



| Diálogos **PHC**

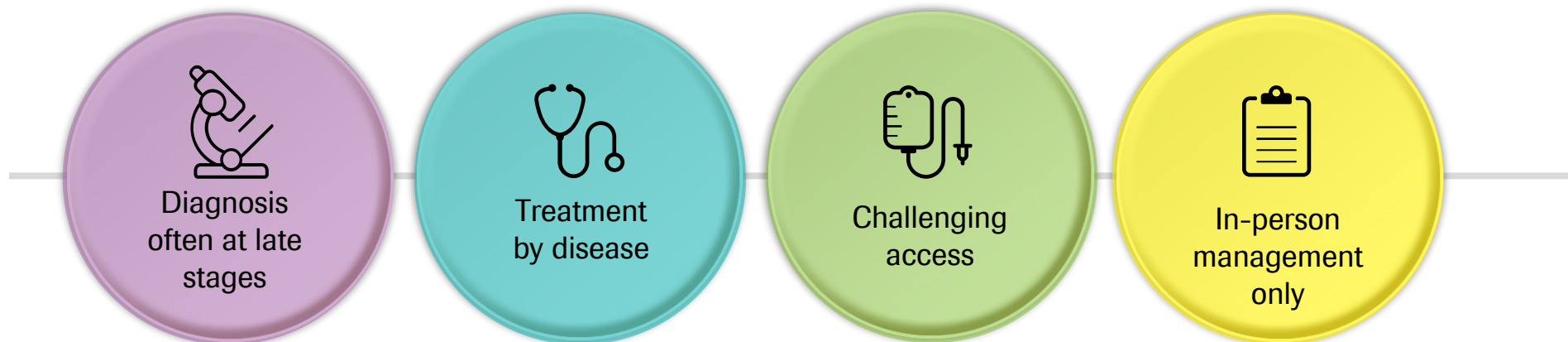
Personalized Medicine

TRANSFORMING HEALTHCARE

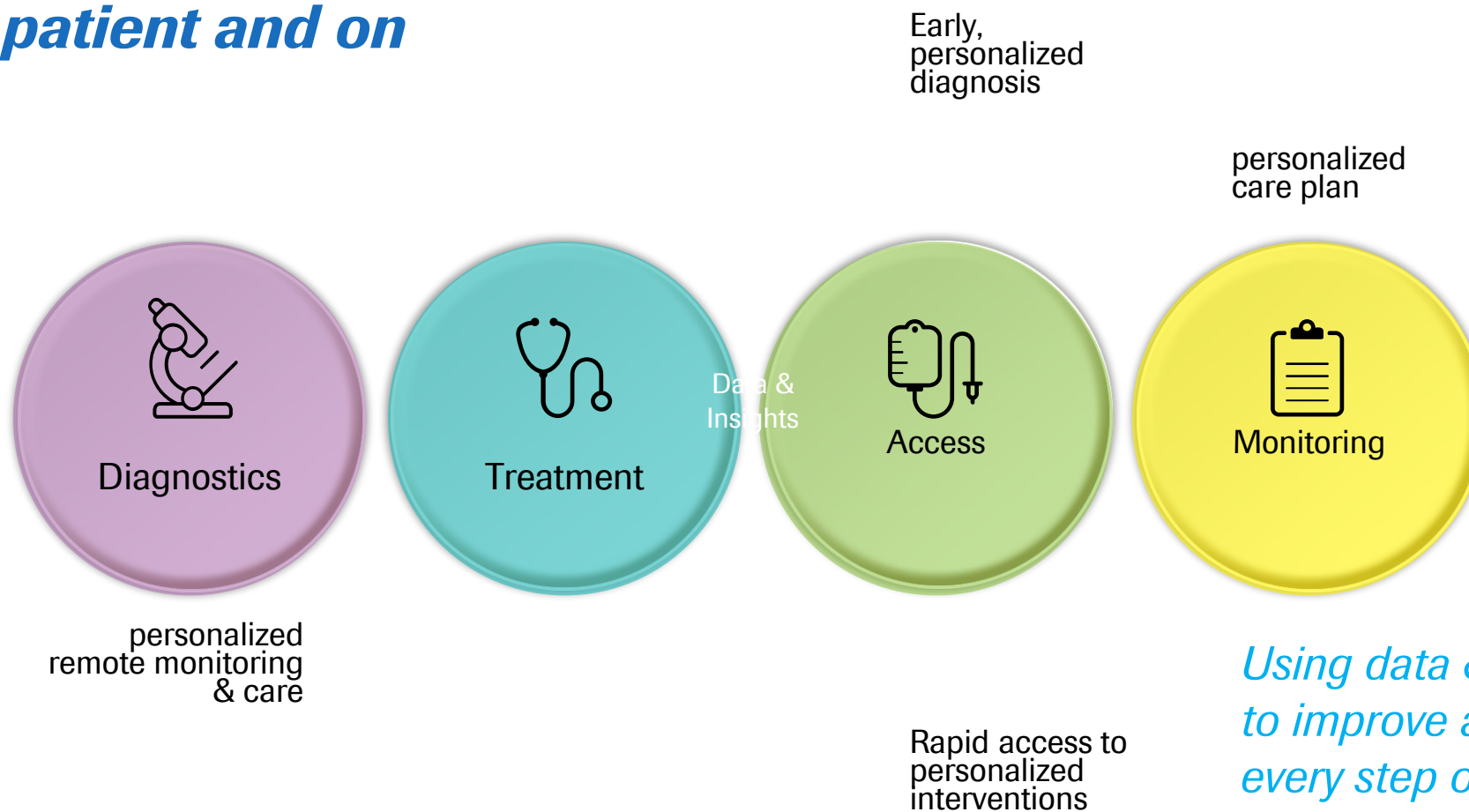


The Healthcare System was not designed to face the challenges of our time.

Patient experience TODAY:
focused on the illness

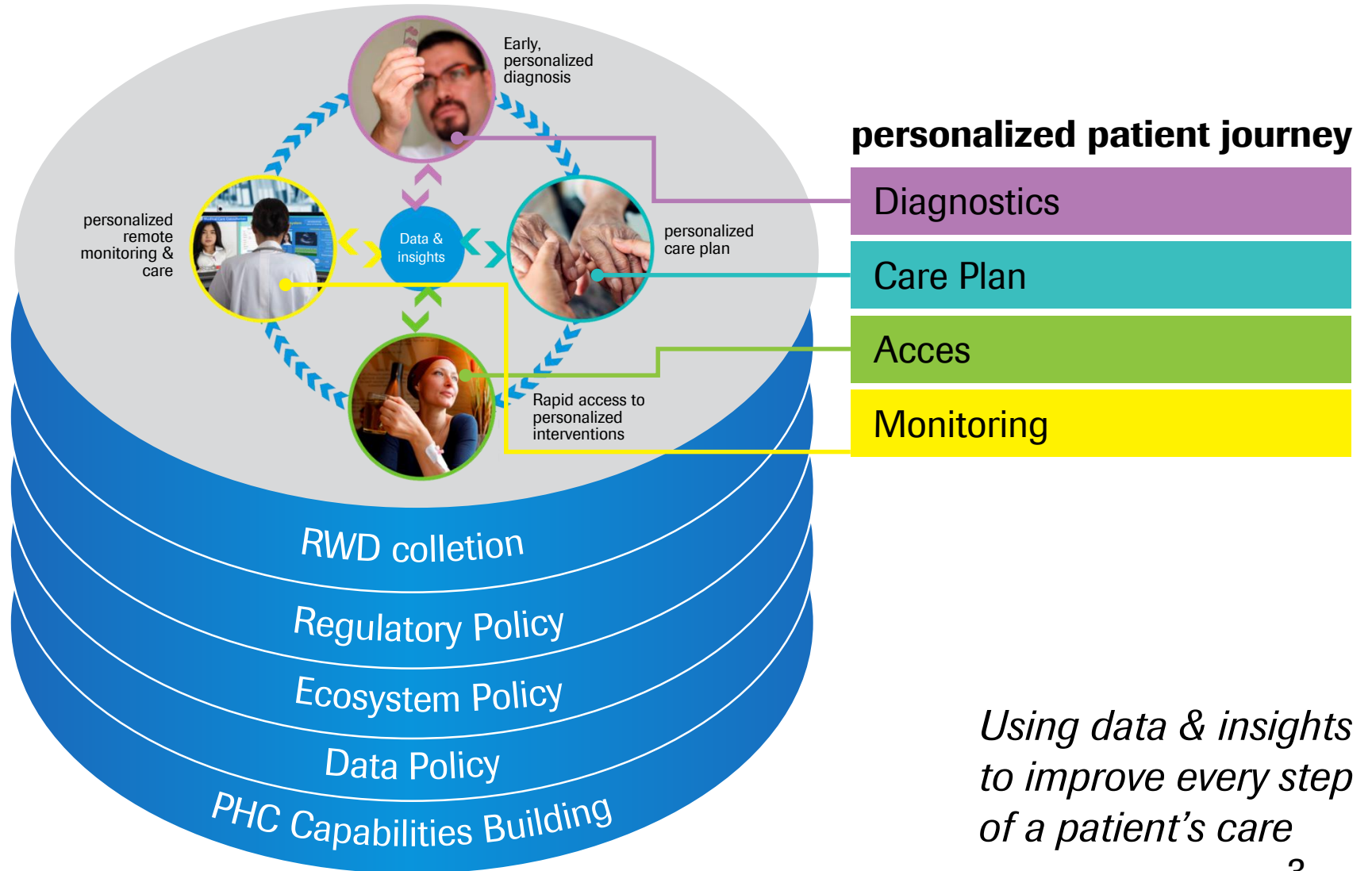


Personalized healthcare focused on knowledge about the patient and on data.



Personalized patient care: a new medical ecosystem.

PHC Ecosystem



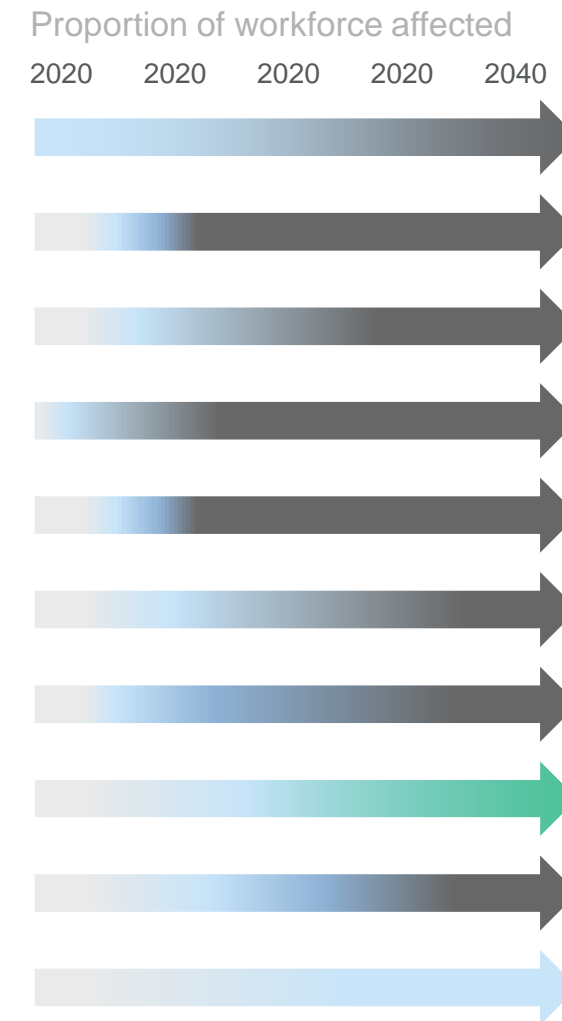
The necessary foundation for a personalized patient journey

Using data & insights to improve every step of a patient's care

Developing new capabilities and infrastructures.



- 1 Telemedicine
- 2 Smartphone apps
- 3 Sensors and wearables for diagnostics and remote monitoring
- 4 Reading the genome
- 5 Speech recognition and natural language processing (NLP)
- 6 Virtual and augmented reality
- 7 Automated image interpretation using AI
- 8 Interventional and rehabilitative robots
- 9 Predictive analytics using AI
- 10 Writing the genome



Transforming patient care.

The right treatment for the right patient at the right time.



Increased understanding of disease biology



More educated and empowered patients



Novel technologies in research, clinic and personal use



Evolving regulatory environment



Partnerships between non-traditional players



Demand for value-based, outcome-driven healthcare

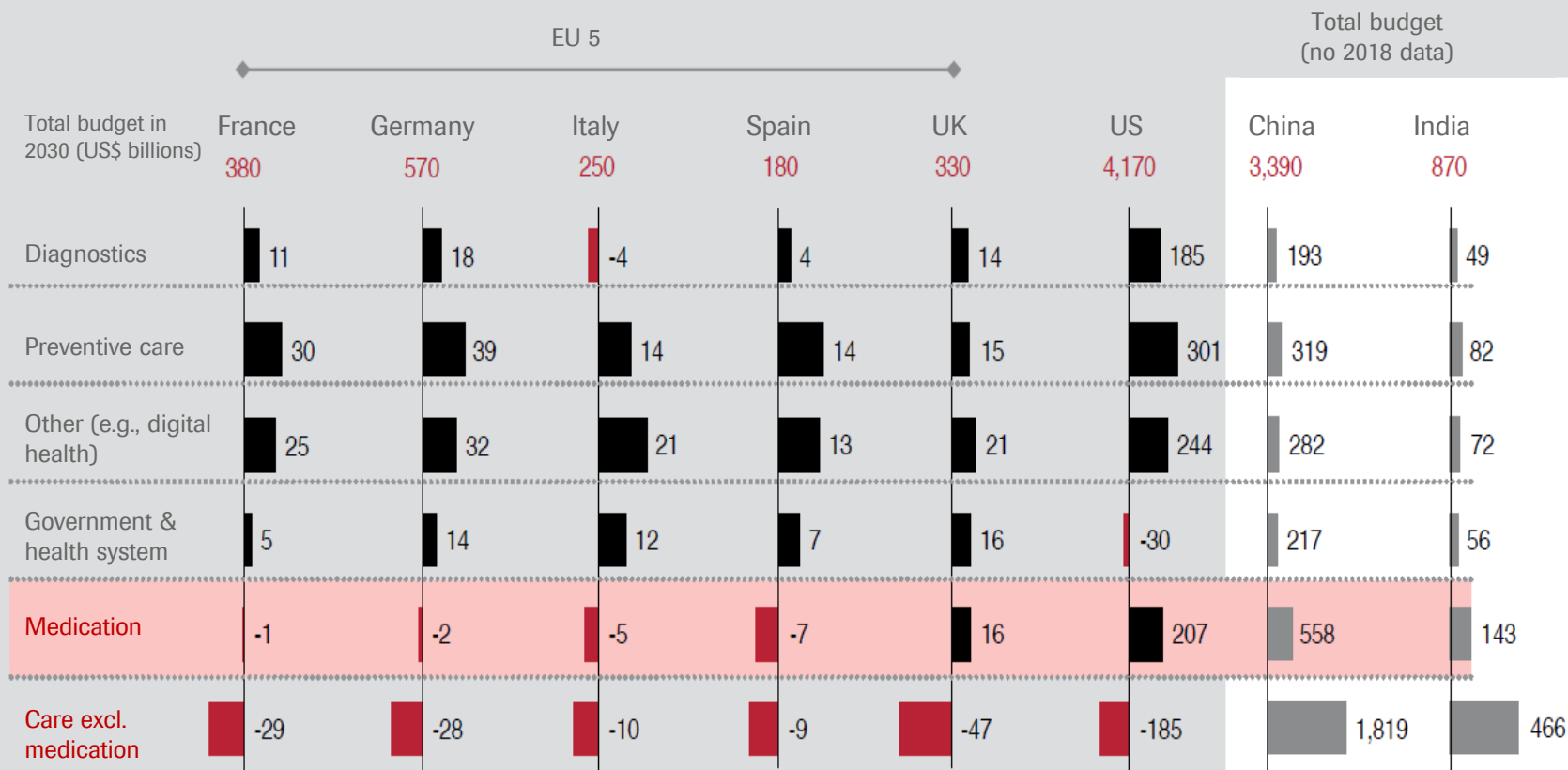
The future of the Healthcare System.

- By 2030, healthcare will be centered on patients empowered to prevent diseases rather than seek treatment.
- They will receive personalized health solutions in ways that are integrated seamlessly into their daily lives.
- All of this will be enabled by data and algorithms and provided within a healthcare system that is organized and regulated in an entirely new way.

The future of the Healthcare System.

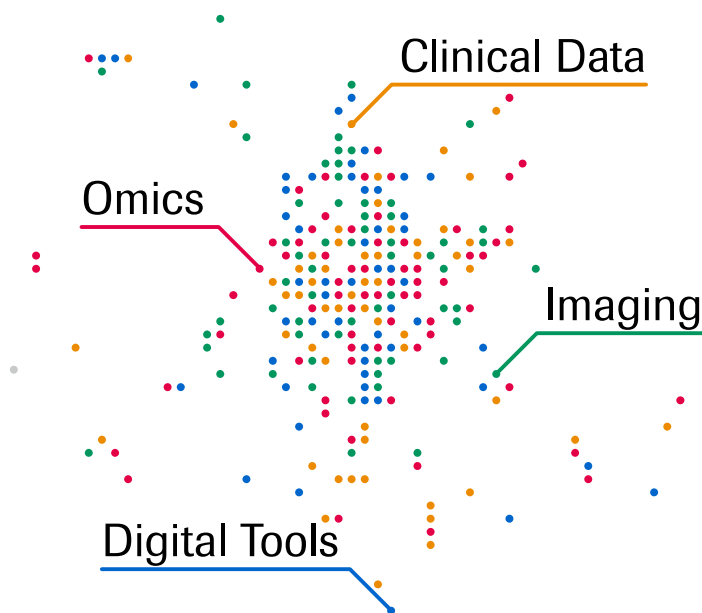
EXHIBIT 2

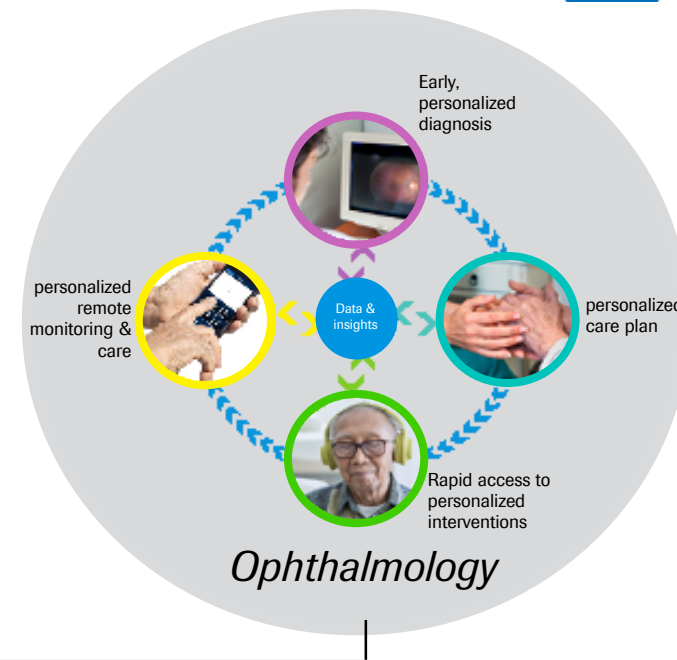
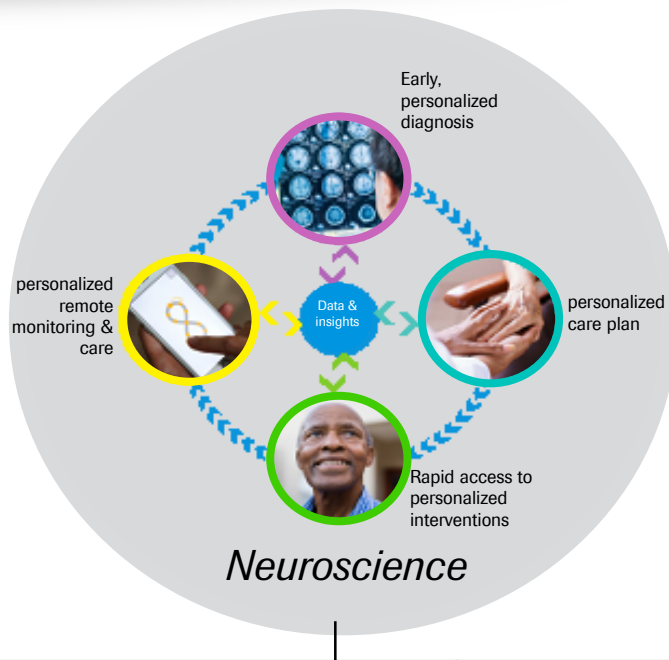
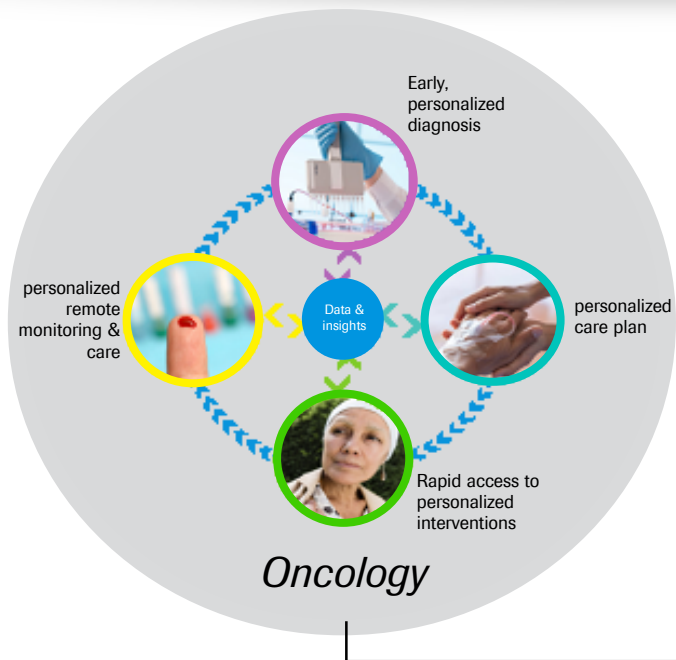
How national healthcare budgets will shift by 2030 (2018 vs. 2030)



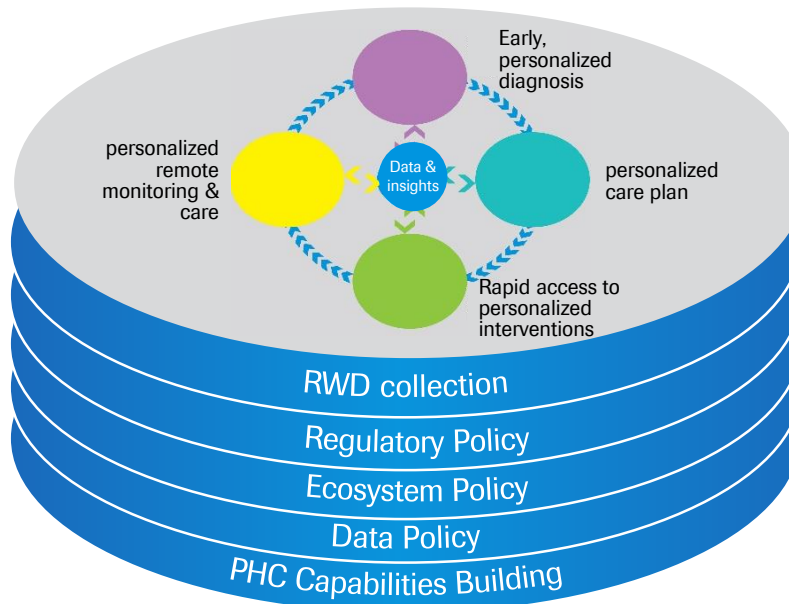
Source: OECD data; The Lancet: Strategy & analysis.

Patient data: EMR, RWD1





A personalized healthcare ecosystem makes it possible for all therapeutic areas to provide personalized patient care.



The PHC ecosystem will support and reinforce the ongoing development of each TA patient journey



#MadurezDigitalSalud
#TecnologíaParaVivir

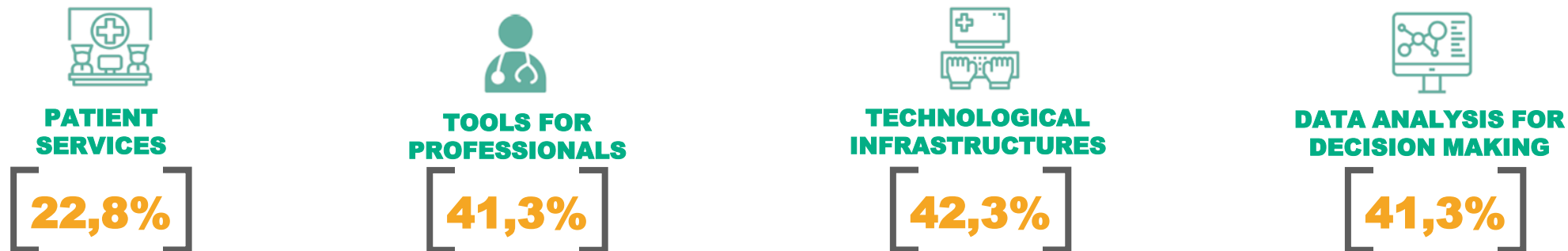


FENIN INDEX ON DIGITAL MATURITY IN HEALTHCARE

Analyzes the degree of maturity of the healthcare systems in the 17 autonomous regions regarding the implementation of digital tools and services.

GLOBAL INDEX
31%

DIGITAL MATURITY INDEX BY AREA



Precision medicine asset approvals 2018.

ACTIVE

- Cardiology
- Dermatology
- Diabetes
- Gastroenterology
- Genetic Disease
- Hematology
- Hepatology
- Infectious Disease
- Nephrology
- Neurology
- Oncology
- Pain Management
- Psychiatry
- Pulmonology
- Rheumatology
- Testing Platform
- Xenotransplantation

Figure 1. Precision Medicine asset approvals over time (cumulative) in the United States by the end of 2018. ⁴⁻⁷

