

Z

hdk

Zürcher Hochschule der Künste
Zürcher Fachhochschule

 oyster lab
by ALPIQ

Introduction Workshop for ZHDK Digital Home

2 May 2018





Smart Homes - ZHDK Kick Off

- Introduction to Oyster Lab
- Project Juicar
- A bit of research into 'Smart Home'
- 4 challenges | constraints and considerations

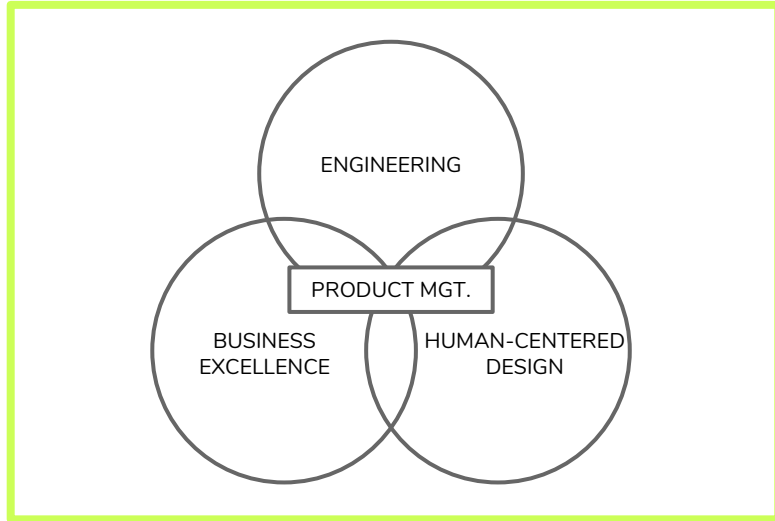
Introduction to Oyster Lab – Why, how and what
(15 min)

Oyster Lab is a **cleantech** incubator.

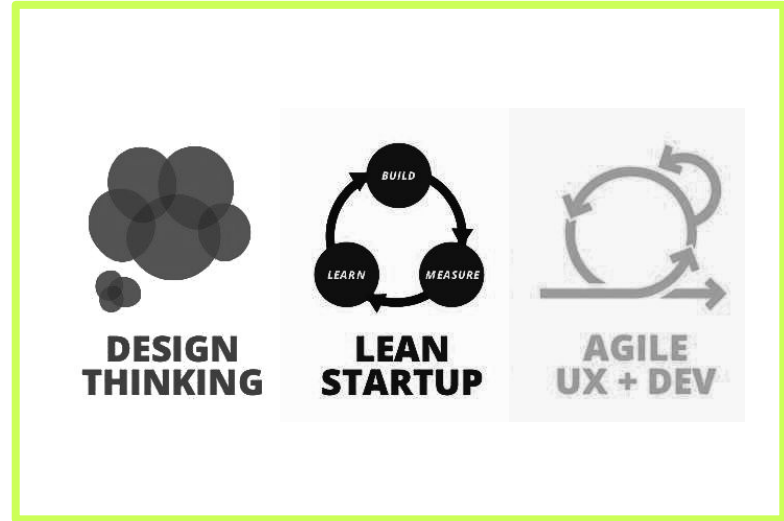
We identify and pursue **consumer business** opportunities for Alpiq.

With our solutions, we hope to **make the world a greener place.**

Our superpowers to turn ideas into scaling business models.

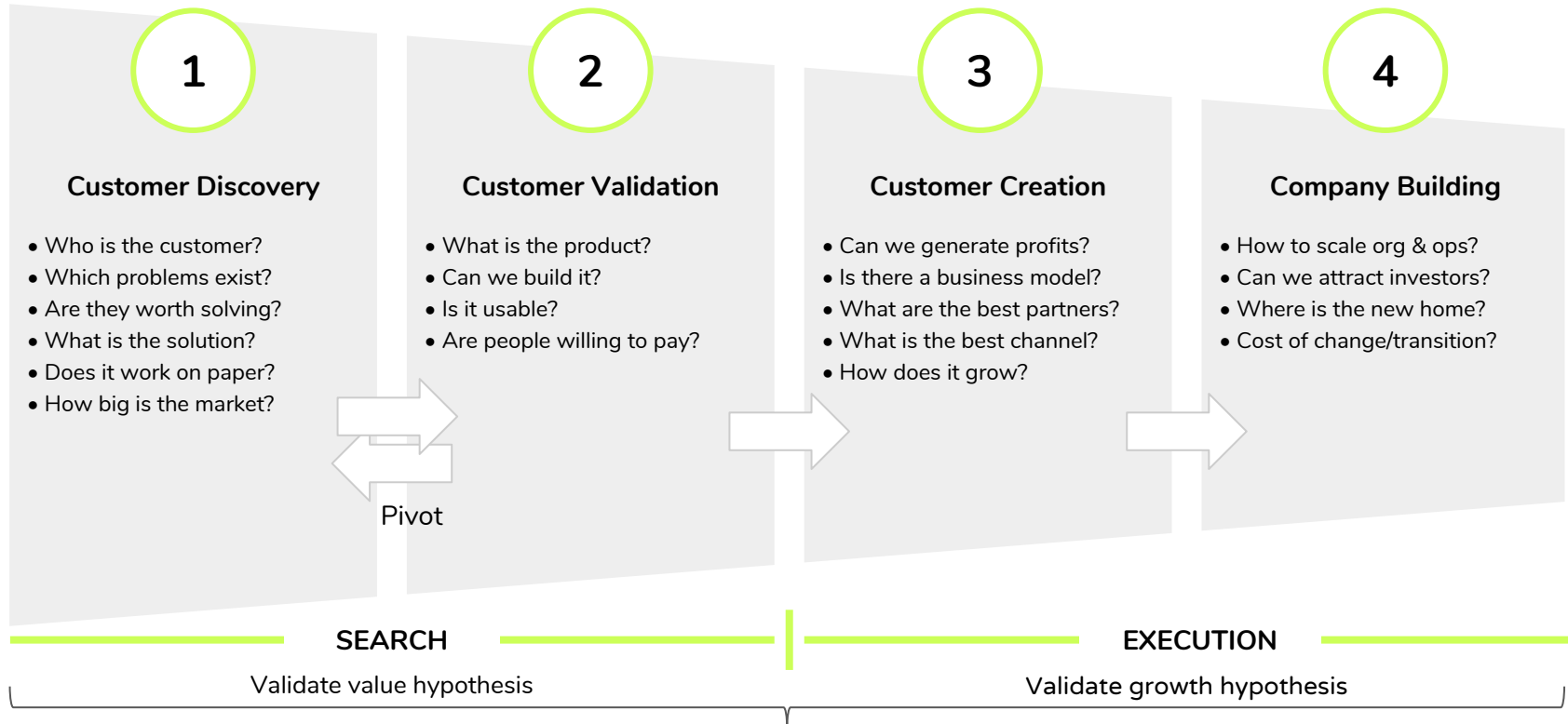


- Interdisciplinary team of 15 people
- Good mix of energy and e-commerce experts
- Customer-centric, entrepreneurial mindset

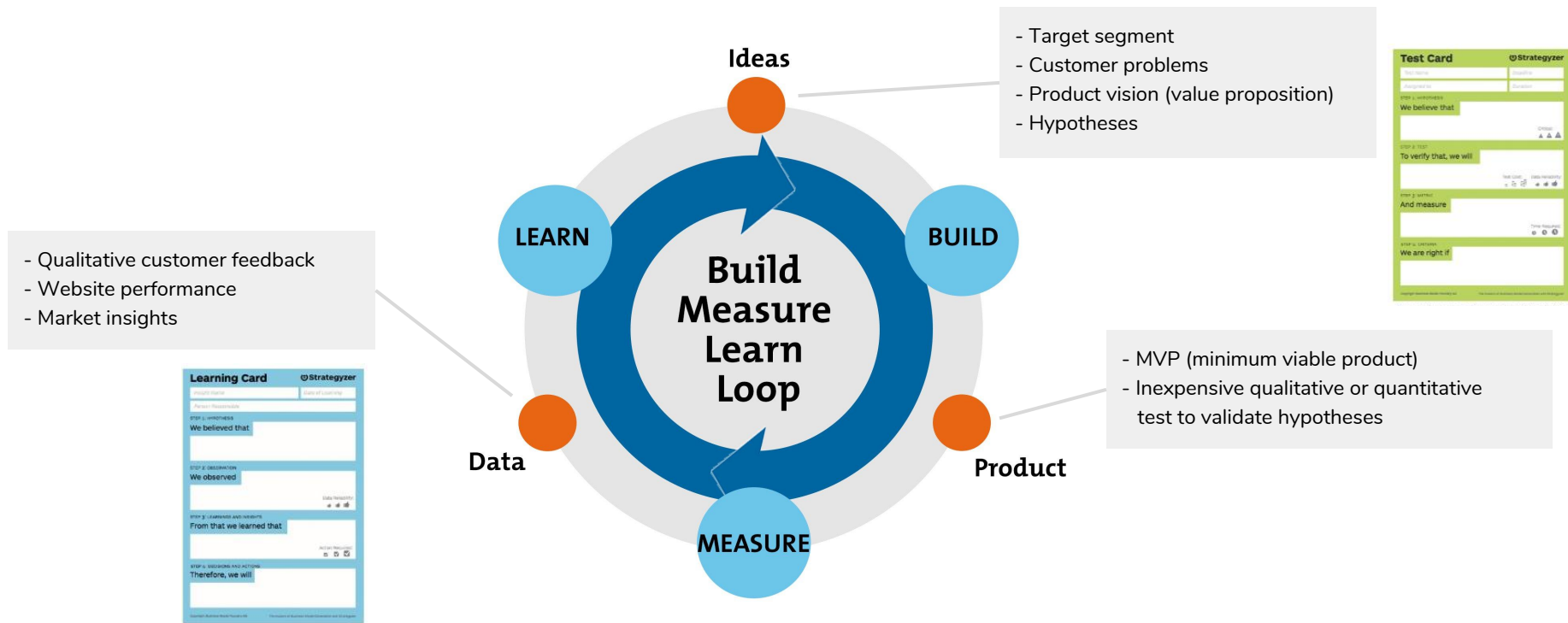


- Lean processes and tools
- Qualitative and quantitative research
- Fastest, inexpensive way to validate hypotheses

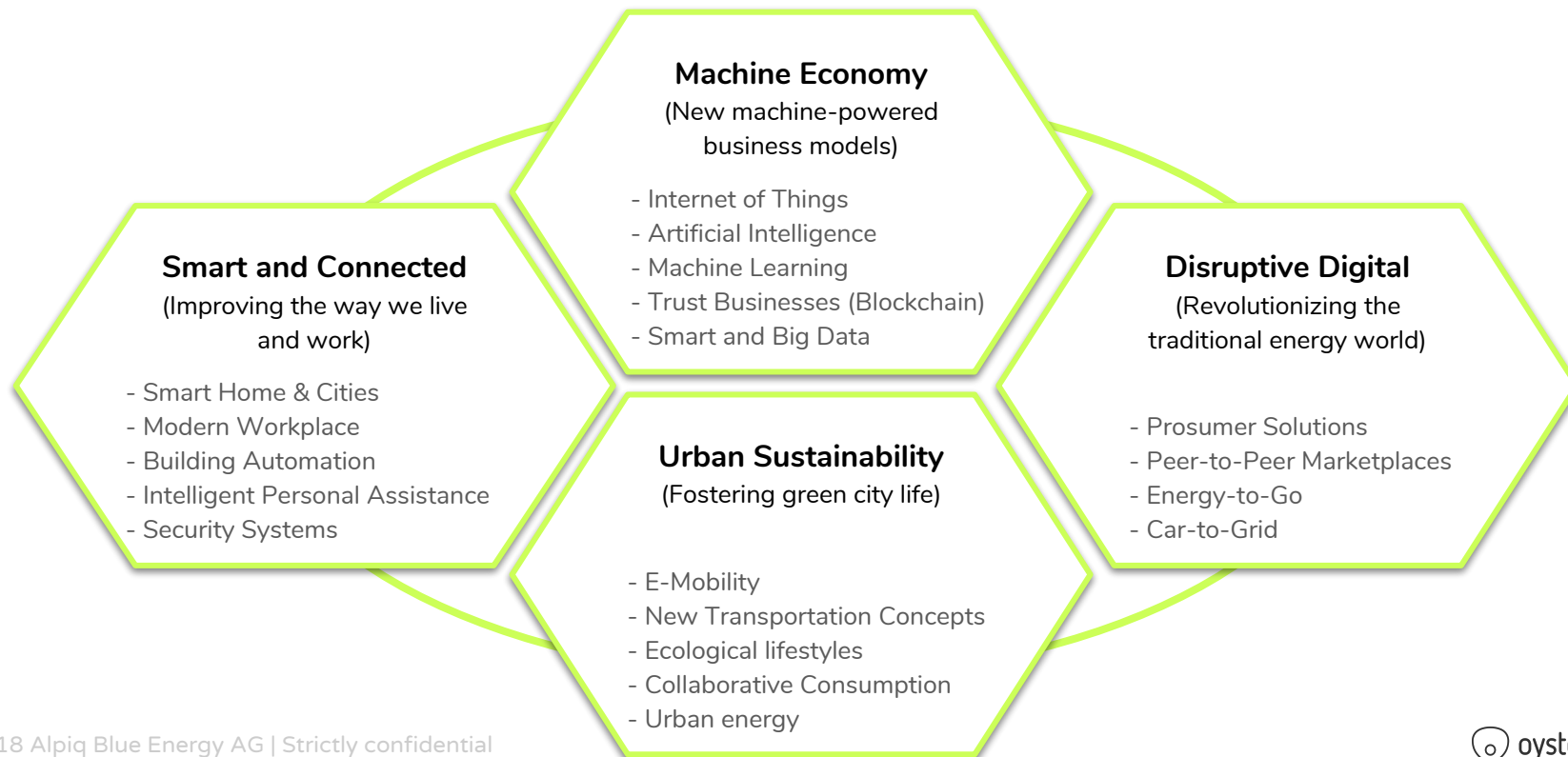
Our value stream: the customer development process.



Validated learning with the Build-Measure-Learn feedback loop.



Where new ideas come from: our fields of innovation.



Project Juicar - An example of lean customer development
(15 min)



Our mission: Gain access to the digital house with a digital solution.

How it all began: Why do people “hire” photovoltaic?

1



- Self-consumption vs. injection of electricity
- Ways to increase self-consumption?
- Ways to bundle PV/energy with other services?
- How to sell PV in an **emotional** way?
- It's all about money!



2

- Are EVs really suitable for everyday use?
- How to increase the demand in electric mobility?
- How to make e-mobility more cost-efficient?
- Bundling options (e.g. EV and energy tariff, EV and PV, EV and battery)?
- What are alternatives to buying an EV (=expensive)?

EV = “Gateway drug” for PV

3



Millennial families / house owners
in rural areas of **Germany**:

Investing in house, building technology.
Digital natives and high Internet affinity.
Mobility need (school, medical
appointments, commuting to work). Social
and sustainability aspects are important.

We decided to focus on the “informed young family”

2 - MARK - the informed family man

A profile describing a segment of a product's target user base.



“
We're a green family and need a second car to do school runs, with IKEA runs and the occasional trips into the nearby countryside”
”

Age: 43
Occupation: **Lead Development Engineer**
Income range: **€90k**
Family: **2 kids, married**
Home Location: **suburbs of Stuttgart**
Work Location: **Stuttgart**
Mindset: **EV enthusiast, Early adopter**
Hobby: **Discovering local natural treasures with his family, making his house more efficient and automated.**

PERSONALITY

Caring	Open	Informed
Loyal	Efficient	

GOALS

- To provide for his family and build a secure **financial future**
- Bring up his kids to be **environmentally conscience**
- Maintain a healthy work-life balance
- Be as **energy efficient as possible**

NEEDS

- Wants to be on top of the **latest gadgets and products for his smart home**
- To be mobile when needed as they have busy schedules with the kids getting older.
- To feel **like he's part of the 'future'** especially for his kids' sakes
- He likes to **research topics around renewable energy, including EV's as he wants one**
- Some alone time in his garage tinkering with his personal projects

TYPICAL DAY

He gets up and helps make breakfast for his kids. His wife takes the kids to school while he drives to work. At work he immerses himself until at 4:30pm he picks the kids up from day care and drives home. His ideal evening is spending time with his family and once they are off to bed, testing out the new surround system on a movie with his wife.

MOTIVATIONS

Price



Comfort



Convenience



Speed



Flexibility



TECH / EV KNOWLEDGE

He works for a **renewable energy company and is generally interested in the latest technological advances within the renewable energy sector.** His personal interests also include SmartHomes and any gadgets that assist him making the house efficient. Mark's interested in analysing his house's energy data and simplifying his life through technology.



EVs are quite expensive



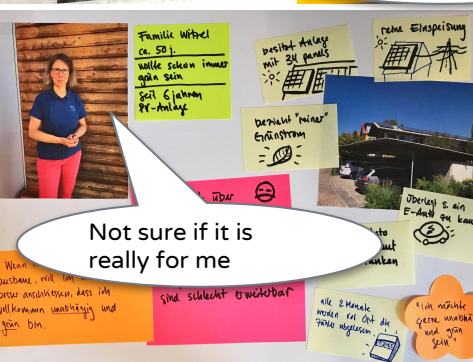
Our challenge: Remove entry barriers to electric mobility for millennial motorists in rural and suburban areas of Germany.



Nobody wants to sell us an EV

Range is too short

What is the remaining value after 3-4 years?



Not sure if it is really for me



Charging in public is a pain

Kilowhat...?



Our solution concept:

Juicar.com - a subscription-based complete package with electric car and electricity.

→ Easy in, easy out. Our solution enables our target audience to test if electric cars are for them.



Electric Vehicle

Full-service subscription (rental)



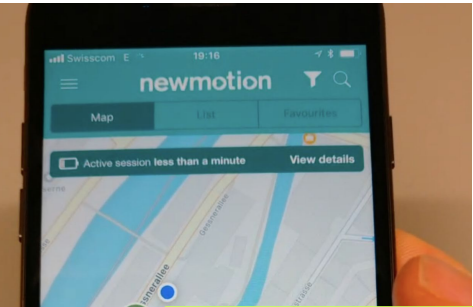
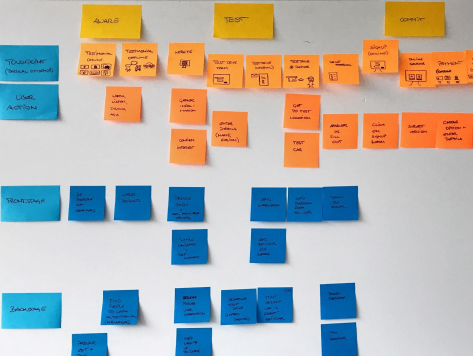
Public Charging App

Maximized usability and flow

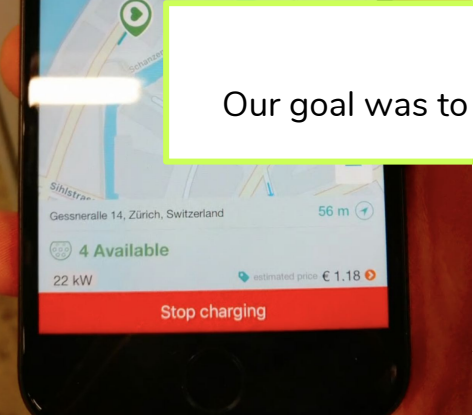


Home Charger

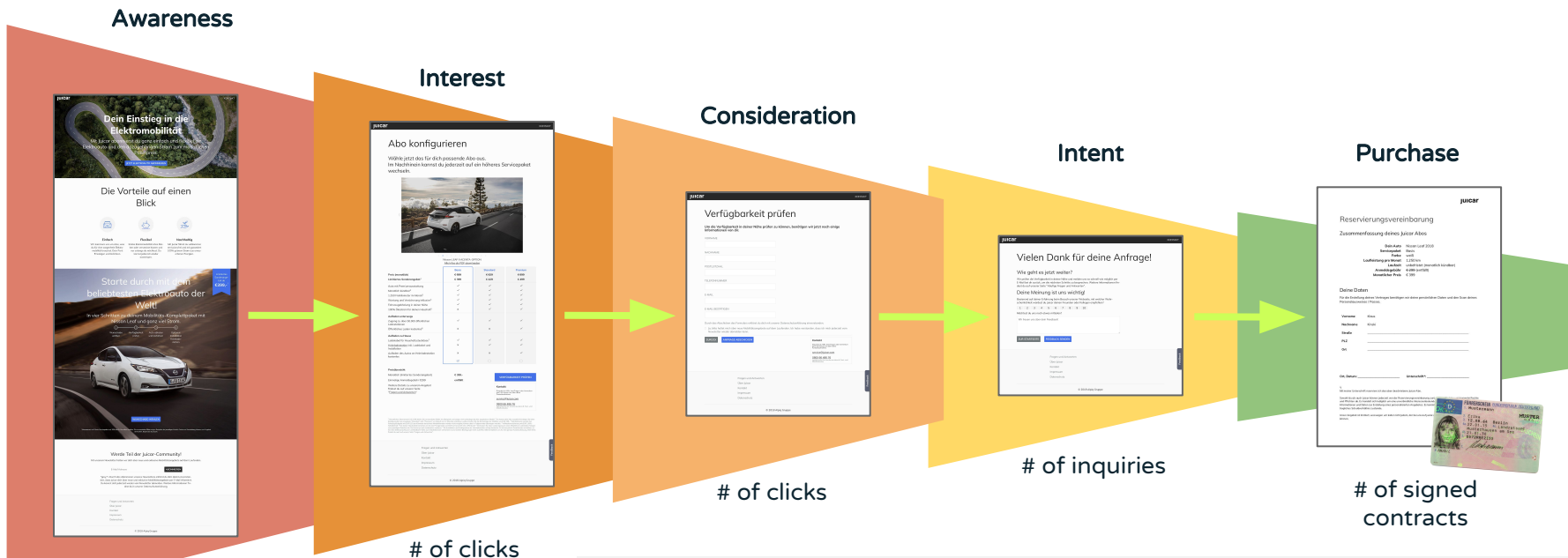
Installation and electricity included



First “MVP” to test problem-solution fit:
Our goal was to put a working prototype of our service in front of the customer as quickly as possible.



We developed an MVP to test product-market fit quantitatively.



We built a simple website to test different price points and validate these hypotheses in Germany:

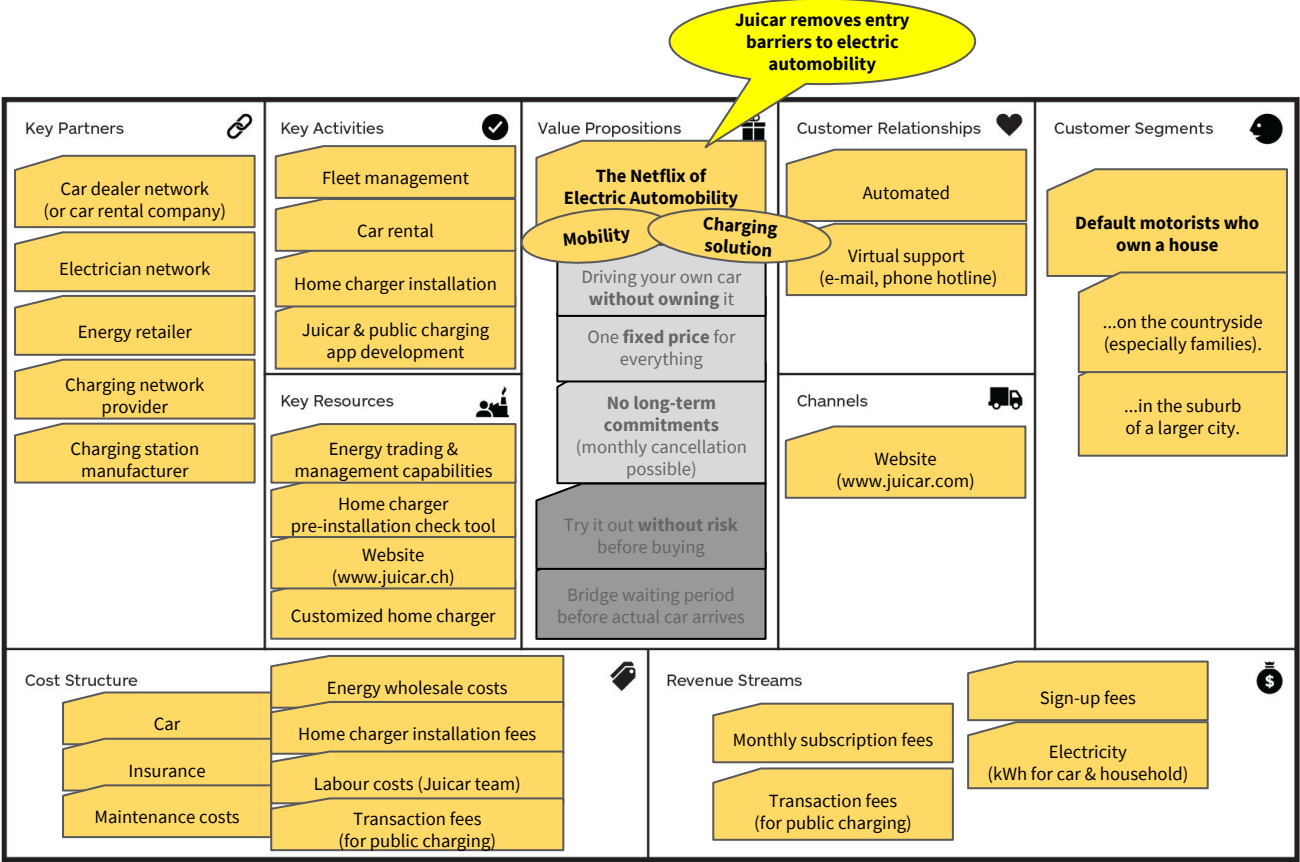
- Our target users **want to rent an electric car on a monthly basis.**
- Our target users are **willing to pay for both the car and our home charging solution.**

We discovered the ideal bundling & pricing strategy through A/B testing.

	Electric Vehicle	Public Charging App	Home Charger
	<ul style="list-style-type: none"> - Incl. insurance & maintenance - Premium configuration - Cancel anytime - Minimum duration: 1 month 	<ul style="list-style-type: none"> - Find public charging stations - 50,000 stations across Europe - Easy payment with token or app 	<ul style="list-style-type: none"> - Rental device (incl. basic setup) - Smart home integration - Charging speed up to 22 kW - Green energy tariff for household - Enables Alpiq to gain home access and upsell additional digital services
Drive - Basic	✓	✓ (pay as you go)	✓
Drive - Standard	✓	✓ (pay as you go)	✓ (pay as you go)
Drive - Premium	✓	✓ (flat rate)	✓ (flat rate)
Charge - Basic		✓ (pay as you go)	✓ (pay as you go)
Charge - Premium		✓ (flat rate)	✓ (flat rate)

EUR 399 / month
+ EUR 29 / month
+ EUR 99 / month

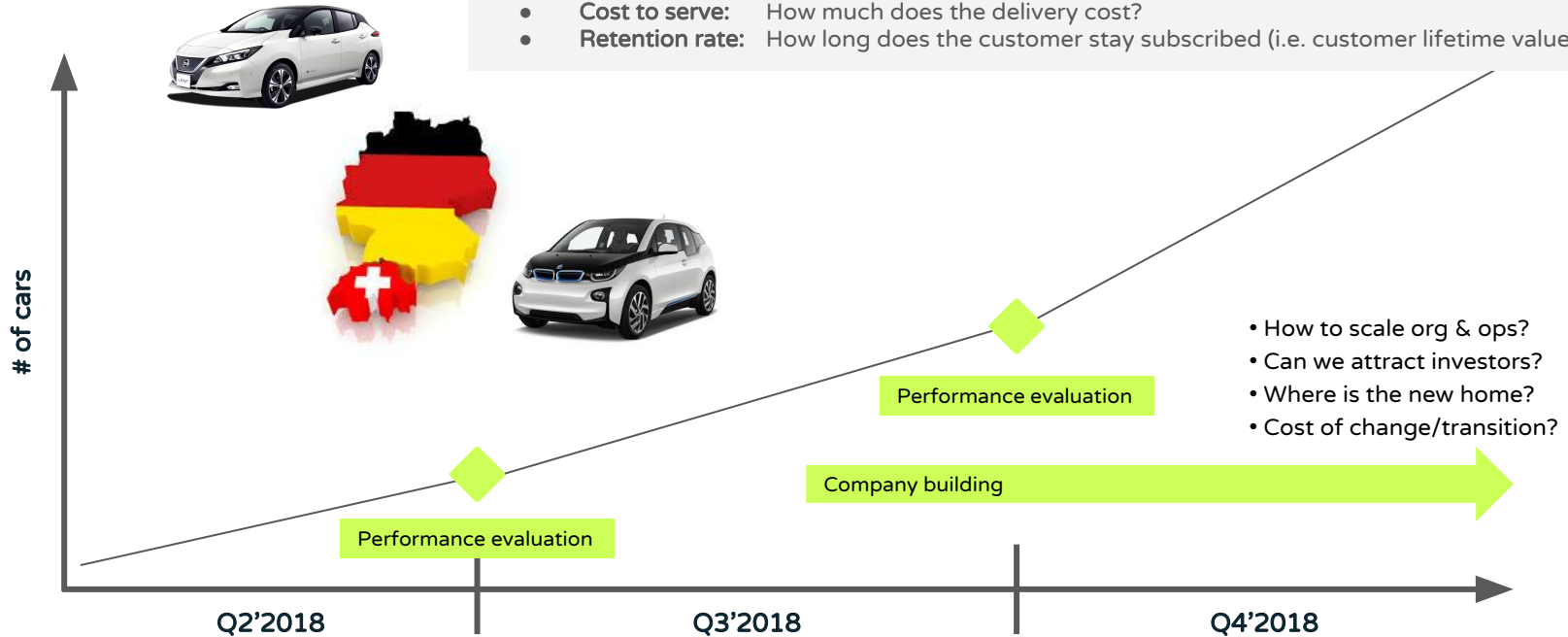
We do have a business model - but what are the numbers?



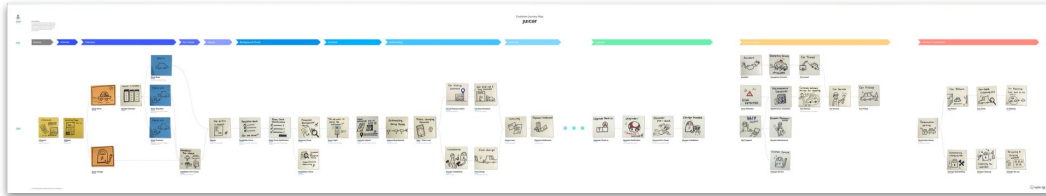
We now deliver the product to customers in DE and CH.

Pilot our product to collect relevant/significant data for calculating a business case:

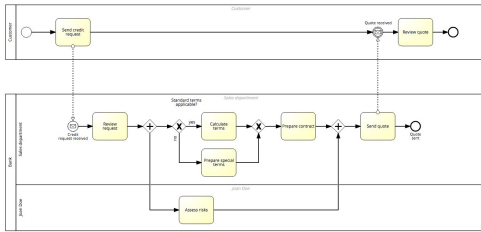
- **Cost to capture:** How much do we need to spend to acquire one paying customer?
- **Cost to serve:** How much does the delivery cost?
- **Retention rate:** How long does the customer stay subscribed (i.e. customer lifetime value)?



Becoming operational to deliver a great end-to-end customer experience.



Customer journey & service blueprints



Process maps



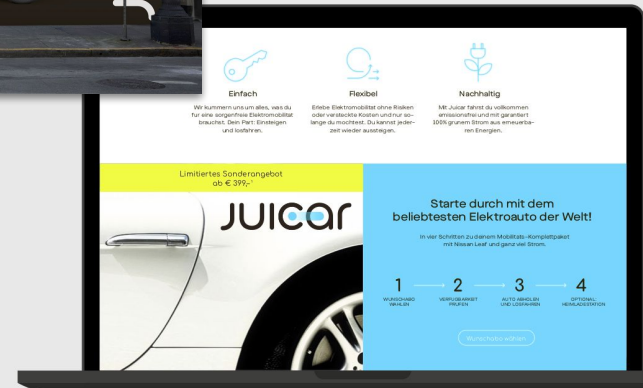
Legal documents and contracts



New brand design

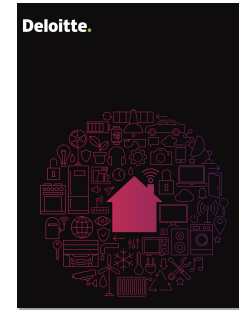


Bei Juicar eCars abonnieren. Einfach. Flexibel. Nachhaltig.



A bit of research into 'Smart Homes'

White Papers are available in your blog



... Service opportunities we want you to focus on

1 Energy Consumption

Water supply control, smart metres, electricity + heating usage etc.

2 Money Saving

Energy optimisation, process efficiency, financial overviews etc.

3 Home Security

Observation, control, connectivity to emergency contacts, chip implants etc.

4 Lifestyle Optimisation

Home comfort, monitoring of health, food consumption, entertainment etc.

5 Social Connectivity

Interaction within objects, family, members, friends etc.

6 Data Analysis

Insights to how things are used, why and within what environment

7 Remote Learning

Inclusion and connection of people at home with schools / universities

8 Assisted Living

More independency for the elderly or disabled + connectivity for Care Givers

Risks and challenges within Digital Homes

1 **Data Security**

Open to hackers, data ownership and access

2 **Technological Stability**

Dependency on network connection and electricity supply

3 **Devices not versatile enough**

Connected devices currently cannot cope with level of complexity in people's lives

4 **Multiple Users**

Connected devices are not designed to be used across households and multiple inhabitants

5 **Needs driving design**

Devices bought for more broader, reasons rather than just technical availability (e.g. elderly care) rather than just making household tasks simpler

6 **Communicating cost benefit**

Smart devices can save money, but initial investment of devices scare low earners off.

7 **Portability**

Currently not easy to transfer devices and systems from one smart home to another.

8 **Designing the Experience**

Transitioning from creating new products to designing integrated systems.

4 Challenges

Challenge 1 - Communication Services for millennial patchwork families

1 “Designing the experience of a communication service for millennial patchwork families in a world where personal goals and family responsibilities need to be juggled.”



Photos by [Dan Gold Gift Habeshaw](#) [Daniel Cheung](#) [John-Mark Smith](#) on [Unsplash](#)

Challenge 2 - Improving the home living experience for the 60+

2 “Improving the **everyday living experience at home (health / convenience) for elderly (60+)** in a world where people are getting older, living in isolation and costs of homecare is increasing.”



Photo by [Lukas Budimaier](#) [Sam Wheeler](#)
[Gemma Evans](#) on [Unsplash](#)

Challenge 3 - Designing a pet care experience for absentee animal lovers

3

“Designing a **pet care experience** for working or travelling **animal lovers** in a world **where animals are treated like family members**”



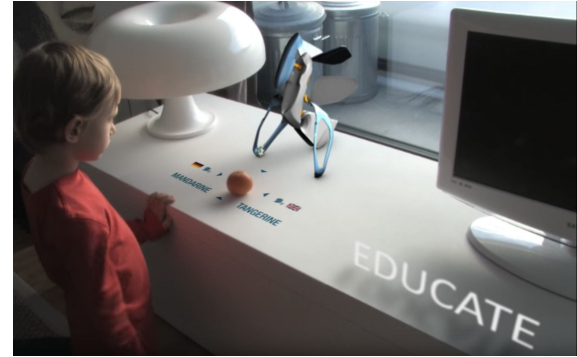
Photos by [Ember + Ivory](#) on [Unsplash](#) + [Carolyn Coles](#) via [Compfight](#) cc + [Sumatra Aquariums](#)



Challenge 4 - Designing a child care experience for absentee parents

4

“Designing a **child care experience** for **vigilant parents** in a world with demanding timetables and safety concerns”

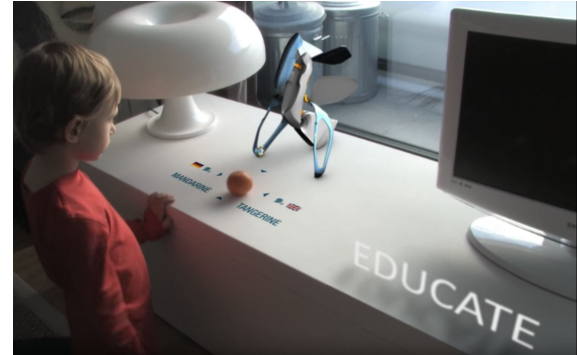


Photos [Kita Randarath](#)

Challenge 4 - Designing a child care experience for absentee parents

4

“Designing a **child care experience** for **vigilant parents** in a world with **secure digital service / digital access**”



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Consider these when designing your experiences



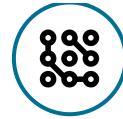
Green service



A service that can be enriched and combined with other services



Captures a huge market



Service with a strong digital focus



Lies within Alpiq's core capabilities

Have fun!