



KEYNOTE

Harnessing Data-Driven
Healthcare: Balancing
Innovation with Ethical
Responsibility



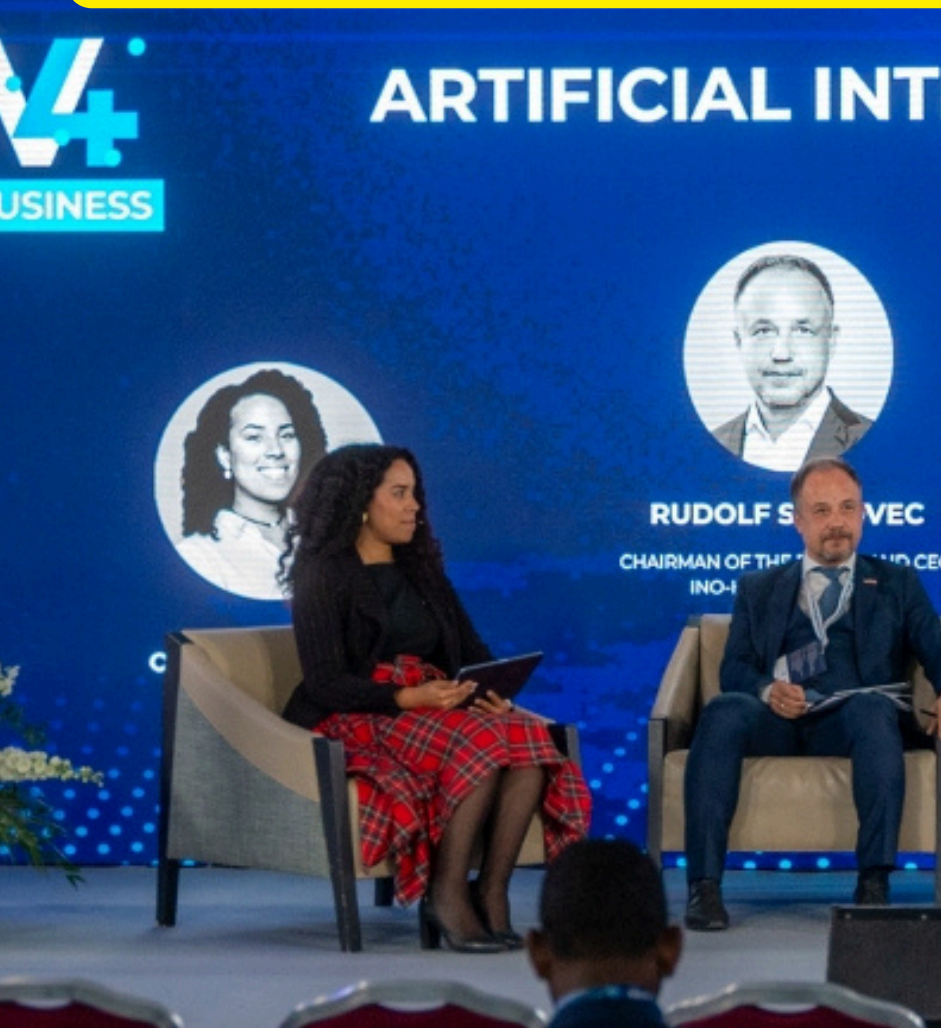
ITAPA Conference 25.11.2024

Overview

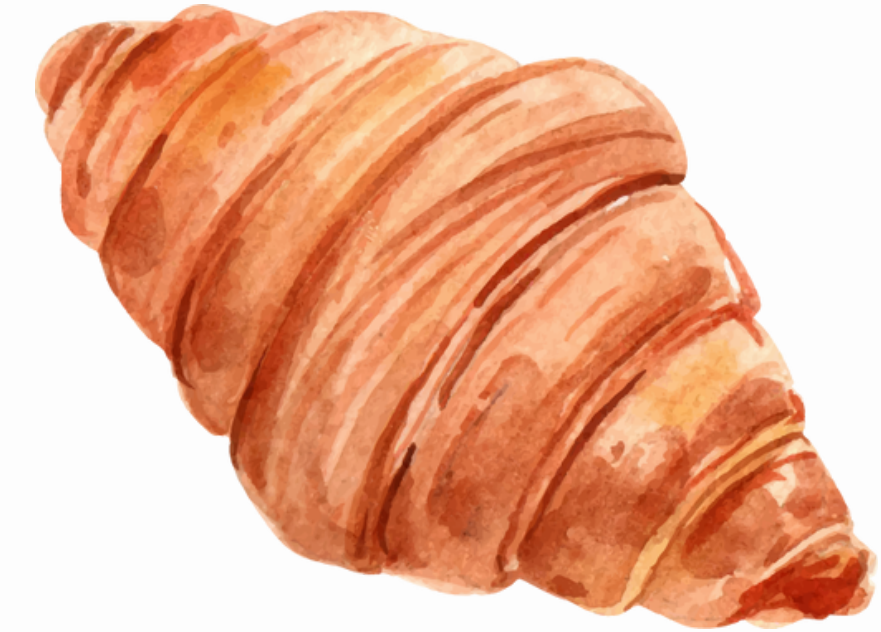
- ▶ About Me
- ▶ What is digital health ethics?
- ▶ Ethics by design
- ▶ Ethics & Equity: a case study
- ▶ Ethical AI in healthcare
- ▶ Conclusions





Health Problems Know No Borders—Neither Should Solutions.



About me



- Consulting
- Think Tank
- Business
- Entrepreneurship
- Research


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1. What is digital health ethics?

When we don't apply digital health ethics, innovations intended to help can cause harm.

SCI
AM

60 days of Digital Access for \$1

Racial Bias Found in a Major Health Care Risk Algorithm | Scientific American
scientificamerican.com

OCTOBER 24, 2019 | 4 MIN READ

Racial Bias Found in a Major Health Care Risk Algorithm

Black patients lose out on critical care when systems equate health needs with costs

BY STARRE VARTAN

Weighing risks and benefits

Taking an ethical approach to digital health comes down to:

1. Weighing the benefits and risks of developing and deploying digital solutions
2. Ensuring that the benefits outweigh the risks for all people

1. Risks Associated With Digital Health

Commoditization
& misuse of data

AI bias &
accountability

Data use, rights
& privacy

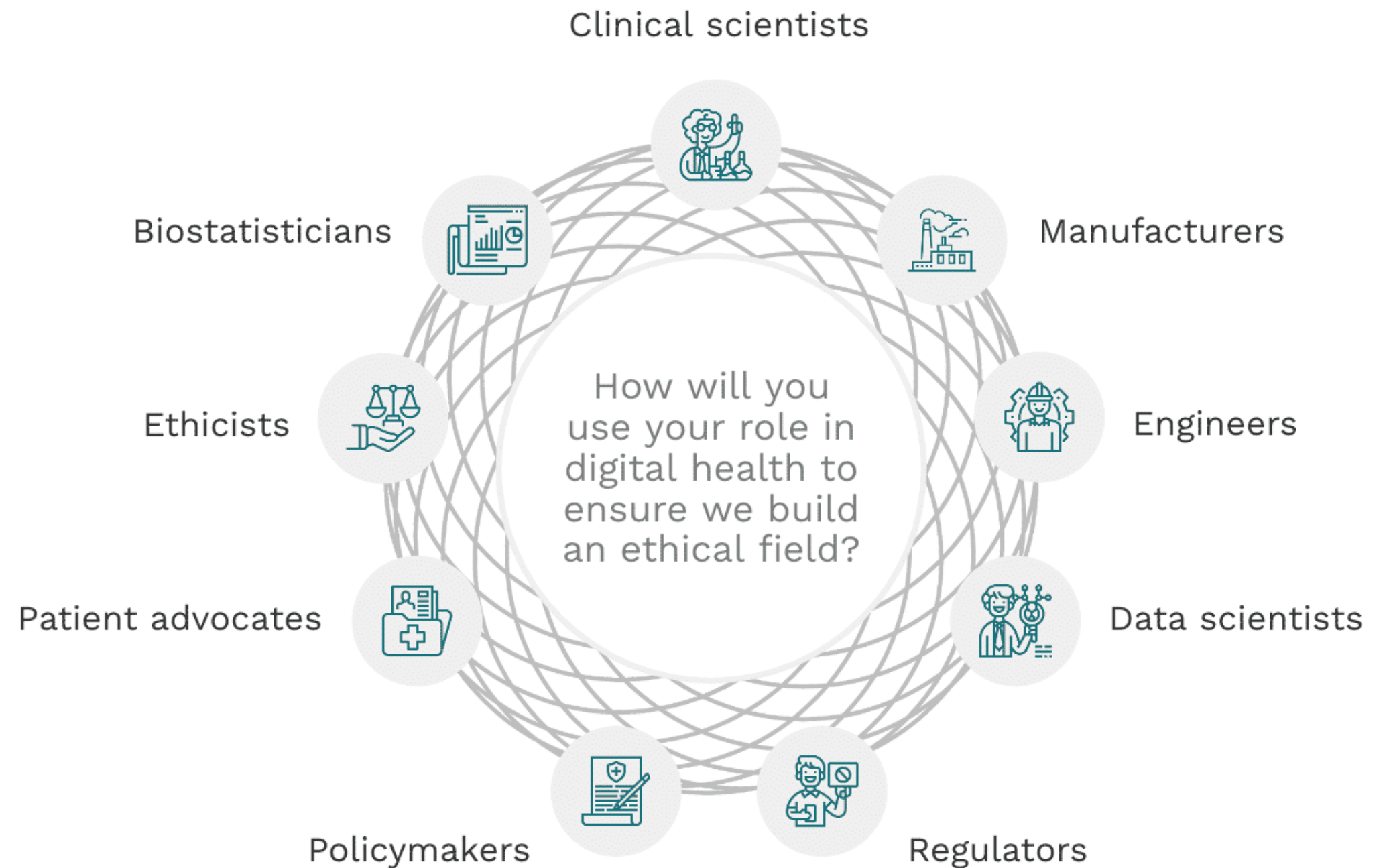
Disparities of
access to
internet

Misinformation &
Disinformation

Excessive
automation &
Overuse of tech

1. Ethical digital health is our responsibility

Regardless of our role in the digitization of healthcare, we each have a responsibility to advance digital health as an ethical field.



2. Ethics by Design

The Ethical Principals that Govern Digital Health

	Autonomy	Justice	Beneficence	Non-maleficence
Definitions	Individuals can make informed decisions for themselves.	Burdens and benefits must be distributed equally among all groups in society.	The intent of good must outweigh the bad.	Does not harm the individual involved or others in society.

European Commission defines ethics by design as:

- preventing ethical issues from arising & addressing them early in development
- Proactively using ethical principles to guide system requirements

2. There is no 'one size fits all' approach to ethics by design

- Keeping ethical principles in mind through the design and development process
- Asking questions at each juncture to ensure that the benefits of the digital health solution outweigh the risk of harm to all people



predictive algorithm for use
in end-of-life care.

3. Ethics & Equity

Equity



Equity refers to **fairness** and **justice** and is **distinguished from equality**:

- Equality means providing the same to all
- Equity means recognizing that we
 - Do not all start from the same place
 - Must acknowledge and make adjustments to imbalances



Equity is a **process** and must be ongoing, requiring us to **identify** and **overcome** intentional and unintentional barriers arising from **bias** or **systemic structures**.

Equity in digital health is inextricably linked with the ethical principle of justice

3. Ethics & Equity: a case study



FITBIT

- activity tracker
- heart rate monitoring
- sleep analysis
- temperature tracker

1 IN 5 AMERICANS OWNS ONE

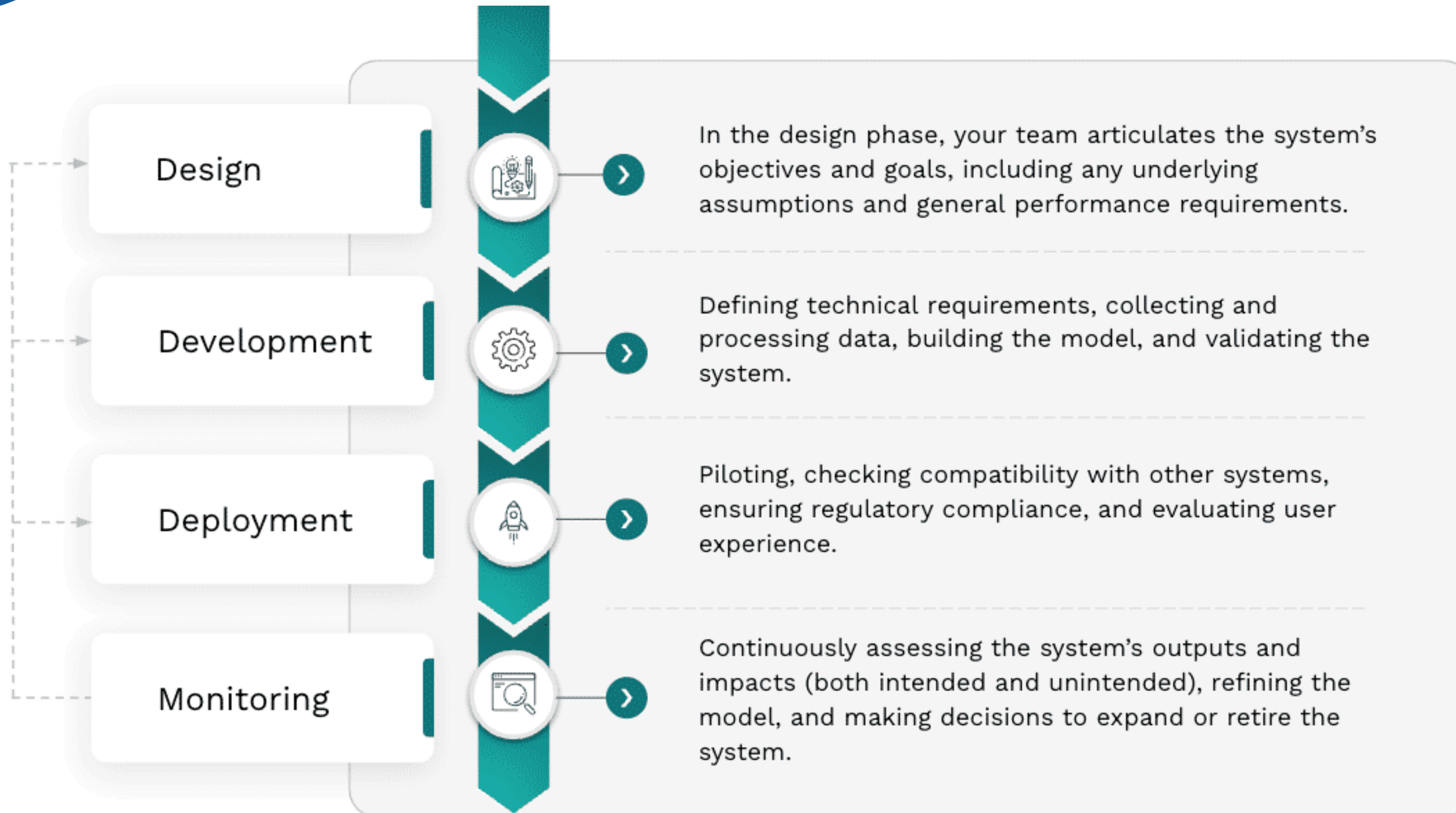
THE PROBLEM: FitBit and other wearables might not accurately track heart rates in people of color. The American College of Cardiology ran a study in 2022 and found that smartwatch heart-data depends on your skintone.

THE CLAIMS: that these devices can detect heart rhythm issues like tachycardia, bradycardia and even atrial fibrillation

THE SOLUTIONS: Explore alternative options to make sure we can create a more equitable solution in health care and not just in the consumer industry.

4. Ethical AI in healthcare

AI lifecycle





THANK YOU!



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