

Smart Branding 4.0

Marke und Disruption: Wie radikale Innovationsstrategien Marken stärker machen und starke Marken Innovation beflügeln

@masscustom (Frank T. Piller)



Responsibilities

- Head of **RWTH Technology & Innovation Management Group** and Professor of Management at **TIME Research Area** at **RWTH Aachen University**
- Founding Dean, **RWTH Business School**
- Member of the Scientific Advisory Board, **German National Platform Industrie 4.0**

Research Interests and Expertise

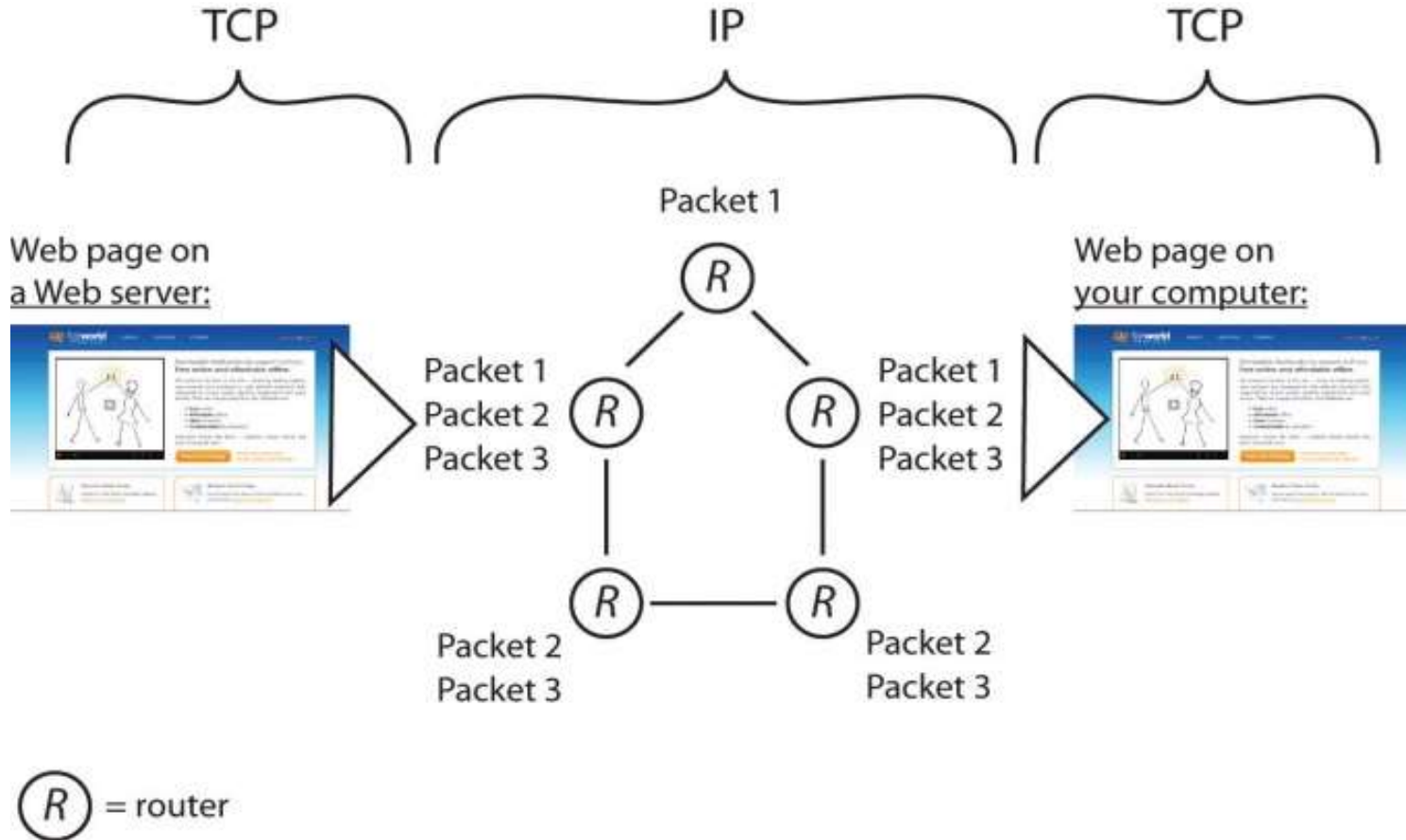
- **Strategies for Customer-Centric Value Creation**, like mass customization, innovation co-creation, additive manufacturing, managing the frontend of innovation
- **Open Innovation**, i.e. technology transfer, R&D partnership models, crowdsourcing
- Managing Disruptive **Business Model Innovation** in the context of **Industrie 4.0** and **Digital Transformation**

Entrepreneurial Activities

- **Co-Founder, Investor, and/or Member of Board of Directors** of several companies, including **ThinkConsult** (process management & concept testing), **Competivation** (innovation advisory), **Dialego** (innovative online market research), **Combeeneration** (product configurator as a service), **Corpus-e** (“best fit” solutions for eCommerce), and **DOOB AG** (3D printing and modelling of human avatars)
- **Real life achievements:** Only German in “**Top50 Profs on Twitter**” list; **Kloutscore** >60; **Google Scholar Citations** ~12,000; **H-index** >46

**We should thank the guys who made
it happen that we are all here**

Vint Cerf & Bob Kahn



**They are behind of one of the most
successful recent branding initiatives:**

Industrie 4.0

**New dimensions of networking ability,
enhancing our [collaboration productivity](#),
is at the core of our current
technological disruption**

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



1

**End of
18th century**

Mechanization:

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



2

**Beginning of
20th 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

**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?)**



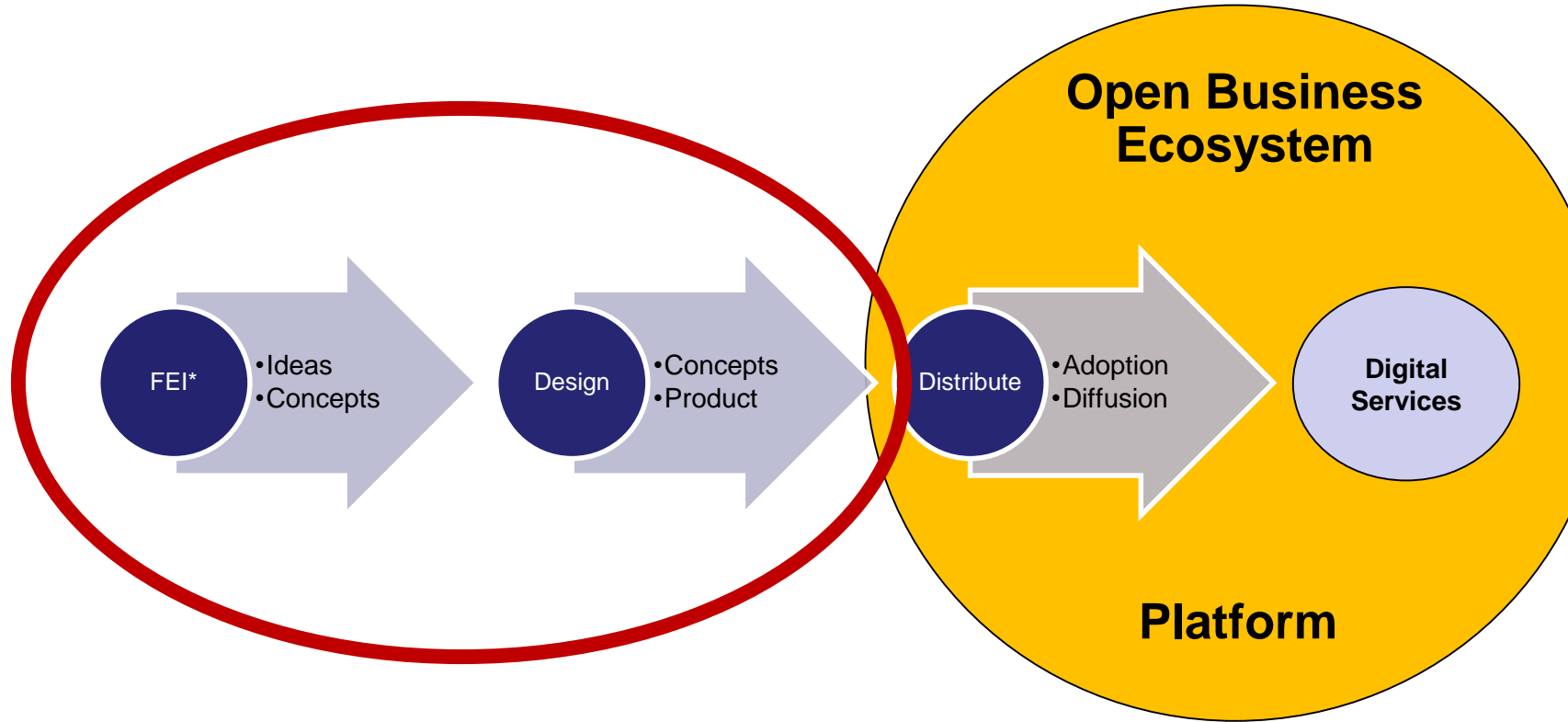
**Job-based thinking is more
important than ever ...**

**... as your customers in the end
do not care about digitalization (or
customization, or smartness...) at all!**

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



Lots of work for an innovation professor



*FEI = Frontend of Innovation: Opportunity recognition, market needs discovery

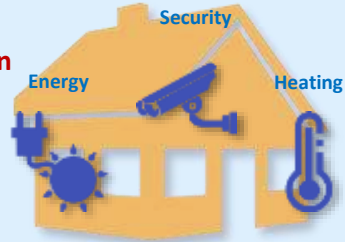
**If there is one pattern
of digital business models, it is that of
a platform (“business ecosystem”)
around smart offerings.**

Branding in the age of digital platforms

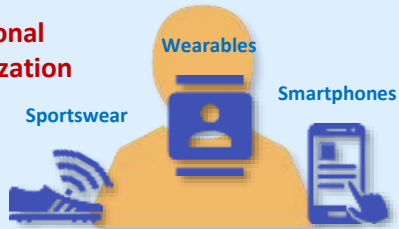
Smart things

Internet of Things (Smart Solutions)

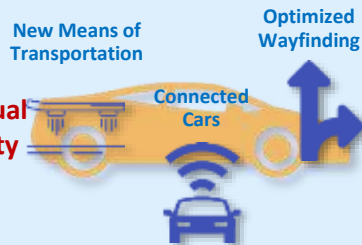
Home Automation



Personal Digitalization

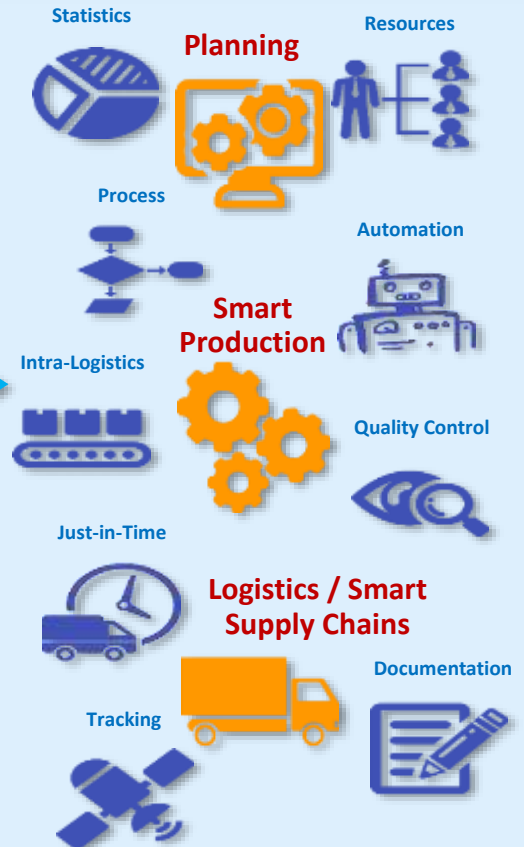


Individual Mobility

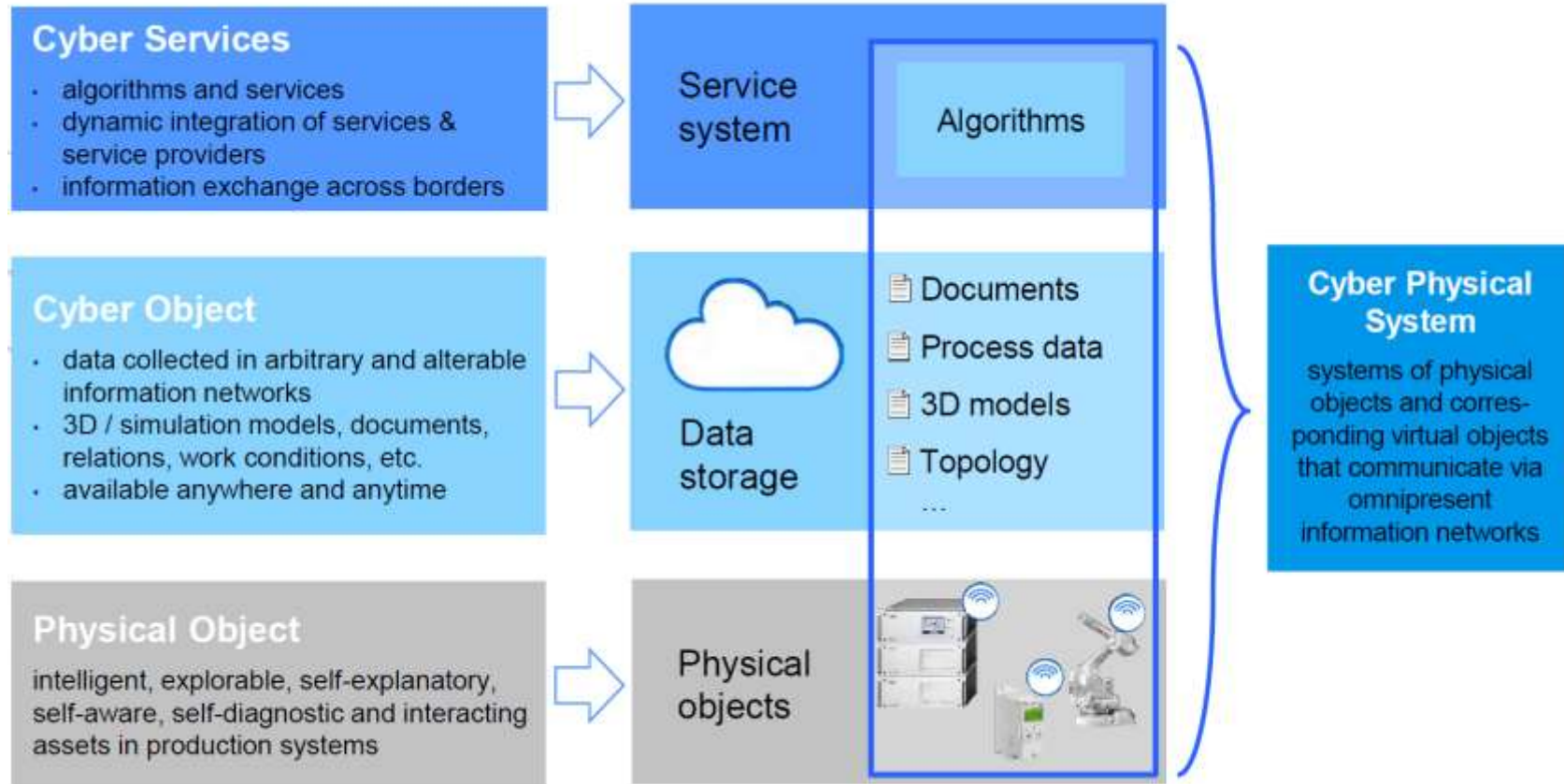


A major IoT
application is ...

Industrie 4.0 (Industrial Internet of Things)



Cyber Physical (Production) Systems are Smart Products in Manufacturing



Why will one win and the other fail?



An integrated,
isolated product



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

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

And this effects not just retail



dashbuttondudes.com

instructables.com/id/Amazon-Dash-Button-Hack

1. Order a taxi (Uber)
2. Order your favorite pizza
3. Order office equipment
4. Set an alarm for your warehouse
5. Track baby data
6. Monitor any activity in a xls sheet
7. Monitor work performance
8. Control every plug in your home
9. Silent door bell
10. Netflix and chill
11. Prepare coffee
12. Open your garage door
13. Send a txt mssg
14. Send a Android or iOS mssg
15. Message to Slack, Twitter everyone with API
- 16. Transfer money to your savings account**
- 17. Pay your office coffee**
- 18. Pay a vendor**
- 19.**



**Who is the unifying brand
behind all these offerings?**



Brand as a platform

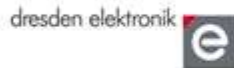
**This also challenges (enables)
currently another iconic brand**

Supported by:



on the basis of a decision
by the German Bundestag

The connected shoe, reinvented.



Sense

Think

Connect

Act



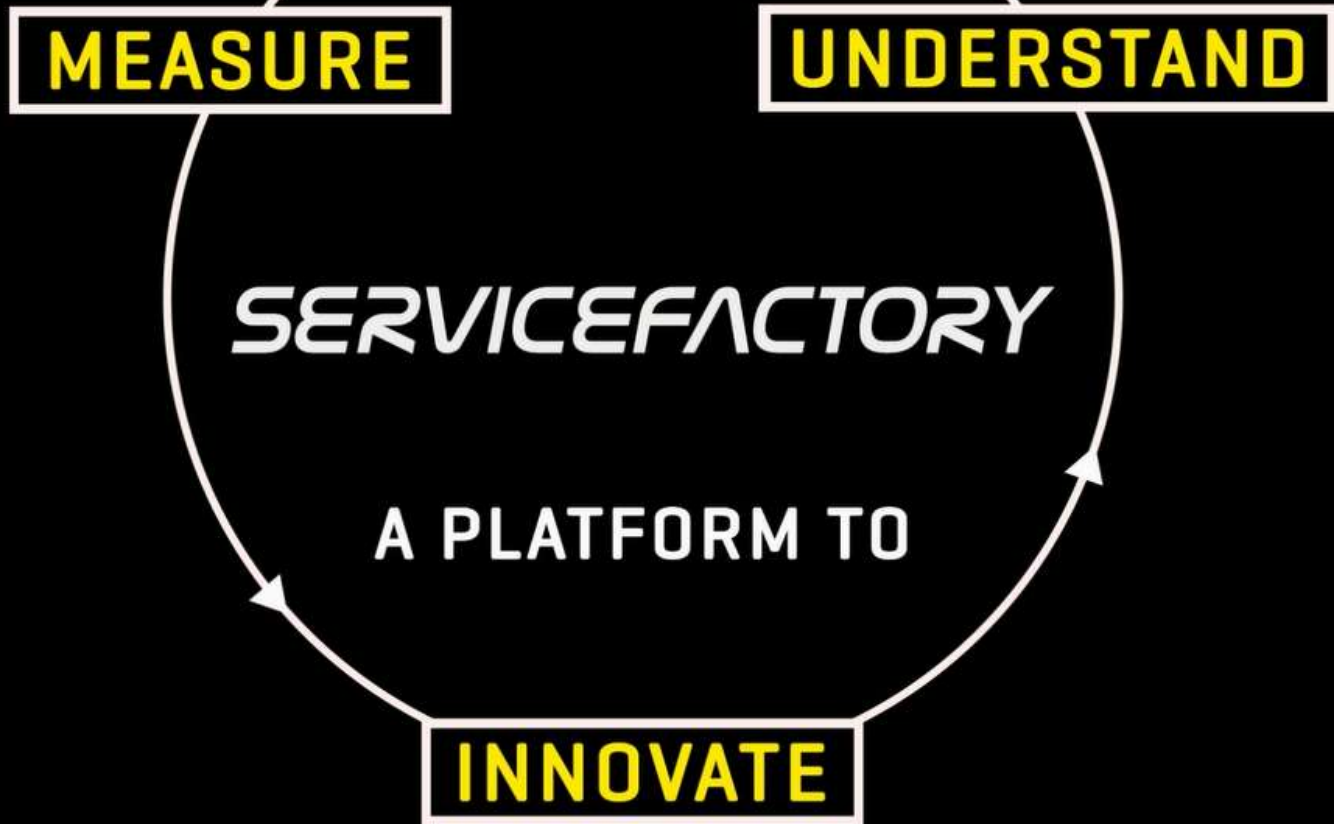
MEASURE

UNDERSTAND

SERVICEFACTORY

A PLATFORM TO

INNOVATE



What are the brand opportunities and challenges for Adidas sketched in this project vision?

Der Algorithmus braucht eine Marke

**But the real challenge
is a different one**

**How we think about something ...
shapes the way we manage it.**

Lindt



HELLO



Brands as a barrier

**You need an aligned innovation
and branding strategy**

Two Dimensions of “Innovation”

- **Technological Change**
 - How scientifically or technologically different is this innovation from what our base of competences?
 - A ‘hardware’ innovation for a software based firm
- **Business Model Change**
 - To what extent does this innovation change the way we create and capture value?
 - Differences in customer segment, revenue source, distribution channels, etc.

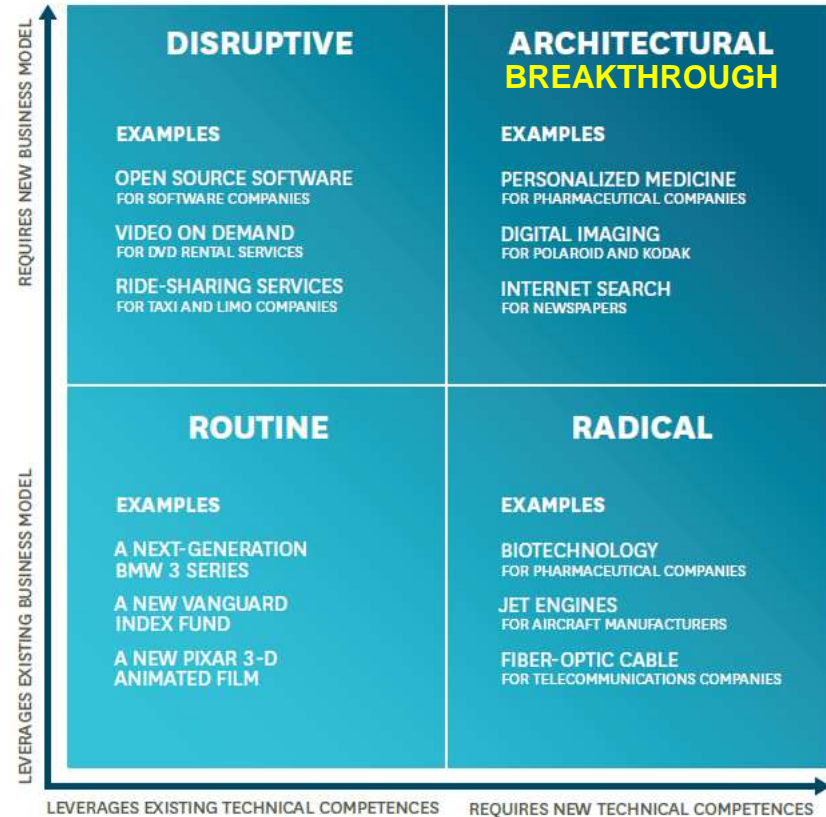


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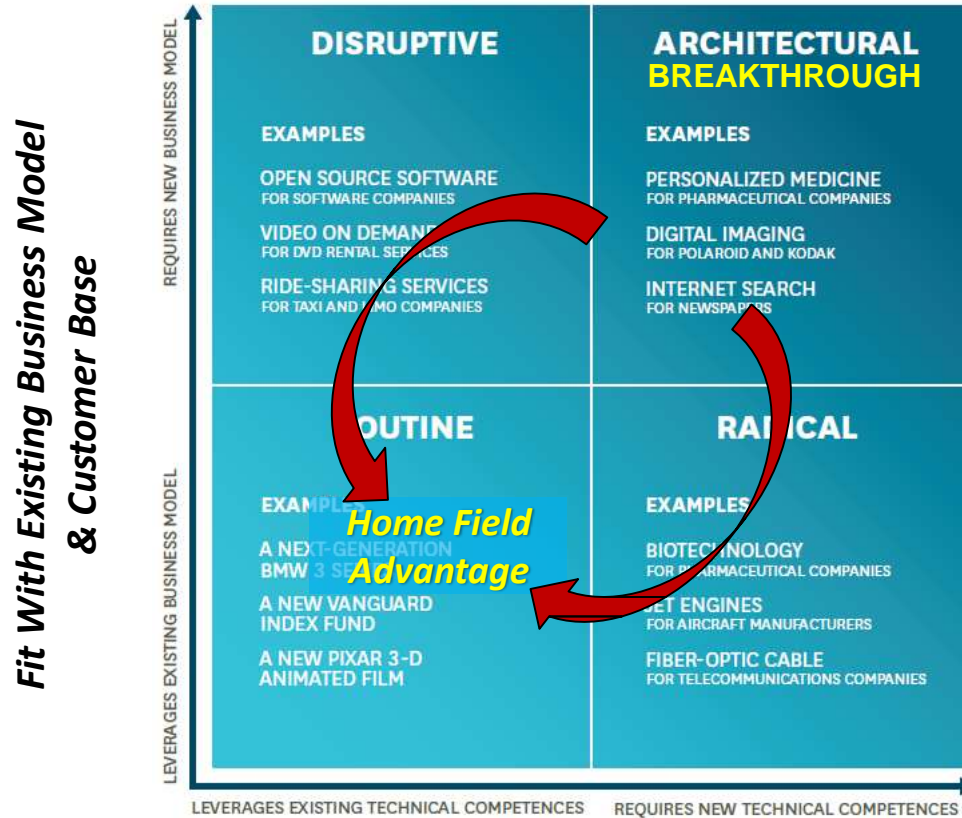
*Fit With Existing Business Model
& Customer Base*

Mapping Innovation Opportunities



Fit With Existing Technical & Organizational Capabilities

Mapping Innovation Opportunities: The Prevailing Winds



Three Pillars of Innovative Capacity

The background of the slide features three tall, classical columns with Corinthian capitals, set against a cloudy sky. The columns are arranged in a slightly receding line from left to right, creating a sense of depth and grandeur. The overall tone is professional and academic.

SEARCH

How you
**find novel
problems
and novel
solutions**

SYNTHESIS

How you
**integrate
ideas** from
diverse
sources

SELECT

How you
**allocate
resources**
to projects

Three Pillars of Innovative Capacity: Search

All innovations should solve a problem

- **What** problems are you trying to solve?
- **Whose** problem are you trying to solve?
- **Where** are you looking for problems to solve?

**How we think about something ...
shapes the way we search (manage it).**

Three Pillars of Innovative Capacity

The background of the slide features three tall, classical columns with ornate capitals, set against a cloudy sky. The columns are arranged in a slightly receding perspective, creating a sense of depth and grandeur. The central column is partially obscured by a yellow rectangular box, while the other two are flanking it.

SEARCH

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Three Pillars of Innovative Capacity: **Synthesis**

Building a Capability to Synthesize

- **People:** Need for “**architects**” -- people who understand how different pieces fit together
 - *Who are our architects? Do we have a place for them in our organization?*
- **Culture:** Want **boundary spanning** to be considered normal behavior
 - *What happens when people “step outside” their discipline? How are those people viewed?*
- **Business Structures:** Need for mechanisms to drive **cross-divisional cooperation**
 - *Is P&L discipline inhibiting valuable cooperation?*
- **Branding:** Need to **clearly differentiate our brand along the four innovation dimensions:**
 - *Is our brand strong enough to **provide trust (internally and externally)** along all dimensions of the innovation space?*
 - *Do we need sub-brands (or new brands) when entering the non-routine quadrants?*

Three Pillars of Innovative Capacity



SEARCH

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SYNTHESIS

How you
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sources

SELECT

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to projects

Three Pillars of Innovative Capacity: Selection

If you don't fund it, it won't happen! But why is it so hard to get innovations “outside the home field” funded?

Demands of the Resource Allocation Process:

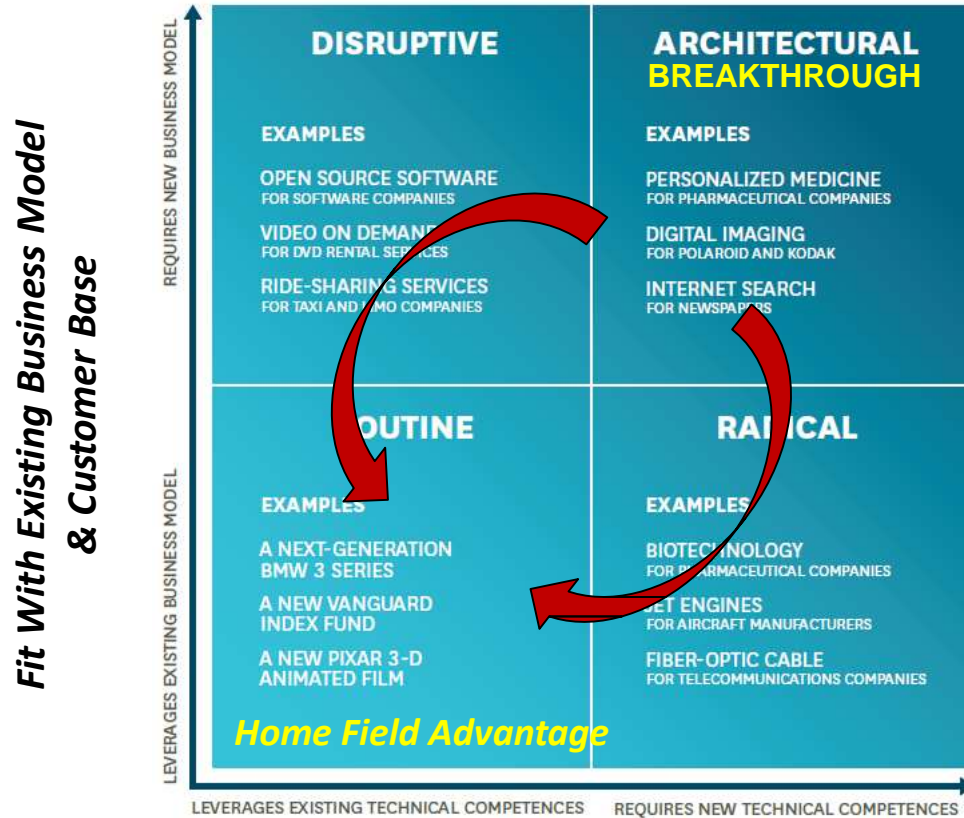
- Estimate of the market potential
- Identifiable customer need
- Internal stakeholders
- Financial logic: margins, growth targets, returns



Realities of Non-Routine Innovation

- Unknown market potential
- Vague customer needs
- No internal stakeholders
- Appear unattractive (when judged against current business model)
- No fit with current branding logic

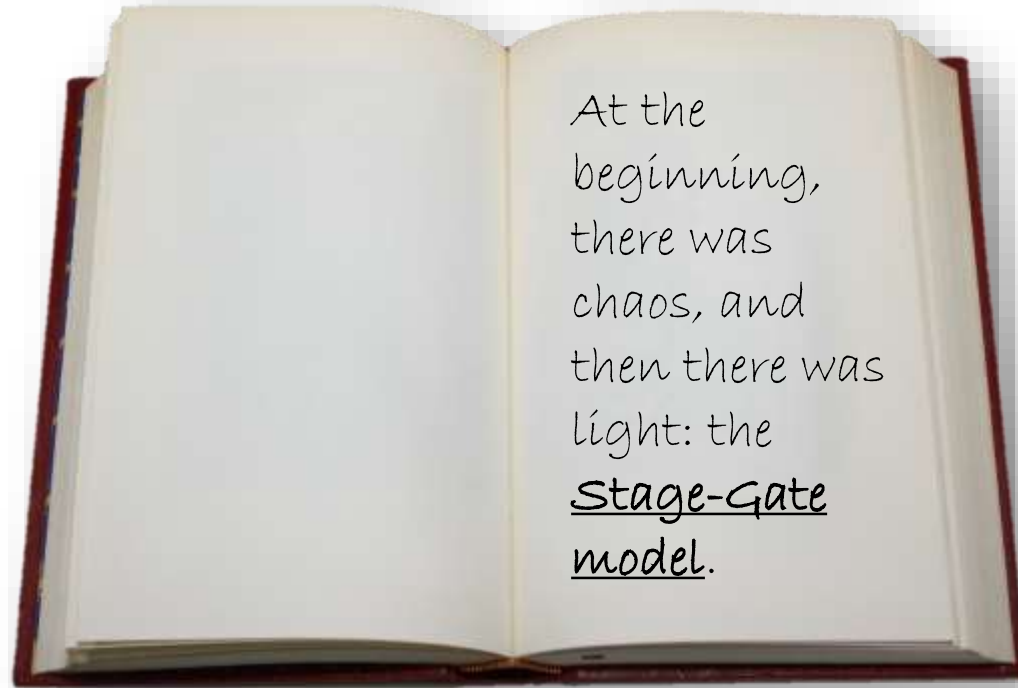
Mapping Innovation Opportunities: The Prevailing Winds



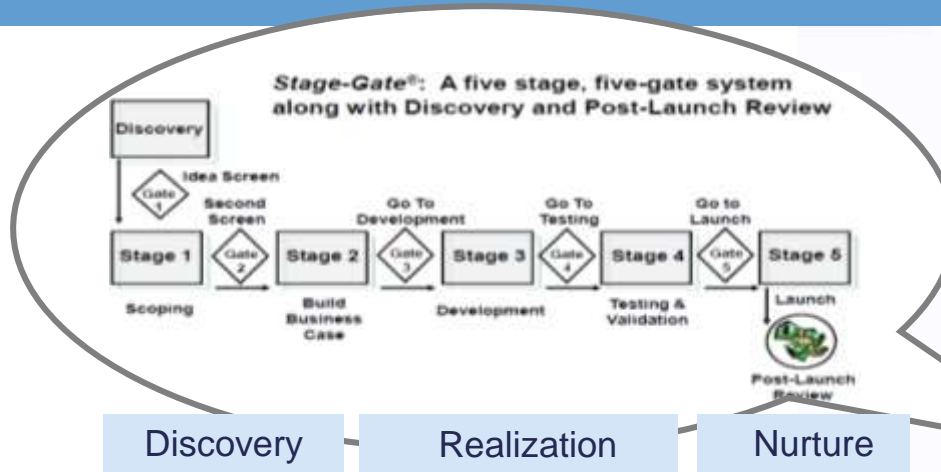
What can we do against this?

**We need to innovate
the innovation process!**

De-risk innovation: The Stage-Gate model



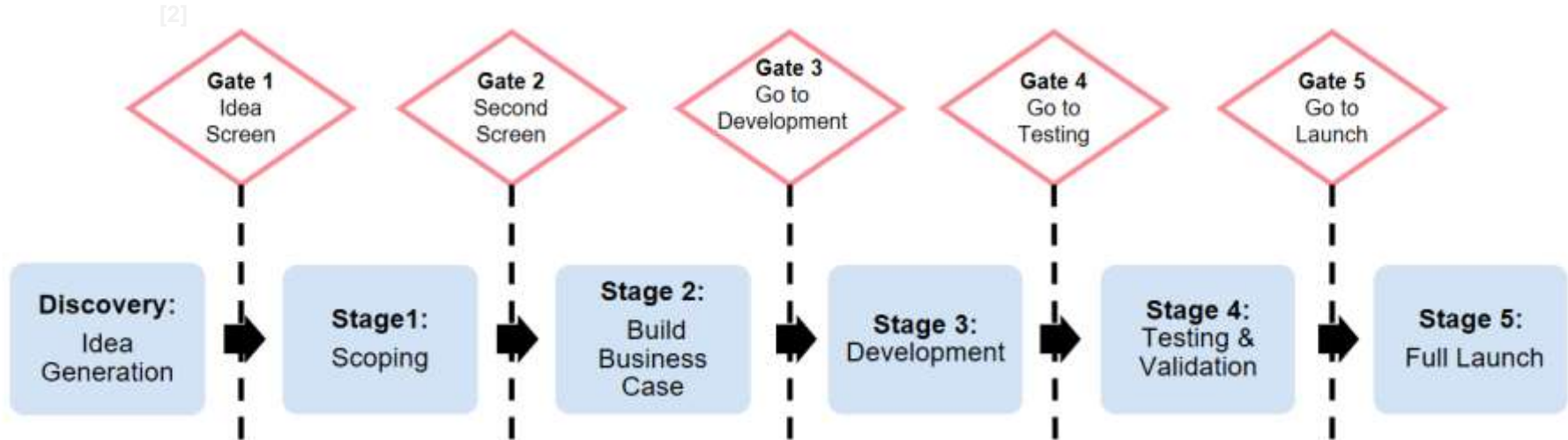
Robert G. Cooper: The Stage-Gate Model



- **“Stage-Gate process** “is a conceptual and operational map for moving new product projects *from idea to launch and beyond*”
- **Structuring the innovation process into different stages** to master complexity of this process. Each stage defines a **set of cross-functional and parallel activities** to be undertaken by the project team.

The Stage-Gate Model

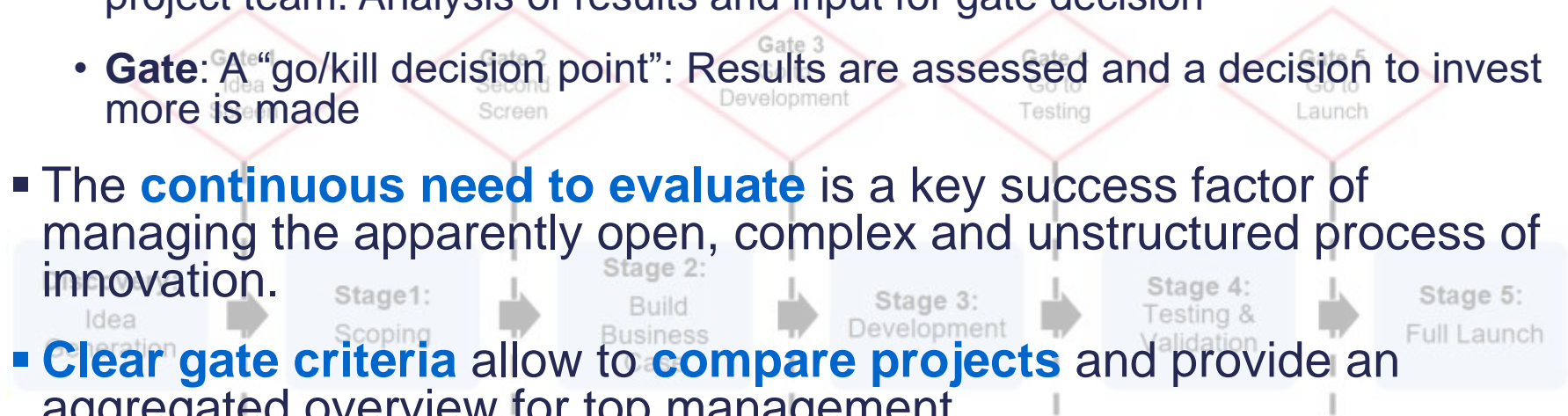
*“The **Stage-Gate process** is a conceptual and operational map for moving new product projects from idea to launch and beyond.”*



Source: Cooper (1990, 2008)

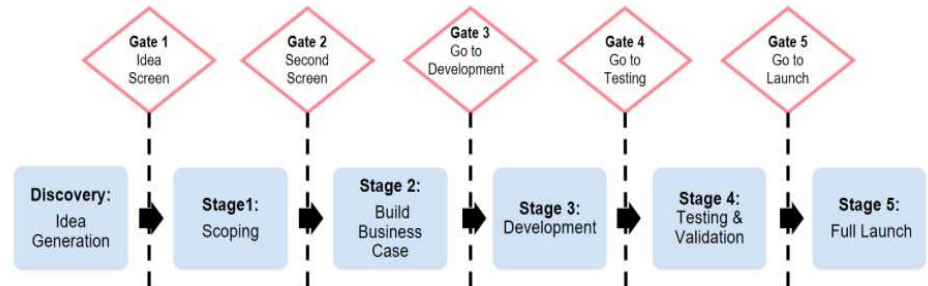
The Stage-Gate model structures the innovation process

- Each **stage** defines a set of cross-functional and parallel activities to be undertaken by the project team, and is followed by a gate:
 - Activities:** Information gathering (problem solving & knowledge generation) by project team. Analysis of results and input for gate decision
 - Gate:** A “go/kill decision point”: Results are assessed and a decision to invest more is made
- The **continuous need to evaluate** is a key success factor of managing the apparently open, complex and unstructured process of innovation.
- Clear gate criteria** allow to **compare projects** and provide an aggregated overview for top management.



Critique of the Stage-Gate model

- **The Stage-Gate process has been subject of plenty of critique:**
 - Too determined, too slow for minor improvements
 - Not suited for radical innovation (what would be a gate criteria?)
 - Sequential thinking, but innovation happens in iterations: “trial and error”
- **What happens before Gate 1?**
 - How are new projects being created? No focus on the **“Frontend of Innovation”**



Design thinking becomes the new paradigm of managing innovation

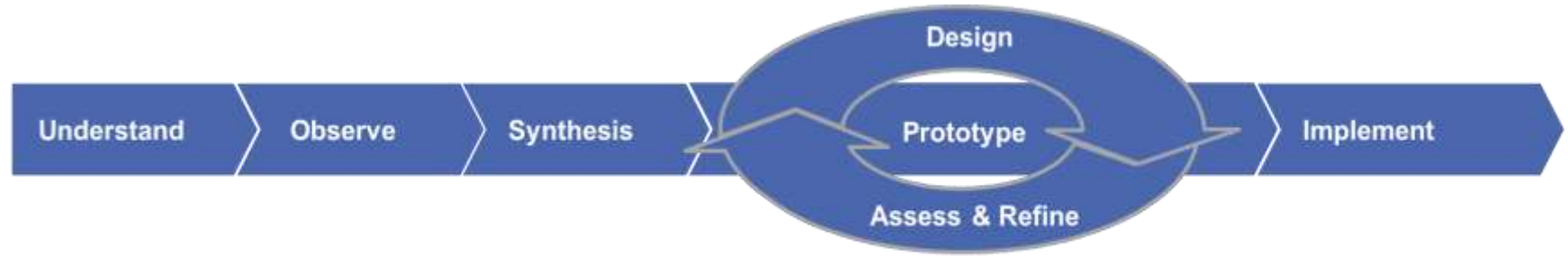


Principles of design thinking

- 1 Focus on users' experiences, especially their emotional ones.
- 2 Create models to examine complex problems.
- 3 Use prototypes to explore potential solutions.
- 4 Tolerate failure (an open culture).
- 5 Exhibit thoughtful restraint.
- 6 Experimentation and iterative problem-solving.

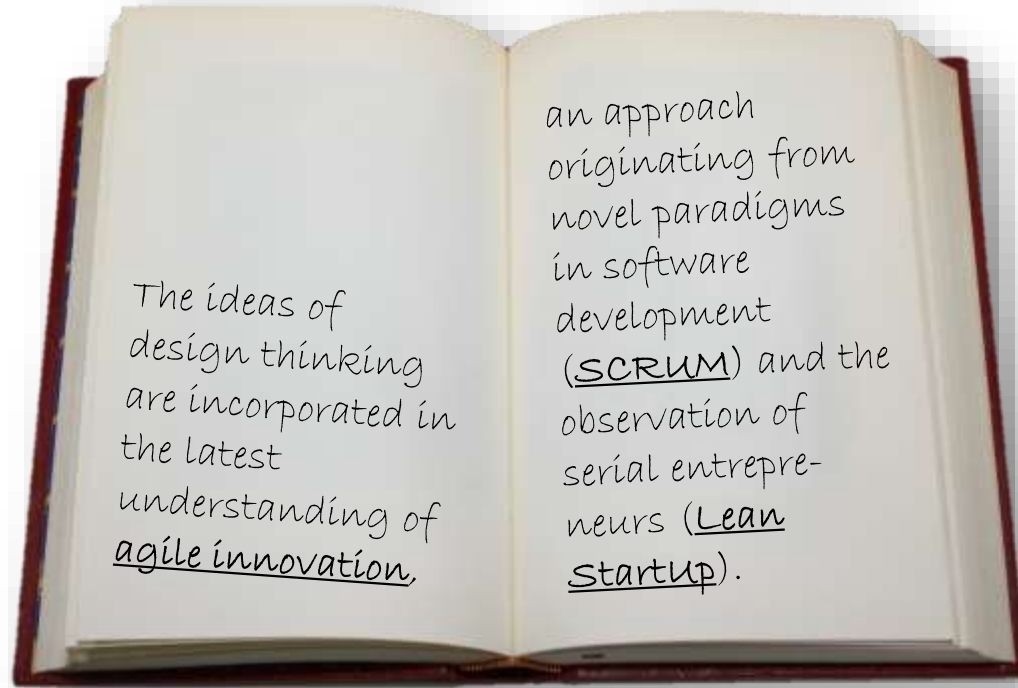


Design Thinking at SAP AG



What	Scope Project & define objectives and outcomes	Interview & Observe End Users in their work place	Identify Needs, Motivations & Ideas for Solutions	Develop iterative Prototypes and test with Users	Deliver a prototype to Solution Development	Work with Development to build the final design
Results	Project Plan Resources	Results of the Research, Artifacts, Pictures	Needs & Motivations User profiles Use cases	Rough Prototypes Feedback from users & stakeholders	Low-fidelity Prototypes Feedback from users & stakeholders	High-Fidelity prototypes and/or design specifications

Today, innovation is agile, highly-iterative, scrum, and lean



The ideas of
design thinking
are incorporated in
the latest
understanding of
agile innovation,

an approach
originating from
novel paradigms
in software
development
(SCRUM) and the
observation of
serial entrepre-
neurs (Lean
Startup).

The Agile Manifesto

The Agile Manifesto was written in February of 2001 by seventeen software practitioners. While the participants didn't agree about much, they found consensus around four main values.

“We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions **over** processes and tools

Working software **over** comprehensive documentation

Customer collaboration **over** contract negotiation

Responding to change **over** following a plan

That is, while there is value in the items on the right,
we value the items on the left more.”

Core principles of agile development

Iterative, incremental and evolutionary: Break development into small increments that minimize amount of up-front planning and design.

Iterations are **short time frames** (timeboxes) from one to four weeks. Each iteration involves a **cross-functional team** working in all functions.

In a **daily stand-up** (“daily scrum”) team members report what they did the previous day, what they intend to do today, and any roadblocks they see toward the goal.

Working software is the primary measure of progress. Team includes a **customer representative** (product owner) to continuously review progress and ensure alignment with customer needs.

Some agile software development approaches:

- Adaptive software development
- Agile modeling
- Agile Unified Process (AUP)
- Disciplined agile delivery
- Dynamic systems development method (DSDM)
- Extreme programming (XP)
- Feature-driven development (FDD)
- Lean software development
- Rapid application development
- SCRUM

Agile development beyond software

Objectives:

Ability to respond in an uncertain and turbulent environment.

Flexibility, motivated teams, improved communication and knowledge transfer. **Faster time to market** and **higher customer-centricity**.

Principles:

- **Integrate the customer** or user, **think in products**, not projects.
- **Agile work practices**: Small teams, self-organization, new roles
- **Commitment** to common goal
- Work in **small iterations**, testing is a core activity of development.

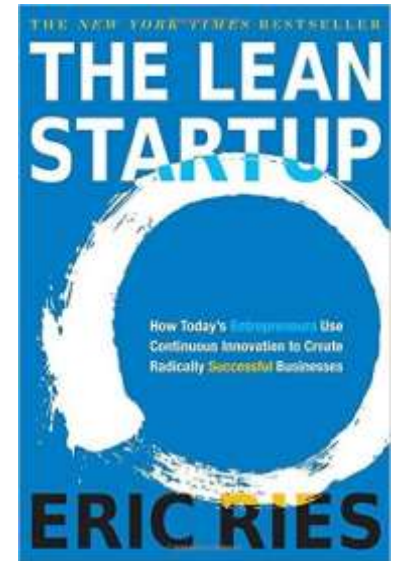
The Lean Startup

Methodology for startups to shorten product development cycles by adopting **business-hypothesis-driven experimentation**, **iterative product releases**, and **validated learning**.

Principles:

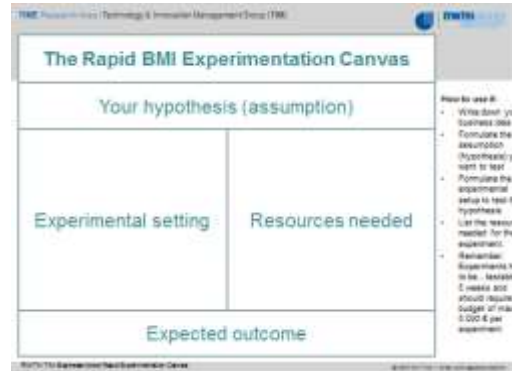
- **Minimum viable product (MVP):** Collect maximum amount of validated learning by one product version with least effort
- **Split or A/B testing:** Experiment by offering two versions
- **Pivot:** Structured course correction designed to test a new fundamental hypothesis about product or business model
- **Build–Measure–Learn loop:** A learning cycle turns ideas into products, measuring customers' reactions and behaviors against built products.
=> **Ideas** → **Build** → **Product** → **Measure** → **Data** → **Learn**

Central hypothesis:
If startups invest their time into **iteratively building products** to meet needs of early customers, they can **reduce risk and don't need large amounts of initial funding** for expensive product launches (failures).



Methods for rapid experimentation and validation of alternatives

- BMI means to develop alternatives – and to **test assumptions**
- This means to experiment and gather real validation data from real customers
- Ability to generate **quick and cheap experiments**, e.g., 5x5x5x5x5 logic by Schrage, **Pretendotypes** by Google
- Experimentation templates, Fast Business Case models



Paper, wood, etc. The Palm Pilot prototype is a great example of how you can test a concept and usage with a simple mockup (a Pinocchio prototype.)



Google AdWords, a great way to measure the ILI (Initial Level of Interest) interest in an product before investing to create it.

Prototype it
www.prototypeit.co.uk
The official guide on prototyping
by Alberto Savoia, only \$29.95

Balsamiq is a great tool for visualizing prototypes—both for yourself and to help convey the message to potential users.



PrototyperPro by JustinMinds is another great tool for visualizing and making ideas more concrete for yourself and others.



If you can get over your (mostly unfounded) fears of other people stealing your idea, Kickstarter is a great tool for testing the Initial Level of Interest (ILI) in an idea.



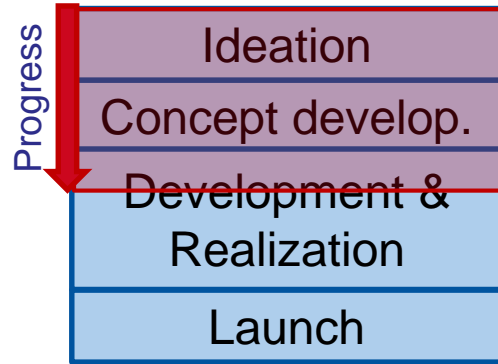
YouTube is great to help people imagine a product and its uses—even if the product does not exist yet.



**All these new approaches
have something in common:
A fundamental change in our
dominant paradigm of planning**

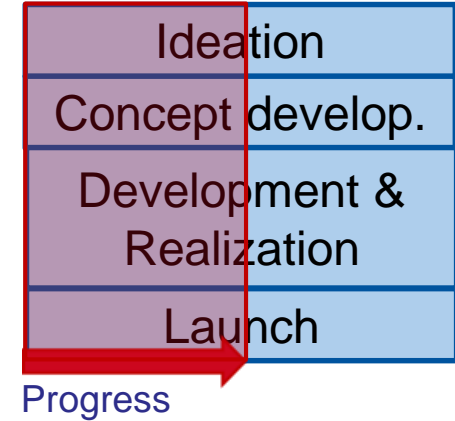
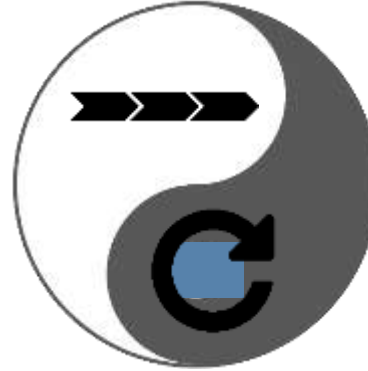
Two perspectives on how to manage innovation

Planning (“we can know”)



**Deterministic, predictive
perspective of a
Stage-Gate process**

Experimentation (“we learn by doing”)



**Experimental &
adaptive perspective of
agile development,
design thinking or
The Lean Startup**

**With this, we can also see an earlier
example from a new perspective:**

Who is the more ambitious corporate entrepreneur?



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



„Business as usual“

**Innovation is not a PPT slide deck
with a decision template based on
an elaborated business case ...**

**... but it means to experiment
and gather real data from real
customers**

Agile innovation:

**Agile branding or
brand as core factor
of stability?**

We need faster decision making

#WeAreNotWaiting

„They told me as a child that there will be a cure for diabetes, and I am still waiting.

But I will not wait for a better Artificial Pancreas System (APS).“

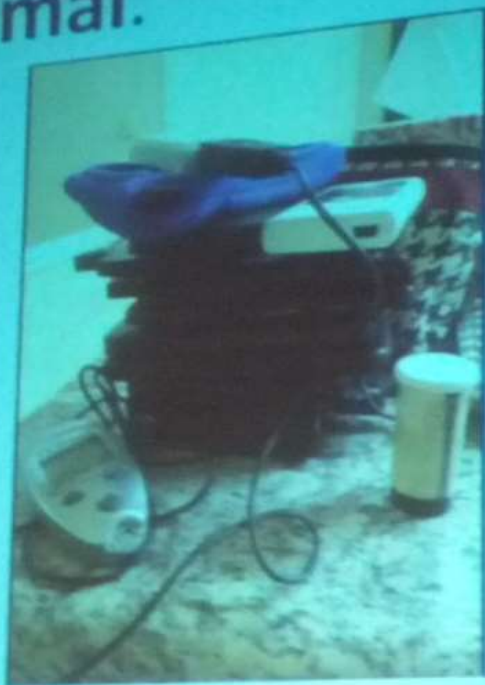
The cost? Minimal.

- Already owned (basic diabetes supplies):
 - Insulin pump, sites, reservoirs
 - Insulin
 - CGM & sensors
 - Meter & test strips
- Purchased:
 - Carelink USB stick - \$35
 - Raspberry Pi mini computer - \$60
 - (Cables & miscellaneous - \$20-100)

Total: ~\$95 + many hours of blood, data, and lots of devices

Having a DIY artificial pancreas in your pocket?

Priceless.





NIGHTSCOUT

#WeAreNotWaiting

Welcome

What is the Nightscout project?

Nightscout (CGM in the Cloud) is an open source, DIY project that allows real time access to a Dexcom G4 CGM from web browsers via smartphones, computers, tablets, and the Pebble smartwatch. The goal of the project is to allow remote monitoring of the T1D's glucose level using existing monitoring devices.

Are you looking for technical support for your existing Nightscout installation or have questions about your existing Nightscout installation? Please visit the [CGM in the Cloud](#) group on Facebook for help! For first-time installation instructions, keep reading here!

THIS IS THE NIGHTSCOUT PROJECT



Connect with:

Welcome to the Nightscout Project



Powered by [Cloud Social Login](#)

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Disclaimer

All information, thought, and code described here is intended for informational and educational purposes only. Nightscout currently makes no attempt at HIPAA, privacy compliance. Use of code from [github.com](#) is without warranty or support of any kind. Please review the LICENSE found within each repository for further details. Use Nightscout at your own risk, and do not use the information or code to make medical decisions.

OpenAPS.org

#OPENAPS REFERENCE DESIGN

LEARN MORE ABOUT #OPENAPS

TESTING AND

#WeAreNotWaiting to more quickly improve and save as many lives as possible and reduce the burden of Type 1 diabetes

Introducing the #OpenAPS project

by Dana Lewis | February 4, 2015 | [OpenAPS](#) | [APS](#), artificial pancreas, CGM, CGM in the Cloud, closed loop, continuous glucose monitor, diabetes, diabetes technology, insulin pump, open source, research, T1D, type 1 diabetes, [WeAreNotWaiting](#)

The Open Artificial Pancreas System (#OpenAPS) is an open and transparent effort to make safe, effective basic Artificial Pancreas System (APS) technology widely available to more quickly improve and save as many lives as possible and reduce the burden of Type 1 Diabetes.

Background on the current state of diabetes management

Diabetes (T1D), an autoimmune disease that destroys pancreatic beta cell functionality, is managed by frequent injections or infusions of synthetic insulin. Insulin is a potentially lethal drug whose dose must be constantly adjusted based on blood glucose (BG) levels, meal content, activity, and any other hard-to-measure factors. Even with state-of-the-art technology (insulin pumps and continuous glucose monitors (CGMs)), every person with T1D (or their caregivers, as well as children) has to make approximately 300 decisions a day related to their diabetes management to have any chance at all of mostly avoiding short-term sickness and preserving quality of life. And nearly everyone with T1D, and all their loved ones, live with the ever-present risk of waking up in the morning as a result of severe hypoglycemia. These are the most common complications of T1D, and they are so difficult, even the most diligent and lucky patients with T1D have both an elevated risk of death from acute or chronic complications (hypoglycemia and a high rate of complications and early death from acute or chronic hyperglycemia (high blood sugar)). (For more background on T1D and current

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The manufacturer Dexcom, Inc.: “*Great ! We will bring this to market (open innovation rules). But this will take 5+ years for FDA approval.*”

Dana: „???? We are using this already !!!!“

**User communities organized and
got FDA approval in less than 5 months!**

#WeAreNotWaiting

Innovation in Open Ecosystems
= new speed to market (*usage*)

Conclusions

**There are many ways
to create value with innovation today ...**

**... but ways to capture value from
smart data and digital ecosystems
are rather complex ...**

Thankfully!

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

pillertime@rwth-aachen.de

Twitter: @masscustom

www.frankpiller.com

Customization 4.0

**MCPC 2017: The 9th World Conference on
Mass Customization & Personalization**

Aachen, Germany, November 19-21, 2017

Let's continue this discussion in two weeks!

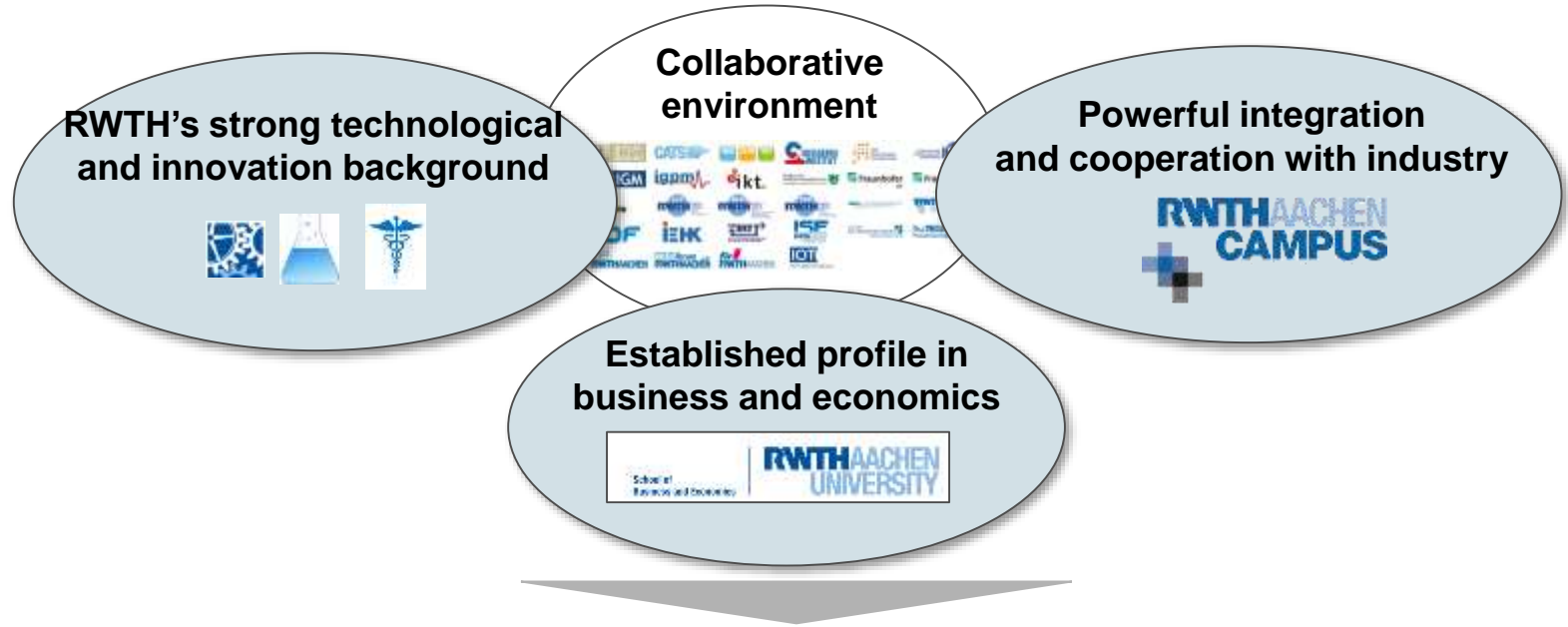
mcpc2017.com

Opportunities for further interaction

Agile Culture, Industrie 4.0 and horizontal networking (valley) make the RWTH Aachen Campus a learning organization



In the highly innovative surrounding of the RWTH Campus we educate managers and technology professionals at the intersection of technology and business



The **RWTH Business School** offers professional and Executive Education, forming strong leaders to meet the challenges of tomorrow

**BUSINESS
SCHOOL**

**RWTH AACHEN
UNIVERSITY**



Our current study programs of RWTH Business School (business-school.rwth-aachen.de)



MME
Master of Management and Engineering

Move from technical expert
to technology leader

- Taught in English
- Three semesters full-time (part-time option)
- Delivered in Aachen and Cambridge, England
- Master of Science (M.Sc., RWTH)

[View Factsheet](#) [View Details](#)



EMBA
Executive Master of Business Administration

Professionalize your
management skills

- Taught in English and German
- Four semesters part-time
- Delivered in Aachen and St. Gallen, Switzerland
- Master of Business Administration (MBA, RWTH)

[View Factsheet](#) [View Details](#)



DBA
Doctor of Business Administration

Leave your footprint and break new ground in
research

- Taught in English
- Eight semesters part-time
- Delivered in Aachen and Maastricht, Netherlands
- Doctor of Business Administration (DBA)

[View Factsheet](#) [View Details](#)



Master in Management and Engineering (M. Sc.)

in Technology, Innovation, Marketing and Entrepreneurship

A programme delivered in partnership with Cambridge Digital Innovation at Hughes Hall, University of Cambridge

**A unique blended-
learning program
in innovation for
young professionals**



Degree

Master of Science (M.Sc.)

Focus

Technology, Innovation, Marketing and Entrepreneurship
with in-depth exposure to cutting-edge technology fields

Target Group

Professionals with a STEM background

Duration

2 Semesters Full-Time, 8 Semesters Part-Time

Location

At home and/or on campus in Aachen, Cambridge, and/or Boston

Teaching

Unique blend of digitally enabled teaching
and highly interactive on-campus experiences

Fees

30,000 EUR for the entire program incl. Cambridge Ecosystem Practicum in Cambridge, UK
payable in three installments. This corresponds to 5,000 EUR per semester if you study part-
time (i.e. 8 semesters) and 10,000 EUR per semester if you study full-time (i.e. 3 semesters)

Academic Director

Professor Torsten Oliver Selge, PhD

The RWTH Executive MBA

Alumni

Einblicke

Kontakt

News



Kontakt

info@emba.rwth-aachen.de
Tel: +49 241 80 20010
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[Newsletter bestellen](#)

Community

Executive MBA RWTH Aachen University



Executive MBA



EMBA Einblicke



Nächste Durchführung

Part time **Executive MBA program** at Germany's leading university of technology, focusing on **innovation, technology management and leadership**

Academic director: Prof. Dr. Frank T. Piller
emba.rwth-aachen.de

Berufsbegleitend zur Promotion: Der RWTH DBA

Promotionsprogramm

Doctor of Business Administration (DBA)

Doctor of Business Administration (DBA)

Termin: 01.09.2016

Teilnahmegebühr: 48.000 €

Format: Promotionsprogramm

Abschluss/ECTS: 120 ECTS

RWTH Institut/Anbieter: RWTH International Academy gGmbH /
Maastricht School of Management

Wissenschaftliche Leitung: Prof. Wim A. Naudé

Didaktik: Präsenztage, Case Studies, Gruppen- und
Individualarbeit

Qualitätssiegel: AMBA, IACSB und AACSB

Veranstaltungsort: Aachen und Maastricht (NL)

Voraussetzungen: siehe Details



Der **Doctor of Business Administration (DBA)** erstreckt sich über einen Zeitraum von insgesamt acht Semestern. Die Kursinhalte der ersten beiden Semester setzen sich aus interaktivem Unterricht, Diskussionen, Fallstudien etc. zusammen und ermöglichen so einen optimalen Wissensaustausch zwischen renommierten Dozenten der RWTH Aachen und den Studierenden.

In den folgenden sechs Semestern widmen sich die Studierenden der **unabhängigen, angewandten Forschung einer betriebswirtschaftlichen Thematik aus ihrem Unternehmen**.

Der Austausch von Vortragenden und Studenten ist ein essenzieller Teil des Studienkonzeptes im ersten Jahr. In den darauffolgenden Jahren wird vor allem die Intensität mit dem betreuenden Professor stark in den Vordergrund gerückt. Das Alumni Netzwerk der RWTH Aachen und der Maastricht School of Management komplettieren den langfristigen Netzwerkgedanken.

Der DBA der RWTH Aachen richtet sich an Manager und Unternehmer, die durch ein tiefes, grundlegendes Verständnis der Geschäftsprozesse technologische Innovationen gestalten und führende Entscheider in ihrem Unternehmen sind oder werden wollen.

Managing Technology & Innovation: How to deal with disruptive change

Learn how to lead an organization to success by anticipating and leveraging disruptive change brought about by technology and market trends.

[Start the MicroMasters Program](#)[View Courses](#)[Meet the Instructors](#)

We share our approach of innovation:

A free MicroMaster by RWTH – study online and at your own pace. Earn ECTS and course credits.

**www.edx.org, search “RWTH”
(direct: <http://tinyurl.com/yb7d8sxc>)**



MicroMasters™ A series of credit-eligible courses recognized by industry.

Success or failure? The future of your organization today depends on how well it can adapt to and leverage disruptive technologies and business models.

This MicroMasters program enables you to do just that – to deal with disruptive change in the

🕒	Average Length:	6 weeks per course
👤	Effort:	6-10 hours per week, per course
📖	Number Of Courses:	6 Courses in Program

Lernen Sie die Methode für systematische Geschäftsmodell-Innovation

INTERNATIONAL
ACADEMY

RWTH AACHEN
UNIVERSITY

**RWTH Zertifikatskurs für
Führungskräfte:
Business Model Innovation**

**5 Tage in zwei Teilen, plus
unternehmensbezogenes Projekt**

**Dieser Kurs ist auch als individueller Inhouse-Kurs
zu flexiblen Terminen möglich!**

RWTH Zertifikatskurs „Business Modell Innovation“

Termine unter bmi.rwth-aachen.de

Business Model Innovation

Zertifikatskurs der RWTH International Academy

28. - 30. Oktober

Erfolgsfaktoren von Business Model Innovation

23. - 24. November

Implementierung von Business Model Innovation



Exclusive Smart Factory Masterclasses & Factory Tours

Industry 4.0:

Leading the Factory of the Future (Incl. Siemens factory tour)

by Frank Piller, Fabrizio Salvador



Dates and locations (BMW, Siemens, Festo, Audi ...) for 2018:

theleadershipnetwork.com/courses/future-manufacturing

SIEMENS

FACTORY TOUR

3

DAYS

25

PLACES ONLY

ilm

ILM ACCREDITED

Course Availability:

22 - 24 June 2016 (**SOLD OUT**)

Nuremberg, Germany

Private Course (25 Participants)

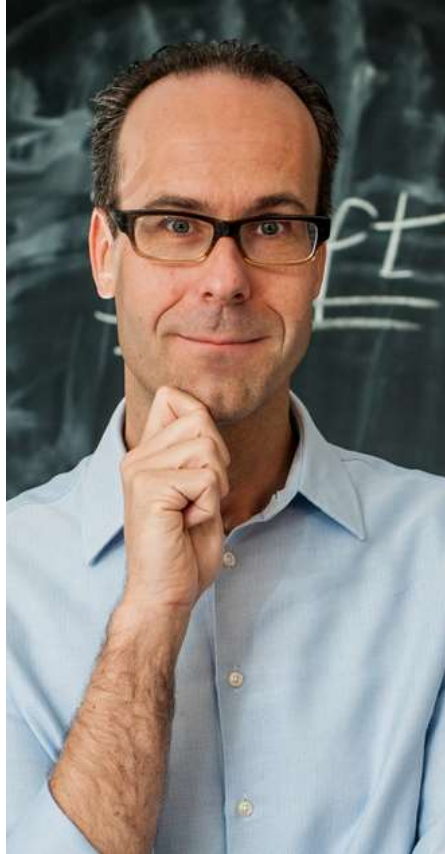
Nuremberg, Germany

What does it take to be ready for Industry 4.0?

Think 3D printing, The Internet of Things and products talking to the machines that are actually putting them together. Industry 4.0 is starting to look a lot like the future.

BOOK NOW

Open for interaction



Frank T. Piller, Prof. Dr.

RWTH Aachen University

TIME Research Area Technology, Innovation,
Marketing & Entrepreneurship

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