

Synergy of projects in H2020 and OPEIC

How to become a European Innovation Champion?

Marcela Příhodová

Financial Instruments and Project Management
Dpt., MIT

Prague 25.5. 2016

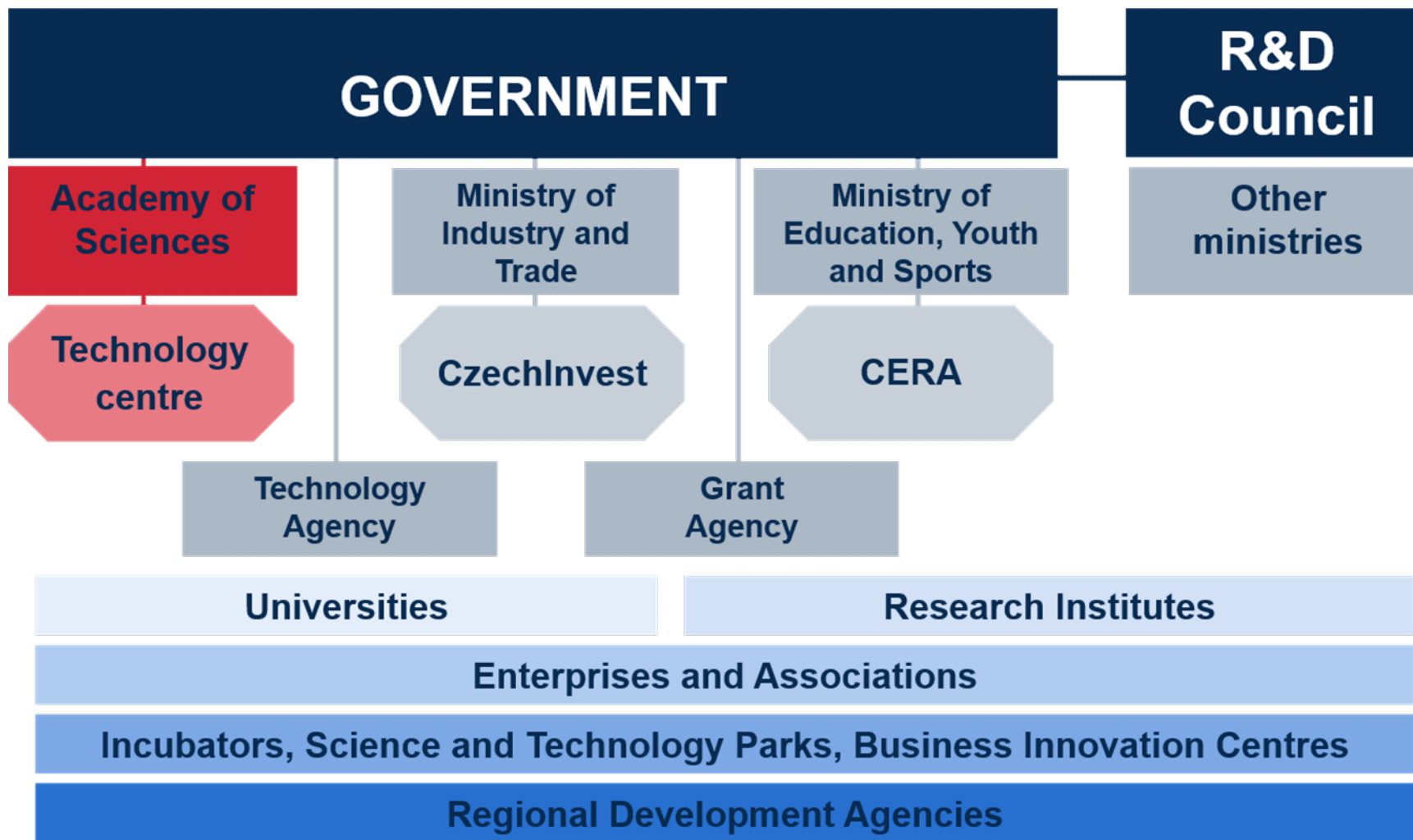


EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE

R&D Support in the Czech Republic



Our experience

OPEI support:

- **Innovation activities** - grants
- **SME's** – grants, financial instruments
- **Environment – services – infrastructure** – STP, Incubators, Clusters, KTP, IPR – Patent, Potential prg.
- **Start up connection** – CzechEcoSystem, CzechAccelerator, Marketing – Fairs & Exhibitions – international market
- **Applied R & D** – EU and national budget – huge pool for financing
- Less application in the **international research cooperation**, esp. in the EU Framework Programme, H2020



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE

Synergy and challenge to the ESIF

Understand specific objectives & features

EU R&D Policy – Horizon 2020	EU Cohesion Policy
Differences	
<p>> Excellence based / Non-territorial approach</p>	<p>> Socio economic development/ Place-based approach</p>
<p>> Direct management - mostly awarded directly to final beneficiaries</p>	<p>> Awarded through shared management to national and regional public intermediaries</p>
<p>> Mostly competitive calls addressed mainly to international groupings through peer-review based on excellence criteria</p>	<p>> Mostly non-competitive attribution addressed to regional players (single beneficiaries) based on strategic planning negotiation</p>
<p>> Bi-annual work programmes</p>	<p>> 7-years OPs</p>
Complementarities	
<p>> Horizon 2020 focuses on tackling major societal challenges, maximising the competitiveness impact of research and innovation and raising and spreading levels of excellence in the research base (widening) + single beneficiary (SME) + simplification</p>	<p>> Cohesion policy will maximise the competitiveness impact of research and innovation acting as a capacity building instrument via smart specialisation, based on learning mechanisms and critical skills in regions and Member States + interregional possibilities.</p>



Synergy and challenge to the ESIF

Guide ['Enabling synergies between European Structural and Investment Funds, Horizon 2020 and other research, innovation and competitiveness-related Union programmes Guidance for policy-makers and implementing bodies,](#)

- Sequential funding from different sources:
 - Upstream sequential combination: ESIF investment that enables Horizon 2020 participation
 - Downstream sequential combination: Horizon 2020 or FP project results are used or further developed with subsequent ESIF investments
- Parallel funding (Parallel use of funds in separate projects): ESIF and Horizon 2020 funding are running in parallel and are mutually supportive that complement each other;
- Alternative funding (through ESIF): Reorientation of FP7/Horizon 2020 projects that were positively evaluated, shortlisted, but not funded given the limited budget, towards SF/ESIF.
- Simultaneous/cumulative funding that brings together Horizon2020 and ESIF funds in the same project aiming at achieving greater impact and efficiency (i.e. ESIF used for costs non-eligible under Horizon 2020. This new combination is possible under the new regulation of Horizon 2020 (Art. 37 Rules for Participation), provided that the grants do not cover the same cost items.



Business

manufacturing and services, primary sectors, financial sector, creative industries, social sector, large firms, SMEs, young entrepreneurs, students with business ideas, cluster and business organisations, etc.

Research

public and private research bodies, universities, science and technology parks, NCPs, Technology transfer offices, Horizon2020 committee members, regional ESFRI roadmaps etc.

Entrepreneurial in **composition** and **spirit**: (risk-taking, broader view beyond boundaries ...)

Different departments, if relevant at different government levels, agencies e.g. for regional development, business advice, public procurement offices, incubators, etc.

Public administration

NGOs and citizens' initiatives related to societal challenges for which innovative solutions would be helpful, consumers associations, Talents! etc.

Civil society / Users

Synergies with Horizon2020 inbuilt in RIS³ via the Entrepreneurial Discovery Process:

Authorities directly concerned by Horizon 2020 shall be closely associated with EDP.

RIS³s shall include:

(a) "Up-stream actions" to prepare regional R&I players to participate in Horizon 2020

(b) "Down-stream actions" to provide the means to exploit and diffuse R&I results, stemming from Horizon 2020"

See [Common Provisions Regulation for ESI funds No 1303/13](#) annex 1, point 4.3.2.

See also annex III of RIS3 Guide: <http://s3platform.jrc.ec.europa.eu/s3pguide>



Priority axis of OPEIC

The OP contains **four factually-oriented priorities and one priority axis for technical assistance**

PA 1 R&D for innovation growth

- 1.35 bil. €
- 31 % of allocation

PA 2 Development of enterprise and competitiveness in small and medium-sized enterprises

- 0.89 bil. €
- 21 % of allocation

PA 3 Efficient energy management, development of energy infrastructure and renewable energy sources, support for the introduction of new technologies in the management of energy and secondary raw materials

- 1.22 bil. €
- 28 % of allocation

PA 4 Development of high-speed internet access networks and information and communications technology

- 0.74 bil. €
- 17 % of allocation



Synergies to OPEIC

→ What is missing in the Czech Republic?

- international cooperation with European Technology platforms
- intensive participation in the key R&D councils, boards (Access to Risk Finance)
- better activity in the DGs in ERA Network (not only R&D, but industrial, applied)

Challenge for better coordination of capacities:

- In cooperation with MEYS in the H2020 activities
- Looking for the best practice in synergies H2020/OPEIC, Fraunhofer Inst., ISERD, TEKES
- Different methodology (ex ante, ex post – financing)
- State Aid, processing, exclusion for SoE initiative? DG's approach – Regio, R&D, Compet, Growth, etc.
- Bonification of projects – evaluation criteria
- COSME, EEN cooperation, innovation platforms, KETs, entrepreneurial discovery proces with using already built capacities



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE

New Approach and Synergy OPEIC/SME In

→ New head of unit – H2020 support of projects close to OPEIC

→ Launch strategy – SME Instrument/Seal of Excellence:

1 stage SMEI – feasibility study in Proof of Concept prg. – grant/ex post consideration about special call (under DG Regio discussion)

2 stage SMEI– many activities (bonification in different OPEIC prg or special call or PoC)

3 stage SMEI- investment pool – NIF (PoC) or EU investment of risk capital fund

Further focusing in H2020 -

Clean Sky2 – MoU preparation and stakeholder meetings

Fast Track to Innovation

LIFEothers ?how to solve consortia?



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE

EU Grant of
€ 50,000
(lump sum)

EU Grant of
€ 500,000 to 2.5
million (indicative
amount)

01

Technical and market feasibility
assessment of technical feasibility and market potential of new ideas




Elaborated Business Plan

02

Demonstration activities
developing, testing, prototyping, piloting innovative processes, products and services




Commercialisable Output

03

Commercialisation
support measures toward commercialising SMEs' innovative products




Market Success

01

02

03


DEMO (TRL 6)
Idea > Business Plan

- **No grant, but...**
- Coaching support
- Market and Investment Readiness support
- Promotion / networking with financiers & clients
- ... and more indirect support!



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



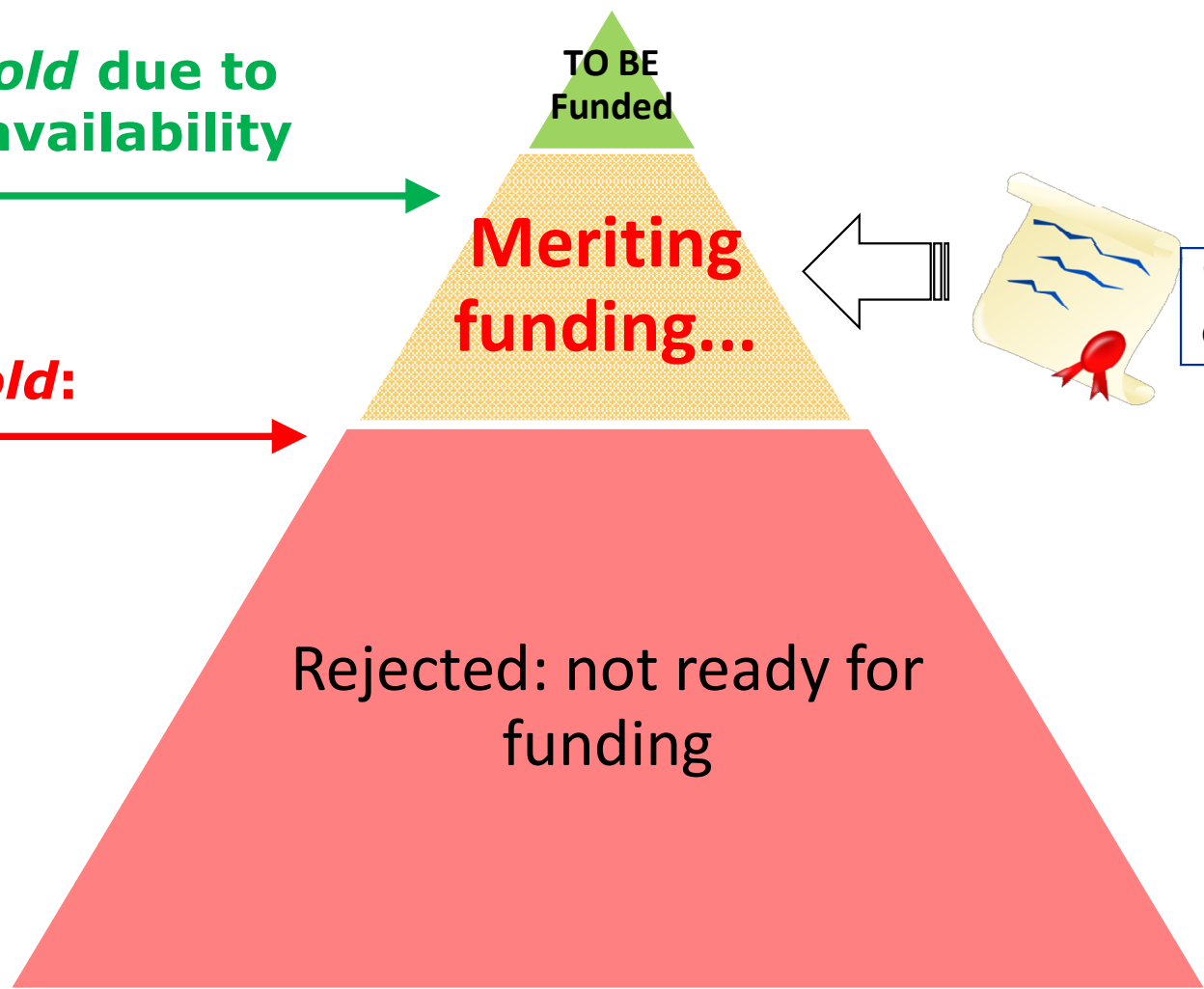
MINISTRY OF
INDUSTRY AND TRADE

SME Instrument STEP 1 - IDENTIFY THE PROJECTS ABOVE THRESHOLD BUT NOT FUNDED WHICH ARE CONSIDERED SUITABLE FOR A SEAL OF EXCELLENCE (SoE)

Funding threshold due to H2020 budget availability



Quality threshold:



SME Instrument STEP 2.

**PROVIDE THE APPLICANTS ABOVE THRESHOLD WITH
A SEAL OF EXCELLENCE CERTIFICATE ANNEXED TO THE REJECTION LETTER**

It contains:

- a standard text explaining that the proposal was subject to strict peer review and positively assessed
- the necessary data for identifying the proposal and the applicant (proposal number, acronym, title, applicant PIC, legal name, legal address)
- document validity to be checked through Commission services/agency



The accompanying letter will indicate that:

- the certificate can be used to get in contact with other funding bodies to explore other funding possibilities, as for instance from national/regional Managing Authorities of the Structural Funds



Example of specific project - OPEI

Contipro Biotech s.r.o.: Establishment of the production of technically new medical device for wound dressing and fully biodegradable fibres and textiles

- ➔ **The aim of the project is the introduction of two technically new products and one new process:**
 - ▶ device for dressing of area, chronic, infected wounds in the first stage of healing with the strong anti-microbial effects given by a synthetic antiseptic
 - ▶ fibrous materials from a fully biocompatible and completely biodegradable polymers that are appropriate for the internal surgical applications, where they shall primarily serve for mechanical support in the beginning stages of the healing of the post-op wounds
 - ▶ new process is the process of preparation of the biodegradable fibres that has been established under own private R&D



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE

Contipro Pharma a.s. – H2020

- ➔ **Call: H2020-NMP-2014-two-stage** Topic: NMP-10-2014
- ➔ **Title: Diabetes Reversing Implants with enhanced Viability and long-term Efficacy**

- ➔ Consortium of 12 beneficiaries: Royal College of Surgeons in Ireland, Dublin City University, Eberhard Karls University Tuebingen, Utrecht University, University College Dublin, Biomedical Research Networking Center in Bioengineering, Biomaterials and Nanomedicine (Spain), Abiel S.r.l. (Italy), Explora Biotech S.r.l. (Italy), InnoCore Pharmaceuticals (Netherlands), Boston Scientific Ireland Ltd, INNOVA S.p.A. (Italy)

- ➔ The aim of the project is to develop a suite of functional biomaterials (β -Gel) for long term clinical efficacy of transplanted pancreatic islets.
 - Development of a suitable hyaluronic acid derivative (leader Contipro)
 - Setting of the process of HA-based hydrogel formation (leader Contipro)
 - Incorporation of pancreatic islets (β -Shell) into the hydrogel
 - Development of a specialised minimally invasive delivery catheter (β -Cath)
 - Scale-up of all processes (participation of Contipro)
 - Pre-clinical testing up to GLP animal assessment with the ultimate objective of having the Investigational Medicinal Product Dossier



Example of specific project

➔ CLUTEX - Cluster of Technical Textiles: CORNET – anti-dekubitus

- ➔ The joint research and development of prototype multi-layer textile materials within the international cooperation project with German partners (an association of textile companies and a research organization). It aims to produce new designs based on distance (3D) structures and their combinations with an aim to reduce the risk of pressure ulcers (bedsores) – decubitus ulcers.
 - ▶ unique properties of the new textile material (reducing the risk of developing these wounds and promoting their healing, ventilation function and protective barrier
 - ▶ delivered through combining the functional properties of new textile products (using production technologies such as weaving, knitting, injection and creation of non-woven elements) and functionalizing them through additivation and final modifications, including combinations of multilayer structures.



About CLUTEX

- ➔ was founded in 2006
- ➔ 2004-2006 mapping of a potential cluster – very important step
- ➔ 17 founding members (companies, FT TUL, ATOK, research institutions)
- ➔ join together Czech companies interested in technical textile innovations

Main Areas of CLUTEX Activities:

- ➔ improve cooperation of companies in the cluster
- ➔ deepen cooperation of manufacturers and research institutions
- ➔ provide resources for pilot developments and research projects
- ➔ establish contacts and cooperation with foreign clusters and institutions



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE

CLUTEX projects examples

LED-UV-curing systems for textiles and composites

➡ Czech, Belgian and German partners

Development of sustainable textiles against bugs

▶ Application of biocids into textiles with tick-repelling effects

Promotion of technical textiles in the construction sector

▶ Providing SME with information and tools enabling them to use state-of-the art textiles successfully for construction

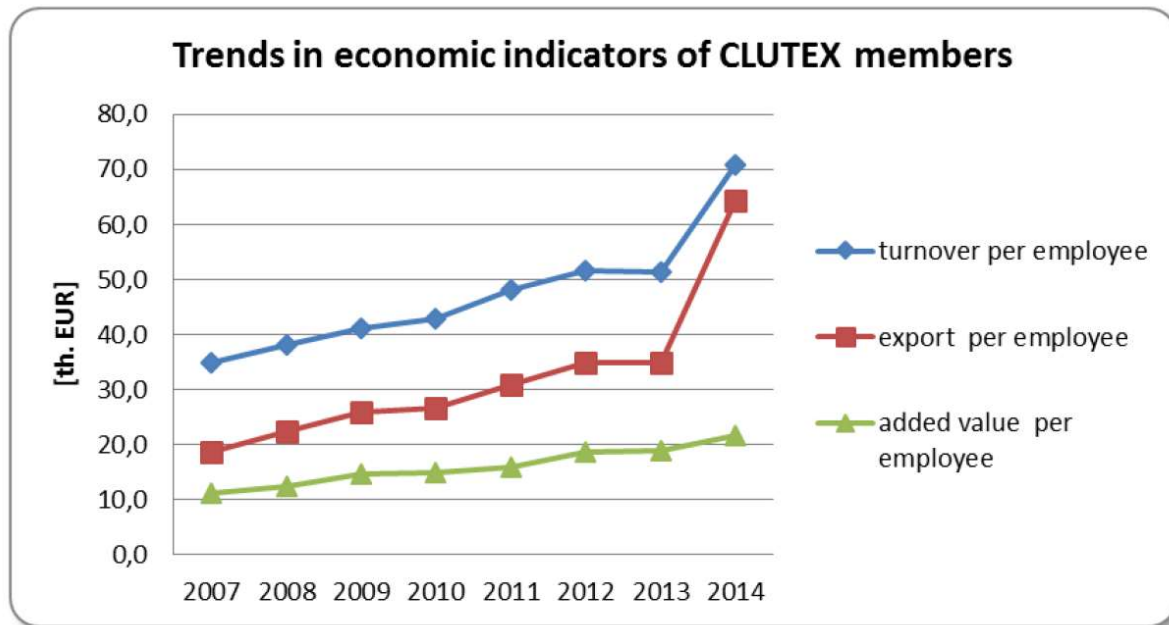


EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness

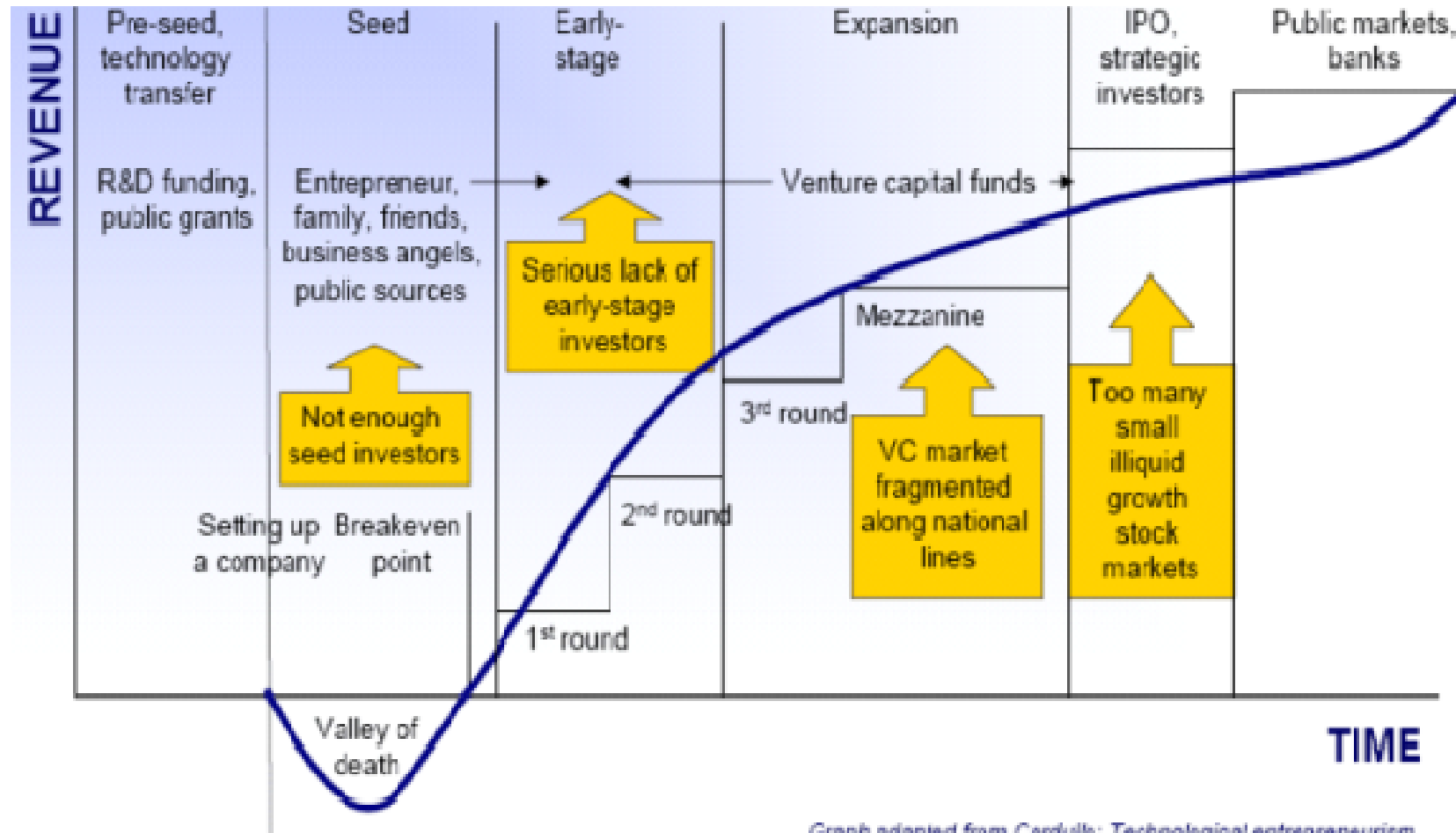

MINISTRY OF
INDUSTRY AND TRADE

Results of CLUTEX

- ➔ Solved 25 Projects (6 international) between 2012 – 2015
- ➔ Operated with a budget of 3 mil Euro, 82 % spent on R&D
- ➔ Main result is a better cooperation among industrial companies, R&D institutions and universities



Business cycle



Graph adapted from Cardulla: *Technological entrepreneurship*.
 Note that there are no agreed and fast definitions for most of the concepts used in SME finance.



Programme Proof-of-concept OPEIC – financial instrument

Programme structure:

- Activities leading to commercialization of the research results with the help of feasibility improvement
 - Realization of the feasibility study and commercial application, making a prototype, pre-production, IPR, spin-off/commercial sale etc.
- **Allocation:** 20 mil. EUR (total allocation 42 mil. EUR)
- **Recipients:** Research institutions (their branches)
- **Type of support:** financial instrument - capital investment (dividing of the program allocation and special calls for financial instruments and grants)



The Principles of a PoC fund

- ➔ A tool for support in the form of capital investment
- ➔ MIT will establish a PoC fund from the OPEIC resources which will invest into entities created by research institutions (RI)
- ➔ These entities will be set up as daughter companies (SPV), esp. for the purpose of managing commercialization activities. RI will transfer their rights and know-how for the specific projects to them, they will be administered through the commercialization centres RI (STP, CTT), key experts and research staff will be contracted
- ➔ **PoC fund OPEIC** gets a share in the commercialization centre in return for resources to fund activities
- ➔ **A successful exit** is a commercial use of R&D in forms of **spin-off creation or a licence sell**
- ➔ RI and POC fund **will share the returned resources** from successful activities



Programmes in OPEIC

PA1	PA2	PA3	PA4
Innovation Potential	Technology Consultancy	Renewable Sources of Energy	High-speed internet
Application	<i>Risk Capital</i>	Energy Savings	
<i>PCP</i>	<i>Expansion</i>		
Knowledge transfer partnership	Marketing	Smart grids I.	
Cooperation Innovation vouchers	Properties	Low-carbon technologies	ICT and shared services
Infrastructure services	Training Centres	Energy savings in heat supply system	
<i>Proof of Concept</i>		Smart grids II.	

Comment: Bold letters prg. are approved by gvt. CR

Venture capital financing gap

- ➔ As confirmed by conclusions of the Ex-ante assessment of OP EIC financial instruments, **the venture capital market in the Czech Republic is still little developed, it is one of the weakest ones in the EU and the entire Europe, and new innovative business entities have significant difficulties obtaining external financing**
- ➔ Support for venture capital fits into broader government efforts support investments in the Czech Republic in, among other things, research, development and innovation and it is recommended e.g. in the National Reform Programme, the RIS3 strategy, the National Innovation Strategy or the International Competitiveness Strategy 2012–2020.
- ➔ **Unlike the neighbouring CEE countries (Slovakia, Poland, Hungary, the Baltic states, Bulgaria), state support of venture capital has not been launched yet. State support has become an important source of funding of start-up and seed stages of venture capital in Europe.**



Support of venture capital in the Czech Republic

- The MIT wishes to support a new generation of new entrepreneurs who have ambitions to succeed in foreign markets and in the future can contribute to the growth of competitiveness of the Czech Republic by enhancing its focus on research, development and innovation.
- The global objective of the NIF project is to provide a catalyst of creation of creative entrepreneurship with a high added value from the idea and prototype (pre-seed) through early stages of business (seed, start-up) to a successful exit so that this process leads to innovations, their commercial realisation and support for economic growth.



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE

InnovFin

InnovFin
EU Finance for Innovators



InnovFin Product Overview



SMEs	Mid-Caps	Large Caps	Thematic Finance	Advisory
InnovFin SME Guarantee	InnovFin MidCap Guarantee	InnovFin Large Projects	InnovFin Energy Demo Projects	InnovFin Advisory
InnovFin SME Venture Capital	InnovFin MidCap Growth Finance		InnovFin Infectious Diseases	
SMEs and small Mid-Caps < 500 Employees	Mid-Caps < 3,000 Employees	Large Caps Typically > 3,000 Employees	SPV, Mid-Caps and Large Caps	Public and Private Sector Promoters
Intermediated SME/Mid-Cap Financing	Intermediated and/or direct Corporate lending	Direct Corporate Lending	Project Finance and/or Direct Corporate Lending	Financial Advisory

- direct products
- indirect products

Project advisory services;
Horizontal activities



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness

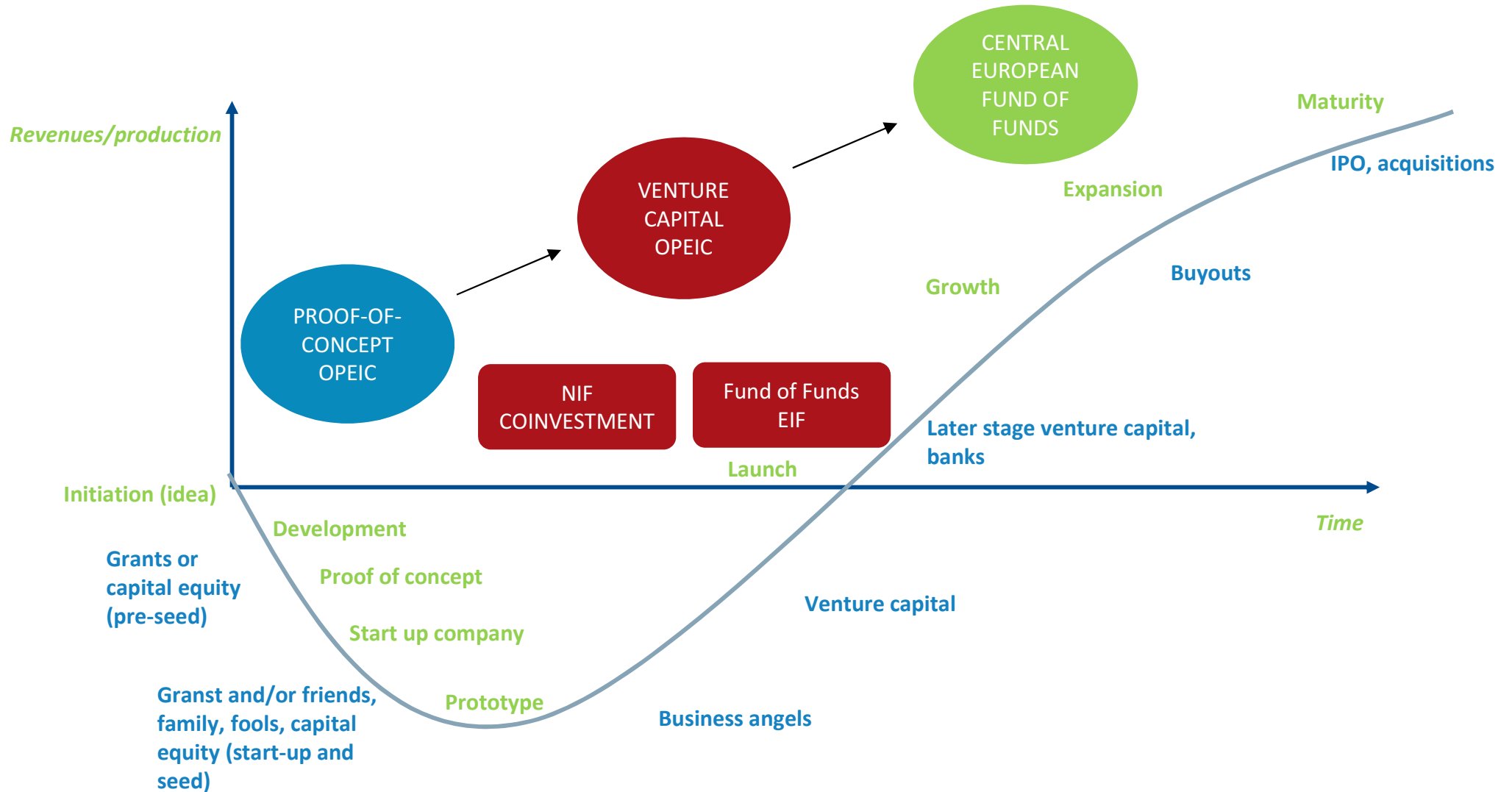


The National Innovation Fund - NIF

- ➔ Inspired by Israeli Yozma programme and German HTGF
- ➔ Expected important role of the European Investment Fund (EIF) and European Investment Bank (EIB)
- ➔ Mobilization of domestic **venture capital** market, particularly in the **seed and start-up stage**.
- ➔ Ensuring know-how and strengthen public awareness of this method of financing.
- ➔ The aim is also **to increase the attractiveness of the Czech Republic for foreign venture capital funds** which may bring in the Czech startup environment not only capital, but also the necessary global contacts.
- ➔ The investment strategy of the fund will be directed at the areas insufficiently saturated by the private sector – seed (prototype) stage and high-tech industries outside of ICT with a longer payback period.
- ➔ The feasibility study of the project was approved by the Czech government. Founding of the state investment company is in process.



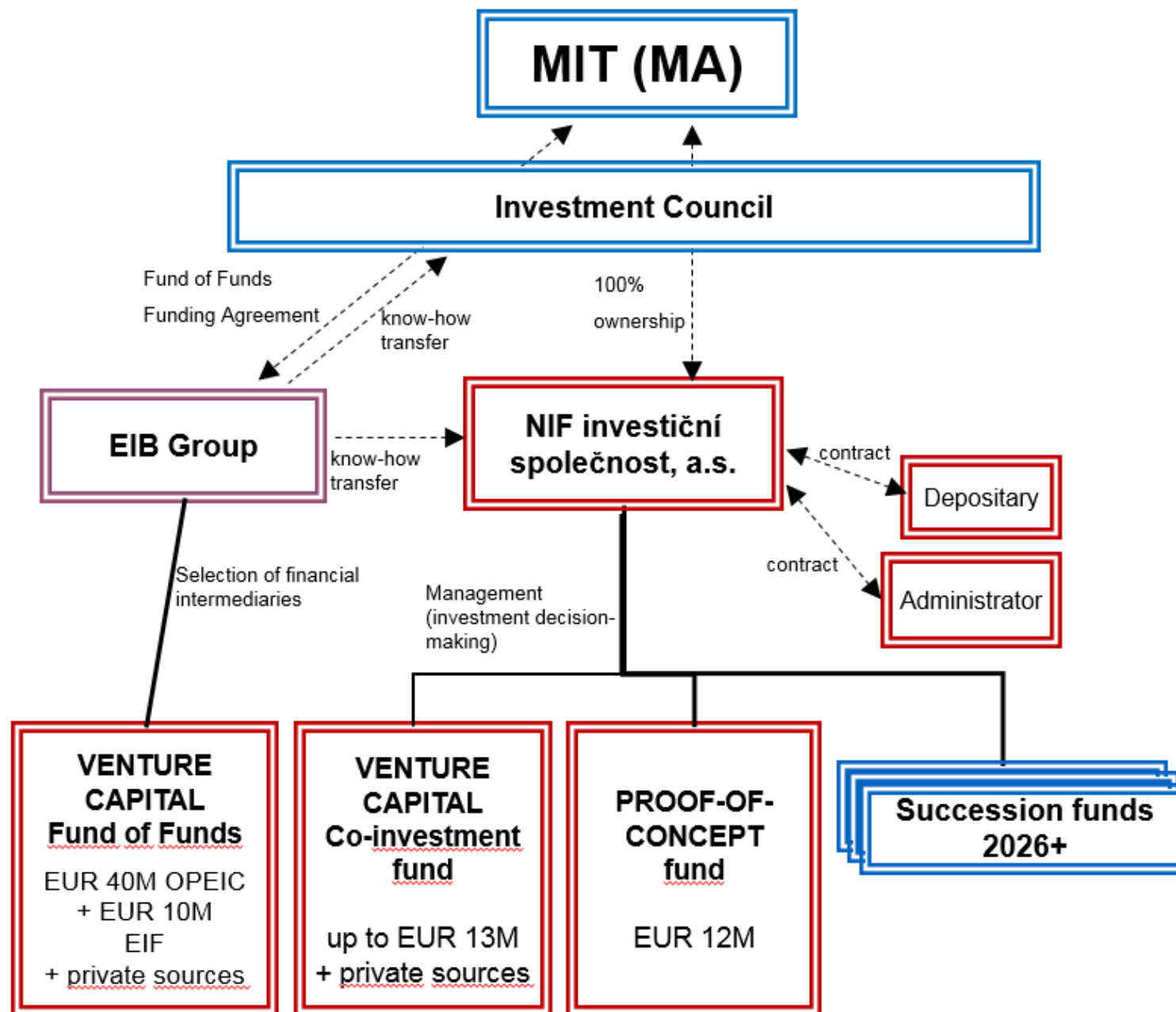
MIT support in Life Cycle of company



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE



Thank you for your attention!



EUROPEAN UNION
European Regional Development Fund
Operational Programme Entrepise
and Innovations for Competitiveness



MINISTRY OF
INDUSTRY AND TRADE