



patient-innovation.com

PATIENT INNOVATION

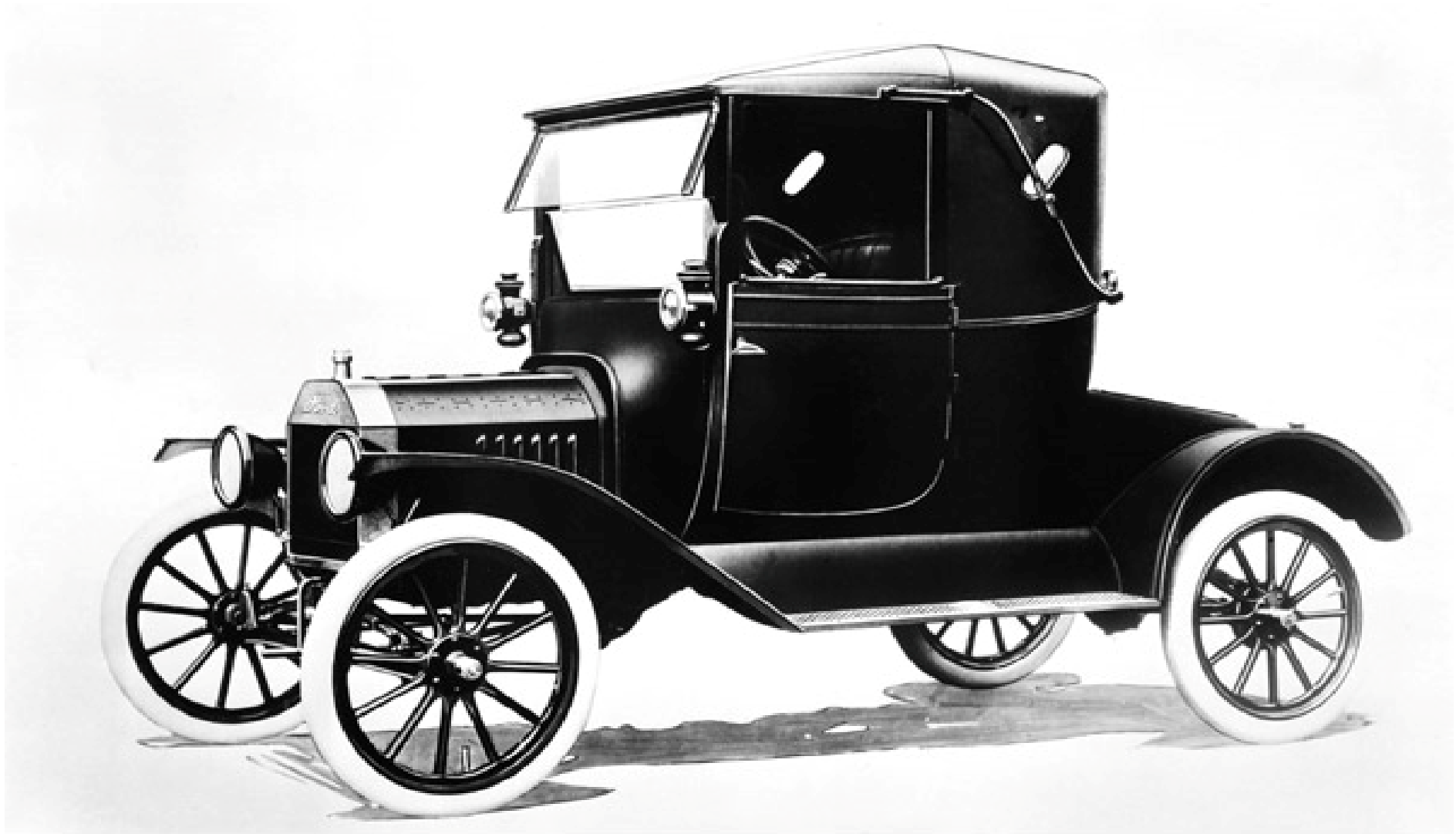
Sharing solutions, improving life

INNOVATION AND ENTREPRENEURSHIP IN HEALTH

Solutions developed by citizens (user-innovation)

Helena Canhão, MD PhD

CHRC, NOVA Medical School & Patient Innovation



FORD T Model





FORD T Model

Converted by users into snowmobiles, trucks and tractors







GET



Ride Or Walk
Finally it's your decision!

Why transport the bag... if the bag can transport you?





To what extent is this phenomena relevant in healthcare?



Oliveira et al. *Orphanet Journal of Rare Diseases* (2015) 10:41
DOI 10.1186/s13023-015-0257-2

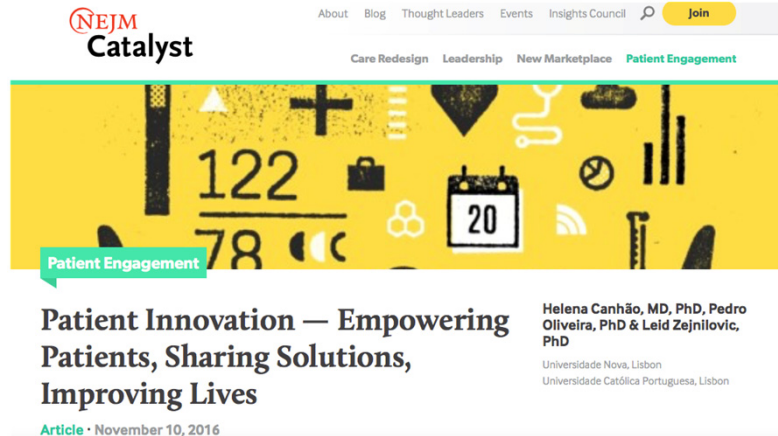


RESEARCH Open Access

Innovation by patients with rare diseases and chronic needs

Pedro Oliveira^{1*}, Leid Zejnilovic^{1,2}, Helena Canhão³ and Eric von Hippel⁴

Abstract: We provide the first empirical exploration of disease-related innovation by patients and their caregivers. Our aims were to explore to what degree do patients develop innovative solutions; how many of these are unique developments; and do these solutions have positive perceived impact on the patients' overall quality of life? In addition, we explored the factors associated with patient innovation development, and sharing of the solutions that the patients developed.



REVOLUTIONISING HEALTHCARE BY EMPOWERING PATIENTS TO INNOVATE

*Helena Canhão,¹ Leid Zejnilovic,² Pedro Oliveira²

¹. CEDOC, School of Medicine, NOVA University of Lisbon, Lisbon, Portugal

². Católica-Lisbon School of Business and Economics, Catholic University of Portugal, Lisbon, Portugal

*Correspondence to helenacanhao@gmail.com

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INTRODUCING A NEW PARADIGM OF HEALTHCARE INNOVATION

A growing stream of literature argues for a more active role for patients and caregivers in healthcare delivery, namely in:

or health condition. We found that patients and caregivers have significant innovative capabilities and have developed various solutions, treatments, and medical aid devices for themselves (e.g. about 50% of the solutions for cystic fibrosis were developed by the patients). These solutions span





Michael Seres, Crohn's Disease with ileostomy, UK







David Day, father of Cystic Fibrosis patient *Computer games*



Kylie's father
the intravenous backpack



Debby Elnatan
the Upsee – a mobility device for children





Ivan Owen, USA





Nuno, 3D printed prosthetic hand, Portugal



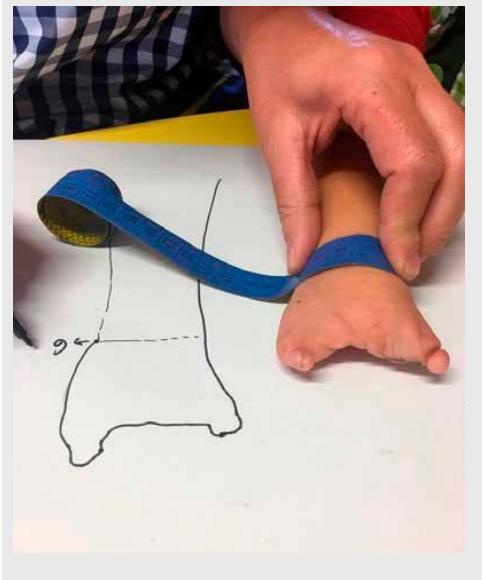
Project *Offer a hand*

“Offer a hand” is a project that consists of designing, printing and giving, for free, 3D printed hands and arms to kids from all over Portugal who need a prosthesis.

The project “Offer a hand” was one of the winners of the Santa Casa da Misericórdia Challenge and the Fidelidade Comunidade prizes that reward social inclusion and healthcare promotion projects. This award allows us to contribute to the development and production of low-cost 3D printed prosthesis for up to 20 children.

Rodrigo was the first child to receive a 3D printed prosthesis under this project.

→
Measurement and sketch of plaster cast for the prosthesis



↑ Plaster cast of the hand that will receive the prosthesis.



↑ Rodrigo, first child to receive a prosthesis in this project.



OFFER YOUR HAND

Promoted by:



PATIENT INNOVATION

Awards winning project:

SANTA
CASA
Misericórdia de Lisboa.

challenge.

PRÉMIO FIDELIDADE
COMUNIDADE
Para que a vida não pare

RESEARCH

Open Access

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Methods: We administered a questionnaire via telephone interviewing to a sample of 500 rare disease patients and caregivers. The solutions reported were pre-screened by the authors for their fit with the self-developed innovation aim of the study. All the reported solutions were then validated for their novelty by two medical professionals. Logistic regression models were used to test the relationships between our key variables, patient innovation and solution sharing.

Results: 263 (53%) of our survey respondents reported developing and using a solution to improve management of their diseases. An initial screening removed 81 (16%) solutions for being an obvious misfit to the self-developed innovation aim of the study. This lowered the sample of potentially innovative solutions to 182 (36%). Assessment of novelty and usefulness of the solutions, conducted by two medical evaluators, confirmed that 40 solutions (8%) were indeed novel, while the remaining 142 (28%) were already known to medicine. The likelihood of patient

The solutions significantly improve their quality of life...

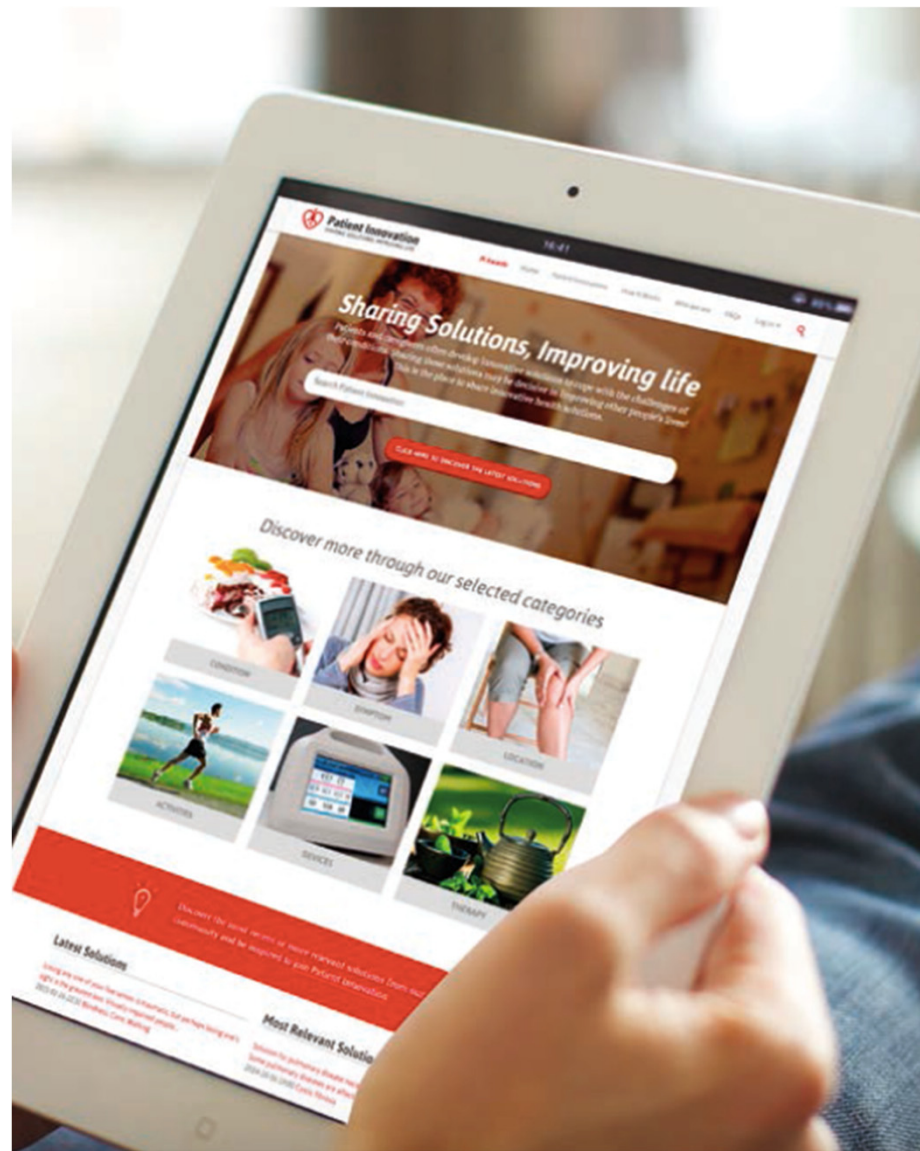
➔ But they rarely diffuse (e.g. only 5% are show to medical professionals)

Quality of life differences Scale 1-5				New to the world	New to the patient
	Patients mean (SD)	Caregivers mean (SD)			
Products	2.2 (1.5)	1.7 (1.4)		89%	92%
Services	1.8 (1.4)	2 (1.7)		37%	28%
Total	2 (1.4)	1.9 (1.6)	➔ Shown it to medical professionals	5%	2%
			Shared the info on a website/blog/social network	16%	8%
			Shared it through media other	25%	13%

Oliveira, Zejnilovic, Canhão and von Hippel (2015)



<http://www.patient-innovation.com>



PATIENT INNOVATION platform

Platform Evolution

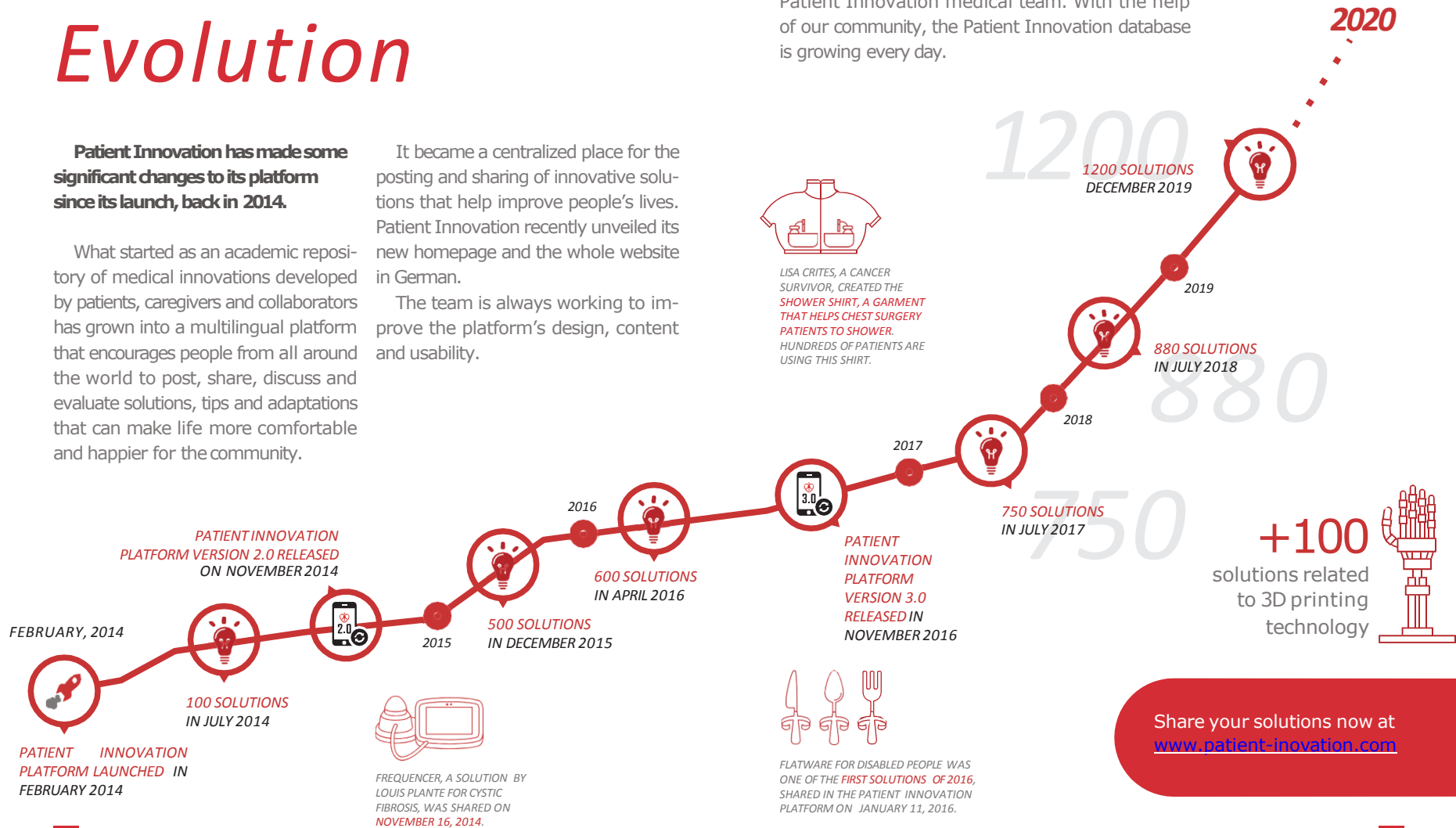
Patient Innovation has made some significant changes to its platform since its launch, back in 2014.

What started as an academic repository of medical innovations developed by patients, caregivers and collaborators has grown into a multilingual platform that encourages people from all around the world to post, share, discuss and evaluate solutions, tips and adaptations that can make life more comfortable and happier for the community.

It became a centralized place for the posting and sharing of innovative solutions that help improve people's lives. Patient Innovation recently unveiled its new homepage and the whole website in German.

The team is always working to improve the platform's design, content and usability.

In December 2019, Patient Innovation achieved another milestone: 1200 live solutions developed by members of the community and curated by the Patient Innovation medical team. With the help of our community, the Patient Innovation database is growing every day.



Share your solutions now at www.patient-innovation.com

Our Vision

THE PATIENT INNOVATION PLATFORM

Each patient, caregiver or collaborator is a potential innovator.



We are driven to work, everyday, on a non-profit platform that connects patients, caregivers and collaborators and enables the sharing of solutions, devices and knowledge, otherwise unknown to others.



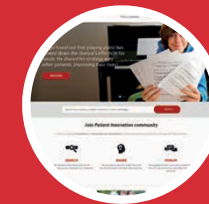
“Doctors make the worst patients. Maybe in the future patients will make the best doctors.”

Carlos Moedas
Former European Commissioner for Research, Science and Innovation
Innovation Awards Ceremony, Lisbon, 2015

THE PLATFORM PATIENT INNOVATION HAS MORE THAN **1200 SOLUTIONS** ONLINE.

How does it work?

The Patient Innovation Platform is an international, multilingual, totally free-of-charge venue for patients, caregivers and collaborators of any disease to share their innovations within the community.



The platform allows searches by disease, symptom, location, type of activity, device and therapy. It is available online at:

patient-innovation.com



Research and management team

The Patient Innovation Project has resulted from the joint research and international cooperation of scholars (in the health sciences, management, engineering and law), healthcare practitioners and institutions that are committed to help promote knowledge and solutions that can improve patients' well being.

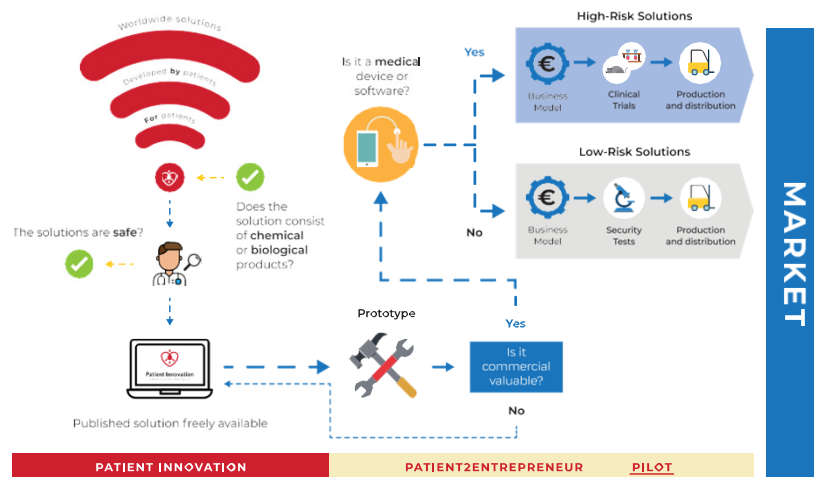
Projects

Patient 2 Entrepreneur (P2E)

P2E is a consortium which involves Católica Lisbon School of Business and Economics, Nova Medical School, Nova School of Business and Economics, Luz Saúde and Orange Bird.

This project, relying on the [Patient Innovation platform](#) and on all partners, aims to empower patients by valuing innovation and promoting entrepreneurship.

Here's how it works:



Projects

Releasing the power of users

Patient Innovation is part of the consortium for the research project "Releasing the power of users - articulating user interest to accelerate new innovative pathways in digital health and welfare sector".

This project is funded by the Norwegian Research Council and aims to develop a greater understanding of the users by identifying the attitudes, concerns and expectations of users related to welfare technology.

The project is currently being lead by Tatiana Iakovleva, professor of entrepreneurship at the University of Stavanger UiS Business School, and includes international partners such as Norwegian Smart Care Cluster, Copenhagen Business School, University of Twente, University of Manchester, University of Michigan, University of Southern California, Western Norway University of Applied Science and Queensland University of Technology.





Patient Innovation Bootcamp

Potenciar o empreendedorismo entre doentes e cuidadores informais

Lisbon - Barcelona - Copenhaga



Esta é a primeira série de bootcamps com o objetivo de ajudar doentes e cuidadores informais a implementar e levar para o mercado soluções inovadoras desenvolvidas pelos próprios.



Pedro Oliveira
CBS

Patient Innovation Nova Medical School



Helena Canhão
Patient Innovation

Nova Medical School



Judit Valero
Biocat



Luca Venza
IESE Business School



Rudi Westendorp
U. of Copenhagen



James Barlow
Imperial College



Thomas Unt
Smile Incubator



Filipa Fixe
Glintt



Lisa Pape
Walk with Path

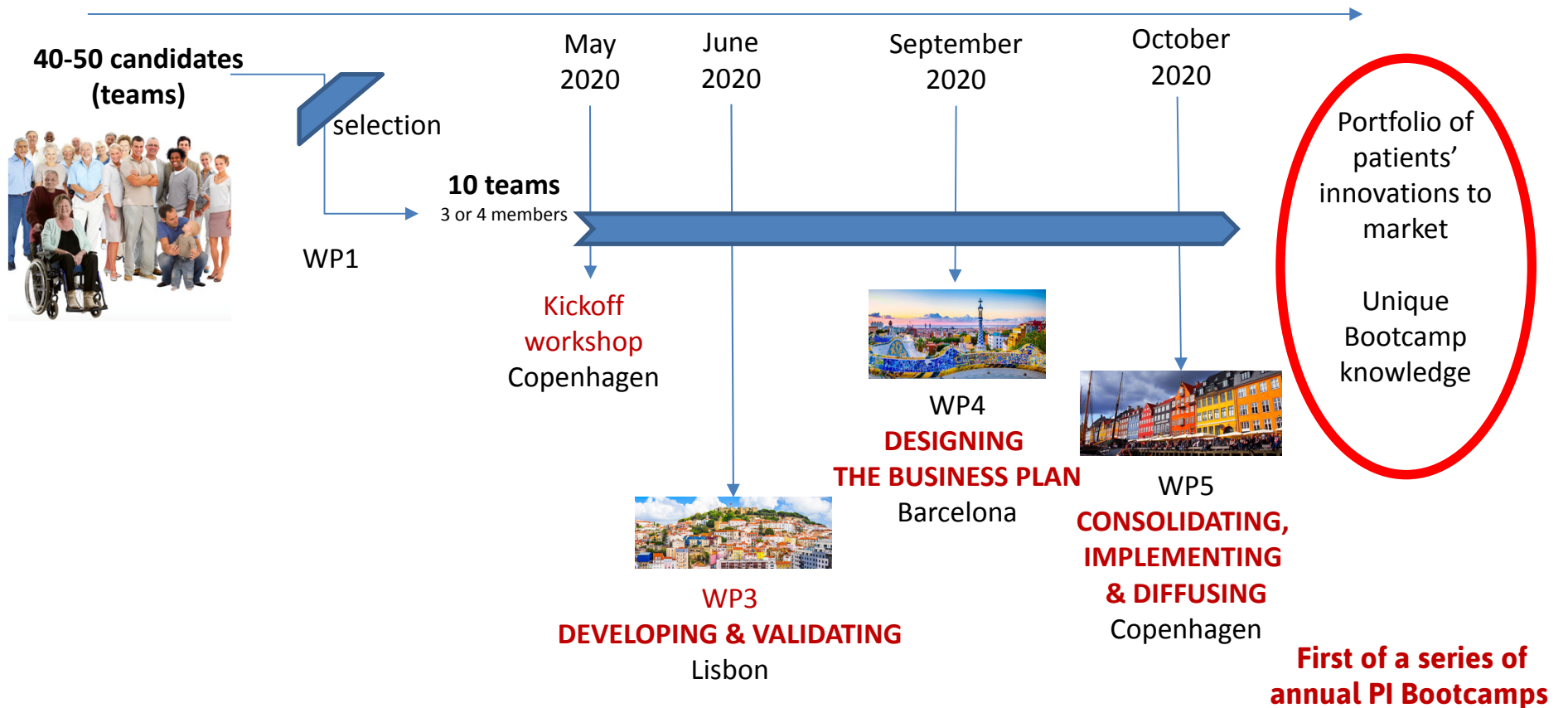


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a body of the European Union





The plan



PATIENT INNOVATION AWARDS

1st Edition
Calouste Gulbenkian Foundation



Carlos Moedas, **European Commissioner for Research, Science and Innovation**



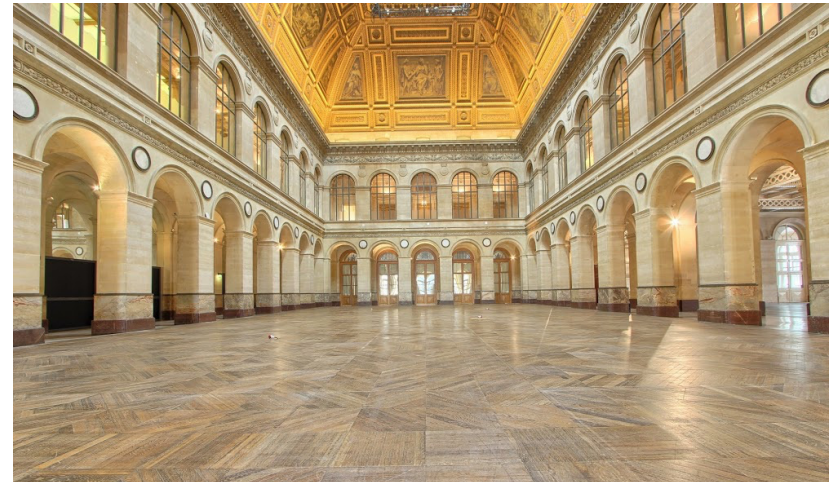
2nd Edition
Web Summit 2016
Europe's largest and most important
technology market place



3rd Edition
Calouste Gulbenkian Foundation



Carlos Moedas, **European Commissioner for Research, Science and Innovation;**
Marianne Thyssen, **European Commissioner for Employment, Social Affairs;**
The **President of the Portuguese Republic,**
Professor Marcelo Rebelo de Sousa.



Palais Brongniart, Paris, France
Dec 2nd 2019, 6pm





Awards & recognitions



AACSB's Honoree



HEALTH ACCELERATION CHALLENGE



Recognition by United Nations Secretary General Ban Ki-moon

- For its contribution to the UN's SDGs
- Good health and Well-Being & Industry
 - Innovation and Infrastructure

In the media



Austria: LT1, Neues Volksblatt; Reader Digest



Belgium: Horizon Magazine;

Brazil: El Pais (Brazil); Reader Digest



Canada: Canoe;

Cyprus: CYBC;

France: Reader Digest

Germany: Reader Digest

Italy: Il Sole 24 Ore;



Kenya: Business Daily Africa;

Luxembourg: Luxemburger Wort, Tageblatt;

Paraguay: Reader Digest



Poland: Wyborcza, Human, National Geographic Polska;

Portugal: RTP 1/2/3/Internacional, RDP Internacional, SIC, SIC-N, TVI, Expresso, Público, DN, JN, Observador, Sol, Sábado, Visão, Diário Económico, Jornal de Negócios, Exame, Dinheiro Vivo, Antena 1/2, Radio Renascença, TSF;



Russia: Clip;

Spain: El Pais, El Independiente de Granada; Selecciones

Slovenia: VAL 2020 Radio Slovenija;



Switzerland: World Economic Forum, Neue Zürcher Zeitung;



UAE: Akbar El Emarat, MBC;



UK: BBC, Sky News, The Guardian, The Independent, Time Out London, Virgin, E&T Magazine; Reader Digest

USA: Huffington Post, NEJM Catalyst, Florida Today, Miami Herald, Medgaget, MGH Proto Magazine, Business Insider, Reader Digest, among other.

ADVISORY BOARD

	<p>— Sir Richard Roberts</p> <p>Chief Scientific Officer, New England Biolabs. Nobel Laureate in Physiology or Medicine 1993.</p>		<p>— Eric von Hippel</p> <p>Professor, MIT Sloan School of Management.</p>		<p>— Aaron Ciechanover</p> <p>Professor, Technion- Israel Institute of Technology. Nobel Laureate in Chemistry 2004.</p>
<p>Katherine Strandburg</p> <p>Professor, New York University School of Law.</p>		<p>Robert Langer</p> <p>Professor, MIT.</p>		<p>Lee Fleming</p> <p>Professor, University of California, Berkeley.</p>	
	<p>— Keld Laursen</p> <p>Professor, Copenhagen Business School.</p>				

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Pedro Oliveira, PhD
PROJECT LEADER AND PRINCIPAL
INVESTIGATOR PROFESSOR,
NOVA SBE AND COPENHAGEN BUSINESS
SCHOOL



Helena Canhão, MD, PhD
PROJECT LEADER AND CHIEF MEDICAL
PROFESSOR, NOVA MEDICAL SCHOOL
AND NATIONAL SCHOOL OF PUBLIC HEALTH



Maria João Jacinto, PhD
EXECUTIVE DIRECTOR



Catarina Santos
PLATFORM MANAGER



Leid Zejnilovic, PhD
CONSULTANT



Maria João Gonçalves
MEDICAL OFFICER, MD



Sara di Fabio
SOLUTION ANALYST
AND IMPACT MANAGER



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MEDICAL OFFICER, MD



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