ROTEIRO
INovação
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REPÚBLICA PORTUGUESA
XXI GOVERNO CONSTITUCIONAL
CoLABS
- COLLABORATIVE LABORATORIES -
A vision and an initiative for the stimulation and reinforcement of the innovation and technology transfer in Portugal

by
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THE INNOVATION CYCLE

Generating New Knowledge + New Ideas to drive the Innovation

(Basic) Research  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

- Basic, market-independent research
- Human resources
- Academic careers
- Progressing Knowledge

- Lobby the field
- Develop market needs
- Implement continuing education
- Technology transfer
- Product Development
- Business Development

- System integration
- Marketing
- Spin-offs
- Venture Capital

- Market-dependent contract research
- Applied research
- Application prototypes

- Universities
- Public Labs
- Market; Society
- Industry

- Applied Research Institutes

THE ‘PLAYERS’ IN THE INNOVATION PROCESS
THE INNOVATION ‘VALLEY OF DEATH’ (1)

Societal challenges; future markets - being ready for global competition

- Universities and Public Labs perform excellent scientific research
- Research cycle
- The Innovation “Valley of Death”
- Innovation cycle
- Innovative companies create new products

Intensive exchange with society
The Innovation ‘Valley of Death’ (2)
**THE RTO’S BRIDGE THE INNOVATION CAP**

### Societal challenges; future markets - being ready for global competition

- Universities perform excellent scientific research
- RTOs bridge the innovation gap with technological R&D
- Innovative companies create new products

### Intensive exchange with society

- Professional R&D services to industry
- Demand driven research combined with scientific excellence
- Autonomy of institutes combined with simple corporate rules
- Working in networks

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**RTO = Research and transfer organisations**
CLOSING THE GAP – THE NEED FOR CoLABs IN PORTUGAL

Demand to assure Stability and Continuity

Need to close the Innovation and Technology Transfer Gap

CoLABs

Research Institutes and Public Labs

Universities

Research and Education

Technology Transfer Bridge

F&E Projects

Marketing & Sales

Market Industry Economy Society

Basic Research / Ideas

Technological Prototypes

Trials; Pilots; Commercial Prototypes; Innovation Platforms

Products + Business + Services

GoPortugal | 15 and 16 February 2018
Events and Workshops in Matosinhos and Porto | Portugal

Collaborative Laboratories - the Vision and the Portuguese Initiative
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 be 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)

Examples in other European countries
- Fraunhofer (D)
- DFKI (D)
- Carnaugh (F)
- Catapult (UK)
- …
COLAB’S INITIATIVE SUPPORTED BY AN ‘INTL. EVALUATION COMMITTEE’

Chairman: Prof. José Luis Encarnação
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 earings
• 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 1ST 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 1ST EVALUATION ROUND OF COLABS PROPOSALS (2)

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Acronym</th>
<th>Expected number (min) of new scientific jobs generated by CoLABs</th>
<th>Base Funding Requested (in Mio EUR in 5 years)</th>
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<tbody>
<tr>
<td>1</td>
<td>MORE</td>
<td>42</td>
<td>4,4</td>
</tr>
<tr>
<td>2</td>
<td>CoLabAtlantic</td>
<td>40</td>
<td>7,4</td>
</tr>
<tr>
<td>3</td>
<td>ForestWise</td>
<td>45</td>
<td>4,4</td>
</tr>
<tr>
<td>4</td>
<td>WinesVines</td>
<td>15</td>
<td>1,4</td>
</tr>
<tr>
<td>5</td>
<td>GreenCoLab</td>
<td>24</td>
<td>1,8</td>
</tr>
<tr>
<td>6</td>
<td>DTx</td>
<td>52</td>
<td>7,4</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>218</td>
<td>26,8</td>
</tr>
</tbody>
</table>

Expected new jobs on the market

Factor (*)

3 – 6 ca. 600 - 1200

(*) based on european RTO’s experience
2ND EVALUATION ROUND OF COLABS PROPOSALS

Dates

• 19./20. Feb. 2018  Public Session for discussion of ideas for the 2nd 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

- Innovative climate with access to R&D results
- Technology Push and Pull
- Early identification of market potential
Thank you for your kind attention

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