



APPROACH

ADVANCED PHOTONIC PROCESSES FOR NOVEL SOLAR ENERGY HARVESTING TECHNOLOGIES

Tech Transfer / Idea Valorization
Dr. Jiri Navratil



Context



Jiří Navrátil, Ph.D.



Education

- PhD Czech Academy of Science – Biophysics, New drug development
- PhD Brno University of Technology – Physical Chemistry, smart responsible materials



Technology Transfer Experiences

- Imperial Innovations – Technology Scout, London
- Cambridge Enterprise – Cambridge, UK. IP Valuation and bus dev



Business

- CEO & Owner – TechMovin s.r.o. – Technology Communication Agency
- Senior Innovation Consultant – Direct People – Design Thinking
- CEO – Entrant s.r.o. – Spinout
- Partner & Head of Venture Unicio.AI - Tech Innovation Company
- IP Lab ventures – Venture fund for innovations

Experiences

01

100+ Company innovations

100+ innovations: by harnessing the power of cutting-edge research, We have developed over 100 tech innovations: new [Barnie](#) tap for Pilsen Urquell, an upgrade of the [ROUVY](#) cycling app into virtual reality, or an AI-powered software for [Carvago](#)'s digitalized car marketplace (ongoing project)

02

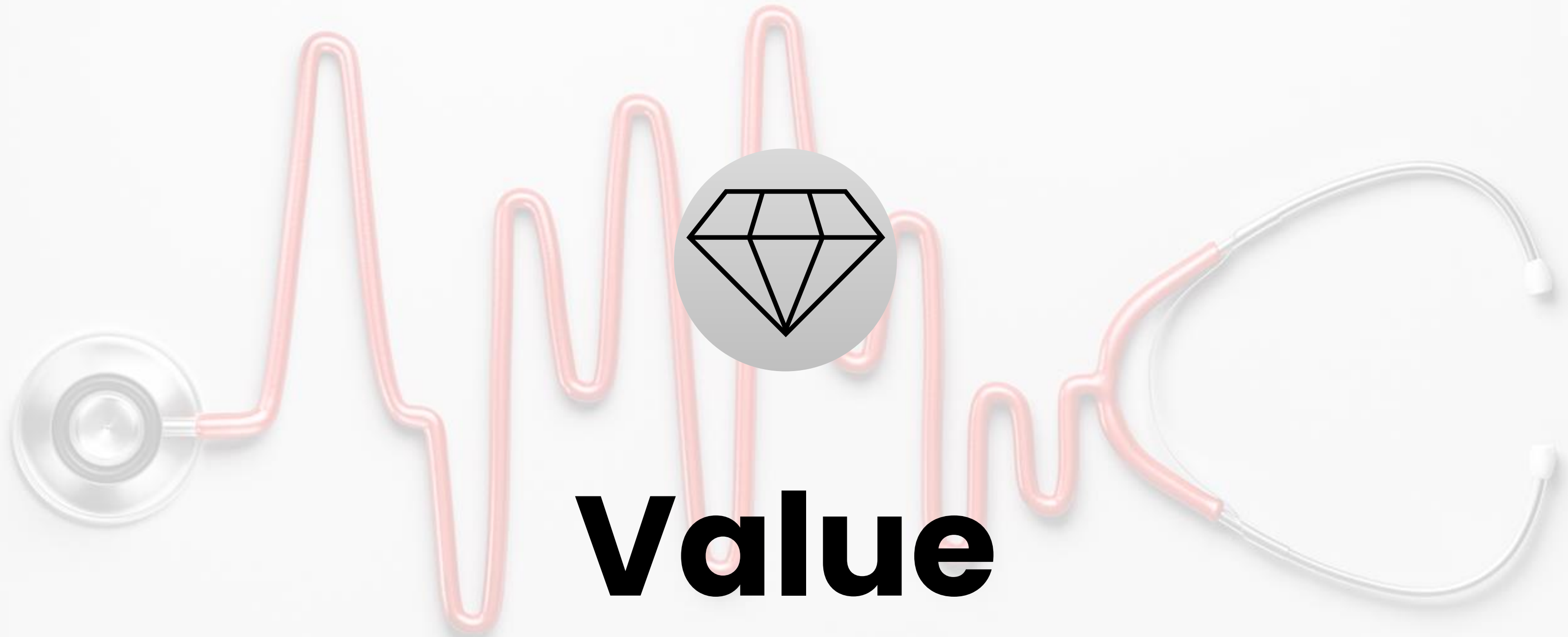
7 scientific spin-outs / 3 exits

We have built scientific spin-outs like the ESA-incubated [Entrant](#) developing a non-invasive stress measurement method or the AI-powered biotech company [Allffinity](#)

03

5 continents

Through [UNDP](#), World Bank and [Visegrad Fund](#) projects, We share its unique expertise in deep tech innovation in Europe and beyond



Value

Value

How to create (Design Thinking)

How to measure (Valuation, Radar)

How to protect (IP)



Value



What are your expectations?

„examples of healthcare startups, successful in Europe or in Czechia. What is the way from idea to business.“

„How to address investors and how to choose one – the correct one.“

„ examples of successful startups and what are the main barriers in healthcare from the point of view of the industry's conservatism.“

Subjects

Good to Know



Idea Evaluation

Critical Evaluation of the Idea. Technology Radar.



Human Centred Design

Crucial Question – What is it good for? How to design and test business potential. Types of Due Diligence.



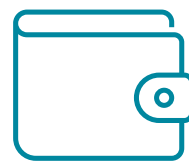
Idea Protection and the Cost

What is the price of my Idea? Where was my idea created?
How can I protect it?



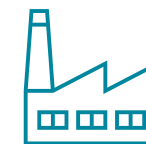
Market Research

Detailed Market Research. Is there already something similar?
(Ladislav Chodák billionaire: „after a while in business, we found out there is something with the same Gobs to be done“)



Investment

Where to find money? The size of equity for investors? What investors need to hear? Elevator Pitch. Profit and Lost.



Company

Different types of enterprises. VAT. Turnover. Profit and Loss.

HCD

Human Centered Design – jak se tvoří hodnota.



Create Value

The set of value proposition **benefits** that you **design** to attract customers.

DEF-I-NI-TION

VALUE PROPOSITION

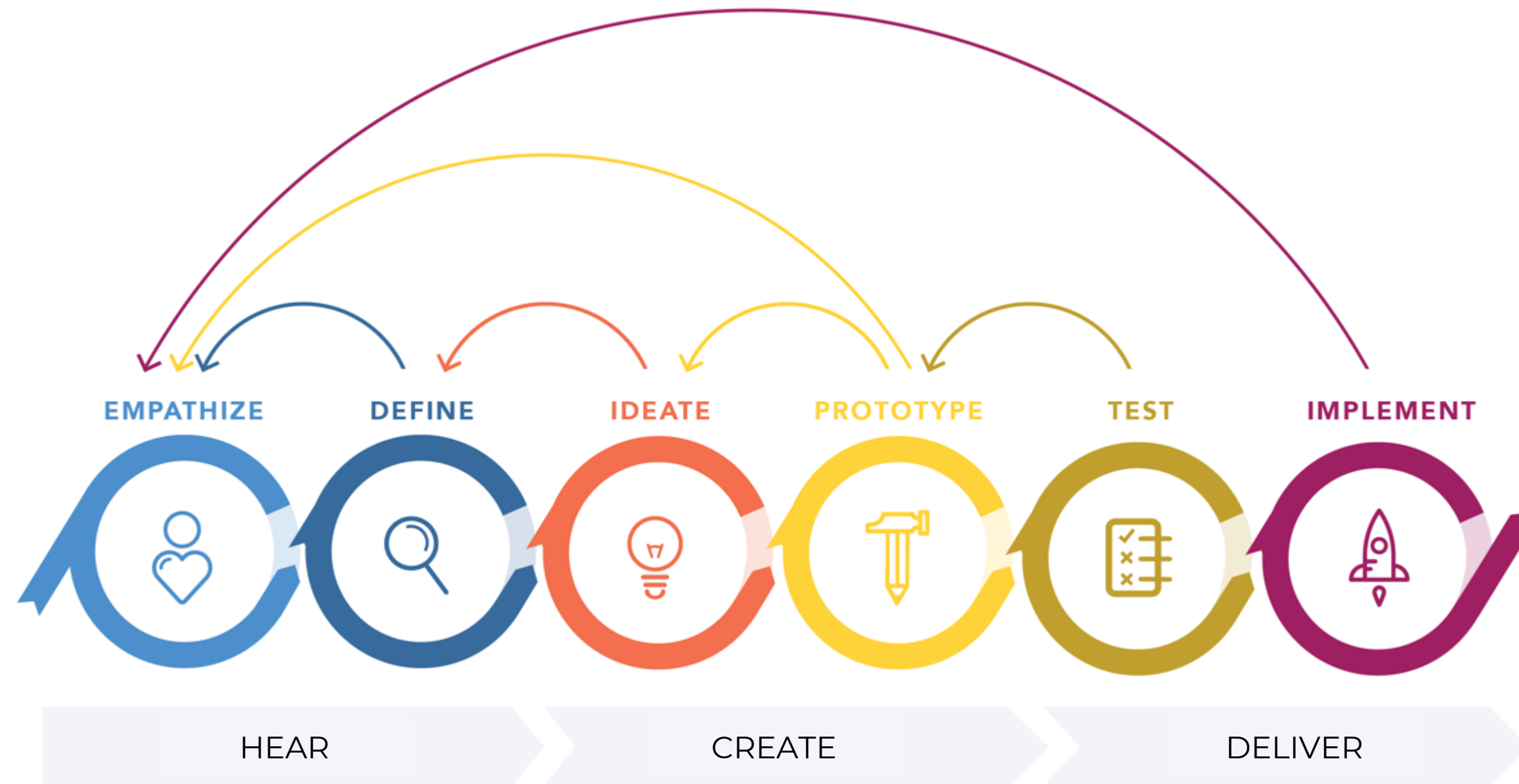
Describes the benefits customers can expect from your products and services.

Observe Customers

The set of customer **characteristics** that you **assume, observe, and verify** in the market.

 **Product** we
got, only missing
is **marketing**

Design Thinking & HCD



How to create products and services customers want.
Get started with...

Value Proposition Design

strategyzer.com/vpd

Written by
Alex Osterwalder
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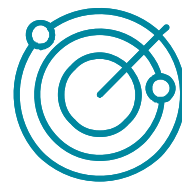


Never build a product without knowing the problem it solves or the value it will bring to someone by relying on marketing.



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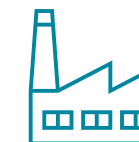
Human Centred Design

Crucial Question – What is it good for? How to design and test business potential. Types of Due Diligence.



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Who good is my Idea



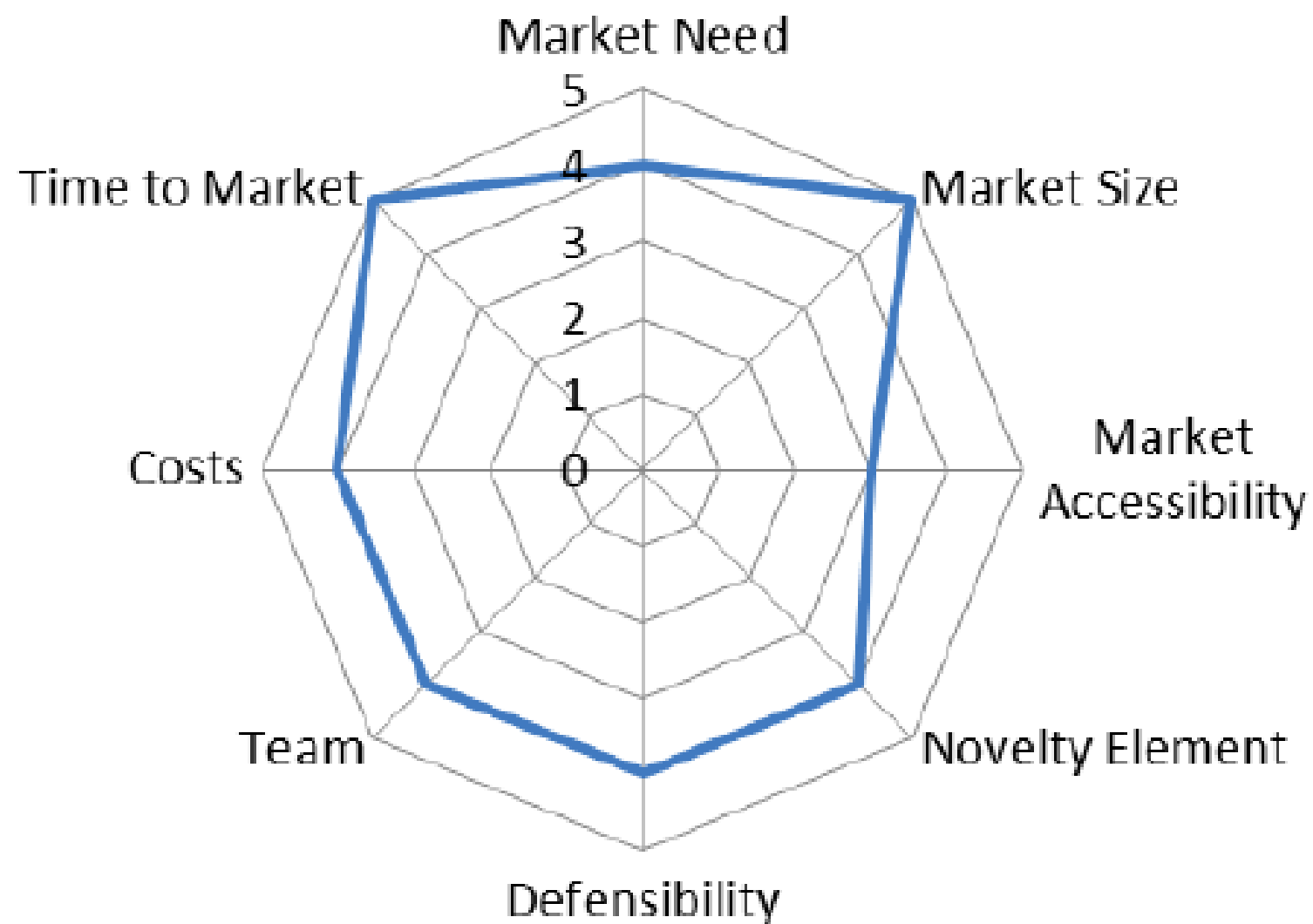
Basic Questions– how to find answers

- If we create the product/process/service from the Idea **is there a buyer?**
- How much the buyer want to pay?
- How big is the accessible market?
- How difficult is to address this market? How much will it cost?
- What are the other consequences?
- Shouldn't we do something else with our time and money?

Technology Evaluation



Technology Evaluation Cambridge Enterprise - technology evaluation radar



| | Score 5 | Score 4 | Score 3 | Score 2 | Score 1 |
|--------------------------|--|---|--|---|---|
| Market need | A clear, convincing market need has been identified and evidenced, for example through statements from prospective customers or users | The market need is very plausible, based on credible market research and/or generally accepted public sources of information | The market need is plausible but there is little evidence or the evidence is not quite convincing | The market need may exist but no evidence is available | There is no market need |
| Market size and dynamics | There is a very large (in financial terms) worldwide market, possibly still growing as well | There is a substantial market across significant parts of the world, OR the market is not particularly large but growing rapidly and likely to become large | The market is modest in size and probably restricted to one or a few countries | The market is small and not likely to grow very fast in the short term | The market is very small |
| Market accessibility | The market is very easy for newcomers to enter, with no significant practical, financial or regulatory barriers and little or no competition, and there is a clear and credible business model | There are some barriers to market entry but they can realistically be overcome without requiring large resources. The business model is appropriate to overcome these barriers. | There are significant barriers to entry that will require a lot of effort and resources to overcome, OR the business model is not fully appropriate or has weaknesses that may hinder market entry | The market is difficult to enter, because of high costs, regulations and/or strong competition, OR the business model has significant flaws | The market is almost impossible to break into, OR the business model is completely inappropriate. |
| Time to market | Market entry can happen almost immediately | Market entry will take some time but can be within a timescale that is shorter than the likely development times of competing solutions | Market entry will take some time, and there is a risk of competing solutions reaching the market first | Market entry will take such a long time that there is a high risk of competing solutions reaching the market first and/or the market changing | Entering the market will take an extremely long time |

Technology Pricing

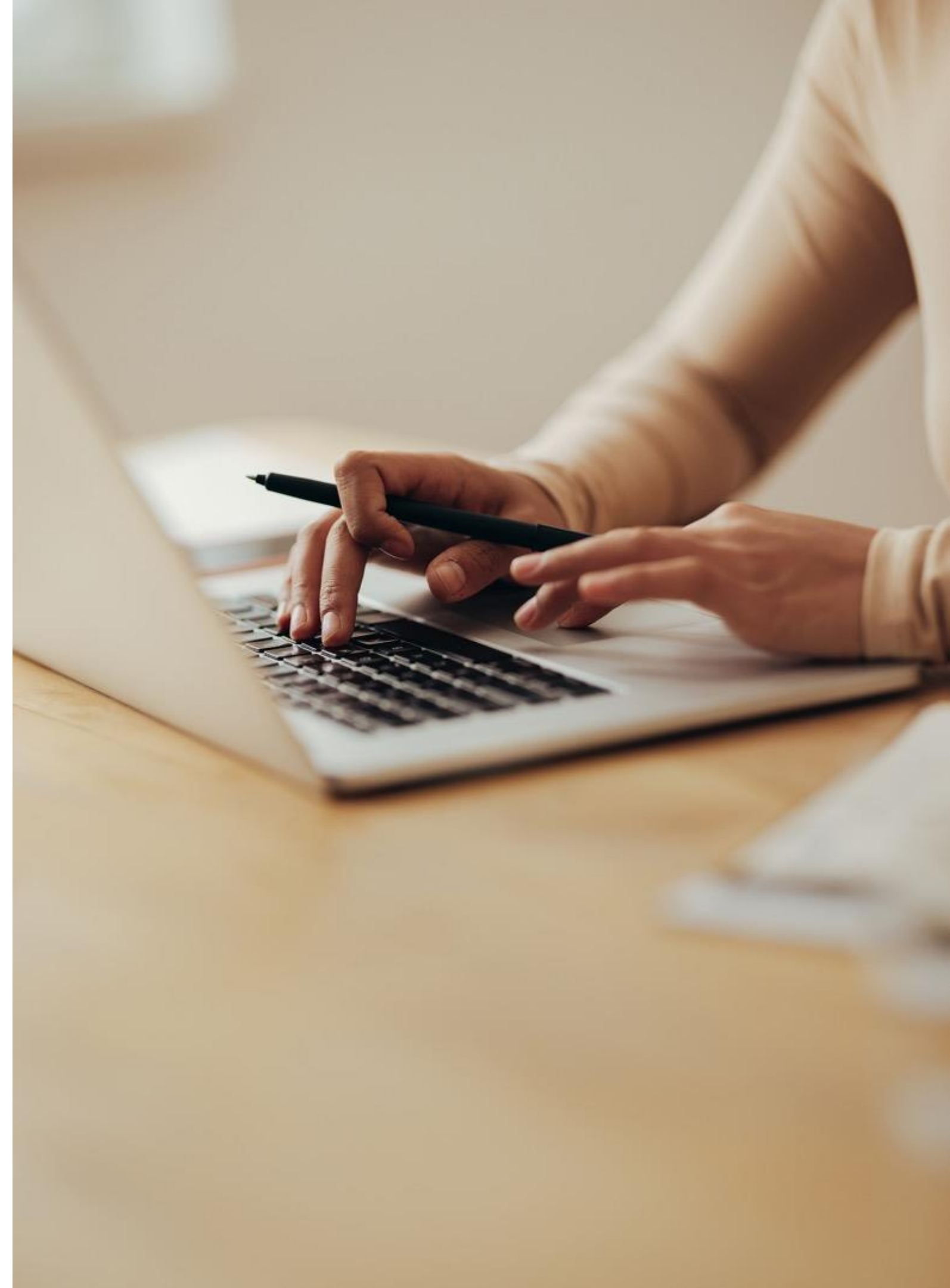
- Equity investment (equity for investors money) need to know the value of your company e.g.:
 - 1. founder need 300.000\$
 - 2. the company value is 1Mil \$
 - 3. investor get 30% share
- Step 1.&3. are clear but step 2. is not...
...“Put a price tag on a technology is more art than science.”

Art of Technology Valuation

- It all starts with negotiation and replaying to “WHY?”

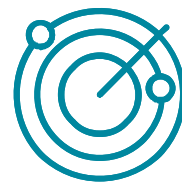
Answers to “WHY?” can be found:

- **Good knowledge of the market**, value proposition, know the competitors.
- But consider how far you want to go in negotiations
- Think about other possibilities (loan ...)
- Think twice about your value and be aware to defend it.



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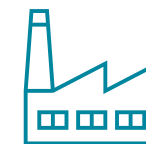
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Technology Value by the IP/IP Rights

What do you need to know from founder:

- Who owns the idea and who are the other founders?
- What is the origin of the idea?
- Was the idea published and when?
- What is behind the idea:
 - What problem does it solve?
 - How does it work?
 - Is it different, other and how?
 - Who could be interested in the idea and why?



Technology Value by the IP/IP Rights

What defines the value:

- Where the IP is protected (Regions)?
- For how long?
- Market research so how many similar solutions exists? How is the problem solved today?
- Market size/ Problem size.
- How to address this market or problem.



Best Foundations



01

Network

It is very important to have relevant contacts around you who you can contact for: testing an idea/hypothesis, with an investment needs, consultations.

02

Public Fundings

It is important to know how the ecosystem can help you and how to use it.

03

PR a Marketing

It is perhaps the most important activity to communicate your projects appropriately in the right places and with the right intensity and truthfully.

Case Study



The Product

- Mathematical algorithm which accurately measures a subject's stress levels in real-time
 - Utilizes standard physiological data
 - Supports predictive modeling (anticipating stress & response)
- Hardware which includes all the necessary fittings and sensors

The Problem

Currently, stress level measurements require a blood sample

Measurements are not in real-time
 Costly and timely lab work required

The Advantage

Real-time measurements – expands data set doctors, trainers, and others can reference

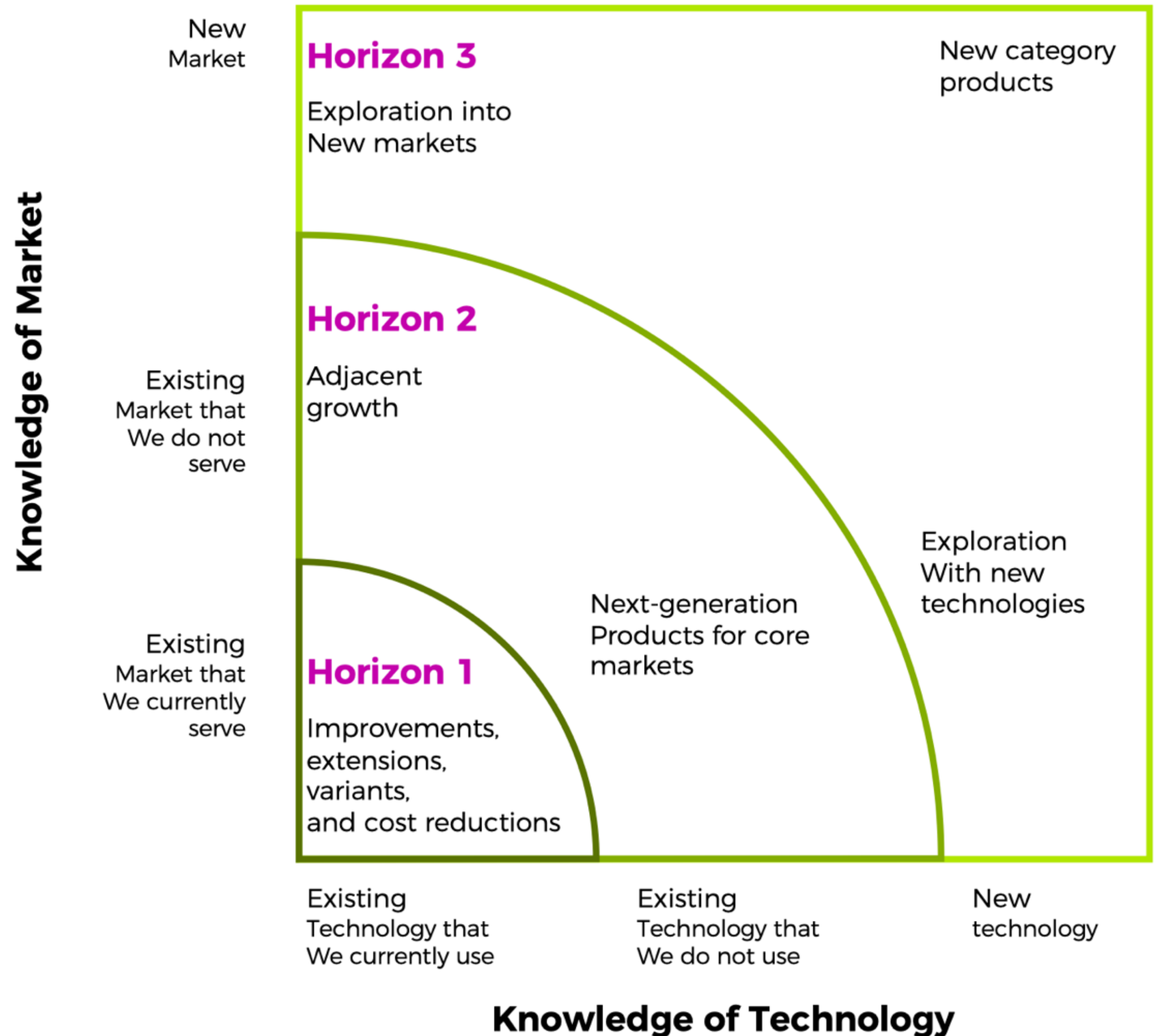
No extra samples required – utilizes common physiological data from existing sensors

Analysis is quick and inexpensive

Target Industries

- Health Care
- Defense
- Athletics
- Exploration

Where Innovations and Business meets



What we are looking for



Value Proposition Design



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Describes the benefits customers can expect from your products and services.





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THANK YOU

