



# Managing Disruptive Innovation & Change: **How do we discover it, how do we react on it, how do we implement change.**

**@masscustom** (Frank T. Piller)



**Note:**

**This slide set is for private use only.**

**It is similar to the one  
shown by Prof. Piller during the event.**

**It lacks some slides and most pictures, but  
should provide you the opportunity to review the  
messages delivered during the presentation.**

# Who's talking? Frank Piller



## Today's positions

- Head of **RWTH Technology & Innovation Management Group** and full (tenured) professor of management at **TIME Research Area** at **RWTH Aachen University**
- **Academic Director of RWTH Executive MBA**, offered by RWTH Aachen & Fraunhofer Gesellschaft
- Co-Founder and **Co-Director of the MIT Smart Customization Group**, MIT Media Lab, **Massachusetts Institute of Technology**, Cambridge, MA

## Past positions

- **Research Fellowship at the MIT Sloan School of Management**, Innovation Management Group, **Mass. Institute of Technology**, Cambridge, MA (2004-2007)
- **Assistant / Associate Professor in Management** and Habilitation on Customer Co-Creation at **TUM Business School**, Munich (1999-2004)
- **Ph.D. in Operations Management** with focus on Mass Customization, **University of Wuerzburg** (1995-1999)

## Current Research Interests and Expertise

- **Strategies for Customer-Centric Value Creation**, like mass customization, innovation co-creation, additive manufacturing, managing the frontend of innovation
- **Open Innovation**, i.e. technology transfer, R&D partnership models, crowdsourcing
- Managing Disruptive **Business Model Innovation** and supporting organizational structures and cultures (especially facilitated by Industrie 4.0 and Digital Transformation)

## Entrepreneurial Activities

- **Co-Founder, Investor, and/or Member of Board of Directors** of several companies, including **Competivation** (innovation consultancy) **ThinkConsult** (process management and concept testing), **MVM.com** (personalization and virtual models), **Hyve AG** (customer co-creation), **Dialego AG** (innovative online market research), **Corpus-e AG** (low-cost high-quality 3D body scanning and “best fit” solutions for eCommerce), **DOOB AG** (3D printing and 3D modelling)
- **Real life achievements:** Only German in “**Top50 Profs on Twitter**” list; **Kloutscore** >60; **Google Scholar Citations** >8500



More info: [frankpiller.com](http://frankpiller.com)  
Follow me on Twitter: [@masscustom](https://twitter.com/masscustom)

# Let's start with an innovation by a dinosaur

**End-Up: = an established market leader with a long and proud history of innovation**

## Start-ups

## End-ups

Want to be something

Already are something

Agile

Stable

Culture is forming

Culture has formed

Have little

Have lots

Have little to lose

Have lots to lose

Try something for the first time

Tried everything and know what works

Unproven

Proven

Do what needs to get done

Clear roles and responsibilities

Flat structure with empowerment

Hierarchical structure with rules

May come and go

Stand the test of time



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Designed für maximalen Komfort



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Klingen auf Knopfdruck.



Bequeme Lieferung  
direkt nach Hause.



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wie Du brauchst.

In Kooperation mit

**Gillette**



**amazon** dash  
BUTTON

<https://youtu.be/NMacTuHPWFI>

EXCLUSIVELY FOR AMAZON PRIME MEMBERS

# Why will one win and the other loose?



An integrated,  
isolated product



A service („App“) as part  
of an existing platform

**Platforms (business ecosystems)  
beat products every single time.**

**The same is happening in the car**

# From on-demand repair to vehicle-to-vehicle communication: Digital startups try to unbundle the car



Source. CB Insights, June 2015

# **IoT**

## **Internet of Threats?**

**Digital**, platform-based business models  
(*business ecosystems, two-sided  
markets*) are a core driver  
of **disruption** today.

# Disruption

# An Innovation can have three outcomes (Christensen, 2014)

## Performance improving ("sustaining") innovation:

Substituting or complementing existing products by a new one (this can be based on a radical technology shift).

*Moving from Golf 6 to Golf 7; a new power train technology*



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## Efficiency improving innovation (*process innovation*):

Offering the same to the same customers at lower prices (or higher margins) („**low-end disruptions**").

*Walmart's supply chain; "just in time" by Toyota*



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## Market creating innovation (**disruptive business model innovation**):

Transformation of existing (often complex, expensive) solutions in such a radical way that a new market is being created (with a new class of customers). In most cases, the marriage of a cost-saving technology with a new business model. *Uber; free-flow car sharing*



# A Core Source of Disruption:

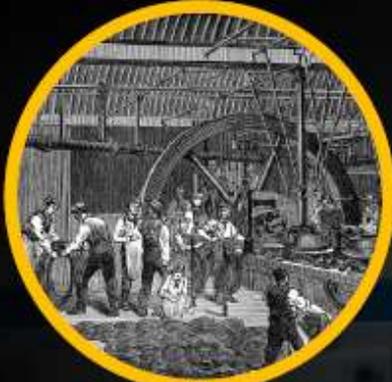
**“Digitalization”**

**“Digital Transformation”**

**“Industrie 4.0 (I40)”**

**“The (Industrial) Internet of Things (IoT)”**

# Industrie 4.0 characterizes the 4th industrial revolution: After mechanization, electrification, and computerization, **networking** today is driving economic development



1

End of 18<sup>th</sup> century

**Mechanization:**

Use of **water and steam power** to run mechanical production facilities



2

Beginning of 20<sup>th</sup> century

**Electrification:**

Use of **electrical power** to enable work-sharing mass production



3

Early 1970s

**Computerization:**

Use of **electronics and IT** to automate production



4

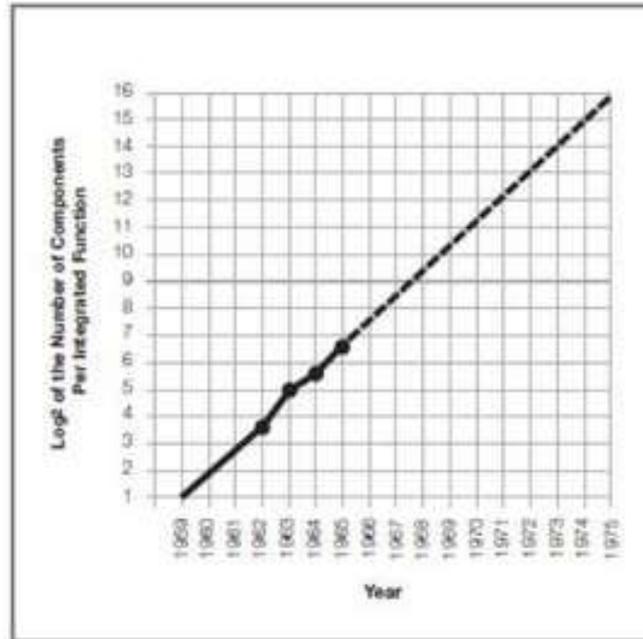
Today

**Networking:**

Use of **cyber-physical systems** to connect, transform and reimagine business

**All this is based on a well-known effect**

# Digitalization etc. is still very much driven by Moore's Law



“**Reduced cost** is one of the big attractions of integrated electronics, and the cost advantage continues to increase as the technology evolves toward the production of larger and larger circuit functions on a single semiconductor substrate.”

Electronics, Volume 38, Number 8, April 19, 1965

# Brynjolfsson & McAfee: Moore's Law still is very much alive (in its principle) – and driving competition and market dynamics

“**Idea of exponential growth** — in the computing power of machines, in the amount of digital information that is being created and in the number of relatively cheap devices that are continually talking to each other.

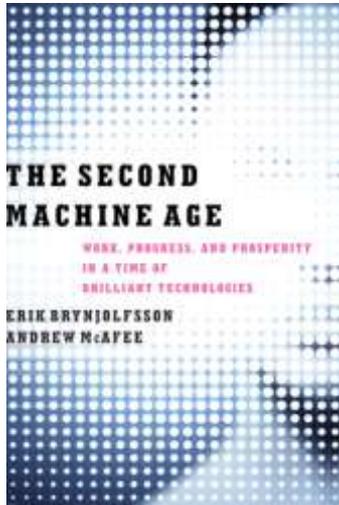
**Moore's law**

When these numbers doubled every year or two **in the early days of the computer revolution**, the results, while impressive, were still within our ability to imagine.

**Power law**

But **now** that the numbers are so staggeringly large, [so] that machines can **finally do things once considered possible only in the realm of science fiction.**”

**The 2nd half of the chessboard**



FINANCE

More: Robots Venture Capital

# A Venture Capital Firm Just Named An Algorithm To Its Board Of Directors – Here's What It Actually Does



ROB WILE

MAY 13, 2014, 11:19 AM

26,434

15



A Hong Kong VC fund has just appointed an algorithm to its board.

Deep Knowledge Ventures, a firm that focuses on age-related disease drugs and regenerative medicine projects, says the program, called VITAL, can make investment recommendations about life sciences firms by poring over large amounts of data.

Just like other members of the board, the algorithm gets to vote on whether the firm makes an investment in a specific company or not. The program will be the sixth member



Google images

**And what do we do  
with all this capacity?**

## Pacif-i™ Smart Pacifier



### WORLD'S FIRST BLUETOOTH™ SMART BABY PACIFIER

Blue Maestro are the inventors of the world's first Bluetooth™ Smart baby pacifier - Pacif-i™. Pacif-i™ is unique in that it records a baby's temperature and passes it to a parent's smartphone where it can be tracked and medication recorded. The ability to plot the effect medication has on temperature is particularly useful, no more scrambling for a pen and paper or trying to remember in your head. With useful reminders and alerts it becomes a peace of mind at stressful times. Comes with a range of other useful features, such as the ability to find the pacifier with your smartphone as well as a proximity feature that alerts your smartphone if the pacifier moves away from you.

From £25.00 / \$39.00 / €30.00

**What is the „job“  
of this innovation?  
(Do we really need this?)**



**But: The pacifier becomes  
an open platform ...  
expect 100s of baby apps**



**The current Digital Transformation  
demands firms of all industries  
to better cope with disruption**

*(think of supermarkets versus the Amazon Button)*

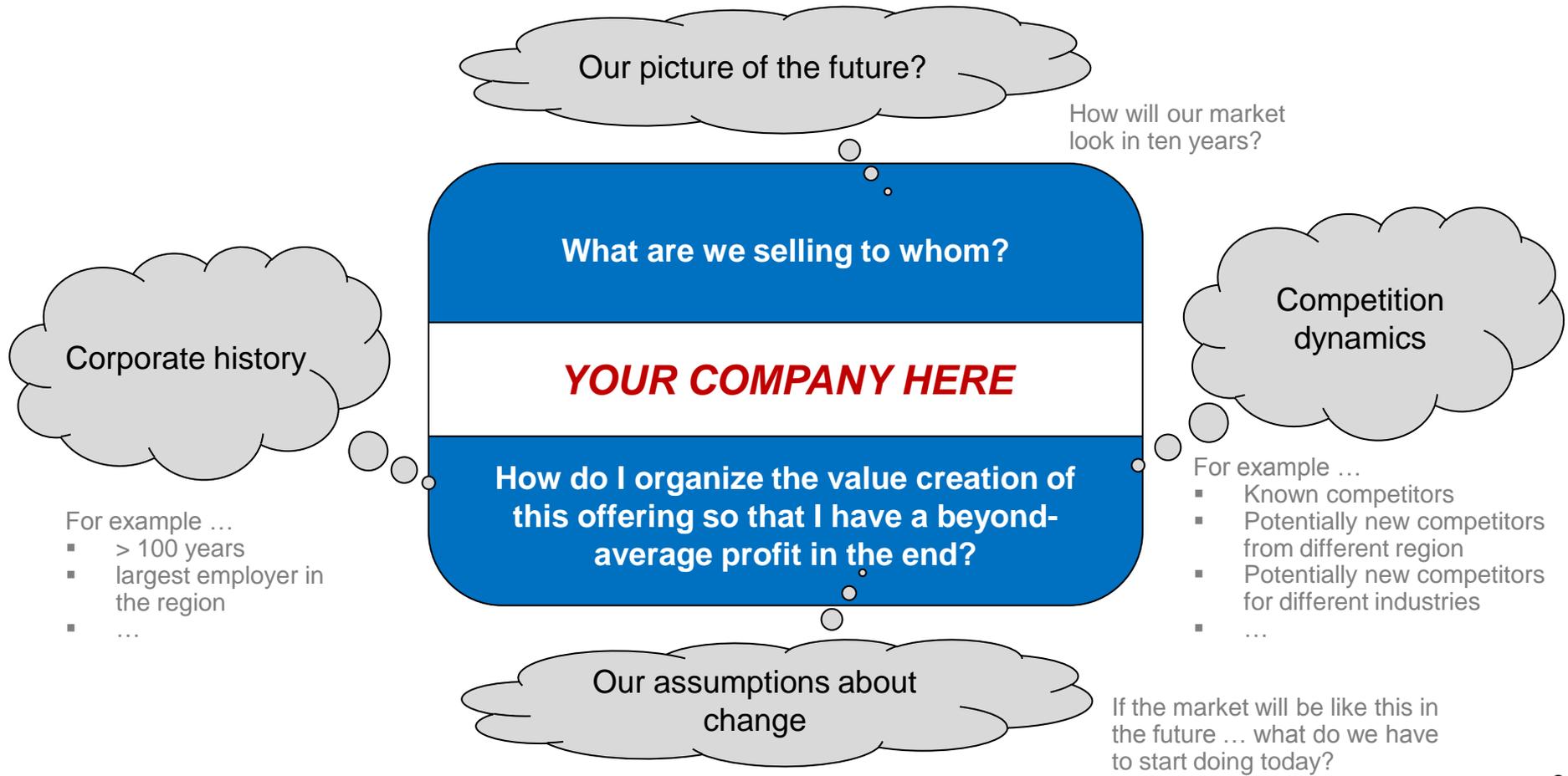
**So what is the problem?**

The average age of an U.S. company: 42

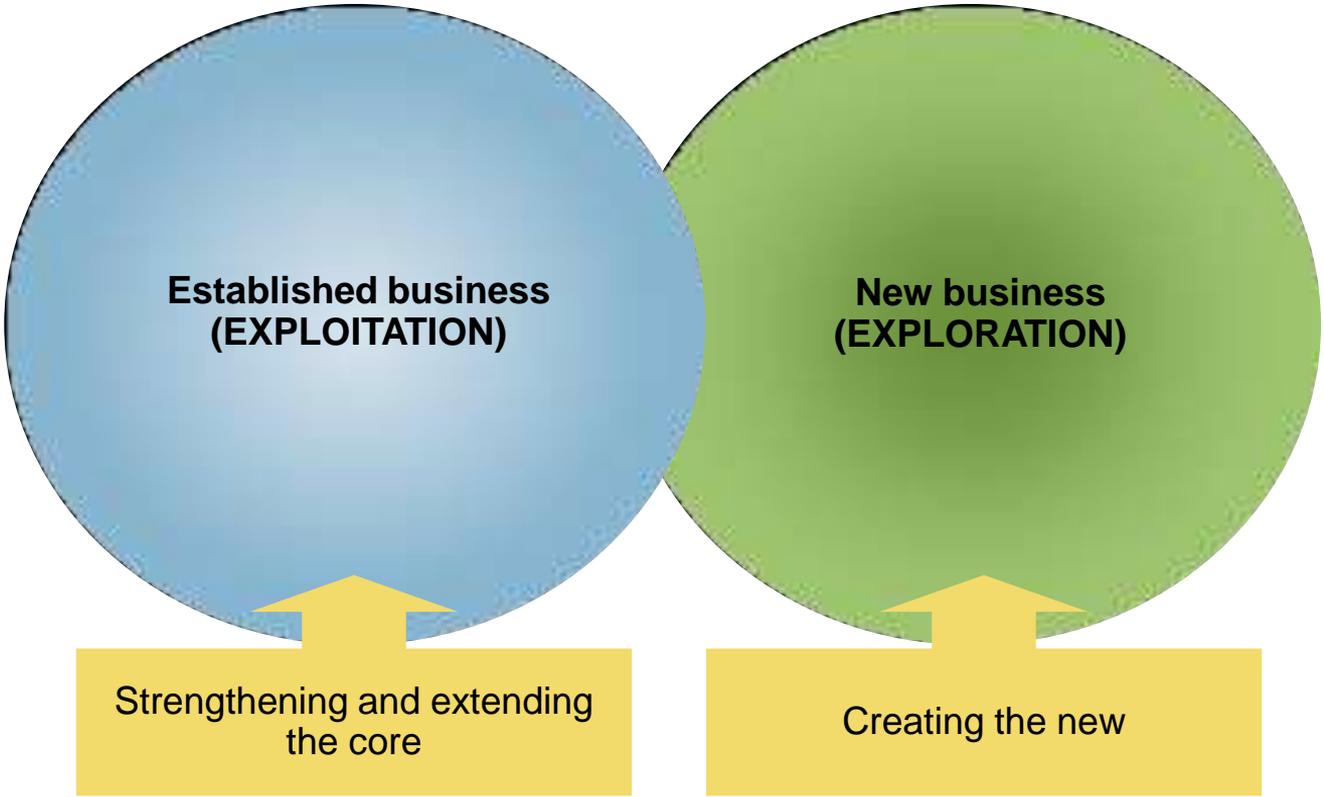
**Established companies generally\*  
fail when reacting on a disruptive  
innovation in their industry.**

\*But there are exceptions. Many of them are German Mittelstand.

# Current realities drive our thinking about the business model of the future



# Firms need to master two distinct challenges at the same time



**The fundamental problem of managing  
innovation on a corporate level:**

***Balancing Short-Term Profitability  
with Long-Term Sustainability***

**How to deal with disruption?**

**Reactive Strategies**

Proactive Strategies

# Reactive Strategies to cope with disruption

- (a) Wait and Double up:** Executed by Microsoft several times successfully: Only when they are certain that a new technology (WebBrowser, Cloud, Gaming) will become a core technology, Microsoft rapidly places huge resources into developing its take on this technology.
- (b) Wait and Buy up:** The typical pattern executed by many companies who acquire startups mastering a disruptive technology. Example: Consortium of automotive companies buying Nokia's Navigation technology
- (c) Wait and Give up:** Going down gracefully (perhaps Kodak did the right thing; same Cisco with the "Flip" video camera).

**Reactive approaches (waiting) are like a real option (they buy time to react better under a situation of more complete information)**

Reactive Strategies

**Proactive Strategies**

# **(d) Self-disruption**

***Problem of the “self disruption” approach:***

Replacement effects; same ownership and fight to use established resources in an asymmetric way (the old ambidexterity issue), difficult to execute!

**(e) Create a separate and independent (innovation) unit**

**38%** of the **largest 200 companies** by revenue, across sectors, have **set up Innovation Centers**

Innovation Centers Map



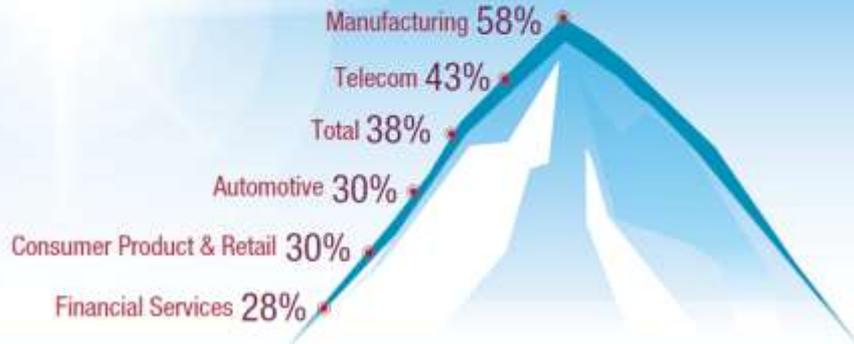
Top Ten Locations



But the penetration of centers varies dramatically across sectors

Sector-wise penetration of Innovation Centers

*% of companies*



The main focus is a mix of Technology and Customer aspects

Main focus of Innovation Centers

*% of companies*



**If you have a corporate  
innovation lab, I predict it will fail  
(when measured with hard  
performance criteria)**

Define the right focus—  
not too futuristic, not  
too current

Ensure strong CEO  
support for the  
innovation centers

Set up a governance  
model with stakeholders  
from across the business

Create a diverse  
cross-functional team

Prove value and extend  
innovation across the  
enterprise

Ensure that business  
units are closely  
involved

Engage with diverse  
partners in the innovation  
ecosystem

Quickly sunset infeasible  
programs, but at the  
right time

**Gap Gemini Consulting:**  
**“As many as 80-90 percent  
of all innovation centers fail”**  
(even if I believe that they still  
provide value on the level of  
culture and leadership)

What to do against failure: Most importantly, however, is to  
give the unit a large enough budget for implementation

**What we need is a separate  
and independent (innovation)  
unit *with realization capability***



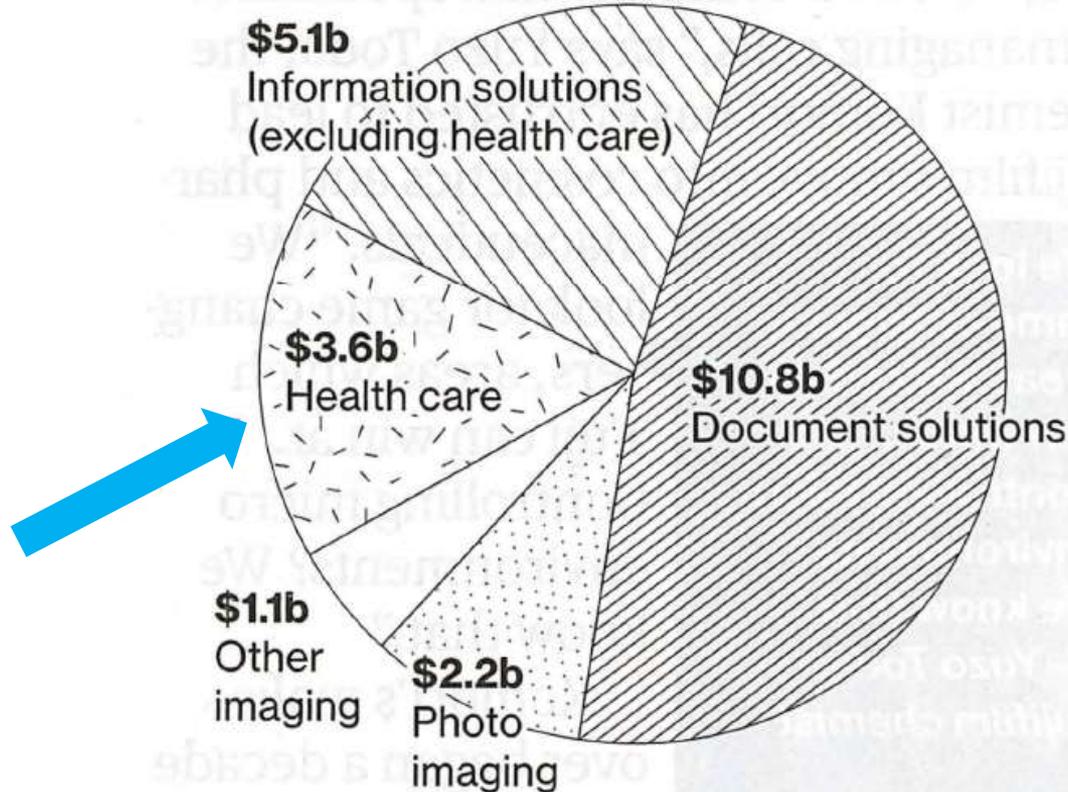
# **(f) Building integration capability**

# Life After Photography

Fujifilm revenue for fiscal 2015

# FUJIFILM

Source: Bloomberg BusinessWeek, Sept 2015



FISCAL YEAR ENDED MARCH 2015

DATA: FUJIFILM

# 3M Technology Platforms

<b>Ab</b> Abrasives	<b>Bi</b> Biotech							<b>Pm</b> Polymer Melt Processing	<b>Sm</b> Specialty Materials
<b>Ac</b> Acoustics	<b>Ce</b> Ceramics	<b>Em</b> Electronic Materials					<b>Nt</b> Nanotechnology	<b>Po</b> Porous Materials & Membranes	<b>Su</b> Surface Modification
<b>Ad</b> Adhesives	<b>Dd</b> Drug Delivery	<b>Fc</b> Flexible Converting & Packaging				<b>Mi</b> Microbial Detection & Control	<b>Nw</b> Nonwoven Materials	<b>Pp</b> Precision Processing	<b>Tt</b> Track and Trace
<b>Am</b> Advanced Materials	<b>Di</b> Display	<b>Fe</b> Flexible Electronics	<b>Fs</b> Filtration, Separation, Purification	<b>Is</b> Integrated Systems Design	<b>Me</b> Metal Matrix Composites	<b>Mo</b> Molding	<b>Op</b> Opto-electronics	<b>Pr</b> Process Design & Control	<b>Vp</b> Vapor Processing
<b>An</b> Analytical	<b>Do</b> Dental & Orthodontic Materials	<b>Fi</b> Films	<b>Im</b> Imaging	<b>Lm</b> Light Mgmt	<b>Mf</b> Mechanical Fasteners	<b>Mr</b> Micro-replication	<b>Pd</b> Particle & Dispersion Processing	<b>Rp</b> Radiation Processing	<b>We</b> Accelerated Weathering
<b>As</b> Application Software	<b>Ec</b> Energy Components	<b>Fl</b> Fluoro-materials	<b>In</b> Inspection & Measurement	<b>Md</b> Medical Data Mgmt			<b>Pe</b> Predictive Engineering & Modeling	<b>Se</b> Sensors	<b>Wo</b> Wound Mgmt

## ***Integration capability***

*Using internal capabilities to create new connections based on old linkages in the organization:*

**Invest in integrated structures** that embed **architectural knowledge in as many people of your company as possible**, allow knowledge to continuously evolve and change.

**And execute this continuously and with high ambition.**



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ARTICLE | ADMINISTRATIVE SCIENCE QUARTERLY | **MARCH 1990**

## Architectural Innovation: The Reconfiguration of Existing Product Technologies and The Failure of Established Firms

by **Rebecca M. Henderson** and **Kim B. Clark**

PRINT SHARE EMAIL

**Keywords:** Design; Innovation and Invention; Product; Technology; Failure; Business Ventures

**Format:** Print | 22 pages

**FIND AT HARVARD**

### About the Authors



**Rebecca M. Henderson**  
General Management  
Strategy

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**Kim B. Clark**

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# Two technology strategies for the driverless car

## Reverse engineering the future



"We disrupt you with a car from a future that hasn't yet arrived -- and perhaps won't for decades. But who cares, as this is a future in which the automobile is merely a node in a transportation matrix, managed by powerful technology."

## Utilizing Integration Capability



"OK, Google, what you're doing is cool, but we can start bringing self-driving cars to market now ("cruise control 4.0") and not wait for a radically different future."

**And so Detroit may beat Silicon Valley**

# Proactive strategies to cope with disruption

- (d) Self-disruption:** Cannibalizing a firm's existing products while those are still doing well (Examples: Apple cannibalizing its laptops with tablets; New York Times cannibalizing its Print paper with digital editions).
- (e) Create a separate and independent innovation unit** to sense / invent / own disruptive technologies at the first place. Followed by many firms creating "innovation labs". Example: Daimler with its broad move towards mobility services with Moovel/Car-to-Go.
- (f) Building integration capability:** Using internal capabilities to create new connections based on old linkages in the organization: Invest in integrated structures that embed architectural knowledge in the minds of as many employees as possible, allow knowledge to continuously evolve and change. Change decision making style. Execute fast!

**Proactive approaches, especially  
*building integration capability,*  
are like an **insurance policy****

***An insurance ...***

**... comes with a *premium* to be paid.**

*In our case:* Sacrificing short-term competitiveness and market leadership for long term survival.

A dilemma of trading ...

**... *profitability versus sustainability***

**... *leading pioneering role versus follower position***

## Our research at RWTH TIME and the RWTH Invention Center strives to understand these integration capabilities better:

- **Effectual decision making**, bringing the lean startup into established organizations
- **Business experimentation** and agile, highly-iterative decision making; design thinking
- **Open innovation** and absorptive capacity
- **Business model innovation** capability
- Knowledge management, **organizational forgetting**
- **Financing disruption**, crowdfunding, ...
- Creating a cultural shift, corporate mindset, ...

**Co-create this research with us!**

([www.invention-center.de](http://www.invention-center.de))



INC  
INVENTION  
CENTER

**(1) Open innovation** is a core measure to provide technical competences, *and also business opportunities*, not available internally *but complementing existing capabilities*

# GE's Garages Initiative: Complement internal integration capability with external input

Garages

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## Open Innovation

Open innovation utilizes a network of experts and enthusiasts from around the world working as one to solve some of today's most pressing challenges from products to processes and beyond.



# One GE project is an open development community for Home Appliances, FirstBuild: The idea is to efficiently access IoT/smart home technologies and INTEGRATE then with existing technologies

**IB firstbuild** CO-CREATE MICROFACTORY SHOP BLOG LOGIN

**Co-create a new world of home appliances.**

FirstBuild is an online and physical community dedicated to designing, engineering, building, and selling the next generation of major home appliances. Sign up today to bring your innovations to market at unprecedented speed.

**How to FirstBuild? Sign up to get started.**

Your Email:

Create New Password:

(At least 8 characters, can be numbers, letters, and special characters)

**GET STARTED**

By clicking "Get Started", you agree to our [Terms of Service and Privacy Policy](#).

### HOW IT WORKS

- Ideate**: Ideas are the starting point for solving the challenges in developing major home appliances. These ideas can
- Evaluate**: A dialogue in the form of voting and commenting is the backbone of the FirstBuild community. It is
- Make**: The making phase is a critical step in the creative process. We believe that the best way to learn about a
- Produce**: Rapid and advanced manufacturing techniques at the FirstBuild Microfactory can produce products
- Sell**: FirstBuild will then help sell and promote your great ideas online through a dedicated web store and on physical

### WHAT WE MAKE

- Refrigeration**: Food Cold Storage, Freezers, Beverage Centers, Dispensers.
- Dish Cleaning**: Dishwashers, Compact Sink, Portable
- Food Disposal**: Disposers, Compactors
- Cooking**: Cooktops, Ranges, Microwave Ventilation
- Clothes Care**: Washers, Dryers, Space-Saving Units
- Water Systems**: Water Heaters, Water Softeners, Water Filtration
- New & Novel**: What's Next for Home Appliances?

# SIEMENS: A managed (by NineSigma) Open Innovation Gallery to bridge with the outside

## SIEMENS



Innovation has been the lifeblood of Siemens for more than 165 years, allowing us to remain at the leading edge – and our partners play a vital role in this ongoing effort.

Siemens Process Industries and Drives Division provides future-proof automation, drive technology, industrial software and services based on best-in-class technology platforms like Totally Integrated Automation (TIA) or Integrated Drive Systems (IDS).

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We are actively seeking innovations in the areas:

- Sensors
- Signal Transmission
- Monitoring
- Data evaluation

This could be an excellent starting point for our joint journey towards an exciting and fascinating technology partnership.



## HINTERGRUND

Siemens Corporate Technology ist eine weltweit tätige Forschungs- und Entwicklungseinheit, die die Zukunft von Siemens aus technologischer und innovativer Sicht mit **über 1000 Forschungspartnerschaften pro Jahr** sicherstellt.



## FAKTEN

<b>START DER GALERIE:</b>	August 2012
<b>BRANCHE:</b>	Engineering
<b>BEDARF:</b>	3D-Oberflächen ARM Architekturen Cloud Computing Wearable-Technologie

## ABLAUF

- » **Siemens** sammelt organisationsübergreifend technologischen Bedarf und Ideen.
- » **NineSigma** führt gezielte Suchstrategie durch.
- » Regelmäßige Telefonate zu aktuellen Metriken
- » NineSigma arbeitet mit Siemens zusammen, um das Engagement und den Input externer Lösungsanbieter zu sichern.



**DR. CRISTIAN HOMMA**

Technology & Innovation Management Group,  
Siemens Corporate Technology

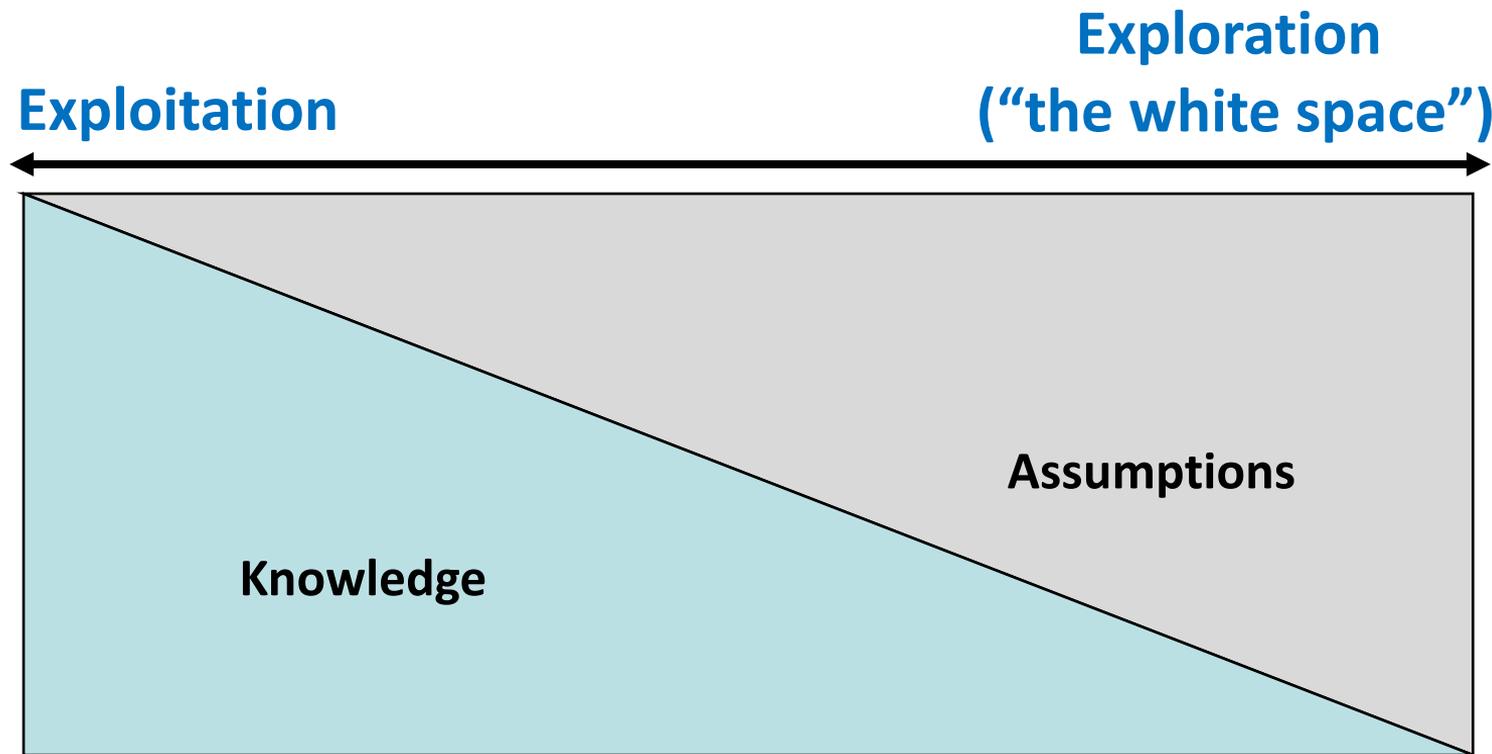


**DR. STEPHEN CLULOW**

Senior Program Manager,  
NineSigma Europe

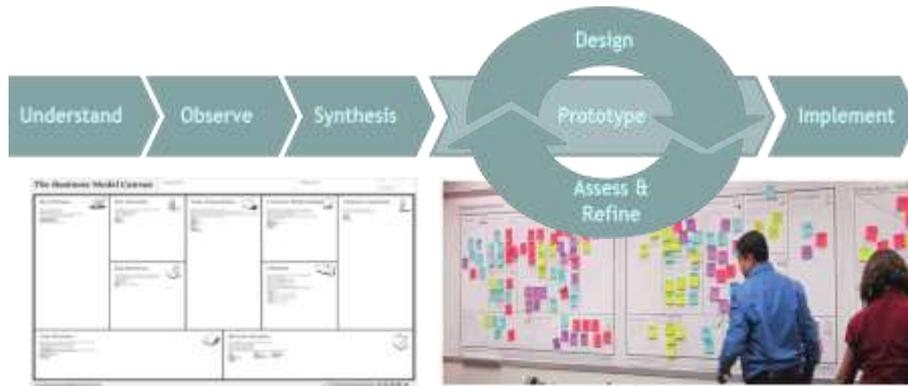
**(2) To build integration capability  
also means to master  
business model innovation**

**The challenge: The more we move to the “white space” (= engage in exploration), the more we have to build and manage assumptions**



**The idea is to create an innovation system that allows firms to deal with assumptions about their future – and *to create (and test) new business models as systematically as new products and services***

# THE AACHEN BUSINESS MODEL INNOVATION (BMI) APPROACH\*

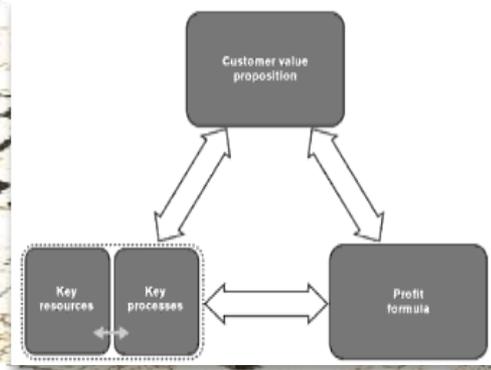
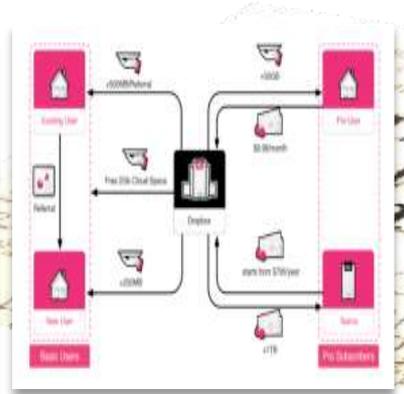
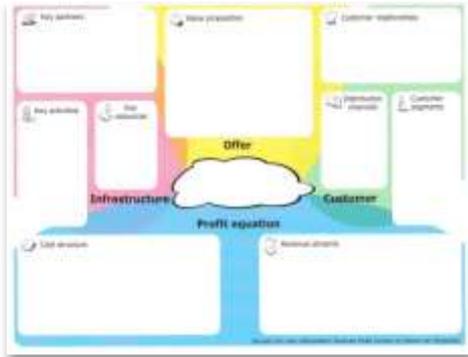
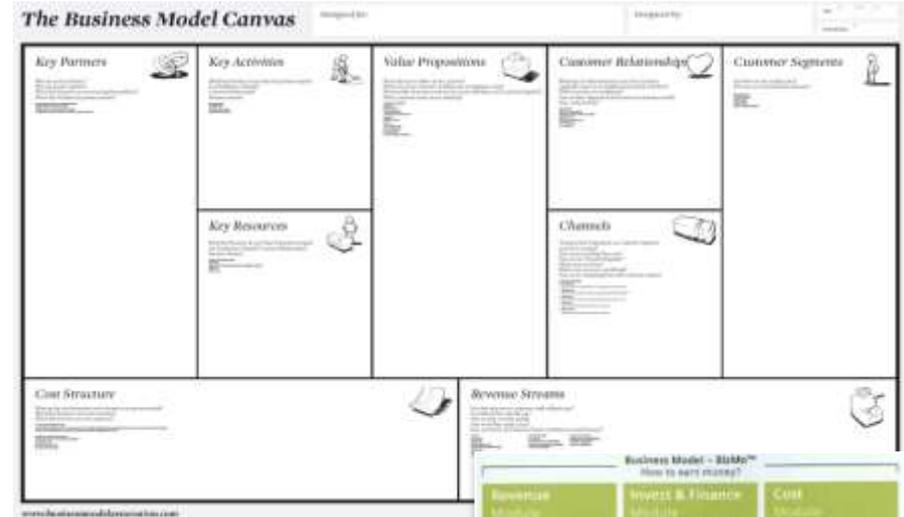


## (1) Iterative „Design Thinking“ approach:

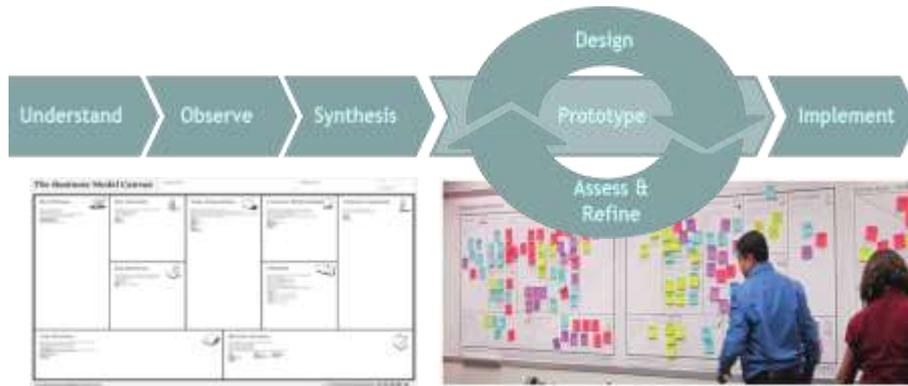
- **Agile process** with continuous iterations and **strong user focus**
- **Open, collaborative task** in responsibility of every product manager
- Early use of many BM prototypes (**Primitives**)
- **BM Canvas as a communication tool**: Ability to map BM alternatives
- **Intuitive approach**, at the same time systematically
- Today, often **company-specific canvas**

# The Idea of the Business Model Canvas

- To analyze the status quo, clarify the processes underlying them,
- To overcome barriers (confusion and complexity) and to discover alternative business models, ...
- which then allows us to run “experiments” considering alternate combinations of the processes.
- And this in an interactive process!

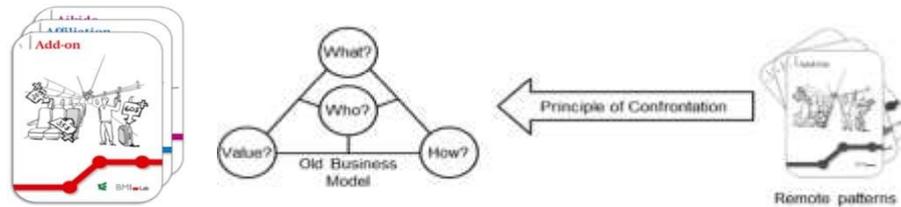


# THE AACHEN BUSINESS MODEL INNOVATION (BMI) APPROACH\*



## (1) Iterative „Design Thinking“ approach:

- **Agile process** with continuous iterations and **strong user focus**
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- Today, often **company-specific canvas**



## (2) BM patterns for systematic search for new BM:

- Successful BM are based on **recurring patterns**
- Derivation of general and company specific libraries of **BM patterns**
- Systematic problem solving based on **TRIZ approach**

# BM PATTERNS – INSPIRATION TO RETHINK THE BUSINESS MODEL

In the world of business models, **there is not much that is actually new – but many powerful adaptations!**

Patterns of business models **can serve as an inspiration** when innovations of business models are considered.

*E.g. **Solution Provider**: Deliver carefree package of comprehensive solution of integrated product and service offerings*

*E.g. **Experience Selling**: Deliver emotional sensation apart from the functionality of the tangible product in saturated market*

→ **Recombine existing concepts** to break outside of the box and generate ideas for new business models

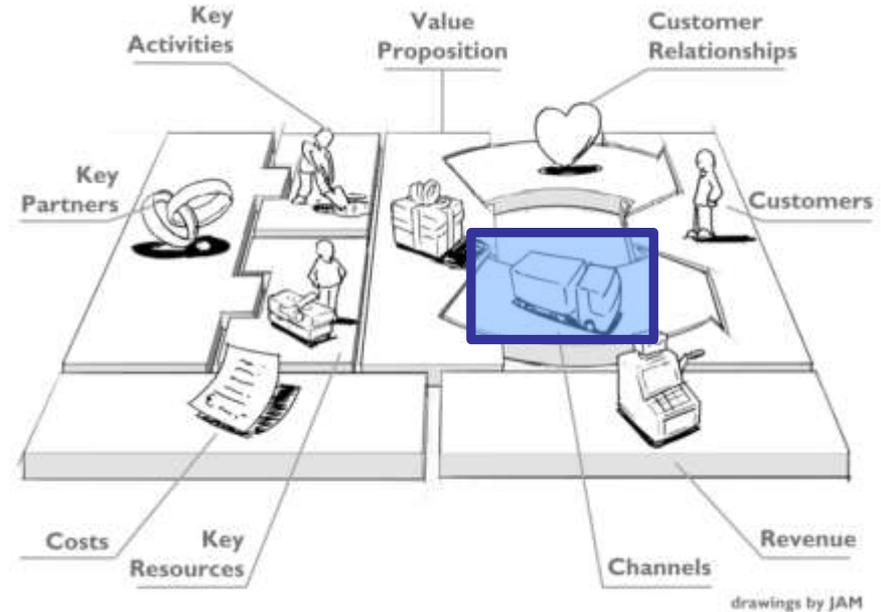


## In a recent project, we try to transfer these insights from Nespresso to a car sharing provider



Car sharing finds **great echo**, but is still **not profitable in all cases**.

Discuss all elements of business model to improve the model.



„Car sharing is not accessible enough!“

→ Discuss **„Channel“** and **find new approaches to make it easily accessible.**

**Start to build your company's  
disruptive (mobility) business model  
pattern collection**

**One more thing ...**

We can see this competition also differently:



*An ambitious and  
brave business  
experiment (from  
prototype or perish  
to deploy or die)*

**„Business as usual“**

**We often make one BIG mistake  
when managing innovation:**

# **Innovation is not just ideas.**

*(MIT Media Lab: Earlier: “demo or die” instead of „publish or perish“. Today: „deploy or die“)*

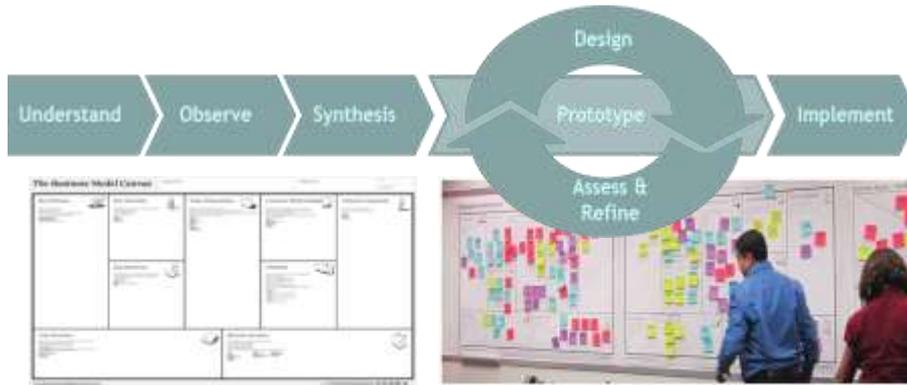
**A core ability of innovation is to experiment:** Test and validate quickly your assumptions behind a (product, service, biz model) concept.

Michael Schrage, MIT, suggest a simple formula:

**5 x 5 x 5 x 5 x 5**

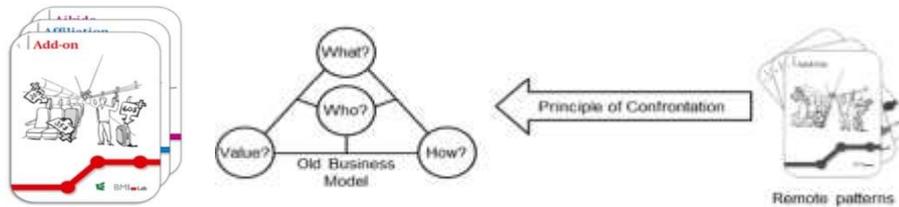
*5 Teams ... with 5 members ... do 5 experiments each ... in not more than 5 weeks ... for max. €5000 per experiment*

# THE AACHEN BUSINESS MODEL INNOVATION (BMI) APPROACH\*



## (1) Iterative „Design Thinking“ approach:

- **Agile process** with continuous iterations and **strong user focus**
- **Open, collaborative task** in responsibility of every product manager
- Early use of many BM prototypes (**Prototypes**)
- **BM Canvas as a communication tool**: Ability to map BM alternatives
- **Intuitive approach**, at the same time systematically
- Today, often **company-specific canvases**



## (2) BM patterns for systematic search for new BM:

- Successful BM are based on **recurring patterns**
- Derivation of general and company specific libraries of **BM patterns**
- Systematic problem solving based on **TRIZ approach**



## (3) Rapid experimentation and validation in field

- BMI means to develop alternatives – and to test assumptions
- Ability to generate quick and cheap experiments (e.g., 5x5x5x5x5 logic by Schrage)
- Experimentation template

**How to implement this  
mentality in our company?**

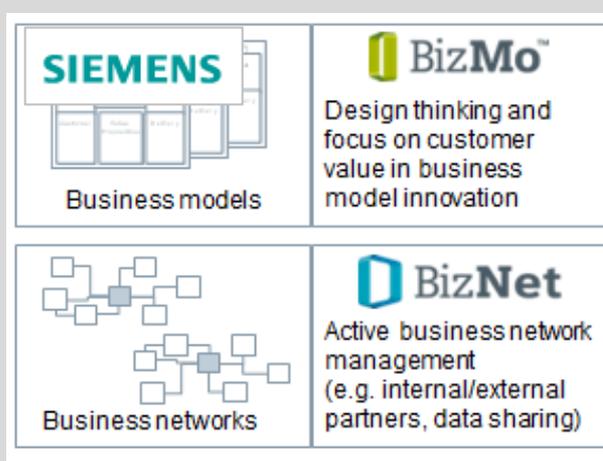
# There are different ideas in companies how to organize explorative activities (BMI) best: in a spin-off, as an consulting capability, as a state of mind



**DAIMLER:** Spin off company **Moovel** -- after **3 year internal incubation** as “*business innovation idea lab*”, reporting to CEO.

Open, **Design thinking approach**.  
Lead function: **Sales, IT**

Today: **different location**, 1200+ employees, very different culture.  
5 actives ventures

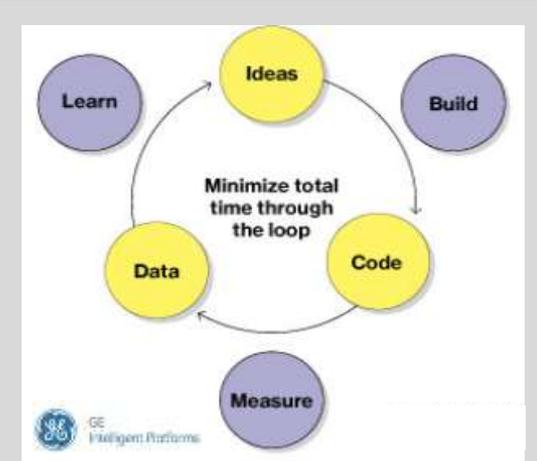


**SIEMENS:** Internal **BizMo** team (~15 FTE) in **Corporate Technology (CTO)**.

**Fully integrated** into current processes and organization, “BMI from within”

**Internal consulting approach**, however mandatory in many development projects.

Strong focus on processes and templates, train the trainer. BM software development



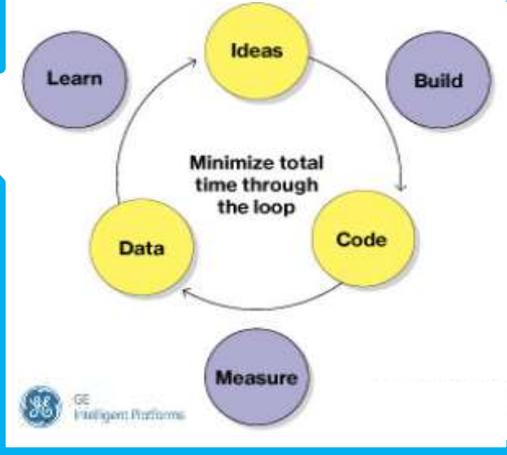
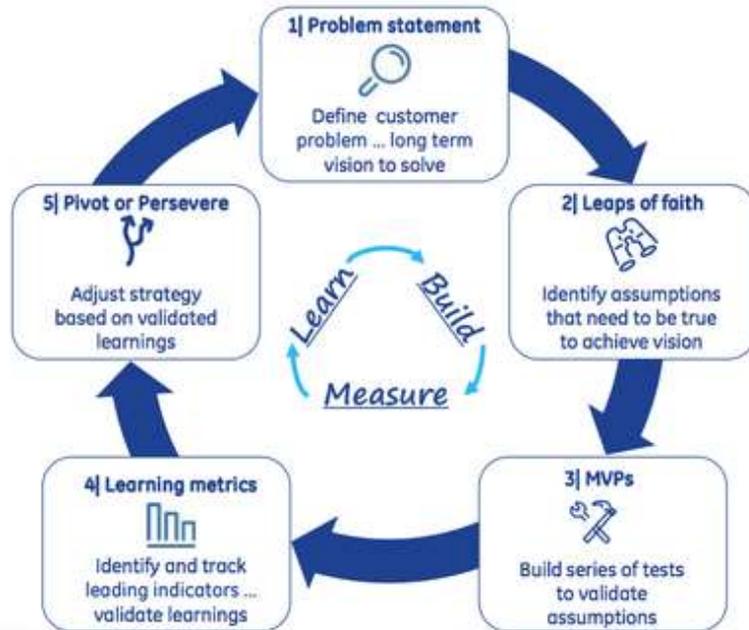
**General Electric (GE):** “**Fast Works**” Management innovation to **change the corporation**. Build on “Lean Startup” idea; driven by Industrial Internet (“Industrie 4.0”)

Shall become new basic management style. **Trained 60K persons**

# The “Fast Works” approach of GE is a bold attempt to implement a new management & decision making style to cope with Digital Disruption

## The FastWorks Framework

*Experiment...learn...iterate*



**General Electric (GE): “Fast Works”** Management innovation to **change the corporation**. Build on “Lean Startup” idea; driven by Industrial Internet (“Industrie 4.0”)

Shall become new basic management style. **Trained 60K persons**

**Managing disruption is not simple**

**Luckily!**

**Otherwise it could not become a  
competitive advantage**

## Conclusions: To deal with disruption, we need a new innovation system

- + A corporate mindset of balancing exploration and exploitation *on both the level of the product and the organization*
- + Creating a strategy (and corresponding structure) for disruption: *Either react (“option”) or proactively manage (“insurance”) disruption*
- + Digitalization demands the skill of orchestrating an open eco-system: *Innovation co-development in distributed infrastructures – products are always in beta / the platform creates the solutions*
- + Supplementing stage-gate by agile, highly-iterative business model innovation processes: *From idea management to experimentation and rapid validation: Prototyping, testing, and a design-thinking culture*



**INC  
INVENTION  
CENTER**

Our platform for continuous interaction:  
**The RWTH Aachen Invention Center**  
<http://www.invention-center.de>

EXPERIENCE INNOVATION –  
CREATE MARKETS

### Das INVENTION CENTER (INC)

#### INVENTION CENTER - WARUM?

Das Technologie- und Innovationsmanagement (TIM) in Unternehmen steht vor großen Herausforderungen. Neben der kontinuierlichen Entwicklung, Verbesserung und Einführung neuer Technologien und Produkte entscheidet heute auch die Differenzierung über neue Geschäftsmodelle über den Markterfolg. Mit dem Invention Center (INC) schaffen wir einen Ort, an dem sich Industriepartner gemeinsam mit uns den Herausforderungen des TIM stellen können.

#### DIE VISION

- Den Nutzen neuer Ideen maximieren.
- Die Dauer der Produktentwicklung bis zur Platzierung des Produkts am Markt auf 25% reduzieren.
- Die Entwicklungskosten auf 10% reduzieren.
- Entwicklung eines Pionier- und Vorreiterverständnisses in Bezug auf anspruchsvolle Fragestellungen im TIM.
- Partizipieren an DER Meinungsführerschaft im Technologie- und Innovationsmanagement.
- Technologie- und Innovationsmanagement in einer Erlebniswelt erfahrbar machen.
- Mitarbeiter zu Experten im Technologie- und Innovationsmanagement weiterbilden

## Learn more about the Business Model Innovation Approach (Executive Training in German language)

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Zertifikatskurs der RWTH International Academy

28. - 30. Oktober

Erfolgsfaktoren von Business Model Innovation

23. - 24. November:

Implementierung von Business Model Innovation



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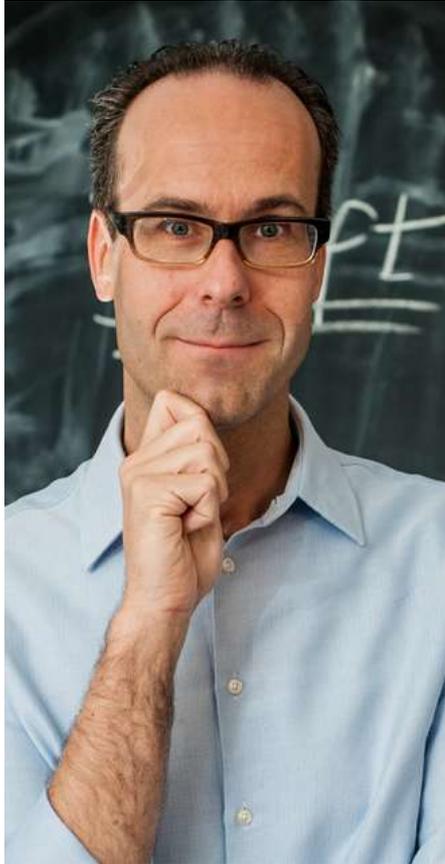
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# Open for interaction



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