

A background image showing a person in a white lab coat and gloves working on a complex, multi-colored machine. The machine has various components, including a large black pulley with a yellow label. The scene is brightly lit, suggesting a laboratory or industrial setting.

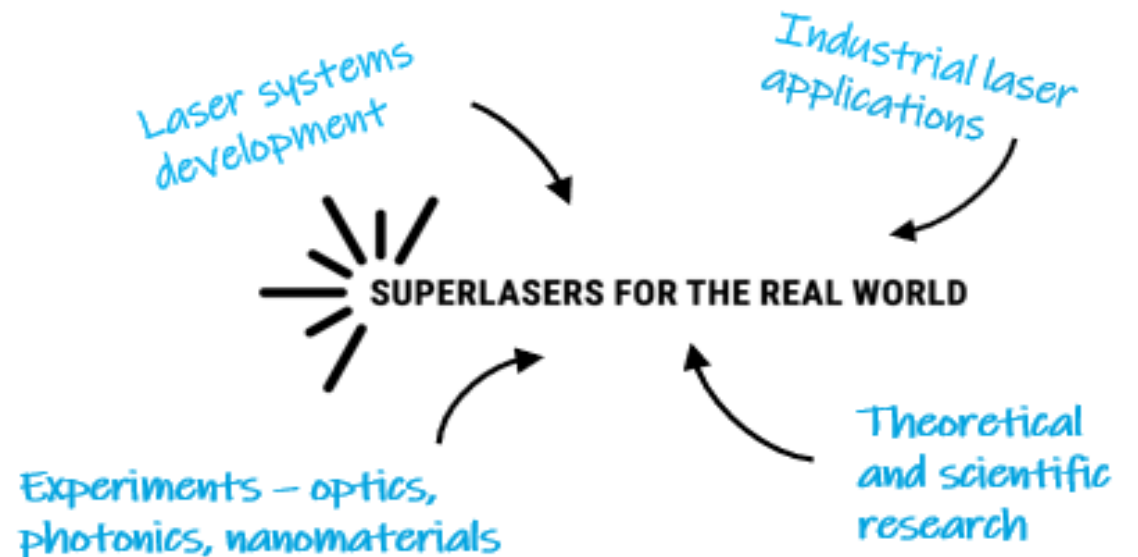
HiLASE Grant Office Project Preparation Strategy

Jana De Merlier, January 23, 2025

HiLASE Centre

- **LASERS – Tradition in the Czech Republic, strong background, wide range of applications**
- **STRATEGIC FIELD FOR THE FUTURE**
– potential to build an entire ecosystem
- **EXCELLENT INFRASTRUCTURE + KNOW-HOW IN PEOPLE – unique laser systems and applications**
- **Maximum utilization of European funds**

hilo



HiLASE – „LESSONS LEARNED“

- Large grant from OP VVV + Horizon Programme Teaming, HiLASE CoE - 1.2 billion CZK
 - 6 years of implementation + several smaller grants worth tens of millions CZK
 - Financial stability and security – unique infrastructure upgrades - certainly **excellent science, and a tremendous amount of accomplished work**
 - On the other hand, **reduced need to secure funding from other sources**, limited collaboration with industry, team overload related to meeting KPI indicators,
- **CHALLENGE** – PREPARING FOR A PERIOD WITHOUT LARGE SUBSIDIES – strategic decision by HiLASE



2023 – Status at the end of the project:

Budget: 200 million CZK

Contract research: 3%

Thanks to HiLASE CoE, most of the budget was covered by grant funding.

2024 – CHALLENGE:

- Significantly smaller projects
- Reduced institutional funding – 30%

SOLUTION/GOAL:

- Reduction of FTE count by 20% with a gradual increase in productivity
- GROWTH IN COLLABORATION WITH INDUSTRY

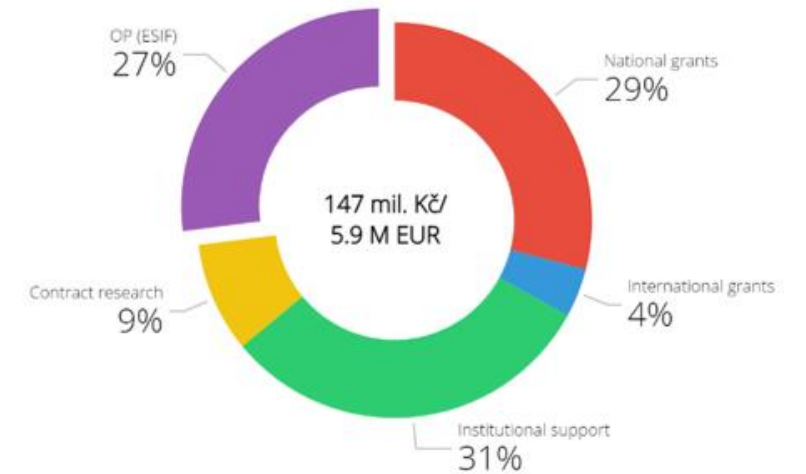
Change in funding – a way to motivate and "lead" towards collaboration

FINANCE

FINANCIAL MANAGEMENT OF THE CENTER – CLEARLY DEFINED KPIs

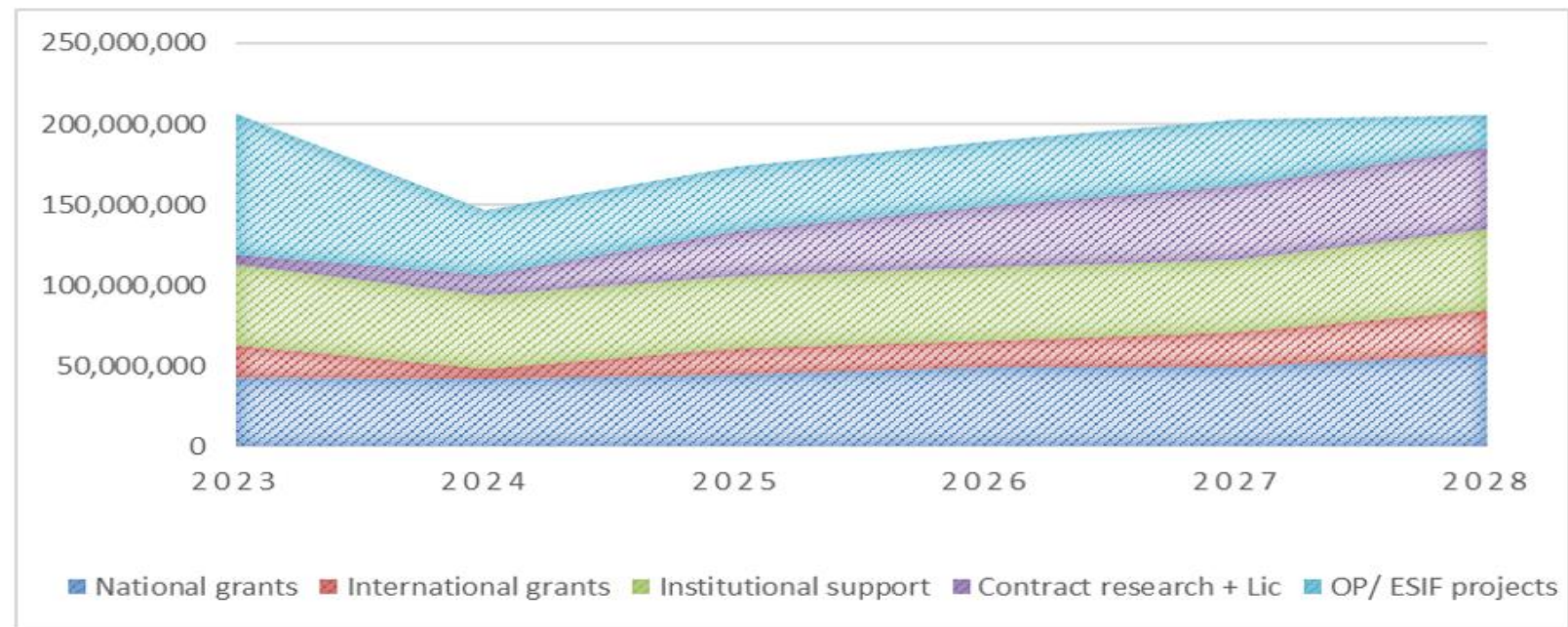
- Stable institutional funding around 30%
- Gradual increase in revenue from **commercial collaboration**
- After the end of OP programs – a need to focus more on **international projects**
- Searching for new sources – education initiatives such as the **Laser Safety Training Centre and Brain4Industry Academy**

Operational funding in 2024



FINANCIAL PLAN 2028

- Need to compensate for the decline in funding from OPs
- Increase commercial revenue to 20% alongside budget growth
- Emphasis on international grants and collaboration
- Education



STRATEGY

- **STRATEGIC PLANNING**
 - VISION, MISSION – long-term strategy
 - Medium-term plans + **action plans, specific KPIs, and regular evaluations**
 - FOCUS – 4 STRATEGIC AREAS
 - PEC – Project evaluation committee – **every project/idea is evaluated and must align with the strategy**
- **STRATEGIC PARTNERS** from industry – for each area, the goal is to identify trends, ensure applicability, and achieve **IMPACT**



Vision

To become one of the respected Leaders defining the trends in high power Laser Applications. To be the first-choice R&D partner for companies and research organizations seeking innovative laser technologies and solutions, on the Earth and beyond...



Mission

We are eager to push the boundaries of laser technologies beyond their current limits, search for new Applications and contribute to the Prosperity of the Czech and European Economy, daily lives of people and Sustainable Future. We strive to inspire the next generation of laser Scientists, Engineers and Entrepreneurs.

4 strategic areas:

- Advanced laser processing and manufacturing technologies
- Space and defense laser technologies
- Smart & safe solutions for laser systems and applications
- Laser technologies for compact particle and radiation sources

PROJECT EVALUATION COMMITTEE

- **Idea Pitch** – 5-minute presentation of an idea – the need to gain support
 - Every project needs to be introduced and approved for further realization
- **Alignment with the strategy** – the goal is to maintain focus
- Internal grants
- Rewards for projects – **MOTIVATION FOR THE TEAM**
 - **2023**: 35 projects submitted, success rate 40%.
 - **2024**: 25 projects submitted, success rate 32 % (10 proposals not yet evaluated)

DIRECTION:

TRL 6 AS THE GOAL

- We lack the ability to finalize into an end product
- Functional prototype, validated technology – further search for industry partners

Excellence in research!

2024: successful international projects
Horizon – Excellence Hubs, Era Chairs, Photonic Factory of the Future
EDF – LACE, NECSUS



PITCH YOUR IDEA

What do you present?

Your name/ team, date



Idea introduction

- *Identify the **problem** or idea in-depth. You might include how the idea or problem first came to your attention*
- *Describe the key principle of your idea*
- *Who can be the **beneficiary** (target group, specific market, end user)?*

Introduce your solution

- *Elaborate on your **proposed solution** – how will your idea work?*
- ***Why** is the idea good? Think about the **benefits** (internal/ external).*
- *How is it connected to the **strategic areas** of HiLASE?*
- ***Stay short and targeted** – focus on the top three features/benefits.*

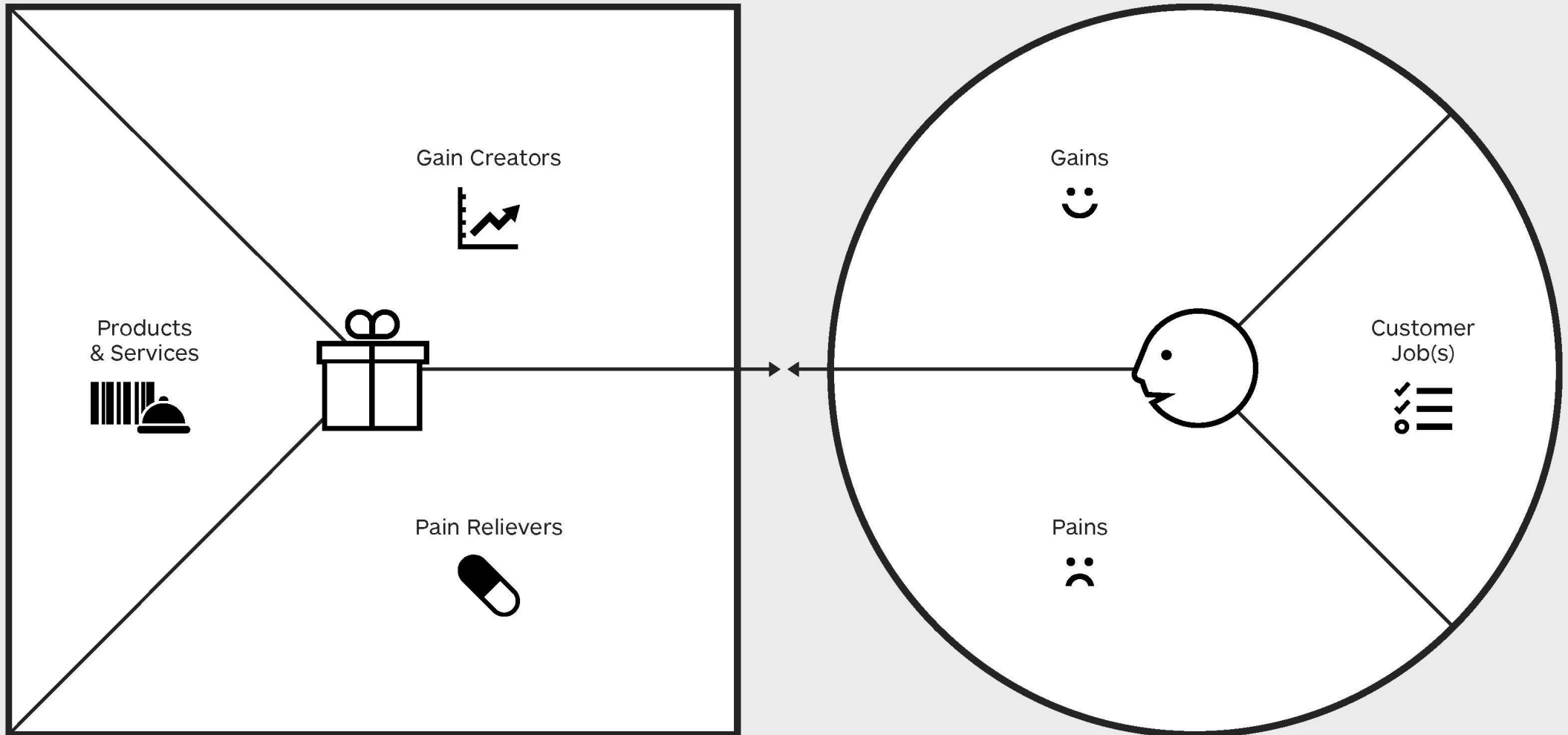
What do you need to make it happen

- Describe **which key factors and capabilities** are needed to make this real.
- Show the **next steps**. You do not need to describe the details.
- In points try to explain the **estimated total costs** (big numbers), **timeline**, **staff needed**, **cooperation** across the teams etc.
- Which **assistance** do you need from HiLASE management/ Grant Office (e.g. search for partners, call, etc.)?
- Try to be specific. It will help your idea to become reality.

The Value Proposition Canvas

Value Proposition

Customer Segment

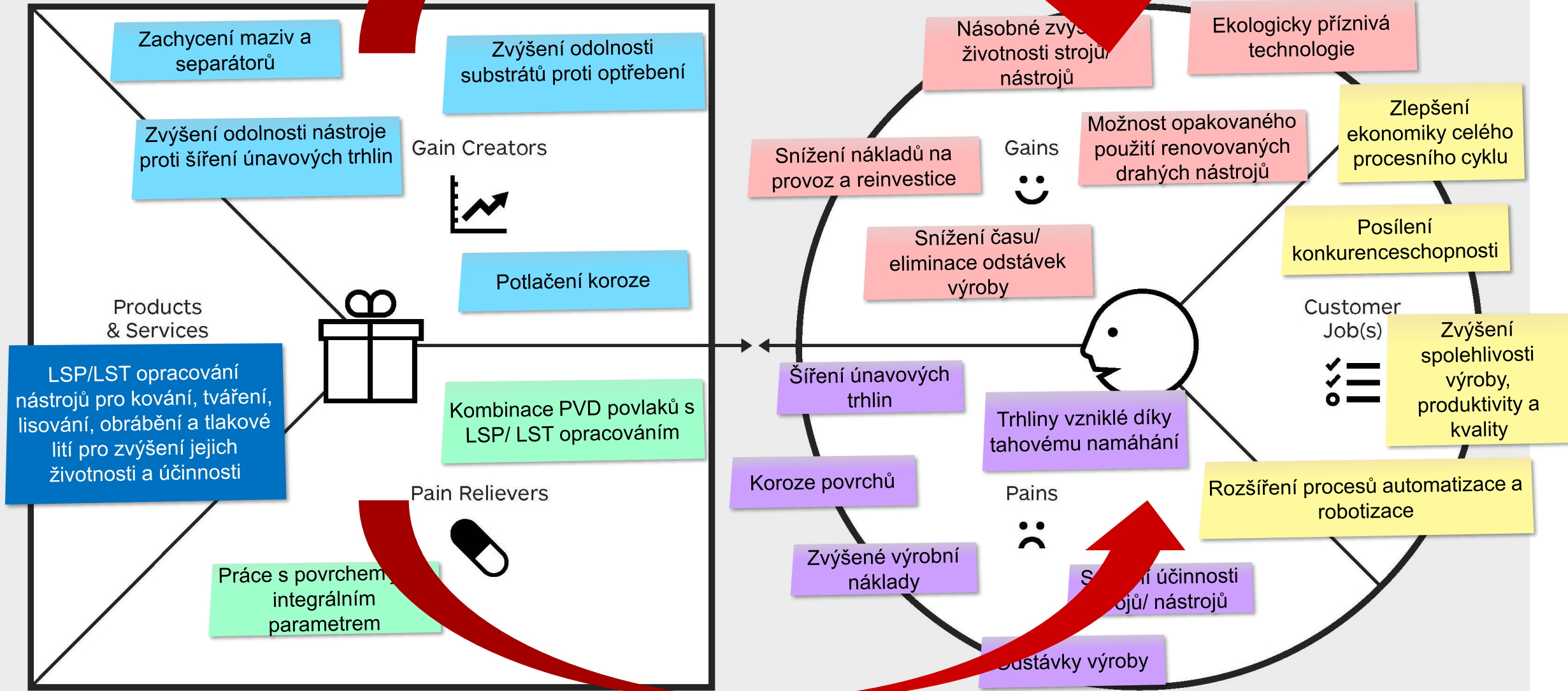


The Value Proposition Canvas

CANVAS - example

Value Proposition

Customer Segment



PROJECTS

- COOPERATION WITH CZECH COMPANIES

- TAČR (NCK, Trend, Delta/Sigma/Théta) – Meopta, SQS, Crytur, Lightigo, OptiCE, OptiXs, Narran, LaserTherm, BaL, Sigma, SHM, podáno – Prospan, Onsemi, Asphericon, OPTAK – Meopta, WIKOV, BBT
- ESA/Space – Crytur, TRL Space, Rigaku, ESC Aerospace
- Biotech - IQS – strategic partnership, Prospan
- Defense – One3D, PBS, Omnipol
- Cooperation – ŠKODA Auto, ČEZ

- COOPERATION WITH FOREIGN COMPANIES

- Horizon, EDF, commercial projects – Lockheed Martin, Thales, Leonardo, OHB, EMBRAER, Asphericon, Light Conversion,....

- COOPERATION WITH RESEARCH INSTITUTIONS

- South Korea, Japan, Taiwan, France, Germany, Italy, Netherland, Denmark, Lithuania, Austria – leading institutions
- CR – Biocev/Př. F. UK, ČVUT, VŠCHT, TUL, VUT (OPJAK , OP TAK, TAČR, Horizon)

PROJECTS – YEAR 2023

| Programmes | No. of Proposals Submitted | No. of Proposals Approved | Not evaluated yet (No. of projects) | Success Rate in % (2023) |
|--|----------------------------|---------------------------|-------------------------------------|--------------------------|
| OPJAK (Špičkový výzkum - Lassap, Sendiso + CQT, Vesmír, TU Liberec) | 5 | 2 | 0 | 40 |
| OPTAK (Aplikace - Wikov, BTL, Meopta) | 3 | 3 | 0 | 100 |
| GAČR (4 x standard - Sasha B., Thibault D., Yuri R., Jan B. + 1 x Lead USA - Sunil) | 5 | 0 | 0 | 0 |
| TAČR (1 Trend Wikov, 1 Delta - česko - tajwanská spolupráce, 1 Théta - ÚT) | 3 | 2 | 0 | 67 |
| Horizon Europe (3 Twinning, RIANA, Lasers4EU) | 5 | 2 | 0 | 40 |
| ESA (ESA OSIP) | 1 | 0 | 0 | 0 |
| FFG Austria (Martin S.) | 1 | 0 | 0 | 0 |
| Erasmus (Laser Safety - Helena V.) | 1 | 0 | 0 | 0 |
| EIC Pathfinder (Martin D. Yuri R.) | 2 | 0 | 0 | 0 |
| EDF (LACE resubmission) | 1 | 1 | 0 | 100 |
| Bilaterální spolupráce (Česko - bavorská spolupráce, česko-španělská mobilita, česko-turecká mobilita) | 3 | 1 | 0 | 33 |
| Others (MŠMT - talentová akademie 1X, SIC - transferový voucher, SIC - validace tržní technologie, Strategie AV21, AV ČR - Projekt spolupráce s ELI) | 5 | 3 | 0 | 60 |
| Total Amount | 35 | 14 | 0 | 40 |

GRANT OFFICE SERVICES

- **PEC Coordination** – preparation of deadlines, communication with teams
- **Calls Monitoring** – presentation of calls + brainstorming for each call, evaluation of assessment criteria/**Finding Specific Calls** – based on idea pitch/fiche
- **Project Preparation** – finance, ensuring attachments, administration
 - For larger strategic projects (**OP TAK, OP JAK, Horizon Europe – Widening, EDF, etc.**) – coordination of the preparation
 - For purely research-focused projects (**ERC, Pathfinder, GAČR etc.**) – more responsibility lies with the scientist, but consultation, budget support available
 - For **smaller projects** – depending on focus, often assistance with aligning the project with the call, market research, readings
- **General partner search** - consortium building
- **For application-focused projects** – project setup, communication with partners, text revision in accordance with evaluation criteria

WHAT WE EMPHASIZE

- **FIND THE RIGHT CALL** – pay attention to the project concept, select a call that suits your project
- **START PREPARING EARLY** – you can't write a quality project at the last minute (for larger projects, we recommend at least 3 months in advance)
- **FIND THE RIGHT PARTNERS** – maximize synergies
- **READ THE CALL AND EVALUATION CRITERIA CAREFULLY** – work with these documents throughout the preparation process
- **PREPARE A LOGICAL PROJECT FRAMEWORK** – proper setup significantly improves the preparation (schedule!)
- **CONSULT AND USE RESOURCES** – verify and check information
- **BE FOCUSED AND CLEARLY FORMULATE** – presentation matters too, use graphics, boxes, and colors to highlight key points that the evaluator should take away (if possible). Long does not mean better.

Success Factors – What We Focus On in HiLASE

A large part of the calls will be application-focused – it's not enough to simply describe the technology; you need to know the applications.

- Partnerships with research institutions as well as with industry
- Establish strategic partnerships for each area – stay updated on trends
- Build a larger network of companies that can join us in projects
- Focus is needed, align with the BD team, ensure cross-team awareness
- Monitor calls in advance – plan projects for the pipeline, have partners, develop project topics
- Stay focused – strategic areas
- Link to future commercial contracts – strategic view (Example: IQS project, Crytur, ...)

SHARED MATERIALS AND INFORMATION

Separate Section on Intranet/MS Teams:

- Calls schedule – table + presentation
- Basic information about the projects
- Idea Pitches – ideas + presentations – "idea marketplace,"
- Fiches
- Submitted projects/projects in preparation
- Partners
- Feedback from projects
- Marketing surveys, studies, trends

Motivational System

- Involve more people in project preparation
- Financially reward successful projects
- Connect teams – impact on the interdisciplinarity of projects
- Share experiences and knowledge – helps improve the quality of projects

PROJECTS WITH INDUSTRY

- **LONG-TERM PARTNERSHIP**
 - Joint strategy – mapping possible areas of collaboration
 - Understanding synergies – clear ownership on both sides
 - Connection to strategic areas, tracking trends
 - Need for specific applications
- **MONITORING OF THE CALLS**
 - Close cooperation with the Grant Office/BDMs
 - Timely project preparation – significant impact on quality
- **CLOSE COOPERATION DURING IMPLEMENTATION**
 - Sharing, joint teams – learning industrial processes, repeatability, focus
- **EVALUATION AND FEEDBACK**
 - Ability to build on completed projects
 - Customer care officer
- **Establishing Connections within Commercial Cooperation**
 - Mutual feedback



CZECH CALLS:

- TAČR – SIGMA, TREND?, PRODEF x M-ERA.NET
- TWIST
- OPTAK – last calls
- ESA – MD ČR

INTERNATIONAL CALLS:

- HORIZON
- EDF
- ESA
- EUREKA
- Bilateral calls

Gradual emphasis on international projects – need for industry partners.

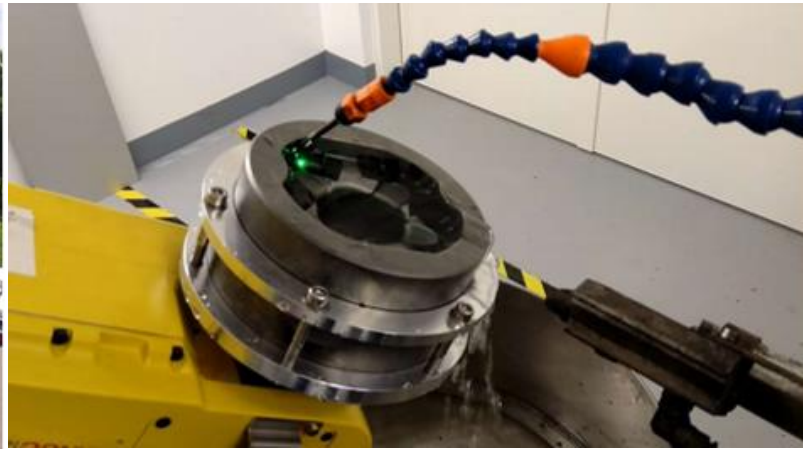
COOPERATION WITH INDUSTRY

- 2 FTE – BUSINESS DEVELOPMENT – CR and Abroad
 - Market Strategy – developed in 2023/24 under the guidance of a consulting firm with practical experience
 - Emphasis on data, surveys – both in the Czech Republic and abroad
 - Connection to trends, synergies with projects
- Sustainability as a Trend – Envitrail study – contribution of technological innovation to reducing the CO2 footprint

-Hi-BEAMS

= SHM + hilose
SUPER HARD MATERIALS

První spin-off HiLASE



INSPIRATION FROM ABROAD:

- Netherlands – fieldlabs,
- Belgium – Flanders Make,
- Denmark – DTI, Force Technology
- Germany – Fraunhofer Institute
- "Service organizations for R&D for companies,"

R&D for companies:

- Commercial Collaboration
- Shared Laboratory
- HiLASE – learning – repeatability, processes, meeting deadlines, etc.
- Roundtables, workshops, company visits etc.



DĚKUJI ZA
POZORNOST!

Jana De Merlier - GOM



www.hilase.cz



<https://www.linkedin.com/company/hilase-centre/>



+420 314 007 700