

IMI DIGITAL HEALTH PARTNERSHIPS

DELIVERING VALUE TO PATIENTS
AND ACCELERATING EUROPE'S
DIGITAL LEADERSHIP



SETTING THE STANDARD FOR PUBLIC-PRIVATE PARTNERSHIP AND ACCELERATING EUROPEAN DIGITAL LEADERSHIP

SETTING THE STANDARD FOR PARTNERSHIP

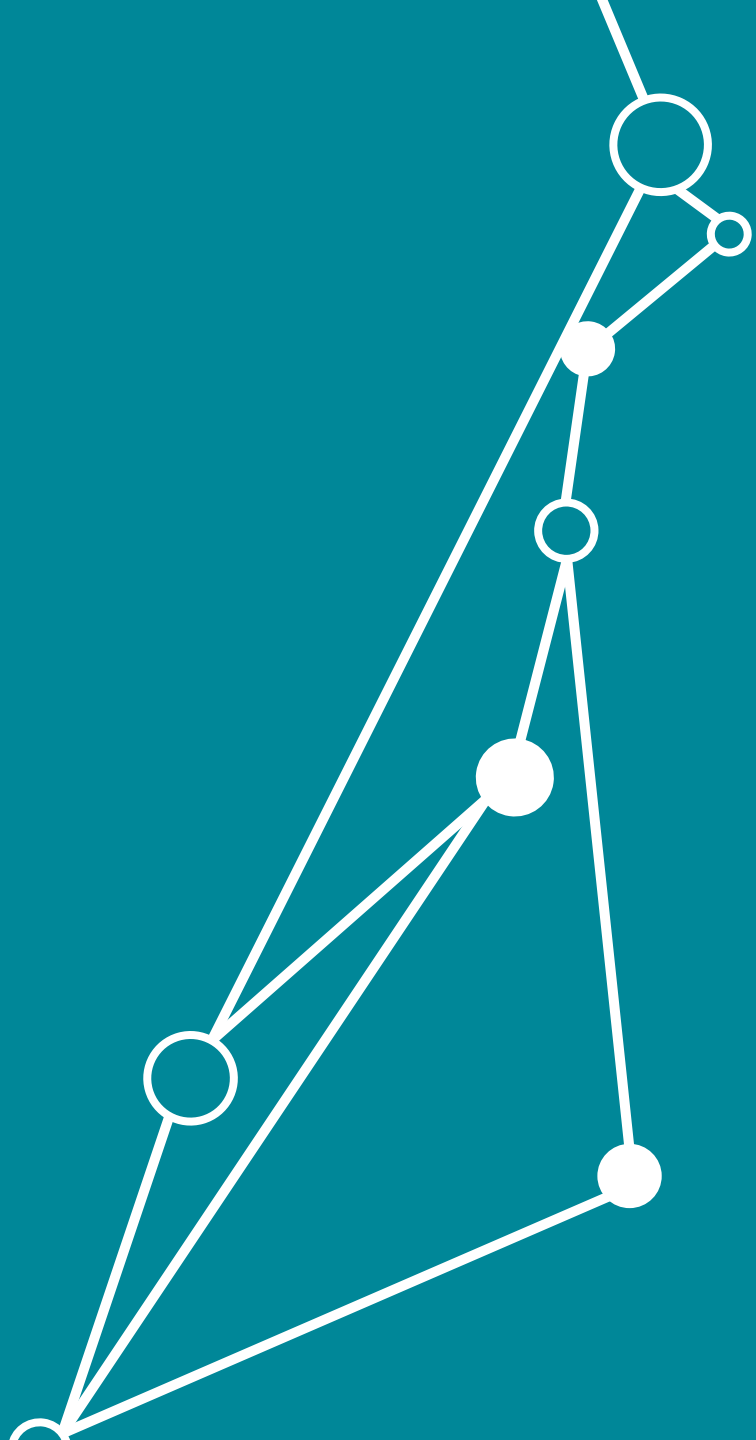
IMI – EFPIA collaboration pioneered a bold and novel way of working across sectors – providing tremendous value:

- Increased shared investment of EU and EFPIA into collaborative health R&D, yielding a vibrant national and regional research agenda and greater efficiencies
- Significantly increased pre-competitive collaboration between industry partners
- New digital assets created, using PPP to expand knowledge base and de-risk innovation – learning from and building upon previous projects
- Greater interaction between industry, researchers and EU decision-makers to co-develop patient-centered solutions - enabling digital health progress at national, regional, and global levels

EUROPEAN LEADERSHIP ON DIGITAL

Building upon the success of IMI, Europe continues to lead in the advancement of PPP models, now expanding to include more industries with a broader agenda.

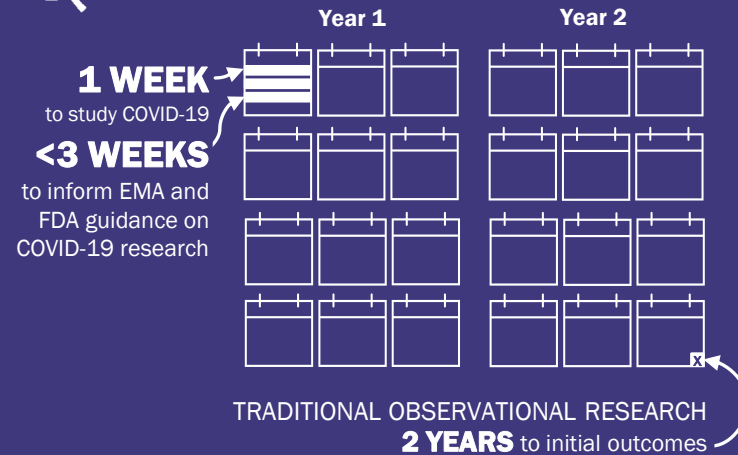
- COVID-19 has brought IMI investments to the forefront, playing a role in the COVID-19 response
- Europe is well-placed, with the IMI track record of public-private collaboration, to navigate digital transformation
- Digital health can accelerate the European Digital Strategy and transform the healthcare industry
- Unlock synergies with national level strategies and priorities in digital
- Not only within Europe – can position Europe as a global leader in digital and R&D, built on European values



As much as 30% of the world's stored data are currently produced by health systems. But the health sector lags behind in exploiting this potential. It is a sector which is data rich but information poor.

-OECD

IMI DIGITAL HEALTH IMPACT



The future:
Predict relapses,
before they happen.



25
PERCENT
Reduction in clinical
trial recruitment time



1 POINT OF
CONTACT
Empowers patients
and eases burden
on systems

€10 B
Reduction in counterfeits



**GREATER
PATIENT
SAFETY
& TRUST**



The future:
Digital biomarkers as
regulatory endpoints.



The future:
Patient-controlled data
informs population-level
decisions, in real-time.



EHDEN

HARMONIZING FEDERATED BIG DATA FOR FAST OBSERVATIONAL RESEARCH

ABOUT

EHDEN's mission is to reduce the time to provide an answer in real world, health research. It will achieve this by developing the required infrastructure in a federated network at scale across Europe, collaboration on research methodologies, and education in an open science collaboration in the 21st century.

VALUE PROPOSITION

- EHDEN seeks to address the current challenges in generating insights & evidence from real-world clinical data at scale
- EHDEN supports patients, clinicians, payers, regulators, governments, and the pharmaceutical industry in understanding wellbeing, disease, treatments, outcomes and new therapeutics and devices; and science through patient data
- Dramatically accelerates operational research
- EHDEN Academy for industry upskilling with SME Marketplace for digital infrastructure
- Sustainability: Building on previous (EHR4CR, EMIF) and enabling current IMI projects (e.g. EU-PEARL, H2O), and launching EHDEN Institute to operationalize the output of the project

KEY FACTS

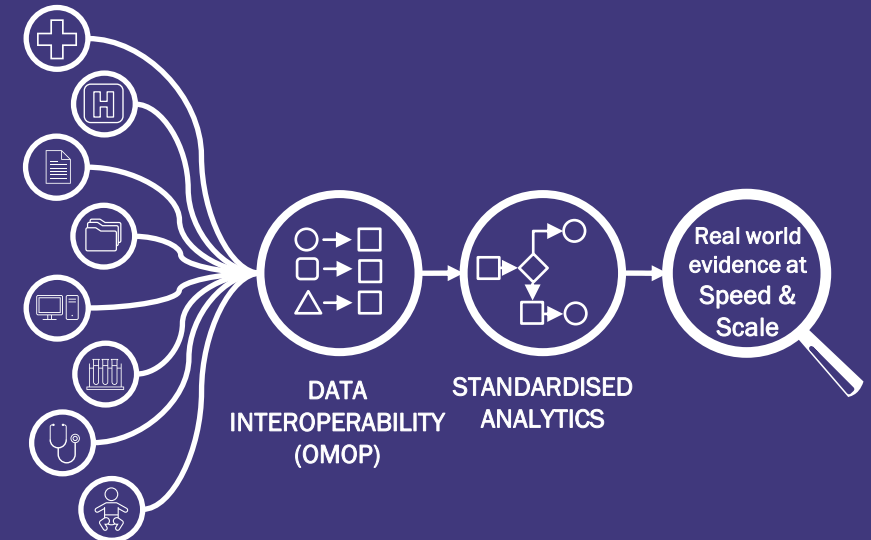
22
PARTNERS

12
COUNTRIES

€29 [IMI €14M
EFPIA €15M]
MILLION
BUDGET

**2018-
2024**
PROJECT
DURATION

HOW IT WORKS



>200 MILLION
PATIENT RECORDS*
61 DATA PARTNERS*
FEDERATED DATA NETWORK

STRENGTHENED COMMUNITY

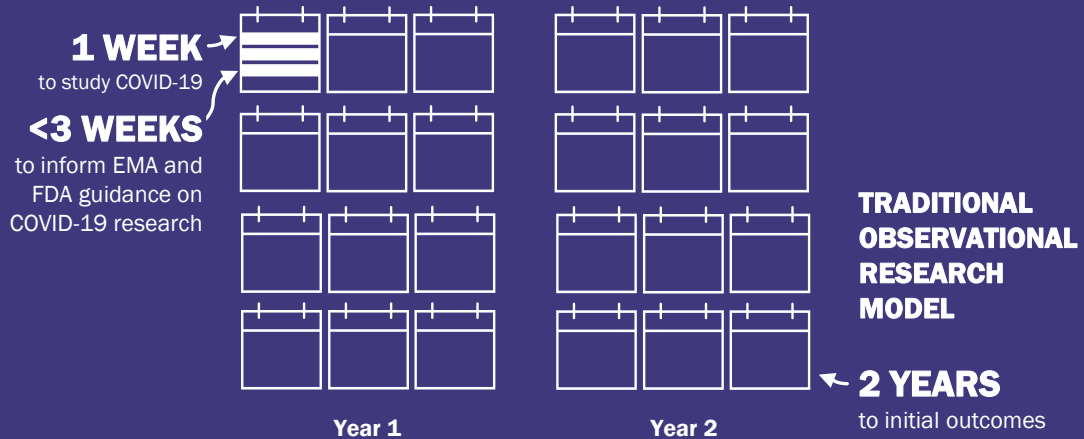
*as of 1 March 2021



EHDEN

THE ASPIRATION AT SCALE

WHY IT MATTERS



PATIENT

- Understanding benefits and risks
- Improvement of care
- Better patient outcomes
- Patients supporting research through appropriate data contribution



INDUSTRY

- Open collaboration
- Understanding diseases
- New indications
- Trial design & feasibility
- Demonstrating real world outcomes and value



SCIENCE

- Accelerate speed of research
- Possibility to strengthen regulatory with RWE
- Strengthen national and regional scientific community



WORLD

- EHDEN INSTITUTE – visionary thought leadership, research programmes, and network studies
- European leader
- Data analyzed across global markets
- Education and upskilling



PharmaLedger
BLOCKCHAIN ENABLED HEALTHCARE

PHARMALEDGER

BLOCKCHAIN ENABLED HEALTHCARE

ABOUT

The goal of the project is to provide a widely trusted platform that supports the design and adoption of blockchain-enabled healthcare solutions for clinical trials, supply chain, and health data while accelerating innovation that benefits the entire ecosystem, from manufacturers to patients.

VALUE PROPOSITION

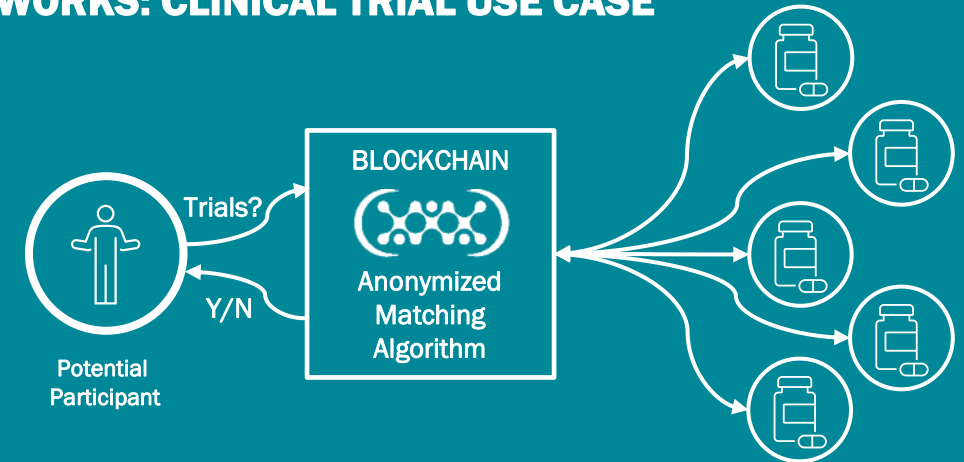
High potential to transform the industry and create value through blockchain:

Clinical trials: aggregate clinical trials and screening criteria across the entire industry, via anonymized matching algorithm enabling voluntary enrollment-less dependency on intermediaries and accelerating recruitment time

Supply chain: end to end visibility can accelerate product deployment, reduce product waste, ensure trust in product quality, and authentication capability for anti-counterfeit

Health data: privacy-enabled, patient-centric solutions for a value-based health delivery in clinical practice by combining blockchain with Machine Learning and AI. This can be applied to improve diagnosis, prevention and personalized treatment of patients.

HOW IT WORKS: CLINICAL TRIAL USE CASE



Aggregated trials and criteria across whole industry

KEY FACTS

29
PARTNERS

13
COUNTRIES

€22 [IMI €8M
EFPIA €14M]
MILLION
BUDGET

**2020-
2022**
PROJECT
DURATION



PHARMALEDGER

THE ASPIRATION AT SCALE

WHY IT MATTERS

 **25**
PERCENT
Reduction in clinical
trial recruitment time



1 POINT OF
CONTACT
Empowers patients
and eases burden
on systems

€10 B
Reduction in counterfeit



GREATER
PATIENT
**SAFETY
& TRUST**



PharmaLedger



PATIENT

Increase patient centricity

Increase patient trust in medicines

Patient-centered care solutions

Data ownership & privacy



INDUSTRY

Reduce the development and
validation time for new drugs

Reduce product waste

Reduction in counterfeit goods

Higher volume of patient data



SCIENCE

Provide new solutions by using data
based on blockchain's ability to
create:

- Trust
- Real-time
- Immutability
- Interoperability
- Decentralization



WORLD

Scaled across geographies

Platform can be scaled to include any
use case: future-proof using
innovative open DSU technology



RADAR-CNS



RADAR-CNS

WEARABLES TO HELP PREDICT AND PREVENT RELAPSE

ABOUT

A collaborative research programme exploring the potential of wearable devices to help prevent and treat depression, multiple sclerosis, and epilepsy.

VALUE PROPOSITION

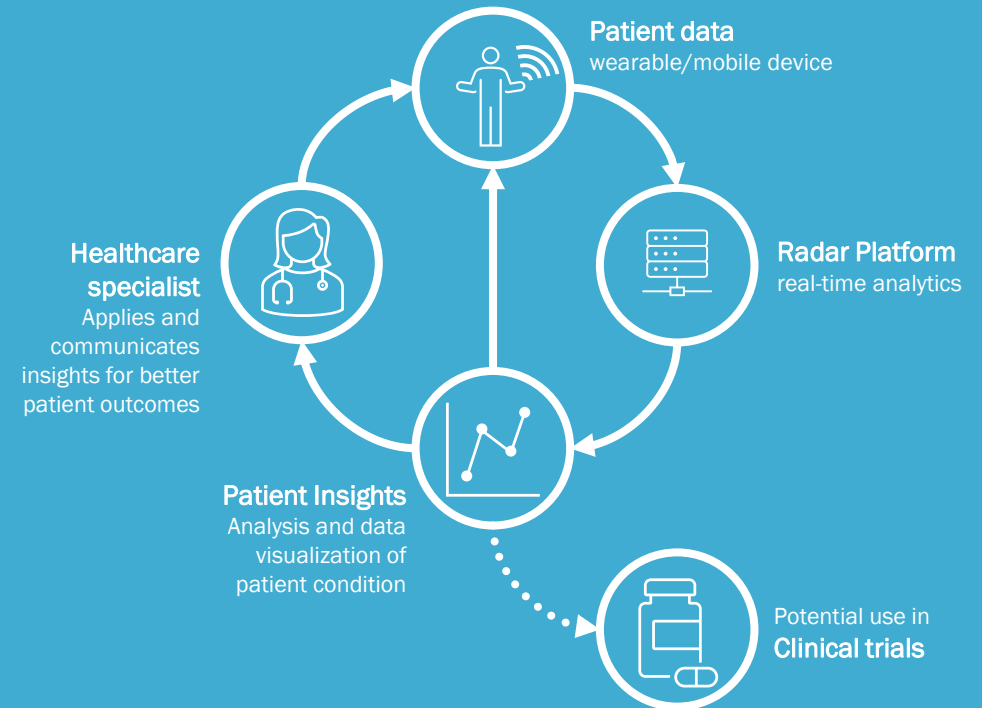
RADAR-CNS aims to improve people's quality of life and change how conditions are managed and treated. Data from mobile devices can give a full picture of a person's condition at a level of detail which was previously impossible. This offers the potential to detect changes in behavior, sleep, or mood before the individual themselves is aware of it, helping them to predict – or even avoid – a relapse.

- MS: gain understanding of disability, disease course and patient journey
- Epilepsy: track, predict and prevent seizures
- Depression: predict and preempt relapse

KEY FACTS

22	9	€26	IMI €11M EFPIA €14M OTHER €1M	2016-2020
PARTNERS	COUNTRIES	MILLION BUDGET		PROJECT DURATION

HOW IT WORKS



RADAR-CNS

THE ASPIRATION AT SCALE

WHY IT MATTERS

The future:
Predict relapses,
before they happen.



PATIENT

New model for patient empowerment and enhanced patient experience

Accelerated patient-centered care, better quality of life and outcomes

Improved outcomes for epilepsy, depression and MS

Physician and patient understanding of trajectory yields enhanced care

Prevents hospitalizations and burden on healthcare/clinical system



INDUSTRY

Smarter, faster clinical trials

Digital technology creates new business models: open-source, open-data, flexible, scalable, data-driven, data privacy

Aligned to outcome-based care



SCIENCE

Powerful tool for clinical insights

Biomarker data for clinical trials

Establish new standard of care

ID new inter-related predictive factors for disease management

New guidance on use of predictive biomarkers for disease

Strengthen national and regional scientific community



WORLD

Scaled across geographies

Radar Platform scaled to other diseases: cardiac, stroke, etc.

 Mobilise-D



MOBILISE-D

DIGITAL MOBILITY DATA AS A BIOMARKER IN CLINICAL TRIALS

ABOUT

MOBILISE-D aims to develop a comprehensive system to analyse people's gait based on digital technologies, including sensors worn on the body. The project focuses on conditions which often affect mobility.

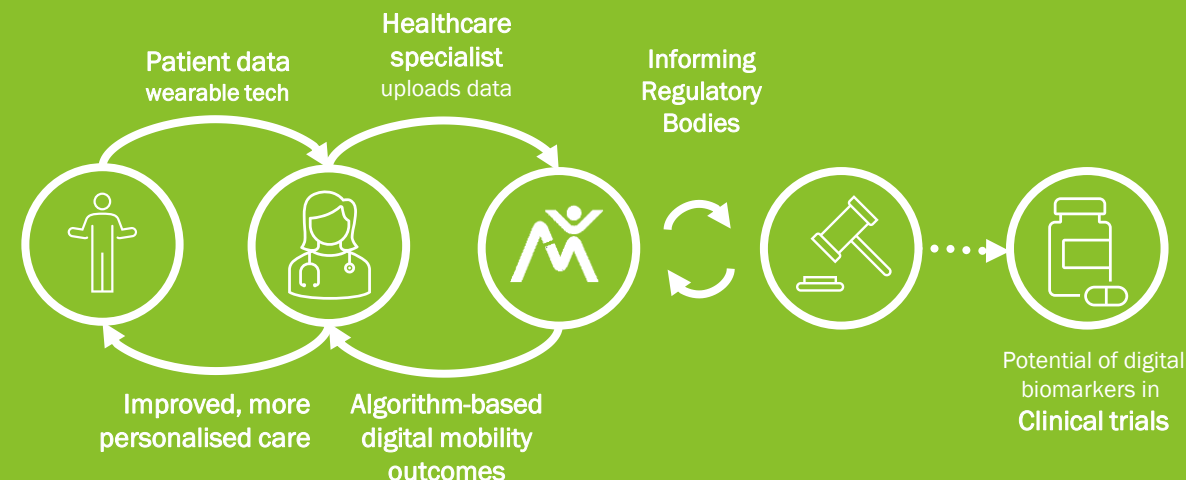
VALUE PROPOSITION

The project works closely with regulators, patients, and the public to ensure that the solutions are accepted. Once validated, the MOBILISE-D results will help to improve the accurate assessment of mobility in clinical trials. They will also make it easier for clinicians to monitor patients' mobility and thereby contribute to improved, more personalised care.

KEY FACTS

34 PARTNERS
10 COUNTRIES
€49 MILLION BUDGET
(IMI €25M, EFPIA €24M)
2019-2024 PROJECT DURATION

HOW IT WORKS



MOBILISE-D

THE ASPIRATION AT SCALE

WHY IT MATTERS

The future:
**Digital biomarkers as
regulatory endpoints.**



PATIENT

Accelerated patient-centered care

Improved outcomes for COPD, hip fracture, Parkinson's, MS, congestive heart failure

Improved mobility

Modernising and improving healthcare



SCIENCE

Continuous real-world, remote monitoring of mobility in real-time

Electronic and more accurate clinical endpoints that are digital from the start

ID new inter-related predictive factors for disease management

Possibility to strengthen regulatory with RWE

Strengthen national and regional scientific community



INDUSTRY

Digital technology creates new business models: open-source, open-data, flexible, scalable, data-driven, data privacy



WORLD

Applications relevant to post-COVID-19 landscape

Scaled across geographies

Mechanism scaled to other diseases





H₂O

HEALTH OUTCOMES
OBSERVATORY



H2O

PATIENT-CONTROLLED BIG DATA IMPROVING PERSONAL AND PUBLIC HEALTH OUTCOMES

ABOUT

The mission of H2O is “to empower patients with tools to monitor their outcomes independently, to promote the use of their outcomes in decision making with clinicians, to create transparency of outcomes to facilitate value-based healthcare models and to create an ethical governance model for patient-reported health data in the interest of patients, science and society”

VALUE PROPOSITION

H2O will equip patients with tools to measure their outcomes in a standardised way, whilst giving them full control of their data. This is the first-ever attempt at scale to collect and incorporate patient outcomes into health care decision making at an individual and population level. H2O will set up an independent, not-for-profit, entity – an observatory – in each of four European countries, covering three disease areas, initially. These entities will provide information for individual patients and their healthcare providers for use in clinical care and for others to use in improving health care decision making more broadly.

KEY FACTS

23 PARTNERS

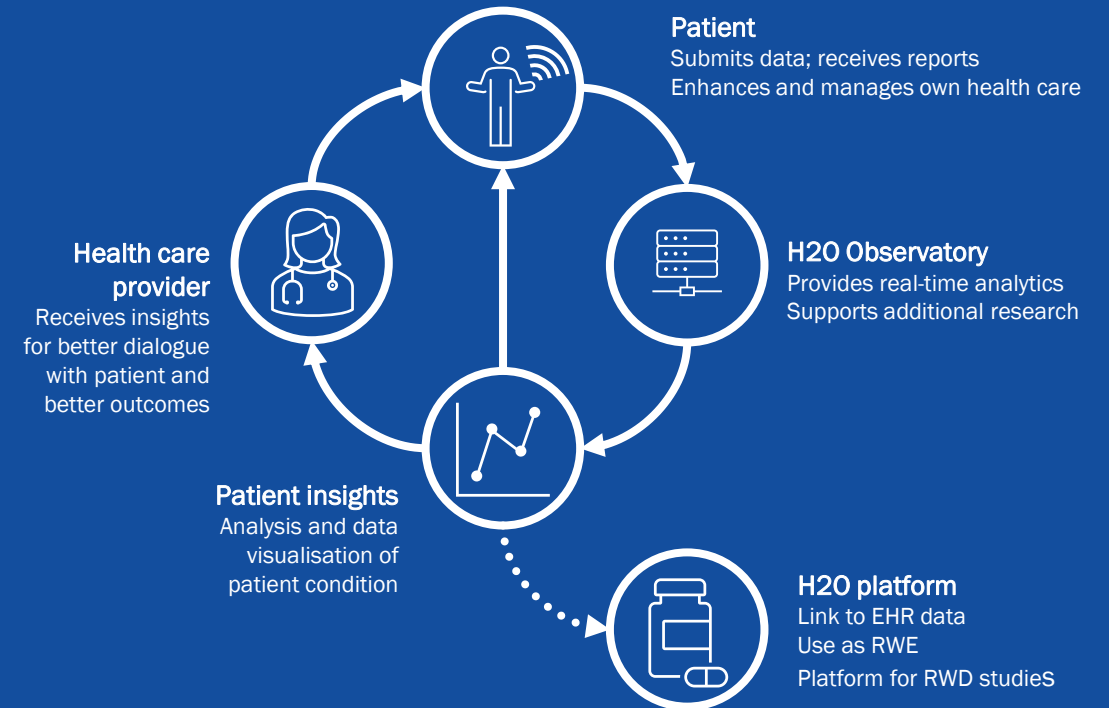
12 COUNTRIES

€21 MILLION BUDGET

IMI €10.5M
EFPIA €10M
OTHER €0.2M

2020-2025
PROJECT DURATION

HOW IT WORKS



H2O

THE ASPIRATION AT SCALE

WHY IT MATTERS

The future:
Patient-controlled data
informs population-level
decisions, in real-time.



PATIENT

Patient empowerment through data

Better patient-clinician dialogue: better care
and therefore better outcomes

Improved outcomes in diabetes, IBD and
cancer care



INDUSTRY

Better data and evidence to inform activities
throughout drug development and marketing

Richer data to design development
programmes

Access to patients (who have consented) for
research studies

H2O platform will be used for outcomes
based contracting and other value-based
health care initiatives



SCIENCE

Greater insights for clinicians

Improved and more efficient clinical
consultations with patients

New data sources for research

Strengthened national and regional
scientific community

Richer RWE for regulatory/HTA/ public
authorities' decision making

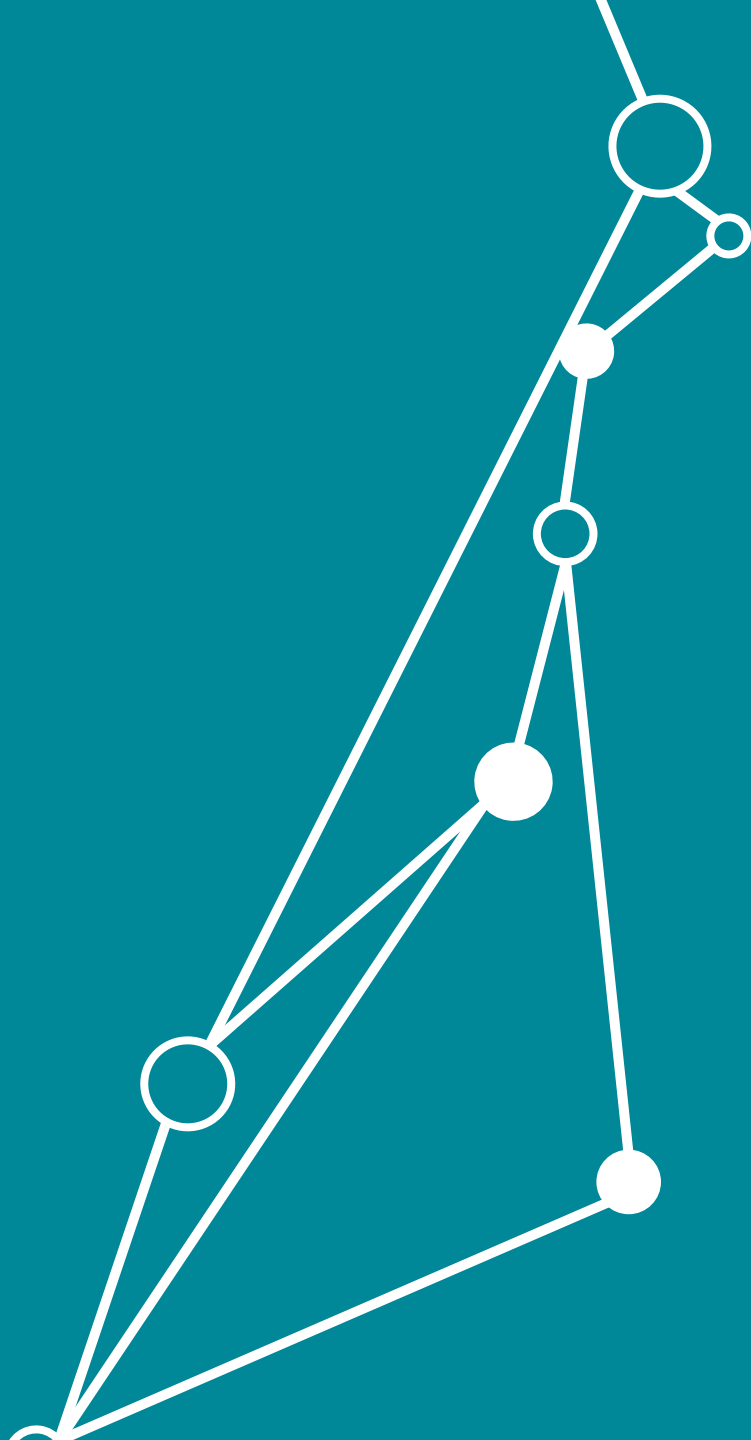


WORLD

Scalable across geographies

H2O approach and operational model
extendable to other diseases

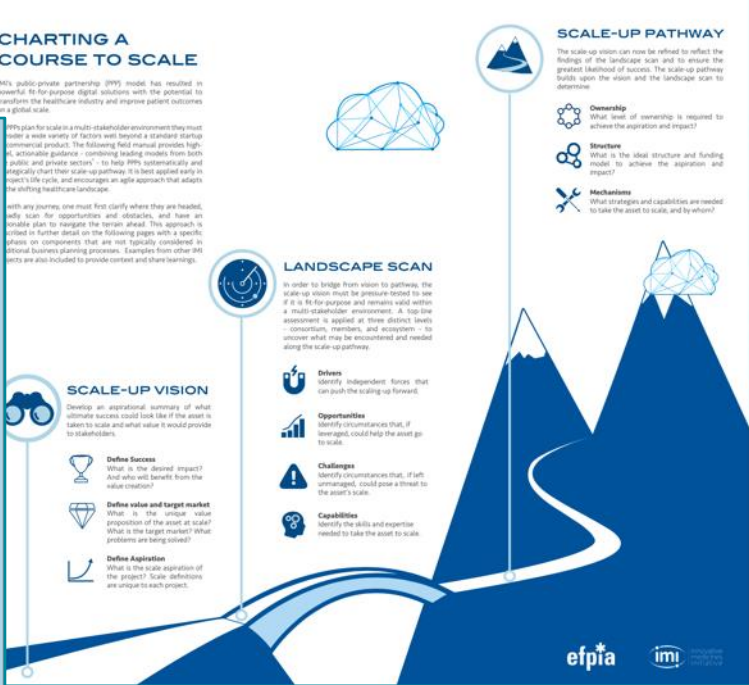
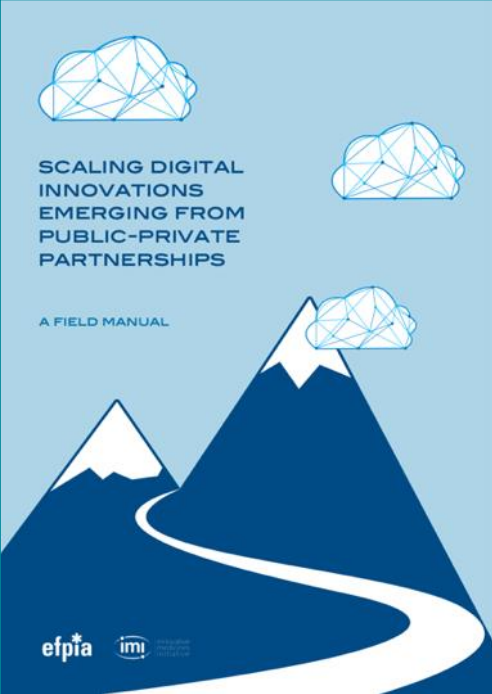
Early interest already manifested in
other multinational organisations



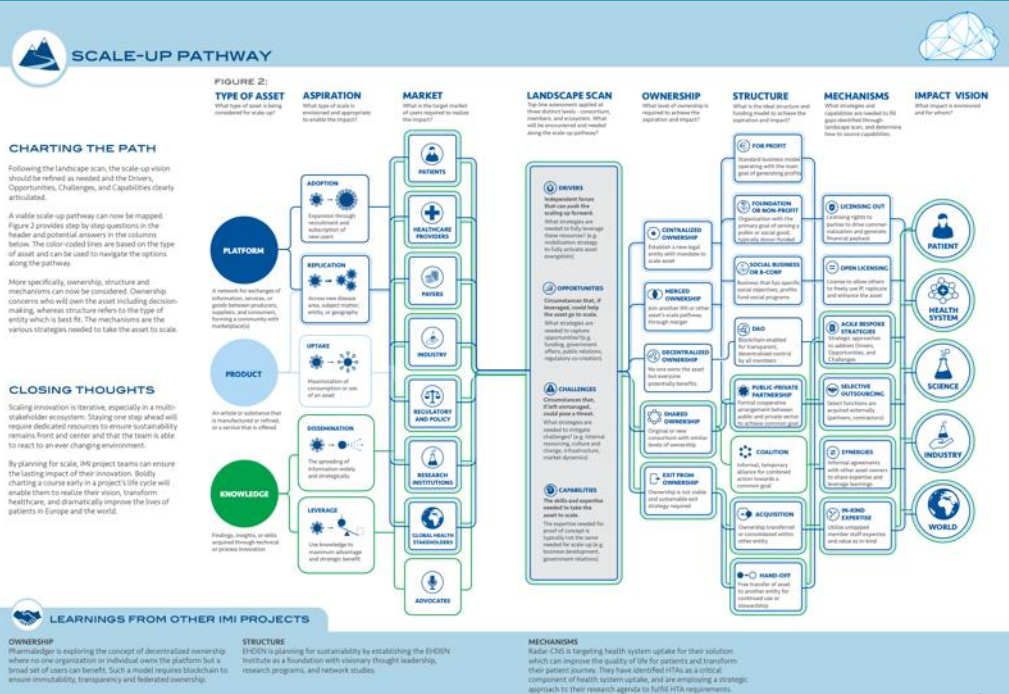
Accelerating Uptake and Scale

FIELD MANUAL

RESOURCING IMI PROJECTS WITH SCALE AND UPTAKE BLUEPRINT

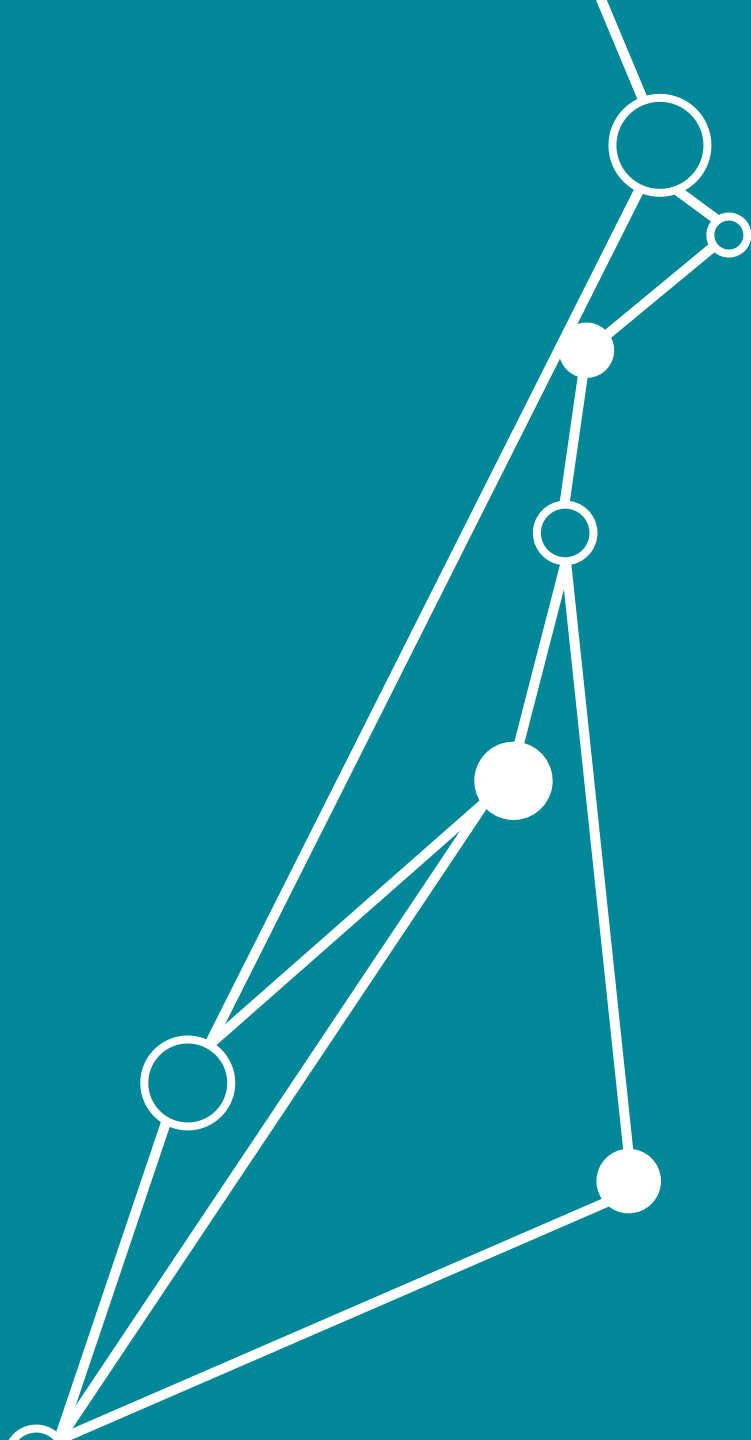


Pragmatic process and checklist to Inform robust sustainability planning and execution



6 | Accessible field manual format to encourage broad use

Actionable public-private framework to define what scale means for each project, and to assess and anticipate internal and external opportunities and challenges at all levels: Global, EU, national



Discussion