

REHABILITY:
Gamifying Tele-Rehabilitation

Lucia Pannese, CEO imaginary srl

The Rise of Patient Centric Applications, Dec 17th, 2020



imaginary

Multi-disciplinary Team



- >16 years experience in serious games and enabling technologies
- Combine enabling technologies with games psychology and mechanics
- Aims at influencing motivation, understanding and behavioural change
- 3 markets: eHealth, Training & Education, Smart Cities
- Awarded over 30 EU research projects

imaginary is one of the best practices chosen by the European Commission for the sector **Silver Economy**:
http://ec.europa.eu/growth/industry/innovation/business-innovation-observatory/case-studies/index_en.htm

Digital Therapeutics & Serious Games

Digital therapeutics, a subset of **digital** health, are evidence-based **therapeutic** interventions driven by high quality software programs to prevent, manage, or treat a medical disorder or disease.

- Active Patient
- Patient motivation
- Behavioural change to improve health (QoL)
- Adherence

Serious Games are a perfect excipient!

The Challenge

European health systems are
seriously challenged, even more so during a Pandemic!

Direct healthcare cost of
Stroke : €20 Billion in
2015; ~€30 Billion in 2035
Parkinson's Disease: cost
>€8 Billion yearly
MS affects ~ 0.1% of
population; typically
diagnosed at the age of 29
and 50% end up
unemployed within 3 years

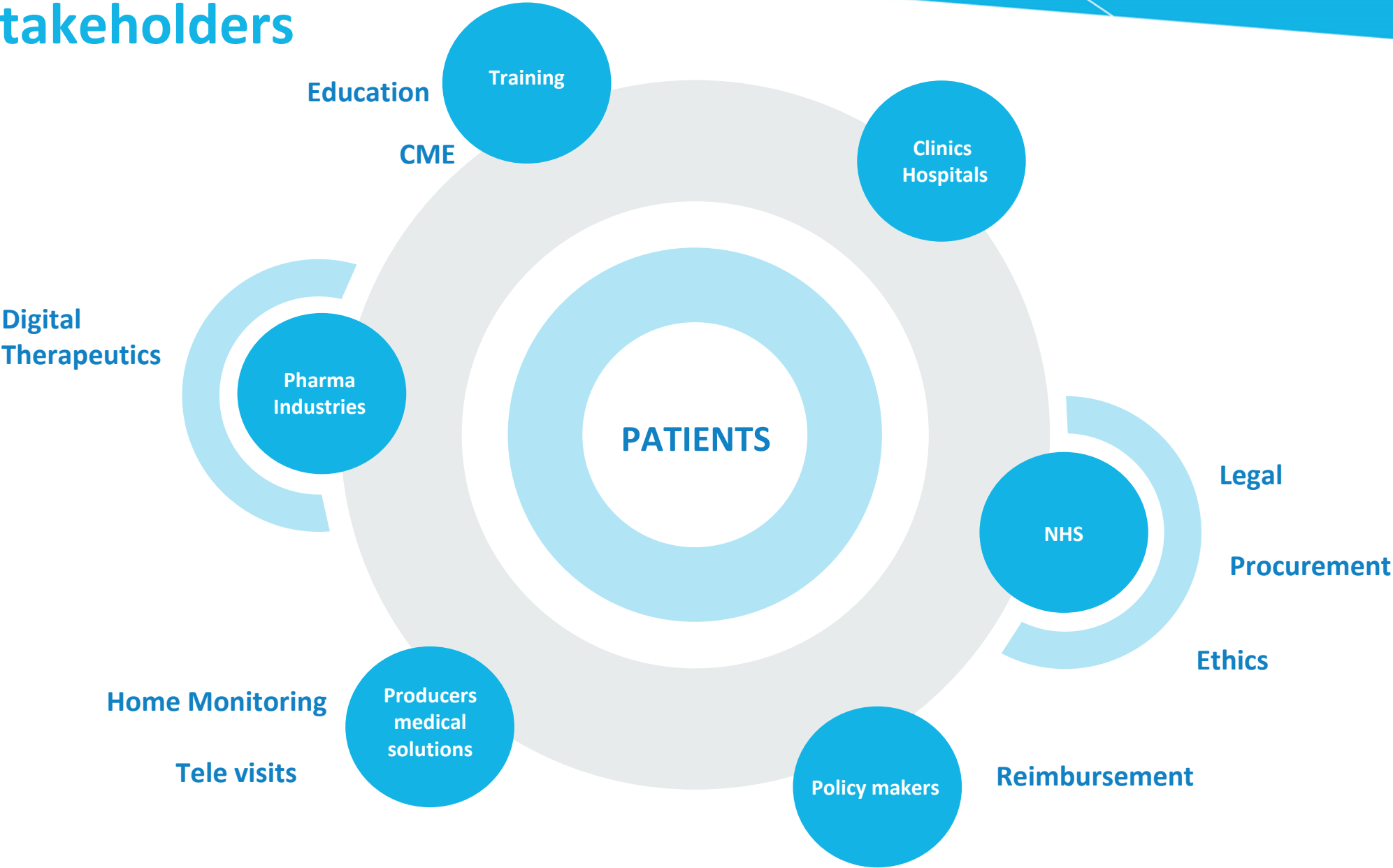
Chronic patients have
been left behind,
because of the high risk
inside hospitals: the
number of **heart
attacks** has already
started to raise!

Medical staff has an
extra burden to take
care of new challenges,
and are at **risk** while in
contact with patients:
digital, scalable
solutions are needed
more than ever

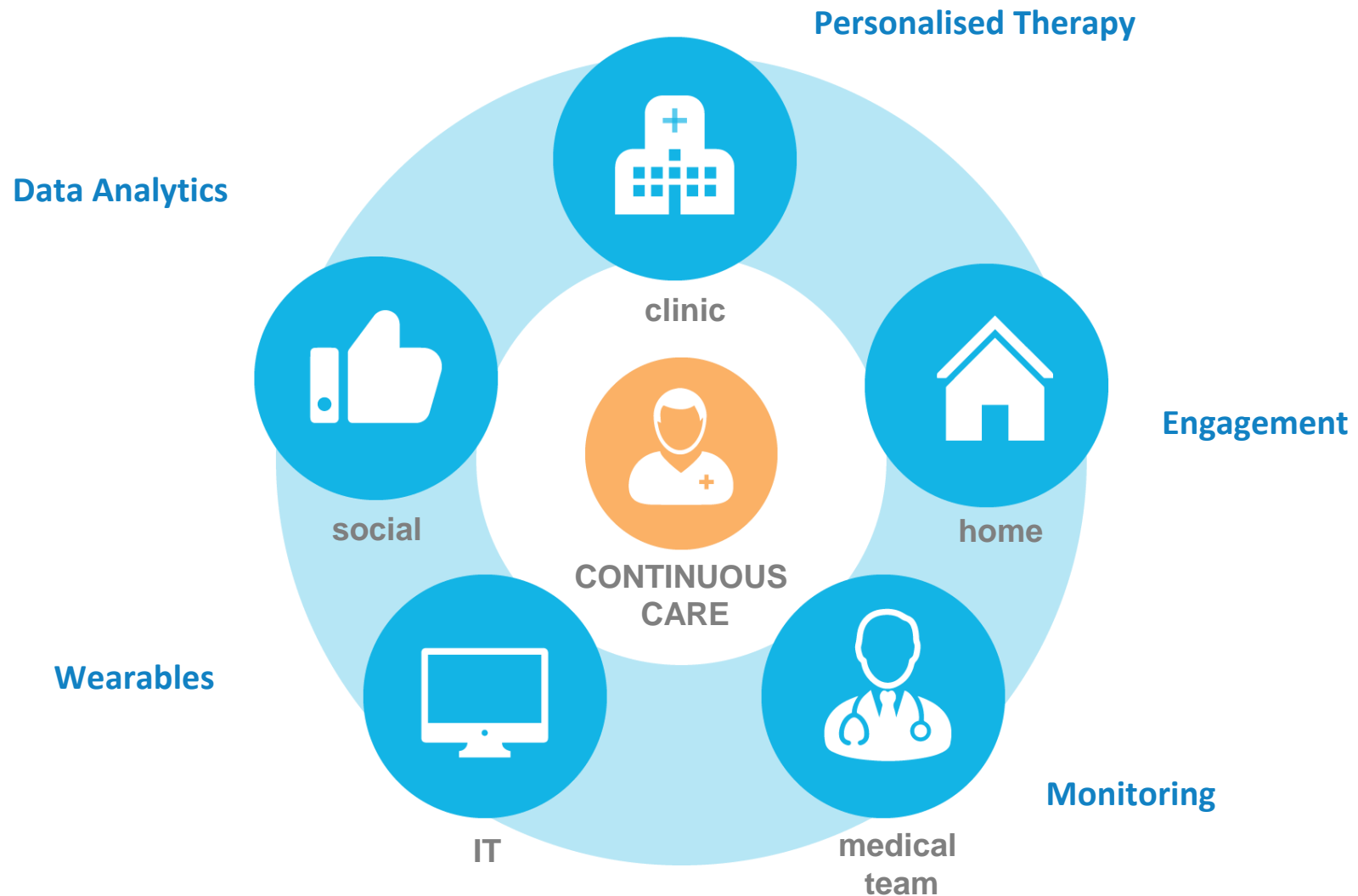
Eurostat health office trends **acknowledging an increasing number of
home caring professionals → NOT SCALABLE!**

**Covid-19 accelerated uptake of digital health solutions –
There is a huge need for scalable tele- rehabilitation**

Stakeholders



Towards Connected Care



REHABILITY NEURO: The solution



- Medical Device Class I
- Scalability
- Highly personalised therapy plans
- Patient-centric
- Security and constant care
- Adherence to therapy
- Proven to boost motivation
- Raising QoL
- Enriches data collection

VIDEO: <https://www.youtube.com/watch?v=tmRj8MjezU&t=12s>

Awards



Best Presentation Award at [Healthtech Invest Europe](#), Helsinki, March 2017



Awarded at the Pitch Competition [Frontiers Conference 2017](#)

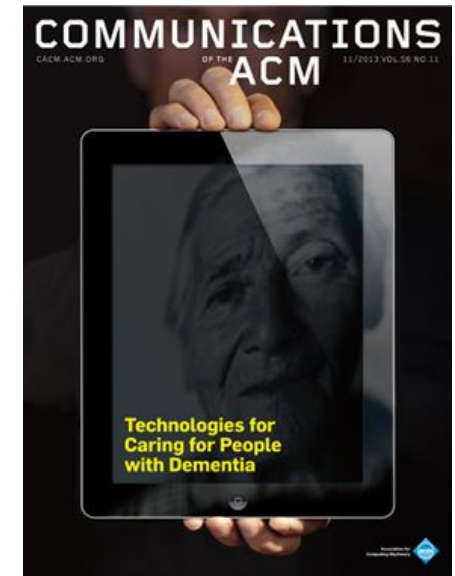


1st prize in AboutPharma Digital Awards (Oct 2015) for the category “reorganization of the **NHS**” and is in the **top 3** nominations in the category of “Tech for Patients”.



Outcomes

- >2.500 patients (60-95 years) already used REHABILITATION NEURO
- Methodology and results published in 22 scientific papers
- Motivational index >85%
- Efficacy same as traditional therapy
- Efficacy > solutions using Wii or commercial games



Expected Outcomes

- Therapist can raise nr of treated patients by >40%
- Improvement of therapy adherence in the mid-long term
- Ca 80% of patients can be treated remotely

A hand is shown holding a white chess piece, likely a king or queen, positioned as if about to move it. The chessboard is visible in the foreground, with several other pieces, including a dark brown king, in various positions. The background is blurred, showing a person's face.

Patient experience

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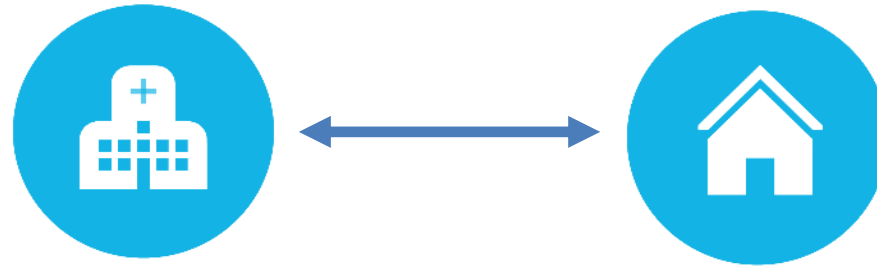
An association in Italy reports the satisfaction of patients who – feeling as “losers” in their lives - are able to “win again”!

”

Where are we going?

- **Broad adoption of Digital Therapeutics**
- **Studies: Clinical & Longitudinal**
 - Further collect data and experiences
 - Opportunity of better improvement / limiting deterioration
 - Check efficacy and motivation at home in the medium-long period
 - Reduce risk of new occurrences (longer therapies)
 - Better adherence
- **Better QoL (patient)**
 - Better health
 - Psychological improvements
 - Feeling of being cared for vs abandonment
 - Involvement of families
 - Less trips to hospital

Barriers



- **Organisational Perspective**

- Digital solutions need to be seamlessly embedded into routine
- Innovation of organisation / processes
- Update of legal processes
- Demonstrate cost savings: less time dedicated per patient
- Therapist training
- Patient training and empowerment

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