

# Point IoT

POSITION •  
CONNECT •  
DEVELOP •

[www.point-iot.eu](http://www.point-iot.eu)

## Entrepreneur's Playbook

Edition 2021



European  
Global Navigation  
Satellite Systems  
Agency



This project has received funding from the European GNSS Agency under the European Union's Horizon 2020 research and innovation programme under grant agreement No 870283.



## ABOUT POINT.IOT PROJECT

# Empowering IoT innovation with Galileo technology

### Opportunity for IoT and GNSS entrepreneurs

Each year, ten ambitious teams are selected to tackle relevant industry challenges while using European positioning technologies in IoT. The programme kicks off with a two-day action-packed bootcamp to prepare for a three-month virtual development sprint. During their solution development journey, teams get access to a customized MOOC, investment readiness training, business design tools as well as investor track and partnership opportunities.

### Guided development sprint with a support of business & technology mentors

Each team has access to leading industry experts for continuous guidance, advice and support during their technical and business sprints. The teams will have virtual one-on-one meetings with their mentors to have the greatest chance of success.

### How to use the Point.IoT Entrepreneur`s playbook?

With this book Point.IoT provides a customized, comprehensive entrepreneurial toolkit. It allows promising IoT and GNSS entrepreneurs to unlock unique business opportunities in the expanding IoT market.

This Playbook will help you to go through your business journey with a series of self-directed exercises addressing key questions to understand customer challenges, define products & services, design business model & case as well as get practical instructions in preparing to pitch like a pro.

You can use this book together with your mentors or by yourself.

### Prize for the winners

Point.IoT programme ends with a demo day where teams can showcase their success. All teams will pitch their solutions to the jury, which will then evaluate each solution and decide who will get the €20,000 cash prize. The evaluators will also select five teams to take part in a leading investor roadshow, giving the most promising high-tech solutions a chance to build partnerships with investors and access funding.

Partners

VERHAERT | MASTERS IN INNOVATION

space-tec  
PARTNERS

TechTour  
Growth

design&data  
IDEAS FACTORY FOR SPACE & SCIENCE

cesah  
Centrum für  
Satellitenavigation  
Hessen

orange™

load



# Content



## INTRO IOT & GNSS

Tech trends shaping future market opportunities

## PREP IDEA & TEAM

Who is who? Team formation  
Teamwork and team roles  
List your goals as a team

## STAGE 1 CUSTOMER PROBLEM

Mile 1 - Find your customers & size the opportunity  
- Who is your user and customer?  
- What problems do your customers and users have?  
- How do you recognise & nail the most important customer questions?

HOMEWORK

Mile 2 - Nail your customer problems!  
- Does your solution fit the problem and customer?  
- How can you validate the fit?  
- How do you get the X-factor in?

HOMEWORK

## STAGE 3 PRODUCTS /SERVICES

Mile 3 - Define a compelling & meaningful offering!  
- How do you design a differentiated value proposition: functionalities, features, USP's?  
- How do you design a min viable product?  
- How do you secure growth further – product platform planning

HOMEWORK

## STAGE 4 CONCEPT DESIGN

Mile 4 – Define your concept & plan  
- How do define user requirements?  
- What is my system architecture design?  
- How do I choose the right components?  
- How do I define an end-2-end concept?

HOMEWORK

## STAGE 5 BUSINESS

Mile 5 - Make sure it brings enough of money!  
- How do you make money (revenue & business model)?  
- How do you get traction in market?  
- How do you get the business growing (marketing plan and roadmap)?

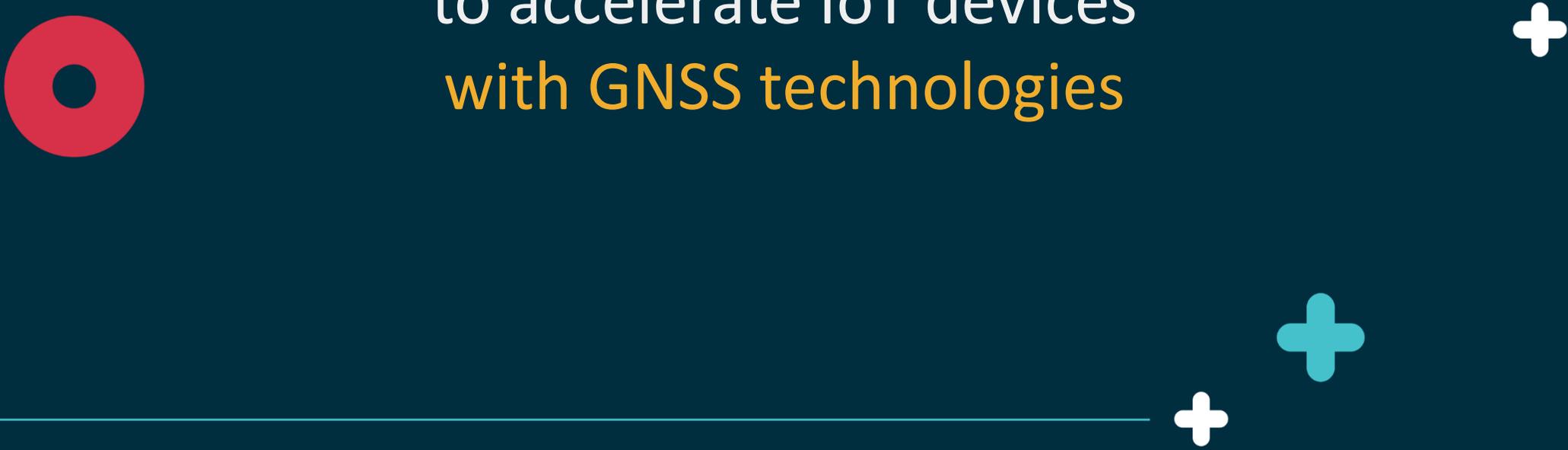
HOMEWORK

## STAGE 6 PITCH

Mile 6 - Get prepared to raise funds!  
- Define your financial metrics  
- Funding strategy  
- Fundraising & pitching  
HOMEWORK  
Mile 7 - Just DO IT!  
- Tips and tricks for preparing your pitch!  
- Pitch Event



Follow this playbook to  
discover, **build** and tap into  
**business opportunities**  
to accelerate IoT devices  
with **GNSS technologies**



## Tick these boxes along the way

- We have a problem worth solving.
- We have set deadlines to make our goals concrete.
- We know our customers.
- We tailored an attractive solution for our customers.
- Our solution is scalable.
- We designed a unique user experience that our customers could have never dreamed of.
- We have created a story around our unique value proposition.
- We have worked agile, found shortcuts, and copied and used existing resources.
- We claimed the resources needed by acting as urban warriors.
- We used and engaged our mentors in designing our solution.
- We survived the innovation jungle by acting as a team.



## INTRO

# IOT & GNSS

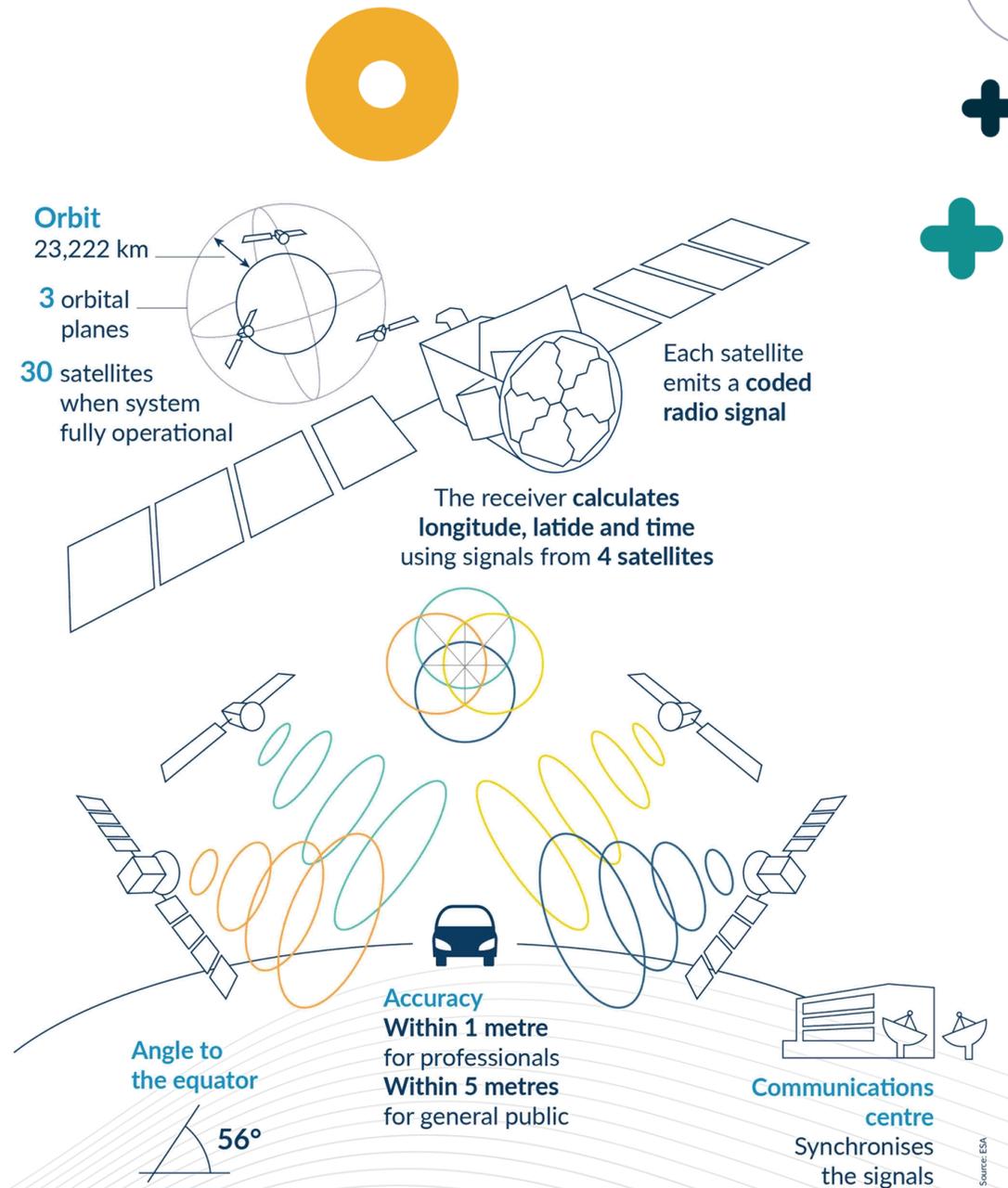
Tech trends shaping future market opportunities

A background illustration in a light blue color on a dark blue background. It features various IoT and GNSS-related icons connected by lines. The icons include a house with a smartwatch, a microwave, a smartphone, a car, a smartwatch, a camera, a drone, and a laptop. There are also several plus signs and circular symbols scattered throughout the scene.

# What is Galileo?

A European Global Navigation Satellite System (GNSS), similar to GPS (US) or GLONASS (RU).

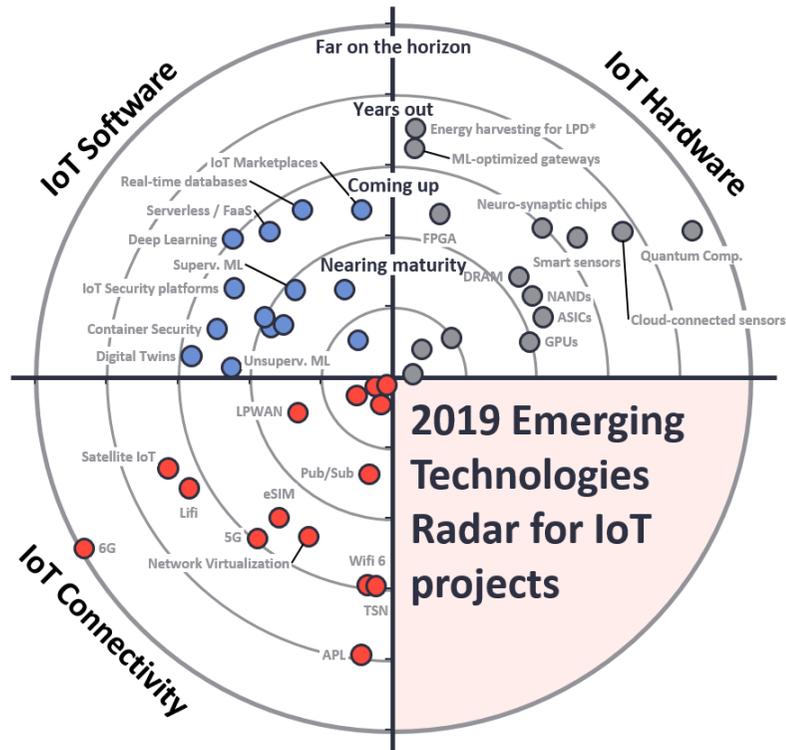
- Highly accurate in multi-constellation
- Best urban performance
- Global positioning service
- Under civilian control



# Future Trends: How will IoT evolve?

## Emerging Technologies Radar for IoT Projects

Aug 2019

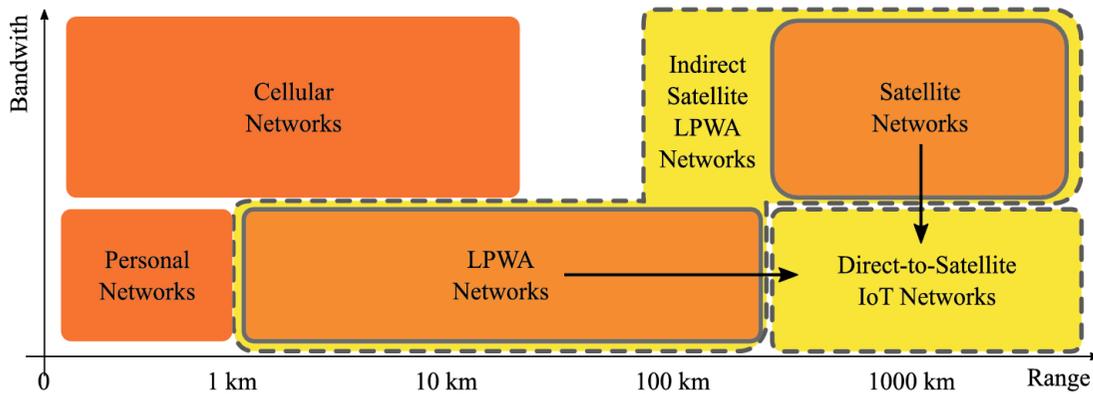


The typical technologies depicted here take roughly 12 years to move from being 'far on the horizon' to becoming so mature and widely adopted that we consider them 'mainstream'.

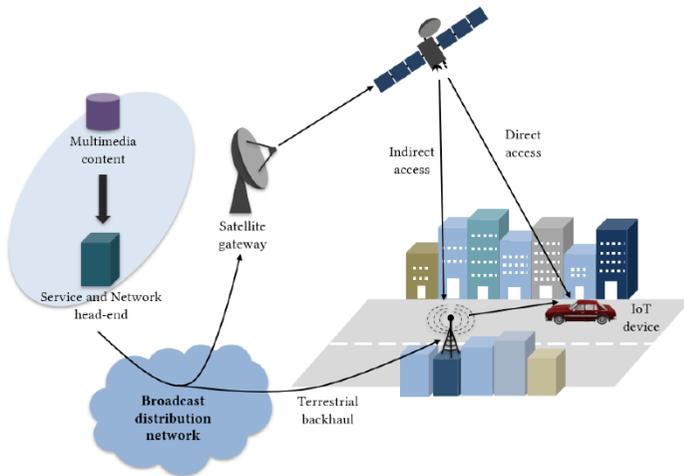
**Disclaimer:** The 2019 Emerging technologies radar for IoT projects represents the analyst view of the IoT Analytics' research team under the disclaimer that depending on context the classification and perception of the project may be different in reality. IoT Software refers to Middleware, Analytics, Storage, Platforms, and Applications. LPD = Low power devices. The only relevant positioning of each topic is its distance to the center. The positioning on the axes plays no role. Source: IoT Analytics Research – August 2019

# Direct to Satellite – IoT solves most challenging scenario's

REQUIRED BANDWIDTH VS. RANGE CAPACITY FOR PERSONAL, CELLULAR, LPWA AND SATELLITE NETWORKS



Direct-to-Satellite IoT (DtS-IoT) connectivity will facilitate and speed up the deployment of wide coverage IoT infrastructure. The most challenging IoT scenarios include deployments of low power devices dispersed over wide geographical areas.



## PREP

# IDEA & TEAM



CHIEF MENTOR

Lead questions to discuss with your mentor in this sprint.

- Who is who?
- What is the team formation?
- How do we organise teamwork and team roles?
- What are your goals as a team?

# Build your perfect team

Fill in the names of **your** team members.



CEO

Leadership, Management and Business Development



CTO

Technical EO Product and Service Development



CMO

Marketing, Pricing and Sales



CDO

UI and UX Creative



CBO

Business Modelling and Value Engineering



# Team formation

The goal of starting with this preparation segment is to form a team of at least 3 people. Those people should share a passion for solving the same problem and work towards the same goals. On top of that, you'll have to demonstrate excellent team dynamics in your daily teamwork and you will have to feel that you would go to the end of the world together. To put together that dream team you need to revisit and thoroughly re-discuss all the potential problems - their possible solutions - and how everyone in the team can contribute to develop these solutions This helps you see and decide who you would best fit together with.



## GOALS

Form a team of 3 - 5 members

## TASKS

Team formation - Ideation

## TOOLS

Mapping team roles & competences



### TASK 1

#### Team formation

- If you have a team of 3-5 people formed already:
  - Review whether you have all the necessary competences and experiences
  - Discuss the complementary assets you have, the strengths and weaknesses each of you have
- If you don't have a team of 3-5 people formed yet:
  - Identify networks and contacts that could help to connect you with people who might be interested to join your team
  - Meet, greet and discuss your entrepreneurial ideas, initiatives and visions



### TASK 2

#### Ideation & first vision

- If your team has already agreed on an idea:
  - Each team member describes the idea according to their understanding
  - Present & discuss your viewpoints
  - Develop the idea further and assess its potential
- If your team has NOT agreed on an idea yet:
  - Each team member describes their idea
  - Present and discuss the ideas
  - Go through the idea assessment and select the idea that you want to develop together.

GET INSPIRED

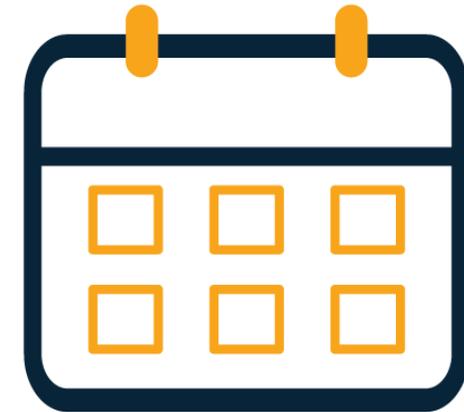
[The Secret Phrase Top Innovators Use](#) - by Warren Berger (HBR)

# Team formation

You will need to find a big problem worth solving. So gather your team, clear your calendars, and collect some essential supplies. And most of all, you will need deadlines.

[Your design team might need a war room; here's how to set one up - Fast Company](#)

In the beginning, your team will 'unpack' everything they know. Expertise in most teams is asymmetrical: marketers know things that engineers and designers don't. All team members can contribute to each function, even though one person will take the lead. Start by creating a simple user story and set the scope for the first period.



PREP – IDEA & TEAM

# Team formation

[The first step in a design challenge: build team understanding](#) - *Fast Company*

[“How might we”: The secret phrase top innovators use](#) - *Harvard Business Review*

[Google Ventures’ secret mantra for super-productive meetings](#) - *Fast Company*



## Teamwork and team roles

When you have your team together, discuss each other's skills, strengths and weaknesses.

Fill in the table to divide roles and responsibilities between you all. Return to the table every time you are planning your future tasks. Consider switching "the additional roles" weekly.

### Additional roles

- Timekeeper - makes sure that the team allocates time for all tasks and uses time efficiently.
- Secretary - takes, keeps and shares notes of all decisions and to-do-lists of the team.
- Messenger - informs team members about changes in the calendar, social events, etc.
- Reporter - is responsible for reporting & sending progress updates to your coach or mentor.
- Party Starter - makes sure that team members have fun options for free time.



# Partner up with coaches and mentors!

Fill in the names of your coaches and mentors.



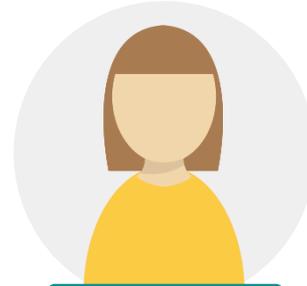
CHIEF MENTOR

Business (within EO market) and team management



PRODUCT MENTOR

Product development and prototyping



DESIGN MENTOR

UX design for products/services



MARKETING MENTOR

Marketing



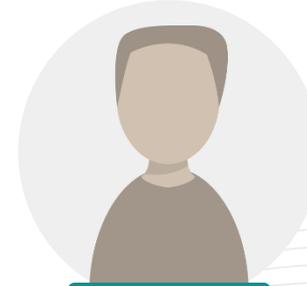
IP LAWYER

Intellectual property



INVESTOR

Fundraising and financial management



EO EXPERT

Earth observation / Copernicus data & services





# Tool - Mapping team roles & competences

	NAME	MAIN COMPETENCE	MAIN ROLE	ADDITIONAL ROLE
<i>F.e.</i>	<i>Anna Smith</i>	<i>Marketing</i>	<i>CMO</i>	<i>Timekeeper</i>

1

2

3

4

5

6

7



# List your goals as a team

What would be the final destination of your team's journey? What's the big dream?

1

---

---

2

---

---

3

---

---

4

---

---

5

---

---

6

---

---

## STAGE 1, Mile 1

# CUSTOMER PROBLEM

Find your customers & size the opportunity



CHIEF MENTOR

Lead questions to discuss with your mentor in this stage.

- Who are your customers and users?
- What problems do your customers and users have?
- How do you recognise & nail the most important customer questions?

## STAGE 1 - CUSTOMER PROBLEM

# Discover who your customer and user are! Size the opportunity

Customer development can happen if

- you have evidence (data) that your solution (product/service) is actually creating value for your customer
- your product scales in the market.

Basically this means choosing a good market with a product that can satisfy that market. In a great market - a market with lots of real potential customers - the market pulls the product out of the start-up. Lack of market is the #1 start-up killer, and neither a stellar team nor a fantastic product will redeem a bad market fit.

Watch out! The development times are longer for hardware than for software, which makes it difficult to pivot if the product-market fit is not realised when the product launches. And the success rate in the consumer IoT space, in particular, is vanishingly low—even intrepid hardware investors have a lot of misgivings about the consumer side. Solving the right customer problem is key.



### TASK 1

#### Customer description

- Use the tools (see following pages) to describe your global customers (B2B or B2C) and customise your solution. Describe your customer as detailed as possible - you'll need to talk to him/her at a later stage to validate your idea.



### TASK 2

#### Target market selection

- The target market is the actual customer group to which your business will attempt to sell its products and services. For the target market definition, consider geography and industry segments.
- Use the tools in the following pages to select the market with the biggest potential and define your target market.

#### GET INSPIRED

Market selection - [How to Select a Target Market for New Product Launch](#) - Motarme

Customer persona - [Personas for Need finding, Design & Growth](#) - by Alexander Cowan

# Tool - Customer persona

ROLE OR JOB TITLE

---

AGE                      GENDER

---

KEY CHARACTERISTICS

---

GOALS

---

NEEDS

---

FRUSTRATIONS & POINTS

---

KEY INFLUENCERS

---

OTHER APPLICATIONS

---

FEATURE REQUESTS

---

STAGE 1 - CUSTOMER PROBLEM

# Tool - Customer insights B2B

## BUYER PERSONA, INFLUENCERS, USERS AND OTHER DECISION MAKERS

Describe different personas for your potential customers which could be involved in the buying process. Detail their roles, responsibilities and boundaries.

## DECISION MAKING PROCESS

List all relevant decision making factors and rank them in order of importance. Give as much details as possible for the decision making process.

## BUSINESS CONTEXT OF PURCHASE DECISION

Highlight questions that could influence urgency, timing and pricing of purchases.

© Verhaert 2019

**ANNELIES THE ENTREPRENEUR** BUSINESS

32  
Owner of purse brand for 8 years  
@Annelies Timmermans  
Antwerp

**ATTRIBUTES**  
Laptop, Social media icons (W, M, G, F, I, S, P, IG, FB, TW, LI, Y, P, V)

**GOALS**  
Build up a network of loyal customers  
Create timeless designs so that my bags/brand will never become outdated  
Be known as a quality brand  
Use influencers to spread the word

**CONCERNS**  
Afraid of becoming too big  
Being on social media for a brand is a must, but I am not good at it and don't find the time.  
I know sharing personal stuff works but I'm not like that and I don't like it.

---

**ROEL THE MARKETING MANAGER** BUSINESS

45  
Marketing Manager for 15 years  
@Albert Heijn  
Antwerp

**ATTRIBUTES**  
Laptop, Social media icons (G, M, G, T, I, S, P, Y, F, V)

**GOALS**  
Looking to draw more customers into the store & engage them with exciting campaigns and events  
Empower employees in the marketing strategy  
Customer loyalty is very important

**CONCERNS**  
In the future we won't be able to increase personal advertisement due to the privacy issue.  
How can we take the discount coupons to another 'digital' level?

*We are organizing a platform where each shop can organize events on its own like a tent show in the back of the store.*

*During the holidays we run special promotions like hiding chocolate in the store for the kids, we see that the little things like this are highly appreciated by our customers and make them keep coming back to the store.*

STAGE 1 - CUSTOMER PROBLEM

# Tool - Customer insights B2C

WHO ARE THEY? (age, gender, other profile information,...)

WHAT ROLES DO THEY TAKE? (parent, volunteer, young professional, ...)

WHAT ARE THEIR KEY BEHAVIOURAL PATTERNS?

WHAT ARE THEIR CONCERNS? (needs, pains, problems,...)



### BART THE CYCLING LOVER



**GOALS**

- To climb the Mont Ventoux in a record time
- To use his car as least as possible
- To beat his friends cycling records, and also on Strava (The Social Network for Athletes)

**ACTIVITIES**

- Following the cycling news
- Playing with the kids
- Going to work by bike (26 km)
- Bicycle tinkering in his garage
- Sharing routes with his cycling buddies

**CONCERNS**

- He hates cycling in the city
- He would never leave his bicycle unguarded
- He pays too much for his insurance for bicycle theft and damage

**MOTIVATION**

- Uses bike for the thrill in the sport, relaxing his mind and staying fit
- His job forces him to sit for too long, his bicycle is his saviour outside the working hours
- Mobile apps that help him keep track of his cycling records

**ATTRIBUTES**

- 42 years
- Bank clerk at KBC
- Married and 2 kids
- Suburb of Gent

**His bike Daily use to go to these places:**



I have no problems investing money in my bicycle. For me, cycling is a hobby that I love doing like no other.

Even when it's raining, sometimes I dare to go to work by bike, which is 26 km from home.

© Verhaert 2019

## STAGE 1 - CUSTOMER PROBLEM

# Tool - Experiments, tests & learning: Discover customers & users

### Experiments

- Identify different possible market segments for your solution
- Validate users who make the market

### Tests

- [Google Trends](#) to collect data about what people search for
  - Design a Test & Learning card
- [Watson Analytics](#) to analyse different markets
  - Design a Test & Learning card

### Learning

- Different markets have different scalability opportunities
- Finding out which users fit which market

By the end of this sprint, you still might have alternative solutions to choose from. That's great, but it's also a problem, because you can't prototype many solutions. You have to narrow down and make tough decisions. To prepare for prototyping, choose one Customer Persona and think of possible user scenarios for the prototyping.

- [How to decide what ideas to prototype - Fast Company](#)
- [Research: Schedule participants and draft interview guide - GV.com](#)



MASTERS IN INNOVATION

## Learning card

INSIGHT NAME .....

PERSON RESPONSIBLE .....

DATE OF LEARNING .....

### STEP 1: HYPOTHESIS

We believe

### STEP 2: OBSERVATION

We need to

Data reliability  
👍 👍 👍

### STEP 3: LEARNING & INSIGHTS

Therefore, we will

Action required  
😊 😐 😞

Adopted from: Strategyzer, A. Osterwalder, customers and users,  
available at <https://www.strategyzer.com/>



# Tool - Choose the target segment

SEGMENT 1

SEGMENT 2

SEGMENT 3

SEGMENT 4

MARKET VALUE

- Size
- Growth rate
- Profit margins

MARKET ACCESS

- Competitors
- Availability & access to distributors/ channels
- Regulatory path

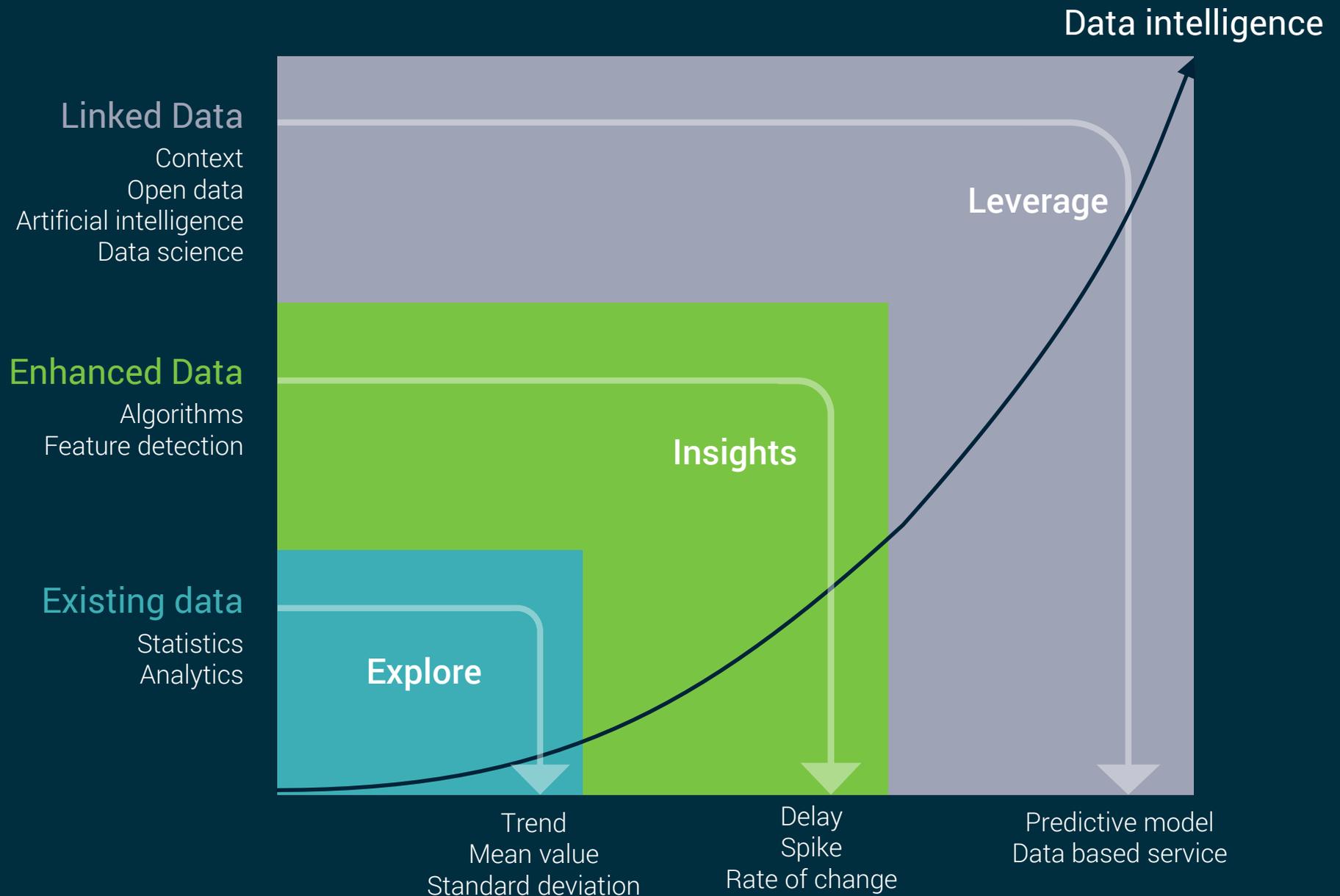
YOUR MARKET EXPERTISE

- Financial resources to enter the market segment
- Network & contacts
- Capability & market knowledge

# Tool – Connect customer needs to data requirements

YOUR CUSTOMER NEEDS	INSIGHTS	INFORMATION	DATA

# Define your data approach to solve customer problems



# Homework list

What do you need to do to get to know your customers and users even better? Fill in your own goals to complete this sprint.

- 1 \_\_\_\_\_  
\_\_\_\_\_
- 2 \_\_\_\_\_  
\_\_\_\_\_
- 3 \_\_\_\_\_  
\_\_\_\_\_
- 4 \_\_\_\_\_  
\_\_\_\_\_
- 5 \_\_\_\_\_  
\_\_\_\_\_
- 6 \_\_\_\_\_  
\_\_\_\_\_

## STAGE 1, Mile 2

# CUSTOMER PROBLEM

Nail your customer problem



CHIEF MENTOR

Lead questions to discuss with your mentor in this stage.

- Does your solution fit the problem and customer?
- How can you validate the fit?
- How to get the X-factor in?

## STAGE 1 - CUSTOMER PROBLEM

# Nail your customer problems

To show you have found the right problem-solution fit you need to have evidence that customers care about certain problems (gains/pains) and that you have designed a solution that addresses those problems.

Customer gains are outcomes and benefits your customers expect, require, desired or be surprised by.

Customer problems (pains) are anything that prevents them from getting a job done smoothly.

“Right” customer problems are:

- problems/pains/passions that many others have
- problems that occur often enough
- problems that are serious enough so that customers are ready to pay to get (rid of) them

If you succeed in finding a truly unique problem, addressing both pains and gains that nobody has tried to solve yet you can grow 10 X instead of 10% per year.



### GOALS

Business idea fine-tuned

### TASKS

Online evidence search - Idea development - Team roles planning

### TOOLS

Recognise customer problems & segments – visual diary-  
Problem redefinition instructions



#### TASK 1

### Online evidence search

- Use Google tools to search for online evidence about your problem and solution:
  - Popularity and relevance of keywords describing your problem and solution (Google Trends, Google AdWords Keyword Planner)
  - Competition and similar solutions existing already (Google Search, YouTube, Google Patent Search, Start-up databases, Copernicus Masters winners, Copernicus Incubation Programme winners, Copernicus accelerator participants and other sources)
  - Alternative solutions existing already (Google Search).
- This is your first Moment of Truth If necessary, fine-tune your idea or search for a new one. And then do an online check again!



#### TASK 2 - Idea development

- If you found good online evidence to continue with your initial idea, apply the problem redefinition and ideation techniques to develop it further.



#### TASK 3

### Team roles planning

- Discuss through and divide your team roles and responsibilities. On top of your professional skills take into account your different personality traits and individual strengths and weaknesses.

GET INSPIRED

[The 7 All-time Greatest Ideation Techniques](#) - by Chuck Frey (Innovation Management)



# Tool - Recognise most important customer problems & segments



**CUSTOMER PROBLEM**  
Customer problems, pains



**IMPORTANT**  
Does failing the job lead to extreme problems?



**TANGIBLE**  
Can you feel or see the pain?



**UNSATISFIED**  
Are there unresolved problems, jobs?



**LUCRATIVE**  
Are there many with that problem & ready to pay?



**TOTAL SCORE**  
Focus on the highest value jobs & related problems.

1

2

3

4

5

Scoring scale: 1 (low) to 5 (high)

Adopted from: Strategyzer, A. Osterwalder, Customer segments, available at <https://www.strategyzer.com/>

## STAGE 1 - CUSTOMER PROBLEM

# Tool - Visual diary

**WHY** Users report activities, experiences, problems and events around a particular topic in a daily diary .  
You let them map their user actions. Try to determine in advance what you want to know.

**WHO** About ten users.  
Go for a good mix of users

**WHAT** A diary with a few simple questions and commands that users must perform, and a simple camera.

**HOW** Find a number of users willing to participate in the study. Give them a few days the diary for a couple of days and ask them to answer questions and commands.



By precisely monitoring the 'obvious' daily behaviour and actions through a visual diary, you can find amazing insights about all possible interfaces and problems between the user, the environment and your intended solution.

**TIP**  
Provide one page in the diary in which the participant can describe their experience and actions.

© Verhaert 2013

## Tool - Problem redefinition

Problem redefinition technique helps you to invent new ways of looking at a problem and by re-defining that problem, ultimately come up with other, even better solutions.

### How to do it?

**Step 1** - Start by formulating the idea (= problem + solution + customer) that you agreed on as an opportunity/problem statement starting with "How do we..."

Example: How do we sell EO data based recommendations to farmers?

**Step 2** - Write this statement

**Step 3** - Next, pick three of the more interesting words in the sentence and generate creative alternatives (8 to 10) for each choice. Think of choosing words that represent a who, what, when, where, why and how.

In the above example, the three words you might choose are "we", "sell", and "farmers".

So for the first word "we" the 8-10 creative alternatives could be:

1) the sales force 2) fertiliser manufacturers 3) friends of farmers, 4) farming unions, 5) food chain 6) farming equipment machine builders...

**Step 4** - Continue creating alternatives for the other two selected words, write them down in columns

**Step 5** - Re-define the opportunity/problem statement by randomly combining words from each of the three columns to give you an entirely new statement.

Here are a couple of examples:

- 1) How do we get fertiliser manufacturers to be incentivised to sell recommendations to farmer unions?
- 2) How do we get farmers to sell recommendations to farming machine builders?

**Step 6** - Use these fairly crazy combination sentences as triggers for brainstorming to generate new ideas.

You might want to take the statements not too literally though. As such, the first statement might inspire an idea about creating a program to incentivise...

Adopted from: Growth-Engine, Problem redefinition, available at [www.growth-engine.com](http://www.growth-engine.com)

## STAGE 1 - CUSTOMER PROBLEM

# Nail your customer problems

As a start-up, you will be making many assumptions, but you need to avoid spending time and money on building something nobody wants. In order to do so, you need to validate the problem and the solution with your customers before starting product development.

Validation also forces you to get in touch with your users, which could save you the pain of building a product that is hard to use or understand. Customer validation will help you to figure out if people will buy your product before you build it.

## + GOALS

Problem, solution & customer validated

## TASKS

Customer feedback collection (GO OUT OF THE BUILDING!) - Customer feedback analysis (and pivoting) - Plan next week

## TOOLS

Test & Learning Card - User research tools - Problem-Solution Fit - Product-Market Fit



### TASK 1

#### Customer feedback collection

Go out of the building with your prepared Customer Validation Questionnaire to talk to your customers.

- Your aim is not to get a specific number of responses, but a consistency in them that allows making conclusions - if 14 out of 15 first customers validate your hypothesis, it is safe to conclude that it was correct.



### TASK 2

#### Customer feedback analysis & pivoting

- Read each comment carefully, but identify patterns and trends rather than making conclusions based on individual comments.
- Be careful to treat the collected feedback with “the mom test” filter - your mom and close friends will always lie to you to give you answers that they think you expect.
- This is your second Moment of Truth: no validation = choose a new idea!

If your assumptions are not validated you have to pivot (= change direction) - either you have chosen a bad problem, proposed a weak solution, or targeted a wrong customer. Remember that you are looking for a 100M EUR idea!



### TASK 3

#### Product-solution-market fit

- Once you have validated your idea, fine tune your problem- solution fit
- After validation, revisit your market potential. Is it still the potential matching your business and revenue ambitions?

GET INSPIRED

[Validate or Die: Using Validation to Build the Right Product](#) - by Kunal Punjabi (Mind The Product)

## STAGE 1 - CUSTOMER PROBLEM

# Tool - Experiments, tests & learning: provide evidence that customers care about your solution

### Problems & pains

You strive to identify the problems & pains that are most relevant to customers. Your next step is to provide evidence that customers care about your solution (products & services). If you don't find the evidence you need to design a new solution.

### To provide the evidence you run the tests

- Google Trends to understand what people search for in your business domain
- Google Adwords Keyword Planner gives you information on how companies promote their solutions (discover their value propositions) in your business area
- Contact your customers directly - either face-to-face, by email, phone or social media channels
- Build trackable landing page (Instapage) for your products & services to collect leads of future users

### Tools

- [Google Trend](#)
- [Google Adwords Keyword Planner](#)
- [Instapage](#)

### Experiment workflow

- Design Test & Learning Cards (each test separately)
- Run the tests (e.g. customer contacts, Google Trends, Keywords Planner, Ads, etc.)

Organise the experiments on any other social media (LinkedIn, Twitter) and ad platform (Facebook, etc.) that you are familiar with or that is more suitable for your solution.



MASTERS IN INNOVATION

## Test card

TEST NAME \_\_\_\_\_  
ASSIGNED TO \_\_\_\_\_  
DEADLINE \_\_\_\_\_ DURATION \_\_\_\_\_

**STEP 1: HYPOTHESIS**

We believe Critical

**STEP 2: TEST**

We need to Test cost   
Data reliability

**STEP 3: METRIC**

We measure Time required

**STEP 4: CRITERIA**

We are right, if

Adopted from: Strategyzer, A. Proposition DesiOsterwalder, Value gn, Available at <https://www.strategyzer.com>

## STAGE 1 - CUSTOMER PROBLEM

# Tool - Product-market fit

### Product & Market

Product-market fit takes place when you:

- Have evidence (data) that your solution (product, service) is actually creating customer value
- Your product scales in the market

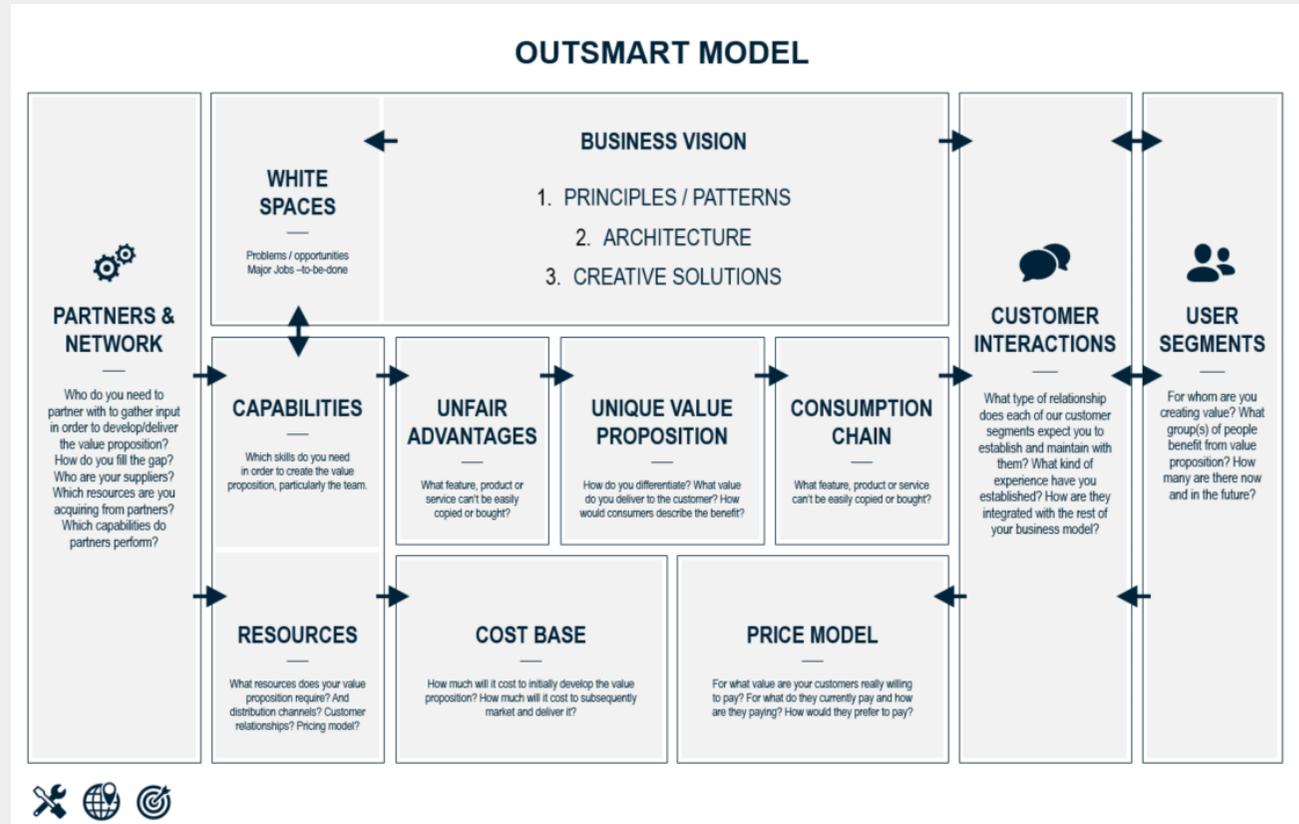
### Tasks

Find the strongest fit between different markets & your solution (products):

- List 3 different customer segments (markets) for your solution (use separate canvas for each customer segment).
- Use Post-it Notes to describe the markets on the Outsmart model Canvas!
- Analyse the business opportunity of each market (scalability) & prioritise the markets
- Find the market where the fit with your solution is the strongest
- If you find a weak fit or no scalability consider to pivot, change your solution

### Tools

- Outsmart model



# Homework list

Fill in your own goals to complete this sprint.

- 1
- 2
- 3
- 4
- 5
- 6

## STAGE 2, Mile 3

# PRODUCTS/ SERVICES

Define a compelling & meaningful offer



PRODUCT MENTOR



MARKETING MENTOR



DESIGN MENTOR

Lead questions to discuss with your mentor in this stage.

- How do you design a differentiated value proposition: functionalities, features, USP's?
- How do you design a minimum viable product?
- How do you further secure growth – product/service platform planning?

# Design a differentiated value proposition: functionalities, features, USPs

Product definition is an important milestone in your business planning. It forces you to make choices on specific set of features and functionalities. This will serve a pathway for estimating time2market as well as necessary development efforts. Moreover, you will be able to use it for first prototypes in order to test and validate with customers in several iteration cycles. This will help you to improve and eventually have a validated attractive product/service proposition with optimal development efforts and costs.



## GOALS

Product/service definition

## TASKS

Define your value proposition - Elaborate on features and functionalities - Outline your differentiation strategy & USP

## TOOLS

Value proposition design diagram - Value & attribute map - Concept sharpening tool - Differentiation & USP tool



### TASK 1

#### Design your value proposition

- Define a value proposition of your product (service) starting from customer job2be done statements (value proposition design diagram)
- Come up with the key product/service values & corresponding features and functionalities to get a first top level product/service definition (left side of value proposition design diagram).



### TASK 2

#### Value - attribute mapping

- Make a map of your product / services values by connecting them to specific functionalities and features (value & attribute map)
- Do a sanity check with your team whether the defined set of features and functionalities nail the promise of your product/service.



### TASK 3

#### Differentiation strategy & USP

- Decide on features that will be the key for your differentiation strategy. Make sure that your USP are features have high value perception in the eyes of your customers and users.
  - Use concept sharpening tool to assess the value perception of each feature from the perspective of customers & users
  - Use differentiation & USP tool to map your proposition against other alternatives in market (competitive benchmarking). Discuss the necessary performance level of all your features. Pay extra attention to the desired performance level of your USPs.

GET INSPIRED

[Product differentiation strategies](#) – Dany Robberecht

[Blue ocean strategy](#) - Kim & Mauborgne. Blue Ocean Strategy

# Tool - Value proposition design

Design your value proposition starting from basic solution ideas & customer problems/needs

This will allow you to make a transition from a top level product concept to a more specific product definition with specific list of functionalities and features.

Task 1: Describe the customer need and critical customer values

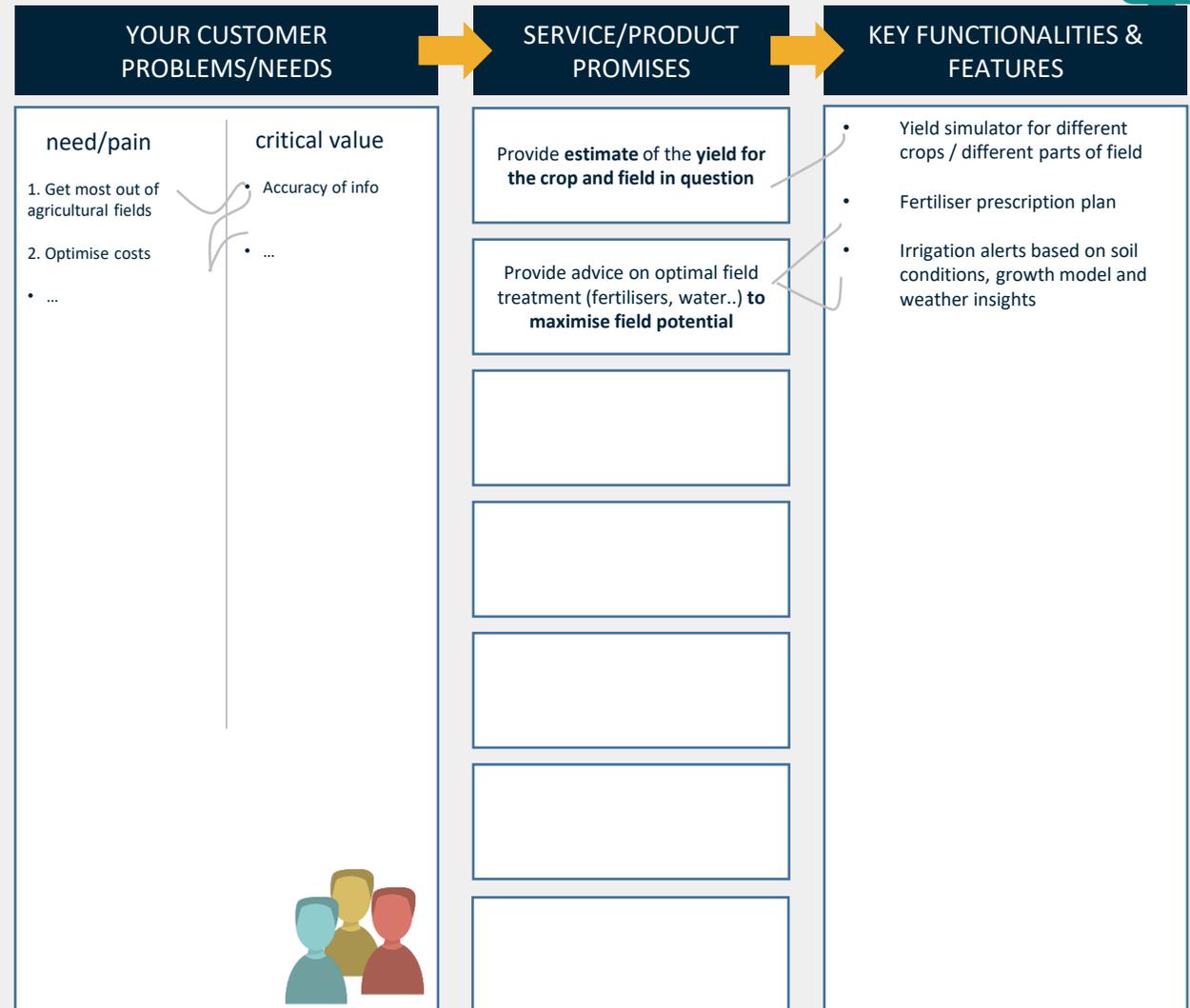
Rank each statement on importance to facilitate your exercise.

Task 2 : Create product/services promises as answers to specific customer problems

At this stage you can work with general product/service promises. The aim is to define the key building blocks of your products/services based on its promises.

Task 3: List features/functionalities of your solution to fulfill the service/customer promises.

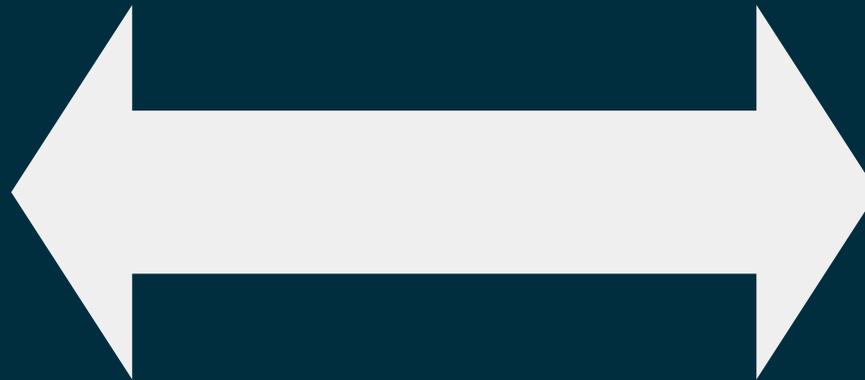
How will you deliver the promise? What service features will be needed? What would be the easiest (most useful) for your customer to take advantage of your solution?



© Verhaert 2019

# Typical customer benefits in IoT

NEW REVENUE



OPERATIONAL EXCELLENCE

*Efficiency, automation & optimisation/ cost reduction*



# Tool - Value & attribute mapping

Map your product (service value) to identify functionalities & features

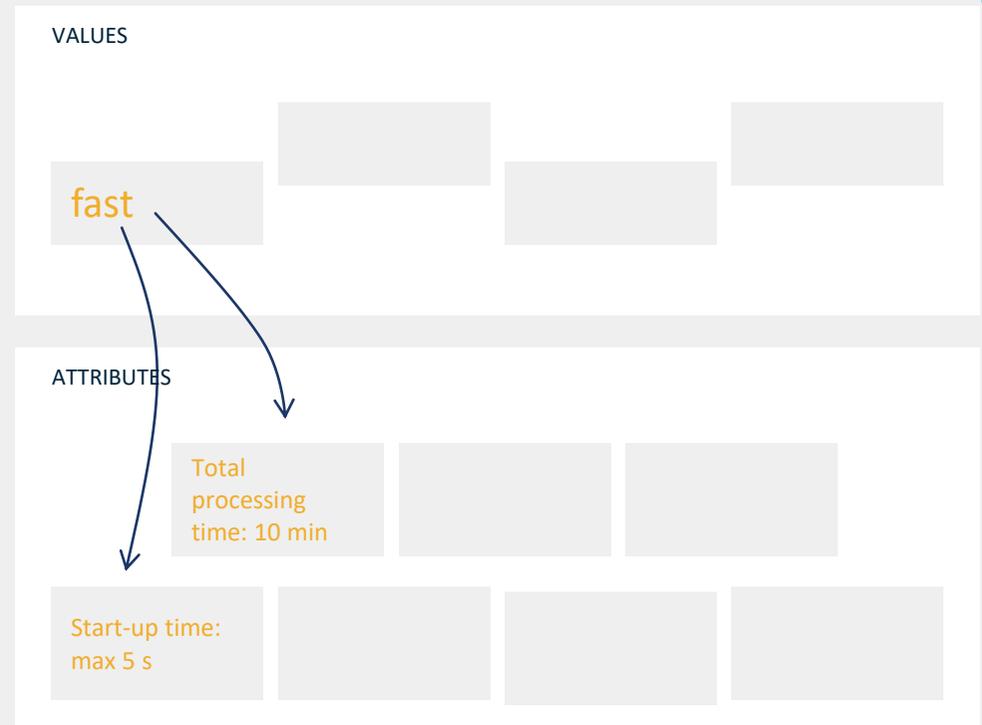
Task 1 : Identify values based on your value proposition design

Review your value proposition canvas and copy values on the top part of the canvas.

Task 2 : Identify features & functionalities to meet the desired value

Ideate different options for meeting the value with product functionalities & features.

Select the features that deliver the highest fit to desired values.



Adopted from: ICSB, Value and attribution mapping, available at: <http://icsb.nl/uploads/files/attribute-value-mapping.pdf>

# Tool - Concept sharpening

Concept sharpening is an essential step in developing a convincing feature set in the eyes of your customers. If you have selected a relevant target customer group and a specific solution that solves an important problem in an adequate way, it is time to sharpen this concept and find the out-performers compared to other solutions in market.

Task 1 : Each participant receives a card deck of features to assess individually on two axes

- Pleasure of having: Would customers be extremely pleased to have this feature or would it leave them indifferent? (f.e. Airbags vs. heated seats in a car)
- Pain of absence: Would customers consider this a weak product if this feature was not present?

Task 2 : Make a consolidated assessment of all functionalities & features

When you have scored each feature, you can map them on the product sharpening canvas.

Task 3 : Review your outperformers

Do you have enough of outperformers?

If you fall short on outperformers, organise an ideation session to search for more.

Task 4 : Review your “indifferent” features

Drop these features unless they have a strategic importance in your proposition or you can upgrade them to another value category.

**1. FEATURE TITLE**

*SHORT DESCRIPTION OF ADDED VALUE*

WOULD YOU LIKE THIS FEATURE IN THE CONCEPT? ... / 10

WHY (NOT)?

.....

.....

*FIRST VISUALIZATION OF THE FEATURE*

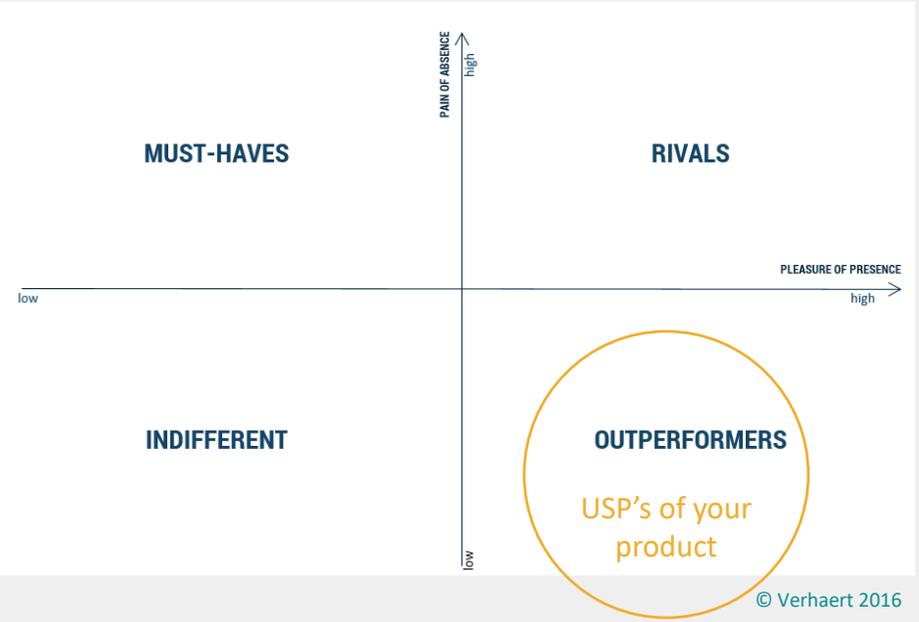
**IMPACT ON:**

- Element 1
- Element 2
- Element 3

**PAIN OF ABSENCE** 
○
○

low high

**PLEASURE OF HAVING** 
○
○



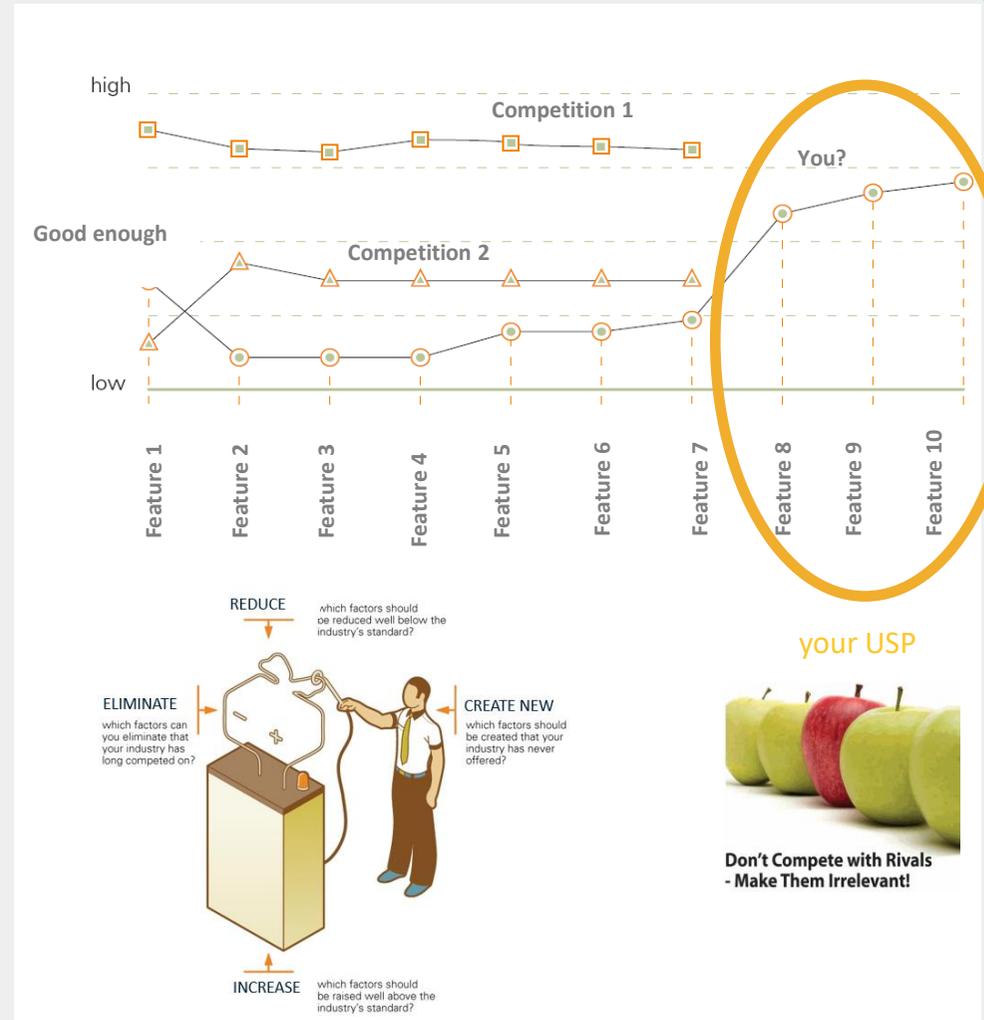
# Tool - Differentiation and USP

Finding USPs that are relevant to your customers is critical to give your product a chance in market. Some companies try to be better than others on all features. However, this is not necessary. You need to be unique and better at a set of relevant features, others features must be “good enough” in they eyes of customers not to jeopardise an overall value perception. By trying to excel in all features you might end up with an over-engineered and very expensive product. Thus, it is essential to choose your USPs strategically, since it will be the basis for both your go2market and development priorities.

**Task 1:** Discuss customer expectations and their “good enough” level for each feature  
List all your features on the horizontal axis. Have a discussion with your team to get aligned on general market expectations and what is the basic and good enough expectation from a customer in your market and product category.

**Task 2 :** Map key competitors and their performance  
Score the performance of each feature as executed by the most important competitors. Evaluate the features from the perspective of customers.

**Task 3 :** Map your own intended performance level of each feature and agree on features that will be a core part of your USP  
If you end up with no features that could significantly differentiate your product/service from other alternatives in market, organise a brainstorming session to collect ideas on potential outperformers and differentiators.



# Prototyping

Paper prototyping is mostly known for prototyping **user interfaces**, but can also be used to make customer journeys, visualise ideas or just to have some fun. People say a picture is worth a thousand words. If that's true, a prototype is worth a thousand pictures.

Prototyping on paper is cheap, allows rapid iteration, increased creativity and engages all team members in making their idea tangible.



## GOALS

MVP (Minimum Viable Product) prototype is ready for validation

## TASKS

Sketch a storyboard - Build a paper prototype - Prepare for customer validation

## TOOLS

MVP Checklist – Paper prototyping toolkits – Test your prototype – Test & Learning cards - SurveyMonkey



### TASK 1

#### Sketch a storyboard

- Draw a storyboard with up to 15 frames. Start with an opening scene where customers/users find your solution and add all other scenes. Check the tools to get instructions.
- Storyboarding means sketching an actual situation showing how a user would use your solution (e.g. web, mobile app, product):
  - where (s)he clicks
  - what info (s)he enters
  - what (s)he thinks etc.



### TASK 2

#### Build a paper prototype

- Use the storyboard tool to make sure that your product/service will be the most minimalistic version of your solution still delivering great value to your customer (MVP). Aim to build the prototype around 1 product feature or functionality only.
- Based on the storyboard, define and prototype the individual interactions (screens) on paper.



### TASK 3

#### Customer validation preparation

- For validation by testing:
  - prepare the Test & Learning Card for validating your problem and solution with your customers tomorrow via testing hypotheses.
- For validation by customer interviews:
  - prepare a questionnaire on [SurveyMonkey](#) for collecting more detailed customer feedback - use these questions for reference. Digitalise your paper prototype with [popapp.in](#)

#### GET INSPIRED

Prototyping - [Prototyping for Web and Mobile Workshop](#) - by Simon Phillips (Slideshare)

Customer validation - [How to Interview your Customers](#) - Customer Development Labs

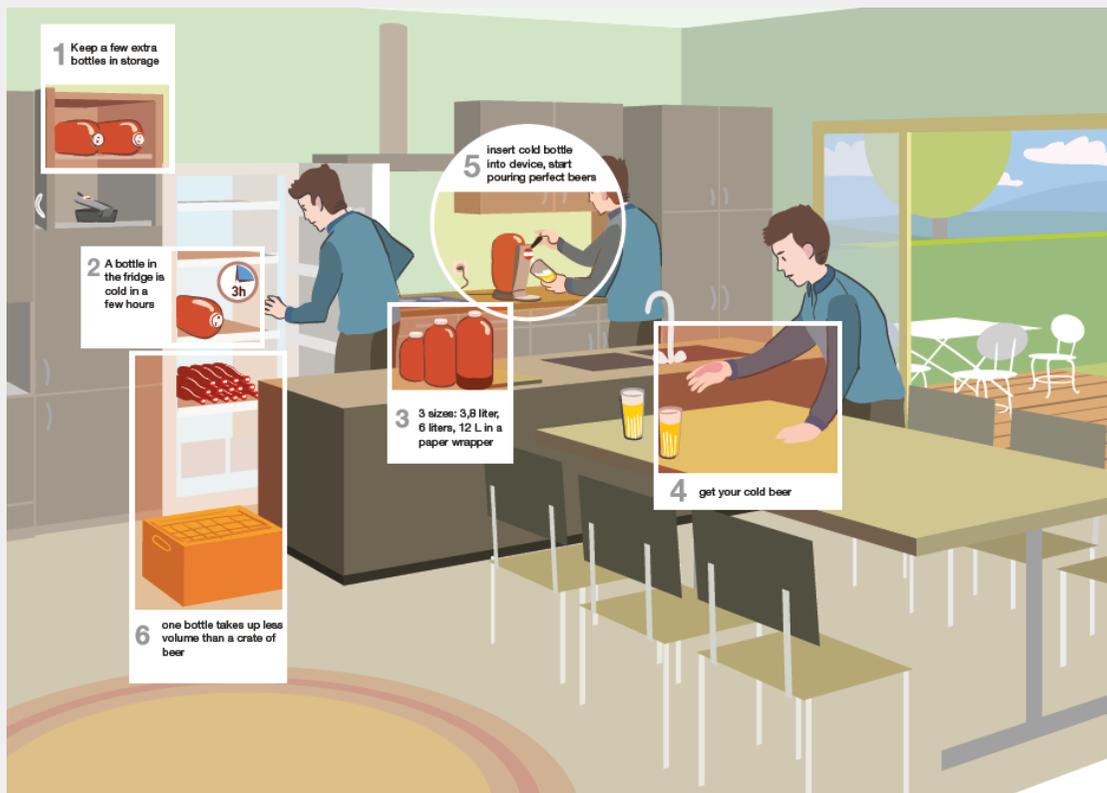
# Tool - MVP checklist

Before starting with product/service development make sure that the product that you will be building is really the minimum viable product (MVP).

FEATURE	IMPORTANCE OF THE FEATURE			MVP (YES/NO)  Minimum set of features: - to deliver intended customer value, - to achieve shortest time-to- market - to get market traction
	CRITICAL Delivers customer short term value	SECONDARY Nice-to-have	MUST-HAVE Critical for technical feasibility	
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

# Tool - Storyboard

Building a prototype after finishing your storyboard is much easier. The goal is to take your ideas and sketch an actual solution, showing how a user would move through your solution – where they click, which info they get/enter. You can build your storyboard as a page of a comic book or a drawing illustrating different touchpoints. It is important to cover all use steps and touchpoints.

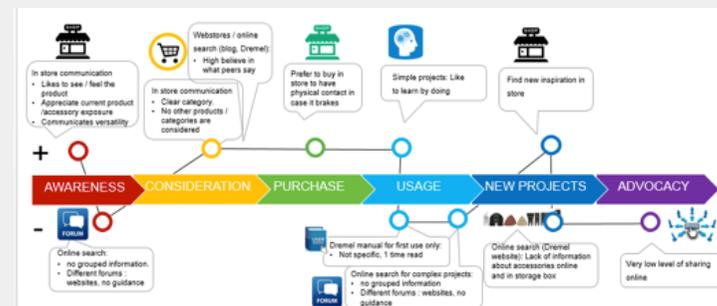


© Verhaert 2019



Create your own at Storyboard That

© 2019 - Clever Prototypes; <https://www.storyboardthat.com/>



## Tool - Paper & digital prototype ready

Build a prototype in a few hours

Plan for doing the impossible: build an entire realistic-looking prototype from simple materials.

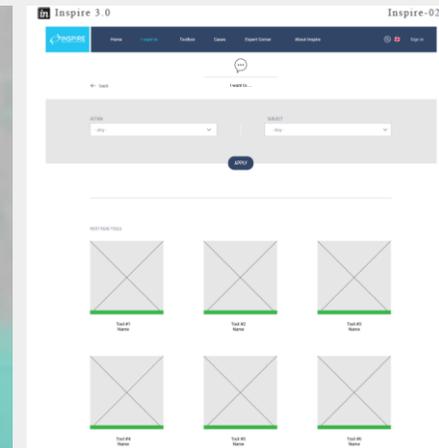
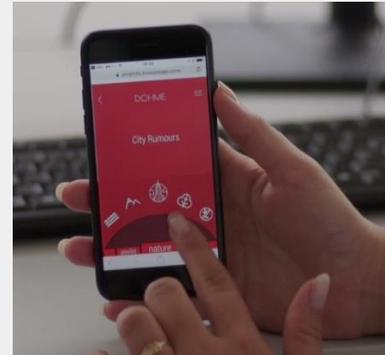
Option 1 : Paper prototype

Option 2 : Digital Prototype

Focus on having a user interface mock-up. You can create screenshots in a PowerPoint program or with dedicated digital prototyping tools.

Select tools based on your needs & skills

- [invisionapp.com](https://invisionapp.com)
- POP for [mobile apps](#) - super easy mobile app to scan paper screens and make first clickable prototype in your mobile
- [Proto.io](https://proto.io) - simple but more serious solution for web and mobile prototypes.
- [Appery.io](https://appery.io) - start designing apps with some code attached, build mobile back-ends later
- [Google Material Design](https://google.com/material-design) - professional source for designers



© Verhaert 2019

## Tool - Test your prototype

### Test Your Prototype

You'll show your prototype to real customers in 1-on-1 interviews.

By the end of prototyping and testing, all your ideas will have been exposed to oxygen - some will be smash hits, while others will meet an early end. When a prototype flops, it means you have spotted critical flaws early in your process

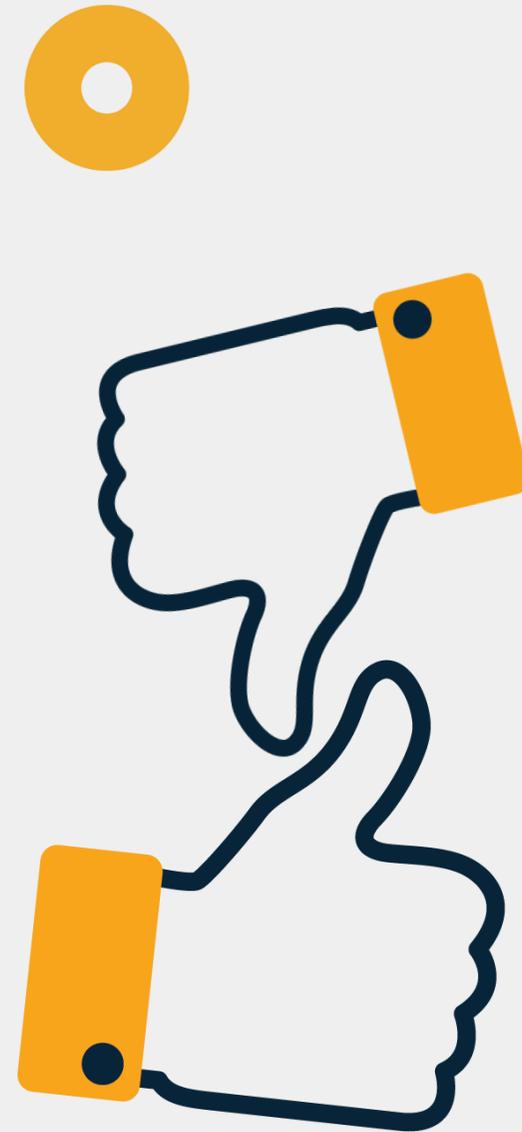
There are ca 26.000 new product introductions each year. 70% of success is how meaningful and unique is the product for the customer.

The key to success is rapid cycles.

[Got a bright idea? Test it with a rapid-fire user study - Fast Company](#)

[Research: Interview participants and summarise findings - GV.com](#)

[How Cluster uses live user testing - Medium](#)



# Tool - Test & learning card

Check your prototype using the following criteria.

MASTERS IN INNOVATION

## Test card

TEST NAME \_\_\_\_\_  
ASSIGNED TO \_\_\_\_\_  
DEADLINE \_\_\_\_\_ DURATION \_\_\_\_\_

**STEP 1: HYPOTHESIS**

We believe  Critical

**STEP 2: TEST**

We need to  Test cost  
 Data reliability

**STEP 3: METRIC**

We measure  Time required

**STEP 4: CRITERIA**

We are right, if

MASTERS IN INNOVATION

## Learning card

INSIGHT NAME \_\_\_\_\_  
PERSON RESPONSIBLE \_\_\_\_\_  
DATE OF LEARNING \_\_\_\_\_

**STEP 1: HYPOTHESIS**

We believe

**STEP 2: OBSERVATION**

We need to  Data reliability

**STEP 3: LEARNING & INSIGHTS**

Therefore, we will  Action required

Adopted from: Strategyzer; A. Osterwalder, Value Proposition Design, available at <https://www.strategyzer.com/>

# Tool - Test your prototype with users & find flaws

## USER-TESTING WITH MOCK-UPS

Why worry about usability testing so early in the process when prototyping already has a big enough to-do list?

Because unless your prototype is usable, all your testing will tell you that people don't like terrible products. The best way to understand your users, is to simply ask! You will get insights on value perception of the product configurations and the usage and get ideas how can you onboard customers and make them use the product on a daily basis.



**Concepts:** Demonstrate the use of each of them and then pass them over:  
First impression? What do you like most / least about it?

C1	C2	C3	C4
LIKE	LIKE		
DISLIKE	DISLIKE		
C5	C6		
LIKE	LIKE		
DISLIKE	DISLIKE		

**Usability:** Which of the concepts stick around. 1

EASY TO USE

CHOICE FOR DAILY USE

EASY FOR TRAVELLING

A

**Perception of product values (nr. 1, nr. 2 and least)**

THE MOST EXPENSIVE A

BEST IMAGE QUALITY B

DURABILITY C

FASTEST RESULTS D

APPEALING DESIGN E

TRUSTWORTHY F

**Importance of product values**

**Preference of all concepts**

RECOMMEND TO FRIENDS

WILDCARD

FORGET ABOUT IT

## Secure growth further – Product/service platform planning

A product platform planning is essential for multiple reasons:

1. Cost optimisation in customisation
2. Manufacturing flexibility & speed to please customers with products and lead time
3. Optimised internal and external value chain and its processes
4. Upscaling on module level to achieve higher benefits of economies of scale

You need to think about how your product or service could be manufactured. Could it be done in a modular way? A modular product architecture is often considered best practice in product design.



### GOALS

Product/service platforming for further growth

### TASKS

Define fit with various platforming approaches - Design your platform approach

### TOOLS

Product sharpening & positioning - Platforming potential evaluation tool



#### TASK 1

##### Search for platform and modularity potential

- Review a variety of platform approaches (input from the training session), discuss advantages and disadvantages of each of them.
- Assess the fit of different platforming strategies to your case.



#### TASK 2

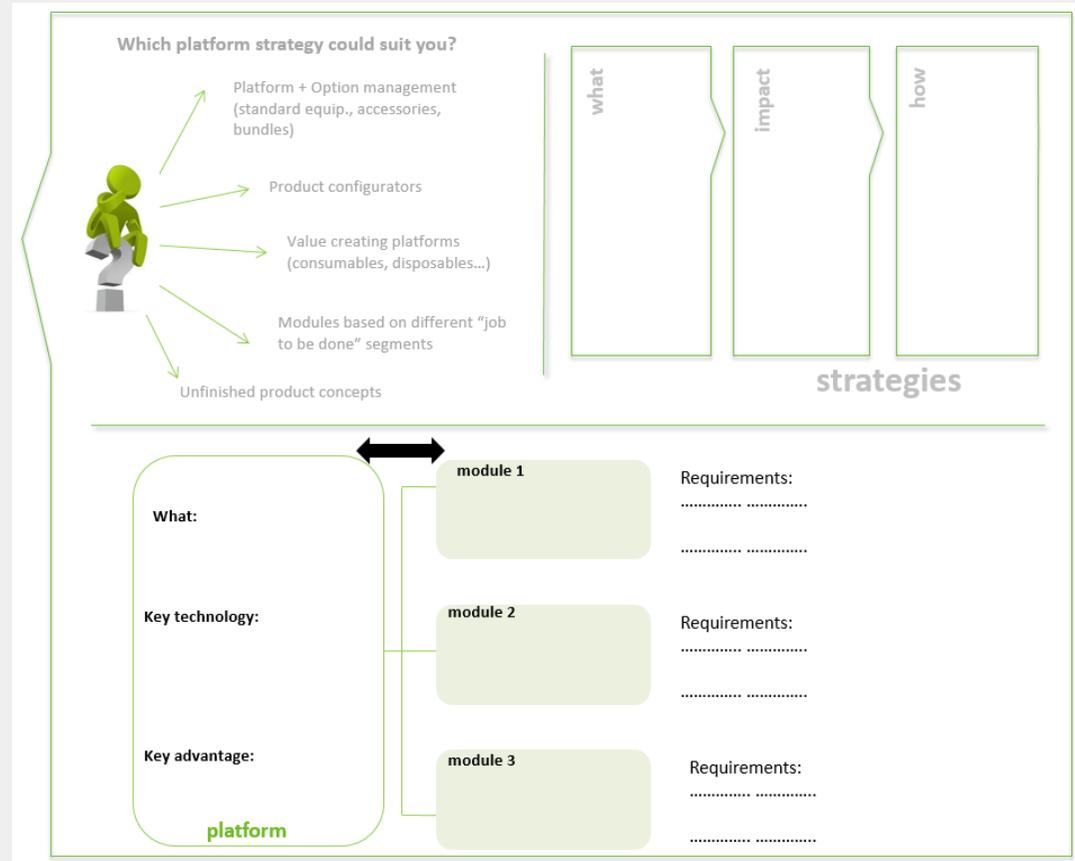
##### Define your product/service platform & modules

- Break up your offering in different modules (follow the tool platforming potential evaluation tool)
- Define module requirements (performance, technical, interfaces with other modules) as detailed as possible

# Tool - Platforming potential evaluation tool

Make an outline for your platform strategy.

Assess the platform strategy potential for your product.  
 On the one hand, you can start with the platform and investigate different modules based on it. On the other hand, you can start by defining modules (different offerings) based on "job to be done" segmentation and afterwards identify the generic part - platform - for all of them.



© Verhaert 2013

# Homework list

Fill in your own goals to complete this sprint.

1

2

3

4

5

6

## STAGE 3

# CONCEPT DESIGN

Design your system architecture  
& technical requirements



TECH. MENTOR

Lead questions to discuss with your mentor in this stage.

- How do define user requirements?
- What is my system architecture design?
- How do I choose the right components?
- How do I define an end-2-end concept?

# CONCEPT DESIGN

Concept design is an important exercise in your journey. It forces you to understand and list the actual requirements, assess feasibility, estimate development efforts and make choices on your possibilities to deliver the winning solution.

The concept will be your starting point for describing a product, service and business model. A system architecture design that fits user requirements will allow you to envision the right development roadmap.

Once your concept is ready, proceed with the “proof of concept” exercise or feasibility tests!

## GOALS

Design your system architecture and concept

## TASKS

Define your use case & user requirements - List all your options for different technology blocks & components - Select the most suitable technology components - Design your system architecture & concept

## TOOLS

Use case & user requirement sheet – Morphological map – Evaluation matrix – System architecture design



### TASK 1

#### Define your user requirements

- Define all use cases you can think of. Why would your user need your solution? When is he going to use it? What will his use intention be? When is he going to use it? Where?
- Users have specific expectations for every action they take. Those will help you to define your user requirements.



### TASK 2

#### List & select technology options

- Every solution consists of different building blocks corresponding to functions or features of your solution. You will always have to choose which technology to use for each building block. Before you choose, list all your options.
- Make smart choices. Understand every option to the necessary level of detail. Benchmark it against your objective. Understand the trade offs you might need to make in order to secure the total value of the solution.



### TASK 3

#### Design your system architecture & concept

- Your system architecture design will give an overview of all system elements you will need to develop and integrate.
- Review all potential end-2-end solution technology blocks. Select those that are required to deliver the desired value to your customers.
- Choose the technologies and components (or values) to design your concept that will guide you further in the development process.

# Tool – Use cases and user requirements

You can use this tool to define top level user requirements based on a variety of potential user actions and cases. Think about the uses cases of all your potential target users. The users might differ in their motivations, needs, behavioural patterns, responsibilities, abilities etc.

Task 1: List your target users. Differentiate those that might have dissimilar requirements and use cases.

Task 2: Describe different use cases. A use case can be a specific application of your solution, a step in the process of use etc.

Task 3: For every use case, describe requirements for your system design. This will serve as an input for defining your total product and service.

Target user : \_\_\_\_\_

## USE CASE 1: \_\_\_\_\_

### USER ACTION

- *What is the action and intension of your user in this case? What's the context of his action? How frequent is it? Is there any pattern of the location & time when this action happens?*

### USER REQUIREMENT

- *What is his/her expectation from your solution? How will you enable it?*

USE CASE 2: \_\_\_\_\_

USER

USE CASE 3: \_\_\_\_\_

USER

USE CASE 4: \_\_\_\_\_

USER

USE CASE ...: \_\_\_\_\_

USER ACTION

USER REQUIREMENT

# Example - Customer requirements & technology specs

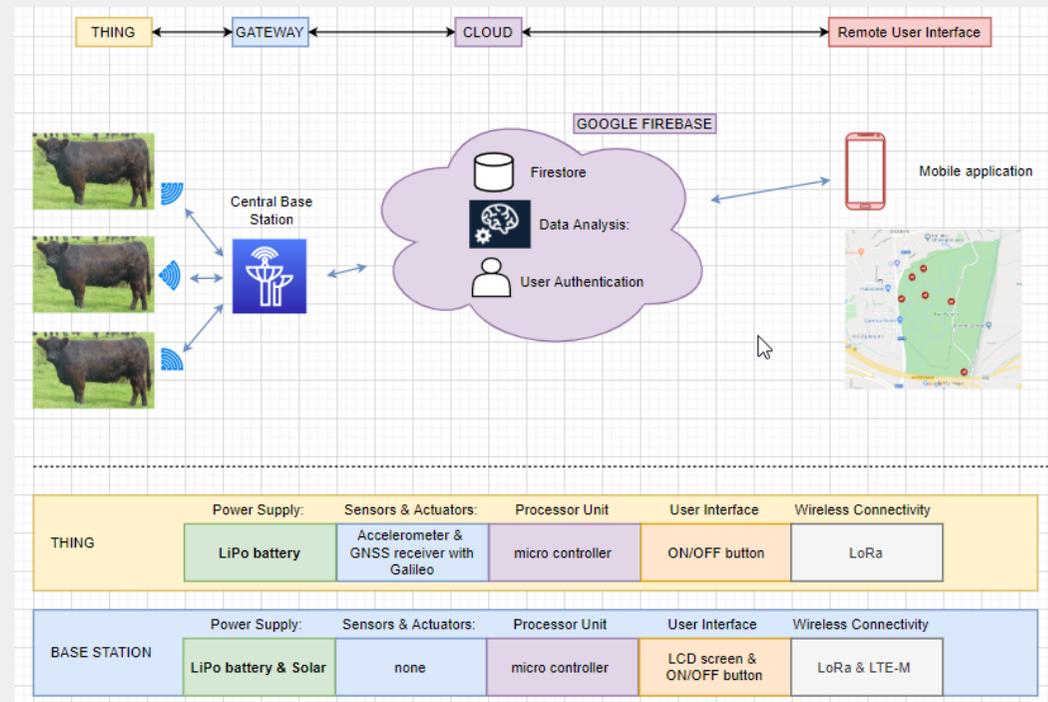
A natural reserve in Belgium, uses Galloway cows for grazing, because they don't need much care taking. They don't even need a winter shelter and can be outdoors the whole year round! However, sometimes a few of them try to escape. The owners of the natural reserve want to track each individual cow.

## KEY USE CASES & USER REQUIREMENTS:

1. Owners want to know at any time where their cows are;  
Requirement: status update on demand via smartphone app.
2. Owners want to be notified immediately if a cow escapes the domain when a cow escapes the domain.  
Requirement: Real time alerts when the situation happens via smartphone app; indication of the location that continue to provide live feed on the situation.
3. The owners want to get notified when a cow doesn't move for more than 8 hours.  
Requirement: Pop up alerts via smartphone app; indication of the location.

## IMPORTANT SPECIFICATIONS

- Battery life: > 1 year: the cows get a yearly check up at which the battery can be changed
- Price: < €150 (per tracker)
- Delivery time: < 3 months
- Mechanical design: Robust, weatherproof
- Tracking accuracy: +/- 10m
- UI & UX: Mobile App
- Shows a life map of the position of the cows, that updates every 10 minutes (in emergency situations)
- The user gets a notification when a cow escapes the domain.
- The user gets a notification when a cow didn't move for more than 8 hours.



# Tool – Morphological map: component options

This tool (Morphological chart) can be used to support a brainstorm or a discussion when designing options for different components. It encourages to think of different alternatives before making a choice.

Task 1: List all relevant features and their components (column 1 and 2). This will give you a complete list of technological component requirements.

Task 2: Write down all options for every component that you can think of. Write down all ideas even if they don't look realistic at first sight. These ideas can trigger other good ideas.

Task 3: Assess and select components based on your criteria and/or customer segmentation. Choose assessment criteria that are relevant for your project (e.g. feasibility, cost, desired performance, fit with other system elements etc.).

Task 4: Experiment with alternative combinations of components to could meet different cost targets or market segments.

Keep in mind that by changing one requirement, the total solution design (concept) can be affected.

Depending on your maturity, you can either decide to explore certain options further or do a final selection and proceed with you your development project.

FEATURE	COMPONENT	OPTION 1	OPTION 2	OPTION 3	...	REMARKS
1. Power supply & management	<i>Output voltage</i>	<i>AC mode 3</i>	<i>DC mode 4</i>	<i>AC &amp; DC</i>		
	<i>Input voltage</i>					
	<i>Output power</i>					
	<i>Protection &amp; safety</i>					
	<i>Power source</i>					
	...					
2. Communication	<i>Connectivity</i>	<i>4G</i>	<i>LTE ready</i>	<i>Wi-Fi</i>	<i>LAN</i>	
	<i>Smart communication</i>	<i>none</i>	<i>Wireless</i>	<i>Wired</i>		
3. User interface	<i>User input</i>	<i>Touch-screen</i>	<i>Voice</i>	<i>Gesture</i>	<i>Physical button</i>	
	<i>User authentication</i>					
	....					
4. Position tracker	<i>Location based info</i>	<i>GNSS (Galileo)</i>				
....						

© Verhaert 2020

# Tool – Triggers for Morphological map & system design

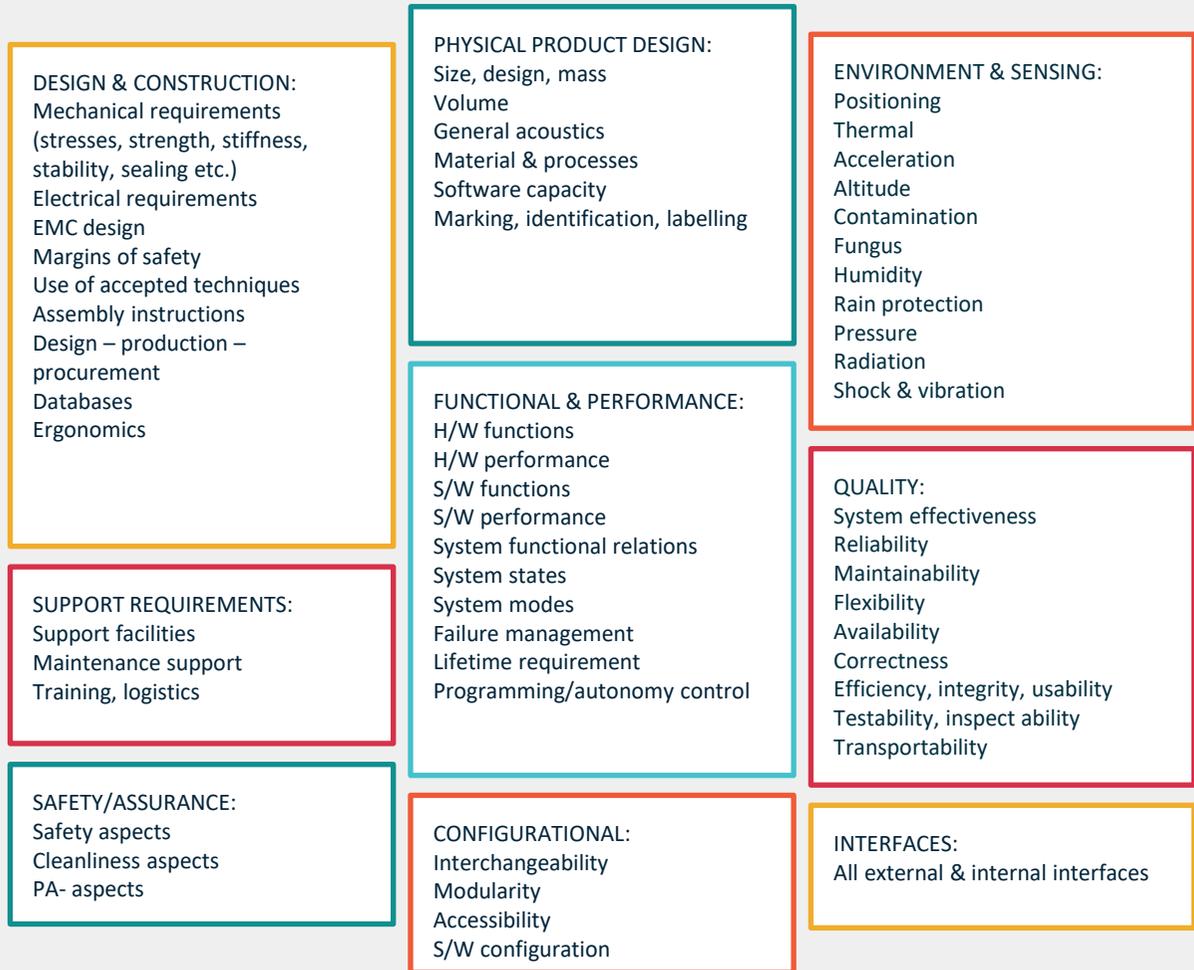
This tool gives you a list of potential product and technology topics that might be relevant when designing an end-2-end IoT solution. Pick and choose what is relevant for your discussion.

These cards can be handy to trigger your brainstorming or discussion on the exercises:

- Technology blocks on your Morphological map
- User requirement aspect in use case design exercise
- Technology topics for your end-2-end solution architecture design.

Use these cards as a checklist or as inspiration together with your team!

Choose the topics that are the most important and critical for your solution to deliver functionality & value.



# Tool - Evaluation matrix & selection trade offs

This tool allows to objectify your component selection and highlight potential trade offs.

Some applications require a combination of multiple technologies to optimise speed, battery life and cost. This will always require choices and trade offs. Your selection criteria should fit your system design objectives.

	SPEC 1	SPEC 2	SPEC 3	SELECTION CRITERIA: Rate the options on a scale of 1 to 5 (1 - low, 5 - high)
OPTION 1				
OPTION 2				
OPTION 3				

Example: select the best option for the wireless communication technology:

	DESCRIPTION	RANGE (km)	USE FEE	POWER CONSUMPTION (W)	COVERAGE	Speed
2G/3G/4G	Mainly meant for voice, but also supports data in the form of SMS and GPRS. It is widely adopted and hardware is available at low cost.	35	SIM License	2	Outdoor & Indoor	High: 200 kbps - 300Mbps
NB-IoT	NB-IoT runs in the mobile telephone radio spectrum, and piggybacks on old, unused GSM channels, or free space between LTE channels.	10-15	SIM License	0,2	Outdoor & Deep Indoor	Low: 200 kbps
LTE-M	low speed, low power and long range protocol for small amounts of data. Implementation is cheaper as no dedicated hardware is necessary.	10-15	SIM License	0,2	Outdoor & Indoor	Medium 1 Mbps
LoRAWAN	LoRaWAN is a low speed, but long range and low power communication protocol. It is free to implement	5-10km*	License free	0,025	Outdoor & Indoor	very Low: 25 kbps
wifi	WiFi is mainly meant for broadband network connections in a confined space. Normally less than 100 square metre per access point.	50m	License free	0,1	Indoor	High: 50 -200 Mbps
BLE 5	Bluetooth, BLE and ANT are radio protocols meant for Personal Area Networks (PAN). Mostly these are on a person's body or in close proximity to them.	100m (line of sight)	License free	0,003	Indoor & Outdoor (line of sight)	Medium: 500 kbps

SELECTION CRITERIA: **LOWEST POWER CONSUMPTION WITH THE BIGGEST RANGE** (Rate the options on a scale of 1 to 5 (1 - low, 5 - high).

KM range	Power consumption	Selection decision
5	1	
4	2	
4	2	
3	4	<b>X</b>
1	3	
2	5	

# Tool - IoT end2end solution architecture design

Available physical dimensions and restrictions for integrating the new IoT solution:

AVAILABLE DIMENSIONS

- Max weight:
- Max height: ...

RESTRICTIONS & CONDITIONS...

- Temperature range:
- Materials:

Data gathering using sensors :

KEY REQUIREMENTS

- Monitor content quality
- Location specific

TECHNOLOGY OPTIONS

- Temperature sensor
- Moisture sensor
- GNSS receiver
- ....

Controlling (ex. display, movable parts):

KEY REQUIREMENTS

- Touchless control options
- Intuitive user feedback
- ...

TECHNOLOGY OPTIONS

- Display with touchless interface
- Smart backlight
- ...

IoT Embedded HW/SW system, UX & Applications:

KEY REQUIREMENTS

- Smart phone application
- Integrated screen
- ....

TECHNOLOGY OPTIONS

- iOS & Android
- ...

Data preprocessing:

KEY REQUIREMENTS

TECHNOLOGY OPTIONS

Communication:

KEY REQUIREMENTS

- Min. power consumption

TECHNOLOGY OPTIONS

- 4G
- Lora
- Wi-Fi

This tool gives an overview of all possible technological blocks for your IoT end2end solution. However, not all blocks are relevant for every solution. Assess and discuss those blocks that are critical to your IoT system to work and deliver value.

Map your solution in these blocks to identify key technology requirements and implementation options for your technical concept & development track.

Task 1: Discuss different technology blocks and their relevancy to your intended solution;

Task 2: Identify specific technology requirements & technological options for every relevant block.

At this stage, feel free to list assumptions and ideas.

Validate your options and make the final selections at a later stage.

Local application:

KEY REQUIREMENTS

TECHNOLOGY OPTIONS

Server Cloud application:

KEY REQUIREMENTS

TECHNOLOGY OPTIONS

Data processing (AI, big data):

KEY REQUIREMENTS

- Continuous data transfer from generic database
- ...

TECHNOLOGY OPTIONS

- Data loader algorithm
- ...

Reporting, data visualisation (UI, app, web):

KEY REQUIREMENTS

- Real time info
- Alerts in case of error

TECHNOLOGY OPTIONS

# Homework list

Fill in your own goals to complete this sprint.

- 1
- 2
- 3
- 4
- 5
- 6

## STAGE 4, Mile 4

# BUSINESS

Make sure it brings enough money



CHIEF MENTOR



PRODUCT MENTOR



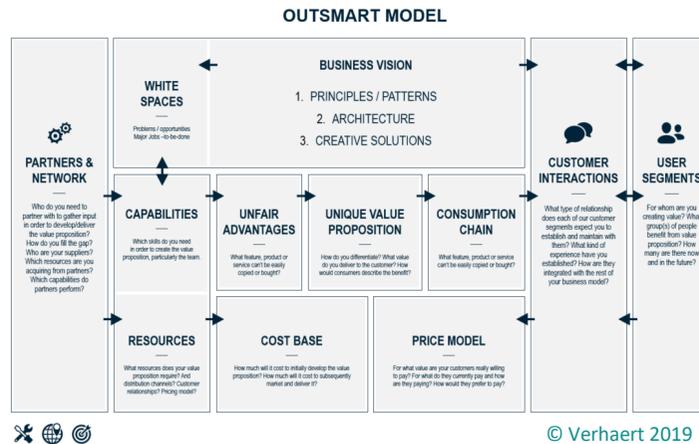
MARKETING MENTOR

Lead questions to discuss with your mentor in this stage.

- How can you make money (revenue & business model)?
- How do you get traction in the market?
- How do you get the business growing (marketing strategy, campaign and roadmap)?

# How to make money (revenue with the outsmart model)

Monetisation is one of the aspects key to your potential investors. They look for the frequency of the revenue stream, and whether or not it is recurring and easily predictable. A strong Outsmart Model is particularly important, it shows how you will monetise your solution.



- GOALS  
Outsmart model designed
- TASKS  
Design outsmart model
- TOOLS  
Outsmart model design



**TASK 1**

**Design a outsmart model for your business**

- Use inspiration from other industries to define the best fitting Outsmart model for you. Study different models with examples and design your revenue model.



**TASK 2**

**Run quick tests with customers on your revenue model**

- Organise brief interviews with a few customers to question your new outsmart model and pricing ideas
- If necessary re-visit your outsmart model to improve it based on customer feedback

GET INSPIRED

Revenue Model - [6 Drivers That Determine Your Revenue Model](#) - by George Deeb (The Next Web)

Marketing strategy - [15 Early Traction Growth Hacking Strategies For Startups](#) - by Stuart McKeown (Gleam)

# Tool Outsmart model designed

The outsmart model describes how a business generates revenue streams from its products and services. A strong revenue model is most important for early stage start-ups; their investors are usually very conscious of monetisation. Let's put it simply - a strong revenue model gives you money!

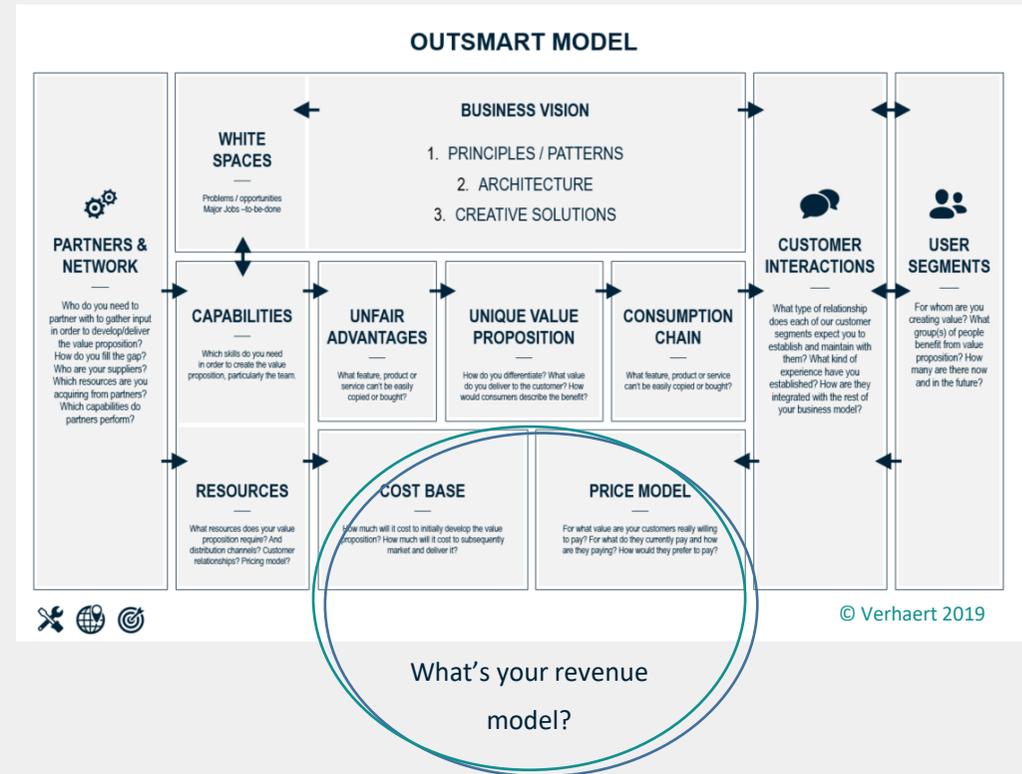
### Tasks

- Design your unique revenue model which will give you high growth and market traction.
- Test with your customers their willingness to pay for the product/ service.
- Find the optimal price points during your customer interviews

### Sample revenue models

- Paid App Downloads – e.g. WhatsApp
- In-app purchases – e.g. Candy Crush Saga, Temple Run
- In-app subscriptions – e.g. NY Times app
- Advertising – e.g. Flurry
- Transactions – e.g. Airtel Money
- Freemium – e.g. Zynga, Skype
- Subscription – e.g. World of Warcraft
- Premium – e.g. xBox games
- Downloadable Content – e.g. Call of Duty
- Ad-supported

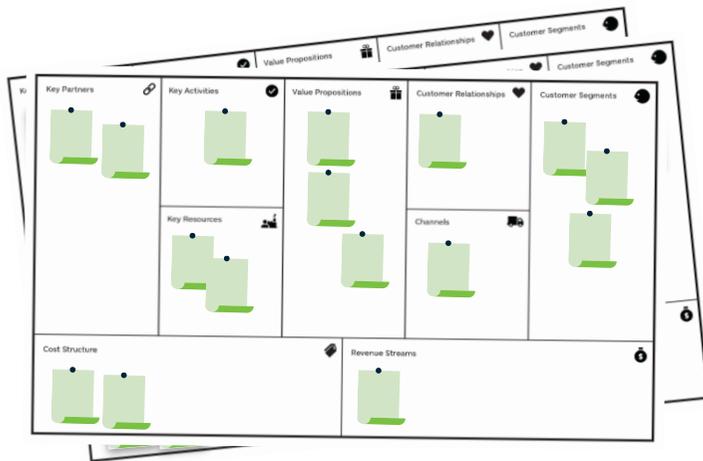
[The ultimate master list of revenue models - BMNOW](#)



## STAGE 4 - BUSINESS

# How to make money (business model)

A strong value proposition embedded in a fitting business model is difficult to copy and more likely to grow exponentially. Some business models fit better than others and produce better financial results. The business model fit is key to a profitable and scalable business.



GET INSPIRED [+30 Business & Revenue Model Examples](#) - Board of Innovation



**GOALS**  
Business model completed & scalable for growth

**TASKS**  
Complete your business model

**TOOLS**  
Profitable and scalable business - 7 questions to test your business model



**TASK 1**  
Complete your business model

- Re-visit and finalise your business model on Lean canvas – focusing on the value proposition!
- Your business model must be designed for fast growth and global scalability. Assess your business model and its scalability by using the tool: 7 questions to test your business model.

## Tool - Profitable and scalable business models

Business model fit takes place when a value proposition is embedded in a profitable and scalable business. Your job is to get both the business model and the value proposition right. It is a process of back and forth until you nail it.

- Can you create & deliver profitably value around this particular customer value proposition?
- Is your value proposition in your business model really creating value for your customer?

### Tasks & tools

- Lean canvas to create 3 alternative business models.
- Describe the final version of your business model!
- Discuss the business model with all your team members - how to develop your solution on top of the business model.

### Assess the business models

Some business models are better than others and will produce better financial results, will be more difficult to copy, and to outperform competitors. Assess the weaknesses of your business model prototypes (next page). Ask yourself how you could improve or change your initial value proposition?

When assessing your business model, focus on Death Threats - the risks which might cause the idea to fail. No more Death Threats usually means a business that can work. Focus on the biggest Death Threats first.



Adopted from: Strategyzer, Business model canvas, available at <https://www.strategyzer.com/>

# Tool - 7 questions to test your business model

Assess your business model design. Circle how you perform on a scale from 0 to 10.

## 1. Switching Costs



1 ..... 10  
Nothing holds my customers back from leaving me ..... My customers are locked in for several years

## 2. Recurring Revenues



1 ..... 10  
100% of my sales are transactional ..... 100% of my sales lead to automatically recurring revenues

## 3. Earning vs. Spending



1 ..... 10  
I incur 100% of my costs of COGs before earning revenues ..... I earn 100% of my revenues before incurring costs of goods & services sold (COGs)

## 4. Game-changing Cost Structure



1 ..... 10  
My cost structure is at least 30% higher than my competitors ..... My cost structure is at least 30% lower than my competitors

## 5. Others Who Do the Work



1 ..... 10  
I incur costs for all the value created in my business model ..... All the value created in my business model is created for free by external parties

## 6. Scalability



1 ..... 10  
Growing my business model requires substantial resources and effort ..... My business model has virtually no limits to growth

## 7. Protection from Competition



1 ..... 10

Adopted from: Business model alchemist, A. Osterwalder, 7 questions to assess your business model design, available at <http://businessmodelalchemist.com/blog/2011/09/7-questions-to-assess-your-business-model-design.html>

# How to get traction in the market? How can you convince the market?

Market traction is quantitative evidence of market demand and it shows momentum in market adoption. This is usually the first and the most important indicator that the investors want to see. It means that somebody really wants your product. If your marketing isn't generating enough leads it means that it's not working. Your marketing strategy and go-to-market plan must address 4 crucial aspects:

- What will you sell? (solution & unique value proposition)
- Who will you sell to? (customer segment)
- How will you reach your target market? (distribution channels, partners, etc.)
- Where will you promote your product? (marketing channels)



## TASK 1 Design marketing strategy

- Based on the question template : 'Questions for marketing strategy' in the toolbox, discuss your marketing strategy
- Review your marketing tools and channels selection to focus your efforts on those that work best.



## TASK 2 Design marketing campaign & landing page

- Based on the strategy, define your marketing campaign plan
- Develop a content plan for social media usage.
- Create a landing page with a clear value proposition on [Launchrock](#). Follow instructions from [Sales Messaging Cheat Sheet](#) to write compelling sales messages.



## TASK 3 Design IP protection plan

- Use the IP protection plan to draft a plan to protect your intellectual property
- Conduct a patentability search ([US Patent & Trademark Office](#), [Google Patents](#)) to learn if your solution has already been patented. As in Europe software and mobile apps are not patentable, search [trademarks](#) and [copyrights](#) instead.

### GET INSPIRED

Campaign improvement - [10 Solutions To Fix Your Busted Marketing Campaigns](#) - by Oli Gardner (Unbounce)  
 IP strategy - [Does Your Mobile App Need a Patent?](#) - by Rahul Varshneya (The Next Web)  
 Marketing campaign - [A Step-by-Step Guide to Running Successful Marketing Campaigns](#) - by Amanda Durepos (Unbounce)  
 Landing page - [ASP 43: How to Create Kick Ass Landing Pages](#) - Authority Pub

# Tool - Questions for marketing strategy

Answer these questions to guide you when preparing your marketing strategy draft.

Your goals (business + marketing) - for 1-3 month, for 3-12 month.

Marketing message(s) (1 per each customer persona).

Your defined revenue streams: where is the money?

Competitors. Why are you better? What to learn from other successes/failures?

Service/product & unique value proposition (UVP).

Main possible marketing channels (fb, e-mail, guest blogging, content marketing etc.) with main activities and goals.

Customer persona + target groups.

What technology are you already using or planning to use? NB! What platform?

# Tool - Questions for marketing strategy

Answer these questions to guide you when preparing your marketing strategy draft.

What is your sales or pre-sales campaign planning?

What is your marketing and sales process (visitor-subscriber-lead-sign-up-trial-paid etc.)?

KPIs that you will measure in the marketing for this product/service?

# Tool - Marketing strategy map

## The Periodic Table of Content Marketing

An overview of the key elements of content marketing

**1 Cs**  
Content strategy

**2 Ar**  
Article

**3 V**  
Video

**4 Im**  
Image

**5 Ev**  
Event

**6 Gm**  
Game

**7 To**  
Tool

**8 P**  
Print

**9 El**  
E-learning

**10 Sh**  
Slideshow

**11 Vi**  
Visualisation

**12 Pr**  
Press release

**13 Wb**  
Webinar

**14 Ap**  
App

**15 Eb**  
Ebook

**16 So**  
Social

**17 Em**  
Email

**18 Ho**  
'How-to' based

**19 Iv**  
Interviews

**20 Qz**  
Quizzes

**21 Re**  
Reviews

**22 As**  
Ask the experts

**23 Ex**  
Experiments

**24 De**  
Definitions

**25 Qu**  
Question-based

**26 Rs**  
Resources

**27 Pd**  
Productivity

**28 Gl**  
Glossaries

**29 Ga**  
Galleries

**30 Ti**  
Timesaving

**31 Lb**  
Linkbait

**32 Fu**  
Fun

**33 Da**  
Data

**34 Mm**  
Mindmaps

**35 Bp**  
Best practice

**36 Hi**  
Hivemind-based

**37 Te**  
Templates

**38 Pc**  
Product-based

**39 Fr**  
Frameworks

**40 Co**  
Compilations

**41 Ee**  
Event-based

**42 Bg**  
Beginner's guides

**43 Sv**  
Surveys

**44 Fr**  
Frameworks

**45 Ca**  
Case study

**46 Rc**  
Research

**47 In**  
Inspiration

**48 An**  
Analysis

**49 Tm**  
Testimonials

**50 St**  
Stats

**51 Tr**  
Trends

**52 Op**  
Opinion

**53 Fi**  
Fiction

**54 Dm**  
Demos

**55 De**  
Debates

**56 Cm**  
Competitions

**57 Ch**  
Checklists

**58 Gf**  
Gifs

**59 We**  
Website

**60 Tw**  
Twitter

**61 Yo**  
YouTube

**62 Re**  
Reddit

**63 Bl**  
Blogs

**64 Fa**  
Facebook

**65 Vm**  
Vimeo

**66 Ig**  
Imgur

**67 Hn**  
Hacker News

**68 Pv**  
Page views

**69 NI**  
New leads

**70 Bm**  
Brand metrics

**71 Of**  
Offline media

**72 Li**  
Linkedin

**73 Gp**  
Google+

**74 Vn**  
Vine

**75 Ps**  
Partner sites

**76 Uv**  
Unique visitors

**77 Do**  
Downloads

**78 Rp**  
Reputation metrics

**79 Mi**  
Microsite

**80 Pi**  
Pinterest

**81 Fo**  
Forums

**82 Sl**  
Slideshare

**83 Ad**  
Advertising

**84 Nv**  
New visitors

**85 Cl**  
Cost per lead

**86 Pm**  
PR metrics

**87 Am**  
Acquisition metrics

**88 Is**  
Instagram

**89 Tu**  
Tumblr

**90 Fl**  
Flickr

**91 Br**  
Bounce rate

**92 Kp**  
Key pages

**93 Dg**  
Demographic metrics

**94 Rm**  
Retention metrics

**95 Nm**  
New members

**96 Tu**  
Tumblr

**97 Sm**  
Social metrics

**98 Eg**  
Engagement metrics

**99 Tf**  
Traffic

**100 Le**  
Leads

**101 Br**  
Branding

**102 Sa**  
Sales

**103 S**  
Search

**104 Me**  
Members

**105 Sh**  
Shares

**106 En**  
Engagement

**Strategy** (Yellow)

**Format** (Orange)

**Content Type** (Pink)

**Platform** (Blue)

**Metrics** (Green)

**Goals** (Light Blue)

**Sharing Triggers** (Light Green)

**Checklist** (Light Cyan)

**A seven-step guide to success**

1. Take some time to define a **strategy**.
2. Figure out the **formats** you plan on using.
3. Think about the **content types** that will appeal to your audience. Do your research. Brainstorm Ideas. Create.
4. Share your content across the key content distribution / social **platforms**.
5. Track the key **metrics**, and map these to your **goals**.
6. Be aware of the main sharing **triggers**. Be sure to work the emotions.
7. Always **double check** your work.

**107 Fu**  
Funny

**108 Sx**  
Sexy

**109 Sg**  
Shocking

**110 Mv**  
Moving

**111 Un**  
Unbelievable

**112 Cv**  
Controversial

**113 Co**  
Cool

**114 Ig**  
Illuminating

**115 Rd**  
Random

**116 Zg**  
Zeitgeist

**117 Aw**  
Cute

**118 Up**  
Uplifting

**119 Di**  
Disgusting

**120 Sq**  
Search queries

**121 Se**  
Search optimisation

**122 Ce**  
Copy editing

**123 Fm**  
Formatting

**124 Hd**  
Headline optimisation

**125 Tv**  
Tone of voice

**126 Gd**  
Brand guidelines

**127 Pe**  
Plain English

**128 Do**  
Device optimisation

**129 Fc**  
Fact-checking

**130 Cd**  
Credit sources

**131 Ct**  
Calls to action

**132 Fd**  
Invite feedback

**Econsultancy**  
Achieve Digital Excellence™

*Devised & designed by Chris Lake (@lakey).*

*You may share it around, embed it on your website, print it out or tear it up, with appropriate credit.*

*Copyright Econsultancy Ltd.*

Adopted from: Econsultancy, C. Lake, Marketing strategy map, available at <https://econsultancy.com>

# Market traction

Market traction is quantitative evidence of market demand. This is usually the first and the most important indicator that the investors want to see as it is proof that somebody really wants your product.

Traction can be demonstrated by different indicators, depending on the type of your start-up: profitability, revenue, active users, registered users, engagement, partnerships/clients, traffic etc. It shows momentum in market adoption. Use specific numbers (ex: 10,000 registered users) or growth numbers (ex: 20% weekly growth in users) to communicate the traction. To really excel, include a graph of your accelerating growth!

## Task 1 : Customer engagement

- Adjust your customer engagement campaign
- Discuss the campaign with your Marketing Mentor
- [How 23 Web & Mobile Start-ups Got Their First Users - Autosend](#)

## Task 2 : Pitch like a boss

Start preparing the final pitch slide deck.

When you are able to pitch like a boss, it means that you are able to talk and sell your ideas - to anyone anytime, and anywhere, be it Warren Buffett himself. Often, how you pitch may become even more important than what you pitch. There are very clear do's and don'ts for pitching, and a concrete checklist of content that you are expected to address.

- [The ultimate pitch deck - Forbes](#)



# Tool - The 5 P's

**Outline the key elements of your marketing approach. Make sure that the 5 p's strengthen one other.**

**Product:**

What products or services do you provide? What are the specific features that you offer to your customers? And what makes you different/ more unique compared to the competition?

**People:**

Who are your customers? How can you segment and characterise them? Where can you find them? Are the services or the communication to your target group customer / user friendly? Easy to comprehend? And applicable for all?

**Place:**

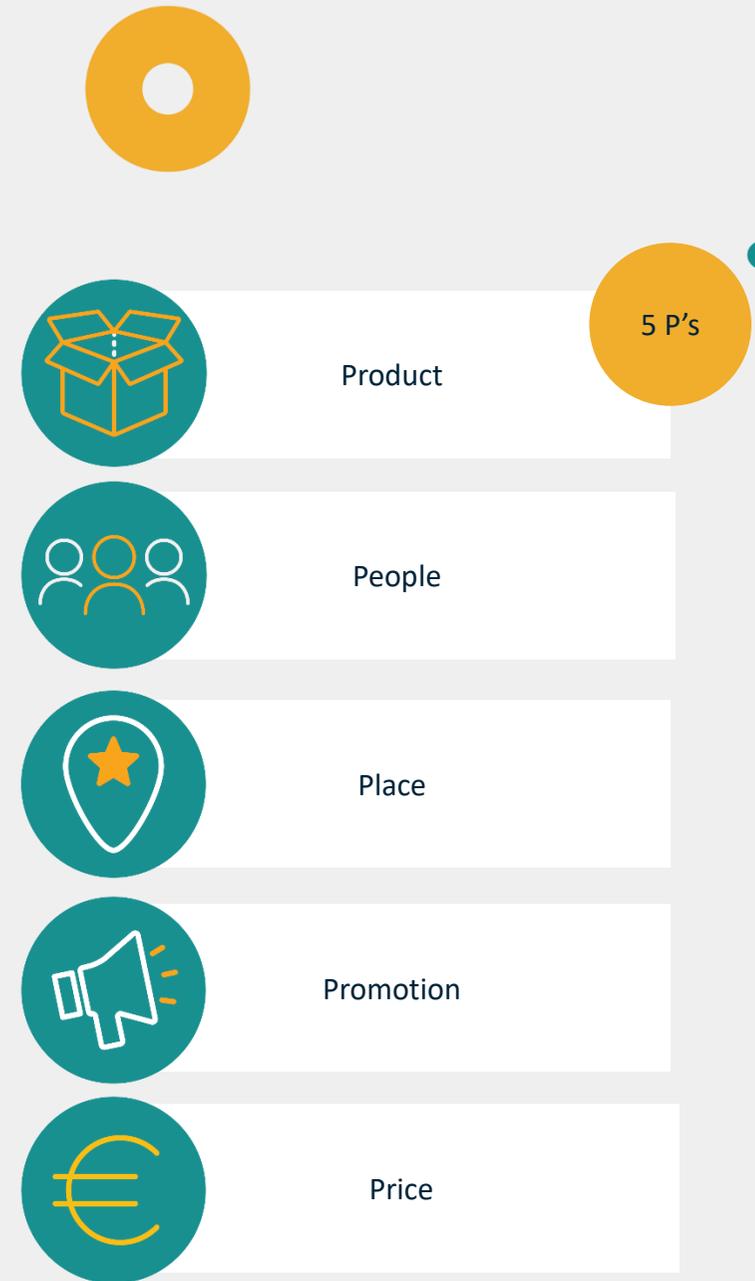
How does your distribution and sales network look like? How will you get the products /services to your customers and clients? What are the key channels?

**Promotion:**

What kind of marketing strategy will you apply to reach your target group and trigger interest about your product/ services? How will you communicate your product value and will it attract the customers?

**Price:**

What are you charging for your product or services? Are you getting the maximum out of your value proposition ("value selling") Is it enough to cover all your expenses on long and short term and still to make a profit?



Frey, A. 1961

## Tool - Digital marketing tools

Which digital marketing tactics to pursue:

- Email marketing
- Social media marketing
- Search engine marketing
- Content marketing
- Display advertising
- Referral marketing
- Paid search
- Mobile advertising
- Digital video advertising
- Affiliate marketing
- Other



# Marketing Campaign actions

To achieve measurable results with your marketing, you need to treat every single one of your marketing activities as a marketing campaign. It means that for every single project you've got to set clearly defined goals, a finite start and end date, and a means of tracking success (and failure).



## GOALS

Marketing campaign preparation at full speed

## TASKS

Configure Google Analytics - Create marketing campaign actions according to your marketing campaign plan - Launch marketing campaign - Request influencer tweets

## TOOLS

Action list - Google Analytics



### TASK 1

#### Configure Google Analytics

- Set your analytical engine to help you to improve on-the-go.



### TASK 2

#### Create marketing campaign actions according to marketing campaign plan

- Build marketing campaign for social media channels according to your content plan.
- Build Google AdWords campaign.
- Fulfill other tasks according to your marketing campaign plan.

#### GET INSPIRED

Google AdWords - [How to Create a Profitable Google AdWords Campaign \(from Scratch\)](#) - by Phil Frost (KISS Metrics)  
Social media campaign - [A Cheat-Sheet for Creating the Best Social Media Campaigns EVER!](#) - by Scott Ayres (Post Planner)



# Tool - Marketing campaign template (pre-launch)

Based on the marketing strategy that you have defined with your marketing mentor, describe your marketing plan here. What your action plan is (pre-launch, during launch, post-launch, by channels, with KPI's)?

## PRE-LAUNCH

WHAT ACTION	TIME	WHAT CHANNEL	DEFINE KPI
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			



## Tool - Marketing campaign template (during launch)

Based on the marketing strategy that you have defined with your marketing mentor, describe your marketing plan here. What is your action plan (pre-launch, during launch, post-launch, by channels, with KPI's)?

### DURING LAUNCH

WHAT ACTION	TIME	WHAT CHANNEL	DEFINE KPI
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

## Tool - Marketing campaign is ready: start with the plan of actions

A marketing campaign isn't something that comes to you while you're taking a shower. Successful campaigns tend to be carefully researched, well thought-out and focused on details and execution, rather than resting on a single, grand idea.

[A Step-by-Step Guide to Running Successful Marketing Campaigns - Unbounce](#)

You are free to use any other digital marketing platform if you feel it is more suitable for your marketing campaign.



# Tool - Content plan template

In the template on the right, develop a content plan for social media usage. What exactly (text/photo /video), when (date) and where (channel) do you plan to share? Include link/image/file of your shareable content.

Web marketing channels	Check the box if you pick this	What message(s) will you share?	When will you share your message? (date)
Facebook			
LinkedIn			
Twitter			
Instagram			
YouTube			
Pinterest			
Google +			
VK			
Flickr			
Meetup			
Reddit			
Scoop.it			
Quora			
Slideshare			
Visual.ly			
Other ...			

## STAGE 4 - BUSINESS

# Protect your intellectual assets and IP!

In some markets “speed” is critical, in others - it’s customer service and your relationships. Yet, make sure you understand the value of and the risks to your IP, especially when your IP accounts for a high percentage of the company’s value.

Your intellectual assets and IP are important to provide you with competitive advantage as well as give you strong arguments with your investors.

Different types of IP assets are treated differently when it comes to the frequency, focus, and required actions. Thus, choose your method and actions wisely!



### TASK 1

Evaluate your assets and decide on protection method

Be confident in your go-2-market without having fear that your solution might be copied and your competitive advantage taken away.



### TASK 2

Make sure you have taken all the necessary actions to protect your key assets under competitive risks

Be smart , be protected - install processes and legal measures as necessary!



### GOAL:

Have a clear approach on protecting you key assets & don’t take risks with your competitive edge

### TASKS:

Audit your assets IA & IP – draft a plan on how to protect it

### TOOLS:

IP protection checklist, IP protection options



# IP protection options

While no law in any country protects simply a “good idea”, there are various components of your Intellectual Property that can indeed be protected. These include your brilliant invention, smart software, clever design, brand name, logo, music, tagline, secret recipe, and the like. These protectable components generally take the following forms:

- Utility patents protect your invention (hardware, software, and mechanical components).
- Design patents protect the aesthetic aspects of your invention (look, design, decoration).
- Trademarks protect your business and product names (logo, brand, colour, tagline).
- Copyrights protect your expression (song, jingle, poem, marketing materials, videos, source code).
- Trade secrets protect your confidential business information that provides your competitive edge. (Note that this is unregistered protection that you are responsible for guarding - e.g. formula for Coca Cola.)

	WHAT IS PROTECTED?	HOW LONG IS IT PROTECTED?	WHAT DOES IT PROTECT AGAINST
PATENTS	Inventions	Up to 20y (subject to annual renewal)	Your idea being used, sold, manufactured
TRADE MARKS	Brand identity, including words & logos	Forever (renewals every 10y)	The use of your trademarks by others without permissions
REGISTERED DESIGN RIGHTS	What the product looks like	Up to 25y	Your product being manufactured, sold or imported
COPYRIGHT	Source code business plan, marketing materials	Life plus 70y	Your work being copied, reproduced
TRADE SECRETS	Business methods, strategies, list of suppliers, clients, processes	Unlimited	Unfair competition by commercial espionage, breach of contract and breach of confidence

Adopted from: Cambridge Business Lounge, E. Goodman, A Start-Up's Guide to Intellectual Property, available at <http://www.cambridgebusinesslounge.com/a-start-ups-guide-to-intellectual-property/>



STAGE 4 - BUSINESS

# Homework list



Fill in your own goals to complete this sprint.

1

---

---

---

2

---

---

---

3

---

---

---

4

---

---

---

5

---

---

---

6

---

---

---

## STAGE 5, Mile 5

# PITCH



CHIEF MENTOR

Lead questions to discuss with your mentor in this stage.

- What are your financial metrics?
- What is your funding strategy?
- How will you do fundraising & pitching?

## STAGE 5 - PITCH

# Define your financial metrics

As a start-up, you need to manage your financial metrics a bit different than the traditional finance focus in companies. The difference between these is that finance in start-ups is more focused on monitoring and validation, in traditional company's is the focus more on planning and budgeting.

So as a start-up you need to fill in metrics to evaluate whether you can scale up your business with the current building blocks of your business model.



### TASK 1

#### Define your financial metrics

- Identify relevant financial metrics
- Evaluate & calculate these matrixes and process these in your pitch deck.



### TASK 2

#### Evaluate regularly

- Evaluate the results of these calculations
- Make changes in your business model if its necessary



### GOALS

Financial KPI's calculated

### TASKS

Calculate & define financial KPI's

### TOOLS

Financial improvements - 5 year financial projection - Risk management - Risk hedging options - 65 VC questionnaire



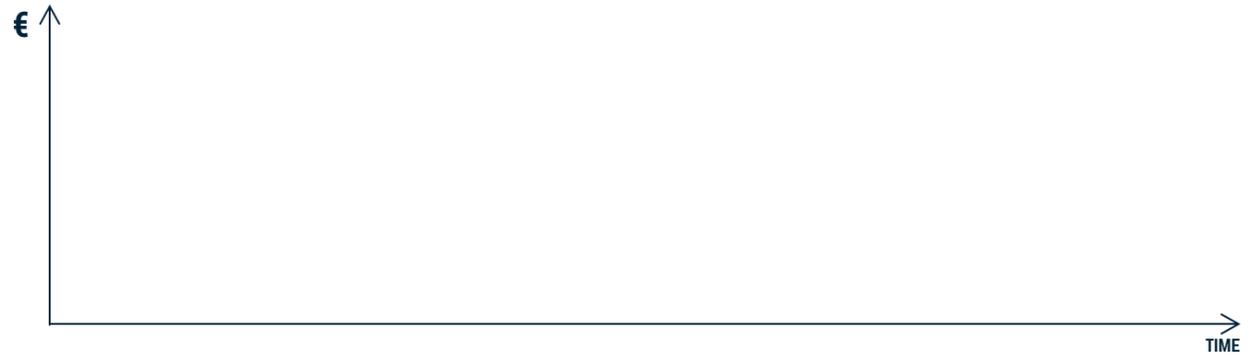
# Tool - Financial improvements

As was mentioned earlier, startups need a different financial focus than traditional companies. To optimise your financial structure you need to map the profit and losses. When you have identified these profits and losses you can generate options to improve your business case. You can do this exercises for different time slots: 1 year, 3 years or 5 years.

## PRIORITY SETTING

Assess chances of occurrence and potential impact of each threat, compare them each to other

PROFIT & LOSS SIMULATION



BUSINESS CASE IMPROVEMENT OPTIONS

WHAT



HOW



IMPLICATIONS

© Verhaert 2013

## Tool - Financial metrics

As already mentioned, startups need to have a different angle on finance than traditional companies. The areas of key performance indicators you need to monitor as a startup:

- Cash: Where does the cash burn? What's run away? What's the run rate?
- Product: What is the customer satisfaction.
- Sales: What's the productivity vs. the efficiency and what will be the ROI.
- Marketing: What's the efficiency vs. the cost to acquire and what will be the ROI?
- Operations: What is the efficiency vs. the effectiveness?
- Team: What is the commitment vs. the enthusiasm.



# Tool - 5 year financial projection

Make a first draft of the financial projections of the first 5 years.

	Year 1	Year 2	Year 3	Year 4	Year 5
<hr/>					
Costs					
Start-up investments & costs					
Running field costs					
Running variable costs					
<hr/>					
Income					
<hr/>					
Balance at the end of the year					

© Verhaert 2013

# Tool - Risk management

Listing the risks

Categorising / characterising the risks

Measure the effect of the risks.

Operating risk	Financial risk	Continuous risk	Event risk	Small risk	Catastrophic risk	Risk assessment
----------------	----------------	-----------------	------------	------------	-------------------	-----------------

### Product market specific risks

①	.....
	.....
②	.....
	.....
③	.....
	.....

### Firm specific risks

①	.....
	.....
②	.....
	.....
③	.....
	.....

# Tool - Risk hedging options

Generate risk hedging options/strategies for the risks you identify on the previous page.

Risk

Risk hedging options / strategies

Risk

Risk hedging options / strategies

Risk

Risk hedging options / strategies

## STAGE 5 - PITCH

# What will be your strategy to get funding?

Financing a whole start-up project by yourself is very hard, therefore almost every start-up is looking for funds. But there are a very small group that receive funds. So what do you need to do to be the lucky one that receive funding? At one side you need to choose the right funding strategy, not every start-up has the same needs so it's very important to identify yours.

Successful entrepreneurs are not always the one with the most elaborated business plan, but the one who thinks creative about how they can acquire cash. Which creative combination you make to acquire the cash your start-up needs?



### TASK 1

#### Choose a suitable funding strategy

- Use the six Mission Critical Metrics to identify relevant financial metrics
- Evaluate & calculate these matrices and process these in your pitch deck.



### TASK 2

#### Finalise your pitch deck

- Add the last financial data or insights that you get by making the financial exercises.
- Try to pick the most relevant data
- Make sure that you have an interesting story about your financial data
- Figure out what the counter arguments can be and find a good answer.



### GOALS

Funding strategy is defined. Ready for pitching.

### TASKS

Create a funding strategy - Prepare your pitch & pitch deck

### TOOLS

Design a funding strategy - The 5 P's of a good pitch - Fundraising & pitching - The 11 slides of a funding pitch - Become a VC - Funding acquired.

# Tool - Design your funding strategy, select and combine

	Fit with start-up			Actions
	Low	Medium	High	
Bootstrapping: funding your enterprise of start-up project without debt.				
Friends, Families and Fools = Win-win loan (BE): a subordinated loan, which one of the F's granted you. More info <a href="#">Agentschap innoveren en ondernemen</a> & <a href="#">PMZ</a> .				
Crowdfunding: public funding via an online platform. It's important to choose a good platform, 3 types: financial, rewarding or donation.				
Business Angels: a private investor, who has enough time, money and business experience who's willing to mad these resources available for an entrepreneur in a seed- or start-up phase.				
Incubators and/ or accelerators Incubator: a substantively program to coach a start-up, accelerator = a physical space where a modest content start-up coach program is offered.				
Venture capital: capital that is invested by venture capitalist to fund start-ups with a big risk to fund.				
Partnerships: a partnership is an arrangement in which two or more individuals share the profits and liabilities of a business venture.				
Small business grants: non-repayable funds or products disbursed by one party, often a government department, corporation or foundation. More info (Flanders) <a href="#">Subsidy database</a> .				
Loans: the act of giving money, property or other material goods to another party in exchange for future repayment of the principal amount along with interest or other finance charges finance.				
Battering: trading goods or services between two or more parties without the use of money.				
Customer funding: business arrangement between a vendor and its customer wherein the customer agrees to provide the vendor with some level of up-front funding in advance of delivery of the product or service.				
Leases: a form of credit whereby the lender or lessor buys business equipment, assets or durable consumer goods and makes it available to the borrower or lessee for a pre-agreed term and at a fixed fee.				

## Tool 5 - P's of any good pitch

- Problem - What is the real problem that you solve with your product/service?
- Promise - What do you promise to your customers?
- Proof - Why would I believe you?
- Profit - In which way will you make money?
- Passion - I'll do whatever it takes!

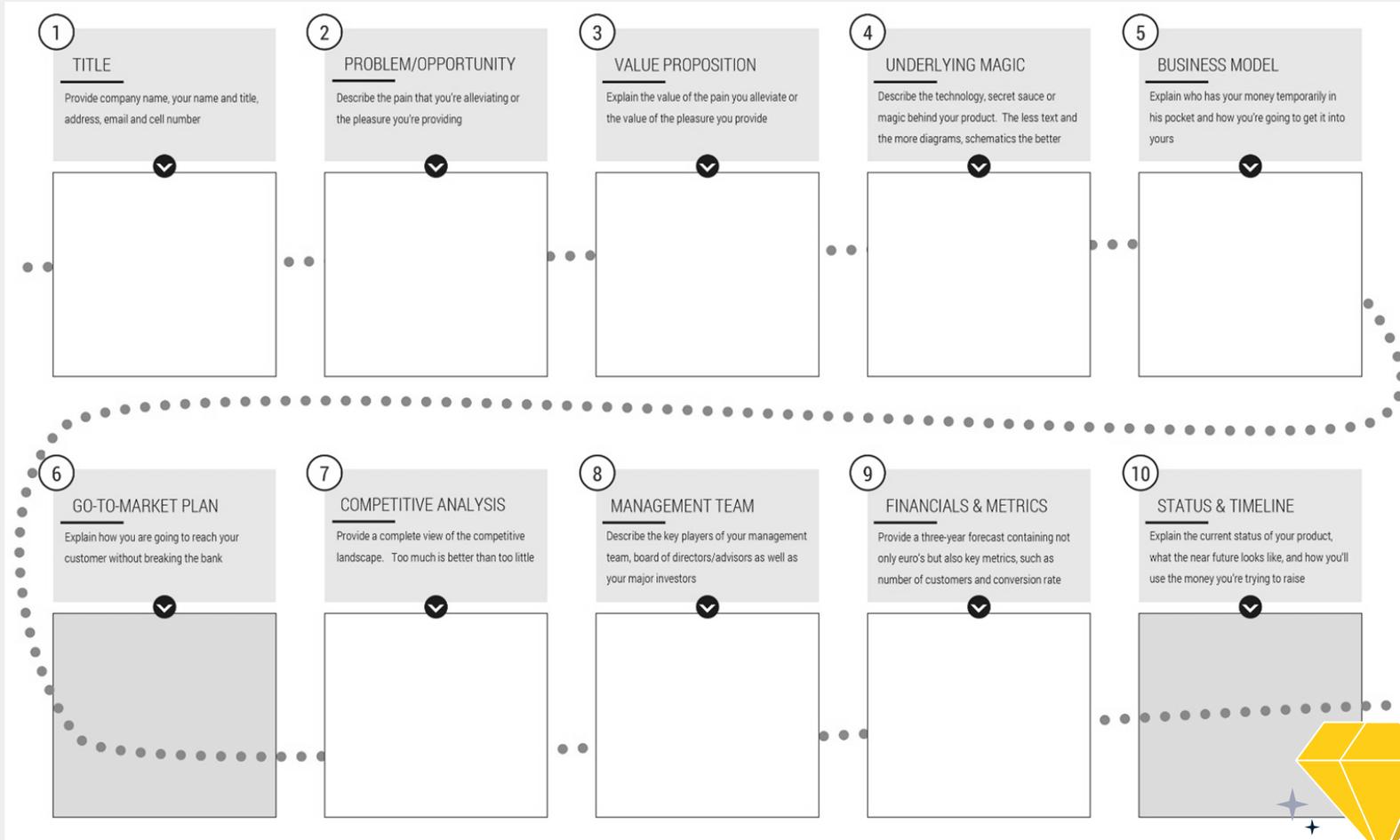
### TIP

Guy Kawasaki's 10/20/30 Rule for PowerPoint

- 10 slides
- 20 minutes to present the slides
- 30 point font or greater

# Tool - 10 Slide pitch

The purpose of a pitch is to stimulate interest, not to cover every aspect of your startup and bludgeon your audience.



© Verhaert 2019

## Tool - Become a VC

Venture capital competition enables you to step into the shoes of a VC and think like one. You will act as a VC investor search online for a start-up/funding presentations and assess these from a VC perspective.

Listening to pitches and assessing them from the VC point of view will help you better understand how investors compare and select their preferred projects. This, in turn, will help you better prepare and fine-tune your own pitch.

Making an impression to the investors with the first seconds of your appearance and pitch will be crucial and can mean everything for your future business success or failure.

### Tips to act like a real VC

- Make notes of things you like and things you don't like.
- Evaluate the following criteria.
  - Team
  - Market opportunities
  - Value propositions
  - Investment propositions
  - Risks
- Select a team in which you want to invest.



## STAGE 5 - PITCH

# Funding acquired!

When your presentation is finished and you're ready to give a pitch for venture capitalists, there are some 'rules' that you need to keep in mind.

- The objective of the pitch is to get a meeting.
- Slides support your storytelling: you are the start of your presentation, not your slides.
- You need to build an effective pitch, 80% needs to be about the problem, 20% needs to focus on the solution.
- Practice your pitch.
- Be ready to answer questions, but be careful and precise with numbers and facts.
- Show your enthusiasm, energy and passion to make sure the investors love what you love.
- Don't lose your sense of humor, even if there is something that goes wrong.

## FUNDING QUESTIONS

- What are the main risks for your business?
- How can the early traction be accelerated?
- What are the company's three-year projections?
- What is the cost of a customer acquisition?
- What relevant domain experience does the team have?



STAGE 5 - PITCH



# Homework list



Fill in your own goals for this sprint.

1

---

---

2

---

---

3

---

---

4

---

---

5

---

---

6

---

---

## STAGE 5, Mile 6

# PITCHING EVENT

Just do it



PITCH COACH

Lead questions to discuss with your mentor in this stage.

- How should I act out?
- What key messages will work?

# How to act during a funding pitch?

As a start-up, you need to raise interest and build confidence in your idea! This means that you have an convincing validated proposition as well as motivation to carry it out!

Firstly, it is a story that needs to have the right content packaged in a concise way. Secondly, it's a story that needs to be communicated as irresistible investment opportunity. Thirdly, it's a story of your team that will make it happen with passion and hard work!

## GOALS

To perform a good funding pitch

## TASKS

Evaluate and improve your own skills

## TOOLS

Pitching frameworks



### TASK 1

Building your story and pitch deck!

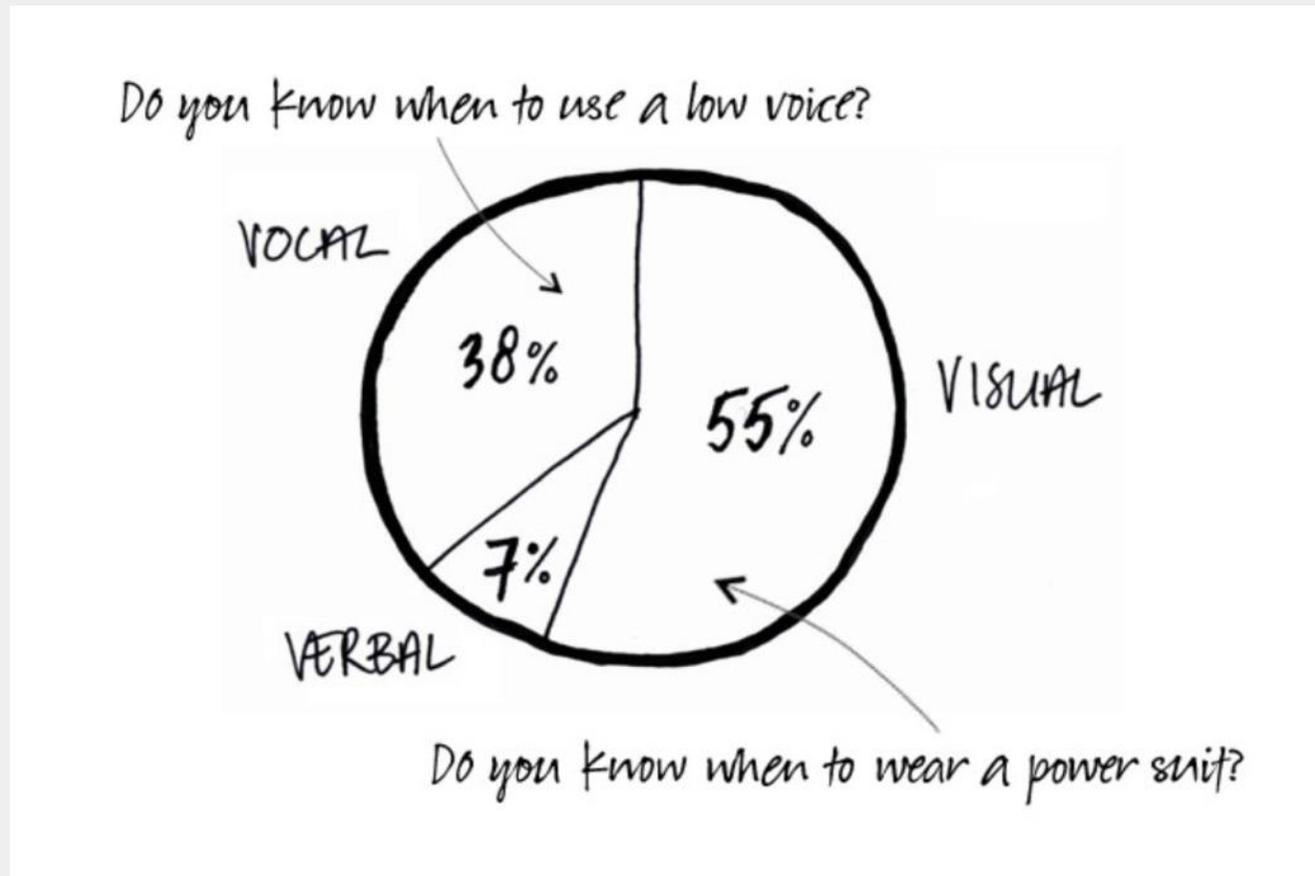


### TASK 2

Practice the story telling

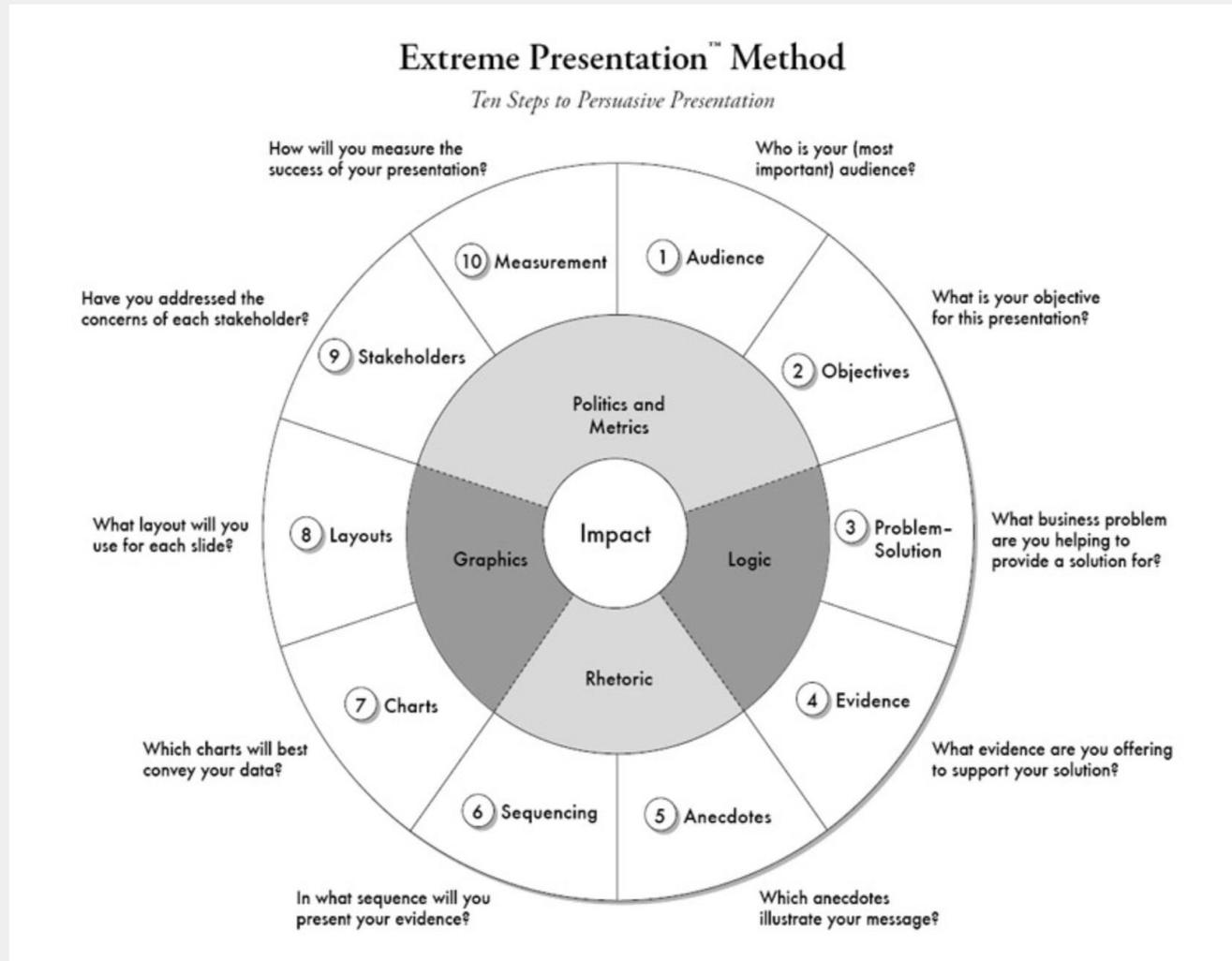
- Organise a few dry-runs
- Ask others to listen and give you feedback
- Iterate as many times as needed

## Tool Mehrabian's tool



Source: Albert Mehrabian, PhD

# Tool Pitch guidelines

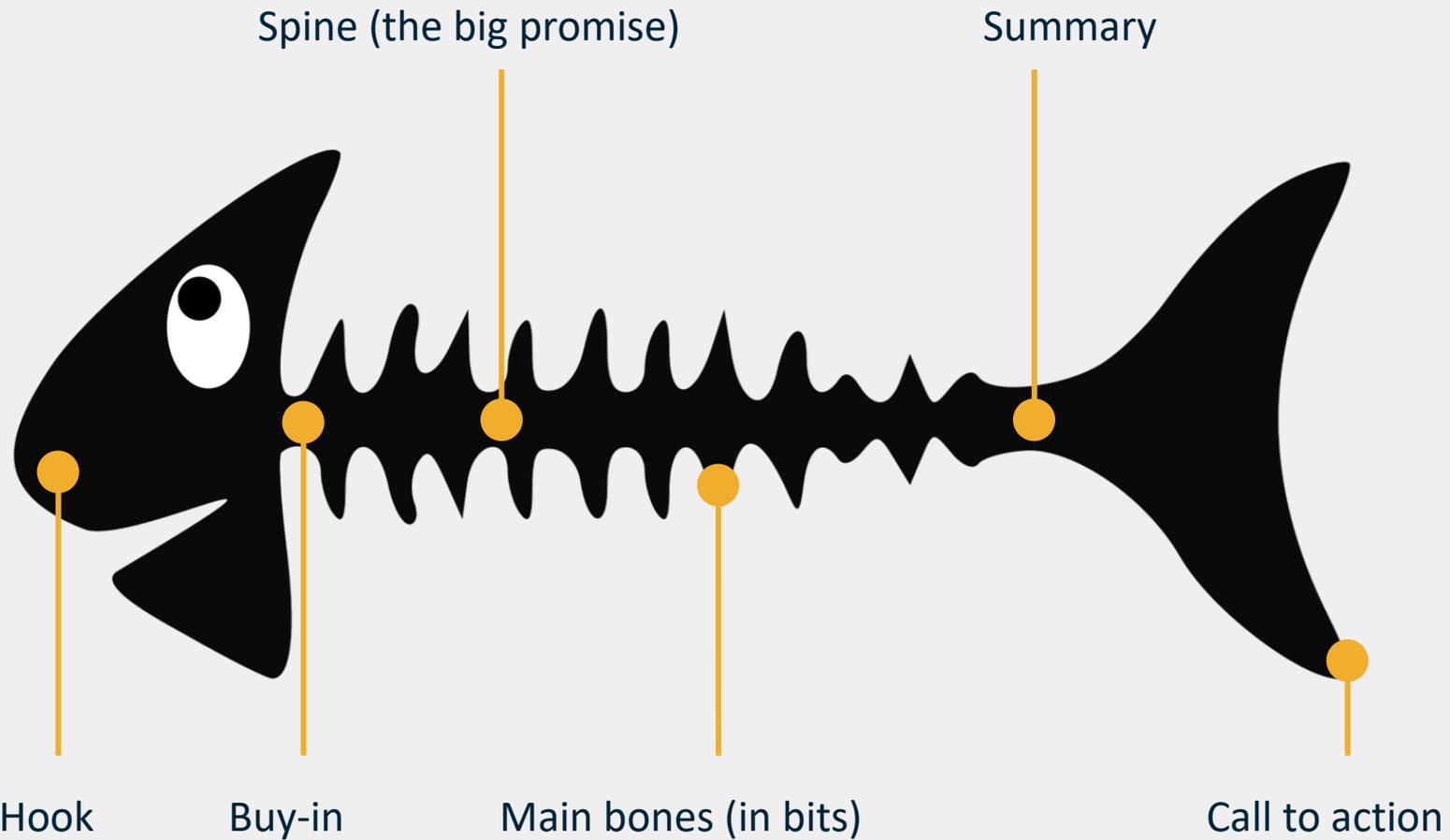


Adopted from: Extreme presentations, Dr. Abela, available at <https://extremepresentation.com/> ©2019



STAGE 5 - PITCH

## Tool Structure of the story



## Tool Speaker: body language

- Smile
- Avoid tics
- Move around
- Keep eye contact
- Keep frontal contact
- Use your arms/hands
- Have an open attitude



# Tool Cast-method

## CONTENT

Why? What? Who? What if?

## TELLING

Who designed your story ? Who will validate it?

## AUDIENCE

Who is your audience? And which lean- and decision styles do they have?

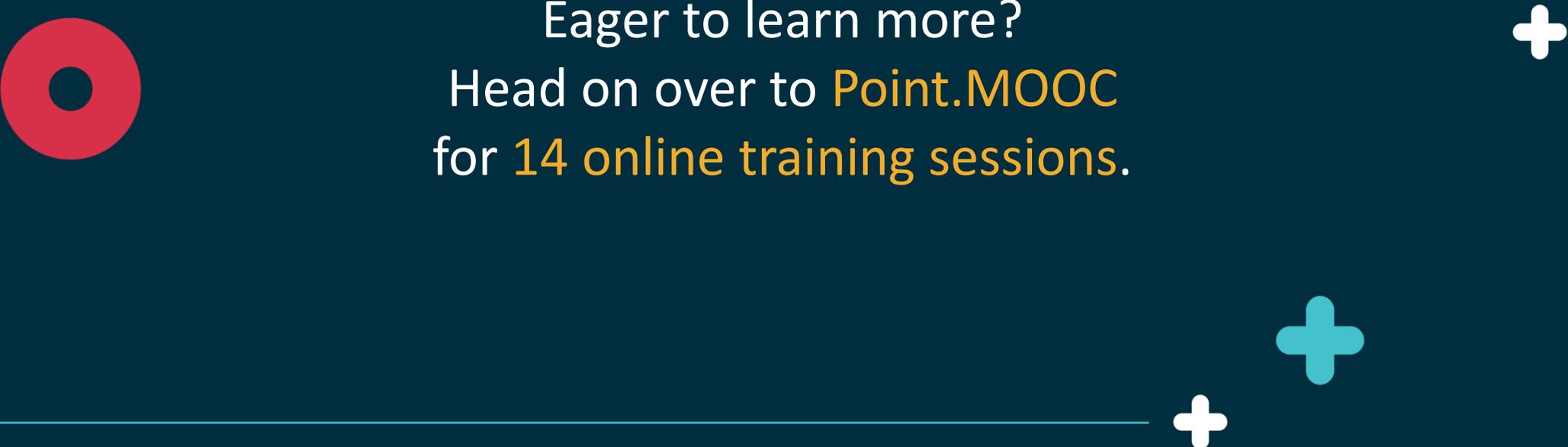
## STORY

What is the structure of your story? What are the characters of your story? What's the sense of urgency? Do you have a presentation plan?

Adopted from: Miro, Visual story map, available at <https://miro.com/templates/visual-story-map/>



**Congratulations!**  
You've reached the end of the  
Entrepreneur's Playbook!



Eager to learn more?  
Head on over to [Point.MOOC](#)  
for **14 online training sessions.**



## Point.MOOC

Attend **14 on-demand training sessions** that will steer the technical and business development of your Galileo-enabled IoT product.



In the first part of our Point.MOOC, you'll learn all about the basics of creating an IoT business by journeying through the customer problem, product concept design, business model creation and launching your product.



Not sure where to start with Galileo integration? The second part of Point.MOOC examines positioning in our connected world, and dives deep into Global Navigation Satellite Systems and the European system, Galileo.



More info? Visit [point-iot.thinkific.com/courses/point-iot](https://point-iot.thinkific.com/courses/point-iot)



# Point IoT

POSITION •  
CONNECT •  
DEVELOP •

[www.point-iot.eu](http://www.point-iot.eu)

```
10 0 100  
1010 10 0  
11 0 100  
1010 000
```



This project has received funding from the European GNSS Agency under the European Union's Horizon 2020 research and innovation programme under grant agreement No 870283.