„The hard part is finding a problem to solve“
[Kevin Systrom from Instagram]

12. Instruments for Deep Pain-Gain Analysis
(Improved Value Proposition Design)

1) Value Proposition Analysis
2) Pain Analysis
3) Gain Analysis
4) Pain-Gain Banana
5) Stickiness and Virality
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.

12.1 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

Products & Services

- Software as a Business
  - TU Dresden, Prof. U. Aßmann

Gain Creators

- Describe the benefits and value created by your product or service.
  - How do you make your customer's job easier?
  - How do you make your customer's job more enjoyable?

Pain Relievers

- Describe the problems and stress that your product or service solves.
  - What do your customers hate about your industry or your competitors?
  - What do your customers love about your industry or your competitors?

Value Proposition

Create an entry for each Customer Segment in your Business Model

www.businessmodelgeneration.com

Gains

- Describe the benefits and value created by your product or service.
  - How do you make your customer's job easier?
  - How do you make your customer's job more enjoyable?

Pains

- Describe the problems and stress that your product or service solves.
  - What do your customers hate about your industry or your competitors?
  - What do your customers love about your industry or your competitors?

Customer Segment

- Describe the characteristics and needs of your target customer.
  - What are the demographics of your target customer?
  - What are the psychographics of your target customer?

Use in Conjunction with the Business Model Canvas

http://businessmodelalchemist.com
VPA uses a canvas to map the customer pains and gains to products and services.
VP Canvas Mapping and Fit

- 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

Key Partners → Key Activities

Key Resources → Value Proposition (Wertangebote)

Customer Relations → Customer Segments

Channels

Costs → Resources

Customer Profile → Revenues

Software as a Business

© Prof. Uwe Aßmann

[Osterwalder-BMC]
12.2 Evolving the BMC Cactus during Startup Development
The Evolving BMC-VPC Canvas Cactus (extended)

- Growing a tree with side edges (link tree - cactus) out of a first version
  - Assess with red-yellow-green; choose a current “greenest” “champion”
- Every step tests **hypotheses** about the customer
- Not too many canvases are kept active (small dashboard)
The BMC-VPC cactus evolves during customer modeling.

- A red BMC-VPC shows why a persona cannot become a customer.
- A green BMC-VPC models a customer faithfully.
12.3 Deep Pain Analysis with Different Types of Pains

- diving into the VPC
Customer Analysis with Maslow

▸ Play your customer .... and fill a Maslow pyramid

http://upload.wikimedia.org/wikipedia/commons/thumb/2/2c/Erweiterte_Bedarfshierarchie_%281970%29_nach_Maslow.svg/600px-Erweiterte_Bedarfshierarchie_%281970%29_nach_Maslow.svg.png
The Pain Hierarchy: Pain Drives Selling and Buying

- For business, find a good pain.

A clear **catastrophy** or force sells.

A **fear of catastrophe** sells almost always

A **fear of force** sells almost always

A **blocking factor** is an immediate problem to be removed

A **clear pain** is half the business
Pressure and awareness are two important factors influencing customer decisions. Their product determines decisions.

Problems with high pressure and awareness MUST be solved and lead to buy decisions.
Examples of Future Force

- New country-wide governance rules
  - New finance rules of tax authorities
  - Laws (e.g., the EU law on dynamite)
  - New taxes, raise of taxes
- New social governance rules
  - Gender equality issues
  - Quotas
- Health problems: Age, illness, Alzheimer, heart attack
- Future Force of Competition Change
  - New competitors and competing products
    - USP and UCA gets lost
  - New business models of competitors
How to Achieve Disruptive Innovations (Game Changers)

- A **Blocking factor** is a (hidden) problem directly hindering that the goal of the customer is reached

- A **Blocking factor remover** (block remover, overcomer) is a special kind of pain killer, applicable to different types of innovations
  - It enables a discontinuous revolutionary, radical innovation (**enabler** for a discontinuous innovation)
  - A *discontinuity enabler (blocking factor changer)* is a pain killer removing a blocking factor that leads to a change in a market
  - A *disruption enabler (game changer)*: It may even enable a disruptive innovation

- An innovative company should work on blocking factor removers and game changers

- Questions for Game Changers:
  - What blocks the radical innovation?
  - What blocks the disruptive innovation?
Pain Analysis and Pain Priority List

- The **pain priority list** is a list of pains prioritized by pressure-awareness product from the pain portfolio
- Produce with G-A-P analysis: Generate pains, Assess them, Prioritize them

<table>
<thead>
<tr>
<th>Problem</th>
<th>Pressure</th>
<th>Awareness</th>
<th>Pain Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>tooth pain</td>
<td>10</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>tooth inflammation</td>
<td>10</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>tooth hole</td>
<td>3</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>weak tooth health inherited</td>
<td>1</td>
<td>1-5</td>
<td>1-5</td>
</tr>
<tr>
<td>ignorance of health measures</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>forgetting to brush teeth</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>eating too much sugar</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
Exc.: Classify: is it a Problem, Need, Pain, Catastrophy? Determine Pain Priority

- Climate catastrophe
- Deodorant
- Partnership portals
- Islamistic terrorism in the West
- Odol mouth water
- Glasses
- Attack on your software
  - threat modeling, attack modeling
Getting Research Funding with Pain

- Funding for the Climate Catastrophe
- Funding for the Hadron Collider
  - Gain: World formula
- Funding for the Energiewende
Exercise of Pain analysis in the Pressure/Awareness-Product (Pain Portfolio)

- **Pressure** and **awareness** are two important factors influencing customer decisions. Their product determines decisions.
- Problems with high pressure and awareness **MUST** be solved and lead to buy decisions.

### Diagram

- **Hidden Problem**
- **Fear of Future Problem**
- **Present Problem**
- **Death march (I will die)**
- **Future Catastrophy**
- **Force (presses)**
- **Catastrophy (kills)**
- **Pain (hurts)**
- **Clear Needs**
- **Clear Problem**
- **Blocking Factor**
- **Hidden Need**
- **Clear Vision of Future Need**
- **Hidden Problem (grumbling)**
- **Risk (dangerous)**
Pain Refinement with the Pain Canvas

- A **problem hypothesis** is tested in pain analysis. If it is validated, it becomes a **tested (real) pain (fact)**.

- A **pain canvas (problem classification canvas)** classifies the problems into different classes of **pains**

- It forms the left part of the Pain-Gain Banana and can be used for
  - Stating a problem hypothesis in VPA
  - Specifying questions for costumer interviews
  - Preparing selling and sales interviews.

- The problem canvas is derived from different sources, e.g., SPIN, Maslow, ZOPP
Pain Refinement with the Pain Canvas (Problem Classification Canvas)

- Put a problem first into the “General” or “Background” field, then classify it and refine it (from left to right)
- Think about which stakeholder has which objectives
- First untested, then tested

![Diagram of the Pain Canvas](image)
By adding painkillers, the Pain Canvas can be extended to the pain killer canvas.
12.3.2 Pain Management

- Pain management is an essential activity of a startup

- Like Risk management (→ course Softwaremanagement)
- Put up a PDCA process
- Identify pains, assess pains, classify pains with pain portfolio and Problem canvas
Pain Management with Pain Diary, Pain Sheet, Pain Priority List, Pain Canvas, Pain Killer Canvas

- A **pain diary** is a diary in which all problems, pains, deficiencies of techniques and tools are recorded day by day.
- A **pain sheet** [Bosworth] suggests this 3-step table (reasons → impact → capabilities) for thinking about the pains of the customers.

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Impact</th>
<th>Capabilities</th>
</tr>
</thead>
</table>

- A **pain priority list** ranks all known pains with a priority (product awareness * pressure).
- An **untested pain canvas** classifies all pains into different classes, but is untested.
- A **tested pain canvas** has verified hypotheses about the pains.
- A **pain killer canvas** is a tested pain canvas with annotated pain killers.

![Diagram of pain management process]
12.3. Deep Gain Analysis

After pain analysis, you should do a gain analysis with your customer. There are different kinds of gains...
- **Hope** is a strong motivation
- **Hidden value** is implicit gain
Exc.: Classify: is it a Gain, Benefit, Desire? Determine Gain Priority

- Hadron Collider
- Google Glass
- Mobile phone
- Tablet computer
- Communism
- Socialism
- Vom Tellerwäschler zum Millionär
- Lottery
Exercise Gains/Value

- **Hope** is a strong motivation
- **Hidden value** is implicit gain

- **Future Gain**
- **Feature**
- **Clear Advantage**
- **Benefit**
- **Love**
- **Desire (Sehnsucht)**
- **Paradise**
- **Hope**
- **Present Value**
- **Hidden Value**

Pressure vs. Awareness Axis

- **Hidden Value**
- **Future Paradise**
- **Present Value**
12.4 Another Question-Guided Travel Through the Sales Funnel: Pain-Gain Analysis with the Pain-Gain Banana

Guiding your potential customer LIVE through a pain/gain analysis
Severity Levels of Pain

- Pains are differently severe. The following levels can at least be distinguished:
  - Catastrophy
  - Forces
  - Pain
  - Needs
  - Implicit Needs

- Gains are differently severe. The following levels can at least be distinguished:
  - Competitive Advantage
  - Features of Product
  - Advantages
  - Explicit Benefit/Gain
  - Pain killer
  - Desire filler
  - Implicit Gains
Pain-Gain-Banana Canvas

- We can define now a third Sales Funnel Travel based on the different levels of pain and gain
- The **Pain-Gain Banana** canvas can be used for customer pain-gain analysis
  - Canvas transforms hidden pains to competitive gains
  - Derived from SPIN® selling, ZOPP, NABC and VPC
- Blocking factors directly transform pains to gains
- Goals transform future pains to future gains
- Catastrophies require urgent action
# Pain-Gain-Banana Question Canvas

<table>
<thead>
<tr>
<th>Questions</th>
<th>Customer pain knowledge</th>
<th>Customer gain knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredient</td>
<td>Implicit Needs</td>
<td>Needs</td>
</tr>
<tr>
<td>Force</td>
<td>Needs</td>
<td>Features</td>
</tr>
<tr>
<td>Pain</td>
<td>Pain</td>
<td>Escapes</td>
</tr>
<tr>
<td>Obstacle</td>
<td>Pain killers (benefits for cost)</td>
<td>Benefits/Gains</td>
</tr>
<tr>
<td>Blocking Factor</td>
<td>Obstacle - Blocking Factor questions</td>
<td>Overcomer</td>
</tr>
</tbody>
</table>

- **Background questions**
- **Problem questions**
- **Goal questions**
- **Hidden-Effect (Implication) questions**
- **Benefit-for-Cost questions**
- **Catastrophy questions**
- **Catastrophy avoider**
- **Customer knows force**
- **Customer feels pain**
- **Customer fears catastrophe**
- **Customer knows blocking factors**
## Pain-Gain-Banana Stripped Form

### Questions
- Implicit Needs
- Needs
- Forces
- Pain
- Catastrophe
- Blocking factors

### Customer pain knowledge
- Catastrophy avoider
- Forces
- Pain
- Catastrophe

### Customer gain knowledge
- Features
- Advantages
- Benefits/Gains
- Escapes
- Pain killers (benefits for cost)
- Catastrophy avoider
- Overcomer

### Competition

- Competitive Advantage

---

*Image 3x2 to 45x31*

**Softw... Bu...**
12.5. Stickiness and Virality of a Feature

.. how to achieve that the news spreads itself (how to achieve mouth-to-mouth words)
A **viral** product/service is one about which news spreads easily, because people talk about it.

For **virality**, increase the pain priority, gain priority, and UCA.
A **sticky** product/service has high pain and gain priority. (green: infectious)

![Pain-Gain-Stickiness diagram](image)
A *viral* product/service has high pain, high gain priority, and high (ultimate) competitive advantage. (visualized here with the size of green boxes)
The “Lean Analytics” Stages and Their Metrics

- The Lean Analytics Stages are a simple stage system for product/service product-market fit.
- [LeanAnalytics] contains metrics for every stage.
“Even pirates need metrics.” (Dave McClure)

Example: the story of Dropbox – starting with a *smoke video* of a non-existing product


![Diagram of the Pirate Metrics AARRR for Web Site Visits]

- Referral (does a visitor recommend your website)
- Revenue (does a visitor pay?)
- Retention (stickiness) (does a one-time visitor return?)
- Activation (which activities do they start on your website)
- Acquisition (how do customers know from you?)

[LeanAnalytics]
[Dave McClure http://www.slideshare.net/dmc500hats/startup-metrics-for-pirates-long-version]
12.6. The Evolving Cactus of the Nested BMC
How would you maintain an evolving cactus for all these canvases?
Most Important for Startups

- Pain (and Gain) management
- Virality management
The End

- Explain the difference between customer empathy, activation, stickiness, virality and referral.
- What is the difference between untested, assessed, and tested canvases?
- What is a strong real tested pain?
- Why are catastrophies better for a good value proposition than blocking factors?
- Explain the influence of the UCA for virality.
- Why is the pirate metrics important for building good value propositions?
- How can you cross the border between Virality and Revenue in the LeanAnalytics stages?
- Explain the differences between the SPIN™ Canvas and the VPC. Which canvas do you prefer for a cold call?