The future of healthcare is Health

Re-using medical data: governance, examples and collaboration

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9 March 2021
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Amsterdam Economic Board

This is where AI-Health collaboration begins

- 2.5 million inhabitants (13% Pop, 21% GDP)
- Regional strategy on Data, AI & Health
- Ambition: 2 more healthy life years by 2030
- "Coalition of the visionary doers"
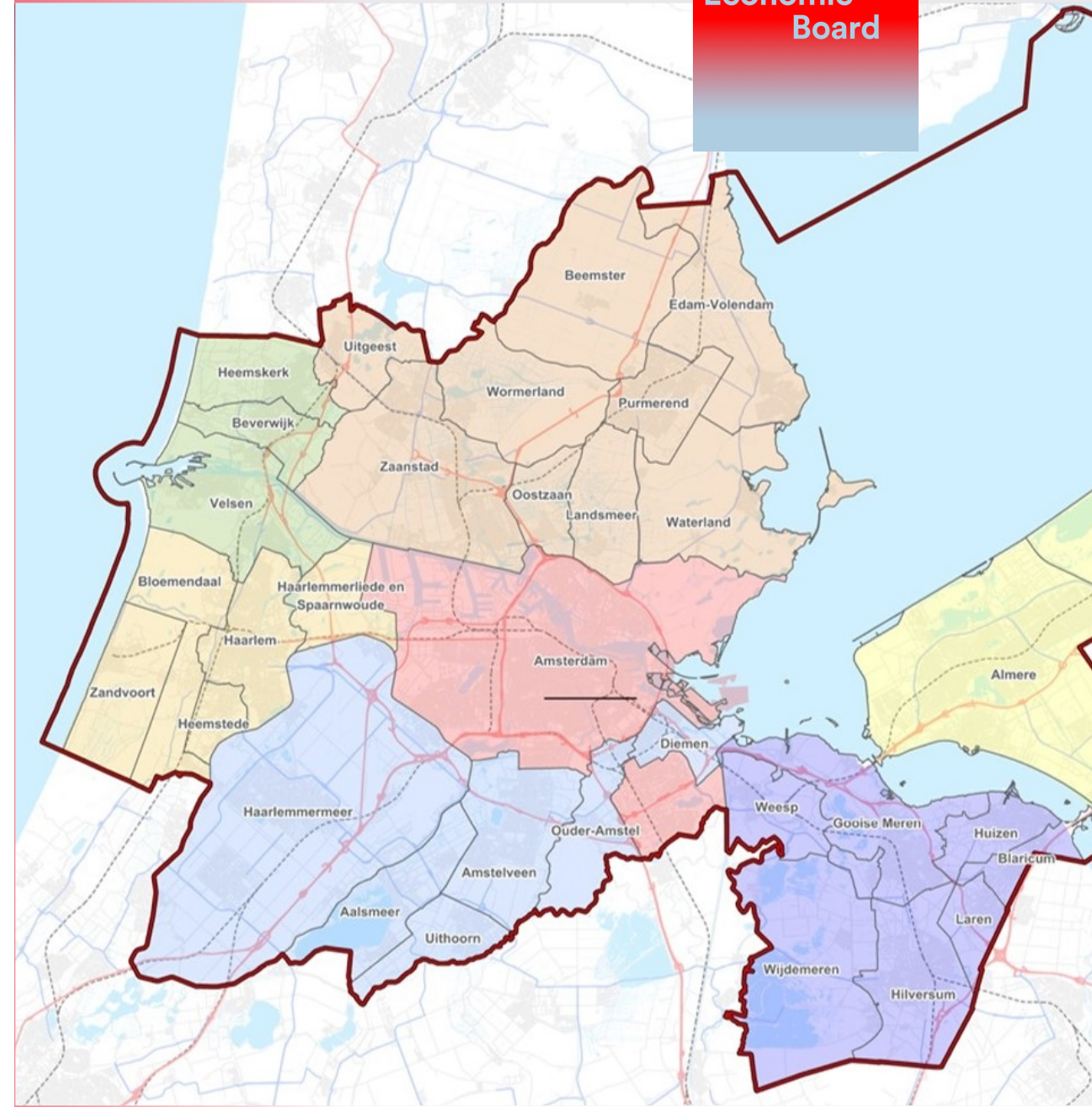- Cross-sectoral and cross-disciplinary collaboration

**Government**   **Academia**   **Care orgs**   **Business**

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Your comfort zone

Where the magic happens
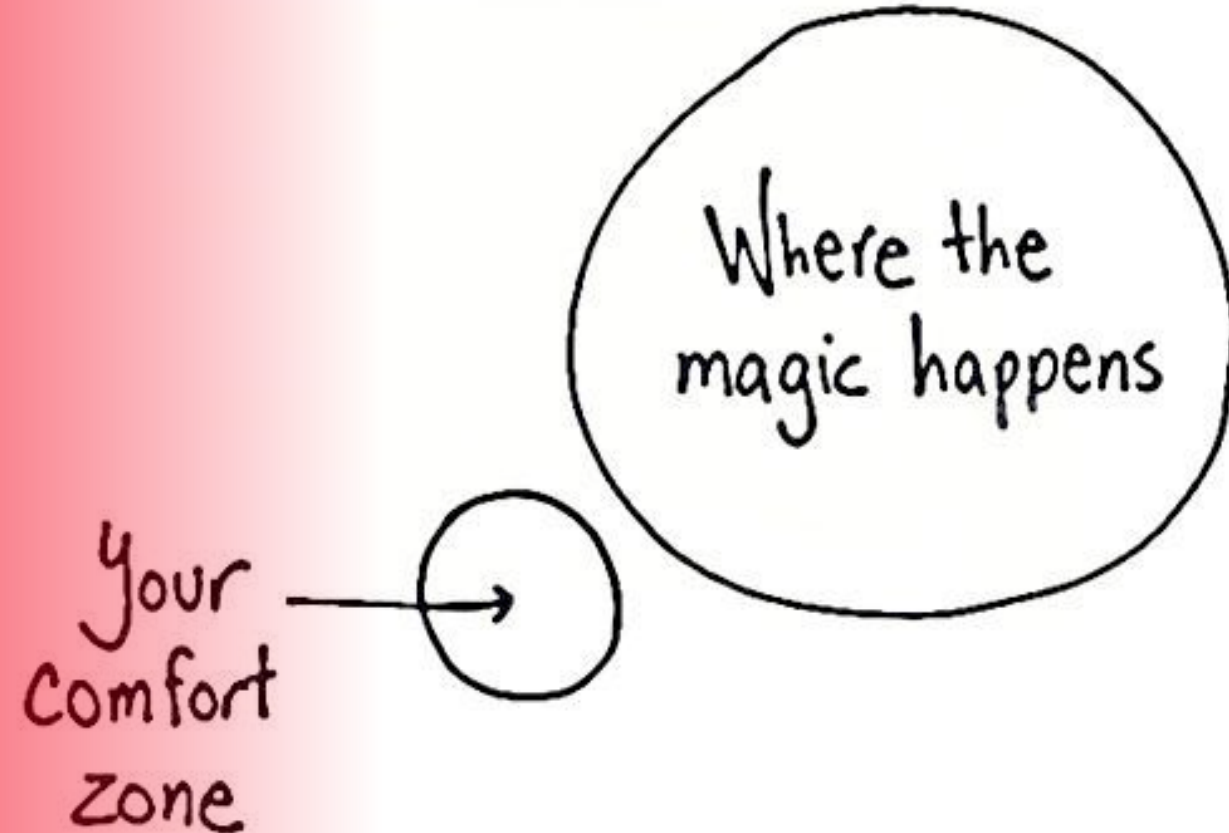
PPP: building on each other's strengths

Some charactyeristics of each sector

	Government	Academia	Industry
Role	Sets up conditions and rules	Researcher, discoverer, evaluator	Innovator, creator
Orientation	Society	Field of study	Market
Relative timeline	Medium	Long	Short
Approach	Process-oriented, democratic	Descriptive, analytic, content-based	Pragmatic, output-oriented
Reward system	Public perception, votes, coalition partners	Articles, papers, citations	Turnover, market share, profit
Work processes	Budget	Input	output

Re-using medical data – sketching the scene

Rich medical data in silos

- At least 15 years of longitudinal GP data, with spots of rich, detailed, pluriform data from e.g. hospital visits or specific diagnostic research: multi-omics, lab data, annotations, etc.
- In silos: across disciplines and across organisations
- Need to connect the silos to be able to make use of the data.

Guiding principles

- The Why: Quadruple aim & sustainable innovation
- *The patient decides who gets access to their data*. **No government or private organisation can own the medical data.**
- Products derived from the data (e.g. large anonimised data sets, algorithms, analyses) deliver economical benefits
- Need to set up infra in public-private collaboration

Picture credits to https://www.marquette.edu/interprofessional-education/

Key: good governance

Foundation: Data Trust & TTP by and for care providers and patients

Data Management & Security

ISO 9001 ✓   ISO 27001 ✓

Pharm Inc

Research on large, anonimised, RWD set on e.g. drug safety &side effects; and relative cost-effectiveness
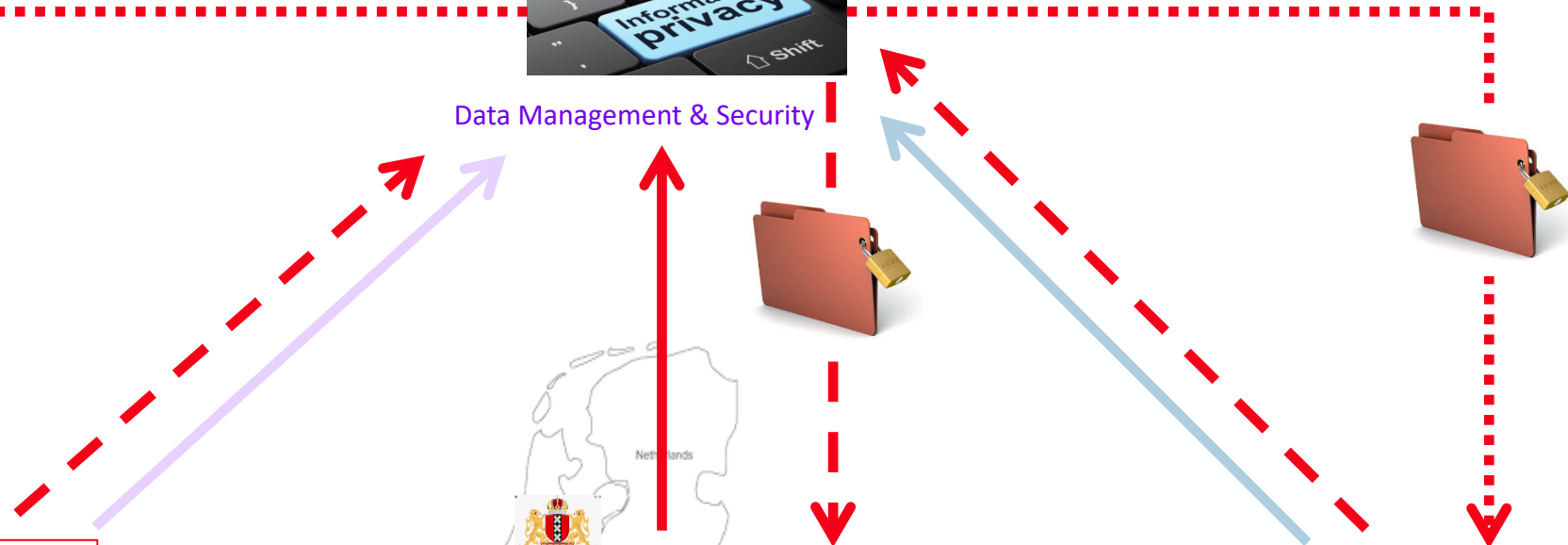
Care Inc: Support to care organisations

Data Network of care providers,and institutions for public health, prevention and care optimization.

Inc X, Y, Z

E.g.: AI Validation Lab.
Value creation and monetisation

COVID DATA

February 15, 2021

An algorithm to estimate the risk of getting severe COVID-19 complications

- real world covid data from 264 GP practices (~5% of Dutch GP practices), April '20 – Jan '21
- Using the algorithm, 50% reduction of patients with severe complications could be obtained with a vaccination coverage of only 8%.
- can readily be implemented in the electronic health records of general practitioners.
- Get out of lockdown sooner
- Blueprint for pandemic preparedness
- More info in the article: https://www.medrxiv.org/content/10.1101/2021.02.05.21251197v1

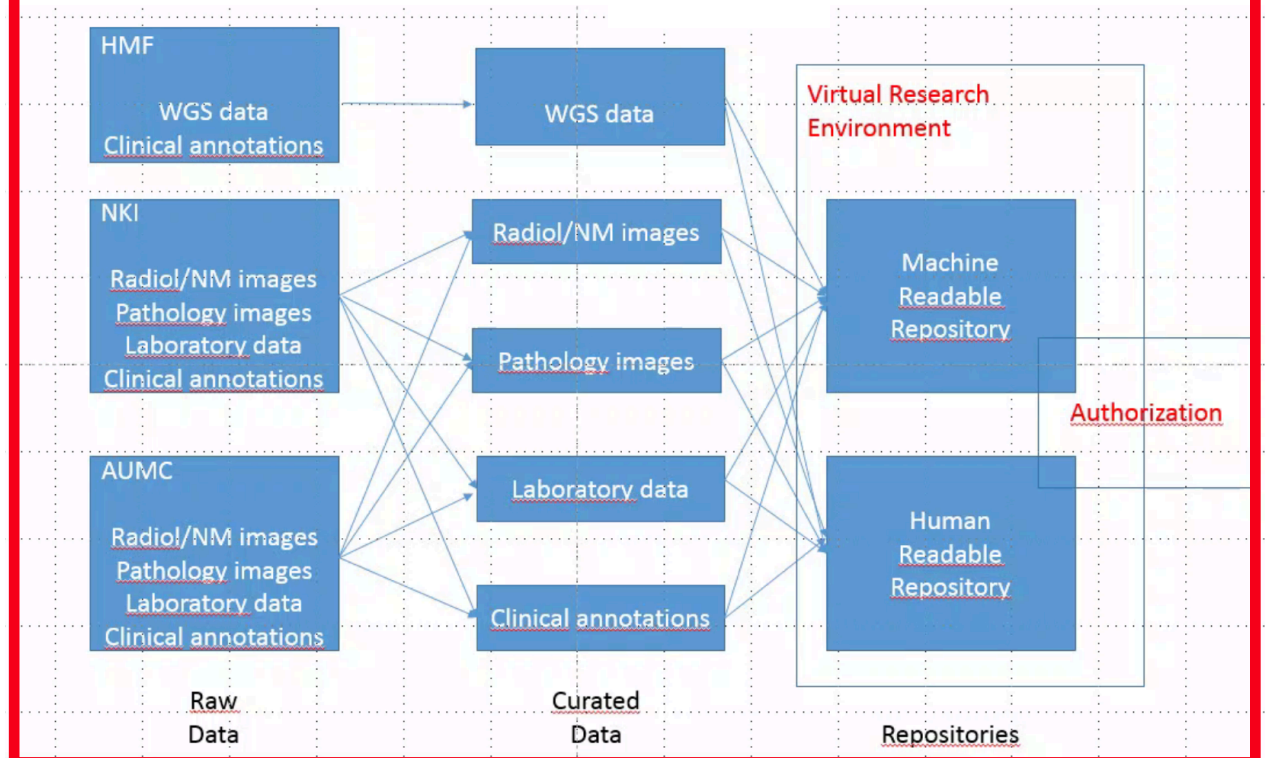**Amsterdam Economic Board**

Example: oncology – 2 parts

1) Integrated oncological care:

Ability to follow patients across chain of care; from GP to hospitals and specialized centers, and vice versa

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Universitair Medische Centra

NKI-AVL

olvg
een santeon
ziekenhuis

> 100 GP's

2) Multimodal data repository

Amsterdam UMC
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Hartwig
MEDICAL FOUNDATION

Let's collaborate! Available data for research

1 - Dutch Data Warehouse against COVID-19

- >35 Dutch ICUs
- > 400 million data points, > 46.000 parameters, from >1500 critically ill patients with COVID-19.
- The Dutch Data Warehouse against COVID-19 is open for global collaboration within the boundaries of privacy laws, regulation and ethical considerations.
- Contact: **ddw@amsterdammedicaldatascience.nl**

2- AmsterdamUMCdb

- AmsterdamUMC ICU
- 20.000 unique patients; 23.000 ICW visists between 2013-2016.
- More info and contact @ **https://www.amsterdammedicaldatascience.nl** – scroll to bottom

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Thank you!

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