

# Funding strategies

## *How to develop competitive research funding strategies?*

EARMA Conference Malta 2017

Patrick de Boer MSc – partner  
Andree Schram, PhD – senior consultant

## *ttopstart academy team present at EARMA*



**Patrick de Boer, MSc**

- Co-founder and partner ttopstart
- Realised EUR 85 million in funding (H2020, ERC, Marie Curie, IMI etc.)
- Developed many industry-research partnerships
- Founder ttopstart academy



**Andree Schram, PhD**

- Senior consultant at ttopstart
- Realised EUR 20 million in funding (H2020, SME instrument, etc)
- Trainer in the ttopstart academy

## Company and expertise

**ttopstart is a science and business consulting company that serves researchers and companies mainly in the fields of life sciences, medical technology and health.**

*“We empower scientists and entrepreneurs to establish breakthroughs”*



### Subsidies & Funding



We help to fund  
medical  
innovation

### Project Management



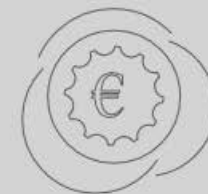
We manage your  
EU Horizon 2020  
project

### Business Strategy



We support  
successful  
commercialisation

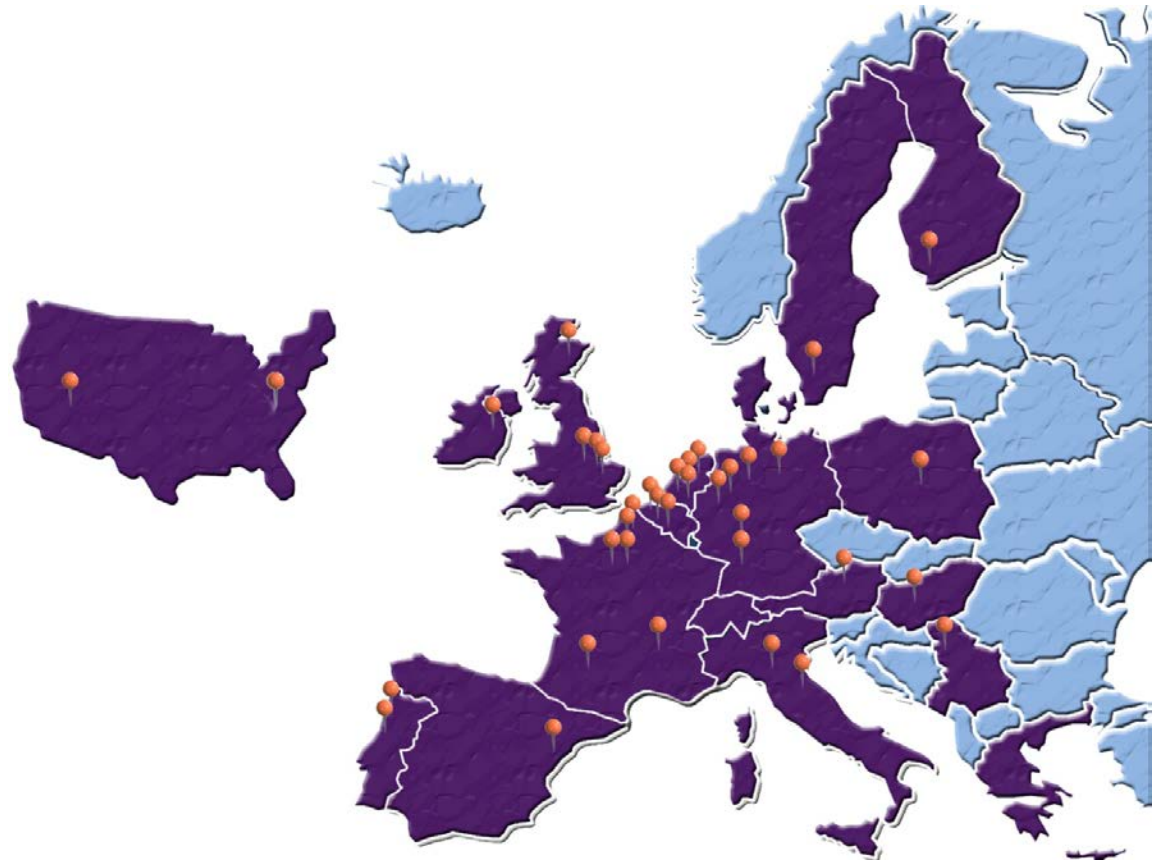
### Funding database



EU & non EU  
subsidies

## *Company profile*

- **ttopstart is active in 21 EU Countries and the US**
- **Client profile**
  - 60% industry
  - 40% academic
- **27 professionals**



## *ttopstart academy service portfolio*

Funding strategy  
PRO-ACTIV



Increase your competitiveness in  
the current funding landscape

Personalised  
training



Tailor-made training to improve  
your skills

Coaching  
Review service



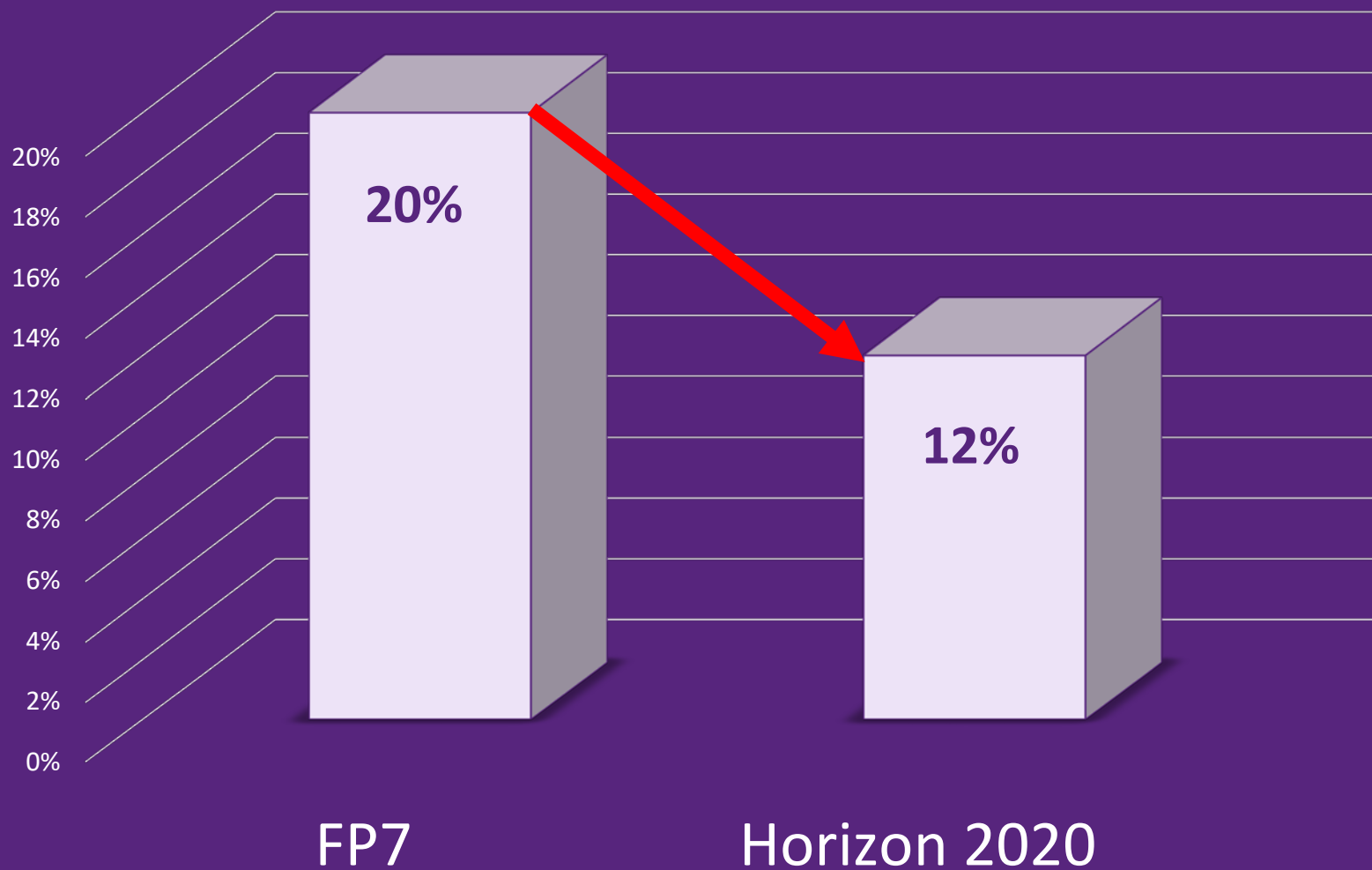
One-on-one coaching to develop  
your proposal





# **RESEARCH FUNDING CHALLENGES**

## A priori success rates





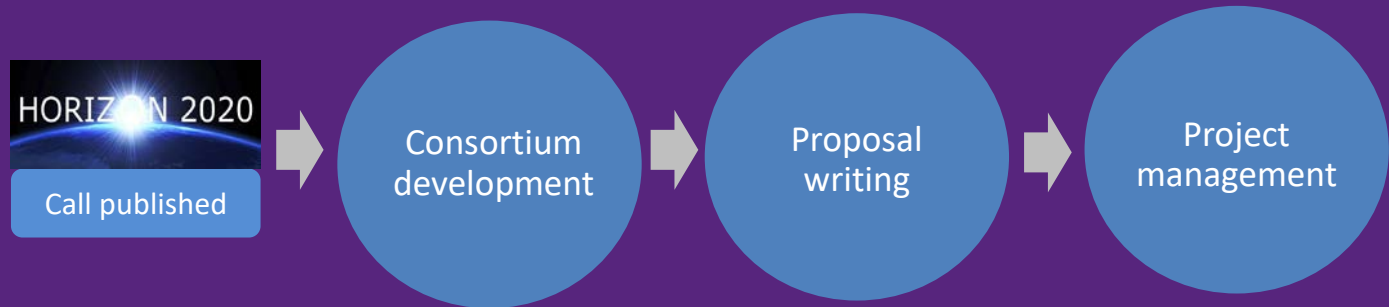
# 18,000

‘Inefficient hours’

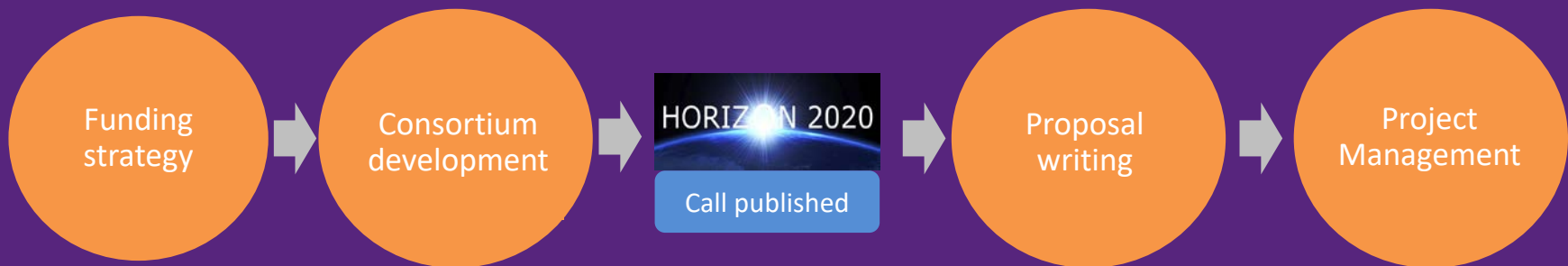


# Investments are usually too late

## Current practice



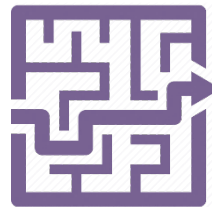
## Best practice



## *Increase your preparedness*

HORIZON 2020

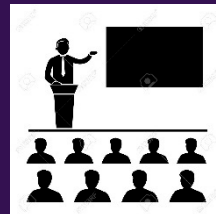
**Increasing share of  
research is funded  
by Europe**



**High complexity of  
European funding  
schemes**



**Increasing  
competitive  
pressure on  
European funds**



**Increase preparedness (funding strategies)  
Higher success rate**



# **PRO-ACTIV *FUNDING STRATEGY***

## *Towards a framework to boost success*

- Best practices from >250 national and international funding applications.
- Assessment of high performing research groups.
- Identification of key performance indicators for:
  - successfulness in raising subsidies;
  - developing new partnerships.

*→ 9 success factors.*

# FUNDING MODEL CANVAS

# The funding model canvas



## Collaborations

- Industry
- Non-profit sector
- Complementary research groups
- International



## Scientific excellence

- KOLs in group
- Young talent
- Unique expertise



## Infrastructure

- Cohorts
- Biobanks
- Instrumentation



## Research focus

- Strong vision
- Aligned with Europe
- Unique selling points
- Risk/gain balance
- Potential



## Marketing and Communications

- Website
- Marketing
- Conferences



## Valorization

- Industry sponsors
- Spin-off activity
- Valorization strategy



## Impact

- Societal
- Economic
- Clinical
- Sustainability



## Subsidy culture

- Subsidy identification and selection
- Internal grant writing and review policy



## Scientific output

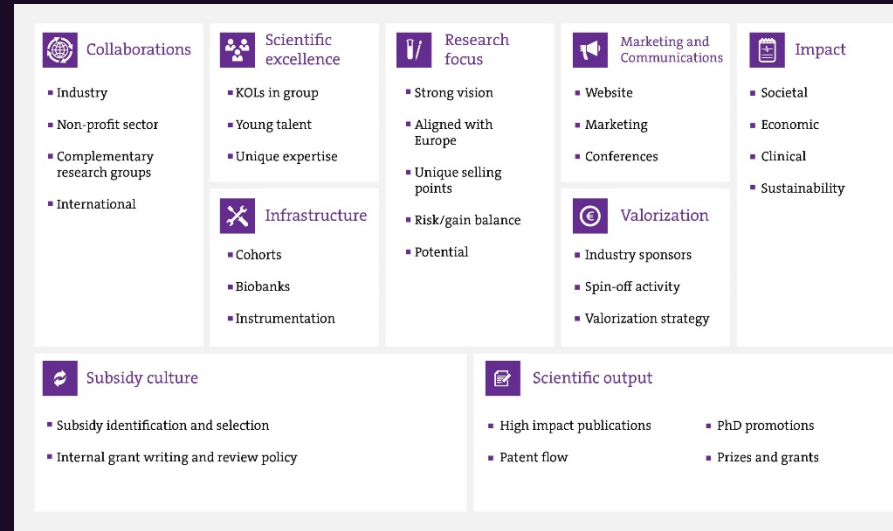
- High impact publications
- Patent flow
- PhD promotions
- Prizes and grants

A tool to support the development of competitive research funding strategies



## Collaborations

- Industry
- Non-profit sector
- Complementary research groups
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- Collaborations with new stakeholders open-up new funding opportunities

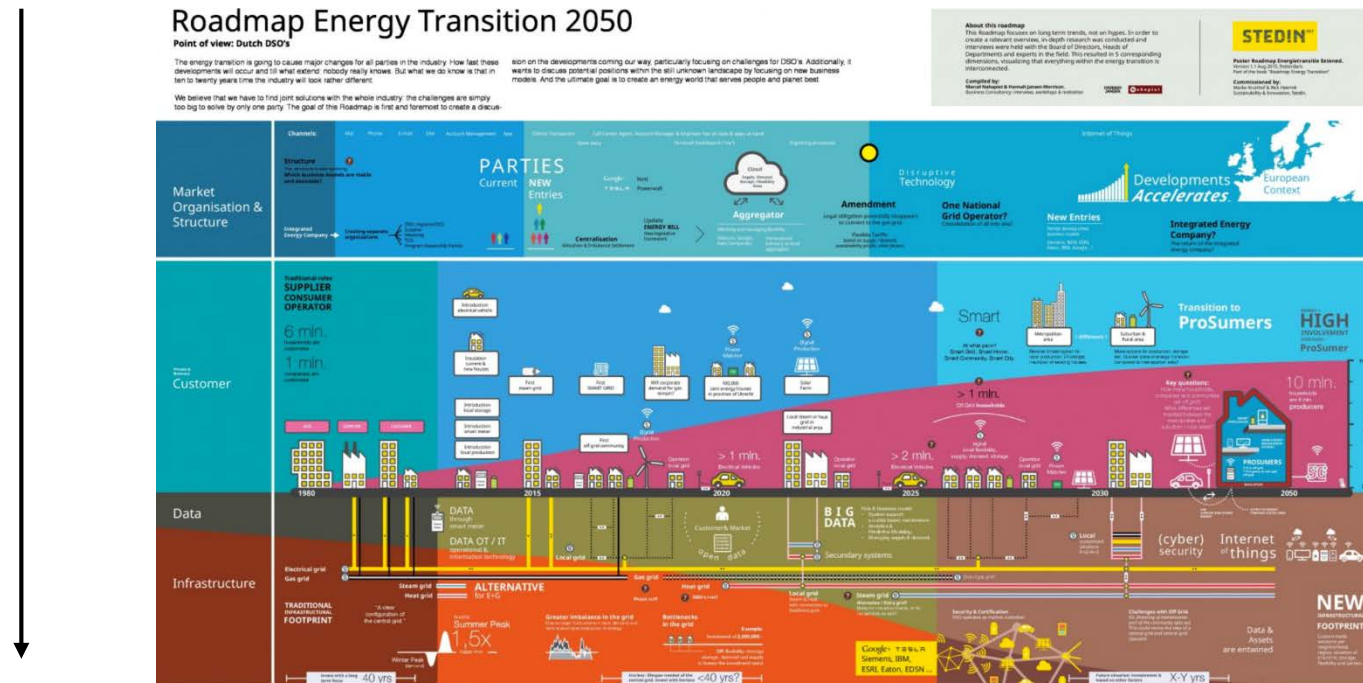


Designing a  
**European  
Innovation Council:**  
**A Call for Ideas**



# Collaborations and new partnerships

Current practice: research funding strategies are (too much) focused on internal capabilities.



Best practice: Competitive research funding strategies also rely on the perspectives of other partners in R&I process.

## Example: a good mix of collaborative partners

- Horizon 2020 call: **Understanding disease: systems medicine (PHC-02)**
- Consortium: 9 partners (2 hospitals, 3 universities, EMBL and 3 companies)
  - Combination of clinical studies, animal models, omics, biomarkers, systems modelling)
  - Strong group of various disciplines
  - Frontrunners in the field
  - Participation of SMEs and mid-sized companies for further development and commercialisation

*“There is good balance and complementarity between industry and academics within the consortium. They have complementary clinical, microbiome, biomarkers, systems and modelling expertise and involvement of appropriate SMEs as these are FDA approved labs with GLP/CLIA for biomarker development and commercialisation.*





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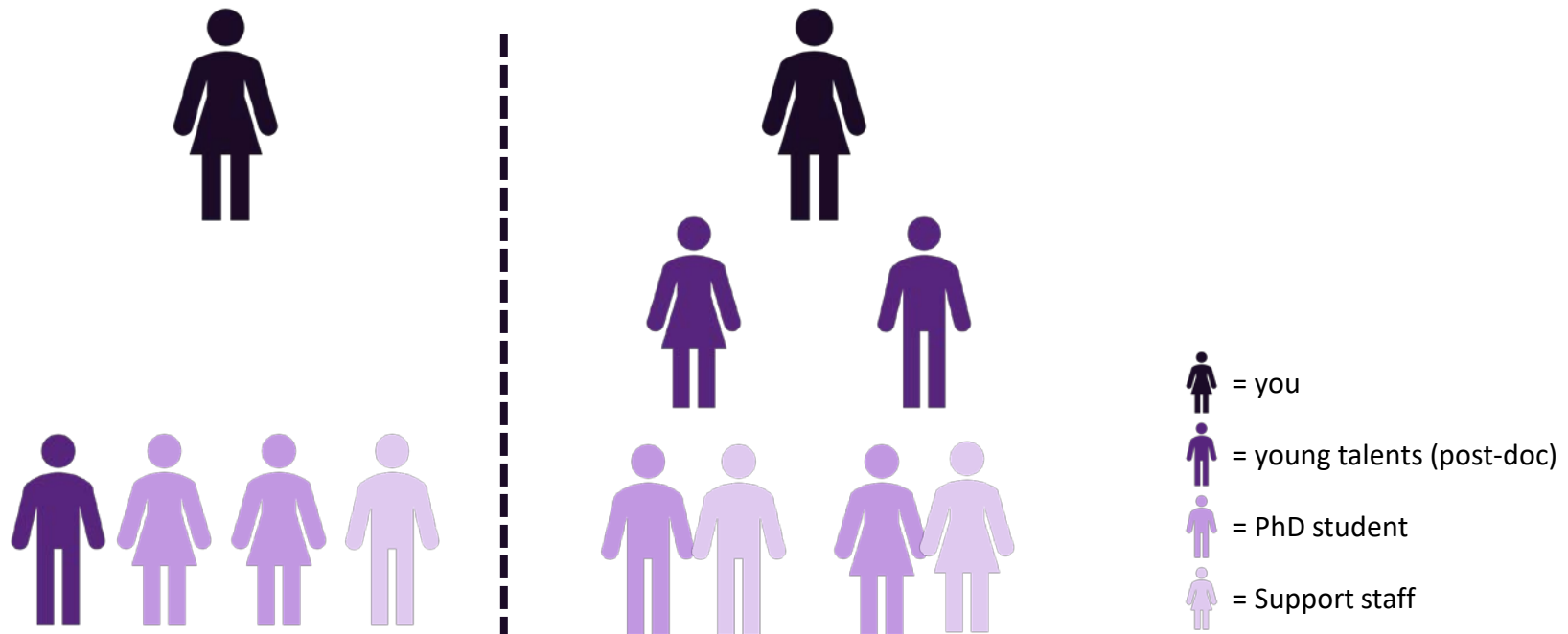
### Scientific output

- High impact publications
- Patent flow
- PhD promotions
- Prizes and grants

- ERC grants, H-index, etc
- Presence of young talented researchers
- Excellence across organisation

## *Best practice: develop complementary teams*

- Help researchers to shape their group;
- **Hire different backgrounds (bioinformaticians, engineers, chemists, etc.);**
- Align *and* complement their own expertise.





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### Scientific output

- High impact publications
- Patent flow
- PhD promotions
- Prizes and grants

- Cohorts, access to patients, access to strong data sets, new equipment, etc.



## Align strategy with international and national roadmaps



European Strategy Forum  
on Research Infrastructures



## *Join forces with key infrastructure hubs*

- Create collaborations with added (competitive) value

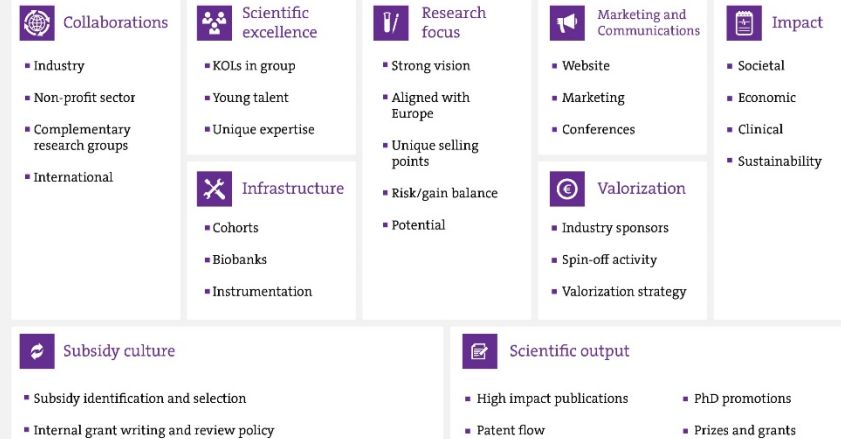






## Research focus

- Strong vision
- Aligned with Europe
- Unique selling points
- Risk/gain balance
- Potential

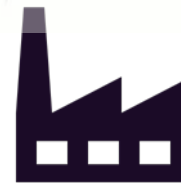


- Alignment with international research agendas and societal challenges
- Balance of fundamental and applied research

## *The 'research mix'*



Fundamental

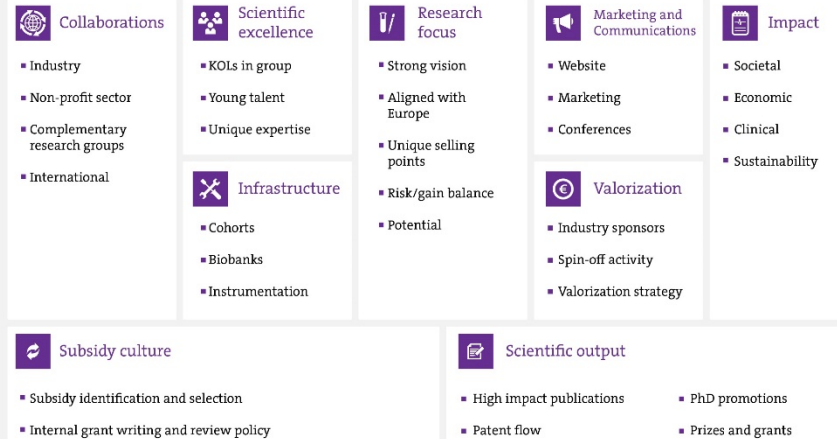


Applied



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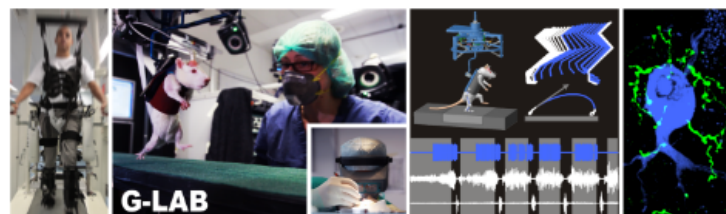


- Presentation of research lines
- Demonstration videos, social media
- Opportunities / calls
- Coherent presentation

## CHAIR IN SPINAL CORD REPAIR IRP

Publications Research Public data Team Alumni Students and Open positions Press / Media Funding Life at G-lab How to find us

Share:     



Welcome! We are part of the [Center for Neuroprosthetic and Brain Mind Institute](#) of the Life Science School at the Swiss Federal Institute of Technology Lausanne (EPFL). The laboratory is headed by Professor Grégoire Courtine who holds the [International Paraplegic Foundation \(IRP\) Chair in Spinal Cord Repair](#).

### Mission

Our mission is to design innovative interventions to restore sensorimotor functions after CNS disorders, especially spinal cord injury, and to translate our findings into effective clinical applications capable of improving the quality of life of people with neuromotor impairments.

### To achieve this goal

We are developing multifaceted neuroprosthetic systems, robotic interfaces and advanced neurorehabilitation procedures that we combine with neuroregenerative interventions. Using genetically modified mice, optogenetics, and novel viral tools, we also seek to uncover the neural mechanisms underlying the control of locomotion in intact animals, as well as the processes that reestablish motor functions after neuromotor disorders.



Visit the web documentary about our laboratory on [www.project-rewalk.com](http://www.project-rewalk.com)

### Key topics

Neurorehabilitation  
Neuroregeneration  
Neuroprosthetics  
Locomotion  
Spinal Cord Injury

### LATEST PUBLICATIONS

Mechanisms underlying the neuromodulation of spinal circuits for correcting gait balance and deficits after spinal cord injury (February 4th 2016, *Neuron*)

Spatiotemporal neuromodulation therapies engaging muscle synergies improve motor control after spinal cord injury (January 18th 2016, *Nature Medicine*)

[Pronounced species divergence in corticospinal tract reorganization and functional recovery after lateralized spinal cord injury favors primates](#) (August 26th 2015, *Science Translational Medicine*)

[Defining ecological strategies in neuroprosthetics](#) (April 8th 2015, *Neuron*)

Electronic dura mater for long-term multimodal neural interfaces (January 9th 2015, *Science*)

Muscle spindle feedback directs recovery and circuit reorganization after spinal cord injury (December 18th 2014, *Cell*)

[Wireless neurosensor for full-spectrum electrophysiology recordings during free behavior](#) (December 17th 2014, *Neuron*)

Web documentary about our laboratory

### OPEN POSITIONS

[Master's Projects](#)

### CONTACTS

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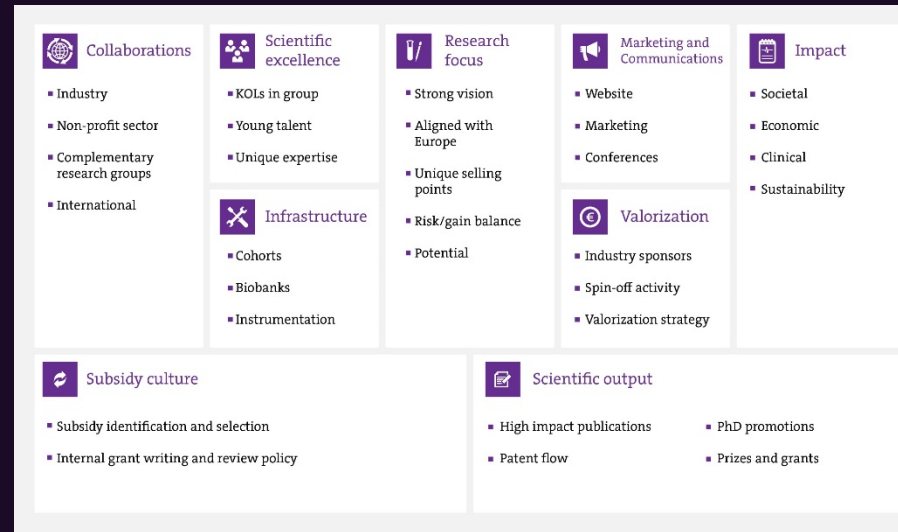
Station 19

CH-1015 Lausanne



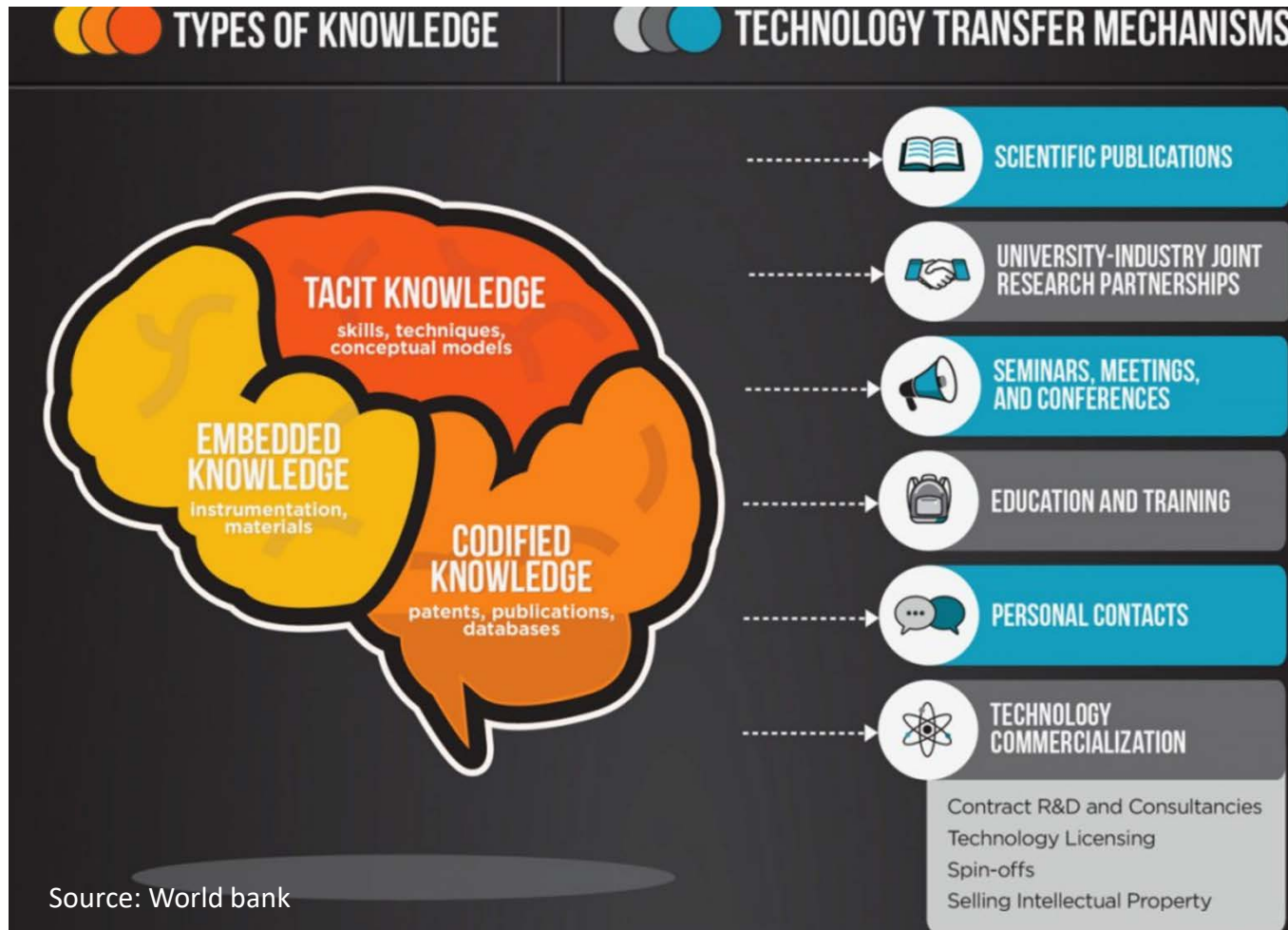
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- Efforts to translate science into the benefit of society and industry
- Visibility with non-scientific efforts

## Technology transfer mechanisms are important

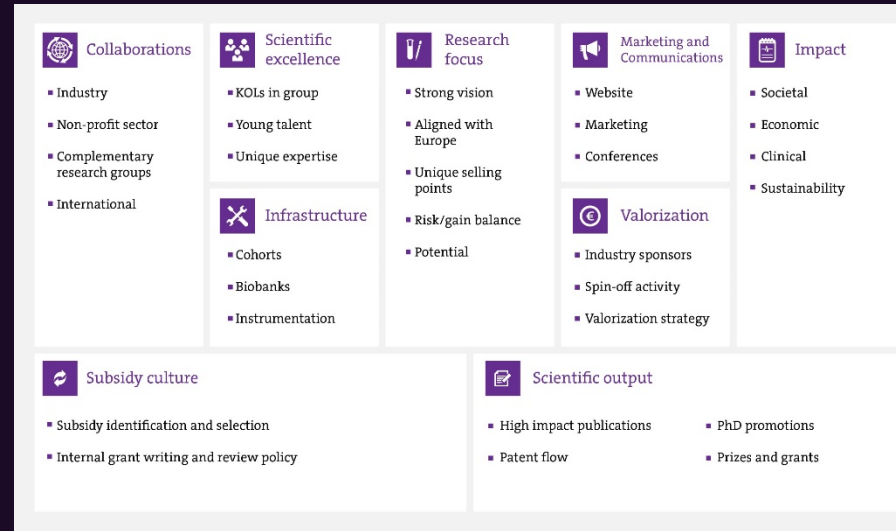


*"MIT 2017: industry-sponsored research is 20% of total research budget"*



## Impact

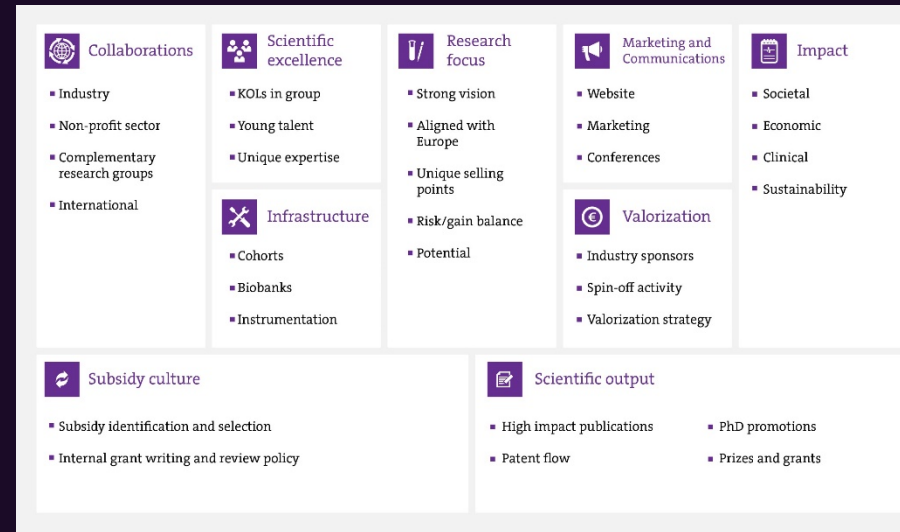
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- Economic
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- Impact of research
- Innovative elements



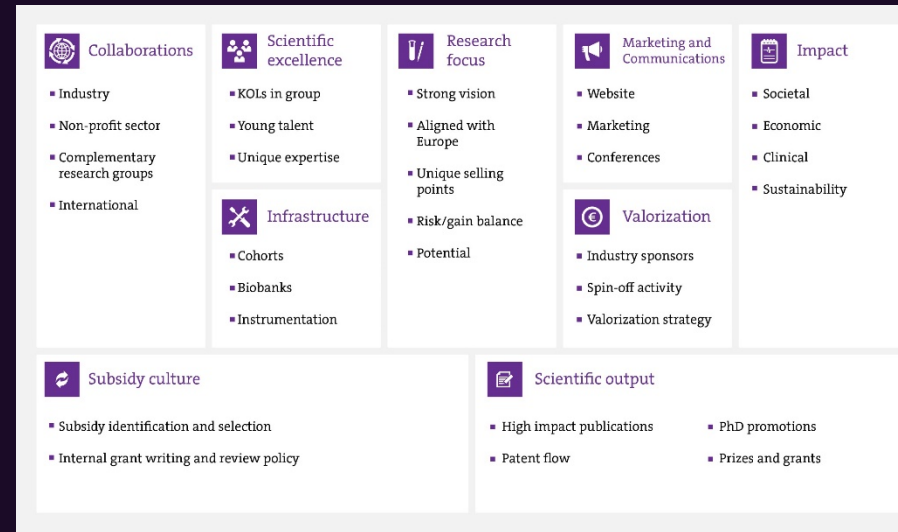
- Clear training programmes
- Internationalisation budget
- Mutual support and learning
- Funding strategies, not ad hoc
- Internal review policy
- Lobby for EU projects?



## Subsidy culture

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- Above average (scientific) output is needed to be competitive in funding



## Scientific output

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# **PRO-ACTIV SERVICE: HOW DOES IT WORK?**

## *Step 1: Questionnaire based analysis of your department*

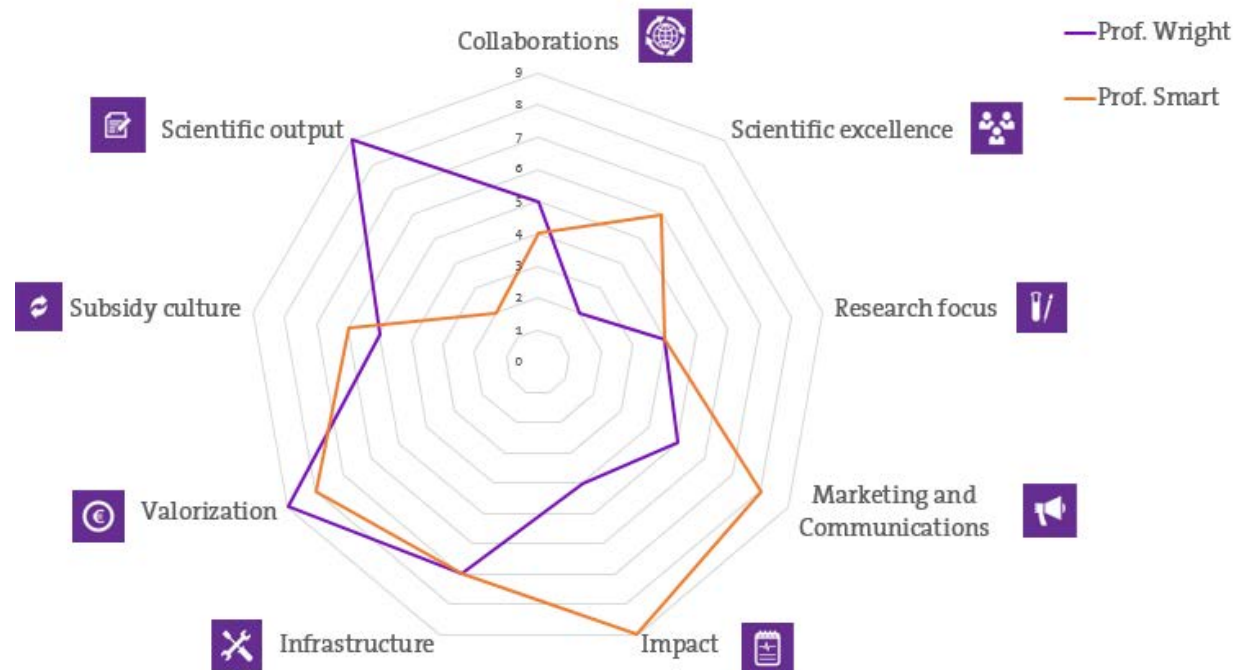
### *Insights provided in:*

- How do your researchers describe themselves?
- How is the subsidy culture described?
- What types of subsidies are applied for and how often?
- What type of collaborations do your researcher have?

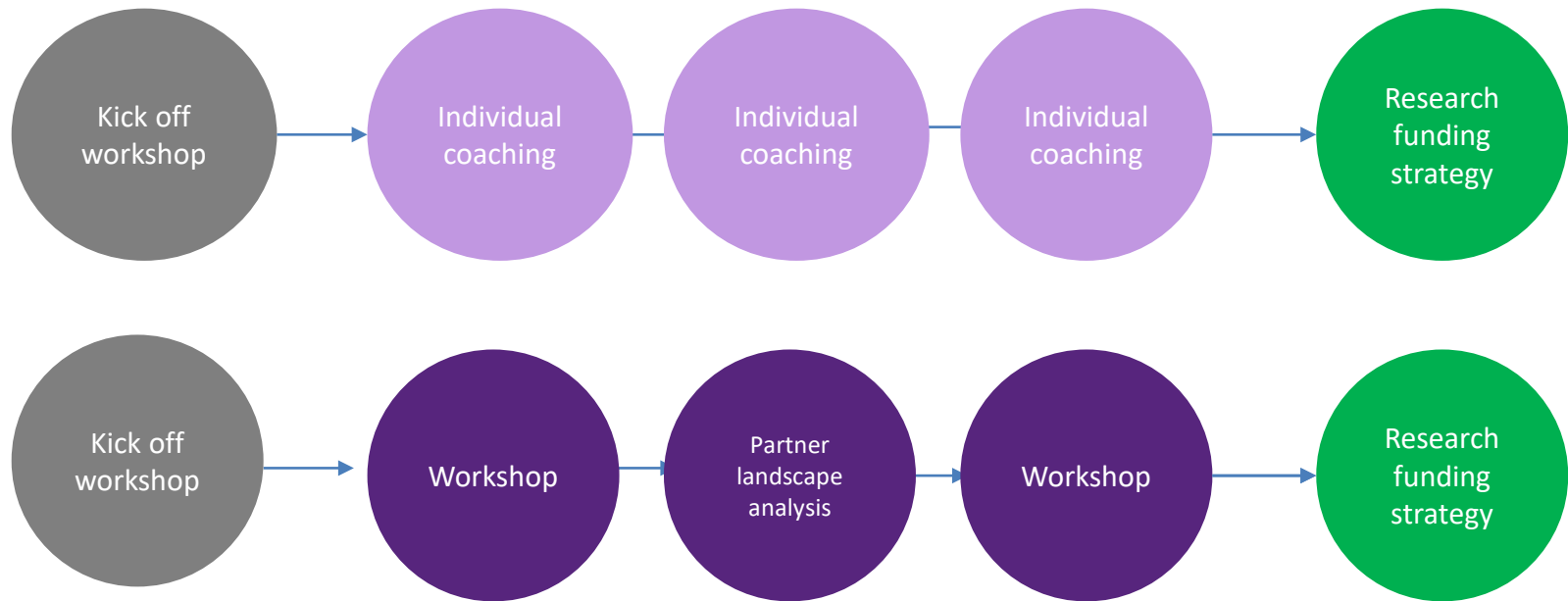


## Step 2: analysis of individual researchers

- 9 factors of the funding model canvas.
- Based on resumes, websites, discussions, older subsidy proposals, etc.
- Straightforward overview of strengths and weaknesses.



## *Step 3: tailored modules to meet your needs*



## Step 4: Towards a personalised research funding strategy

Personal Funding Roadmap Prof. Wright						
Grant	Amount	Funding	Gap analysis/set-up needed	Research Line	Deadline	A priori success rate
NIH	Up to 1.5M	100%	Collaborations in the US would increase competitiveness (RO1/UO1)	Research Line 1 and 2 (not leading)	Diversity of calls, published weekly	15-20%
ERC CoG	EUR2M	100%	Academic funding (wait for Paper in Journal X)	Research Line 1 and 2 (leading)	Open for submission	15%
H2020 PM-02	EUR6M	100%	Consortium needed - strengthen with partner X (therapy) and partner Y (liquid biopsy platform)	Research Line 2 and 3 (leading)	April 2017	15-20% after Stage 1
INFRADEV	EUR2-5M	100%	Consortium needed - Development of research infrastructure for omics based tech	Research Line 1 (not leading)	April 2017	10%
IMI	EUR20M	100%	Consortium is being formed – partner with Prof. X	Research Line 2 (not leading)	Stage 2 is being written	50%

- Develop partnerships with company X and research organisation Y
- Introduce step-by-step internal reviewing process





**HOW CAN YOU APPLY THE CANVAS?**

## *Use the canvas to develop your own funding strategy*



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## *Impact of PRO-ACTIV on your organisation*

- Research topics are optimally aligned with funding roadmaps of large funding agencies.
  - Researchers and organisations have better selection mechanisms and are more competitive.
- This leads to higher success rates and reduces the number of inefficient hours.

# ttopstart BV

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## Our services

- Subsidies
- Business development
- Project management

For life sciences and medical technology



patrick@ttopstart.com



andree@ttopstart.com



# Thank you

