Internal Cost Allocation For Shared IT Services

Leistungsverrechnung für Shared IT-Services

Frankfurt, 30.10.2012 I Dr. Wilfried Lyhs

CATcon 2012
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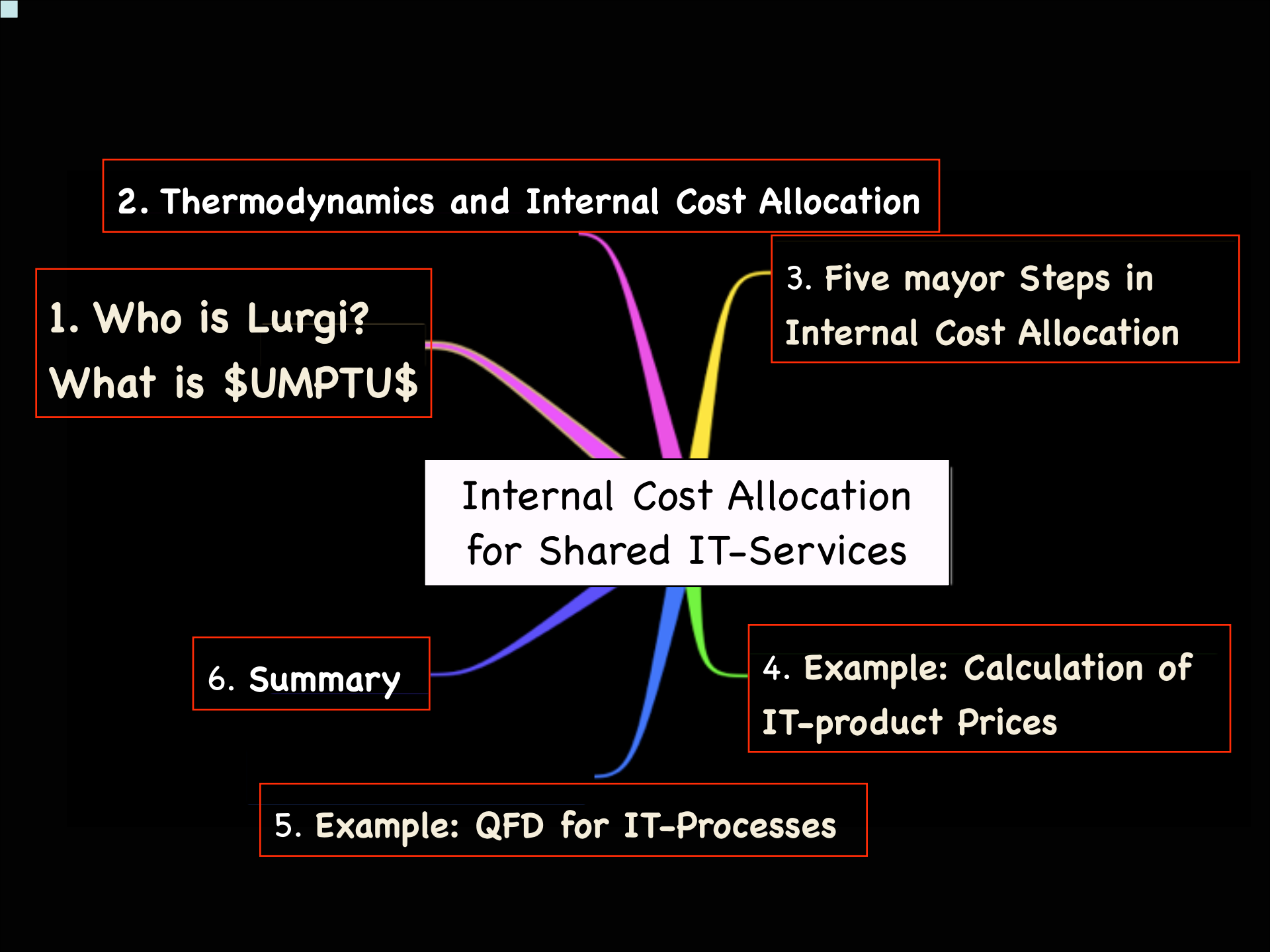
2. Thermodynamics and Internal Cost Allocation
1. Who is Lurgi?
What is $UMPTU$
3. Five mayor Steps in
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for Shared IT-Services
6. Summary
4. Example: Calculation of
IT-product Prices
5. Example: QFD for IT-Processes

What is $UMPTU$?

1

2009 start of "$UMPTU$ 1" with targets:
- change distribution of IT costs from "per head" to "consumption oriented" (sumptus: lat. for cost, waste)
- increase transparency of IT costs
- increase cost awareness of users

>>> decrease cost in the medium term

Results: introduction of DSL, reduction of software versions, prohibition of forbidden and unwanted software

2010:
- introduction of a service catalog: definition of orderable products
- price calculation (diploma thesis) >>> procedure discussed later
- consolidaton of all consumption relevant data: distribution of IT costs on costs centers

Results: fair distribution of costs, but:
- price calculation is based on target planning >>> prices too high
- calculation is restricted to FFM

What is $UMPTU$?

2

2012 start of "$UMPTU$ 2

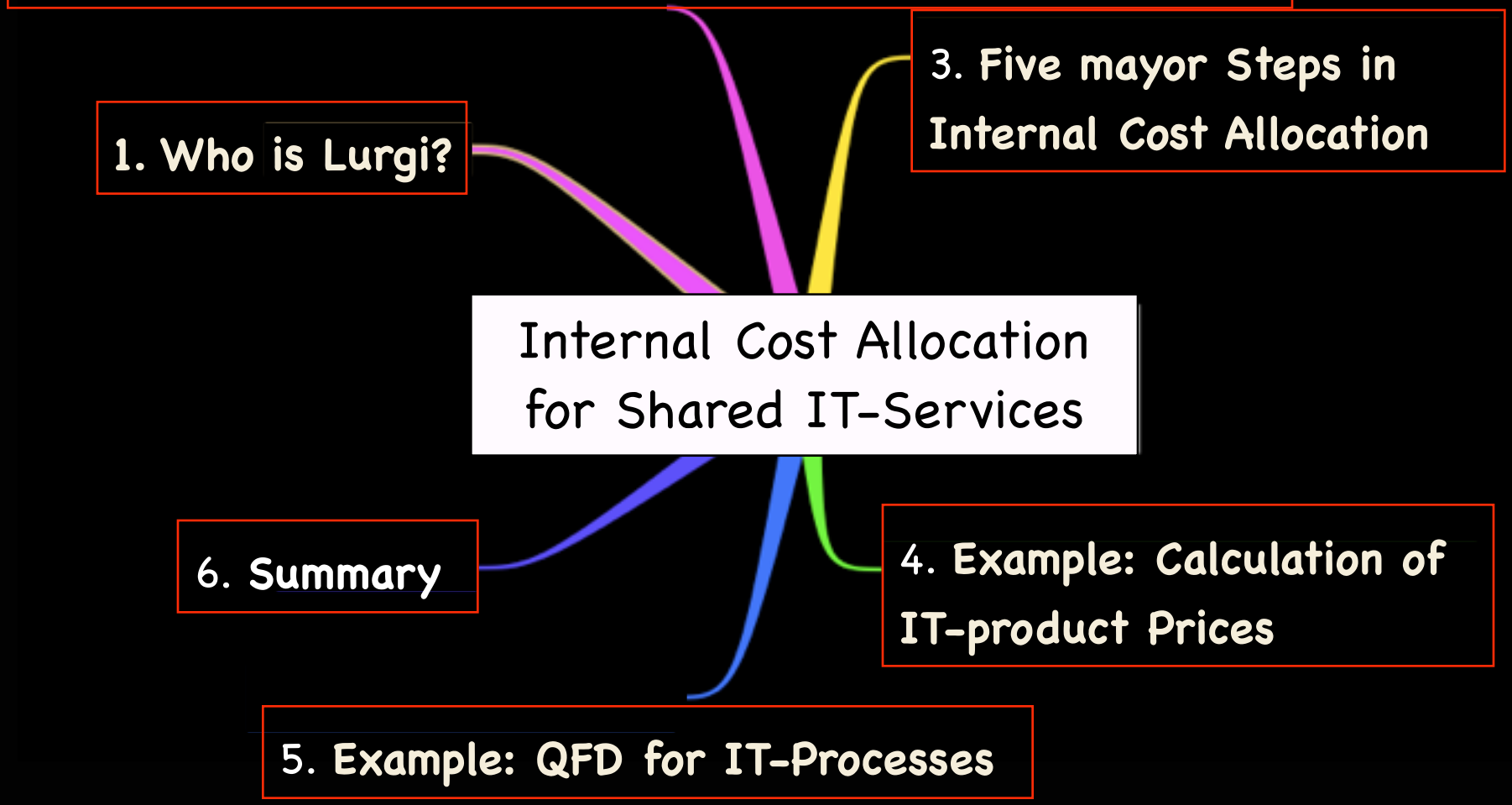
- based on real consumption 2011 in FFM
- introduction of new products locally invoiced like
  - = physical and virtual servers
  - = consumption of storage: high and low availability
  - = mobile phones
  - = LUMOS (output management)
- introduction of new products globally invoiced like
  - = global UHD
  - = usage of private cloud based in FFM with
    - * engineering applications
    - * DMS
  - = SAP
  - = BYOD services

Results: preparation for 2013:

- cost distribution between Lurgi affiliates in KRA, DEL, SHA, PEK, JOB
- local cost distribution in FFM

2013 extension for Global E&C Solutions?

2. Thermodynamik und Leistungsverrechnung (1)



2. Thermodynamik und Leistungsverrechnung (1)

1. Hauptsatz der TD

$$\Delta U = \Delta Q + \Delta W$$

U : innere Energie
Q : Wärme
W : Arbeit

Der Zustand eines Systems läßt sich durch Zufuhr von Wärme und Arbeit verändern.
U beschreibt den Zustand eindeutig.
U ist eine Erhaltungsgröße.

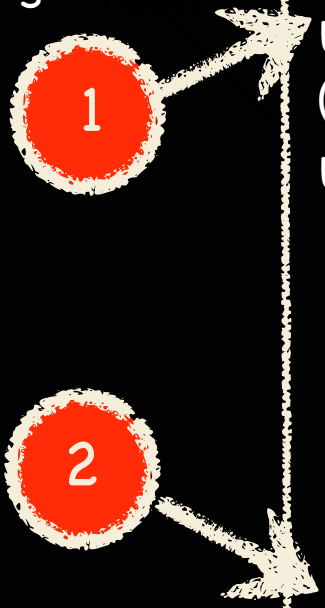
1. Hauptsatz der LV

U : Gesamtkosten
Q : Drittkosten
W : Arbeitskosten

Der Zustand eines Systems läßt sich durch Zufuhr von Geld und Arbeit verändern.
U beschreibt den Zustand (eindeutig?).

U ist **keine** Erhaltungsgröße.

Rheinische Formulierungen:
- "von nix küt nix"
('Creatio ex Nihilo' nur in biblischen und quanten-mechanischen Systemen)
- "wat nix kost' is och nix":
Wertschätzung von Leistungen



2. Thermodynamik und Leistungsverrechnung (2)

2. Hauptsatz der TD

$$\Delta S > \frac{\Delta Q_{irr.}}{T}$$

S : Entropie
Q : Wärme
T : Temperatur

Unabhängig von der Prozeßführung nimmt die Entropie (Maß für die Unordnung eines Systems) stets zu.

Schlußfolgerungen:

- es gibt reversible und irreversible Prozesse,
  reversible sind i.d.R. (unendlich) langsam
- Unmöglichkeit des
  "Perpetuum Mobiles" (der 2. Art)
- der Wirkungsgrad einer Carnot-Machine
  steigt mit der Temperatur
- Entropietod des Universums
- ...

2. Hauptsatz der LV

S : Unordnung
Q : Drittkosten
T : Professionalität

Egal wie Prozesse geführt werden: die Unordnung nimmt zu.

- Geld und Arbeit sind nicht beliebig ineinander konvertierbar, erst recht nicht reversibel
- je schneller Prozesse sind, desto irreversibler sind sie
- Bestätigung von "von nix küt nix"
- der Wirkungsgrad nimmt mit der Professionalität zu
- ....

2. Thermodynamik und Leistungsverrechnung (3)

3. Hauptsatz der TD

$$\lim_{T \to 0} \Delta S = 0$$

S : Entropie
T : Temperatur

Es ist unmöglich, durch einen Prozeß die Temperatur auf den absoluten Nullpunkt zu führen.

3. Hauptsatz der LV

S : Unordnung
T : Professionalität

Widerspruch zur TD:
der absolute Nullpunkt der Professionalität **ist** gerade in Shared Services erreichbar!

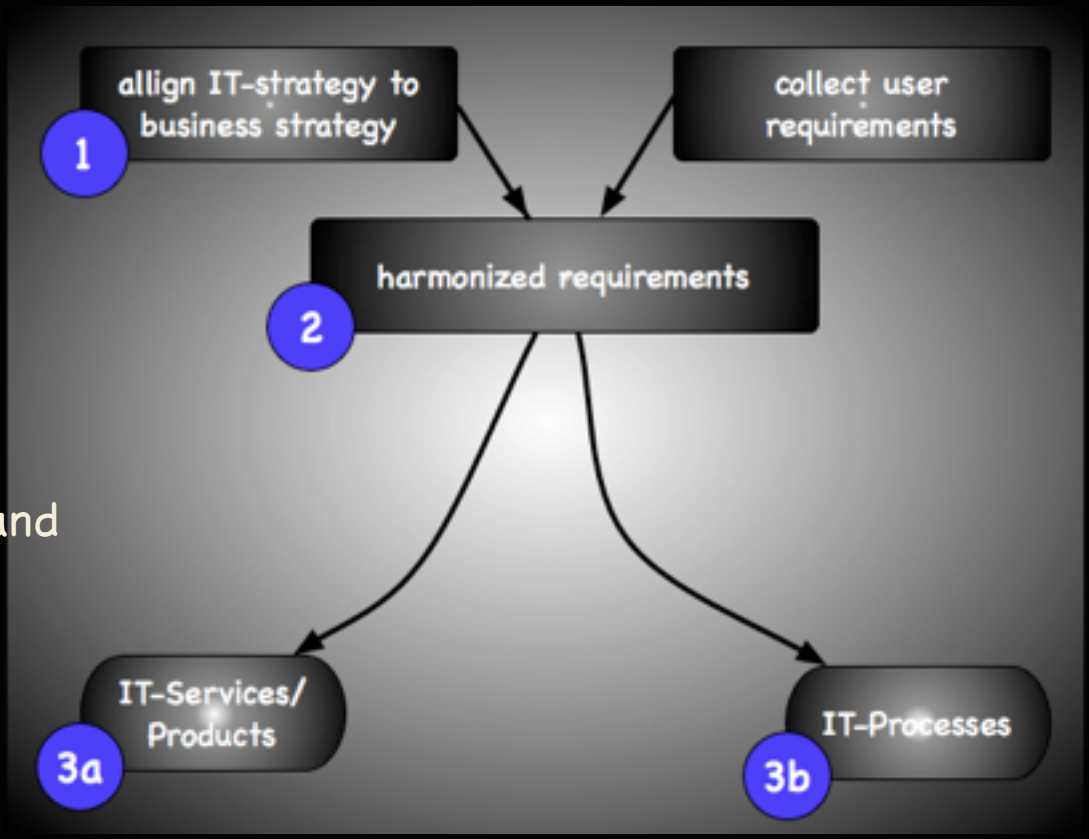
Trost: bei verschwindender Professionalität nimmt die Unordnung nicht mehr wesentlich zu ($\Delta S \to 0$).

3. Five mayor Steps in Internal Cost Allocation (1)

- **Step 1:**
  - align your (IT-) **Strategy** to business strategy
    ⇒ derive Strategical Requirements (for IT)
  - collect **User Requirements** from different stakeholders

- **Step 2:**
  - User Requirements must be harmonized with the strategy in order to become Tactical Requirements

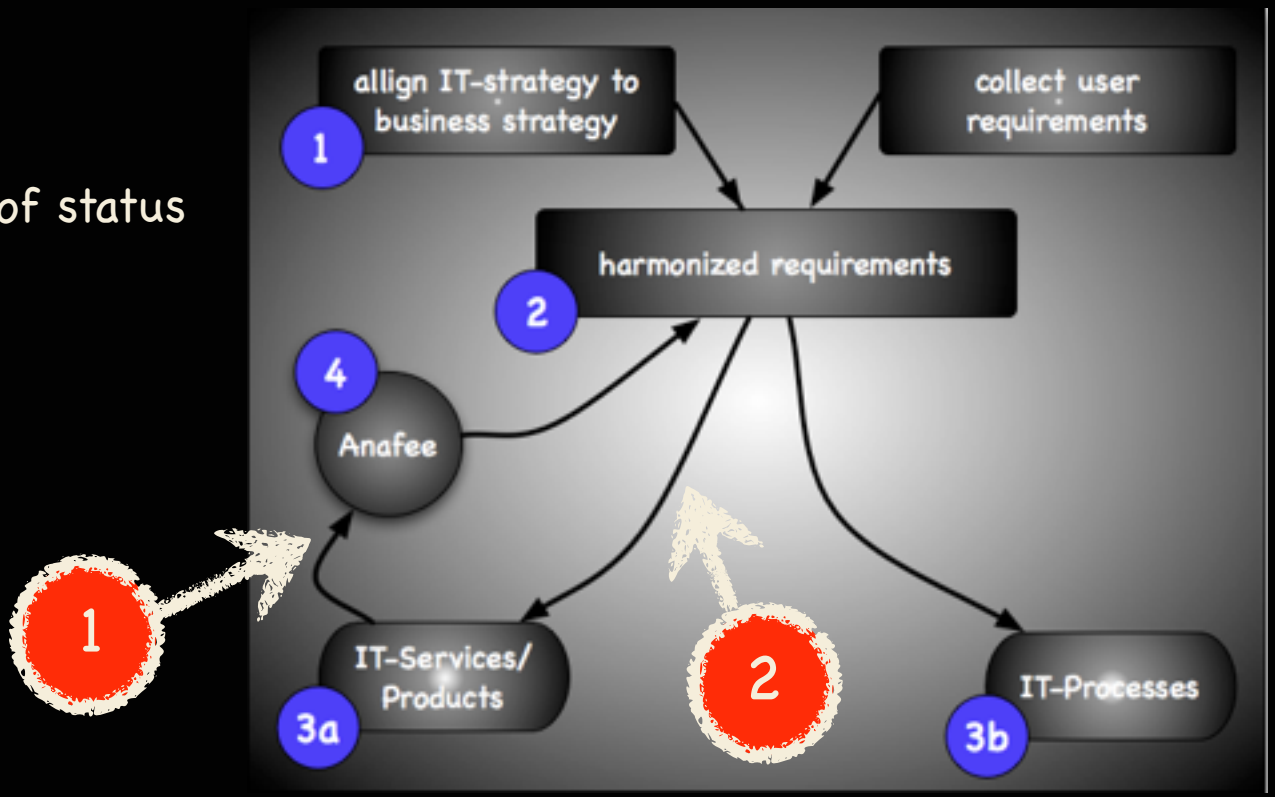
- **Step 3:**
  - a) IT-Services/ IT-Products and
    b) IT-Processes
    can be defined from Req's



3. Five mayor Steps in Internal Cost Allocation (2)

- **Step 4:**
  - calculate the costs of your products: external costs and work (tool: e.g. Catenic's Anafee)
    cf. details below
  - sell your products:
    - the price will influence the requirements
    - the price creates valuation

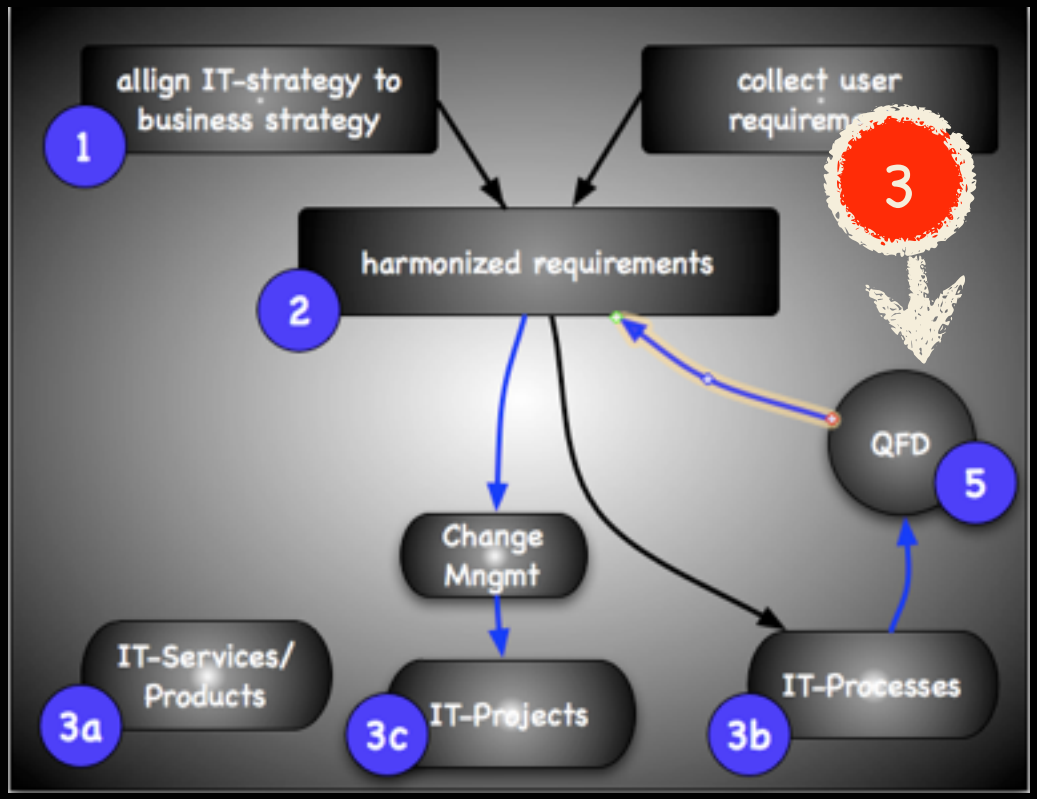
➜ Effects:
- complete description of status
- costs transparency

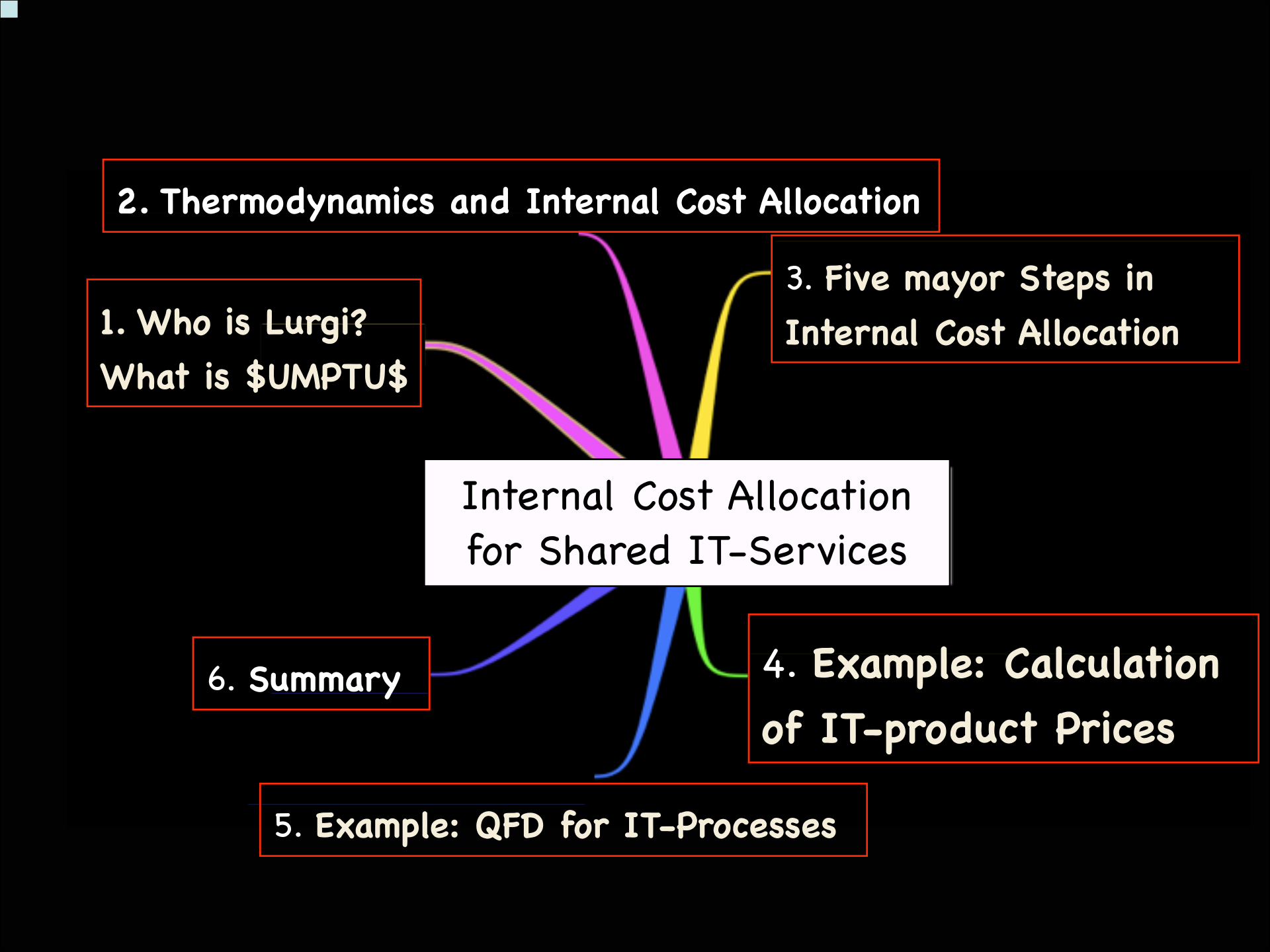


3. Five mayor Steps in Internal Cost Allocation (3)

- **Step 5:**
  - evaluate your processes (QFD is a probate method, cf. below):
    - what processes contribute most to reach the targets
    - what are the costs for these processes

➜ Effects:
- changing a process can reduce "the loss of entropy" and can increase the efficiency
- costs transparency

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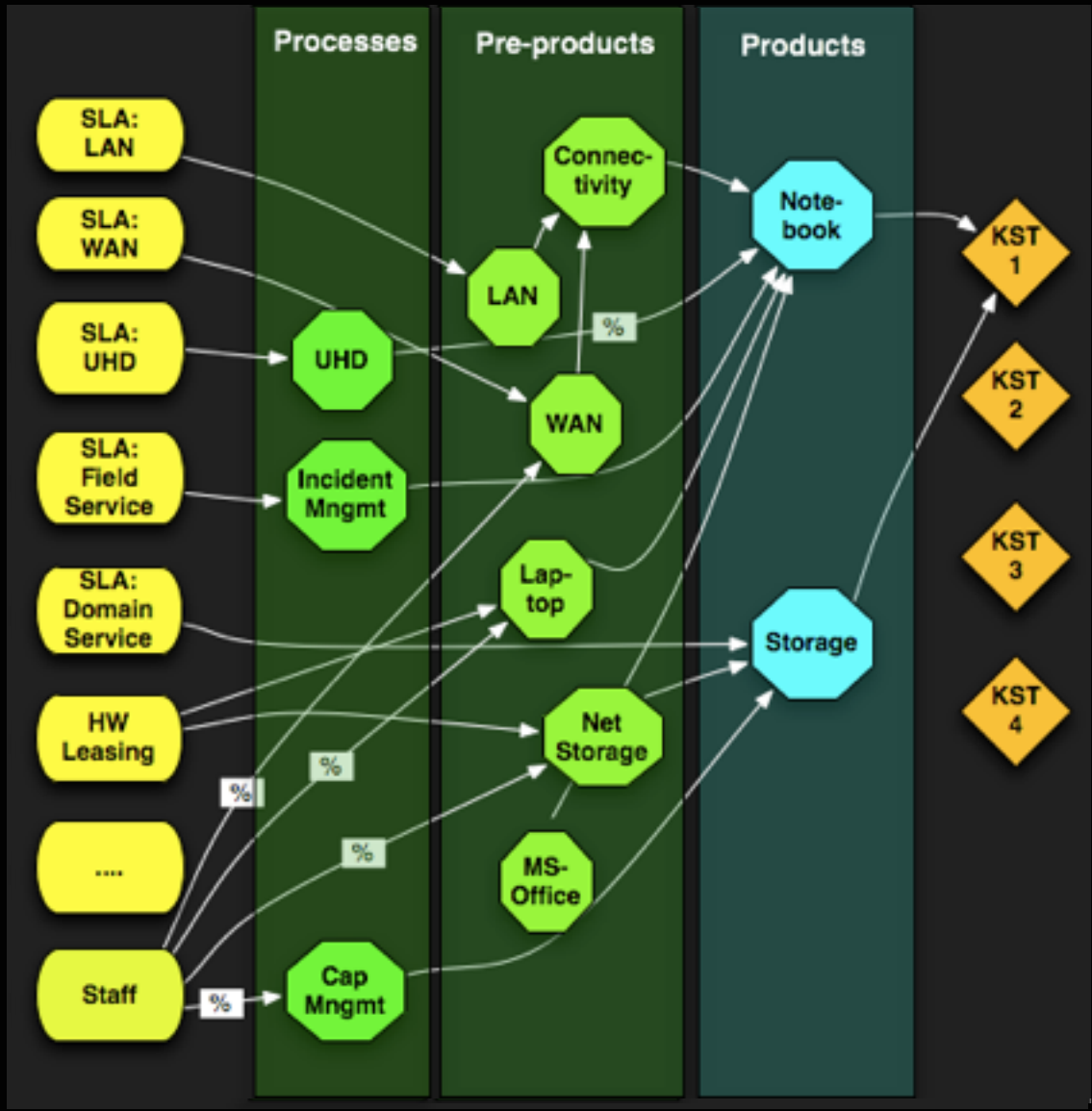
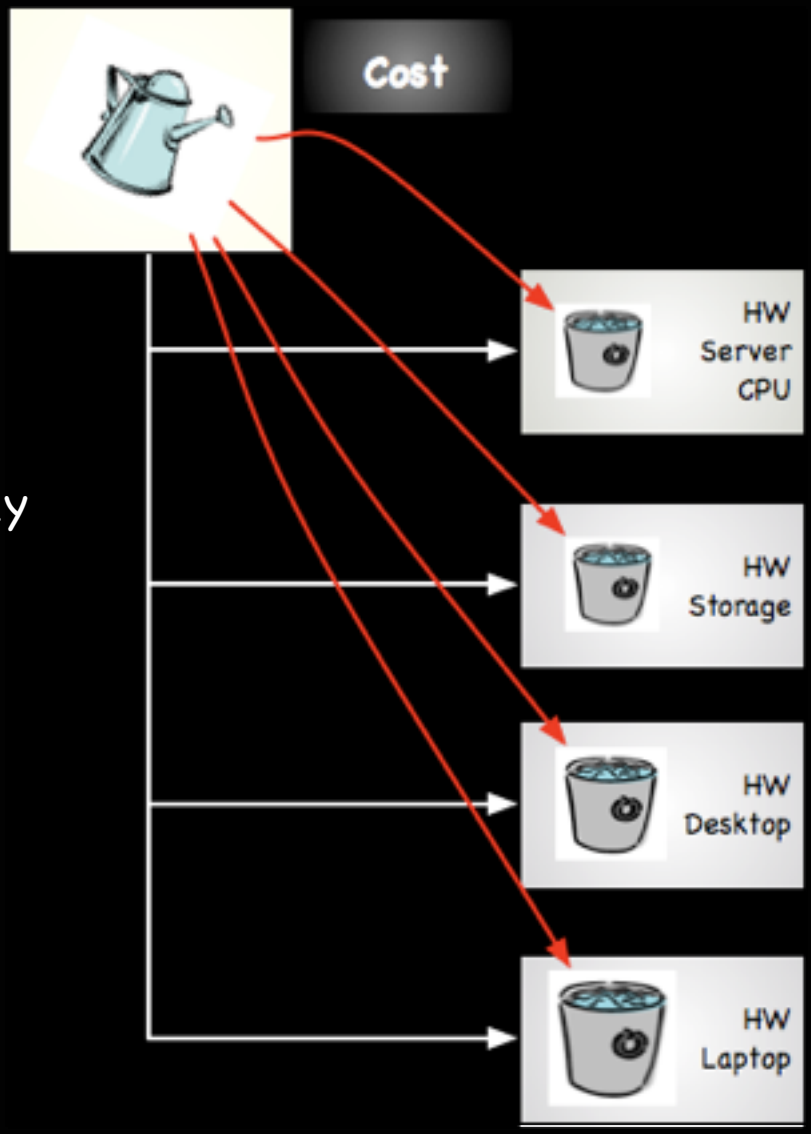
4. Example: Calculation of IT-product Prices

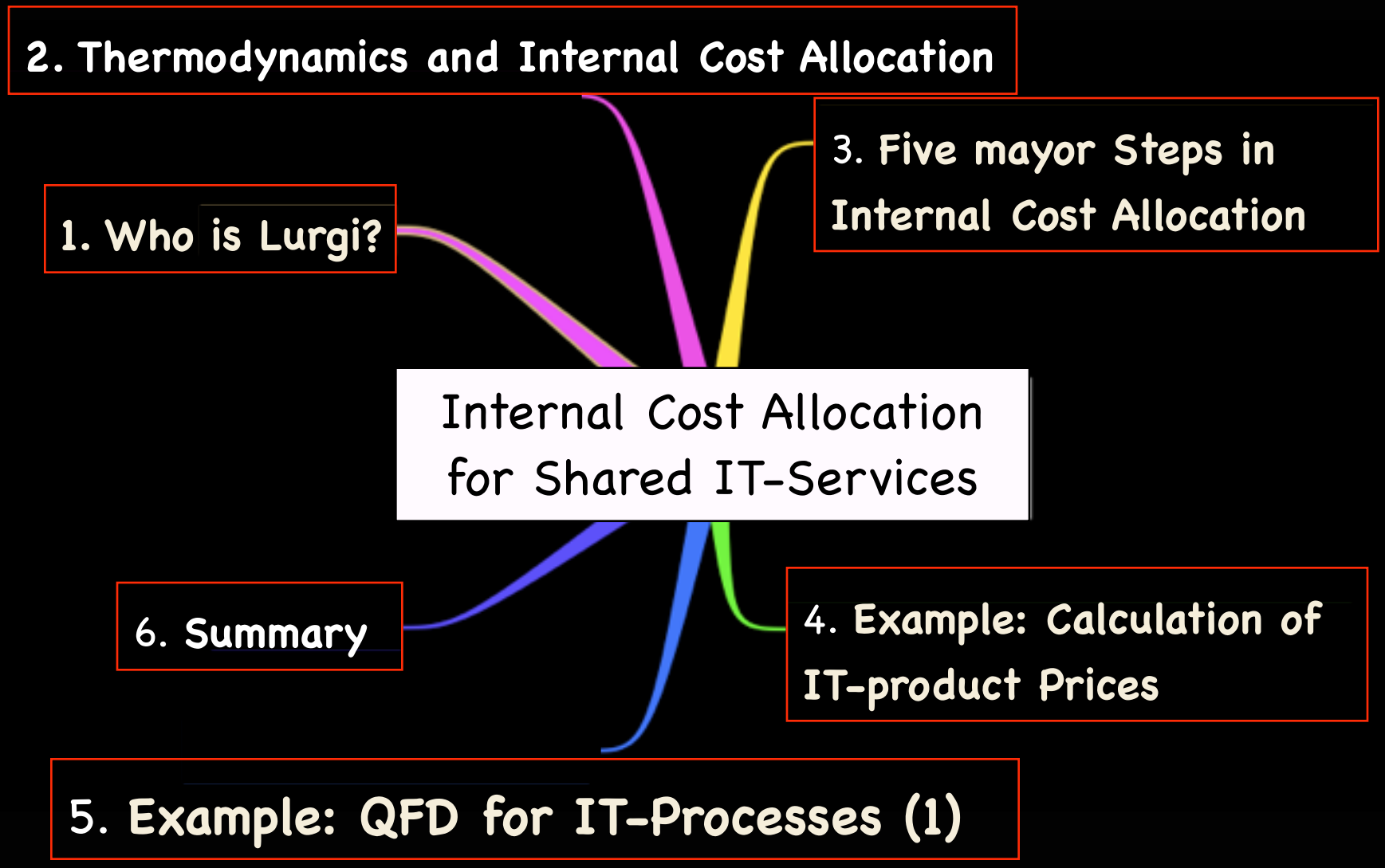
- **Step 4 in detail:**
  - assign costs (invoices) to **processes**,
  - assign work to **processes**
  - **define Pre-products**
  - assign costs and work to Pre-products,
  - assign processes to Pre-products
  - **define Products**
  - assign costs and work to Products,
  - **assign Products per** usage to cost centers (KST)



4. Example: Calculation of IT-product Prices (2)

- **Step 4 in detail:**
  different mechanisms are used to distribute the costs among the items of the Service Catalog:
  - PUSH: from node down to folio with
    - fixed percentaged values (static)
    - fixed capacities or consumption data
  - PULL: folio gets costs from node dynamically
    - „meta cost acceptor": external data (e.g. persons)
    - „cardinality meta cost acceptor"
  - LOAD RATING (dispersion): costs are distributed due to amount of already calculated costs over costs centers or cost groups

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5. Example: QFD for IT-Processes (1)

5. Example: QFD for IT-Processes (1)

Step 4-1: What are the requirements and what is their ranking.

The requirements are taken from the IT-Strategy.

	0: requirement in this line minor to target equal, 2: more important
	Strategical Targets
1-1	Enabling worldwide project execution
1-2	Protection of Lurgi's intellectual property (IP)
1-3-1	„Rightsizing" of local IT-organizations to serve a flexible n
1-3-2	Decrease the IT-costs per seat.
1-3-3	Intensify the communication on planning of the common cost situation,
1-3-4	Enable the organization for the best utilization of the reso human cf. table 4 in chap. 2.4.2.): *use local experts to so vice versa*
1-3-5	Coordinate the purchase of hard- and software, optimize coordinate the expenses for IT issues.
1-4-1	Cost reduction in many areas: telephony, license usage,
1-4-2	introduction of **ITPPM** in all affiliates

	Strategic IT-targets 2010	Weight
	Prio 1:	
1-1	▸ Enabling worldwide project execution	3
1-2	▸ Protection of Lurgi's intellectual property (IP)	3
1-3-1	▸ „Rightsizing" of local IT-organizations to serve a flexible number of employees. ▸ „Rightsizing" and global re-location of IT-services.	3
1-3-2	Decrease the IT-costs per seat.	
1-3-3	★ Intensify the communication on planning of the common IT-infrastructure and the cost situation,	
1-3-4	★ Enable the organization for the best utilization of the resources (technical and human cf. table 4 in chap. 2.4.2.): *use local experts to solve global IT-problems and vice versa*	
1-3-5	★ Coordinate the purchase of hard- and software, optimize the license usage, coordinate the expenses for IT issues.	
1-4-1	▸ Cost reduction in many areas: telephony, license usage, service reduction	3
1-4-2	★ introduction of **ITPPM** in all affiliates	
1-5	▸ **DMS**	3
1-5-1	★ Definite end of lifetime for ProFile **1HY 2011:** no more new projects with ProFile from 2010 on.	
1-5-2	★ Migration of AutoDoc- and Masterbox-functionalities to *Livelink*.	
1-5-3	★ New projects must be started with *Livelink*. No new projects without usage of a DMS.	
1-5-4	★ Introduction of the new DMS *Livelink* (⇒ cf. 2.2.2.2.)	
1-6	▸ **SAP:**	3
1-6-1	★ Introduction of IFRS	
1-6-2	★ further improvements in financials and supply chain management	
2	**Prio 2:**	
2-1	Further integration in AL: support tool harmonization, usage of common services (⇒cf. 2.1):	2
2-1-1	★ keep the infrastructure flexible to cover fluctuating needs,	
2-1-2	★ keep the infrastructure fail-safe and secure,	
2-1-3	★ have a 24/7-monitoring to reduce down-times,	
2-1-4	★ purchase standard equipment.	
2-2	Stronger service orientation and technical leadership of Lurgi-IT in FFM for all of Lurgi's affiliates:	2
2-2-1	★ introduction of additional help desk out of New Delhi to cover eastern time zone (⇒ cf. 2.1.0.)	
2-2-2	★ creation of SLAs between Lurgi and the affiliates (cf. chap. 2.2.5.),	

By comparing pairwise the req

ranking of the processes can b

QFD: Quality Function Deployment: cf. R

5. Example: QFD for IT-Processes (2)

Step 4-2: Find the importance of the processes.

Define the influence of the processes to fulfill the requirements.

				370001	370002	370003	370004	370005	370006	370007
	1: week influence .... 9: strong influence of process on product/ requirement	Import.	sum	User-Helpdesk, Servicedesk (UHD)	Incident Mngmt	Problem Mngmt	Organization and execution of Training	Field Service (FS)	Change Mngmt (ChM)	Service Level Mngmt (SLM)
1-1	Enabling worldwide project execution	65	224	9	9	9	9	9	5	5
1-2	Protection of Lurgi's intellectual property (IP)	67	116	1	5	1	5	5	1	1
1-3-1	„Rightsizing" of local IT-organizations to serve a flexible number of employees.	62	120	5	5	5	5	5	5	5
1-3-2	Decrease the IT-costs per seat.	61	128	5	5	5	5	5	5	1
1-3-3	Intensify the communication on planning of the common IT-infrastructure and the cost situation,	60	34	1	1	1	9	1		
1-3-4	Enable the organization for the best utilization of the resources (technical and human cf. table 4 in chap. 2.4.2.): *use local experts to solve global IT-problems and vice versa*	61	94	9	5	5		5		5
1-3-5	Coordinate the purchase of hard- and software, optimize the license usage, coordinate the expenses for IT issues.	53	55	1						5
1-4-1	Cost reduction in many areas: telephony, license usage, service reduction	55	72	5			5	5		5
1-4-2	introduction of ITPPM in all affiliates	58	27						9	

5. Example: QFD for IT-Processes (3)

Step 4-3: Assign costs and „man hours" to processes. Plot „total process costs" and „relative importance of process":

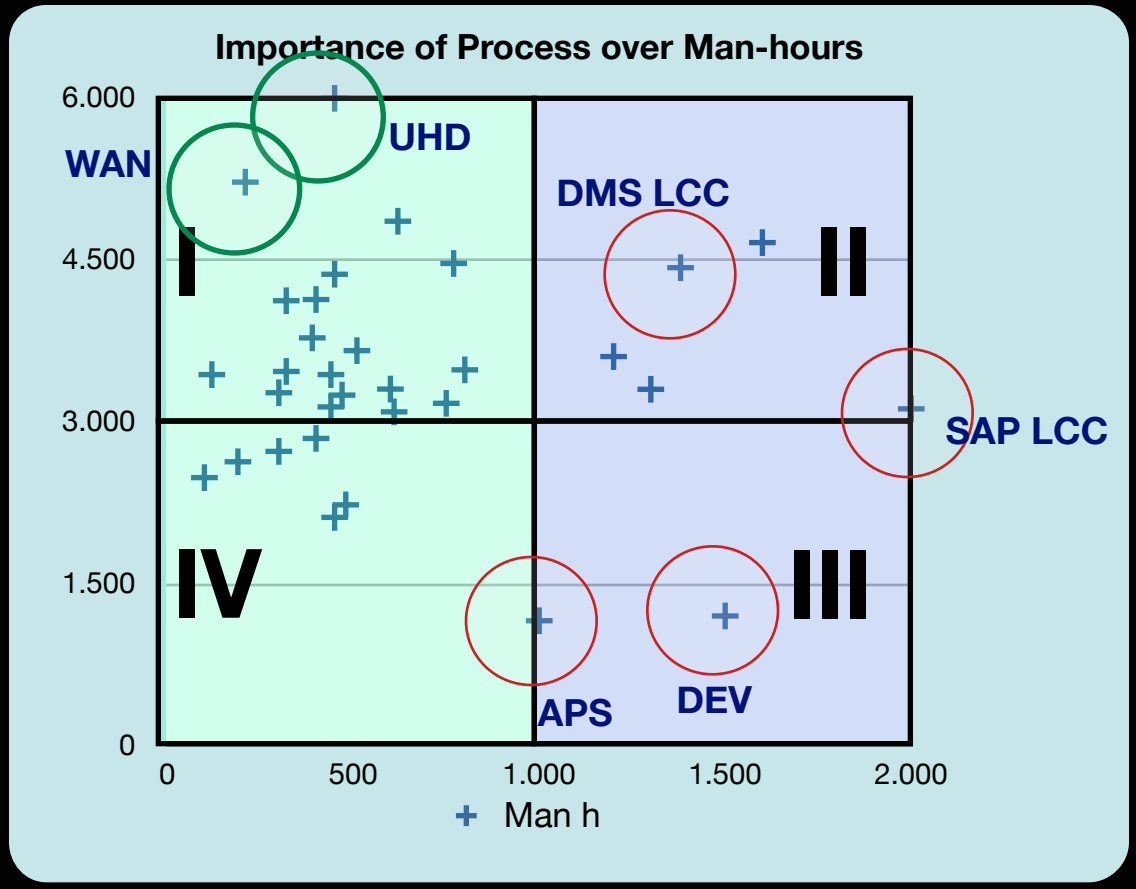
potential for cost reduction: development & application service

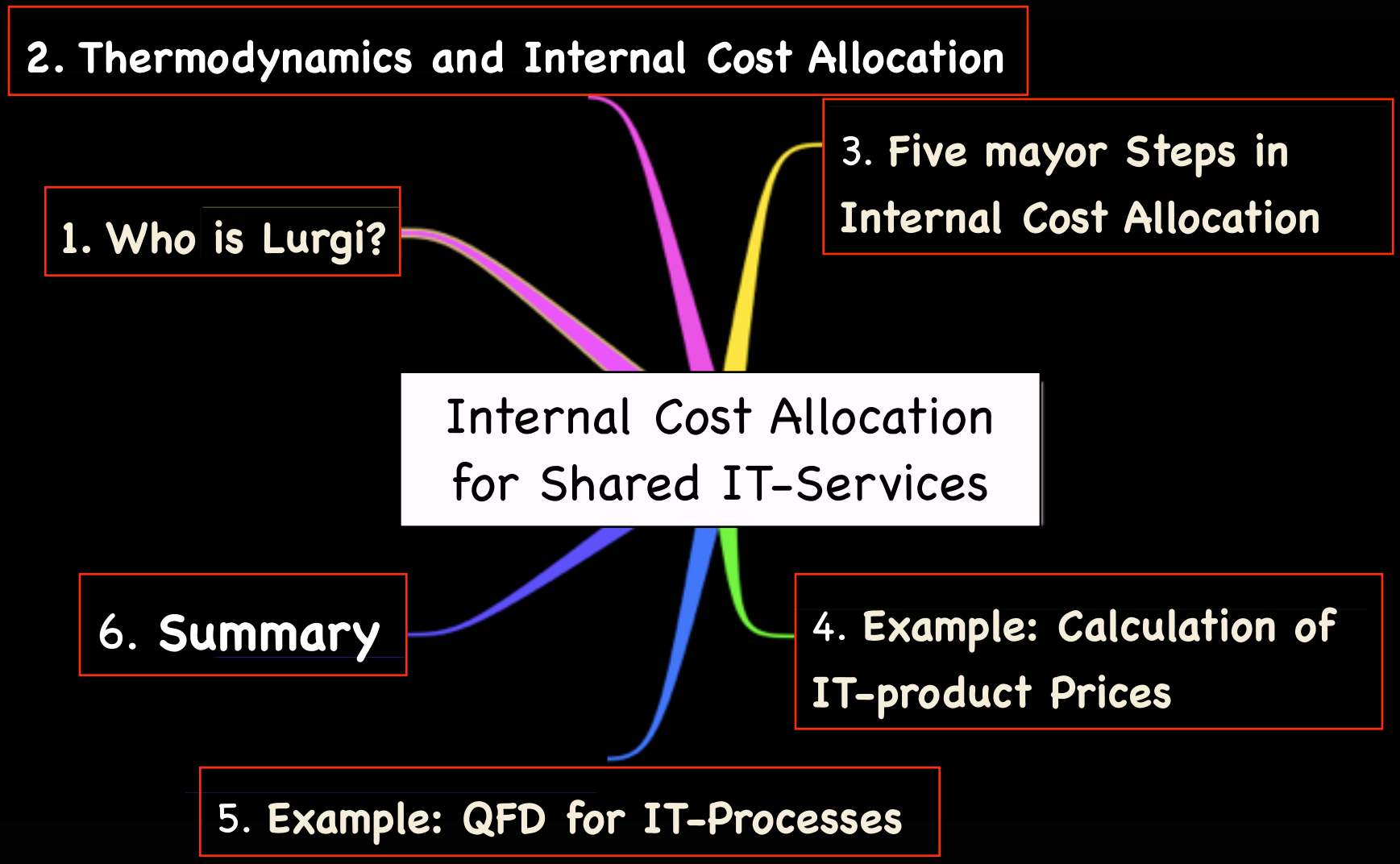
potential for cost reduction: release mngmt, model office

potential for cost reduction: LAN: network on demand

5. Example: QFD for IT-Processes (4)

Plot „importance of process“ over „man hours per process“:

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6. Summary

1

- Internal Cost Allocation
  - increases the transparency of costs (no 'Creatio ex Nihilo')
  - increases the cost awareness in the organization
  - increases the valuation ('non pecunia non estimatio')

2

- When processes are assessed by QFD
  - a re-design of all processes with cost drivers can be considered
  - less important processes can be strongly re-designed with less costs or even dropped

Thank you for your attention!

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