



**INNOVATIVE ECONOMY**  
NATIONAL COHESION STRATEGY



MEDICAL  
UNIVERSITY  
OF WARSAW

**EUROPEAN UNION**  
EUROPEAN REGIONAL  
DEVELOPMENT FUND



# Developing effective technology transfer mechanisms in life sciences in Poland



## Centre for Preclinical Research and Technology

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Project co-financed from the European Regional Development Fund within the Innovative Economy Operational Programme

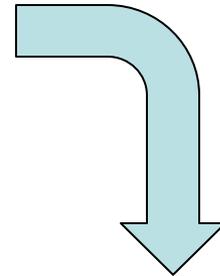
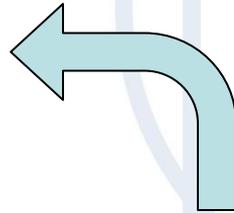


# Presentation outline

- Why technology transfer at the „cluster” level?
- Main barriers to effective TT in Poland and CE
- Approach to overcoming the barriers
- CePT Technology Transfer Platform approach
- Main opportunities and challenges
- Summary: Key factors for successful TT transfer in CE



# The first hydraulics principle





# Critical Mass + Competence = Success

- Pipeline – R&D – **ideas, discoveries, inventions - PUSH**  
Accumulation of top R&D potential (People, tools, funding)
- Faucet – TT – **innovation process**  
Professional support  
Effective TT Model  
Proof of Concept funding
- Drainage – Industry – **implementation, marketing - PULL**  
Market driven implementation



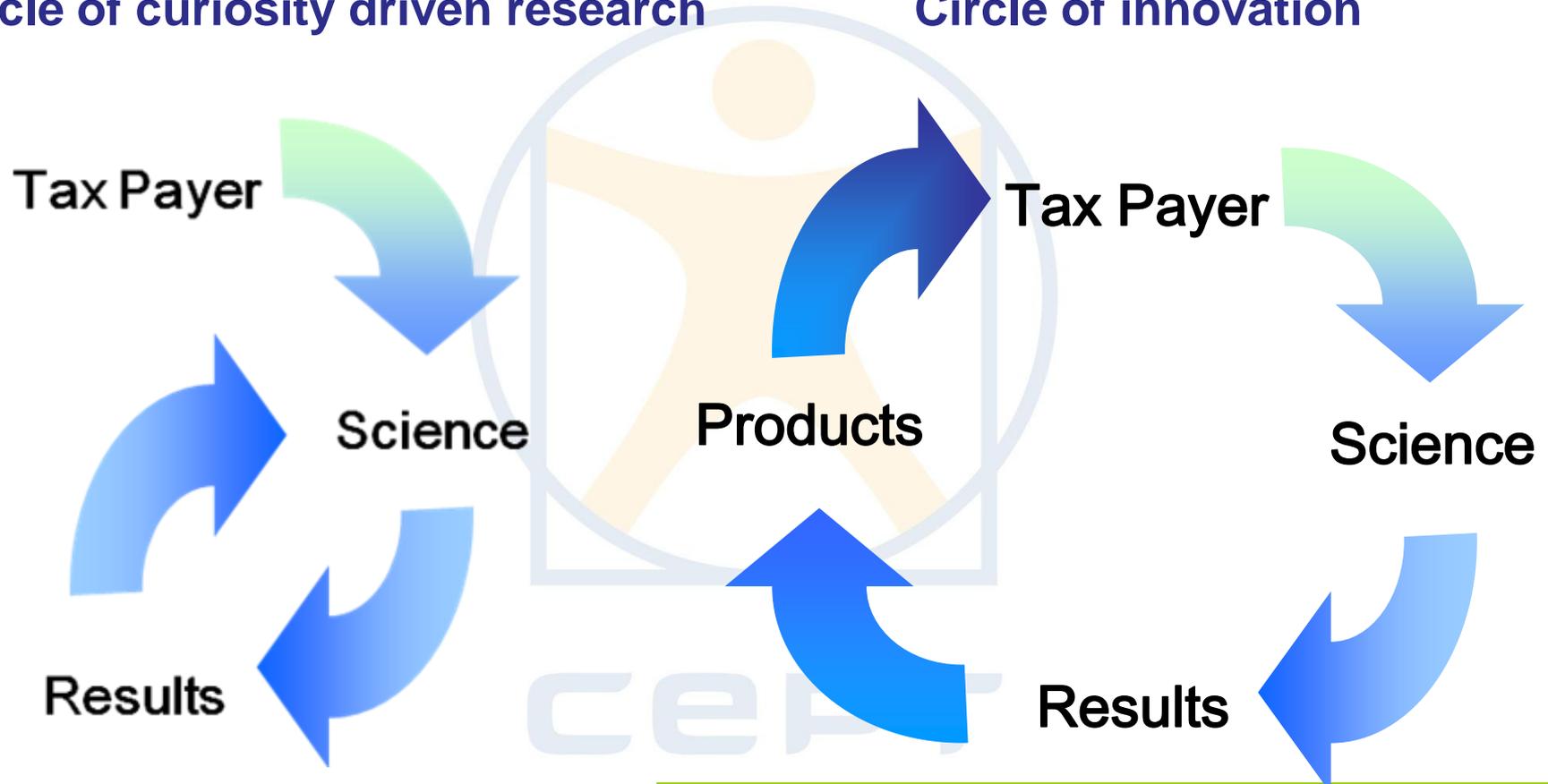
# Main barriers to effective TT in Poland

- Scarce (0.5 – 0.6 GDP) and dispersed financing of research
- Inefficient use of EU Funds to stimulate innovation
- Political (short-term) approach to stimulate innovation
- Legal and tax barriers + lack of proper incentives
- Incorrect approach to TT – lack of accountability
- Low awareness & lack of motivation among the research community
- Unwillingness to cooperate in TT area



## Circle of curiosity driven research

## Circle of innovation



This circle can take months to decades  
but also relies on high quality research !



# Overcoming the barriers – national level

- Funding focused on „clusters of excellence”
- Coherent strategic programmes (different sources of funding)
- Tax and other incentives for Industry
- Transparent merit-based evaluation schemes (international)
- Long-term strategic approach to developing R&D and industry sectors
- More favourable environment for entrepreneurs
- Professionalising management of R&D and TT



# Overcoming the barriers – cluster level

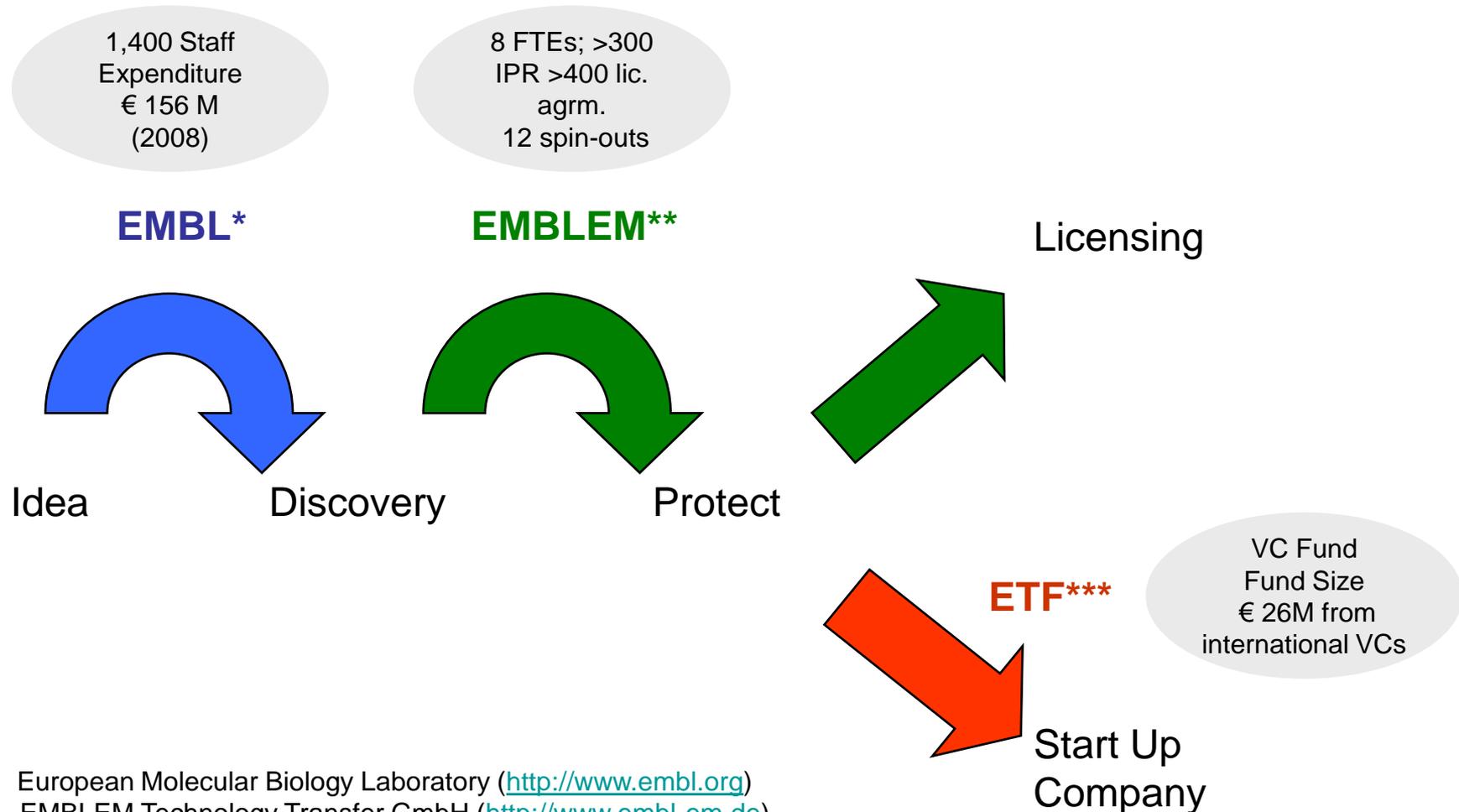
- Communication and interaction
- Entrepreneurial culture
- Incentive schemes
- Proper management of intellectual property
- Academia-industry collaborations
- Translational process („Proof-of-concept” phase funding)
- Licensing
- Creating spin-offs



# Choosing a reference model

- Scale
  - R&D funding level – annual turnover
  - Number of scientific faculty, PhD students
  - Number of international grants, access to RI
- Scope – similar research profile
- Success – demonstrated achievements
- Similar legal and tax environment

# Knowledge Creation & Transfer – EMBL Model



- \* European Molecular Biology Laboratory (<http://www.embl.org>)
- \*\* EMBLEM Technology Transfer GmbH (<http://www.embl-em.de>)
- \*\*\* EMBL Technology Fund (<http://www.embl-ventures.com>)

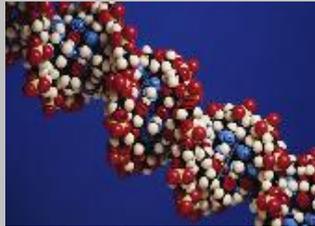
# EMBLEM

## Technology Focus

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### Biotechnology



e.g.

- Enabling Technologies
- Therapeutics
- Diagnostics

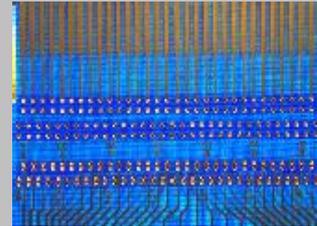
### Software



e.g.

- Bio-Informatics
- Databases
- LIMS

### Nanotechnology



e.g.

- Chip-Technology
- Nanotubes

### Devices

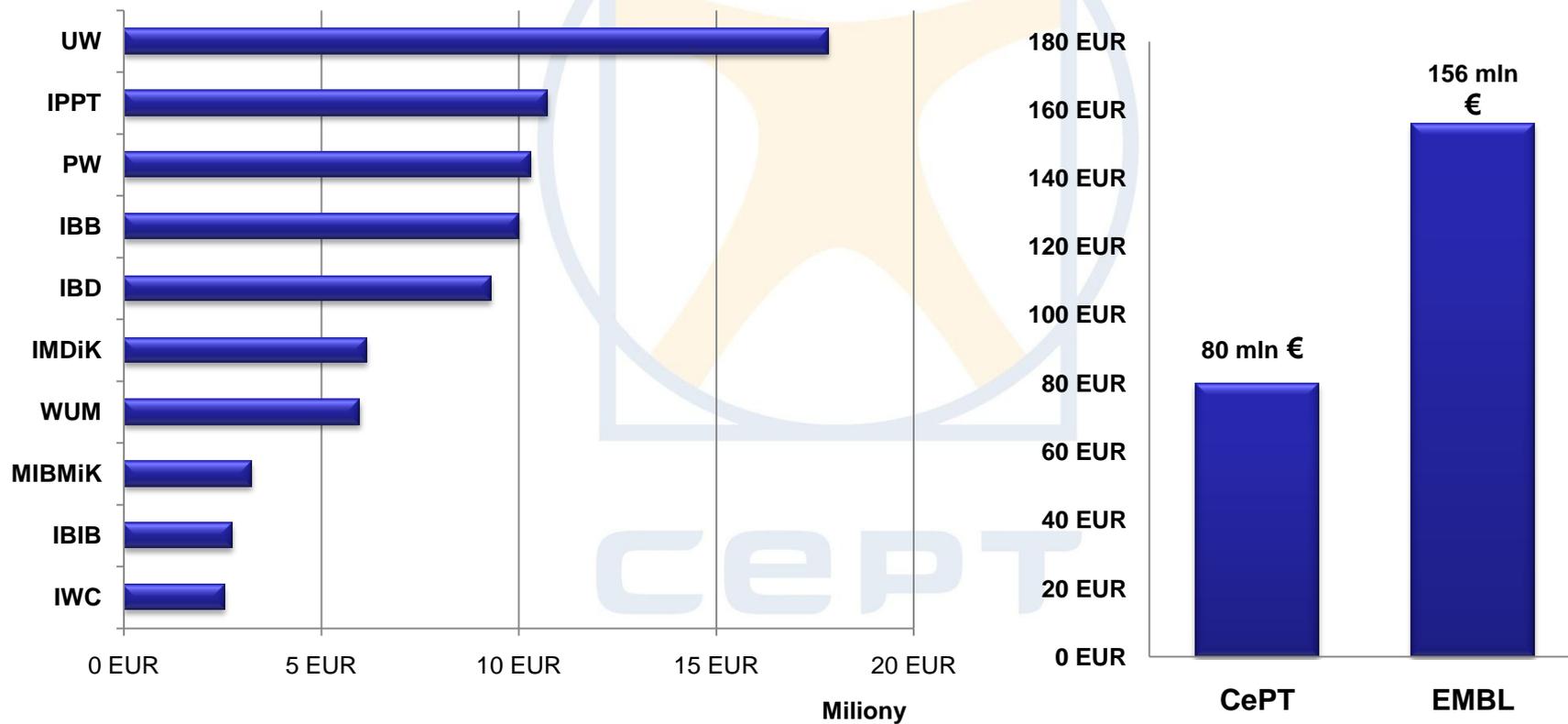


e.g.

- Microscopy
- Robotics



# CePT Consortium 2008 R&D budget



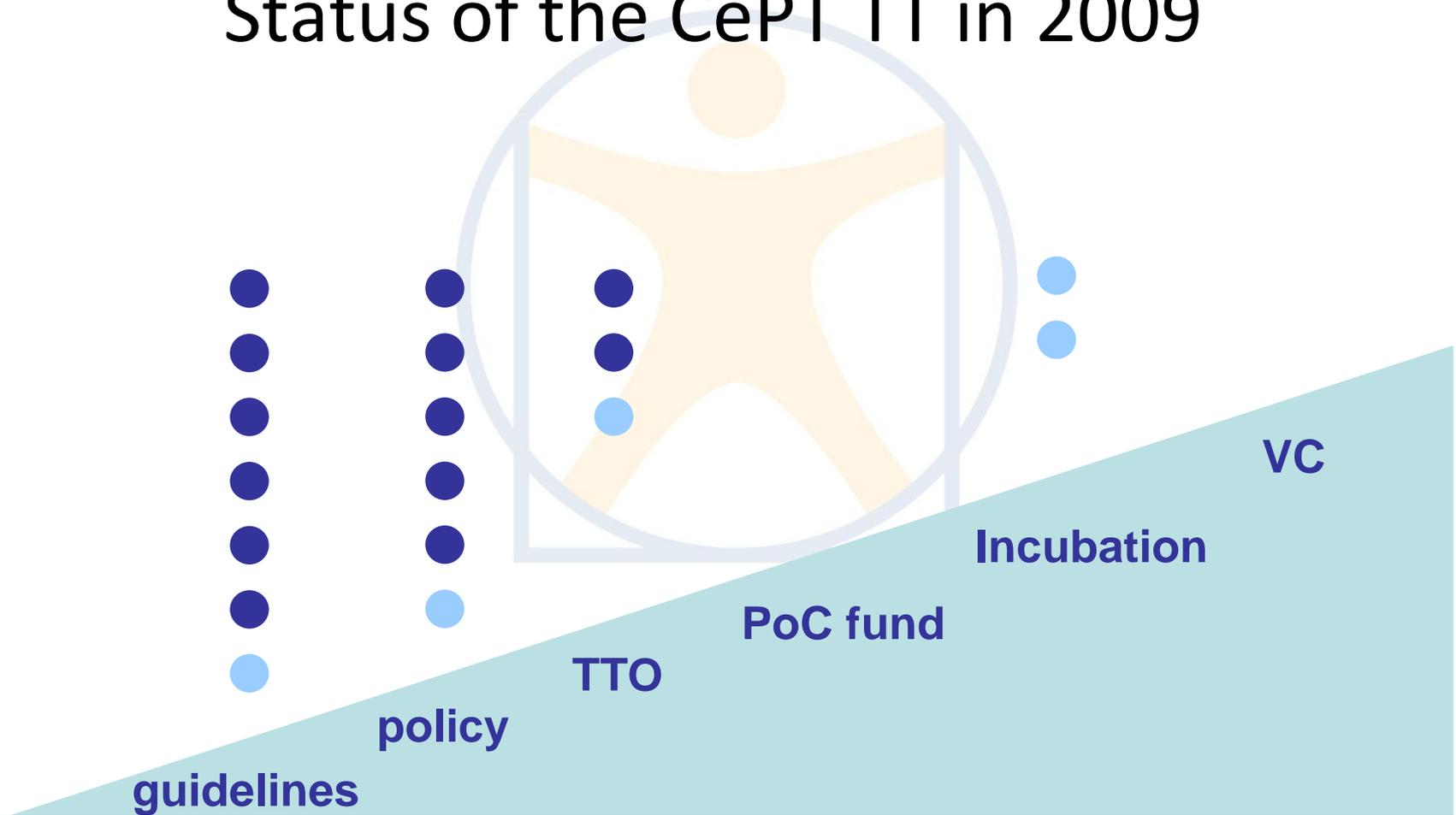


# CePT Technology Transfer Output

Indicator	UOTT UW	CTT PW	OTT -BioCenrum	EMBLEM
<b>Year founded</b>	1998	1999	2010	1999
<b>No. of FTE</b>	11	9	2	8
- <b>Legal background</b>	0	0	N/A	4
- <b>Industry background</b>	4	3	N/A	8
<b>R&amp;D budget managed</b>	42 M €	39 M €	4 M* €	156 M €
<b>Annual TTO budget</b>	0,5 M €	0,3 M €	0,6 M €	4,5 M €
<b>Year of Break-even</b>	N/A	N/A	N/A	2004
<b>Number of patent appl / patents granted</b>	7 (21)**	N/A (10)**	3*	450
<b>Number of licences</b>	N/A	N/A	N/A	400
<b>Licensing revenue</b>	N/A	N/A	N/A	> 20 M €
<b>Contracts with industry</b>	11	80	5*	1200
<b>Number of spin-offs / outs</b>	N/A	N/A	1*	12

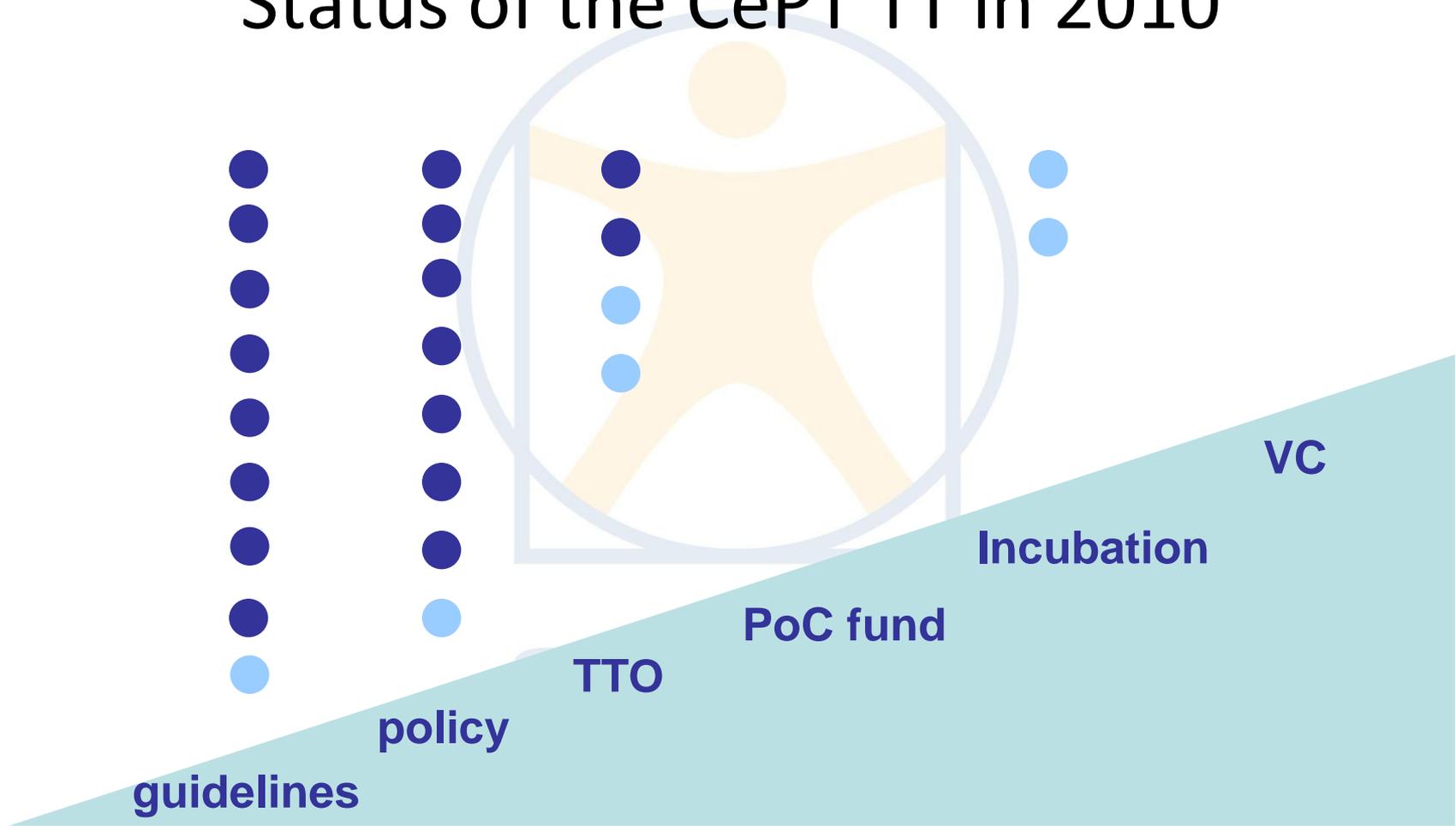


# Status of the CePT TT in 2009





# Status of the CePT TT in 2010





# Opportunities

- Large-scale RI investments create a „**clustering**” opportunity
- Technology Transfer schemes should capitalize on the potential to create **critical mass**
- New legislation provides an opportunity to **spin-out TT units** professionalising the TT process
- **Motivation schemes** for researchers and recruitment of good people are going to be the key factors



# Challenges

- Resistance to change + low risk tolerance
- Lack of leadership support in partner institutions
- Apparent lack of added value
- Recruitment of skilled professionals
- Complexity of the multi-shareholder model
  - Ownership, IPR and financial management
  - Public Procurement Law – access to capital
- Do we have a choice?



# Summary

- Key factors for successful Technology Transfer
  - Scale** - critical mass
  - Structure** - accountability
  - Support** - people
- Road to success: **Education** - **Motivation** - **Support**
- Learn from the best – chose a suitable model



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***Thank you  
for listening***

***Pre-invitation: please mark your calendar***

***Warsaw, September 22-24***

***[www.managinginnovation.pl](http://www.managinginnovation.pl)***



***just do it***