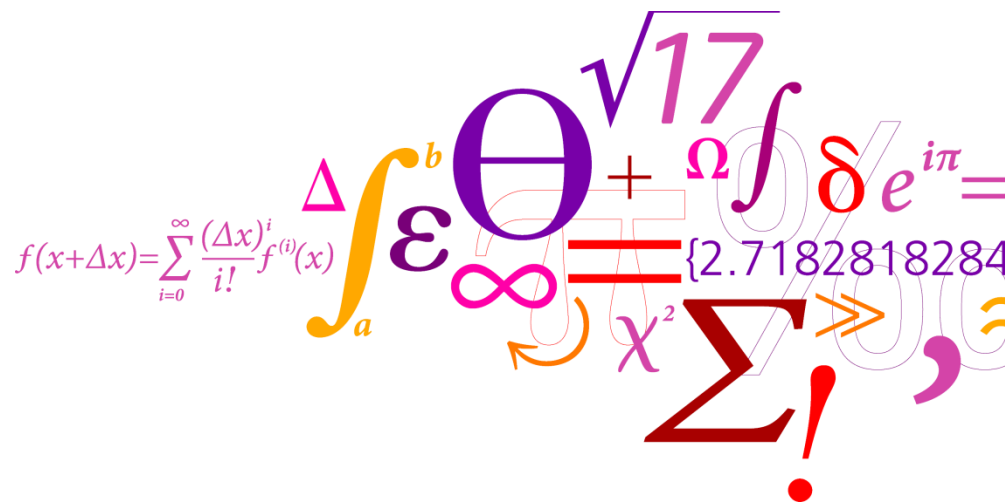


The Added Value of Facilities Management: *How to map and manage?*

Professor Per Anker Jensen

January 2015

DTU Management Engineering
Department of Management Engineering



Who am I

- Education

- MSc. in Civil Engineering, DTU 1978
- PhD. in Construction Management, DTU 1985
- MBA, Copenhagen Business School 2004

- Employment

- Researcher at DTU, 1979-1984
- Consultant in Rambøll, 1985-1991
- DR – Danish Broadcasting Corporation, 1991-2005
 - Project and Real Estate manager, 1991-1999
 - Deputy Project Director on DR Byen, 1999-2005
- DTU, 2005-
 - Associate professor, 1. April 2005, Civil Engineering
 - Centre director, 1. January 2008, Management Engineering
 - Professor in Facilities Management, 1. January 2009



Agenda

- FM Value Map
- Value Adding Management
- RENO-EVALUE
- Plans for book 2
- Added value process model



Per Anker Jensen



Theo van der Voordt



Christian Coenen



THE ADDED VALUE OF FACILITIES MANAGEMENT CONCEPTS, FINDINGS AND PERSPECTIVES

PER ANKER JENSEN, THEO VAN DER VOORDT AND CHRISTIAN COENEN
(EDITORS)



Facilities Management Best Practice in the Nordic Countries

- Research project at DTU 2005-2008
- 36 cases
- Involvement in a NordicFM workgroup
- From cost reduction to adding value
- FM Value Map
- EuroFM research group



General conclusions

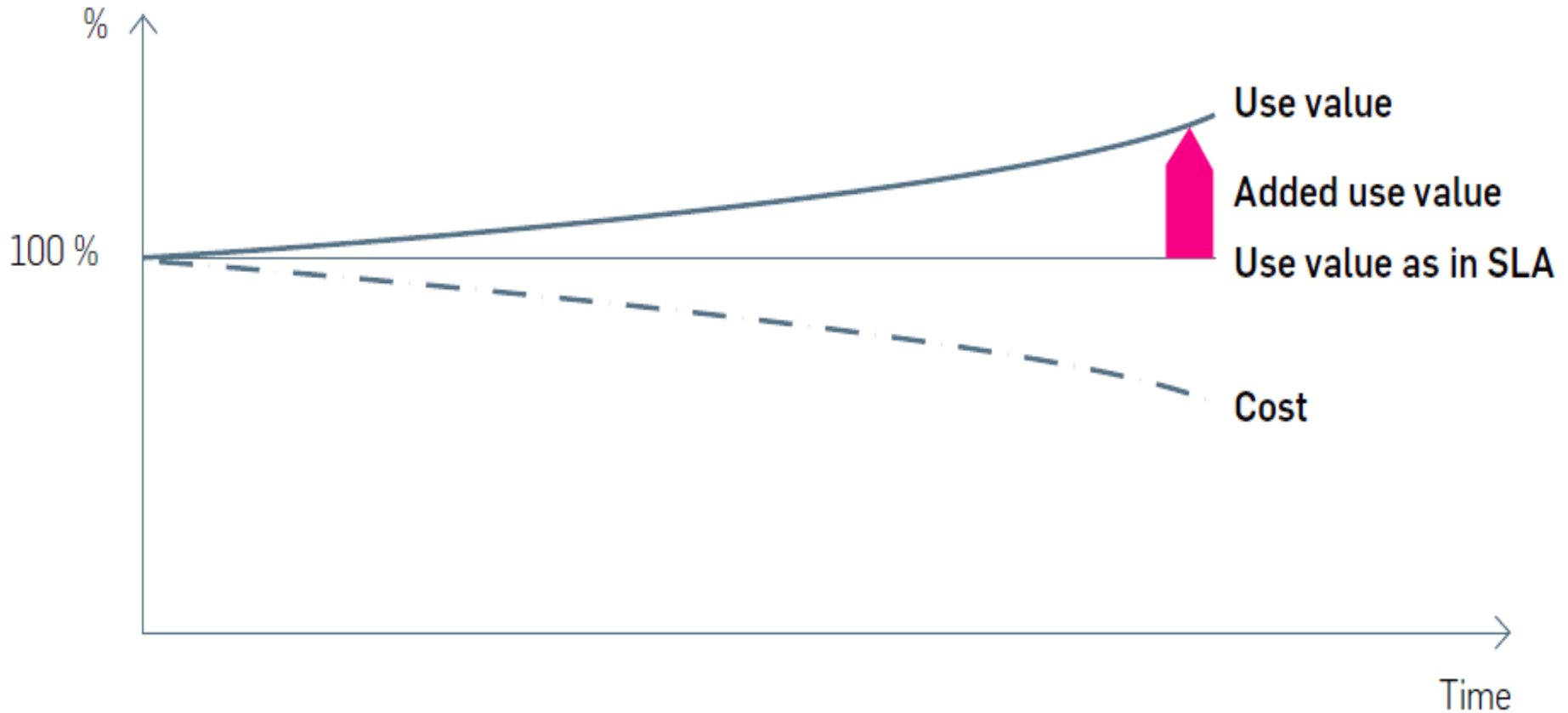
- A change in focus from mainly cost reduction towards adding value
- Implication for knowledge and competences
 - Change from general management methods transferred from other industries and experience based knowledge
 - Towards new research based knowledge and more FM specific professional competences

Added value – for who and how?

- For who?
 - Shareholders?
 - Stakeholders?
 - And which?
- How?
 - Value for money?
 - Efficiency?
 - More of the same for the same money
 - The same for less money
 - Value for money
 - Effectiveness?
 - Something better for the same or less money?



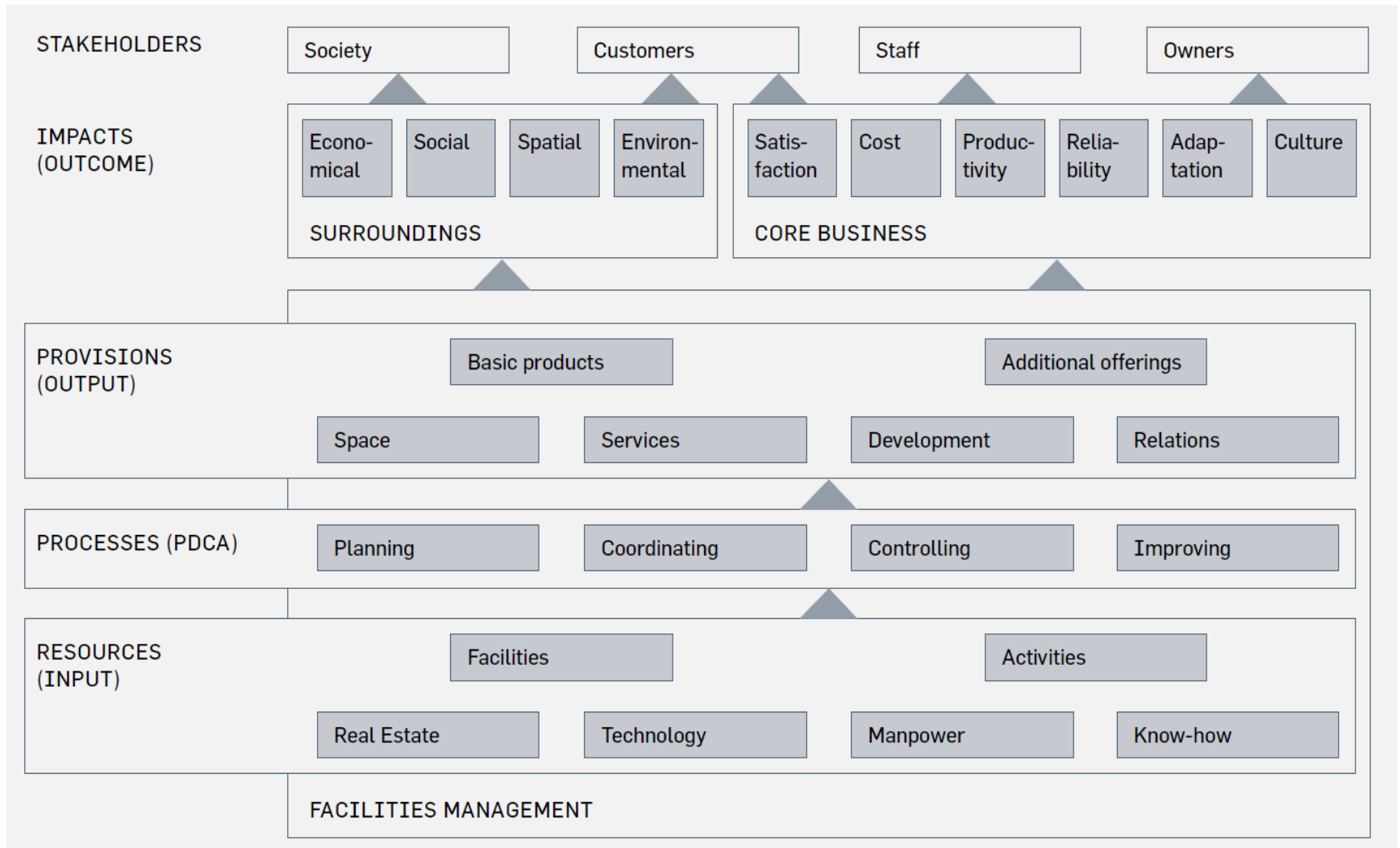
Figure 4.1: Added use value and cost reductions (Jensen, 2010)



The FM Value Map – What is it?

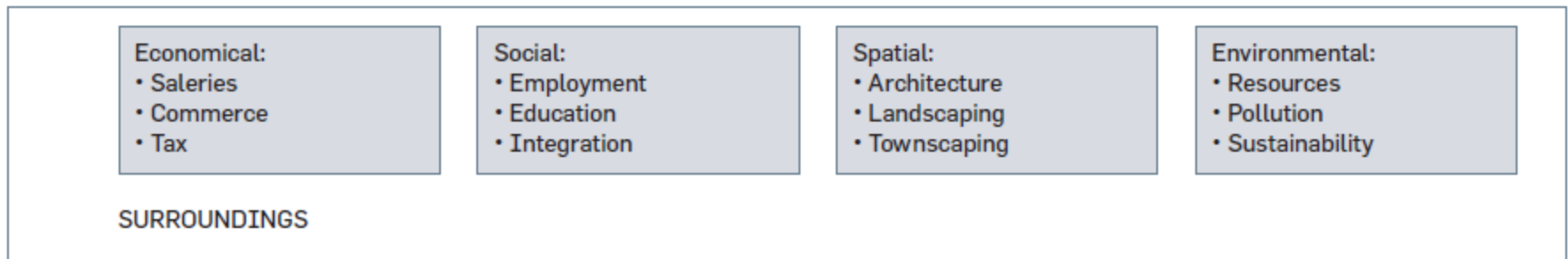
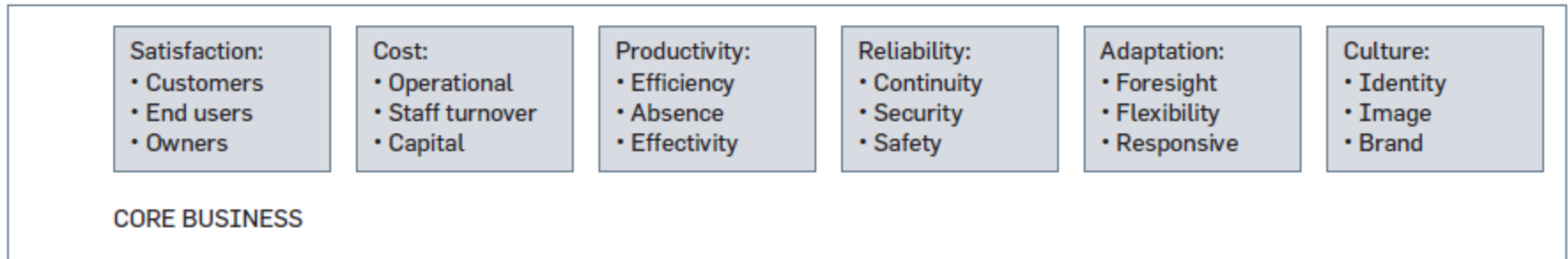
- A conceptual framework to understand and explain how FM creates value for core business and society
- Based on an analysis of best practice cases from the Nordic countries
- Inspired by Strategic Mapping in Balanced Score Card Methodology
- Part of a NordicFM workgroup on “Highlighting the added value for the core business provided by FM”

FM Value Map – Generic version, level 1 and 2, 2008



FM Value Map – Generic version, level 3 - Impacts

IMPACTS



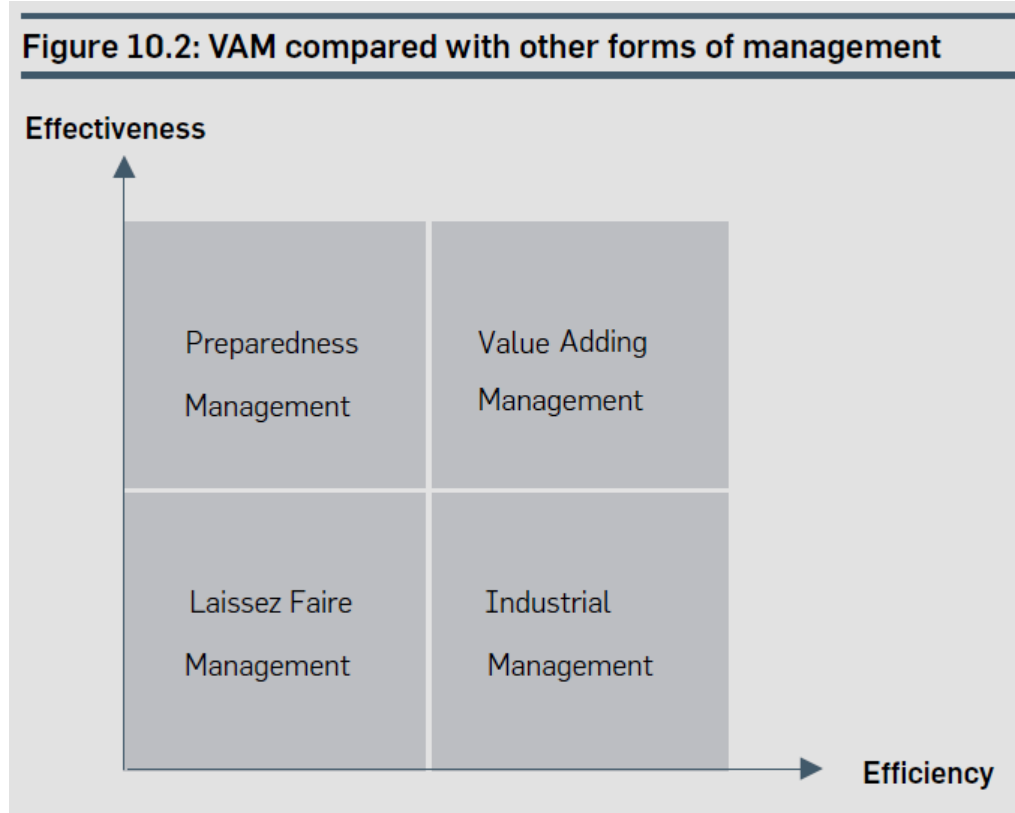
Value Adding Management

- A concept with the purpose to:
 - increase the awareness of the impacts and strategic importance of FM for organisations
 - be a practical tool for facilities managers in implementing value adding strategies and practices



Development of the concept

- From existing models of FM and Real Estate value and strategy mapping
- From existing management theories and models
- From case studies among leading actors, for instance LEGO
- From workshops with researchers and practitioners



Coordination mechanisms

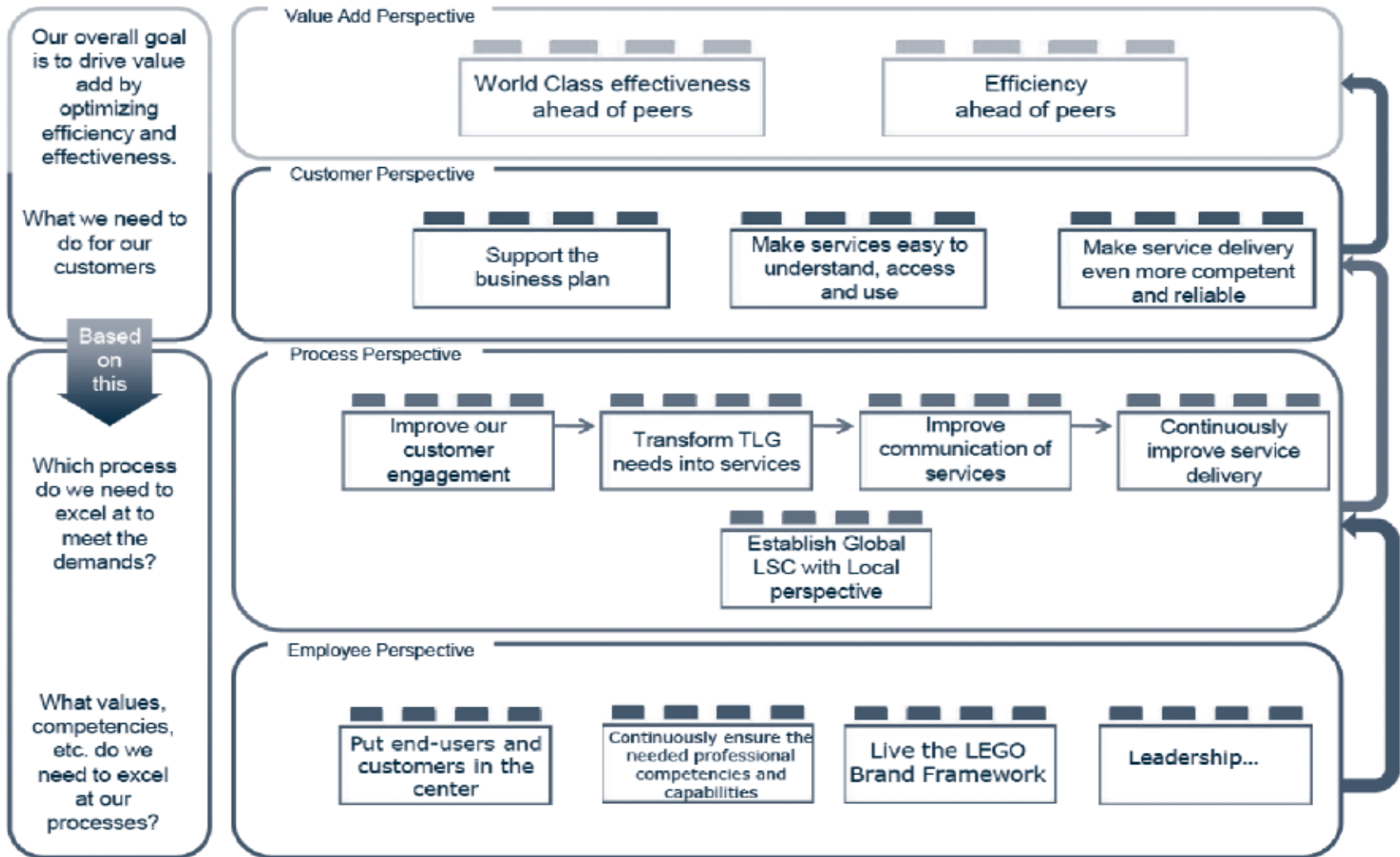
Degree of centralisation	Centralised	Semi-centralised	De-centralised
Decision-making			
One-sided	Authority relationship (Hierarchy)	Agent relationship	Norms/customs
Two-sided	Partnership	Negotiation	Price (Market)
Multi-sided	Coalition	Voting	Team

Table 10.1: VAM relationship differentiation

Level	Demand side	Relationship focus	Coordination form
Strategic	Client	Business orientation	Coalition
Tactical	Customer	Customer orientation	Negotiation
Operational	End user	Service orientation	Price per order/Service charge

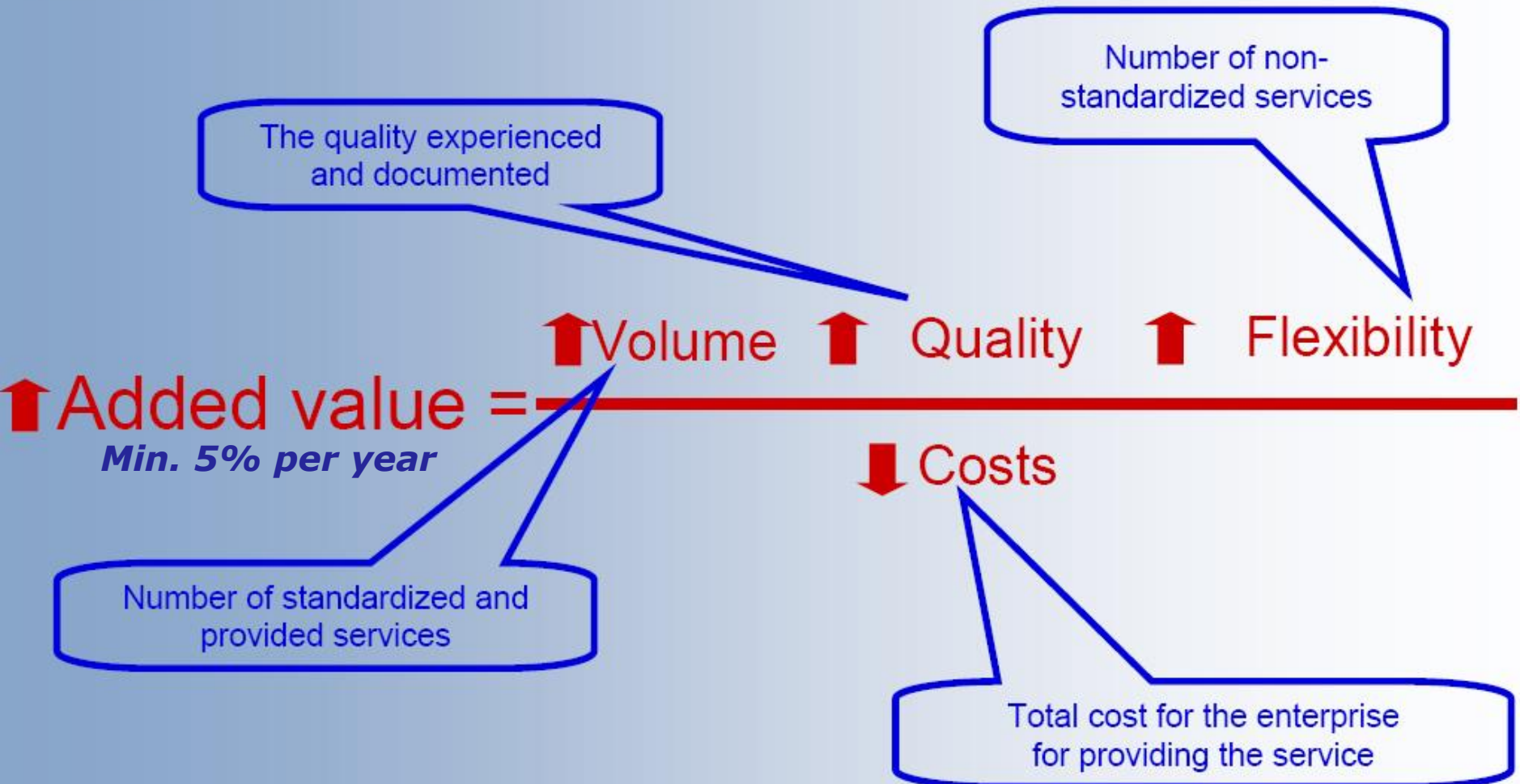


Figure 10.3: LEGO's Facilities Strategy Map 2010 (Møllebjerg, 2010)





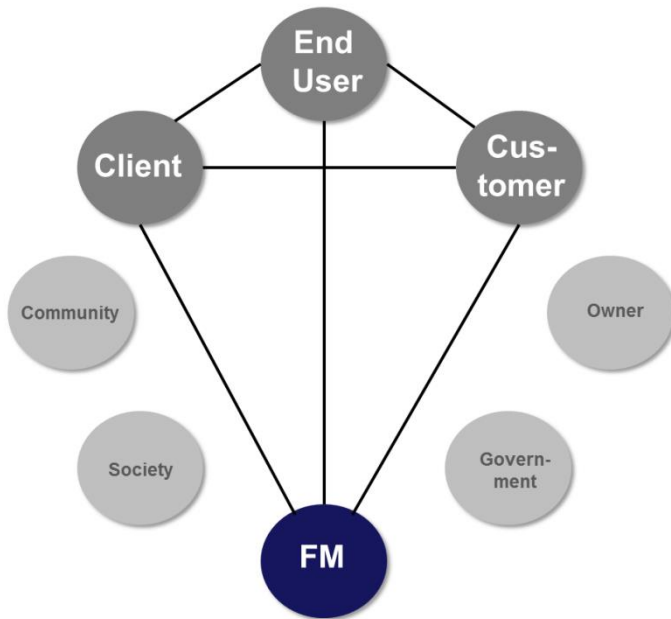
The added value-equation



LEGO Service Centre and Value Adding

Stakeholder	Channel	Target Group
Client	Leadership team survey and meeting	Top 40 management level including vice president
	Facilities committee meetings	CFO, heads of LEGO Corporate Center, Global Supply Chain, LSC and others by invitation
Customer	Customer meetings	Director level and above
	Customer survey	
End users	User survey	Everyone below director level

FM Value Net and FM Value Matrix



<i>Relationship</i> <i>Value Dimension</i>	FM ↔ Client	FM ↔ Customer	FM ↔ End User
Use Value			
Social Value			
Relationship Value			
Environmental Value			

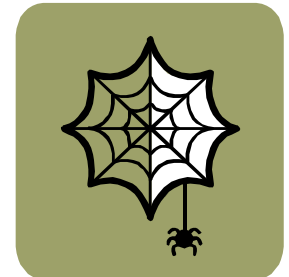
- *Focus on co-creation of value*

FM Value Matrix with 5 research topics

Relationship	Company < > Society	FM < > Client	FM < > Customer	FM < > End user
Value dimension				
Use value	Topic 3 Sustainability and CSR	Topic 1 Corporate Strategy		
Customer/consumer/ user value			Topic 2 FM Value Map	
Economical/financial/ exchange value				
Social value	Topic 4 Branding			
Relationship value		Topic 5 Relationship Management		
Environmental value				

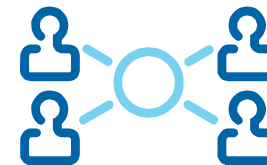
RENO-EVALUE

- A tool for decision support for renovation projects in early stages and evaluation
 - Eracobuild program:
 - Value Driven Processes
 - Value is in the eye of the beholder
- Stakeholders assess renovation projects differently
 - Therefore we emphasize subjective evaluations
 - To make the evaluations made by stakeholders visible is important to create a basis for a meaningful dialogue
 - The evaluations should as far as possible be based on the same factual information/preconditions
 - The reasons for the evaluations are important
 - Decision should not necessarily be based on consensus but on compromises that balance the different interests and considerations



RENO-EVALUE: Categories and Parameters

- Environment
 - Resources (energy etc.)
 - Climate (CO2 ect.)
- Stakeholders (satisfaction)
 - Product (quality)
 - Process (quality)
- Organisation (incl. competences)
 - Procurers/building clients (demand)
 - Consultants/contractors (supply)
- Economy (in a broad sense)
 - Euros/crowns (quantitative)
 - Value (mostly qualitative)



RENO-EVALUE templates

RENO-EVALUE: Bredgade 43, København

Kategori	Parameter	Faktor	Beskrivelse
Interesserer	Produkt	Arititektur og æstetik	<ul style="list-style-type: none"> Ingen ændringer i facaden eller indretningen. Vinduer overvejes udsjiftet.
		Funktion og brugervenlighed	<ul style="list-style-type: none"> Nye belysningsarmaturer. Bevægelsesflere på udearealer og i F-kælder. NDx midlere i F-kælder.
		Indeklima og komfort	<ul style="list-style-type: none"> Bedre indeklima pga. optimeret ventilation. Bedre belysning på kontorerne.
		Holdbarhed/fremtidssikring	<ul style="list-style-type: none"> Nye mekaniske dele (motorer og pumper) med lang levetid og lavere energiforbrug. Automatisk styring i F-kælder.
	Proces	Samarbejdet mellem parterne	<ul style="list-style-type: none"> Projektgrundlag: frivillig omkostning for lejer og ejer. Lejer ønsker samarbejde med Dataeo. EMR samarbejde mellem Dataeo og Cowi som repræsentant for lejerne.
		Involvering af brugere	<ul style="list-style-type: none"> Møder med koncerntest. Orientering om kommende arbejde.
Miljø	Ressourcer	Energiforbrug	<ul style="list-style-type: none"> Noget af arbejde udføres over sommerferien. Større arbejdsstyrke. Energimærke haves fra E til C. Det beregnede energiforbrug reduceres fra 183,8 til 137,7 kWh/m²/år. (ca. 25 %)
		VE produktion	<ul style="list-style-type: none"> Solceller på taget overvejes men implementeres ikke pga. en lang tilbagebetalingstid (15,5 år)
	Klima	Vandforbrug	<ul style="list-style-type: none"> Ingen ændringer.
		Genbrug af vand	<ul style="list-style-type: none"> Ingen ændringer.
		Lokal udledning af vand	<ul style="list-style-type: none"> Ingen ændringer.
Klima	CO ₂ udledning	<ul style="list-style-type: none"> Ingen ændringer. 	
	Forurening	<ul style="list-style-type: none"> Ingen ændringer. 	

1. Case description

RENO-EVALUE Evalueringsskema

Dato: _____

Navn/Firma: _____

Kategori	Parameter	Spørgsmål/karakter	Forklaring/begrundelse
Interesserer	Produkt	Hvilken betydning vil renoveringen have for den funktionelle og den byggetekniske kvalitet af boliger og bebyggelsen fremover? 1: Meget mindre kvalitet 2: Mindre kvalitet 3: Usikkert 4: Bedre kvalitet 5: Meget bedre kvalitet	<ul style="list-style-type: none"> Hvad er din vigtigste grund til at give den karakter?
		Hvordan har du oplevet den hidtidige proces og planerne for den videre proces under renoveringen i forhold til, hvad du mener, man med rimelighed kunne forvente?	<ul style="list-style-type: none"> Hvad er din vigtigste grund til at give den karakter?
Miljø	Ressourcer	Hvilken betydning vil renoveringen have for, hvor miljøvenlig bebyggelsen vil være med hensyn til ressourceforbrug fremover? 1: Meget mindre miljøvenlig 2: Mindre miljøvenlig 3: Usikkert 4: Mere miljøvenlig 5: Meget mere miljøvenlig	<ul style="list-style-type: none"> Hvad er din vigtigste grund til at give den karakter?
	Klima	Hvilken betydning vil renoveringen have for, hvor miljøvenlig bebyggelsen vil være med hensyn til klimapåvirkning fremover? 1: Meget mindre miljøvenlig 2: Mindre miljøvenlig 3: Usikkert 4: Mere miljøvenlig 5: Meget mere miljøvenlig	<ul style="list-style-type: none"> Hvad er din vigtigste grund til at give den karakter?

2. Evaluation

RENO-EVALUE example

- Esthetics and architecture
- Function and usability
- Comfort and indoor climate
- Durability/future-proofing

PRODUCT

5

4

3

2

1

0

CONSULTANT/CONTRACTOR

- Project management competences
- Technical competences
- Problem solving competences
- Interpersonal skills
- Coherence in delivery team
- Risk/responsability/innovation

PROCESS

- Collaboration between stakeholders
- Mutual information sharing
- User involvement
- User consideration during construction

RESOURCES

- Energy consumption
- Renewable energy sources
- Water consumption
- Reuse of water
- Waste amount
- Reuse of waste
- Reuse of materials

OWNER

- Project management competences
 - Decision competences
- Technical competences
 - Interpersonal skills
 - O&M involvement
- Risk/responsability/innovation

CLIMATE

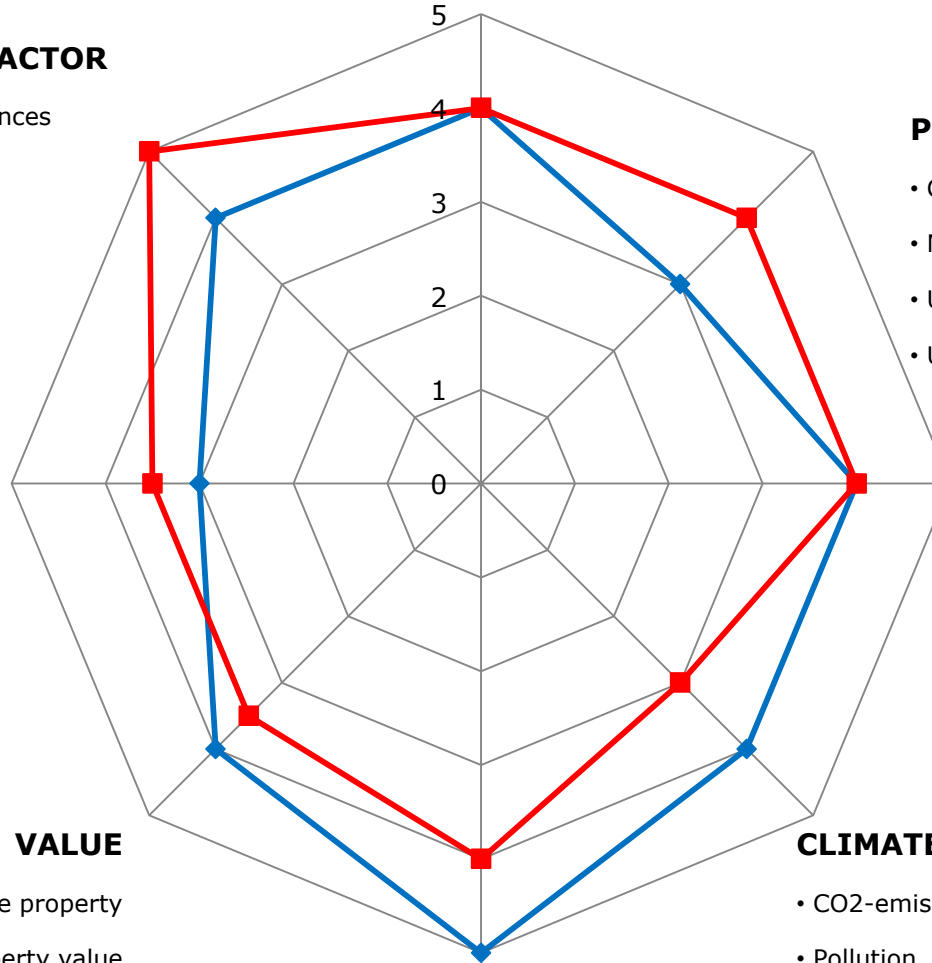
- CO2-emissions
- Pollution
- Local water treatment

VALUE

- Attractive property
- Property value

ECONOMY

- Reasonable maintenance costs
- Reasonable operational costs



Book 2 on the Added Value of FM

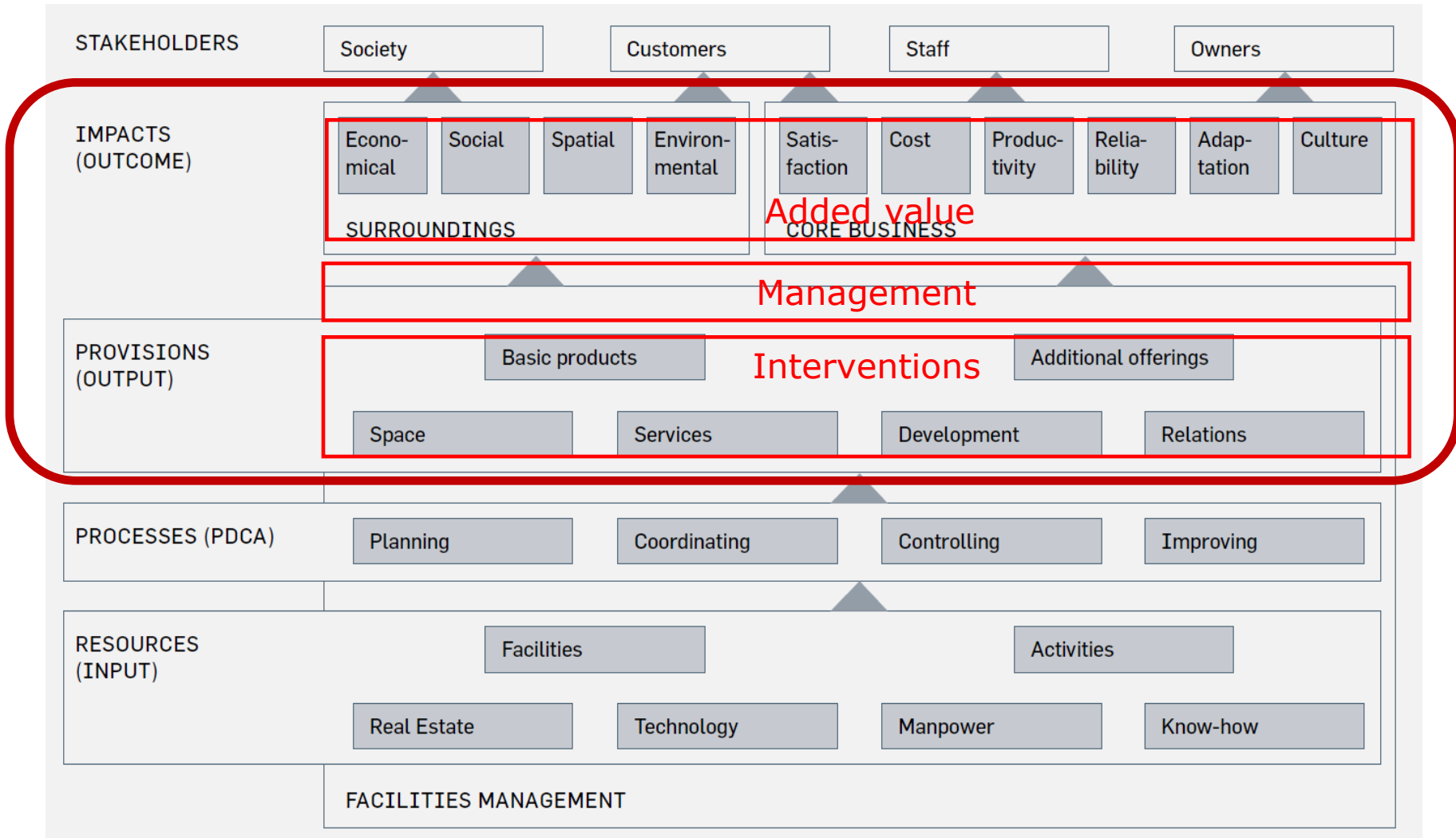
- Preliminary title:
 - FM and CREM as Value Drivers - How to manage and measure added value
- Editors and contributors
 - Per Anker Jensen and Theo van der Voordt
 - An anthology with contributions from a number of authors
- Publishing
 - Routledge
 - Planned spring/summer 2016

Overall framework

- The general process model:
 - Input -> Throughput -> Output ---> Outcome = Impact =
Added Value

- The Added Value process model:
 - Intervention -> Management -> Added Value
 - Decision on type of change -> Implementation -> Outcome
 - What → How → Why

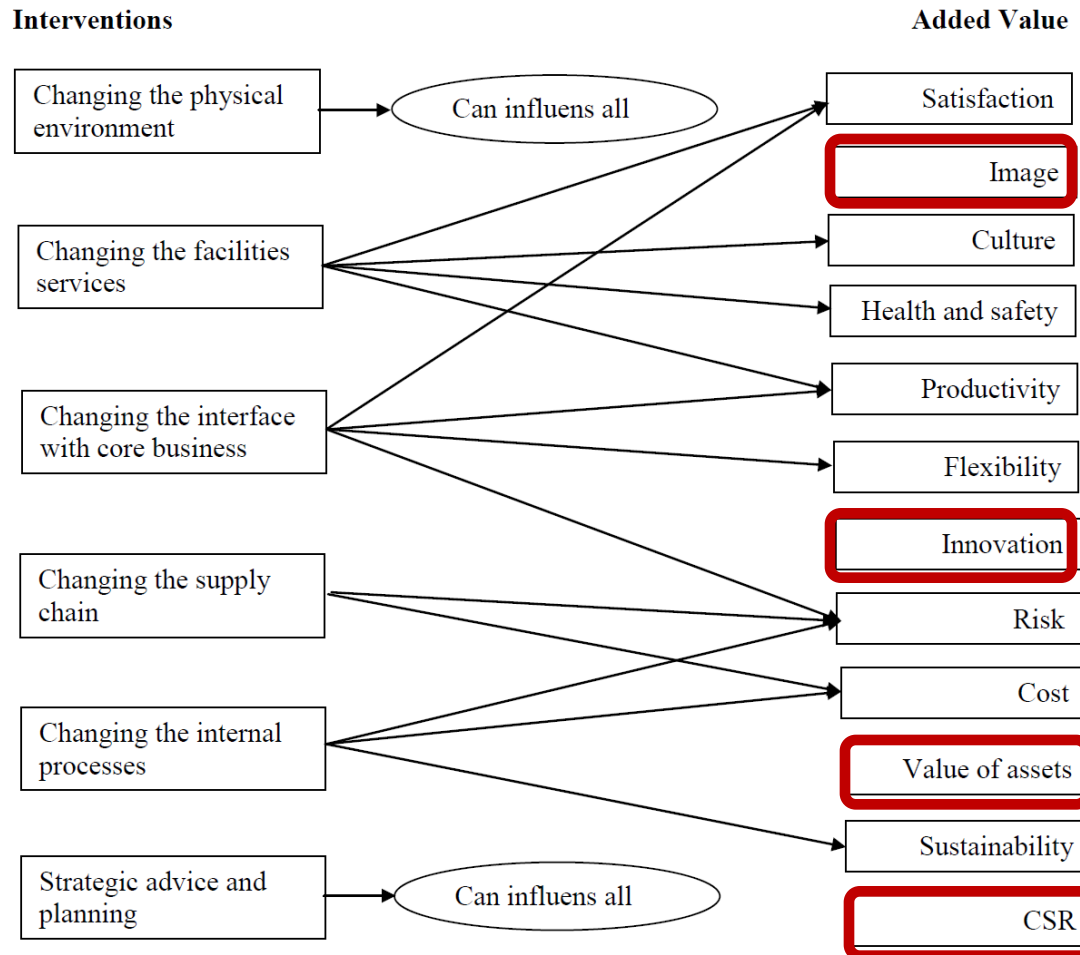
FM Value Map – Generic version, level 1 and 2, 2008



FM and CREM interventions typology

- Changing the physical environment on different scale levels (portfolio, building, space)
 - Moving to another location (new or existing building)
 - New building
 - Rebuilding, refurbishment or adaptive re-use
 - Changing workplace layout
 - Changing appearance
- Changing facilities services
- Changing the interface with core business
- Changing the supply chain
- Changing the internal processes
- Strategic advice and planning

TYPES OF INTERVENTIONS AND ADDED VALUE PARAMETERS



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"I'm in value-adding. What do you folks do?"