

# Software as a Business

## 0. Announcements

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2020-0.2, 20-10-28  
<http://st.inf.tu-dresden.de/teaching/saab>

# Lecturing – How? - in Corona-Times?

- ▶ We will start with presence teaching and film a video
  - People may ask questions via a Matrix chat room
  - <https://matrix.tu-dresden.de/#/room/#saab:tu-dresden.de>
  - This room also has a jitsi conference room, see widget on top of the page
- ▶ If Aßmann catches a cold, there might be sudden changes
  - Then, lecture films from home
  - Lecture dates will morph to question hours via Matrix room

# Startup Courses

- ▶ Queen's University College, Kanada (courtesy Prof. James Cordy):
  - <http://www.queensu.ca/news/articles/software-startup-course-highlights-new-academic-offerings>
  - <http://research.cs.queensu.ca/softwarestartups/>
  - <http://www.smartplanet.com/blog/bulletin/how-to-build-a-startup-standfords-new-free-course/>
- ▶ Stanford
  - <http://online.stanford.edu/course/startup-engineering>
  - (new one from stanford - that would be great for our Medieninformatik...)
- ▶ Peter Thiel course, VC of Facebook:
  - <http://blakemasters.com/peter-thiels-cs183-startup>
- ▶ Aberdeen:
  - <http://startupsexplained.com/>
  - <http://www.abdn.ac.uk/study/courses/postgraduate/taught/software-entrepreneur>
- ▶ Riehle's Product Management Course <http://pmbycase.com/>

# Free Literature

- ▶ [StartupGenomeReport] Max Marmer, Bjoern Lasse Herrmann, Ertan Dogrultan, Ron Berman. CSO Startup Genome Report. A new framework for understanding why startups succeed.
  - Supporters: Chuck Eesley, Stanford University; Steve Blank, Stanford University
  - startupcompass.co
- ▶ <https://business-services.heise.de/specials/ebooks.html>

# Literature on Business Models

- ▶ BITKOM. Mathias Weber (ed.) Wie Cloud Computing neue Geschäftsmodelle ermöglicht. Leitfaden.
  - [https://www.bitkom.org/Bitkom/Publikationen/Publikation\\_832.html](https://www.bitkom.org/Bitkom/Publikationen/Publikation_832.html)
- ▶ BITKOM. Big Data und Geschäftsmodell - Innovationen in der Praxis: 40+ Beispiele
  - [https://www.bitkom.org/Bitkom/Publikationen/Publikation\\_527.html](https://www.bitkom.org/Bitkom/Publikationen/Publikation_527.html)
- ▶ [Faltin] Günter Faltin. Kopf schlägt Kapital. Die ganz andere Art, ein Unternehmen zu gründen. Von der Lust, ein Entrepreneur zu sein. Dtv. 2012.
- ▶ [Herzwurm] Georg Herzwurm, Wolfram Pietsch. Management von IT-Produkten. Dpunkt-Verlag, 2009
- ▶ <http://www.xn--grnder-4ya.guide/gratis-e-book.html>

# Innovation Stories

- ▶ [Scholtissek] Stefan Scholtissek. Die Magie der Innovation. Verlag Moderne Industrie.
- ▶ [Warmer-Weber] Christoph Warmer, Sören Weber. Mission: Startup. Gründer in Deutschland schildern ihren Weg von der Idee zum Unternehmen. Springer. 2014. Ebook. Interviews with German founders.
  - <https://www.springerprofessional.de/mission-startup/4318460>
- ▶ [Scheer] August-Wilhelm Scheer. Unternehmen gründen ist nicht schwer. Springer. 2000. Honest book about ups and downs of ARIS.

# Founder Portals

- ▶ <https://www.gruenderkueche.de/>
  - <https://www.gruenderkueche.de/fachartikel/checklisten-leitfaeden/>
- ▶ <https://www.fuer-gruender.de/>
- ▶ <https://www.unternehmerheld.de/>
- ▶ German Accelerator East Coast and West Coast helps startups to internationalize in USA
  - <https://www.germanaccelerator.com/>

# Books

- ▶ [BlankDorf] Steve Blank, Bob Dorf, Nils Högsdal, Daniel Bartel. Das Handbuch für Startups – die deutsche Ausgabe von 'The Startup Owner's Manual'. Deutsche Übersetzung von Kathrin Lichtenberg. 2014. O'Reilly.
  - <http://www.daniel-bartel.de/das-handbuch-fuumlr-startups.html>
- ▶ [Ries] Eric Ries. Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. O'Reilly, 2011
- ▶ [Maurya] Ash Maurya. Running Lean. Iterate from Plan A to a Plan That Works. O'Reilly, 2012.
- ▶ Ash Maurya. How to Create Your Lean Canvas.  
<http://leanstack.com/LeanCanvas.pdf>
- ▶ [LeanAnalytics] Alistair Croll, Benjamin Yoskowitz. Lean Analytics. O'Reilly, 2013
- ▶ [LeanUX] Jeff Gothelf, Josh Seiden. Lean UX: Applying Lean Principles to Improve User Experience. O'Reilly, 2013.
- ▶ [LeanCD] Cindy Alvarez. Lean Customer Development: Building Products Your Customers Will Buy. O'Reilly, 2014
- ▶ [LeanAML] Lutz Finger, Soumitra Dutta. Ask Measure Learn. Using Social Media Analytics to Understand and Influence Customer Behavior. O'Reilly 2014
- ▶ [SW-Industry] Peter Buxmann, Heiner Diefenbach, Thomas Hess. The Software Industry. Economic Principles, Strategies, Perspectives. Springer 2012



# Books on VPA/BMC

- ▶ [BMG] Alexander Osterwalder. Yves Pigneur. Business Model Generation. Wiley.
  - !Fantastic! There is a preview available from the website <http://www.businessmodelgeneration.com/book>, do NOT miss it
  - [http://www.businessmodelgeneration.com/downloads/businessmodelgeneration\\_preview.pdf](http://www.businessmodelgeneration.com/downloads/businessmodelgeneration_preview.pdf)
- ▶ [VPD] Alex Osterwalder, Yves Pigneur, Greg Bernarda, Alan Smith, Trish Papadacos. Value Proposition Design. Wiley. 2014
- ▶ [Carlson-Wilmot] Curtis R. Carlson, William W. Wilmot. Innovation. The Five Disciplines for Creating what Customers Want. SRI International. Crown Business, US, 2006
- ▶ [ThinkNew] Christian Hoffmeister. Yorck von Borcke. Think new! 22 Erfolgsstrategien im digitalen Business. Hanser-Verlag, 2015.

# Recommended Reading

- ▶ Tim Clark, Alexander Osterwalder. Business Model You: A One-Page Method For Reinventing Your Career, 2012, Wiley.
  - For strategic development of yourself
- ▶ Scheer, August-Wilhelm. Nutzentreiber der Digitalisierung. Informatik-Spektrum, vol. 39(4), pp. 275-289 Springer, 2016
  - <http://dx.doi.org/10.1007/s00287-016-0975-4>
  - This is a great paper explaining the main drivers for disruptive business model in the internet of services and things.
- ▶ [Oddoy] Manuel Oddoy. Softwareentwicklung mit natürlicher Sprache (“Lean Modelling”), Belegarbeit, TU Dresden, Jan. 2014. Supervised by Christian Wende, [www.devboost.de](http://www.devboost.de)
- ▶ [Korger] Christina Korger. Organisierte Software-Startups mit kollaborativen Canvases. Großer Beleg. TU Dresden, 2014.
  - <http://nbn-resolving.de/urn:nbn:de:bsz:14-qucosa-160539>

# Selling Strategies

- ▶ Neil Rackham. Spin Selling. McGrawHill, 1996
- ▶ Neil Rackham. Major Account Selling Strategies. McGrawHill, 1989.
- ▶ Michael T. Bosworth. Solution Selling. Creating Buyers in Difficult Selling Markets. McGrawHill, 1995.

# Mentorings of Software Start-Ups



- ▶ Ubigrate 2008-2012: Boxes with RFID-Tags to automate logistics

- ▶ Mentalmotive (2008-2015): Environment for multimedia exchange

- [www.mentalmotive.de](http://www.mentalmotive.de)



- ▶ DevBoost (2012-today): Software quality management tools

- [www.devboost.de](http://www.devboost.de)

- Consulting, Domain-specific languages



- ▶ Wandelbots (2017-today): Co-working robotics

- [www.wandelbots.de](http://www.wandelbots.de)

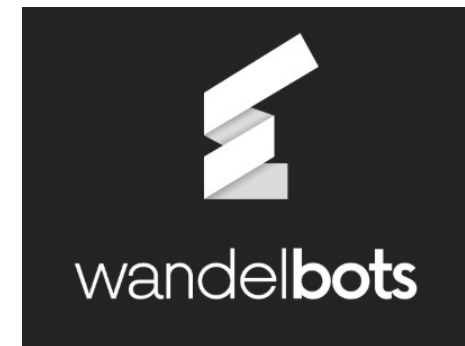
- Demonstration-based teaching of robots

- ▶ AppAxy (2020-): collaborative apps

- ▶ Mainteny (2020-): IoT-based maintenance of elevators

- <https://mainteny.com/en>

- [https://www.youtube.com/watch?v=tDp\\_IRTNosw](https://www.youtube.com/watch?v=tDp_IRTNosw)





# Software as a Business

## 0.1 Overview

# Objectives

- ▶ What are good business models for software?
- ▶ Good modeling helps to sell and to survive as entrepreneur
- ▶ Understand customers and sales processes
- ▶ Understand innovation processes
- ▶ Understand Lean Startup

# Table of Contents

- ▶ 0 Introduction to Lean Startup
  - Basics, Patterns and Tools
  - Lean Startup Process
- ▶ I – Problem-Solution Fit Methods
  - DesignThinking
- ▶ II – Problem-Solution Fit with MVV
- ▶ III - Product-Market Fit with MVP
- ▶ IV – Scale

### Scale

Coopetition

Networking

Ecosystems

Crowdsourcing

Venture Capital

### Product-Market Fit with MVP

Lean Startup

Smoke Tests

### Problem-Solution Fit With MVV

Lean Textual Modeling

Lean Feature Modeling

Canvas Engineering

Idea Variation

### Problem-Solution Fit Methods

Pain-Gain Analysis

Value Proposition analysis

Selling Techniques

Question-Guided Traveling

### Introduction to Lean Startup

Business Models

Canvases

Innovation Stories

Lean Startup







# Internship 2 SWS (60h, 4h per week)

- ▶ Developing an innovative app on an IoT platform
  - Group with 5-6 people
- ▶ Develop a scalable, sticky and viral business model
  - Use the innovation management system LINC
- ▶ Feb 01, 2021: Pitch in front of investors (“dungeon of dragons”)
- ▶ Introduction to internship: Monday, Nov 2 (tentatively)
  - Presentation of IoT platforms
  - Presentation of LINC