



Big Data for
Better Outcomes

IMI2 Big Data for Better Outcomes

Supporting the evolution towards outcomes-focused, sustainable healthcare systems

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Improve health outcomes
and healthcare systems in
Europe by maximising the
potential of Big Data



BD4BO Mission



ambitious



transformative



collaborative



disease-specific



patient-centric





2016-2024

Big Data for Better Outcomes

2013-2018

European Medical Informatics Framework

2013-2016

GetReal

2011-2016

Electronic Health Records for Clinical Research

IMI

Evolution of Big Data in IMI

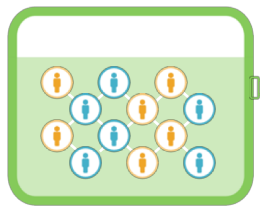
The public contribution



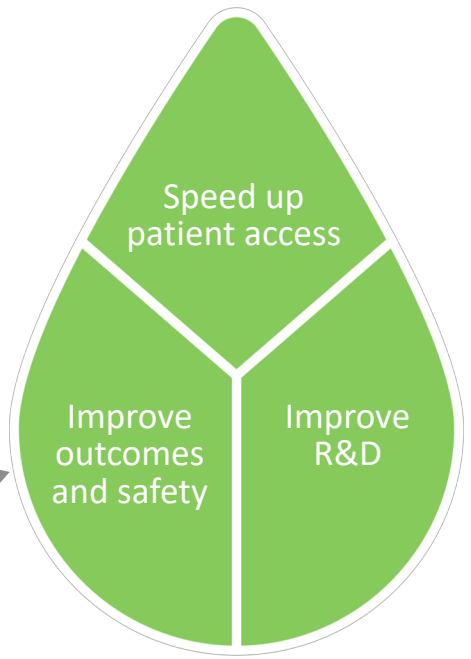
efpia The private industry in-kind contribution



Public partners Private partners = in IMI2 consortia



What are the results?



- € Cash
- Consumables
- Laboratories
- People

World's largest life sciences PPP



Mission: Improve health outcomes and healthcare systems in Europe by maximising the potential of Big Data

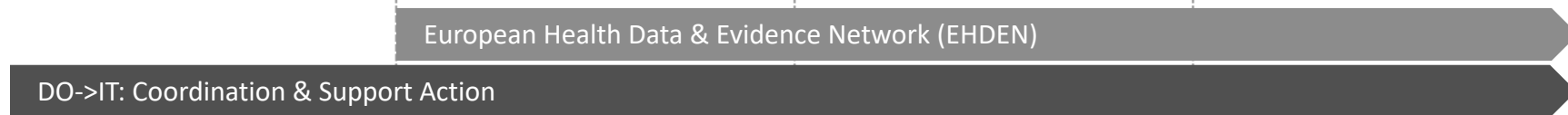
THEMES/ENABLERS:



DISEASE-SPECIFIC PROJECTS:



CO-ORDINATING PROJECTS:



Objective	Expected outputs	Timeline
<p>Provide the foundation for a Europe-wide, integrated data environment and framework for RWE across the spectrum of Alzheimer’s disease</p>	<ul style="list-style-type: none"> • Minimum set of measurable real-world patient outcomes • Recommendations on RWE appropriate AD-related endpoints • Identification of data sources and outline a data integration strategy for RWE outcomes • Development of new methods for collecting RWE data to improve health care value for AD • Recommendations for disease progression and health economic modelling • Guiding principles and recommendations from HTA groups/payers/regulators for the development and incorporation of RWE into clinical and market access development plans for AD 	<p>2016 - 2018</p>

Objective	Expected outputs	Timeline
<p>Improve the outcomes of patients with haematological malignancies through the use of Big Data sharing among all relevant stakeholders.</p>	<ul style="list-style-type: none"> • A clinical data-sharing platform including Big Data series from patients with haematological malignancies • A community of European haematological malignancies stakeholders • Meaningful and harmonised clinical endpoints and outcome measures in haematological malignancies • Tools for analysing complex data sets including genomic data • Biomarkers that will contribute to timely patient access to more effective and better tolerated innovative therapies • A framework for legal, ethical and governance issues 	<p>2017 - 2021</p>

Objective	Expected outputs	Timeline
Deliver clinically-relevant disease phenotypes, scalable insights from RWE and insights driving drug development and personalised medicine through advanced analytics	<ul style="list-style-type: none">• Definitions of diseases and outcomes that are universal, computable and relevant for patients, clinicians, industry and regulators• Informatics platforms that link, visualise and harmonise data sources of varying types, completeness and structure• Data science techniques to identify new phenotypes and construct personalised predictive models• Guidelines that allow for cross-border usage of Big Data sources acknowledging ethical and legal constraints as well as data security	2017 – 2022



PIONEER



Objective	Expected outputs	Timeline
To leverage the potential of Big Data and Big Data analytics to ensure the optimal, personalised care for all European men living with prostate cancer	<ul style="list-style-type: none">• Meaningful and standardised clinical endpoints and outcome measures for localised, locally advanced, and metastatic prostate cancer• A single innovative data platform in which existing ‘big data’ from prostate cancer patients across different stages of the disease has been standardised and integrated• A community of all European prostate cancer stakeholders• Tools for analysing complex data sets including genomic data• A framework for legal, ethical and governance issues which will allow for cross-border usage of big data sources whilst acknowledging data security constraints	2018 – 2023



European Health Data & Evidence Network (EHDEN)

A federated network of relevant and high quality data sources



Objective	Expected outputs	Timeline
As an enabling component of the BD4BO programme – to deliver the vision of large-scale medical outcomes research that develops a data network to enable other researchers to ‘find’ and safely ‘reuse’ data.	<ul style="list-style-type: none">• An open, transparent call process for third party data providers, with financial support for mapping to OMOP common data model• Delivery of an operational, federated network equivalent to a representative 20% of the EU population, or approximately 100 million people (~200 data sets)• Data quality management framework, supportive of both validation and benchmarking• European SMEs with relevant experience in innovative services for data providers and/or consumers• Certification of these SMEs across the RWE technical continuum• EHDEN project governance for engagement of third party datasets, oversight of data harmonisation and interaction with BD4BO• Evolution of health outcomes research and incorporation of novel data sources	2018 – 2023

Co-ordinating Projects



Objective	Expected outputs	Timeline
Serve as the pivotal point of programme coordination providing expertise for communication, collaboration, dissemination and stakeholder engagement for some areas common for all BD4BO projects	<ul style="list-style-type: none">• Develop and coordinate the overall BD4BO programme strategy• Develop recommendations for new IMI2 scientific priorities• Identify best practice for data management & collection - the standardisation, selection and measurement of outcomes• Build an online repository to share knowledge and learning across the BD4BO programme• Lead communication activities of the BD4BO programme and provide coordination of communications with BD4BO projects• Facilitate stakeholder engagement with key healthcare system stakeholders to foster policy discussions and build consensus• Develop minimum data privacy standards for ICFs• Develop explanatory information and training material to improve awareness of data privacy issues and engage with stakeholders to ensure buy-in for ICF templates	2017 – 2019

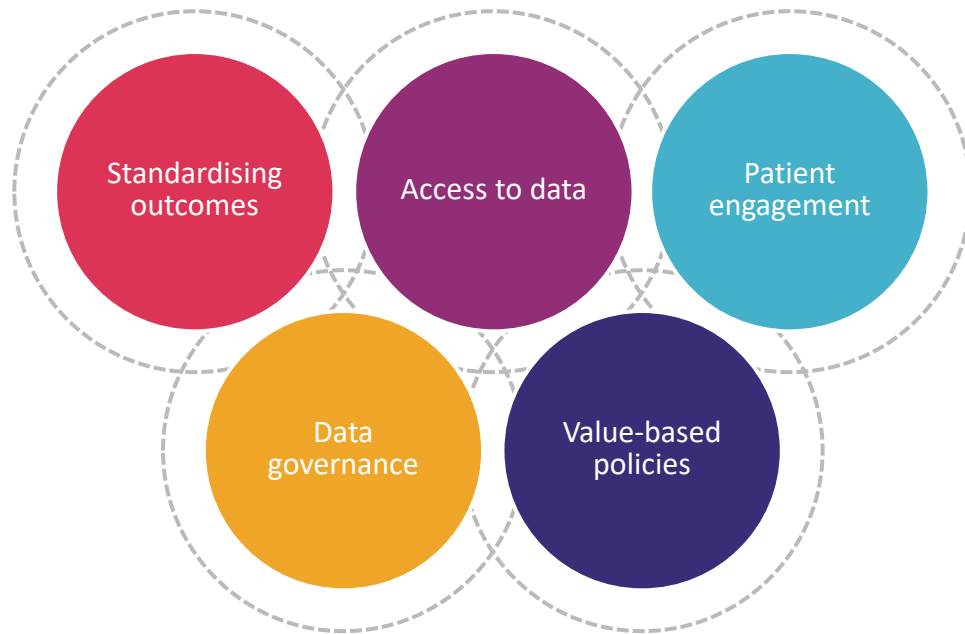


System-level | Disease-level | Patient-level | Trial/product-level

Benefits for Society



Improve health outcomes and healthcare systems in Europe by maximising the potential of Big Data



Coordinating Partner: London School of Economics and Political Science

Industry Lead: Novartis

PUBLIC PARTNERS

National Institute for Health and Care Excellence
Dental and Pharmaceutical Benefits Agency
European Cancer Patient Coalition
European Multiple Sclerosis Platform
Simmelweis University
Imperial College London
Swedish Institute for Health Economics
Centre for Research in Healthcare Management – Università Bocconi
Norwegian Institute of Public Health
University of Liverpool
Norwegian Medicines Agency
Technology, Methods and Infrastructure for Networked Medical Research
Inserm Toulouse

PRIVATE PARTNERS

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MSD
Novo Nordisk
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Servier
UCB
Association of Research-Based Pharmaceutical Companies

DO->IT Partners





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Thank you!

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