

Development of an Enterprise Architecture for Integrated Health Information Systems (IHIS)

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Introduction

The Singapore healthcare landscape has evolved from the provision of primary care to an integrated healthcare system providing a continuum of care services across all care settings such as preventive care, acute care and chronic care. As the technology service provider for the public healthcare sector, IHIS embarked on its Enterprise Architecture (EA) journey since 2008. IHIS leveraged EA to align its technology investments and initiatives to enable integrated patient-centric health services, thus facilitating seamless information flow, cross-functional collaboration and quality care services.

Objective

- Harmonise businesses to achieve integrated care
- Accountability and ownership of data and information
- Integrate information systems to provide better access to information that leads to improved patient-centric health services
- Govern implementation of IT systems and technologies
- Build architecture foundation and capability so as to support business growth and execution

Solution

To achieve the objectives, ISS Consulting Services was engaged to provide coaching services and to jointly develop the EA with IHIS' team. A four-phase project approach was adopted consisting of:

- Phase 1 – Training for all staff involved so that everyone understands what EA is
- Phase 2 – Coaching and joint development of four reference models – the Business Reference Model (BRM), the Data Reference Model (DRM), the Application Reference Model (ARM) and the Technical Reference Model (TRM)
- Phase 3 – Coaching and joint development of an EA framework and methodology customised for healthcare
- Phase 4 – Coaching and joint development of a segment architecture on “Chronic Disease Management”

The four-phase project was completed over a duration of 18 months. While developing the EA jointly with the customer, ISS EA consultants were also focused on helping the IHIS team build up their architecture foundation and capability, so that they can continue the EA journey on their own after the engagement is completed.

Hear from IHIS:

“The method of engagement – through both teaching and consulting – was very effective for IHIS as our group has to update its enterprise architecture regularly to reflect dynamic changes in the healthcare landscape. The engagement was effective and the team was able to produce the enterprise architecture framework for the group within the specified time.”

Dr Chong Yoke Sin, Chief Executive Officer

“We engaged ISS to help us to establish a common language as well as establish a reference model and foundation for our enterprise architecture team. That allows us to make use of the framework and springboard us into the next few subsequent enterprise architecture blueprinting exercises which we have performed for our healthcare clusters. The more recent implementation at a national level was to establish a healthcare IT master plan for the entire public healthcare sector for the Ministry.”

Mr Ong Leong Seng, Chief Architect & Group Director, Architecture & Innovation