



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

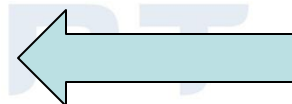
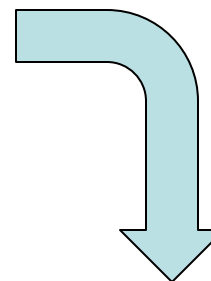
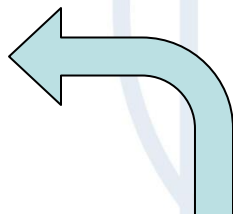
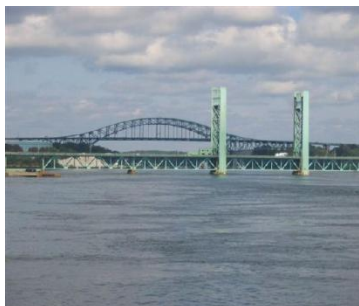


Presentation outline

- 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



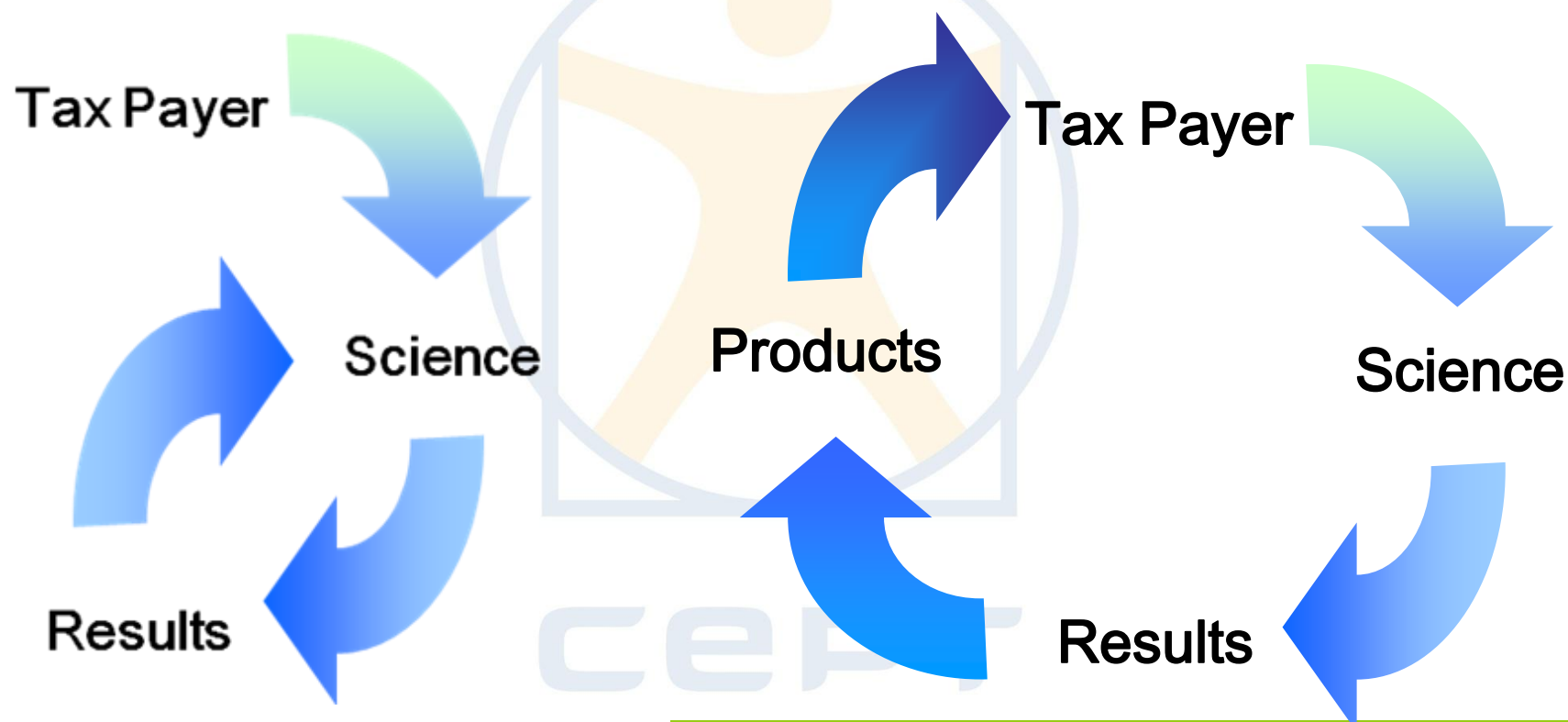
Main barriers to effective TT in Poland

- 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

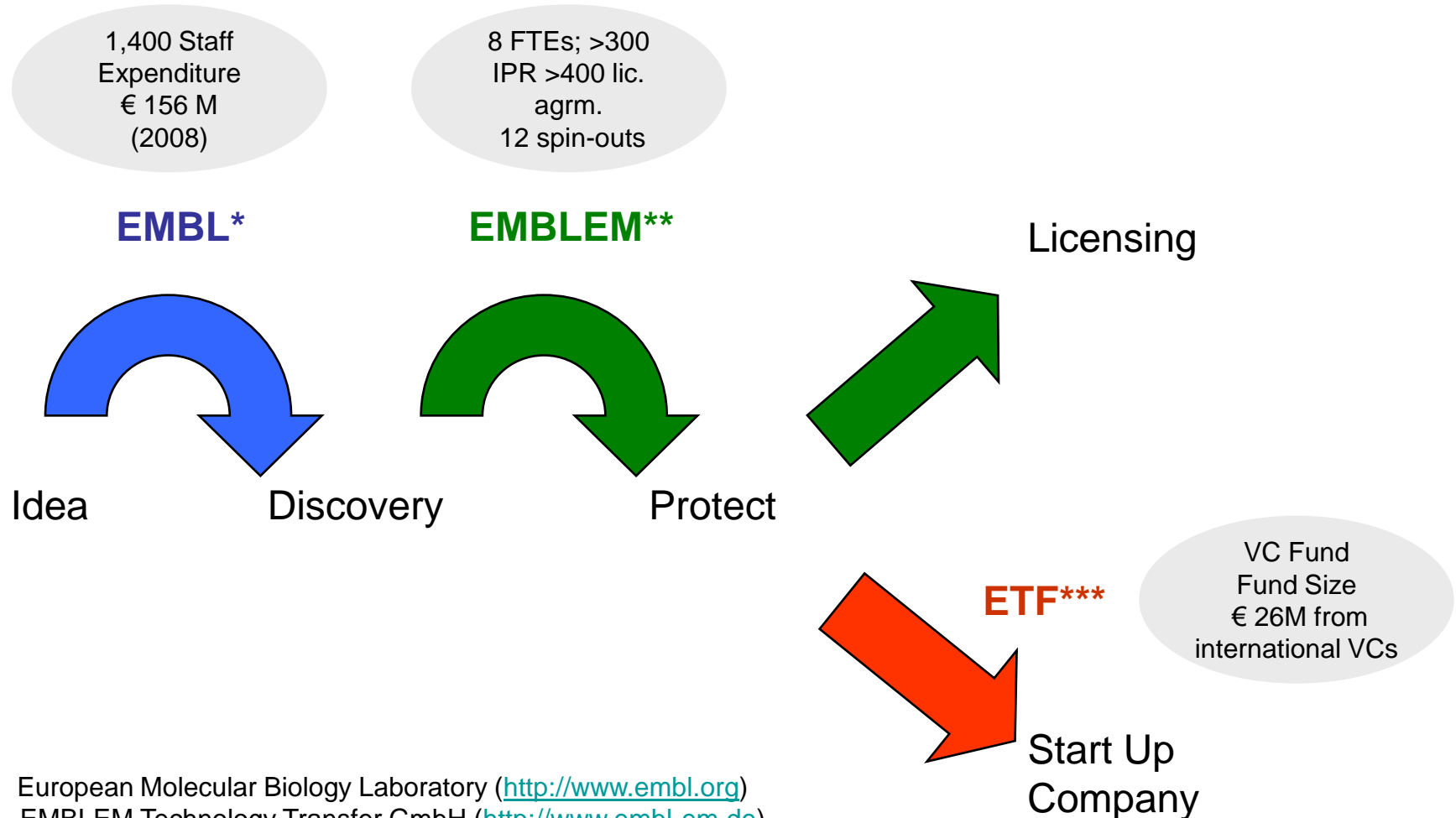
- Communication and interaction
- Entrepreneurial culture
- Incentive schemes
- Proper management of intellectual property
- Academia-industry collaborations
- Translational process („Proof-of-concept” phase funding)
- Licensing
- Creating spin-offs



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>)



Biotechnology



e.g.

- Enabling Technologies
- Therapeutics
- Diagnostics

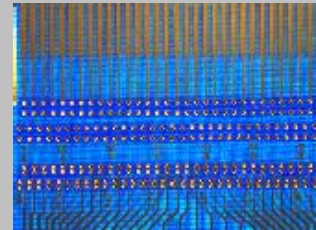
Software



e.g.

- Bio-Informatics
- Databases
- LIMS

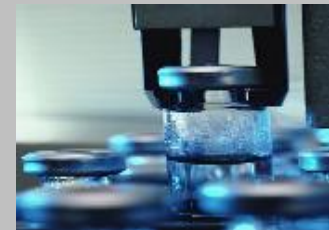
Nanotechnology



e.g.

- Chip-Technology
- Nanotubes

Devices

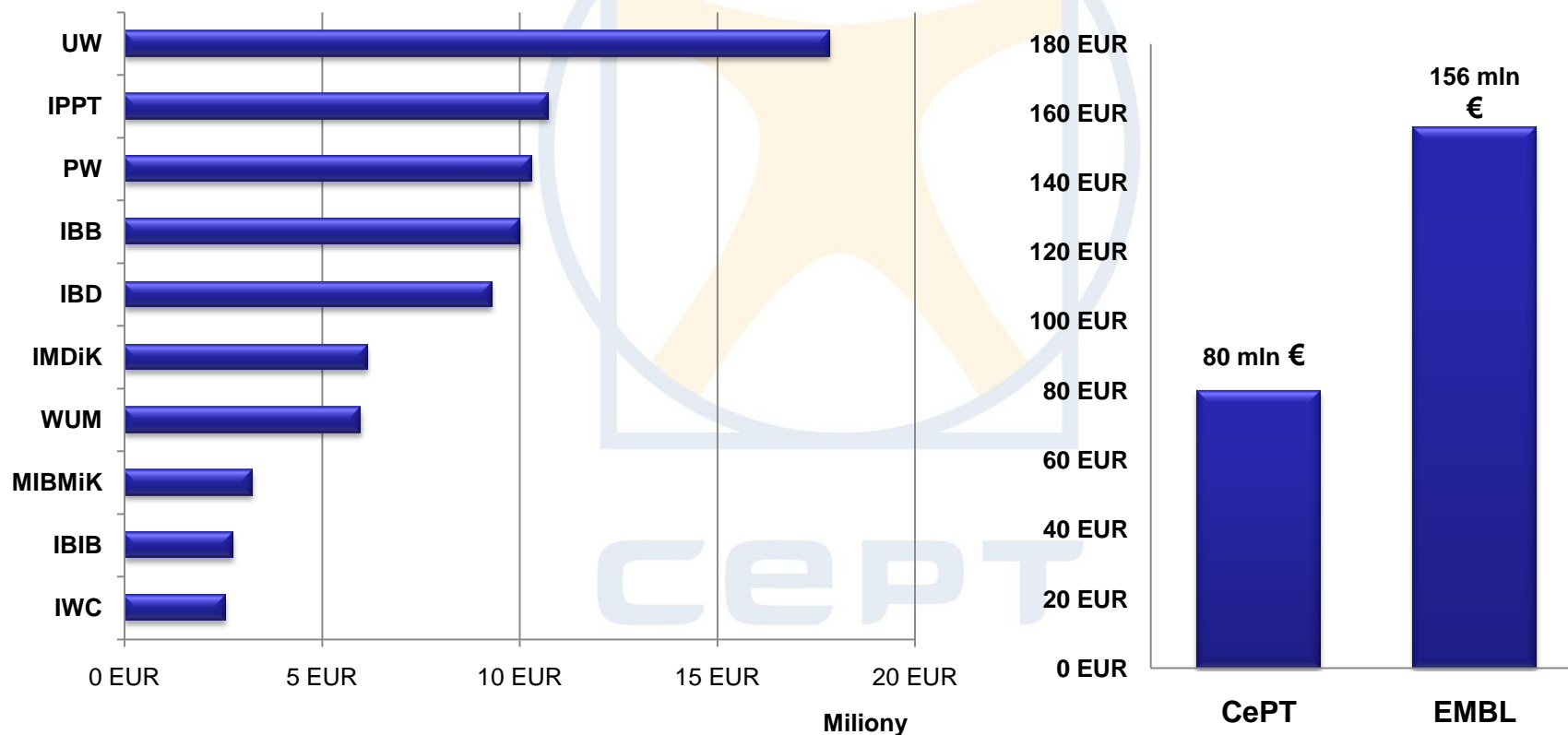


e.g.

- Microscopy
- Robotics



CePT Consortium 2008 R&D budget



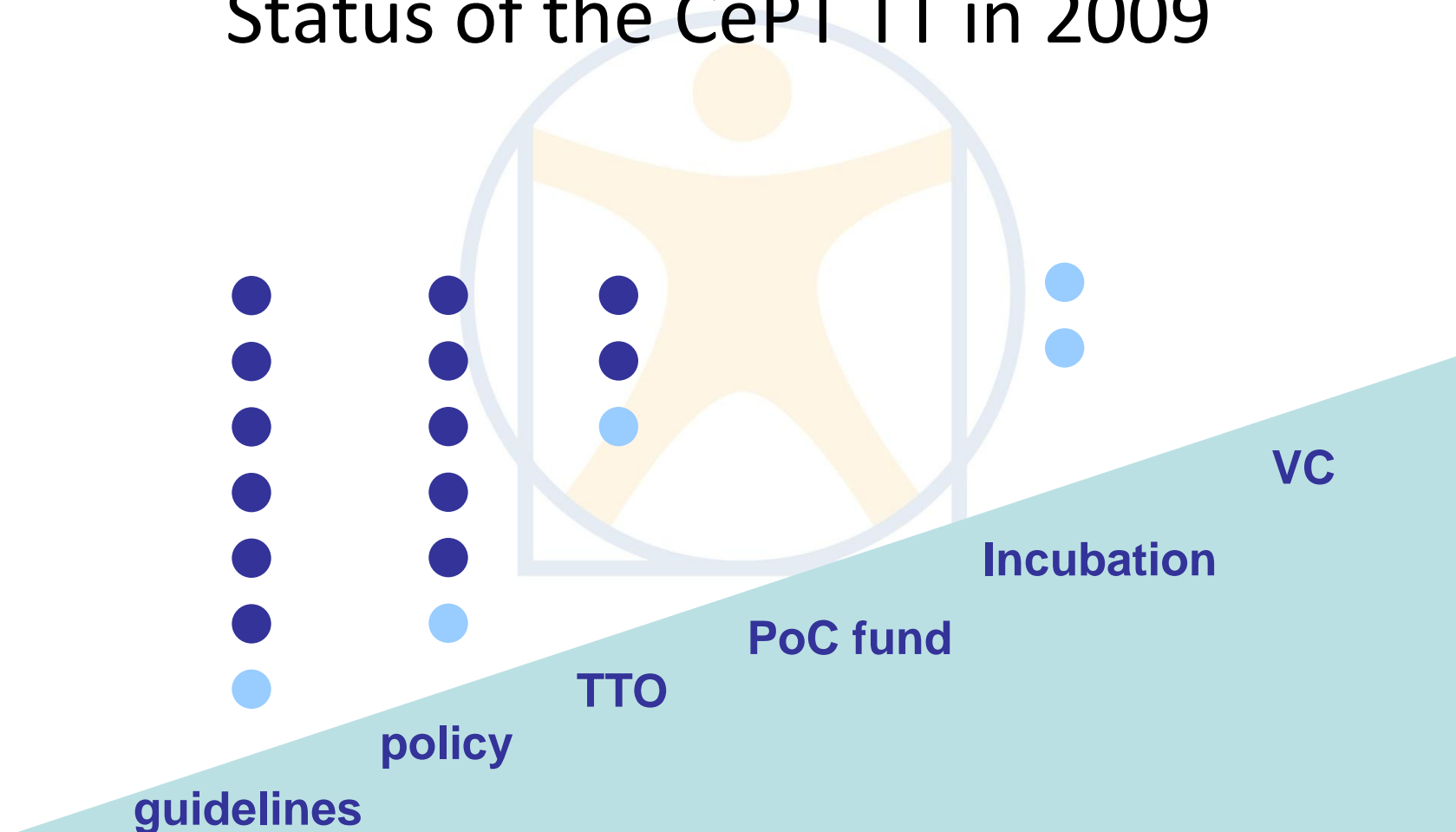


CePT Technology Transfer Output

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

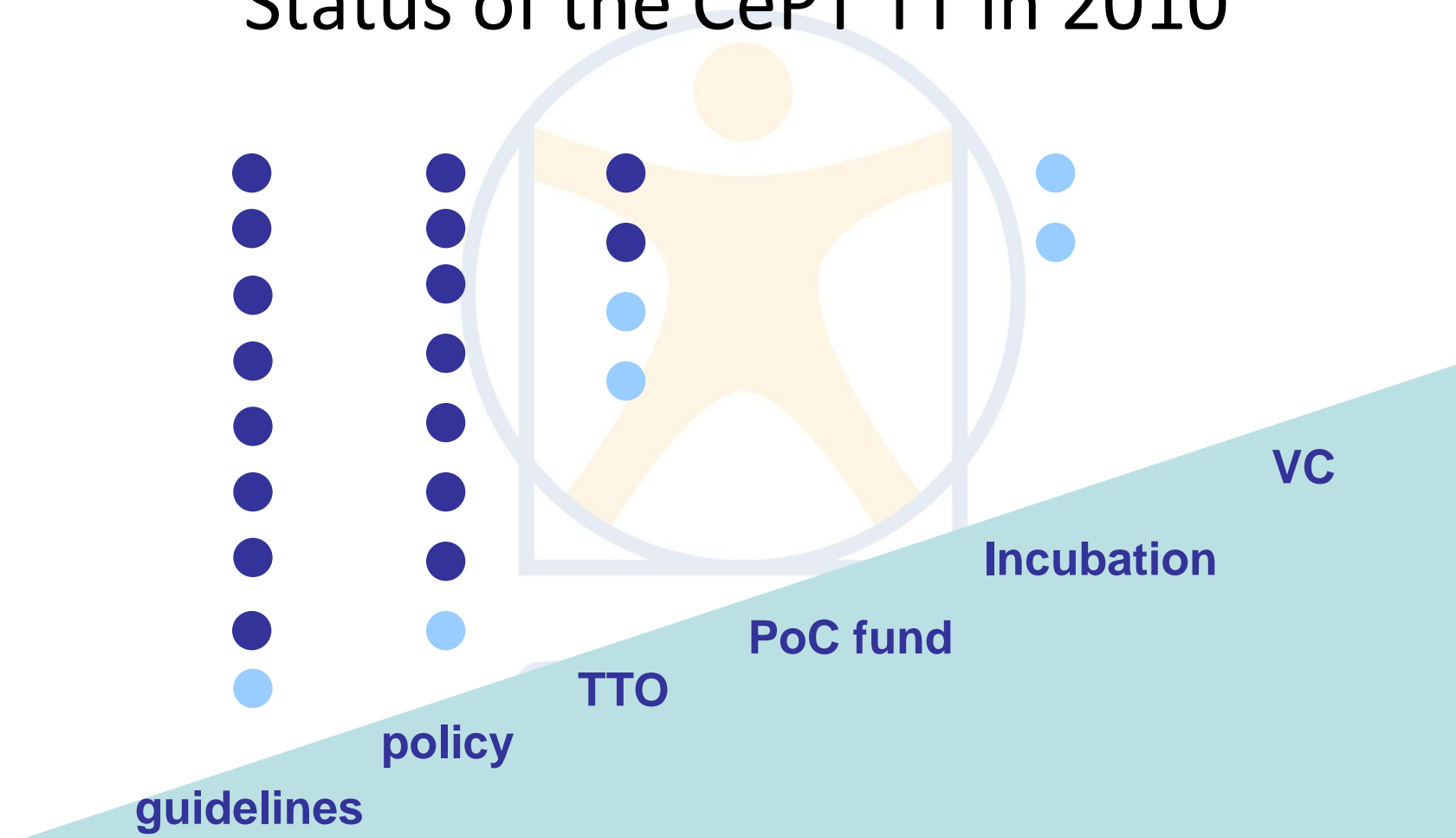


Status of the CePT TT in 2009





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: **E**ducation - **M**otivation - **S**upport
- 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



just do it