

DATA AVAILABILITY AND USE - the KimMic FI@World Solution
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In looking at the benefits and costs of increasing the availability and improving the use of data what is paramount is the effective engagement between all Endusers/stakeholders/consumers/users of said data. This is true while acknowledging the inescapable fact that, to date, the cost and complexity of any solution has been an impediment to finding a ubiquitous solution.

That notwithstanding, it is imperative that the Australian government, in tandem with solution providers, delivers a simple, secure, inexpensive, integrated, effective ecosystem for the sharing of data which is both vendor neutral and platform agnostic. All of these facets must be part of any solution looking to be adopted by stakeholders - one need only look at industry sectors ignoring this as illustrative of the minimal stakeholder uptake. One example of this, and one which is particularly relevant to Australia given its focus on agriculture is AgTech:

“Small farmers seem flummoxed by many of the new [sensors and software] products and services, which are often tied to complicated contracts; don’t work with existing equipment, software, or growing practices; and promise solutions to problems that growers don’t necessarily have.” - Jennifer Alsever, Fortune.com (Is There an Ag Tech Bubble), July 25, 2016

For the majority of Stakeholders, current Solutions are inflexible and unaffordable in terms of money and time; don’t solve the problems of data integrity, ownership, provenance, security and compliance; are vendor/platform locked; and don’t enable efficient engagement between Enterprise level organisations and their Endusers/stakeholders - be they colleagues, customers, clients, suppliers or partners.

Additionally, and understandably, Stakeholders have serious concerns around the issues of data Security - specifically those of exposure, exploitation, theft and fraud. Their issues are complex, and include having different systems with different security models; different departments and roles having different levels of security and access; and varying security policies. These issues only compound the complexity surrounding the requirements for sharing, collaborating, and unifying data in the Digital Economy.

What is essential in the Digital (data) Economy - regardless of whether that data is shared across departments, companies, countries or continents - as the this economy is global, is proving data integrity. To do this in a simple, secure, vendor neutral, platform agnostic way has, until now, been impossible for the majority of Stakeholders due to the immense cost and complexity of any potential solutions.

**ILLUSTRATING THE IMPERATIVE FOR DATA SHARING:
USE CASE (INTEGRATED HEALTH CARE)**

“Medical errors in Australia cost over \$1 billion — possibly \$2 billion — annually.¹⁵ The Quality in Australian Health Care Study found that about half of these errors were potentially preventable.”
- Challenges in health and health care for Australia, Bruce K Armstrong, James A Gillespie, Stephen R Leeder, George L Rubin and Lesley M Russell, 2007

(Excerpt from ‘It’s meHealth I’m Talking About’, Kim Chandler McDonald, 2011)

eHealth can and should provide options for how stakeholders (consumers, care givers and healthcare managers) manage and interact with the healthcare system across geographic and health sector environs. That said, if there is anywhere that 'Capital I' Innovation is essential, I believe it is in the field of eHealth.

The term eHealth has become nigh on ubiquitous. And yet, it is somewhat nebulous, as it can be perceived as being perceptively less than personal. meHealth, however, is different. It demands that I, you, we, take it upon ourselves to take responsibility.

Responsibility for what?

Responsibility to expect and demand that all healthcare stakeholders at the local, regional and national – and, dare I say, international – level to work together to ensure that affordable, effective healthcare is available to one and all.

e-Health uses the internet and related communication technologies to improve healthcare delivery, collaboration, diagnostics and treatments, while reducing errors and costs.

Thus far most arguments for eHealth take-up have relied upon Web 2.0 solutions such as MedHelp, MyGP, patientslikeme and Hello Health – each excellent initiatives. Unfortunately, these arguments for adoption, though interesting, have not been compelling enough to engender a rush towards mass adoption, at least not by healthcare service providers. But, with the advent of Web 3.0 solutions, this situation should soon change. It must. However, this will only happen if all stakeholders take on the responsibility of demanding the change; this is the time for the change to meHealth.

Stakeholder requirements are clear:

Consumers	Care Givers	Healthcare Managers
Care providers knowing who they are	An integrated and complete view of consumer health information	Access to timely and complete information about health system activities and outcomes
An effectively coordinated health system	The ability to share information electronically, in a timely manner, across different geographic locations and all parts of the health sector	A reliable and comprehensive evidence base
Access to their own health records	Effective monitoring and evaluation of service and delivery outcomes	The ability to better respond in emergency situations through realtime monitoring of public health indicators
Confidence that their health information is managed securely and confidentially	The ability to easily and electronically order tests, prescribe medications and refer individuals to other providers	The ability to rapidly assess the national impact of particular treatment regimes via access to nationally aggregated clinical data-sets
Better management of their own health	Access to appropriate information sources and decision supporting tools at the point of care	Enhancement of legacy systems and processes rather additional costs and complexities

We cannot ignore the fact that pressure on the healthcare industry is rapidly increasing, as is the cost of provision. It is in this area where new technologies can be of great import by enabling the healthcare sector to operate as an effectively co-ordinated, interconnected system, which:

- Lowers costs and eliminate wastage of time and effort*
- Lowers costs on families and communities supporting the elderly*
- Enables integrated healthcare delivery systems*
- Consolidates medical records/services*
- Enables the viewing and following of healthcare processes*
- Enables single points of contact, self service and self help*
- Ensures cost and service level transparency*
- Enables disparate IT systems and processes to connect and co-ordinate with each other*
- Supports vast consumer and care provider populations*
- Removes duplication of healthcare efforts, expenditure and solutions*
- Enables confidential electronic information to be securely and seamlessly accessed and shared, by the right person at the right place and time, regardless of their urban, suburban, rural or remote location*
- Enables effective co-ordination and oversight of national E-Health activities*
- Supports informed policy, investment and research decisions*
- Enables secure flexibility within mobile services, using such tools as PDAs and VOIP processes*
- Reduces errors and inefficiencies*

What is needed is a plan, and below you will find a To Do List. I welcome any and all who are interested in moving this debate forward to add to this list.

(Excerpt: 'It's meHealth I'm Talking About – The To Do List', Kim Chandler McDonald, 2011)

Collaborative Health

- Convince stake holders that Collaborative Health Care (CHC) is a cheaper, safer, and better system*
- Enable single points of contact, self service and self help*
- Enable Doctors to make better diagnoses and prescribe better treatments through access to more useful and integrated data*
- Enable data aggregation to produce useful data of clinical significance for researchers evaluation, teaching doctors and development of health services*

Non Vendor Locked Tools

- Ensure systems are easy and economical for use by all stakeholders*
- Enable tools that help patients feel more informed, included and valued*
- Enable medical help via Web sites/browsers and smart phone apps*
- Enable easily understandable bundles of products and services that can be compared on quality and price, and used by stake holders with a wide range of capability levels*

- *Enable access to and co-ordination of home based medical equipment / tools and assessments along with data-generating Web-enabled devices*
- *Enable tools for doctor patient dialogue*
- *Enable healthcare givers to electronically interact with patients regardless of where they are located*
- *Enable disparate IT systems and processes to connect and co-ordinate with each other*
- *Enable secure flexibility within mobile services, using such tools as PDAs and VOIP processes*
- *Enable healthcare managers to better respond to emergencies and rapidly assess the national impact of particular treatments*

Governmental Issues

- *Enable and enhance uptake by governmental agencies*
- *Support government responsibility for public infrastructure and systems*
- *Enable support for vast consumer and care provider populations in urban, suburban, rural and remote locations*
- *Enable effective co-ordination and oversight of national E-Health activities*
- *Enable tools and systems which support informed policy, investment and research decisions*

Security and Privacy

- *Ensure security of all data transfers*
- *Ensure privacy for patients*
- *Enable confidential electronic information to be securely and seamlessly accessed and shared, by the right person at the right place and time, regardless of their location*

Standards

- *Either create and enable record system standards and benchmarks, or make standards unnecessary by enabling different systems to talk/work with to one another without vendor lock, using a Web 3.0 / Semantic Solution*

Data Management

- *Incentivise enhancement of IT and information management*
- *Incentivise investment in infra- and info-structures*
- *Ensure easy and economical training and support*
- *Ensure implementation is cost effective*

Infrastructure

- *Maximise existing information management and technology to improve functionality*
- *Upgrade old computers and dial-up Internet access or ensure they can work within the new system*
- *Ensure new systems are designed with potential user consultation*
- *Support Funding to improve rural ICT infrastructure*
- *Ensure broadband / 'chatty' high-speed connections are not necessary for most clinical consultation (Systems can be broadband based, but must not be broadband bound)*

Costs

- *Reduce/Eliminate errors, inefficiencies and the wastage of time and effort*
- *Lower healthcare provisioning costs*
- *Ensures cost and service level transparency*
- *Lowers costs on families and communities supporting the elderly*
- *Cut time needed to review and implement systems and training*
- *Modernise the management and transmission of data*
- *Consolidate medical records/services and clinically relevant information*
- *Remove duplication of healthcare efforts, expenditure and solutions*
- *Reduce administration time and costs*
- *Combine insurance systems reducing duplications and high overhead costs*

Systems and Processes

- *Enable an integrated health care delivery system*
- *Link emergency and acute hospitals with tertiary care in the community sector*
- *Enable integrated healthcare delivery systems and the consolidation of medical records/services*
- *Ensure B2B applications (i.e. reporting, billing and claiming processes) are integrated into general practice software systems*
- *Enable the secure viewing and following of healthcare processes*

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We at KimMic (a Sydney based high-tech company) have focused on Future Internet Architecture to create a solution (FI@World™) which empowers stakeholders to participate in the gathering and utilisation of information/data and resources, which enables:

- Consolidation of records/services and the cooperation/collaboration between disparate IT systems and processes and their machine-readable data;
- Confidential electronic information to be securely and seamlessly accessed and shared, by (only!) the right individuals at the right place;
- Viewing and following of processes along with access to realtime and complete information about system/data activities and outcomes to integrated stakeholders;
- Cost and service level transparency;
- Simple public participation through single points of contact, self service and self help through mobile-first applications;
- A standard way of transparently showing the service in operation while maintaining strict, auditable security controls/compliance;
- Clear points of stakeholder accountability to be implemented and monitored in a realtime manner;
- Service providers and stakeholders to integrate their (legacy and/or latest) systems and applications
- Effective co-ordination and oversight of activities.

FI@World™ enables both SME's and large organisations to collaborate between people, processes and applications. It brings together IoT, BYOD (Bring Your Own Device), internal/external systems easily.

FI@World™:

- Costs a fraction of the total costs of current solutions

- Is simple and can work in low bandwidth, high latency environments (as well as broadband) thus ready to empower the Majority World mobile market
- Protects data (structured and unstructured) ownership/provenance
- Encrypted to bank level and has an inbuilt auditing for compliance (including risk)
- Is vendor neutral/platform agnostic
- Does not require consolidation of data or data sources (no ETL)
- Provides a real-time two way connection

This in turn:

- Supports informed policy, investment and research decisions;
- Enables support for Stakeholders in urban, suburban, rural and remote locations;
- Enables effective response to emergencies through real-time monitoring of electronic indicators locally, nationally and internationally;
- Supports government responsibility for public infrastructure and systems;
- Lowers costs and eliminate wastage of time and effort due to systemic errors and inefficiencies - i.e. duplication of healthcare efforts, expenditure and solutions [In Australia, in 2010, approximately \$3 billion was wasted in avoidable annual expenditure.].

We look forward to hearing from the Commission with a view to demonstrating the effectiveness of FI@World™ and how .