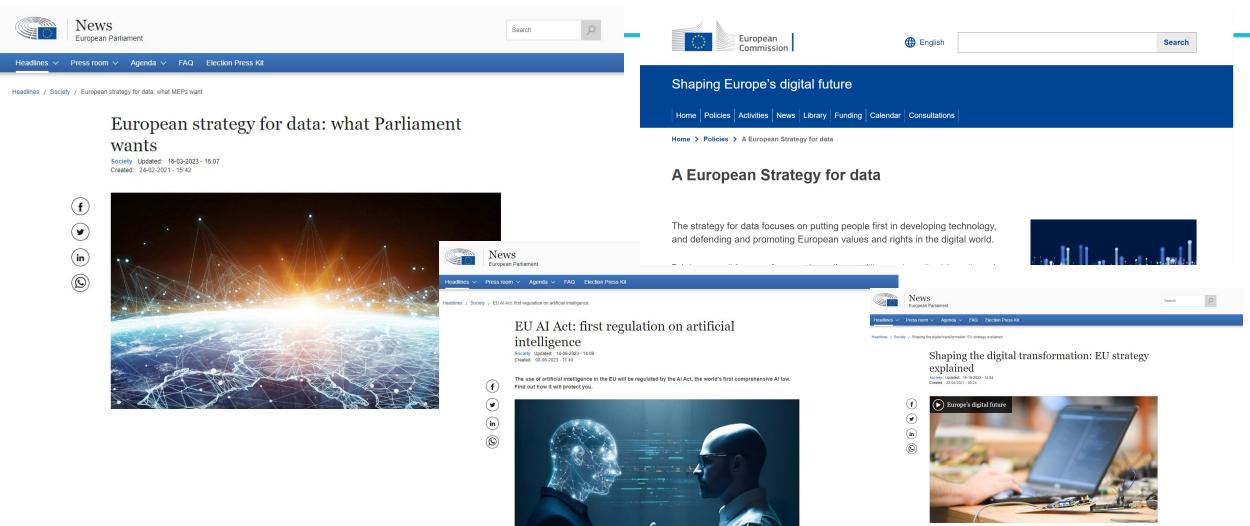






Data strategy









Heracles overview

Problem

•Increasing
number of cancer
cases but also
research & big
data

Solution

Technology & Governance for sustainable data infrastructure

Need

Crossorganizational data for evidence-based analytics

Challenge

Privacy-preserving solution

Proposal

Bringing together existing technology and data partners: enabling sustainable multiparty computation (MPC)

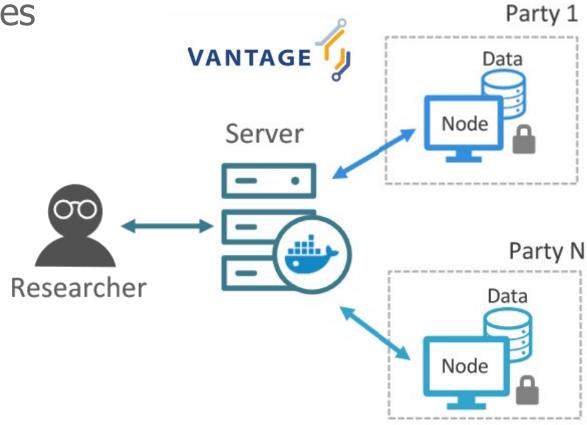






What is multiparty computation (MPC)

Decentralized statistical analyses



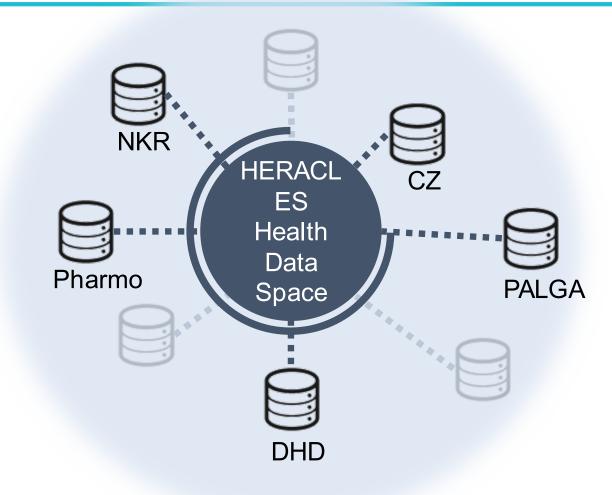






Heracles' vision

 A data space of multiple technology and data partners that accelerates cancer insights & fundamental research

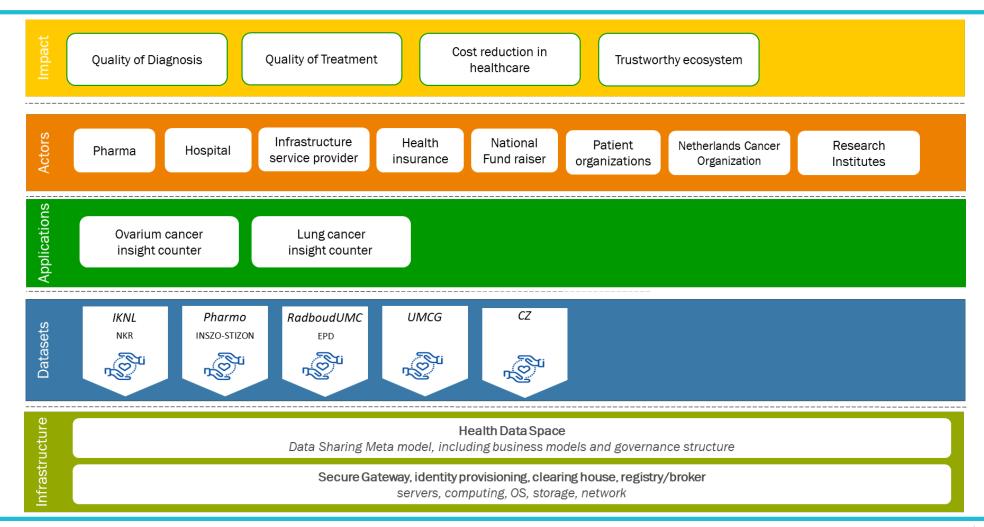








Heracles' value chain









Two use cases at the center

- Early detection of lung cancer
 - Lung cancer usually detected at a late stage
 - Identify people at higher risk earlier than diagnosis/referral
 - Bring data together from various sources (GP, pharmacological, etc)
 - Provide an algorithm to GPs
- Ovarian cancer recurrence
 - ~70% 80% of recurrence
 - Treatment/maintenance variations & build a predictive model of recurrence
 - Bring data together from various sources (pharmacological, therapy, etc)
 - Provide a prognostic algorithm to patients & clinicians







Heracles' progress status

- Data prepared: use case protocols/data dictionaries
- Combined data at the source: comparison baseline
- Test case of MPC in preparation: synthetic data







Where to read more:



Projects overview

Summary

To create new insights in peoples' health journeys by combining real world data from different organisations and sources. And a unified approach that can utilise the power of artificial intelligence for improving diagnostic, optimise care processes, improve interaction within the value chain of health.

Technology Readiness Level (TRL)

A privacy preserving ecosystem for cancer research

HEalth ReseArch - Cancer Living labs - setting up an Ecosystem of trust (Secure and Sovereign)

The HERACLES project aims to reduce the cancer impact by creating a sustainable data learning system. This innovative infrastructure (rapid learning) for combining multiple fragmented data sources, is crucial to enrich and complete the insights in the health journey of people at risk for or suffering from cancer. This will be nefit the growing population with an often high and long-term disease burden and give them a





university medical center



































SURF



Platform <u>Uitwisseling en Hergebruik</u> van Kl<u>i</u>nische Data <u>N</u>ederland











