

Successful digital transformation of mature SME businesses – a bottom-up methodology and best practices

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10th ITSTAR Workshop on IT Security

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Consequences of Digitization...

„Banks are dying“

Picture: dpa



„Always to the benefit of the individual?“

MIT Technology Review
BUSINESS REPORT

Data-Driven Health Care

New technologies promise a flood of molecular, environmental, and behavioral patient information. Will all that data make medicine better?

CONTENTS

- The Big Question
- More Phones, Fewer Doctors
- IBM Aims to Make Medical Expertise a Commodity
- 23andMe Tries to Woo the FDA
- Mobile Health Monitoring Devices
- Mobile Health's Growing Pains
- Plus: CB's Crash, Data in Action at Mayo, Pharma's new transparency, and more

The Big Question

Can Technology Fix Medicine?

Medical data is a hot spot for venture investing and product innovation. The goal: better care.

- After decades as a technological laggard, medicine has entered its data age. Mobile technologies, sensors, genome sequencing, and advances in analytic software now make it possible to capture vast amounts of information about our individual makeup and the environment around us. The sum of this information could transform medicine, turning a field aimed at treating the average patient into one that's customized to each person and shifting more control and responsibility from doctors to patients.

The question is: can big data make health care better?

"There is a lot of data being gathered. That's not enough," says Ed Martin, interim director of the Information Services Unit at the University of California, San Francisco, School of Medicine. "It's really about coming up with applications that make data actionable." →

1

„What happens with my data?“

WhatsApp to Share User Data with Facebook

You have just 30 days to Stop It...

Scary or Encouraging?

**Adidas' Speedfactory
100% automated production of shoes**



Picture: Adidas 5/2016

Digitization: just a game?



dpa / Hannover Fair 2016

Challenges for SMEs



Drastic increase of complexity related to technologies!

Sustainability, Resources, ...
(e.g. closed-loop material flows)

Innovative Production

(synchronization/coupling of Development, Production, Prototyping, Re-Manufacturing, etc.)

New Materials

(with direct impact on production methodologies)

Components with Micro- and Nano-Structures

(also with direct impact on production methodologies)

Social and Economic Challenges

(diversity, education, social media, increasing demands, impact of emerging economies, ...)

Issues (1) – Business Perspective

canibalization of existing businesses

who owns data?

do we have the right resources/right skills?

value of data?

security/anonymity

what is the value-add of new business models/data?

risk of the first mover / brand

dependency / acceptance

short-term success vs. long-term investments

Issues (2) – Humans Perspective

why to change a running system?

who can predict the future?

Securing the current job

fears, to become replaced by others (incl. robots)

leaving the comfort zone

fears, to make mistakes/failures

finding the perfect solution

etc.

What happens in world's economy?

,I call it the New New Economy': all classic and former economical principles aren't valid anymore'



Next stop... the FUTURE

What happens in world's economy?

,I call it the New New Economy': all classic and former economical principles aren't valid anymore'

UBER

- founded 2009
- Online trading of transportation services (taxis)
- Revenue 2013: ~213MioUSD, Revenue 2015 ~2MrdUSD
- Company's value > 60MrdUSD
- Number of taxis as inventory: 0



Saudi-Arabien steigt beim Mitfahrdienst Uber ein. Der Staatsfonds des Königreichs habe 3,5 Milliarden Dollar in Uber investiert, teilte das Unternehmen mit. Mit der jüngsten Finanzierungsrunde werde Uber mit 62,5 Milliarden Dollar (rund 56 Milliarden Euro) bewertet. Zum Vergleich: Der Volkswagen-Konzern steht derzeit bei einer Marktkapitalisierung von rund 68 Milliarden Euro, BMW bei etwa 49 Milliarden Euro. ntv – 1.6.2016

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Airbnb

- **Founded 2008**
- **Online trading of rooms (replacing hotels)**
- **Revenue 2013: ~150MioUSD, actual revenue: ?**
- **Company's value > 20MrdUSD**
- **Number of hotel beds/rooms as inventory: 0**



... and they don't stop => disruption everywhere ... autonomous driving

Volvo + Uber (Sweden/USA)

Source spiegel.de 8/2016

Die Testfahrten finden in Pittsburgh, dem Hauptsitz der Firma, statt. Vorerst allerdings fahren die Volvos noch nicht allein, sondern transportieren auch ohne Passagiere mindestens zwei Menschen. Den gesetzlich noch erforderlichen Fahrer, der seine Fingerspitzen am Lenkrad behält und, wenn es erforderlich ist, das Steuer übernimmt sowie eine weitere Person auf dem Beifahrersitz, die die Testfahrt protokolliert



Consequences and strategies for SME's



1.) It's all about the customer!



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⇒ doesn't matter if the business model follows B2B, B2C, B2B2C, G2C, ... principles, understand the customer and concentrate on solutions providing added value (as fast as possible).



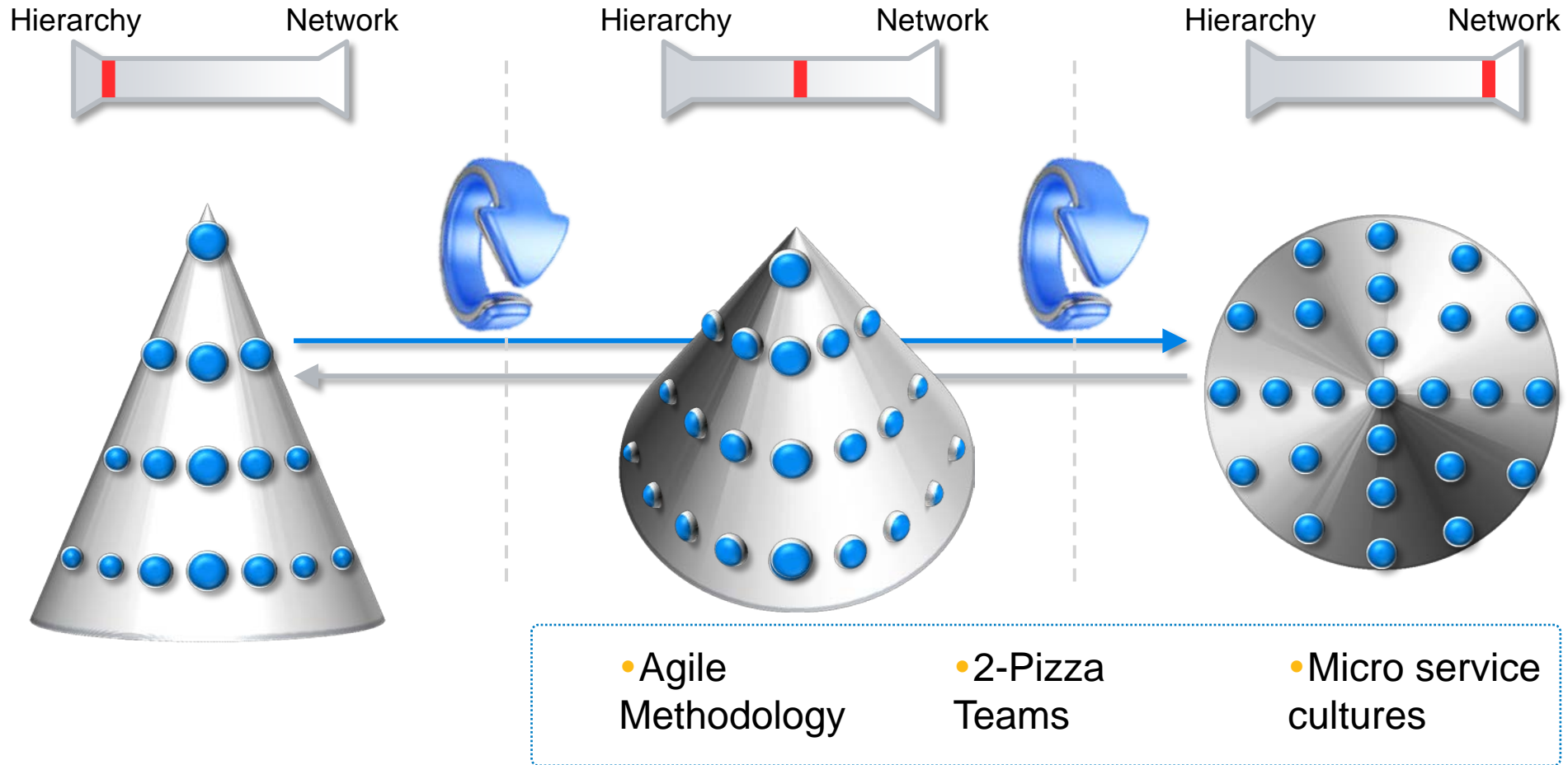
from:

„know your target group, know your customer“

to:

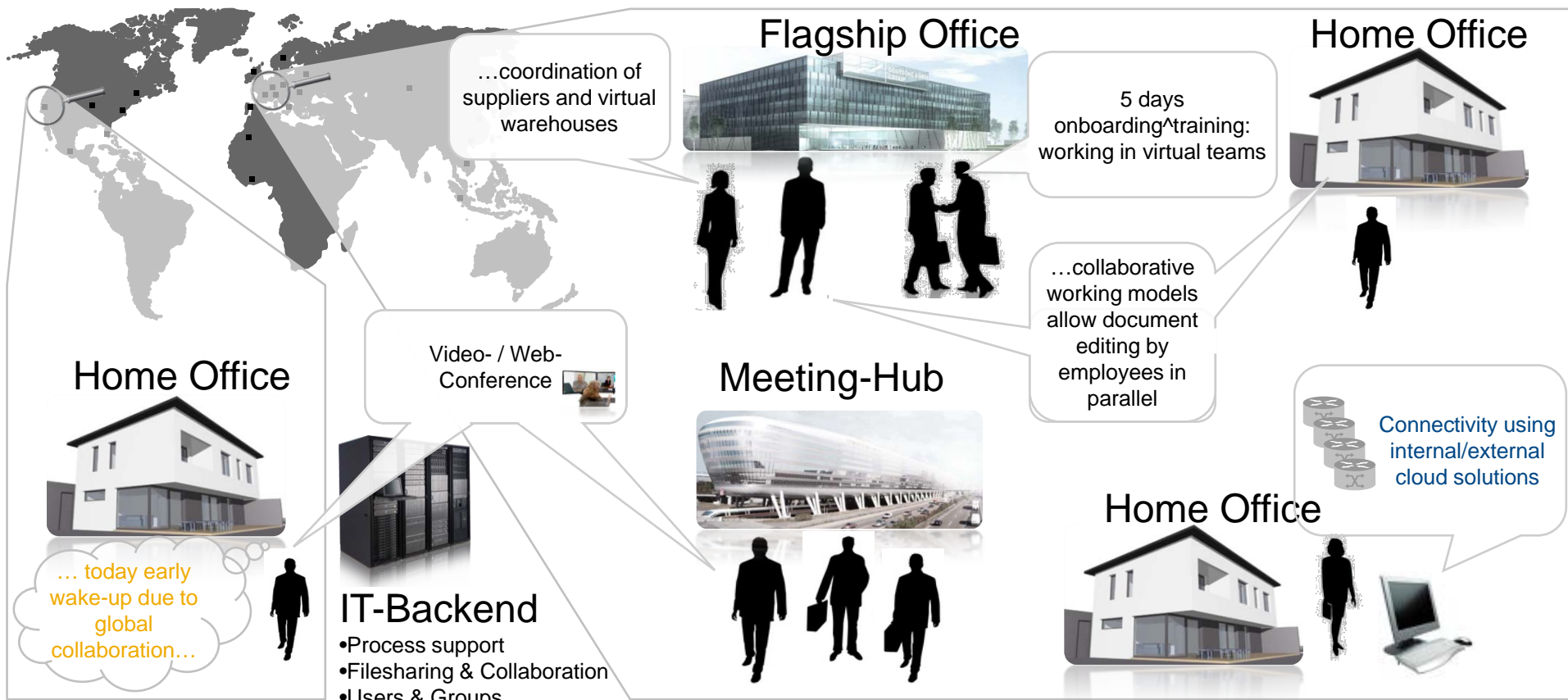
„understand and speak with your target group and with your customer“

2.) Establish Digital Leadership on all Levels! => Empowerment!



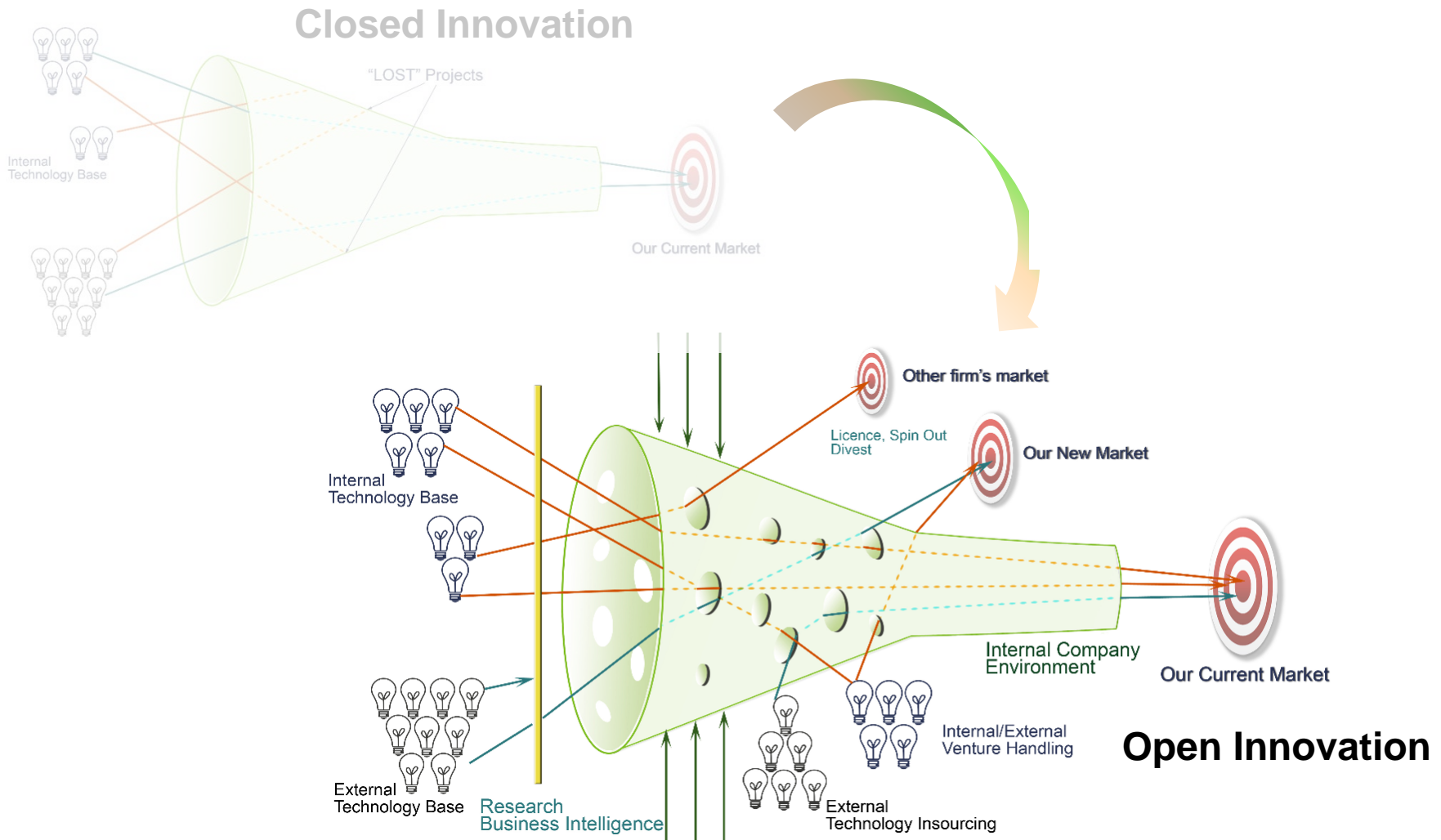
Source: Richard Beetz/ Arthur D. Little (2013)

3.) Walk the Talk! Support innovative/networked working models!



according to: Richard Beetz/ Arthur D. Little

4.) Or even better? From Closed Innovation to Open Innovation



Source: Eidon Lab, Padova

5.) Go beyond the line: consider new/disruptive business models



Picture: DFKI GmbH

Freemium (Free + Premium): physical product + free basic services => premium services will be charged

Examples: Smart Home solutions, Skype , Dropbox, ...

Digital Add-On / Digital Lock-In: physical product + services (not for free!) – product and services have to come from the same supplier (dependency!)

Examples: Encryption Services, Customer Loyalty Programs, Car Features (e.g. Connected Drive / BMW)

Products as Point of Sales (PoS): physical product serves as sales/marketing multiplier

Examples: Apps using Augmented Reality, banners in sport arenas, etc.



Picture: Mobile Brand Blog – Dominos Pizza



2 Best Practices

1.) Leading Manufacturer of Industry Gate Systems

Revenue p.a.: 40M€, ~500 employees

Location: Germany

Today mainly B2B Business

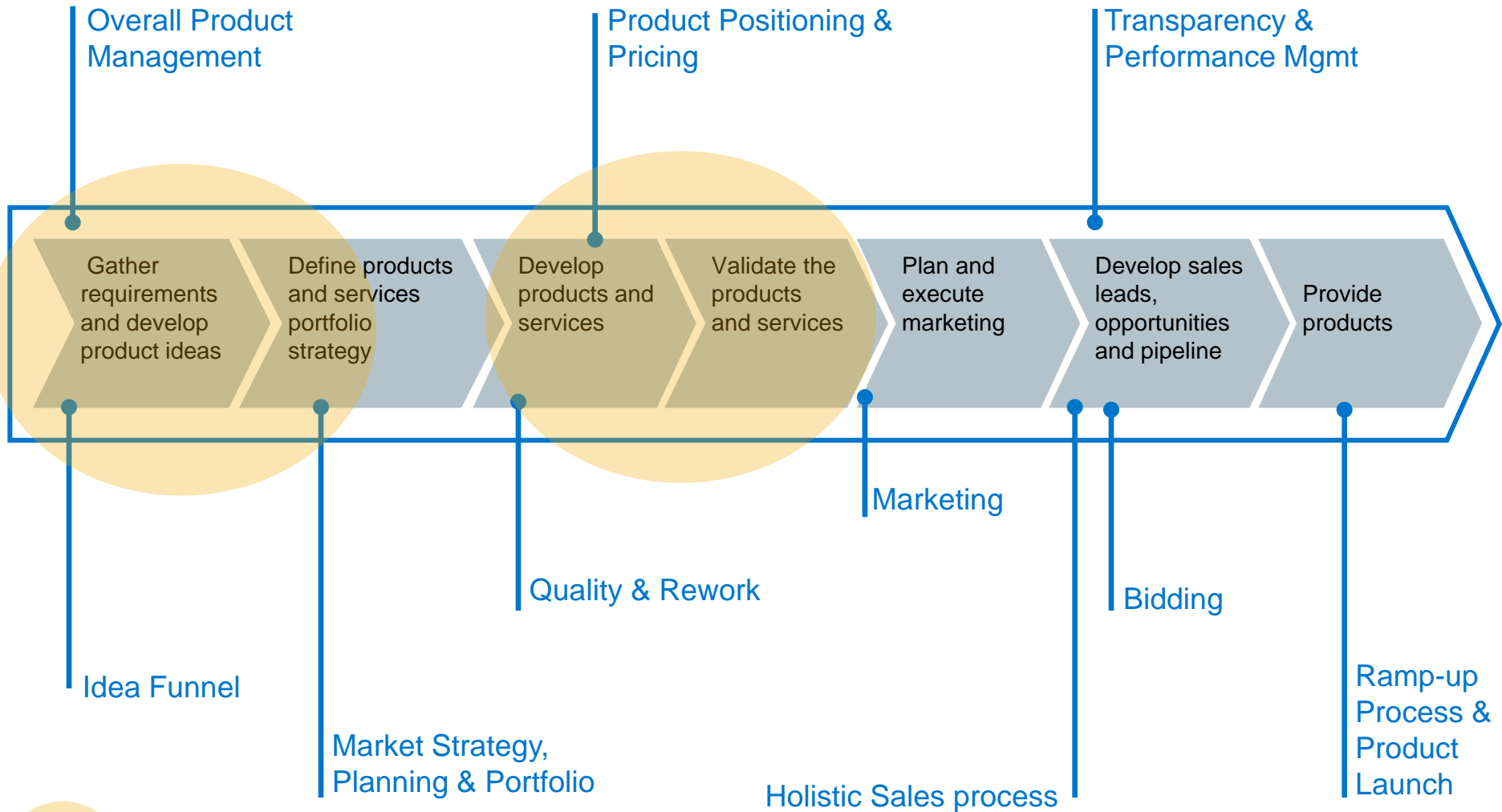
Each product is individual, prices range between 6,000€ and 1 Mio. €!

Goal: Doubling the revenue during next 5 years!

Key Problem:

Current product portfolio doesn't allow significant growth! New markets/products/solutions have to be identified.

From Idea to Close / From Idea to Market



Focus areas => **Virtual Teams** were empowered to develop and execute!

Virtual teams were built, and two new areas identified – both require digital technologies



Intelligent Gate System:

- Fully networked gate system
 - Remote opening
 - Remote maintenance
 - Predictive maintenance
 - Security Control
 - New design elements (illumination)
 - New design elements (remote darkening)
 - Intelligent door avoids accidents
 - and more

IP connectivity

New Business Model:

- From Product to Services
 - Gate system, as physical product will be complemented or even replace by services
 - Service (1) = Secure access to buildings
 - Service (2) = opening/closing of the gate
 - Service (3) = optional analytics (not yet in realization)
 - Services are a continuous revenue source

2.) Service Provider Building Systems (heating, cooling, electricity, etc.)

Revenue p.a.: not known, ~1,000 employees

Location: Germany

Today B2B (focus) and B2C offerings

Project based work, expensive sales cycles,

**Goals: Significant growth over next 5 years, increased
business efficiency**

Key Problem identified:

**Due to strong growth, inefficient processes. Increasing
customer dissatisfaction, increasing customer
complaints related to project activities, „lost money“**

Virtual teams were built, and 5 new areas identified – all require digital technologies!



1 of 5, revised on-site processes:

- Seamless digital recoring of all activities performed, e.g. installed components, wiring lenghts, etc.
- On-site customer approval, customer confirmation
- Immediate transfer to department resonsible for charging
- Real-time customer charging (according to contract)
- 100% mobile!
- 100% paper-less!



Conclusion

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- Hypothesis: bottom-up beats top-down! But this requires full empowerment of (virtual and diverse) teams.

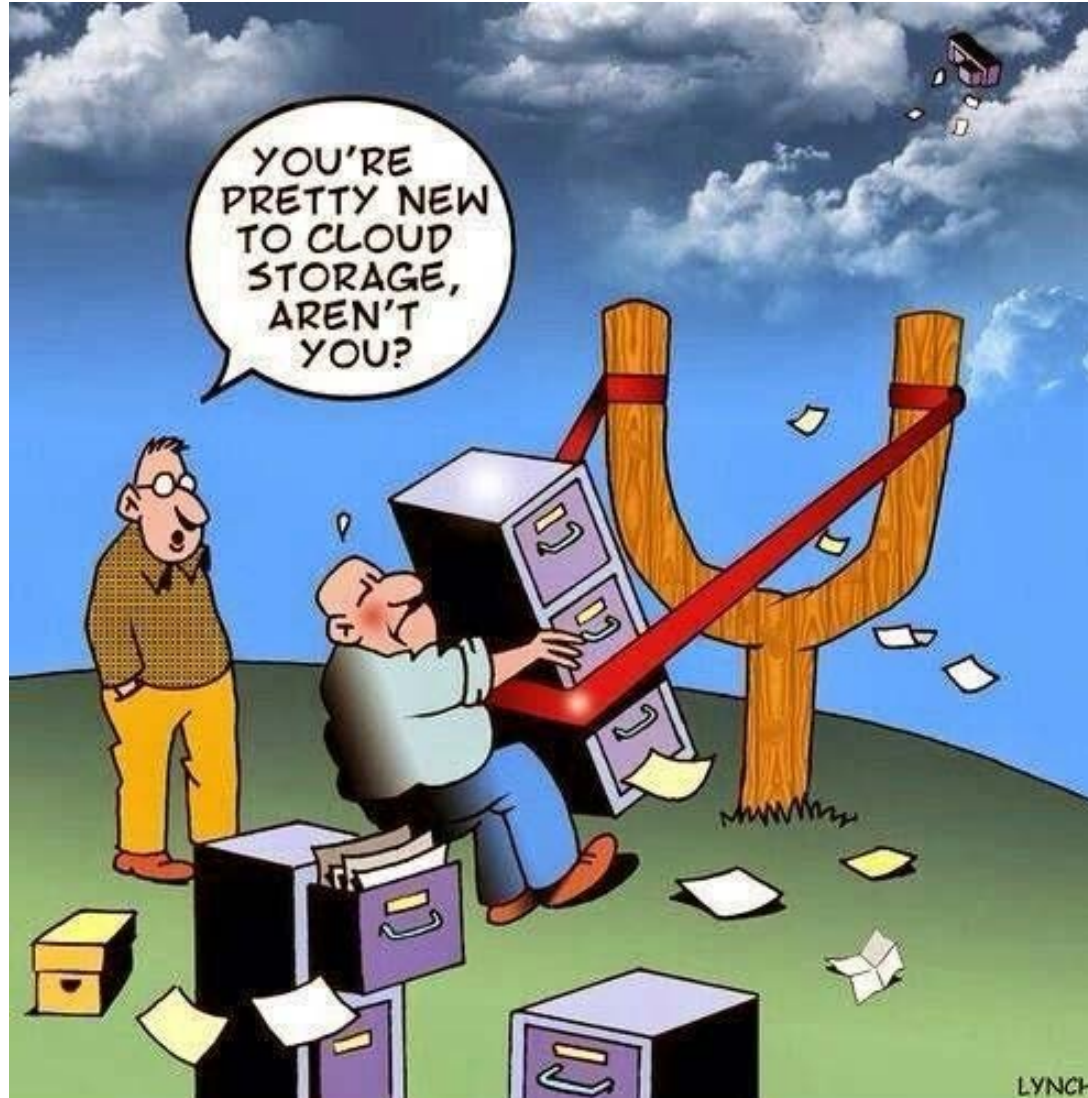
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- Hypothesis: bottom-up beats top-down! But this requires full empowerment of (virtual and diverse) teams.
- Digital competencies have to be built-up quickly on all levels.
- Not every digitization activity or project will become a success. Learning from mistakes can't be just a phrase. Making mistakes will become normality and learning from mistakes will become a necessity!

Digitalization is far more than shooting data into the cloud!



Thank You!

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