

Characterizing Approaches for the Implementation of Digital Business Strategies

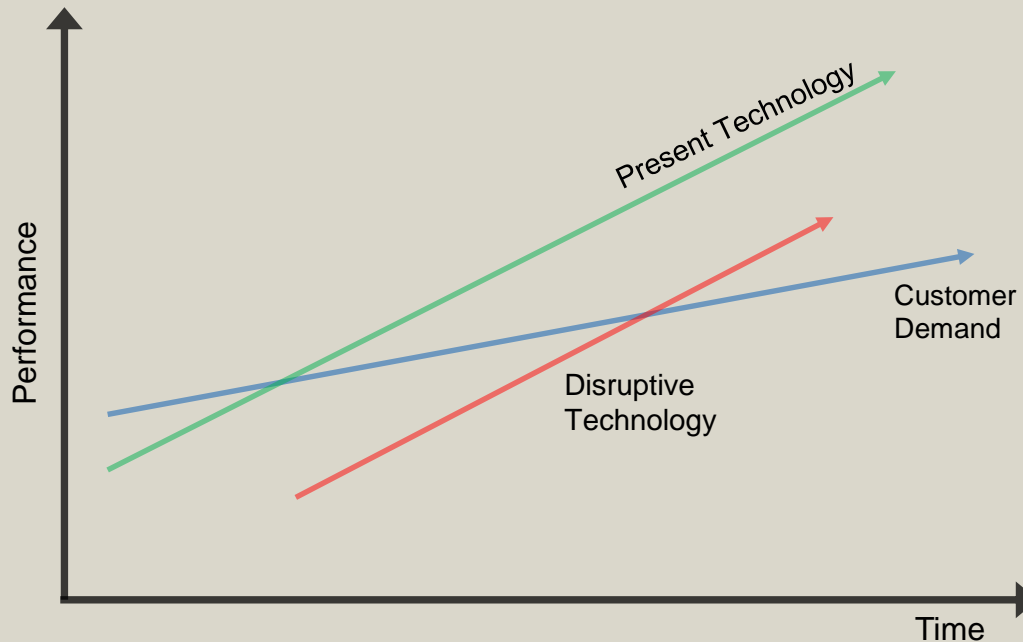
Daniel Richter, Master's Thesis, Final Presentation, 05.10.2015

Software Engineering für betriebliche Informationssysteme (sebis)
Fakultät für Informatik
Technische Universität München

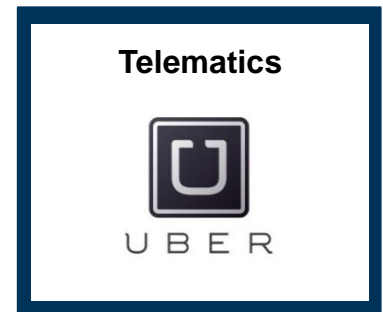
www.matthes.in.tum.de

How to implement new products and services from a digital business strategy? (see Bharadwaj et al.)

- **The Innovator's Dilemma**
- Disruptive innovations allows a **whole new population of consumers** access to a product or service that was historically only accessible with a lot of money or a lot of skill.

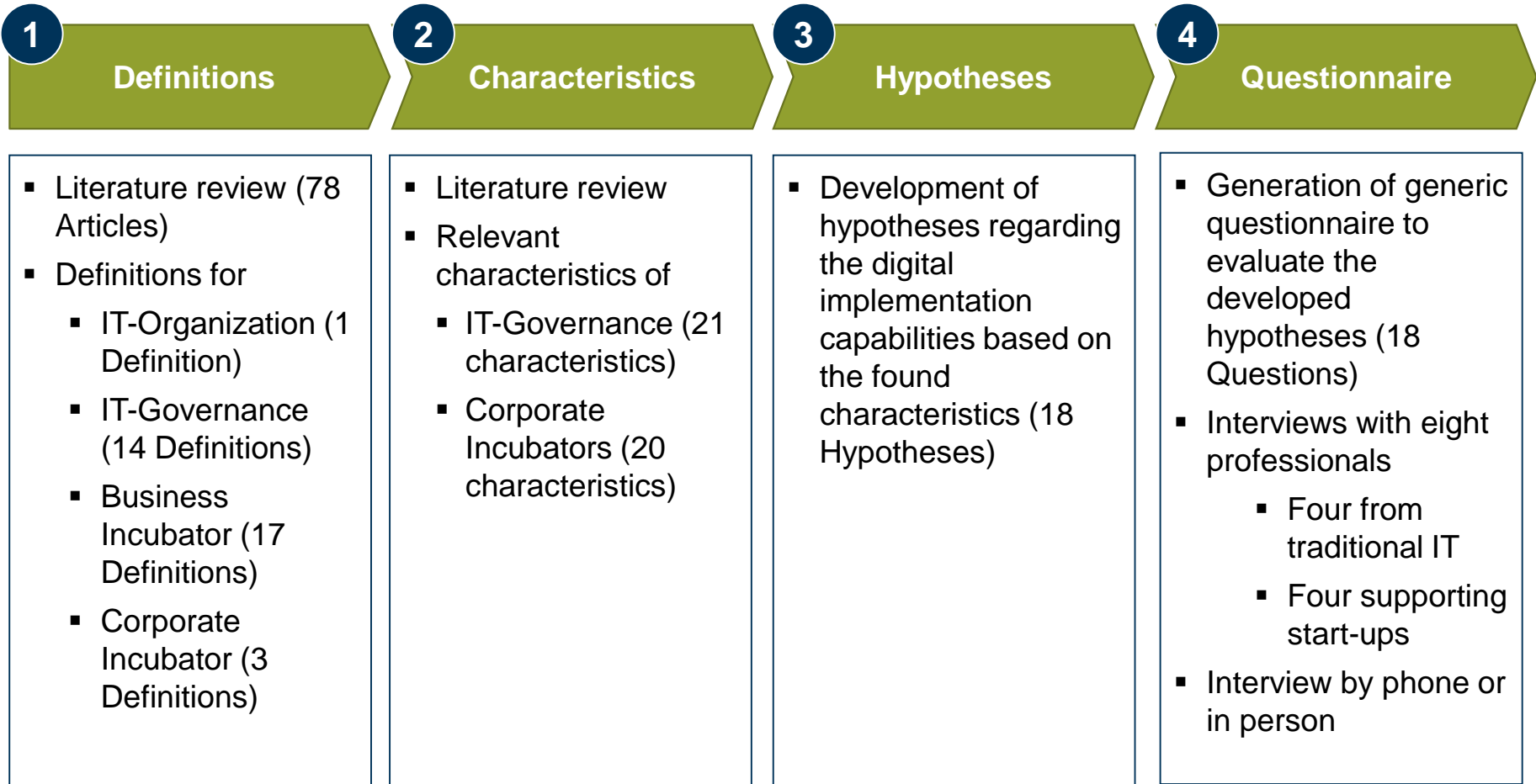


Examples:

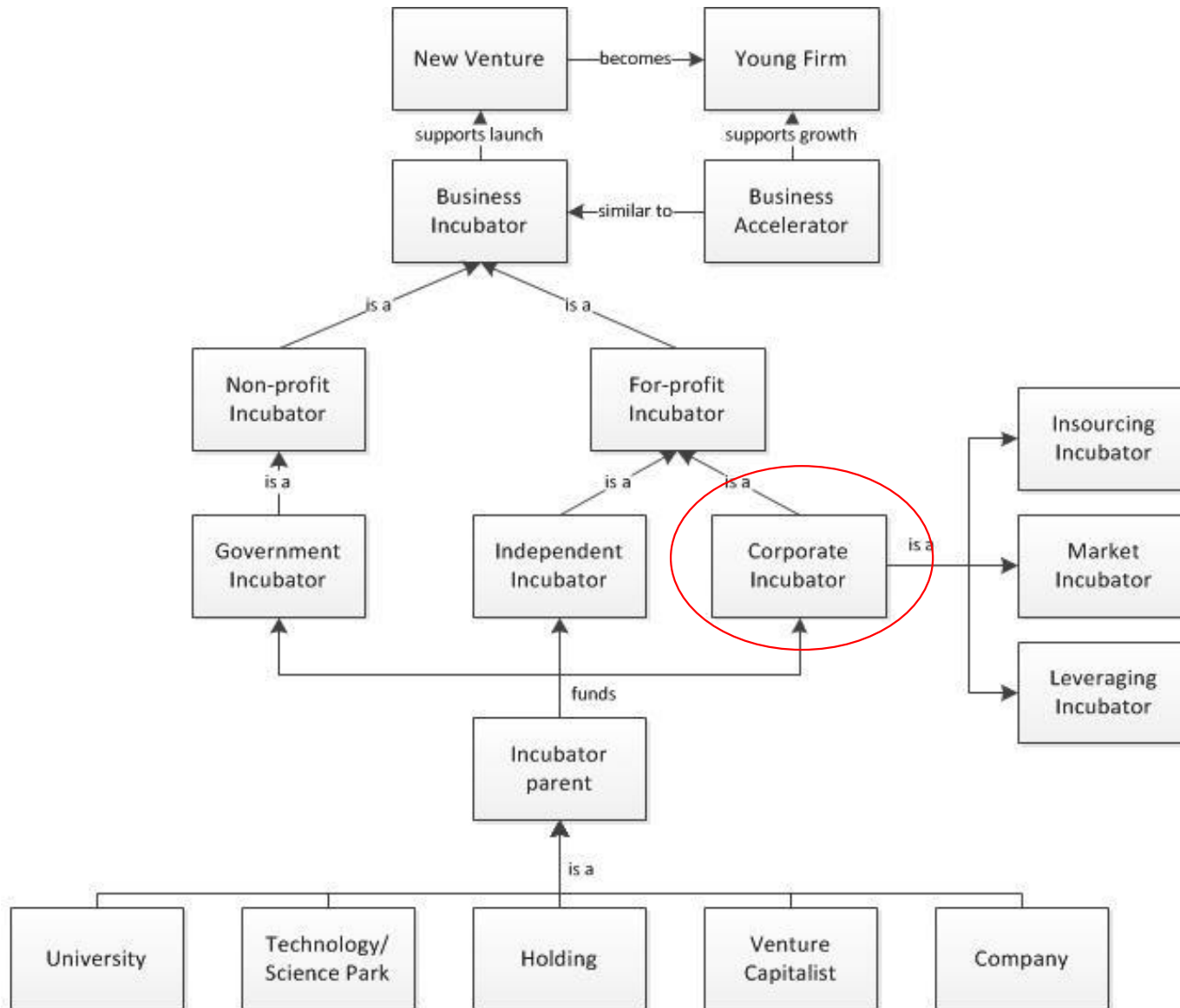


*Bharadwaj, Anandhi; El Sawy, Omar A.; Pavlou, Paul A.; Venkatraman, N. (2013): Digital business strategy. Toward a next generation of insights. In: Management Information Systems : MIS Quarterly 37
Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail. The management of innovation and change series.* Boston, Mass.: Harvard Business School Press.

Internal or external implementation as possible Approaches



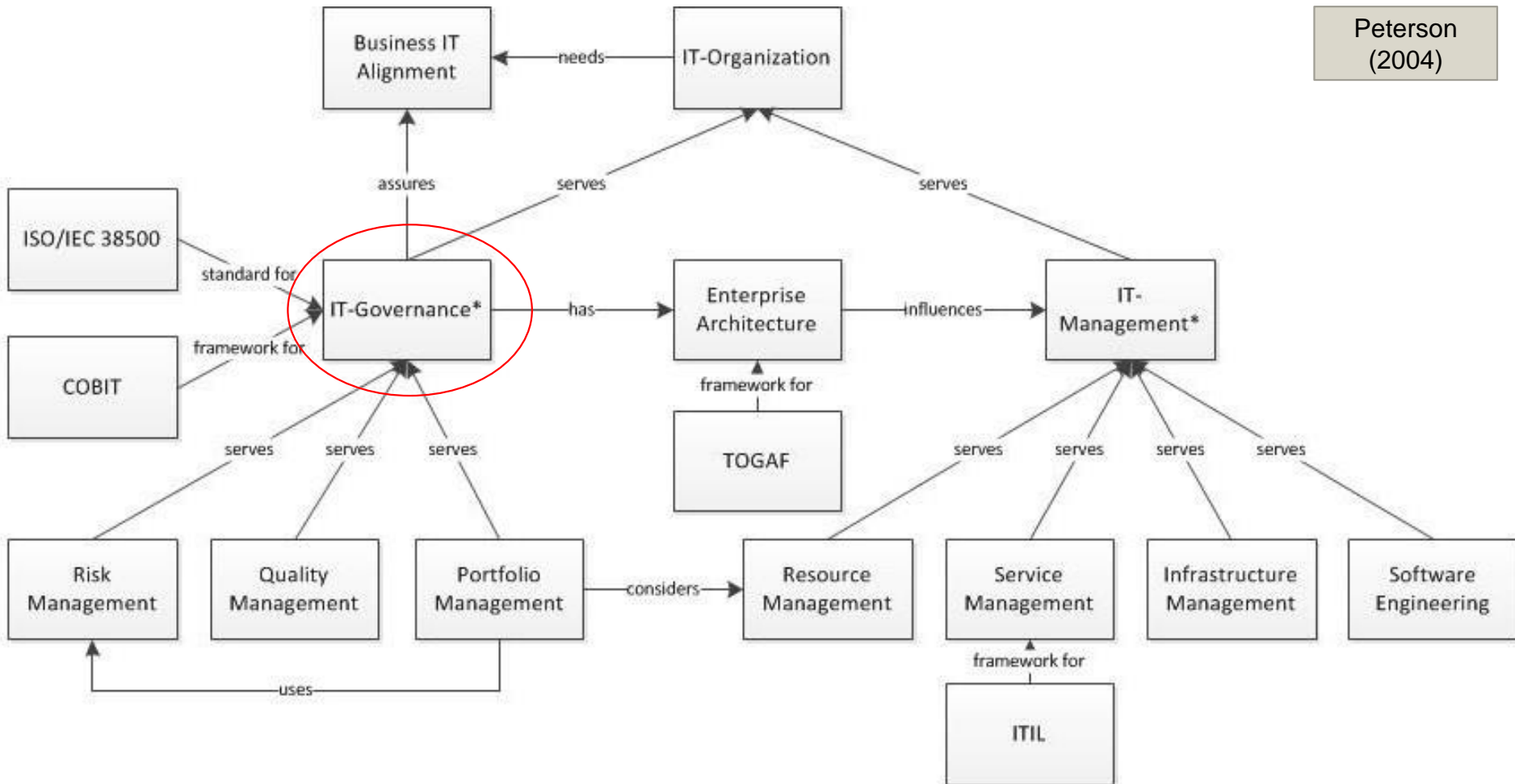
Map of Incubation Terms



- Gassmann (2006)
- Isabelle (2013)
- Cohen (2014)

Map of IT Organization Terms

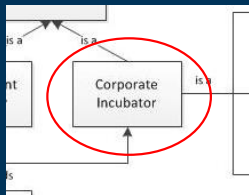
Peterson
(2004)



IT Governance (41 Articles)



Incubator (37 Articles)



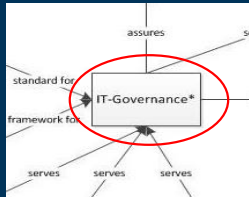
Development Process

- Searching representative articles for relevant statements about strategy, product or services implementation
- Combining relevant statements of different articles to get characteristics with scientific basis
- Development of 21 characteristics related to IT Governance and 20 characteristics related to Incubators

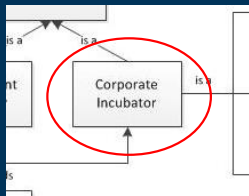
Example Characteristics

- Companies establish incubators to leverage entrepreneurship from their employees.
- Larger companies are less innovative than small companies because their business and IT structures are more complex.

IT Governance (21 Characteristics)



Incubator (20 Characteristics)



Development Process

- Combining corresponding characteristics of IT Governance and/ or Incubators to get hypothesis
- Development of 18 hypotheses out of the 41 characteristics

Example Hypotheses

- Corporate incubators select new ventures according to the strategic fit of the new business idea.
- A company benefits more from an extended service portfolio than from refining existing services.

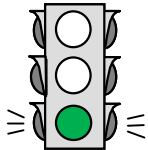
Hypothesis

A corporate incubator is better suited to implement new non-core business products and services than a traditional IT organization.

References

- Bergek, Anna; Norrman, Charlotte (2008): Incubator best practice. A framework. In: Technovation
- Becker, Barbara; Gassmann, Oliver (2006): Gaining leverage effects from knowledge modes within corporate incubators. In: R&D Management
- Ford, Simon; Garnsey, Elizabeth; Probert, David (2010): Evolving corporate entrepreneurship strategy. Technology incubation at Philips. In: R&D Manage

Overall Result



- In a company it depends on the availability of relevant capabilities
- For an incubator it daily business to understand new business models

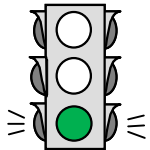
Hypothesis

Traditional IT organizations are more business driven.

References

- Ciborra, Claudia U. (1996): The Platform Organization. Recombining Strategies, Structures, and Surprises. In: Organization Science
- Ford, Simon; Garnsey, Elizabeth; Probert, David (2010): Evolving corporate entrepreneurship strategy. Technology incubation at Philips. In: R&D Manage
- Christensen, Clayton M. (1997): The innovator's dilemma. When new technologies cause great firms to fail. Boston, Mass.: Harvard Business School Press (The management of innovation and change series).

Overall Result



- There is a traditional top-down approach in companies and the business initializes new projects
- Incubators try to support promising start-ups but do not control which entrepreneurs apply

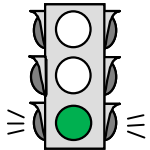
Hypothesis

New ventures in incubators implement new products and services faster than traditional IT Organizations.

References

- Barbero, José L.; Casillas, José C.; Ramos, Alicia; Guitar, Susana (2012): Revisiting incubation performance. In: Technological Forecasting and Social Change
- Ali, Syaiful; Green, Peter (2012): Effective information technology (IT) governance mechanisms. An IT outsourcing perspective. In: Inf Syst Front
- Weill, Peter; Woodham, Richard (2002): Don't Just Lead, Govern. Implementing Effective IT Governance. In: SSRN Journal.

Overall Result



- Average time for start-ups are 6 months while companies need 24 month to implement a scalable product which is market ready

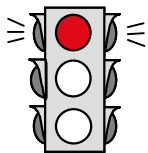
Hypothesis

New ventures in incubators do not face additional challenges resulting from large teams and hierarchical organization.

References

- Weill, Peter; Woerner, Stephanie (2015): Optimizing your digital business model. In: IEEE Eng. Manag. Rev. Gallagher, Kevin P.; Worrell, James L. (2008): Organizing IT to promote agility. In: Inf Technol Manage Barbero, José L.; Casillas, José C.; Ramos, Alicia; Guitar, Susana (2012): Revisiting incubation performance. In: Technological Forecasting and Social Change
- Ford, Simon; Garnsey, Elizabeth; Probert, David (2010): Evolving corporate entrepreneurship strategy. Technology incubation at Philips. In: R&D Manage.

Overall Result



- In an early stage start-ups do not face those challenges
- Once a start-ups starts growing and scales his business up it faces organizational challenges

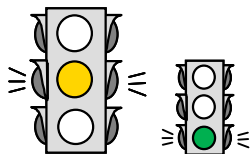
Hypothesis

Companies try to attract young talented new employees with their corporate incubators.

References

- Branstad, Are (2010): A study of management tasks and stakeholders in a hybrid corporate incubator. In: Euro Journal of Innovation Management
- Ford, Simon; Garnsey, Elizabeth; Probert, David (2010): Evolving corporate entrepreneurship strategy. Technology incubation at Philips. In: R&D Management
- Becker, Barbara; Gassmann, Oliver (2006): Gaining leverage effects from knowledge modes within corporate incubators. In: R&D Management

Overall Result



- Overall the interview partners supporting start-ups neither agreed nor disagreed
- The incubator employees strongly agreed to the statement as it is important to find people who understand the new digital business models
- Furthermore the corporate incubator acquired in the beginning three companies to get young talented employees

How to implement new products and services from a digital business strategy?

Internal IT

It is important to consider that they might be too slow to compete with the market (H5) and are more business driven (H9).

External IT

It is important that new business ideas fit to the strategy (H1), the incubator's parent enables employees to join the incubator (H6) and the business model has potential for high revenue growth (H10).

Both Organizations

Both have in common that an entrepreneurial orientation of the entrepreneurs and employees is important for the speed to the market (H3), company's growth is the main reason behind corporate incubators and the IT organization (H15) and the implementation requires top-management involvement (H18).

Differences

Incubators are better suited to implement new non-core products and services (H8), incubator's management is better suited to recognize the potential of new technologies (H16) and new ventures in incubators implement new products and services faster (H11).

- Approach of **small internal and self-responsible teams** that are outside the traditional governance and therefore have a faster time to market and enable companies to quickly test innovative products and services.
- The approach is similar to the idea of start-ups in a corporate incubator.
- Start-ups and small teams face similar challenges with hierarchical structures when the new business is growing like existing organizations.
- It is not enough to establish an incubator or self-responsible teams but a traditional company needs to adapt their structures to support the chosen approach.

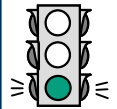
McKinsey suggests a two-speed IT with another IT organization for digital products and services

not part of
the thesis

Important Elements

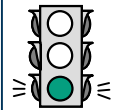
Clear, central business leadership on digital

- Central agreement is important because assets such as web platforms are often created centrally. (H18)
- Center of excellence that creates and drives a fact-based digital strategy and resolves competing priorities across business areas.



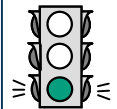
Elite IT talent

- New IT talent to bring in leading technology practices. (H17)
- For example open a rebranded development center in the Silicon Valley, encourage a start-up culture, and acquire start-ups to demonstrate its commitment and new attitude.



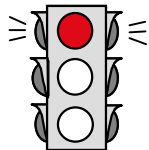
Agile development and rapid releases

- Delivering high-quality end products quickly requires new ways of working, including agile development and rapid release cycles. (H12)
- The greatest challenge here is not within IT but in persuading the business to adopt this approach.



Critical Points

- Scalable cloud-based infrastructure to ensure a rapid time to market and high-quality integrated data for business models like recommendation systems
- Not enough to launch a „fast-lane“ IT organization but it is necessary to integrate both organizations and to alter the traditional organization to support the new approach
- McKinsey does not address the actual challenges in the existing organizations



Source: Andersson, Henrik, and Philip Tuddenham. "Reinventing IT to support digitization." (2014).

Further Questions and Feedback

Ratings per Group

ID Question	Question	Rating IT Organization	Rating Business Incubator
Q 1	Mainly the strategic fit of the new business idea influences the decision for a new project/venture.	✓	✓
Q 2	A company benefits more from an extended service portfolio than from refining existing services.	NN	NN
Q 3	Entrepreneurial orientation benefits the speed to the market for new products and services.	✓	✓
Q 4	Digital initiatives face, due to their potential disruptiveness, huge internal barriers in the company.	NN	✓
Q 5	The organization is too slow to implement a digital business strategy.	NN	✗
Q 6	The company's overall workload and shortness of staff affects the time to market for new products and services.	✓	NN
Q 7	Building new capabilities for business ideas outside the company's primary business is challenging.	✓	NN
Q 8	The organization is suited to implement new non-core business products and services.	NN	✓
Q 9	The decision for new projects/ventures is business-driven.	✓	NN
Q 10	Mainly the potential revenue growth of the new business idea influences the decision for a new project/venture.	NN	✓
Q 11	Large teams and hierarchical structures negatively affect the strategy implementation.	NN	✓
Q 12	The standardization of IT infrastructures and business processes negatively affects the strategy implementation.	NN	✗
Q 13	The organization's main purpose is to increase the company's growth.	✓	✗
Q 14	The company's management is suited to recognize the potential of new technologies.	✓	✓
Q 15	Recruiting of young talented people is one driver of the organization.	✓	NN
Q 16	The implementation of a digital business strategy requires the company's Top-Management involvement.	✓	✓
Q 17	What is the average time to market for a new business idea?	24 Month	6-12 Month
Q 18	How does the organization try to speed up the time to market?	agile Development	Non-core business support

✓ = 'Agreed or Strongly Agreed', NN = 'Neither Agreed Nor Disagreed', ✗ = 'Disagree or Strongly Disagree'

Business Incubators

“Business incubators nurture the development of entrepreneurial companies, helping them survive and grow during the start-up period, when they are most vulnerable. These programs provide their client companies with business support services and resources tailored to young firms. The most common goals of incubation programs are creating jobs in a community, enhancing a community’s entrepreneurial climate, retaining businesses in a community, building or accelerating growth in a local industry, and diversifying local economies.”

Ford, Simon; Gamsey, Elizabeth; Probert, David (2010): Evolving corporate entrepreneurship strategy. Technology incubation at Philips. In: *R&D Manage* 40 (1), S. 81–90. DOI: 10.1111/j.1467-9310.2009.00580.x.

IT Governance

“IT Governance is the organizational capacity exercised by the board, executive management and IT management to control the formulation and implementation of IT strategy and in this way ensure the fusion of business and IT.”

van Grembergen, Wim; Haes, S. de; Guldentops, Erik (2004): Structures, Processes and Relational Mechanisms for IT Governance. In: *Strategies for Information Technology Governance*, S. 1–36.