14. Instruments for Competitive Advantage

Prof. Dr. Uwe Aßmann
Softwaretechnologie
Fakultät Informatik
Technische Universität Dresden
2020-0.4, 11/28/20
http://st.inf.tu-dresden.de/teaching/saab

1) Ultimative Competitive Advantage
2) Competitive Positioning Canvas
3) Stickiness and Virality
4) Moonshots

Obligatory Literature

- Mitchell, D. and Coles, C. (2003), "The ultimate competitive advantage of continuing business model innovation", Journal of Business Strategy, Vol. 24 No. 5, pp. 15-21. https://doi.org/10.1108/02756660310504924
- McGillicuddy, K.M. (2005), "The Ultimate Competitive Advantage", Journal of Consumer Marketing, Vol. 22 No. 5, pp. 292-293. https://doi.org/10.1108/07363760510611770
- UCA means several things:
  - UCA of a product or service: a non-beatable advantage
    - unfair advantage
    - moonshot
  - UCA of a company: to continuously improve your business model (business model innovation)

Software as a Business, © Prof. Uwe Aßmann

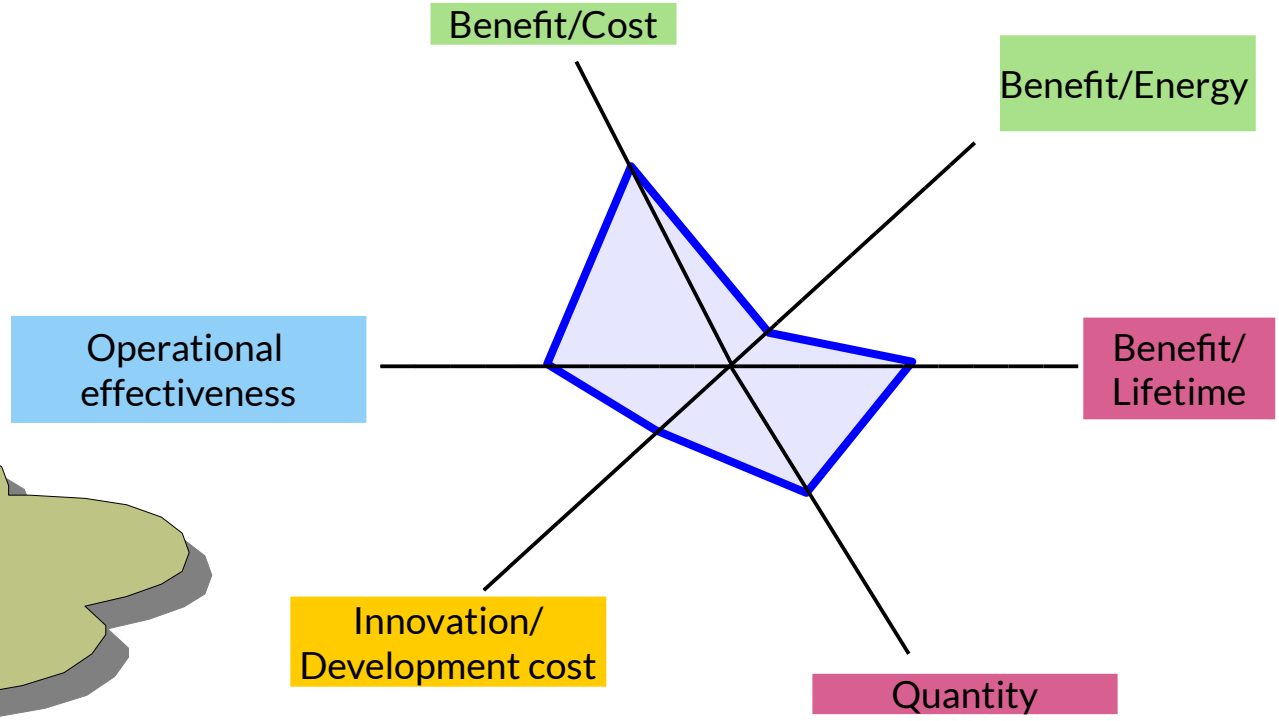
14.1. The Ultimate Competitive Advantage of a Feature or of a Product (UCA)

When we are talking about the features of our products, an UCA is important to beat the competition.

„Werden Sie Entrepreneur. Es gibt keine bessere Alternative.“ [Faltin]

Radar Charts (Spider Diagrams, Kiviat Graphs) measure Olympic advantages in Different Dimensions

- Spider diagrams visualize n-dimensional attribute analysis

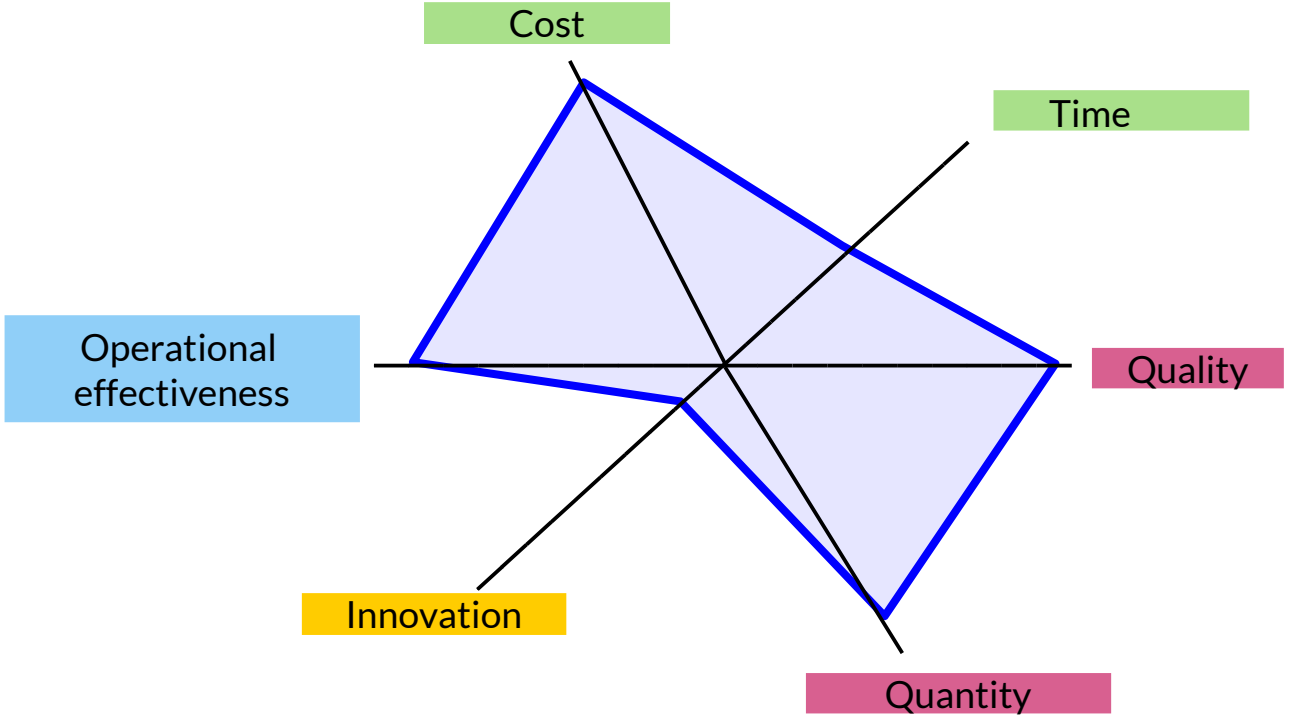


Efficiency advantage measures „higher, farer, faster" over "cost" (cost-utility function / relation).

Software as a Business, © Prof. Uwe Aßmann

Ex.: Faltin's “Kopf schlägt Kapital”

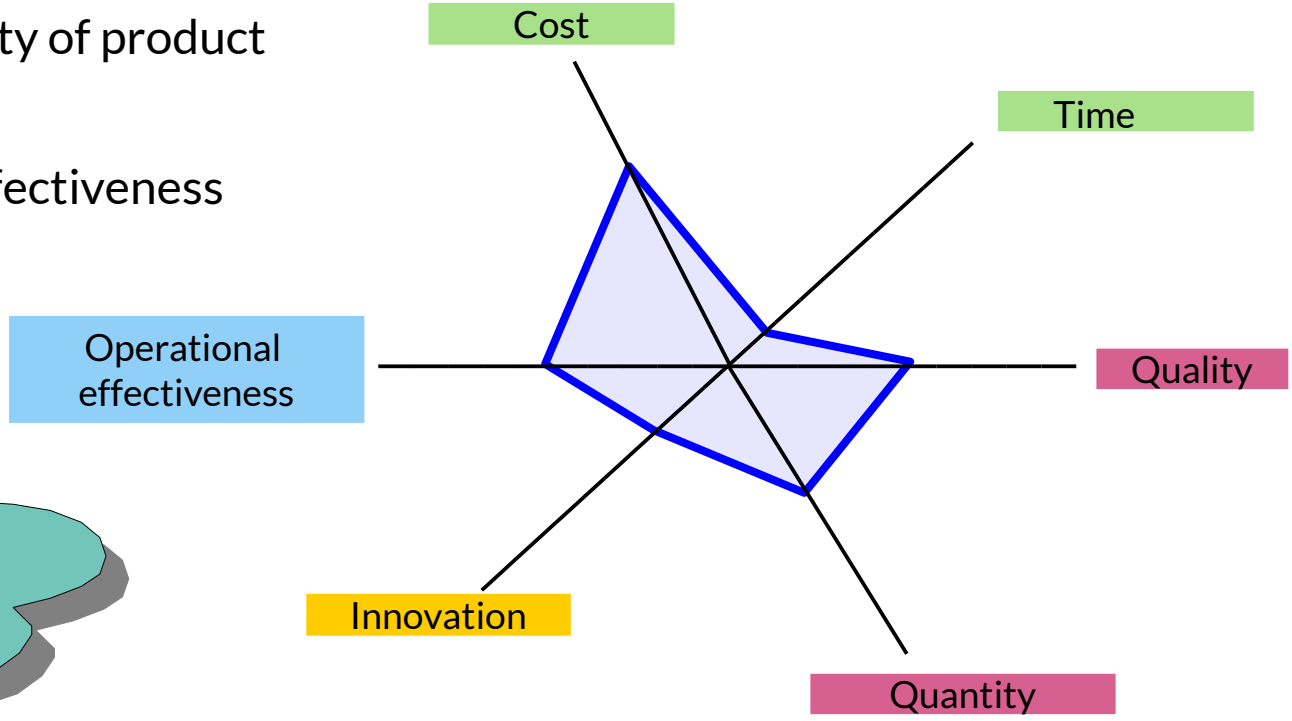
- Faltin founded in 1997 the company “Teekampagne”. Its **ultimate competitive advantage** is to reduce the product of **price *quality*quantity** (an efficiency product)
  - Importing entire containers of fresh, high-quality Darjeeling (*one sort)* from India by ship
  - Distributing very cheap by internet and mail in Germany in large packets of kilograms
  - Teekampagne has a high product / large polygone in the radar chart:



Software as a Business, © Prof. Uwe Aßmann

Competitive Advantage of a Feature

- http://en.wikipedia.org/wiki/Competitive_advantage
- In a market your company is not al one. Competition is strong. Therefore, you need to find a *competitive advantage* along **one or several of the following *olympic* dimensions:**
  - Cost leadership
    - Time to delivery
  - Feature Differenciation (uniqueness of feature)
    - Quality of product
    - Quantity of product
  - Innovation
  - Operational effectiveness

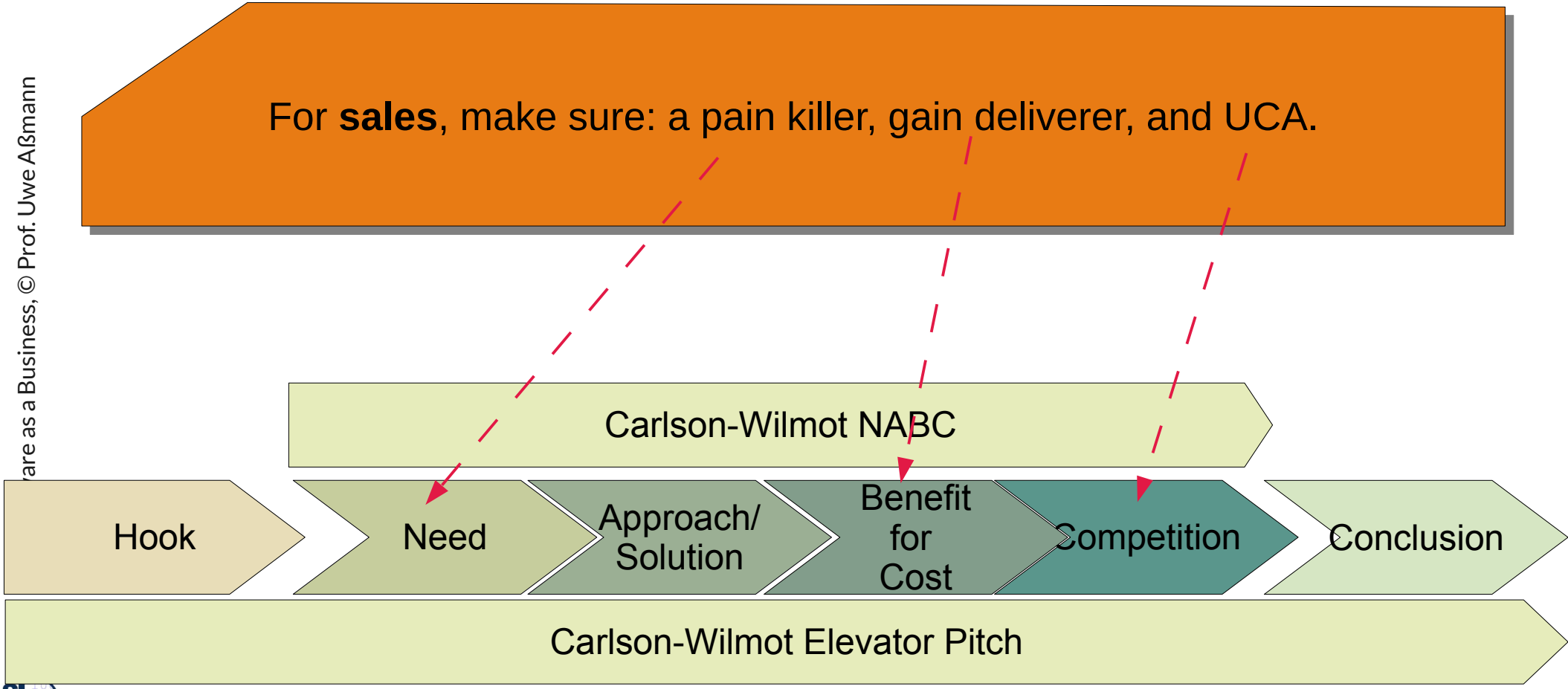


Olympic advantage measures „higher, farer, faster" (cost *or* utility function).

Software as a Business, © Prof. Uwe Aßmann

Ultimate Competitive Advantage (UCA) is about Beating the Competition by Factor 10

- A **viral** product/service is one about which news spreads easily, because people talk about it.
- A **moonshot (UCA)** is a feature that is 10 times better than that of the competitor



are as a Business, © Prof. Uwe Aßmann

Domain Porting: Olive Oil

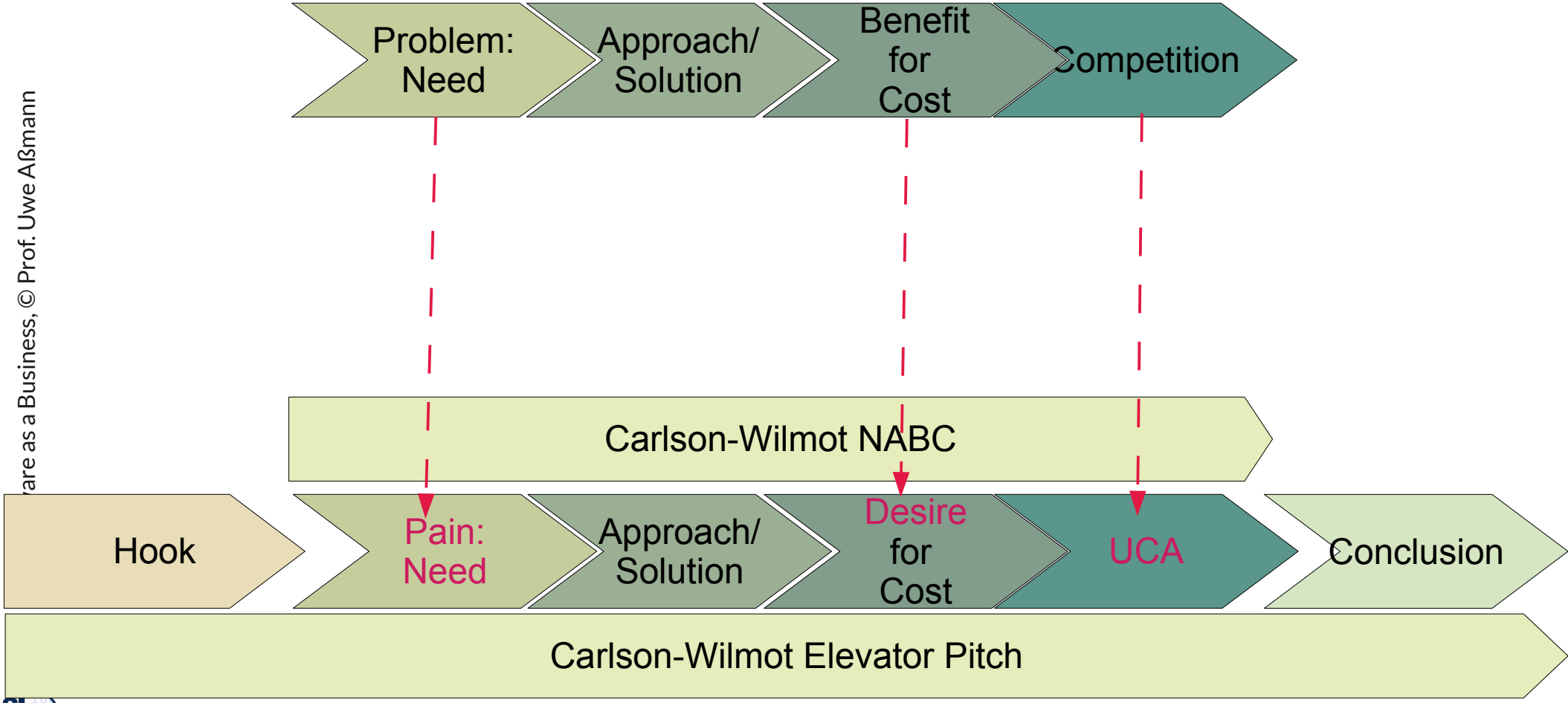
- http://www.artefakten.net/ Founder: Conrad Bölicke, Focussing on olive oil, with the same business model as Teekampagne

- http://www.zait.de, Founder: Thomas Fuhlrott: Olive oil products
- https://www.waschkampagne.de/ Founder: Wolfgang Kunz, Ecologic washing
- Similar companies with “Kopf schlägt Kapital”: https://www.entrepreneurship.de/kopf-schlaegt-kapital/

Software as a Business, © Prof. Uwe Aßmann

What is a Good Pitch?

- A **viral** product/service is one about which news spreads easily, because people talk about it.
- A **moonshot (UCA)** is a feature that is 10 times better than that of the cojmpetitor



are as a Business, © Prof. Uwe Aßmann

14.1.2. The Dimensions of a Competitive Advantage

The Lean Canvas

Designed for:	Designed by:	Date:	Version:
Startup Name	Name1, Name2, ...	DD/MM/YYYY	X.Y

Problem	Solution	Unique Value Prop.	Unfair Advantage	Customer Segments
Top 3 problems	Top 3 features	Single, clear and compelling message that states why you are different and worth buying	Can't be easily copied or bought	Target Customers
Existing Alternatives	**Key Metrics**	**High-Level Concept**	**Channels**	**Early Adopters**
List how these problems are solved today.	Key activities you measure	List your X for Y analogy (e.g. YouTube = Flickr for videos)	Path to customers	List the characteristics of your ideal customers.

Cost Structure	Revenue Streams
List your fixed and variable costs. Customer acquisition costs Distribution costs Hosting People Etc.	List your sources of revenue. Revenue Model Life Time Value Revenue Gross Margin

Lean Canvas is adapted from The Business Model Canvas (www.businessmodelgeneration.com/canvas). PowerPoint implementation by: Neos Chronos Limited (https://neoschronos.com). License: CC BY-SA 3.0

Dimensions

In the BMC, the fields can be used to derive competitive dimensions:

- Customer orientation
- Cost
- Sustainability
- Value proposition
  - Need
    - Maslow
    - Safety, Protection, Health
  - Gain
    - Beauty
    - Quality of service
- Copy-ability (fair or unfair advantage)
  - Intellectual property
  - Market positioning

Software as a Business, © Prof. Uwe Aßmann

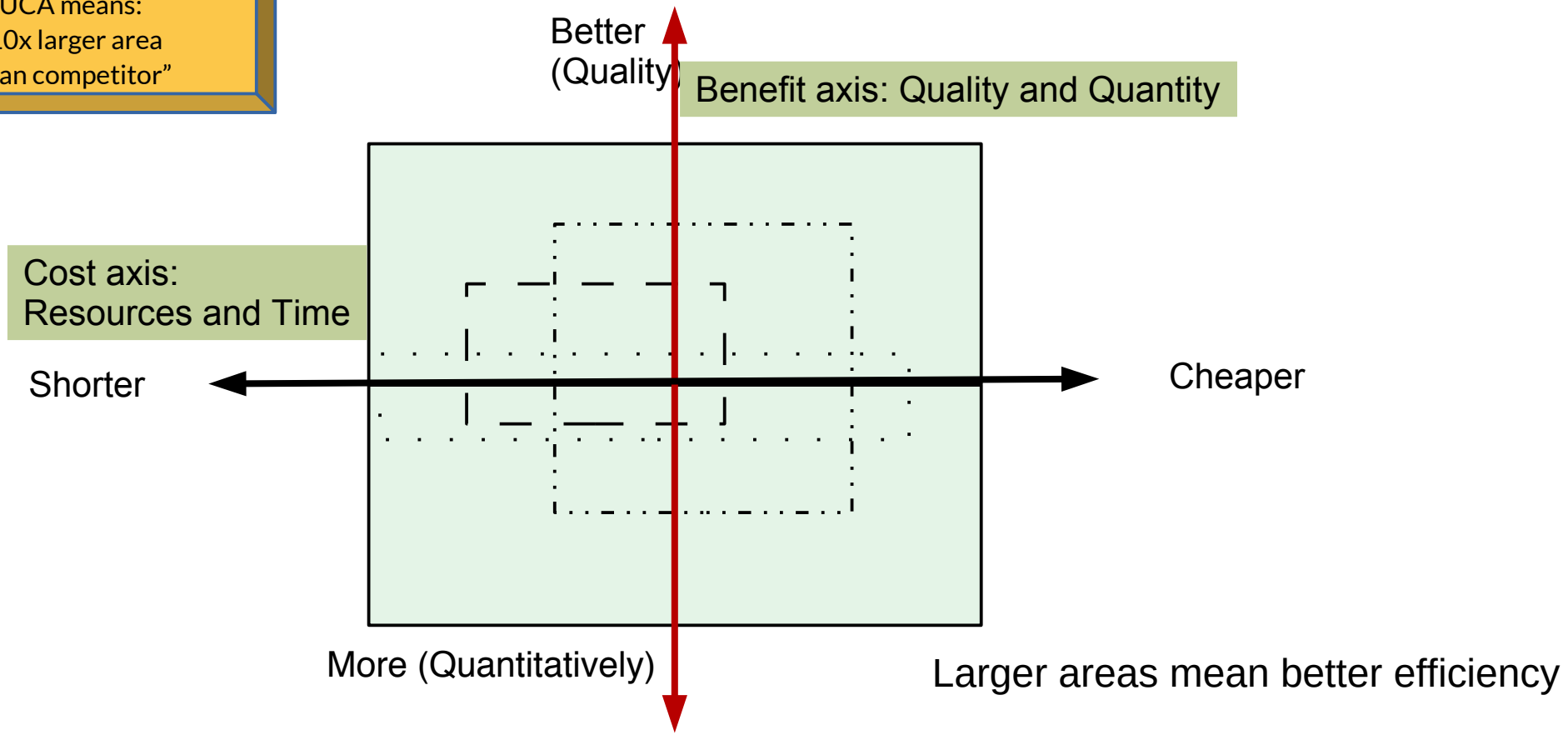
14.1.3. Combinations of Dimensions of a Competitive Advantage

- 4d analyses for measuring your competitive advantage

Comparative Cost-Benefit Analysis (CoTiQQ Efficiency 4-D Analysis)

- ***CoTIQQ (Cost, Time, Quantity, Quality)*** is a special *4-D analysis* for one project with cost and benefit axis and a fixed area, several 4-D analyses can be derived, which can be used to compare different projects for efficiency.
  - Without fixed area, the CoTiQQ analysis for operational goals results
  - Teekampange has a CoTiQQ-UCA

UCA means:
"10x larger area than competitor"

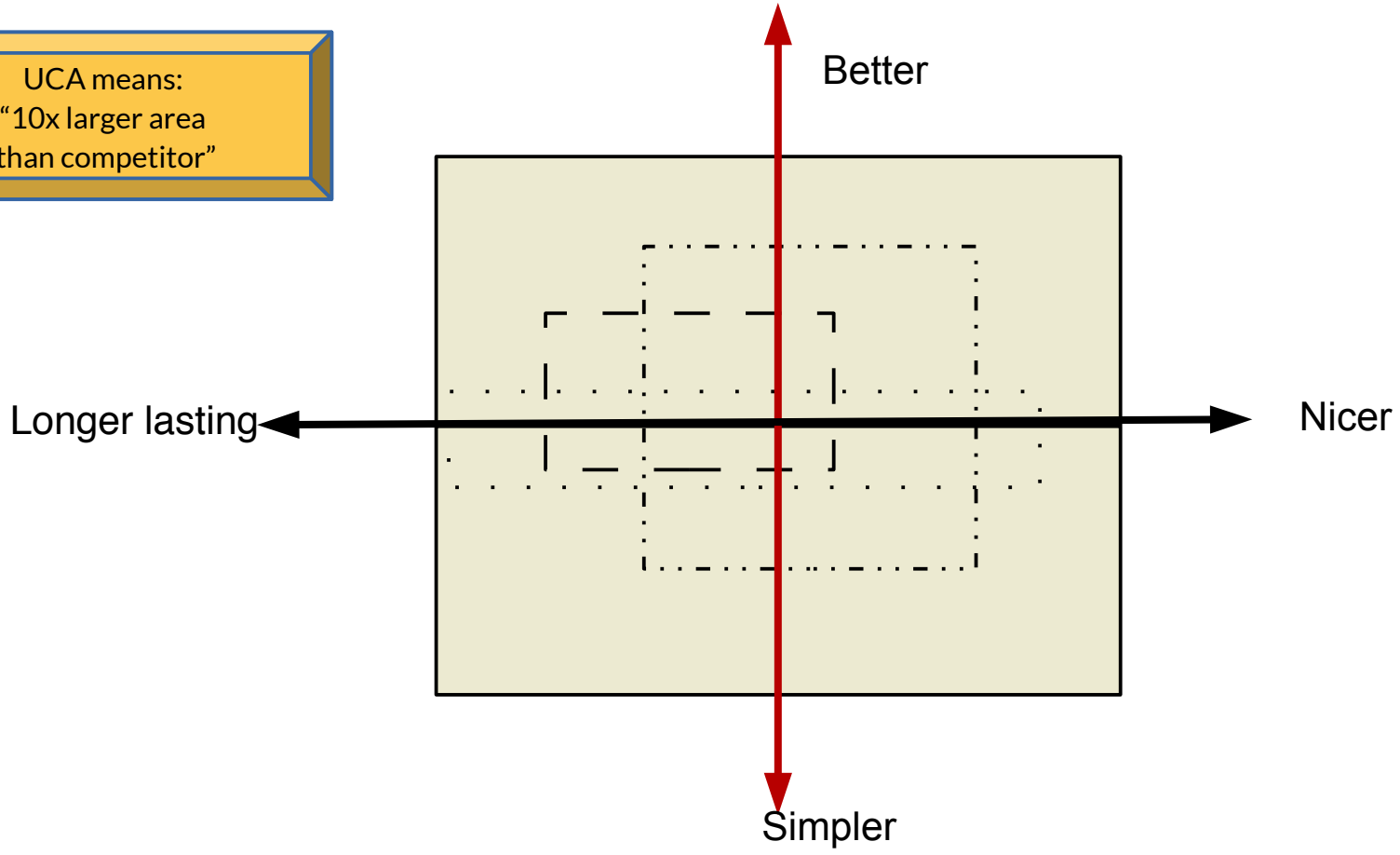


Software as a Business, © Prof. Uw

Comparative Utility Analysis with BeNiSiLo – Which Quality are we interested in?

- The utility of products, processes, projects is hard to measure, but contains at least 4 dimensions
- BeNiSiLo (Better, Nicer, Simpler, LongerLasting) compares several products in terms of their 4 basic qualites (utility analysis)

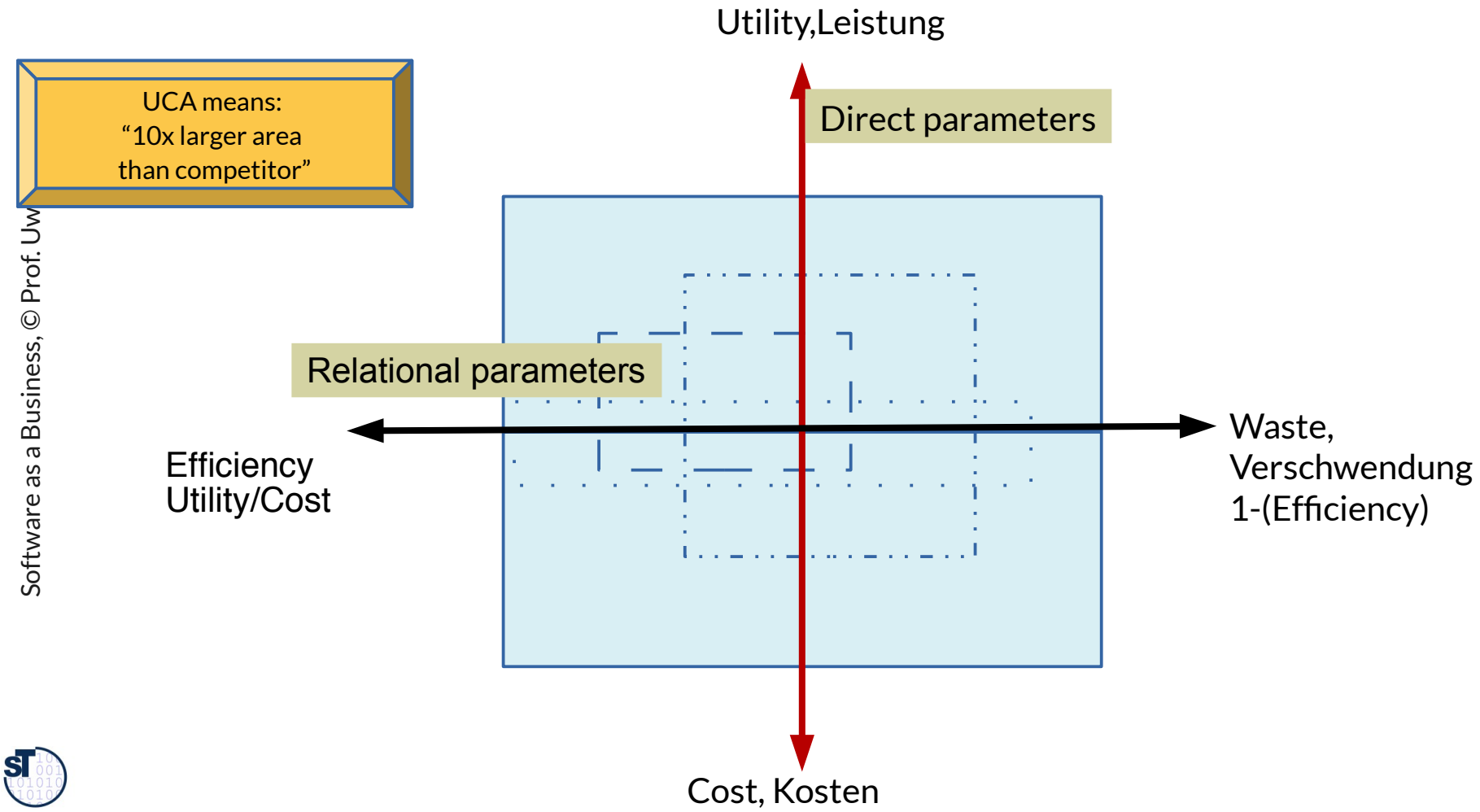
UCA means:
"10x larger area
than competitor"



Software as a Business, © Prof. Uw

Efficiency Comparative Analysis UCEW

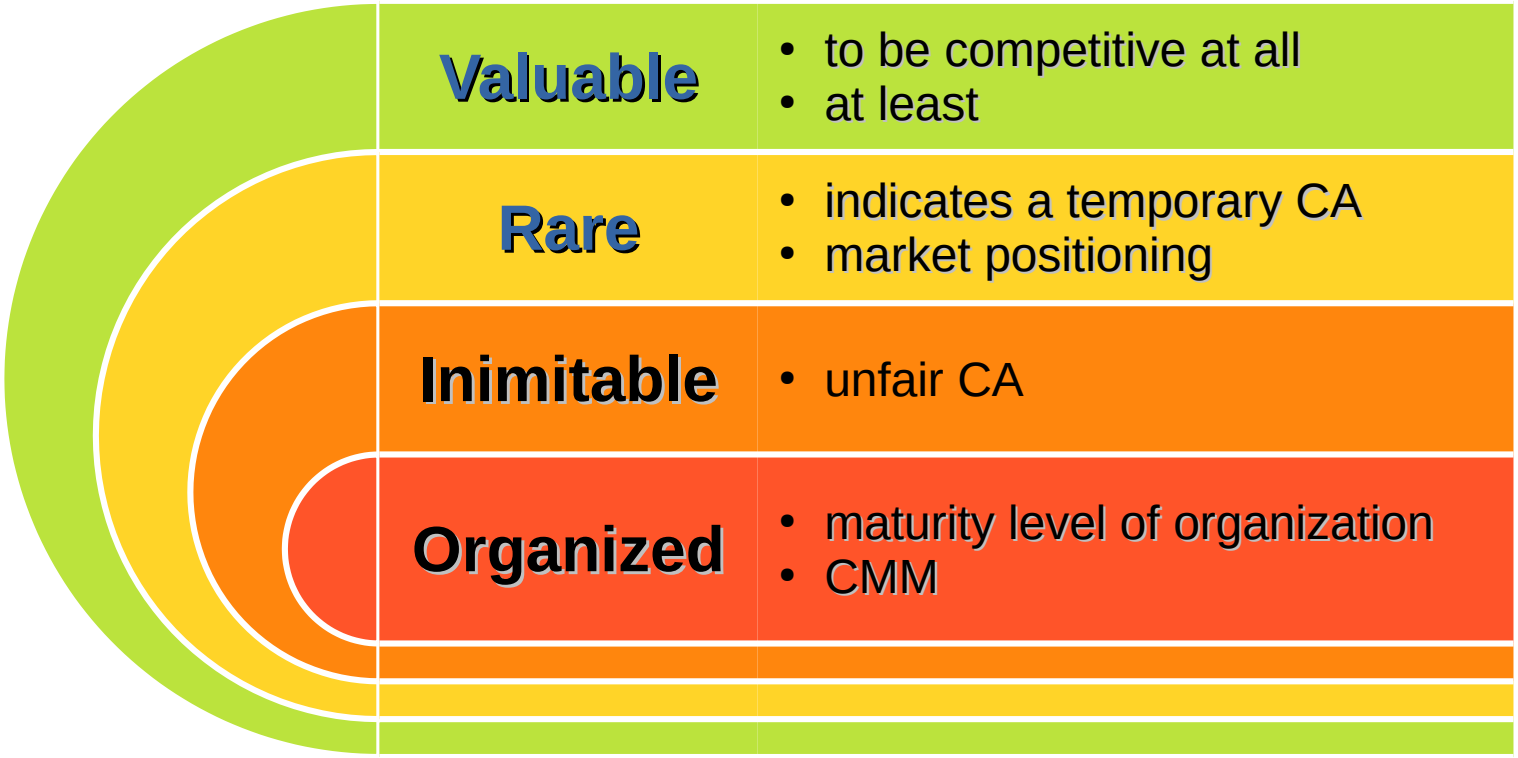
- UCEW is a 4-dimensional attribute analysis comparing the efficiency of *several* products, processes, services,
  - based on direct parameters (utility, cost) and indirect relations (efficiency, waste)



Software as a Business, © Prof. Uw

The VRIO Framework from ClearPointStrategy

- 4 dimensions



Software as a Business, © Prof. Uwe Aßmann

14.2. Competitive Positioning Canvas

- For distinguishing rational from emotional factors
- Market positioning (unique, superior, indifferent)

COMPETITIVE POSITIONING CANVAS

Customer jobs-to-be-done Customers / Job(s) to be done		Rational decision factors Pain / Value / Gain		Emotional decision factors
		Must have & nice to have traits ▪ Features ▪ Ease of use/ sophistication ▪ Offerings quality ▪ Configurability ▪ Support service ▪ Availability ▪ Uniqueness ▪ Customization	**Price & cost of access** ▪ Cheapest ▪ Value for money ▪ Competitive price ▪ Premium price ▪ Perceived free goodies ▪ Price transparency ▪ Finding costs ▪ Cost of access ▪ Due diligence costs ▪ Reputation/Brand value	▪ Personalization ▪ Choice ▪ Uniqueness ▪ Fair price ▪ Trust ▪ Status ▪ Popularity ▪ Reputation
Needs and desires derived from customer jobs-to-be-done				
Value proposition / Offering	**Unique**	▪ Capabilities ▪ Technologies ▪ Know-how and experience ▪ Access to natural resources ▪ Patents and intellectual property ▪ Features ▪ Novelty	▪ Pricing model ▪ Bundling ▪ Distribution network	▪ Perceived innovativeness ▪ Access to customers ▪ Distributors ▪ Perceived offering status ▪ Opinion leaders/influences
	Superior	▪ Quality of offering ▪ After-sales support ▪ Skills of labor ▪ Quality and quantity of natural resources ▪ Quantity of features	▪ Price level ▪ Search costs to find offerings ▪ Due diligence costs	▪ Reputation/Brand value ▪ User reviews ▪ Trust factors ▪ Offerings shelf size
	Indifferent	▪ Easily replicable traits ▪ Traits with a competitive disadvantage ▪ Functions required to get the job done but not explicitly valued by customers	▪ Easily replicable traits ▪ Traits with a competitive disadvantage ▪ Functions required to get the job done without explicit customer price sensitivity	▪ Easily replicable trains ▪ Traits with a competitive disadvantage ▪ Must have functional requirements without any emotional importance/relevance

This work is licensed under a Creative Commons Attribution-Non Commercial-Share Alike 4.0 International License by innovate.d llc

Emotional vs. Rational Aspects

- https://www.innovate-d.com/insight-101/
- Emotional aspects play an important role for differenciation
- How do you increase the emotional aspect?

- CPC can be filled to support an NABC canvas (detailing the fields Benefit4Cost and Competition)
  - Use it for your MVV pitch!

Aha.io consultancy for startups

- Aha.io Tools
  - e.g., imitability ladder
- https://www.aha.io/pricing for startups, Aha consultancy is free

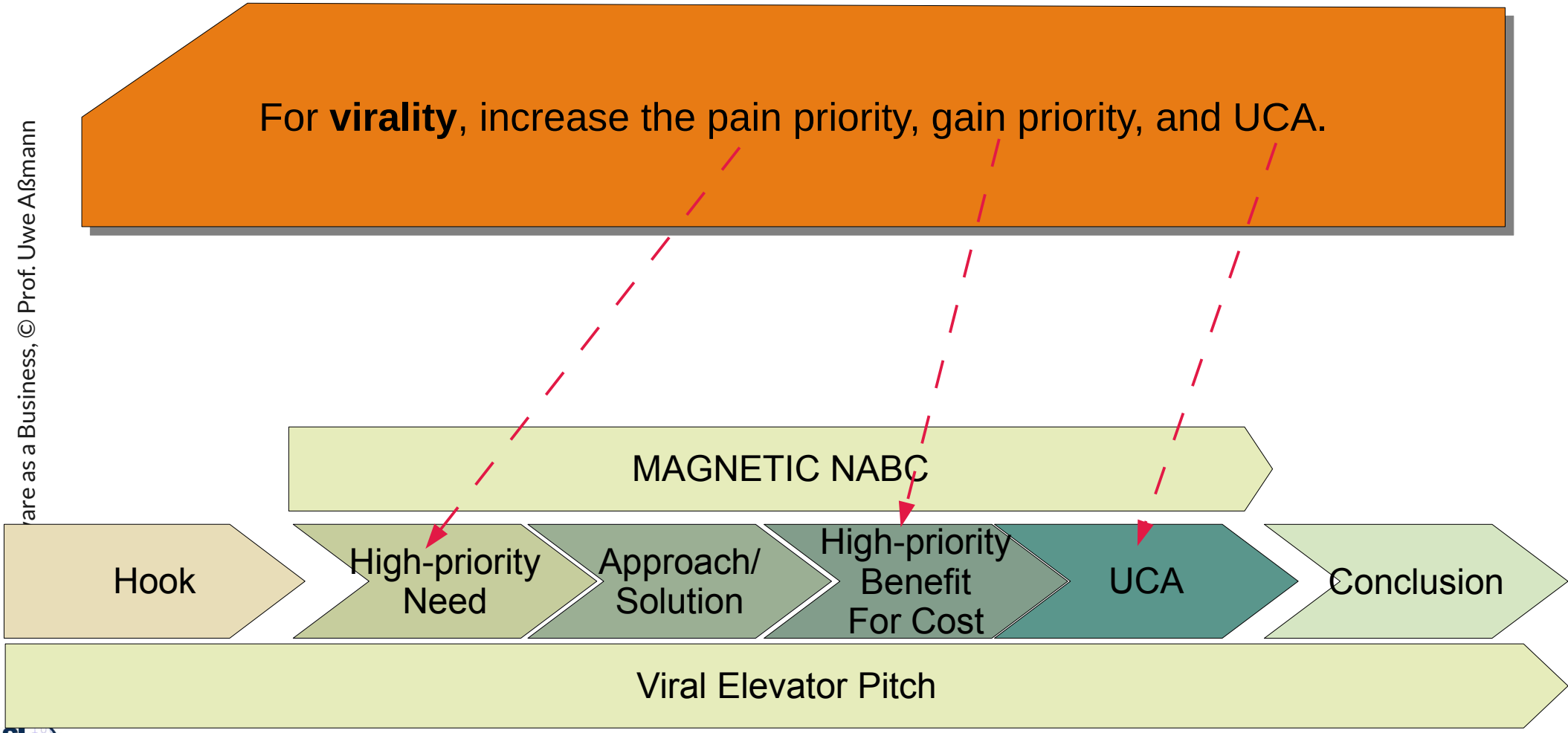
Software as a Business, © Prof. Uwe Aßmann

14.3. Stickiness and Virality of a Feature – The Influence of the Ultimate Competitive Advantage (UCA)

.. how to achieve that the news spreads itself (how to achieve mouth-to-mouth words)

Virality with *magnetic-NABC*

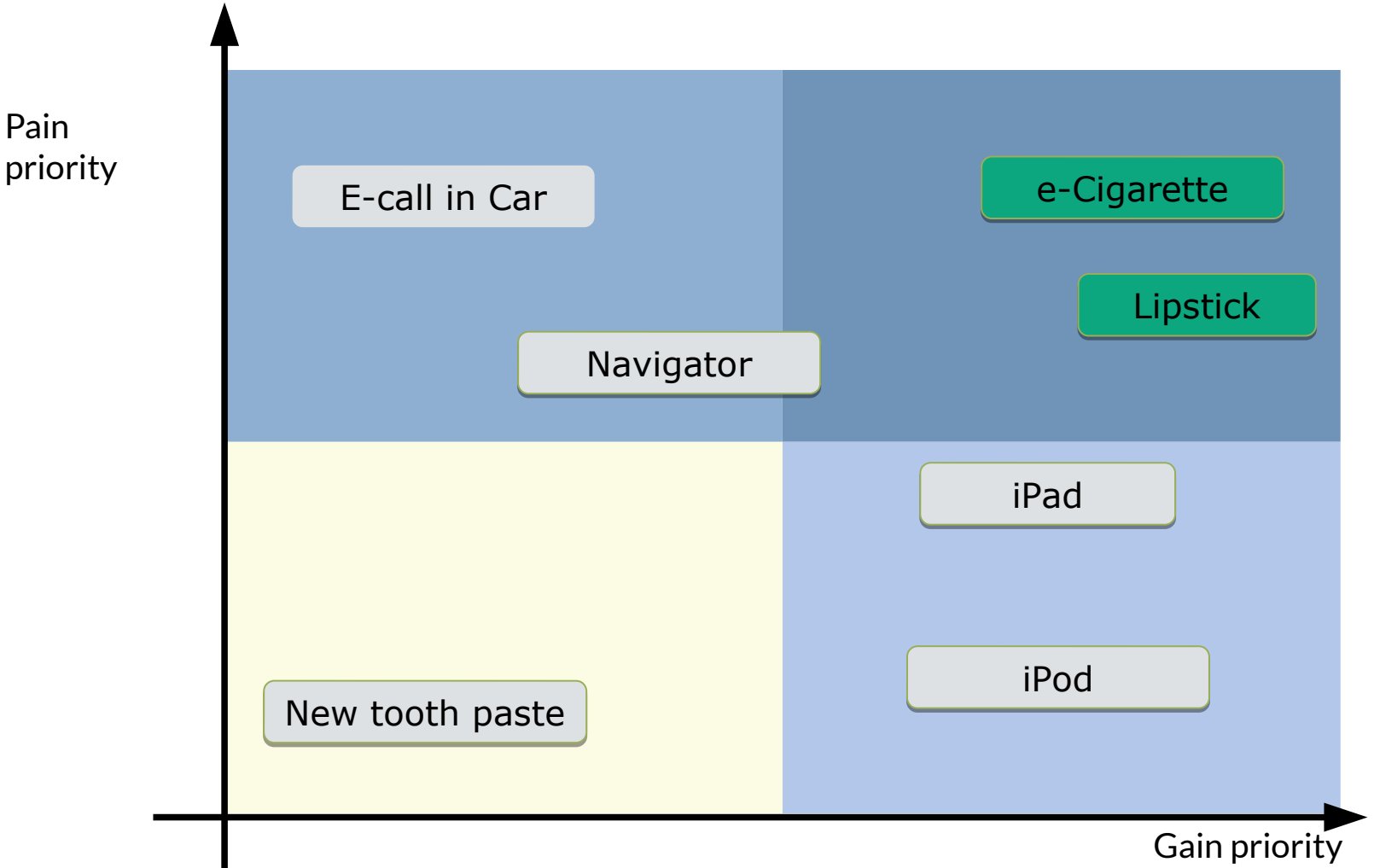
- A **viral** product/service is one about which news spreads easily, because people talk about it.



are as a Business, © Prof. Uwe Aßmann

Pain-Gain-Stickiness as Pain/Gain Product

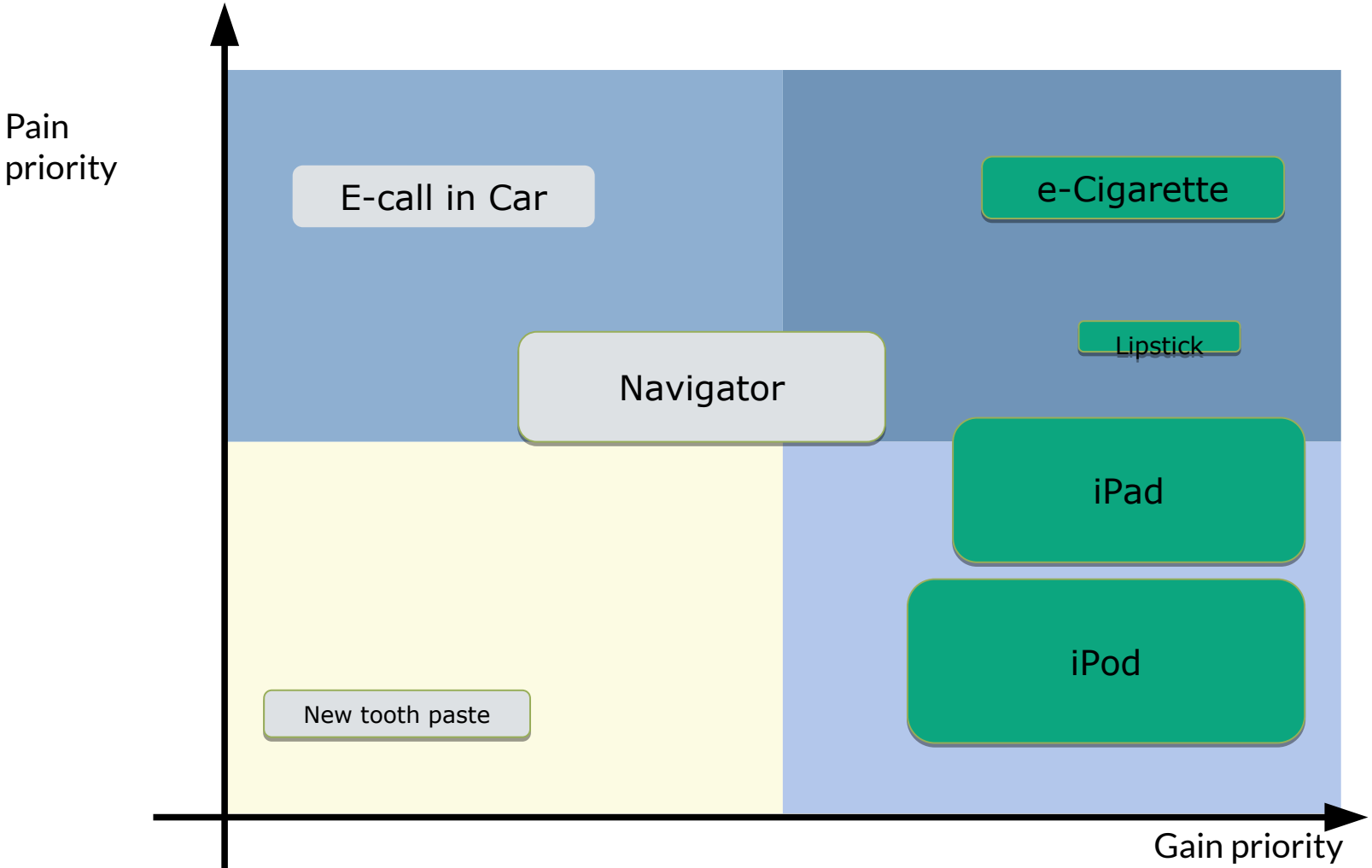
A ***sticky*** product/service has high pain **and** gain priority.
(green: infectious)



Software as a Business, © Prof. Uwe Aßmann

Pain-Gain-UCA-Virality

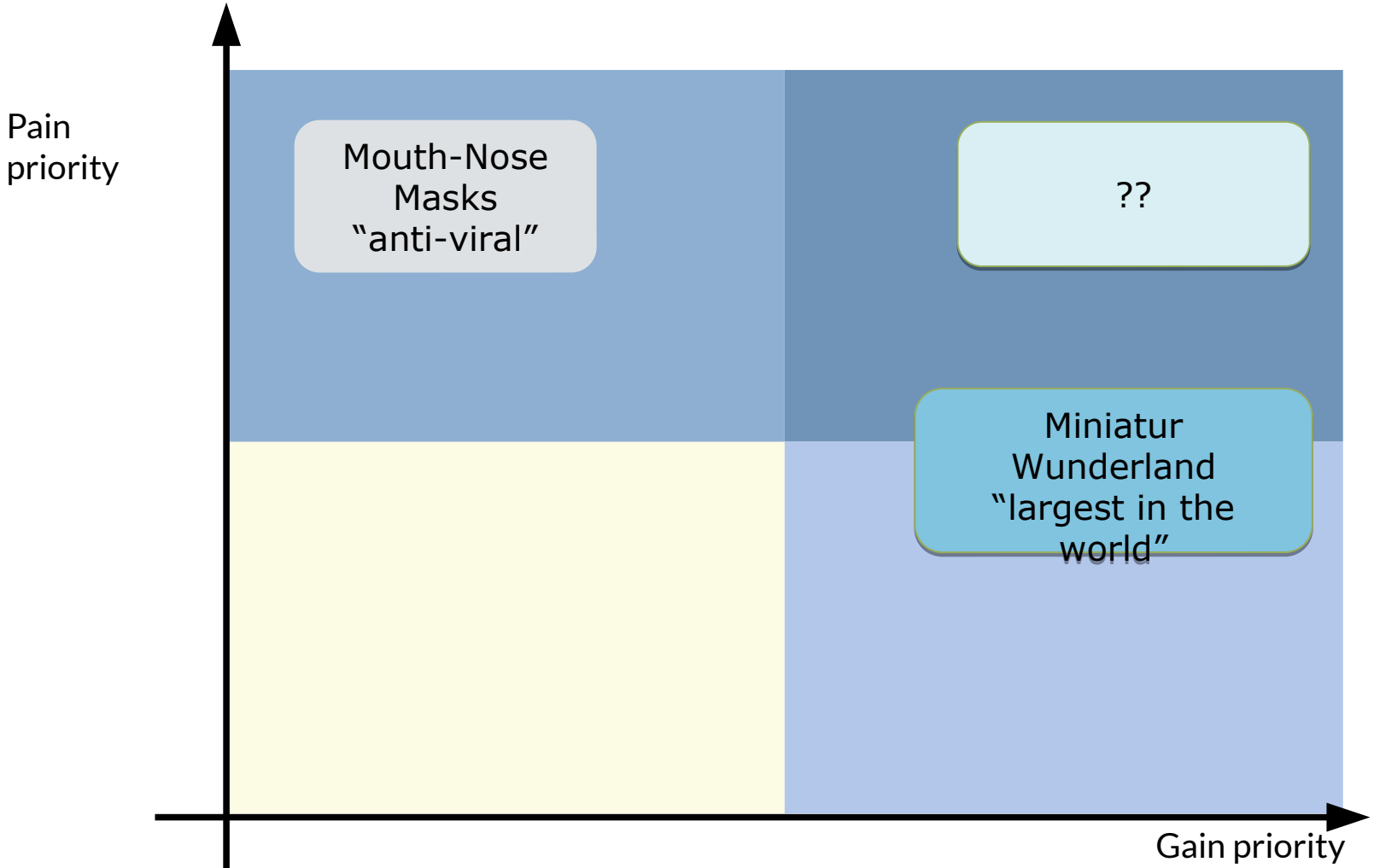
A ***viral*** product/service has high pain, high gain priority,
and high (ultimate) competitive advantage.
(visualized here with the size of green boxes)



Software as a Business, © Prof. Uwe Aßmann

Why is Miniatur Wunderland Viral?

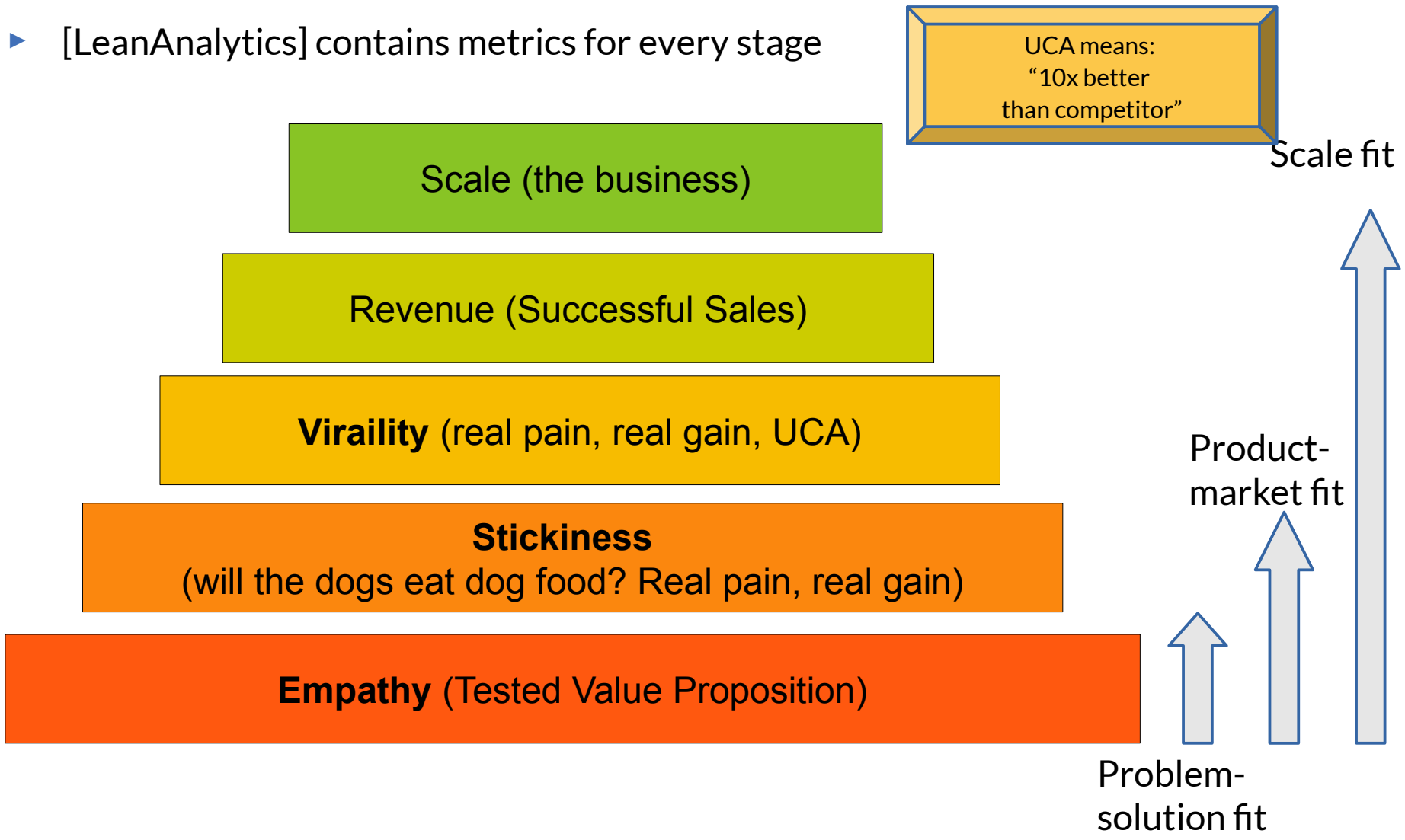
A ***viral*** product/service has high pain, high gain priority,
and high (ultimate) competitive advantage.



Software as a Business, © Prof. Uwe Aßmann

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



Software as a Business, © Prof. Uwe Aßmann

The Pirate Metrics AARRR for Web Site Visits

- "Even pirates need metrics." (Dave McClure)
- Example: the story of Dropbox – starting with a ***smoke video*** of a non-existing product
  - http://techcrunch.com/2011/10/19/dropbox-minimal-viable-product/

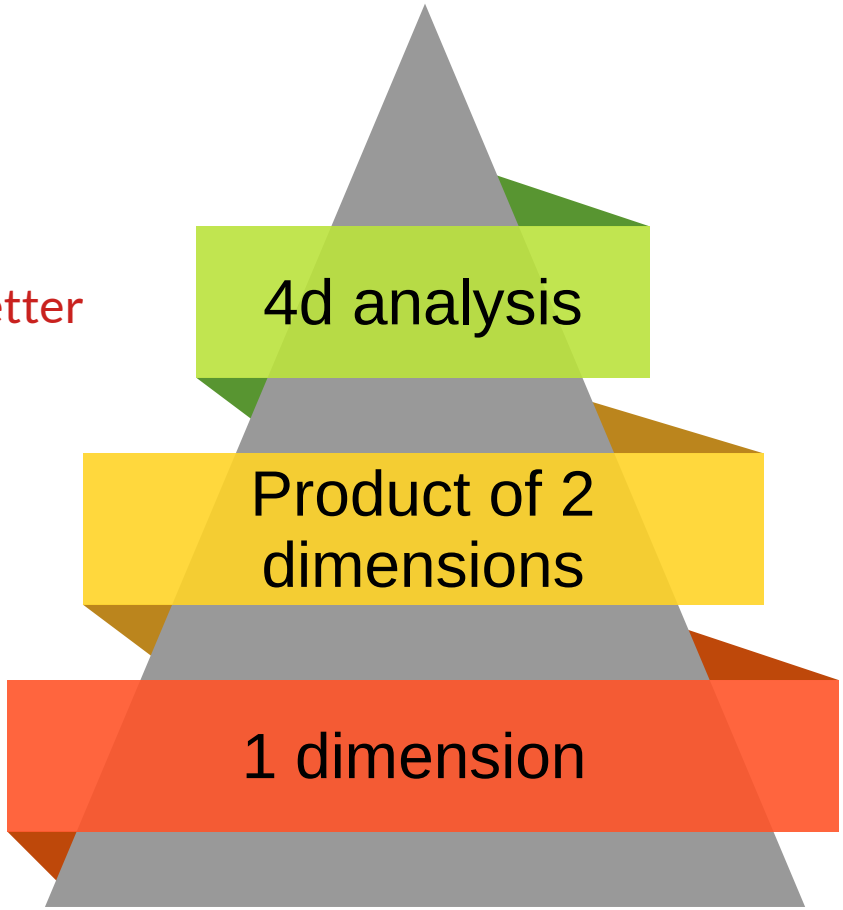
[LeanAnalytics]
[Dave McClure http://www.slideshare.net/dmc500hats/startup-metrics-for-pirates-long-version]

Software as a Business, © Prof. Uwe Aßmann

13.4. Moonshots (Ultimate Competitive Advantage with Factor 10)

Moonshots: How to be 10x better

- Competitive dimensions do not add up, but *multiply* or *divide*
- Remember Teekampagne: UCA from (cost x quality)
- If you have a high CA in one dimension, you can allow to be doubly as expensive (division by 2)



Factor 10x2/2=10xbetter

Factor 2x2x2x2=16x better

Factor 10x2=20xbetter

Factor 2x2=4xbetter

Factor 10 better

Factor 2 better

Software as a Business, © Prof. Uwe Aßmann

The End

- 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?
- What is virality? What is UCA?
- How to you plan a moonshot business model? Is it possible to plan a moonshot systematically?
- Test your favorite business idea on pain priority, gain priority, UCA, stickiness and virality.

Software as a Business, © Prof. Uwe Aßmann

14. Instruments for Competitive Advantage

Prof. Dr. Uwe Aßmann
Softwaretechnologie
Fakultät Informatik
Technische Universität Dresden
2020-0.4, 11/28/20
http://st.inf.tu-dresden.de/teaching/saab

1) Ultimative Competitive Advantage
2) Competitive Positioning Canvas
3) Stickiness and Virality
4) Moonshots

Pains can be shallow or deep.

For an innovation, rather find a *deep pain*.

Obligatory Literature

- Mitchell, D. and Coles, C. (2003), "The ultimate competitive advantage of continuing business model innovation", Journal of Business Strategy, Vol. 24 No. 5, pp. 15-21. https://doi.org/10.1108/02756660310504924
- McGillicuddy, K.M. (2005), "The Ultimate Competitive Advantage", Journal of Consumer Marketing, Vol. 22 No. 5, pp. 292-293. https://doi.org/10.1108/07363760510611770
- UCA means several things:
  - UCA of a product or service: a non-beatable advantage
    - unfair advantage
    - moonshot
  - UCA of a company: to continuously improve your business model (business model innovation)

Software as a Business, © Prof. Uwe Aßmann

14.1. The Ultimate Competitive Advantage of a Feature or of a Product (UCA)

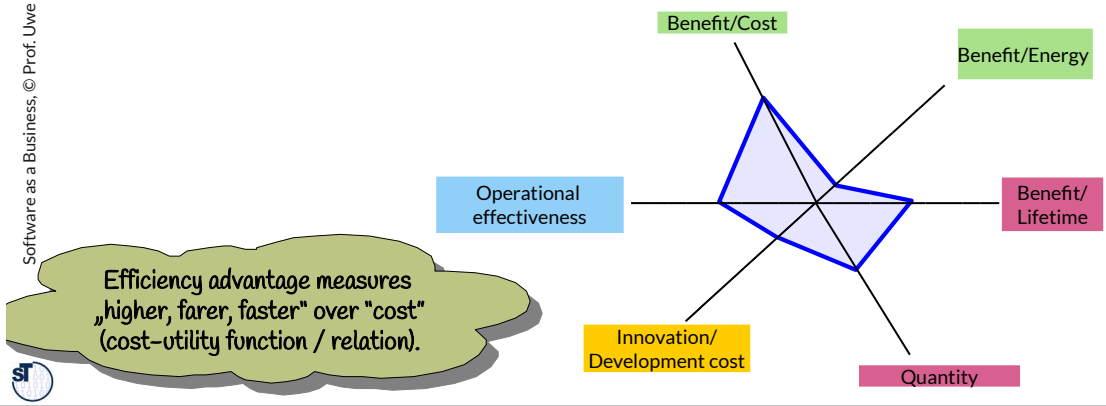
When we are talking about the features of our products, an UCA is important to beat the competition.

„Werden Sie Entrepreneur. Es gibt keine bessere Alternative.“ [Faltin]

Radar Charts (Spider Diagrams, Kiviat Graphs) measure Olympic advantages in Different Dimensions

- Spider diagrams visualize n-dimensional attribute analysis

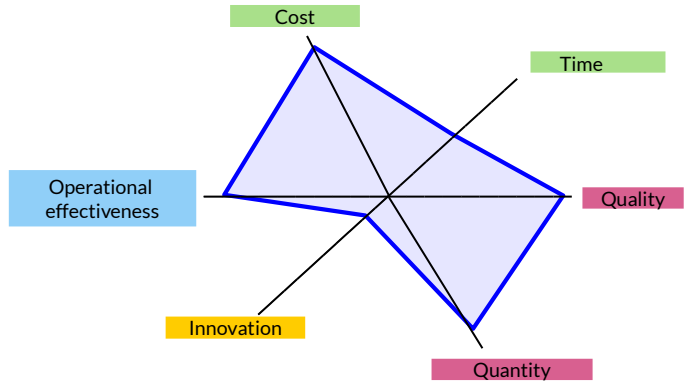
Software as a Business, © Prof. Uwe Aßmann



Efficiency advantage measures „higher, farer, faster" over "cost" (cost-utility function / relation).

Ex.: Faltin's “Kopf schlägt Kapital”

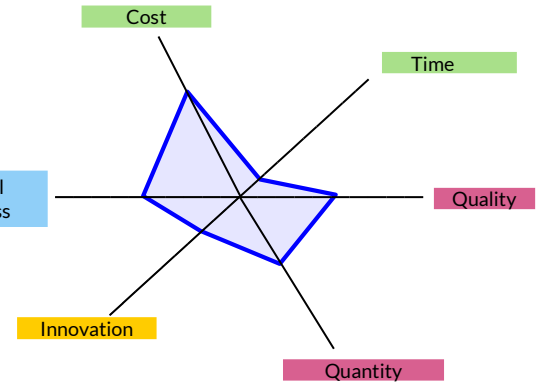
- Faltin founded in 1997 the company “Teekampagne”. Its **ultimate competitive advantage** is to reduce the product of **price *quality*quantity** (an efficiency product)
  - Importing entire containers of fresh, high-quality Darjeeling (*one sort)* from India by ship
  - Distributing very cheap by internet and mail in Germany in large packets of kilograms
  - Teekampagne has a high product / large polygone in the radar chart:



Software as a Business, © Prof. Uwe Aßmann

Competitive Advantage of a Feature

- http://en.wikipedia.org/wiki/Competitive_advantage
- In a market your company is not al one. Competition is strong. Therefore, you need to find a *competitive advantage* along **one or several of the following *olympic* dimensions:**
  - Cost leadership
    - Time to delivery
  - Feature Differenciation (uniqueness of feature)
    - Quality of product
    - Quantity of product
  - Innovation
  - Operational effectiveness

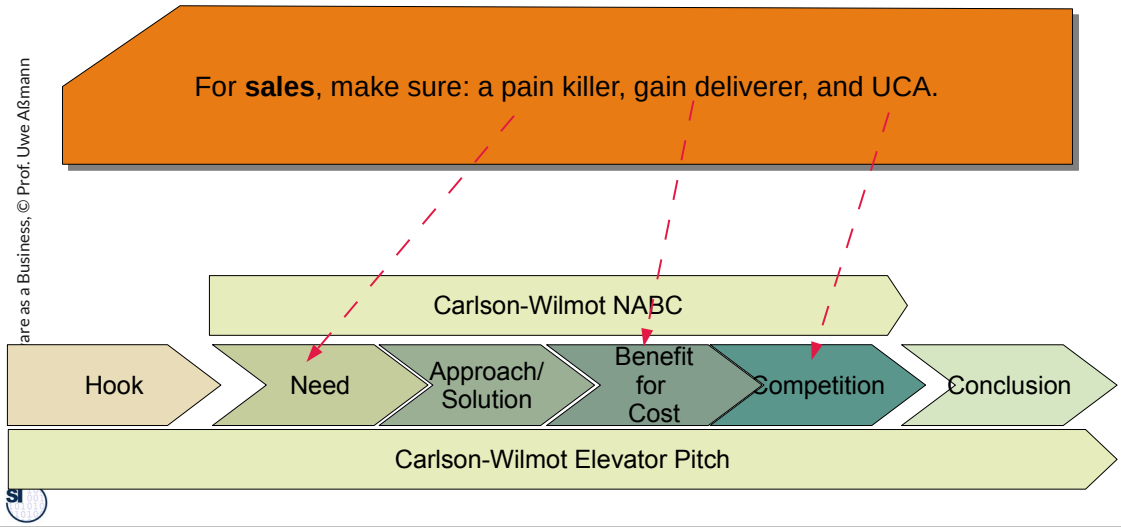


Olympic advantage measures „higher, farer, faster" (cost *or* utility function).

Software as a Business, © Prof. Uwe Aßmann

Ultimate Competitive Advantage (UCA) is about Beating the Competition by Factor 10

- A **viral** product/service is one about which news spreads easily, because people talk about it.
- A **moonshot (UCA)** is a feature that is 10 times better than that of the competitor



are as a Business, © Prof. Uwe Aßmann

Domain Porting: Olive Oil

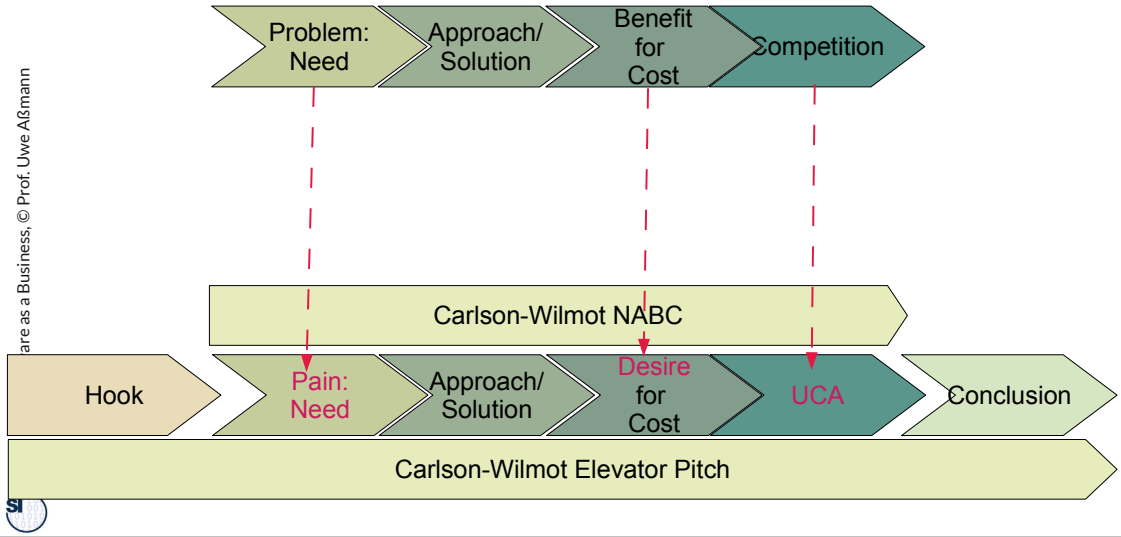
- http://www.artefakten.net/ Founder: Conrad Bölicke, Focussing on olive oil, with the same business model as Teekampagne

- http://www.zait.de, Founder: Thomas Fuhlrott: Olive oil products
- https://www.waschkampagne.de/ Founder: Wolfgang Kunz, Ecologic washing
- Similar companies with “Kopf schlägt Kapital”: https://www.entrepreneurship.de/kopf-schlaegt-kapital/

Software as a Business, © Prof. Uwe Aßmann

What is a Good Pitch?

- A **viral** product/service is one about which news spreads easily, because people talk about it.
- A **moonshot (UCA)** is a feature that is 10 times better than that of the cojmpetitor



are as a Business, © Prof. Uwe Aßmann

14.1.2. The Dimensions of a Competitive Advantage

The Lean Canvas

Designed for:	Designed by:	Date:	Version:
Startup Name	Name1, Name2, …	DD/MM/YYYY	X.Y

Problem	Solution	Unique Value Prop.	Unfair Advantage	Customer Segments
Top 3 problems	Top 3 features	Single, clear and compelling message that states why you are different and worth buying	Can't be easily copied or bought	Target Customers
Existing Alternatives	**Key Metrics**	**High-Level Concept**	**Channels**	**Early Adopters**
List how these problems are solved today.	Key activities you measure	List your X for Y analogy (e.g. YouTube = Flickr for videos)	Path to customers	List the characteristics of your ideal customers.

Cost Structure	Revenue Streams
List your fixed and variable costs. Customer acquisition costs Distribution costs Hosting People Etc.	List your sources of revenue. Revenue Model Life Time Value Revenue Gross Margin

Lean Canvas is adapted from The Business Model Canvas (www.businessmodelgeneration.com/canvas). PowerPoint implementation by: Neos Chronos Limited (https://neoschronos.com). License: CC BY-SA 3.0

Dimensions

In the BMC, the fields can be used to derive competitive dimensions:

- Customer orientation
- Cost
- Sustainability
- Value proposition
  - Need
    - Maslow
    - Safety, Protection, Health
  - Gain
    - Beauty
    - Quality of service
- Copy-ability (fair or unfair advantage)
  - Intellectual property
  - Market positioning

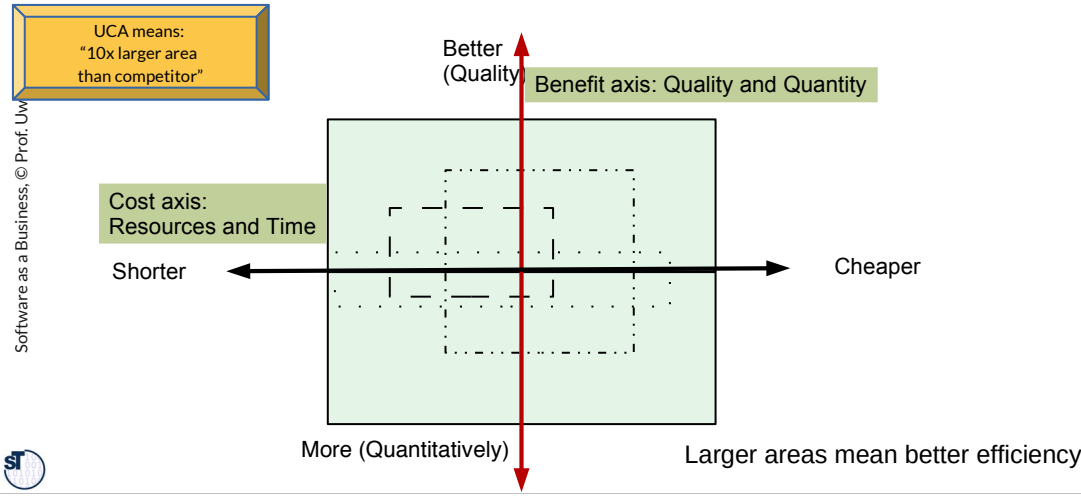
Software as a Business, © Prof. Uwe Aßmann

14.1.3. Combinations of Dimensions of a Competitive Advantage

- 4d analyses for measuring your competitive advantage

Comparative Cost-Benefit Analysis (CoTiQQ Efficiency 4-D Analysis)

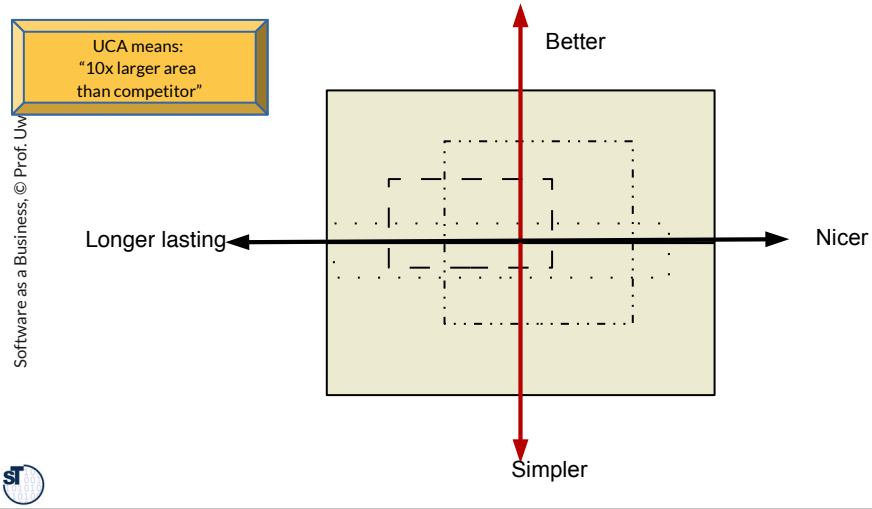
- ***CoTIQQ (Cost, Time, Quantity, Quality)*** is a special *4-D analysis* for one project with cost and benefit axis and a fixed area, several 4-D analyses can be derived, which can be used to compare different projects for efficiency.
  - Without fixed area, the CoTiQQ analysis for operational goals results
  - Teekampange has a CoTiQQ-UCA



Software as a Business, © Prof. Uw

Comparative Utility Analysis with BeNiSiLo – Which Quality are we interested in?

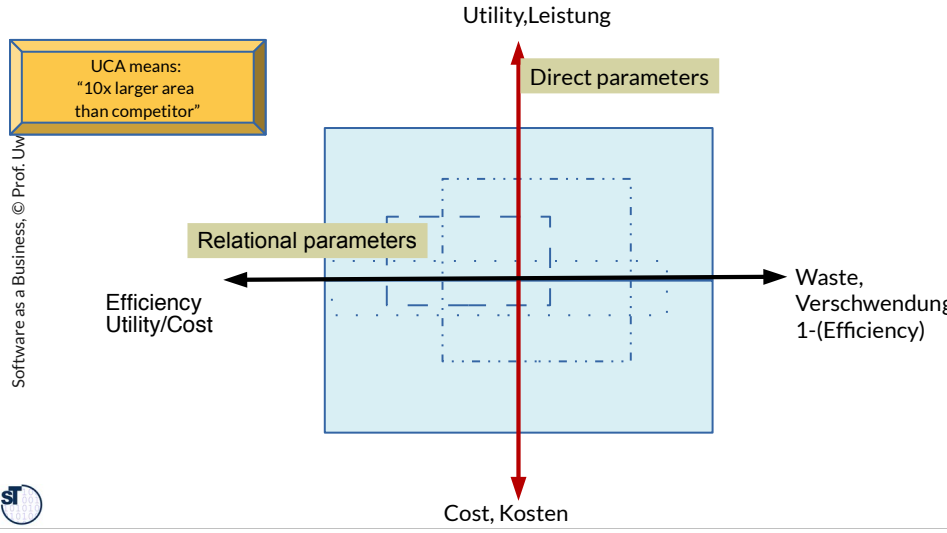
- The utility of products, processes, projects is hard to measure, but contains at least 4 dimensions
- BeNiSiLo (Better, Nicer, Simpler, LongerLasting) compares several products in terms of their 4 basic qualites (utility analysis)



Software as a Business, © Prof. Uw

Efficiency Comparative Analysis UCEW

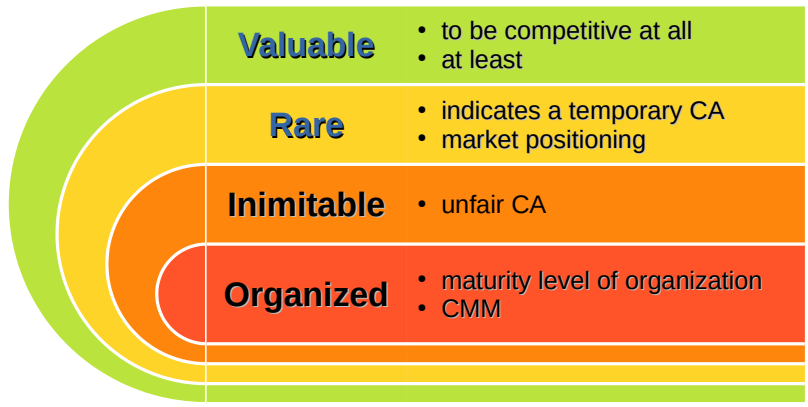
- UCEW is a 4-dimensional attribute analysis comparing the efficiency of *several* products, processes, services,
  - based on direct parameters (utility, cost) and indirect relations (efficiency, waste)



Software as a Business, © Prof. Uw

The VRIO Framework from ClearPointStrategy

- 4 dimensions



Software as a Business, © Prof. Uwe Aßmann

14.2. Competitive Positioning Canvas

- For distinguishing rational from emotional factors
- Market positioning (unique, superior, indifferent)

COMPETITIVE POSITIONING CANVAS

Customer jobs-to-be-done		Rational decision factors		Emotional decision factors
Customers / Job(s) to be done		Pain / Value / Gain	Costs	
Needs and desires derived from customer jobs-to-be-done		**Must have & nice to have traits** ▪ Features ▪ Ease of use/ sophistication ▪ Offerings quality ▪ Configurability ▪ Support service ▪ Availability ▪ Uniqueness ▪ Customization	**Price & cost of access** ▪ Cheapest ▪ Value for money ▪ Competitive price ▪ Premium price ▪ Perceived free goodies ▪ Price transparency ▪ Finding costs ▪ Cost of access ▪ Due diligence costs ▪ Reputation/Brand value	▪ Personalization ▪ Choice ▪ Uniqueness ▪ Fair price ▪ Trust ▪ Status ▪ Popularity ▪ Reputation
Value proposition / Offering	Unique	▪ Capabilities ▪ Technologies ▪ Know-how and experience ▪ Access to natural resources ▪ Patents and intellectual property ▪ Features ▪ Novelty	▪ Pricing model ▪ Bundling ▪ Distribution network	▪ Perceived innovativeness ▪ Access to customers ▪ Distributors ▪ Perceived offering status ▪ Opinion leaders/influences
	Superior	▪ Quality of offering ▪ After-sales support ▪ Skills of labor ▪ Quality and quantity of natural resources ▪ Quantity of features	▪ Price level ▪ Search costs to find offerings ▪ Due diligence costs	▪ Reputation/Brand value ▪ User reviews ▪ Trust factors ▪ Offerings shelf size
	Indifferent	▪ Easily replicable traits ▪ Traits with a competitive disadvantage ▪ Functions required to get the job done but not explicitly valued by customers	▪ Easily replicable traits ▪ Traits with a competitive disadvantage ▪ Functions required to get the job done without explicit customer price sensitivity	▪ Easily replicable trains ▪ Traits with a competitive disadvantage ▪ Must have functional requirements without any emotional importance/relevance

This work is licensed under a Creative Commons Attribution-Non Commercial-Share Alike 4.0 International License by innovate-d llc

Emotional vs. Rational Aspects

- https://www.innovate-d.com/insight-101/
- Emotional aspects play an important role for differenciation
- How do you increase the emotional aspect?

- CPC can be filled to support an NABC canvas (detailing the fields Benefit4Cost and Competition)
  - Use it for your MVV pitch!

Software as a Business, © Prof. Uwe Aßmann

Aha.io consultancy for startups

- Aha.io Tools
  - e.g., imitability ladder
- https://www.aha.io/pricing for startups, Aha consultancy is free

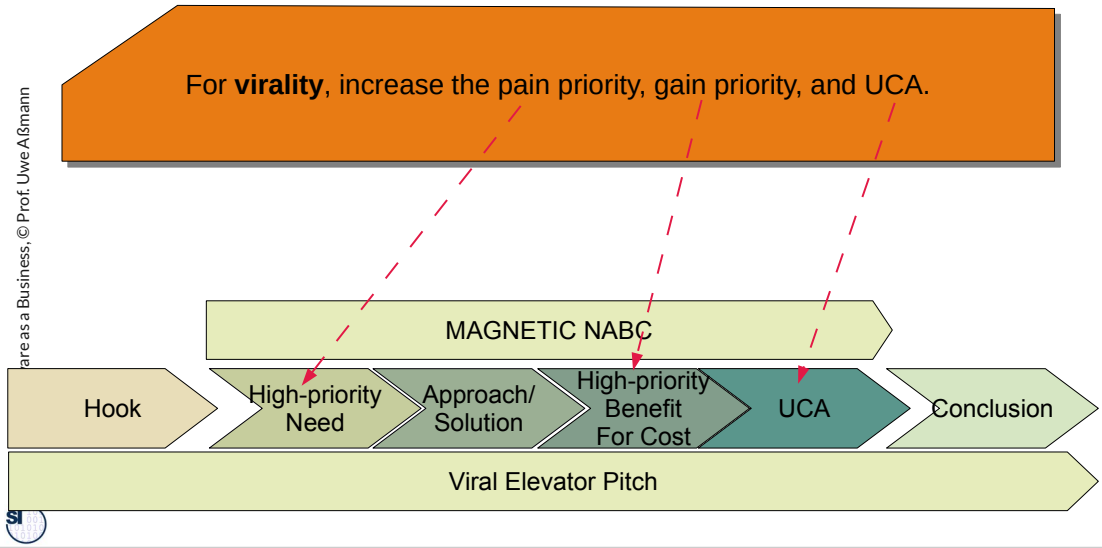
Software as a Business, © Prof. Uwe Aßmann

14.3. Stickiness and Virality of a Feature – The Influence of the Ultimate Competitive Advantage (UCA)

.. how to achieve that the news spreads itself
(how to achieve mouth-to-mouth words)

Virality with *magnetic-NABC*

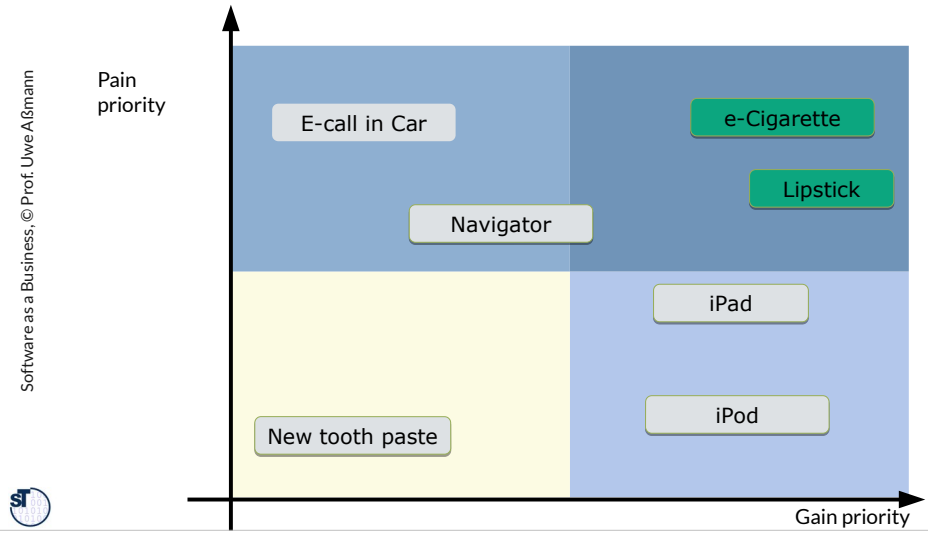
- A **viral** product/service is one about which news spreads easily, because people talk about it.



are as a Business, © Prof. Uwe Aßmann

Pain-Gain-Stickiness as Pain/Gain Product

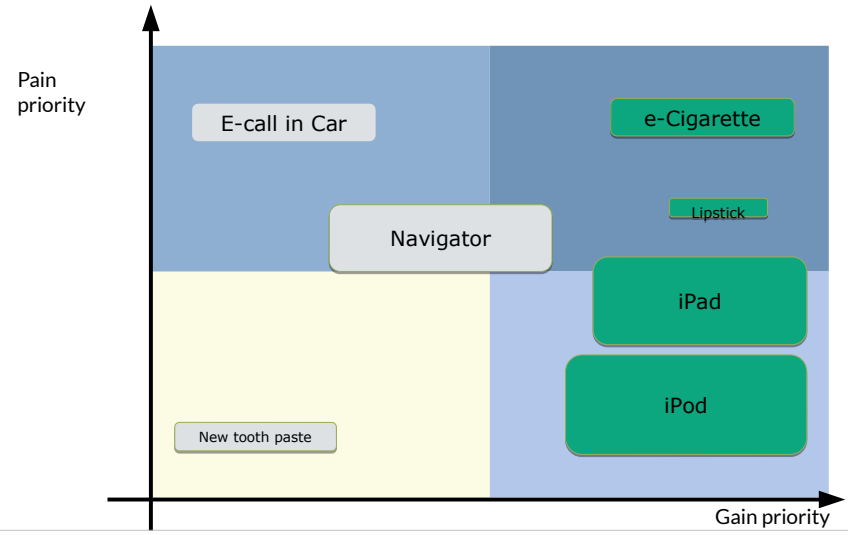
A ***sticky*** product/service has high pain **and** gain priority.
(green: infectious)



Software as a Business, © Prof. Uwe Aßmann

Pain-Gain-UCA-Virality

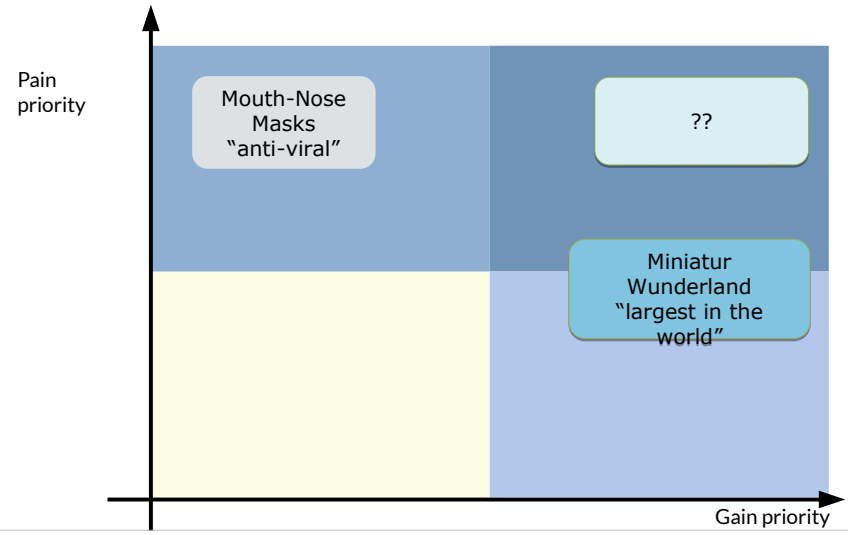
A ***viral*** product/service has high pain, high gain priority,
and high (ultimate) competitive advantage.
(visualized here with the size of green boxes)



Software as a Business, © Prof. Uwe Aßmann

Why is Miniatur Wunderland Viral?

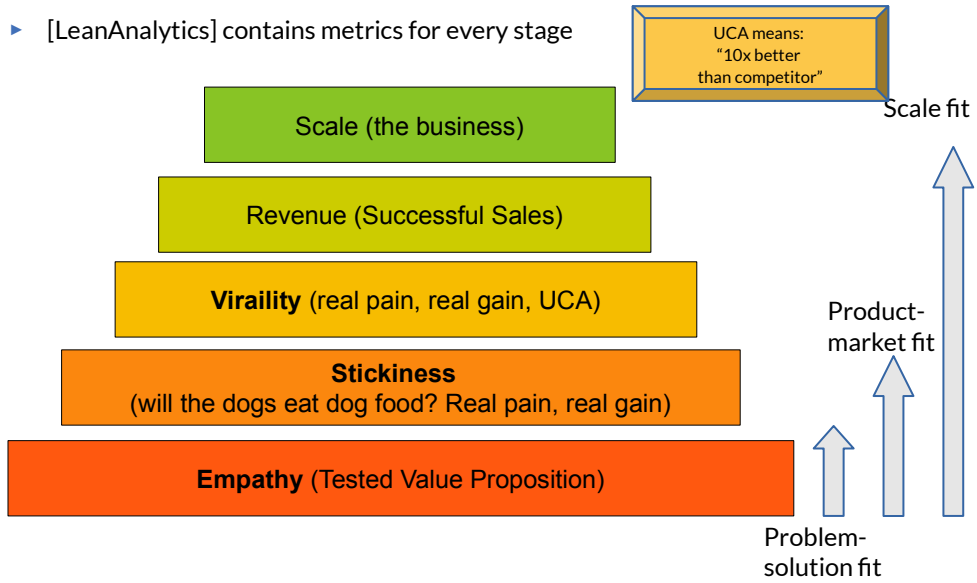
A ***viral*** product/service has high pain, high gain priority,
and high (ultimate) competitive advantage.



Software as a Business, © Prof. Uwe Aßmann

The “Lean Analytics” Stages and Their Metrics

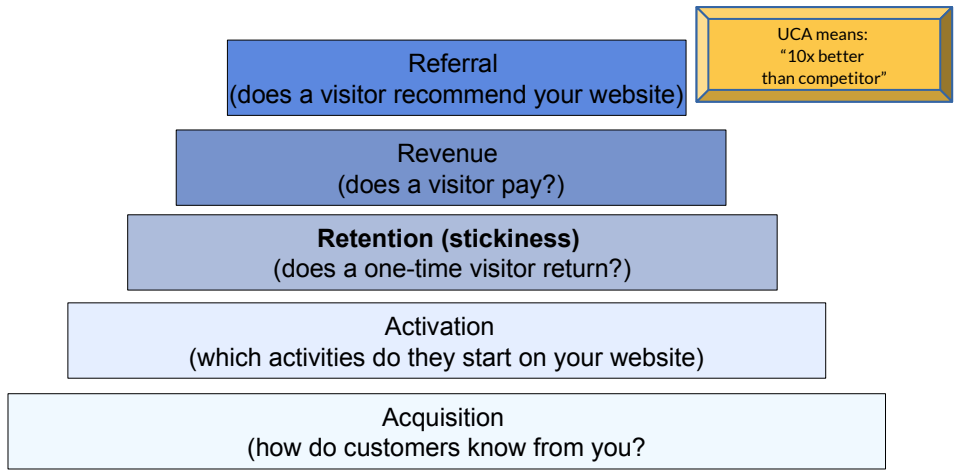
- The Lean Analytics Stages are a simple stage system for product/service product-market fit.
- [LeanAnalytics] contains metrics for every stage



Software as a Business, © Prof. Uwe Aßmann

The Pirate Metrics AARRR for Web Site Visits

- "Even pirates need metrics." (Dave McClure)
- Example: the story of Dropbox – starting with a ***smoke video*** of a non-existing product
  - http://techcrunch.com/2011/10/19/dropbox-minimal-viable-product/



Software as a Business, © Prof. Uwe Aßmann

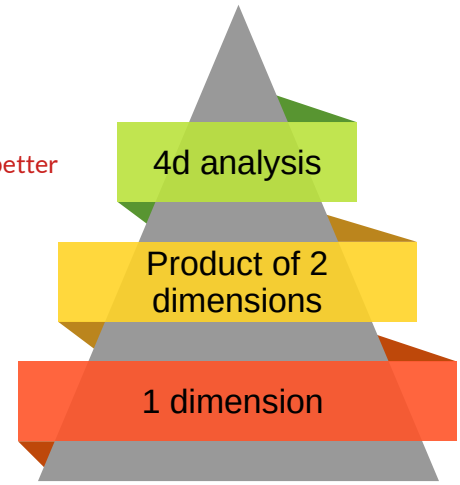
[LeanAnalytics]
[Dave McClure http://www.slideshare.net/dmc500hats/startup-metrics-for-pirates-long-version]

13.4. Moonshots (Ultimate Competitive Advantage with Factor 10)

Moonshots: How to be 10x better

- Competitive dimensions do not add up, but *multiply* or *divide*
- Remember Teekampagne: UCA from (cost x quality)
- If you have a high CA in one dimension, you can allow to be doubly as expensive (division by 2)

Software as a Business, © Prof. Uwe Aßmann



Is it possible to plan a Moonshot systematically?

Yes, if you try to combine UCA in several dimensions. If you are much better in 4 of the dimensions, the chance to get a moonshot is high.

The End

- 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?
- What is virality? What is UCA?
- How to you plan a moonshot business model? Is it possible to plan a moonshot systematically?
- Test your favorite business idea on pain priority, gain priority, UCA, stickiness and virality.

Software as a Business, © Prof. Uwe Aßmann