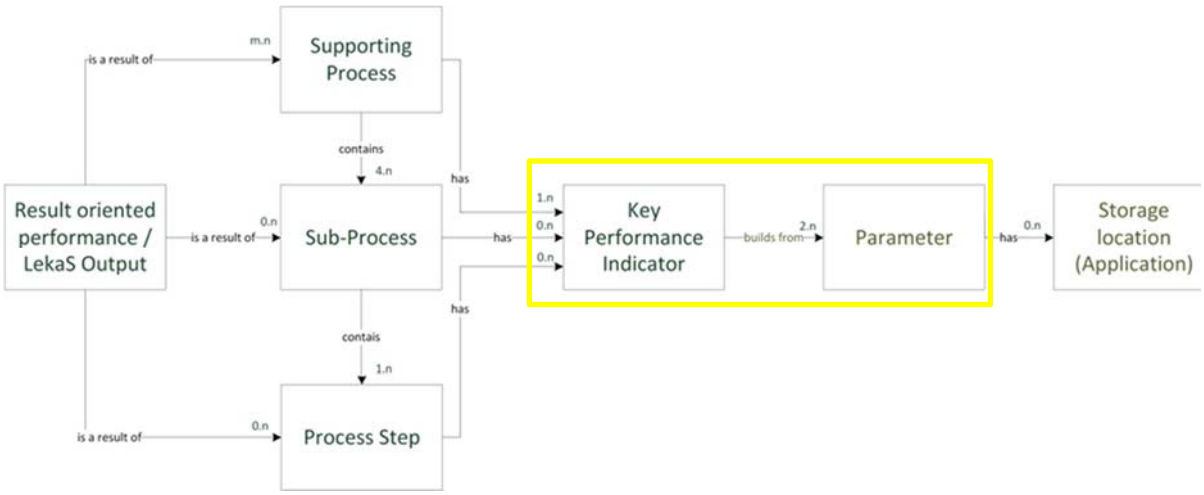
KenkaS – Key Performance Catalogue for Non-medical Support Services in Hospitals

incl.

KenmoS - KPI-Model for Non-medical Support Services in Hospitals

based on LekaS

Version 1.0 – based on German original



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Published
Zurich University of Applied Sciences (ZHAW)
Institute of Facility Management (IFM)
Wädenswil

December 2017

Project partners

conrealis

Deloitte.

Kantonsspital Aarau

Kantonsspital Graubünden

Universitätsspital Basel

UniversitätsSpital Zürich

SAP

Zürcher Hochschule für Angewandte Wissenschaften

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IFM Institut für Facility Management

Zürcher Hochschule für Angewandte Wissenschaften

zhaw School of Management and Law

Acknowledgements

Katharina Alföldi, Zurich University Hospital / Alföldi Beratung
Adrian Ammann, Cantonal Hospital Graubünden
Richard Birrer, University Hospital Basel
Reto Bucher, Cantonal Hospital Aarau
Prof. Dr. Christian Coenen, ZHAW Institute of Facility Management
Prof. Dr. Alexandre de Spindler, ZHAW Institute of Business Information Technology
Annieck de Vocht, Deloitte AG
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Dr. René Fitterer, SAP (Switzerland) AG
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The foundations of this publication were enabled by the funding of the Swiss Commission for Technology and Innovation (CTI).

Abstract

Since the introduction of the Diagnosis-related Group / SwissDRG, there has been a greatly increasing need for an improved data base and meaningful key figures [KPIs] for better steering and comparability in the non-medical support area [FM]. The aim was not only to compile a comprehensive compilation of KPIs in all facility management areas in the health care sector [FM in HC], but also to show connections between the required parameters. A comprehensive listing was made on the basis of existing FM and hospital key figure literature. In cooperation with four hospital partners and three business partners, the consortium research approach involved prioritizing and categorizing key figures in numerous expert rounds and interviews. The result is a catalogue of key figures which systematically lists KPIs suitable for FM in HC for each discipline, consolidates prioritised key figures and specifies them further for implementation. Thus, all the managers of FM in HC have the basis for their utililzation in practice. In doing so, they can access and discuss objective data in strategic discussions and decisions. The clear definition also makes it possible to compare with other hospitals in the future and thus to carry out benchmarking. The code catalogue KenkaS including the key figure model KenmoS is part of the reference model for non-medical support services in Hospitals RemoS and the basis for the guidance on the use of SAP for Facility Management in Healthcare LesapS together with the process model PromoS and the application catalogue ApplikaS and the assessment, simulation and benchmarking tool for facility management in health care. All topics mentioned are documented separately in detail and can be called up and downloaded with reference to the other documents at https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/remos-documentation.pdf.

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List of abbreviations

ApplikaS	Application Catalogue for Non-medical Support Services in Hospitals [German: Applikationskatalog für nicht-medizinische Supportleistungen in Spitälern]
BAG	Swiss Federal Office for Public Health [German: Bundesamt für Gesundheit]
DRG	Diagnosis- Related Group
FM in HC	Facility Management in Healthcare
FTE	Full Time Equivalent
GoM	Generally accepted modelling principles [German: Grundsätze ordnungsmässiger Modellierung]
IFM	Institute of Facility Management
KenkaS	Key Performance Catalogue for Non-medical Support Services in Hospitals [German: Kennzahlenkatalog für nicht-medizinische Supportleistungen in Spitälern]
KenmoS	KPI-Model for Non-medical Support Services in Hospitals [German: Kennzahlenmodell für nicht-medizinische Supportleistungen in Spitälern]
KPI	Key Performance Indicator
LekaS	Service Catalogue for Non-medical Support Services in Hospitals [German: Leistungskatalog für nicht-medizinische Supportleitungen in Spitälern]
LemoS	Service Allocation Model for Non-medical Support Services in Hospitals [German: Leistungszuordnungsmodell für nicht-medizinische Supportleitungen in Spitälern]
LesapS	Guideline for applying SAP for the Facility Management in Healthcare [German: Leitfaden zum Einsatz von SAP für das Facility Management in Healthcare]
PromoS	Process Model for Non-medical Support Services in Hospitals [German: Prozessmodell für nicht-medizinische Supportleistungen in Spitälern]
RemoS	Reference Model for non-medical support services in Hospitals [German: Referenzmodell für nicht-medizinische Supportleistungen in Spitälern]

1 Introduction

To start with, the project will be introduced: what was the starting position, the objective and the benefit promise of the project, what was the methodology, which topics were not covered and how is the document connected to other sub-projects.

1.1 Starting position

In the course of the introduction of the Diagnosis-related Group/SwissDRG in Switzerland, the need for an improved data base and meaningful key performance indicators [KPIs] for the controllability and comparability between the hospitals has also greatly increased in the non-medical support area. The results of Marr (2012): "What gets measured, gets done" and "If you cannot measure it, you cannot manage it" are increasingly also valid for Facility Management in Health Care [FM in HC].

The topic of KPIs in FM has been scientifically treated for some time. Studies in the area of FM ratios are accordingly available. However, the following problem arises: either the subject matter is dealt with by the broad use of possible FM benefits, superficially with regard to precise application and concrete expression, or else specific expressions are examined, but only with regard to individual aspects considered separately. An empirical study on the specificity, contexts and feasibility of KPIs in FM in HC has not yet been treated in the German and English-language literature (cf. Gerber & Hofer, 2016a).

1.2 Objective

The goal was to obtain a comprehensive view of the KPIs on all FM in HC disciplines as well as their correlations between the required parameters, with the particular purpose of equipping FM in HC managers to make their services more transparent, thus minimizing any waste and providing the basis for arguments for strategic discussions and decisions. The development of the key performance catalogue or model is a component which serves as the basis for the comprehensive project "Development of an IT-based assessment tool and a corresponding introduction manual for relevant facility management process applications in the hospital based on an adaptive reference model". The aim of the entire project was to make the connections between non-medical (partial) processes, key figures (parameters) and their data storage applications visible and to define them in terms of a uniform standard for the Swiss health care system. In addition to this, a customer- and user-friendly solution in the form of an IT-based assessment tool, together with an introductory manual, should be developed on this basis, so that the FM can be subjected to systematic analysis in HC tool-based analysis and action options for the elimination of possible weaknesses can be identified and discussed.

1.3 Benefit / Application

With the insights gained with regard to KPIs in the non-medical support area, it is now possible for all managers of FM in HC to use specifically selected, prioritised and categorised KPIs for the hospital context. In this way, a comprehensive view and the foundations are available to establish internal connections between the individual subject areas and making effectively rendered services transparent, identifying cost drivers as well as synergy potential and minimizing waste. An IT-based assessment tool is available for reviewing the use of KPIs in one's own company (see Assessment, simulation and benchmarking tool for facility management in health care, Möller et al., 2017). In strategic discussions and decisions, objective data can be used and arguments set out accordingly. The clear definition also makes it possible to compare with other hospitals and thus to carry out benchmarking.

1.4 Methodology

As a conceptual basis in the area of FM in HC, the key performance catalogue for non-medical support services in hospitals [LekaS] (Gerber & Läuppi, 2015) was used for all areas. The

context is visualised in Figure 1. For the area of modeling, the principles of proper modeling [GoM] according to Becker et al. (2012) and Schütte (1998) were applied.

Figure 1: Service Allocation Model for Non-medical Support Services in Hospitals Version 3.0 (Gerber, 2016)

Empirical research was developed in the sense of the applied sciences on the basis of consortial research according to Österle and Otto (2009 & 2010) for and with practice (see Figure 2). A total of four Swiss hospitals, three business partners and two ZHAW institutes were intensively involved during the entire duration of almost three years.

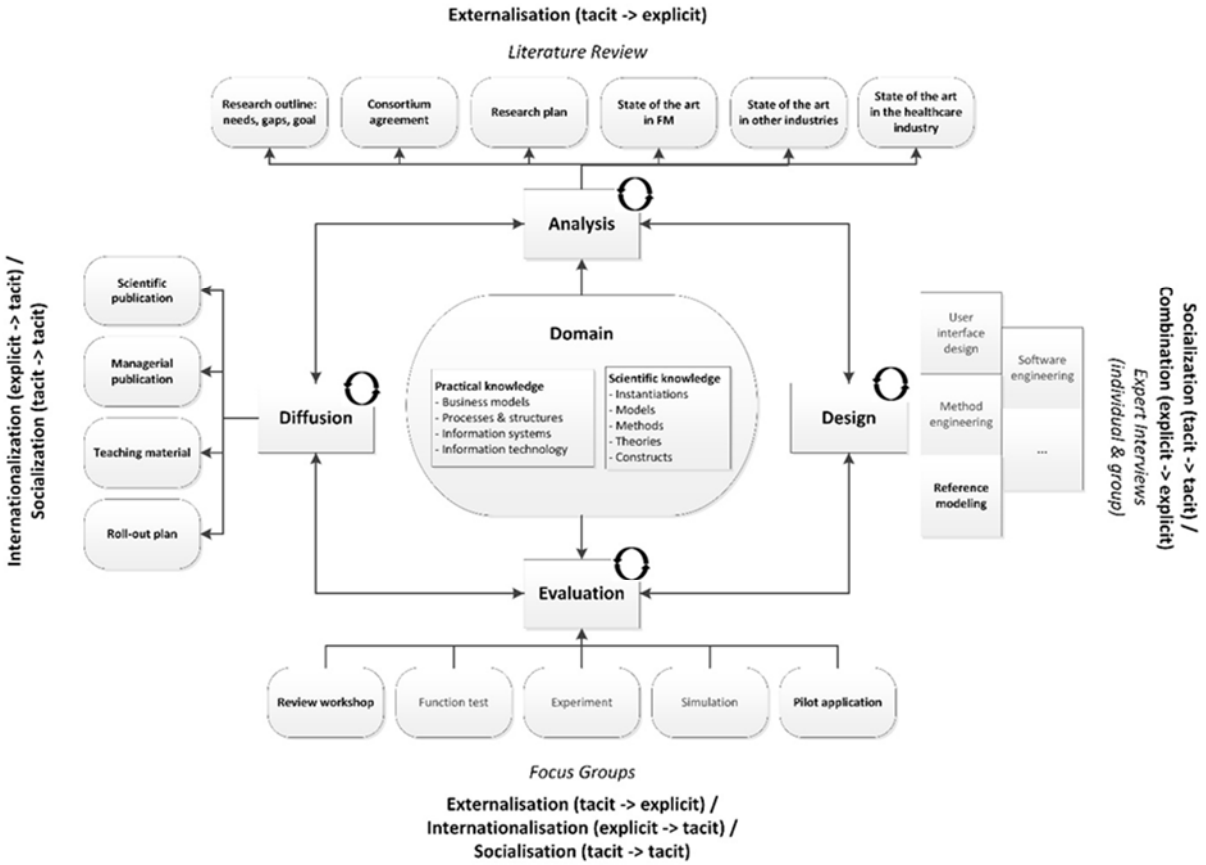

Figure 2: Consortial research approach (based on Österle & Otto, 2009)

In doing so, the scientific principles of Design Science Research were examined according to Hevner et al. (2004), Peffers et al. (2007), Vaishnavi and Kuechler (2008), Hevner and Chatterjee (2010) and Dresch et al. (2015) as summarised in Figure 3. The development and evaluation was carried out using expert interviews according to Meuser and Nagel (2009), Liebold and Trinczek (2009) and Gläser und Laudel (2009).

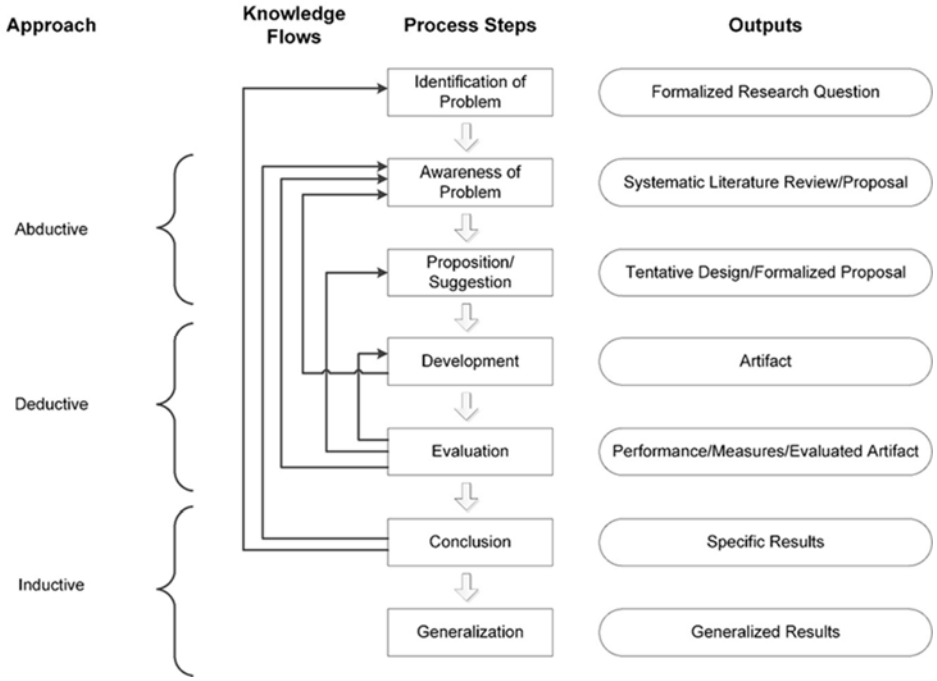

Figure 3: Generalised method of Design Science (based on Vaishnavi & Kuechler, 2008 and Dresch et al., 2015)

1.5 Delimitation

The KPIs presented make it possible to uniformly generate KPIs as the basis for benchmarking. However, data must be collected, compared and the results interpreted. It will therefore only be possible in a further step to carry out the actual benchmarking as it has already been applied successfully in the Hotelleriebchmark (http://www.hotellerie-benchmark.ch/). For this purpose, as well as for the development of key indicator systems, further projects are ongoing at the Institute for Facility Management at the Zurich University of Applied Sciences [ZHAW]. The same applies to the system of uniform cost center systems and chart of accounts. A comprehensive validation of the model will become possible only after the broad use in practice, and thus only later.

1.6 Links / Connections with other topics

The present KPI aspects also include the definition of processes. These processes are explained and described in detail in the **PromoS – process model for non-medical support services in hospitals** (Gerber et al., 2016b).

The same applies to results-oriented performance descriptions - these are published in **LekaS, the performance catalogue for non-medical support services in hospitals** (Gerber & Läuppi, 2015).

The current status of the enquiry with regard to FM in HC applications can be found in the **ApplikaS – application catalogue for non-medical support services in hospitals** (Gerber et al., 2016b).
The possibilities to record the Actual Situation of the applications and to determine a possible Target state with the corresponding implementation possibilities is presented in the **assessment, simulation and benchmarking tool for facility management in the health care system** (Möller et al., 2017).

The concrete degree of coverage of the applications is shown in relation to the **LesapS guideline for the use of SAP for Facility Management in Healthcare** (Weigele et al., 2017).

The explanations concerning the interrelationships of the abovementioned sub-areas are given in the **RemoS – reference model for non - medical support services in hospitals** (Gerber & Hofer, 2016b) and is shown in Figure 4.

All publications can be downloaded and downloaded at www.zhaw.ch/ifm/fm-healthcare/remos.

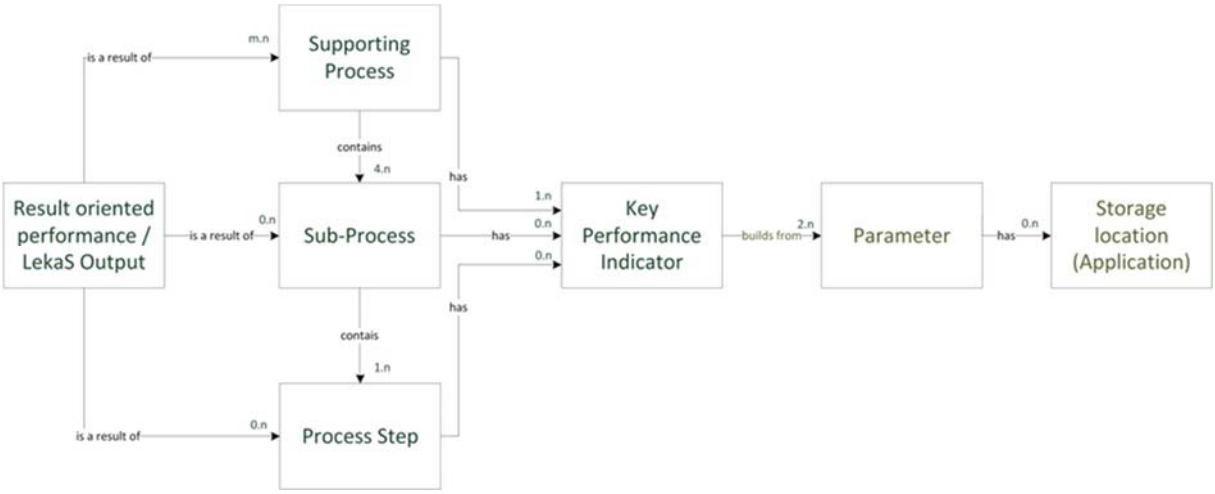

Figure 4: Reference Model for non-medical support services in Hospitals [RemoS] (Gerber & Hofer, 2016b)

1.7 Outlook

The key performance catalogue and the KPI model are used as a basis for systematically developing future benchmarking initiatives.

2 Conceptual foundation

In the context of the generation of KPIs described in chapter 4, two facts have to be clarified.

2.1 Differentiation effort - costs

Most KPIs relate to costs. However, there are also expense KPIs (for example in connection with personnel expenses). The definitions according to Besson (2013) were used as the basis for distinguishing the two terms:
Costs are performance-related consumptions (of goods and services) during a period, valued according to the principles of cost accounting. In other words, costs reflect the amounts used and services provided for operation performance.
Expenditure is consumption of all the goods and services booked for a period, according to the principles of financial accounting.

2.2 Area information

In the definition of the different kinds of areas in the hospital, the existing basis of SIA 416 and DIN 277 were used (see Appendix 1).

It has been shown that in the future it will be necessary to define the areas and rooms in the hospital in more detail. Corresponding efforts are part of follow-up projects at ZHAW IFM.

3 Theory in relation to key figures and key figure modeling

The publications on are diverse and extensive. Due to the context being FM in HC, the KPIs in FM (SN EN 15221-5: 2011, 2011; GEFMA 260-1, 2012) or the health care system (Zapp & Haubrock, 2010; BAG, 2015, Federal Statistical Office, 2015) were taken into account where it was possible and made sense to do so. The statements of Preissler (2008) and Marr (2012) were used as the basis for the general KPI theory.

In the following sub-chapters the necessary theory is briefly summarised for further understanding and for further definitions and developments. For details please refer to the corresponding originals.

3.1 Definition of KPIs

There is no clear, detailed definition of KPIs in the literature. This publication supports the following KPI definitions based on Preissler (2008) and SN EN 15221-5: 2011.
KPIs are used to make information on the services rendered and the overall relationships visible in a company. They are an important analysis tool for the visualisation of possible weaknesses and the basis for strategic discussions and decisions.

3.2 Forms of KPIs

KPIs are classified and divided differently in the literature. In the present project, a distinction was made between **numbers (absolute numbers)** and KPIs **(ratios)**, based on Preissler (2008).

Absolute numbers are individual values which stand alone. In the case of the absolute numbers, a distinction can be made between **individual numbers** (e.g. number of FTEs), **totals** (e.g. number of inpatient cases), **differences** (e.g. turnover restoration - cost restoration) and **average value** (e.g. average number open orders for medical technology). A further distinction can be made between **stock numbers** and **movement numbers**. Stocks represent a state at a specific time (for example, all types of stocks). Movement figures refer to a period (e.g. costs, sales, items in the period considered). Absolute numbers are not very helpful for external comparisons. They usually are used as parameters for KPIs or for the internal comparison of trends.

KPIs are ratios, meaning that two or more values are compared. They can be divided into **structure figures**, which represent a subset of a total quantity (for example, pro rata costs of the subject area maintenance of the total cost of the hospital), **relationship figures** that relate a subset to another subset (e.g. the number of female employees vs. number of male employees) and **index figures**, which always take a time factor into account and thus provide information about a different period (e.g. energy consumption of the current year in % vs. the previous year's energy consumption).

The used KPI forms are shown in Figure 5.

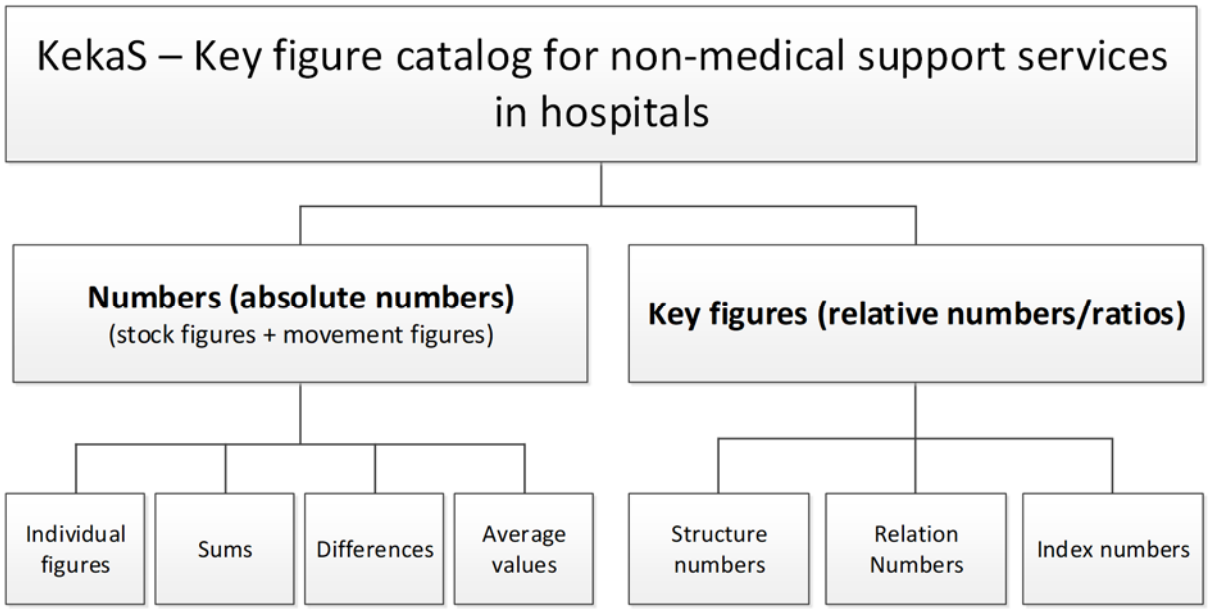

Figure 5: Forms of used KPIs (based on Preissler, 2008)

3.3 Groups of key figures

In accordance with the idea of the KPI classification (DIN, 1996, Zapp & Haubrock, 2010) and the KPI tree (Kronz, 2005), the aforementioned KPI forms were additionally categorised into KPI groups. There is no uniform grouping language in the literature. According to DIN (1996), Kronz (2005) and Zapp & Haubrock, (2010), the KPI categories shown in Figure 6 were formed on the basis of the present context.

3.3.1 Structure figures of total hospital

Here, values and figures relating to the structure of the entire hospital as a whole are depicted. The values are used in parameters of the KPIs or in the interpretation of the values as indications of comparability.

The structure KPIs of the total hospital are divided into

1. **Absolute/Stock figures** (e.g. number of clinics, total number of FTEs or number of beds. All the structure numbers summarised in this category are shown in Figure 6. cf. chapter 3.2 for definition of absolute and flow figures)
2. **Absolute/Flow figures** (e.g. turnover of the hospital, number of discharges or the hospitals consumption of utilities (electricity, water, etc.). All the structure numbers summarised in this category are shown in Figure 6. cf. chapter 3.2 for the definition of absolute and flow numbers see chapter 3.2).
3. **Concepts/Strategies** (Serve in particular to determine the use of certain concepts, such as the existing operating concept in the hotel industry or the existence of strategies, such as a risk strategy, in order to be able to point later to the comparisons among themselves or also in the development of KPI systems.)

3.3.2 Structure KPIs of total hospital

Here, KPIs are depicted that relate to the structure of the entire hospital as a company. They make it possible to categorise the comparability of KPIs from the organisation and provide the basis for the future development of KPI systems.

The structure KPIs of the total hospital are divided into
1. **Capacity/Occupancy** (includes the bed capacity and bed occupancy)
2. **Case Mix Index** (describes the severity of patient cases in a given period of time)
3. **Spatial structure** (includes the degree of concentration and the expansion of the sites)
4. **Degree of decentralisation** (gives an indication of the degree of decentralised premises of the total hospital)

3.3.3 Structure figures of non-medical support services in hospitals / FM in HC

Here, values / numbers are depicted which relate to the structure of non-medical support services / FM in HC according to LekaS (cf. Figure 1). The values are used in parameters of the KPIs or on the other hand in the interpretation of the values as indications of comparability.

The structure figures for FM in HC are divided into
1. **Absolute/Stock figures** (e.g. number of FTEs of subject areas, number of vehicles or number of seats. All the structure figures summarised in this category are shown in Figure 6. cf. chapter 3.2 for a definition of absolute and inventory figures).
2. **Absolute/Flow figures** (e.g. number of overtime, costs of subject areas or the disposal quantity of special waste. All the structure figures summarised in this category are shown in Figure 6. cf. chapter 3.2 for a definition of absolute and flow figures)

3.3.4 Structure KPIs FM in HC

KPIs are shown here which relate to the structure of non-medical support services / FM in HC. They make it possible to categorise the comparability of KPIs from the organisation and provide the basis for the future development of KPI systems.

The structure figures for FM in HC are divided into
1. **Proportion** (e.g. the ratio of professional workwear vs. patient clothing, the proportion of old vs. new equipment, or the ratio of skilled workers vs. unskilled personnel). All the structure figures summarised in this category are shown in Figure 6.
2. **Degree of externalisation** (gives an indication of the proportion of externally provided services)
3. **Average number** (gives information about the average quantity / quantity processed and thus the order of magnitude)
4. **Degree of decentralisation** (gives an indication of the degree of decentralised FM in HC premises)

3.3.5 KPIs non-medical support services / FM in HC

KPIs are shown here, which relate to the operation of non-medical support services / FM in HC.

The KPIs are divided into the following subcategories
1. **Operational cost indicators**
2. **Operational turnover indicators**
3. **Performance indicators**
4. **Quality indicators**
5. **Environmental indicators**

3.3.5.1 Operational cost KPIs

These KPIs provide information on the costs resulting from the operation.

The operating cost indicators are divided into

1. **Costs per absolute/stock figure** Cost per absolute / stock figure (costs per structure figure, e.g. cost per inpatient bed at the total hospital level or cost per FTE of a subject area on FM in HC level)
2. **Costs per absolute/flow figures** (Costs per structure figure such as costs per maintenance day at the total hospital level or cost per order item on FM in HC level)
3. **Cost ratios** (e.g. cost of non-medical services vs. costs of medical services, costs of personnel vs. costs of material or cost of sub-areas vs. total areas such as the proportion of catering production in the total cost of catering).

3.3.5.2 Operational turnover KPIs

Turnover KPIs can only be expected where turnover is generated effectively. Currently, in hospitals this is particularly the case in catering.

The operating revenue indicators are divided into

1. **Revenue per absolute / stock figure** (e.g. turnover per seat)
2. **Revenue per absolute / flow figure** (e.g. revenue per guest)
3. **Turnover ratios** (e.g. personnel costs in the catering sector in relation to the turnover of catering)

3.3.5.3 Performance KPIs

These indicators provide hints on operational efficiency.

The performance KPIs are divided into

1. **Productivity** (provides information about the services per person or unit or area, sets output and input in relation, or reports the level of disturbances / interferences)
2. **Utilisation** (of movables, rooms / areas / volumes or seats)
3. **Outage / Availability** (of machines / equipment)
4. **Process efficiency / lead times** (names the duration or reaction time, e.g. of orders, names ranges and turnover figures)
5. **Planning efficiency** (planning deviation hours planned vs. effective hours)

3.3.5.4 Quality KPIs

These KPIs provide hints on the quality of various aspects.

The quality KPIs are divided into

1. **Structure personnel quality** (such as the fluctuation rate or degree of training, all the KPIs summarised in this category are shown in Figure 6)
2. **Structure areas quality** (places floors or seats in relation to employees)
3. **Structure infrastructure quality** (shows the up-to-date infrastructure)
4. **Structure material quality** (shows the percentage of defective inventory)
5. **Fulfillment of targets** (e.g. budget or terminal dates or complaints ratio, all KPIs summarised in this category are shown in Figure 6)
6. **Waiting times** (shows the waiting period of persons or patients during the exercise of the service provision)

3.3.5.5 Environmental KPIs

These KPIs provide information about various environmental aspects.

The environmental KPIs are divided into

1. **Recycling** (recycled materials ratio)
2. **Waste volume** (waste volume and special waste proportion)
3. **Media consumption per absolute / flow / population number** (e.g. water consumption per case, energy consumption per unit area or movables)
5. **Energy trends** (development of energy costs or demand over the years)

Financial and performance have been excluded for the time being (cf. section 5.2)

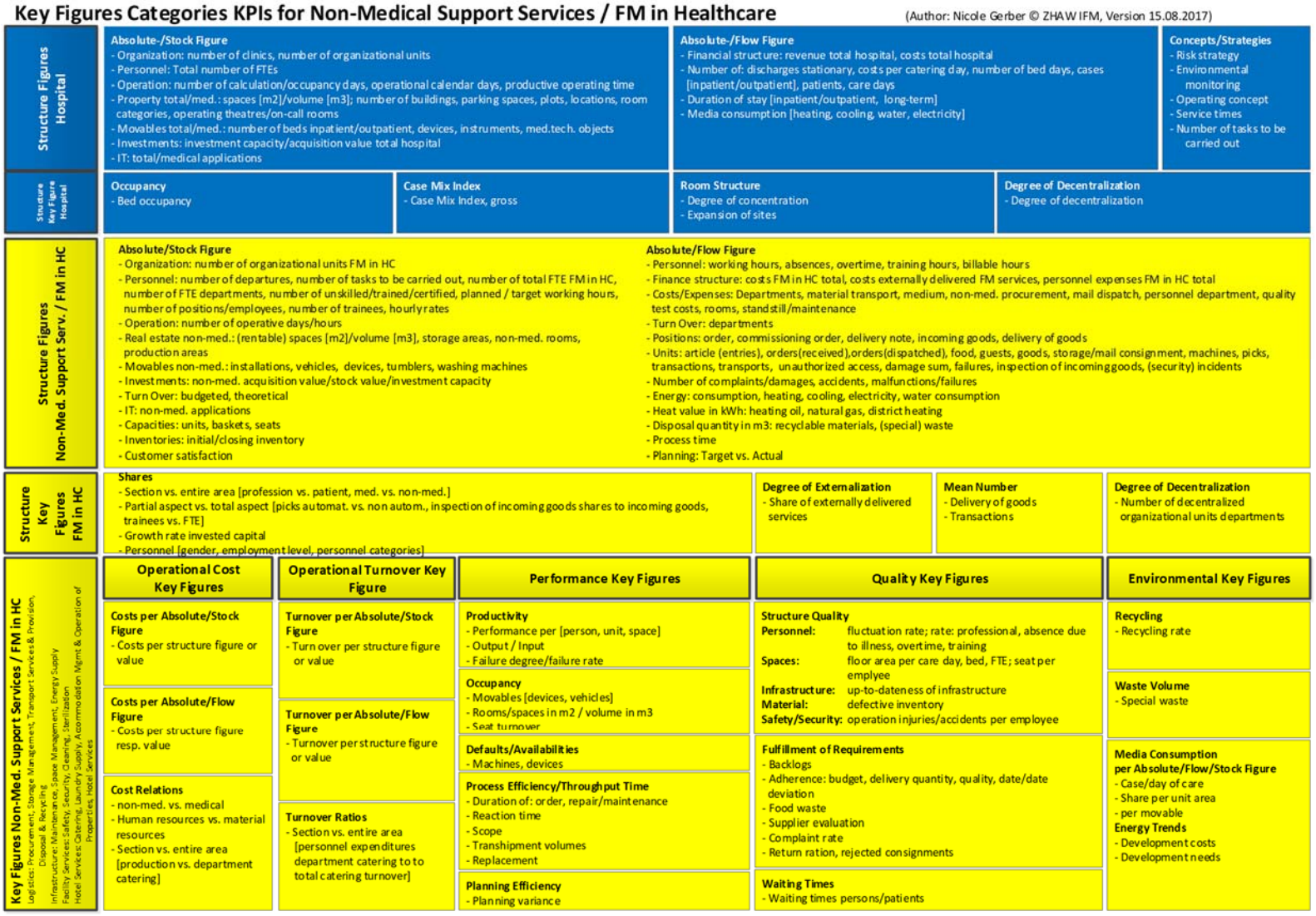

Figure 6: Categories of key figures for (FM in) HC
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3.4 Purpose of selected and categorised KPIs

The purpose of KPIs is defined in different ways in the literature. According to Preissler (2008), the following criteria were used as the basis for the present project:

- Creation of transparency
- Provide objective data bases for strategic discussions and decisions
- Enable benchmarking within a hospital as well as across the hospital
- Possibility of using targets

3.5 Characteristics of prioritised KPIs

The following criteria were applied when selecting and defining the prioritised KPIs:

- Provide starting points for new plans and objectives (Preissler, 2008).
- Recognise connections with developmental tendencies (Preissler, 2008).
- Provide an orientation on the situation and the location of the company in comparison to the competition (Preissler, 2008).
- Highlight starting points for a goal-oriented company policy for permanent success control and be the basis for value-oriented and value-enhancing corporate management (Preissler, 2008).
- Be clearly quantifiable, i.e. measurable, and have a meaningful value or value for their recipient (GEFMA 260-1, 2012).
- The objective of the KPI must be recognizable (Preissler, 2008).
- KPIs must meet the criteria of profitability, so their number should be limited and integrated into existing information systems (Preissler, 2008).
- A requirement analysis should be carried out before a KPI is determined, in order to determine which information is actually required (Preissler, 2008).

3.6 Theory in relatio to (KPI) models

In order to understand the terminologies associated with the development of the KPI model, this chapter briefly presents the concepts of model, KPI model and the generally accepted modelling principles based on the literature.

3.6.1 Models

A model

- is a simplified, abstract representation of reality or a section thereof
- is intended to reduce complexity by being limited to key variables
- serve a specific question or scope of tasks adequately
- is designed for a specific purpose (model of what, for whom, when and why), depending on the modeling goal and application context

(Becker et al., 2012; Delfmann, 2006; DIN-Fachbericht 80-2000; Goeken, 2003; Haux et al., 1998; Kruse, 1996; Scheer, 2002; Stachowiak, 1983; vom Brocke, 2003); cf. chapter Models in RemoS (Gerber & Hofer, 2016a).

3.6.2 Modeling language

A modeling language

- is an artificial language
- can be textual or graphical
- can be informal, semi-formal or formal
- allows a description of a situation within a subject area in a diagrammatic form
- should be intuitive for different stakeholders
- is intended to lend clarity to the complexity

(Delfmann, 2006; Schlieter, o. D.; Becker et al. 2012; Herrler, 2007; Bartsch, 2010; see chapter Modeling Languages in RemoS, Gerber et al., 2016 und KenkaS, Gerber et al., 2016)

3.6.3 Generally accepted modelling principles

In order to increase the quality of the developed models, the established “Generally accepted modelling principles” by Becker et al. (2000), Schütte (1998) and Rosemann (1996) were applied.
They are:

- **Principle of correctness:**
  A model is syntactically correct when it is complete, correct and consistent according to the underlying meta-model.
- **Principle of relevance:**
  All necessary aspects of the real world are usefully represented in the model and all aspects of the model also appear in the real world.
- **Principle of economic efficiency:**
  It should be ensured that the model has no irrelevant aspects and that the duration of creation of the model is in relation to its use.
- **Principle of clarity:**
  The model should be understandable, clear and descriptive.
- **Principle of comparability:**
  Connected models should be harmonious and free of discrepancy and should be transferrable into one another if needed
- **Principle of systematic structure:**
  Different model views have to be designed integrably

(cf. chapter Generally accepted modelling principles in RemoS, Gerber & Hofer, 2016 and KenkaS, Gerber et al., 2016c)

Since models are constructed from specific perspectives, the extent to which they are appropriate (cf. chapter 3.5) must be decided in individual cases.

4 Hospital and FM KPIs become KPIs for FM in HC

In the following, the basic principles used in the hospital and FM KPIs for the KPI catalogue are explained as well as the KPIs calculated for the area FM in HC using the KPI model (KenmoS).

4.1 Hospital KPIs

KPIs in HC have hitherto mainly been focused on medical areas (e.g. Swiss National Health Service indicators: BAG, 2015). Medical KPIs are not further dealt with or discussed in this document due to the focus on the non-medical area. However, the use of medical structure (K)PIs was necessary for the generation of FM in HC ratios (see Figure 5).

The following structure (K)PIs at the level of the total capital is used in this context on the basis of existing documentation (see Appendix 2):
Number of operating theaters (BAG, 2016)
Number of beds inpatient (BAG, 2016)
Number of FTE in total hospital (BAG, 2016)
Number of cases inpatient (Zapp & Haubrock, 2010)
Number of cases outpatient (Zapp & Haubrock, 2010)
Number of days of care inpatient (BAG, 2016)
Number of patients (Papenhoff & Schmitz, 2013, Losbichler, Eisel & Engelbrechtsmüller, 2015)
Number of discharges inpatient (BAG, 2016)
Average lenght of stay inpatient in days (BAG, 2016)
Risk strategy implemented? (Rose, 2016).
Envoironmental monitoring implemented? (AWEL, no date)
Operating concept catering (Hotellerie Benchmark)
Service times (Hotellerie Benchmark)
Average bed occupancy rate in % (Statistisches Bundesamt, 2015)
Bed occupancy inpatient in % (BAG, 2016)
Case Mix Index gross (BAG, 2016)
Decentralisation degree (VDI 2893:2006)

In addition, the following structure (K)PIs were additionally defined by the project at the level of the total hospital (see appendix 2):
Number of areas (parcels)
Number of locations
Number of medical buildings
Number of clinics
Total cost of hospital
Degree of concentration
Expansion of sites

4.2 FM KPIs

There are already numerous definitions of KPIs in individual FM areas, as well as in the Facility Management discipline. Gerber and Hofer (2016a) provide an overview of the current publications of KPIs in the FM area. What was lacking, however, was a systematic clarification of which existing FM and subject areaal KPIs are also suitable for FM in HC that could provide the industry with relevant information for concrete governance purposes. Within the scope of this project, the existing FM ratios were tested for suitability for FM in HC and, if necessary, adapted to specific sectors.

The following sources have proven to provide a suitable basis:

AWEL (n.d.), BAG (2016), Brown (2009), Caquas et al. (2010), Deloitte (2015), Diez (2009), Gladen (2014), Gottmann (2016), Herter & v. Wangenheim (1997), Hotellerie Benchmark (n.d.), IFMA (2007), Kanton Zug – Direktion des Innern (2013), Kumar et al. (2005), Kumar et al. (2013), Kummert et al. (2013), Lavy et al. (2010), Leidinger (2014), Löchelt (2000), Loosemore & Hsin (2001), Losbichler et al. (2015), Madritsch et al. (2008), Martin (2009), Papenhoff & Schmitz (2013), Pericin Häfliger (n.d.), Reineck et al. (2011), Rose (2016), Rotermund (2014), SIA D 0213:2005, Spring (2008), Statistisches Bundesamt (2015), Strunz (2012), Supply Chain Council (2012), VDI 2525:1999, VDI 2893:2006, VDI 3330:2007, VDI 4400:2001, VDI 4400:2002, VDI 4400:2004, Werner (2013), Wissenschaftliche Gesellschaft für Krankenhaustechnik (2009), Zapp & Haubrock (2010).

The correspondingly collected and categorised KPIs are set out in this document and are listed in appendix 2 - 39.

4.3 FM in HC KPIs – KPI-Model for Non-medical Support Services in Hospitals KenmoS

Although numerous existing FM and subject area indicators were available, it became clear that specific KPIs were lacking in the FM in HC context. For this reason, a systematic evaluation of KPIs was performed, which is illustrated in the KPI model for non-medical support services in hospitals - KenmoS (Figure 1). The principle of the model was further developed on the basis of Gerber and Hofer (2016a) during the project in an informal-graphic modeling language. The first column contains the services, including their numbering from the performance catalogue for non-medical support services in hospitals (LekaS). These are clustered in columns two, three and four according to special criteria (which are subsequently explained and visualised in Figure 7) and summarised in the fifth column into a total of 15 subject areas. The subject areas themselves are divided into the four FM areas according to the performance model for non-medical support services in hospitals [LemoS] (Gerber, 2016).

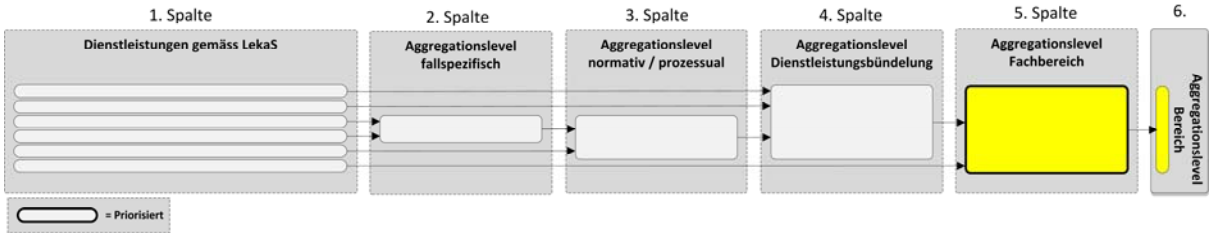

Figure 7: System of the KPI model KenmoS

1. column: Services according to LekaS
This column lists all the services listed in the performance catalogue for non-medical support services in hospitals (LekaS). During the development of the process model, some lacking services were identified, which are marked in the model by italic characters. These services will be recorded and described in the next version of LekaS.

2. column: Aggregation level: case specific
The goal is that as many non-medical services as possible can also be assigned to a case. The appropriate services are listed in the 2nd column. This way, case specific KPIs can be compared to the general figures.

3. column: Aggregation level normative / procedural
In this column services are presented which differ from other services due to normative requirements in the processes. Like this, these areas can be viewed separately in the KPIs.

4. column: Aggregation level service bundling
Here, services, which are typically grouped in service bundles, are presented. This clustering is intended to enable internal and external services to be compared.

5. column: Aggregation level subject area
Here the services from LekaS are allocated to the 15 subject areas (see Figure 8). Every LekaS service belongs to precisely one subject area.

6. column: Areas
Finally, the 15 subject areas are grouped into the 4 areas shown in LemoS (Figure 1).

Establishing relevance
After the compilation of the performance clusters, these were assessed according to their relevance. The following three criteria were used:
1. Importance for the core medical business
2. The weight and the influence of the finances (i.e. are the costs of a service essential and can they be influenced at all?)
3. Possibility of performance recording by means of IT (i.e. can the service provision be recorded and analysed at all)?

The following clusters were classified as relevant in several expert rounds according to the above criteria and in coordination with the project OPIK (Lennerts, 2011):

- Procurement
- Storage managment
- Transportation of people and goods & fleet management
- Medical technology
- Energy
- Cleaning of wards
- Highly intensive cleaning
- Sterilisation
- Patient and resident catering
- Operation of on-call rooms

The relevant services are highlighted in the model by thick frames.

The entire KPI model is shown in Figure 8. Subsequently, all subject areas and the clusters defined therein are described in detail.

Figure 8: KenmoS – General overview KPI-Model for Non-medical Support Services in Hospitals
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-overall.jpg

4.4 Description of all aggregation levels and clusters

In the following, the performance aggregations of the four areas of logistics, infrastructure, facility services and the hotel services and their aggregation level are depicted and described in detail.

4.4.1 Logistics area

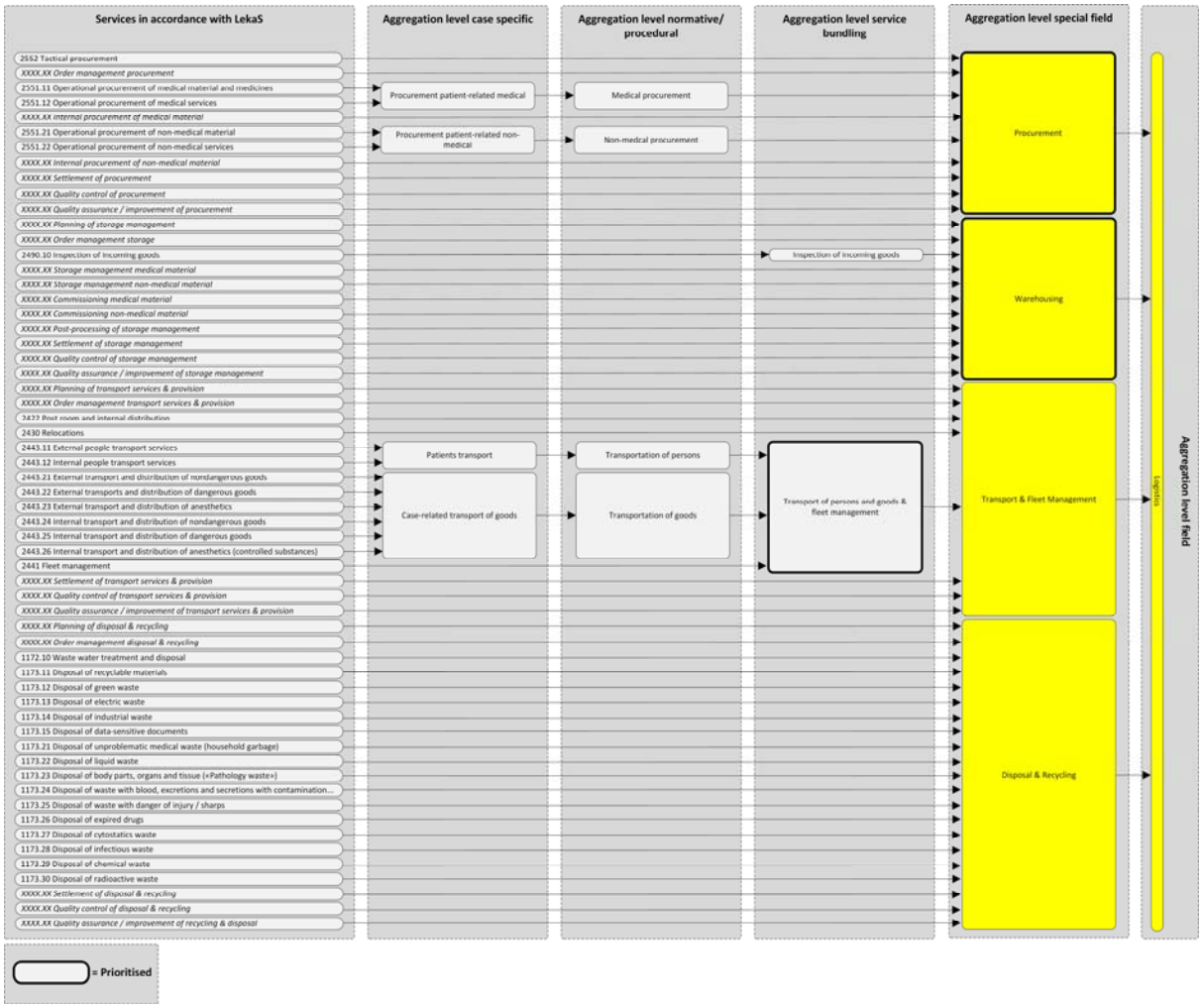

Figure 9: Section of the KenmoS part logistics
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-logistics.jpg

Logistics pertains to to the idea of a supply chain and consists of four subject areas:

- Procurement
- Storage management
- Transport services & provision
- Disposal & recycling

Their composition and aggregations in the KPI model are explained in detail below.

4.4.1.1 Subject area of procurement

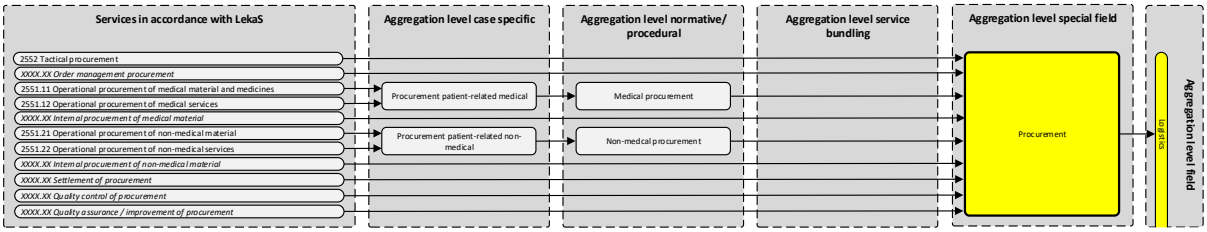

Figure 10: Section of the KenmoS part procurement
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-logistics.jpg

The subject area procurement contains the LekaS* services:
2552 Tactical procurement
XXXX.XX Order management procurement
2551.11 Operational procurement of medical material and medicines
2551.12 Operational procurement of medical services
XXXX.XX Internal procurement of medical material
2551.21 Operational procurement of non-medical material
2551.22 Operational procurement of non-medical services
XXXX.XX Internal procurement of non-medical material
XXXX.XX Settlement of procurement
XXXX.XX Quality control of procurement
XXXX.XX Quality assurance / improvement of procurement
The subject area of procurement corresponds to the support process procurement in the process model PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
Cluster procurement patient allocatable medical
The cluster procurement patient allocatable medical consists of:
2551.11 Operational procurement of medical material and medicines
2551.12 Operational procurement of medical services

Cluster procurement patient allocatable non-medical
The cluster procurement patient allocatable non-medical consists of:
2551.21 Operational procurement of non-medical material
2551.22 Operational procurement of non-medical services

Aggregation level normative / procedural
Cluster medical procurement
The cluster medical procurement consists of:
2551.11 Operational procurement of medical material and medicines
2551.12 Operational procurement of medical services

Cluster non-medical procurement
The cluster non-medical procurement consists of:
2551.21 Operational procurement of non-medical material
2551.22 Operational procurement of non-medical services

Aggregation level service bundling
No clustering was performed here.

4.4.1.2 Subject area of storage management

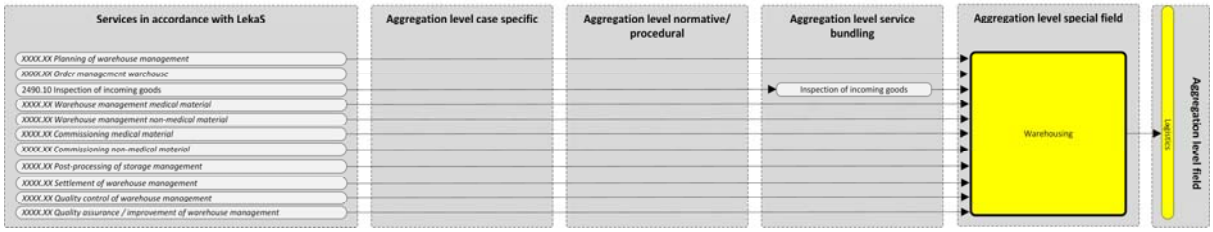

Figure 11: Section of the KenmoS part storage management
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-logistics.jpg

The subject area of storage management contains the LekaS* services:
XXXX.XX Planning of warehouse management
XXXX.XX Order management warehouse
2490.10 Inspection of incoming goods
XXXX.XX Warehouse management medical material
XXXX.XX Warehouse management non-medical material
XXXX.XX Commissioning medical material
XXXX.XX Commissioning non-medical material
XXXX.XX Post-processing of storage management
XXXX.XX Settlement of warehouse management
XXXX.XX Quality control of warehouse management
XXXX.XX Quality assurance / improvement of warehouse management
The subject area of storage management corresponds to the support process of storage management in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
No clustering was performed here.

Aggregation level service bundling
Cluster inspection of incoming goods
The cluster inspection of incoming goods consists of:
2490.10 Inspection of incoming goods

4.4.1.3 Subject area of transport services and provision

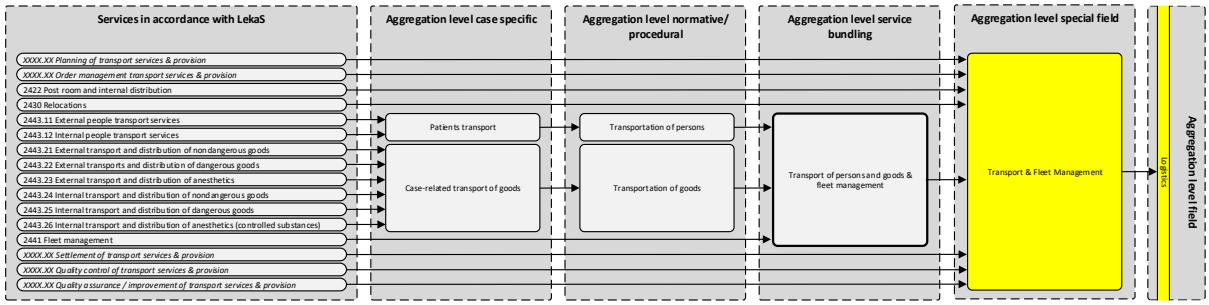

Figure 12: Section of the KenmoS part transport services and provision
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-logistics.jpg

The subject area of transport services and provision contains the LekaS* services:
XXXX.XX Planning of transport services & provision
XXXX.XX Order management transport services & provision
2422 Post room and internal distribution
2430 Relocations
2443.11 External people transport services
2443.12 Internal people transport services
2443.21 External transport and distribution of nondangerous goods
2443.22 External transports and distribution of dangerous goods
2443.23 External transport and distribution of anesthetics
2443.24 Internal transport and distribution of nondangerous goods
2443.25 Internal transport and distribution of dangerous goods
2443.26 Internal transport and distribution of anesthetics (controlled substances)
2441 Fleet management
XXXX.XX Settlement of transport services & provision
XXXX.XX Quality control of transport services & provision
XXXX.XX Quality assurance / improvement of transport services & provision
The subject area of transport services & provision corresponds to the support process of transport services & provision in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
Cluster patient transport
The cluster patient transport consist of:
2443.11 External people transport services
2443.12 Internal people transport services

Cluster case-related transport of goods
The cluster case-related transport of goods consist of:
2443.21 External transport and distribution of non-dangerous goods
2443.22 External transports and distribution of dangerous goods
2443.23 External transport and distribution of anesthetics
2443.24 Internal transport and distribution of non-dangerous goods
2443.25 Internal transport and distribution of dangerous goods
2443.26 Internal transport and distribution of anesthetics (controlled substances)

Aggregation level normative / procedural
Cluster transportation of persons
The cluster transportation of persons consists of:
2443.11 External people transport services
2443.12 Internal people transport services

Cluster transportation of goods
The cluster transportation of goods consists of:
2443.21 External transport and distribution of non-dangerous goods
2443.22 External transports and distribution of dangerous goods
2443.23 External transport and distribution of anesthetics
2443.24 Internal transport and distribution of non-dangerous goods
2443.25 Internal transport and distribution of dangerous goods
2443.26 Internal transport and distribution of anesthetics (controlled substances)

Aggregationslevel service bundling
Cluster transport of persons and goods & fleet management
The cluster transport of persons and goods & fleet management consists of:
2443.11 External people transport services
2443.12 Internal people transport services
2443.21 External transport and distribution of non-dangerous goods
2443.22 External transports and distribution of dangerous goods
2443.23 External transport and distribution of anesthetics
2443.24 Internal transport and distribution of non-dangerous goods
2443.25 Internal transport and distribution of dangerous goods
2443.26 Internal transport and distribution of anesthetics (controlled substances)
2441 Fleet management

4.4.1.4 Subject area of disposal & recycling

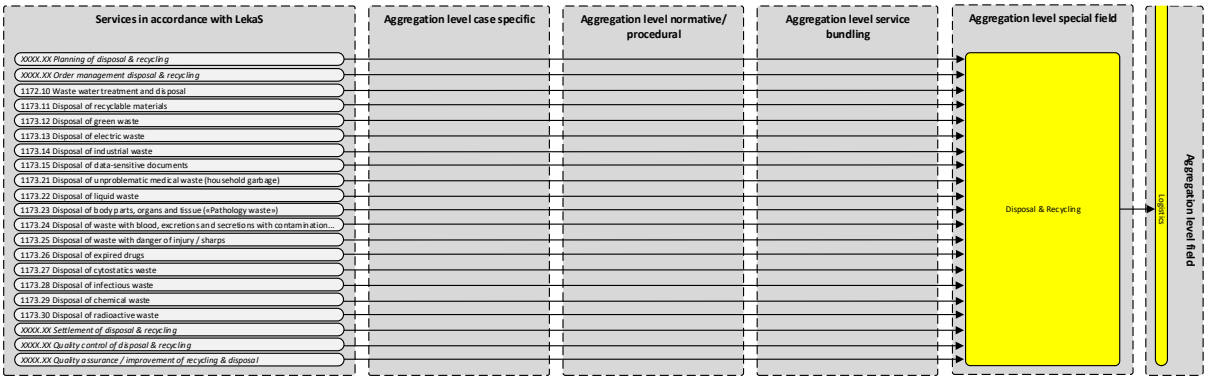

Figure 13: Depiction of the KenmoS part disposal & recycling
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-logistics.jpg

The subject area of disposal & recycling contains the LekaS* services:
XXXX.XX Planning of disposal & recycling
XXXX.XX Order management disposal & recycling
1172.10 Waste water treatment and disposal
1173.11 Disposal of recyclable materials
1173.12 Disposal of green waste
1173.13 Disposal of electric waste
1173.14 Disposal of industrial waste
1173.15 Disposal of data-sensitive documents
1173.21 Disposal of unproblematic medical waste (household garbage)
1173.22 Disposal of liquid waste
1173.23 Disposal of body parts, organs and tissue («Pathology waste»)
1173.24 Disposal of waste with blood, excretions and secretions posing contamination risk
1173.25 Disposal of waste with danger of injury / sharps
1173.26 Disposal of expired drugs
1173.27 Disposal of cytostatics waste
1173.28 Disposal of infectious waste
1173.29 Disposal of chemical waste
1173.30 Disposal of chemical waste
XXXX.XX Settlement of disposal & recycling
XXXX.XX Quality control of disposal & recycling
XXXX.XX Quality assurance / improvement of recycling & disposal
The subject area of disposal & recycling corresponds to the support process of disposal & recycling in PomoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
No clustering was performed here.

Aggregation level service bundling
No clustering was performed here.

4.4.2 Infrastructure area

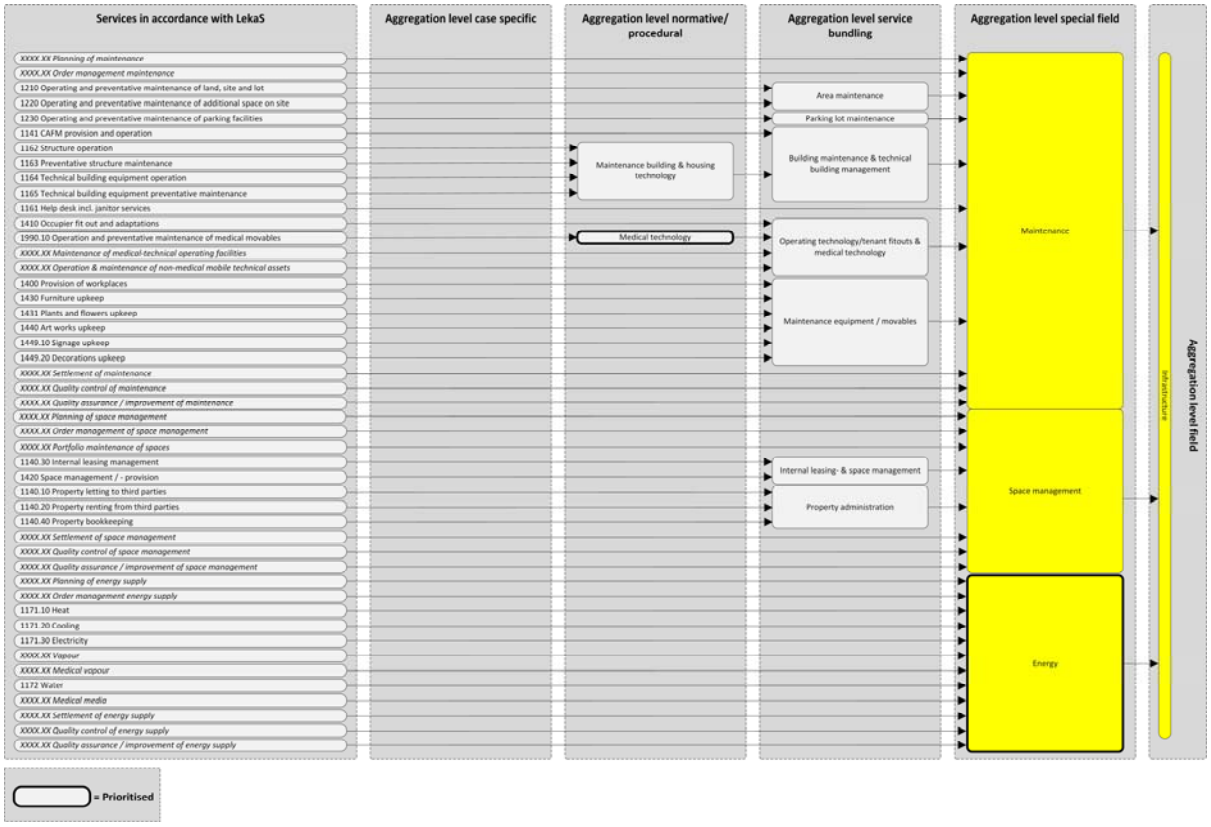

Figure 14: Section of the KenmoS part infrastructure
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-infrastructure.jpg

Infrastructure consists of the three subject areas:

- Maintenance
- Space management
- Energy

Their composition and aggregations in the KPI model are explained in detail below.

4.4.2.1 Subject area of maintenance

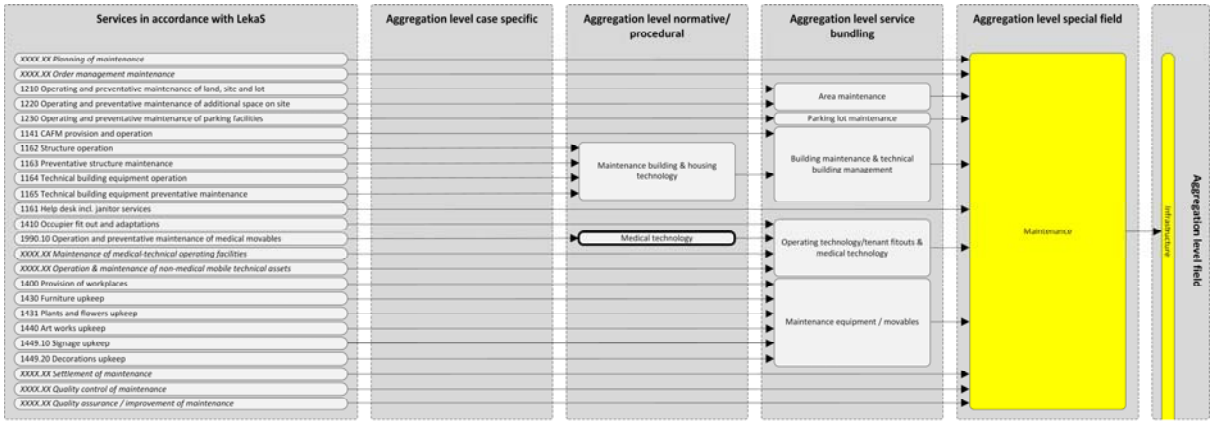

Figure 15: Section of the KenmoS part maintenance
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-infrastructure.jpg

The subject area of maintenance contains the LekaS* services:

XXXX.XX Planning of maintenance
XXXX.XX Order management maintenance
1210 Operating and preventative maintenance of land, site and lot
1220 Operating and preventative maintenance of additional space on site
1230 Operating and preventative maintenance of parking facilities
1141 CAFM provision and operation
1162 Structure operation
1163 Preventative structure maintenance
1164 Technical building equipment operation
1165 Technical building equipment preventative maintenance
1161 Help desk incl. janitor services
1410 Occupier fit out and adaptations
1990.10 Operation and preventative maintenance of medical movables
XXXX.XX Maintenance of medical-technical operating facilities
XXXX.XX Operation & maintenance of non-medical mobile technical assets
1400 Provision of workplaces
1430 Furniture upkeep
1431 Plants and flowers upkeep
1440 Artworks upkeep
1449.10 Signage upkeep
1449.20 Decorations upkeep
XXXX.XX Settlement of maintenance
XXXX.XX Quality control of maintenance
XXXX.XX Quality assurance / improvement of maintenance

The subject area of maintenance corresonds to the support process of maintenance in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
Cluster maintenance building & housing technology
The cluster maintenance building & housing technology consists of:
1162 Structure operation
1163 Preventative structure maintenance
1164 Technical building equipment operation
1165 Technical building equipment preventative maintenance

Cluster medical technology
The cluster medical technology consists of:
1990.10 Operation and preventative maintenance of medical movables

Aggregation level service bundling
Cluster area maintenance
The cluster area maintenance consists of:
1210 Operating and preventative maintenance of land, site and lot
1220 Operating and preventative maintenance of additional space on site

Cluster parking lot maintenance
The cluster parking lot maintenance consists of:
1230 Operating and preventative maintenance of parking facilities

Cluster building maintenance & technical building management
The cluster building maintenance & technical building management consists of:
1141 CAFM provision and operation
1162 Structure operation
1163 Preventative structure maintenance
1164 Technical building equipment operation
1165 Technical building equipment preventative maintenance

Cluster operating technology/tenant fitouts & medical technology
The cluster operating technology/tenant fitouts & medical technology consists of:
1410 Occupier fit out and adaptations
1990.10 Operation and preventative maintenance of medical movables
XXXX.XX Maintenance of medical-technical operating facilities
XXXX.XX Operation & maintenance of non-medical mobile technical assets

Cluster maintenance equipment / movables
The cluster maintenance equipment / movables consists of:
1400 Provision of workplaces
1430 Furniture upkeep
1431 Plants and flowers upkeep
1440 Art works upkeep
1449.10 Signage upkeep
1449.20 Decorations upkeep

4.4.2.2 Subject area of space management

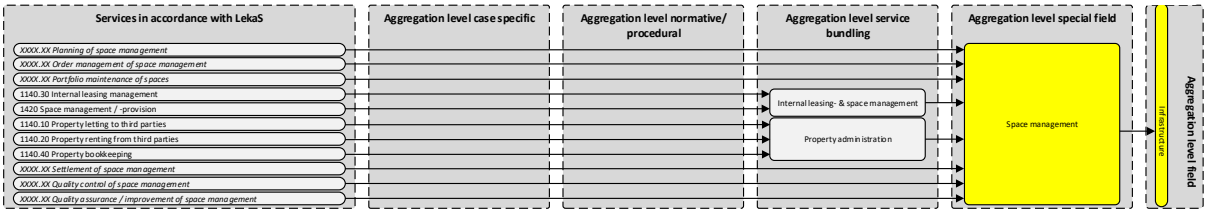

Figure 16: Section of the KenmoS part space management
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-infrastructure.jpg

The subject area of space management contains the LekaS* services:
XXXX.XX Order management of space management
XXXX.XX Portfolio maintenance of spaces
1140.30 Internal leasing management
1420 Space management / - provision
1140.10 Property letting to third parties
1140.20 Property renting from third parties
1140.40 Property bookkeeping
XXXX.XX Settlement of space management
XXXX.XX Quality control of space management
XXXX.XX Quality assurance / improvement of space management
The subject area of space management corresponds to the support process of space management in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
No clustering was performed here.

Aggregation level service bundling
Cluster Internal leasing & space management
The cluster internal leasing & space management consists of:
1140.30 Internal leasing management
1420 Space management / - provision

Cluster Property administration
The cluster property administration consists of:
1140.10 Property letting to third parties
1140.20 Property renting from third parties
1140.40 Property bookkeeping

4.4.2.3 Subject area of energy supply

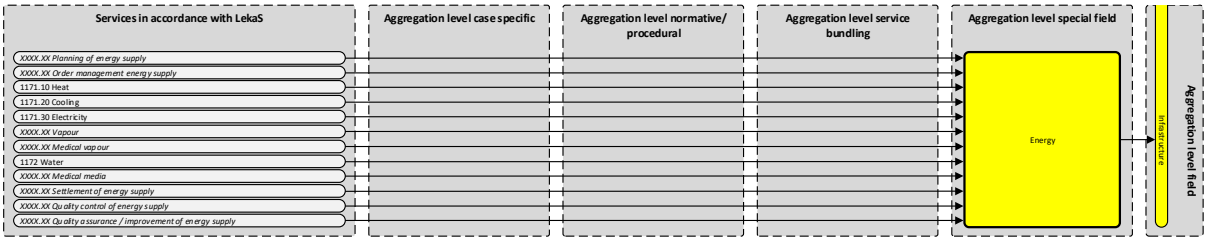

Figure 17: Section of the KenmoS part energy supply
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-infrastructure.jpg

The subject area of energy supply contains the LekaS*-services:
XXXX.XX Planning of energy supply
XXXX.XX Order management energy supply
1171.10 Heat
1171.20 Cooling
1171.30 Electricity
XXXX.XX Vapour
XXXX.XX Medical vapour
1172 Water
XXXX.XX Medical media
XXXX.XX Settlement of energy supply
XXXX.XX Quality control of energy supply
XXXX.XX Quality assurance / improvement of energy supply
The subject area of energy supply corresponds to the support process of energy supply in Promos.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
No clustering was performed here.

Aggregation level service bundling
No clustering was performed here.

4.4.3 Facility services area

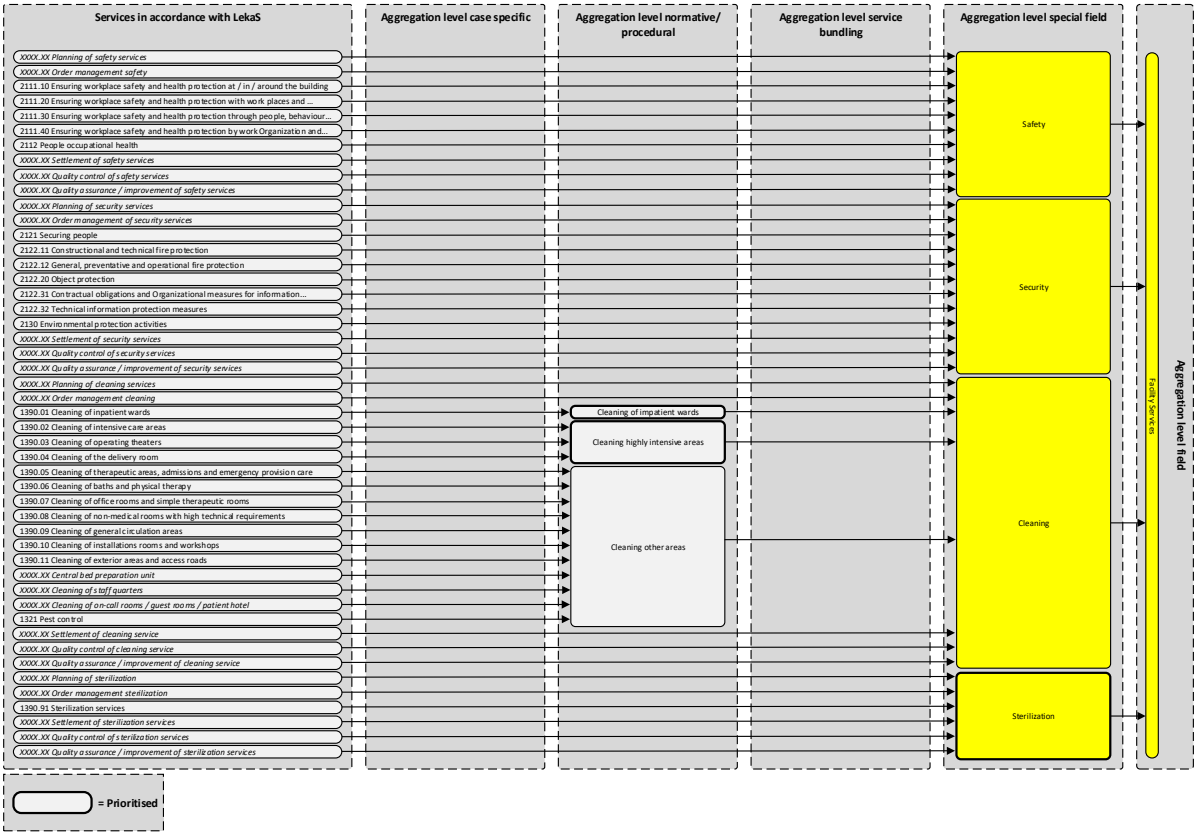

Figure 18: Section of the KenmoS part facility services
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-facility-services.jpg

Facility Services consists of the four subject areas:

- Safety
- Security
- Cleaning
- Sterilisation

Their composition and aggregations in the KPI model are explained in detail below.

4.4.3.1 Subject area of safety

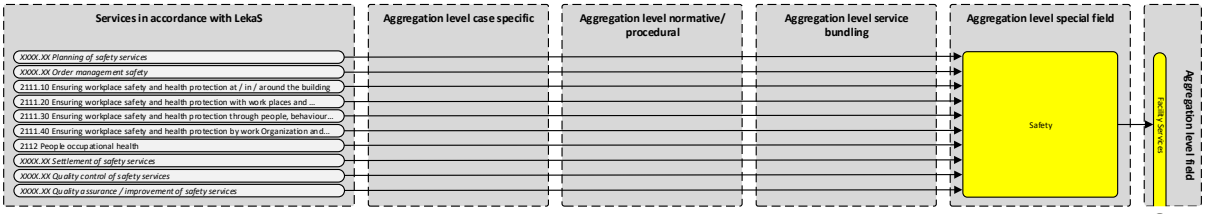

Figure 19: Section of the KenmoS part safety
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-facility-services.jpg

The subject area of safety contains the LekaS* services:

XXXX.XX *Planning of safety services*
XXXX.XX *Order management safety*
2111.10 Ensuring workplace safety and health protection at / in / around the building
2111.20 Ensuring workplace safety and health protection with work places and equipment with respect to work places / the work place and installations
2111.30 Ensuring workplace safety and health protection through people, behaviour and workload
2111.40 Ensuring workplace safety and health protection by work Organisation and special protection
2112 People occupational health
XXXX.XX *Settlement of safety services*
XXXX.XX *Quality control of safety services*
XXXX.XX *Quality assurance / improvement of safety services*

The subject area of safety corresponds to the support process safety in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
No clustering was performed here.

Aggregation level service bundling
No clustering was performed here.

4.4.3.2 Subject area of security

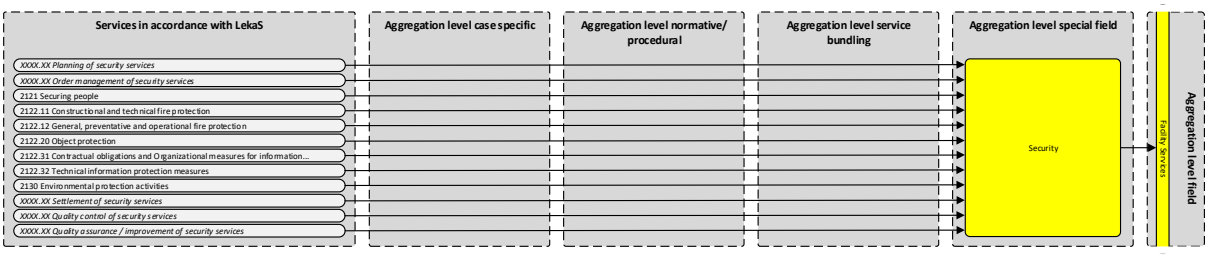

Figure 20: Section of the KenmoS part security
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-facility-services.jpg

The subject area of security contains the LekaS* services:
XXXX.XX Planning of security services
XXXX.XX Order management of security services
2121 Securing people
2122.11 Constructional and technical fire protection
2122.12 General, preventative and operational fire protection
2122.20 Object protection
2122.31 Contractual obligations and organisational measures for information protection
2122.32 Technical information protection measures
2130 Environmental protection activities
XXXX.XX Settlement of security services
XXXX.XX Quality control of security services
XXXX.XX Quality assurance / improvement of security services
The subject area of security corresponds to the support process security in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
No clustering was performed here.

Aggregation level service bundling
No clustering was performed here.

4.4.3.3 Subject area of cleaning

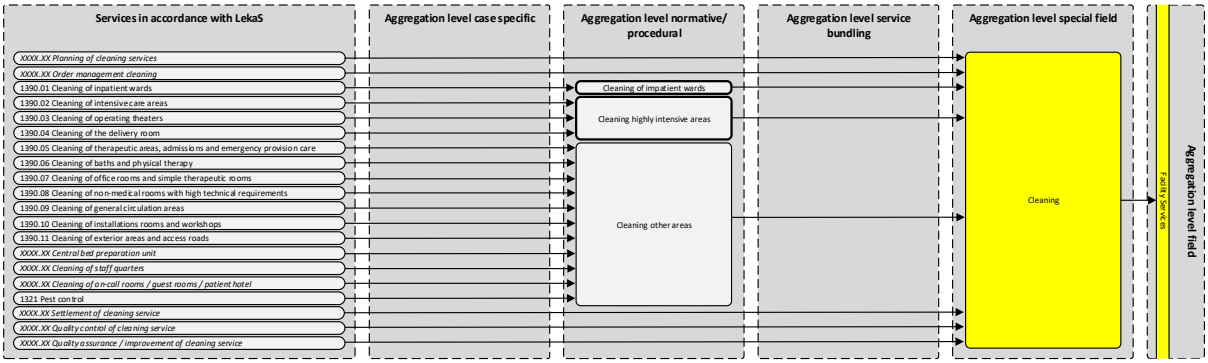

Figure 21: Section of the KenmoS part cleaning
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-facility-services.jpg

The subject area of cleaning contains the LekaS* services:
XXXX.XX Planning of cleaning services
XXXX.XX Order management cleaning
1390.01 Cleaning of inpatient wards
1390.02 Cleaning of intensive care areas
1390.03 Cleaning of operating theaters
1390.04 Cleaning of the delivery room
1390.05 Cleaning of therapeutic areas, admissions and emergency provision care
1390.06 Cleaning of baths and physical therapy
1390.07 Cleaning of office rooms and simple therapeutic rooms
1390.08 Cleaning of non-medical rooms with high technical requirements
1390.09 Cleaning of general circulation areas
1390.10 Cleaning of installations rooms and workshops
1390.11 Cleaning of exterior areas and access roads
XXXX.XX Central bed preparation unit
XXXX.XX Cleaning of staff quarters
XXXX.XX Cleaning of on-call rooms / guest rooms / patient hotel
1321 Pest control
XXXX.XX Settlement of cleaning service
XXXX.XX Quality control of cleaning service
XXXX.XX Quality assurance / improvement of cleaning service
The subject area of cleaning corresponds to the support process cleaning in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
Cluster cleaning of inpatient wards
The cluster cleaning of inpatient wards consists of:
1390.01 Cleaning of inpatient wards

Cluster cleaning highly intensive areas
The cluster cleaning highly intensive areas consists of:
1390.02 Cleaning of intensive care areas
1390.03 Cleaning of operating theaters
1390.04 Cleaning of the delivery room

Cluster cleaning other areas
The cluster cleaning other areas consists of:

1390.05	Cleaning of therapeutic areas, admissions and emergency provision care
1390.06	Cleaning of baths and physical therapy
1390.07	Cleaning of office rooms and simple therapeutic rooms
1390.08	Cleaning of non-medical rooms with high technical requirements
1390.09	Cleaning of general circulation areas
1390.10	Cleaning of installations rooms and workshops
1390.11	Cleaning of exterior areas and access roads
XXXX.XX	*Central bed preparation unit*
XXXX.XX	*Cleaning of staff quarters*
XXXX.XX	*Cleaning of on-call rooms / guest rooms / patient hotel*
1321	Pest control

Aggregation level service bundling
No clustering was performed here.

4.4.3.4 Subject area of sterilisation

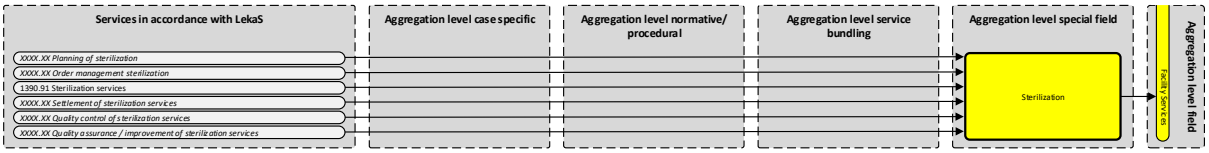

Figure 22: Section of the KenmoS part sterilisation
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-facility-services.jpg

The subject area of sterilisation contains the LekaS* services:
XXXX.XX Planning of sterilisation
XXXX.XX Order management sterilisation
1390.91 Sterilisation services
XXXX.XX Settlement of sterilisation services
XXXX.XX Quality control of sterilisation services
XXXX.XX Quality assurance / improvement of sterilisation services
The subject area of sterilisation corresponds to the support process sterilisation in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
No clustering was performed here.

Aggregation level service bundling
No clustering was performed here.

4.4.3.5 Hotel services area

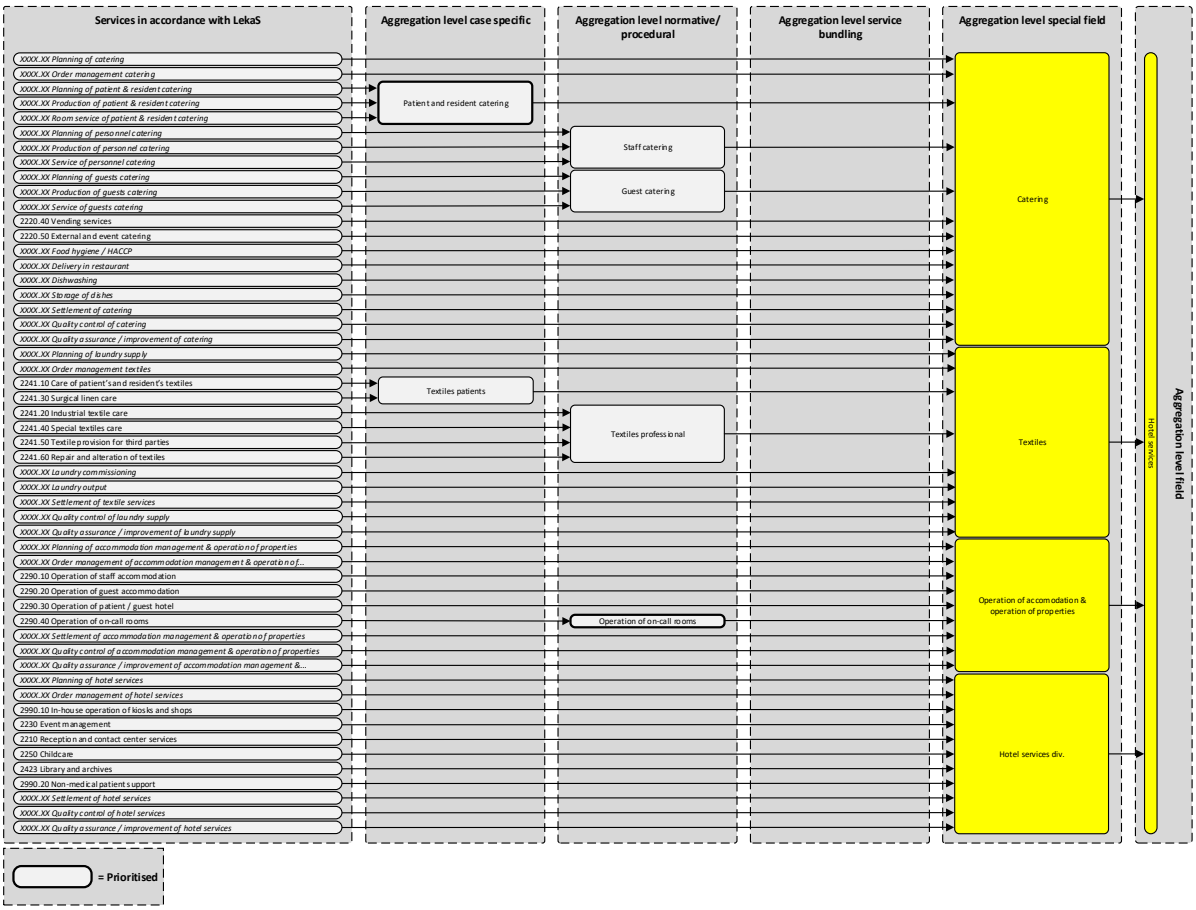

Figure 23: Section of the KenmoS part hotel services
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-hotel-services.jpg

Hotel Services consists of the four subject areas

- Catering
- Laundry supply
- Accommodation management & operation of properties
- Diverse hotel services

Their composition and aggregations in the KPI model are explained in detail below.

4.4.3.6 Subject area of catering

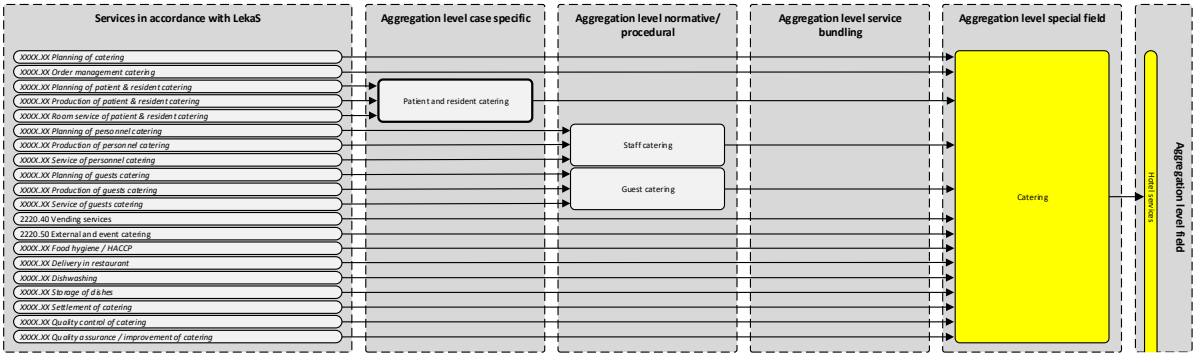

Figure 24: Section of the KenmoS part catering
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-hotel-services.jpg

The subject area of catering contains the LekaS* services:
XXXX.XX Planning of catering
XXXX.XX Order management catering
XXXX.XX Planning of patient & resident catering
XXXX.XX Production of of patient & resident catering
XXXX.XX Room service of patient & resident catering
XXXX.XX Planning of personnel catering
XXXX.XX Production of personnel catering
XXXX.XX Service of personnel catering
XXXX.XX Planning of guests catering
XXXX.XX Production of guests catering
XXXX.XX Service of guests catering
2220.40 Vending services
2220.50 External and event catering
XXXX.XX Food hygiene / HACCP
XXXX.XX Delivery in restaurant
XXXX.XX Dishwashing
XXXX.XX Storage of dishes
XXXX.XX Settlement of catering
XXXX.XX Quality control of catering
XXXX.XX Quality assurance / improvement of catering
The subject area of catering corresponds to the support process catering in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
Cluster patient and resident catering
The cluster patient & resident catering consists of:
XXXX.XX Planning of patient & resident catering
XXXX.XX Production of of patient & resident catering
XXXX.XX Room service of patient & resident catering

Aggregation level normative / procedural
Cluster staff catering
The cluster staff catering consists of:
XXXX.XX Planning of personnel catering
XXXX.XX Production of personnel catering
XXXX.XX Service of personnel catering
Cluster guest catering

The cluster guest catering consits of:
XXXX.XX Planning of guests catering
XXXX.XX Production of guests catering
XXXX.XX Service of guests catering

Aggregation level service bundling
No clustering was performed here.

4.4.3.7 Subject area of laundry supply

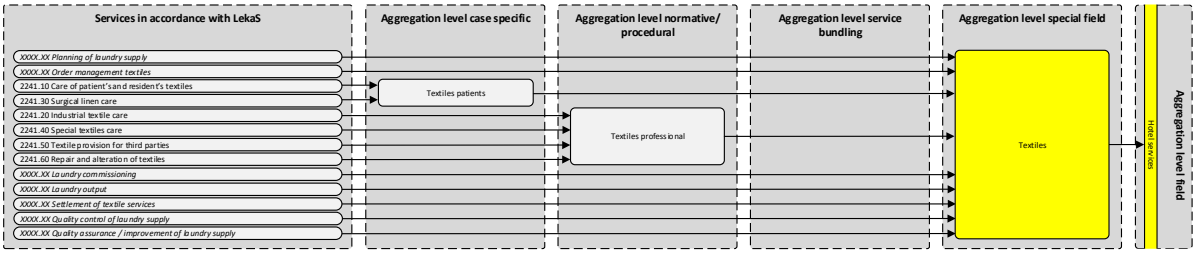

Figure 25: Section of the KenmoS part laundry supply
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-hotel-services.jpg

The subject area of laundry supply contains the LekaS* services:
XXXX.XX Planning of laundry supply
XXXX.XX Order management textiles
2241.10 Care of patient's and resident's textiles
2241.30 Surgical linen care
2241.20 Industrial textile care
2241.40 Special textiles care
2241.50 Textile provision for third parties
2241.60 Repair and alteration of textiles
XXXX.XX Laundry commissioning
XXXX.XX Laundry output
XXXX.XX Settlement of textile services
XXXX.XX Quality control of laundry supply
XXXX.XX Quality assurance / improvement of laundry supply
The subject area of laundry supply corresponds to the support process laundry supply in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
Cluster textiles patients
The cluster textiles patients consists of:
2241.10 Care of patient's and resident's textiles
2241.30 Surgical linen care

Aggregation level normative / procedural
Cluster textiles professional
The cluster textiles professional consists of:
2241.20 Industrial textile care
2241.40 Special textiles care
2241.50 Textile provision for third parties
2241.60 Repair and alteration of textiles

Aggregation level service bundling
No clustering was performed here.

4.4.3.8 Subject area of accommodation management and operation of properties

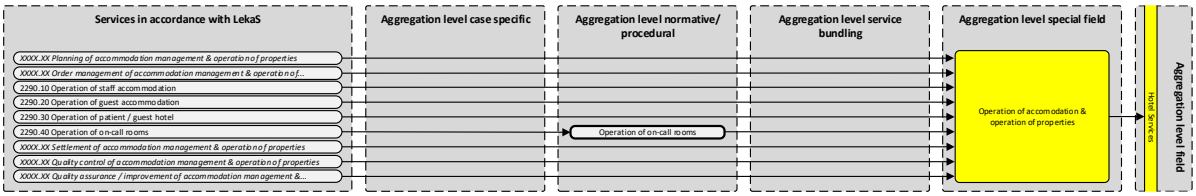

Figure 26: Section of the KenmoS part accommodation management and operation of properties
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-hotel-services.jpg

The subject area accommodation management and operation of properties contains the LekaS* services:

XXXX.XX Planning of accommodation management & operation of properties
XXXX.XX Order management of accommodation management & operation of properties
2290.10 Operation of staff accommodation
2290.20 Operation of guest accommodation
2290.30 Operation of patient / guest hotel
2290.40 Operation of on-call rooms
XXXX.XX Settlement of accommodation management & operation of properties
XXXX.XX Quality control of accommodation management & operation of properties
XXXX.XX Quality assurance / improvement of accommodation management & operation of properties

The subject area accommodation management and operation of properties corresponds to the support process accommodation management and operation of properties in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
Cluster operation of on-call rooms
The cluster operation of on-call rooms consists of:
2290.40 Operation of on-call rooms

Aggregation level service bundling
No clustering was performed here.

4.4.3.9 Subject area of hotel services

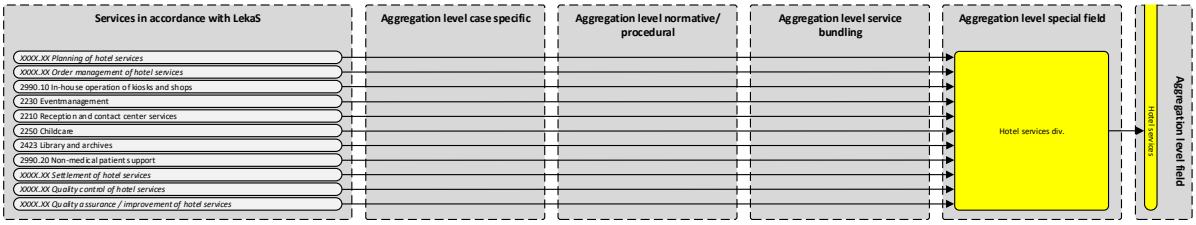

Figure 27: Section of the KenmoS part hotel services
Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenmos-subject-area-hotel-services.jpg

The subject area of hotel services contains the LekaS* services:
XXXX.XX Planning of hotel services
XXXX.XX Order management of hotel services
2990.10 In-house operation of kiosks and shops
2230 Event management
2210 Reception and contact center services
2250 Childcare
2423 Library and archives
2990.20 Non-medical patient support
XXXX.XX Settlement of hotel services
XXXX.XX Quality control of hotel services
XXXX.XX Quality assurance / improvement of hotel services
The subject area of hotel services corresponds to the support process hotel service in PromoS.
*services written in italics are included in the LekaS version 2.0 and are described in more detail than described so far in the sense of the Deming cycle (see PromoS, chapter 2.1.2)

Aggregation level case specific
No clustering was performed here.

Aggregation level normative / procedural
No clustering was performed here.

Aggregation level service bundling
No clustering was performed here.

4.5 Evaluation of the model

As outlined in Chapter 1.5, only a preliminary validation of the model can be carried out at present on the basis of the generally acceptable modelling principles: Working together with practice increases the probability that the principle of relevance and syntactic correctness are given. The project team is of the opinion that the principles of clarity, systematic construction, semantic correctness and comparability are given (see the interrelations in PromoS (Gerber et al., 2016b), ApplikaS (Gerber et al., 2016a) and RemoS (Gerber & Hofer, 2016b), however, must be examined after the introduction into practice. The extent to which the model is applied in practice depends on whether the principle of profitability is applied. This question can only be addressed at a later date.

5 KenkaS – Key Performance Catalogue for Non-medical Support Services in Hospitals

The catalogue consists of tables with collected and developed KPIs. It is shown in appendices 2 - 39 and can be downloaded at https://www.zhaw.ch/en/lsfm/institutes-centres/ifm/about-us/hospitality-management/fm-in-healthcare/remos/kenkas/ in Excel format.
This chapter describes how the catalogue was put together and what system was used.

The KPI catalogue was developed in several iterative steps:
Step 1: Collection of KPIs in HC and FM from the literature
Step 2: Elimination of KPIs irrelevant or not viable for FM in HC and supplementation of the missing FM in HC KPIs in the KPI model KenmoS (see chapters 4.3 and 4.4).
Step 3: Definition of basic numbers to be considered in each (subject) area
Step 4: Categorization and mapping of the KPIs collected
Step 5: Prioritizing the key figures and linking with PromoS and LekaS

5.1 Step 1: Collecting KPIs in HC and FM from literature

From the literature in step 1, all the appropriate KPIs were recorded in Excel for each subject area. The following data were registered according to the following criteria:

- Name and parameters involved in the measure
- Unit of parameters
- KPI category in system of organisation
- Comments on how the the KPIs were collected
- Comments General

Regarding the name of the **KPI**, it was important to find a unique name. The explicit designation of the **unit of parameters** was necessary to prevent misunderstandings or ambiguities. To ensure effective implementation, each individual parameter was identified as a stock or movement figure. In the column **KPI category in classification system**, each KPI was assigned to the KPI categorisation shown in Figure 6. Clarifications regarding effective data collection were entered under **Remarks – (collection)** with regard to the implementation in practice; these were either evident in the literature or arose out the expert discussions. In the **general comments** column, general notes are recorded where necessary.

5.2 Step 2: Elimination of KPIs which are irrelevant or stillborn for FM in HC / supplementation of the missing FM in HC KPIs in the KPI-model KenmoS

In a second step, KPIs which were irrelevant or not viable for FM in HC were determined and removed from the collection by means of expert rounds. For this phase, all financial figures, which are dealt with in a separate project, also included this. The KPIs specific to FM in HC lacking have been defined (see chapter 3.3) and included in the collection.

5.3 Step 3: Definition of basic KPIs to be used in each area/subject area

Finally, 21 basic (K)PIs were determined, which were uniformly defined and used in each (subject) area. These are the following (K)PIs:

- Number of FTE of subject areas
- Total cost of subject area
- Personnel expenditure of subject area
- Costs of externally provided services of subject area in %
- Degree of decentralisation of subject area in %
- Total cost of subject area per bed inpatient
- Total cost of subject area per case inpatient
- Cost of subject area total per case outpatient
- Costs total subject area per day of care

- Costs total subject area per patient
- Costs total subject area per discharge inpatient
- Total cost of the subject area per average length of stay
- Costs of subject area per FTE total
- Total cost of subject area per FTE FM in HC total
- Total cost of subject area in relation to total cost of hospital
- Specialist staff rate in %
- Fluctuation rate in %
- Illness-related absenteeism rate subject area in %
- Overtime quota subject area in %
- Training rate per employee subject area in %
- Customer satisfaction in the subject area in %

5.4 Step 4: Categorisation of collected KPIs

In order to make the large number of collected KPIs manageable, searchable and sortable, the (K)PIs were categorised. The different categorisation groups are described in detail in section 3.3. The corresponding assignment of the KPIs has been made in the **KPI category column in the system**.

5.5 Step 5: Prioritisation of the KPIs and their linking with PromoS and LekaS

From the extensive KPI collections of each subject area, a prioritisation with approximately 10 top KPIs was carried out using expert rounds. In doing so, it was important to define whether collecting the prioritised KPIs would serve any purpose and, if so, what would be the objective of the KPI acquisition. These two items were listed in the columns **Top 10?** and **Goal of the KPIs / What should be achieved?** recorded. The validation of this prioritisation will result from the use in practice and in particular during systematic benchmarking in the future.

In order to assign the prioritised KPIs to the correct level in the process model PromoS (Gerber et al., 2016b), the relevant data were recorded in the column **level support process** and **level sub-process**. At the current stage, no KPIs have been defined / selected at the process step level. In the **Output LekaS** column, the LekaS services involved were also inserted in accordance with the information in PromoS (Gerber et al., 2016b).

A prioritised and consolidated presentation of the KPIs of each subject area is given in the appendices 25 - 39.

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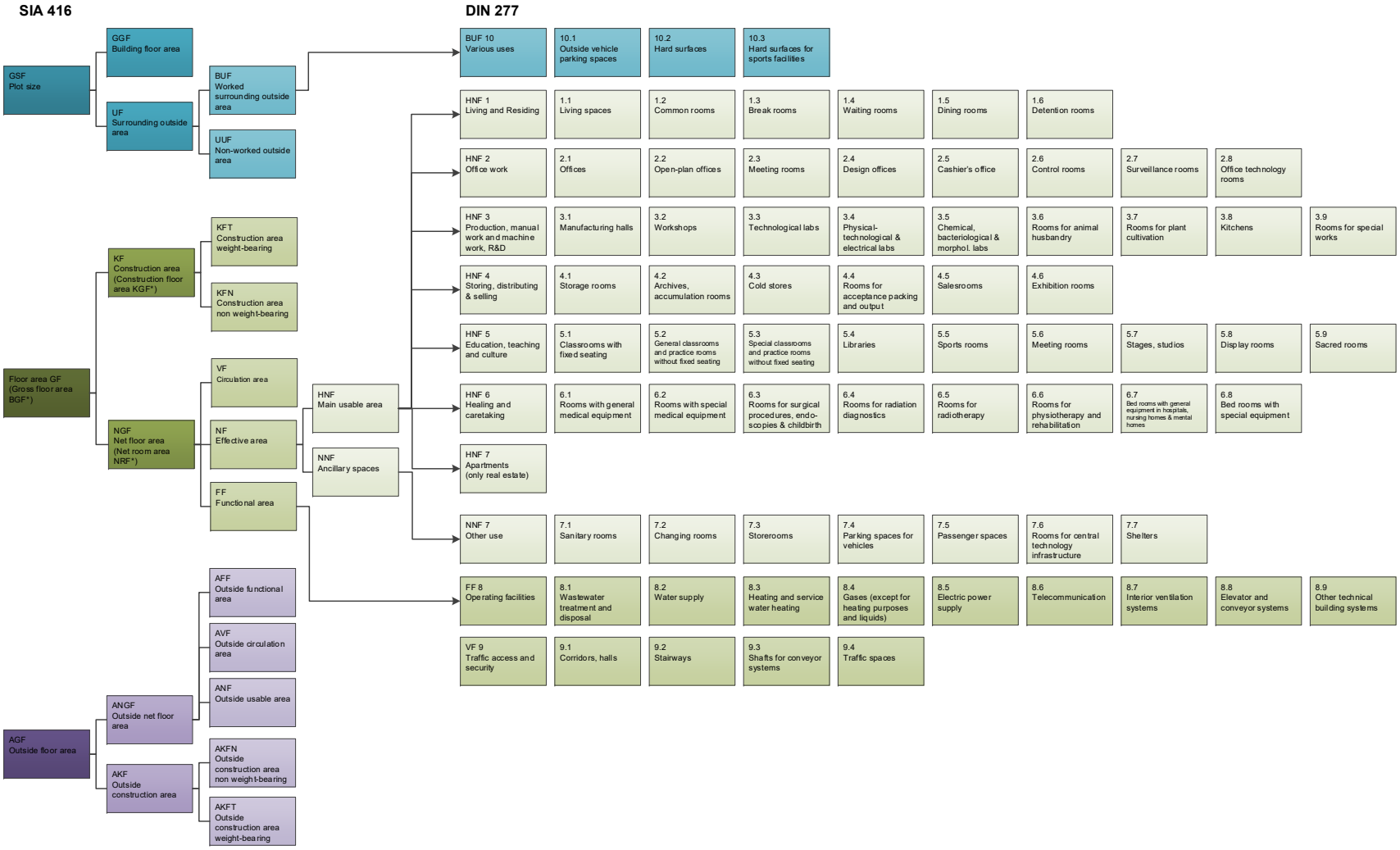
Appendix 1: Area definitions used according to SIA 416: 2003 resp. DIN 277-2: 2005-02



*) In brackets the designations as they are used in DIN 277.

Download of figure optimised in A3: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/_bilder/kenkas-space-definitions.jpg

Appendix 2: Complete listing of the structure (key) figures of the total hospital

Structure(key)figures overall hospital	Unit parameter	KPI-Category	Remarks
Absolute-/Stock figures			
Number of spaces (plots)	Stock figure / spaces	Structure figure/ Stock figure	
Number of sites	Stock figure / sites	Structure figure/ Stock figure	
Number of medical buildings	Stock figure / medical buildings	Structure figure/ Stock figure	
Number of clinics	Stock figure / clinics	Structure figure/ Stock figure	
Number of operating theatres	Stock figure/ Operating theatres	Structure figure/ Stock figure	Number of operating theatres, which are in operation in the hospital; Source Formula: KS A.13.09
Number of inpatient beds: Number of bed days / 365	Stock figure/ Number of bed days	Structure figure/ Stock figure	The average number of manageable and available beds coincide with the number of days of operation of the beds divided by 365; calculated per activity type. Source/Formula: KS X1.02.01 / 365
Total number of FTEs in the hospital	Stock figure/ FTE Hospital	Structure figure/ Stock figure	Doctors, nursing staff, other medical personnel Personnel PLUS welfare services (advice and support), housekeeping personnel, technical services and administrative personnel. Number of FTE shows the number of hours worked during a year in proportion to a normal 100% workload. Source/Formula: Σ KS A.14.05.02
Absolute-/Flow figures			
Total costs of the hospital	Flow figure/ CHF	Structure figure/ Flow figure	
Total number of inpatient cases (DRG)	Flow figure/ Cases	Structure figure/ Flow figure	
Total number of outpatient cases	Flow figure/ Cases	Structure figure/ Flow figure	
Number of days of care (inpatient, without day of discharge)	Flow figure/ Number of days of care	Structure figure/ Flow figure	Total number of patient days of all activity types, which are performed for inpatient treatments (without consideration of the discharging day) between the 1st of January and the 31st of December Source/Formula: Σ KS X1.01.01
Number of patients	Flow figure/ Patients	Structure figure/ Flow figure	Number of patients which are inpatient registered in the hospital, if beds, inclusive day-care beds, (not functional beds) are being occupied.
Number of inpatient discharges	Flow figure/ Discharges	Structure figure/ Flow figure	Total number of administrative cases, which in the case of all activity types, have been completed in the period of 1. January to 31. December. Source/Formula: Σ KS X1.01.02
Average length of inpatient stay in days: Number of care days/ Number of discharges	Flow figure/ Number of care days Flow figure/ Discharges	Structure key figure/ Length of stay	Accounted per activity type Source/Formula number care days: KS X1.01.01 Source/Formula number care days: KS X1.01.02
Concepts/Strategies			
Risk strategy already implemented? Risks will be regularly monitored and checked. Measures to minimize and reduce the risks will be set, implemented and checked.	yes/no	Structure figure/ Concepts/ Strategies	- All risks will be periodically checked with regard to the probability of occurrence and the possible extend of damage. - The type and the number of occurrences and damages will be captured. Analyses of occurrences are performed. - Measures against risks are identified with regard to their implementation and impact. A periodically created report of risks is informing about the state of the risk management.
Environmental monitoring already implemented? Performance of environmental-key figure relevant activities	yes/no	Structure figure/ Concepts/ Strategies	Performance of environment-indicator relevant activities: Disposal of common special waste Disposal of medical special waste Disposal of slurry (oil separator etc.) Disposal of other waste requiring inspection (for example edible oil, the content of the oil separator, electronic waste) Disposal of radioactive material Maintenance of air-conditioning systems and -devices Maintenance of tank facilities Maintenance of combustion facilities / heaters Maintenance of wastewater treatment plants Maintenance of outdoor facilities, if pesticides are used Maintenance of swimming-pool technology
Operating concept Catering	Selection	Structure figure/ Concepts/ Strategies	
Service times	Selection	Structure figure/ Concepts/ Strategies	
Bed-Occupancy			
Average bed occupancy in %: (Number of calculation days + number of occupancy days) / beds operated * calendar days * 100	Flow figure/ Calculation days Flow figure/ Occupancy days Stock figure/ Beds	Structure key figure/ Bed occupancy	The actual bed occupancy corresponds to the sum of the calculation- and the occupancy days, as every patient occupies one bed per complete day in the facility.
Occupancy rate of inpatient beds in %: Number of care days / Number of days of beds operated	Flow figure/ Number of care days Flow figure/ Days of beds operated Stock figure/ beds	Structure key figure/ Bed occupancy	Accounted per activity type Source/Formula number care days: KS X1.01.01 Source/Formula number bed occupancy days: KS X1.02.01 * 100

Continuation

Continuation

Case Mix Index			
Case Mix Index (CMI) gross: Sum (Cost weight) / Number of cases	Stock figure/ Cost weight Stock figure/ Number of cases	Structure key figure/ Case Mix Index	From MS with MS 1.3.V01 = 3 (Type of the inpatient treatment) AND MS 0.2.V02 = «A» (discharges within the year); Outlier-corrected moderate degree of severity of the treated inpatient cases. At a hospital stay with a length of stay outside of the expected limitations, the cost will be appropriately weighted. The calculation of the CMI is based on the data of the medical statistic and will be made by the BFS.
Spatial structure			
Degree of concentration: Number of spaces (parcels) / medical buildings	Stock figure / spaces Stock figure / medical buildings	Structure figure / degree of concentration	
Expansion of sites: Radius of hospital in km / number of sites	Stock figure / radius Stock figure / sites	Structure figure / expansion of sites	
Degree of decentralisation			
Degree of decentralisation: Number of decentralised organisational units / Total number of organisational units	Stock figure/ Organisational units Stock figure/ Organisational units	Structure key figure/ Degree of decentralisation	

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Appendix 3: Complete listing of the structure (key) figures for the total FM in HC

Structure(key)figures FM	Unit parameter	KPI-Category	Remarks
Absolute-/Stock figures			
Total number of FTEs in the area of FM	FTE	Structure number/ Absolute-/Stock figure	Number of all FTEs from the areas of procurement, warehousing, transport & fleet management, disposal & recycling, maintenance, space management, energy, safety, security, cleaning, sterilisation, hotel services, textiles, operation of accommodation & operation of properties, Hotel services div. according to LekaS/Gerber et al., 2015
Total number of FTEs *subject areas*	FTE	Structure number/ Absolute-/Stock figure	All FTEs in the individual operational divisions of procurement, warehousing, transport & fleet management, disposal & recycling, maintenance, space management, energy, safety, security, cleaning, sterilisation, hotel services, textiles, operation of accommodation & operation of properties, Hotel services div. according to LekaS/Gerber et al., 2015
Acquisition-/ Stock values	CHF	Structure number/ Absolute-/Stock figure	Values in accordance with bookkeeping taking account of Rekole
Area / Volume	m2 / m3	Structure number/ Absolute-/Stock figure	Area data, to be defined precisely for each KPI on a case by case basis
Absolute-/Flow figures			
Total costs of FM in HC	CHF	Structure number/ Absolute-/Flow figure	Sum of all costs from the areas of procurement, warehousing, transport & fleet management, disposal & recycling, maintenance, space management, energy, safety, security, cleaning, sterilisation, hotel services, textiles, operation of accommodation & operation of properties, Hotel services div. according to LekaS/Gerber et al., 2015
Personnel expenditures in the area of FM	CHF	Structure number/ Absolute-/Flow figure	Personnel expenditures taking account of Rekole of the areas of procurement, warehousing, transport & fleet management, disposal & recycling, maintenance, space management, energy, safety, security, cleaning, sterilisation, hotel services, textiles, operation of accommodation & operation of properties, Hotel services div. according to LekaS/Gerber et al., 2015
Proportions			
Section vs. Entire area		Structure figure / sections	
Partial aspect vs. Overall aspect		Structure figure / sections	
Old vs. New		Structure figure / sections	
Personnel structure		Structure figure / sections	
		Structure figure / sections	
Degree of externalisation			
Proportion of costs of externally rendered services: Costs of externally rendered FM services / Total costs of rendered FM services * 100	CHF CHF	Structure key-figure / degree of externalisation	
Degree of decentralisation			
Degree of decentralisation: Total number of decentralised organisational units / Total number of all units	Stock figure / Organisational units Stock figure / Organisational units	Structure key-figure/ Degree of decentralisation	

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Appendix 4: Complete listing of the uniform base (key) figures for all areas/subject areas

Basic(key)figures consistent for all (subject)areas	Unit parameter	KPI-Category	Remarks to the key figure (collection)	General remarks
Number of FTE of subject area	Stock figure / FTE subject area	Structure number / Stock figure		
Total costs of subject area	Flow figure / CHF	Operative costs / Flow figure		
Personnel expenditures of subject area	Flow figure / CHF	Operative costs / Flow figure		
Proportion of costs for services rendered externally of subject area in %: Costs of FM services rendered externally Total costs of FM services rendered * 100	Flow figure / CHF Flow figure / CHF	Structure key figure/ Degree of externalisation		
Degree of decentralisation of subject area in %: Number of decentralised organisational units of subject area/ Total number of organisational units of subject area	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC	Structure key figure / Degree of decentralisation		
Total costs of subject area per inpatient bed: Total costs of subject area/ Number of inpatient beds	Flow figure / CHF Stock figure / Beds	Operative cost-Key figure / Costs per absolute-/ Stock figure		
Total costs of subject area per inpatient case: Total costs of subject area/ Number of inpatient cases	Flow figure / CHF Flow figure / Cases	Operative cost-Key figure / Costs per absolute-/ Flow figure		
Total costs of subject area per outpatient case: Total costs per subject area/ Number of outpatient cases	Flow figure / CHF Flow figure / Cases	Operative cost-Key figure / Costs per absolute-/ Flow figure		
Total costs of subject area per care day: Total costs per subject area/ Number of care days	Flow figure / CHF Flow figure / Care days	Operative cost-Key figure / Costs per absolute-/ Flow figure		
Total costs of subject area per patient: Total costs per subject area/ Number of patients	Flow figure / CHF Flow figure / Patients	Operative cost-Key figure / Costs per absolute-/ Flow figure		
Total costs of subject area per inpatient discharge: Total costs of subject area / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges	Operative cost-Key figure / Costs per absolute-/ Flow figure		
Total costs of subject area per average length of stay: Total costs of subject area/ Average length of stay	Flow figure / CHF Flow figure / Length of stay	Operative cost-Key figure / Costs per absolute-/ Flow figure		
Total costs of subject area per total number of FTEs: Total costs of subject area/ Total number of FTEs in HC	Flow figure / CHF Stock figure / FTE	Operative cost-Key figure / Costs per absolute-/ Stock figure		
Total costs of subject area per total FTE FM in HC: Total costs of subject area/ Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE	Operative cost-Key figure / Costs per absolute-/ Stock figure		
Total costs of subject area in relation to the total costs of the hospital: Total costs of subject area/ Total costs of the hospital	Flow figure / CHF Flow figure / CHF	Operative cost-Key figure / Cost ratio		
Quota of qualified personnel of subject area in %: Number of FTE of qualified personnel of subject area/ (Number of FTE of qualified personnel of subject area + Number of FTE of auxiliary staff of subject area) * 100	Stock figure / FTE subject area Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel		
Fluctuation rate of subject area in %: Number of staff leaving subject area Average number of staff of subject area * 100	Stock figure / FTE subject area Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel		
Absence quota due to illness of subject area in %: Absences of subject area/ Planned working time of subject area * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours	Quality-Key figure / Structure quality personnel		
Overtime quota of subject area in %: Overtime of subject area/ Normal working hours of subject area * 100	Flow figure / Overtime Flow figure / Working hours	Quality-Key figure / Structure quality personnel		
Quota of further education per employee of subject area in %: Hours of continuing education of subject area/ Working hours of subject area * 100	Flow figure / Hours of continuing education Flow figure / Working hours	Quality-Key figure / Structure quality personnel		
Customer satisfaction of subject area in %	Stock figure / %	Quality-Key figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level	

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Appendix 5: Complete listing of collected and developed key figures for FM in HC in total

Key figures (KPIs) FM in HC overall	Unit parameter	KPI-Category	Area	Remarks to the key figure (collection)	General remarks
Total number of FTE FM in HC	Stock figure / FTE subject area	Structure number / Stock figure	FM in HC		
Total costs of FM in HC	Flow figure / CHF	Operative costs / Flow figure	FM in HC	In preferred time unit (p.a., quarter, month, week, day)	
Total personnel expenditures FM in HC	Flow figure / CHF	Operative costs / Flow figure	FM in HC	Personnel expenditures according to REKOLE	
Proportion of costs of externally rendered FM services in %: Costs of externally rendered FM services/ Total costs of rendered FM services * 100	Flow figure / CHF Flow figure / CHF	Structure key figure/ Degree of externalisation	FM in HC		
Degree of decentralisation in %: Number of decentralised FM organisation units/ Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC	Structure key figure / Degree of decentralisation	FM in HC		
Total costs of FM in HC per inpatient bed: Total costs of FM in HC/ Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds	Operative cost-Key figure / Costs per absolute-/ Stock figure	FM in HC		
Total costs of FM in HC per FTE: Total costs of FM in HC/ Total number of FTE	Flow figure / CHF Stock figure / FTE Hospital	Operative cost-Key figure / Costs per absolute-/ Stock figure	FM in HC		
Total costs of FM in HC per FTE FM in HC: Total costs of FM in HC/ Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC	Operative cost-Key figure / Costs per absolute-/ Stock figure	FM in HC		
Total costs of FM in HC per inpatient case: Total costs of FM in HC/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	Operative cost-Key figure / Costs per absolute-/ Flow figure	FM in HC		
Total costs of FM in HC per outpatient case: Total costs of FM in HC/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	Operative cost-Key figure / Costs per absolute-/ Flow figure	FM in HC		
Total costs of FM in HC per care day: Total costs of FM in HC/ Number of care days	Flow figure / CHF Flow figure / Discharges	Operative cost-Key figure / Costs per absolute-/ Flow figure	FM in HC		
Total costs of FM in HC per patient: Total costs of FM in HC/ Number of patients	Flow figure / CHF Flow figure / Patients	Operative cost-Key figure / Costs per absolute-/ Flow figure	FM in HC		
Total costs of FM in HC per inpatient discharge: Total costs of FM in HC/ Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges	Operative cost-Key figure / Costs per absolute-/ Flow figure	FM in HC		
Total costs of FM in HC per average length of stay: Total costs of FM in HC/ Average length of stay	Flow figure / CHF Flow figure / Length of stay	Operative cost-Key figure / Costs per absolute-/ Flow figure	FM in HC		
Total costs of FM in HC in relation to the total costs of the hospital: Total costs of FM in HC/ Total costs of the hospital	Flow figure / CHF Flow figure / CHF	Operative cost-Key figure / Cost ratio	FM in HC		
Specialist quota of FM in HC in %: Number of FTE of specialists in FM in HC / (Number of FTE of specialists in FM in HC + Number of FTE of auxiliary staff in FM in HC) *100	Stock figure / FTE subject area Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	FM in HC		
Fluctuation rate of FM in HC in %: Number of departures of FM in HC / Average number of staff of FM in HC * 100	Stock figure / FTE subject area Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	FM in HC		
Absence quota due to illness of FM in HC in %: Absence time of FM in HC/ Planned working time of FM in HC * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours	Quality-Key figure / Structure quality personnel	FM in HC		
Quota of overtime in the area of hotel services in %: Overtime of FM in HC/ Normal working hours of FM in HC * 100	Flow figure / Overtime Flow figure / Working hours	Quality-Key figure / Structure quality personnel	FM in HC		
Rate of continuing education per employee of FM in HC in %: Hours of continuing education of FM in HC/ Working hours of FM in HC * 100	Flow figure / Hours of continuing education Flow figure / Working hours	Quality-Key figure / Structure quality personnel	FM in HC		
Customer satisfaction of FM in HC in %	%	Quality-Key figure/ Customer satisfaction	FM in HC	IFM-standard questionnaire internal customer satisfaction on initial level	

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Appendix 6: Complete listing of collected and developed key figures for the area of logistics

Key figures (KPIs)	Unit parameter	KPI-Category	Remarks to the key figure (collection)	General remarks
Area of logistics				
Total number of FTE´s in the area of logistics	Stock figure / FTE subject area	Structure figure/ Stock figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics	Flow figure / CHF	Operative costs / Flow figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Personnel expenditures in the area of logistics	Flow figure / CHF	Operative costs / Flow figure	Personnel expenditures according to REKOLE; Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Proportion of costs of externally rendered logistics services in %:	Flow figure / CHF	Structure key figure/ Degree of externalisation	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Costs of externally rendered logistics services/ Total costs of rendered logistics services * 100	Flow figure / CHF			
Degree of decentralisation in the area of logistics services in %:	Stock figure / Organisational units decentralised	Structure key figure / Degree of decentralisation		
Number of decentralised organisation units in the area of logistics / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units FM in HC			
Total costs in the area of logistics per inpatient bed:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Stock figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics/ Number of inpatient beds	Stock figure / Inpatient beds			
Total costs in the area of logistics per FTE:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Stock figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics/ Total number of FTE	Stock figure / FTE hospital			
Total costs in the area of logistics per FTE FM in HC:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Stock figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics/ Total number of FTE FM in HC	Stock figure / FTE FM in HC			
Total costs in the area of logistics per inpatient case:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Flow figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics/ Number of inpatient cases	Flow figure / Inpatient cases			
Total costs in the area of logistics per outpatient case:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Flow figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics/ Number of outpatient cases	Flow figure / Outpatient cases			
Total costs in the area of logistics per care day:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Flow figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics / Number of care days	Flow figure / Discharges			
Total costs in the area of logistics per patient:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Flow figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics / Number of patients	Flow figure / Patients			
Total costs in the area of logistics per inpatient discharge:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Flow figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs in the area of logistics / Number of inpatient discharges	Flow figure / Discharges			
Total costs in the area of logistics per average length of stay:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute- / Flow figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs of the area of logistics / Average length of stay	Flow figure / Length of stay			
Total costs in the area of logistics in relation to the total costs of the hospital:	Flow figure / CHF	Operative cost-Key figure / Cost ratio	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Total costs of the area of logistics / Total costs of the hospital	Flow figure / CHF			
Specialist quota in the area of logistics in %:	Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Number of FTE of specialists in the area of logistics / (Number of FTE of specialists in the area of logistics + Number of FTE of auxiliary staff in the area of logistics) *100	Stock figure / FTE subject area			
Fluctuation rate in the area of logistics in %:	Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Number of departures in the area of logistics / Average number of staff in the area of logistics * 100	Stock figure / FTE subject area			
Absence quota due to illness in the area of logistics in %:	Flow figure/ Absence time in hours	Quality-Key figure / Structure quality personnel	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Absence time in the area of logistics / Planned working time in the area of logistics * 100	Flow figure / Planned working time in hours			
Quota of overtime in the area of logistics in %:	Flow figure / Overtime	Quality-Key figure / Structure quality personnel	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Overtime in the area of logistics / Normal working hours in the area of logistics * 100	Flow figure / Working hours			
Rate of continuing education per employee in the area of logistics in %:	Flow figure / Hours of continuing education	Quality-Key figure / Structure quality personnel	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Hours of continuing education in the area of logistics / Working hours in the area of logistics * 100	Flow figure / Working hours			
Customer satisfaction for the area of logistics in %	Stock figure / %	Quality-Key figure / Customer satisfaction	IFM standard questionnaire internal customer satisfaction at initial stage; Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Average order throughput time:	Time of day	Economic performance number/ Absolute- /Flow figure	Area of logistics = subject area procurement, storage, transportation, disposal & recycling and the corresponding support processes in PromoS	
Time of delivery at the customer`s location - Time of order intake	Time of day			

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Appendix 7: Complete listing of collected and developed key figures for the subject area of procurement

Key figures (KPIs) Subject area of procurement	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of procurement	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement	Flow figure / CHF		Operative costs / Flow figure	Subject area of procurement = Support process procurement in PromoS	
Personnel expenditures in the subject area of procurement	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE	
Proportion of costs of externally rendered procurement services in %: Costs of externally rendered procurement services / Total costs of rendered procurement services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Only FM-services according to LemoS/LekaS, no projects, no investments, no procurement goods (Account group 43 in Rekole)	
Degree of decentralisation in the subject area of procurement in %: Number of decentralised organisation units in the subject area of procurement / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per inpatient bed: Total costs in the subject area of procurement / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute- / Stock figure	Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per FTE: Total costs in the subject area of procurement / Total number of FTE	Flow figure / CHF Stock figure / FTE hospital		Operative cost-key-figure / Costs per absolute- / Stock figure	Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per FTE FM in HC: Total costs in the subject area of procurement / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute- / Stock figure	Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per inpatient case: Total costs in the subject area of procurement / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	X	Operative cost-key-figure / Costs per absolute- / Flow figure	Total costs procurement including goods values and services without investments; Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per outpatient case: Total costs in the subject area of procurement / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	X	Operative cost-key-figure / Costs per absolute- / Flow figure	Total costs procurement including goods values and services without investments; Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per care day: Total costs in the subject area of procurement / Number of care days	Flow figure / CHF Flow figure / Care days	X	Operative cost-key-figure / Costs per absolute- / Flow figure	Total costs procurement including goods values and services without investments; Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per patient: Total costs in the subject area of procurement / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute- / Flow figure	Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per inpatient discharge: Total costs in the subject area of procurement / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute- / Flow figure	Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement per average length of stay: Total costs of the subject area of procurement / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute- / Flow figure	Subject area of procurement = Support process procurement in PromoS	
Total costs in the subject area of procurement in relation to the total costs of the hospital: Total costs in the subject area of procurement / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Total costs procurement including goods values and services without investments; Subject area of procurement = Support process procurement in PromoS	
Specialist quota in the subject area of logistics in %: Number of FTE of specialists in the subject area of procurement / (Number of FTE of specialists in the subject area of procurement + Number of FTE of auxiliary staff in the subject area of procurement) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of procurement = Support process procurement in PromoS	
Fluctuation rate in the subject area of procurement in %: Number of departures in the subject area of procurement / Average number of staff in the subject area of procurement * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of procurement = Support process procurement in PromoS	
Absence quota due to illness in the subject area of procurement in %: Absence time in the subject area of procurement / Planned working time in the subject area of procurement * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of procurement = Support process procurement in PromoS	
Quota of overtime in the subject area of procurement in %: Overtime in the subject area of procurement / Normal working hours in the subject area of procurement * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of procurement = Support process procurement in PromoS	
Rate of continuing education per employee in the subject area of procurement in %: Hours of continuing education in the subject area of procurement / Working hours in the subject area of procurement * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of procurement = Support process procurement in PromoS	
Customer satisfaction for the subject area of procurement in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of procurement = Support process procurement in PromoS	
Proportion of the goods value of medical procurement to the total goods value in the subject area of procurement: Goods value of medical procurement / Total goods value in the subject area of procurement * 100	Flow figure / CHF Flow figure / CHF		Structure key-figure / Proportions	Goods values = Buy-in amount; Subject area of procurement = Support process procurement in PromoS	
Proportion of the goods value of non-medical procurement to the total goods value in the subject area of procurement: Goods value of medical procurement / Total goods value in the subject area of procurement * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure / Proportions	Goods values = Buy-in amount, Account group 43 in Rekole; Subject area of procurement = Support process procurement in PromoS	
Proportion of goods value medical procurement vs. non-medical procurement: Goods value of medical procurement / Goods value of non-medical procurement	Flow figure / CHF Flow figure / CHF	X	Structure key-figure / Proportions	Goods values = Buy-in amount, Account group 43 in Rekole	

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Total costs in the subject area of procurement per number of order item: Total costs in the subject area of procurement / Total number of order items	Flow figure / CHF Flow figure / Order items	X	Operative cost-key-figure / Costs per absolute- / Flow figure	Subject area of procurement = Support process procurement in PromoS	Disproportionately high costs per planning activity (= costs per order) = little economic production planning. Reasons: Inefficient application of technology resources (for example IT) or lack of communication with other functional areas. (Werner, 2013, p. 348)
Mean costs per order item: Purchase costs / Number of order items	Flow figure / CHF Flow figure / Order items		Operative cost-key-figure / Costs per absolute- / Flow figure		
Material costs per material type: Costs of purchased material + Costs of moving material + Material customs duty-, Import duty, Taxes and Tariffs + Material Risk- and compliance costs	Flow figure / CHF Flow figure / CHF Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Costs per absolute- / Flow figure		
Relation between personnel expenditures in the subject area of procurement to goods value in the subject area of procurement: Personnel expenditures in the subject area of procurement / Goods value in the subject area of procurement	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Goods values = Buy-in amount; Personnel cost centre purchaser; Subject area of procurement = Support process procurement in PromoS	
Order proportion per subject area: Number of orders per subject area / Total number of orders	Flow figure / Orders Flow figure / Orders		Operative cost-key-figure / Cost ratio		
Average throughput time order processing: Number of effective throughput times of all executed orders / Total number of executed orders	Flow figure / Throughput time in hours Flow figure / Orders	X	Economic performance-key-figure / Process efficiency / Throughput time	Purchase requisition (Time Purchase requisition) to incoming goods	
Average planned replacement time: Sum / n with: Sum = Sum (Planned replacement time$_i$), i = 1..n n = Number of items	Flow figure / Planned replacement time Flow figure / Items		Economic performance-key-figure / Process efficiency / Throughput time		
Inventory ratio in %: Number of stocked goods / Number of procured items * 100	Flow figure / Goods Flow figure / Items		Economic performance-key-figure / Process efficiency / Throughput time		
f order meet ordering positions in %: Number of order meet ordering positions / Total number of ordering positions * 100	Flow figure / Order meet ordering positions Flow figure / Ordering positions		Quality-key-figure / Fulfilment of guidelines		
Average delivery date variance: Σ / n with: Σ = Σ_i(Delivery date variance$_i$), i = 1..n n = Number of incoming goods positions	Flow figure / Delivery date variance Flow figure / Incoming goods positions		Quality-key-figure / Fulfilment of guidelines		
Standard deviation of delivery date variance: √(Σ / n) with: Σ = Σ_i(Delivery date variance$_i$ - Average delivery date variance)^2, i = 1..n n = Number of incoming goods positions	Flow figure / Delivery date variance Flow figure / Delivery date variance Flow figure / Incoming goods positions		Quality-key-figure / Fulfilment of guidelines		
Delivery date accuracy in %: Number of on schedule receipt items / Number of incoming goods positions * 100	Flow figure / Incoming goods positions Flow figure / Incoming goods positions		Quality-key-figure / Fulfilment of guidelines		
Back locks in %: Number of delayed incoming goods positions * 100 / Total number of incoming goods positions	Flow figure / Incoming goods positions Flow figure / Incoming goods positions		Quality-key-figure / Fulfilment of guidelines		
Delivery quantity accuracy in %: Number of ordering positions with quantity accuracy / Total number of ordering positions * 100	Flow figure / Ordering positions with quantity accuracy Flow figure / Ordering positions		Quality-key-figure / Fulfilment of guidelines		
Average delivery quantity variance in %: () / Sum / n * 100 % with: Sum = Sum(Delivery quantity variancei / Order quantityi), i = 1..n n = Total number of ordering positions	Flow figure / Delivery quantity variance Flow figure / Order quantity Flow figure / Ordering positions		Quality-key-figure / Fulfilment of guidelines		
Standard deviation of delivery quantity variance: √(Σ / n) with: Σ = Σ_i((Delivery quantity variance$_i$ / Order quantity$_i$) * 100 % - Average delivery quantity variance)^2, i = 1..n n = Total number of ordering positions	Flow figure / Delivery quantity variance Flow figure / Order quantity Flow figure / Delivery quantity variance Flow figure / Ordering positions		Quality-key-figure / Fulfilment of guidelines		
Rejected shipments in %: Number of rejected incoming goods positions / Total number of incoming goods positions * 100	Flow figure / Rejected incoming goods positions Flow figure / Incoming goods positions		Quality-key-figure / Fulfilment of guidelines		
Proportion of rejects: (Number of rejects + Number of early shipments + Number of late shipments) / Total number of received positions	Flow figure / Rejects Flow figure / Early shipments Flow figure / Late shipments Flow figure / Positions		Quality-key-figure / Fulfilment of guidelines		
Proportion of target achievement of the suppliers: Number of supplier evaluations with target achievement / Total number of supplier evaluations	Flow figure / Supplier evaluations Flow figure / Supplier evaluations		Quality-key-figure / Fulfilment of guidelines		

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Appendix 8: Complete listing of collected and developed key figures for the subject area of storage management

Key figures (KPIs) Subject area of storage management	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of warehousing	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing	Flow figure / CHF		Operative costs / Flow figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Personnel expenditures in the subject area of warehousing	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of warehousing = Support process warehousing in PromoS	
Proportion of costs of externally rendered warehousing services in %: Costs of externally rendered warehousing services/ Total costs of rendered warehousing services * 100	Flow figure / CHF Flow figure / CHF		Structure key-figure/ Degree of externalisation	Costs of warehousing services provided = Full costs (Personnel costs and space prices + depreciation)	Not probable/difficult to detect
Degree of decentralisation in the subject area of warehousing services in %: Number of decentralised organisation units in the subject area of warehousing / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per inpatient bed: Total costs in the subject area of warehousing/ Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per FTE: Total costs in the subject area of warehousing/ Total number of FTE	Flow figure / CHF Stock figure / FTE hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per FTE FM in HC: Total costs in the subject area warehousing/ Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per inpatient case: Total costs in the subject area of warehousing/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per outpatient case: Total costs in the subject area of warehousing/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per care day: Total costs in the subject area of warehousing/ Number of care days	Flow figure / CHF Flow figure / Care days	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per patient: Total costs in the subject area of warehousing/ Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per inpatient discharge: Total costs in the subject area of warehousing/ Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing per average length of stay: Total costs of the subject area of warehousing/ Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Total costs in the subject area of warehousing in relation to the total costs of the hospital: Total costs of the subject area of warehousing/ Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Warehousing total = Internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Specialist quota in the subject area of warehousing in %: Number of FTE of specialists in the subject area of warehousing/ (Number of FTE of specialists in the subject area of warehousing + Number of FTE of auxiliary staff in the subject area of warehousing) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of warehousing = Support process warehousing in PromoS	
Fluctuation rate in the subject area of warehousing in %: Number of departures in the subject area of warehousing/ Average number of staff in the subject area of warehousing * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of warehousing = Support process warehousing in PromoS	
Absence quota due to illness in the subject area of warehousing in %: Absence time in the subject area of warehousing/ Planned working time in the subject area of infrastructure * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of warehousing = Support process warehousing in PromoS	
Quota of overtime in the subject area of warehousing in %: Overtime in the subject area of warehousing/ Normal working hours in the subject area of warehousing * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of warehousing = Support process warehousing in PromoS	
Rate of continuing education per employee in the subject area of warehousing in %: Hours of continuing education in the subject area of warehousing/ Working hours in the subject area of warehousing * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of warehousing = Support process warehousing in PromoS	
Customer satisfaction for the subject area of warehousing in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internally customer satisfaction on initial level; Subject area of warehousing = Support process warehousing in PromoS	

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Average stock: (Stock opening balance + Stock closing balance) / 2	Stock figure / Opening inventory in CHF Stock figure / Closing inventory in CHF		Environment number / Absolute-/Stock figure		
Number of picking request items	Flow figure / Number of picking request items		Structure key-figure / Absolute-/ Flow figure		
Picks automated in %: Picks automated/ Total number of picks * 100	Flow figure / Picks Flow figure / Picks		Structure key-figure / Proportion	Rating of the pick operation: The manager of a particular value chain is not only interested in the sheer number of order picks per se, but as well in their assignment per order: For example, to calculate the later average processing time per employee, based on this information. Werner, 2013, p. 343	
Framework contract quota in %: Incoming goods items with framework contracts/ Number of incoming goods items * 100	Flow figure / Incoming goods items Flow figure / Incoming goods items		Structure key-figure / Proportion		
Proportion of incoming goods inspections: Number of inspections of incoming goods/ Total number of incoming goods items	Flow figure / Incoming goods inspections Flow figure / Incoming goods items		Structure key-figure / Proportion		
Proportion of quality key-figure examination in %: Incoming goods items with quality key-figure examination/ Number of incoming goods items * 100	Flow figure / Incoming goods items Flow figure / Incoming goods items		Structure key-figure / Proportion		
Average number of incoming/outgoing goods deliveries: Number of incoming/outgoing goods deliveries/ Number of operation calendar days	Flow figure / Incoming goods items Stock figure / Operation calendar days		Structure key-figure / Proportion		
Standard deviation of the average number of incoming/outgoing goods deliveries per operation calendar days: √(Σ/ n) with: Σ = Σi(Goods deliveries – Average number of goods deliveries per operation calendar days)2, i = 1..n n = Number of operation calendar days in the reviewed period	Flow figure / Incoming goods items Flow figure / Incoming goods items Stock figure / Operation calendar days		Structure key-figure / Average number		
Personnel expenditures per moved unit: Personnel expenditures warehouse/ Number of moved units	Flow figure / CHF Flow figure / Quantity units		Operative cost-key-figure / Costs per absolute-/ Stock figure	Personnel expenditures according to REKOLE	
Total costs in the subject area of warehousing per order item: Total costs in the subject area of warehousing/ Total number of order items	Flow figure / CHF Flow figure / Order items		Operative cost-key-figure / Costs per absolute-/ Stock figure	Warehousing total = internally performed warehousing; Subject area of warehousing = Support process warehousing in PromoS	
Costs per storage location per material unit: Total costs interior warehouse/ Total number of storage locations interior warehouse	Flow figure / CHF Stock figure / Storage locations warehouse		Operative cost-key-figure / Costs per absolute-/ Stock figure	The average storage area costs identify the economic efficiency of the warehouse. However, this key-figure should be calculated in combination with the space utilisation ratio […] because the volume of the available storage locations is unknown. Werner, 2013, p. 345	
Average costs per incoming goods item: Costs of incoming goods/ Number of receipt items	Flow figure / CHF Flow figure / Incoming goods items		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Average costs of quality testing per incoming goods item: Costs of quality testing/ Number of incoming goods items	Flow figure / CHF Flow figure / Incoming goods items		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Warehousing costs per quantity unit: Costs warehouse/ Average number of warehoused units	Flow figure / CHF Stock figure / Quantity units		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Costs per warehouse movement: Total costs in the subject area of warehousing/ (Number of goods receipt documents per item + Number goods of outwards receipt per item)	Flow figure / CHF Flow figure / Stock items Flow figure / Stock items	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing total = Internally performed warehousing Total costs in the Subject area of warehousing = Full costs; Subject area of warehousing = Support process warehousing in PromoS	
Costs per order provision/order picking: Personnel expenditures order picking/ Number of stock orders	Flow figure / CHF Flow figure / Processed incoming orders	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Number of stock orders = Number of reservations	
Proportion of costs of incoming goods inspection to total costs of warehouse management: Costs incoming goods inspection/ Total costs of warehouse management * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios		
Valued revenue rate: (Valued stock outflow/ Average stock value) * (Number of operation calendar days per year/ Reviewed period)	Stock figure / CHF Stock figure / CHF Stock figure / Operation calendar days Stock figure / Reviewed period		Economic performance-key-figure / Productivity		
Picking request items per employee hour: Number of picking request items/ Working hours in the distribution	Flow figure / Number of picking request items Flow figure / Working hours		Economic performance-key-figure / Productivity		
Deliveries per day and employee hour: Number of incoming shipments/ Number of working hours	Flow figure / Incoming shipments Flow figure / Working hours		Economic performance-key-figure / Productivity		
Capture time per shipment: Total hours of goods acceptance/ Number of incoming shipments	Flow figure / Hours of goods acceptance Flow figure / Incoming shipments		Economic performance-key-figure / Productivity		

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Order-processing costs: Total costs of warehouse order -processing/ Stock turnover	Flow figure / CHF Flow figure / CHF		Economic performance-key-figure / Productivity		
Degree of space utilisation in %: Warehouse net area/ Warehouse gross area * 100	Stock figure / Warehouse net area in m2 Stock figure / Warehouse gross area in m2		Economic performance-key-figure / Capacity utilisation	Example: The shelving rack has a given depth of 40 cm, the working aisle width is 1 m, the following can be calculated: Warehouse net area: 2 x 0,40 x Length of the rack L Warehouse gross area: 2 x 0,40 x L + 1,0 x L Martin, 2009, p. 344	
Degree of vertical space utilisation in %: Effectively used height/ Usable height * 100	Stock figure / Height in cm Stock figure / Height in cm		Economic performance-key-figure / Capacity utilisation		
Degree of space utilisation in %: Volume warehouse unit * Number of units/ Warehouse gross area	Stock figure / Volume warehouse unit in m3 Flow figure / Units Stock figure / Warehouse gross area in m3		Economic performance-key-figure / Capacity utilisation	The warehouse net area corresponds to the area occupied with shelves, the warehouse gross area only includes the shelf aisle area in this example. Martin, 2009, p. 345	
Average throughput time outgoing goods per supply position: Σ / n with: $\Sigma = \Sigma i(\text{Throughput time}_i)$, i = 1..n n = Number of delivery note items	Flow figure / Throughput time in hours Flow figure / Delivery note items		Economic performance-key-figure / Process efficiency/Throughput times		
Standard deviation throughput time outgoing goods: √(Σ / n) with: $\Sigma = \Sigma i(\text{Throughput time}_i - \text{Average throughput time})2$, i = 1..n n = Number of delivery note items	Flow figure / Throughput time in Hours Flow figure / Throughput time in Hours Flow figure / Delivery note items		Economic performance-key-figure / Process efficiency/Throughput times		
Turnover period: 365 / Turnover frequency per year	Stock figure / Turnover frequency		Economic performance-key-figure / Process efficiency/Throughput times		
Internal range of warehouse (prospective): Warehouse stock/ Needs	Stock figure / Warehouse stock Flow figure / Needs		Economic performance-key-figure / Process efficiency/Throughput times	A requirement is determined with a future-oriented range of delivery- and detailed call-offs. For "difficult" customers, who often change their orders and therefore only have a low sales forecast accuracy, the inventory controlling with a future oriented range is not recommended. Werner, 2013, p. 341	
Stock range: Warehouse stock/ Stock outflow	Stock figure / Warehouse stock Flow figure / Stock outflow		Economic performance-key-figure / Process efficiency/Throughput times		
Valued turnover rate: (Valued stock outflow/ Average warehouse inventory value) * (Number of operation calendar days per year/ Reviewed period)	Flow figure / CHF Flow figure / CHF Stock figure / Operation calendar days Stock figure / Reviewed period		Economic performance-key-figure / Process efficiency/Throughput times		
Average throughput time of incoming goods: Σ / n with: $\Sigma = \Sigma_i(\text{Throughput time}_i)$, i = 1..n n = Number of incoming goods items	Flow figure / Throughput time in hours Flow figure / Incoming goods items		Economic performance-key-figure / Process efficiency/Throughput times		
Defect inventory %: Total value of defective warehouse inventory/ Product inventory value * 100	Flow figure / CHF Flow figure / CHF		Quality-key-figure / Structure quality material		
Internal degree of service in %: Order fulfilment of order picks/ Order picks total * 100	Flow figure / Order fulfilment of order picks Flow figure / Order picks		Quality-key-figure / Guideline fulfilment		
Internal rejections in %: Rejected order picks/ Order picks total * 100	Flow figure / Rejected order picks Flow figure / Order picks		Quality-key-figure / Guideline fulfilment		

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Appendix 9: Complete listing of collected and developed key figures for the subject area of transport services and provision

Key figures (KPIs) Subject area of transport & fleet management	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of transport & fleet management	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without ambulance services
Total costs in the subject area of transport & fleet management	Flow figure / CHF		Operative costs / Flow figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Personnel expenditures in the subject area of transport & fleet management	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Proportion of costs of externally rendered transport & fleet management services in %: Costs of externally rendered transport & fleet management services/ Total costs of rendered transport & fleet management services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation		Transport = without rescue
Degree of decentralisation in the subject area of transport & fleet management services in %: Number of decentralised organisation units in the subject area of transport & fleet management / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management per inpatient bed: Total costs in the subject area of transport & fleet management/ Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue; probably less meaningful, because the number of beds stays the same and the survey of operated beds is very difficult
Total costs in the subject area of transport & fleet management per FTE: Total costs in the subject area of transport & fleet management/ Total number of FTE	Flow figure / CHF Stock figure / FTE hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management per FTE FM in HC: Total costs in the subject area of transport & fleet management/ Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management per inpatient case: Total costs in the subject area of transport & fleet management/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management per outpatient case: Total costs in the subject area of transport & fleet management/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management per care day: Total costs in the subject area of transport & fleet management/ Number of care days	Flow figure / CHF Flow figure / Care days	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management per patient: Total costs in the subject area of transport & fleet management/ Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management per inpatient discharge: Total costs in the subject area of transport & fleet management/ Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management per average length of stay: Total costs of the subject area of transport & fleet management/ Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Total costs in the subject area of transport & fleet management in relation to the total costs of the hospital: Total costs of the subject area of transport & fleet management/ Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Specialist quota in the subject area of transport & fleet management in %: Number of FTE of specialists in the subject area of transport & fleet management/ (Number of FTE of specialists in the subject area of transport & fleet management + Number of FTE of auxiliary staff in the subject area of transport & fleet management) *100	Stock figure / FTE subject area Stock figure / FTE subject area	X	Quality-key-figure / Structure quality personnel	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Fluctuation rate in the subject area of transport & fleet management in %: Number of departures in the subject area of transport & fleet management/ Average number of staff in the subject area of transport & fleet management * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Absence quota due to illness in the subject area of transport & fleet management in %: Absence time in the subject area of transport & fleet management/ Planned working time in the subject area of transport & fleet management * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Quota of overtime in the subject area of transport & fleet management in %: Overtime in the subject area of transport & fleet management/ Normal working hours in the subject area of transport & fleet management * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Rate of continuing education per employee in the subject area of transport & fleet management in %: Hours of continuing education in the subject area of transport & fleet management/ Working hours in the subject area of transport & fleet management * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Customer satisfaction for the sub-process transport in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of warehousing = Support process warehousing in PromoS	Transport = without rescue
Customer satisfaction for the sub-process postal services in %	Stock figure / %		Quality-key-figure / Customer satisfaction	Definition energy: Electricity, petroleum products, natural gas, coal, district heating, wood energy, other renewable energies, water and gases (LekaS, 2015, p. 33); According to REKOLE: Expenses energy = Costs energy	Transport = without rescue

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Number of vehicles	Stock figure / Vehicles		Structure figure / Absolute- / Stock figure	Motorised vehicles, no vehicles according to MePV	Transport = without rescue
Costs of the subject area of transport & fleet management per number of working hours: Total costs of the subject area of transport & fleet management / Number of working hours of transport personnel	Flow figure / CHF Stock figure / Working hours		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Mean costs transport & fleet management per order position: Costs transportation / Number of order positions	Flow figure / CHF Flow figure / Order positions		Operative cost-key-figure / Costs per absolute-/ Stock figure		Transport = without rescue
Postal shipping cost quota: Total postal shipping cost / Performed postings	Flow figure / CHF Flow figure / Postings		Operative cost-key-figure / Costs per absolute-/ Flow figure		Transport = without rescue
Assumed costs per posting: Total costs of post / Number of incoming postings	Flow figure / CHF Flow figure / Postings		Operative cost-key-figure / Costs per absolute-/ Flow figure		Transport = without rescue
Proportion of costs of person related transports to the total costs of the subject area of transport & fleet management in %: Costs of person related transports / Total costs of the subject area of transport & fleet management * 100	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Proportion of costs of goods related transports to the total costs of the subject area of transport & fleet management in %: Costs of goods related transports / Total costs of the subject area of transport & fleet management * 100	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Ratio of total costs of patient transportation vs. Total costs of goods transportation: Costs patient transportation / Costs goods transportation	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue
Proportion of transport costs in %: Total costs of the subject area of transport & fleet management / Total costs of logistics * 100	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of transport & fleet management = Support process transport & fleet management in PromoS; Logistic = Transport & fleet management + procurement + warehouse + disposal & recycling	Transport = without rescue
Shipping processing quota of the post in %: Number of postings / Number of operation calendar days per year * 100	Flow figure / Postings Stock figure / Operation calendar days per year		Economic performance key-figure / Productivity		Transport = without rescue
Means of transport degree of utilisation in %: Actual transport volume / Possible transport volume * 100	Stock figure / Transport volume in m3 Stock figure / Transport volume in m3		Economic performance key-figure / Utilisation		Transport = without rescue
Proportion of complaints in postal delivery: Number of complaints about postal delivery / Total number of postal deliveries	Flow figure / Complaints Flow figure / Postal deliveries		Quality Key-figure/ Fulfilment of guidelines		Transport = without rescue
Proportion of complaints outgoing mail: Number of complaints in outgoing mail / Total number of outgoing mail	Flow figure / Outgoing mail Flow figure / Outgoing mail		Quality Key-figure/ Fulfilment of guidelines		Transport = without rescue
Proportion of complaints in the subject area of transport & fleet management in %: Number of legitimated customer complaints / Total number of transport processes * 100	Flow figure / Complaints Flow figure / Transport processes	X	Quality Key-figure/ Fulfilment of guidelines	Total of transport & fleet management = People + goods	Transport = without rescue
Delivery date adherence in %: Number of delivery not items on schedule / Number of delivery note items * 100	Flow figure / Delivery note items Flow figure / Delivery note items		Quality Key-figure/ Fulfilment of guidelines		Transport = without rescue
Proportion of defect inventory during internal transportation in %: Value of the defect inventory in physical return- and transport stadium / Whole product inventory value of deficient inventory * 100	Flow figure / CHF Flow figure / CHF		Quality Key-figure/ Fulfilment of guidelines		Transport = without rescue
Delivery reliability in %: Number of satisfied sales order items / Number of sales order items * 100	Flow figure / Sales order items Flow figure / Sales order items		Quality Key-figure/ Fulfilment of guidelines		Transport = without rescue

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Appendix 10: Complete listing of collected and developed key figures for the subject area of disposal & recycling

Key figures (KPIs) Subject area of disposal & recycling	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of disposal & recycling	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling	Flow figure / CHF		Operative costs / Flow figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Personnel expenditures in the subject area of disposal & recycling	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Proportion of costs of externally rendered disposal & recycling services in %: Costs of externally rendered disposal & recycling services/ Total costs of rendered disposal & recycling services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation		
Degree of decentralisation in the subject area of disposal & recycling services in %: Number of decentralised organisation units in the subject area of disposal & recycling/ Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per inpatient bed: Total costs in the subject area of disposal & recycling/ Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per FTE: Total costs in the subject area of disposal & recycling/ Total number of FTE	Flow figure / CHF Stock figure / FTE hospital	X	Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per FTE FM in HC: Total costs in the subject area of disposal & recycling/ Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per inpatient case: Total costs in the subject area of disposal & recycling/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per outpatient case: Total costs in the subject area of disposal & recycling/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per care day: Total costs in the subject area of disposal & recycling/ Number of care days	Flow figure / CHF Flow figure / Care days	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per patient: Total costs in the subject area of disposal & recycling/ Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per inpatient discharge: Total costs in the subject area of disposal & recycling/ Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Total costs in the subject area of disposal & recycling per average length of stay: Total costs of the subject area of disposal & recycling/ Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	

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Total costs in the subject area of disposal & recycling in relation to the total costs of the hospital: Total costs of the subject area of disposal & recycling/ Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Specialist quota in the subject area of disposal & recycling in %: Number of FTE of specialists in the subject area of disposal & recycling/ (Number of FTE of specialists in the subject area of disposal & recycling + Number of FTE of auxiliary staff in the subject area of disposal & recycling) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Fluctuation rate in the subject area of disposal & recycling in %: Number of departures in the subject area of disposal & recycling/ Average number of staff in the subject area of disposal & recycling * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Absence quota due to illness in the subject area of disposal & recycling in %: Absence time in the subject area of disposal & recycling/ Planned working time in the subject area of disposal & recycling * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Quota of overtime in the subject area of disposal & recycling in %: Overtime in the subject area of disposal & recycling/ Normal working hours in the subject area of disposal & recycling * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Rate of continuing education per employee in the subject area of disposal & recycling in %: Hours of continuing education in the subject area of disposal & recycling/ Working hours in the subject area of disposal & recycling * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Customer satisfaction for the subject area of disposal & recycling in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of disposal & recycling = Support process disposal & recycling in PromoS	
Recycling quota in %: Volume of recycled waste / Total volume of valuable substances * 100	Flow figure / Volume of waste in m3 Flow figure / Volume of valuable substances in m3	X	Environmental-key-figure / Recycling		
Proportion of costs of recyclable materials to total costs of valuable substances in %: Costs of recyclable materials / Total costs of valuable substances * 100	Flow figure / CHF Flow figure / CHF	X	Environmental-key-figure / Recycling	Costs of recyclable materials according to invoices	
Special waste quota in %: Volume of special waste / Total volume of waste * 100	Flow figure / Volume of special waste in m3 Flow figure / volume of waste in m3	X	Environmental-key-figure / Waste volume	Rated as special waste are the waste categories B, C und D according to BUWAL (2004)	

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Appendix 11: Complete listing of collected and developed key figures for the area of infrastructure

Key figures (KPIs) Area of infrastructure	Unit parameter	KPI-Category	Remarks to the key figure (collection)	General remarks
Total number of FTE´s in the area of infrastructure	Stock figure / FTE subject area	Structure figure/ Stock figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area of infrastructure	Flow figure / CHF	Operative costs / Flow figure	Sum of all storage-, transportation-, capital commitment-, personnel- and disposal costs per period; This sum can be reported as a part of the production costs or turnover.; Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Personnel expenditures in the area of infrastructure	Flow figure / CHF	Operative costs / Flow figure	Personnel expenditures according to REKOLE; Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Proportion of costs of externally rendered infrastructure services in %:	Flow figure / CHF	Structure key figure/ Degree of externalisation	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Costs of externally rendered infrastructure services/ Total costs of rendered infrastructure services * 100	Flow figure / CHF			
Degree of decentralisation in the area of infrastructure services in %:	Stock figure / Organisational units decentralised	Structure key figure / Degree of decentralisation	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Number of decentralised organisation units in the area of infrastructure / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units FM in HC			
Total costs in the area of infrastructure per inpatient bed:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area of infrastructure/ Number of inpatient beds	Stock figure / Inpatient beds			
Total costs in the area of infrastructure per FTE:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area of infrastructure/ Total number of FTE	Stock figure / FTE hospital			
Total costs in the area of infrastructure per FTE FM in HC:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area infrastructure/ Total number of FTE FM in HC	Stock figure / FTE FM in HC			
Total costs in the area of infrastructure per inpatient case:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area of infrastructure/ Number of inpatient cases	Flow figure / Inpatient cases			
Total costs in the area of infrastructure per outpatient case:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area of infrastructure/ Number of outpatient cases	Flow figure / Outpatient cases			
Total costs in the area of infrastructure per care day:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area of infrastructure / Number of care days	Flow figure / Discharges			
Total costs in the area of infrastructure per patient:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area of infrastructure / Number of patients	Flow figure / Patients			
Total costs in the area of infrastructure per inpatient discharge:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs in the area of infrastructure / Number of inpatient discharges	Flow figure / Discharges			
Total costs in the area of infrastructure per average length of stay:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs of the area of infrastructure / Average length of stay	Flow figure / Length of stay			
Total costs in the area of infrastructure in relation to the total costs of the hospital:	Flow figure / CHF	Operative cost-Key figure / Cost ratio	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Total costs of the area of infrastructure / Total costs of the hospital	Flow figure / CHF			
Specialist quota in the area of infrastructure in %:	Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Number of FTE of specialists in the area of infrastructure / (Number of FTE of specialists in the area of infrastructure + Number of FTE of auxiliary staff in the area of infrastructure) *100	Stock figure / FTE subject area			
Fluctuation rate in the area of infrastructure in %:	Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Number of departures in the area of infrastructure / Average number of staff in the area of infrastructure * 100	Stock figure / FTE subject area			
Absence quota due to illness in the area of infrastructure in %:	Flow figure/ Absence time in hours	Quality-Key figure / Structure quality personnel	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Absence time in the area of infrastructure / Planned working time in the area of infrastructure * 100	Flow figure / Planned working time in hours			
Quota of overtime in the area of infrastructure in %:	Flow figure / Overtime	Quality-Key figure / Structure quality personnel	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Overtime in the area of infrastructure / Normal working hours in the area of infrastructure * 100	Flow figure / Working hours			
Rate of continuing education per employee in the area of infrastructure in %:	Flow figure / Hours of continuing education	Quality-Key figure / Structure quality personnel	Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	
Hours of continuing education in the area of infrastructure / Working hours in the area of infrastructure * 100	Flow figure / Working hours			
Customer satisfaction for the area of infrastructure in %	Stock figure / %	Quality-Key figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Area of infrastructure = subject area maintenance, space management and energy and the corresponding support processes in PromoS	

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Appendix 12: Complete listing of collected and developed key figures for the subject area of maintenance

Key figures (KPIs) Subject area of maintenance	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of maintenance	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance	Flow figure / CHF		Operative costs / Flow figure	Subject area of maintenance = Support process maintenance in PromoS	
Personnel expenditures in the subject area of maintenance	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of maintenance = Support process maintenance in PromoS	
Proportion of costs of externally rendered maintenance services in %: Costs of externally rendered maintenance/ Total costs of rendered maintenance * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Subject area of maintenance = Support process maintenance in PromoS	
Degree of decentralisation in the subject area of maintenance in %: Number of decentralised organisation units in the subject area of maintenance/ Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per inpatient bed: Total costs in the subject area of maintenance/ Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per FTE: Total costs in the subject area of maintenance/ Total number of FTE	Flow figure / CHF Stock figure / FTE hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per FTE FM in HC: Total costs in the subject area maintenance/ Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per inpatient case: Total costs in the subject area of maintenance/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per outpatient case: Total costs in the subject area of maintenance/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per care day: Total costs in the subject area of maintenance / Number of care days	Flow figure / CHF Flow figure / Care Days	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per patient: Total costs in the subject area of maintenance / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per inpatient discharge: Total costs in the subject area of maintenance / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance per average length of stay: Total costs of the subject area of maintenance / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of maintenance = Support process maintenance in PromoS	
Total costs in the subject area of maintenance in relation to the total costs of the hospital: Total costs of the subject area of maintenance / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of maintenance = Support process maintenance in PromoS	
Specialist quota in the subject area of maintenance in %: Number of FTE of specialists in the subject area of maintenance / (Number of FTE of specialists in the subject area of maintenance + Number of FTE of auxiliary staff in the subject area of maintenance) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of maintenance = Support process maintenance in PromoS	
Fluctuation rate in the subject area of maintenance in %: Number of personnel departures in the subject area of maintenance / Average number of staff in the subject area of maintenance * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of maintenance = Support process maintenance in PromoS	
Absence quota due to illness in the subject area of maintenance in %: Absence time in the subject area of maintenance / Planned working time in the subject area of maintenance * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of maintenance = Support process maintenance in PromoS	
Quota of overtime in the subject area of maintenance in %: Overtime in the subject area of maintenance / Normal working hours in the subject area of maintenance * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of maintenance = Support process maintenance in PromoS	
Rate of continuing education per employee in the subject area of maintenance in %: Hours of continuing education in the subject area of maintenance / Working hours in the subject area of maintenance * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of maintenance = Support process maintenance in PromoS	
Customer satisfaction for the subject area of maintenance in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of maintenance = Support process maintenance in PromoS	
Number of managed medical technology objects	Stock figure / Objects		Structure figure / Absolute-/Stock figure		
Number of FTE medical technology	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Internal budget medical technology	Flow figure / CHF		Structure figure / Absolute-/Stock figure		
External budget medical technology	Flow figure / CHF		Structure figure / Absolute-/Stock figure		
Number of maintained medical technology applications	Stock figure / Applications		Structure figure / Absolute-/Stock figure		With description of the application area
Number of medical technology incidents	Flow figure / Incidents		Structure figure / Absolute-/Stock figure		
Number of managed objects	Stock figure / Objects		Structure figure / Absolute-/Stock figure	Definition asset according to Rekole	
Number of FTE technology	Stock figure / FTE		Structure figure / Absolute-/Stock figure		
Number of objects with status-oriented maintenance in relation to the total number of objects: Number of objects with status-oriented maintenance / Total number of objects	Stock figure / Objects Stock figure / Objects	X	Structure figure / absolute-/ stock figure	Only objects within the database are rated as objects	

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Number of objects with planned maintenance in relation to the total number of objects: Number of objects with a planned maintenance / Total number of objects	Stock figure / Objects Stock figure / Objects	X	Structure figure / Absolute-/ stock figure	Only objects within the database are rated as objects	
Number of objects with condition-based maintenance (Inspection)	Stock figure / Objects		Structure figure / Absolute-/Stock figure		If necessary, in combination with time and/or economic key-figure
Number of objects with predictive maintenance	Stock figure / Objects		Structure figure / Absolute-/Stock figure		If necessary, in combination with time and/or performance and/or condition
Number of objects without maintenance strategy	Stock figure / Objects		Structure figure / Absolute-/Stock figure		
Number of objects with risk assessment	Stock figure / Objects		Structure figure / Absolute-/Stock figure		
Internal budget technology	Stock figure / CHF		Structure figure / Absolute-/Stock figure		
External budget technology	Stock figure / CHF		Structure figure / Absolute-/Stock figure		
Number of maintained technology applications	Stock figure / Applications		Structure figure / Absolute-/Stock figure		With description of the application area
Proportion of administrative activities of technology employees	Stock figure / %		Structure figure / Absolute-/Stock figure		
Number of incidents technology	Flow figure / Reports		Structure figure / Absolute-/Flow figure		
Number of orders technology	Flow figure / Orders		Structure figure / Absolute-/Flow figure		
Average number of outstanding orders medical technology	Flow figure / Orders		Structure figure / Absolute-/Flow figure		
Average number of overdue orders medical technology	Flow figure / Orders		Structure figure / Absolute-/Flow figure		
Number of orders medical technology	Flow figure / Orders		Structure figure / Absolute-/Flow figure		
Average number of outstanding orders technology	Flow figure / Orders		Structure figure / Absolute-/Flow figure		
Average number of overdue orders technology	Flow figure / Orders		Structure figure / Absolute-/Flow figure		
Costs outdoor area	Flow figure / CHF		Structure figure / Absolute-/Flow figure	incl. Winter service	
Maintenance costs technical, usable assets	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Costs janitorial services	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Damage costs from not timely detected causes: Costs of resulting damages from not timely detected causes	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Number of incidents	Flow figure / Incidents		Structure figure / Absolute-/Flow figure	Incidents can be breakdowns or unexpected findings at inspections or revisions (according to Leidinger, 2014, p. 3)	The more planned/preventive maintenance, the smaller the number of unplanned parts (according to Leidinger, 2014, p. 3)
Downtime- and maintenance costs: Costs planned maintenance + costs unplanned maintenance + costs due to damage enhancement + amount of coverage due to operational interruption	Flow figure / CHF Flow figure / CHF Flow figure / CHF Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Growth rate fixed assets: Fixed assets of new facilities / Total number of fixed assets	Stock figure / CHF Stock figure / CHF	X	Structure key-figure / Proportion	Sum of all assets = Balance sheet total according to Rekole	
Building condition-index: Value of current state of assets / Mint condition of assets	Stock figure / CHF Stock figure / CHF		Structure key-figure / Proportion	Asset = Fixed assets, capital assets Current state of assets = Depreciations included according to Rekole	
Degree of implementation of the maintenance strategy: Number of assets with a defined maintenance strategy / Total number of assets	Stock figure / Assets Stock figure / Assets		Structure key-figure / Proportion		
Backlog of orders: Number of resources tied up in fixed orders / Number of available resources	Flow figure / CHF Flow figure / CHF		Structure key-figure / Proportion		
Coverage completeness of assets: Number of covered assets / Total number of managed assets	Stock figure / Assets Stock figure / Assets		Structure key-figure / Proportion		
Asset managing quote personnel: Number of managed technical facilities / Number of FTE maintenance	Stock figure / Facilities Stock figure / FTE subject area		Structure key-figure / Proportion	Facilities = Module plant section; Subject area of maintenance = Support process maintenance in PromoS	
Costs per device according to MepV: Total costs in the subject area of maintenance / Number of devices according to MepV	Flow figure / CHF Stock figure / Devices		Operative cost-key-figure / Costs per absolute-/Stock figure	MepV - Ordinance concerning medical devices; Subject area of maintenance = Support process maintenance in PromoS	
Operating costs per m2 floor area: Total operating costs / Number m2 floor area	Flow figure / CHF Stock figure / Floor area in m2		Operative cost-key-figure / Costs per absolute-/Stock figure	Operating costs: Personnel-, maintenance-/service costs (without instruments, without IT, without energy); Floor area according to SIA 416	
Operating costs per fixed asset: Total costs in the subject area of maintenance / Fixed assets	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of maintenance = Support process maintenance in PromoS	
Costs stand-by service: Costs stand-by service / Investment volume	Flow figure / CHF Stock figure / CHF		Operative cost-key-figure / Costs per absolute-/Stock figure		
Maintenance expenses for buildings per m2 space area: (Personnel expenses maintenance (in-house or externally rendered)) + Needed materials for building monitoring, inspection, repairs, maintenance und answered service requests) / Number of m2 floor area	Flow figure / CHF Flow figure / CHF Stock figure / Floor area in m2		Operative cost-key-figure / Costs per absolute-/Stock figure	Floor area according to SIA 416; Personnel expenditures according to REKOLE	
Personnel expenses for technical personnel per investment volume: Personnel expenses for technical personnel / Investment volume	Flow figure / CHF Stock figure / CHF		Operative cost-key-figure / Costs per absolute-/Stock figure	Incl. Medical technology; Personnel expenditures according to REKOLE	
Maintenance costs building per building: Costs maintenance building / Number buildings	Flow figure / CHF Stock figure / Buildings		Operative cost-key-figure / Costs per absolute-/Stock figure		
Maintenance-intensity: Total costs of the subject area of maintenance / Acquisition value	Flow figure / CHF Stock figure / CHF		Operative cost-key-figure / Costs per absolute-/Stock figure	Subject area of maintenance = Support process maintenance in PromoS	

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Costs maintenance per m2 floor area: Costs maintenance / Number of m2 floor area	Flow figure / CHF Stock figure / Floor area in m2		Operative cost-key-figure / Costs per absolute-/Stock figure	Floor area according to SIA 416	
Mean external hourly rate: Calculated external hours * External hourly rate / Calculated external hours	Flow figure / Calculated hours Stock figure / CHF		Operative cost-key-figure / Costs per absolute-/Stock figure		
Operating costs per case: Total operating costs / (Number of inpatient cases + Number of outpatient cases)	Flow figure / CHF Flow figure / Inpatient cases Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/Flow figure	Operating costs: Personnel-, maintenance-/service costs (without instruments, without IT, without energy)	
Downtime costs per machine in %: Downtime costs per machine / Total costs per machine * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Costs per absolute-/Flow figure		
Maintenance costs per case: Total costs subject area of maintenance / (Number of inpatient cases + Number of outpatient cases)	Flow figure / CHF Flow figure / Inpatient cases Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/Flow figure		
Proportion of costs of maintenance of infrastructure to the total costs of the subject area of maintenance in %: Costs of the maintenance of infrastructure / Total costs of the subject area of maintenance * 100	Flow figure / CHF Flow figure / CHF	X	Operative cost key-figure / Cost ratios	SKP 2 -> everything except medicinal technique; Subject area of maintenance = Support process maintenance in PromoS	
Proportion of costs of medicinal technique to the total costs of the subject area of maintenance in %: Costs of medicinal technique / Total costs of the subject area of maintenance * 100	Flow figure / CHF Flow figure / CHF	X	Operative cost key-figure / Cost ratios	SKP 7+8 -> everything except infrastructure; Subject area of maintenance = Support process maintenance in PromoS	
Proportion of costs operating technology/tenant fit-out and medical technology to the total costs subject area of maintenance in %: (Costs operating technology/tenant fit-out + Costs medical technology) / Total costs subject are of maintenance * 100	Flow figure / CHF Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Subject area of maintenance = Support process maintenance in PromoS	
Proportion of costs maintenance equipment/movables to the total costs subject area of maintenance in %: Operating technology/tenant fit-out & medical technology / Total costs subject area of maintenance * 100	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Subject area of maintenance = Support process maintenance in PromoS	
Maintenance proportion of service type: Costs maintenance / Total costs subject area of maintenance	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Subject area of maintenance = Support process maintenance in PromoS	
Maintenance proportion of service type: Costs inspection / Total costs subject area of maintenance	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Subject area of maintenance = Support process maintenance in PromoS	
Maintenance proportion of service type: Costs overhaul / Total costs subject area of maintenance	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Subject area of maintenance = Support process maintenance in PromoS	
Material quota: Material costs maintenance / Total costs subject area of maintenance	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Subject area of maintenance = Support process maintenance in PromoS	
Proportion of personnel maintenance: Personnel expenses subject area of maintenance / Total costs subject area of maintenance	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Personnel expenditures according to REKOLE; Subject area of maintenance = Support process maintenance in PromoS	
Upkeep index: Upkeep costs / Total costs subject area of maintenance	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Subject area of maintenance = Support process maintenance in PromoS	
Degree of planning: Costs maintenance of planned orders / Total costs subject area of maintenance	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios		
Costs for repairs per m2 floor area: Costs for repairs / Number of m2 space area	Flow figure / CHF Stock figure / Space area in m2		Operative cost key-figure / Cost ratios	Floor area according to SIA 416	
Maintenance- + Downtime costs to production costs: (Total costs subject area of maintenance + Downtime costs) / Total production costs	Flow figure / CHF Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Downtime costs = lost profits	
Maintenance- Asset value ratio: Annual maintenance costs / Investment costs	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios		
Preventive maintenance work at non-critical facilities: Amount of failure-related maintenance work at miscellaneous facilities / Total maintenance effort at all facilities	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios		
Upkeep costs - effectivity: Upkeep costs / Replacement value	Flow figure / CHF Stock value / CHF		Operative cost key-figure / Cost ratios		
Proportion of costs outdoor area to total costs subject area of maintenance in %: Total costs subject area of maintenance / (Costs space maintenance + Costs parking lot maintenance) * 100	Flow figure / CHF Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios	Subject area of maintenance = Support process maintenance in PromoS	
Handling figure replacement parts: Costs replacement parts / Book value replacement parts	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratios		
Proportion of administrative activities from employees of medical technology in %: Number of hours of administrative activities / Total number of hours of medical technology related maintenance * 100	Flow figure / Hours administration Flow figure / Hours maintenance		Economic performance key-figure / Productivity		
Equipment effectiveness - failure frequency: Total number of failures / Total number of facilities	Flow figure / Failures Stock figure / Anlagen		Economic performance key-figure / Productivity		

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Degree of failure: Failure related downtime / Productive operation time	Flow figure / Failure related downtime in hours Flow figure / Productive operation time in hours		Economic performance key-figure / Productivity		
Incident rate per number of objects medicinal technique: Number of incidents medicinal technique / Number of objects medicinal technique	Flow figure / Incidents Flow figure / Objects	X	Economic performance key-figure / Productivity	Only objects which are integrated and registered within the database are rated as objects	
Incident rate per number of objects infrastructure: Number of infrastructure incidents / Number of infrastructure objects	Flow figure / Incidents Flow figure / Objects	X	Economic performance key-figure / Productivity	Only objects which are integrated and registered within the database are rated as objects	
Incident rate to investment volume: Costs for incidents / Investment volume	Flow figure / CHF Flow figure / CHF		Economic performance key-figure / Productivity		
Maintenance-economy degree: Costs subject area maintenance target / Costs subject area maintenance current	Flow figure / CHF Flow figure / CHF		Economic performance key-figure / Productivity	Subject area of maintenance = Support process maintenance in PromoS	
Backlog rate of orders: Backlog of orders / Available capacity	Flow figure / Orders Stock figure / Capacity in hours		Economic performance key-figure / Productivity	Available capacity = Number of the available tradesperson hours in a period for maintenance , without considering the overtime capacity	
Degree of maintenance: Total costs subject area of maintenance / Productive operating time	Flow figure / CHF Flow figure / Productive operating time in hours		Economic performance key-figure / Productivity	Subject area of maintenance = Support process maintenance in PromoS	
Value-added-proportion per person: Productive operating time / Current-working time	Flow figure / Productive operating time in hours Stock figure / Current-working time in hours		Economic performance key-figure / Productivity		
Throughput time per maintenance order (delivery time): (Date of the technical completion - date incoming order) / Total number of orders	Date Date Flow figure / Orders		Economic performance key-figure / Productivity	Date of the technical completion = Delivery to customer Date of incoming order incl. technical clarification	
Backlog of work in man-hours: Open maintenance hours / Number of FTE in the subject area of maintenance	Flow figure / Open maintenance hours in hours Stock figure / FTE subject area		Economic performance key-figure/ Utilisation	Subject area of maintenance = Support process maintenance in PromoS	
Degree of processing: Finished maintenance orders / Total number of maintenance orders	Flow figure / Maintenance orders Flow figure / Maintenance orders		Economic performance key-figure/ Utilisation		
Degree of processing planned maintenance: Finished planned maintenance orders / Total number of maintenance orders	Flow figure / Maintenance orders Flow figure / Maintenance orders		Economic performance key-figure/ Utilisation		
Average utilisation of workforce of technology: Total number of billable hours workforce of the subject area of maintenance / Total number of hours to accomplish of the total workforce of the subject area of maintenance	Flow figure / Billable hours Stock figure / Hours to accomplish		Economic performance key-figure/ Utilisation	billable hours in the subject area of technology = Productive hours at maintenance order at the expense of other cost centres; Subject area of maintenance = Support process maintenance in PromoS	
Technical fail rate: Technical downtime / Target occupancy time	Flow figure / Technical downtime in hours Stock figure / Target occupancy time in hours		Economic performance key-figure / Failure/Availability		
Degree of breakdown: Maintenance time / Target occupancy time	Flow figure / Maintenance time in hours Stock figure / Target occupancy time in hours		Economic performance key-figure / Failure/Availability		
Breakdown time per machine in %: Breakdown time per medical device / Total running time per medical technique device * 100	Flow figure / Breakdown time in hours Stock figure / Total running time in hours		Economic performance key-figure / Failure/Availability		Could be interesting, but not feasible without sensors -> to be considered after the implementation of sensors
Mean time between failures: (Time between maintenance + Mean time between failures) / Number of break downs	Flow figure / Time between maintenance in hours Flow figure / Hours between breakdowns Flow figure / Breakdowns		Economic performance key-figure / Failure/Availability		
Mean Time Between Repair: Mean time between repair / Number of breakdowns	Flow figure / Mean time between repair in hours Flow figure / Breakdowns		Economic performance key-figure / Failure/Availability		
Asset availability: Useful life / (Useful life + technical downtime)	Flow figure / Useful life in hours Flow figure / Technical downtime in hours		Economic performance key-figure / Failure/Availability		
Reaction time in in the standby service operation: (Time begin of maintenance - Time begin of failure) / Number of incidents	Time of day Time of day Flow figure / Incidents		Economic performance key-figure / Process efficiency/throughput time		
Mean Time To Repair: Total downtime / Number of failures	Flow figure / Downtime Flow figure / Failures		Economic performance key-figure / Process efficiency/throughput time		
Mean throughput time of fault messages technology: Sum (Date & time of day at fault message – Date & time of day at initial creation of the fault message / Total number of fault messages	Date / Time Date / Time Flow figure / Incidents		Economic performance key-figure / Process efficiency/throughput time	Hours between receipt until completion	

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Mean throughput time orders technology: Sum (Date & Daytime at technical order completion – Date & time of day at initial creation of order) / Total number of technical completed orders	Date / Time Date / Time Flow figure / Completed orders		Economic performance key-figure / Process efficiency/throughput time		
Mean throughput time orders medical technology: Throughput time orders medical technology / Total number of medical technology orders	Flow figure / Throughput time Flow figure / Orders medical technology		Economic performance key-figure / Process efficiency/throughput time	Hours between release until completion	
Mean throughput time report medical technology: Sum (Date & time of day at report medical technology – Date & time of day initial creation of order) / Total number of reports medical technology	Date / Time Date / Time Flow figure / Orders medical technology		Economic performance key-figure / Process efficiency/throughput time		
Urgency rate of unplanned orders: Number of unplanned orders / Total number of orders	Flow figure / Unplanned orders Flow figure / Orders		Economic performance key-figure / Planning efficiency		
Urgency rate of planned orders: Number of planned orders / Total number of orders	Flow figure / Planned orders Flow figure / Orders		Economic performance key-figure / Planning efficiency		
Deviations of planning: Planned maintenance hours / Actual maintenance hours	Stock figure / Planned maintenance hours Flow figure / Actual maintenance hours		Economic performance key-figure / Planning efficiency		
Degree of planning of maintenance capacity: Planned hours maintenance / Available capacity	Stock figure / Planned hours maintenance Stock figure / Available capacity in hours		Economic performance key-figure / Planning efficiency	Degree of planning of maintenance capacity = Proportion of the already planned hours of a workshop	
Degree of up-to-dateness: Number of state-of-the-art assets / Total number of assets	Stock figure / Assets Stock figure / Assets		Quality key-figure / Structure quality infrastructure		
Age of assets in comparison to table of service life: Age of asset - Table of service life	Stock figure / Year Years		Quality key-figure / Structure quality infrastructure		
Complaint quota: Orders with complaints / Total number of orders	Flow figure / Orders with complaints Flow figure / Orders		Quality key-figure / Fulfilment of guidelines		
Timeliness: (Corner-end - Final confirmation) / Total number of orders	Date Date Flow figure / Orders		Quality key-figure / Fulfilment of guidelines		Corner end = Agreed date for the order completion; Final feedback (current-end) = Feedback date of the completed order
Help-Desk - Comply with reaction time according to: Number of complied reaction time according to SLA / Number of help-desk orders	Flow figure / Orders with reaction time according to service-level Flow figure / Orders help desk		Quality key-figure / Fulfilment of guidelines		

Download optimised for printing from Excel to A3 in horizontal format: https://www.zhaw.ch/storage/lsfm/institute-zentren/ifm/healthcare/kenkas-subject-area-maintenance.xlsx

Appendix 13: Complete listing of collected and developed key figures for the subject area of space management

Key figures (KPIs) Subject area of space management	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of space management	Stock figure / FTE subject area		Structure number / Stock figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management	Flow figure / CHF		Operative costs / Flow figure	Subject area of space management = Support process space management in PromoS	
Personnel expenditures in the subject area of space management	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of space management = Support process space management in PromoS	
Proportion of costs of externally rendered space management services in %: Costs of externally rendered space management services / Total costs of rendered space management services * 100	Flow figure / CHF Flow figure / CHF		Structure key-figure/ Degree of externalisation	Subject area of space management = Support process space management in PromoS	
Degree of decentralisation in the subject area of space management in %: Number of decentralised organisation units in the subject area of space management / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per inpatient bed: Total costs in the subject area of space management / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per FTE: Total costs in the subject area of space management / Total number of FTE	Flow figure / CHF Stock figure / FTE Hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per FTE FM in HC: Total costs in the subject area of space management / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per inpatient case: Total costs in the subject area of space management / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per outpatient case: Total costs in the subject area of space management / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per care day: Total costs in the subject area of space management / Number of care days	Flow figure / CHF Flow figure / Care days		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per patient: Total costs in the subject area of space management / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per inpatient discharge : Total costs in the subject area of space management / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management per average length of stay: Total costs of the subject area of space management / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of space management = Support process space management in PromoS	
Total costs in the subject area of space management in relation to the total costs of the hospital: Total costs of the subject area of space management / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of space management = Support process space management in PromoS	
Specialist quota in the subject area of space management in %: Number of FTE of specialists in the subject area of space management / (Number of FTE of specialists in the subject area of space management + Number of FTE of auxiliary staff in the subject area of space management) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of space management = Support process space management in PromoS	
Fluctuation rate in the subject area of space management in %: Number of personnel departures in the subject area of space management / Average number of staff in the subject area of space management * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of space management = Support process space management in PromoS	
Absence quota due to illness in the subject area of space management in %: Absence time in the subject area of space management / Planned working time in the subject area of space management * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of space management = Support process space management in PromoS	
Quota of overtime in the subject area of space management in %: Overtime in the subject area of space management / Normal working hours in the subject area of space management * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of space management = Support process space management in PromoS	

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Rate of continuing education per employee in the subject area of space management in %: Hours of continuing education in the subject area of space management / Working hours in the subject area of space management * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of space management = Support process space management in PromoS	
Customer satisfaction for the subject area of space management in %	Stock figure / %		Quality-key-figure/ Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of space management = Support process space management in PromoS	
Tenant support - Tennant satisfaction in %	Stock figure / %		Quality-key-figure/ Customer satisfaction	Definition energy: Electricity, petroleum products, natural gas, coal, district heating, wood energy, other renewable energies, water and gases (LekaS, 2015, p. 33); According to REKOLE: Expenses energy = Costs energy	
Leasing - Customer satisfaction in %	Stock figure / %		Quality-key-figure/ Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level	
Conference room - Customer satisfaction in %	Stock figure / %		Quality-key-figure/ Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level	
Number of areas rented out	Stock figure / Leased out areas in m2		Structure figure / Absolute-/Stock figure		
Number of operated buildings	Stock figure / Operated buildings		Structure figure / Absolute-/Stock figure	By means of number of plot numbers	
Total site area	Stock figure / Site area in m2		Structure figure / Absolute-/Stock figure		
Number of buildings	Stock figure / Buildings		Structure figure / Absolute-/Stock figure	Building = Tract	
Costs of rented rooms	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Proportion of costs of the internal rental- & space management to the total costs subject area of space management in %: Costs rental- & space management / Total costs subject area of space management * 100	Flow figure / CHF Flow figure / CHF		Structure key-figure / Proportion	Subject area of space management = Support process space management in PromoS	
Proportion of costs property management to total costs subject area of space management in %: Costs property management / Total costs subject area of space management * 100	Flow figure / CHF Flow figure / CHF		Structure key-figure / Proportion	Subject area of space management = Support process space management in PromoS	
Number of parking lots per inpatient bed: Number of parking lots / Number of inpatient beds	Stock figure / Parking lots Stock figure / Inpatient beds		Structure key-figure / Proportion		
Number of parking lots per outpatient case: Number of parking lots / Number of outpatient cases	Stock figure / Parking lots Flow figure / Outpatient cases		Structure key-figure / Proportion		
Number of parking lots per FTE: Number of parking lots / Total FTE hospital	Stock figure / Parking lots Stock figure / FTE hospital		Structure key-figure / Proportion		
Proportion of rented space in relation to the total area: Number of rented space / Number of m2 floor area	Stock figure / Rented space in m2 Stock figure / Floor area in m2		Structure key-figure / Proportion	Floor area according to SIA 416	Property and real estate: includes real estate area and provides an estimate of owned versus leased area in order to know what fraction is owned and what is leased =Area in sq. ft. and fraction of leased or owned area in % of total real estate
Building usage costs per rentable area: Building usage costs / Number of m2 rentable area	Flow figure / CHF Stock figure / m2	X	Operative cost-key-figure / Costs per absolute-/ Flow figure		
Costs for leased areas: Costs for leased areas / Number of m2 leased areas	Flow figure / CHF Stock figure / m2	X	Operative cost-key-figure / Costs per absolute-/ Stock figure		
Commercialisation of rental areas: Costs basic rent / Number of m2 of the main usable area 2 - 6	Flow figure / CHF Stock figure / m2		Operative cost-key-figure / Costs per absolute-/ Stock figure	Main usable area 2 - 6 according to DIN 277	
Operation cost quota: Owner costs / Rental income	Flow figure / CHF Flow figure / CHF		Economic performance key-figure / Productivity	Owner costs = Not to be passed on to tenant	
Profits for leased areas: Profits for leased area / Number of m2 leased areas	Flow figure / CHF Stock figure / m2		Economic performance key-figure / Productivity		
Vacancy rate in %: Number of vacant areas / Number of m2 net area * 100	Stock figure / m2 Stock figure / Net area m2	X	Economic performance key-figure / Utilisation	Included mean usable area HNF2 - HNF 6 from DIN 277 + GEFMA 812	
Utilisation inpatient beds: Number of hours of bed utilisation / 24 Hours	Flow figure / Beds utilised in hours		Economic performance key-figure / Utilisation		
Utilisation operation theatres: Number of hours of operation theatres utilisation / 24 Hours	Flow figure / Operation theatre utilised in hours		Economic performance key-figure / Utilisation	Operation theatre = Area definition HNF 6.3 from DIN 277	
Utilisation medical rooms: Number of hours of medical rooms utilisation / 24 Hours	Flow figure / Medical rooms utilised in hours		Economic performance key-figure / Utilisation	Medical rooms = Area definition HNF 6 without HNF 6.3	
Utilisation miscellaneous rooms: Number of hours of miscellaneous rooms utilisation / 24 Hours	Flow figure / Miscellaneous rooms utilised in hours		Economic performance key-figure / Utilisation	Miscellaneous rooms = Area definition HNF 2 - 5	
Architecture-efficiency: Number of m2 floor area / Number of m2 net floor space	Stock figure / Floor area in m2 Stock figure / Net floor space in m2		Quality key-figure / Structure quality area	Space area and net floor space according to SIA 416	
Floor area wards per care day: Number m2 floor area bed hospital / Number care days	Stock figure / Floor area bed hospital m2 Flow figure / Care days	X	Quality key-figure / Structure quality area	Floor area GF according to SIA 416	
Floor area in ward per inpatient bed: Number m2 floor area / Number of inpatient beds	Stock figure / Floor area bed hospital m2 Stock figure / Inpatient beds	X	Quality key-figure / Structure quality area	Floor area GF according to SIA 417	

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Floor area per FTE: Number of m2 floor area / Total number of FTE hospital	Stock figure / Floor area in m2 Stock figure / FTE Hospital		Quality key-figure / Structure quality area	Floor space according to SIA 416	
Tenant support: Number of complaints rent management / number of lessees	Flow figure / Reclamations Stock figure / Lessee		Quality key-figure / Fulfilment of guidelines		

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Appendix 14: Complete listing of collected and developed key figures for the subject area of energy supply

Key figures (KPIs) Subject area of energy	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of energy	Stock figure / FTE subject area		Structure figure/ Stock figure	Definition energy: Electricity, petroleum products, natural gas, coal, district heatinging, wood energy, other renewable energies, water and gases (LekaS, 2015, p. 33); According to REKOLE: Expenses energy = Costs energy	
Total costs in the subject area of energy	Flow figure / CHF		Operative costs / Flow figure	Subject area of energy = Support process energy in PromoS	
Personnel expenditures in the subject area of energy	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE	
Proportion of costs of externally rendered energy services in %: Costs of externally rendered energy services/ Total costs of rendered energy services * 100	Flow figure / CHF Flow figure / CHF		Structure key-figure/ Degree of externalisation	Subject area of energy = Support process energy in PromoS	
Degree of decentralisation in the subject area of energy services in %: Number of decentralised organisation units in the subject area of energy / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per inpatient bed: Total costs in the subject area of energy/ Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per FTE: Total costs in the subject area of energy/ Total number of FTE	Flow figure / CHF Stock figure / FTE hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per FTE FM in HC: Total costs in the subject area of energy/ Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per inpatient case: Total costs in the subject area of energy / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per outpatient case: Total costs in the subject area of energy / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per care day: Total costs in the subject area of energy / Number of care days	Flow figure / CHF Flow figure / Care days		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per patient: Total costs in the subject area of energy / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per inpatient discharge: Total costs in the subject area of energy / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy per average length of stay: Total costs of the subject area of energy / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of energy = Support process energy in PromoS	
Total costs in the subject area of energy in relation to the total costs of the hospital: Total costs of the subject area of energy / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of energy = Support process energy in PromoS	Costs in the subject area of energy are difficult to define
Specialist quota in the subject area of energy in %: Number of FTE of specialists in the subject area of energy / (Number of FTE of specialists in the subject area of energy + Number of FTE of auxiliary staff in the subject area of energy) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of energy = Support process energy in PromoS	
Fluctuation rate in the subject area of energy in %: Number of departures in the subject area of energy / Average number of staff in the subject area of energy * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of energy = Support process energy in PromoS	
Absence quota due to illness in the subject area of energy in %: Absence time in the subject area of energy / Planned working time in the subject area of energy * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of energy = Support process energy in PromoS	
Quota of overtime in the subject area of energy in %: Overtime in the subject area of energy / Normal working hours in the subject area of energy * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of energy = Support process energy in PromoS	
Rate of continuing education per employee in the subject area of energy in %: Hours of continuing education in the subject area of energy / Working hours in the subject area of energy * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of energy = Support process energy in PromoS	
Customer satisfaction for the subject area of energy in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of energy = Support process energy in PromoS	
Costs of energy and water	Flow figure / CHF		Structure figure / Absolute-/Flow figure	Definition energy: Electricity, petroleum products, natural gas, coal, district heatinging, wood energy, other renewable energies, water and gases (LekaS, 2015, p. 33); According to REKOLE: Expenses energy = Costs energy	
Costs of heating	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Costs of cooling	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Consumption process cooling in kWh	Flow figure / Process cooling in kWh		Structure figure / Absolute-/Flow figure	Included: Process cooling of spaces HNF3, HNF4 + HNF6 according to DIN 277	
Consumption comfort cooling in kWh	Flow figure / Comfort cooling in kWh		Structure figure / Absolute-/Flow figure	Included: Comfort cooling of spaces HNF5 + HNF2 according to DIN 277	
Water consumption swimming pool in m3	Flow figure / Water in m3		Structure figure / Absolute-/Flow figure		
Water consumption	Flow figure / Water consumption in litres		Structure figure / Absolute-/Flow figure		

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heating consumption: Number kWh hot water + Number kWh heater	Flow figure / Hot water in kWh Flow figure / Heater in kWh		Structure figure / Absolute-/Flow figure		
Heating value natural gas: Number kWh natural gas	Flow figure / Natural gas in kWh		Structure figure / Absolute-/Flow figure	According to recalculation m3 to kWh from the gas plant on the invoice. The moment of the readout and the billing has to be considered in accordance with the preferred period view.	
Heating value district heating: Number kWh district heating	Flow figure / District heating in kWh		Structure figure / Absolute-/Flow figure		
Heating value heating oil: Number of litres heating oil * 10 kWh	Flow figure / Heating oil in kWh		Environmental figure / Absolute-/Flow figure	Recalculation from purchased litres in heat value (energy): 1 l = 10 kWh. The changing stock of the heat oil tank has to be considered.	
Energy consumption in relation to the weighted space part in %: Energy consumption in kWh / Weighted space part of the floor space * 100	Flow figure / Energy consumption in kWh Stock figure / Weighted space part of the floor space in m2		Structure figure / Absolute-/Flow figure	All energy sources without water; Floor area GF according to SIA 416	Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10
Proportion of water costs to the total water consumption: Total water costs / Total water consumption	Flow figure / CHF Flow figure / Water consumption in litres		Structure key-figure / Proportion		
Energy costs per m2 floor area: Total energy costs / Number m2 floor area	Flow figure / CHF Stock figure / Floor area in m2	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Floor area GF according to SIA 416	
Costs electric energy per floor space: Costs electric energy / Number m2 floor space	Flow figure / CHF Stock figure / Space area in m2		Operative cost-key-figure / Costs per absolute-/ Stock figure	Floor area GF according to SIA 416	
Costs heating energy per floor space: Costs heating energy / Number m2 floor space	Flow figure / CHF Stock figure / Floor space in m2		Operative cost-key-figure / Costs per absolute-/ Stock figure	Floor area GF according to SIA 416	
Costs comfort cooling per inpatient bed: Costs comfort cooling / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Included: Comfort cooling HNF5 + HNF2	
Energy consumption in relation to the weighted part of the area: Total number of kWh energy / Weighted part of the floor area	Flow figure / Energy consumption in kWh Stock figure / Weighted part of the floor area in m2	X	Environmental key-figure / Consumption of media per absolute-/Stock figure	Floor area GF according to SIA 416	Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10
Heating energy consumption in relation to the weighted part of the area: Total number of kWh heating energy / Weighted part of the floor area	Flow figure / Heating energy consumption kWh Stock figure / Weighted part of the floor area in m2	X	Environmental key-figure / Consumption of media per absolute-/Stock figure	Floor area GF according to SIA 416	Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10
Water consumption in relation to the weighted part of the area: Total number of l water / Weighted part of the floor area	Flow figure / Water consumption in litres Stock figure / Weighted part of the floor area in m2	X	Environmental key-figure / Consumption of media per absolute-/Stock figure	Floor area GF according to SIA 416	Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10
Water consumption per FTE: Water consumption in m³ / Total number of FTE hospital	Flow figure / Water consumption in m³ Stock figure / FTE hospital		Environmental key-figure / Consumption of media per absolute-/ Stock figure		
Energy costs in relation to care days: Total costs of energy / Number of care days	Flow figure / CHF Flow figure / Care days	X	Environmental key-figure / Consumption of media per absolute-/Stock figure		Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10
Annual energy consumption in kWh per m2 floor area per inpatient case: Annual energy consumption in kWh per m2 floor area / Number of inpatient cases	Flow figure / Annual energy consumption in kWh Stock figure / Space area in m2 Flow figure / Inpatient cases		Environmental key-figure / Consumption of media per absolute-/ Flow figure	Floor area GF according to SIA 416	
Annual energy consumption in kWh per m2 floor area per outpatient case: Annual energy consumption in kWh per m2 floor area / Number of outpatient cases	Flow figure / Annual energy consumption in kWh Stock figure / Space area in m2 Flow figure / Outpatient cases		Environmental key-figure / Consumption of media per absolute-/ Flow figure	Floor area GF according to SIA 416	

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Energy consumption in relation to care days: Total number of energy kWh / Number of care days	Flow figure / Energy consumption in kWh Flow figure / Care days	X	Environmental key-figure / Consumption of media per absolute-/ Flow figure		Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10
Heating energy consumption in relation to care days: Total number of kWh heating energy / Number of care days	Flow figure / Energy consumption in kWh Flow figure / Care days	X	Environmental key-figure / Consumption of media per absolute-/ Flow figure		Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10
Water consumption in relation to care days: Total number of l water / Number of care days	Flow figure / Water consumption in litres Flow figure / Care days	X	Environmental key-figure / Consumption of media per absolute-/ Flow figure		Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10
Development of energy costs per m2: Total energy costs per m2 floor area in the present year / Total energy costs per m2 floor area previous year	Flow figure / CHF Stock figure / Floor area in m2 Flow figure / CHF Stock figure / Floor area in m2	X	Environmental key-figure / Energy trends	Floor area GF according to SIA 416; without water	
Development of energy demand in kWh per m2: Energy demand per m2 floor area current year / Total energy demand per m2 floor area previous year	Flow figure / kWh Stock figure / Floor area in m2 Flow figure / kWh Stock figure / Floor area in m2		Environmental figure/ Energy-Trends	Floor area GF according to SIA 416; without water	
Development of heating consumption in kWh per m2: Heating consumption pro m2 space area current year / Heating consumption per m2 floor area previous year	Flow figure / Heating consumption in kWh Stock figure / Floor area in m2 Flow figure / Heating consumption in kWh Stock figure / Floor area in m2		Environmental figure/ Energy-Trends	Floor area GF according to SIA 416	

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Appendix 15: Complete listing of collected and developed key figures for the area of facility services

Key figures (KPIs)	Unit parameter	KPI-Category	Remarks to the key figure (collection)	General remarks
Area of facility services				
Total number of FTE´s in the area of facility services	Stock figure / FTE subject area	Structure figure/ Stock figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area of facility services	Flow figure / CHF	Operative costs / Flow figure	Sum of all storage-, transportation-, capital commitment-, personnel- and disposal costs per period; This sum can be reported as a part of the production costs or turnover.	
Personnel expenditures in the area of facility services	Flow figure / CHF	Operative costs / Flow figure	Personnel expenditures according to REKOLE; Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Proportion of costs of externally rendered facility services in %:	Flow figure / CHF	Structure key figure/ Degree of externalisation	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Costs of externally rendered facility services/ Total costs of rendered facility services * 100	Flow figure / CHF			
Degree of decentralisation in the area of facility services in %:	Stock figure / Organisational units decentralised	Structure key figure / Degree of decentralisation	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Number of decentralised organisation units in the area of facility services / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units FM in HC			
Total costs in the area of facility services per inpatient bed:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area of facility services/ Number of inpatient beds	Stock figure / Inpatient beds			
Total costs in the area of facility services per FTE:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area of facility services/ Total number of FTE	Stock figure / FTE hospital			
Total costs in the area of facility services per FTE FM in HC:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area facility services/ Total number of FTE FM in HC	Stock figure / FTE FM in HC			
Total costs in the area of facility services per inpatient case:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area of facility services/ Number of inpatient cases	Flow figure / Inpatient cases			
Total costs in the area of facility services per outpatient case:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area of facility services/ Number of outpatient cases	Flow figure / Outpatient cases			
Total costs in the area of facility services per care day:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area of facility services / Number of care days	Flow figure / Discharges			
Total costs in the area of facility services per patient:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area of facility services / Number of patients	Flow figure / Patients			
Total costs in the area of facility services per inpatient discharge:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs in the area of facility services / Number of inpatient discharges	Flow figure / Discharges			
Total costs in the area of facility services per average length of stay:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs of the area of facility services / Average length of stay	Flow figure / Length of stay			
Total costs in the area of facility services in relation to the total costs of the hospital:	Flow figure / CHF	Operative cost-Key figure / Cost ratio	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Total costs of the area of facility services / Total costs of the hospital	Flow figure / CHF			
Specialist quota in the area of facility services in %:	Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Number of FTE of specialists in the area of facility services / (Number of FTE of specialists in the area of facility services + Number of FTE of auxiliary staff in the area of facility services) *100	Stock figure / FTE subject area			
Fluctuation rate in the area of facility services in %:	Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Number of departures in the area of facility services / Average number of staff in the area of facility services * 100	Stock figure / FTE subject area			
Absence quota due to illness in the area of facility services in %:	Flow figure/ Absence time in hours	Quality-Key figure / Structure quality personnel	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Absence time in the area of facility services / Planned working time in the area of facility services * 100	Flow figure / Planned working time in hours			
Quota of overtime in the area of facility services in %:	Flow figure / Overtime	Quality-Key figure / Structure quality personnel	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Overtime in the area of facility services / Normal working hours in the area of facility services * 100	Flow figure / Working hours			
Rate of continuing education per employee in the area of facility services in %:	Flow figure / Hours of continuing education	Quality-Key figure / Structure quality personnel	Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	
Hours of continuing education in the area of facility services / Working hours in the area of facility services * 100	Flow figure / Working hours			
Customer satisfaction for the area of facility services in %	Stock figure / %	Quality-Key figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Area of Facility Services = subject area safety, security, cleaning and sterilisation and the corresponding support processes in PromoS	

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Appendix 16: Complete listing of collected and developed key figures for the subject area of safety

Key figures (KPIs) Subject area of safety	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of safety	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of safety = Support process safety in PromoS	
Total costs in the subject area of safety	Flow figure / CHF		Operative costs / Flow figure	Subject area of safety = Support process safety in PromoS	
Personnel expenditures in the subject area of safety	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of safety = Support process safety in PromoS	
Proportion of costs of externally rendered safety services in %: Costs of externally rendered safety services/ Total costs of rendered safety services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Subject area of safety = Support process safety in PromoS	
Degree of decentralisation in the subject area of safety services in %: Number of decentralised organisation units in the subject area of safety/ Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of safety = Support process safety in PromoS	
Total costs in the subject area of safety per inpatient bed: Total costs in the subject area of safety / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of safety = Support process safety in PromoS	Probably no correlation
Total costs in the subject area of safety per FTE: Total costs in the subject area of safety / Total number of FTE	Flow figure / CHF Stock figure / FTE hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of safety = Support process safety in PromoS	Safety is more influenced by the headcount
Total costs in the subject area of safety per FTE FM in HC: Total costs in the subject area of safety / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of safety = Support process safety in PromoS	
Total costs in the subject area of safety per inpatient case: Total costs in the subject area of safety / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of safety = Support process safety in PromoS	Probably no correlation
Total costs in the subject area of safety per outpatient case: Total costs in the subject area of safety / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of safety = Support process safety in PromoS	Probably no correlation
Total costs in the subject area of safety per care day: Total costs in the subject area of safety / Number of care days	Flow figure / CHF Flow figure / Care days		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of safety = Support process safety in PromoS	
Total costs in the subject area of safety per patient: Total costs in the subject area of safety / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of safety = Support process safety in PromoS	
Total costs in the subject area of safety per inpatient discharge: Total costs in the subject area of safety / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of safety = Support process safety in PromoS	
Total costs in the subject area of safety per average length of stay: Total costs of the subject area of safety / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of safety = Support process safety in PromoS	
Total costs in the subject area of safety in relation to the total costs of the hospital: Total costs of the subject area of safety / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of safety = Support process safety in PromoS	
Specialist quota in the subject area of safety in %: Number of FTE of specialists in the subject area of safety / (Number of FTE of specialists in the subject area of safety + Number of FTE of auxiliary staff in the subject area of safety) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of safety = Support process safety in PromoS	
Fluctuation rate in the subject area of safety in %: Number of departures in the subject area of safety / Average number of staff in the subject area of safety * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of safety = Support process safety in PromoS	
Absence quota due to illness in the subject area of safety in %: Absence time in the subject area of safety / Planned working time in the subject area of safety * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of safety = Support process safety in PromoS	
Quota of overtime in the subject area of safety in %: Overtime in the subject area of safety / Normal working hours in the subject area of safety * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of safety = Support process safety in PromoS	
Rate of continuing education per employee in the subject area of safety in %: Hours of continuing education in the subject area of safety / Working hours in the subject area of safety * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of safety = Support process safety in PromoS	
Customer satisfaction for the subject area of safety in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of safety = Support process safety in PromoS	
Total costs subject area of safety per total number of employees: Total costs subject area of safety / Total number of employees	Flow figure / CHF Stock figure / Employees		Operative cost-key-figure / Costs per absolute-/ Stock figure	Employees = Number of headcount; Subject area of Safety = Support process safety in PromoS	
Costs of safety campaign in relation to the costs of loss of wages per operational accident respectively -illness in %: Costs of safety campaigns / Costs of loss of wages per operational accident and illness * 100	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio		
Work safety: Number of operational injury and accidents / Total number of employees in the hospital	Flow figure / Accidents Stock figure / Number of employees	X	Quality-key-figure / Structure quality safety/security		

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Appendix 17: Complete listing of collected and developed key figures for the subject area of security

Key figures (KPIs) Subject area of security	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of security	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of security= Support process security in PromoS	
Total costs in the subject area of security	Flow figure / CHF		Operative costs / Flow figure	Subject area of security= Support process security in PromoS	
Personnel expenditures in the subject area of security	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of security = Support process security in PromoS	
Proportion of costs of externally rendered security services in %: Costs of externally rendered security services/ Total costs of rendered security services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Subject area of security = Support process security in PromoS	
Degree of decentralisation in the subject area of security in %: Number of decentralised organisation units in the subject area of security/ Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per inpatient bed: Total costs in the subject area of security/ Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per FTE: Total costs in the subject area of security/ Total number of FTE	Flow figure / CHF Stock figure / FTE hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per FTE FM in HC: Total costs in the subject area security/ Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per inpatient case: Total costs in the subject area of security/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per outpatient case: Total costs in the subject area of security/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per care day: Total costs in the subject area of security / Number of care days	Flow figure / CHF Flow figure / Care Days	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per patient: Total costs in the subject area of security / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per inpatient discharge: Total costs in the subject area of security / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security per average length of stay: Total costs of the subject area of security / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	
Total costs in the subject area of security in relation to the total costs of the hospital: Total costs of the subject area of security / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of security = Support process security in PromoS	
Specialist quota in the subject area of security in %: Number of FTE of specialists in the subject area of security / (Number of FTE of specialists in the subject area of security + Number of FTE of auxiliary staff in the subject area of security) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / StructuralStructure quality personnel	Subject area of security = Support process security in PromoS	
Fluctuation rate in the subject area of security in %: Number of departures in the subject area of security / Average number of staff in the subject area of security * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of security = Support process security in PromoS	
Absence quota due to illness in the subject area of security in %: Absence time in the subject area of security / Planned working time in the subject area of security * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of security = Support process security in PromoS	
Quota of overtime in the subject area of security in %: Overtime in the subject area of security / Normal working hours in the subject area of security * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of security = Support process security in PromoS	
Rate of continuing education per employee in the subject area of security in %: Hours of continuing education in the subject area of security / Working hours in the subject area of security * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of security = Support process security in PromoS	
Customer satisfaction for the subject area of security in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of security = Support process security in PromoS	
Costs of security per m2: Total costs in the subject area of security / Number of m2 floor area	Flow figure / CHF Stock figure / Floor area in m2	X	Operative cost-key-figure / Costs per absolute-/ Stock figure	Floor area GF according to SIA 416; Subject area of security = Support process security in PromoS	
Personnel expenses security per floor area: Personnel expenses subject area of security / Number of m2 space area	Flow figure / CHF Stock figure / Space area in m2		Operative cost-key-figure / Costs per absolute-/ Stock figure	Floor area GF according to SIA 416; Personnel expenditures according to REKOLE; Subject area of security = Support process security in PromoS	
Security costs per incident: Total costs in the subject area of security/ Number of incidents	Flow figure / CHF Flow figure / Incidents	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	

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Number of unauthorised persons accesses in relation to the total costs subject area of security: Total costs in the subject area of security / Number of unauthorised persons accesses	Flow figure / CHF Flow figure / Unauthorised persons accesses		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	
Costs of damage in relation to the total costs in the subject area of security: Total costs in the subject area of security / Costs of damage	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of security = Support process security in PromoS	

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Appendix 18: Complete listing of collected and developed key figures for the subject area of cleaning

Key figures (KPIs) Subject area of cleaning	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of cleaning	Stock figure / FTE subject area		Structure number / Stock figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning	Flow figure / CHF		Operative costs / Flow figure	Subject area of cleaning = Support process cleaning in PromoS	
Personnel expenditures in the subject area of cleaning	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of cleaning = Support process cleaning in PromoS	
Proportion of costs of externally rendered cleaning services in %: Costs of externally rendered cleaning services / Total costs of rendered cleaning services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Subject area of cleaning = Support process cleaning in PromoS	
Degree of decentralisation in the subject area of cleaning in %: Number of decentralised organisation units in the subject area of cleaning / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per inpatient bed: Total costs in the subject area of cleaning / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per FTE: Total costs in the subject area of cleaning / Total number of FTE	Flow figure / CHF Stock figure / FTE Hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per FTE FM in HC: Total costs in the subject area of cleaning / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per inpatient case: Total costs in the subject area of cleaning / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per outpatient case: Total costs in the subject area of cleaning / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per care day: Total costs in the subject area of cleaning / Number of care days	Flow figure / CHF Flow figure / Care days	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per patient: Total costs in the subject area of cleaning / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per inpatient discharge : Total costs in the subject area of cleaning / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning per average length of stay: Total costs of the subject area of cleaning / Average length of stay	Flow figure / CHF Flow figure / Length of stay	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of cleaning = Support process cleaning in PromoS	
Total costs in the subject area of cleaning in relation to the total costs of the hospital: Total costs of the subject area of cleaning / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of cleaning = Support process cleaning in PromoS	
Specialist quota in the subject area of cleaning in %: Number of FTE of specialists in the subject area of cleaning / (Number of FTE of specialists in the subject area of cleaning + Number of FTE of auxiliary staff in the subject area of cleaning) *100	Stock figure / FTE subject area Stock figure / FTE subject area	X	Quality-key-figure / Structure quality personnel	Subject area of cleaning = Support process cleaning in PromoS	
Fluctuation rate in the subject area of cleaning in %: Number of departures in the subject area of cleaning / Average number of staff in the subject area of cleaning * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of cleaning = Support process cleaning in PromoS	
Absence quota due to illness in the subject area of cleaning in %: Absence time in the subject area of cleaning / Planned working time in the subject area of cleaning * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of cleaning = Support process cleaning in PromoS	
Quota of overtime in the subject area of cleaning in %: Overtime in the subject area of cleaning / Normal working hours in the subject area of cleaning * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of cleaning = Support process cleaning in PromoS	
Rate of continuing education per employee in the subject area of cleaning in %: Hours of continuing education in the subject area of cleaning / Working hours in the subject area of cleaning * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of cleaning = Support process cleaning in PromoS	
Customer satisfaction for the subject area of cleaning in %	Stock figure / %		Quality-key-figure/ Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of cleaning = Support process cleaning in PromoS	
Proportion of females in %: Number females / Total number of employees subject area of cleaning * 100	Stock figure / Female employees Stock figure / Employees subject area		Structure key-figure / Proportion	Women and employees headcount; Subject area of cleaning = Support process cleaning in PromoS	
Proportion of Males in %: Number Males / Total number of employees subject area of cleaning * 100	Stock figure / Male employees Stock figure / Employees subject area		Structure key-figure / Proportion	Men and employees headcount; Subject area of cleaning = Support process cleaning in PromoS	
Total number of employees per FTE subject area of cleaning: Number of employees / Number of FTE subject area of cleaning	Stock figure / Employees subject area Stock figure / Employees subject area		Structure key-figure / Proportion	Employee head count; Subject area of cleaning = Support process cleaning in PromoS	
Number of hygiene inspections of the areas HNF 1.5 + HNF 3.8	Flow figure / Hygiene inspections		Structure figure / Absolute-/Flow figure	Rooms HNF 1.5 and HNF 3.8 according to DIN 277	
Rendered tasks: Weighted sum of all tasks according to specification of the task catalogue	Stock figure / Tasks		Structure figure / Absolute-/Flow figure		
Number of rendered tasks: Number of all tasks according to specification of the task catalogue	Stock figure / Tasks		Structure figure / Absolute-/Flow figure		
Total costs in the subject area of cleaning per m2 floor area: Total costs in the subject area of cleaning / Number of m2 floor area	Flow figure / CHF Flow figure / Floor area in m2	X	Operative cost-key-figure / Costs per absolute-/ Stock figure	Floor area GF according to SIA 416; Subject area of cleaning = Support process cleaning in PromoS	

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Total costs subject area cleaning per m2 per bed: Total costs subject area cleaning per m2 floor area / Number of inpatient beds	Flow figure / CHF Flow figure / Floor area in m2 Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Floor area GF according to SIA 416; Subject area of cleaning = Support process cleaning in PromoS	
Cleaning costs of highly intensive area per m2 highly intensive area HNF 6 + HNF 3.5: Cleaning costs of highly intensive area / Number of m2 highly intensive area	Flow figure / CHF Stock figure / Highly intensive area in m2 (HNF 6 + HNF 3.5)	X	Operative cost-key-figure / Costs per absolute-/ Stock figure		Highly intensive = Intensive care units, emergency units, subject area for burn victims, stem cell transplantation, maternity unit and neonatology. But also all units, which have to be isolated for example due to viruses, as well as laboratories.
Costs of cleaning of wards per m2 of wards: Total costs of wards cleaning / Number of m2 of wards	Flow figure / CHF Stock figure / Area of ward in m2	X	Operative cost-key-figure / Costs per absolute-/ Stock figure		
Costs pest control per m2 of the area HNF 3: Costs pest control / Number of m2 of the area HNF 3	Flow figure / CHF Stock figure / Area HNF 3 in m2		Operative cost-key-figure / Costs per absolute-/ Stock figure	Rooms HNF 3 according to DIN 277	
Costs pest control per m2 of the area HNF 6: Costs pest control / Number of m2 of the area HNF 6	Flow figure / CHF Stock figure / Area HNF 6 in m2		Operative cost-key-figure / Costs per absolute-/ Stock figure	Rooms HNF 6 according to DIN 277	
Costs facade cleaning per facade surface: Costs facade cleaning / Facade surface	Flow figure / CHF Stock figure / Facade surface in m2		Operative cost-key-figure / Costs per absolute-/ Stock figure		
Costs window cleaning per window: Costs window cleaning / Number of windows	Flow figure / CHF Stock figure / Windows		Operative cost-key-figure / Costs per absolute-/ Stock figure		
Cost ratio between total cleaning of wards + highly intensive areas vs. Remaining area: Total cleaning costs of wards + highly intensive areas / Total costs of cleaning of remaining area	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios		
Proportion of material costs to total costs subject area cleaning: Material costs cleaning / Total costs subject area cleaning	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios	Subject area of cleaning = Support process cleaning in PromoS	
Average personnel expenditures per FTE subject area cleaning: Personnel expenditures subject area cleaning / Total FTE subject area cleaning	Flow figure / CHF Stock figure / FTE		Operative cost-key-figure / Cost ratios	Personnel expenditures according to REKOLE; Subject area of cleaning = Support process cleaning in PromoS	
Ratio between in-house personnel expenditures to the total cleaning costs: In-house personnel expenditures / Total costs subject area cleaning	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios	Personnel expenditures according to REKOLE; Subject area of cleaning = Support process cleaning in PromoS	
Proportion of personnel expenditures at total cleaning costs: Personnel expenditures subject area cleaning / (Total costs subject area cleaning + Income from cleaning services)	Flow figure / CHF Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios	Personnel expenditures according to REKOLE; Subject area of cleaning = Support process cleaning in PromoS	
Proportion of costs of ward cleaning to total costs subject area of cleaning in %: Costs of ward cleaning / Total costs subject area of cleaning * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios	Subject area of cleaning = Support process cleaning in PromoS	
Proportion of costs of highly intensive cleaning to total costs subject area of cleaning in %: Costs of highly intensive cleaning / Total costs subject area of cleaning * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios	Subject area of cleaning = Support process cleaning in PromoS	
Proportion of costs of remaining areas cleaning to total costs subject area of cleaning in %: Costs of remaining areas cleaning / Total costs subject area of cleaning * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios	Subject area of cleaning = Support process cleaning in PromoS	
Proportion of costs internal labour key-figure: Costs of internal labour subject area of cleaning / (Costs of internal labour + Costs of external cleaning labour)	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios	Subject area of cleaning = Support process cleaning in PromoS	
Proportion of costs external labour: Costs of external cleaning labour / (Costs of external cleaning labour + Costs of internal labour subject area of cleaning)	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios		
Proportion of costs external cleaning labour to total costs subject area cleaning: Costs of external cleaning labour / Total costs subject area cleaning	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratios	Subject area of cleaning = Support process cleaning in PromoS	
Proportion of skilled employees to total number of employees cleaning: Number of skilled employees subject area of cleaning / Total number of employees cleaning	Stock figure / Employees subject area Stock figure / Employees subject area		Quality-key-figure / Structure quality personnel		
Proportion of unskilled employees to total number of employees cleaning: Number of unskilled employees subject area of cleaning / Total number of employees cleaning	Stock figure / Employees subject area Stock figure / Employees subject area		Quality-key-figure / Structure quality personnel		
Total number of cleaning reclamations per cleaning area: Number of cleaning reclamations / Total cleaning area	Flow figure / Reclamations Stock figure / Cleaning area in m2		Quality key-figure / Fulfilment of guidelines		
Number of cleaning reclamations per room category: Number of cleaning reclamations / Room category xy	Flow figure / Reclamations Stock value / Room category		Quality key-figure / Fulfilment of guidelines		A standardised area- and room categorisation is currently compiled at ZHAW IFM - specific definitions are subsequently possible

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Appendix 19: Complete listing of collected and developed key figures for the subject area of sterilisation

Key figures (KPIs) Subject area of sterilisation	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of sterilisation	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation	Flow figure / CHF		Operative costs / Flow figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Personnel expenditures in the subject area of sterilisation	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of sterilisation = Support process sterilisation in PromoS	
Proportion of costs of externally rendered sterilisation services in %: Costs of externally rendered sterilisation services/ Total costs of rendered sterilisation services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Subject area of sterilisation = Support process sterilisation in PromoS	
Degree of decentralisation in the subject area of sterilisation in %: Number of decentralised organisation units in the subject area of sterilisation / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per inpatient bed: Total costs in the subject area of sterilisation / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per FTE: Total costs in the subject area of sterilisation / Total number of FTE	Flow figure / CHF Stock figure / FTE Hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per FTE FM in HC: Total costs in the subject area of sterilisation / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per inpatient case: Total costs in the subject area of sterilisation / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per outpatient case: Total costs in the subject area of sterilisation / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per care day: Total costs in the subject area of sterilisation / Number of care days	Flow figure / CHF Flow figure / Care days		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per patient: Total costs in the subject area of sterilisation / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per inpatient discharge: Total costs in the subject area of sterilisation / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of sterilisation = Support process sterilisation in PromoS	
Total costs in the subject area of sterilisation per average length of stay: Total costs of the subject area of sterilisation / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of sterilisation = Support process sterilisation in PromoS	Probably no correlation
Total costs in the subject area of sterilisation in relation to the total costs of the hospital: Total costs of the subject area of sterilisation / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of sterilisation = Support process sterilisation in PromoS	
Specialist quota in the subject area of sterilisation in %: Number of FTE of specialists in the subject area of sterilisation / (Number of FTE of specialists in the subject area of sterilisation + Number of FTE of auxiliary staff in the subject area of sterilisation) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of sterilisation = Support process sterilisation in PromoS	
Fluctuation rate in the subject area of sterilisation in %: Number of departures in the subject area of sterilisation / Average number of staff in the subject area of sterilisation * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of sterilisation = Support process sterilisation in PromoS	
Absence quota due to illness in the subject area of sterilisation in %: Absence time in the subject area of sterilisation / Planned working time in the subject area of sterilisation * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of sterilisation = Support process sterilisation in PromoS	
Quota of overtime in the subject area of sterilisation in %: Overtime in the subject area of sterilisation / Normal working hours in the subject area of sterilisation * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of sterilisation = Support process sterilisation in PromoS	
Rate of continuing education per employee in the subject area of sterilisation in %: Hours of continuing education in the subject area of sterilisation / Working hours in the subject area of sterilisation * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of sterilisation = Support process sterilisation in PromoS	
Customer satisfaction for the subject area of sterilisation in %	Stock figure / %		Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of sterilisation = Support process sterilisation in PromoS	
Number of sterilisation units	Stock figure / Sterilisation units		Structure figure / Absolute-/Stock figure		
Number of prepared beds	Stock figure / Beds prepared		Structure figure / Absolute-/Flow figure		
Sterilisation costs for one product: Costs sterilisation cycle in sterilizer / Basket capacity of sterilizer / Sterilizer volume index of the product	Flow figure / CHF Stock figure / Basket capacity Stock figure / Volume index		Operative cost-key-figure / Costs per absolute-/ Stock figure	Sterilizator volume index = 1 divided by the number of the product occupied baskets; Baskets = Sieve trays	
Sterilisation costs (dependent on the products): (Average costs of a cycle / Average capacity of standard baskets) / Sterilisation volume index	Flow figure / CHF Stock figure / capacity of basket Stock figure / Volume index	X	Operative cost-key-figure / Costs per absolute-/ Stock figure	Sterilizator volume index = 1 divided by the number of the product occupied baskets; Baskets = Sieve trays	
Handling costs (depending on the products): [(Number of instruments * Assembling time) + Other handling time] * Hourly wage	Stock figure / Instruments Flow figure / Process time Flow figure / Process time Stock figure / CHF		Operative cost-key-figure / Costs per absolute-/ Stock figure		

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Surgery proportion of costs to sterilisation sieve trays: Number of surgery sieves / Total number of sieve trays * Total costs in the subject area of sterilisation	Stock figure / Sieves Stock figure / Sieves Flow figure / CHF	X	Operative cost-key-figure / Costs per absolute-/ Flow figure		Operations might be more meaningful
Usage costs sterilisation (lump sum): Usage costs sterilisation / Number of produced units	Flow figure / CHF Stock figure / Produced units		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Packaging costs (lump sum): Packaging costs / Number of produced units	Flow figure / CHF Stock figure / Produced units		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Cleaning costs sterilisation per unit: (Number of cleaning cycles * Cycle costs) / Number of produced units	Stock figure / Cleaning cycles Flow figure / CHF Stock figure / Produced units		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Productivity of the central sterile services subject area (CSSD): Number of sieves / Number of FTE * Daily work	Stock figure / Sieves Stock figure / FTE Stock figure / Working hours	X	Economic performance key-figure / Productivity		
Utilisation of the cleaning-/ disinfection device (RDG) per operating time: Number of batches * Process time / Number of chambers / Gross operating time	Stock figure / batches Flow figure / Process time Stock figure / Chambers Stock figure / Gross operating time	X	Economic performance key-figure/ Utilisation		
Filling degree factor of a batch Cleaning-/Disinfection device (RDG): Number of sieves / Number of batches	Stock figure / Sieves Stock figure / Batches		Economic performance key-figure / Utilisation		
Utilisation autoclave per operation time: Number of batches * Process time/Number of chambers/Gross operating time	Stock figure / Batches Flow figure / Process time Stock figure / Chambers Stock figure / Gross operating time		Economic performance key-figure / Utilisation		
Filling degree of batch in autoclave: Number of sieves / Number of batches * max. Capacity	Stock figure / Sieves Stock figure / Batches Stock figure / Capacity		Economic performance key-figure / Utilisation		Capacity refers to gross operating time

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Appendix 20: Complete listing of collected and developed key figures for the area of hotel services

Key figures (KPIs)	Unit parameter	KPI-Category	Remarks to the key figure (collection)	General remarks
Area of hotel services				
Total number of FTE´s in the area of hotel services	Stock figure / FTE subject area	Structure number / Stock figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services	Flow figure / CHF	Operative costs / Flow figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Personnel expenditures in the area of hotel services	Flow figure / CHF	Operative costs / Flow figure	Personnel expenditures according to REKOLE; Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Proportion of costs of externally rendered hotel services in %:	Flow figure / CHF	Structure key figure/ Degree of externalisation	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Costs of externally rendered hotel services / Total costs of rendered hotel services * 100	Flow figure / CHF			
Degree of decentralisation in the area of hotel services in %:	Stock figure / Organisational units decentralised	Structure key figure / Degree of decentralisation	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Number of decentralised organisation units in the area of hotel services / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units FM in HC			
Total costs in the area of hotel services per inpatient bed:	Stock figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services / Number of inpatient beds	Stock figure / Inpatient beds			
Total costs in the area of hotel services per FTE:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services / Total number of FTE	Stock figure / FTE Hospital			
Total costs in the area of hotel services per FTE FM in HC:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Stock figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services / Total number of FTE FM in HC	Stock figure / FTE FM in HC			
Total costs in the area of hotel services per inpatient case:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services / Number of inpatient cases	Flow figure / Inpatient cases			
Total costs in the area of hotel services per outpatient case:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services / Number of outpatient cases	Flow figure / Outpatient cases			
Total costs in the area of hotel services per care day:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services / Number of care days	Flow figure / Discharges			
Total costs in the area of hotel services per patient:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services / Number of patients	Flow figure / Patients			
Total costs in the area of hotel services per inpatient discharge :	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs in the area of hotel services / Number of inpatient discharges	Flow figure / Discharges			
Total costs in the area of hotel services per average length of stay:	Flow figure / CHF	Operative cost-Key figure / Costs per absolute-/ Flow figure	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs of the area of hotel services / Average length of stay	Flow figure / Length of stay			
Total costs in the area of hotel services in relation to the total costs of the hospital:	Flow figure / CHF	Operative cost-Key figure / Cost ratio	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Total costs of the area of hotel services / Total costs of the hospital	Flow figure / CHF			
Specialist quota in the area of hotel services in %:	Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Number of FTE of specialists in the area of hotel services / (Number of FTE of specialists in the area of hotel services + Number of FTE of auxiliary staff in the area of hotel services) *100	Stock figure / FTE subject area			
Fluctuation rate in the area of hotel services in %:	Stock figure / FTE subject area	Quality-Key figure / Structure quality personnel	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Number of departures in the area of hotel services / Average number of staff in the area of hotel services * 100	Stock figure / FTE subject area			
Absence quota due to illness in the area of hotel services in %:	Flow figure/ Absence time in hours	Quality-Key figure / Structure quality personnel	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Absence time in the area of hotel services / Planned working time in the area of hotel services * 100	Flow figure / Planned working time in hours			

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Quota of overtime in the area of hotel services in %: Overtime in the area of hotel services / Normal working hours in the area of hotel services * 100	Flow figure / Overtime Flow figure / Working hours	Quality-Key figure / Structure quality personnel	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Rate of continuing education per employee in the area of hotel services in %: Hours of continuing education in the area of hotel services / Working hours in the area of hotel services * 100	Flow figure / Hours of continuing education Flow figure / Working hours	Quality-Key figure / Structure quality personnel	Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	
Customer satisfaction for the area of hotel services in %	Stock figure / %	Quality-Key figure/ Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Area of hotel services = subject area catering, laundry supply, accommodation management & operation of properties & hotel services and the corresponding support processes in PromoS	

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Appendix 21: Complete listing of collected and developed key figures for the subject area of catering

Key figures (KPIs) Subject area of catering	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of catering	Stock figure / FTE subject area		Structure number / Stock figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering	Flow figure / CHF		Operative costs / Flow figure	Subject area of catering = Support process catering in PromoS	
Personnel expenditures in the subject area of catering	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	
Proportion of costs of externally rendered catering services in %: Costs of externally rendered catering services / Total costs of rendered catering services * 100	Flow figure / CHF Flow figure / CHF		Structure key-figure/ Degree of externalisation	Subject area of catering = Support process catering in PromoS	
Degree of decentralisation in the subject area of catering in %: Number of decentralised organisation units in the subject area of catering / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per inpatient bed: Total costs in the subject area of catering / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per FTE: Total costs in the subject area of catering / Total number of FTE	Flow figure / CHF Stock figure / FTE Hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per FTE FM in HC: Total costs in the subject area of catering / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per inpatient case: Total costs in the subject area of catering / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per outpatient case: Total costs in the subject area of catering / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per care day: Total costs in the subject area of catering / Number of care days	Flow figure / CHF Flow figure / Care days		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per patient: Total costs in the subject area of catering / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per inpatient discharge : Total costs in the subject area of catering / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering per average length of stay: Total costs of the subject area of catering / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of catering = Support process catering in PromoS	
Total costs in the subject area of catering in relation to the total costs of the hospital: Total costs of the subject area of catering / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of catering = Support process catering in PromoS	
Specialist quota in the subject area of catering in %: Number of FTE of specialists in the subject area of catering / (Number of FTE of specialists in the subject area of catering + Number of FTE of auxiliary staff in the subject area of catering) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of catering = Support process catering in PromoS	
Fluctuation rate in the subject area of catering in %: Number of departures in the subject area of catering / Average number of staff in the subject area of catering * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of catering = Support process catering in PromoS	
Absence quota due to illness in the subject area of catering in %: Absence time in the subject area of catering / Planned working time in the subject area of catering * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of catering = Support process catering in PromoS	
Quota of overtime in the subject area of catering in %: Overtime in the subject area of catering / Normal working hours in the subject area of catering * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of catering = Support process catering in PromoS	
Rate of continuing education per employee in the subject area of catering in %: Hours of continuing education in the subject area of catering / Working hours in the subject area of catering * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of catering = Support process catering in PromoS	
Customer satisfaction for the subject area of catering in %	Stock figure / %		Quality-key-figure/ Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of catering = Support process catering in PromoS	
Number of FTE restaurant & production	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Number of employees in the subject area of catering	Stock figure / Employees subject area		Structure figure / Absolute-/Stock figure	Subject area of catering = Support process catering in PromoS	
Services times lunch [hours per day]	Structure value		Structure figure / Absolute-/Stock figure		
Number of seats restaurant	Stock figure / Seats		Structure figure / Absolute-/Stock figure		
Number of employees production	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Number of employees restaurant operation	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Number of trainees production + restaurant	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure	Production = Kitchen	
FTE production and restaurant operation: Number of FTE production + Number of FTE restaurant operation	Stock figure / FTE subject area Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Unskilled FTE production	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Trained FTE production	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		

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Skilled FTE production with federal certificate of competence	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Number of m2 production area subject area of catering	Stock figure / m2		Structure figure / Absolute-/Stock figure	Subject area of catering = Support process catering in PromoS	
Number of m2 production area subject area of catering (HNF 3.8)	Stock figure / m2		Structure figure / Absolute-/Stock figure	Subject area of catering = Support process catering in PromoS	
Number m2 restaurant	Stock figure / m2		Structure figure / Absolute-/Stock figure		
Number of m2 dining rooms (HNF 1.5)	Stock figure / m2		Structure figure / Absolute-/Stock figure		
Total number of m2 gastronomy	Stock figure / m2		Structure figure / Absolute-/Stock figure		
Total number of m2 gastronomy (HNF 1.5, 3.8, 4.1, 4.3, 4.3)	Stock figure / m2		Structure figure / Absolute-/Stock figure		
Theoretical revenue for patient catering	Flow figure / CHF		Structure figure / Absolute-/Stock figure		
Number of meals	Flow figure / Meals		Structure figure / Absolute-/Flow figure		
Reimbursement of employee discounts	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Number of cash deck transactions	Flow figure / Transactions		Structure figure / Absolute-/Flow figure		
Costs food distribution	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Personnel expenditures production of catering	Flow figure / CHF		Structure figure / Absolute-/Flow figure	Personnel expenditures according to REKOLE	
Personnel expenditures restaurant operation	Flow figure / CHF		Structure figure / Absolute-/Flow figure	Personnel expenditures according to REKOLE	
Personnel expenditures without trainees: Personnel expenditures subject area of catering - (Personnel expenditures trainees subject area of catering * Total number of trainees subject area of catering)	Flow figure / CHF Flow figure / CHF Stock figure / FTE subject area		Structure figure / Absolute-/Flow figure	Personnel expenditures according to REKOLE	
Food costs	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Personnel expenditures subject area of catering and food costs: Personnel expenditures subject area of catering + Food costs	Flow figure / CHF Flow figure / CHF		Structure figure / Absolute-/Flow figure	Personnel expenditures according to REKOLE	
Reduction due to apprentice adjustment (absolute): Average annual salary (unadjusted) - Average annual salary (adjusted)	Flow figure / CHF Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Calculated revenue gastronomy	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Revenue restauration	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Revenue production	Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Revenue catering section (without patients): Revenue restauration + Revenue kitchen	Flow figure / CHF Flow figure / CHF		Structure figure / Absolute-/Flow figure		
Average number of daily transactions: Number of transactions / Days of operation	Flow figure / Transactions		Structure key-figure / Average number		= Average number of guests per day
Effectively collected costs per patient catering day: Costs tbd / Total number of catering days	Flow figure / CHF Flow figure / Catering days	X	Operative cost-key-figure / Costs per absolute-/ Stock figure	The exact cost structure is currently being developed in the hotellerie-benchmark.	
Average salary per employee production of catering: Salary of production employees / Number of production employees	Flow figure / CHF Stock figure / Employees subject area		Operative cost-key-figure / Costs per absolute-/ Stock figure		
Average salary per restaurant employee: Salary of restaurant employees / Number of restaurant employees	Flow figure / CHF Stock figure / Employees subject area		Operative cost-key-figure / Costs per absolute-/ Stock figure		
Average salary per employee subject area of catering: Salary subject area catering / (Number of FTE production + Number of FTE kitchen / 100)	Flow figure / CHF Stock figure / FTE subject area Stock figure / FTE subject area		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of catering = Support process catering in PromoS	
Average personnel expenditures in the subject area of catering per FTE: Personnel expenditures in the subject area of catering / Number of FTE	Flow figure / CHF Stock figure / FTE Subject area	X	Operative cost-key-figure / Costs per absolute-/ Stock figure	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	
Average personnel expenditures per apprentice in the initial education: Personnel expenditures trainees in the initial education / Number trainees	Flow figure / CHF Stock figure / FTE subject area		Operative cost-key-figure / Costs per absolute-/ Stock figure	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	
Adjusted annual salary per employee: Personnel expenditures subject area of catering / Number of FTE subject area catering / 100	Flow figure / CHF Stock figure / FTE subject area		Operative cost-key-figure / Costs per absolute-/ Stock figure	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	
Costs for patient-/ inhabitant catering per number of meals: Total costs subject area catering / Number of patients/inhabitant meals	Flow figure / CHF Flow figure / Meals		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Proportion oftotal costs patient catering vs. Total costs personnel-/guest catering: Total costs patient catering / Total costs personnel-/guest catering	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost relation		
Ratio of total costs of catering production to the total costs of the hospital in %: Total costs of catering production / Total costs of the hospital * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio		
Proportion of total personnel expenditures of the catering production to the personnel expenditures subject area of catering in %: Proportion of personnel expenditures of catering production / Total personnel expenditures subject area of catering * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	
Proportion of personnel expenditures restaurant operation to total personnel expenditures subject area of catering in %: Proportion of personnel expenditures restaurant operation / Total personnel expenditures subject area of catering * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	

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Proportion of total gastronomy costs to the total costs of the hospital: Total gastronomy costs / Total costs of the hospital * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio		
Proportion of patient- & inhabitant catering costs to total costs subject area of catering in %: Costs of patient- & inhabitant catering / Total costs subject area of catering * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio	Subject area of catering = Support process catering in PromoS	
Proportion of personnel catering costs to total costs subject area of catering in %: Costs personnel catering / Total costs subject area of catering * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio	Subject area of catering = Support process catering in PromoS	
Proportion of guest catering costs to total costs subject area of catering: Costs guest catering / Total costs subject area of catering * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio	Subject area of catering = Support process catering in PromoS	
Seat turnover: Average number of guests / Number of seats in the restaurant	Flow figure / Guests Stock figure / Seats		Operative revenue-key-figure / Revenue per absolute-/Stock figure		
Restaurant turnover per seat: Restaurant turnover / Number of seats	Flow figure / CHF Stock figure / Seats	X	Operative cost-key-figure / Costs per absolute-/ Stock figure		
Restaurant turnover per m2 sales area: Restaurant turnover / Number of m2 sales area	Flow figure / CHF Stock figure / m2		Operative revenue-key-figure / Revenue per absolute-/Stock figure		
Restaurant turnover per m2 sales area: Restaurant turnover / Number of m2 sales area HNF 4.5	Flow figure / CHF Stock figure / m2		Operative revenue-key-figure / Revenue per absolute-/Stock figure		
Total revenue subject area of catering (restaurant-, external- and patient revenue) per m2 production area: Total revenue subject area of catering / Number of m2 production area	Flow figure / CHF Stock figure / m2		Operative revenue-key-figure / Revenue per absolute-/Stock figure		
Total revenue subject area of catering (restaurant-, external- and patient revenue) per m2 production area: Total revenue subject area of catering / Number of m2 production area HNF 3.8, 4.1, 4.3	Flow figure / CHF Stock figure / m2		Operative revenue-key-figure / Revenue per absolute-/Stock figure	Subject area of catering = Support process catering in PromoS	
Total revenue subject area of catering (restaurant-, external- and patient revenue) per m2 gastronomy: Total revenue subject area of catering / Number of m2 gastronomy	Flow figure / CHF Stock figure / m2		Operative revenue-key-figure / Revenue per absolute-/Stock figure	Subject area of catering = Support process catering in PromoS	
Total revenue subject area of catering (restaurant-, external- and patient revenue) per m2 gastronomy: Total revenue subject area of catering / Number of m2 gastronomy HNF 1.5, 3.8, 4.1, 4.3, 4.3	Flow figure / CHF Stock figure / m2		Operative revenue-key-figure / Revenue per absolute-/Stock figure	Subject area of catering = Support process catering in PromoS	
Restaurant revenue per transaction: Revenue restauration / Number of transactions	Flow figure / CHF Flow figure / Transactions		Operative revenue-key-figure / Revenue per absolute-/Stock figure		
Proportion of personnel expenses in the subject area of Catering and food costs to the total catering revenue in %: (Personnel expenditures in the subject area of Catering + Food costs) / Total catering revenue * 100	Flow figure / CHF Flow figure / CHF Flow figure / CHF	X	Operative revenue key-figure / Revenue ratio	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	
Proportion of personnel expenses in the subject-area Catering to the total gastronomy revenue in %: Proportion of personnel expenses in the subject-area Catering / Total gastronomy revenue * 100	Flow figure / CHF Flow figure / CHF	X	Operative revenue key-figure / Revenue ratio	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	
Proportion of food expenses to the total gastronomy revenue in %: Food expenses / Total gastronomy revenue * 100	Flow figure / CHF Flow figure / CHF	X	Operative revenue key-figure / Revenue ratio		
Proportion of revenue of restaurant operation to total revenue subject area of catering in %: Revenue restauration / Total revenue subject area catering * 100	Flow figure / CHF Flow figure / CHF		Operative revenue key-figure / Revenue ratio	Subject area of catering = Support process catering in PromoS	
Proportion of revenue production to total revenue subject area of catering in %: Revenue production / Total revenue subject area catering * 100	Flow figure / CHF Flow figure / CHF		Operative revenue key-figure / Revenue ratio	Subject area of catering = Support process catering in PromoS	
Proportion of revenue patient catering to total revenue subject area of catering in %: Revenue patient catering / Total revenue subject area catering * 100	Flow figure / CHF Flow figure / CHF		Operative revenue key-figure / Revenue ratio	Subject area of catering = Support process catering in PromoS	
Rentability subject area of catering: 100 - [100 / Total calculated revenue subject area of catering * (Total wage costs subject area of catering + Costs of food distribution + Cost of goods subject area of catering)]	Flow figure / CHF Flow figure / CHF Flow figure / CHF Flow figure / CHF		Operative revenue key-figure / Rentability	Subject area of catering = Support process catering in PromoS	
Employee productivity production of catering: Total revenue subject area of catering / Personnel expenditures subject area of catering	Flow figure / CHF Flow figure / CHF		Economic performance key-figure / Productivity	Subject area of catering = Support process catering in PromoS	
Goods productivity: Total revenue subject area of catering / Cost of goods subject area of catering	Flow figure / CHF Flow figure / CHF		Economic performance key-figure / Productivity	Subject area of catering = Support process catering in PromoS	
Personnel- and goods productivity: Total revenue subject area of catering / (Personnel expenditures subject area of catering + Cost of goods subject area of catering)	Flow figure / CHF Flow figure / CHF Flow figure / CHF		Economic performance key-figure / Productivity	Subject area of catering = Support process catering in PromoS	
Area productivity of the production area subject of area catering: Total revenue subject area of catering / Number of production area subject area of catering in m2	Flow figure / CHF Stock figure / m2		Economic performance key-figure / Productivity	Subject area of catering = Support process catering in PromoS	
Area productivity of the catering production area: Total revenue subject area of catering / Number m2 of area HNF 3.8	Flow figure / CHF Stock figure / m2		Economic performance key-figure / Productivity	Subject area of catering = Support process catering in PromoS	
Total productivity of production: Total revenue subject area of catering / (Personnel expenditures subject area of catering + Cost of goods subject area of catering + Area allocation)	Flow figure / CHF Flow figure / CHF Flow figure / CHF Structure value		Economic performance key-figure / Productivity	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS	
m2 production area per bed: Number of m2 production area / Number of inpatient beds	Stock figure / m2 Stock figure / Inpatient beds		Economic performance key-figure / Utilisation		
m2 production area per bed: Number of m2 production area HNF 3.8 / Number of inpatient beds	Stock figure / m2 Stock figure / Inpatient beds		Economic performance key-figure / Utilisation		

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Average employment level: Number of employees subject area of catering / Total number of FTE hospital	Stock figure / Employees subject area Stock figure / FTE Hospital		Quality key-figure / Structure quality personnel		
Number of trainees in relation to the employess production + restaurant in %: Number of trainees subject area of catering / Total number of employees subject area catering (production + restaurant) * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality key-figure / Structure quality personnel	Subject area of catering = Support process catering in PromoS	
Number of seats per employee: Number of seats in the restaurant / Number of employees	Stock figure / Seats Stock figure / Employees	X	Quality key-figure / Structure quality areas		
Food Waste	tbd		Quality key-figure / Fulfilment of guidelines	tbd by IFM, expected until 2017/18 based on PhD from G. Züger	
Proportion of returns of total cost of goods of patient breakfast in %: Number of returns of patient breakfast / Total cost of goods patient breakfast * 100	Flow figure / Returns Flow figure / CHF		Quality key-figure / Fulfilment of guidelines		
Proportion of returns of total cost of goods of patient lunch in %: Number of returns of patient lunch / Total cost of goods patient lunch * 100	Flow figure / Returns Flow figure / CHF		Quality key-figure / Fulfilment of guidelines		
Proportion of returns of total cost of goods of patient dinner in %: Number of returns of patient dinner / Total cost of goods patient dinner * 100	Flow figure / Returns Flow figure / CHF		Quality key-figure / Fulfilment of guidelines		
Proportion of goods returned to the total material expenses of all meals in %: (Number of goods returned patient breakfast + Number of goods returned patient lunch + Number of goods returned patient dinner / (Total number of material expenses patient breakfast + Total number of material expenses patient lunch + Total number of material expenses patient dinner) * 100	Flow number / Goods returned Flow number / Goods returned Flow number / Goods returned Flow number / CHF Flow number / CHF Flow number / CHF	X	Quality key-figure / Fulfilment of guidelines		
Reduction after apprentice adjustment in %: (Average annual salary of trainees / Average annual salary adjusted)	Flow figure / CHF Flow figure / CHF		Operative cost key-figure / Cost ratio		
Levies per m2 production- and sales area: Levies / (Number of m2 production area subject area of catering + Number of m2 sales area subject area of catering)	Flow figure / CHF Stock figure / m2 Stock figure / m2			Subject area of catering = Support process catering in PromoS	
Total area costs from levies	Flow figure / CHF				
Levies per m2 production- and sales area subject area of catering: Levies / (Production area subject area of catering + Sales area subject area of catering)	Flow figure / CHF Stock figure / Production area catering in m2 Stock figure / m2			Subject area of catering = Support process catering in PromoS	
Total area costs subject area of catering from levies: Total area costs subject area of catering / Levies	Flow figure / CHF Flow figure / CHF			Subject area of catering = Support process catering in PromoS	

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Appendix 22: Complete listing of collected and developed key figures for the subject area of laundry supply

Key figures (KPIs) Subject area of textiles	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of textiles	Stock figure / FTE subject area		Structure number / Stock figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles	Flow figure / CHF		Operative costs / Flow figure	Subject area of textiles = Support process textiles in PromoS	
Personnel expenditures in the subject area of textiles	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of textiles = Support process textiles in PromoS	
Proportion of costs of externally rendered textile services in %: Costs of externally rendered textile services / Total costs of rendered textile services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Subject area of textiles = Support process textiles in PromoS	
Degree of decentralisation in the subject area of textiles in %: Number of decentralised organisation units in the subject area of textiles / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of textiles = Support process textiles in PromoS	Difficult to measure
Total costs in the subject area of textiles per inpatient bed: Total costs in the subject area of textiles/ Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles per FTE: Total costs in the subject area of textiles/ Total number of FTE	Flow figure / CHF Stock figure / FTE Hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles per FTE FM in HC: Total costs in the subject area of textiles / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles per inpatient case: Total costs in the subject area of textiles / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles per outpatient case: Total costs in the subject area of textiles / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles per care day: Total costs in the subject area of textiles / Number of care days	Flow figure / CHF Flow figure / Care days	X	Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles per patient: Total costs in the subject area of textiles / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles per inpatient discharge : Total costs in the subject area of textiles / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles per average length of stay: Total costs of the subject area of textiles / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of textiles = Support process textiles in PromoS	
Total costs in the subject area of textiles in relation to the total costs of the hospital: Total costs of the subject area of textiles / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of textiles = Support process textiles in PromoS	
Specialist quota in the subject area of textiles in %: Number of FTE of specialists in the subject area of textiles / (Number of FTE of specialists in the subject area of textiles + Number of FTE of auxiliary staff in the subject area of textiles) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of textiles = Support process textiles in PromoS	
Fluctuation rate in the subject area of textiles in %: Number of departures in the subject area of textiles / Average number of staff in the subject area of textiles * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of textiles = Support process textiles in PromoS	
Absence quota due to illness in the subject area of textiles in %: Absence time in the subject area of textiles / Planned working time in the subject area of textiles * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of textiles = Support process textiles in PromoS	
Quota of overtime in the subject area of textiles in %: Overtime in the subject area of textiles / Normal working hours in the subject area of textiles * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of textiles = Support process textiles in PromoS	
Rate of continuing education per employee in the subject area of textiles in %: Hours of continuing education in the subject area of textiles / Working hours in the subject area of textiles * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of textiles = Support process textiles in PromoS	
Customer satisfaction for the subject area of textiles in %	Stock figure / %		Quality-key-figure/ Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of textiles = Support process textiles in PromoS	
Number washing machines	Stock figure / Washing machines		Structure figure / Absolute-/Stock figure		
Aggregate capacity washing machines	Stock figure / Washing machine volume in m3		Structure figure / Absolute-/Stock figure		
Number tumblers	Stock figure / Tumbler		Structure figure / Absolute-/Stock figure		
Aggregate capacity tumbler in kg	Stock figure / Tumbler volume in kg		Structure figure / Absolute-/Stock figure		
Total energy consumption of all machines	Flow figure / Energy consumption machines subject area in kWh		Structure figure / Absolute-/Flow figure		
Costs of internal and external laundry services: Costs of internal laundry services + Costs of external laundry services	Flow figure / CHF Flow figure / CHF		Structure figure / Absolute-/Flow figure		

Continuation

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Costs of internal and external services and employees: Internal and external service costs / Number of employees subject area of textiles	Flow figure / CHF Flow figure / CHF Stock figure / FTE subject area		Operative cost-key-figure / Costs per absolute-/ Stock figure		
Internal and external costs per operation day laundry: Internal and external costs / Number operation days laundry	Flow figure / CHF Flow figure / CHF Stock figure / Number operation days		Operative cost-key-figure / Costs per absolute-/ Stock figure		
Costs laundry per m2: Costs laundry / Number m2 floor area	Flow figure / CHF Stock figure / Floor area in m2		Operative cost-key-figure / Costs per absolute-/ Stock figure	Floor area GF according to SIA 416	
laundry costs per kg: Total laundry costs / Total number of kg laundry	Flow figure / CHF Flow figure / Laundry in kg		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Internal and external costs of laundry per kg: (Internal laundry costs + External laundry costs) / Number of kg laundry	Flow figure / CHF Flow figure / CHF Flow figure / Laundry in kg		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Internal and external service per occupancy day: Total internal and external service costs / Number of occupancy days	Flow figure / CHF Flow figure / CHF Stock figure / Occupancy days		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Internal and external costs per average stay: Total internal and external service costs / Average stay	Flow figure / CHF Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure		
Proportion of costs of profession textiles to total costs of textiles in %: Costs of profession textiles / Total costs of textiles * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio		
Proportion of total costs of patient textiles vs. profession textiles: Total costs of patient textiles / Total costs of profession textiles	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio		
Proportion of costs of patient textiles to the total costs of textiles in %: Costs of patient textiles / Total costs of textiles * 100	Flow figure / CHF Flow figure / CHF	x	Operative cost-key-figure / Cost ratio		
Laundry costs in % of the total revenue of the hospital: Laundry costs / Total revenue of the hospital	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio		
Average batches per day and washing machine: Number of washing machines / Number of washing batches	Stock figure / Washing machines Flow figure / Batches		Economic performance key-figure / Productivity		
Processed laundry per FTE: Number of kg processed laundry / Number of jobs in subject area of textiles	Flow figure / Laundry in kg Stock figure / FTE subject area		Economic performance key-figure / Productivity	Subject area of textiles = Support process textiles in PromoS	
Processed laundry per room: Number of kg processed laundry / Number of rooms	Flow figure / Laundry in kg Stock figure / Rooms		Economic performance key-figure / Productivity		
Processed laundry per m2: Number of kg processed laundry / Number of m2 floor area	Flow figure / Laundry in kg Stock figure / Floor area in m2		Economic performance key-figure / Productivity	Floor area GF according to SIA 416	
Processed laundry per bed: Number of kg processed laundry / Number of beds	Flow figure / Laundry in kg Stock figure / Beds		Economic performance key-figure / Productivity		
Ø batches per day and tumbler: Number of tumblers / Number of tumbler batches	Stock figure / Tumblers Stock figure / Tumbler batches		Economic performance key-figure / Productivity		
Reclamation quota per kg: Number reclamations / Number of kg laundry	Flow figure / Reclamations Flow figure / Laundry in kg		Quality key-figure / Fulfilment of guidelines		

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Appendix 23: Complete listing of collected and developed key figures for the subject area of accommodation management and operation of properties

Key figures (KPIs) Subject area of operation of accommodation & operation of properties	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of operation of accommodation & operation of properties	Stock figure / FTE subject area		Structure figure/ Stock figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Total costs in the subject area of operation of accommodation & operation of properties	Flow figure / CHF		Operative costs / Flow figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Personnel expenditures in the subject area of operation of accommodation & operation of properties	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Proportion of costs of externally rendered operation of accommodation & operation of properties services in %: Costs of externally rendered operation of accommodation & operation of properties services / Total costs of rendered operation of accommodation & operation of properties services * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Degree of decentralisation in the subject area of operation of accommodation & operation of properties in %: Number of decentralised organisation units in the subject area of operation of accommodation & operation of properties / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Total costs in the subject area of operation of accommodation & operation of properties per inpatient bed: Total costs in the subject area of operation of accommodation & operation of properties / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	Probably no correlation
Total costs in the subject area of operation of accommodation & operation of properties per FTE: Total costs in the subject area of operation of accommodation & operation of properties / Total number of FTE	Flow figure / CHF Stock figure / FTE Hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Total costs in the subject area of operation of accommodation & operation of properties per FTE FM in HC: Total costs in the subject area of operation of accommodation & operation of properties / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Total costs in the subject area of operation of accommodation & operation of properties per inpatient case: Total costs in the subject area of operation of accommodation & operation of properties / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	Probably no correlation
Total costs in the subject area of operation of accommodation & operation of properties per outpatient case: Total costs in the subject area of operation of accommodation & operation of properties / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	Probably no correlation
Total costs in the subject area of operation of accommodation & operation of properties per care day: Total costs in the subject area of operation of accommodation & operation of properties / Number of care days	Flow figure / CHF Flow figure / Care days		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	Probably no correlation
Total costs in the subject area of operation of accommodation & operation of properties per patient: Total costs in the subject area of operation of accommodation & operation of properties / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Total costs in the subject area of operation of accommodation & operation of properties per inpatient discharge : Total costs in the subject area of operation of accommodation & operation of properties / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Total costs in the subject area of operation of accommodation & operation of properties per average length of stay: Total costs of the subject area of operation of accommodation & operation of properties / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Total costs in the subject area of operation of accommodation & operation of properties in relation to the total costs of the hospital: Total costs of the subject area of operation of accommodation & operation of properties / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Specialist quota in the subject area of operation of accommodation & operation of properties in %: Number of FTE of specialists in the subject area of operation of accommodation & operation of properties / (Number of FTE of specialists in the subject area of operation of accommodation & operation of properties + Number of FTE of auxiliary staff in the subject area of operation of accommodation & operation of properties) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	

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Fluctuation rate in the subject area of operation of accommodation & operation of properties in %: Number of departures in the subject area of operation of accommodation & operation of properties / Average number of staff in the subject area of operation of accommodation & operation of properties * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Absence quota due to illness in the subject area of operation of accommodation & operation of properties in %: Absence time in the subject area of operation of accommodation & operation of properties / Planned working time in the subject area of operation of accommodation & operation of properties * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Quota of overtime in the subject area of operation of accommodation & operation of properties in %: Overtime in the subject area of operation of accommodation & operation of properties / Normal working hours in the subject area of operation of accommodation & operation of properties * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Rate of continuing education per employee in the subject area of operation of accommodation & operation of properties in %: Hours of continuing education in the subject area of operation of accommodation & operation of properties / Working hours in the subject area of operation of accommodation & operation of properties * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Customer satisfaction for the subject area of operation of accommodation & operation of properties in %	Stock figure / %	x	Quality-key-figure / Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Costs of on call room per number of m2 on call room: Costs on call room / Number of m2 on call room	Flow figure / CHF Flow figure / CHF	x	Operative cost-key-figure / Costs per absolute-/ Stock figure	Costs = Infrastructure costs + service costs	
Total costs in the subject area of operation of accommodation & operation of properties per guest: Total costs in the subject area of operation of accommodation & operation of properties / Number of guests	Flow figure / CHF Flow figure / CHF	x	Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS	
Proportion of costs of on call room to costs subject area of operation of accommodation & operation of properties in %: Costs on call room / Total costs subject area of operation of accommodation & operation of properties * 100	Flow figure / CHF Flow figure / CHF		Operative cost-key-figure / Cost ratio	Subject area of operation of accomodation & operation of properties = Support process operation of accomodation & operation of properties in PromoS	

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Appendix 24: Complete listing of collected and developed key figures for the subject area of hotel services

Key figures (KPIs) Subject area of hotel services diverse	Unit parameter	Top 10?	KPI-Category	Remarks to the key-figure (collection)	General remarks
Total number of FTE´s in the subject area of hotel services diverse	Stock figure / FTE subject area		Structure number / Stock figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse	Flow figure / CHF		Operative costs / Flow figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Personnel expenditures in the subject area of hotel services diverse	Flow figure / CHF		Operative costs / Flow figure	Personnel expenditures according to REKOLE; Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Proportion of costs of externally rendered hotel services diverse in %: Costs of externally rendered hotel services diverse / Total costs of rendered hotel services diverse * 100	Flow figure / CHF Flow figure / CHF	X	Structure key-figure/ Degree of externalisation	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Degree of decentralisation in the subject area of hotel services diverse in %: Number of decentralised organisation units in the subject area of hotel services diverse / Total number of FM in HC-organisation units * 100	Stock figure / Organisational units decentralised Stock figure / Organisational units FM in HC		Structure key-figure / Degree of decentralisation	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per inpatient bed: Total costs in the subject area of hotel services diverse / Number of inpatient beds	Flow figure / CHF Stock figure / Inpatient beds		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per FTE: Total costs in the subject area of hotel services diverse / Total number of FTE	Flow figure / CHF Stock figure / FTE Hospital		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per FTE FM in HC: Total costs in the subject area of hotel services diverse / Total number of FTE FM in HC	Flow figure / CHF Stock figure / FTE FM in HC		Operative cost-key-figure / Costs per absolute-/ Stock figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per inpatient case: Total costs in the subject area of hotel services diverse / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per outpatient case: Total costs in the subject area of hotel services diverse / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per care day: Total costs in the subject area of hotel services diverse / Number of care days	Flow figure / CHF Flow figure / Care days		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per patient: Total costs in the subject area of hotel services diverse / Number of patients	Flow figure / CHF Flow figure / Patients		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per inpatient discharge : Total costs in the subject area of hotel services diverse / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse per average length of stay: Total costs of the subject area of hotel services diverse / Average length of stay	Flow figure / CHF Flow figure / Length of stay		Operative cost-key-figure / Costs per absolute-/ Flow figure	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Total costs in the subject area of hotel services diverse in relation to the total costs of the hospital: Total costs of the subject area of hotel services diverse / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Specialist quota in the subject area of hotel services diverse in %: Number of FTE of specialists in the subject area of hotel services diverse / (Number of FTE of specialists in the subject area of hotel services diverse + Number of FTE of auxiliary staff in the subject area of hotel services diverse) *100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Fluctuation rate in the subject area of hotel services diverse in %: Number of departures in the subject area of hotel services diverse / Average number of staff in the subject area of hotel services diverse * 100	Stock figure / FTE subject area Stock figure / FTE subject area		Quality-key-figure / Structure quality personnel	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Absence quota due to illness in the subject area of hotel services diverse in %: Absence time in the subject area of hotel services diverse / Planned working time in the subject area of hotel services diverse * 100	Flow figure/ Absence time in hours Flow figure / Planned working time in hours		Quality-key-figure / Structure quality personnel	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Quota of overtime in the subject area of hotel services diverse in %: Overtime in the subject area of hotel services diverse / Normal working hours in the subject area of hotel services diverse * 100	Flow figure / Overtime Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Rate of continuing education per employee in the subject area of hotel services diverse in %: Hours of continuing education in the subject area of hotel services diverse / Working hours in the subject area of hotel services diverse * 100	Flow figure / Hours of continuing education Flow figure / Working hours		Quality-key-figure / Structure quality personnel	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Customer satisfaction for the subject area of hotel services diverse in %	Stock figure / %		Quality-key-figure/ Customer satisfaction	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
Job percentage employees childcare	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Job percentage trained childcare employees	Stock figure / FTE subject area				

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Job percentage temporary employees childcare	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Job percentage childcare trainees	Stock figure / FTE subject area		Structure figure / Absolute-/Stock figure		
Operation calendar day childcare	Stock figure / Operation calendar day		Structure figure / Absolute-/Stock figure		The average operating days per year are needed to calculate the full costs of a childcare place per day. The operating days vary annually, because of this it is recommended to calculate the full costs per operating day with the number of operating weeks and to set average operating days with this basis.
Total number of assisted children	Stock figure / Children		Structure figure / Absolute-/Stock figure		The number and the care needs of the children define the staffing plan of a service and the personnel expenditures. It has to meet the legal requirements.
Number of assisted children under 18 months	Stock figure / Children		Structure figure / Absolute-/Stock figure		
Number schoolchildren	Stock figure / Children		Structure figure / Absolute-/Stock figure		
Number of assisted children with special needs	Stock figure / Children		Structure figure / Absolute-/Stock figure		
Full occupancy childcare in %: Number of childcare places * 100	Stock figure / Childcare places		Structure figure / Absolute-/Stock figure		Maximum of the possible childcare workload
Operating hours childcare: Number of operating calendar days * Number of operated hours per day * Number of childcare places	Stock figure / Operation calendar day Stock figure / Operated hours Stock figure / Childcare places		Structure figure / Absolute-/Stock figure		Number of childcare hours, which are offered during a year
Total full costs of childcare	Flow figure / CHF		Structure figure / Absolute-/Flow figure		All revenues and costs of the childcare provision, which are rendered by the economic performance key-figures (childcare) and by the normal business.
Operating revenue childcare: Operating revenue childcare - Operating expenses childcare	Flow figure / CHF Flow figure / CHF		Structure figure / Absolute-/Flow figure		In a performance-related business key-figure agreement, regulations have to be defined, how the operating revenue has to be handled (acceptance of a deficit liability, utilisation of operating profit)
Costs of non-medical patient care per care day: Costs of non-medical patient care / Number of care days	Flow figure / CHF Stock figure / Number of care days	X	Operative cost-key-figure / Costs per absolute-/ Stock figure		
Costs of non-medical patient care per inpatient discharge: Costs of non-medical patient care / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges	X	Operative cost-key-figure / Costs per absolute-/ Flow figure		
Total costs in the subject area of hotel services diverse in relation to the subject area of hotel services: Total costs in the subject area of hotel services diverse / Costs in the subject area of hotel services	Flow figure / CHF Flow figure / CHF	X	Operative cost-key-figure / Cost ratio	Subject area of hotel services diverse = Support process hotel services diverse in PromoS	
(Full-) Costs of a childcare place: Operating expenses / Number of granted childcare places	Flow figure / CHF Stock figure / Child care places		Economic performance key-figure / Productivity		With the full costs of a child care place per year or per month, the cost-covering contribution from the parents can be determined. The place costs per year/month are also important to set the subsidisation of a childcare place. A meaningful comparison of childcare provision is not offered by the costs of a childcare place because the framework of the offer is not considered (e.g. opening hours). The costs per childcare hour are more significant for a comparison. Within the economic performance key-figure agreements can be defined on the base of the full costs of a childcare place and the standard costs can be used as a ceiling limit of expenses.
Full costs of a childcare place per operated childcare day: Full costs of a childcare place / Number of operation calendar days	Flow figure / CHF Stock figure / Operation calendar day		Economic performance key-figure / Productivity		
Full costs of a childcare hour: Operating expenses / Number operating hours	Flow figure / CHF Stock figure / Operating hours		Economic performance key-figure / Productivity		This key figure offers a comparison of the full costs of different childcare offers, because it considers the opening hours.
Utilisation of childcare in %: Sold childcare workload in % / Full occupancy in % * 100	Flow figure / CHF Flow figure / Occupancy		Economic performance key-figure / Utilisation		The determination of the utilisation aimed for is usually a part of the economic performance key-figures agreement. The lower the utilisation, the higher the costs per childcare place.
Part-time proportion or occupancy factor: Number of assisted children / Number of care places	Stock figure / Children Stock figure / Care places		Economic performance key-figure / Utilisation		The more children sharing a childcare place, the more complex the care.
Child care ratio: Number of attendant carriers per group / Number of attendant children per group	Stock figure / FTE subject area Stock figure / Children		Economic performance key-figure / Utilisation		The child care ratio (number of carers per child) has to comply with the legal requirements. The smaller the number, the more inconvenient the supervisory relationship.

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Appendix 25: Detailed information on the prioritised key figures for the subject area of procurement

Key figures (KPIs) Subject area of procurement	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered procurement services in %: Costs of externally rendered procurement services / Total costs of rendered procurement services * 100	Flow figure / CHF Flow figure / CHF Stock figure / FTE FM in HC	Structure key-figure/ Degree of externalisation	Procurement		2550 Procurement	Only FM-services according to LemoS/LekaS, no projects, no investments, no procurement goods (Account group 43 in Rekole)		Need to compare own FTE or more external services; Productivity; Decision for external allocations
Total costs in the subject area of procurement per inpatient case: Total costs in the subject area of procurement / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Procurement		2550 Procurement	Total costs procurement including goods values and services without investments; Subject area of procurement = Support process procurement in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of procurement per outpatient case: Total costs in the subject area of procurement / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Procurement		2550 Procurement	Total costs procurement including goods values and services without investments; Subject area of procurement = Support process procurement in PromoS		Trend comparison; useful in combination with base rate, CMI, income and in the benchmarking with others
Total costs in the subject area of procurement per care day: Total costs in the subject area of procurement / Number of care days	Flow figure / CHF Flow figure / Care days Flow figure / Length of stay	Operative cost-key-figure / Costs per absolute-/ Flow figure	Procurement		2550 Procurement	Total costs procurement including goods values and services without investments; Subject area of procurement = Support process procurement in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of procurement in relation to the total costs of the hospital: Total costs in the subject area of procurement / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Procurement		2550 Procurement	Total costs procurement including goods values and services without investments; Subject area of procurement = Support process procurement in PromoS		Visualisation of the proportion of the subject area to the total costs
Proportion of the goods value of non-medical procurement to the total goods value in the subject area of procurement: Goods value of medical procurement / Total goods value in the subject area of procurement * 100	Flow figure / CHF Flow figure / CHF	Structure key-figure / Proportions	no process-key-figure		-	Goods values = Buy-in amount, Account group 43 in Rekole; Subject area of procurement = Support process procurement in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Ratio of goods value medical procurement vs. non-medical procurement: Goods value of medical procurement / Goods value of non-medical procurement	Flow figure / CHF Flow figure / CHF	Structure key-figure / Proportions	no process-key-figure		-	Goods values = Buy-in amount, Account group 43 in Rekole		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of procurement per number of order item: Total costs in the subject area of procurement / Total number of order items	Flow figure / CHF Flow figure / Order items Flow figure / CHF Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Costs per absolute-/ Flow figure	Procurement		2550 Procurement	Subject area of procurement = Support process procurement in PromoS	Disproportionately high costs per planning activity (= costs per order) = little economic production planning. Reasons: Inefficient application of technological resources (for example IT) or lack of communication with other functional areas. (Werner, 2013, p. 348)	Internal efficiency assessment, trend & benchmark
Proportion of personnel expenditures in the subject area of procurement to goods value in the subject area of procurement: Personnel expenditures in the subject area of procurement / Goods value in the subject area of procurement	Flow figure / CHF Flow figure / CHF Flow figure / Orders	Operative cost-key-figure / Cost ratio	Procurement		2550 Procurement	Goods values = Buy-in amount; Personnel cost centre purchaser; Subject area of procurement = Support process procurement in PromoS		Internal efficiency assessment, trend & benchmark
Average throughput time order processing: Number of effective throughput times of all executed orders / Total number of executed orders	Flow figure / Throughput time in hours Flow figure / Orders	Economic performance-key-figure / Process efficiency / Throughput time	Procurement		2550 Procurement	Purchase requisition (Time Purchase requisition) to incoming goods		Internal efficiency assessment, trend & benchmark

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Appendix 26: Detailed information on the prioritised key figures for the subject area of storage management

Key figures (KPIs) Subject area of warehousing	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Total costs in the subject area of warehousing per inpatient case: Total costs in the subject area of warehousing/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing		2490 Storage management and incoming inspection of incoming goods	Warehousing total = Internal performed warehousing; Subject area of warehousing = Support process warehousing in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of warehousing per outpatient case: Total costs in the subject area of warehousing/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing		2490 Storage management and incoming inspection of incoming goods	Warehousing total = Internal performed warehousing; Subject area of warehousing = Support process warehousing in PromoS		Trend comparison; useful in combination with base rate, CMI, income and in the benchmarking with others
Total costs in the subject area of warehousing per care day: Total costs in the subject area of warehousing/ Number of care days	Flow figure / CHF Flow figure / Care days Flow figure / Length of stay	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing		2490 Storage management and incoming inspection of incoming goods	Warehousing total = Internal performed warehousing; Subject area of warehousing = Support process warehousing in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of warehousing in relation to the total costs of the hospital: Total costs of the subject area of warehousing/ Total costs of the hospital	Flow figure / CHF Flow figure / CHF Flow figure / Working hours Flow figure / Incoming goods items Flow figure / Order items Stock figure / Quantity units	Operative cost-key-figure / Cost ratio	Warehousing		2490 Storage management and incoming inspection of incoming goods	Warehousing total = Internal performed warehousing; Subject area of warehousing = Support process warehousing in PromoS		Visualisation of the proportion of the subject area to the total costs
Costs per warehouse movement: Total costs in the subject area of warehousing/ (Number of goods receipt documents per item + Number goods of outwards receipt per item)	Flow figure / CHF Flow figure / Stock items Flow figure / Stock items	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing		2490 Storage management and incoming inspection of incoming goods	Warehousing total = Internal performed warehousing Total costs in the Subject area of warehousing = Full costs; Subject area of warehousing = Support process warehousing in PromoS		Internal efficiency assessment, trend & benchmark
Costs per order provision/order picking: Personnel expenditures order picking/ Number of stock orders	Flow figure / CHF Flow figure / Processed incoming orders	Operative cost-key-figure / Costs per absolute-/ Flow figure	Warehousing	Do - Goods picking	2490 Storage management and incoming inspection of incoming goods	Number of stock orders = Number of reservations		Internal efficiency assessment, trend & benchmark

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Appendix 27: Detailed information on the prioritised key figures for the subject area of transport services and provision

Key figures (KPIs) Subject area of transport & fleet management	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered transport & fleet management services in %: Costs of externally rendered transport & fleet management services/ Total costs of rendered transport & fleet management services * 100	Flow figure / CHF Flow figure / CHF Stock figure / FTE FM in HC	Structure key-figure/ Degree of externalisation	Transport		2440 Mobility without 2442 travel services		Transport = without rescue	Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of transport & fleet management per inpatient case: Total costs in the subject area of transport & fleet management/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Transport		2440 Mobility without 2442 travel services	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue	Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of transport & fleet management per outpatient case: Total costs in the subject area of transport & fleet management/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Transport		2440 Mobility without 2442 travel services	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue	Trend comparison; useful in combination with Tarmed, CMI, income and in the benchmarking with others
Total costs in the subject area of transport & fleet management per care day: Total costs in the subject area of transport & fleet management/ Number of care days	Flow figure / CHF Flow figure / Care days Flow figure / Length of stay	Operative cost-key-figure / Costs per absolute-/ Flow figure	Transport		2440 Mobility without 2442 travel services	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue	Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of transport & fleet management in relation to the total costs of the hospital: Total costs of the subject area of transport & fleet management/ Total costs of the hospital	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Transport		2440 Mobility without 2442 travel services	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue	Visualisation of the proportion of the subject area to the total costs
Specialist quota in the subject area of transport & fleet management in %: Number of FTE of specialists in the subject area of transport & fleet management/ (Number of FTE of specialists in the subject area of transport & fleet management + Number of FTE of auxiliary staff in the subject area of transport & fleet management) *100	Stock figure / FTE subject area Stock figure / FTE subject area	Quality-key-figure / Structure quality personnel	Transport		2440 Mobility without 2442 travel services	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue	Indications to the structure of the hospital/subject area
Proportion of costs of transportation of people to the total costs of the subject area of transport & fleet management in %: Costs of person related transports / Total costs of the subject area of transport & fleet management * 100	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Transport		2443.10 Transport of people + 2440 Mobility without 2442 travel services	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue	Indications to the structure of the hospital/subject area
Proportion of costs of goods related transports to the total costs of the subject area of transport & fleet management in %: Costs of goods related transports / Total costs of the subject area of transport & fleet management * 100	Flow figure / CHF Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Transport		2443.20 Transport and distribution of goods + 2440 Mobility without 2442 travel services	Subject area of transport & fleet management = Support process transport & fleet management in PromoS	Transport = without rescue	Indications to the structure of the hospital/subject area
Proportion of transport costs in %: Total costs of the subject area of transport & fleet management / Total costs of logistics * 100	Flow figure / CHF Flow figure / CHF Flow figure / Outgoing mail	Operative cost-key-figure / Cost ratio	Transport		2440 Mobility without 2442 travel services / 2550 Procurement + 2490 Storage management and incoming inspection of incoming goods + 2440 Mobility without 2442 travel services + 1173 Disposal and Recycling	Subject area of transport & fleet management = Support process transport & fleet management in PromoS; Logistic = Transport & fleet management + procurement + warehouse + disposal & recycling	Transport = without rescue	Internal efficiency assessment, trend & benchmark
Proportion of complaints in the subject area of transport & fleet management in %: Number of justified customer complaints / Total number of transport processes * 100	Flow figure / Complaints Flow figure / Transport processes	Quality Key-figure/ Fulfilment of guidelines	No process Key-figure		-	Total of transport & fleet management = People + goods	Transport = without rescue	Improvement process quality + process efficiency

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Appendix 28: Detailed information on the prioritised key figures for the subject area of disposal and recycling

Key figures (KPIs) Subject area of disposal & recycling	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered disposal & recycling services in %: Costs of externally rendered disposal & recycling services/ Total costs of rendered disposal & recycling services * 100	Flow figure / CHF Flow figure / CHF Stock figure / Inpatient beds	Structure key-figure/ Degree of externalisation	Disposal & Recycling		1173 Disposal & Recycling			Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of disposal & recycling per FTE: Total costs in the subject area of disposal & recycling/ Total number of FTE	Flow figure / CHF Stock figure / FTE hospital Flow figure / Outpatient cases	Operative cost-key-figure / Costs per absolute-/ Stock figure	Disposal & Recycling		1173 Disposal & Recycling	Subject area of disposal & recycling = Support process disposal & recycling in PromoS		Ecological footprint
Total costs in the subject area of disposal & recycling per care day: Total costs in the subject area of disposal & recycling/ Number of care days	Flow figure / CHF Flow figure / Care days Flow figure / Length of stay	Operative cost-key-figure / Costs per absolute-/ Flow figure	Disposal & Recycling		1173 Disposal & Recycling	Subject area of disposal & recycling = Support process disposal & recycling in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay and in the benchmarking with others
Total costs in the subject area of disposal & recycling in relation to the total costs of the hospital: Total costs of the subject area of disposal & recycling/ Total costs of the hospital	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Disposal & Recycling		1173 Disposal & Recycling	Subject area of disposal & recycling = Support process disposal & recycling in PromoS		Visualisation of the proportion of the subject area to the total costs
Recycling quota in %: Volume of recycled waste / Total volume of valuable substances * 100	Flow figure / Volume of waste in m3 Flow figure / Volume of valuable substances in m3	Environmental-key-figure / Recycling	Disposal & Recycling		1173 Disposal & Recycling			Important for possible environment certificates
Proportion of costs of recyclable materials to total costs of valuable substances in %: Costs of recyclable materials / Total costs of valuable substances * 100	Flow figure / CHF Flow figure / CHF	Environmental-key-figure / Recycling	Disposal & Recycling		1173 Disposal & Recycling	Costs of recyclable materials according to invoices		Ecological footprint
Special waste quota in %: Volume of special waste / Total volume of waste * 100	Flow figure / Volume of special waste in m3 Flow figure / volume of waste in m3	Environmental-key-figure / Waste volume	Disposal & Recycling		1173 Disposal & Recycling	Rated as special waste are the waste categories B, C und D according to BUWAL (2004)		Note regarding structure / Degree of complexity

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Appendix 29: Detailed information on the prioritised key figures for the subject area of maintenance

Key figures (KPIs) Subject area of maintenance	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered maintenance services in %: Costs of externally rendered maintenance/ Total costs of rendered maintenance * 100	Flow figure / CHF Flow figure / CHF Stock figure / Organisational units FM in HC Stock figure / FTE FM in HC	Structure key-figure/ Degree of externalisation	Maintenance		1160 Maintenance and Operation 1200 Outdoors + 1400 Workplace (without 1420 Space management) + 1990.10 Operation and preventative maintenance of medical movables	Subject area of maintenance = Support process maintenance in PromoS		Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of maintenance per inpatient case: Total costs in the subject area of maintenance/ Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Maintenance		1160 Maintenance and Operation 1200 Outdoors + 1400 Workplace (without 1420 Space management) + 1990.10 Operation and preventative maintenance of medical movables	Subject area of maintenance = Support process maintenance in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of maintenance per outpatient case: Total costs in the subject area of maintenance/ Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Maintenance		1160 Maintenance and Operation 1200 Outdoors + 1400 Workplace (without 1420 Space management) + 1990.10 Operation and preventative maintenance of medical movables	Subject area of maintenance = Support process maintenance in PromoS		Trend comparison; useful in combination with Tarmed, CMI, income and in the benchmarking with others
Total costs in the subject area of maintenance per care day: Total costs in the subject area of maintenance / Number of care days	Flow figure / CHF Flow figure / Care Days Flow figure / Length of stay	Operative cost-key-figure / Costs per absolute-/ Flow figure	Maintenance		1160 Maintenance and Operation 1200 Outdoors + 1400 Workplace (without 1420 Space management) + 1990.10 Operation and preventative maintenance of medical movables	Subject area of maintenance = Support process maintenance in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of maintenance in relation to the total costs of the hospital: Total costs of the subject area of maintenance / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Flow figure / Planned working time in hours Flow figure / Working hours	Operative cost-key-figure / Cost ratio	Maintenance		1160 Maintenance and Operation 1200 Outdoors + 1400 Workplace (without 1420 Space management) + 1990.10 Operation and preventative maintenance of medical movables	Subject area of maintenance = Support process maintenance in PromoS		Visualisation of the proportion of the subject area to the total costs
Number of objects with status-oriented maintenance in relation to the total number of objects: Number of objects with status-oriented maintenance / Total number of objects	Stock figure / Objects Stock figure / Objects	Structure figure / absolute-/ stock figure	No process-key-figure		-	Only objects within the database are rated as objects		Moving away from a maintenance planning method to a status-oriented maintenance method.
Number of objects with planned maintenance in relation to the total number of objects: Number of objects with a planned maintenance / Total number of objects	Stock figure / Objects Stock figure / Objects Flow figure / CHF Flow figure / CHF Flow figure / CHF	Structure figure / Absolute-/ stock figure	No process-key-figure		-	Only objects within the database are rated as objects		Moving away from a maintenance planning method to a status-oriented maintenance method.
Growth rate fixed assets: Fixed assets of new facilities / Total number of fixed assets	Stock figure / CHF Stock figure / CHF Stock figure / Floor area in m2	Structure key-figure / Proportions	No process-key-figure		-	Sum of all assets = Balance sheet total according to Rekole		Growth- + renewal rate as indicator

Continuation

Continuation

Operating costs per fixed asset: Total costs in the subject area of maintenance / Fixed assets	Flow figure / CHF Flow figure / CHF Flow figure / CHF Flow figure / Inpatient cases Flow figure / Outpatient cases	Operative cost-key-figure / Costs per absolute-/ Stock figure	Maintenance		1160 Maintenance and Operation 1200 Outdoors + 1400 Workplace (without 1420 Space management) + 1990.10 Operation and preventative maintenance of medical movables	Subject area of maintenance = Support process maintenance in PromoS		for budgeting
Proportion of costs of maintenance of infrastructure to the total costs of the subject area of maintenance in %: Costs of the maintenance of infrastructure / Total costs of the subject area of maintenance * 100	Flow figure / CHF Flow figure / CHF	Operative cost key-figure / Cost ratios	Maintenance		1160 Maintenance and Operation 1200 Outdoors + 1400 Workplace (without 1420 Space management) + 1990.10 Operation and preventative maintenance of medical movables	SKP 2 -> everything except medical technology; Subject area of maintenance = Support process maintenance in PromoS		Detection of options to reduce costs by changing from a maintenance related to a status-oriented maintenance strategy
Proportion of costs of medicinal technique to the total costs of the subject area of maintenance in %: Costs of medicinal technique / Total costs of the subject area of maintenance * 100	Flow figure / CHF Flow figure / CHF Flow figure / CHF Stock figure / Space area in m2 Flow figure / Productive operation time in hours	Operative cost key-figure / Cost ratios	Maintenance		1160 Maintenance and Operation 1200 Outdoors + 1400 Workplace (without 1420 Space management) + 1990.10 Operation and preventative maintenance of medical movables	SKP 7+8 -> everything except infrastructure; Subject area of maintenance = Support process maintenance in PromoS		Detection of options to reduce costs by changing from a maintenance related to a status-oriented maintenance strategy
Incident rate per number of objects medicinal technique: Number of incidents medicinal technique / Number of objects medicinal technique	Flow figure / Incidents Flow figure / Objects	Economic performance key-figure / Productivity	No process-key-figure			Only objects which are integrated and registered within the database are rated as objects		Internal rating of efficiency, Trend & Benchmark
Incident rate per number of objects infrastructure: Number of infrastructure incidents / Number of infrastructure objects	Flow figure / Incidents Flow figure / Objects	Economic performance key-figure / Productivity	No process-key-figure			Only objects which are integrated and registered within the database are rated as objects		Internal rating of efficiency, Trend & Benchmark

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Appendix 30: Detailed information on the prioritised key figures for the subject area of space management

Key figures (KPIs) Subject area of space management	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Total costs in the subject area of space management in relation to the total costs of the hospital: Total costs of the subject area of space management / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Stock figure / Floor area in m2	Operative cost-key-figure / Cost ratio	Space management		1420 Space management + property management	Subject area of space management = Support process space management in PromoS		Visualisation of the proportion of the subject area to the total costs
Building usage costs per rentable area: Building usage costs / Number of m2 rentable area	Flow figure / CHF Stock figure / m2	Operative cost-key-figure / Costs per absolute-/ Flow figure	No process-key-figure		-			Relevant to know for leasing
Costs for leased areas: Costs for leased areas / Number of m2 leased areas	Flow figure / CHF Stock figure / m2 Stock figure / m2	Operative cost-key-figure / Costs per absolute-/ Stock figure	No process-key-figure		-			Relevant for rental decisions
Vacancy rate in %: Number of vacant areas / Number of m2 net area * 100	Stock figure / m2 Stock figure / Net area m2	Economic performance key-figure / Utilisation	No process-key-figure		-	Included mean usable area HNF2 - HNF 6 from DIN 277 + GEFMA 812		Internal rating of efficiency, Trend & Benchmark
Floor area wards per care day: Number m2 floor area bed hospital / Number care days	Stock figure / Floor area bed hospital m2 Flow figure / Care days	Quality key-figure / Structure quality area	No process-key-figure		-	Floor area GF according to SIA 416		Structure key-figure to asses benchmarking results
Floor area in ward per inpatient bed: Number m2 floor area / Number of inpatient beds	Stock figure / Floor area bed hospital m2 Stock figure / Inpatient beds	Quality key-figure / Structure quality area	No process-key-figure		-	Floor area GF according to SIA 417		Important for investment decision

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Appendix 31: Detailed information on the prioritised key figures for the subject area of energy supply

Key figures (KPIs) Subject area of energy	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Total costs in the subject area of energy in relation to the total costs of the hospital: Total costs of the subject area of energy / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Flow figure / Water consumption in litres	Operative cost-key-figure / Cost ratio	Energy		1171 Supply and disposal of utilities / energy + 1172 Water	Subject area of energy = Support process energy in PromoS	Costs in the subject area of energy are difficult to define	Visualisation of the proportion of the subject area to the total costs
Energy costs per m2 floor area: Total energy costs / Number m2 floor area	Flow figure / CHF Stock figure / Floor area in m2 Stock figure / Inpatient beds	Operative cost-key-figure / Costs per absolute-/ Flow figure	Energy			Floor area GF according to SIA 416		Energy efficiency + Decision for investments
Energy consumption in relation to the weighted part of the area: Total number of kWh energy / Weighted part of the floor area	Flow figure / Energy consumption in kWh Stock figure / Weighted part of the floor area in m2	Environmental key-figure / Consumption of media per absolute-/Stock figure	Energy			Floor area GF according to SIA 416	Weighted part of the area to be calculated according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10	Energy efficiency + Decision for investments
Heating energy consumption in relation to the weighted part of the area: Total number of kWh heating energy / Weighted part of the floor area	Flow figure / Heating energy consumption kWh Stock figure / Weighted part of the floor area in m2	Environmental key-figure / Consumption of media per absolute-/Stock figure	Energy			Floor area GF according to SIA 416	Weighted part of the area to be calculated according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10	Energy efficiency + Decision for investments
Water consumption in relation to the weighted part of the area: Total number of l water / Weighted part of the floor area	Flow figure / Water consumption in litres Stock figure / Weighted part of the floor area in m2 Stock figure / FTE hospital	Environmental key-figure / Consumption of media per absolute-/Stock figure	Energy			Floor area GF according to SIA 416	Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10	Energy efficiency + Decision for investments
Energy costs in relation to care days: Total costs of energy / Number of care days	Flow figure / CHF Flow figure / Care days Stock figure / Space area in m2 Flow figure / Outpatient cases	Environmental key-figure / Consumption of media per absolute-/Stock figure	Energy				Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10	Energy efficiency + Decision for investments
Energy consumption in relation to care days: Total number of energy kWh / Number of care days	Flow figure / Energy consumption in kWh Flow figure / Care days	Environmental key-figure / Consumption of media per absolute-/ Flow figure	Energy				Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10	Energy efficiency + Decision for investments
Heating energy consumption in relation to care days: Total number of kWh heating energy / Number of care days	Flow figure / Energy consumption in kWh Flow figure / Care days	Environmental key-figure / Consumption of media per absolute-/ Flow figure	Energy				Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10	Energy efficiency + Decision for investments
Water consumption in relation to care days: Total number of l water / Number of care days	Flow figure / Water consumption in litres Flow figure / Care days	Environmental key-figure / Consumption of media per absolute-/ Flow figure	Energy				Weighted part of the area to calculate according to the Berner model: Fully air-conditioned: Factor 2.00 Partly air-conditioned: Factor 1.50 Normal: Factor 1.0 Cellar Factor 0.50 GOPS (Protected site of operation): Factor 0.10	Energy efficiency + Decision for investments
Development of energy costs per m2: Total energy costs per m2 floor area in the present year / Total energy costs per m2 floor area previous year	Flow figure / CHF Stock figure / Floor area in m2 Flow figure / CHF Stock figure / Floor area in m2	Environmental key-figure / Energy trends	No process-key-figure			Floor area GF according to SIA 416; without water		Energy efficiency + Decision for investments

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Appendix 32: Detailed information on the prioritised key figures for the subject area of safety

Key figures (KPIs) Subject area of safety	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered safety services in %: Costs of externally rendered safety services/ Total costs of rendered safety services * 100	Flow figure / CHF Flow figure / CHF Flow figure / Patients Flow figure / Length of stay	Structure key-figure/ Degree of externalisation	Safety		2110 Ensuring of health and safety	Subject area of safety = Support process safety in PromoS		Need for comparison of own FTE or more external rendered services; Productivity; Decision for external allocations
Total costs in the subject area of safety in relation to the total costs of the hospital: Total costs of the subject area of safety / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Stock figure / Employees	Operative cost-key-figure / Cost ratio	Safety		2110 Ensuring of health and safety	Subject area of safety = Support process safety in PromoS		Visualisation of the proportion of the subject area to the total costs
Costs of safety campaign in relation to the costs of loss of wages per operational accident or illness in %: Costs of safety campaigns / Costs of loss of wages per operational accident or illness * 100	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	No process key-figure		-			Efficiency assessment of prevention measures
Work safety: Number of operational injury or accidents / Total number of employees in the hospital	Flow figure / Accidents Stock figure / Number of employees	Quality-key-figure / Structure quality safety/security	No process key-figure		-			Efficiency assessment of prevention measures

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Appendix 33: Detailed information on the prioritised key figures for the subject area of security

Key figures (KPIs) Subject area of security	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered security services in %: Costs of externally rendered security services/ Total costs of rendered security services * 100	Flow figure / CHF Flow figure / CHF Stock figure / FTE FM in HC Flow figure / Care Days Flow figure / Length of stay	Structure key-figure/ Degree of externalisation	Security		2120 Security	Subject area of security = Support process security in PromoS		Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of security in relation to the total costs of the hospital: Total costs of the subject area of security / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Flow figure / Working hours	Operative cost-key-figure / Cost ratio	Security		2120 Security	Subject area of security = Support process security in PromoS		Visualisation of the proportion of the subject area to the total costs
Costs of security per m2: Total costs in the subject area of security / Number of m2 floor area	Flow figure / CHF Stock figure / Floor area in m2 Stock figure / Space area in m2	Operative cost-key-figure / Costs per absolute-/ Stock figure	Security		2120 Security	Floor area GF according to SIA 416; Subject area of security = Support process security in PromoS		Internal efficiency assessment, Trend & benchmark
Security costs per incident: Total costs in the subject area of security/ Number of incidents	Flow figure / CHF Flow figure / Incidents Flow figure / Unauthorised persons accesses	Operative cost-key-figure / Costs per absolute-/ Flow figure	Security		2120 Security	Subject area of security = Support process security in PromoS		Effectiveness of the prevention
Costs of damage in relation to the total costs in the subject area of security: Total costs in the subject area of security / Costs of damage	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Costs per absolute-/ Flow figure	Security		2120 Security	Subject area of security = Support process security in PromoS		Effectiveness of the prevention

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Appendix 34: Detailed information on the prioritised key figures for the subject area of cleaning

Key figures (KPIs) Subject area of cleaning	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered cleaning services in %: Costs of externally rendered cleaning services / Total costs of rendered cleaning services * 100	Flow figure / CHF Flow figure / CHF Stock figure / FTE FM in HC	Structure key-figure/ Degree of externalisation	Cleaning		1300 Cleaning without 1390.91 Sterilization services	Subject area of cleaning = Support process cleaning in PromoS		Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of cleaning per inpatient case: Total costs in the subject area of cleaning / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Cleaning		1300 Cleaning without 1390.91 Sterilization services	Subject area of cleaning = Support process cleaning in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of cleaning per outpatient case: Total costs in the subject area of cleaning / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Cleaning		1300 Cleaning without 1390.91 Sterilization services	Subject area of cleaning = Support process cleaning in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of cleaning per care day: Total costs in the subject area of cleaning / Number of care days	Flow figure / CHF Flow figure / Care days Flow figure / Discharges	Operative cost-key-figure / Costs per absolute-/ Flow figure	Cleaning		1300 Cleaning without 1390.91 Sterilization services	Subject area of cleaning = Support process cleaning in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of cleaning per average length of stay: Total costs of the subject area of cleaning / Average length of stay	Flow figure / CHF Flow figure / Length of stay	Operative cost-key-figure / Costs per absolute-/ Flow figure	Cleaning		1300 Cleaning without 1390.91 Sterilization services	Subject area of cleaning = Support process cleaning in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of cleaning in relation to the total costs of the hospital: Total costs of the subject area of cleaning / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Cleaning		1300 Cleaning without 1390.91 Sterilization services	Subject area of cleaning = Support process cleaning in PromoS		Visualisation of the proportion of the subject area to the total costs
Specialist quota in the subject area of cleaning in %: Number of FTE of specialists in the subject area of cleaning / (Number of FTE of specialists in the subject area of cleaning + Number of FTE of auxiliary staff in the subject area of cleaning) *100	Stock figure / FTE subject area Stock figure / FTE subject area Stock figure / Employees subject area	Quality-key-figure / Structure quality personnel	Cleaning		1300 Cleaning without 1390.91 Sterilization services	Subject area of cleaning = Support process cleaning in PromoS		Reference to the composition of the cleaning crew
Total costs in the subject area of cleaning per m2 floor area: Total costs in the subject area of cleaning / Number of m2 floor area	Flow figure / CHF Flow figure / Floor area in m2 Flow figure / Floor area in m2 Stock figure / Inpatient beds	Operative cost-key-figure / Costs per absolute-/ Stock figure	Cleaning		1300 Cleaning without 1390.91 Sterilization services	Floor area GF according to SIA 416; Subject area of cleaning = Support process cleaning in PromoS		Internal efficiency assessment, Trend & benchmark
Cleaning costs of highly intensive area per m2 highly intensive area HNF 6 + HNF 3.5: Cleaning costs of highly intensive area / Number of m2 highly intensive area	Flow figure / CHF Stock figure / Highly intensive area in m2 (HNF 6 + HNF 3.5)	Operative cost-key-figure / Costs per absolute-/ Stock figure	Cleaning		1390.02 Cleaning of intensive care areas + 1390.03 Cleaning of operating theatre +1390.04 Cleaning of delivery room + Cleaning of therapeutic areas, admissions and emergency provision care / 1300 Cleaning without 1390.91 Sterilization services		Highly intensive = Intensive care units, emergency units, subject area for burn victims, stem cell transplantation, maternity unit and neonatology. But also all units, which have to be isolated for example due to viruses, as well as laboratories.	Internal efficiency assessment, Trend & benchmark
Costs of cleaning of wards per m2 of wards: Total costs of wards cleaning / Number of m2 of wards	Flow figure / CHF Stock figure / Area of ward in m2	Operative cost-key-figure / Costs per absolute-/ Stock figure	Cleaning		1390.01 Cleaning of inpatient wards			Internal efficiency assessment, Trend & benchmark

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Appendix 35: Detailed information on the prioritised key figures for the subject area of sterilisation

Key figures (KPIs) Subject area of sterilisation	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered sterilisation services in %: Costs of externally rendered sterilisation services/ Total costs of rendered sterilisation services * 100	Flow figure / CHF Flow figure / CHF Flow figure / Outpatient cases Flow figure / Length of stay	Structure key-figure/ Degree of externalisation	Sterilisation		1390.91 Sterilization services	Subject area of sterilisation = Support process sterilisation in PromoS		Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of sterilisation in relation to the total costs of the hospital: Total costs of the subject area of sterilisation / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Stock figure / Basket capacity Stock figure / Volume index	Operative cost-key-figure / Cost ratio	Sterilisation		1390.91 Sterilization services	Subject area of sterilisation = Support process sterilisation in PromoS		Visualisation of the proportion of the subject area to the total costs
Sterilisation costs (dependent on the products): (Average costs of a cycle / Average capacity of standard baskets) / Sterilisation volume index	Flow figure / CHF Stock figure / capacity of basket Stock figure / Volume index Flow figure / Process time Flow figure / Process time Stock figure / CHF	Operative cost-key-figure / Costs per absolute-/ Stock figure	TP Sterilisation item processing		1390.91 Sterilization services	Sterilizator volume index = 1 divided by the number of the product occupied baskets; Baskets = Sieves		Internal efficiency assessment, Trend & benchmark
Surgery proportion of costs to sterilisation sieves: Number of surgery sieves / Total number of sieves * Total costs in the subject area of sterilisation	Stock figure / Sieves Stock figure / Sieves Flow figure / CHF Flow figure / CHF Stock figure / Produced units	Operative cost-key-figure / Costs per absolute-/ Flow figure	Sterilisation		1390.91 Sterilization services		Operations might be more meaningful	Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Productivity of the central sterile services subject area (CSSD): Number of sieves / Number of FTE * Daily work	Stock figure / Sieves Stock figure / FTE Stock figure / Working hours	Economic performance key-figure / Productivity	Sterilisation		1390.91 Sterilization services			Internal efficiency assessment, Trend & benchmark
Utilisation of the cleaning-/ disinfection device (RDG) per operating time: Number of batches * Process time / Number of chambers / Gross operating time	Stock figure / batches Flow figure / Process time Stock figure / Chambers Stock figure / Gross operating time	Economic performance key-figure/ Utilisation	No process key-figure		-			Internal efficiency assessment, Trend & benchmark

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Appendix 36: Detailed information on the prioritised key figures for the subject area of catering

Key figures (KPIs) Subject area of catering	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Total costs in the subject area of catering in relation to the total costs of the hospital: Total costs of the subject area of catering / Total costs of the hospital	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Catering		2220 Catering and vending	Subject area of catering = Support process catering in PromoS		Visualisation of the proportion of the subject area to the total costs
Effectively collected costs per patient catering day: Costs tbd / Total number of catering days	Flow figure / CHF Flow figure / Catering days Stock figure / FTE subject area Stock figure / FTE subject area	Operative cost-key-figure / Costs per absolute-/ Stock figure	Catering		2220.10 Patient and resident catering	The exact cost structure is currently being developed in the hotellerie-benchmarks.		s. Hotellerie-Benchmark (http://www.hotellerie-benchmark.ch/)
Average personnel expenditures in the subject area of catering per FTE: Personnel expenditures in the subject area of catering / Number of FTE	Flow figure / CHF Stock figure / FTE Subject area Flow figure / CHF Stock figure / Seats	Operative cost-key-figure / Costs per absolute-/ Stock figure	Catering		2220 Catering and vending	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS		s. Hotellerie-Benchmark (http://www.hotellerie-benchmark.ch/)
Restaurant turnover per seat: Restaurant turnover / Number of seats	Flow figure / CHF Stock figure / Seats Stock figure / m2 Flow figure / Transactions	Operative cost-key-figure / Costs per absolute-/ Stock figure	No process-key-figure		-			s. Hotellerie-Benchmark (http://www.hotellerie-benchmark.ch/)
Proportion of personnel expenses in the subject area of Catering and food costs to the total catering revenue in %: (Personnel expenditures in the subject area of Catering + Food costs) / Total catering revenue * 100	Flow figure / CHF Flow figure / CHF Flow figure / CHF	Operative revenue key-figure / Revenue ratio	Catering		2220 Catering and vending	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS		s. Hotellerie-Benchmark (http://www.hotellerie-benchmark.ch/)
Proportion of personnel expenses in the subject-area Catering to the total gastronomy revenue in %: Proportion of personnel expenses in the subject-area Catering / Total gastronomy revenue * 100	Flow figure / CHF Flow figure / CHF	Operative revenue key-figure / Revenue ratio	Catering		2220 Catering and vending	Personnel expenditures according to REKOLE; Subject area of catering = Support process catering in PromoS		s. Hotellerie-Benchmark (http://www.hotellerie-benchmark.ch/)
Proportion of food expenses to the total gastronomy revenue in %: Food expenses / Total gastronomy revenue * 100	Flow figure / CHF Flow figure / CHF Flow figure / CHF Stock figure / Inpatient beds Stock figure / FTE subject area	Operative revenue key-figure / Revenue ratio	No process-key-figure		-			s. Hotellerie-Benchmark (http://www.hotellerie-benchmark.ch/)
Number of seats per employee: Number of seats in the restaurant / Number of employees	Stock figure / Seats Stock figure / Employees Flow figure / CHF	Quality key-figure / Structure quality areas	No process-key-figure		-			s. Hotellerie-Benchmark (http://www.hotellerie-benchmark.ch/)
Proportion of goods returned to the total material expenses of all meals in %: (Number of goods returned patient breakfast + Number of goods returned patient lunch + Number of goods returned patient dinner / (Total number of material expenses patient breakfast + Total number of material expenses patient lunch + Total number of material expenses patient dinner) * 100	Flow number / Goods returned Flow number / Goods returned Flow number / Goods returned Flow number / CHF Flow number / CHF Flow number / CHF	Quality key-figure / Fulfilment of guidelines	No process-key-figure		-			s. Hotellerie-Benchmark (http://www.hotellerie-benchmark.ch/)

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Appendix 37: Detailed information on the prioritised key figures for the subject area of laundry supply

Key figures (KPIs) Subject area of textiles	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered textile services in %: Costs of externally rendered textile services / Total costs of rendered textile services * 100	Flow figure / CHF Flow figure / CHF Stock figure / FTE FM in HC	Structure key-figure/ Degree of externalisation	Textiles		2240 Provision of workwear and other textiles	Subject area of textiles = Support process textiles in PromoS		Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of textiles per inpatient case: Total costs in the subject area of textiles / Number of inpatient cases	Flow figure / CHF Flow figure / Inpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Textiles		2240 Provision of workwear and other textiles	Subject area of textiles = Support process textiles in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of textiles per outpatient case: Total costs in the subject area of textiles / Number of outpatient cases	Flow figure / CHF Flow figure / Outpatient cases	Operative cost-key-figure / Costs per absolute-/ Flow figure	Textiles		2240 Provision of workwear and other textiles	Subject area of textiles = Support process textiles in PromoS		Trend comparison; useful in combination with Tarmed, CMI, income and in the benchmarking with others
Total costs in the subject area of textiles per care day: Total costs in the subject area of textiles / Number of care days	Flow figure / CHF Flow figure / Care days Flow figure / Length of stay	Operative cost-key-figure / Costs per absolute-/ Flow figure	Textiles		2240 Provision of workwear and other textiles	Subject area of textiles = Support process textiles in PromoS		Trend comparison; useful in combination with base rate, CMI + average length of stay, income and in the benchmarking with others
Total costs in the subject area of textiles in relation to the total costs of the hospital: Total costs of the subject area of textiles / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Flow figure / Working hours Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Textiles		2240 Provision of workwear and other textiles	Subject area of textiles = Support process textiles in PromoS		Visualisation of the proportion of the subject area to the total costs
Proportion of costs of patient textiles to the total costs of textiles in %: Costs of patient textiles / Total costs of textiles * 100	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Textiles		2241.10 Care of patients' and residents' Textiles / 2240 Provision of workwear and other textiles			Gives indications to the cost allocation on cost pressure

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Appendix 38: Detailed information on the prioritised key figures for the subject area of accommodation management and operatio of properties

Key figures (KPIs) Subject area of operation of accommodation & operation of properties	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered operation of accommodation & operation of properties services in %: Costs of externally rendered operation of accommodation & operation of properties services / Total costs of rendered operation of accommodation & operation of properties services * 100	Flow figure / CHF Flow figure / CHF Flow figure / Inpatient cases Flow figure / Length of stay	Structure key-figure/ Degree of externalisation	Operation of accommodation & operation of properties		2290 Operation of accommodation	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS		Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of operation of accommodation & operation of properties in relation to the total costs of the hospital: Total costs of the subject area of operation of accommodation & operation of properties / Total costs of the hospital	Flow figure / CHF Flow figure / CHF Flow figure / Working hours Flow figure / Working hours	Operative cost-key-figure / Cost ratio	Operation of accommodation & operation of properties		2290 Operation of accommodation	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS		Visualisation of the proportion of the subject area to the total costs
Customer satisfaction for the subject area of operation of accommodation & operation of properties in %	Stock figure / %	Quality-key-figure / Customer satisfaction	Operation of accommodation & operation of properties		2290 Operation of accommodation	IFM-standard questionnaire internal customer satisfaction on initial level; Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS		Improvement of process quality + process efficiency
Costs of on call room per number of m2 on call room: Costs on call room / Number of m2 on call room	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Costs per absolute-/ Stock figure	No process key-figure		2290.40 Operation of on-call rooms	Costs = Infrastructure costs + service costs		Internal efficiency assessment, Trend & benchmark
Total costs in the subject area of operation of accommodation & operation of properties per guest: Total costs in the subject area of operation of accommodation & operation of properties / Number of guests	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Costs per absolute-/ Stock figure	Operation of accommodation & operation of properties		2290 Operation of accommodation	Subject area of operation of accommodation & operation of properties = Support process operation of accommodation & operation of properties in PromoS		Internal efficiency assessment, Trend & benchmark

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Appendix 39: Detailed information on the prioritised key figures for the subject area of hotel services

Key figures (KPIs) Subject area of hotel services diverse	Unit parameter	KPI-Category	Level support process	Level sub-process	Output LekaS	Remarks to the key-figure (collection)	General remarks	Aim of the KPIs / What is to be achieved in concrete terms?
Proportion of costs of externally rendered hotel services diverse in %: Costs of externally rendered hotel services diverse / Total costs of rendered hotel services diverse * 100	Flow figure / CHF Flow figure / CHF Flow figure / Inpatient cases Flow figure / Length of stay	Structure key-figure/ Degree of externalisation	Hotel services diverse		2210 Reception and contact center services + 2230 Event management + Childcare	Subject area of hotel services diverse = Support process hotel services diverse in PromoS		Need to compare own FTE or more external services; productivity; decision for external allocation
Total costs in the subject area of hotel services diverse in relation to the total costs of the hospital: Total costs of the subject area of hotel services diverse / Total costs of the hospital	Flow figure / CHF Flow figure / CHF'54 Flow figure / Working hours Flow figure / CHF	Operative cost-key-figure / Cost ratio	Hotel services diverse		2210 Reception and contact center services + 2230 Event management + Childcare	Subject area of hotel services diverse = Support process hotel services diverse in PromoS		Visualisation of the proportion of the subject area to the total costs
Costs of non-medical patient care per care day: Costs of non-medical patient care / Number of care days	Flow figure / CHF Stock figure / Number of care days	Operative cost-key-figure / Costs per absolute-/ Stock figure	Hotel services diverse		2990.20 Non-medical patient support			Shows the amount of services per patient
Costs of non-medical patient care per inpatient discharge: Costs of non-medical patient care / Number of inpatient discharges	Flow figure / CHF Flow figure / Discharges	Operative cost-key-figure / Costs per absolute-/ Flow figure	Hotel services diverse		2990.20 Non-medical patient support			Shows the amount of services per patient
Total costs in the subject area of hotel services diverse in relation to the subject area of hotel services: Total costs in the subject area of hotel services diverse / Costs in the subject area of hotel services	Flow figure / CHF Flow figure / CHF	Operative cost-key-figure / Cost ratio	Hotel services diverse		2210 Reception and contact center services + 2230 Event management + Child care / (2220 Catering and vending + 2240 Provision of workwear and other textiles + 2290 Operation of accommodation + 2210 Reception and contact center services + 2230 Event management + Childcare	Subject area of hotel services diverse = Support process hotel services diverse in PromoS		Visualisation of the proportion of the subject area hotel services

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