Karlsruhe Institute of Technology

International FM Conference

Sofia, Bulgaria 2016

Facility management trends and innovations in Europe

INSTITUTE FOR TECHNOLOGY AND MANAGEMENT IN CONSTRUCTION

Quelle: servicefutures.com/wp-content/uploads/2014/12/ISG-ServiceFutures-9-Megatrends-every-FM-provider-should-know.jpg

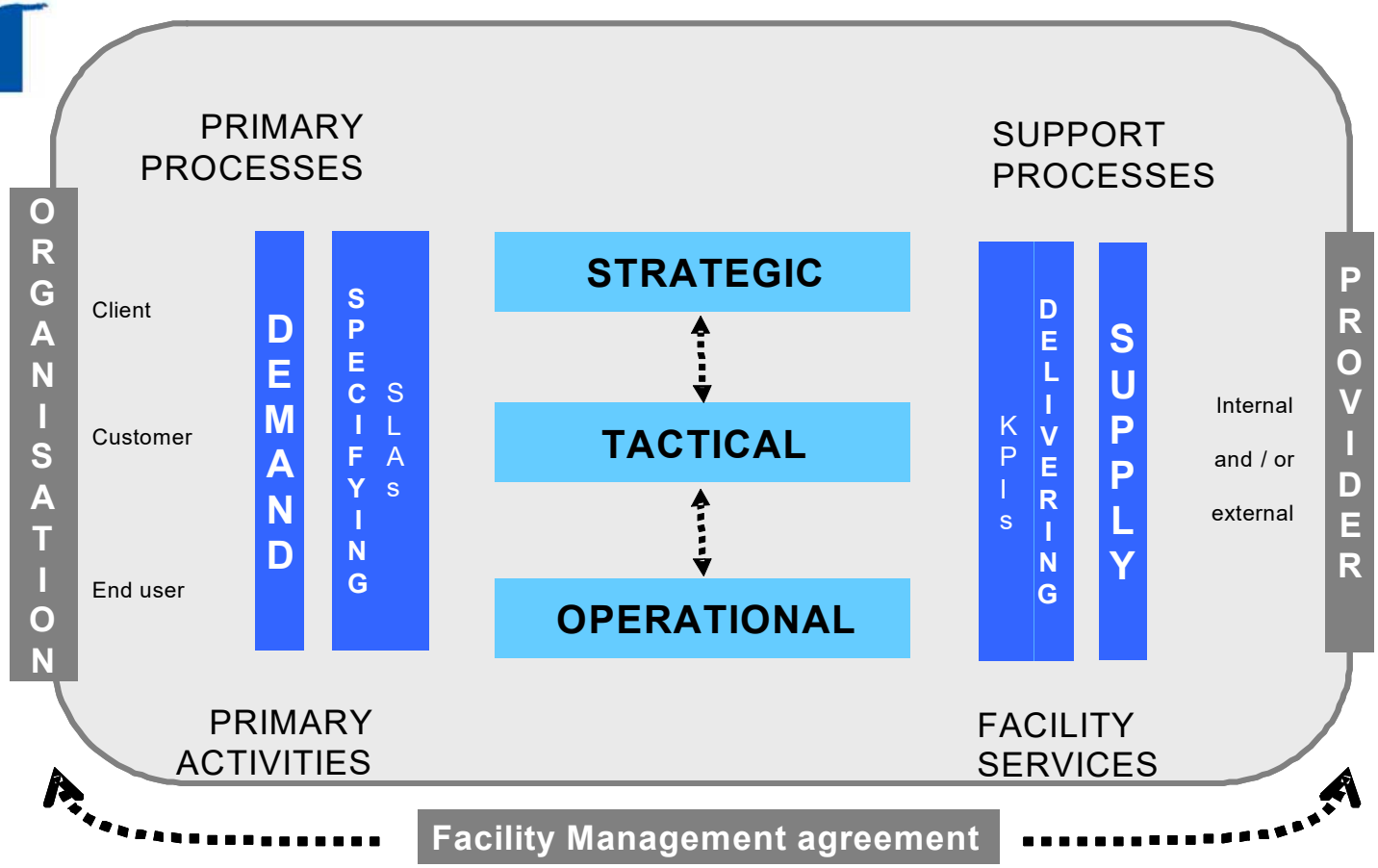
KIT – University of the State of Baden-Wuerttemberg and
National Research Center of the Helmholtz Association

www.kit.edu

FM Definition (DIN EN 15221, CEN/TC 348)

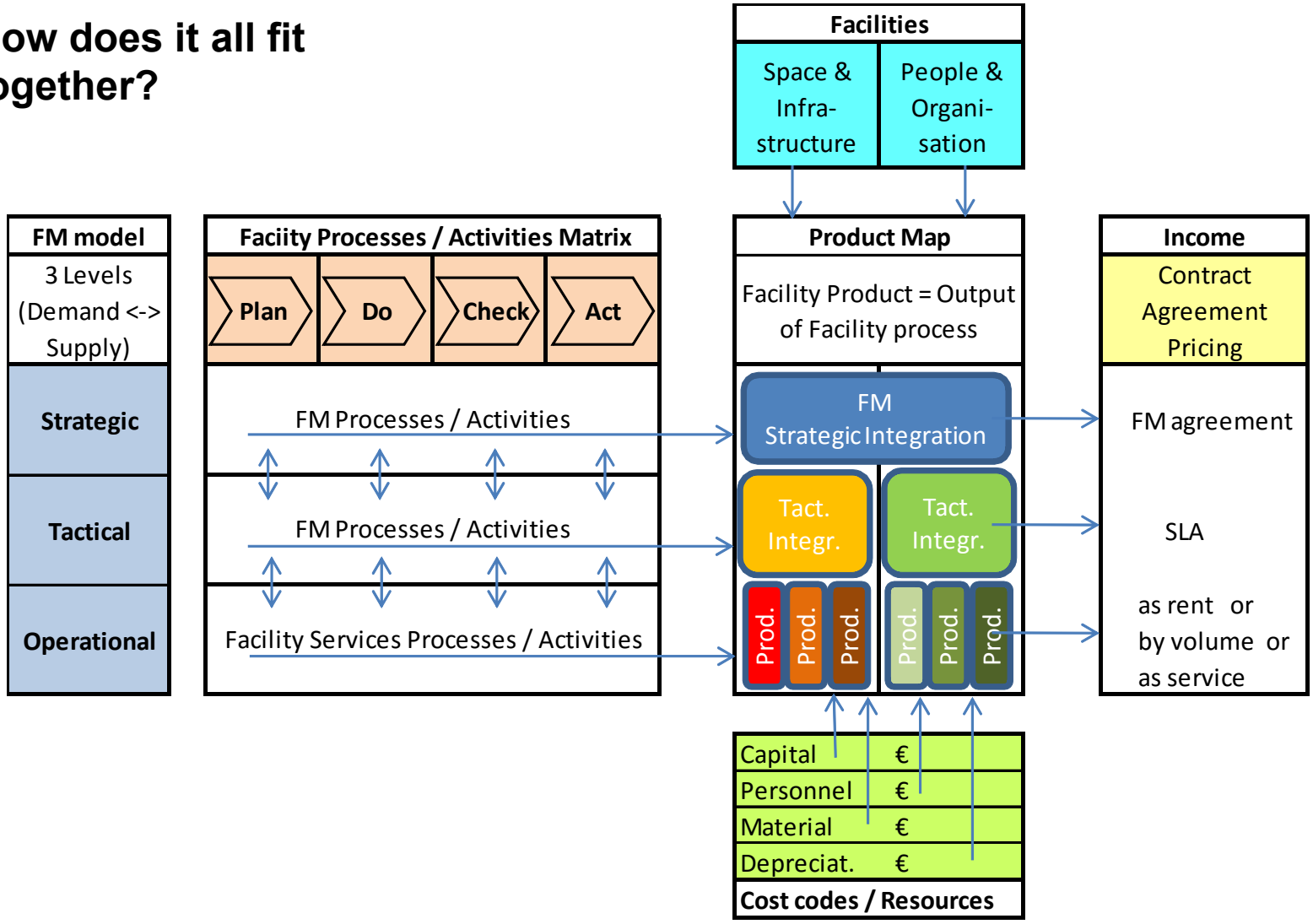
"The integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities"

DIN EN 15221-1 FM-Model



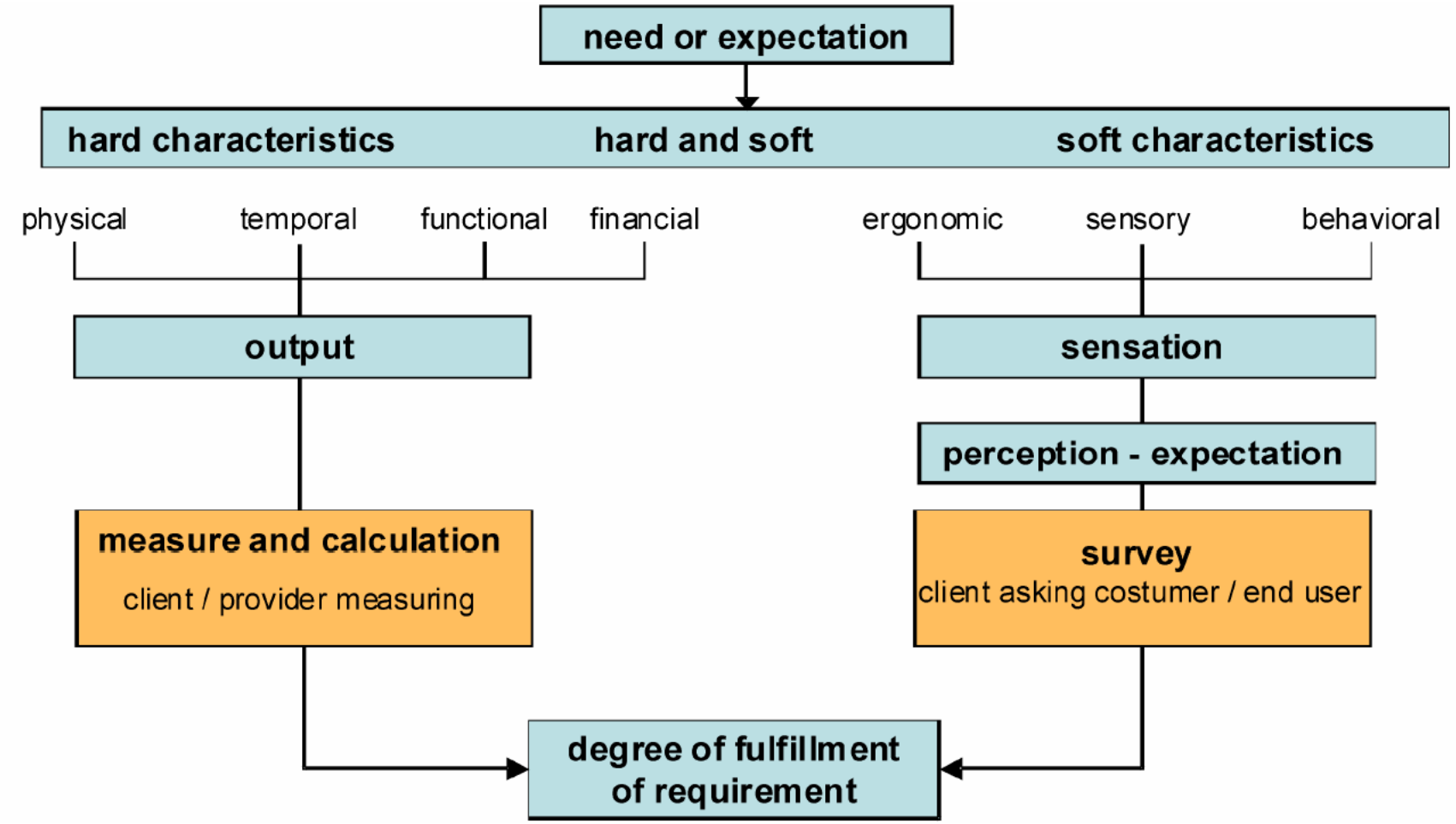
DIN EN 15221-4 Taxonomy

How does it all fit together?



Quality as a trend?

DIN EN 15221-3 Guidance on quality



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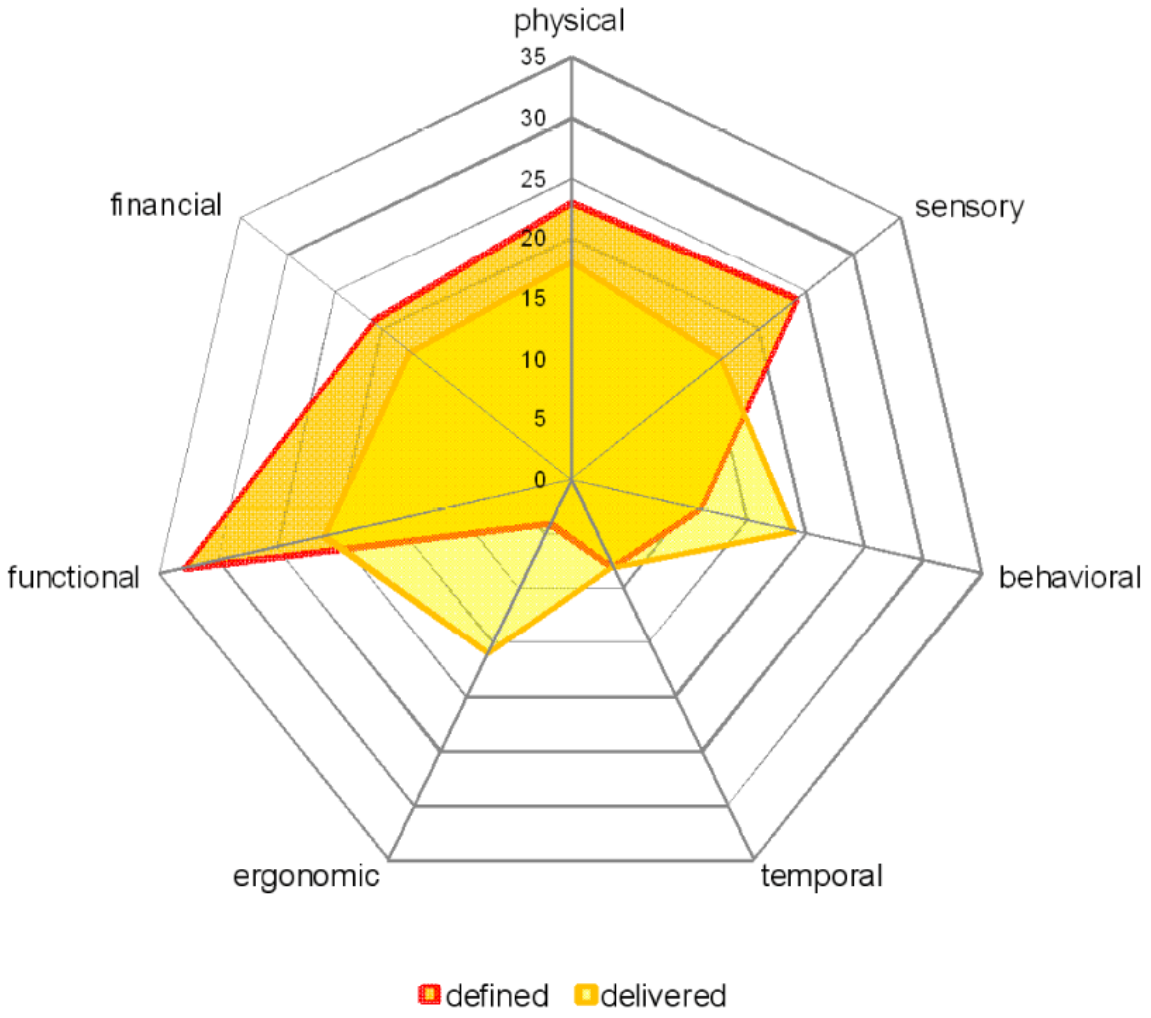


Are there other trends?

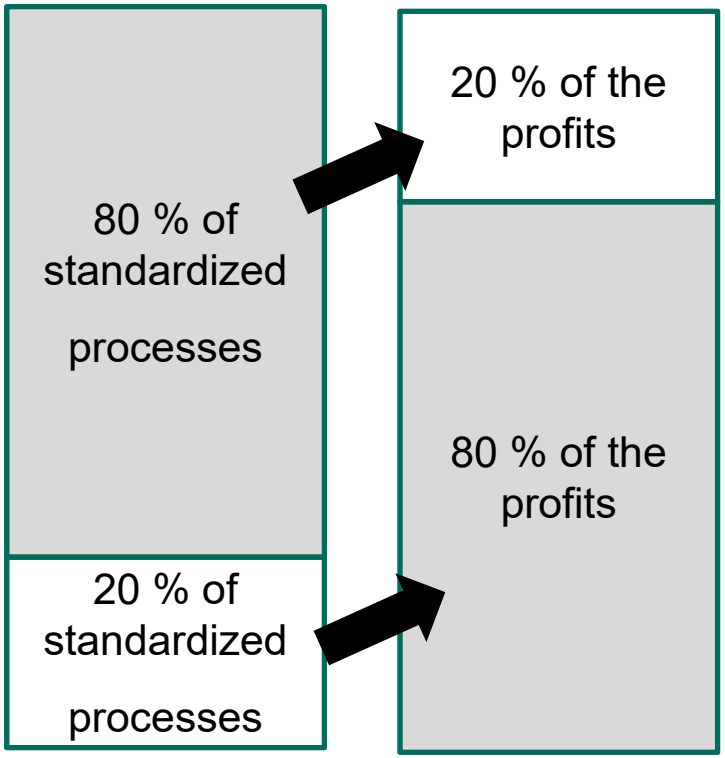
Standardization FM-processes

High level of standadization in the core process (necessary for a efficient production)

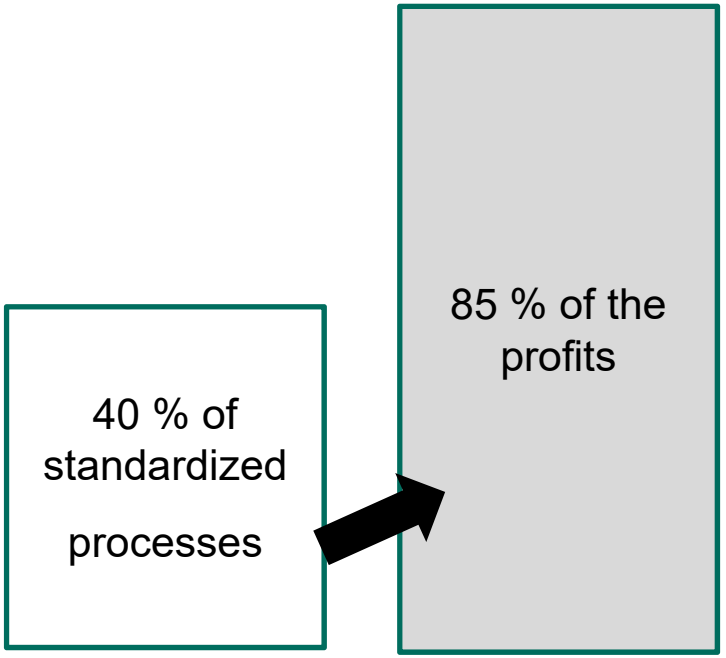
=> High level of standardization in the secondary processes

Standardization FM-processes

The Theory “80/20”



Actual situation 40/85 (we think…)



⇒ Reduce the percentage of standardized processes

⇒ Reduce the overhead (Bachelor or Masterthesis)

Why should I standardize?

- certification
- reporting
- benchmarking
- digitalization

Certification – New Construction/ Design

once in the lifetime of a building

Certification – Existing Buildings

LEED Existing Buildings Operation an Maintenance

DGNB Bestand

BREEAM DE Bestand

DGNB Gebäude im Betrieb

GEFMA 160

Certification – Existing Buildings

RC RC RC

Re-certification more the once in a lifetime of a building

Standardization of

⇒ Standardization of PORTFOLIO is possible!

CSR - guideline

- At the beginning of the financial year 2017 certain companies are obliged to do a reporting in context with social and environmental activities

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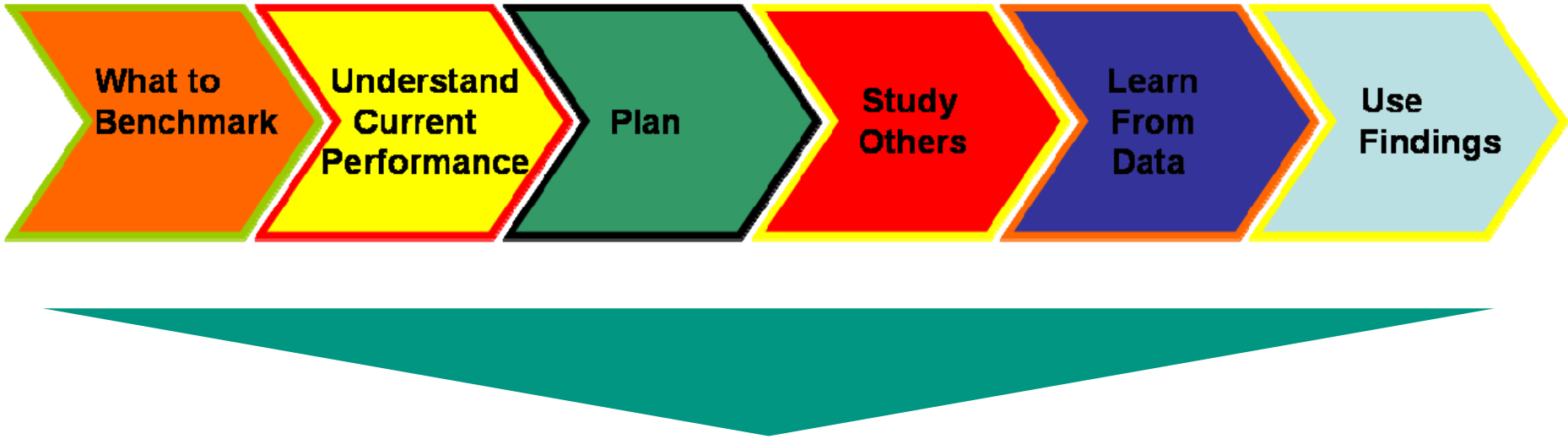
Standardization as an instrument for reducing reporting performance indicators (energy, water, waste etc.)

Benchmarking

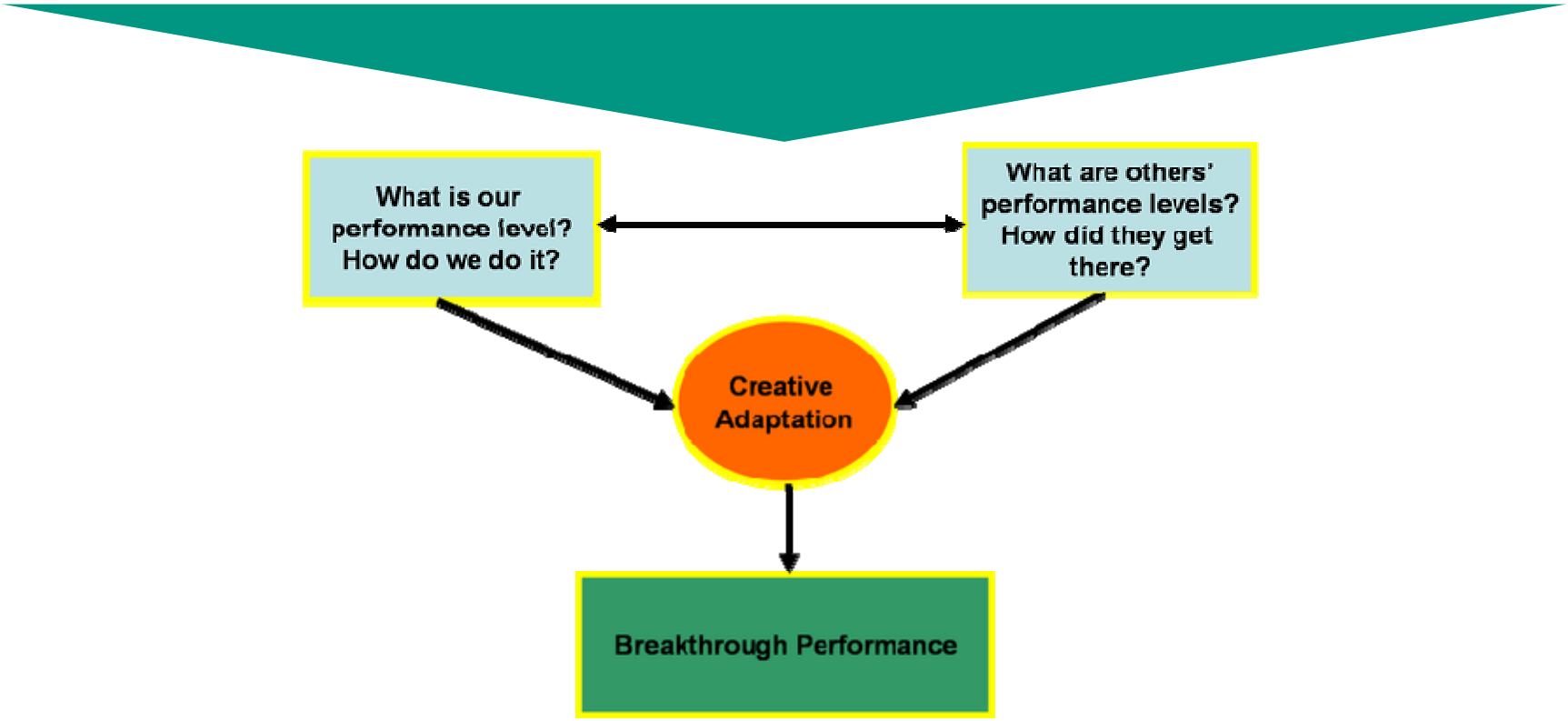
- Process of Benchmarking



- “The essence of benchmarking is the continuous process of comparing processes with those of the world leaders and best-in-class organizations.”

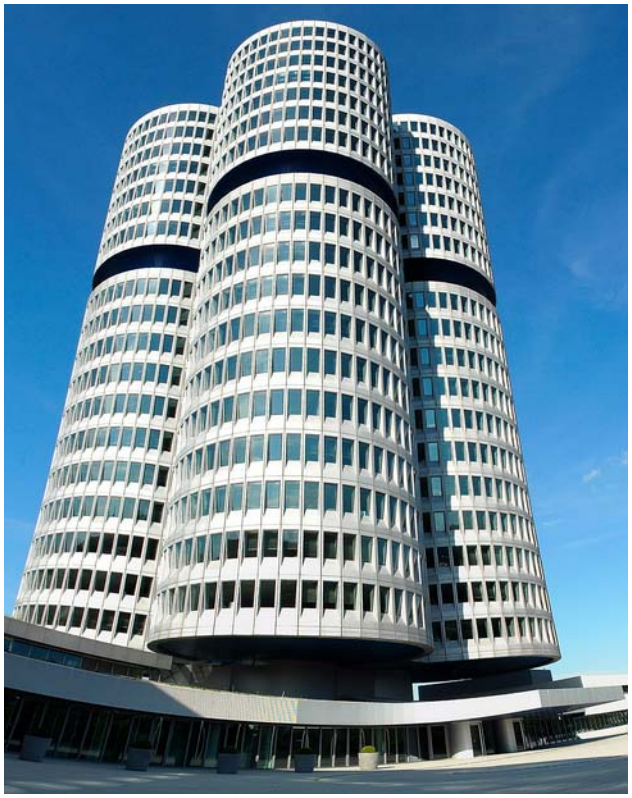
Benchmarking

- “Why reinvent the wheel if I can learn from someone who has already done it?”



Benchmarking

Maintenance costs per m² for office buildings



Benchmarking

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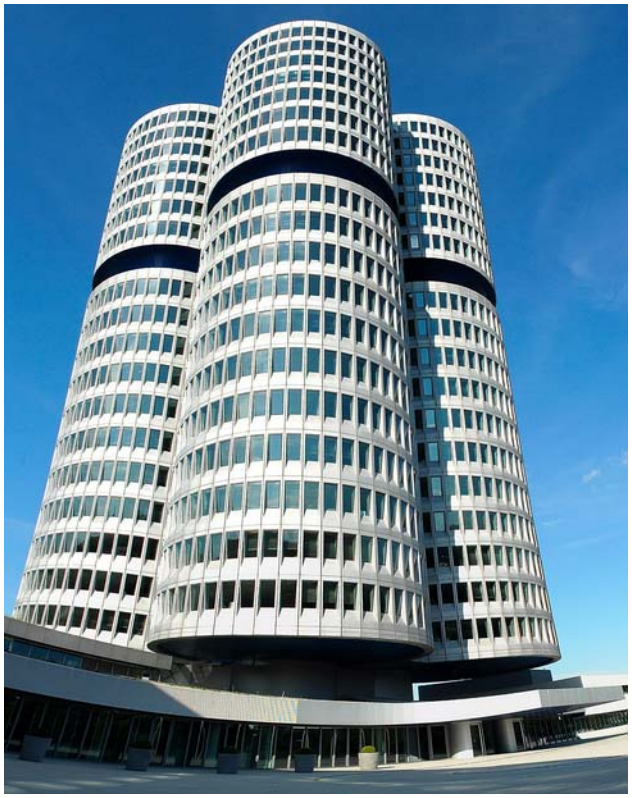


Maintenance costs / m² in relation to the age of the building?

Maintenance costs / m² in relation to the surface are?

Maintenance costs / m² in relation to the level how prestigious the building is?

Maintenance costs / m² in relation to the type of use?

Maintenance costs / m² in relation to the kind of construction?

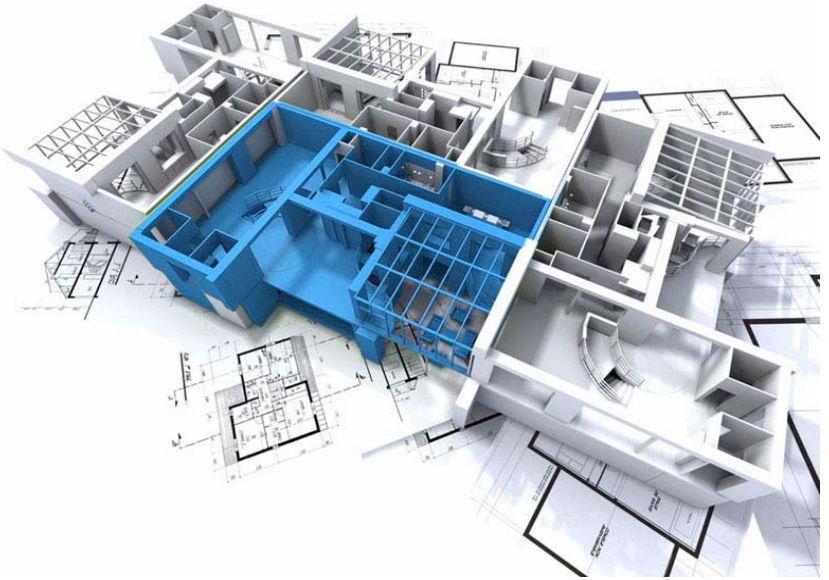
Maintenance costs / m² in relation to the surrounding area/city?

Maintenance costs / m² in relation …?

BIM on Rise in FM

- The BIM clock is ticking for FM

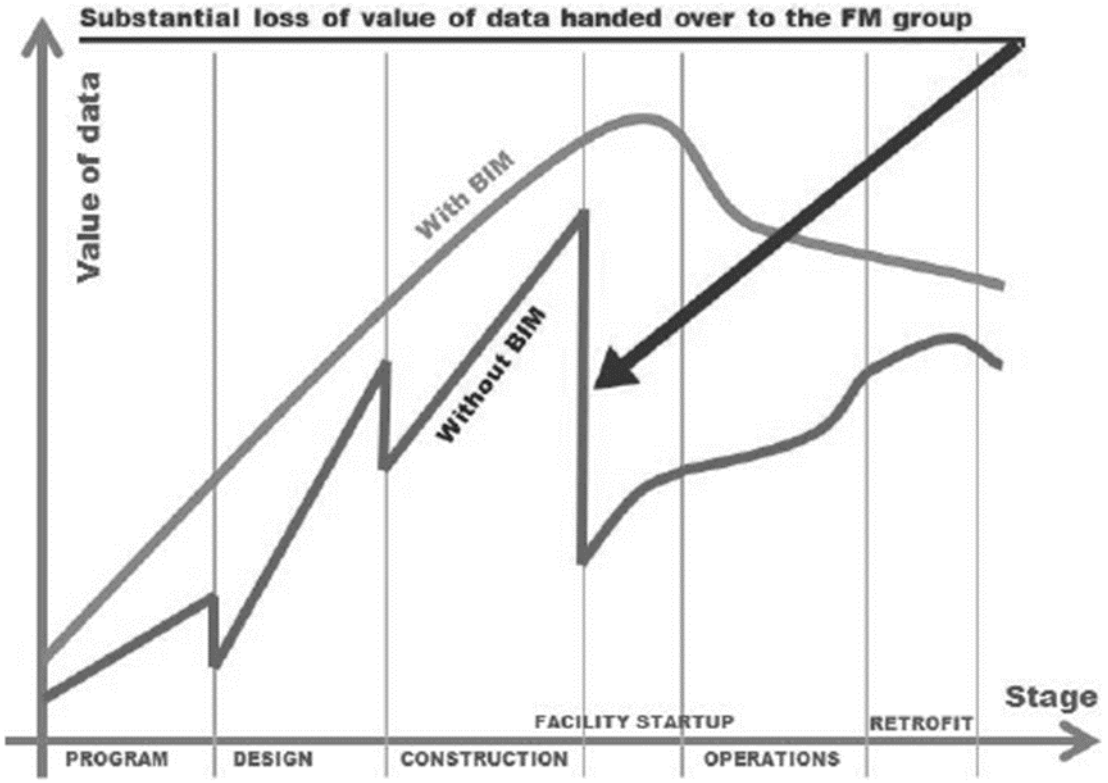
> a digital representation of physical and functional characteristics of a facility. As such, it serves as a shared knowledge resource for information about a facility forming a reliable basis for decisions during its life cycle from inception onward (WBDG)



BIM is a process. It is not a tool or solution. It is a holistic approach to the design, construction and management of the facilities used in the built environment.

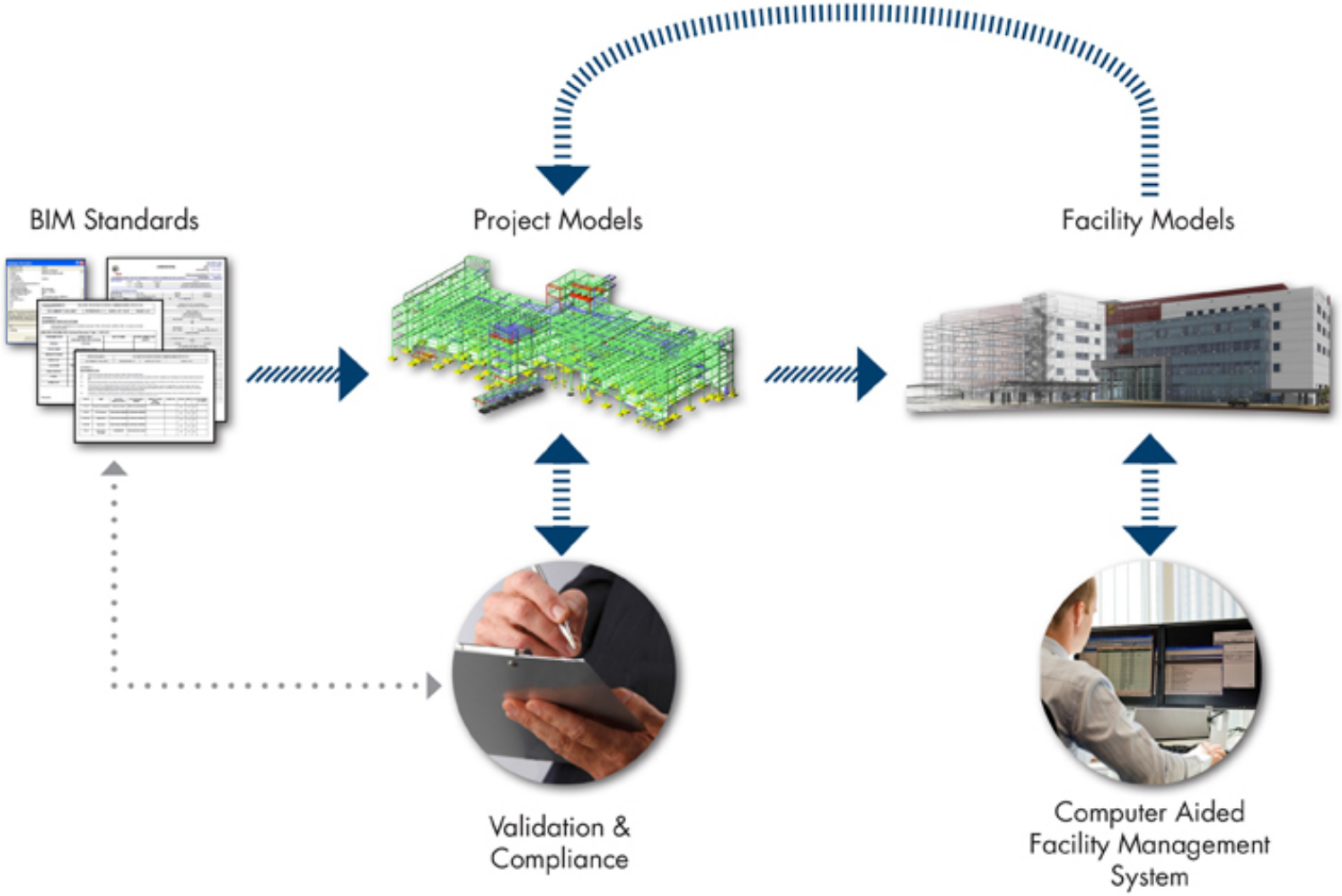
Building Information Value

Building information value degradation through the entire life cycle of the building with and without deploying BIM tools



Source: Eastman et al. 2011

Using BIM for Facility Management



Digitalization

Digitalization (stream of people)

?

Tracking via

RFID

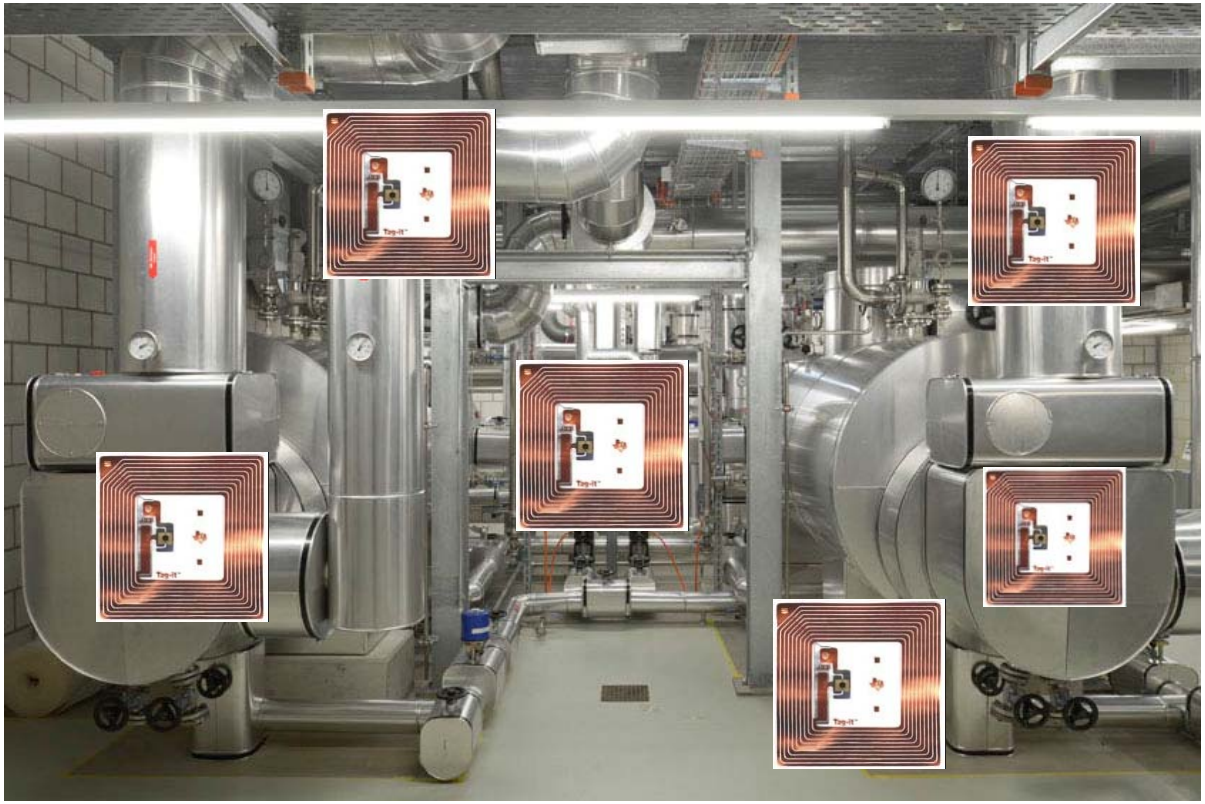
Cameras

Bluetooth

…

Digitalization

- RFID (passiv)



No manual operated Stocktaking

Linkage to handhelds and elektronic data sheets

For the whole Lifecycle (inhouse, outsourcing, etc.)

Digitalization

- RFID (active) with sensors

temperature

humidity

Air quality

Pressure

vibrations

The future of FM

Contact

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