

# ***Setting the Scene: The National eHealth Context and Big Data***

***Big Data and AI for Achieving UHC:  
An International Consultation on Ethics***

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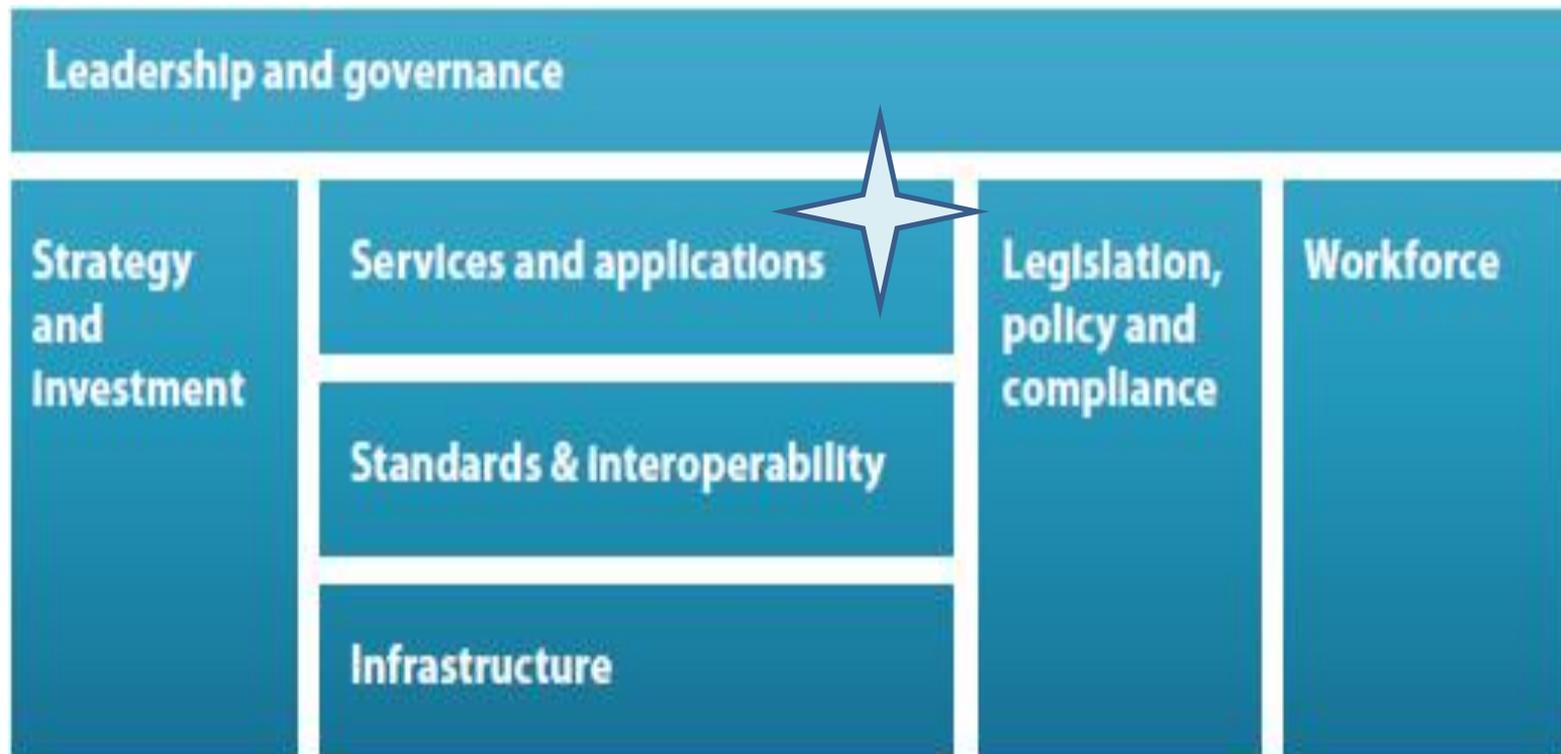


# National eHealth context and big data

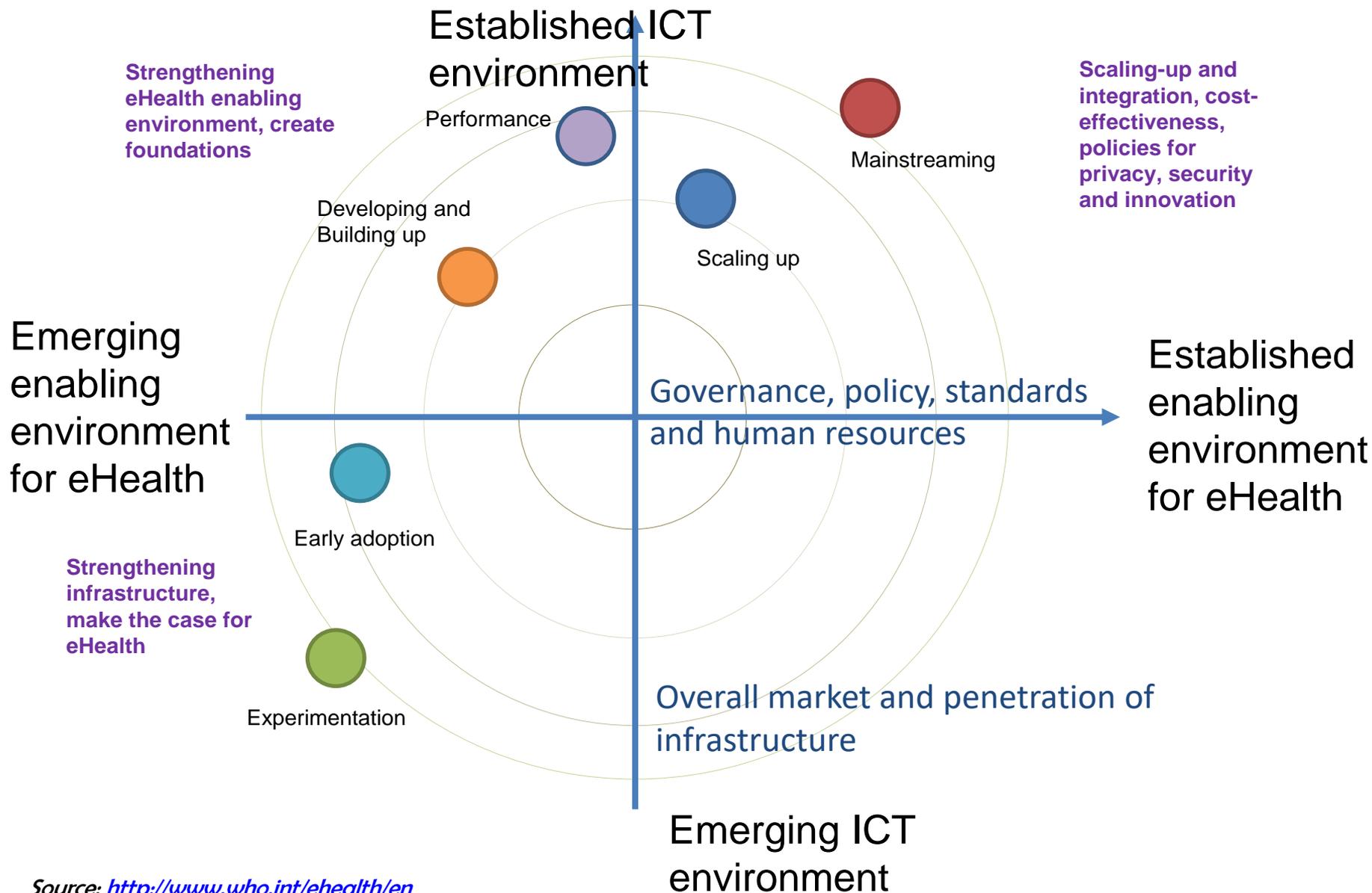
- Overview from the perspective of a global agency looking at eHealth across our Member States
- Share a few findings from the WHO Global Observatory for eHealth global survey in 2015
- Reflect on some of the policy dimensions

# National eHealth components

eHealth planning is a complex undertaking with infrastructure, standards, legislation and regulation, workforce, finance, services and applications, and governance components.



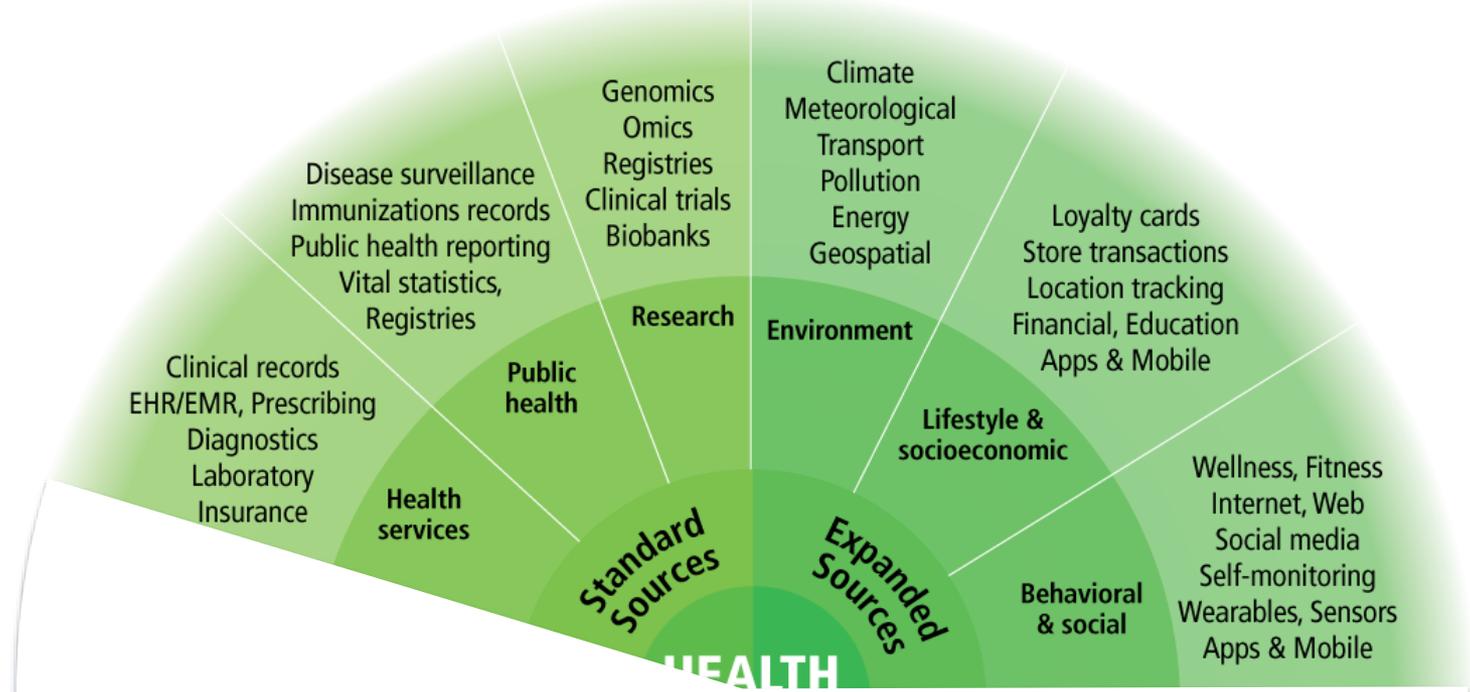
# National context for eHealth development





# National level: Opportunities

- Clinical care quality and service delivery (comfort zone)
- Research (health conditions, genomics...)
- Public health (data assets in the public sector where data linkage can bring insight)
- Public health and emergencies: geospatial and climate data, locations of facilities and cell towers...
- Individuals: online search and purchases, sensors, social media, phone GPS, loyalty cards...



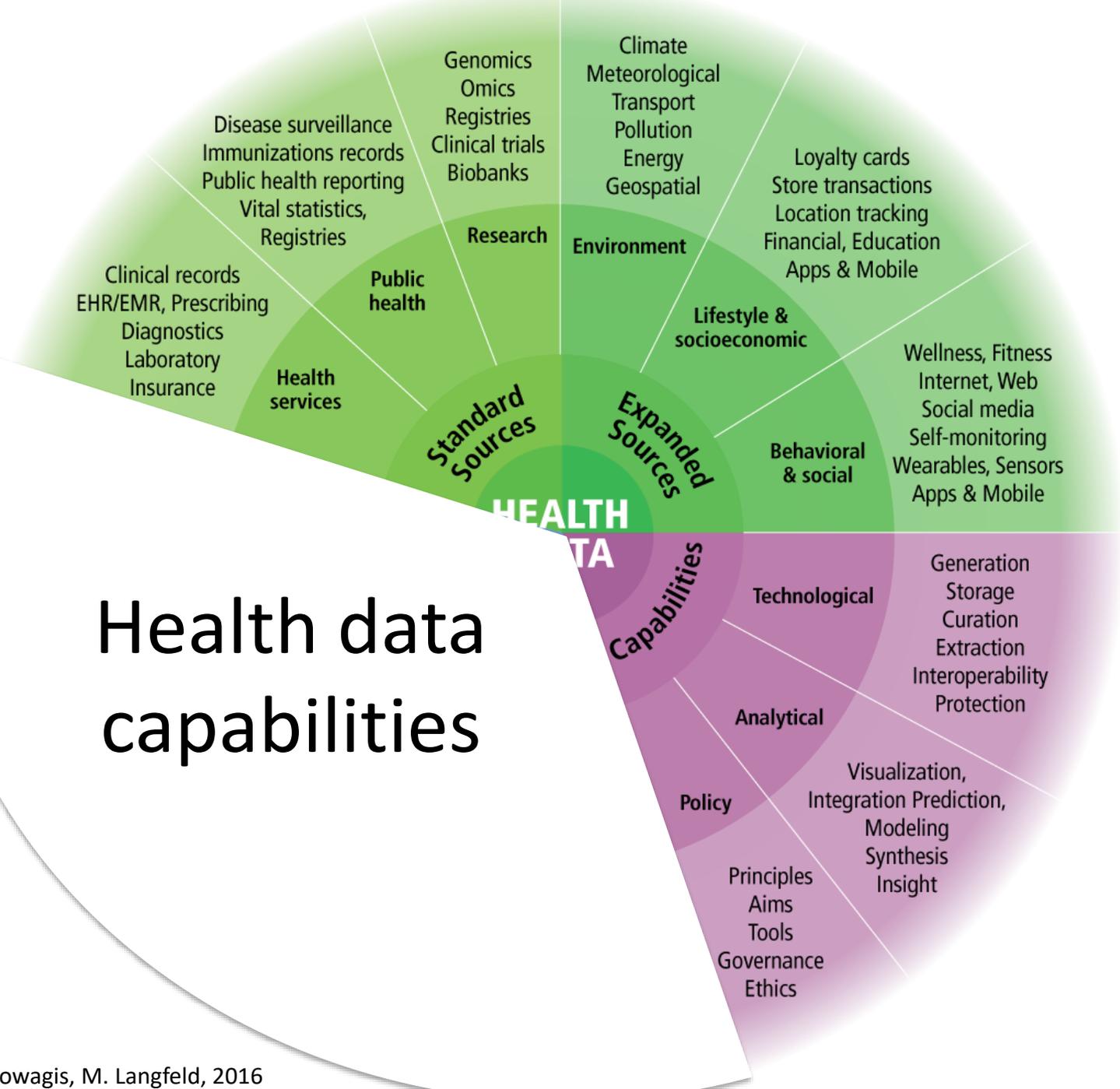
# Health data ecosystem: Data sources



# G0e survey 2015:

- Big data set to play a key role in improving health services and accountability
- The growth in adoption of legal frameworks is a positive indicator for the use of big data in the sector
- However there are significant barriers
  - 70% of countries (n=121) identified the lack of integration between health data systems as a key barrier
  - 70% reported privacy and security as very or extremely important barrier
  - Capacity to use new tools and methods also cited

# Health data capabilities

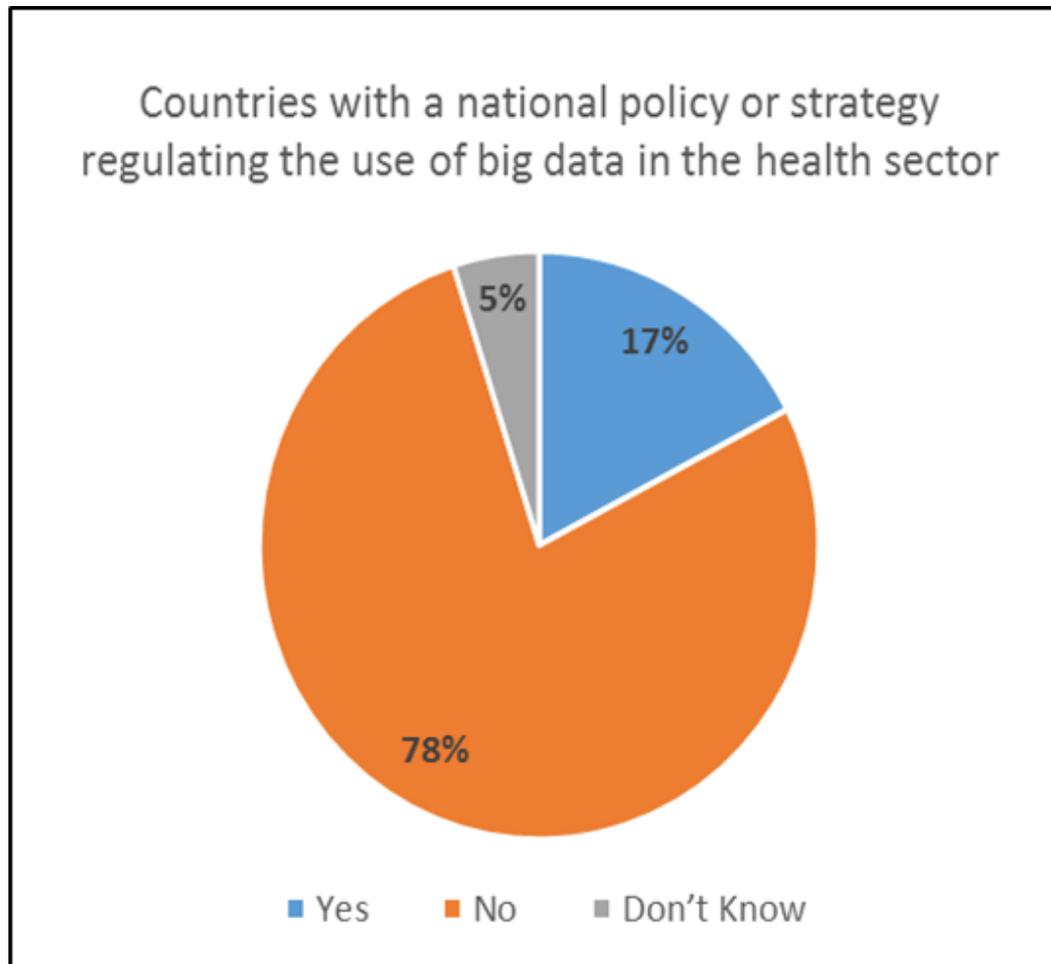




# Capabilities required

- Much of the power of eHealth, whether supporting patient care or driving research through big data applications, relies on the capacity of eHealth tools to access and share reliable patient data
- The legal context needs to address the transfer of information (EHRs, connected devices & solutions...) and the linkage of information from different systems

# Health sector policy on big data (GOe survey 2015, n=121)





# Sharing health-related data

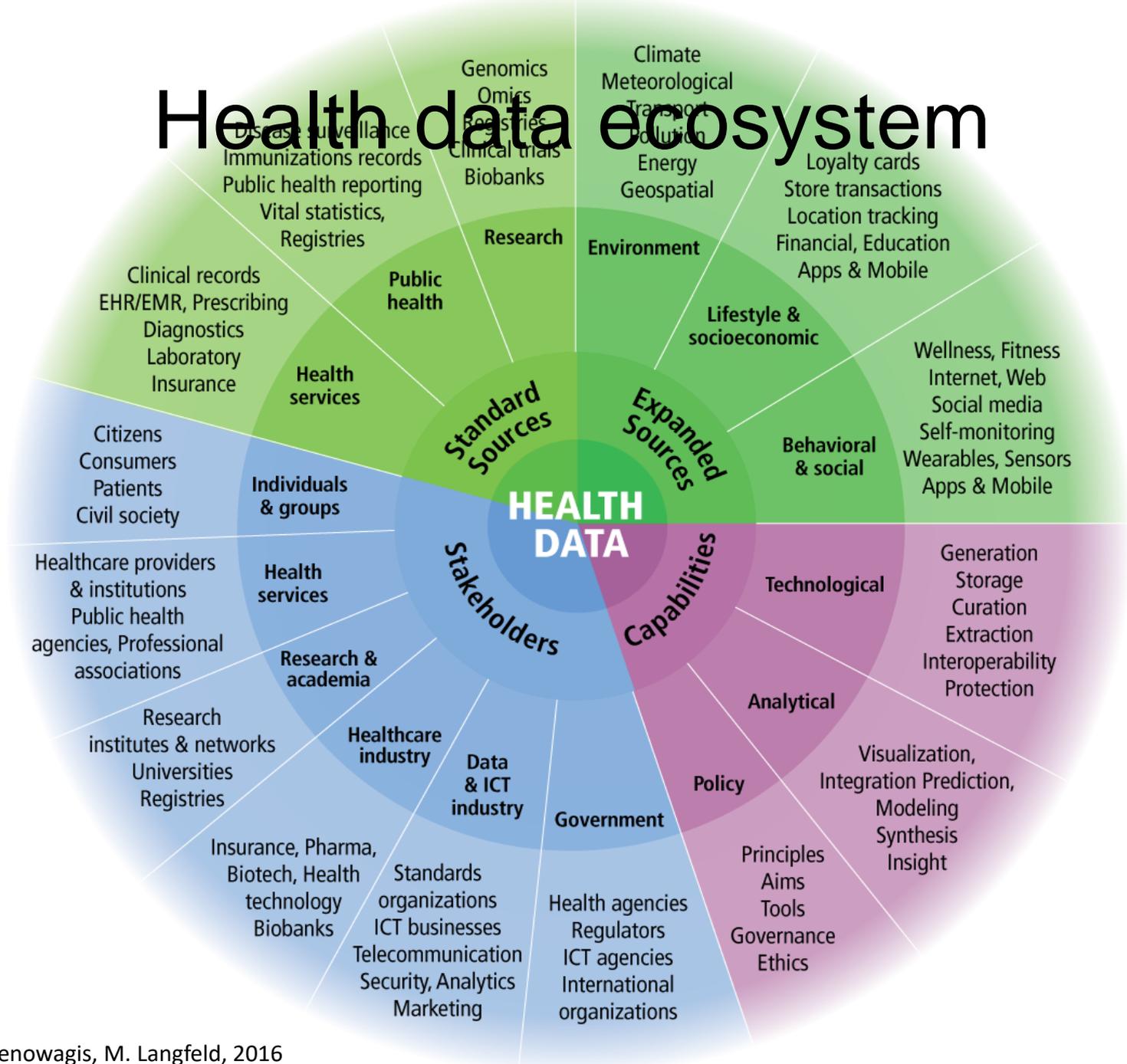
- Slow adoption of legislation on data sharing for patient care: 34% allow within country, 22% internationally
- Data sharing for research is more established at 50% of countries
- Slow but steady development of general eHealth regulation: 50% of countries legislate safety, quality and health data privacy



# Globalization of health data

- Public health research by public institutions (Zika, influenza...)
- Disease surveillance, investigation and response (International Health Regulations)
- Reporting for monitoring and accountability (development goals, pharmacovigilance...)
- Private and mixed transnational research consortia and companies (pharma, genetics)
- Health Internet and social media

# Health data ecosystem





# National context: Remarks

- The foundations for big data present a challenge for many countries: technologies, methods and policy
- The growth in adoption of legal frameworks is promising
- Policy must evolve to address transfer and governance of information between patients, providers and devices, and use of data by all stakeholders



# Areas for further work

- Sharing of health data between countries is an important area to address
- The health Internet represents a fundamental challenge from a policy and governance aspect
- Political, economic and social dimensions must be better understood
- Roles, expectations and interests of stakeholders need to be managed