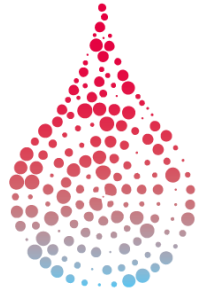


HARMONY

Healthcare Alliance for Resourceful Medicines Offensive against Neoplasms in Hematology

Big data in health
IMI's HARMONY Project

How to improve healthcare services through big data and research

19th June, European Parliament, Brussels

Jesús M. Hernández

HARMONY Coordinator

Institute of Biomedical Reasearch of Salamanca

(IBSAL)

Financiado por

innovative medicines initiative

efpia

The volumen of health-care data is constantly growing

Health care generates a vast amount of clinical data, which is collected and stored electronically. The average person is likely to generate more than one million gigabytes of health-related data in their lifetime, 30% of which at the genetic level.

Currently, medical data doubles every year. **By 2020, it is expected to double every 73 days.**

Source: University of Iowa, Carver College of Medicine, 2014

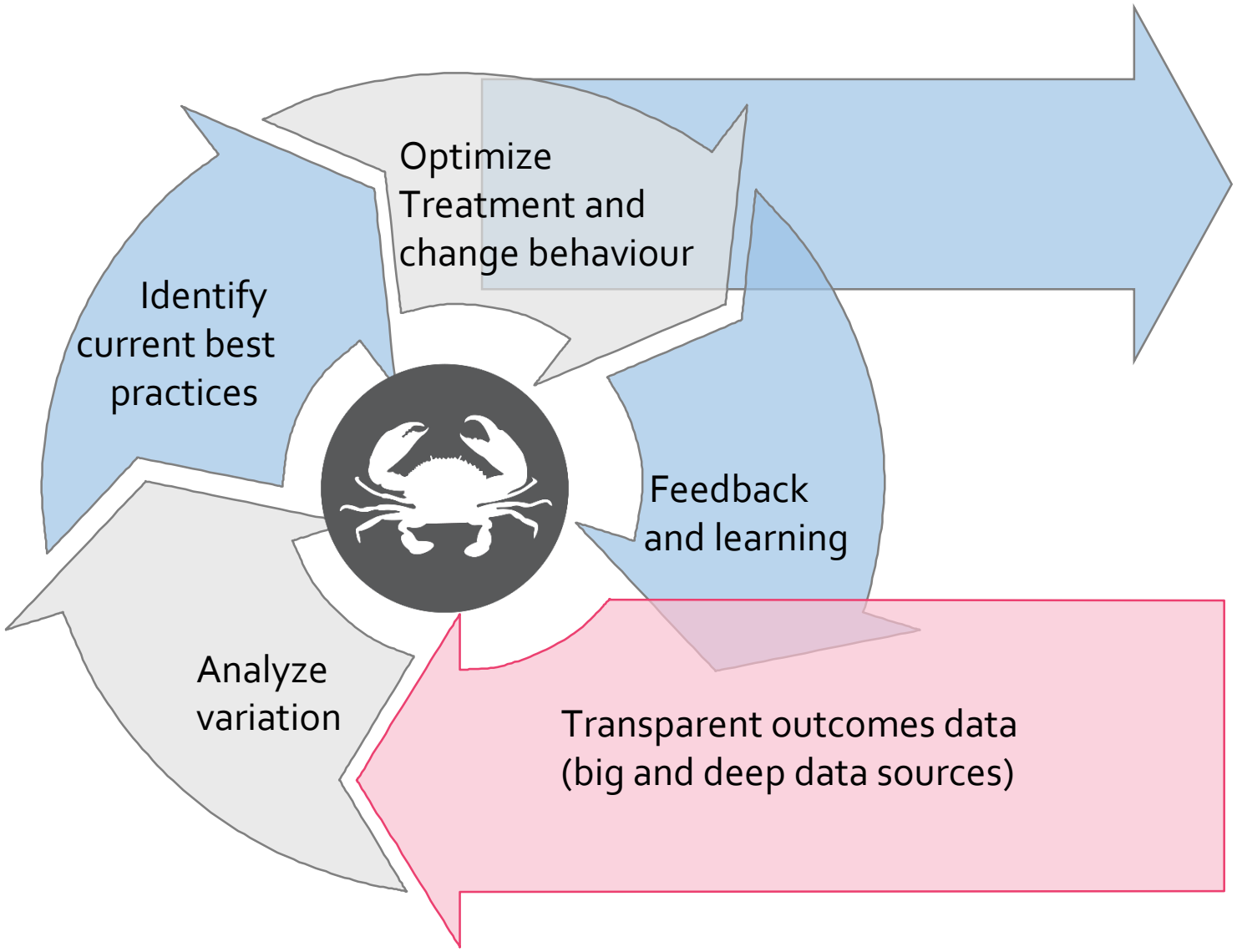
Funded by imi innovative medicines initiative efpia

We need to share and re-use data, **always for the benefit of patients**

While improving clinical practice,
we build up a more digital and sustainable health-care system

Funded by imi innovative medicines initiative efpia

Our health-care systems generate billions of data that can be used to help patients



Data re-use

Sustainable health care

Funded by imi innovative medicines initiative efpia

HARMONY is the biggest BD4BO Project within IMI

HARMONY

Healthcare Alliance for Resourceful Medicines
Offensive against Neoplasms in Hematology

Building a high-quality Big Data platform on haematological malignancies

Harmonization of outcome measures and endpoint definitions for HMs at European level

Speed up drug development, access pathways and bench-to-bedside process

Increase the application of omics data in clinical practice

Big Data to meet the biggest needs in Hematologic Malignancies

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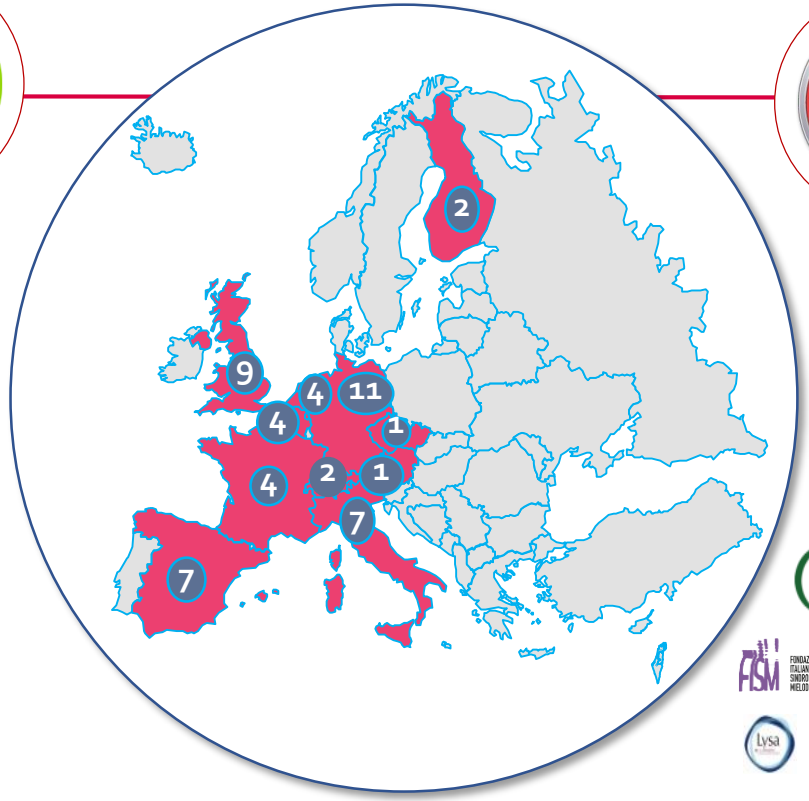

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LeukaNET · European Alliance for Personalised Medicine

ALL · AML · CLL · MDS · MM · NHL · Ped.

53 organisations from 11 countries, working accross 7 hematological malignancies

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AML

Identification of gene-gene interactions and impact on disease outcome

5+ groups
4500 + patients

CLL

Large-scale mutation analysis - Novel prognostic/predictive scheme for improved risk stratification aimed at personalized medicine

ERIC: 24+ groups
5000 + patients

MM

Revised International Staging System for MM in the European clinical trial population and evaluation of the efficacy of different novel agents and treatment approaches

APL

Open issues in the management of acute promyelocytic leukemia

Pediatrics / ALL

Definition of a common data set in childhood malignancies for cross entity analysis comparison of pediatric and adult data

HARMONY Bench-to-Bedside Projects: working on specific questions by disease

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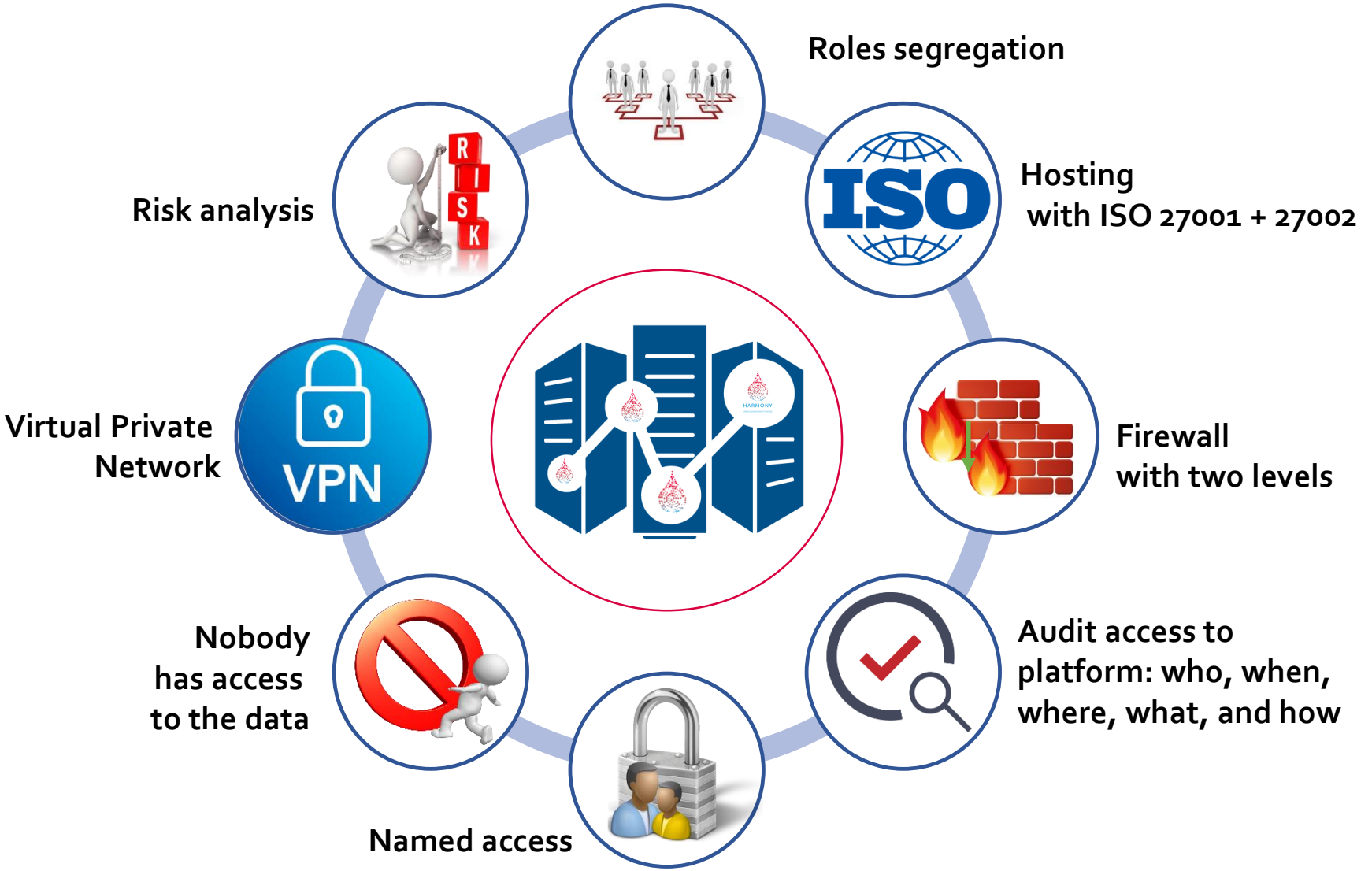
De-facto anonymisation

"Technical and organisational measures to protect data"

- Technical anonymisation
  - Supression
  - Generalisation
  - Perturbation
- Organizational security
  - Policies
  - Processes
  - Contracts
- Data Access Restrictions



Our HARMONY Platform is completely safe and complant with GDPR

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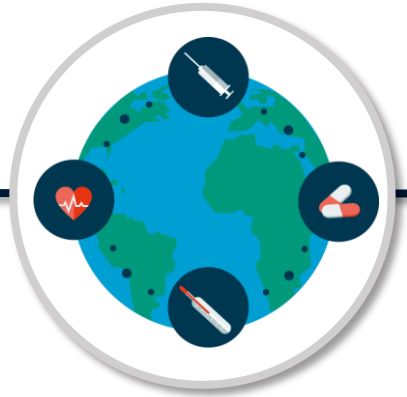
New technologies can be safely incorporated to health care



Digitalisation leads to a sustainable health-care system

Development of tools that improve clinical practice

Benefiting patients while protecting our health-care systems

Preserving patients' privacy while promoting research

There are initiatives and solutions that can benefit both patients and health care systems

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Promoting and investing in Big Data will prove to be beneficial for the whole society

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Thank you!

Any questions?

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Offensive against Neoplasms in Hematology

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