

ROTEIRO  
**INOVAÇÃO**  
*go* PORTUGAL



REPÚBLICA  
PORTUGUESA

XXI GOVERNO CONSTITUCIONAL

# CoLABS

## - COLABORATIVE LABORATORIES -

A vision and an initiative for the stimulation and reinforcement of the innovation and technology transfer in Portugal

by

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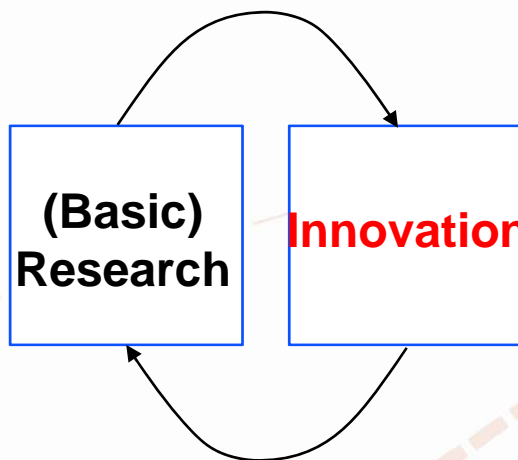
Chairman  
International Assessment and Evaluation Committee  
for the Collaborative Laboratories, Portugal

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## THE INNOVATION CYCLE

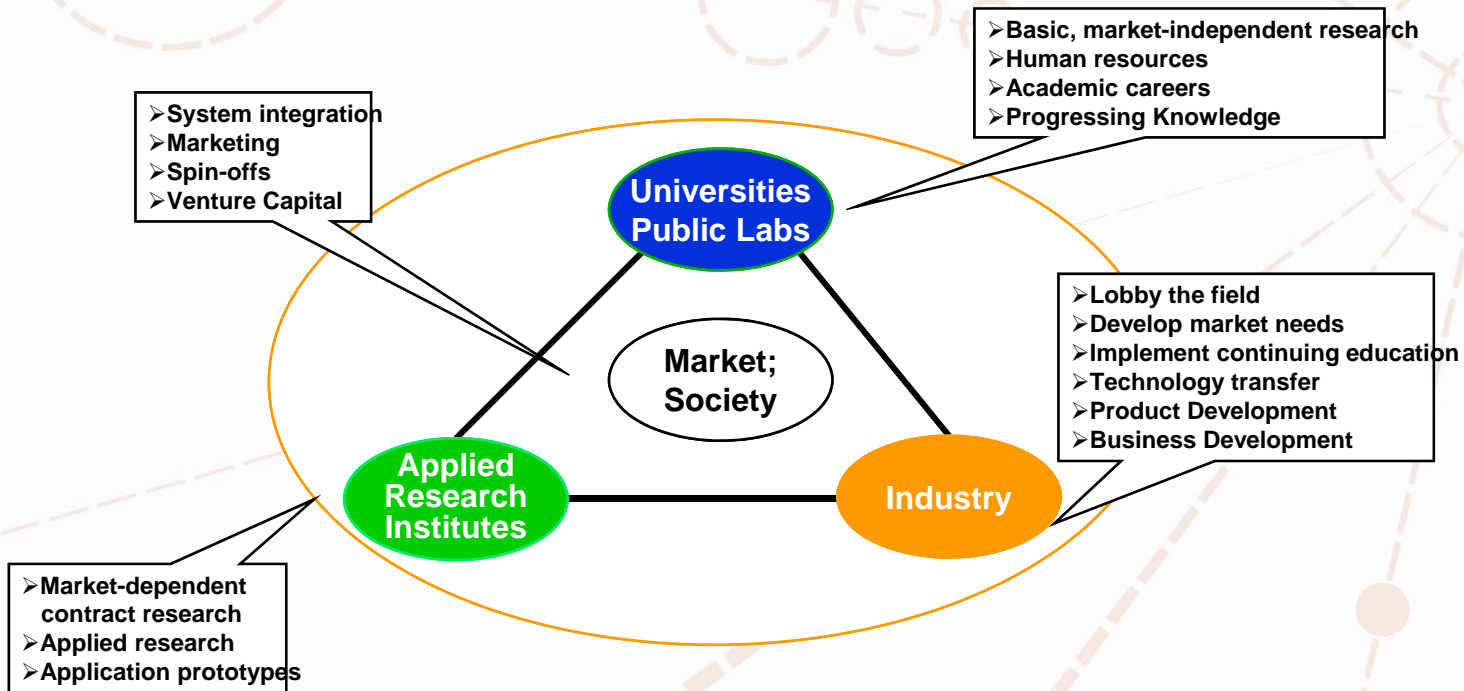
Generating **New Knowledge +**  
**New Ideas to drive the Innovation**



- **To develop new business and new markets**
- **To satisfy societal needs and expectations**

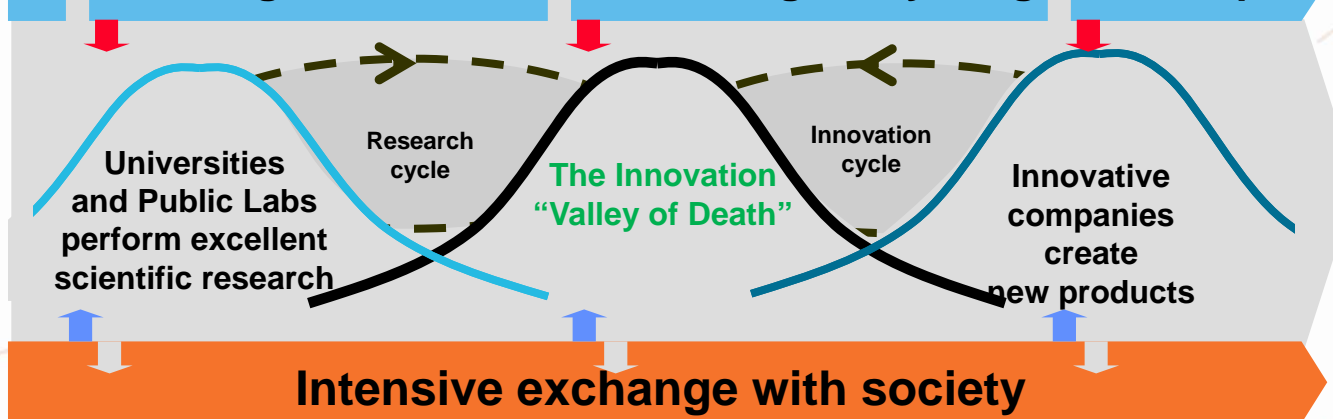
**Making money  
to invest in  
research**

## THE 'PLAYERS' IN THE INNOVATION PROCESS

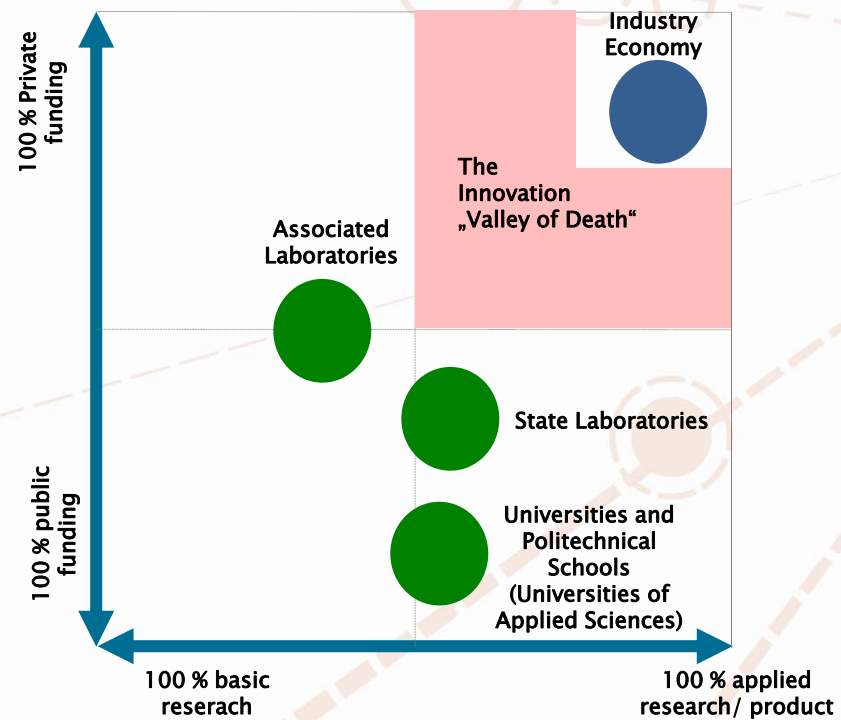


## THE INNOVATION 'VALLEY OF DEATH' (1)

Societal challenges; future markets - being ready for global competition

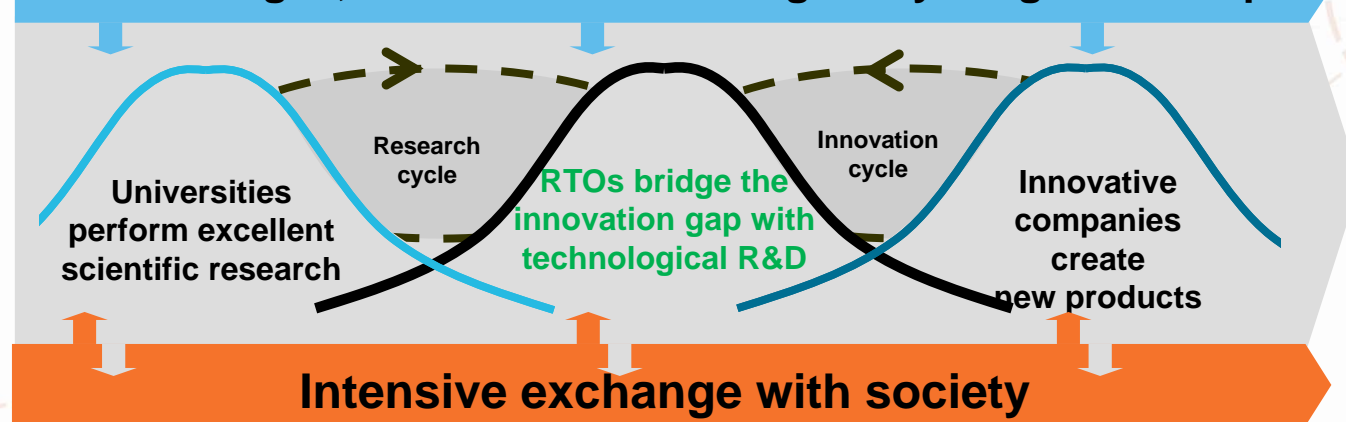


## THE INNOVATION 'VALLEY OF DEATH' (2)



## THE RTO'S BRIDGE THE INNOVATION GAP

Societal challenges; future markets - being ready for global competition

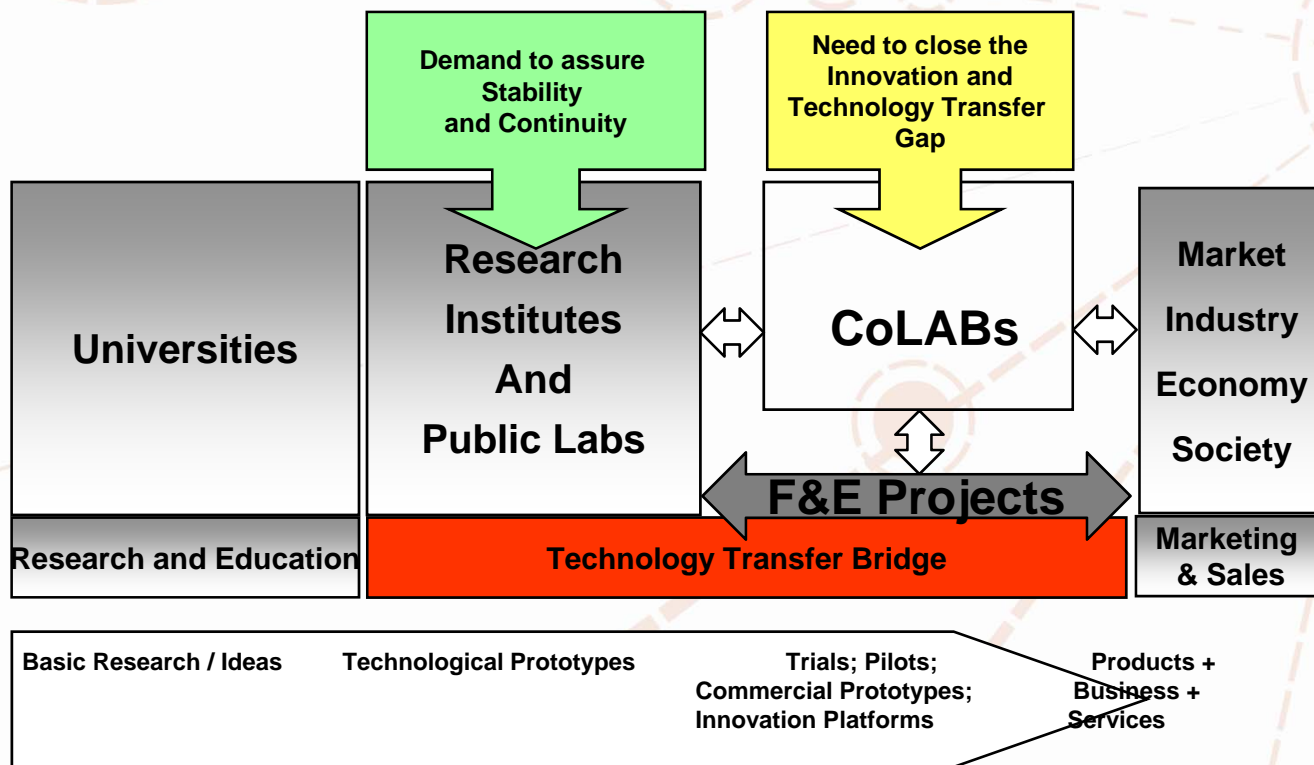


- professional R&D services to industry
- demand driven research combined with scientific excellence
- autonomy of institutes combined with simple corporate rules
- working in networks

RTO = Research and transfer organisations



## CLOSING THE GAP – THE NEED FOR CoLABS IN PORTUGAL



## EXAMPLES FOR THE DIMENSION AND COMPLEXITY OF COLABS-TYPE PROBLEMS

To give an idea for the **types of complex, large-scale problems** the “CoLABs Initiative” is going after, here a **short list of examples**:

- Biomedicine and new forms of therapies (Cancer; cardio; ...);
- Nuclear technologies for medicine;
- Agro precision and smart farming for vineyards and for wine;
- Fisheries and smart farming for aquaculture;
- Creation of added-value for natural products;
- Creation of added-value for the cultural heritage and creative industries;
- Labour dynamics and new forms of social assistance;
- Space: production and applications of micro and nano satellites;
- Digitalisation: advanced manufacturing; Internet of Things (IoT); IT-Platforms for the Smart Service World;
- Advanced ICT: new forms of computing; machine learning; artificial intelligence (AI);
- Electro mobility and urban systems (“smart cities”);
- Advanced, low-carbon cements;
- Risk management and fire prevention;
- etc., etc., etc.

## WHAT IS A CoLAB? (1)

A CoLAB is a private, non-profit association or a private company, specially created for this purpose, that integrates, for example, higher education institutions and its institutes and research units, associated and state laboratories, intermediate and interface institutions, companies, business associations, public institutions and other relevant partners such as social or cultural institutions, incorporated in one independent legal entity, the CoLAB.

The main objective of the CoLABs is to create skilled jobs and economic and social value, by promoting employment through the development of knowledge-based activities, based on the implementation of medium-term research and innovation agendas.

## WHAT IS A CoLAB? (2)

The **CoLABs** complement and reinforce the current landscape of R&D units and Associate Labs in **Portugal**, aiming at stimulating the active participation of the scientific/academic, business and public communities in the **analysis and solution of large scale and complex problems**, generally multidisciplinary, interdisciplinary and multi-institutional.

They should also **complement** existing and future scientific and innovation **networks**.

R&D issues to be analysed by CoLABs are to identified by the coordination of business, social and cultural interventions with a view to **mobilize skilled employment in the implementation of effective solutions with socio-economic impact**.

## WHAT IS A CoLAB? (3)

A consortium of participating entities (including mandatorily business and other social partners)

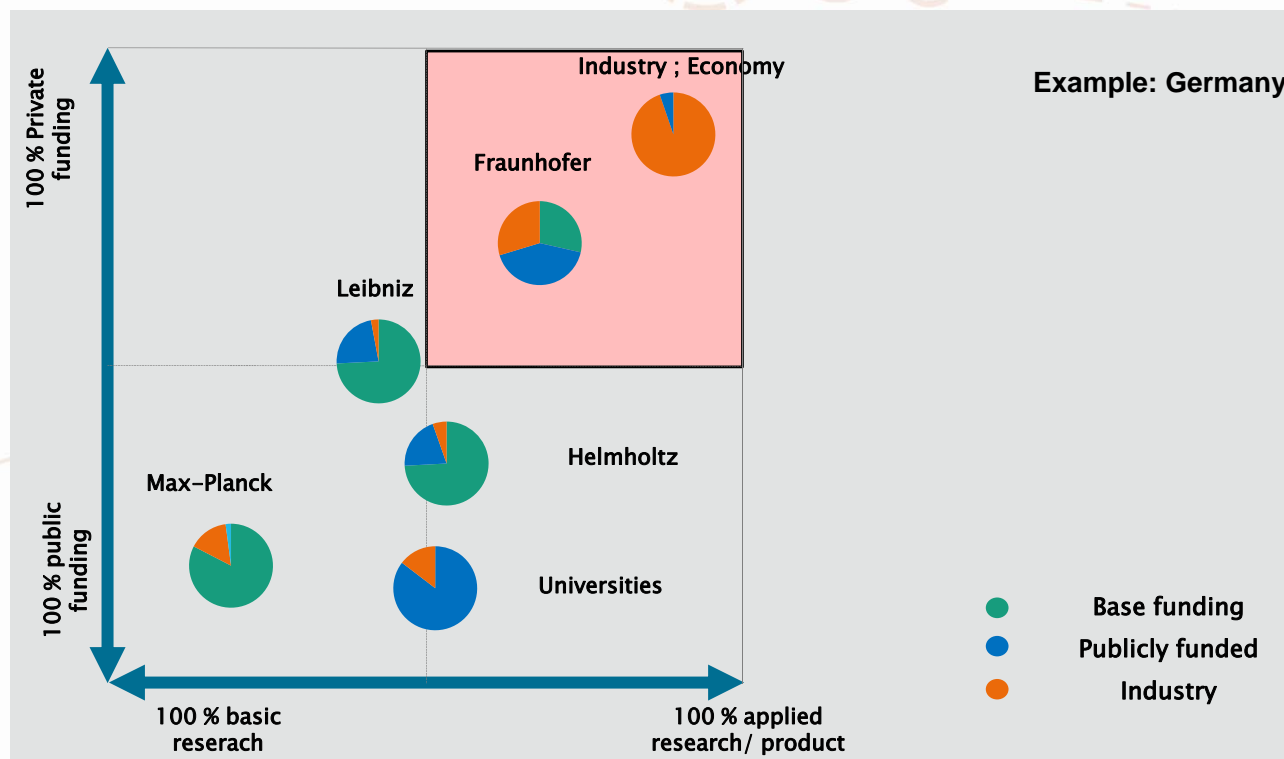
being integrated into one single legal entity

to work together:

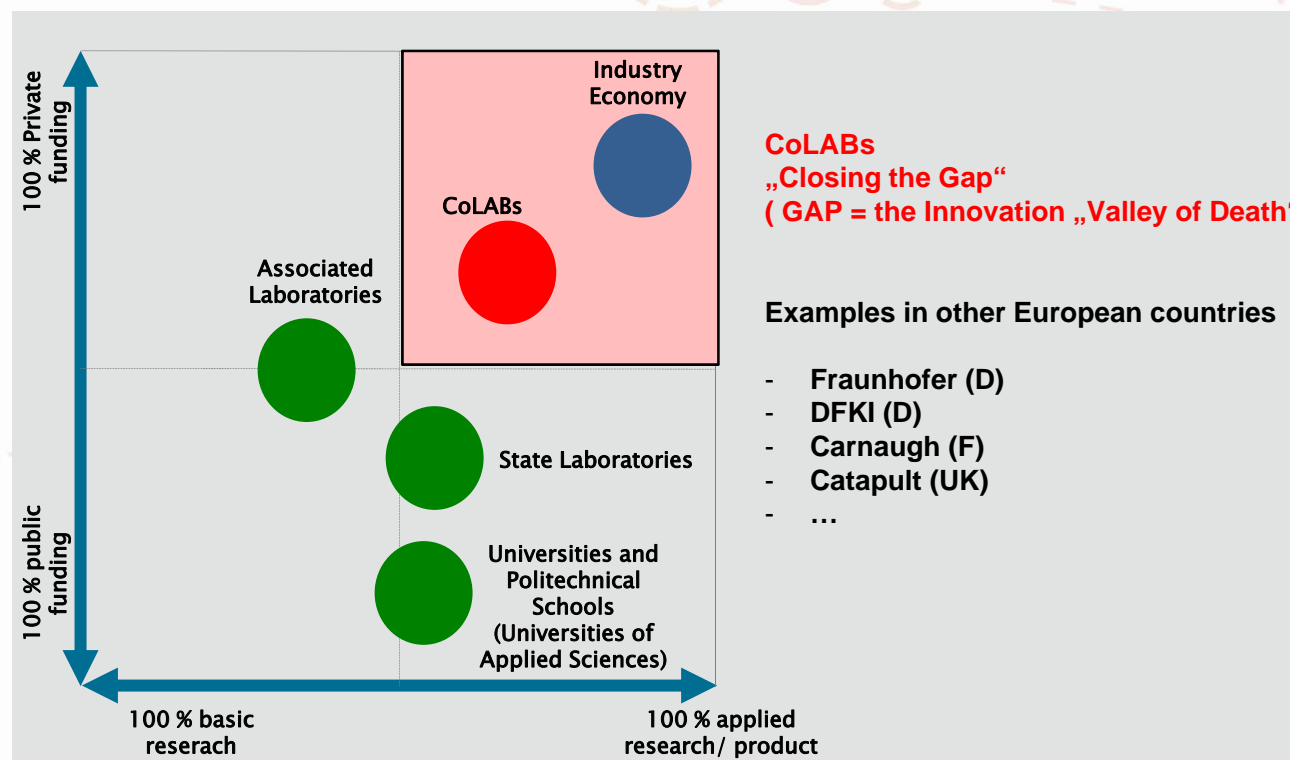
- to **solve complex, large scale problems** of international relevance and with an effective social impact and economic added-value in Portugal;
- to **develop synergies and multi-/interdisciplinary activities** in the scientific community in Portugal;
- to **create innovative economic value**; and
- to **create additional high-quality jobs**  
(not only Ph.D.'s and Post-Docs)

## COLAB'S POSITIONING IN INNOVATION SYSTEM (1)

(EXAMPLE: GERMANY AS AN ORIENTATION FOR THE POTENTIAL POSITIONING OF THE COLABS)



## COLAB'S POSITIONING IN INNOVATION SYSTEM (2)



## COLAB'S INITIATIVE SUPPORTED BY AN 'INTL. EVALUATION COMMITTEE'

### Chairman:

Prof. **José Luis Encarnaçã**  
Technische Universität Darmstadt and **Fraunhofer Gesellschaft**, Germany

### Members:

Prof. **Julian Florez**  
CEO; **VICOMTech**, San Sebastian, Spain

Prof. **Hélène Kirchner**  
Director at INRIA, **Carnaugh** Institutes, France

Prof. **Ser Yong Lim**  
Executive Director, **SIMTech**, Singapore

Prof. **Egbert-Jan Sol**  
CTO, **TNO**, Holland

Prof. **Nicholas Veck**  
Head of CEO Office, Satellite Applications **Catapult**, UK

Prof. **Wolfgang Wahlster**  
CEO of **DFKI** and Universität des Saarlandes, Saarbrücken, Germany



## FIRST EVALUATION ROUND

### Evaluation steps:

- **Public hearings**
- **FCT: formal and legal screening**
- **Public presentation of the proposals by the proposers**
  
- **Discussion with the evaluation panel**
- **Interaction proposers / evaluators to clarify and improve proposals**
- **Two internal evaluation meetings of the Intl. Panel**
  
- **Final results / recommendations:**
  - Six (6) proposals were awarded the CoLAB' Label by FCT
  - Comments and recommendations of the Intl. Panel for each of the six proposals

## RESULTS OF THE 1<sup>ST</sup> EVALUATION ROUND OF COLABS PROPOSALS (1)

The Intl. Panel recommends to FCT to award the CoLAB-Label to the following proposals:

“Forest WISE” – Forest and fire prevention

“Atlantic” – Space, climate and oceans

“DTx” – Digital transformation

“MORE” – Research and innovation in mountain regions

“Wines and Vines” – wine and vines in the Douro region

“Green CoLab” – Algae valorisation in Algarve

and

- to implement a call for project financing enabling the proposers to finance the installation and bootstrapping of each of these CoLABs, also taking into consideration the recommendations and the comments made by the Intl Panel for each of the proposals.

## RESULTS OF THE 1<sup>ST</sup> EVALUATION ROUND OF COLABS PROPOSALS (2)

Nr.	Acronym	Expected number (min) of new scientific jobs generated by CoLABs	Base Funding Requested (in Mio EUR in 5 years)
1	MORE	42	4,4
2	CoLabAtlantic	40	7,4
3	ForestWise	45	4,4
4	WinesVines	15	1,4
5	GreenCoLab	24	1,8
6	DTx	52	7,4
<b>Totals</b>		<b>218</b>	<b>26,8</b>
<b>Expected new jobs on the market</b>		<b>Factor (*) 3 – 6</b>	<b>ca. 600 - 1200</b>

(\*) based on european RTO's experience

## 2<sup>ND</sup> EVALUATION ROUND OF COLABS PROPOSALS

### Dates

- 19./20. Feb. 2018 **Public Session** for discussion of ideas for the 2<sup>nd</sup> Evaluation Round
- 23 March 2018 **Deadline for Proposal Submission in order for the proposals to be evaluated by:**
- 20 April 2018 **Next meeting of the “Intl. Panel for Assessment and Evaluation of the new CoLABs Proposals**

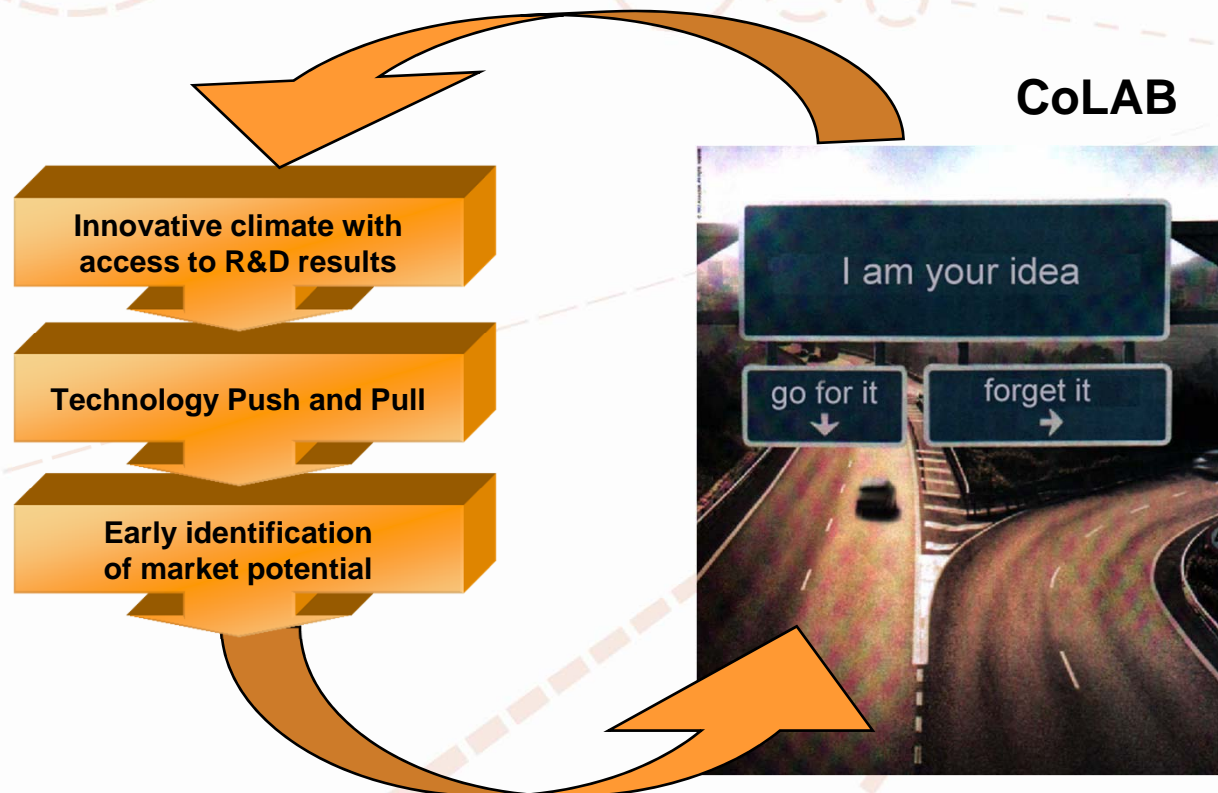
### Proposals

It is known that a set of new proposals (ca. 10 ?!) are already being prepared for submission.

## COLABS IN A NUTSHELL - SUMMARY

- ▶ **Independent legal entities**
- ▶ **“Owned” by a strong consortium (“shareholders”) with a financial commitment**
- ▶ **“Market-players” (not universities) seat on the “drivers’ seat” of a CoLAB**
- ▶ **Provide professional R&D and Innovation services to the market and to industry**
- ▶ **Demand and market driven research combined with scientific excellence**
- ▶ **Cooperation with academia / NOT competition**
- ▶ **Autonomy of CoLABs combined with simple corporate rules and strong brand**

## COLABS: FROM GENERATING IDEAS TO EXPLOITATION



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**INOVAÇÃO**  
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**Thank you for your  
kind attention**

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<http://www.gris.informatik.tu-darmstadt.de/home/members/encarnacao/index.de.htm>