



10. Instruments for Customer Analysis and Validation

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<http://st.inf.tu-dresden.de/teaching/saab>

- 1) Customer Analysis
- 2) Value Proposition Analysis with the VPC
- 3) Customer Analysis
 - 1) Situation Analysis
- 4) Jobs-to-be-Done Framework
- 5) Role in the Company
- 6) Relationships

Obligatory Literature

- ▶ A. Osterwalder, Y. Pigneur et al. Value Proposition Design. Wiley.
- ▶ [BettenUlwick] LA Bettencourt, AW Ulwick. The customer-centered innovation map. Harvard Business Review, 2008 – iimagineservicedesign.com
 - https://www.researchgate.net/publication/5313092_The_customer-centered_innovation_map

At one period of those early days I think that I must have had fully three hundred watches. I thought that I could build a serviceable watch for around thirty cents and nearly started in the business. But I did not because I figured out that watches were not universal necessities, and therefore people generally would not buy them.

Henry Ford. My Life and Work. www.gutenberg.org Ebook #7213



The history of the “Lean Startup” movement is intertwined to several books:

- 2008 Blank/Dorf
- 2011 “Lean Startus” Eric Ries O’Reilly
- 2012 “Running Lean” Ash Maurya
- 2013 “Lean Analytics” B. Yoskowitz

Other Literature

- ▶ [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>
- ▶ Alan Klement. When Coffee and Kale compete. Free web book <http://www.whencoffeeandkalecompete.com/>
- ▶ Free web book: Anthony W. Ulwick Jobs to be Done. Theory to Practice. Idea Bite Press www.ideabitepress.com, <https://jobs-to-be-done-book.com/>





10.0. Begeisterung Startups

Use your own flow to create customer flow

Gain: Flow of visitors, Flow of entrepreneurs

Startup of the Day – Miniatur Wunderland Hamburg

- ▶ Founders in 2001 Gerit and Frederik Braun: Hamburger Speicherstadt has empty levels
- ▶ “The largest model railway of the world”
- ▶ 2000: first film <https://www.youtube.com/watch?v=mjcEVLV02f4>
- ▶ <https://www.youtube.com/watch?v=VAVeJ5HLyVE>
- ▶ <https://www.youtube.com/watch?v=9CZy5-wB4cQ>
- ▶ <https://www.youtube.com/watch?v=VAVeJ5HLyVE>
- ▶ English: https://www.youtube.com/watch?v=ff4RWuPx8Co&feature=emb_rel_end
- ▶ >300 employees, > 1000 trains, 21M€ costs so far
- ▶ Tracks under surface, countries Switzerland, Venezia, Scandinavia, South America (2022), shadow railway stations, airport with “real” starting planes
- ▶ The control software
 - <https://www.miniatur-wunderland.de/wunderland-entdecken/technik/carsystem/steuerungssoftware/>
 - 168kLOC, of which are 100kLOC control on 50 PC , 42kLOC fire brigades, 18kLOC vehicle clients
- ▶ <https://video.golem.de/software-entwicklung/18614/it-im-miniaturwunderland-bericht.html> (with video)



So Many Videos..

- ▶ Gerrits Tagebuch (Diary)
 - Airbus Beluga maiden flight
<https://www.youtube.com/watch?v=FSpYUFmA-XI>
- ▶ The founders <https://www.youtube.com/watch?v=BPBRtNUw9Vk> “most beloved place-to-see in Germany”
- ▶ Airport inauguration video <https://www.youtube.com/watch?v=bIAYb6oBwQA> “There were many moments when I wanted to give up..”
- ▶ Gerrit debugs the airport software <https://www.youtube.com/watch?v=v4QvJoBc-HA>
- ▶ Drives
 - Driving through “Switzerland”
<https://www.youtube.com/watch?v=RBArNAyODLc>
 - Driving through “Austria”
<https://www.youtube.com/watch?v=NwTRW3fllgA>



Flow-based Startups

'Designing for Flow' "Made with Love"

7

Software as a Business

[Schaffer] Owen Schaffer. Crafting Fun User Experiences: A Method to Facilitate Flow. Human Factors International. https://www.researchgate.net/publication/272181532_Crafting_Fun_User_Experiences_A_Method_to_Facilitate_Flow [Flow] [https://en.wikipedia.org/wiki/Flow_\(psychology\)](https://en.wikipedia.org/wiki/Flow_(psychology))

- ▶ **Flow** is a form of hyperfocus humans run doing a beloved activity [Flow]
 - Flow makes happy
 - Most of the employees of Wonderland are Flow-employees
- ▶ Seven conditions for getting into flow [Flow] [Schaffer]:

1

- Knowing what to do

4

- High perceived challenges

2

- Knowing how to do it

5

- High perceived skills

3

- Knowing where to go (if navigation is involved)

6

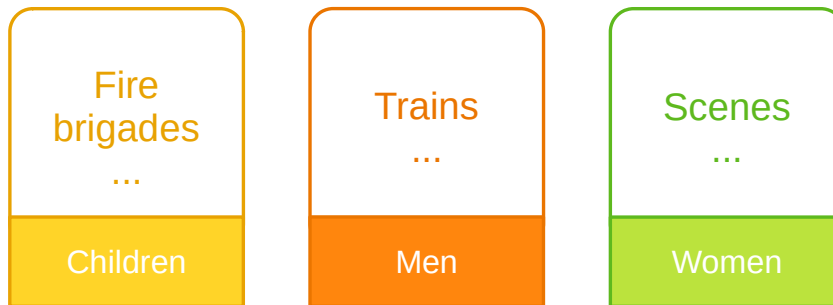
- Knowing how well you are doing

7

- Freedom from distractions

Customer Segments

- ▶ Watch the youtube videos to find out why visitors get into flow in the Wunderland:



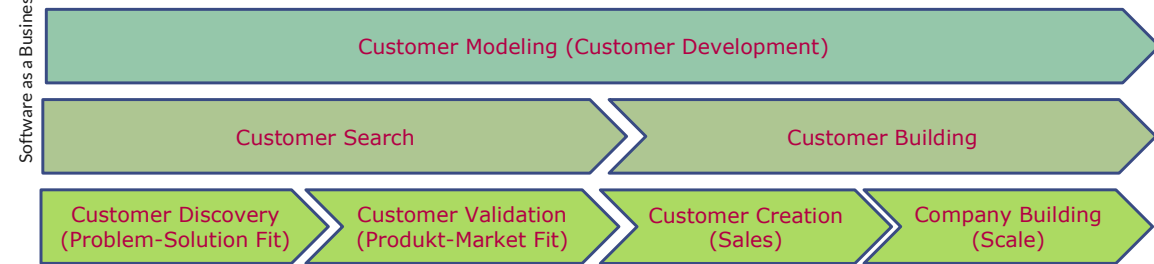


10.1. Customer Modeling

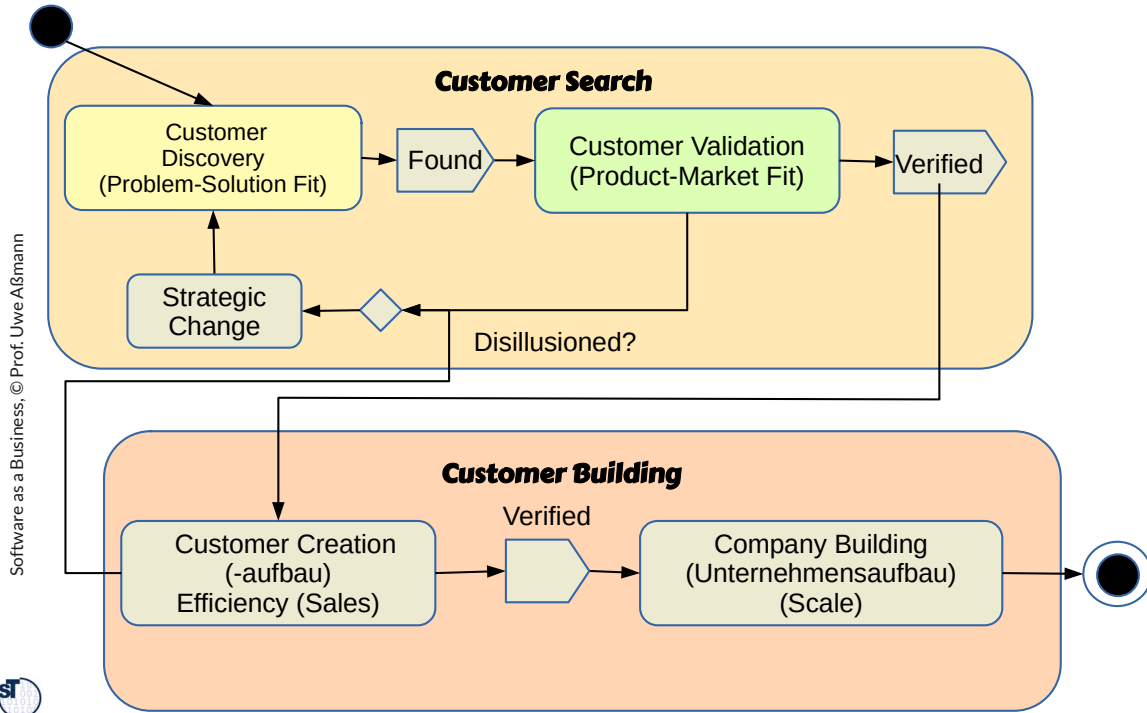
Find out who the customer is, what she needs
and desires
.. a specific part of the Lean Innovation process
[Blank]

The Customer Modeling Process, Refined by S. Blank

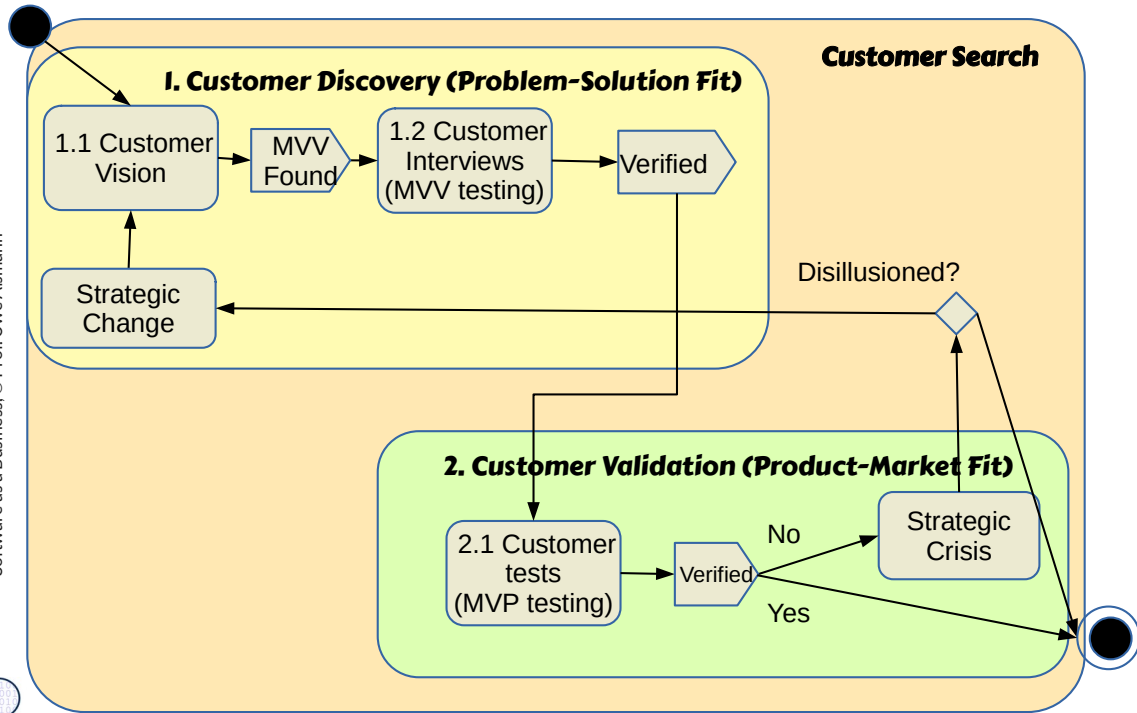
- ▶ Customer Modeling, a company-centric process [Blank/Dorf] 2008
 - Originally called “Customer Development”, but we use this differently in this course



Q3: Blank's Customer Development Process Blended with Maurya's Running Lean Process



Q4: Step 1: The Customer Discovery Subprocess (Problem-Solution Fit)





10.2 Basic Pain-Gain Analysis (Value Proposition Analysis) of Osterwalder

Value Proposition Canvas
From “Value Proposition Design”

Killing Pain and Filling Desire

- ▶ **Customer Analysis** is something different than Selling.
 - Selling addresses an individual customer
 - Customer Analysis analyses the *world of a potential customer*
- ▶ Needs do not make a customer buy – only pain.
- ▶ Value does not make a customer buy – only desire.
- ▶ Osterwalder refined the *value proposition field* of the BMC with a new canvas, the **Value Proposition Canvas**.

Pain and Gain create value proposition.

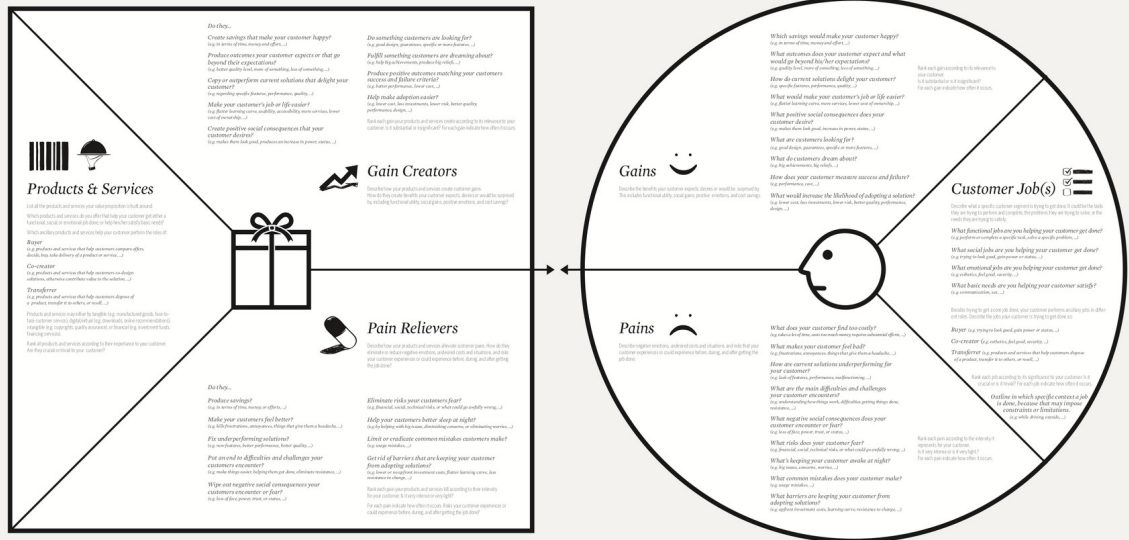


The Value Proposition Canvas

Designed for:

Designed by:

One	Two	Three
Iteration:		



Value Proposition
Create one for each Customer Segment in your Business Model

Customer Segment

www.businessmodelgeneration.com

Use in Conjunction with the Business Model Canvas

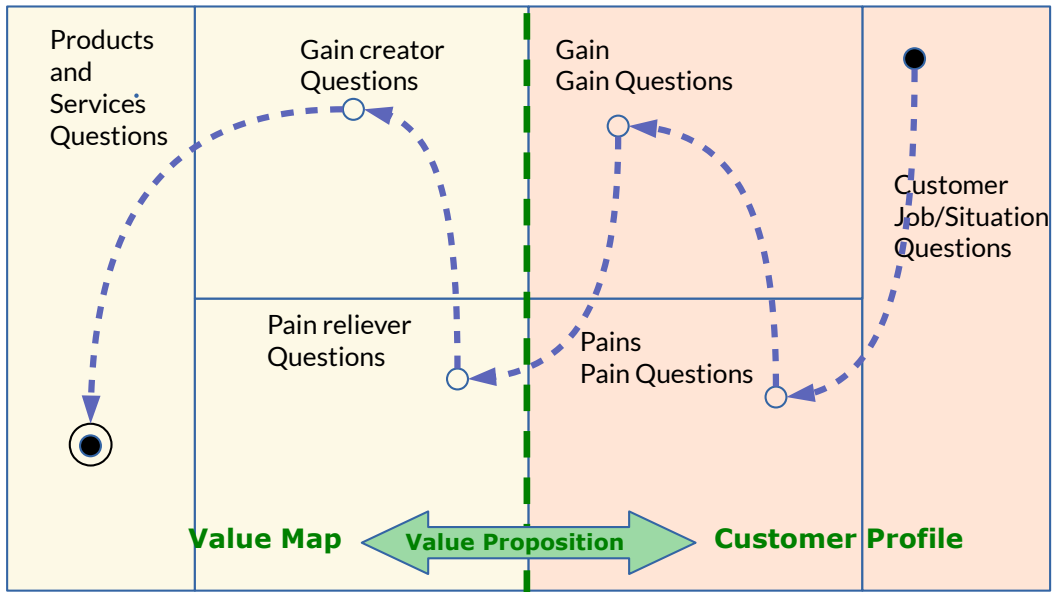
Copyright © Business Model Factory GmbH



<http://businessmodelalchemist.com/>

VP Canvas Process and Filling Order

- ▶ VPA uses a canvas to map the customer pains and gains to products and services

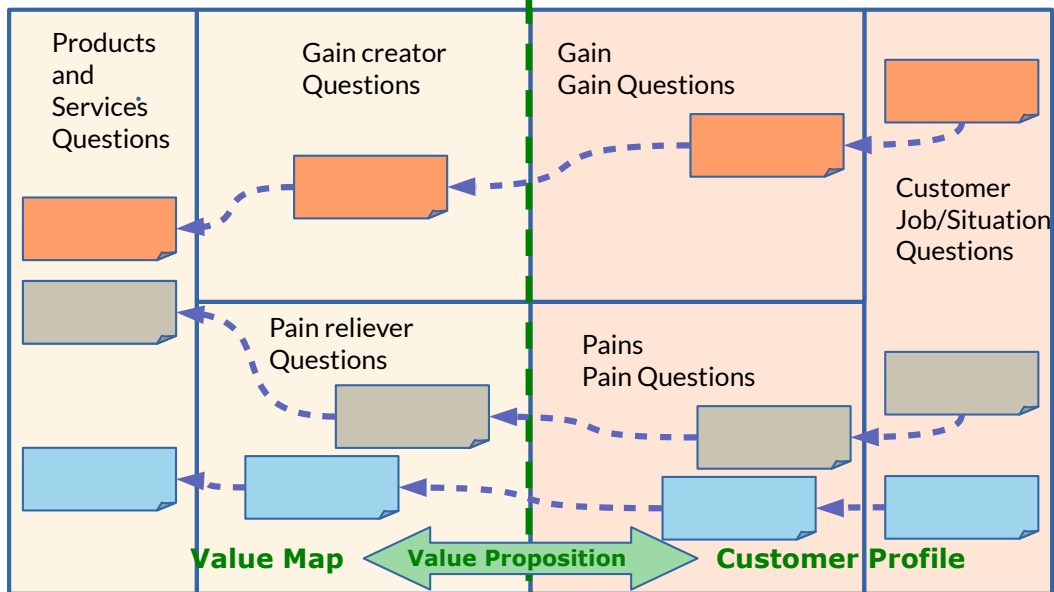


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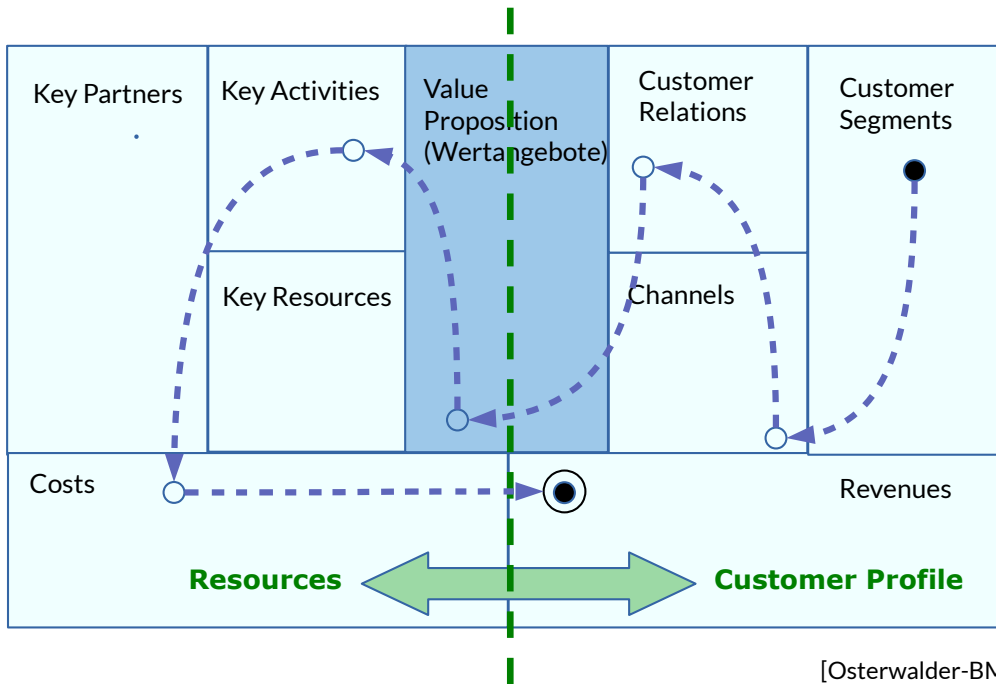


[Osterwalder-VPD]

- ▶ VPA creates mappings between the entries of the customer profile and entries of the value map (value proposition **fit**)
- ▶ Check completeness, consistency of fit!



VPC is a Subcanvas of the Business Model Canvas

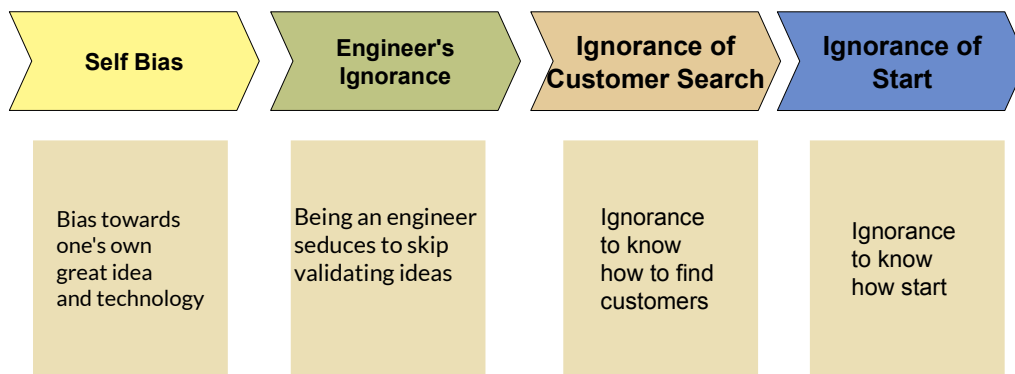




10.3 Customer Discovery in the Problem-Solution Fit: Analysis of the Customer's World

Before understanding the pain and gain of the customer, we need to understand its world

The Major 4 Obstacles to Customer Know-How Can Only Be Remedied by Testing the Customer Hypotheses

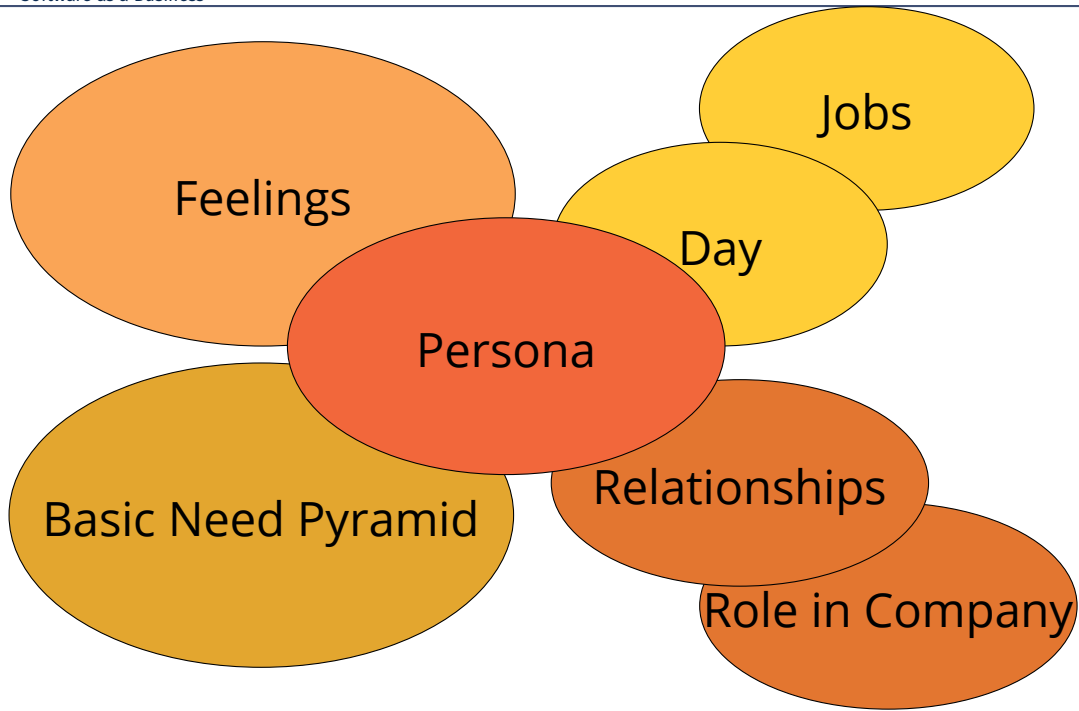


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- ▶ In a group, *untested information about the customer* can be collected by canvases
- ▶ **Hypotheses about the customer** have to be formed (in a Sprint planning)
- ▶ Hypothesis must be **tested** by **getting out of the building**
- ▶ Backlog of hypotheses tests must be burnt down



Aspects of Customer Analysis



Personal Value Proposition with the Personal BMC (BMYC)

[<http://businessmodelyou.com/>]

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- ▶ The BMYC is for the development of your career and yourself, also for customer analysis

Key Partners Who helps You?	Key activities What do you do?	Value Proposition How do you help?	Customer Relationships How do you interact?	Customer Segments Whom do you help?
	Key Resources What you are and have		Channels How do they know you? How do you deliver?	
Cost Structure What do you give?			Revenue Streams What do you get?	

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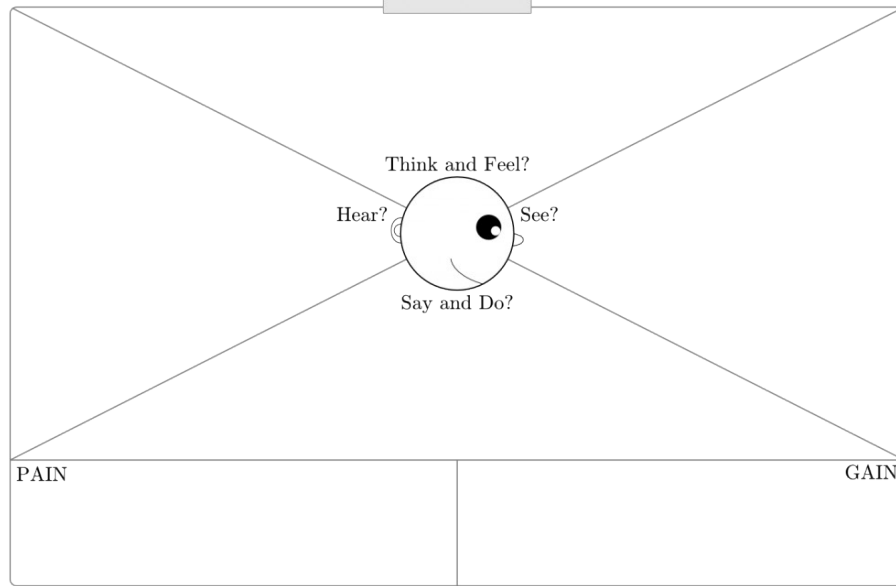


Empathy Map for Customer Modelling

Business Model - The Empathy Map

Author: _____
Date: _____ Iteration: _____

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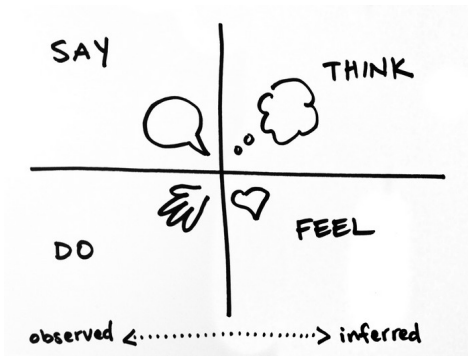


http://blog.8thcolor.com/2011/08/who-are-our-possible-customers/empathy_map/

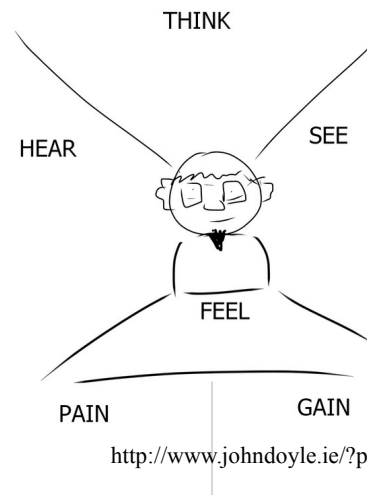


<https://dschool.stanford.edu/wp-content/themes/dschool/method-cards/empathy-map.pdf>

Simpler: Modelling the Customer's Feelings



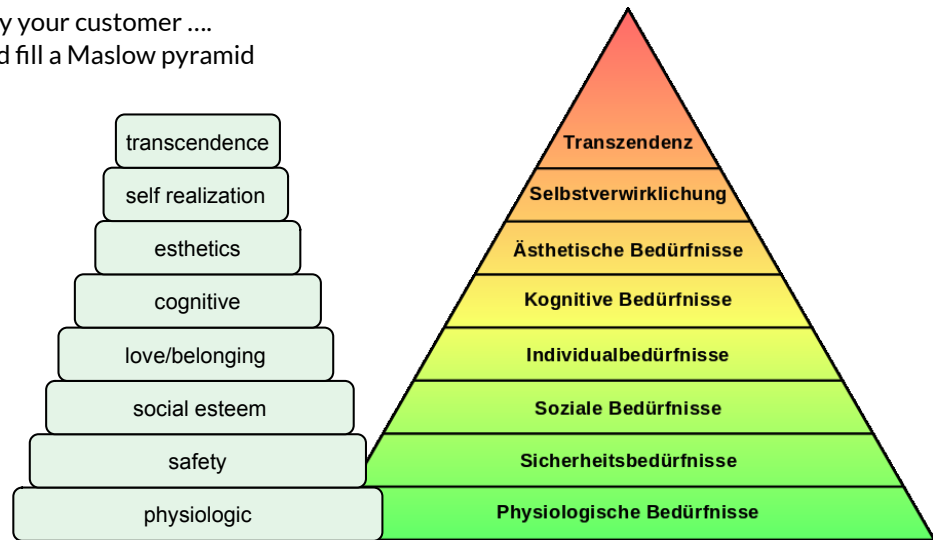
10.
wp-content/uploads/2013/02/mitroff.fig2_.jpg



Customer Need Analysis with Maslow

- ▶ Play your customer
and fill a Maslow pyramid

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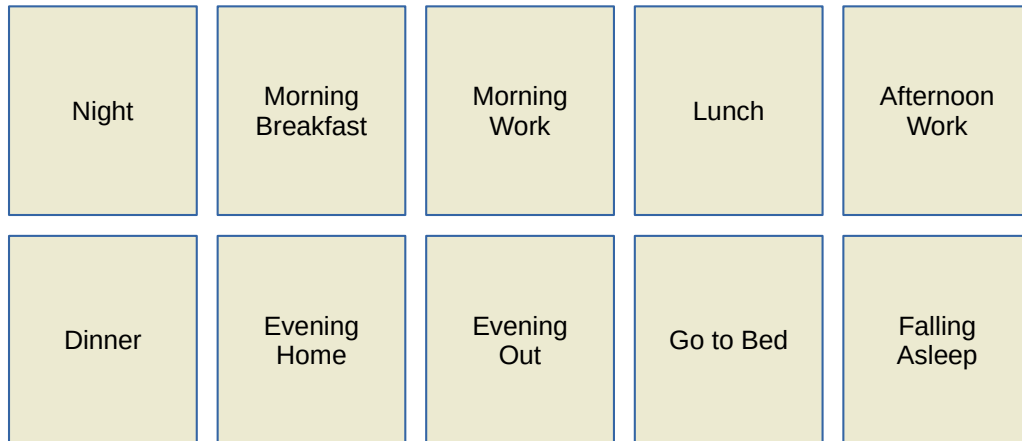
http://upload.wikimedia.org/wikipedia/commons/thumb/2/2c/Erweiterte_Bed%C3%BCrfnishierarchie_%281970%29_nach_Maslow.svg/600px-Erweiterte_Bed%C3%BCrfnishierarchie_%281970%29_nach_Maslow.svg.png



Modeling the Customer's Day

How should a good "Customer Day Canvas" look?

- ▶ Use the Customer Empathy Map to run through the customer's day



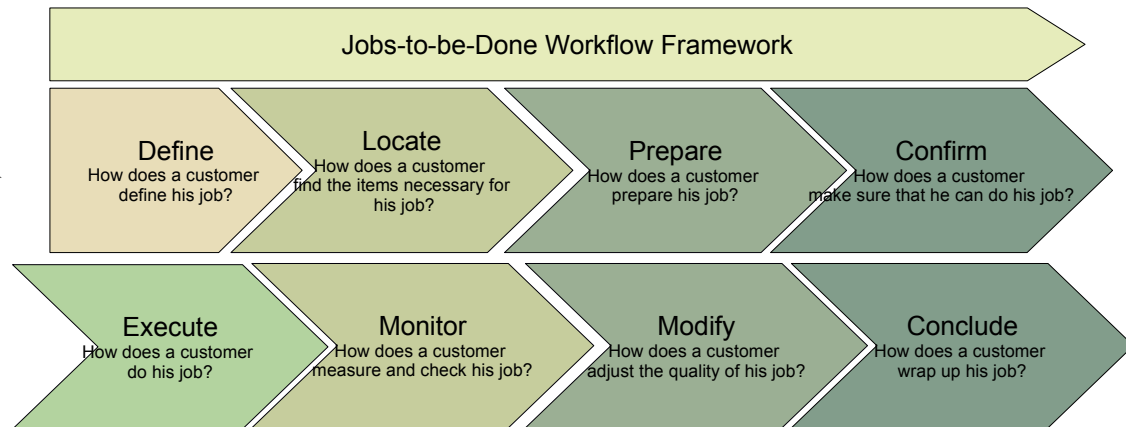


10.4 Jobs-to-be-Done (JTBD) Framework and Canvas

[Ulwick]


A method to specialize a generic workflow to the customer's daily workflows

- ▶ [BettenUlwick] claims that most workflows of customer's daily life can be arranged into 8 generic phases
- ▶ Based on the JTBD framework, user jobs and tasks can be analyzed on subtasks. The question **"How can our service/product help the customer executing his job?"** is central.



JTBD Canvas

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Jobs-To-Be-Done Canvas™
Powered by Outcome-Driven Innovation®

Job Executor e.g. the end user

Core Functional Job-to-be-Done verb + object of verb + contextual clarifier

	1. DEFINE	2. LOCATE	3. PREPARE	4. CONFIRM																												
<p>CONSUMPTION JOBS</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Executor</th> <th style="width: 50%;">Other</th> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Acquire/Purchase</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Receive</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Install</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Setup</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Learn to use</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Use/Interface with</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Store</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Move</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Maintain</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Repair</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Upgrade</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Replace</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/> Dispose</td> </tr> </table> <p>What technology or product assumptions are you making? Or are you considering an altogether new product? Which of these jobs must be executed to support product consumption? Who is responsible for execution?</p>	Executor	Other	<input type="checkbox"/>	<input type="checkbox"/> Acquire/Purchase	<input type="checkbox"/>	<input type="checkbox"/> Receive	<input type="checkbox"/>	<input type="checkbox"/> Install	<input type="checkbox"/>	<input type="checkbox"/> Setup	<input type="checkbox"/>	<input type="checkbox"/> Learn to use	<input type="checkbox"/>	<input type="checkbox"/> Use/Interface with	<input type="checkbox"/>	<input type="checkbox"/> Store	<input type="checkbox"/>	<input type="checkbox"/> Move	<input type="checkbox"/>	<input type="checkbox"/> Maintain	<input type="checkbox"/>	<input type="checkbox"/> Repair	<input type="checkbox"/>	<input type="checkbox"/> Upgrade	<input type="checkbox"/>	<input type="checkbox"/> Replace	<input type="checkbox"/>	<input type="checkbox"/> Dispose	<p>Plan, Select, Determine</p> <ul style="list-style-type: none"> • • • <p>What aspects of getting the job done must the customer define upfront to proceed?</p>	<p>Gather, Access, Retrieve</p> <ul style="list-style-type: none"> • • • <p>What items must be located - tangible/intangible - to do the job?</p>	<p>Setup, Organize, Examine</p> <ul style="list-style-type: none"> • • • <p>How must the customer prepare the inputs and the environment to do the job?</p>	<p>Validate, Prioritize, Decide</p> <ul style="list-style-type: none"> • • • <p>What must the customer verify before proceeding to ensure success?</p>
Executor	Other																															
<input type="checkbox"/>	<input type="checkbox"/> Acquire/Purchase																															
<input type="checkbox"/>	<input type="checkbox"/> Receive																															
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<input type="checkbox"/>	<input type="checkbox"/> Store																															
<input type="checkbox"/>	<input type="checkbox"/> Move																															
<input type="checkbox"/>	<input type="checkbox"/> Maintain																															
<input type="checkbox"/>	<input type="checkbox"/> Repair																															
<input type="checkbox"/>	<input type="checkbox"/> Upgrade																															
<input type="checkbox"/>	<input type="checkbox"/> Replace																															
<input type="checkbox"/>	<input type="checkbox"/> Dispose																															
	5. EXECUTE	6. MONITOR	7. MODIFY	8. CONCLUDE																												
	<p>Perform, Transact, Administer</p> <ul style="list-style-type: none"> • • • <p>What must customers do to execute the job successfully?</p>	<p>Verify, Track, Check</p> <ul style="list-style-type: none"> • • • <p>What must the customer monitor to ensure the job is successfully executed?</p>	<p>Update, Adjust, Maintain</p> <ul style="list-style-type: none"> • • • <p>What might the customer need to alter for the job to be completed successfully?</p>	<p>Store, Finish, Close</p> <ul style="list-style-type: none"> • • • <p>What must the customer do to finish the job?</p>																												

DESIRED OUTCOMES

OVERSERVED
(reduce cost & complexity)

What other functional jobs is the executor trying to get done before, during, and after execution of the core job?

(For core and consumption jobs)

Appropriately Serviced
(maintain status quo)

Outcome = Decision + Metric + Object of Control + Contextual Clarifier

Table Stakes
(must address)

What outcomes do you hypothesize are not important yet highly satisfied? These are opportunities for cost reduction.

What outcomes do you hypothesize are very important and very satisfied? These must continue to be satisfied.

What outcomes do you hypothesize are very important and not very well satisfied? There are opportunities to add value.

How do job executors want to feel by getting the job done? How do they want to be perceived by others?

EMOTIONAL JOBS


What outcomes do you hypothesize are neither important or satisfied? These needs should not be considered.

(do not address / stop addressing)

Irrelevant

(to add value)

Underserved



The Jobs-to-be-Done Canvas™ is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](#).

Use the canvas in a team workshop as a starting point before going into deeper ODI research.

DEVELOPED BY: Tony Ulwick and Mike Boysen of StrategyN, LLC. More information can be found at jobs-to-be-done.com and strategyn.com.





13.5. Customer Progress Canvas

JTBD Progress Forces

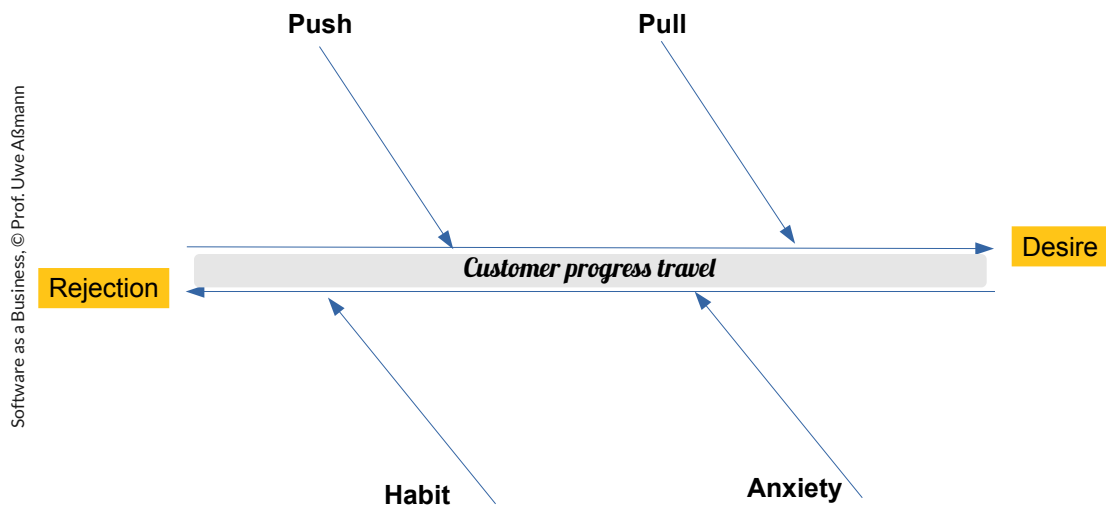
- ▶ Bob Moesta, Chris Spiek, Alan Klement
- ▶ Nice summary of A. Klement, The Forces of Progress. 2017.
<https://jtbd.info/the-forces-of-progress-4408bf995153>
- ▶ Alan Klement. When Coffee and Kale compete. Free web book
<http://www.whencoffeeandkalecompete.com/>

There is no demand — unless push and pull work together. [Klement]

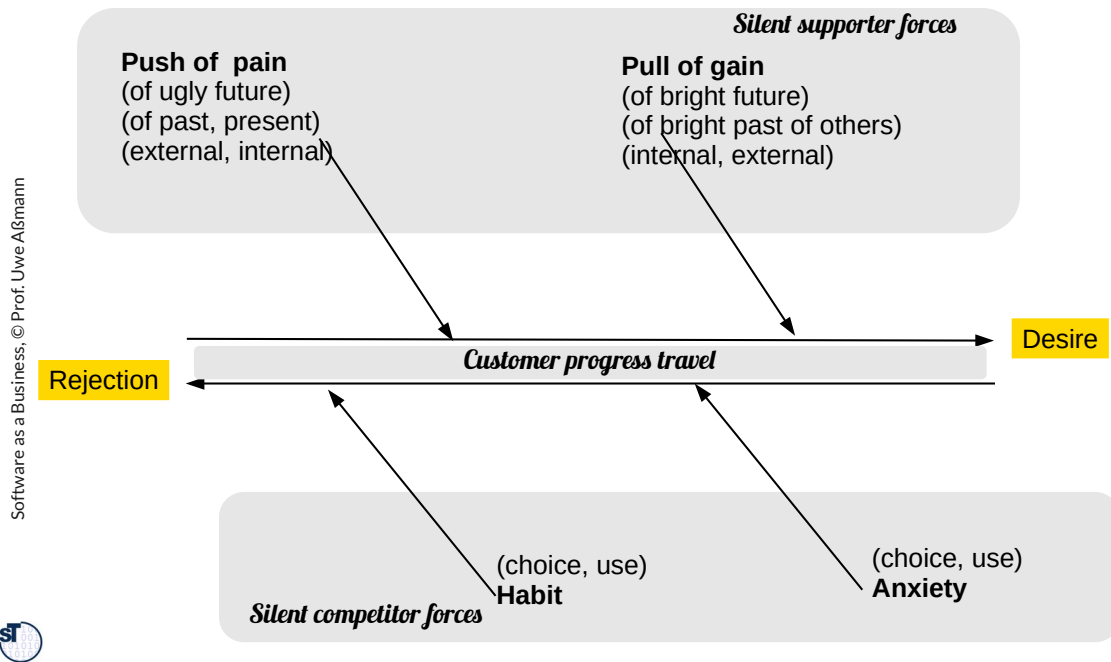


Progress-Forces Canvas (Klement)

- ▶ A Double Fishbone diagram indicates conflicting forces - forward and contradicting forces

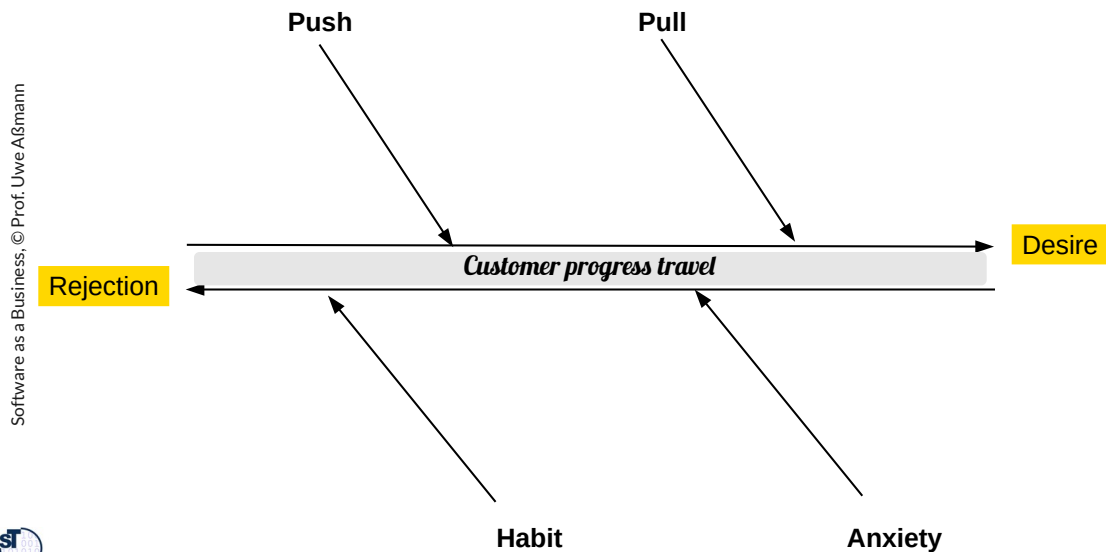


Progress-Forces Canvas (Klement)



Example: Progress Forces Canvas (Klement) on Zero Electric Motorcycles

- ▶ First watch the video
<https://techcrunch.com/video/inside-california-ev-startup-zero-motorcycles/>
- ▶ Then complete the Progress Forces Canvas



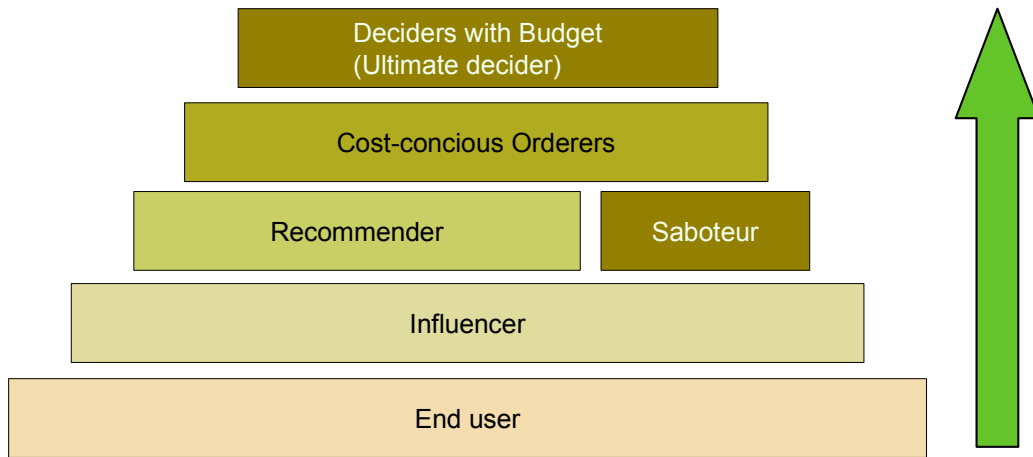


10.6 Who is your Customer? (Early Adopters, Early Evangelists, Brand Advocates)

Entry strategies to reach a decider

Classes of Customer Capabilities in B2B Selling

- ▶ To sell to a company, a decider has to be reached [AccountSelling], but most startups start to interview end users
- ▶ Decider analysis:
 - An **entry strategy** is required to enter the customer's firm and find the decider [AccountSelling]



Characteristics of an Early Adopter

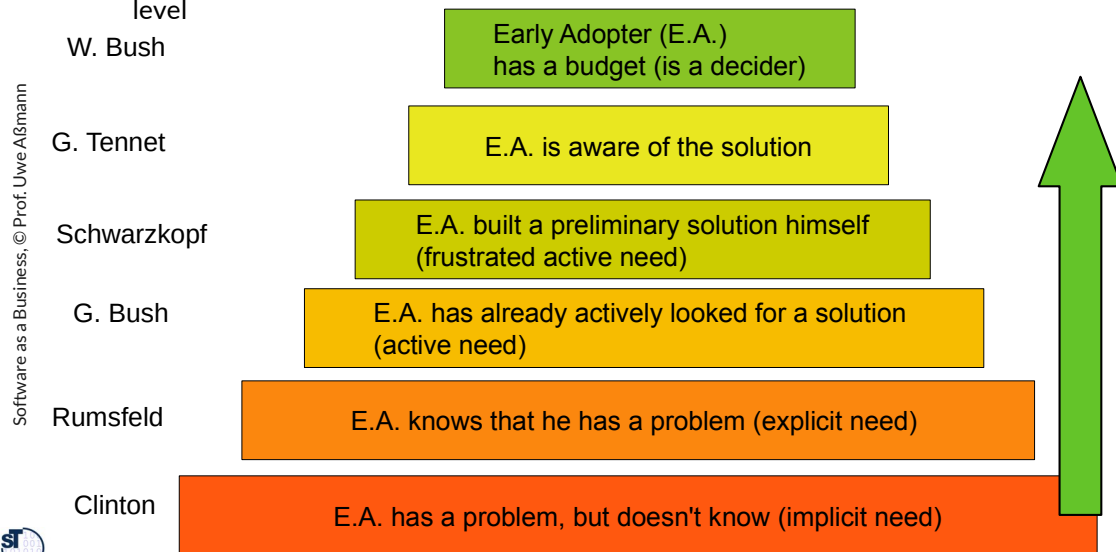
- ▶ Few visionary people, the *early adopters*, believe in a visionary product ("the Innovators Dilemma")
- ▶ Early adopters are the first ones to be relieved from the Rumsfeld dilemma

[Der Apple] Newton ist ein eigenartiges Produkt.
Zu seinen Lebzeiten wurde er belächelt.
Nur eine kleine Gemeinde erkannte sein Potenzial.
Das Potenzial des Digital Hub.
Dies wäre seine Berufung gewesen, seine Bestimmung, sein Durchbruch.

<http://www.macprime.ch/applehistory/story/apple-newton-im-kreuzfeuer-des-digital-hub/>

Classes of Dissatisfaction of Early Adopters (and also all Customers)

- ▶ Most startups discover a situation in which customers have already tried in vain to build a solution. [Blank/Dorf] ("Schwarzkopf problems")
- ▶ [Rackham] claims that need-payoff questions must be used to lift an E.A. to the Tennenet level



Customer Discovery Report Table [Blank/Dorf]

- ▶ The report table estimates with school grading the maturity in the customer funnel of all potential customers.
 - It defines a *metric* on the *maturity* of the customer
- ▶ School grading can be in different ordinal scales, e.g., 1-3, 1-5, 1-16, 1-100
- ▶ Customer Discovery Report can be managed with Excel or a database

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Customer	Enthusiastic	Urgently needed	Importance of effects	Imvised solution	120 days	Importance of Decider	120x2	total
Miller	1	1	3	5	5	1	10	26
Bush	1	2	4	5	1	3	2	18
Clinton	5	3	1	1	1	1	2	14
Trump	2	2	4	3	3	5	6	25
Average	2,25	2	3	3.5	2,5	2,5	5	

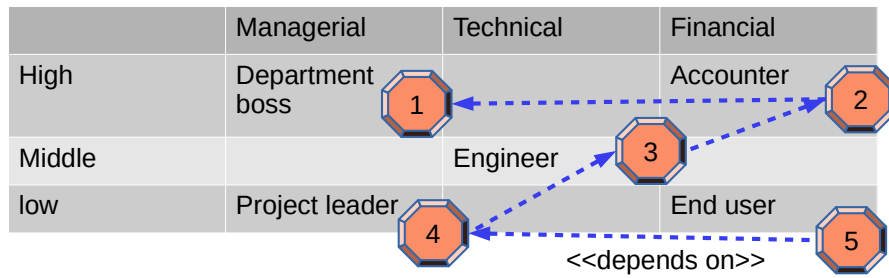




10.6 Who is Related to your Customer?

Analyzing the Customer's Relationships to Deciders

- ▶ An **organizational / influence map** draws the network of the customer that can influence his buy-no-buy decisions
- ▶ Analysis can start with a table or a graph
- ▶ Analysis constructs a **dependency graph** (partial or total order)
- ▶ **Deciders** are the sinks of the dependency graph



Customer Relationship Analysis with Business Model You

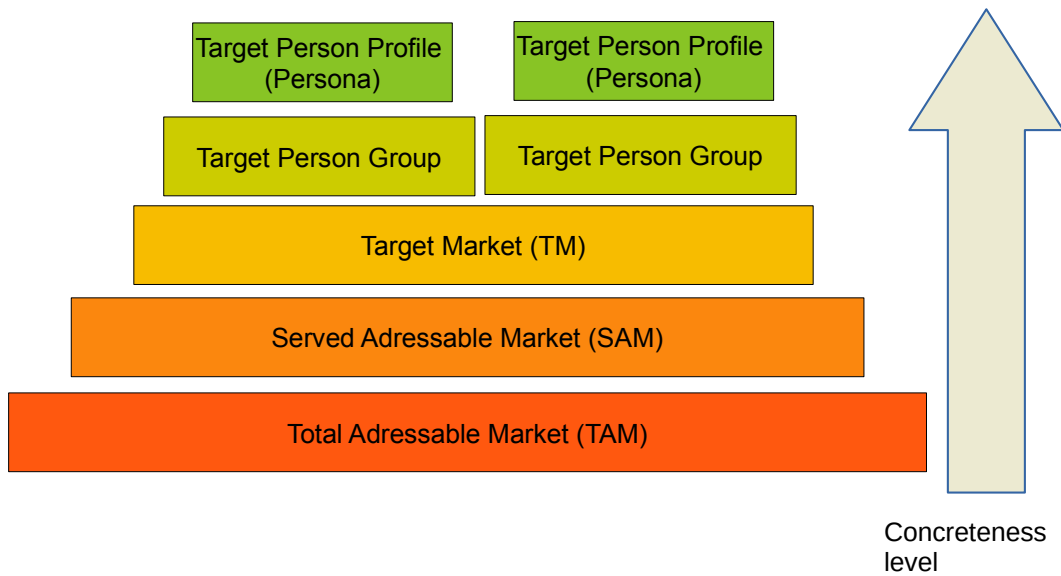
- ▶ Play your customer and fill a BMY Canvas.

Key Partners Who helps Your customer?	Key activities What do Your customer do?	Value Proposition How does Your customer help?	Customer Relationships How does she interact?	Customer Segments Whom does Your customer help?
	Key Resources What she is and has		Channels How do they know him? How does she deliver?	
Cost Structure What does he give?			Revenue Streams What does she get?	



Refinement of Customer Segments and Market Slices

- ▶ See whether you can find several target person groups (customer segments) in your target market, because they speak the same language (same domain)



Customer Profile (Persona)

- ▶ A **Customer Persona (profile, archetype)** is a story about an average customer from a customer segment.
 - Derived from Empathy Map, Influence Map, VPA, Problem Analysis, Customer's Day Canvas, Customers influence map
- ▶ Table form of Persona:

Highlights in the customer's day, problem canvas, VPC, or influence map	Hints for aquisition
Gets up with difficulties	Don't call him before 10:00; send him a coffee kit for advertisement
Doesn't like to read	Send him a DVD with video
Has friends in political party PDU	Analyze partie's opinion about the effects of your product

The End

- ▶ Why is it important to know a lot about your customer?
- ▶ Explain how the customer changes the diapers of his baby. Analyze this activity with Jobs-to-be-Done framework.
- ▶ Why does the JTBD Canvas highlight “underserved” services?
- ▶ Why is it important to analyze the relationships of a potential customer?
- ▶ Why is it important to know the position of potential customer in its company?
- ▶ Explain the different forces of the Progress-Forces Canvas of Klement.

