



Australian Government
**Department of Immigration
and Multicultural Affairs**

Health Check of IT Platform

Executive Summary



31 January 2006



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EXECUTIVE SUMMARY

Background & Objectives

As a result of the findings of the Palmer and Comrie reviews, DIMA senior executives decided to seek independent advice as to the health of DIMA Information Technology (IT) systems and governance mechanisms.

Computer Sciences Corporation (CSC) was engaged to provide a health check in regard to:

1. The overall appropriateness of the mix and deployment of DIMA's technical platform to support current and future business needs.
2. IT Governance portfolio management, program and project management and delivery mechanisms including technical, business and external service provider roles. (The findings from this health check are covered under a separate paper).

CSC was also asked to provide high level advice as to whether both of these aspects were headed in the right direction to support future needs.

CSC identified a number of improvement objectives, including:

- Improved alignment between the business and IT functions delivering higher quality outcomes and qualitative performance improvements;
- Improvements in the level of systems integration to facilitate a more streamlined and accurate management of the caseload, including a single view of the client;
- Increase in the perceived and actual value delivered by Business Solutions Group (BSG) and IT overall through the introduction and increased utilisation of agile development techniques, positioning BSG to respond more effectively to changes in organisational trajectory.

Approach:

The Health Checks were conducted with the following approach:

- An assessment of DIMA's current state IT capabilities via interviews and workshops with key onshore business and IT stakeholders from national office and the regions.
- A comparative analysis based on CSC experience and leading practices that revealed capability gaps in the IT Platform areas.
- Preparation and delivery of findings, gaps, conclusions and recommendations at the DIMA Executive Workshop in December 2005. The purpose of which was to develop a DIMA target IT transformation vision and high-level roadmap.
- Development, estimation and prioritisation of gap-closing recommendations and initiatives required to address the Health Check gaps and deliver on the new IT vision.

These recommendation and initiatives have formed the basis for future planning.

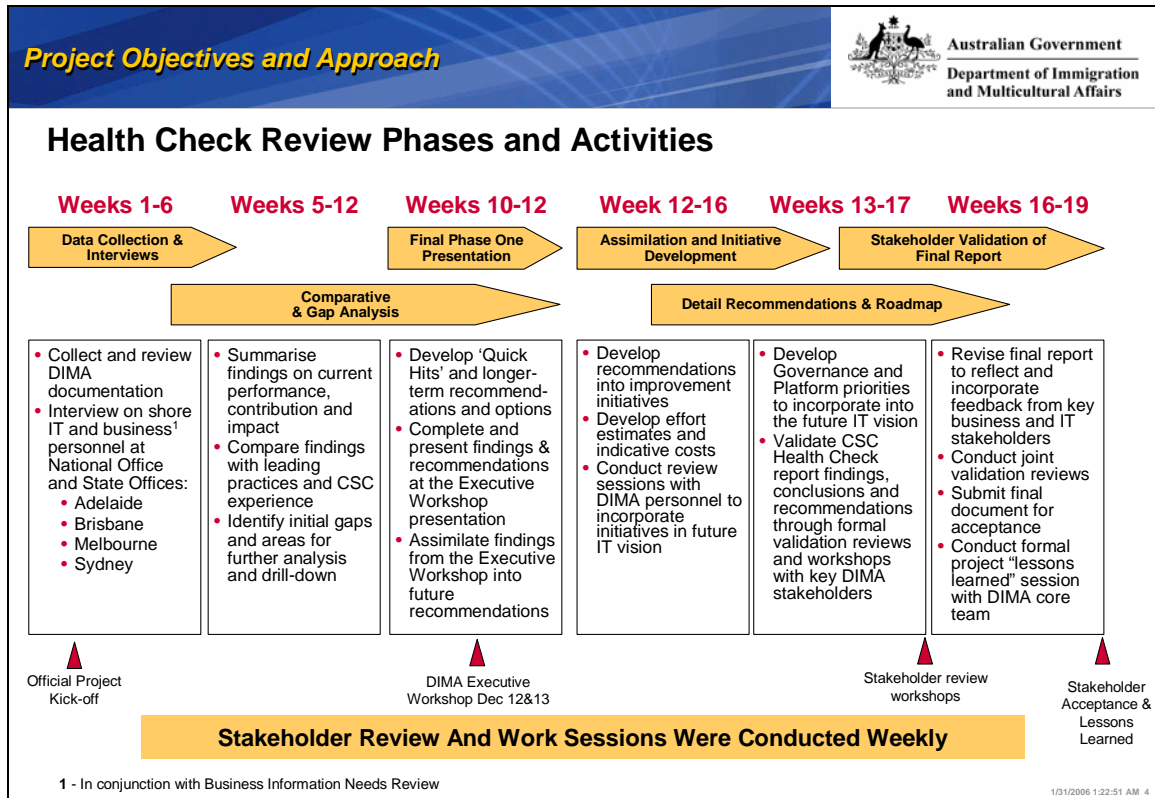


Figure 1: Engagement Approach and Timeline

The IT Platform Health Check was focused on the IT infrastructure components that support DIMA IT operations. These are defined by the items 1-13 on Figure 2.

Some areas were specifically taken out of scope for this assessment. Specifically:

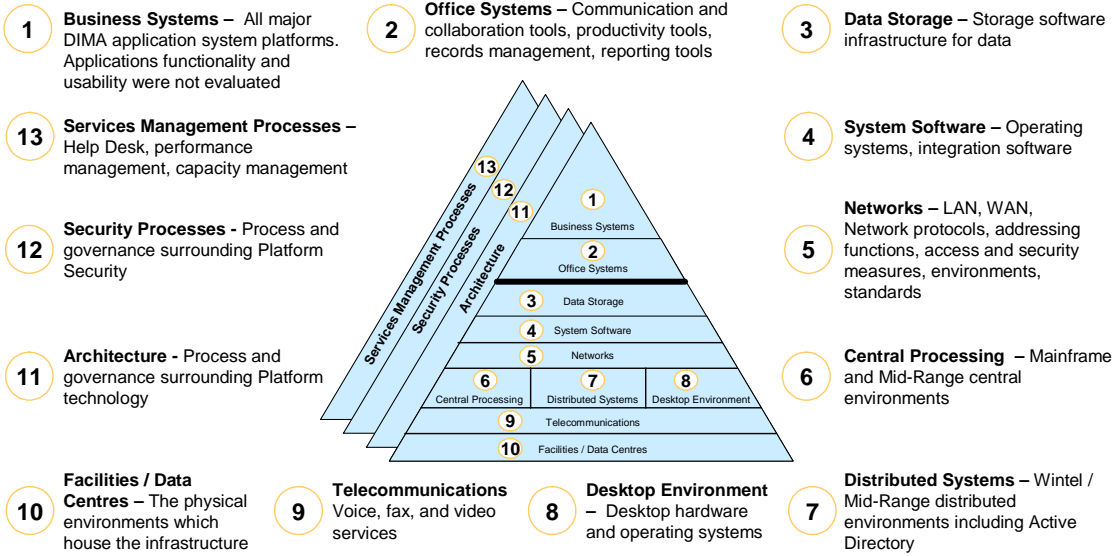
- 1 Business systems: The assessment of the Business Systems in the context of the IT Platform Health Check was focused on the effectiveness of the IT platform to support the operation of business systems. The effectiveness of the business systems and applications that operate on the IT Platform were out of scope .
- 3 Data storage: The Platform Health Check focused on the effectiveness of database storage tools and closely related areas. It did not consider how data storage is used, except where it impacts the management of the storage.



High Level Findings



Analysis Framework for IT Platform



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Figure 2: IT Platform Analytical Framework

For each layer of the IT Platform 1-13, effectiveness was rated using a four point scale. This is defined in Figure 3. Additionally, effectiveness was measured across all 13 layers by evaluating their collective effectiveness against a set of capability dimensions. These dimensions are defined in Figure 4.

Evaluation Rating Indicators Used in this Health Check - “Harvey Balls”

Rating	Meaning	Indicator
Very Effective	As good as you can realistically expect an organisation to get	
Effective	Can do most tasks effectively	
Somewhat Effective	Supports core business, but pain points are evident	
Not Effective	Does not meet core business needs, or not implemented	

Figure 3: IT Platform Evaluation Ratings



Evaluation Criteria Used in this Health Check

Dimension	Description
Scalability	Ability to readily adjusted the capacity of a platform component, up or down, with reasonable cost or effort
Capacity	Ability to do the work at the level needed
Agility	Ability to respond to business-initiated change
Manageability	Ability to monitor and control the characteristics
Service responsiveness	Ability to respond to service requests in a timely manner
Reliability	Ability to operate continuously without unscheduled outages
Performance	Ability to complete work within agreed timeframes
Cost effectiveness	Ability to meet affordable cost levels
Availability of resources to support	Availability of skilled staff, tools, and other resources to provide support
Security	Ability to control and monitor access to the platform component

Figure 4: IT Platform Evaluation Criteria

Key Findings from the IT Platform Health Check

Overall, the review revealed the following summary findings.

- IT infrastructure platforms are adequate to meet current business needs, though there are numerous specific pain points. These pain points are consistent with those seen in similar organisations.
- Of the 13 Platform layers in the analysis model, 7 are rated as effective while 6 are rated as somewhat effective.
- Of the 10 Evaluation Criteria in the analysis model, 4 are rated effective while 6 are rated somewhat effective. These ratings reflect the fact that some aspects of the current platforms are reliable, flexible, scalable for continued use into the future, while others will require attention.
- Overall, the IT Infrastructure platforms are unlikely to support the proposed future development program which will involve intensive integration and data sharing among applications.

Specific findings include:

- Remedial plans exist in many layers of the IT Platform and are being actioned, but these tend to be point fixes associated with known needs rather than actions to further an integrated improvement strategy for the IT infrastructure overall



- Cost-effectiveness is difficult to determine as the business value of information, and therefore IT infrastructure components which handle information, is not known.
- There is potential for simple cost savings across the IT Platform through standardisation and consolidation.
- Current desktop tools are capable products at the leading end of industry standards, however, typically they are not optimally configured.
- Desktop Tools are generally not currently integrated with business systems
- There are no apparent requirements that could be applied to determine business system and desktop effectiveness at a usability level. As a result, there was no simple way of determining whether reported usability issues are inherent in the specific existing tools, or a result of the overall way in which the overall class of tool is configured and deployed.

Overall, while some good work is being undertaken to rectify known IT Platform issues, there are also a number of limitations that if not rectified, will make the challenge of the implementing the future IT vision difficult if not impossible to achieve.

Furthermore, while organisation structure and the distribution and quality of skills were not components of the review scope, the review team observed many issues and limitations that are likely to impede DIMA in its drive to meet the emerging business needs. This point is discussed further in the next steps implications for management.

IT Platform Recommendations

Recommendations were made by layer (1-13) in the IT Platform Analysis Framework and grouped into immediate and longer term. These recommendations were presented to DIMA management at the December Executive Workshop. Following this workshop, the recommendations were organised into three groups which are described as follows:

A - Recommendations aggregated into 6 platform initiatives, summarised below and developed to a further level of detail in the appendix of the IT Platform Health Check Report

B - Recommendations passed to DIMA for consideration within the Systems for People Program

C - Recommendations which while not forming part of current detailed initiatives in the IT Platform Health Check Report, remain relevant for the DIMA IT Platform and may be taken up at a later date.

The full list of IT Platform recommendations are listed in the attachment to this document. The mapping of initiatives to Analysis Framework layer is illustrated in Figure 5. Figure 6 provides a high level description of each initiative.



Coverage of Platform Layers by Group A Initiatives

		Platform Layer													
		1. Business Systems	2. Office Systems	3. Data Storage	4. System Software	5. Networks	6. Central Processing	7. Distributed Systems	8. Desktop Environment	9. Telecommunication	10. Facilities / Data Centres	11. Architecture	12. Security Processes	13. Services Management Processes	
Platform Initiatives	1	IT Performance Improvement Projects		X			X			X	X			X	
	2	IT Platform Enhancement Projects	X	X	X			X	X	X					
	3	Collaborative Electronic Communications Tools		X											
	4	Data Centre Facilities Strategy									X				
	5	Enterprise Security Architecture											X	X	
	6	Agile Architecture and Application Management	X	X		X		X	X	X			X		

X means that an Initiative covers one or more recommendations in a platform layer

Figure 5: IT Platform Initiatives to Analysis Framework Layer

The Initiatives in Group A are described below:

List and Description of Group A Initiatives

#	Initiative	Initiative Description
1	IT Performance Improvement Projects	Improve performance in the IT Platform area by improving email, GRAS, response time in State and Territory offices, document scanning, desktop video streaming, and remote connectivity
2	IT Platform Enhancement Projects	Enhance IT platform by rationalising the SAN environments, refreshing the Sun e-series servers, reviewing DFAT technology capability for overseas DIMA posts, and reviewing end-user and business unit systems for potential for widespread DIMA use
3	Collaborative Electronic Communications Tools	Develop and implement an initial strategy for collaborative electronic communication for DIMA staff that covers collaborative tools including email, instant messaging, forums, team rooms and similar capabilities
4	Data Centre Facilities Strategy	Develop a DIMA wide Data Centre Strategy indicating type and location of facilities to align with future business needs
5	Enterprise Security Architecture	Develop and implement an 'Enterprise Security Architecture (ESA)' for DIMA that provides secure access to information in a cost effective, scalable and timely manner
6	Agile Architecture and Application Management	Develop an agile enterprise architecture for DIMA together with the hierarchy of architectures, and repeatable architecture management processes required to operate a complex portfolio of strategic business and IT systems

Figure 6: IT Platform Health Check Initiatives

Based on an initial analysis of effort to achieve and impact to the organisation, these initiatives were mapped to illustrate their relative priority. This mapping is depicted in Figure 5:

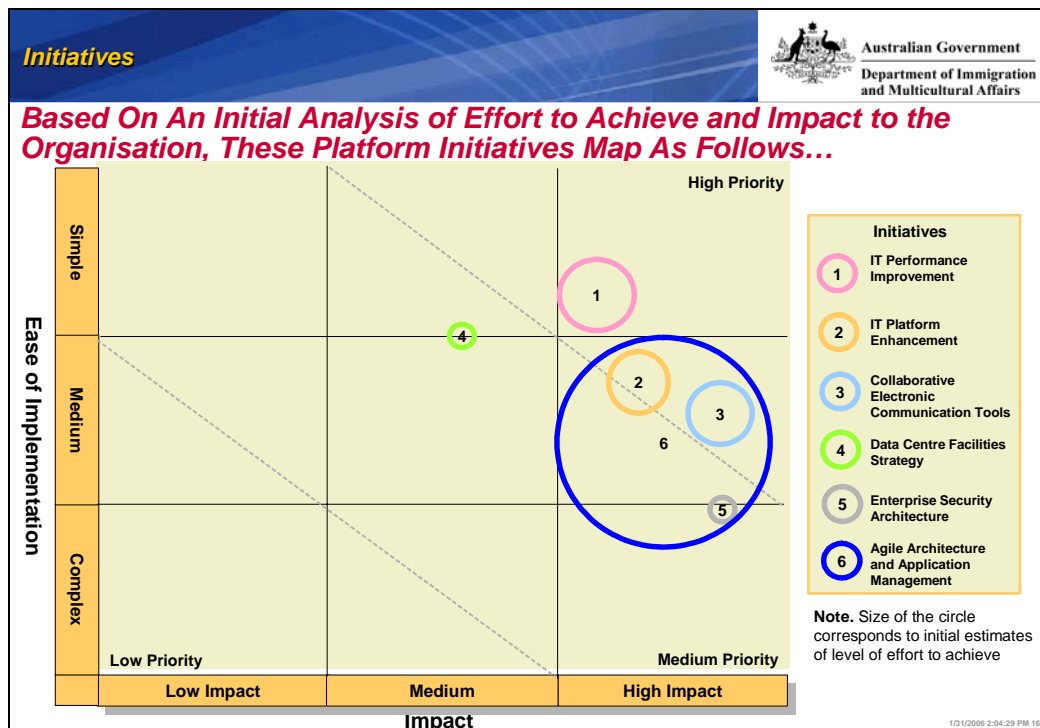


Figure 5: Priority Mappings for IT Platform Initiatives

As defined by the relative priority chart, DIMA should proceed with the IT Platform Initiatives in the following order. These may be staggered and some will need to be executed in parallel. Since these initiatives are critical enablers to DIMA's effective design and execution of the Systems for People Program, their specific timing will need to be coordinated with the overarching Systems for People Program Roadmap.

- IT Performance Improvement
- IT Platform Enhancement
- Collaborative Electronic Communication Tools
- Agile Architecture and Application Management
- Enterprise Security Architecture
- Data Centre Facilities Strategy



Next Steps Implications for Management

The scope of change being considered for DIMA is broad and will be complex to implement. There are a number of factors that will be critical to ensure DIMA's success. These factors, together with the action that needs to be taken, are summarised in Figure 6:

Critical Success Factor	Action to be taken
Visible sponsorship & leadership	Ensure there is appropriate buy-in and commitment to the nature, costs, and risks associated with the change. In particular ensure there is sufficient communication with key stakeholders such as the DIMA Business to engage their <i>active participation and commitment</i> to the full design, execution and ongoing management of the change.
Appropriate Balance	Establish the relative priorities and goals early and communicate often. Determine and communicate how the organisation is going to balance new activity against existing demands and ensure the pace and scale of change is manageable.
Access to expertise and experience	Identify experts who have led these types of initiatives before and can lead the charge. Ensure they are supported by sufficient resources to make them successful. Make them accountable for achieving near term results to demonstrate action to the organisation and maintain momentum Leverage channels that enable rapid access to high quality resources and assets
Speed and Complexity Management	Ensure there is clear sense of urgency around the change and structure the change program into a series of client-focused releases that deliver incremental benefit to key stakeholders in measurable and visible chunks. Ensure everyone is focused on a clearly defined goal/s and measured on their individual and collective delivery of results

Figure 6: Critical Success Factors

Visible sponsorship and leadership

DIMA IT cannot transform itself on its own. It needs the *feedback, support and commitment of the business* to achieve the objectives laid out in this report and implied by the IT vision. Furthermore, it needs the buy-in and support of DIMA executive, management and staff, DIMA service partners and advocates, and DIMA's technology providers.

Appropriate Balance

Balance is critical to DIMA's success in the delivery of the IT vision. Between DIMA-wide and division/region-specific agendas and control, between pragmatic realities and ideal goals, challenges of implementing technical details and the impact of too much change on business operations. Balance is also required between implementing greater governance and allowing IT and DIMA business professionals alike to achieve their core missions of serving the DIMA constituents.

Access to Expertise and Experience

DIMA is not currently equipped with the resources and skills to deliver the IT vision without substantial risk and is therefore counselled to supplement resources as required and to complete the recommendations identified in the IT Governance Health Check in order to mitigate these risks effectively.



Speed and Complexity Management

Control, communication and coordination will be critical factors in DIMA's ability to achieve a successful outcome quickly in the transformation process. DIMA IT needs to work closely with DIMA business in implementing the recommendations identified in this and the IT Governance Health Check Report.

DIMA IT needs to stand ready to push forward on the elements of the IT Vision that are squarely in its power to execute; ready to educate and support business leadership; and ready to accept counsel and feedback from all parties willing to contribute to making this IT and Business Vision clearer, more sound, and better able to achieve its end goal of returning DIMA to its enviable position as a world leader in immigration service delivery.



Attachment 1:

List of IT Platform Recommendations by Layer of the Analytical Framework

Area	Recommendations - Immediate	Recommendations – Long Term
Business Systems Platform Layer	<ul style="list-style-type: none"> • 1.1 Perform IRIS platform risk review • 1.2 Develop migration strategies and plans for all ageing application platforms • 1.3 Develop strategy for small application platforms • 1.4 Evaluate Lotus Notes in context of strategy for small applications 	<ul style="list-style-type: none"> • 1.5 Develop, publish and use an enterprise application architecture that covers all application areas
Office Systems	<ul style="list-style-type: none"> • 2.1 Fix Notes configuration problems • 2.2 Enhance email archiving technology to be enterprise-wide and automated • 2.3 Implement document collaboration software such as SharePoint • 2.4 Upgrade DIMANet per plan • 2.5 Develop strategy for end-user application development • 2.10 Ratification of record keeping standard • 2.11 Provide powerful ad-hoc desktop query and ad-hoc reporting tools to the desktop, with associated training 	<ul style="list-style-type: none"> • 2.6 Develop strategy for communication/collaboration, covering <ul style="list-style-type: none"> • Electronic communications • Knowledge management • Electronic collaboration tools Enterprise business process and workflow technology • Evaluate best long-term technology solution, including whether Lotus Notes should be replaced • 2.7 Implement content management capabilities • 2.8 Provide global accessibility to desktop systems, including through various devices • 2.9 Refresh application architecture to achieve integration of enterprise applications and desktops • 2.12 Develop strategy for records management, covering <ul style="list-style-type: none"> • Electronic document management • Content management technology • Automated file tracking technology for non-automated records • 2.13 Consolidate enterprise recordkeeping data stores • 2.14 Implement data management capability
Data Platforms	<ul style="list-style-type: none"> • 3.1 Develop a comprehensive DIMA data strategy and inventory that includes a strategy for managing the integrity of data for both short term and long term retrieval needs • 3.2 Review data held in MS Access database platform and current policy related to this data • 3.3 Include data warehouse / data mart considerations in a comprehensive DIMA data strategy and inventory 	<ul style="list-style-type: none"> • 3.4 Manage data, information, records and knowledge as a related and holistic area across DIMA, in terms of both horizontal and vertical views through the organisation • 3.5 Develop a clear database platform strategy which will enable the most efficient use of the DIMA infrastructure



Area	Recommendations - Immediate	Recommendations – Long Term
Systems Software	<ul style="list-style-type: none"> • 4.1 Plan to retire AIX (IRIS) • 4.2 Re-visit IRIS risk review • 4.3 Conduct annual risk reviews of IRIS • 4.4 Continue to develop integration architecture • 4.5 Ensure current systems development activities follow architecture • 4.6 Evaluate integration software evolutionary paths 	<ul style="list-style-type: none"> • 4.7 Develop a clear operating system strategy which will enable the most efficient use of the DIMA infrastructure • 4.8 Roll integration architecture across existing systems (internal and external)
Network Layer	<ul style="list-style-type: none"> • 5.1 Continued focus on dual link redundancy • 5.2 Develop a strategy for the convergence of data and voice (to ensure DIMA infrastructure is suitably equipped) • 5.7 Fix GRAS 	<ul style="list-style-type: none"> • 5.3 Develop a network address plan. Include subnet allocation, VLAN allocation. Begin to consider WLAN SSIDs for consistency across the organisation • 5.4 Investigate and recommend an appropriate quality of service strategy across DIMA • 5.5 Plan for required capacity • 5.6 Develop a clear strategy / architecture for the best (and most secure) use of WLAN technology, based on real needs • 5.8 Review remote access strategy. Strategy is currently one size fits all – opportunities to leverage technologies such as SSL VPN for remote connectivity
Central Processing	<ul style="list-style-type: none"> • 6.1 Refresh end of life Sun e-Series servers within the next two years • 6.2 Consider the benefits of virtualisation and consolidation both in terms of logical and physical partitioning (refer to Distributed Layer Best Practise for details) 	<ul style="list-style-type: none"> • 6.3 Develop central processing infrastructure strategy – server, storage and facilities • 6.4 Standardise on a single SAN infrastructure within the <SECURITY REMOVED> data centre. Provide appropriate growth for future projects • 6.5 Review and develop hierarchical storage management for data management within DIMA
Distributed Systems	<ul style="list-style-type: none"> • 7.1 Continue to standardise backup strategies across the platform • 7.2 Continue focus on the restructuring of domain infrastructure • 7.3 Perform risk review on IRIS platform • 7.4 Storage consolidation – leverage centralised backup 	<ul style="list-style-type: none"> • 7.5 Develop a consolidation / rationalisation / virtualisation strategy • 7.6 Develop strategy for the IRIS systems • 7.7 Develop a consistent backup strategy for the distributed environment
Desktop Environment	<ul style="list-style-type: none"> • 8.1 – 8.3 Inventory off-shore technology 	<ul style="list-style-type: none"> • 8.4 Standardise off-shore desktop hardware and software (if not standard already) • 8.5 Continue successful refresh strategy • 8.6 Standardise printers and MFDs, both on-shore and off-shore (if practical) • 8.7 Select long-term scanning solution • 8.8 Standardise PDA technology, with emphasis on mobile devices that work well across DIMA applications and networks • 8.9 Use PDAs to improve reach of technology into new business process areas and to mobile workers
Telecommunications	<ul style="list-style-type: none"> • 9.1 Develop strategy and business case for converged voice-data technology • 9.2 Develop policies for fax and video conferencing technology 	<ul style="list-style-type: none"> • 9.3 Select and implement advanced converged voice and data solution to integrate voice, desktop, handheld, and video technologies • 9.4 Implement all-electronic fax technology to eliminate paper handling at the receiving end



Area	Recommendations - Immediate	Recommendations – Long Term
Facilities / Data Centres	<ul style="list-style-type: none"> • 10.1 Provide a function within DIMA to manage data centre facilities (already underway) • 10.2 Continue focus on facility requirements within the <SECURITY REMOVED> Data Centre • 10.3 Plan for immediate data centre requirements for the coming 12 months (multiple projects all requiring facilities) 	<ul style="list-style-type: none"> • 10.4 Develop DIMA data centre strategy (12-36 months). Position DIMA facilities where they need to strategically be located
Architecture	<ul style="list-style-type: none"> • 11.1 Raise level of authority (and responsibility) of Chief Architect and BSA management • 11.2 Assert strong sponsorship at the senior executive level • 11.3 Develop appropriate subject matter expertise within the BSA group to cover all facets of the DIMA platform • 11.4 Increase resource focus on integration architecture 	<ul style="list-style-type: none"> • 11.5 Finalise and agree (as an organisation) on the DIMA enterprise architecture
Security Processes	<ul style="list-style-type: none"> • 12.1 Establish ownership of enterprise security architecture 	<ul style="list-style-type: none"> • 12.2 Develop enterprise security architecture • 12.3 Provide ongoing training to staff on the relevance and important of security to them and to DIMA • 12.4 Embed security architects into development areas • 12.5 Develop a secure remote access strategy for connectivity by DIMA staff and its partners / clients • 12.6 Develop a strategy for security reporting across all of the DIMA IT platforms • 12.7 Develop and implement a IAM strategy (with consideration of the ADAM infrastructure)
Service Management Processes	<ul style="list-style-type: none"> • 13.1 Consider service desk consolidation steps that could be taken, building on DSSD experience (both negative and positive) 	<ul style="list-style-type: none"> • 13.2 Design program to enable DIMA staff to monitor performance across entire DIMA environment • 13.3 Introduce enterprise-wide help desk and asset management toolset to enable enterprise-wide referral and tracking • 13.4 Select and implement enterprise capacity management process and toolset • 13.5 Implement enterprise-wide data backup and restore standards, processes, and technologies