

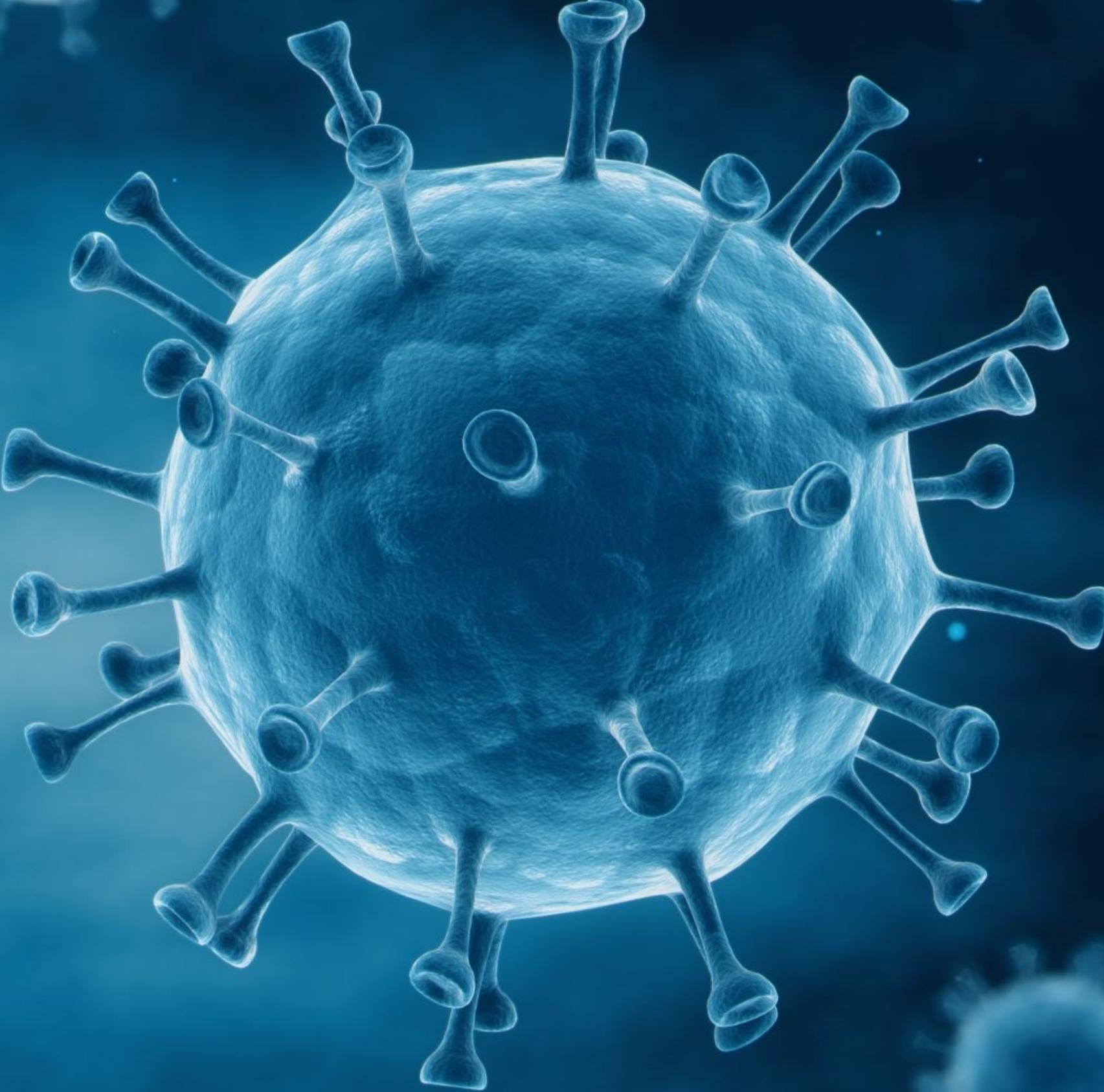


The Future of Learning in Healthcare: Nurturing the well-being of 1.5 million Residents



Mr Ronnie Yang
Deputy Executive Director
Centre for Healthcare Innovation
Tan Tock Seng Hospital

COVID-19





↑ Counter 5
↶ Counter 4
Way Out ↗







The 'Silver Tsunami'

Population in Central Health 1.5 million

Median age: 40 years

Over age 65 in 2030: 25%

Life expectancy: 83 years

- **Ageing Population**

- Burden of Chronic Diseases
- Social, Language, Technological challenges

- **Emerging Infectious Diseases**



Healthcare is Complex

“Do no harm”

Patient Service Areas

- Accident & Emergency
- Outpatient Clinic
- Rehabilitation Clinic
- Operating Theatre
- Intensive Care Unit
- High Dependency Unit
- General Ward



Numerous Touch-Points

- Admission
- Initial assessment
- Daily rounds
- Medical administration
- Meal services
- Nursing care
- Diagnostic tests
- Therapy sessions
- Patient education
- Family visits
- Social services
- Discharge processing
- Housekeeping
- Infection control

Healthcare Expenditure and Outcomes

	Japan	South Korea	Singapore	USA
Health % DP	11%	8%	6%	19%
Life Expectancy	84	83	83	79

ChannelNewsAsia, 10 May 2023

Singapore must ensure healthcare fiscal burden does not spiral out of control: Ong Ye Kung

^[i] World Health Organization Global Health Expenditure Database

^[ii] World Health Organization Global Health Observatory

Manpower Challenges

THE STRAITS TIMES

5 Oct 2022

24k more nurses, healthcare staff needed by 2030 as S'pore ages

THE STRAITS TIMES

4 Jul 2023

Singapore birth rates hit record low in 2022, along with highest number of yearly deaths since 1960

The Straits Times, 3 Aug 2022

Resignation rates of nurses in public hospitals at a five-year high in 2021

Diverse Workforce

Healthcare Professional Groups



Nursing



Medical



Allied Health
& Pharmacy

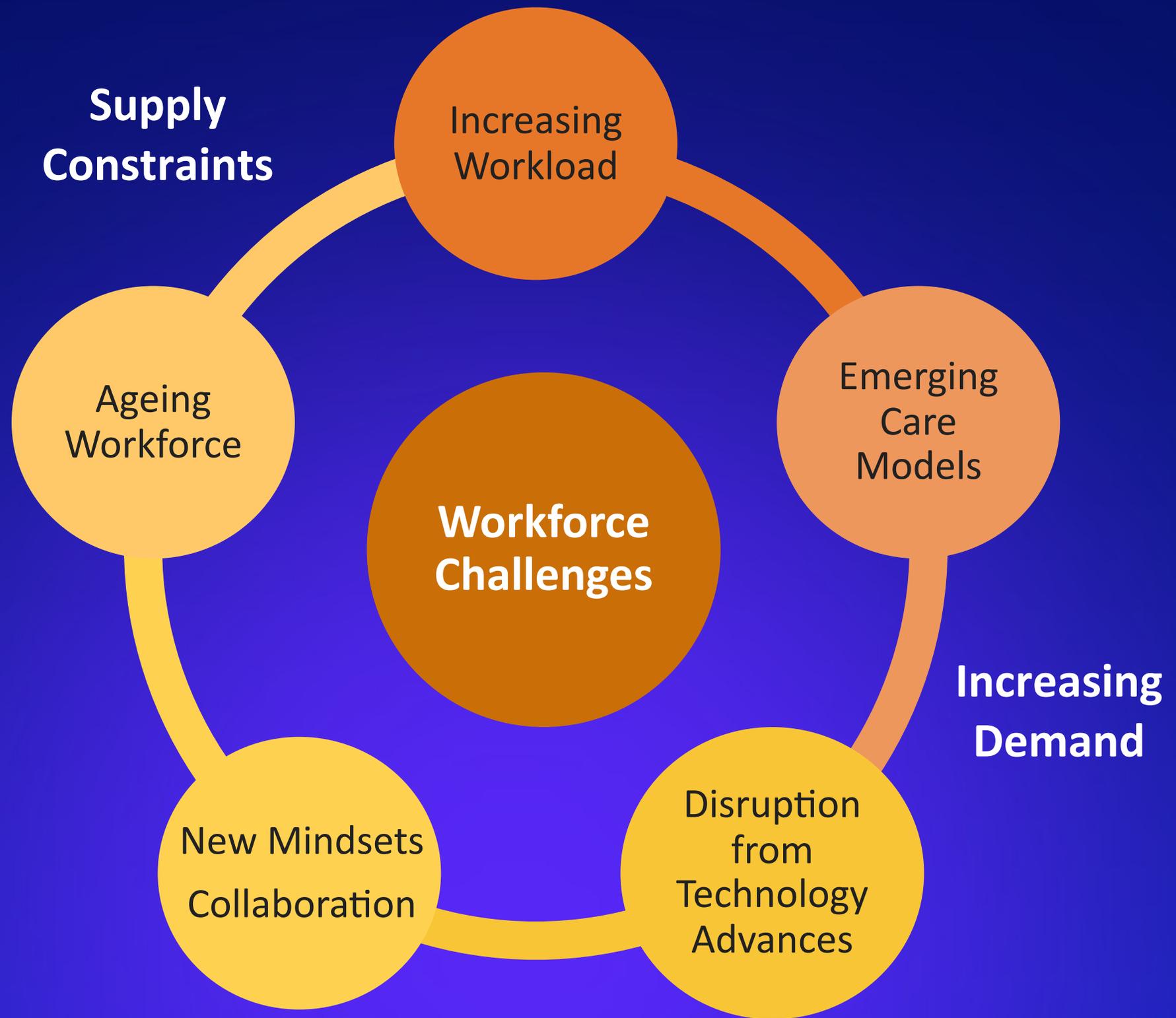


Admin
& Ancillary

5 Generations



Workforce Challenges



Workforce Transformation

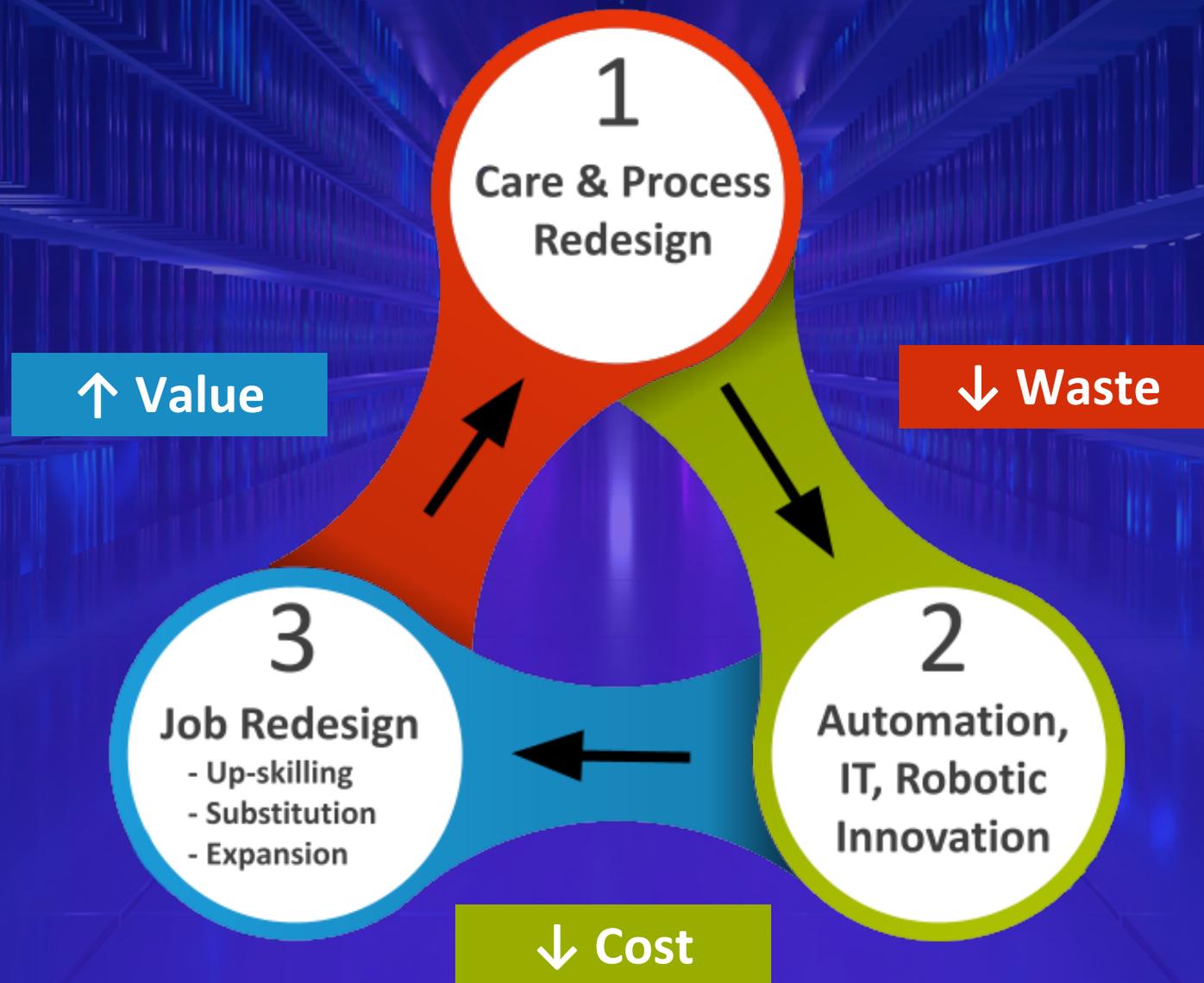


Training to be Innovative, Be Innovative in Training

- **Nurturing Innovation Mindsets**
- **Developing Technical & Soft Skills**

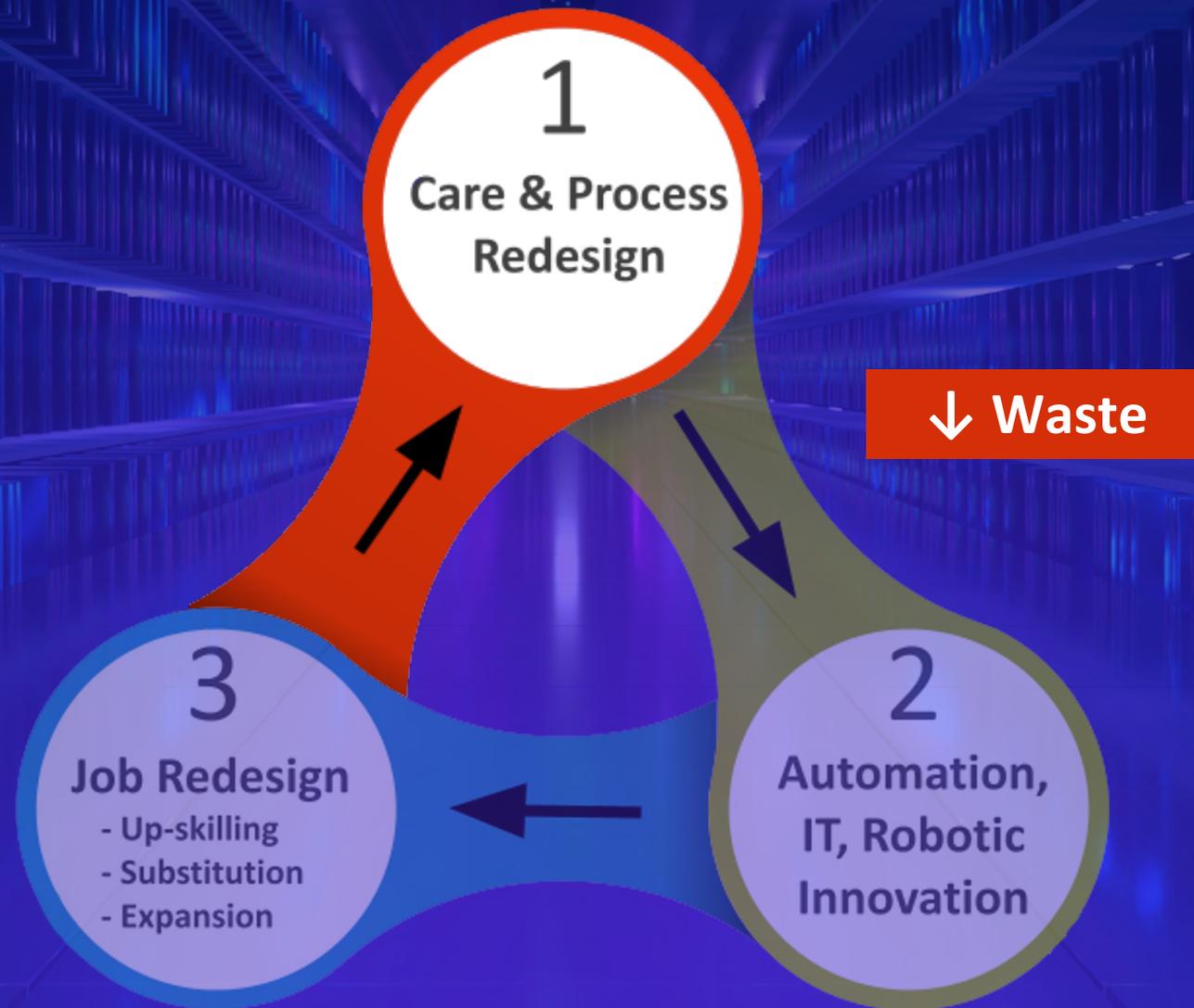
The Innovation Cycle

by Centre for Healthcare Innovation



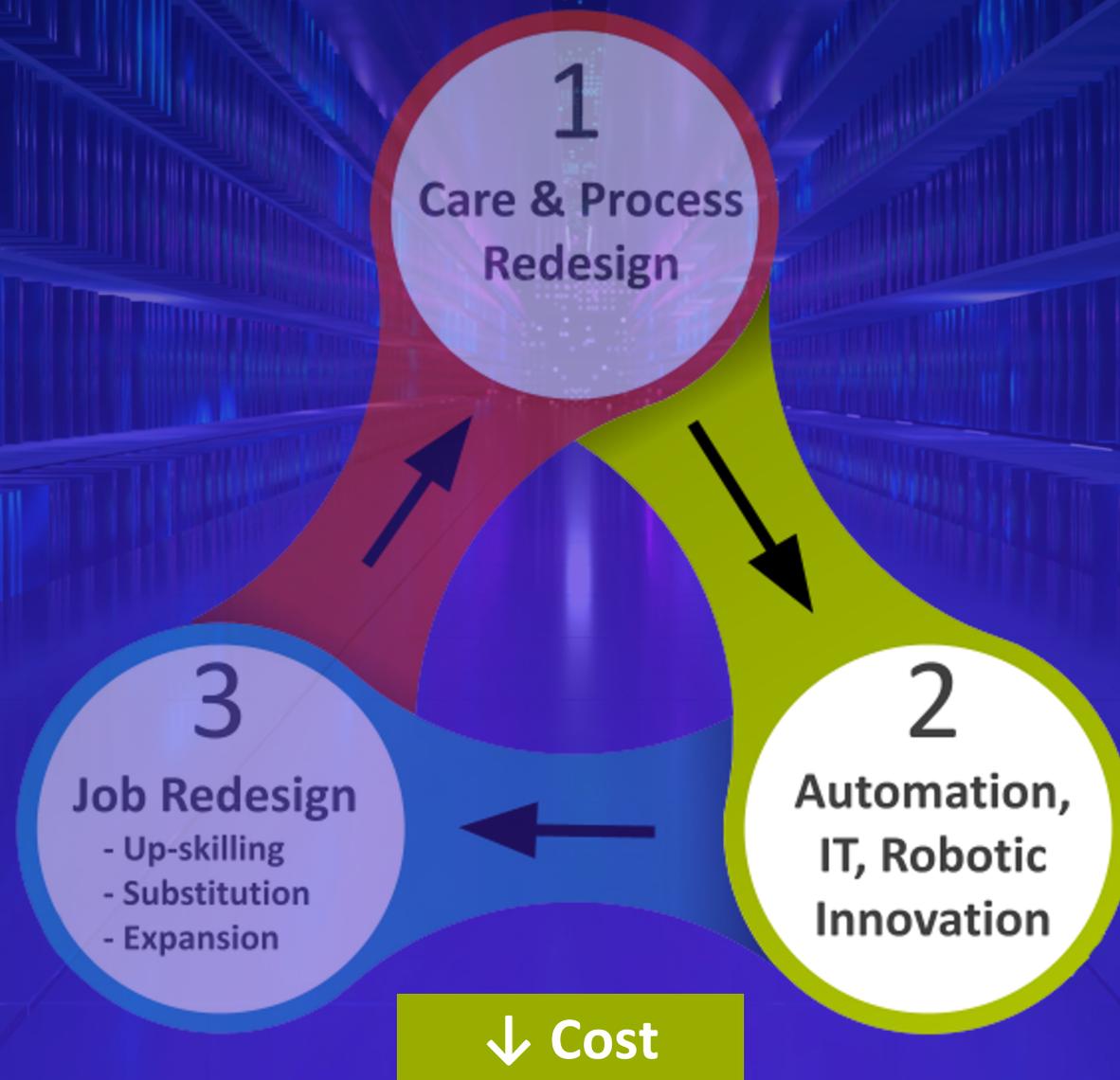
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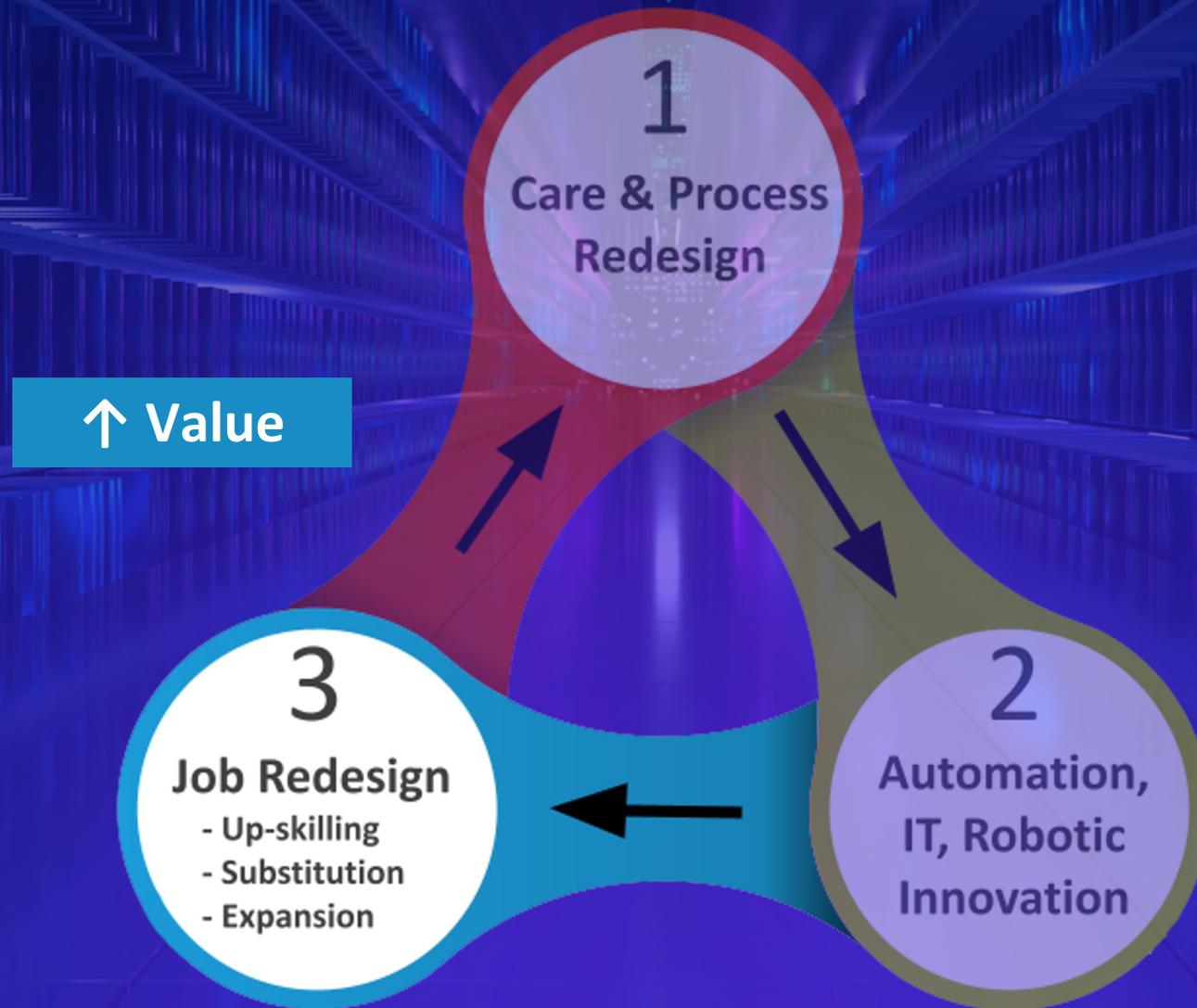
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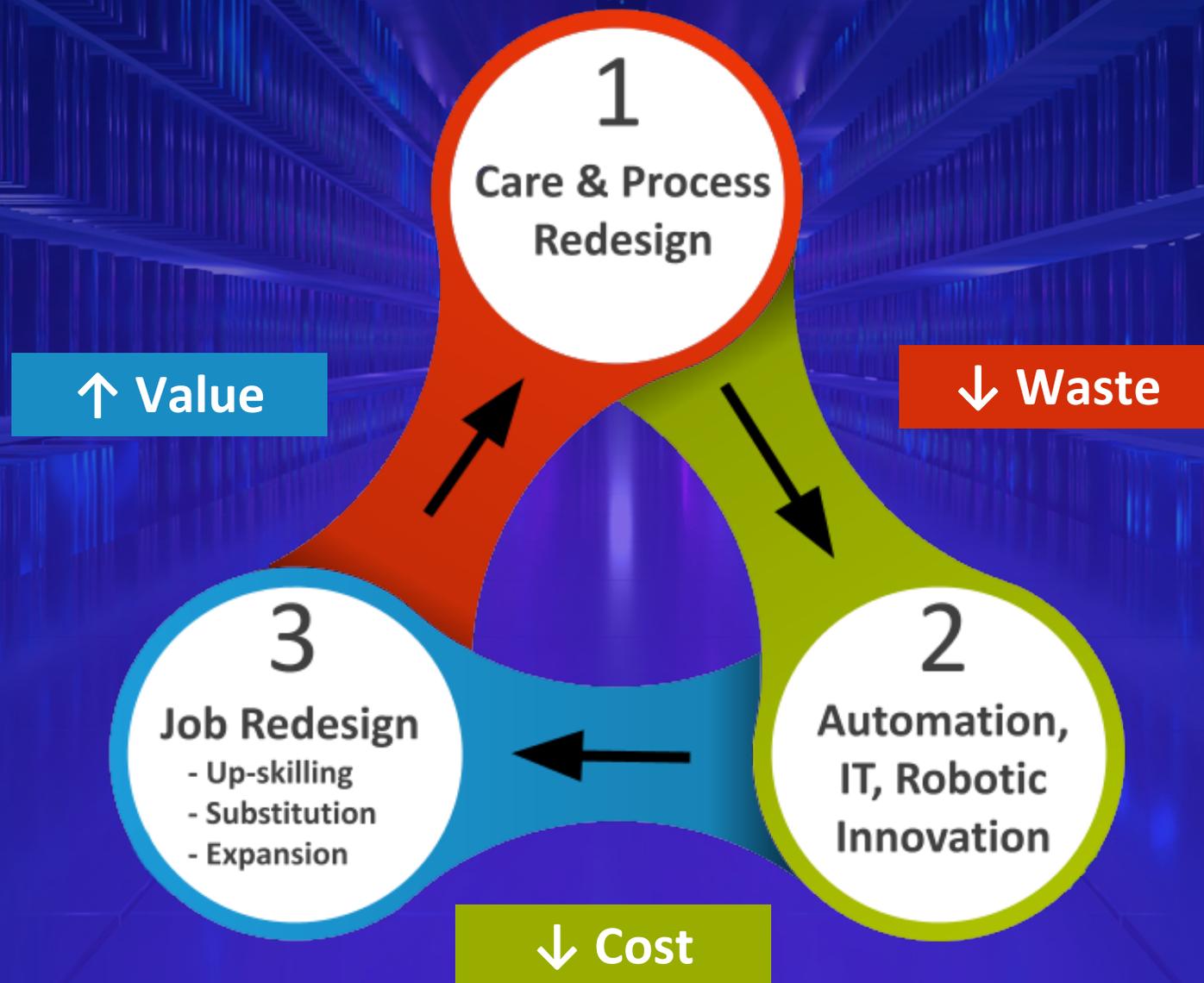
The Innovation Cycle

by Centre for Healthcare Innovation



The Innovation Cycle

by Centre for Healthcare Innovation



Workforce Transformation Strategies

Job Redesign

Individual

Team

Trans-disciplinary

Digitally-enabled

Individual Job Redesign



*Patient Service Associates
are upskilled to perform
higher value roles*

- + Administrative*
- + Training*
- + Support*

Team-based Job Redesign

Diabetic Eye Screening



Healthcare Professional

Ophthalmic Technician

Optometrist

Registrar

Consultant

JOB ROLES

BEFORE

Visual Testing

Primary Grader

Secondary Grader

Arbitrating Grader

AFTER

Primary Grader

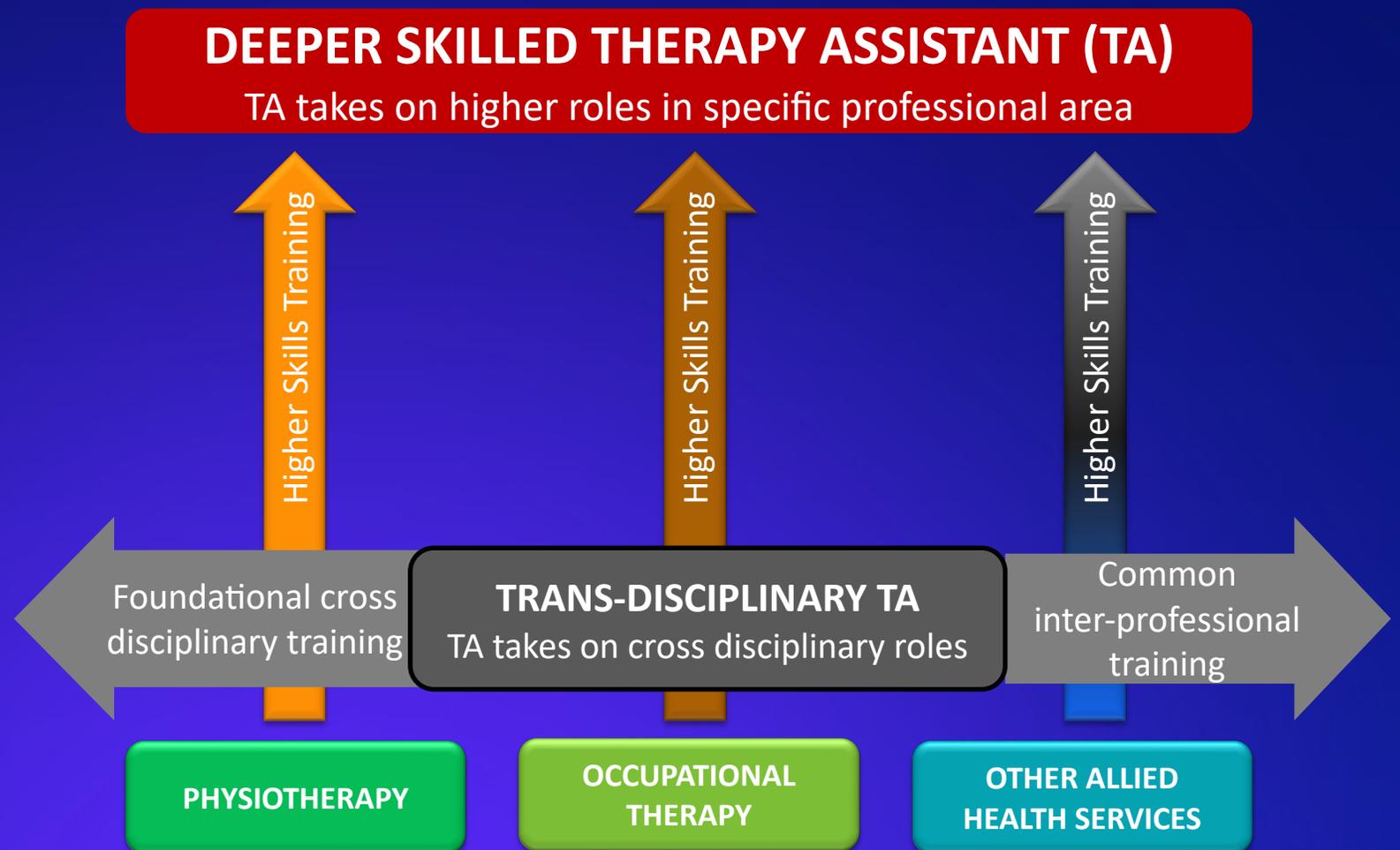
Secondary Grader

Arbitrating Grader

Trans-disciplinary Job Redesign



Therapy Assistant (TA)



Digitally-Enabled Job Redesign

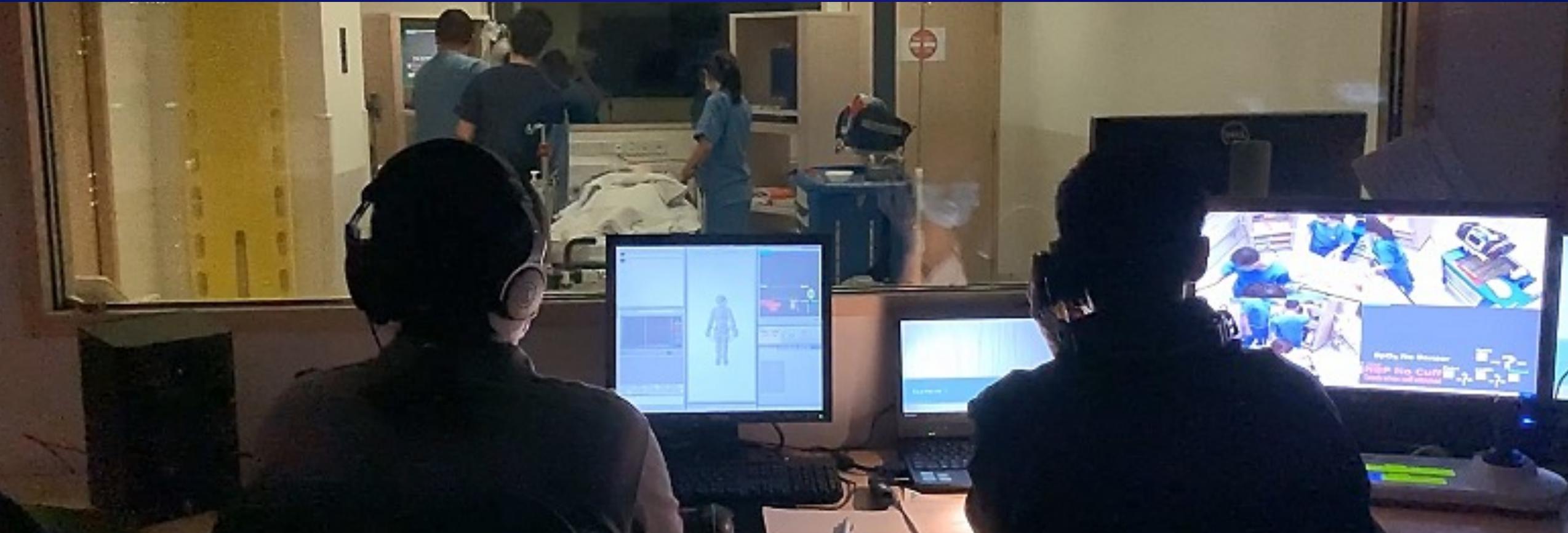
Ward Without Walls



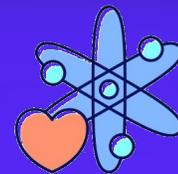
Nurse-led Intravitreal Injections



Simulation-based Technical Training



Safe and
Controlled Environment



Immersive and adaptive
educational experience



Improve practical and
decision-making abilities

Augmenting Training with Virtual Reality

Safe to Fail
Scalable



Direct translation of real-life scenarios into the VR environment

Collective Leadership



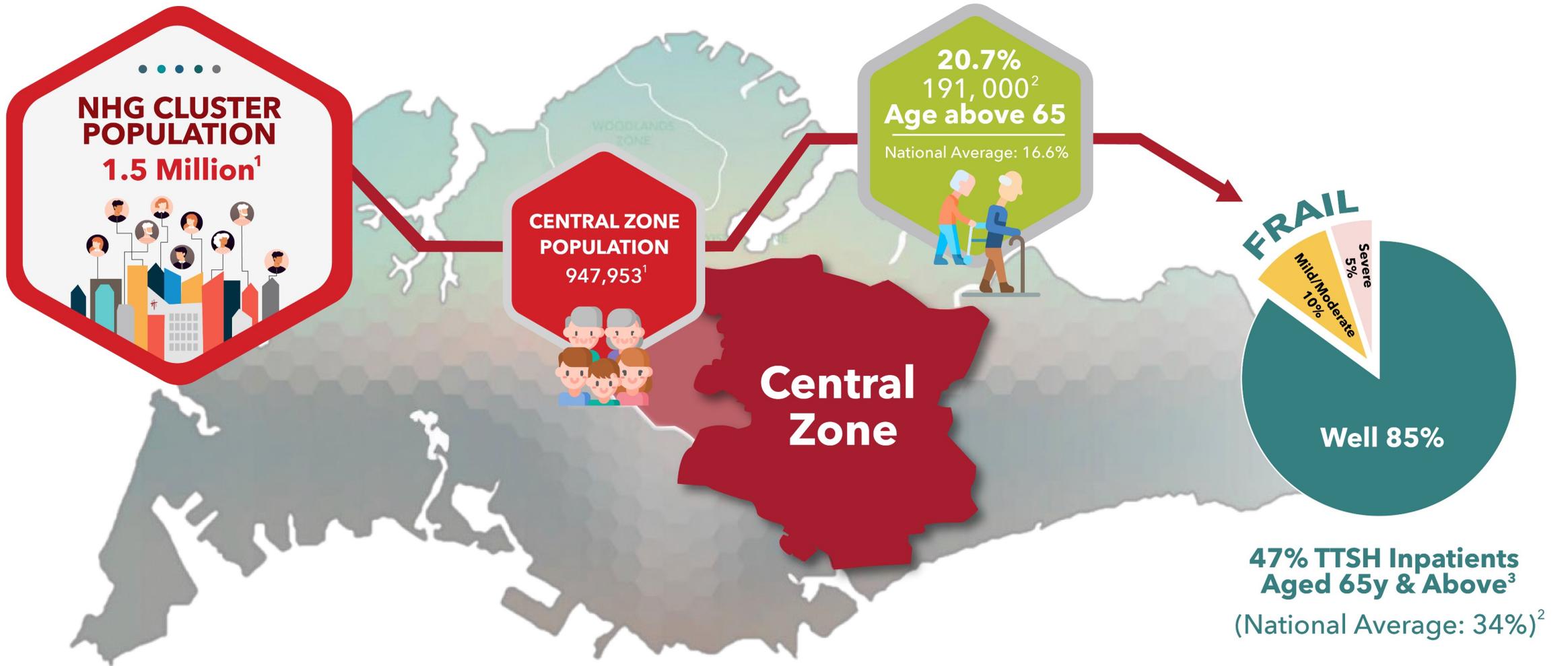
Building Communities of Practice – CHILD



Vision of CHILD

A national **Knowledge Management platform** for healthcare innovators to connect and to share knowledge related to **healthcare productivity, innovation** and **improvement**





¹ NHG CRM, Sep 2023

² MOH 2020 Statistics

³ TTSH QMIS Annual Report 2020

An aerial photograph of a wide, winding river with a dam structure in the foreground. The river is a deep blue color, and the surrounding landscape is a mix of brown and green, suggesting a semi-arid environment. The dam is a long, low structure with a concrete railing on top, crossing the river. The text "Learn Fast", "Learn Wide", and "Learn Well" is overlaid in white, bold, sans-serif font on the river.

Learn **Fast**
Learn **Wide**
Learn **Well**

Choluteca River
Honduras



Thank You



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