

# C3 Smart Hospital for the FUTURE



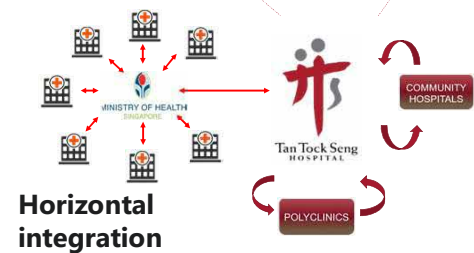
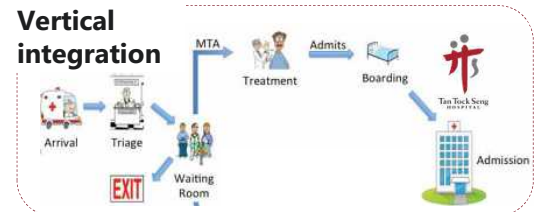
## Issue: Operating in silos and lack of real-time visibility of ground operations

Demand for hospital/ tertiary services is high today partly because:

- Often, healthcare partners are operating in silos and do not have visibility of one another's situation. This delays transfers across providers.
- Optimisation occurs at a unit level. The current focus is predominantly on inventory/ stock management
- Each operator might not have full real-time visibility of ground operations, and any response is lagged.

No longer is it sufficient to just look at inventory management, we need to consider vertical and horizontal integration:

- Vertical integration of care involves optimisation within TTSH resources, and better appreciation of patient flow, to quickly identify any chokepoints, and seamlessly trigger the appropriate response plan.
- Horizontal integration of care involves optimisation beyond TTSH shores, and leveraging on both upstream and downstream resources to load balance throughout the healthcare ecosystem.



## **FUTURE** C3 Operations Command Centre



## What is Command, Control & Communications (C3)?

The Operations Command Centre (OCC), similar to an airport control tower, aims to coordinate and provide better care for patients at a systemic level. It is a first of its kind in healthcare, with the primary focus to coordinate flow, by adopting a more holistic view to the hospital ecosystem and deliver 4 core capabilities –

- Monitoring and sensing of ground situation
- Decision Support to provide actionable insights and facilitate informed decision,
- Flow Optimisation via prescriptive analytics to optimize patient flow
- Autonomy to self-learn and self-execute standard operating procedures (SOPs) with application of artificial intelligence.

## Results

The C3 system was developed with constant engagement of clinical and operational leads from key departments, as well as Senior Management, and finally went live in Dec 2019.

Now, TTSH management has a real time sensing of key details such as the Emergency Department situation, Bed Stock availability, and Discharge situation. This is done fully by automated pulling of data, instead of taxing on staff to collate the details.



The benefits brought about by C3 was best exemplified during the COVID-19 outbreak, where the system has greatly reduced the work that would have otherwise been done by calling and collating details from the ground. It has helped the frontline focus their efforts in fighting the COVID-19 war.