



Achieving the Potential of Primary Care with Digital Tools

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DISCLOSURES

- Received honorarium for workshop attendance from Bristol Myer Squibb
- Unpaid consultant for Innoneo Health Systems

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Centre for Digital Health Evaluation

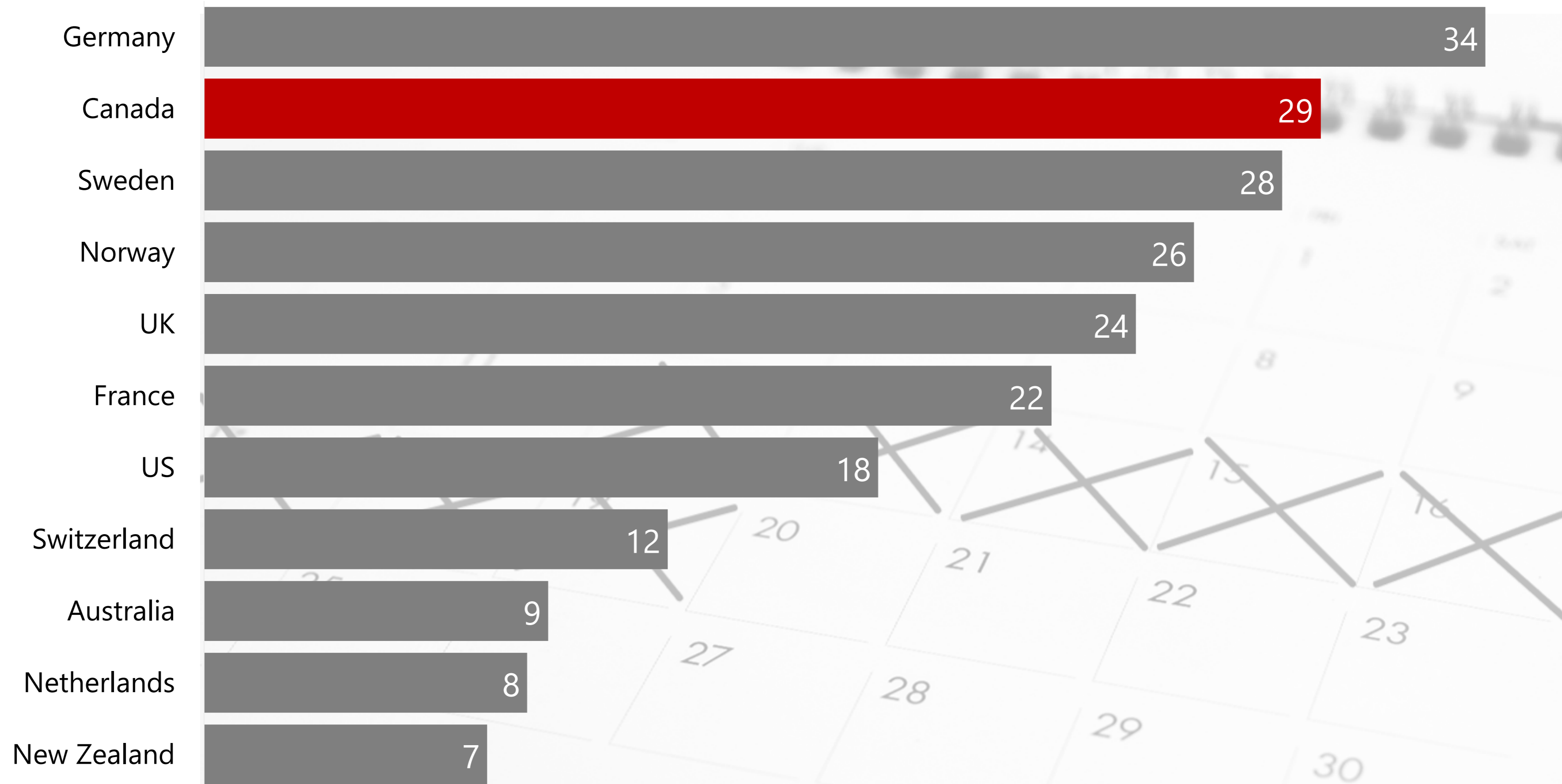
Broader Partnerships



Ontario Digital Health Consortium

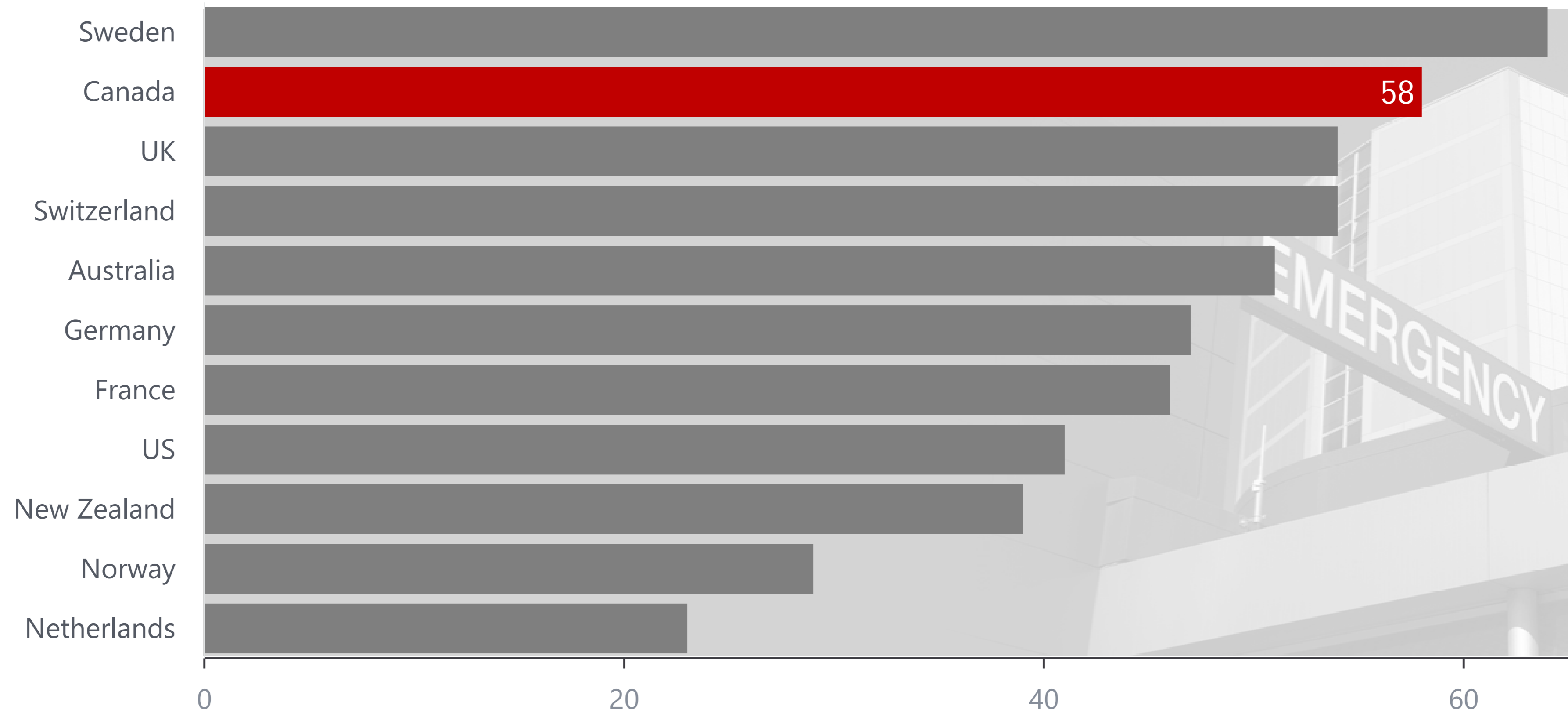


Older adults who waited ≥ 6 days for an appointment, %



Source: 2017 Commonwealth Fund International Health Policy Survey of Older Adults

Older adults who had difficulty getting after-hours care without going to the ED

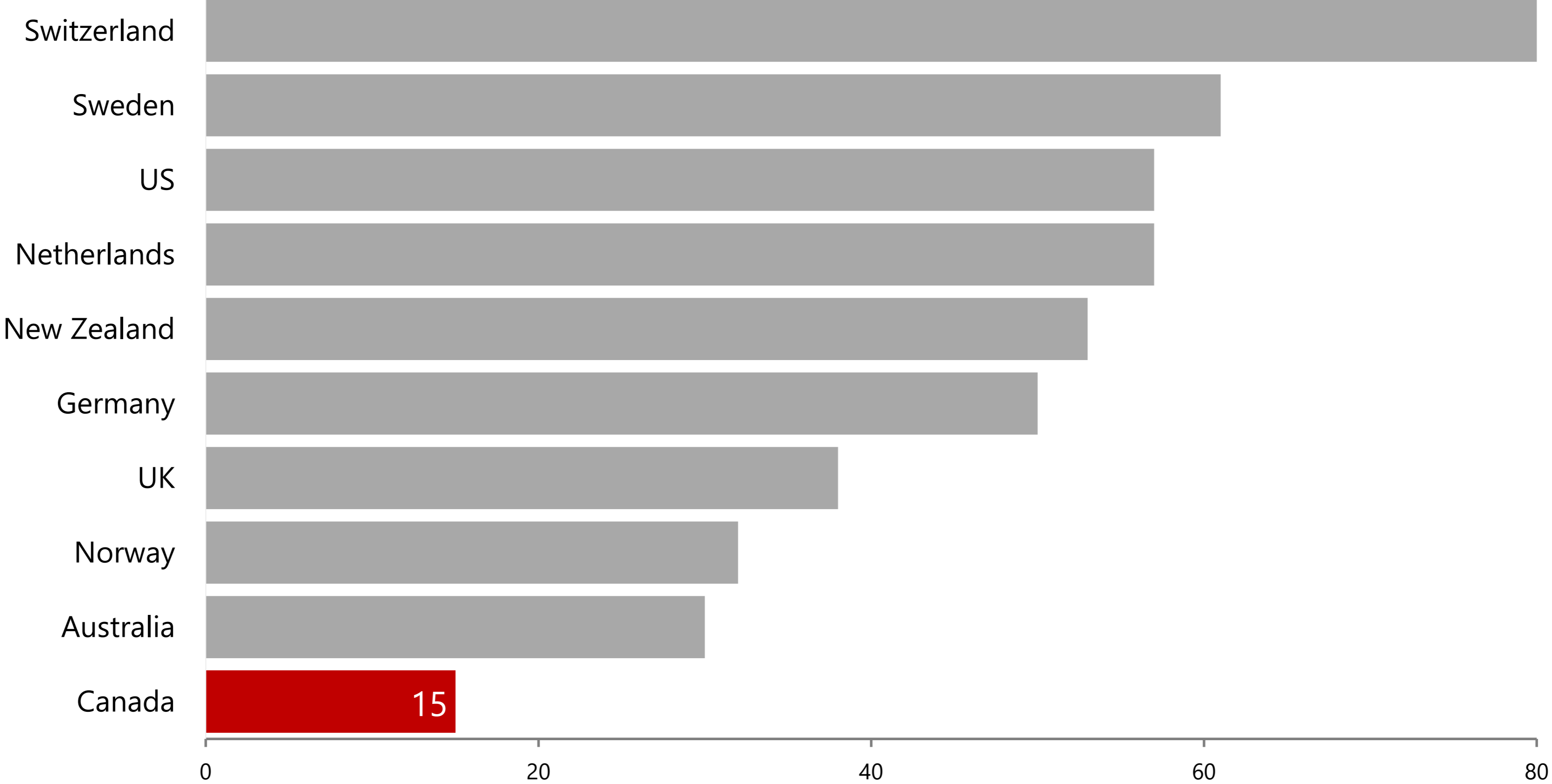


Source: 2017 Commonwealth Fund International Health Policy Survey of Older Adults



Isn't tech supposed to solve this?

Primary care practice provides patient with electronic access, %



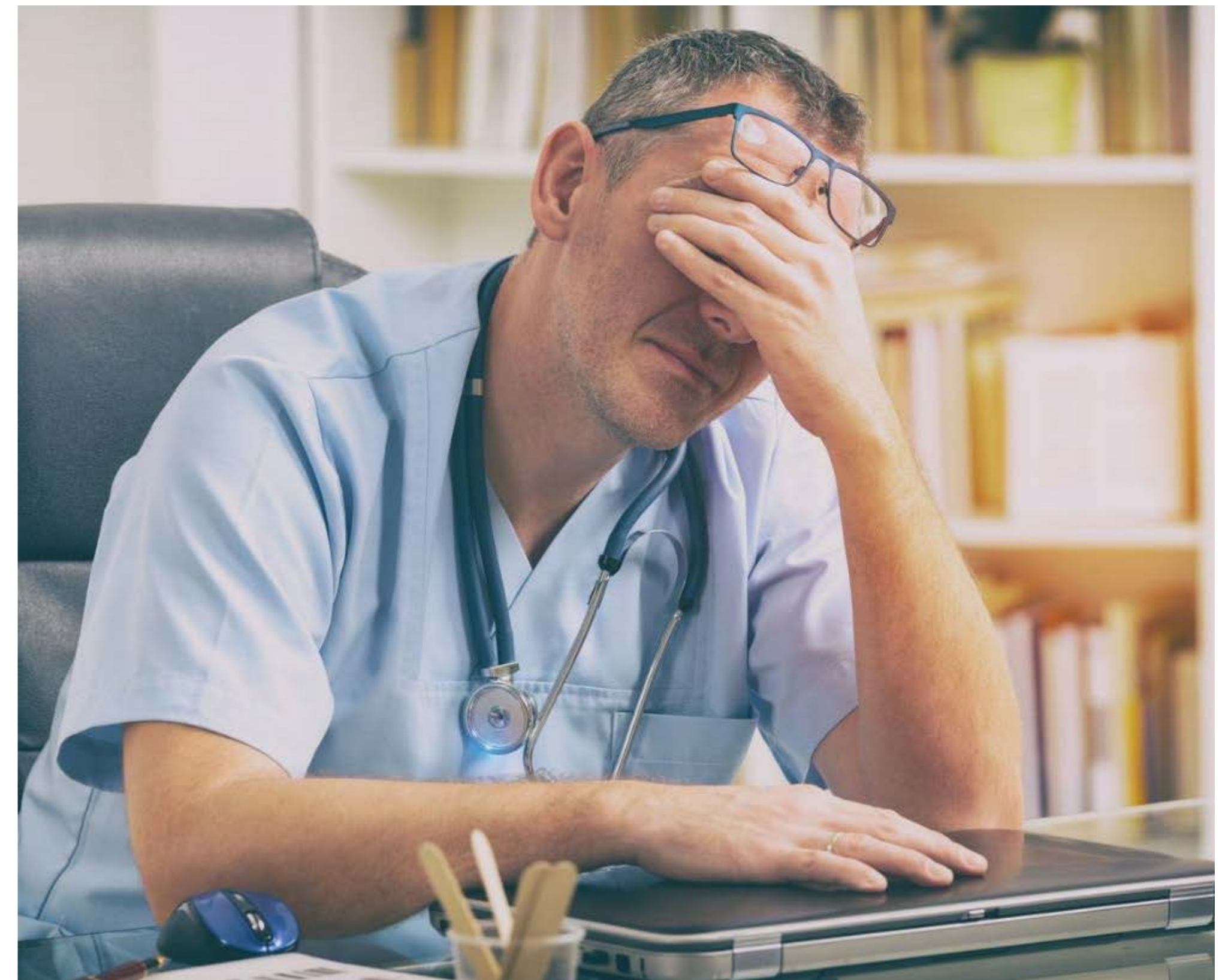
Source: 2015 Commonwealth Fund International Health Policy Survey of Older Adults

IT productivity paradox

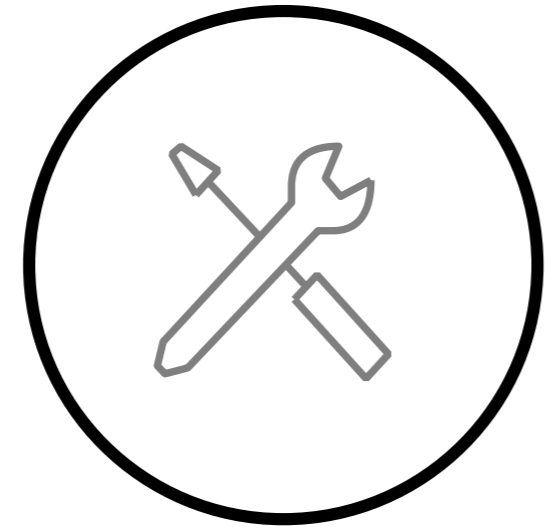
IT productivity paradox



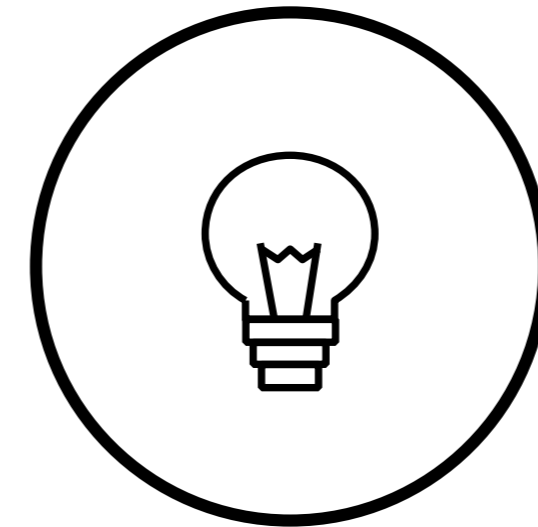
IT productivity paradox



How to overcome the IT productivity paradox?



Build better tools



Reimagine the work

Key Questions

01

How do we know if the tools work?

02

How do we build better tools?

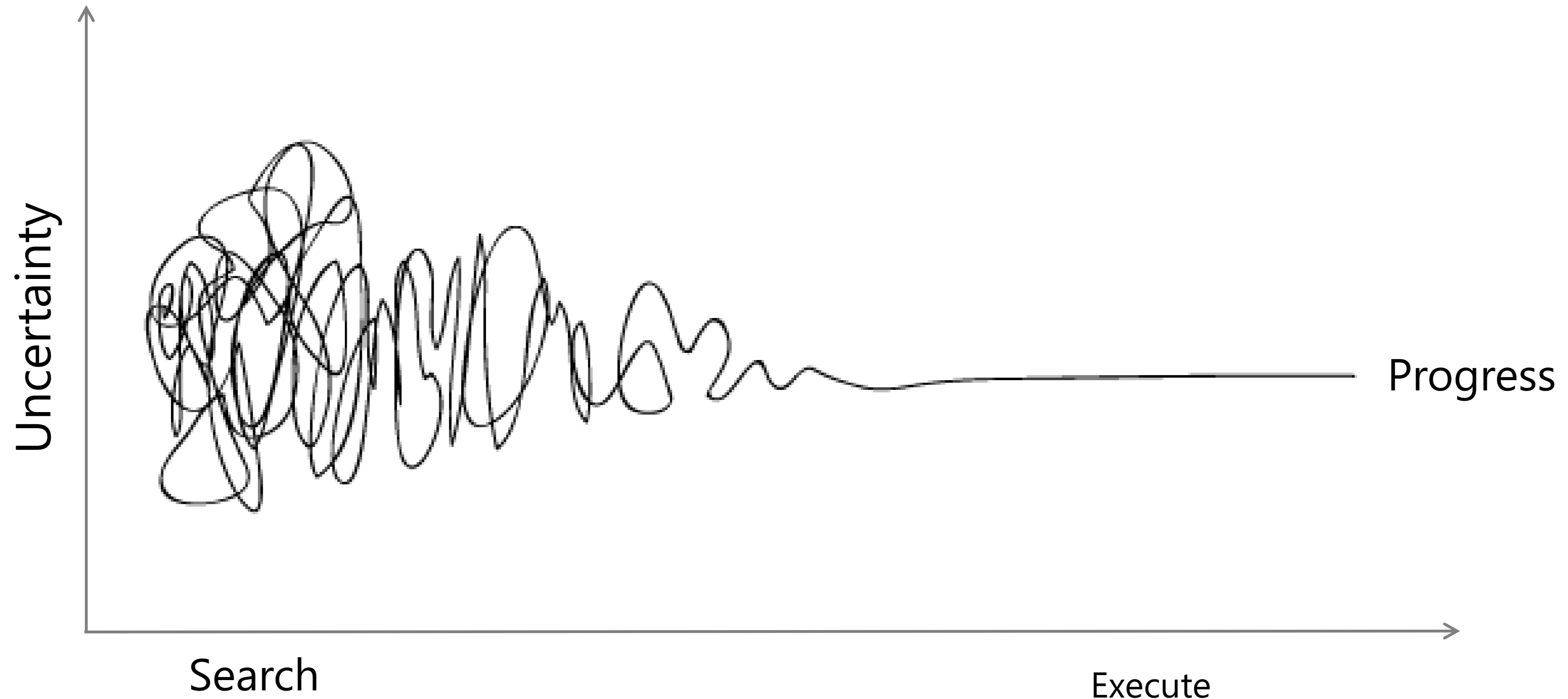
03

What new models of care
could unlock their potential?



**How do we know if the
tools work?**

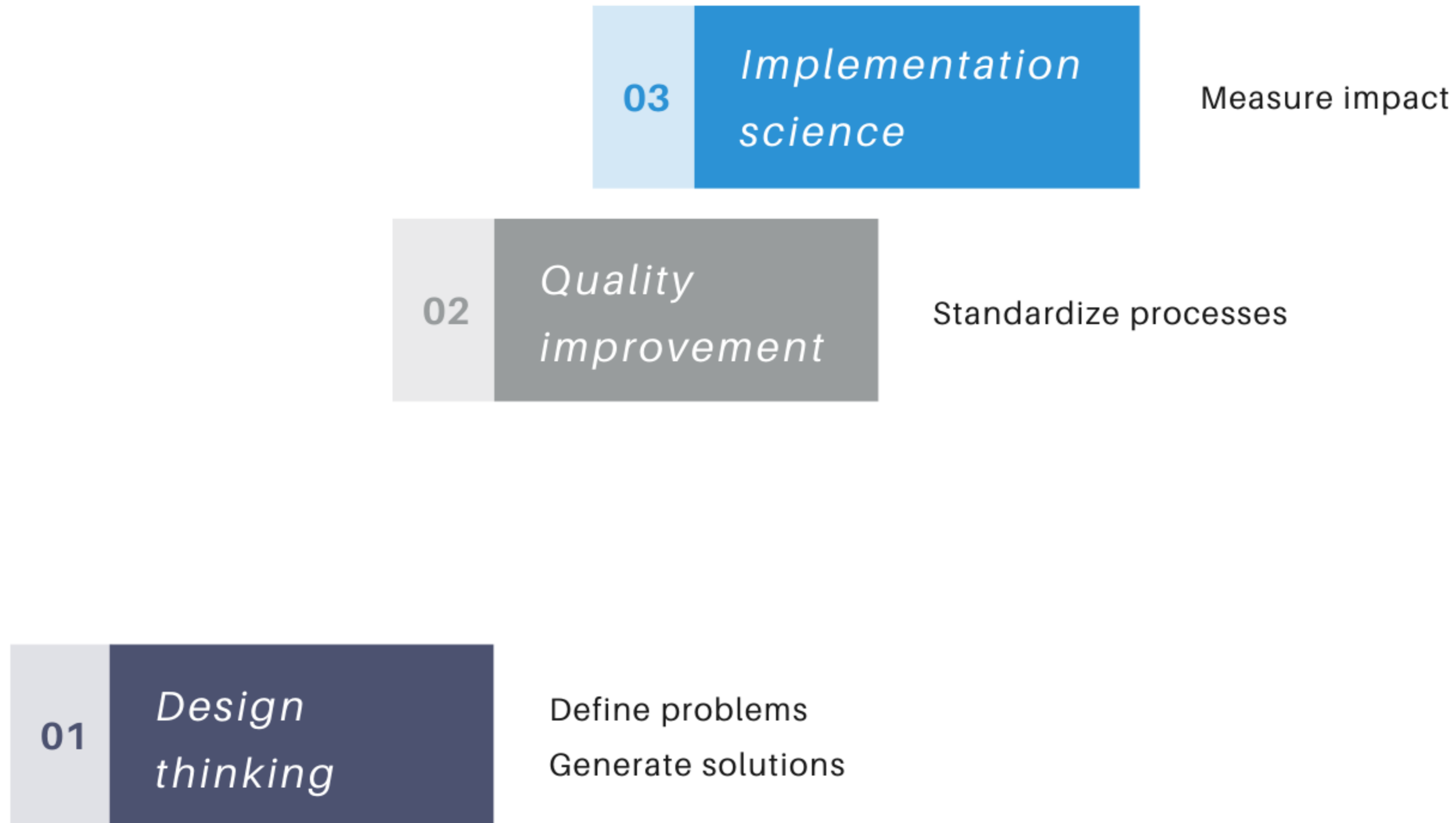
Managing Uncertainty



Source: Osterwalder et al, 2014

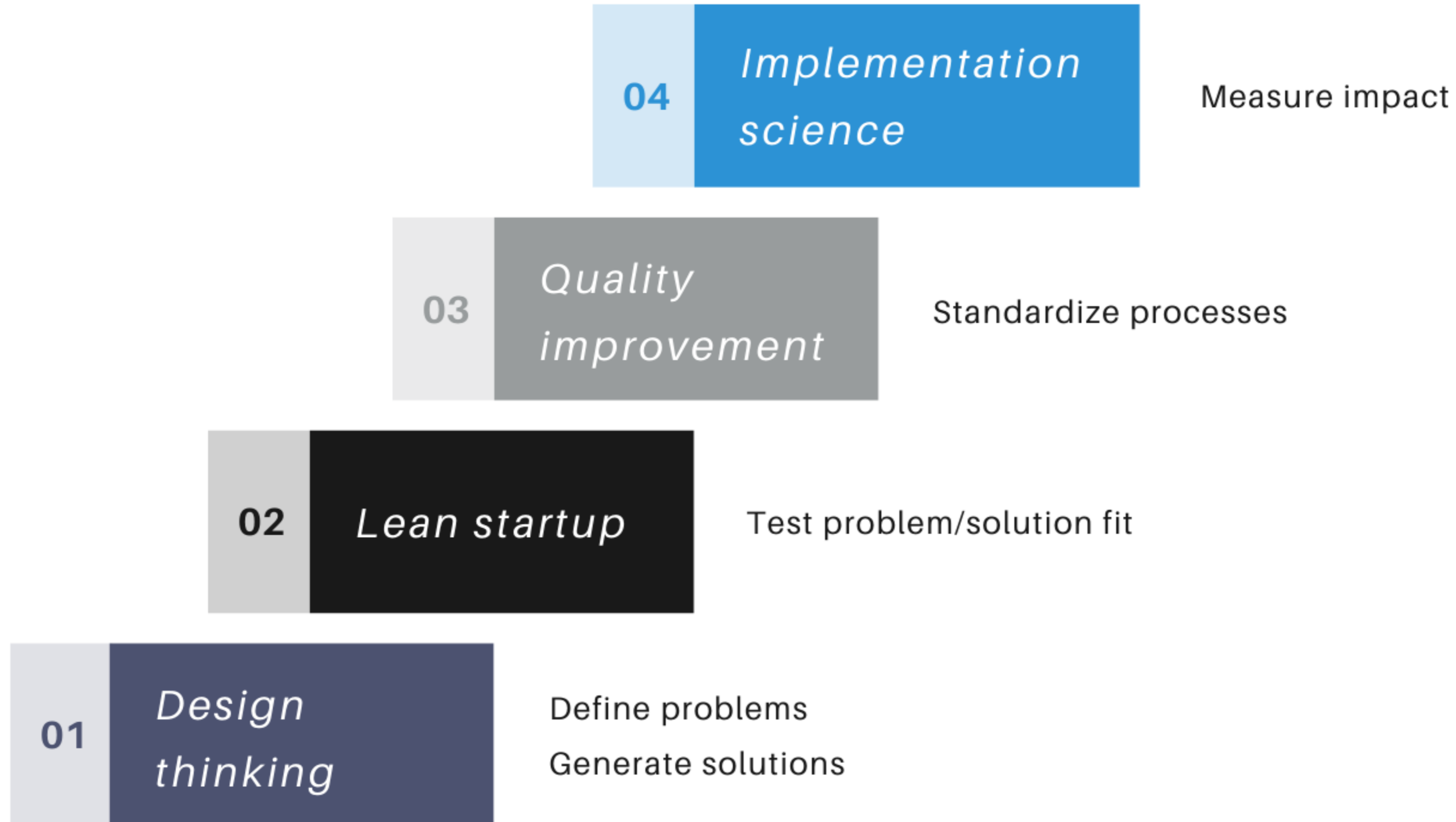
Health services

Design/evaluation process



Health services

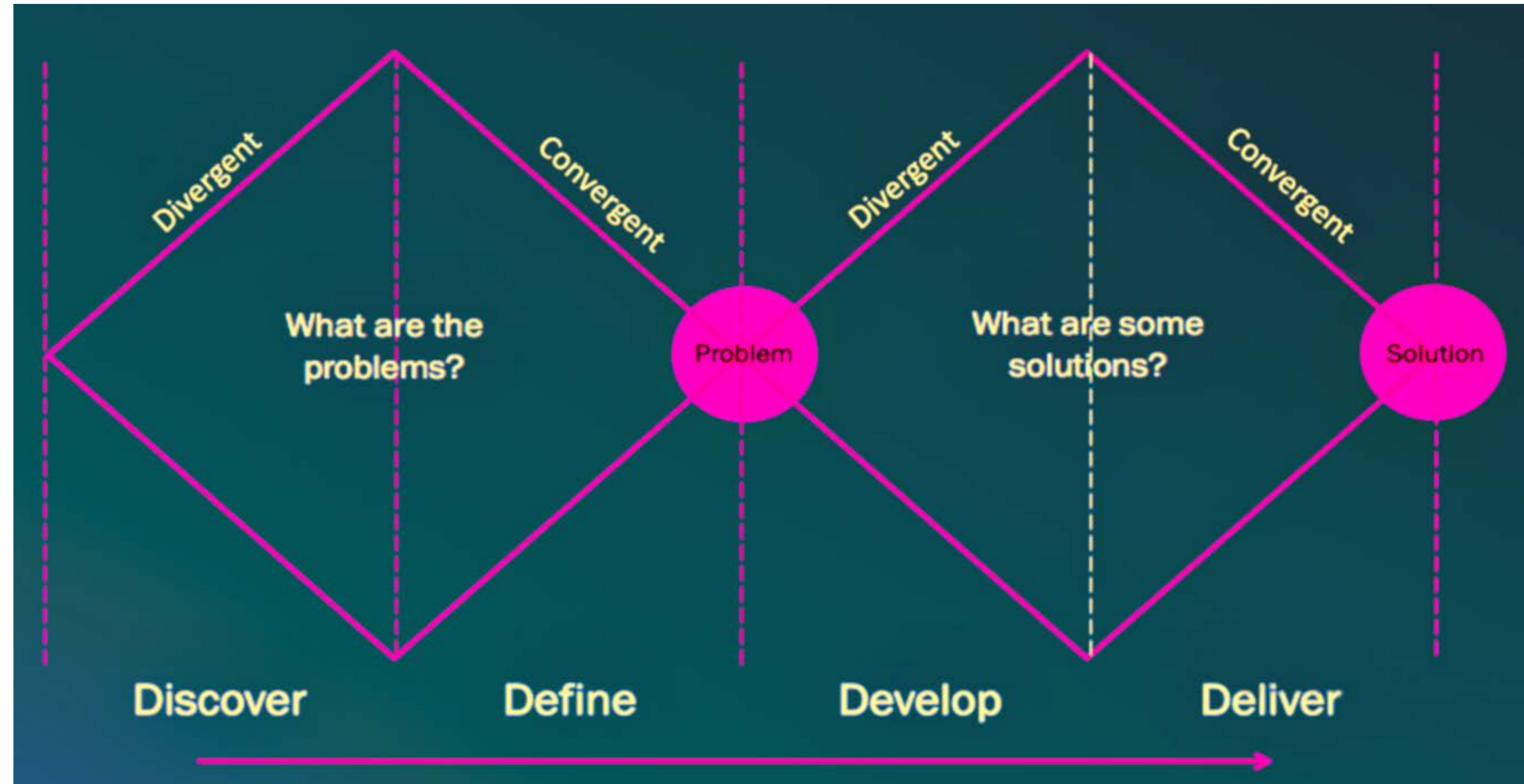
Design/evaluation process



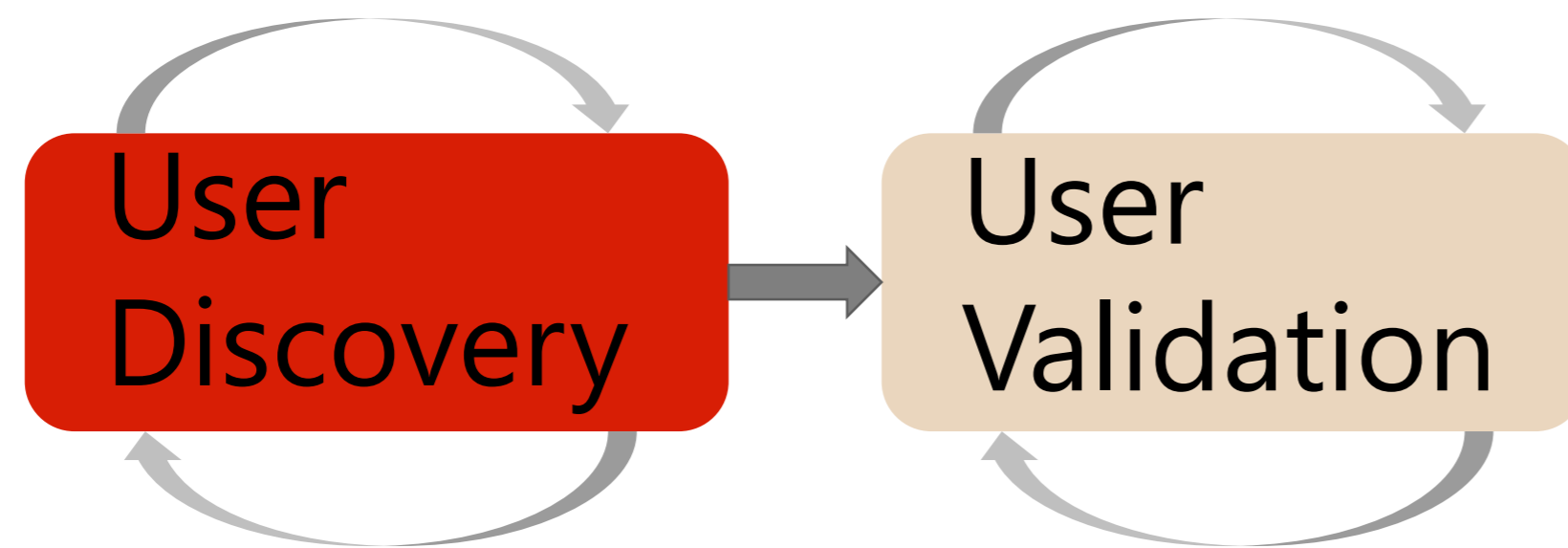
01

*Design
thinking*

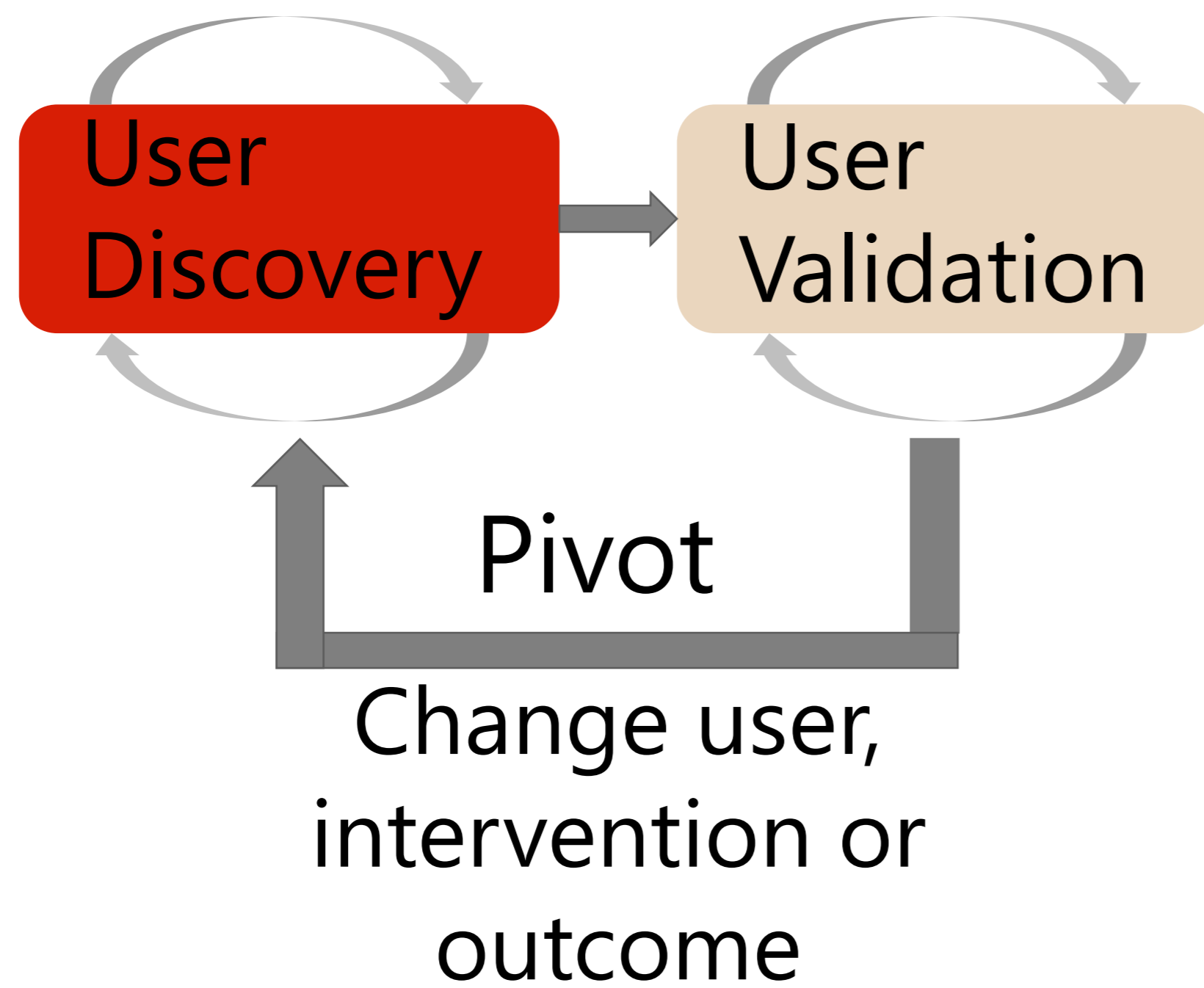
Define problems
Generate solutions

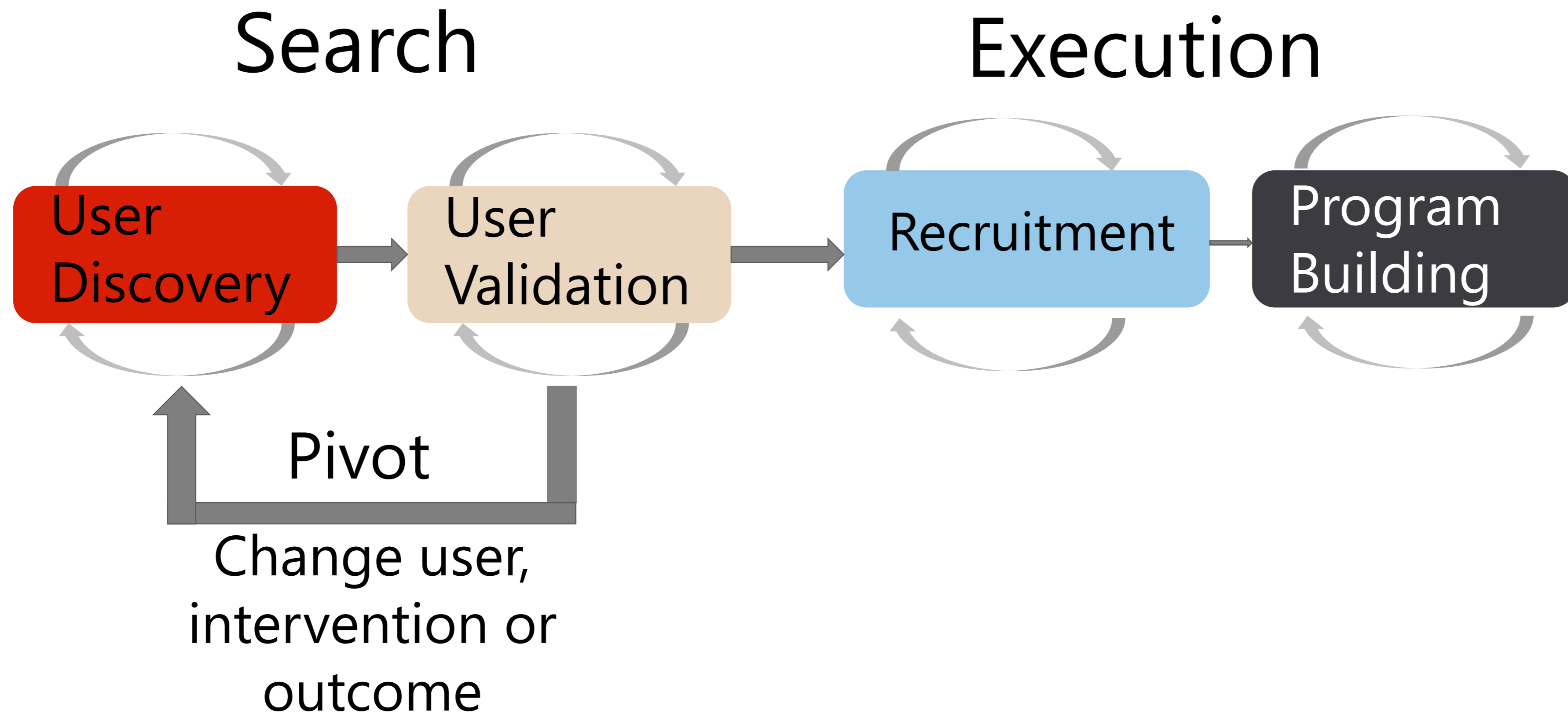


Search

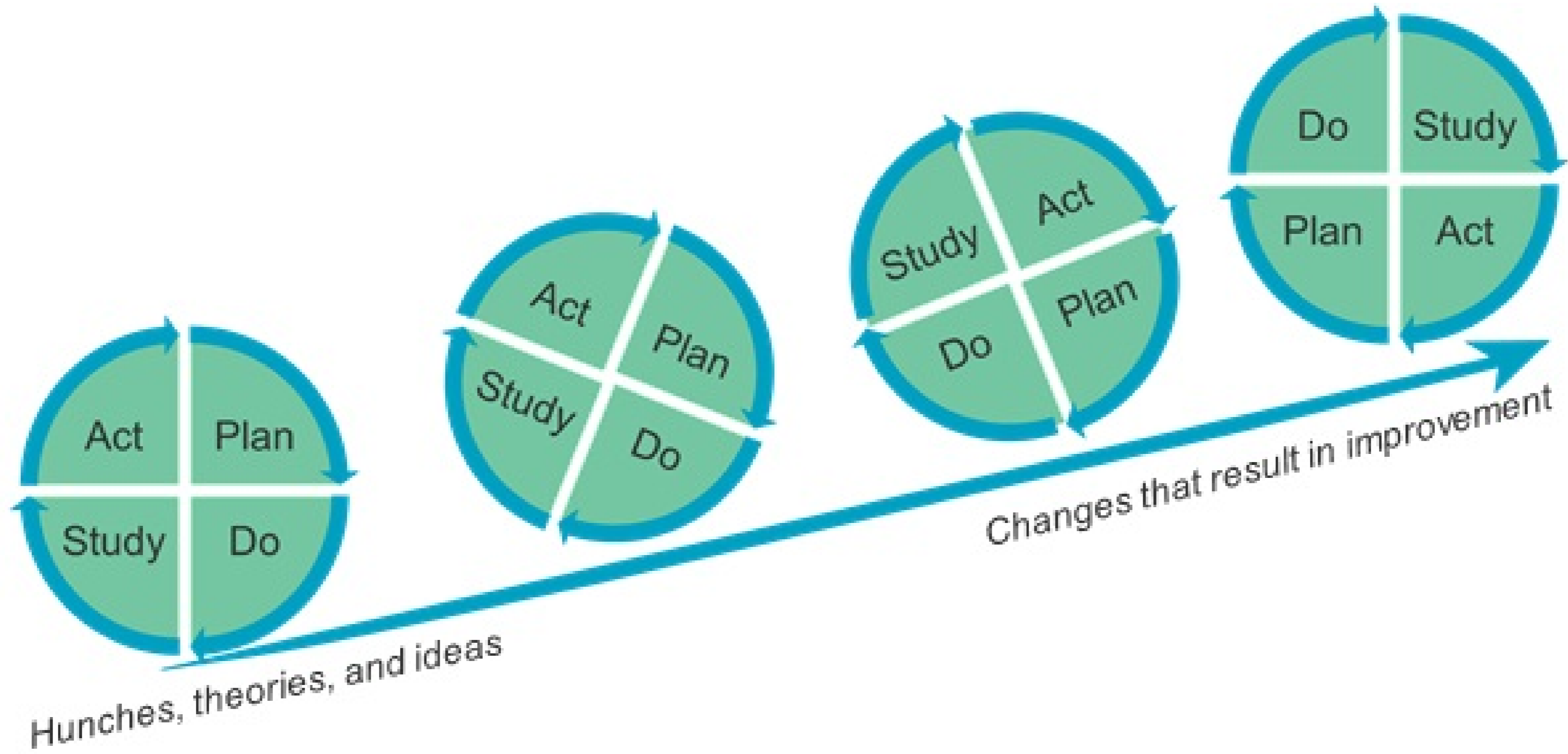


Search





Standardize processes



To control bias and rigorously measure impact, you have to fix all key

parameters:

 **Population**

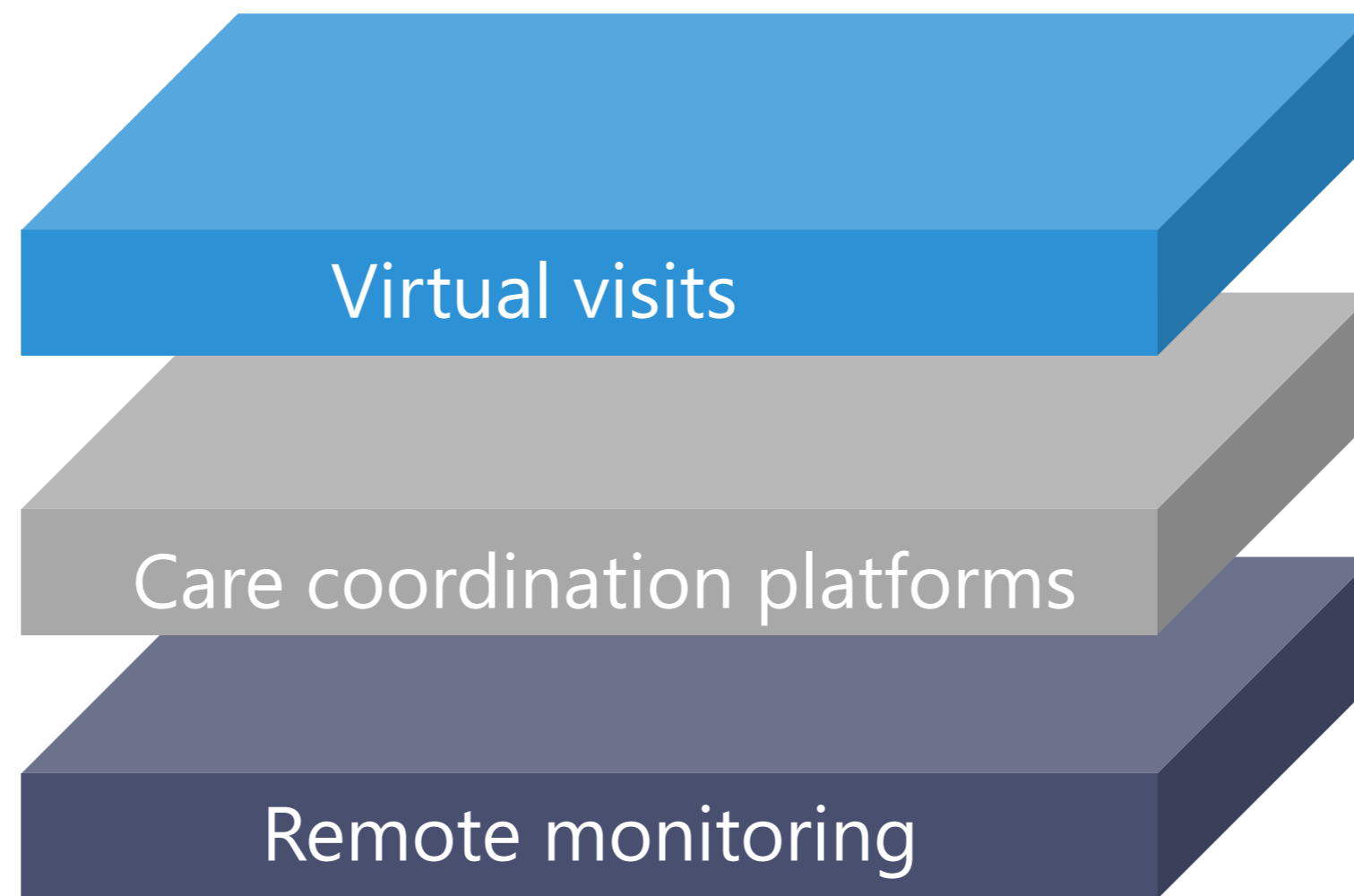
 **Intervention**

 **Control**

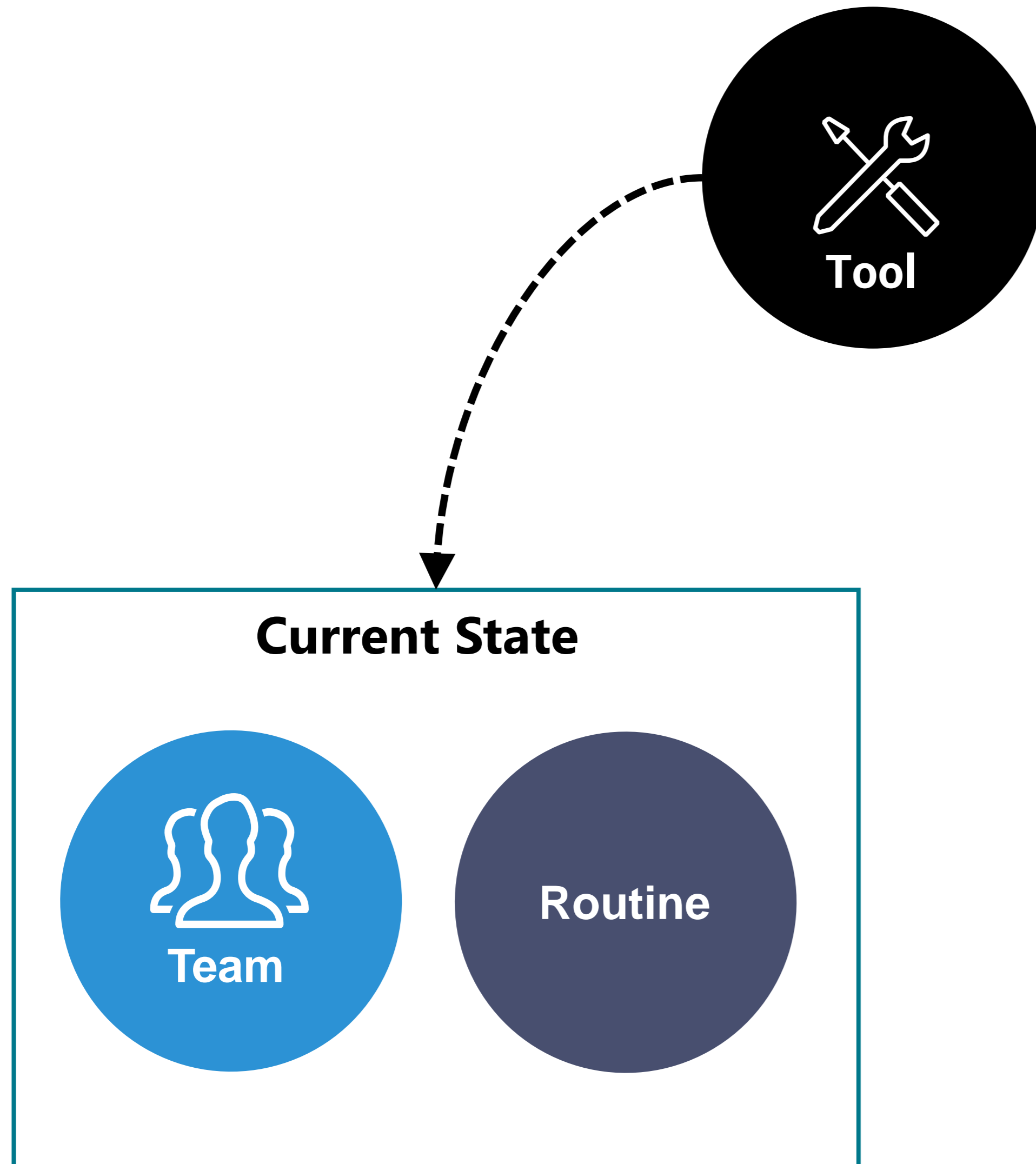
 **Outcome**



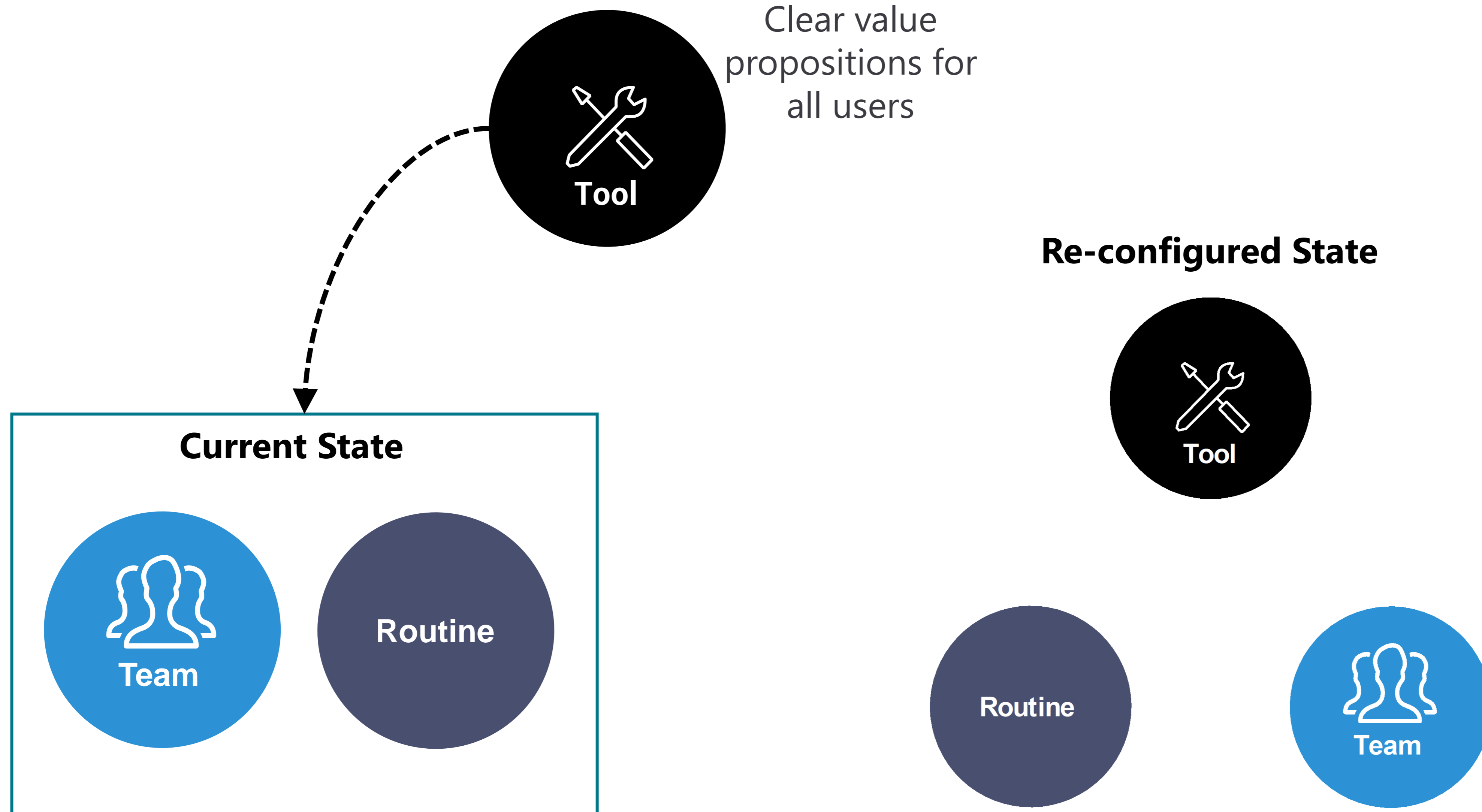
Build better tools



Evaluation & Service Design



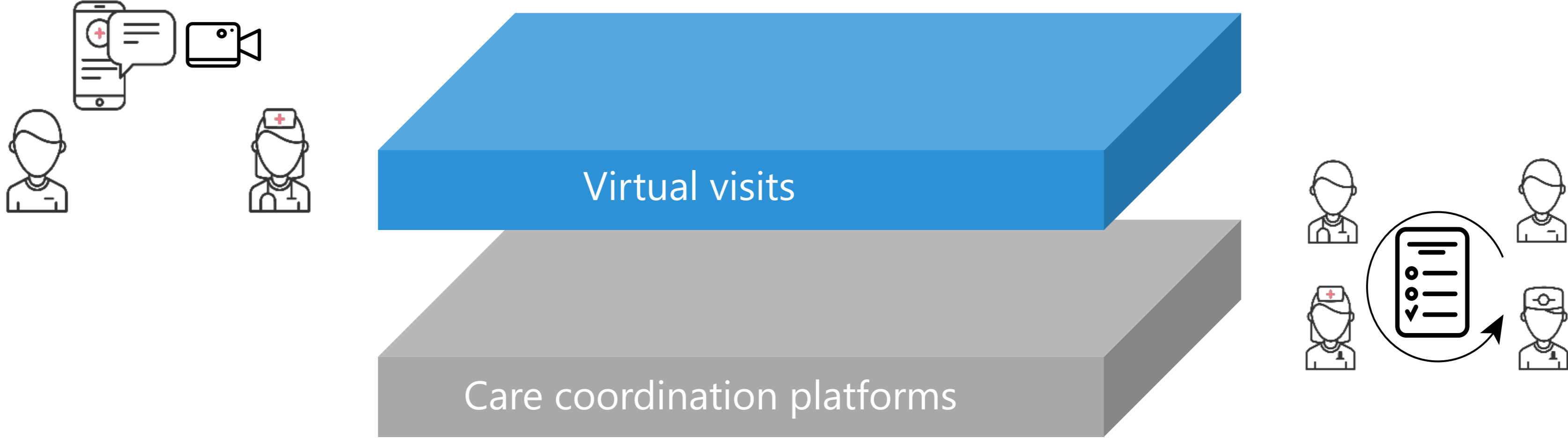
Evaluation & Service Design



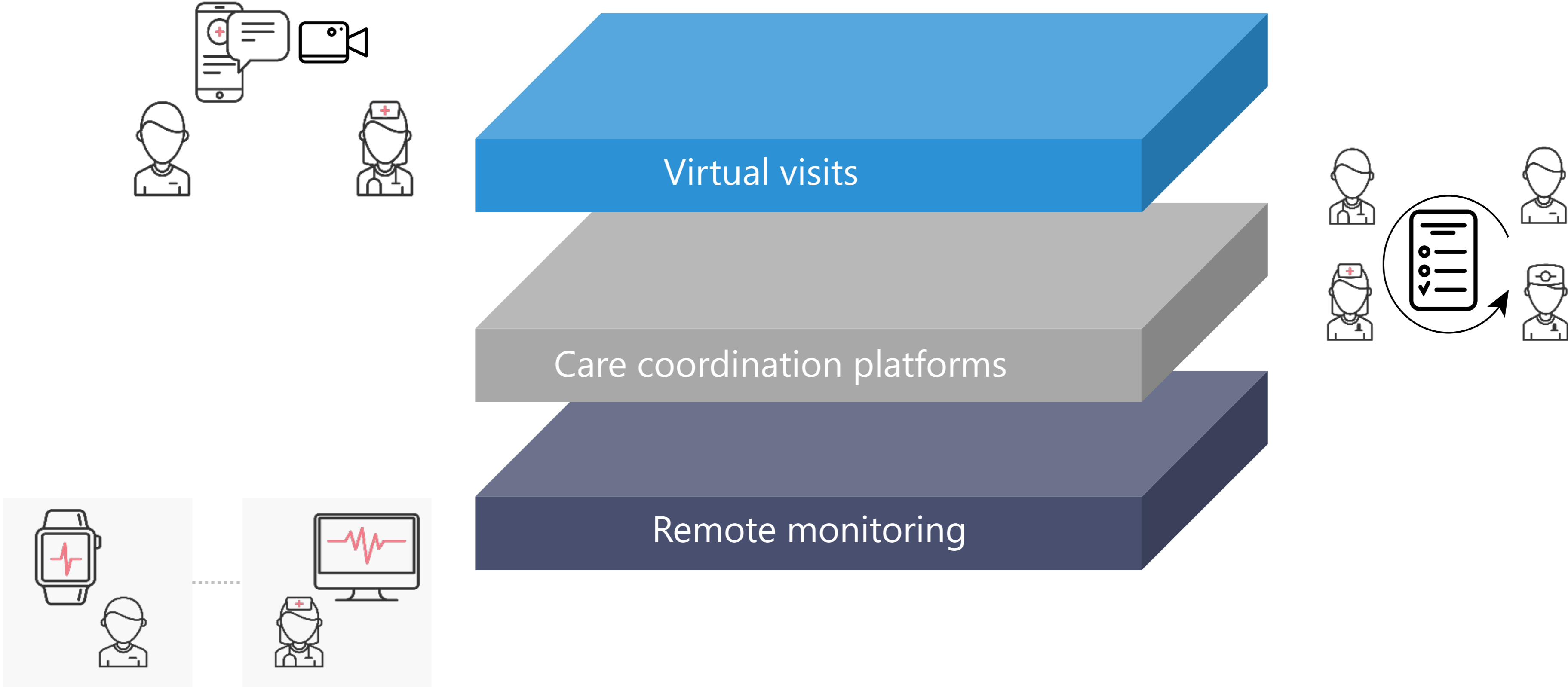
Building Blocks of Modern Primary Care



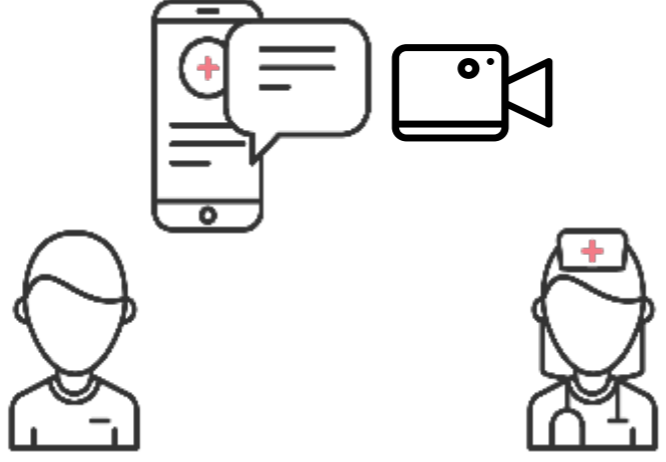
Building Blocks of Modern Primary Care

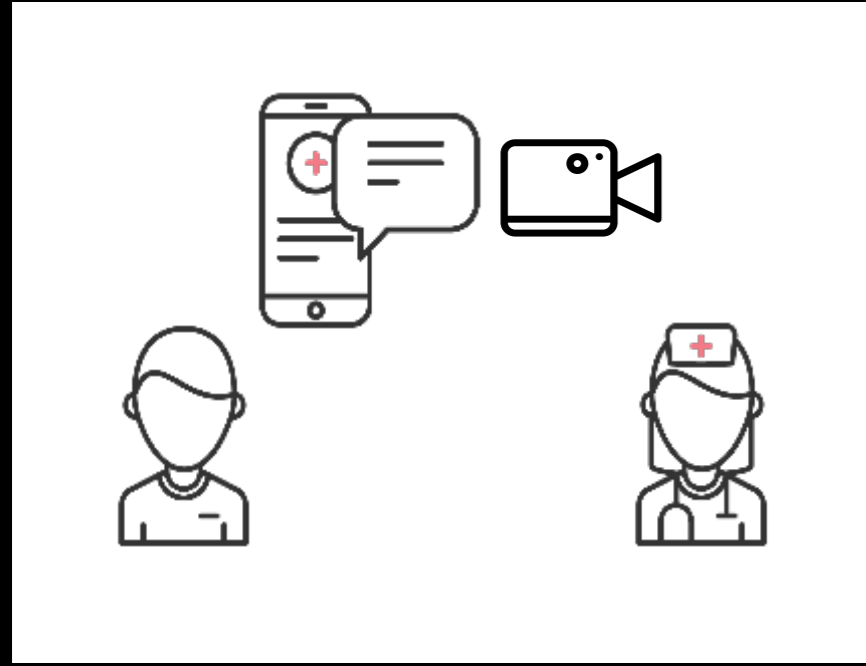


Building Blocks of Modern Primary Care

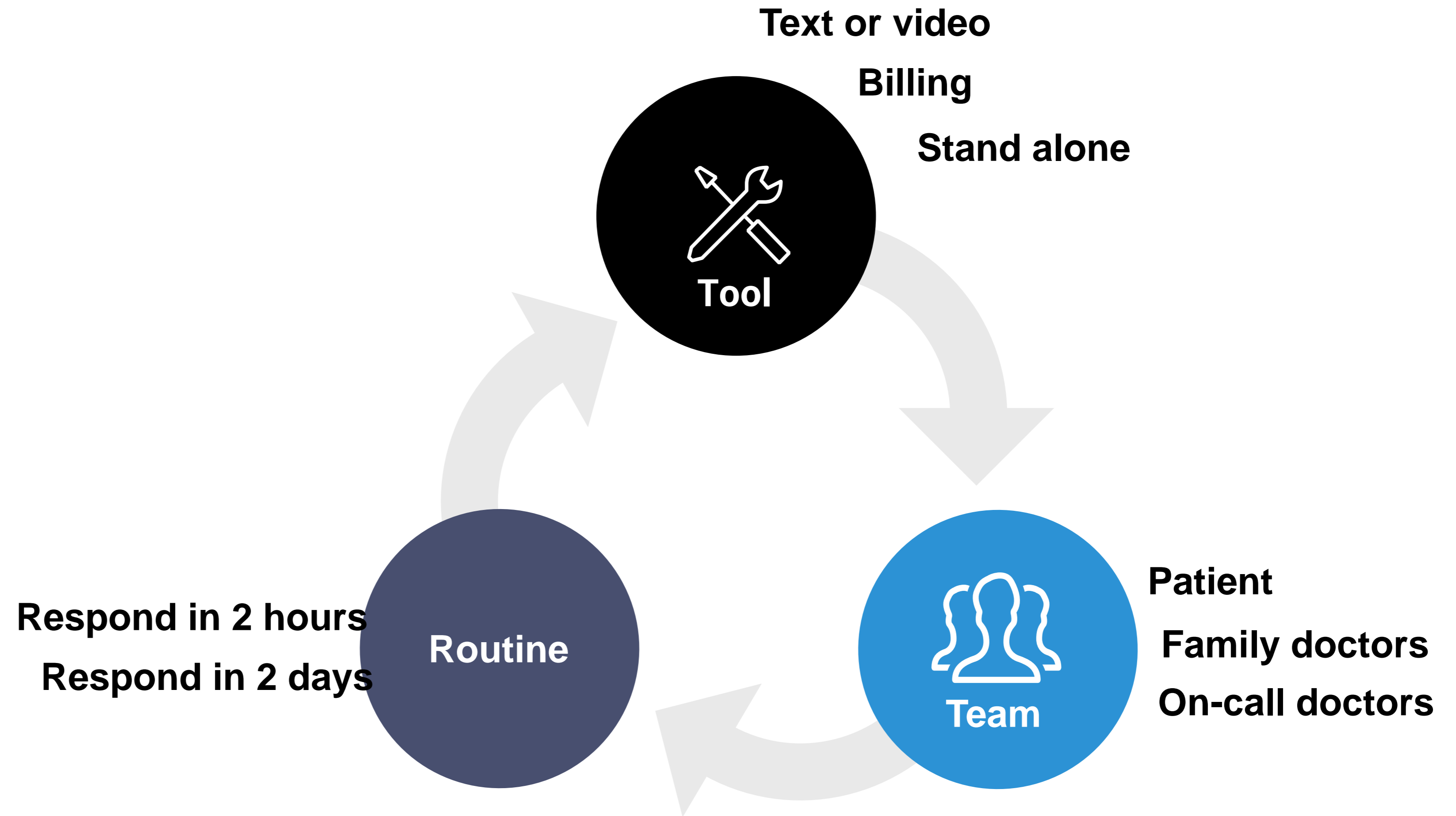


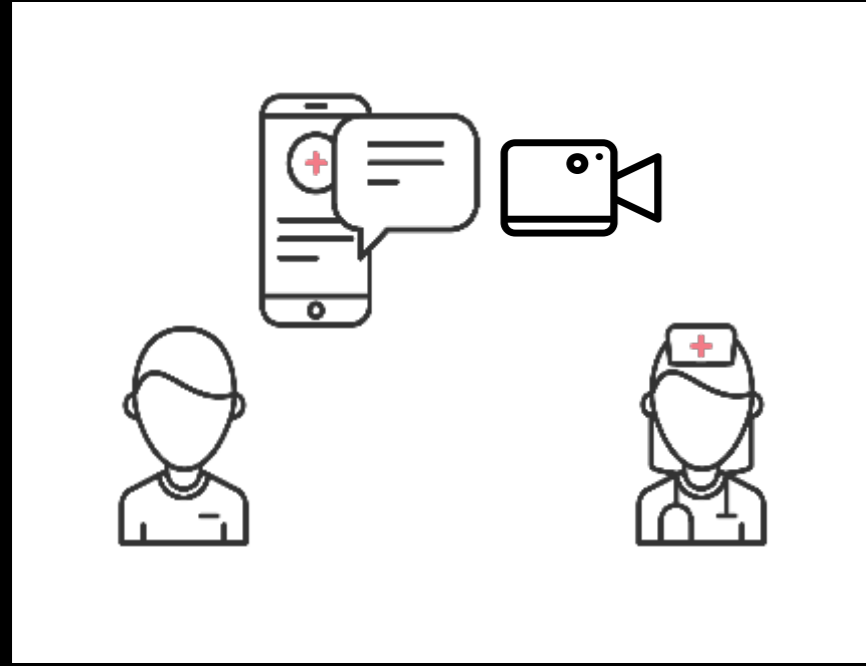
Building Block #1



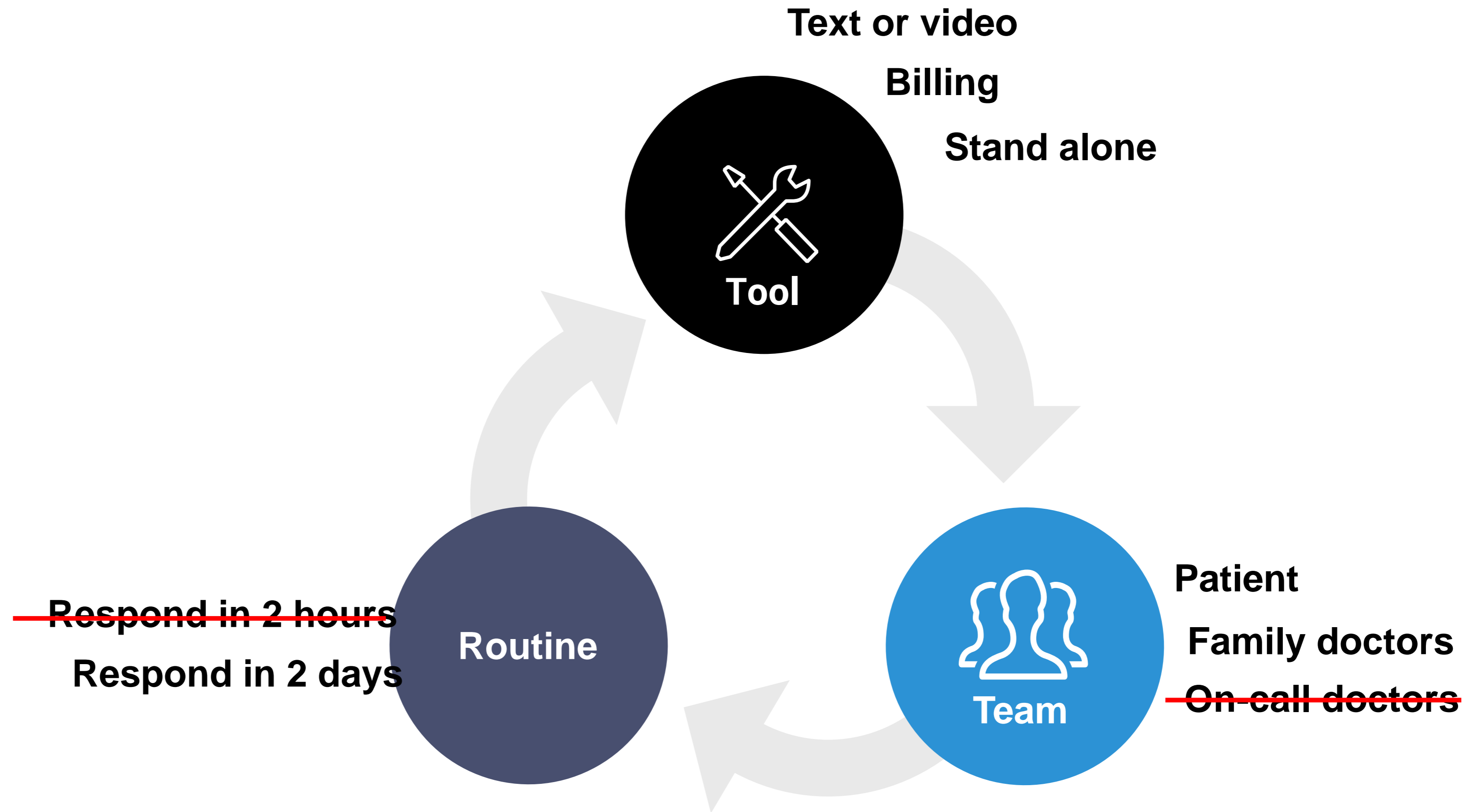


#1: Virtual visits





#1: Virtual visits



PARTICIPANTS

5

Regions
in Ontario



194

Primary care providers
>=1 visit



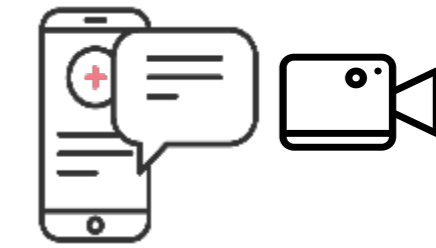
14,291

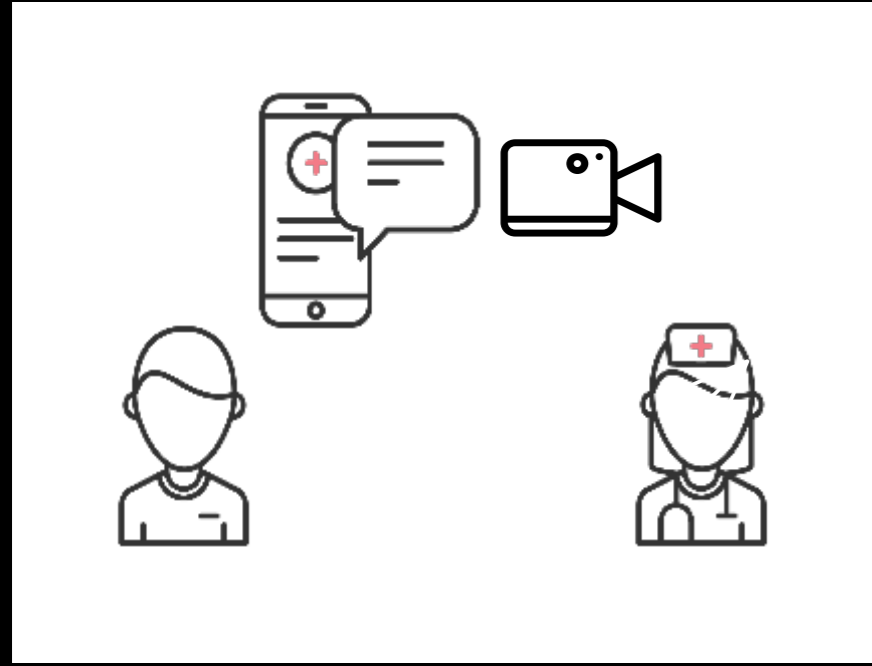
Patients registered



14,317

visits





#1: Virtual visits

14,317 e-Visits

e-Visits (N=14,317)

Asynchronous message alone



Did not require follow-up



Patients' experience (N=1742)

Replaced face-to-face visits with own MD



Same or better than in-person



Saved patient's time

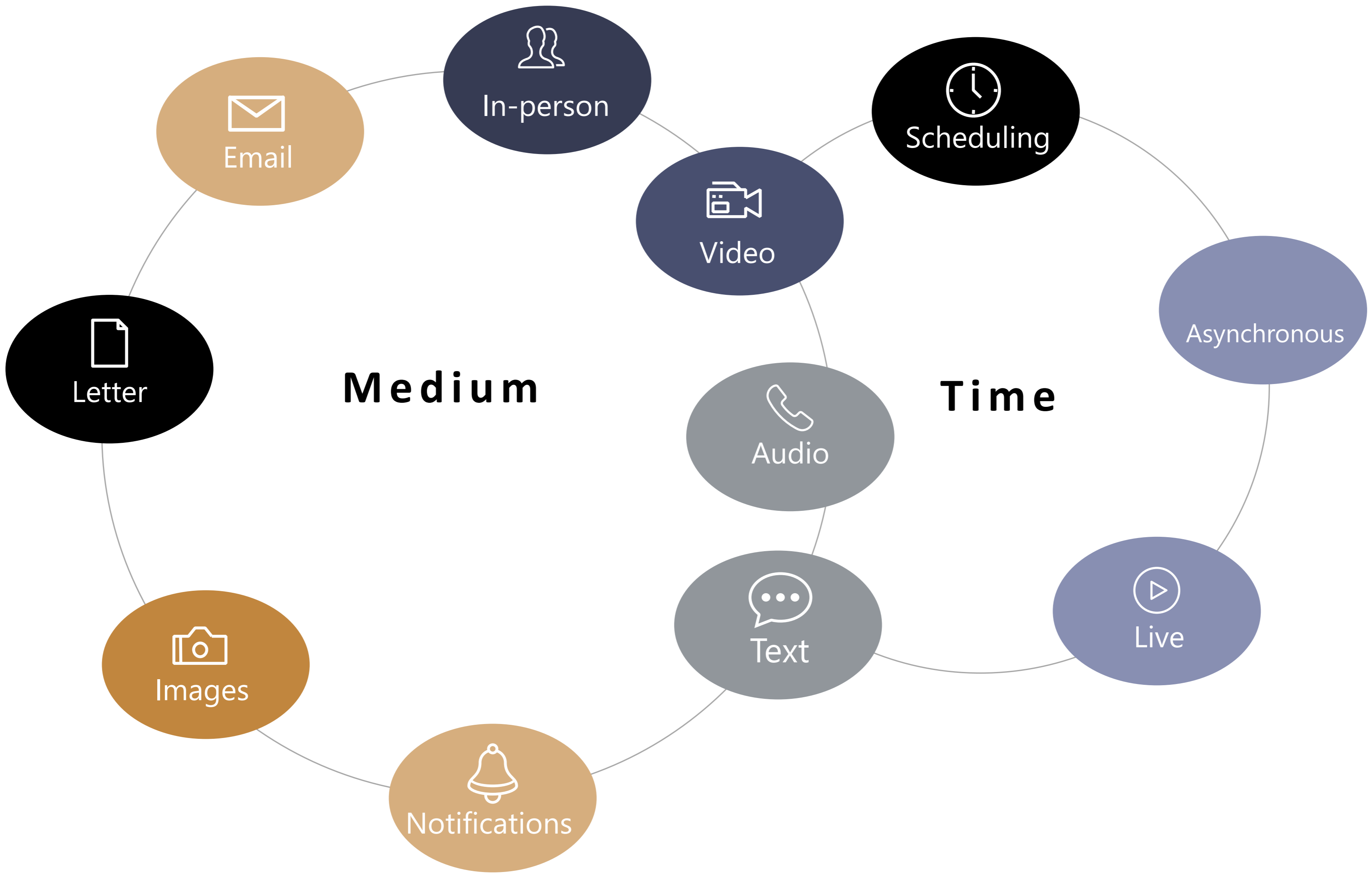


Saved patient's money



0 20 40 60 80 100

Managing communication channels



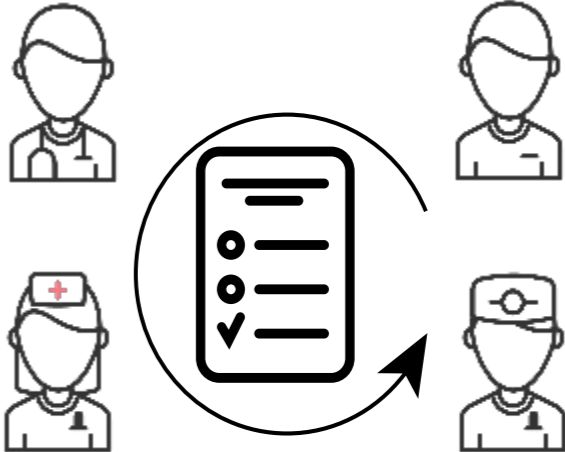
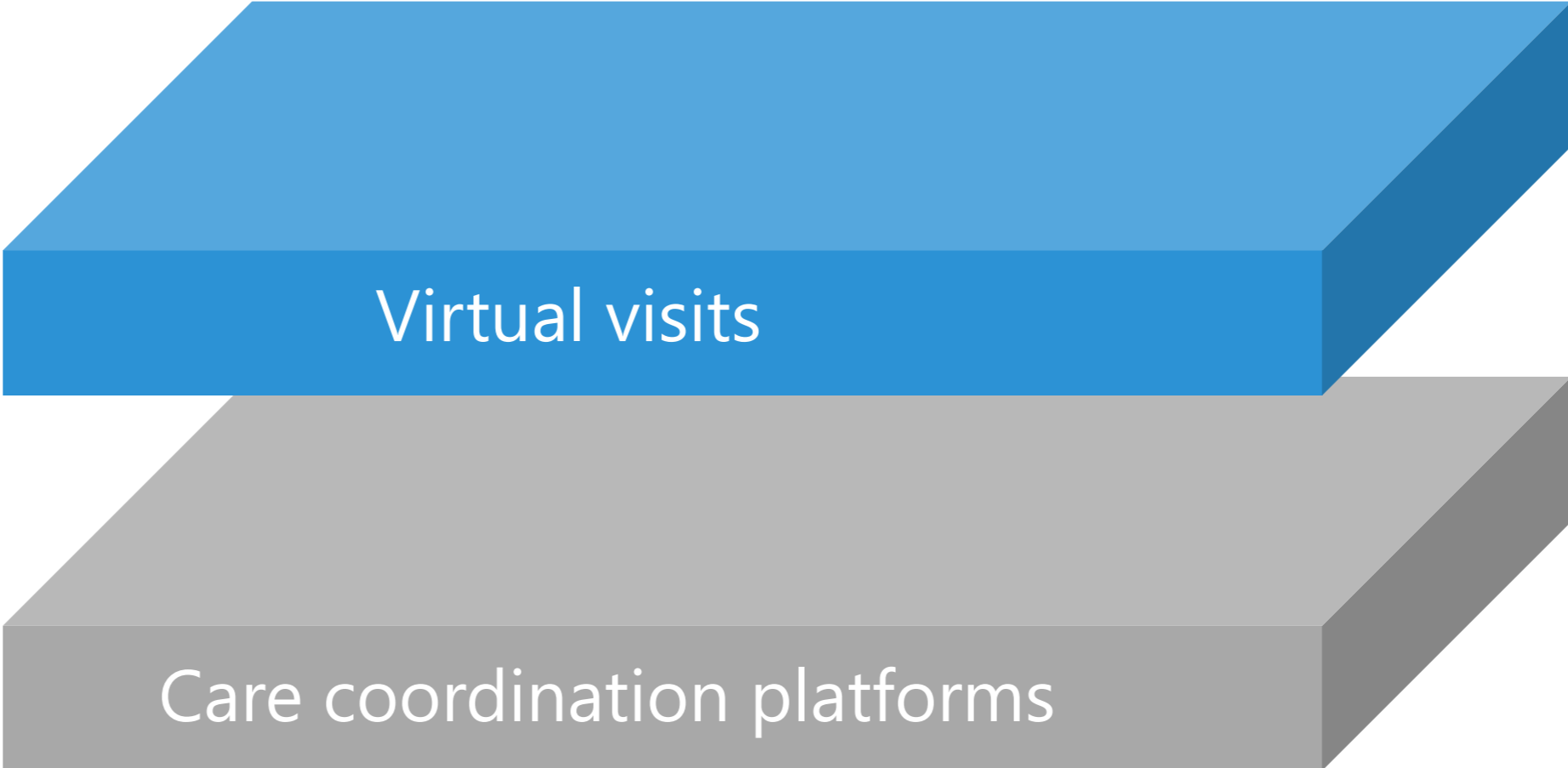
Next steps

01 **Understand the fit between medium & context**
Patient, problem & provider

02 **Invest in workflow redesign, training & analytics**

- Triage: AI/nurse suggests a modality
- Patients learn to request/use the best modalities
- Clinicians learn what works best for them

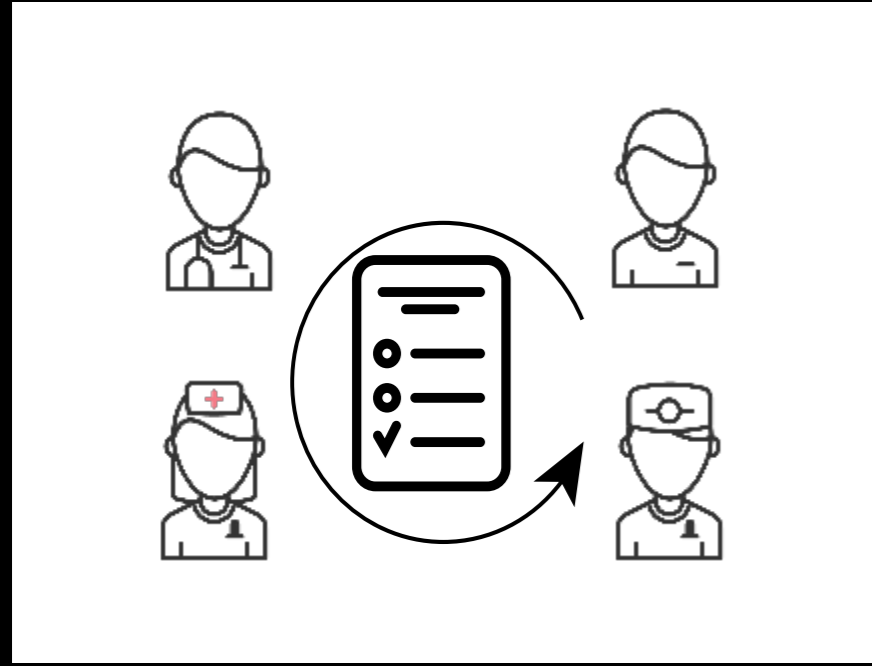
Building Block #2



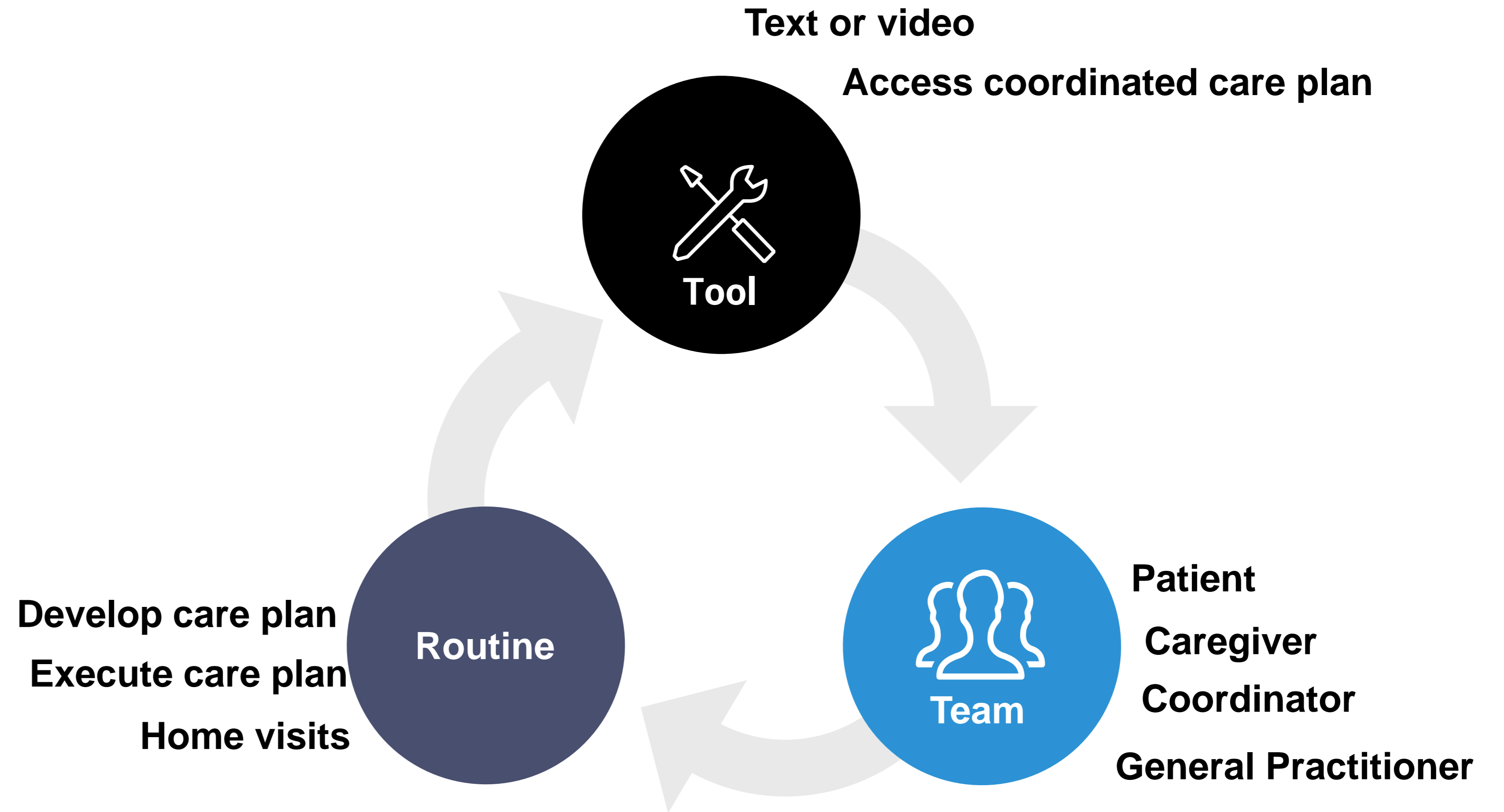


#2: Care coordination
platforms



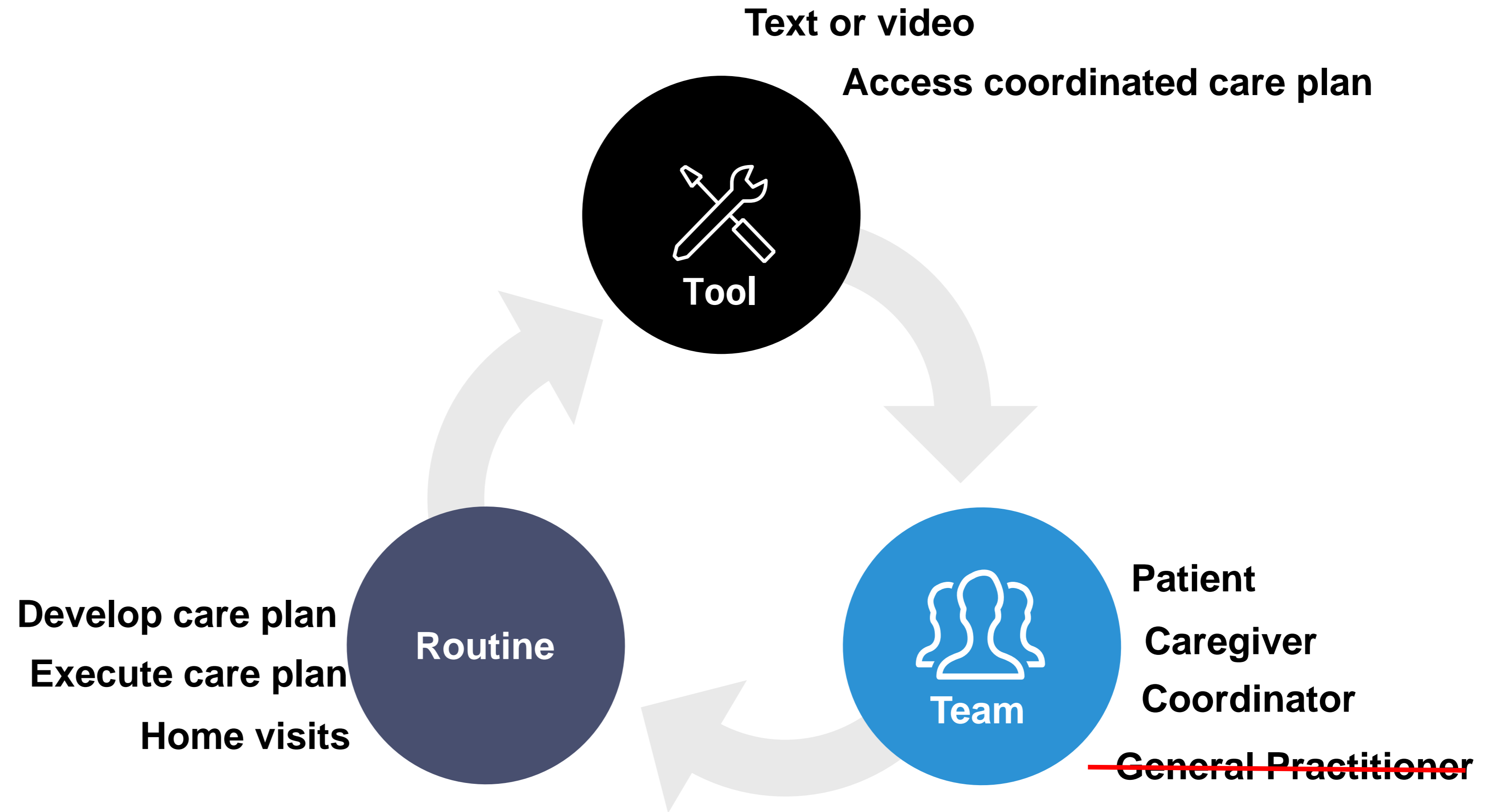


**#2: Care coordination
platforms**





#2: Care coordination platforms



RESULTS

77

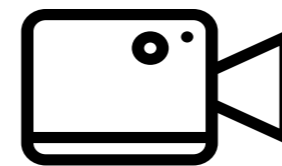
Older patients in rural area



- 36% socially isolated
- 72% lived alone

Video

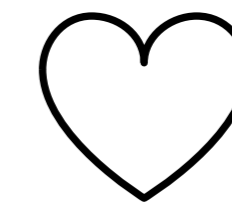
Most prized modality



- 31% of calls between coordinator & patients
- 61% of calls between patient and caregiver

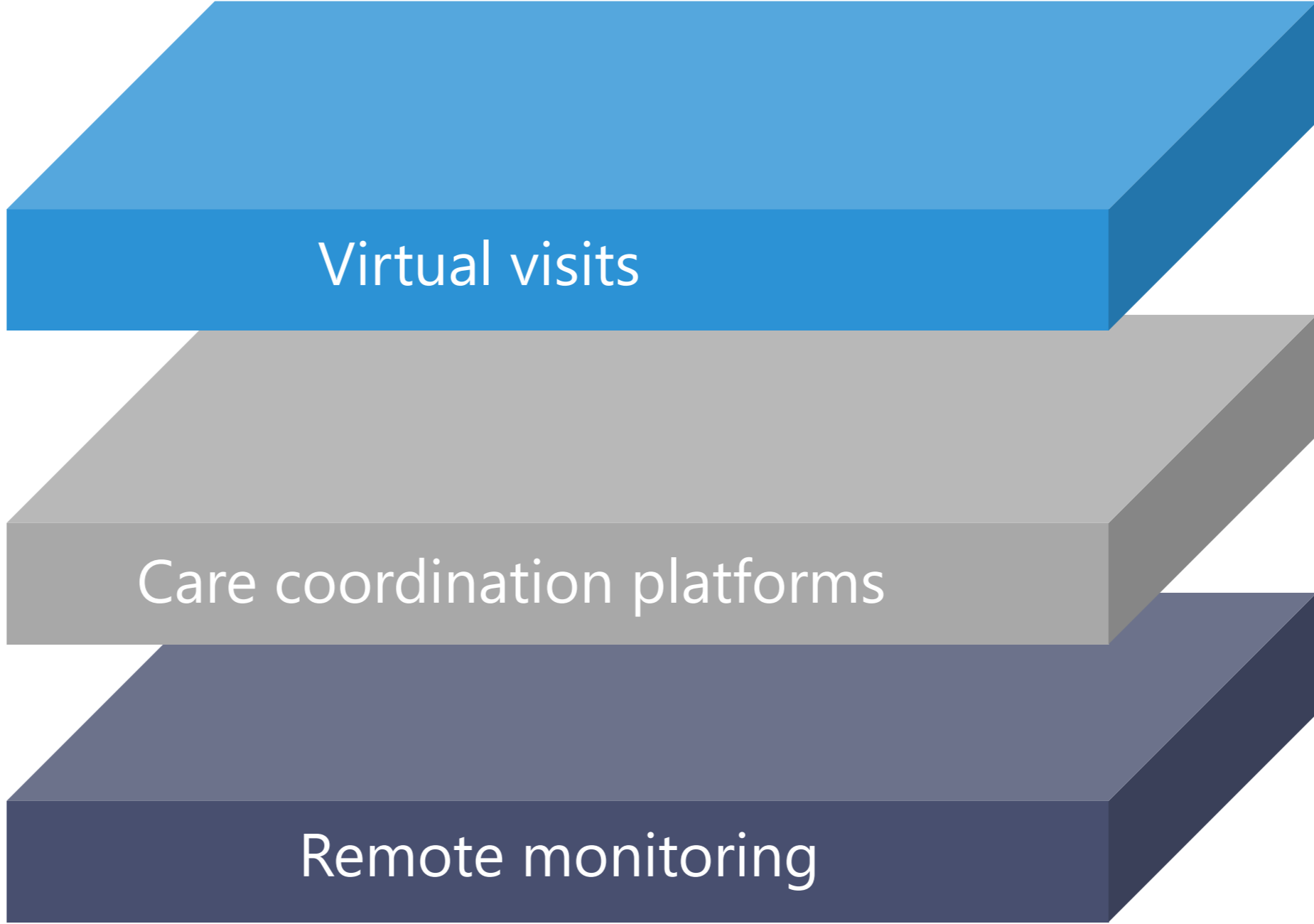
Modest

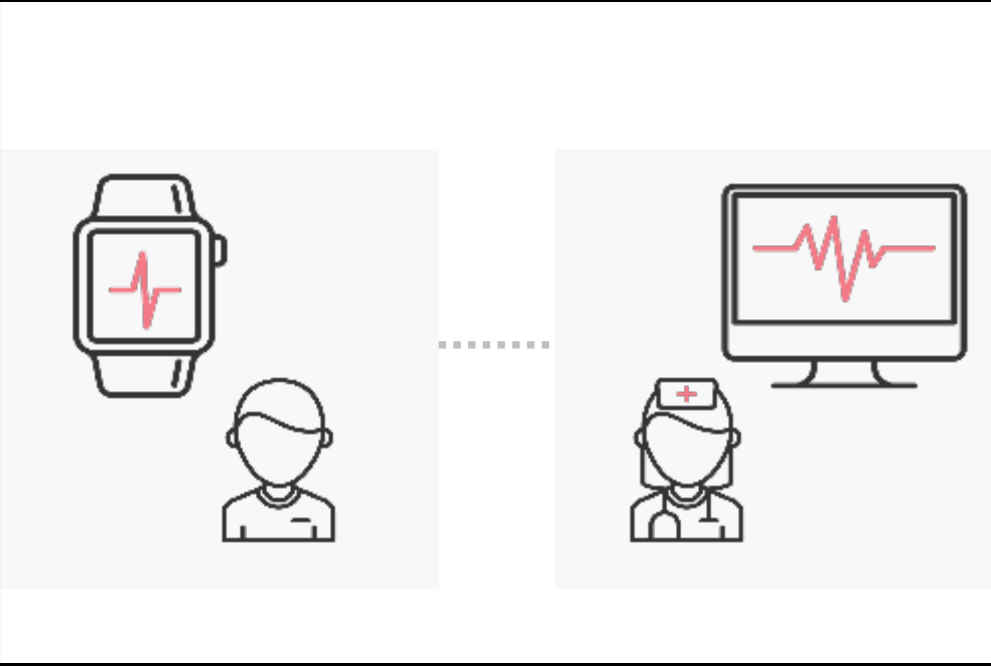
Benefits



- 9.7% reduction in time to develop care plan for those who made 10+ calls
- No benefit for executing care plan

Building Block #3





#3: Remote monitoring

Cloud DX Connected Health Kit

01

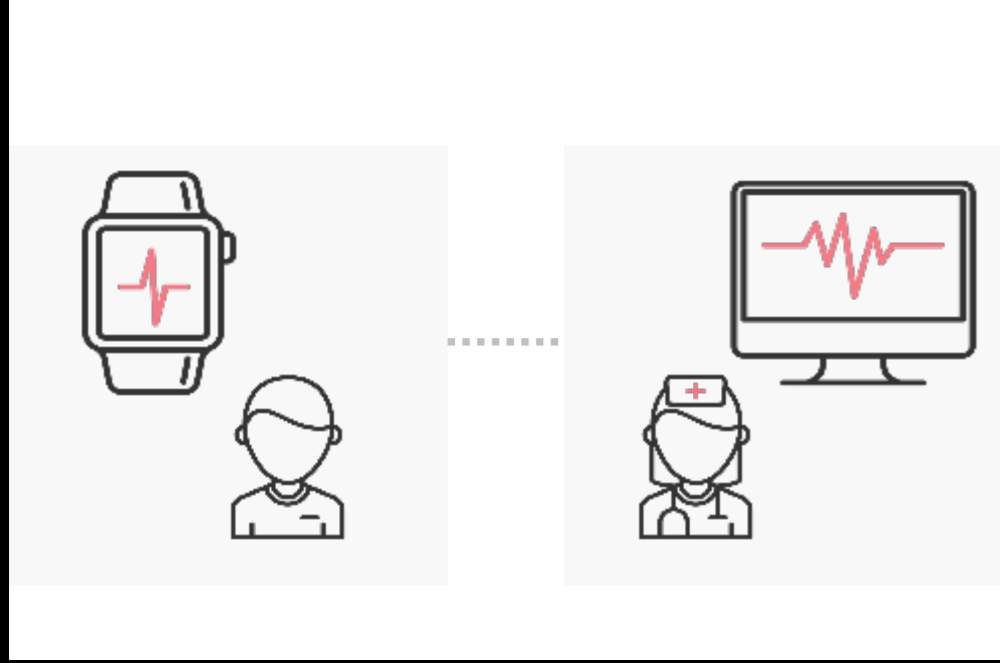
Tracks vital signs using
Bluetooth-enabled medical
devices

- pulsewave wrist cuff monitor
- oximeter
- wireless body-weight scale
- thermometer

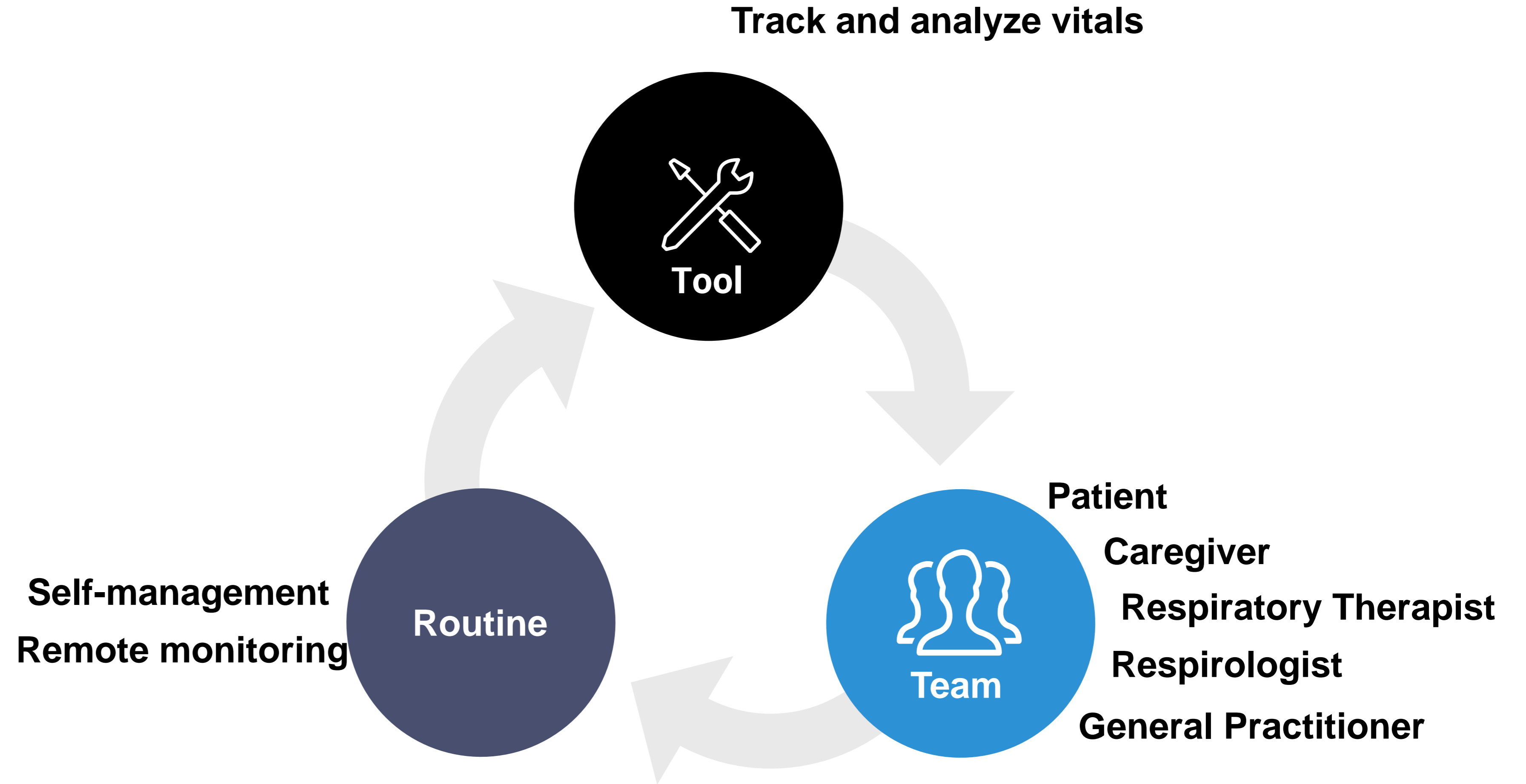
02

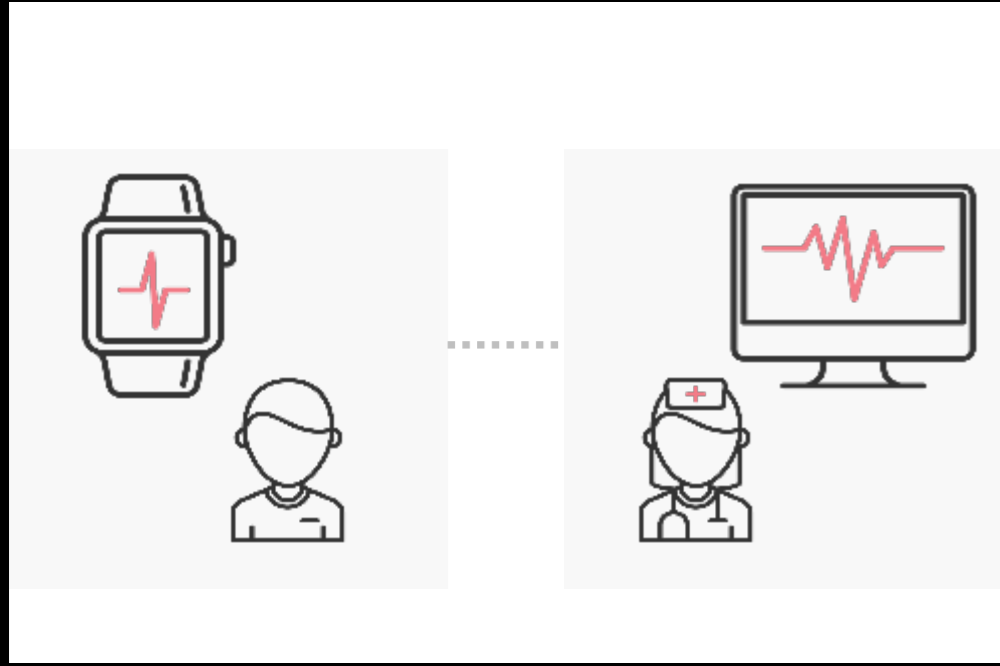
Dedicated connection to the
patient's clinical care team



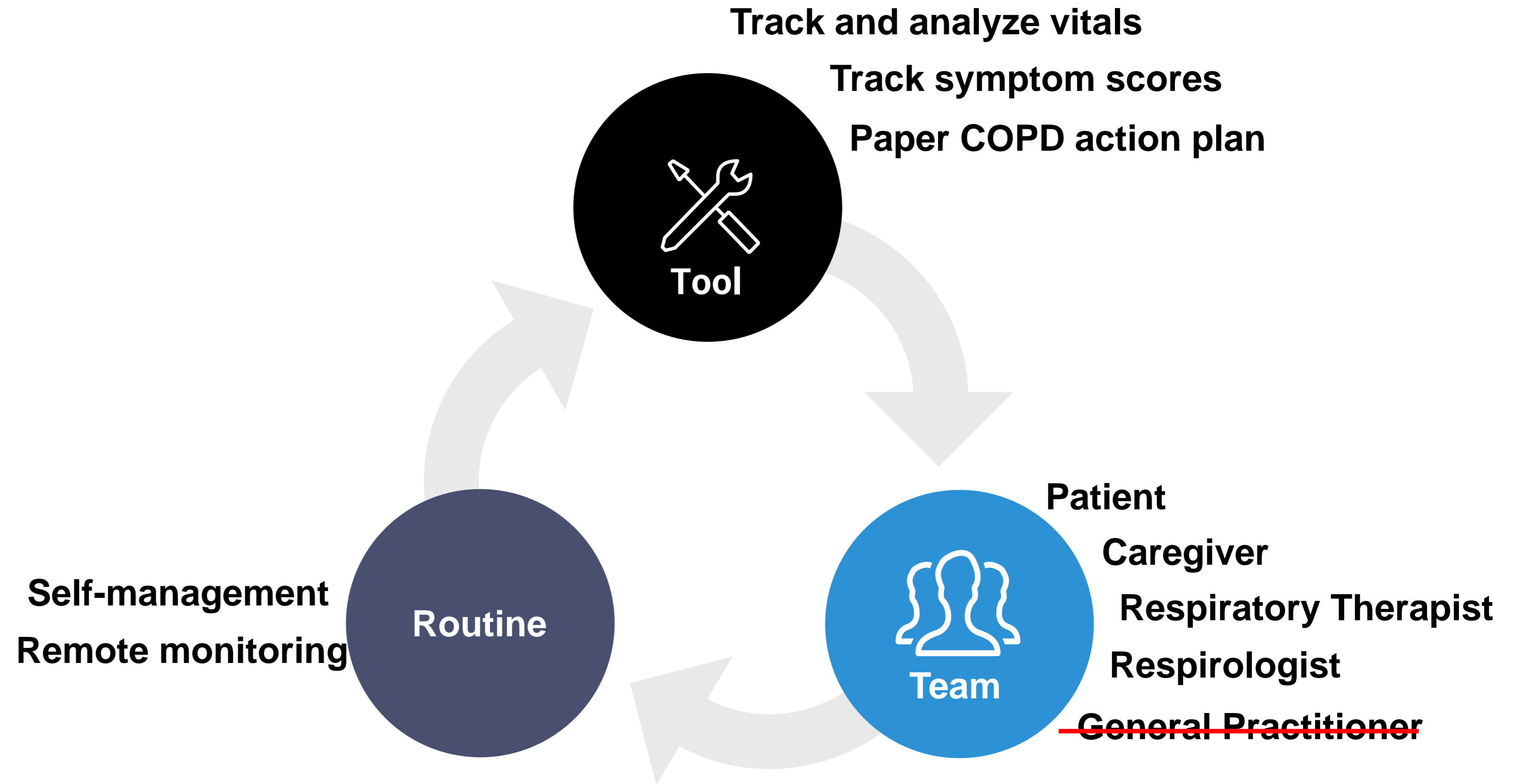


#3: Remote monitoring





#3: Remote monitoring

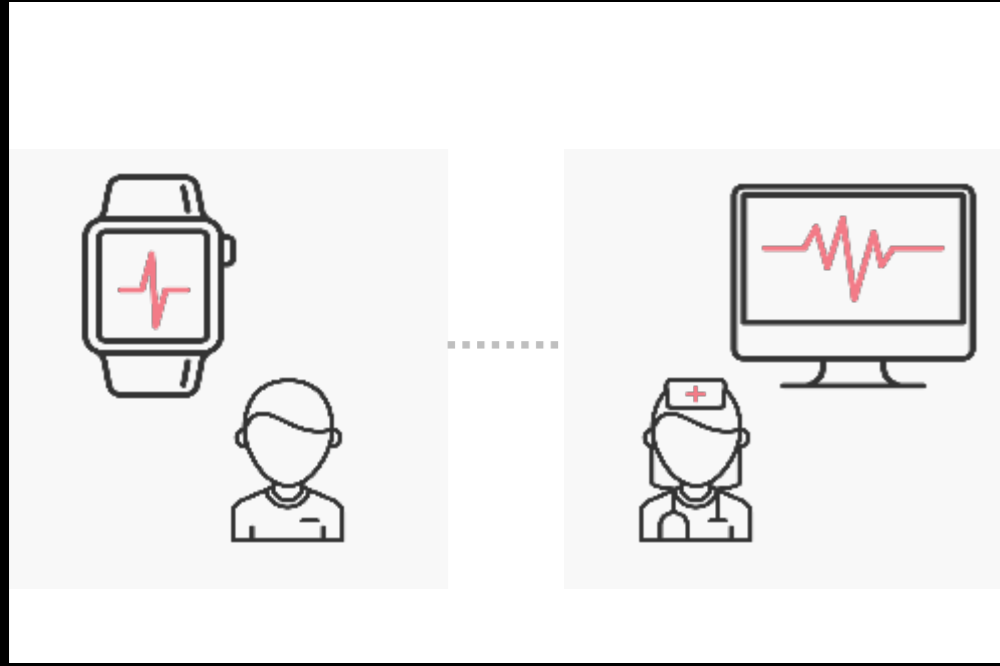


TRIAL PARTICIPANTS

$$122 = 41 + 41 + 40$$

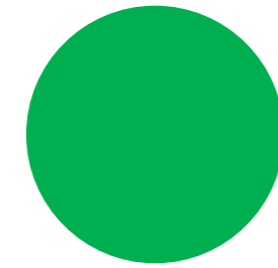
COPD patients Self-monitoring Remote + self-monitoring Standard care





#3: Remote monitoring

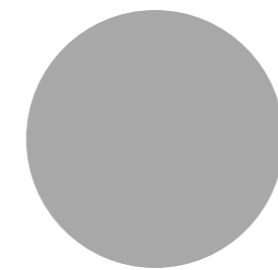
OUTCOMES



UTILIZATION

Good

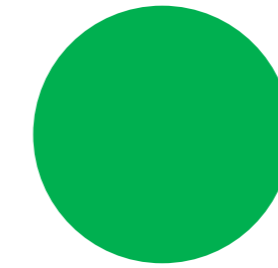
Near daily use by most



OUTCOMES

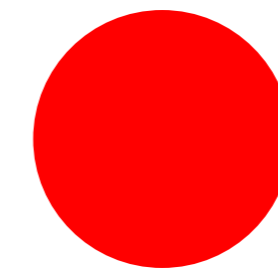
No difference

- Knowledge
- Self-efficacy
- Symptoms
- ED visits
- Hospitalizations



EXPERIENCE

Positive

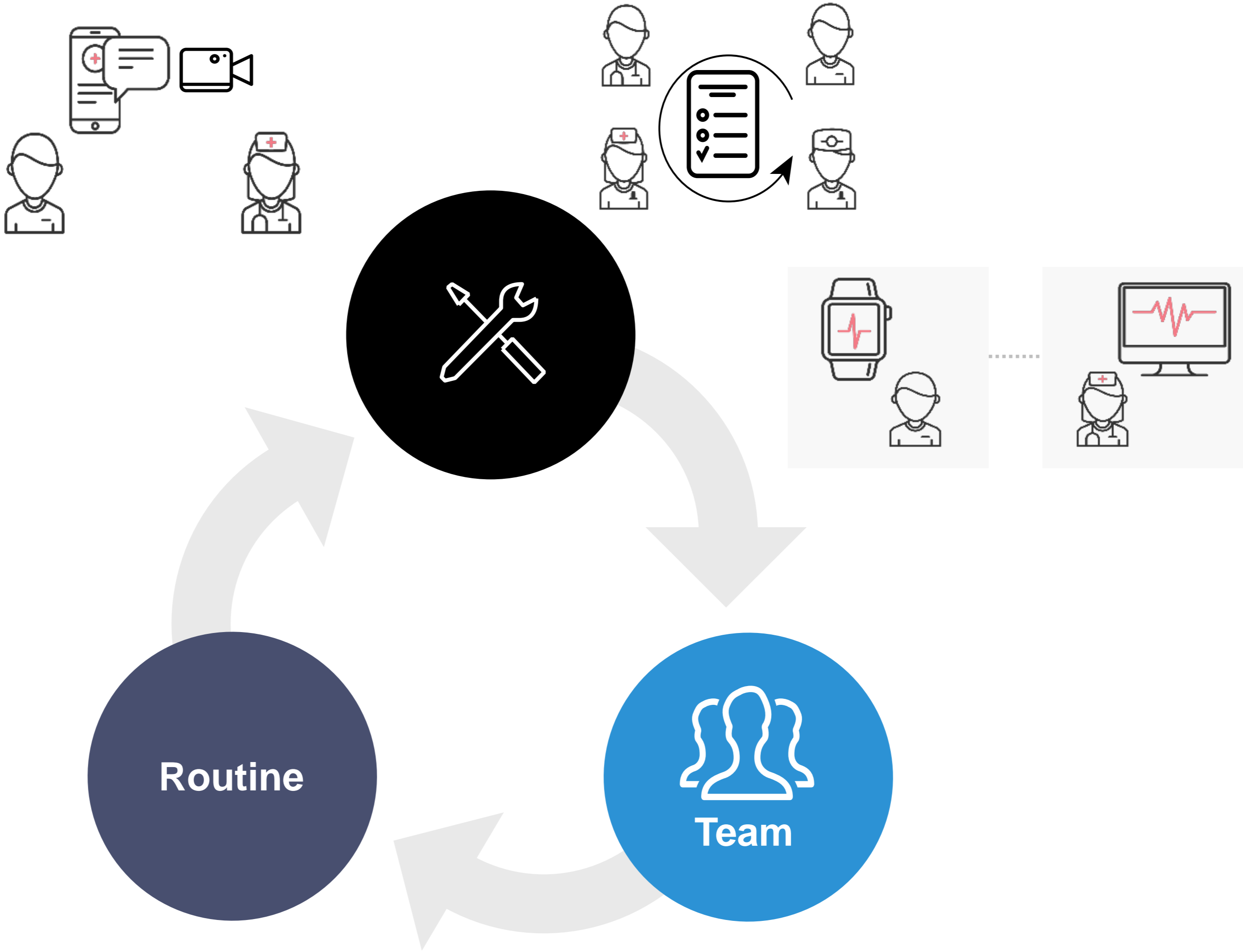


COSTS

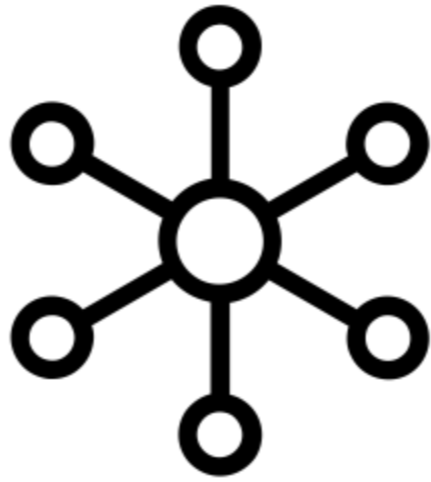
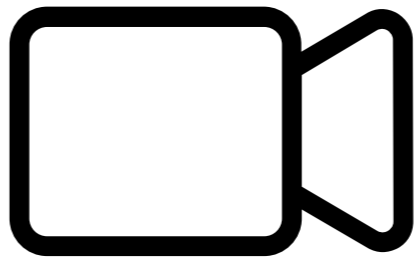
Increased

- 1 FTE Respiratory Therapist
- Tablets

What happened?



Reimagine the work



Created by NeMaria
from Noun Project



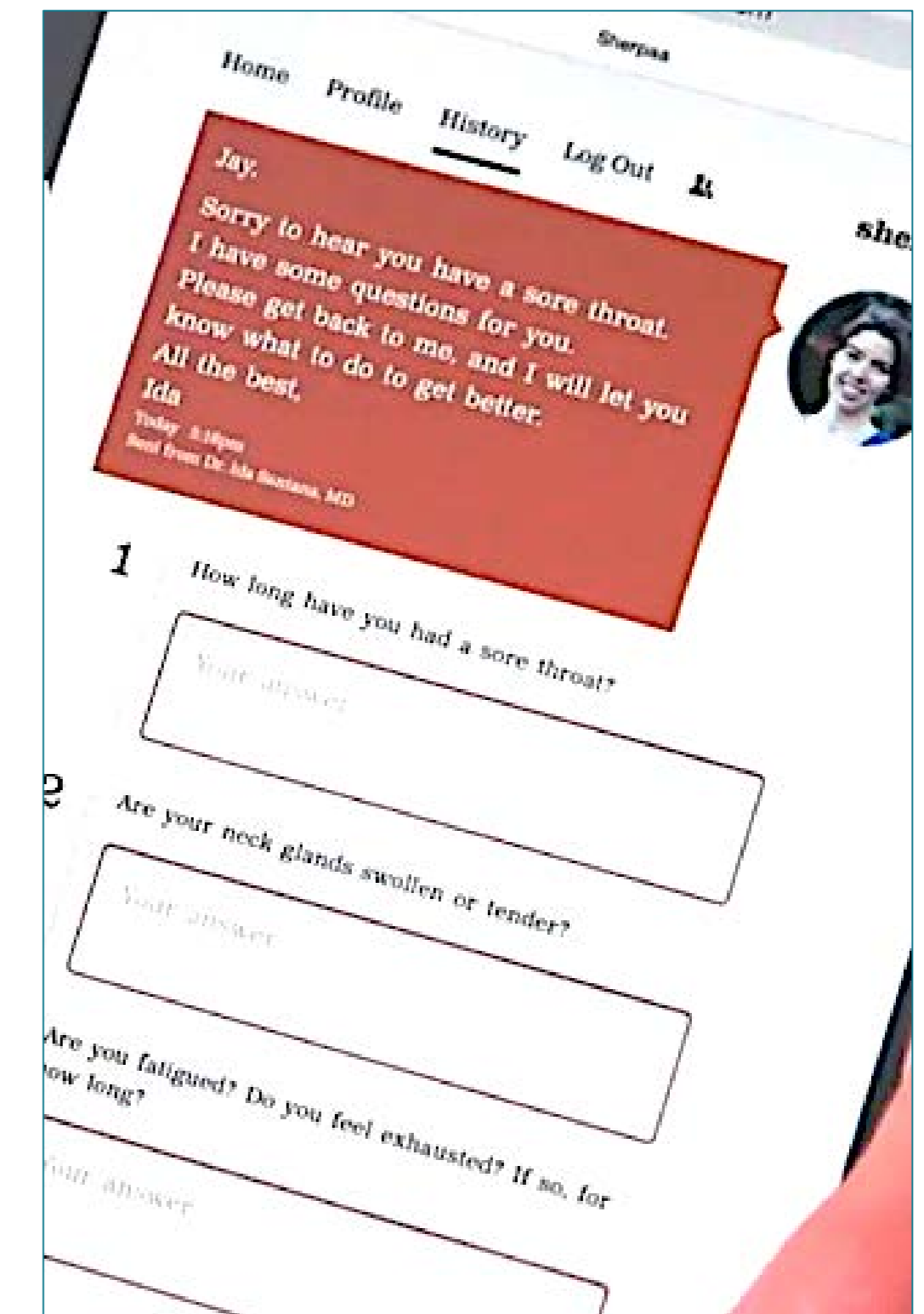
Asynchronous text

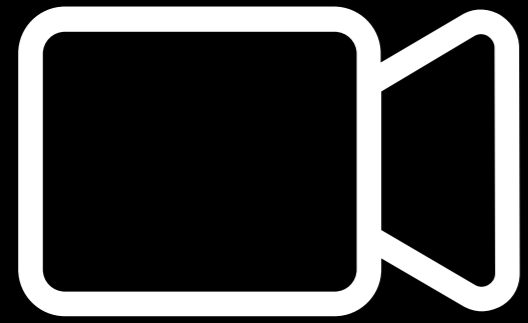
A. Text

1. Facilitates note writing
2. Allows AI-powered history and plan communication
3. Facilitates collaboration

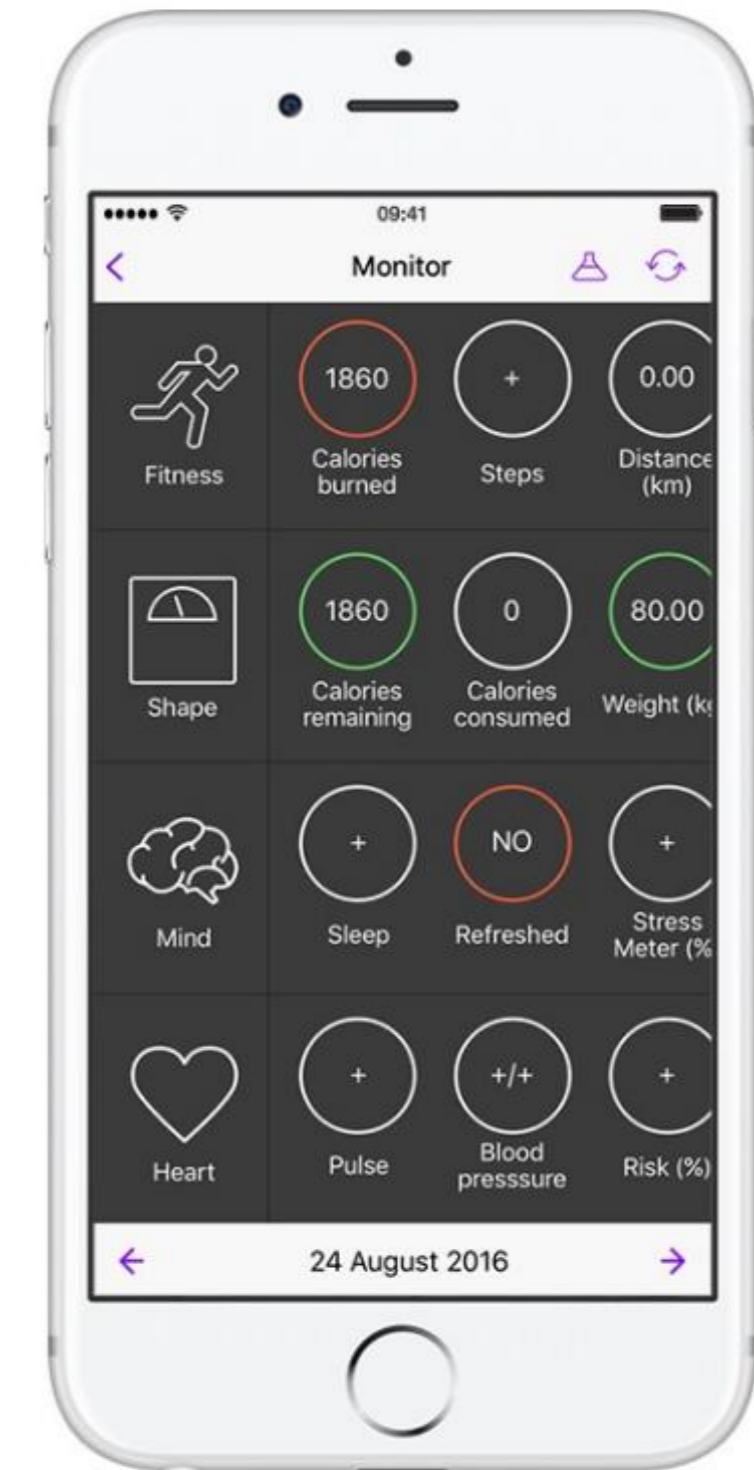
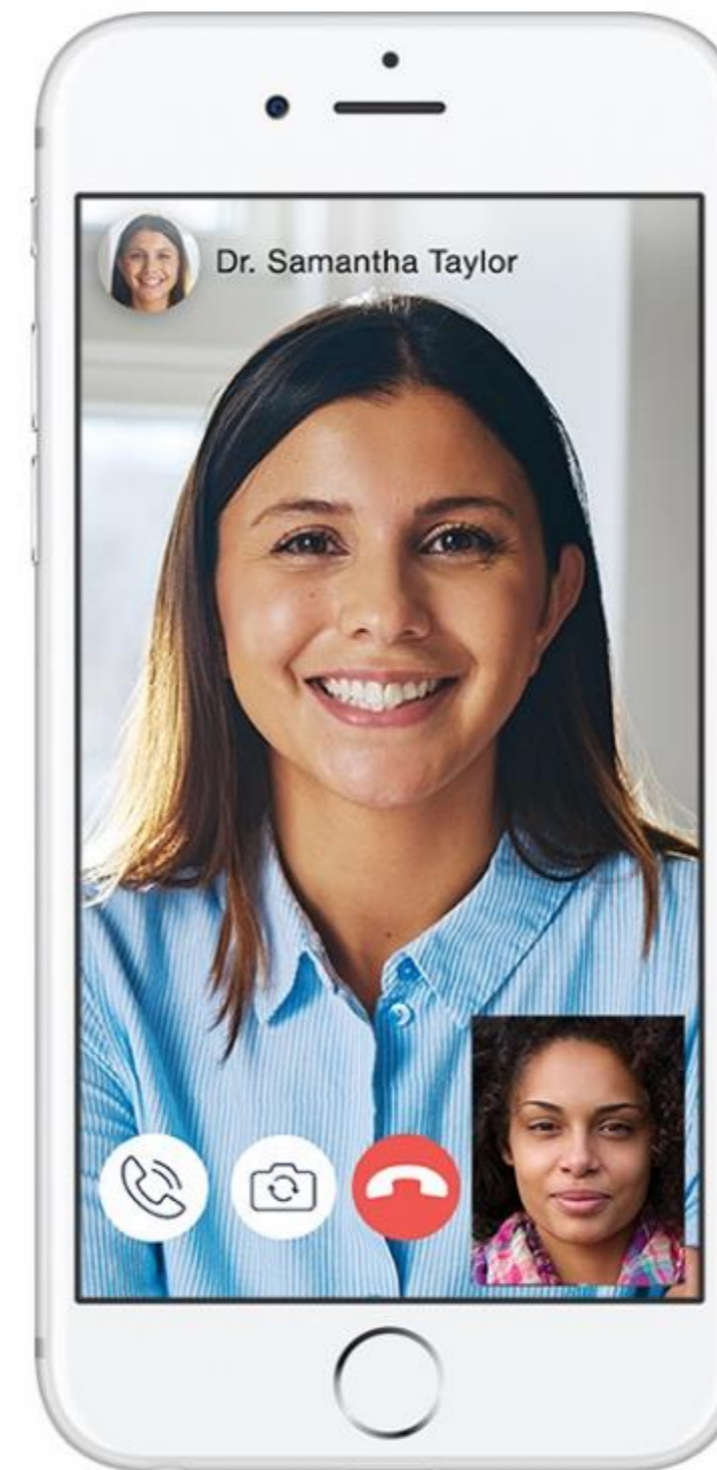
B. Asynchronous

1. gives clinicians time to look up information
2. allows diagnosis over time
3. allows quick f/u check-ins or forgotten questions





Triage & video visits

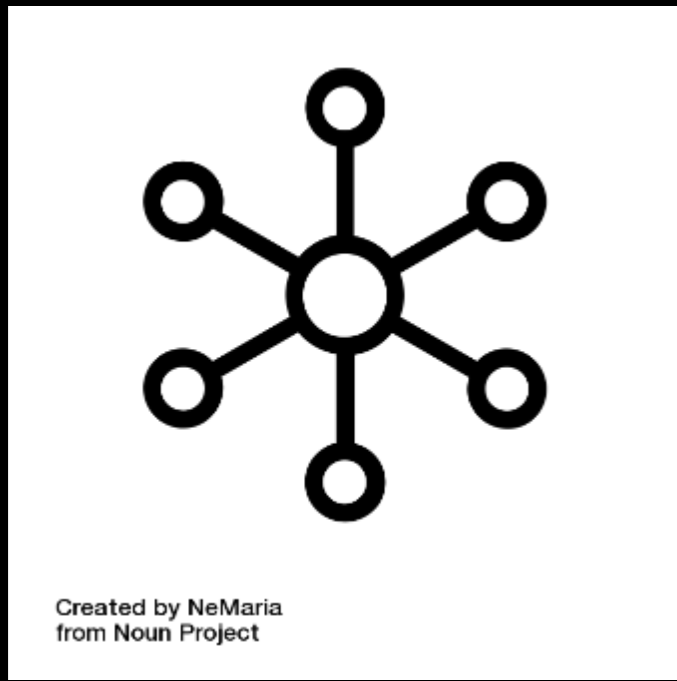




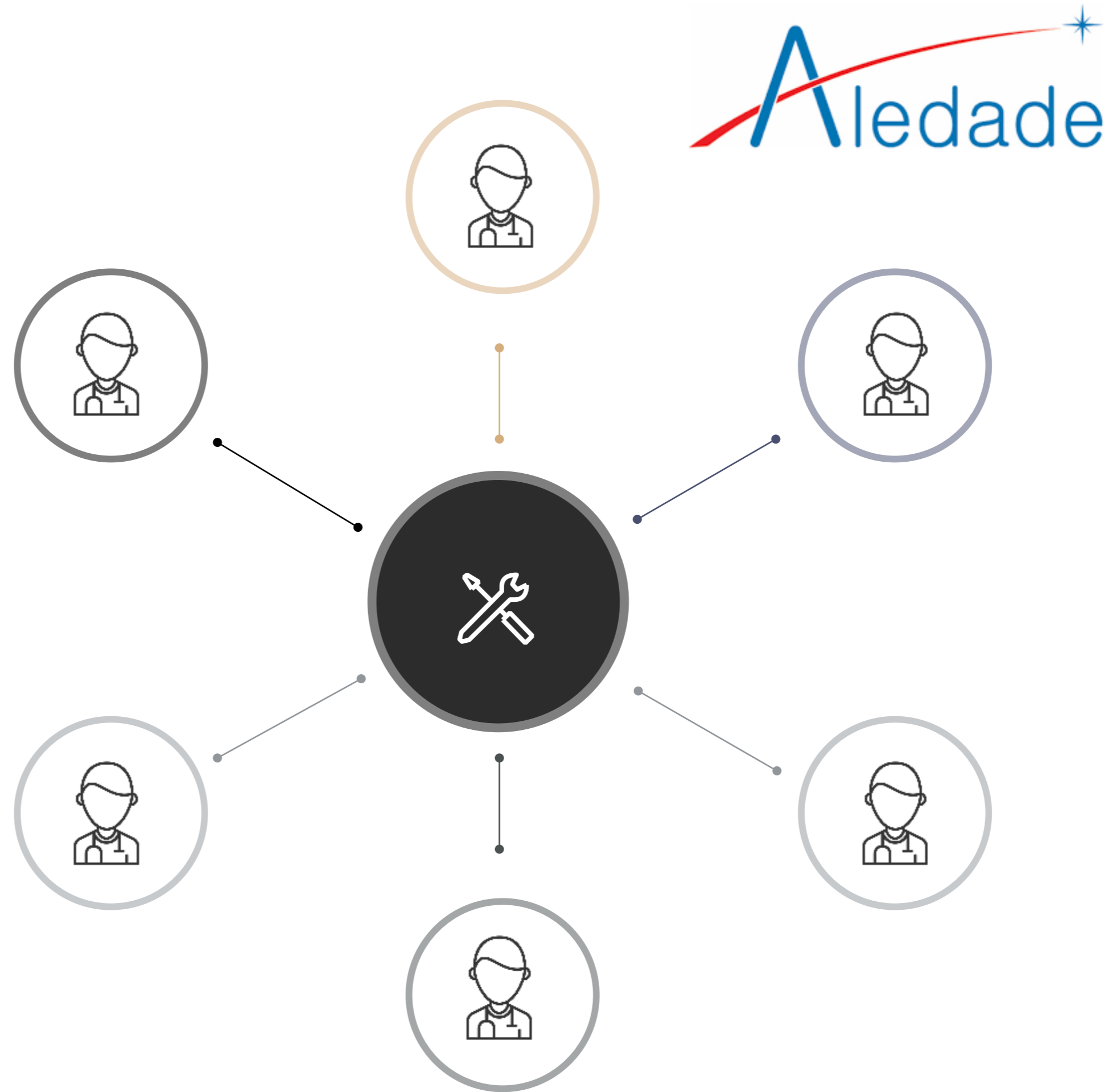
**holistic care and
connection**



**OAK
STREET
HEALTH**

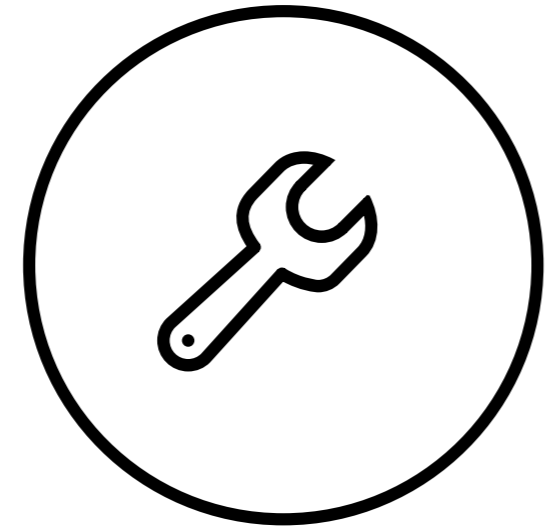


Hub to support primary care

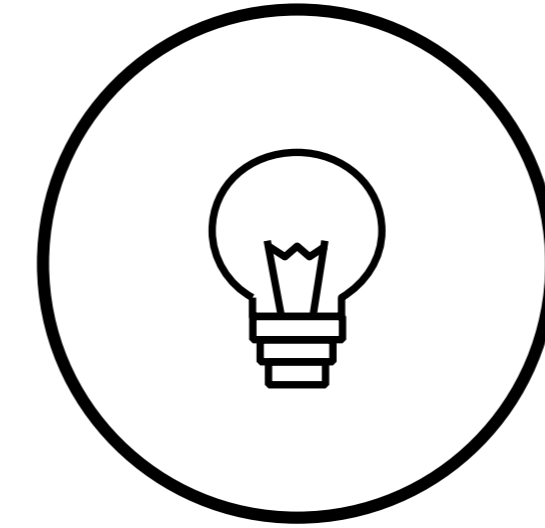
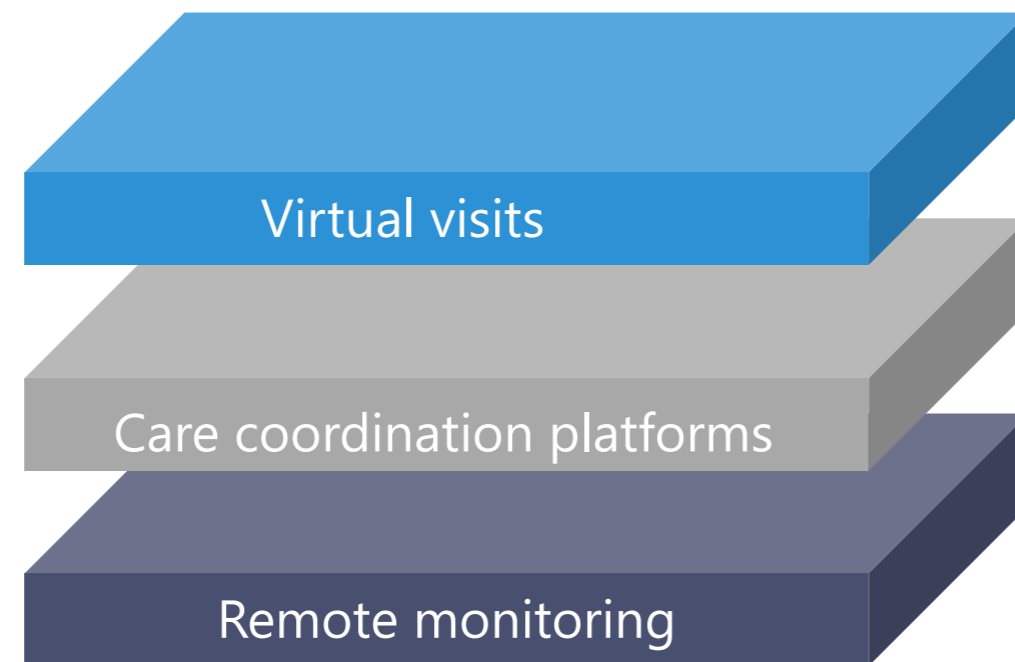


Conclusions

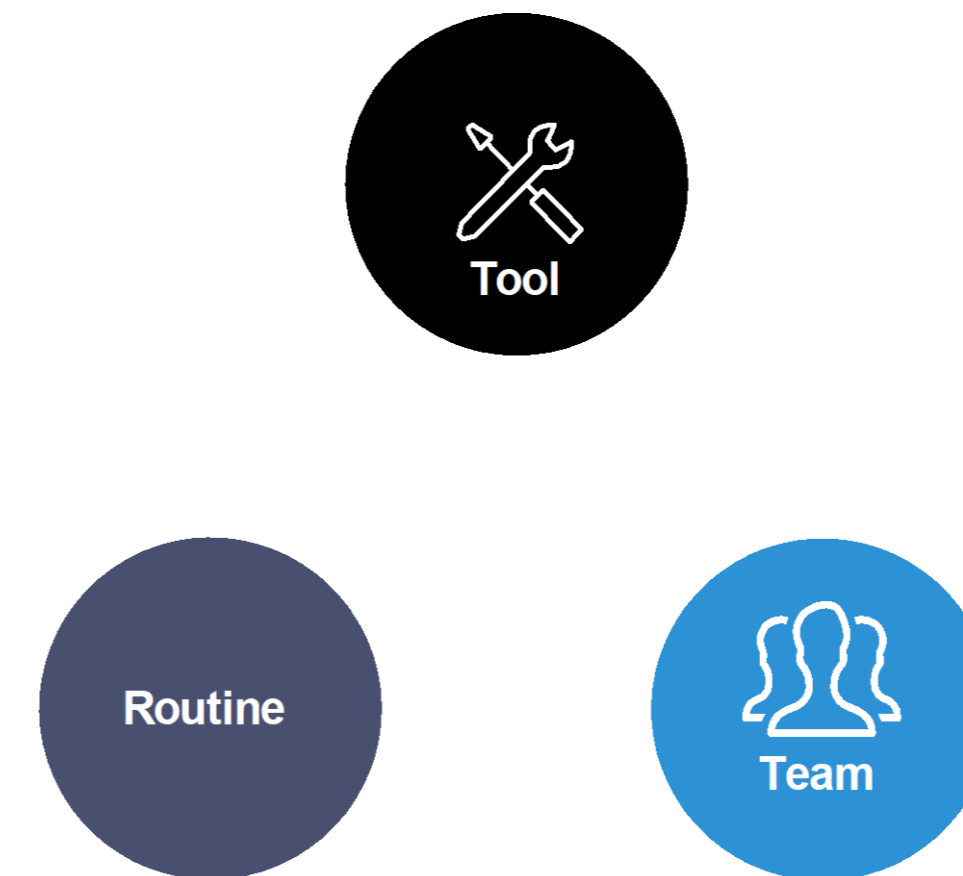
Can we overcome the IT productivity paradox?



Build better tools



Reimagine the work



What can researchers do to help?

Manage uncertainty with the right methods

Fail **faster**

Pivot when you can

Help define value across stakeholders

Make a science of balancing rigour and responsiveness



Thank you.