

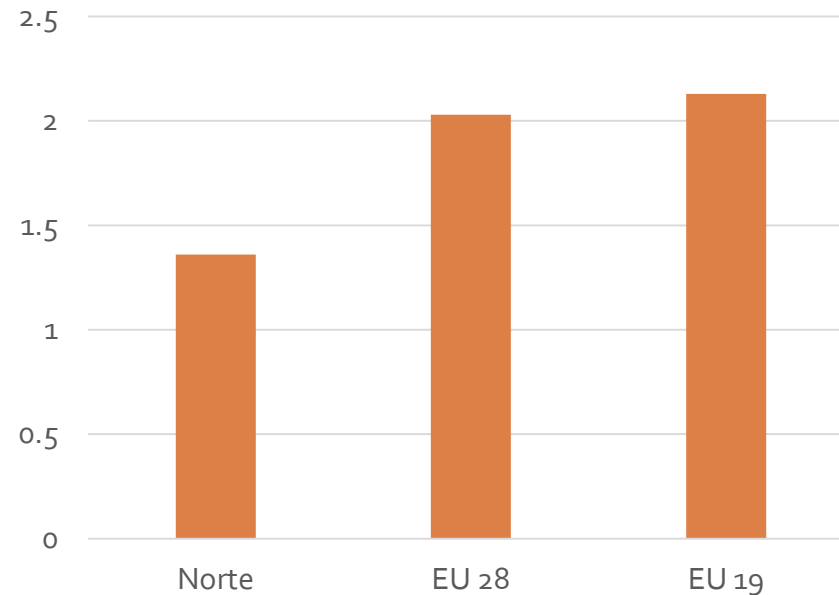
Study and specification of a digital platform to support and promote the ecosystem of innovation in medical devices and assistive technologies

Author:  **Jump4**

December 2017

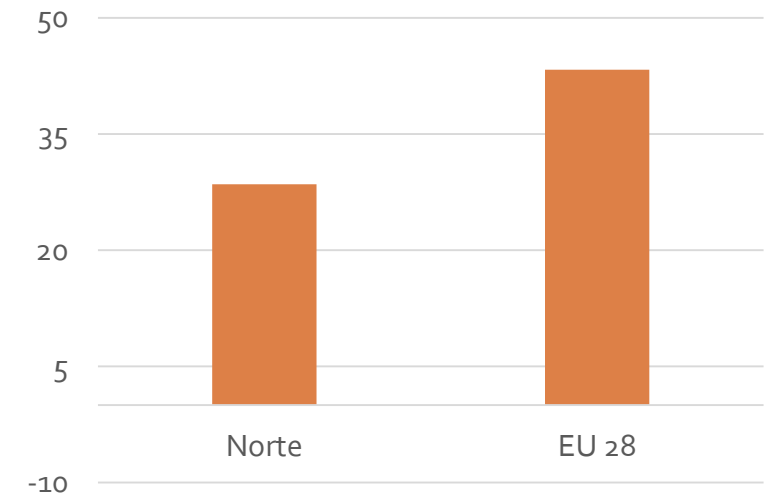
Innovation Ecosystem in the North of Portugal

Expenditure on R&D relative to gross domestic product (2014), %



Norte is one of the areas that still lags behind in terms of research and innovation performance when compared with European average

Share of human resources in science and technology within the economically active population, %



Innovation Challenges in the North of Portugal

Enhance the effectiveness of the regional innovation system



Explore synergies between academia and businesses to create more and better competitive advantages



Induce innovation as a requirement in the industry's business model



Promote R&D and business internationalization



Leverage market-driven innovation



The Evolution of Innovation Management Models

1950-1960

- Linear model: 1) fundamental research, 2) design, 3) manufacturing, 4) marketing, and 5) sales.
- Technology push.

1960-1970

- Linear model.
- Technology pull.

1970-1980

- Linear model, but includes interaction and feedback between the different stages.
- Technology pull + technology push.

1980-1990

- End of well defined and sequential phases in the innovation process.
- Functional integration of the different activities.

1990-2000

- Emergence of the innovation networks, in which different actors – companies, universities, customers, suppliers, and others: Open Innovation and Innovation Labs.

2000+

- Intensive use of top technology, such as simulation, modeling, rapid prototyping for product development and the Big Data.

Open Innovation Management Platforms

5 PROBLEMS

Open Innovation Management Software Solves

ACCELERATE NEW PRODUCT AND PROCESS DEVELOPMENT 01

Increase volume and quality of ideas entering the pipeline.



1



2

02 INCREASE EFFICIENCY

Central aggregation hub and easy to use stage-gating streamlines the idea collection and filtering process.

CONTAIN RISK 03

Proprietary safe disclosure process and technology protects IP integrity for both the innovator and company.



3



4

04 BREAK DOWN SILOS AND GROUP THINK

Technology to facilitate cross-department collaboration and mine, discover and identify powerful ideas outside the company walls.

FOSTER CULTURE OF INNOVATION 05

- Provide an outlet for employees to collaborate and innovate.
- Signal to the outside world that the company welcomes external innovation partners.
- Strengthen brand equity through innovation.



5

Adapted from eZASSI

Innovation Management Platforms

Gaps of the existing platforms:

- Non of them allows to manage the full range of the innovation process;
- Non of them is directed to the specifics of health technology and medical devices.



Chaordix

- Crowdsourcing

eZassi

- Idea management
- Technology scouting

100% Open

- Open innovation strategy
- Identification of external technologies

Hyve

- Open innovation
- Crowdsourcing

Innocentive

- Seeker-Solver matching

Inocrowd

- Seeker-Solver matching

Ideaken

- Seeker-Solver matching

Innonatives

- Seeker-Solver matching
- Crowdfunding

Innoget

- Marketplace for technologies
- Partner discovery

Yet2.com

- Marketplace for technologies

Ideaconnection

- Challenge based ideation

NineSigma

- Challenge based ideation
- Seeker-Solver matching

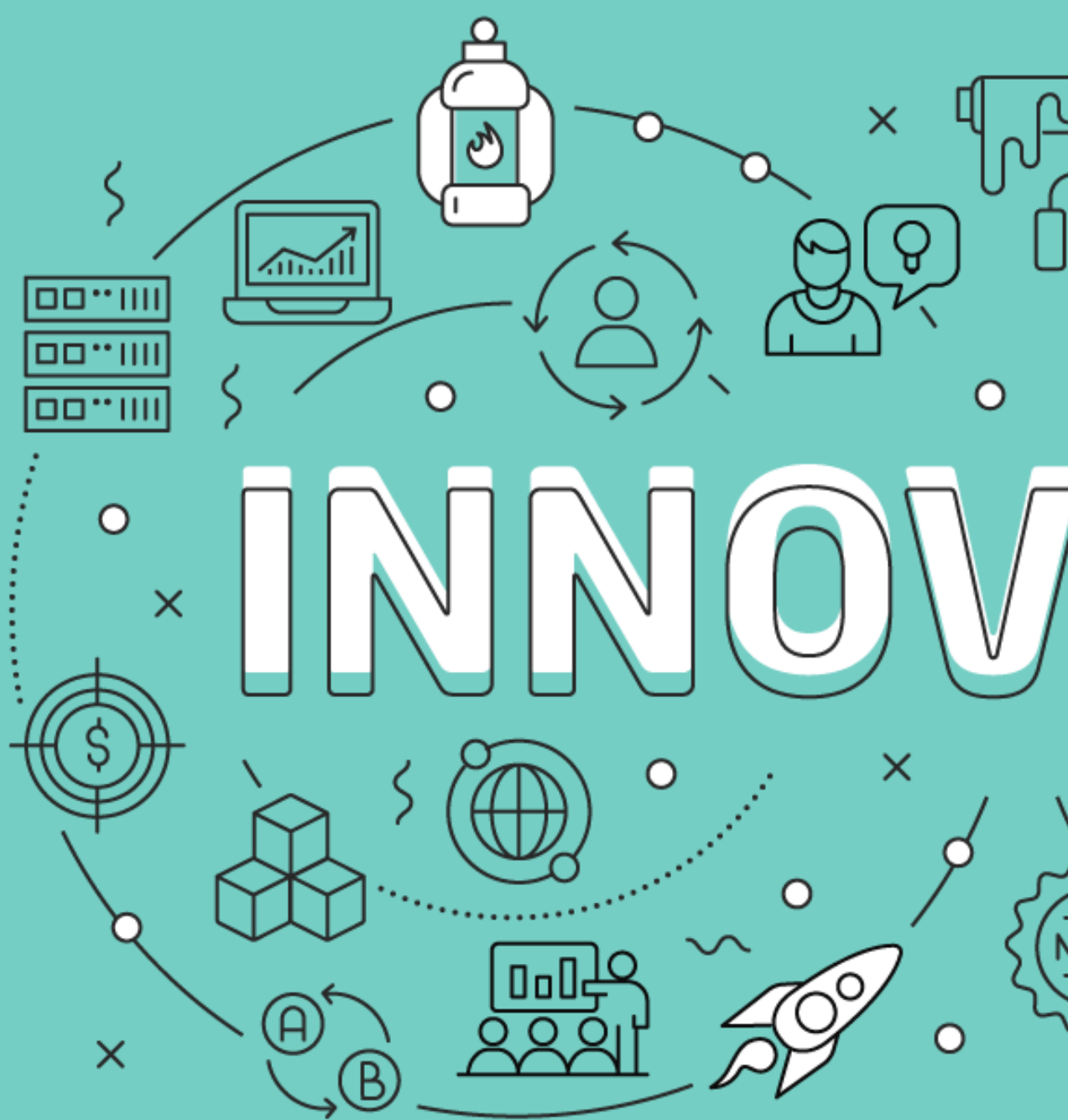
Pharmalicensing

- Marketplace for technologies



A new platform should aim to reinforce Innovation Management practices promoting the:

- Evolution to open innovation;
- Standardization and certification of innovation processes;
- Flow of innovative ideas and their evaluation;
- Maximization the use of R&DI incentives for the creation of new knowledge and technologies;
- Flow of innovative products and services (endogenous and exogenous) and their profitability;
- Management of the R&DI effort and maximizing its effectiveness.



A new platform should support innovation combining the positive features of the already existing web-services. Therefore, it will be divided in the following blocks:

- a) idea management;
- b) innovation project management;
- c) open innovation;

Platform Development

Development and testing of the support platform

Development and testing of the catalog of standards

Development and testing of the module to support innovation processes

Development and testing of the module to support the implementation of medical devices certification standards

Integration

N R T E X C E L

Centro de Excelência em Tecnologias Médicas