National Broadband Network

Senate Select Committee Submission

5 August 2009

The National Broadband Network –
Health Industry 'Points of Proof'

iSOFT

The National Broadband Network – Health Industry Points of Proof

Section 1

Introduction

iSOFT supports the creation of a National Broadband Network (NBN) as a key enabler in electronically connecting the continuum of healthcare providers on a national scale.
The NBN will enable the government's reform agenda and achieve efficiencies in health care delivery through e-health applications that will help pay for the NBN.

iSOFT Group Limited is a wholly-owned Australian ASX 200 company that has its roots in the local health industry since the formation of the IBA Health Group in 1982. It is dedicated to developing e-health software solutions that boost the quality of healthcare and dramatically reduce its cost.

Today iSOFT is a major supplier of software applications across the globe, supporting the delivery of healthcare to more than 300 million people in 38 countries.

The company is the major provider to the UK's National Health Service, where its applications are being rolled out to electronically connect 50 million patient records as part of the £12.7 billion National Programme for IT – the world's largest civilian IT project.

In Australia iSOFT holds a 60% market share across both public and private settings. It serves health departments in every State and Territory in Australia and New Zealand, with solutions in 900 hospitals.

iSOFT is making this submission, on the basis of its relevant national and international experiences and insights, to facilitate a more efficient delivery of healthcare on a national scale.

In responding to the Select Committee's terms of reference, iSOFT's recommendations are constructed around four 'Points of Proof' that provide a roadmap for developing the value proposition that the National Broadband Network (NBN) makes possible for the healthcare industry.

iSOFT's recommendations are in line with and enable the National Health and Hospitals Reform Commission's (NHHRC) recommendations that were recently presented to the Government. The transformation of healthcare will be driven by the patient's need to control the secure sharing of patient data through an interconnected, integrated and interoperable healthcare network.

The NBN will provide the infrastructure for a healthcare-specific network, with appropriate security and access controls to ensure the patient's privacy is protected, that allows patient information to be exchanged between healthcare providers in hospital, outpatient, aged care and home settings.

Section 2

Background

> " Making the patient the locus around which health information flows is critical and will require a major investment in the broader e-health environment. Electronic health information and health care advice will increasingly be delivered over the internet. Broadband and telecommunication networks must be available for all Australians if we are to fulfil the real promise of e-health." [1]

Enabling the reform of the health sector should be a high priority for the NBN. Australia's healthcare system, like those in most developed nations, faces unsustainable increases in spending and a corresponding collapse in the quality and effectiveness of healthcare as ageing populations place more demands on the system:
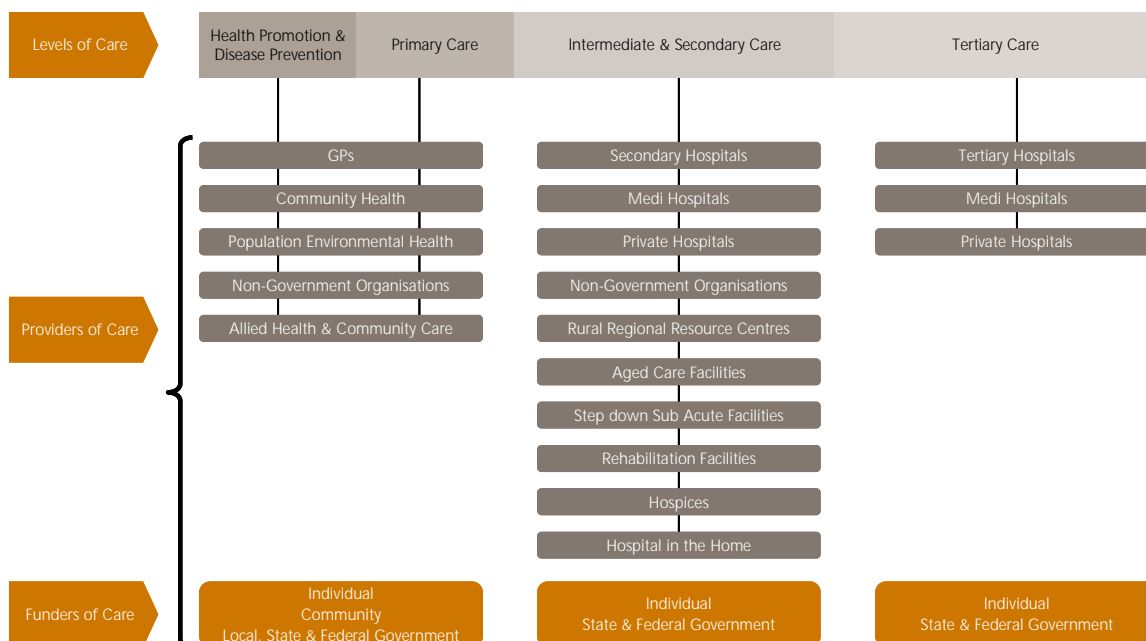
- Australia spent 1 in every 11 dollars on health in 2005–06, equalling $86.9 billion or 9.0% of GDP

- Health spending per person was 45% more in 2005–06 than a decade before, even after adjusting for inflation.

- For Indigenous Australians in 2004-05, health spending per person was 17% higher than for other Australians.

- Spending on medications increased by 1.6% between 2004¬-05 and 2005-06—much less than the average increase of 8.6% per year in the previous decade.[2]

A key plank of the NHHRC is the need to enhance the effectiveness of care provided in hospitals, while also developing the continuity of care outside the hospital, i.e. in primary care (outpatient), community and aged care.

The current Australian continuum of care delivery settings is a complex and challenging landscape to navigate and integrate around the patient and their journey through the health system. This landscape is depicted in the figure below and should be viewed in the context of the current changes recommended by the NHHRC.

The Continuum of Care

Levels of Care	Health Promotion & Disease Prevention	Primary Care	Intermediate & Secondary Care	Tertiary Care
Providers of Care	GPs		Secondary Hospitals	Tertiary Hospitals
	Community Health		Medi Hospitals	Medi Hospitals
	Population Environmental Health		Private Hospitals	Private Hospitals
	Non-Government Organisations		Non-Government Organisations	
	Allied Health & Community Care		Rural Regional Resource Centres	
			Aged Care Facilities	
			Step down Sub Acute Facilities	
			Rehabilitation Facilities	
			Hospices	
			Hospital in the Home	
Funders of Care	Individual Community Local, State & Federal Government		Individual State & Federal Government	Individual State & Federal Government

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[1] A Healthier Future for All Australians. Final report of the National Health and Hospital Reform Commission. June 2009.

[2] The eleventh biennial health report of the Australian Institute of Health and Welfare (Australia's health 2008)

The technology adoption model

The adoption of technology by industries has followed a recognizable path. iSOFT believes the adoption of technology by the healthcare industry will experience similar stages:

Stage 1:
The Formative Period

During the formative period, industries adopt information technology as the basis for mechanizing business processes. While paper-based files are replaced with databases, everyone transitions into a data entry clerk. The processes that control fundamental data are the first to be automated, followed by departmental systems. Finally, automation is applied to connect and replace the most costly processes, such as analytical machines and their outputs.

Stage 2:
The Transformation Period

This stage is typified by the need to transform entire industries, with substantial structural changes in the way the industry operates to achieve improved performance and efficiencies in the industry's primary economic goals. In many industries, competitive pressure is a compelling driver of change. The transformation period in healthcare is therefore about users in the system being able to share relevant and necessary information seamlessly.

The transformation period is also typified by the need for both the industry and the technology providers, along with other systems suppliers to form new partnerships that share in the outcomes.

Stage 3:
Consumerisation

Healthcare is a service industry, not a product industry. This period describes the election by the patient of how, when, where and in what form they receive healthcare. During the transformation period, secure and trustworthy information facilitates change by instilling greater confidence. This is fundamental to the consumerisation period, when technology enables data to be captured and information is delivered through devices over networks that are used for basic forms of content communication.
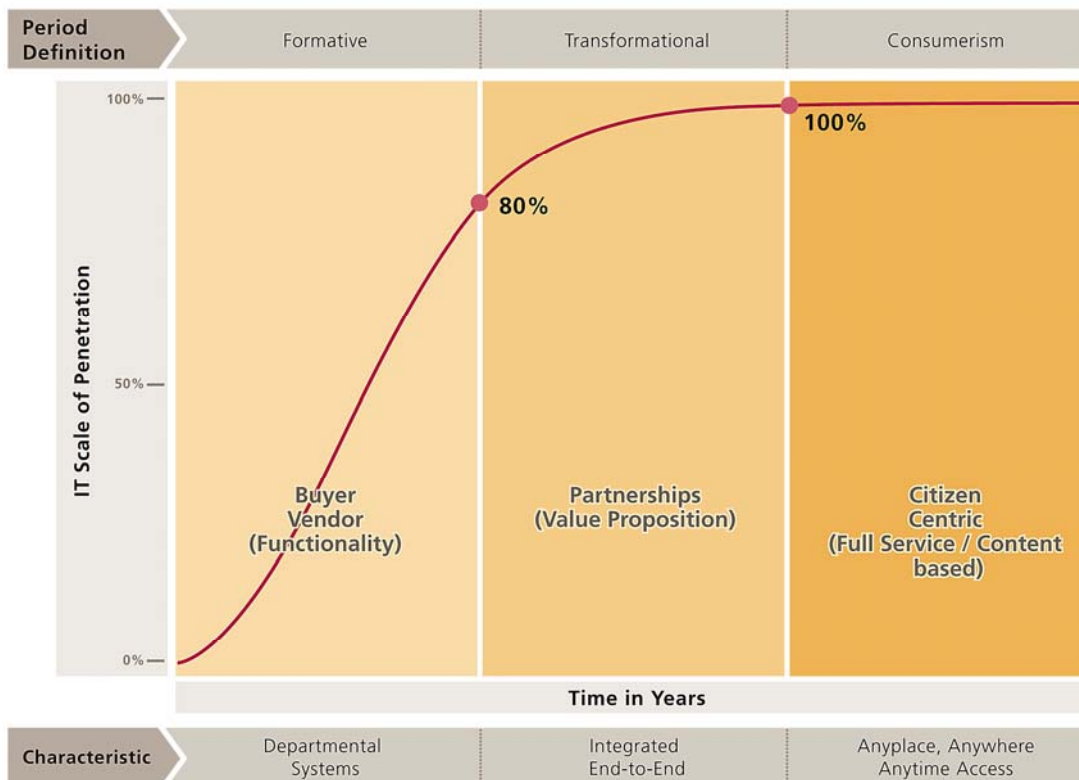
The NBN: the benefits for healthcare

Studies show that the integration of patient information across the healthcare system could save between $8-10 billion per year – a 10% saving on the current investment in healthcare. This saving would pay twice over for the NBN over its implementation timeframe.

Further development in the delivery of healthcare services across Australia cannot be enabled without the foundation of a 'technology highway' that provides access to patient information. With healthcare forecast to take up 25% of the NBN's bandwidth, it is clear that a high-speed network is a critical enabler in connecting healthcare.

There are significant opportunities to provide value by aligning the rollout of the NBN with the Government's healthcare initiatives, including its goal of providing each Australian with an individual electronic health record by 2012.

Moving Towards an Integrated Healthcare System

A transitional phase which integrates healthcare is predicated on moving care delivery closer to the patient in the community to address health conditions that can be effectively managed in the community.

The adoption of technology by the Australian healthcare system has come to the end of the formative stage in which the implementation of departmental systems is almost completed in acute care (hospitals). The movement to embrace Electronic Medical Records (EMR) joins up these systems and creates a holistic of view of patient information across the continuum of healthcare.

The mechanization of healthcare is less advanced outside hospitals. Only about 40% of primary care (outpatient) computer-based systems are used to capture clinical data, little of which follows the patient when referred to another carer or facility.

The NBN and Current Healthcare Initiatives

The Government's initiative to franchise 'Super Clinics', enabled by the NBN, will alleviate the high volume of patients that overburden emergency departments.

The vision of a new and better-connected model for care delivery has been laid by the NHHRC, which recommended patients be assigned to a particular Super Clinic or doctor. The development of a single-patient care plan can only be facilitated by the NBN.

Healthcare Delivery to the Home

The NBN is critical infrastructure to enabling the delivery of healthcare to the home, supporting patients in managing their own care.

Wireless electronic communications, including integrating television as a medium for delivering care, has been shown to be an effective means of remotely managing patients with chronic conditions and averting hospital admissions.

The unavailability of a low-cost, fast broadband service is a major impediment in moving healthcare closer to the patient. The NBN will resolve obstacles associated with connecting the healthcare industry and moving towards a new 'patient centric' delivery model.

Section 3

Electronic Medical and Health Records

The Council of Australian Governments (COAG) has agreed to implement a Shared Electronic Health Record (SEHR). Dr Christine Bennett, Chairperson of the NHHRC, said an electronic health record is arguably "the single most important enabler of truly person-centred care."[3]

There are two terms used for electronic records – the Electronic Medical Record (EMR) and the Electronic Health Record (EHR). While these terms often overlap or are misused, they normally mean the following:

- The EMR is the health practitioner's record of their encounter with a patient – the "episode of care". It documents the details of a patient and records the clinical information relevant to the care delivered. In a hospital this is essentially the "chart at the end of the bed" or its electronic equivalent. In a doctor's office, it is the doctor's notes and records. The EMR usually belongs to one provider organisation. Over time the EMR forms a longitudinal record of a person's health status and relevant history, including problems, medications, allergies, immunisations, test results; and treatment regimens, including allied health information such as diet, podiatry and physiotherapy.

- The EHR is a summary record of a patient's health status from cradle to grave and is comprised of summary information from multiple service providers over time. It is a longitudinal collection of personal health information concerning a single individual, entered by healthcare providers, and stored electronically. The EHR is available across care settings. The information is organised primarily to support continuing, efficient and quality healthcare and is stored and transmitted securely. It contains retrospective, current and prospective health information, and can be used for a personal health record with information being maintained in part by the patient.

Achieving an SEHR is a transformative step that can realise improved efficiencies and significantly enhanced quality of care – from a strategic level in health planning to operational performance management of health care providers, as well as at the individual patient level.

> The NBN is the foundation of a better healthcare system and a necessary infrastructure for building the interconnectivity that will enable a more effective and efficient patient journey.

[3] National Health and Hospitals Reform Commission (NHHRC). Media Release - 30 April 2009.

Section 4

iSOFT's response to selected terms of reference is based on its authority and experience as a healthcare technology supplier to the Australian healthcare industry, and its significant public sector expertise worldwide.

■ Economic and cost/benefit analysis underpinning the NBN

The cost of completing the eight-year implementation plan to reach 90% of Australian households would be in the region of $43 billion, and the forecast traffic for the health sector is 25% of the available bandwidth. This equates to $10.75 billion in spending over eight years, or $1.34 billion per year over the lifetime of the project – equivalent to 1.5% of the current annual expenditure on healthcare.

The NBN would:

- become the founding electronic highway for new models of care as outlined in the NHHRC's recommendations. These would bring efficiencies and cost savings across the continuum of health care that exceed the NBN's annual investment

- contribute to the productive use of resources within the healthcare system, as well as provide the medium for creating new jobs in Australia with worldwide business appeal.

Specific evidence for the benefits in healthcare delivery that can be enabled by the NBN in both hospital and non-hospital settings are discussed below:

Medications Management

ePrescribing has been defined as the process by which a prescription is electronically generated by a prescriber, authenticated (electronically signed), securely transmitted (either directly or indirectly) for dispensing, seamlessly integrated into the pharmacy dispensing software and, in the case of the Pharmaceutical Benefits Scheme (PBS), is available to be electronically sent to Medicare for claiming purposes. This definition does not preclude the use of paper-based processes to support ePrescribing activity.

Medication management of scripts in acute, community, aged and primary care settings is an opportunity to demonstrate the impact that the NBN could have in transforming healthcare delivery. The results of adverse reactions from either incorrectly prescribed drugs or poorly administered drugs passes quickly from the primary care sector to the expensive acute sector.

- In 2005-6, the toxic effects of drugs, or Adverse Drug Events (ADEs), in the community caused 131,287 separations in public hospitals costing $423,270,000. A 50% saving would contribute 16% to the annual cost of the NBN to healthcare each year.

- A 2001 study found that "anywhere from 28% to 95% of ADEs can be prevented by reducing medication errors through computerized monitoring systems"[4] A 2008 study in the U.S found that *one in every ten patients* admitted to a community hospital suffered a preventable adverse drug event. Adding in the cost reductions from unnecessary drug and laboratory test use, the annual savings for each hospital of a medications management strategy was estimated at US$2.7 million.[5]

- The management of scripts in Australia is currently controlled on a paper basis, even as scripts are electronically created from a computer on the clinician's desk in more than 80% of the cases. This can be more effectively managed electronically through the adoption of a 'Medication Exchange' to the destination of the supplying pharmacist irrespective of where the patient wishes to receive the medication.

- The use of electronic medication charts for patients moving between healthcare providers, i.e. hospitals, aged care and community care, would reduce the incidence of adverse events related to drugs, with a resultant reduction of costs associated with treating the events.

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[4] Agency for Healthcare Research and Quality. Reducing and Preventing Adverse Drug Events To Decrease Hospital Costs. Research in Action, Issue 1. AHRQ Publication Number 01-0020, March 2001. http://www.ahrq.gov/qual/aderia/aderia.htm

[5] Saving Lives, Saving Money: The Imperative for Computerized Physician Order Entry in Massachusetts Hospitals The Clinical Baseline and Financial Impact Study February 2008. Massachusetts Technology Collaborative, Brigham and Women's Hospital, PricewaterhouseCoopers LLP, New England Healthcare Institute

"Up to 14,000 drug products are currently marketed in Australia, and medication use by older people is an increasingly important concern. As people age they tend to have more health problems, and an increase in medication use. For example, in Australia, aged pensioners use 22% of all prescription drugs and 55% of psychotropic drugs. In industrialised nations, an estimated 60-90% of community dwelling older people, aged 65 years and over, take medications. Over 50% use at least one drug on a regular basis with the average number of medications used ranging from two to five."[6]

The NBN is required to underpin an effective and robust 'medications exchange' and availability of medication charts to facilitate a significant reduction in the human and monetary costs associated with adverse events.

Community Care in the Home

A new era for health IT and the development of new businesses that supply services and medical content will emerge with the advent of the NBN.

Advances in health communication technologies, universal broadband and wireless access will deliver content to patients in their homes. They will enable integrated self monitoring and recording equipment within the home for accurate and timely data on the patient's performance and wellbeing.

The NBN will facilitate the use of internet protocol television (IPTV) as a medium to deliver advice and content that enables convenient access to real-time consultations and quality information. This could be linked to an electronic health record that accepts automated recording of clinical findings related to the condition of the patient being managed. Communication with the clinician can be interactive, thereby preventing a consultation in a doctor's office or an emergency department. The efficiencies and savings would be substantial. It is worth noting that the funding mechanism for this model of care will also require changes to current payment mechanisms.

- The three most common reasons for patients presenting at their GP are: to receive a check-up (14.6%), to request medication or obtain a repeat script (11.8%), and to receive test results (6.9%).[7]

- Apart from the 31% of the GP's time being accounted for by such presentations, there is the cost, inconvenience and loss of productivity for the patient in making the journey, which in rural settings can be high.

Addressing unnecessary presentations in the GP office or emergency department through broadband access in the home could increase a clinician's available time by 15% - boosting productivity and alleviating demand.

Sub-acute care

Sub-acute care provides the 'glue' that connects the acute care in hospitals with community care in people's homes. It includes services such as rehabilitation, geriatric evaluation and management; new programs such as transition care and other 'step-up' or 'step-down' programs. These services work hand-in-glove with other services such as respite care, community nursing, and home and community care services.

Sub-acute services often involve multidisciplinary teams of clinicians, with input from a range of specialist allied staff. Connecting health information with these other levels of care and multiple clinicians is essential to sub-acute care achieving its potential.

Sub-acute care can improve patients' functioning and independent daily living, slow decline in health status, reduce hospital visits, cut the amount of time people spend in hospitals, and prevent premature admission of older people to residential aged care facilities.

Many parts of Australia have limited or poorly developed sub-acute care, representing a significant 'missing link' in the care continuum. This service gap erodes the effectiveness of other services, particularly acute hospital care, as well as causing poorer outcomes for patients. An ageing population and increasing levels of chronic disease will further strain our already under-developed sub-acute

services. These observations are fundamental to health reform in Australia, as discussed in the NHHRC report, and reflect the opportunity for a transformative impact on the overall cost and effectiveness of healthcare delivery.

The goal of integrated healthcare can only be achieved through an investment in the NBN. The current infrastructure does not provide sufficient communications capability or capacity. Clinicians and pharmacists that are remote from an acute facility are therefore unable to access critical health information such as current medications, discharge diagnoses and follow-up directives required to allow ongoing care.

- ## Ownership, governance and operating arrangements of the NBN company and any NBN related entities

The NBN needs to be owned and governed in accordance with pre-set levels of high availability and performance that ensure it is a reliable conduit of electronic data for healthcare.

- One clear implementation issue in the governance and ownership of the NBN is to ensure priority for the bandwidth required to support the health-related content and the transformation of the health industry versus, for example, non-critical entertainment services.

- Privacy and security concerns raise the question of whether or not healthcare content through the NBN should be the domain of a separate company as a service provider only, controlling use and avoiding abuse, while maintaining service levels across the network deemed appropriate for the provision of healthcare services.

Allowing the network to be swamped with content that limits its use for healthcare would be a disaster. One approach could be the development of a virtual private network (VPN) for the health sector, managed by a significant content provider.

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[6] Extract from one of 8 commissioned papers prepared for: 2020 A Vision for Aged Care in Australia - The Myer Foundation

[7] Refer to Table 7.8: GP consultations: 20 most frequent patient reasons for encounter, 2006–07 Australia's health 2008 The Australian Institute of Health and Welfare

■ **Regulations or legislation pertaining to the NBN**

NHHRC report recommends the Government legislates to ensure the privacy and security of a person's electronic health data. This includes:

- By 2012, every Australian should be able to have a personal electronic health record that will at all times be owned and controlled by that person.

- The Commonwealth Government must legislate to ensure the privacy of a patient's electronic health data, while enabling secure access to the data by authorised health providers.

- The Government must introduce unique personal identifiers for healthcare by 1 July 2010.

While these legislative changes are necessary to achieve the potential of e-health, according to recent research commissioned by the National Electronic Health Transition Authority (NEHTA) 82 per cent of consumers in Australia support the establishment of an electronic health record.[8] Use and access to health-related content, such as articles and clinical advice based upon a patients profile, can be delivered without the need for legislation.

> Current standards for the transmission and encryption of data in healthcare should not prevent the NBN from becoming the primary highway for the delivery of patient-specific information such as diagnostic information to and from remote locations or remote community-based health facilities.

■ **The availability, price, level of innovation and service characteristics of broadband products presently available, the extent to which those services are delivered by established and emerging providers, and the prospects for future improvements in broadband infrastructure and services (including through private investment).**

Price and service will be critical aspects in enabling a national healthcare system that uses broadband as a core infrastructure.

Currently the cost of broadband falls on the provider of the health service rather than the patient. Funding for health providers to realise e-health benefits must now compete with other cost components in an environment of severe financial pressures. Physicians in outpatient practices are paying for the service on their premises to gain some productivity benefits. These applications, however, are limited within the current delivery model.

Who should pay for a network that forms part of the delivery of health care? More specifically, who should pay for a new NBN to the home when its use is predicated on the monitoring of and delivery of health management information? Or perhaps, even more crucially, who should pay for equipment that will inevitably be required for monitoring patients in the home?

- With regard to the medications management proposition for information exchange between the physician and the pharmacy, trials in the Northern Territory have demonstrated the NBN would boost productivity to the physician. The costs to date of these services have been part of the Government's 'Practice Improvement Program' that in itself raises an interesting funding model for the future.

- The savings generated from treating patients in their homes verses treating them in hospitals is on a differential ratio of $1:10.

- Technology is available that will deliver information through a television by installing an intelligent box that transforms the TV into an 'Internet Protocol' (IP) device. Current costs of such a home monitoring device are high as they are in the early adopter stage, but the technology will advance quickly if, for example, it were targeted at sub-populations such as sufferers of diabetes – a condition which is increasingly impacting on costs and subsequent conditions.

> Forward thinking is needed to fund methodologies for e-health applications in new care models. We can learn from other delivery models, for example:
>
> In 1989 Tim Berners-Lee of CERN in Geneva invents HTML and names his networking project the World Wide Web. By 1999 two companies were offering free computers to anyone who signed a long-term contract for Internet services.[9]

■ **The effects of the NBN on the availability, price, choice, level of innovation and service characteristics of broadband products in metropolitan, outer-metropolitan, semi-rural and rural and regional areas and towns.**

The delivery of healthcare in remote communities is one of the most costly and challenging aspects of health delivery in Australia. Technology that will assist in managing remote care is available but is not currently an economical option due to the lack of an appropriate infrastructure that can reliably enable new care delivery models to those locations.

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8 The National Health and Hospitals Reform Commission (NHHRC) Media Release, 30 April 2009.

9 A Brief History of the Net, FORTNE Magazine, October 9th, 2000

Today, the availability and choice of broadband service providers is dependent on geographic location, rendering unacceptable the widespread and reliable use of broadband for the transmission of healthcare data and services. Rural areas may have only one broadband provider and therefore the cost is higher than would be the case in a metropolitan area. Limited choice of providers is limiting the models of care and adoption of available patient-based technology.

- The advent of 'Super Clinics' in regions surrounding the primary metropolitan precincts will strengthen the delivery market and relieve overburdened hospitals. These Super Clinics will need the NBN for an electronic health record as patients become tied to a specific facility or doctor. An electronic clinical history will be required to be available to advising physicians.

- There is awareness worldwide of the excellent reputation and work done by the Royal Flying Doctor Service (RFDS). The RFDS are investing in an EMR that could play a valuable role in integrating healthcare in rural Australia if a reliable NBN was in place. Today, the lack of such infrastructure is a barrier to advancing rural health care delivery.

The economic value of broadband as a 'highway of healthcare' should not be dictated by the choice of broadband provider. The service needs foremost to be reliable and funded based on the value created. iSOFT suggests that the economic value of broadband in delivering a significantly enhanced healthcare service to rural Australia will support the costs of making it available.

■ Technical, economic, commercial, regulatory, social or other barriers that may impede attaining the Government's stated goal for broadband availability and performance in the specified timeframe.

The NBN is a critical first step is overcoming the challenges in implementing e-health strategies. The Government's stated goal for broadband availability and performance within the specified timeframe aligns with the national health reform agenda for transforming health care delivery models.

'Proof Points' should be agreed to maximise the likelihood of success in a program that uses the NBN as an information highway to transform healthcare delivery:

- there are opportunities to combine the health reform agenda with the rollout of the NBN to demonstrate its value to stakeholders across the continuum of care, and

- enable the Government's goal of enhancing the quality of healthcare, i.e. transformational infrastructure to support a healthier nation.

Recommended Proof Points

iSOFT recommends the following four NBN proof points be set up which align with the Government's reform agenda for healthcare and provide specific examples of the applications available to realise benefits from the NBN.

1. **Tasmania to become a 'Centre for Innovation' in the delivery of healthcare to the home.**

   As the first State to implement the NBN, we encourage the establishment of a Centre for Innovation in Tasmania that supports a joint industry/government initiative to prove the value of the NBN to the healthcare industry.

   iSOFT has made a significant investment in the past five years in China in interactive television delivery of homecare. We believe that this provides an opportunity to work with the Government to exploit the combined value of this healthcare initiative with the implementation of the NBN. This could become a proof point for developing a 'Patient Portal' that provides a medium for:

   - patient appointment scheduling (like the Choose & Book initiative in the UK),
   - interactive IPTV content and communications with a comprehensive patient-specific portal,
   - communications with the advising clinician and/or ancillary practitioner,
   - interactive patient monitoring.

2. **The establishment of a 'Centre for Innovation' as a proof point in primary care in collaboration with the Government's development of Super Clinics and their interconnection with the rest of the healthcare.**

   iSOFT is serving the needs of the primary health community through industry leading products. Our technology supports the Independent Practitioner Network (IPN), a Sonic Healthcare company that serves 4 million patient encounters a year, as well as many smaller primary healthcare clinics and consultants. Our engagement with Balance, the franchisee of the Blue Mountains and Cairns Super Clinics, is an opportunity to develop a model of localised care and extend this back into the home and community while connecting the patient flow with acute facilities and other providers.

3. **The establishment of a 'Centre for Innovation' to work with the Royal Flying Doctor Service to prove the value and interconnectivity that is possible with an integrated rural full service provider.**

   The RFDS provides aeromedical emergency health services, primary and community healthcare clinics at remote sites (for example, routine health checks and advice, immunisation, child health care, and dental, eye and ear clinics), telehealth consultations via radio, telephone or videoconference, pharmaceutical supplies at remote sites and transfers of patients between hospitals.

   In 2006–07, there were 242,547 patient contacts with the RFDS. The service conducted 12,247 clinics, 75,439 telehealth services, and 35,089 aerial evacuations. There were 47 aircraft used by the RFDS during 2006–07 that flew a total of 21.7 million kilometres. The RFDS had 21 bases and six health facilities.[10]

   iSOFT is working with RFDS to implement their Electronic Patient Record (EPR) so that all patients have clinical information collected at the point of the initial event before they are evacuated to an acute facility. This streamlining of the process and management of patient records lends itself to an integrated extension of the current landscape and the potential to use the NBN to provide a higher level of integrated rural service supported by RFDS.

   iSOFT encourages the Government to consider this as part of the NBN roll-out as a key 'Proof Point' and value proposition that impacts both the NBN and the future of healthcare in rural Australia.

4. **The establishment of a Centre for Medications Management across both the hospital and outpatient settings to demonstrate the value and cost savings from an integrated medications chart and exchange.**

   iSOFT already provides e-health pharmacy systems to hospitals, including a clinical medications chart that replaces the familiar paper-based systems. 'MedShare' is the shared version of this critically important chart and is available for patients to access electronically in 'read only' mode. It also provides the opportunity for patients to enter non-clinically prescribed medication such as vitamins. This gives the patient the opportunity to be involved in their own healthcare management and better understand the drugs prescribed. Several States and Territory health departments have shown interest in this approach and we recommend forming a program that engages interested parties to become the 'Proof Point' for the Medications Management Centre of Innovation, based on a combined health and NBN engagement.