



CTI – Start-up and entrepreneurship,
R&D Funding, KTT-Support

CTI projects - How they work

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Thilo Stadelmann, ZHAW Datalab



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Commission for Technology and Innovation CTI

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Doodle®

Not Geri Baudinot

Thilo Stadelmann
Head of ZHAW Datalab
Member of the board of Data+Service

thilo.stadelmann@zhaw.ch
058 934 72 08
www.zhaw.ch/~stdm



datalab
www.zhaw.ch/datalab



Swiss Alliance for
Data-Intensive Services

Three funding areas

Start-up and Entrepreneurship

Training modules,
Coaching,
Start-up Label

Projects

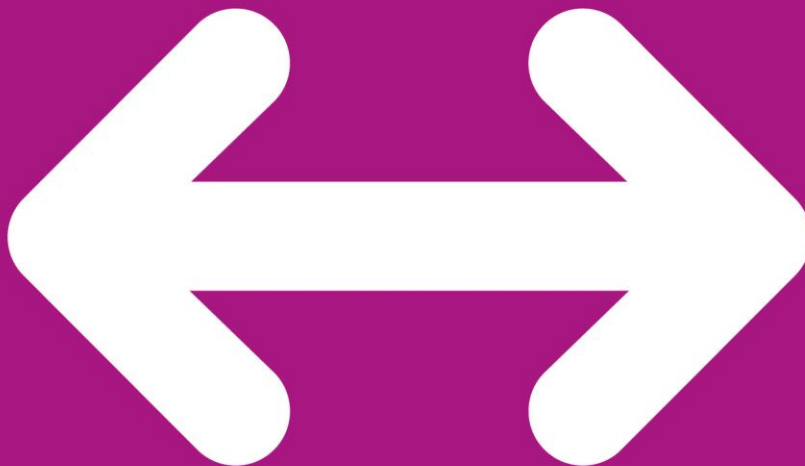
Joint projects
companies - higher
education institutions,
innovation cheque,
innovation voucher

KTT Support

National Thematic
Networks
Innovation mentors
Platforms

KTT-Support

KTT-Support

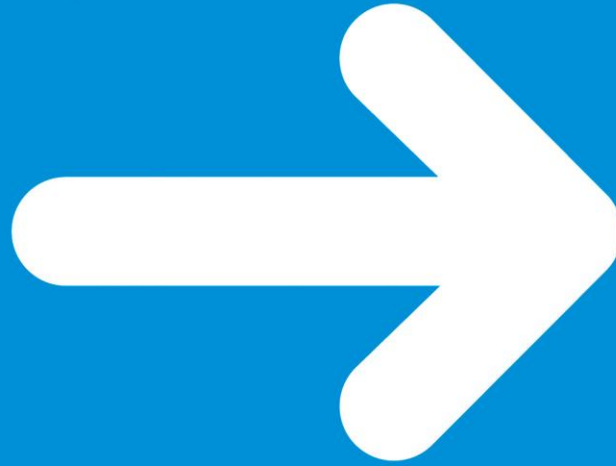


e.g.,



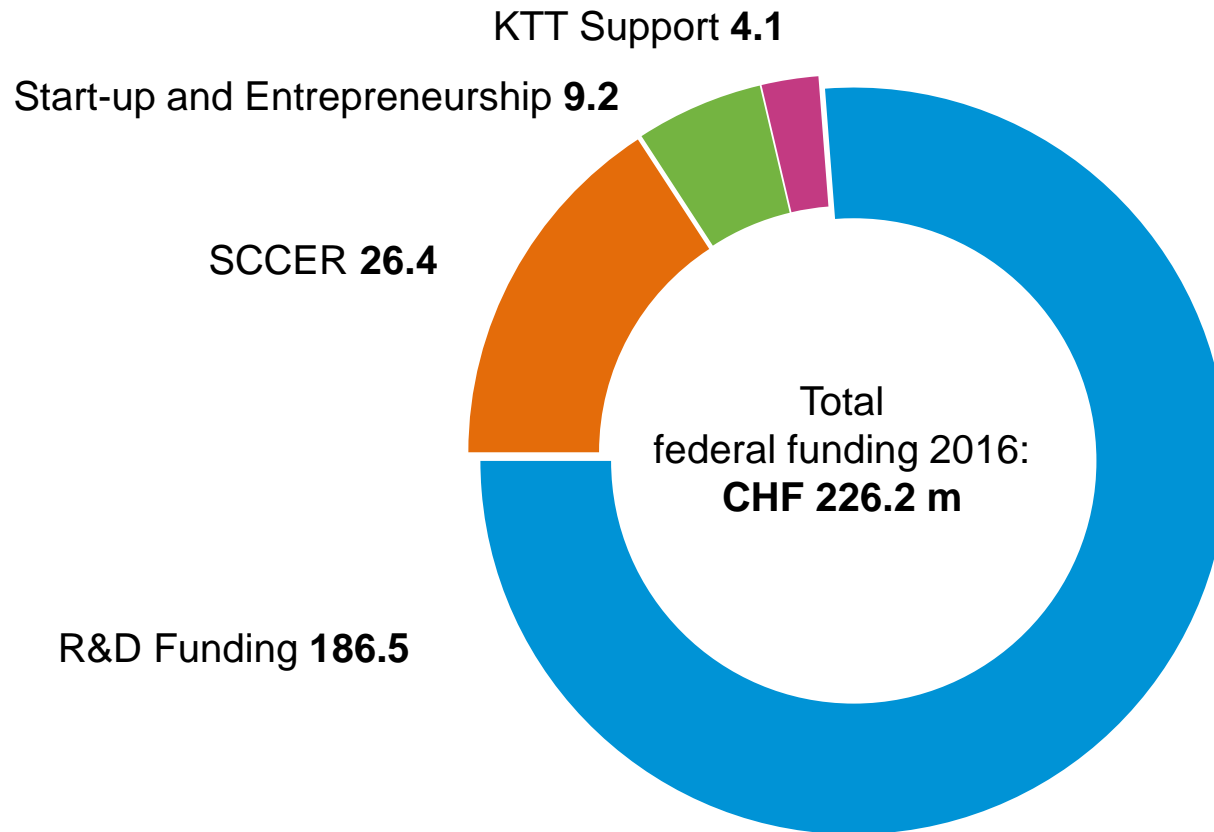
Swiss Alliance for
Data-Intensive Services

R&D Funding

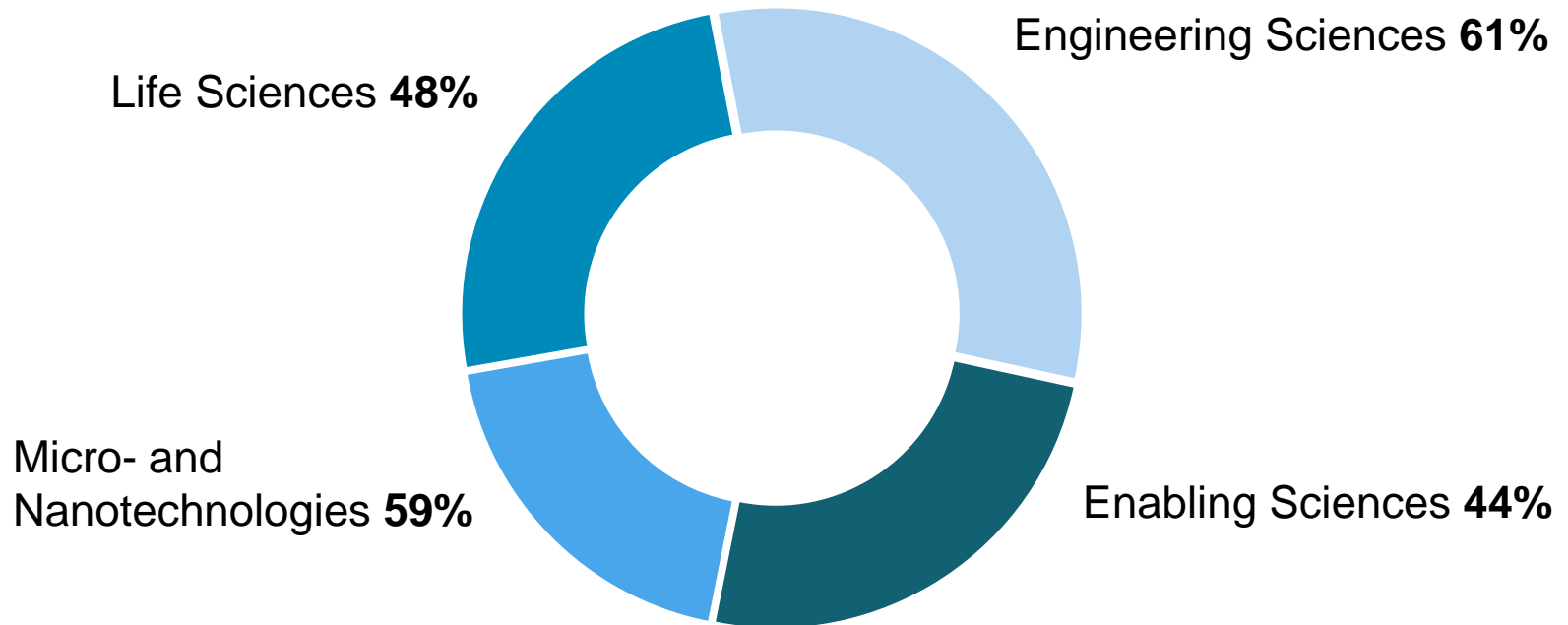


**R&D Project
Promotion**

CTI funding areas



Applications approved by funding area



Total no of projects approved in 2016: **539**

How CTI projects are run?

15% of the funded staff costs is added as overhead

Higher education

- Scientific know-how
- Infrastructure

Max. 50% funding (CTI funds)

Businesses

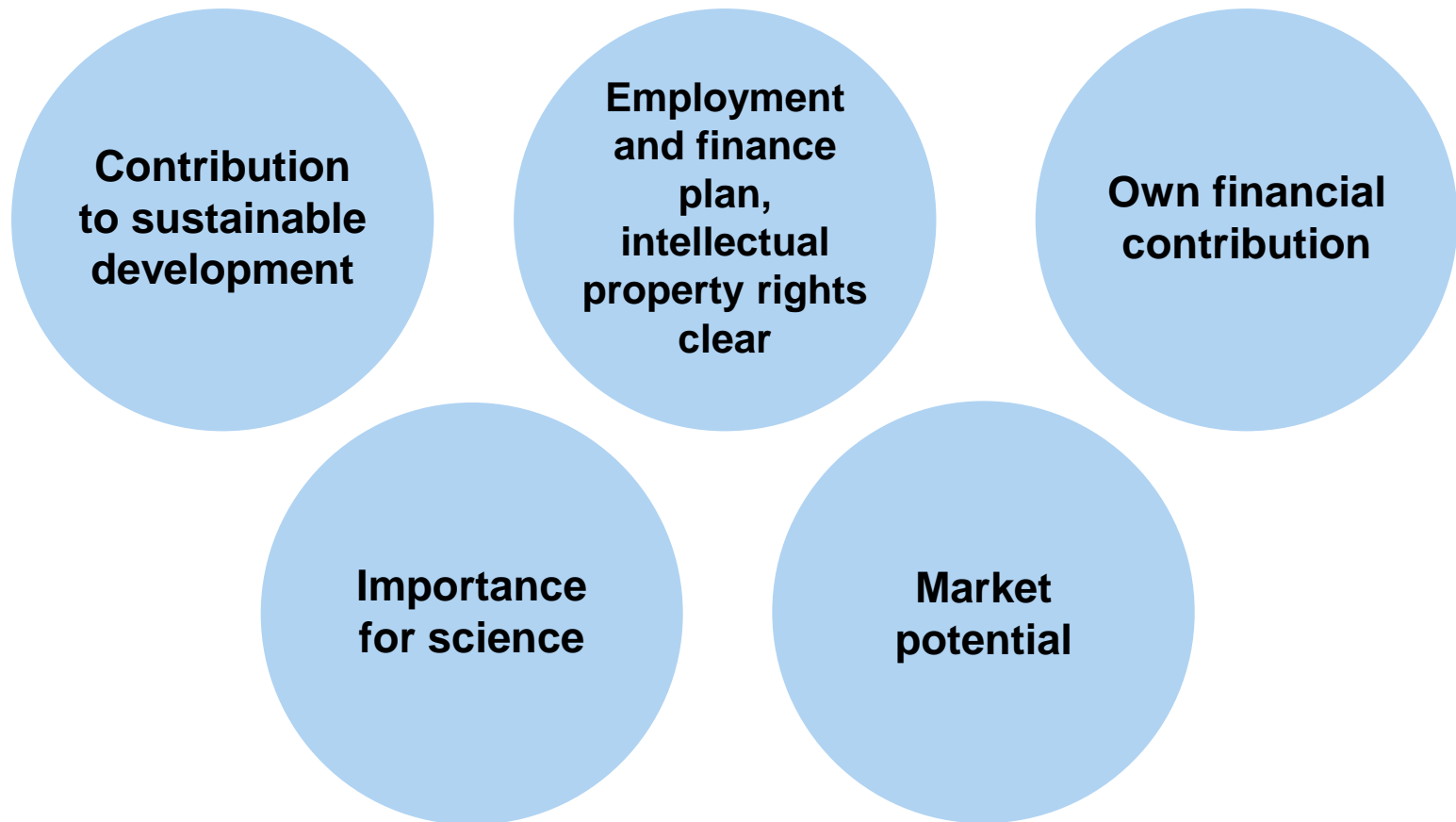
- Entrepreneurial know-how
- Market access, 10% cash contribution

Min. 50% funding

R&D project

Market influence

What are the selection criteria?



Example R&D project

History

- Q1/2014: First contact after a talk
- Until early fall: Several ideation workshops to evaluate pains & ideas
 - Audio segmentation
 - Social media analytics
 - Search
 - Print media segmentation
- Q1/2015: Successful grant acquisition
- Q3/2015-Q3/2017: Agile project management
- Q3/2016: Enhancement by Master students

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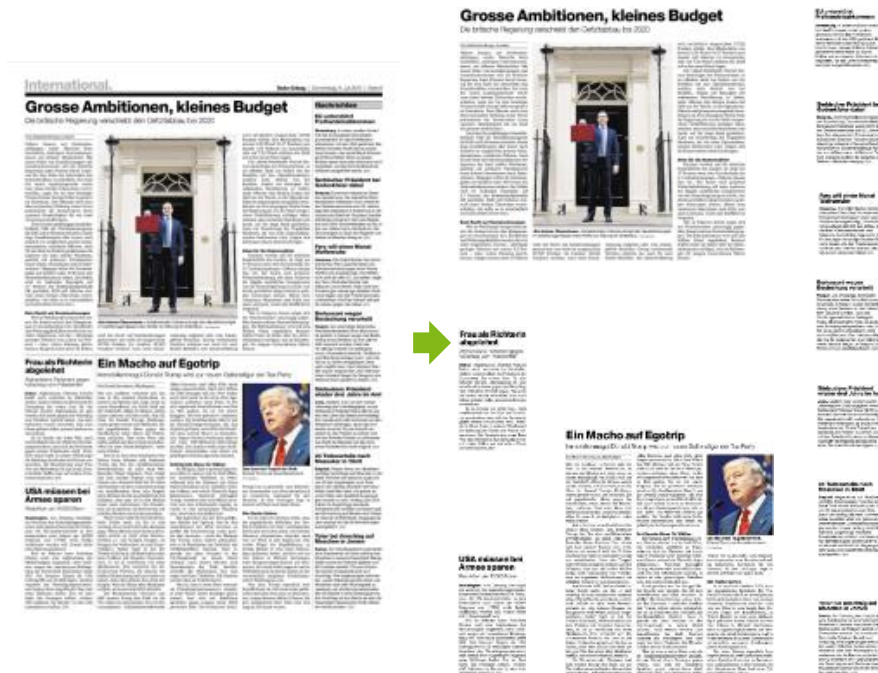
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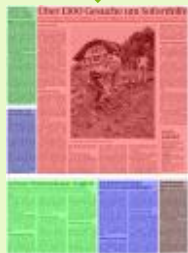
The project: real time print media monitoring

- Automatic article segmentation
- Identification of article parts (title, sub-title, ...)



A 3-fold approach

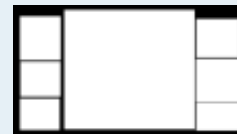
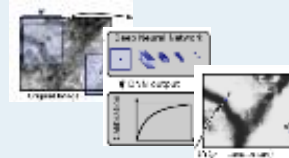
Rule-based



Hardcoded heuristics,
e.g. via size of headline

+

image-based



CNN pixel classifier for
article borders [1]

+

text-based



Similarity of text blocks
via word2vec [2]

[1] D. C. Ciresan, A. Giusti, L. M. Gambardella, und J. Schmidhuber. *Deep neural networks segment neuronal membranes in electron microscopy images*. In *NIPS*, pages 2852–2860, 2012.

[2] T. Mikolov, K. Chen, G. Corrado, und J. Dean. *Efficient Estimation of Word Representations in Vector Space*. In *Proceedings of Workshop at ICLR*, 2013.



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Thank you for listening !

Commission for Technology and Innovation CTI
Innovation Promotion Agency
Einsteinstrasse 2
CH-3003 Bern

www.kti.admin.ch

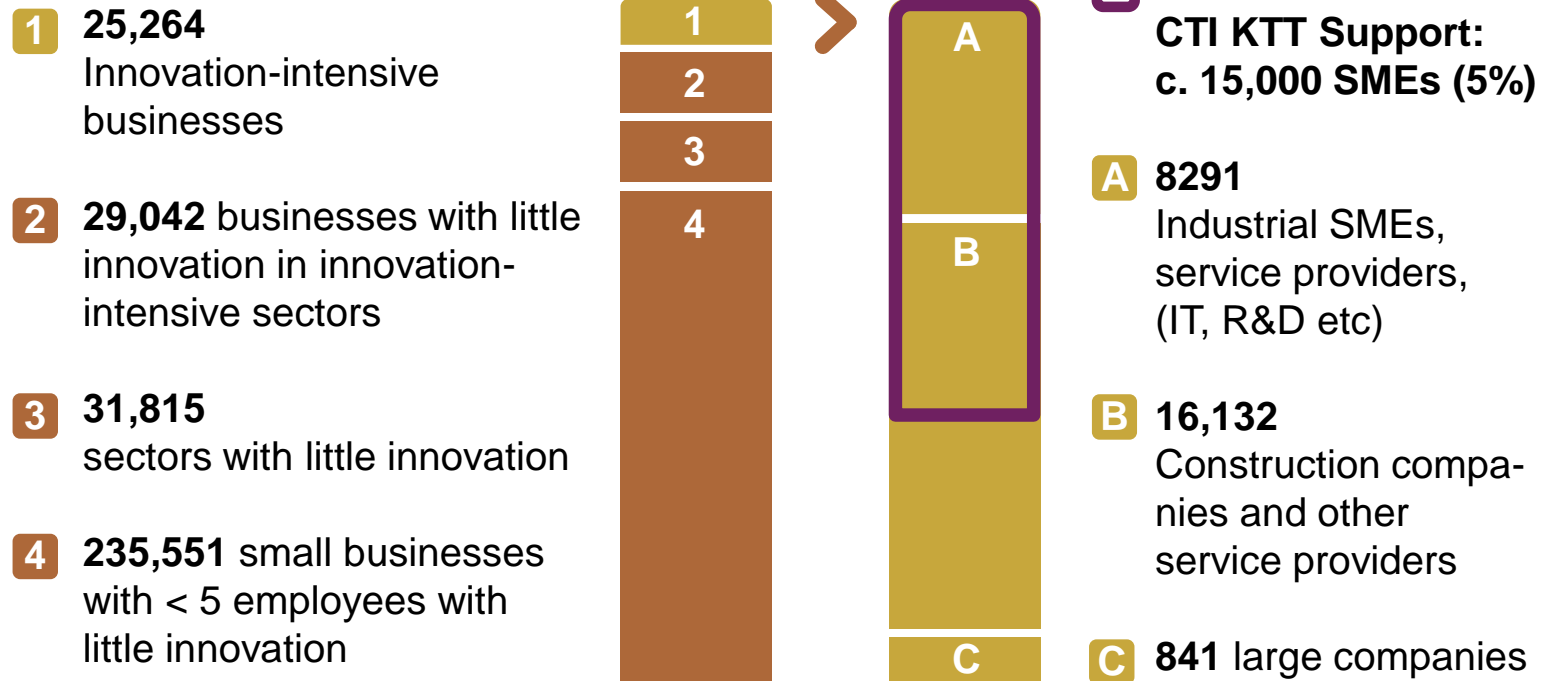


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Focussing on less



Innovation mentor's tasks

1. Contact implementation partners

2. Understand need for innovation

3. Find research partners

4. Indicate funding possibilities

5. Support project applications

A national network of innovation mentors



Frequently funded areas

Engineering Sciences

- Machine engineering
- Productions technologies
- Material technologies
- Mechanical and Thermal Engineering
- Electrical Engineering
- Civil Engineering
- Chemical Engineering
- Environment technologies

Enabling Sciences

- Information and communication technologies
- Business leadership
- Spatial planning, tourism, public administration
- Logistics, integrated production, e-business
- Architecture, design

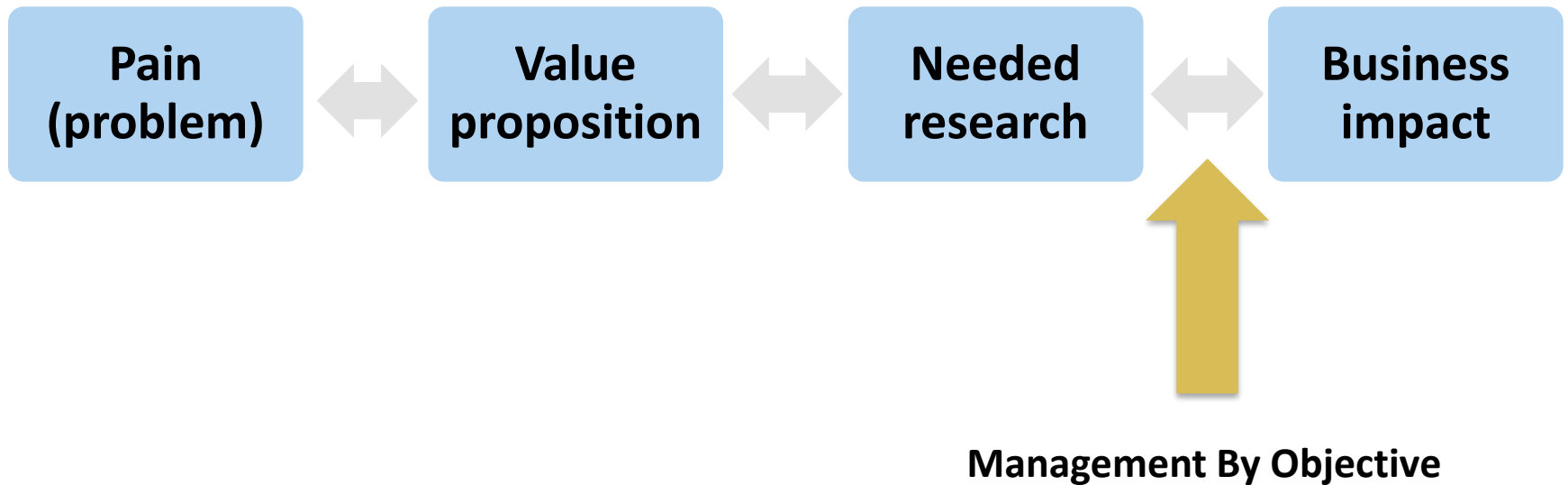
Micro- and Nano-technologies

- Electronics, Optoelectronics, Sensor electronics
- Microsystem technology
- Nanotechnologies
- Miniature systems engineering
- Microelektronics
- Sensors and actuators

Life Sciences

- Medical technology
- Biotechnology, Biochemistry, Pharmacology

What is the project pattern?



CTI brings together businesses and higher education institutions

Science needs

- Market closeness
- Knowledge of market

SMEs need

- Resources for own research
- Contact with higher education
- Access to infrastructure

CTI supports joint research projects between companies and higher education institutions



Higher education institutions
receive funding for applied research

Innovative products make
companies more competitive

How to apply for CTI project funding?

1. Come up with an idea

2. Find a research partner

3. Research partner writes application, company provides details of business goals, implementation concept, benefits (3–4 weeks)

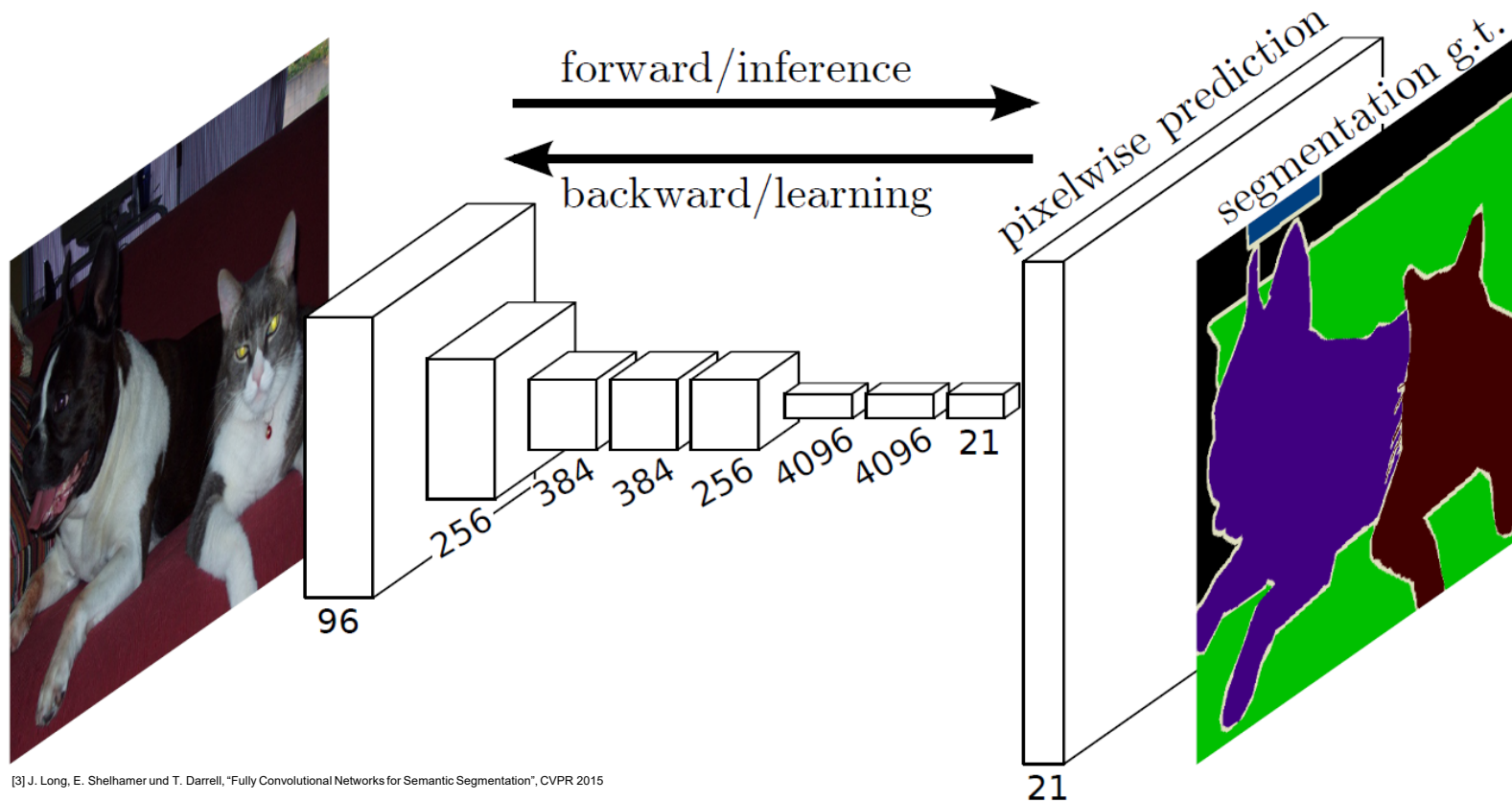
4. Project assessed by CTI experts (6–8 weeks)

5. Contracts, interim and final reports

All info on www.kti.admin.ch

Contacts: mirco.nano.technologies@kti.admin.ch, life.sciences@kti.admin.ch,
enabling.sciences@kti.admin.ch, engineering@kti.admin.ch

Extension: semantic segmentation



[3] J. Long, E. Shelhamer und T. Darrell, "Fully Convolutional Networks for Semantic Segmentation", CVPR 2015

Preliminary results

DER-Score=0.22180142908542302, Completeness-Score=0.1, Segmentation-Time=4492ms



DER-Score=0.025586257849471224, Completeness-Score=1.0, Segmentation-Time=4031ms



DER-Score=0.035989922779227114, Completeness-Score=0.25, Segmentation-Time=3914ms

