Healthcare - Data and Information Reference Architecture Department of Health and Human Services (Victoria)

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Provision of a Data and Information Reference Architecture which aligns to the DHHS Strategic Plan and IM Strategy to support an 18-month roadmap of initiatives and projects.

PROBLEM

The Department of Health and Human Services (DHHS) is in the process of aligning their data ecosystem, processes and methodologies to adapt to current radical shifts in the way data is acquired, manipulated and used. They understand that data and its use is becoming more pervasive and tools are becoming more user friendly which means users are becoming increasingly empowered in their use of data. The department understood that it must respond with an ecosystem and methodologies that embrace these realities and allow for data to:

• Be easily discoverable

• Flow quickly to those who need it

• Retain data quality and governance by setting patterns and guardrails by which to operate

Without guiding principles and architectural blueprints to support these realities, data will become increasingly fragmented and its use will become an ungoverned free for all

SOLUTION

Exposé leveraged our tried and tested Reference Architecture work package to assist DHHS to design a Data and Information Reference Architecture.

The incumbent data ecosystems, methodologies, systems and user stories were analysed to understand the current baseline. Future & aspirational user stories and various functional requirements were also elicited and analysed.

This allowed Exposé to understand the inherent modular data flow patterns that apply across DHHS that will support an infinite number of current and future data-related user stories—ranging from conventional BI; real time data streaming; a common data layer of both transformed and enriched data as a single market for consumption; consumption for semantic modelling, advanced analytics, augmented intelligence and system integration; and enhanced discoverability and governance of data in the common data layer.

A finite set of data flow patterns were then used to architect a modular data ecosystem that will support the infinite number of user stories and all the functional requirements. Guardrails were agreed to describe how patterns must be used and woven together to deliver user stories, bring data to consumers quickly and to ensure a methodical adoption of the new architecture and ecosystem, augmented with user friendly and pragmatic governance and processes.

BUSINESS BENEFITS

The Data and Information Reference Architecture, delivered as a comprehensive document, is complemented with a concept storyboard which is used to roadshow the concepts, patterns and guidelines described in the architecture—user stories, data flow patterns, technical components, guardrails. DHHS now have the Data and Information Reference Architecture described that will help them deal with a modern and complex data landscape, and support:

• A common data market for all data consumption to an increasingly empowered organization.

• Modularity that ensures maximum extendibility and responsiveness to change.

• A sensible and pragmatic governance model and security mechanisms The delivered Data and Information Reference Architecture now sets the scene for a second stage which will see its translation into a technical design based on a selected cloud vendor platform and an applicable scaffold to ensure flexible controls are in place that provide structure to the selected vendor environment, and anchors for services built on the public cloud.