



Conferenza
GARR 2021
sostenibile
digitale

The technology transfer in Healthcare 4.0: the use of Machine Learning solutions for neurodegenerative diseases

Annamaria Demarinis Loiotile

L. Bellantuono , F. De Nicolò , A. Monaco , S. Tangaro , N. Amoroso , R. Bellotti

**Dipartimento di Ingegneria Elettrica e dell'Informazione,
Politecnico di Bari**



AI for Healthcare Transformation

«Artificial intelligence and its first and second cousins, machine learning and robotic process automation, will fundamentally change how almost everyone working in hospitals and health systems will do their jobs in the future.»

American Hospital Association, 2019

AI for Healthcare Transformation

Artificial intelligence has the potential to revolutionize healthcare and help address some of these challenges, above all those related to neurodegenerative diseases which nowadays represent the challenge for Healthy and Active Ageing.

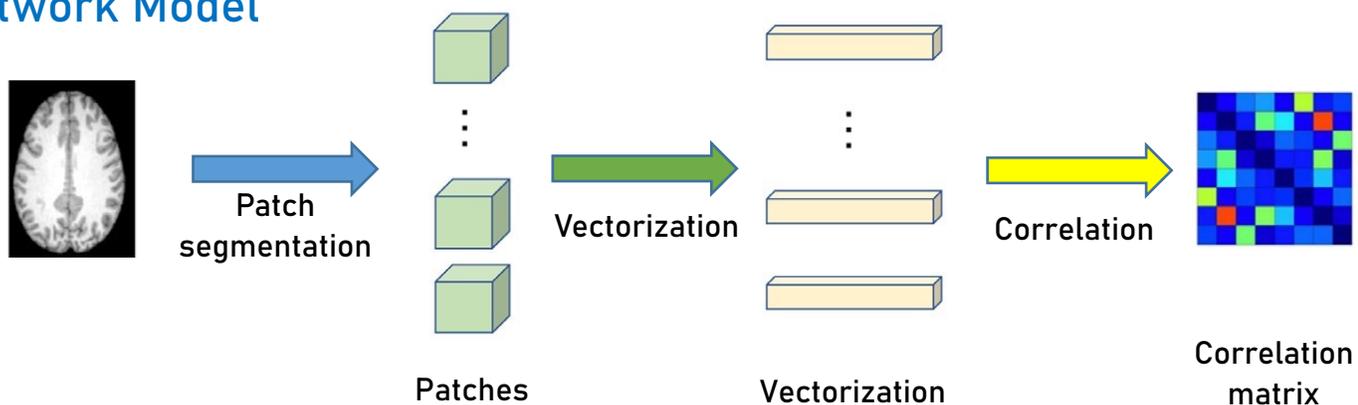
By 2050, one in four people in Europe and North America will be over the age of 65 – this means the health systems will have to deal with more patients with complex needs. The management of these patients is expensive and requires systems to “shift from an episodic care-based philosophy to one that is much more proactive and focused on long-term care management”

FROM: McKinsey and Company, Transforming healthcare with AI - EIT HEALTH

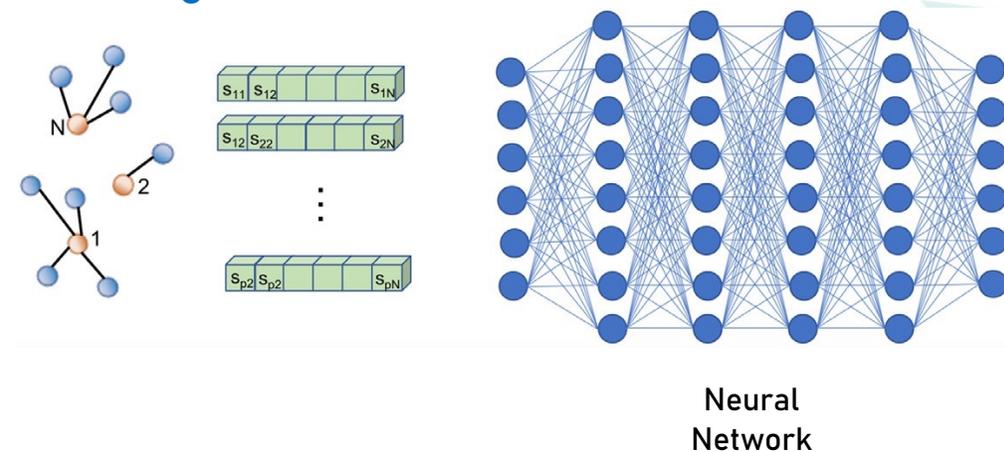
Neuroimaging and deep learning

Exploiting deep learning, it is possible to implement a pipeline for brain age prediction.

Network Model



Learning



Research Results Transfer and Valorization

The pipeline implemented for neurodegenerative diseases using AI and deep learning approach, will be transferred and valorized in order to become a tangible innovation for predicting neurodegenerative diseases, within the framework of 4P Medicine.

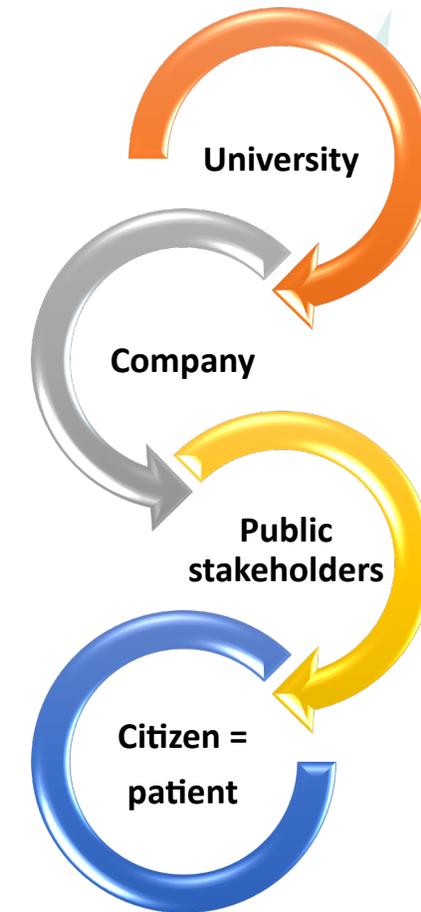
4P MEDICINE



Research Results Transfer and Valorization

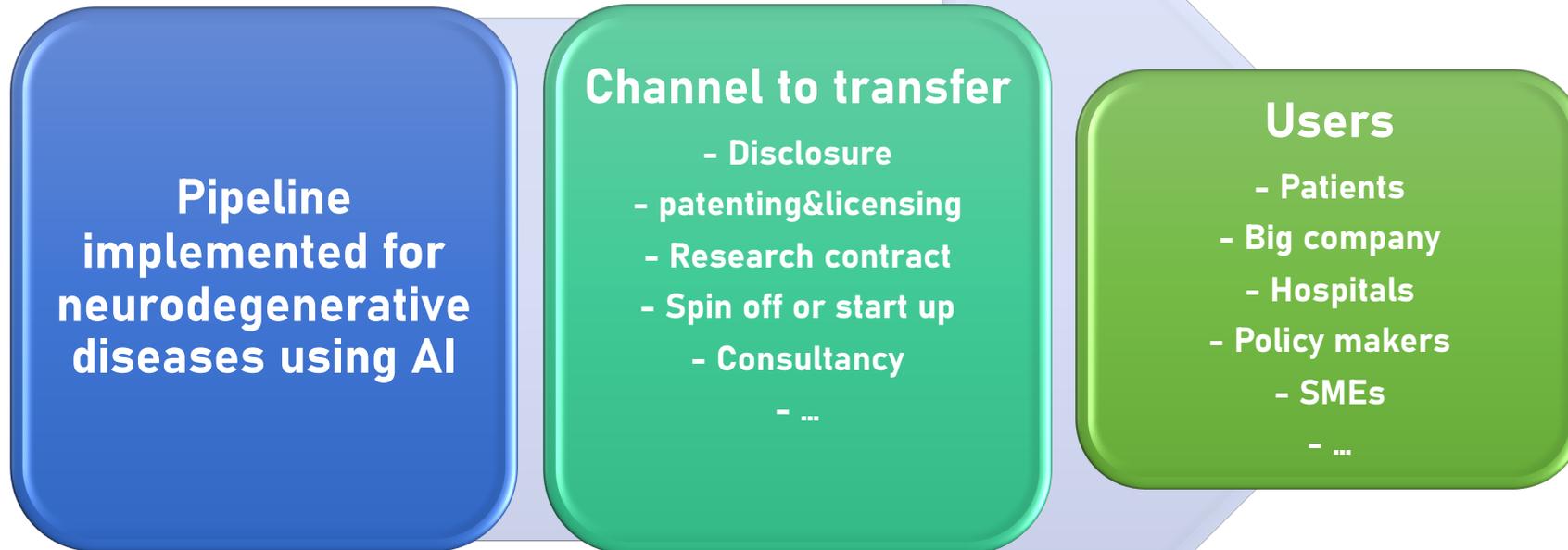
Through research results valorization the Universities promote the dissemination and use of new technologies developed at the research organizations in order to increase the impact of the research for all the stakeholders;

TT in UNIBA/POLIBA has the purpose to transfer technologies out from the university for the benefit of the health and wealth of society.



Quadruple helix model

Technology Transfer in Healthcare 4.0



**SUSTAINABLE
IMPACT &
WELLBEING**

Grazie



Politecnico
di Bari



UNIVERSITÀ
DEGLI STUDI DI BARI
ALDO MORO

Annamaria Demarinis Loiotile
annamaria.demarinis@uniba.it