



Department of Communications, Marine and Natural Resources
Roinn Cumarsáide, Mara agus Acmhainní Nádirtha

Information Systems Division

ICT Statement of Strategy 2005-2007

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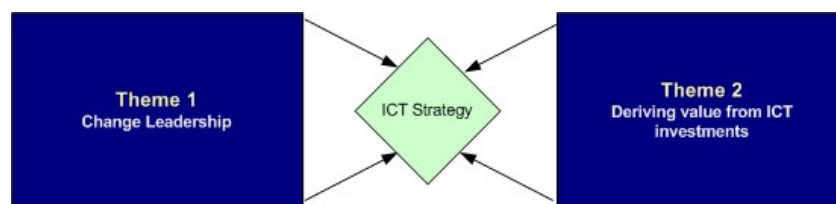
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Executive Summary

This Strategy marks a new focus for the development and management of ICT within the Department, in that it is focused on people and process issues, rather than technology. While previous strategies recognised the importance of the former, in the last 3 years the Department has concentrated on making strong and effective investments in building the right IS delivery capability, by developing and refining its technical infrastructure, development processes and IS organisation. The IS Division now has an excellent platform and ‘production line’ to deliver new projects and applications to the business. The challenge for the IS Division now is to maximise that investment in its core IS delivery infrastructure by using technology as a means to further improve the efficiency and effectiveness of DCMNR’s processes and staff. Given that the Department is now in a strong position vis-à-vis its ability to deliver technology to the business, the Information Systems Division now needs to turn its attention to further maturing its approach to how it interacts with the business Divisions to which it provides services, so the two key themes of this Strategy are:

1. Improving how the change associated with introducing new technology is managed
2. Ensuring that value is derived from the Department’s investments in technology



Key Theme 1: Change Leadership

The Department’s approach to the management of IT projects has improved significantly over the period of the last ICT Strategy. There is now a formal approach to the governance of such projects, and the establishment of a Programme Office in ISD has led to a standard approach to the delivery of projects. While ISD has been mobilising to improve how it gets new technology out to the business Divisions, the business Divisions have not had the same level of commitment to the management of change. New ICT projects tend to have a significant implications for how processes operate and how people do their day-to-day jobs, and this change needs to be managed closely. The evidence from major IT projects around ‘why projects fail’ suggest that resistance to change and lack of leadership for change initiatives are responsible for the major issues on projects, and that projects rarely fail for purely IT reasons. The ICT-related projects within DCMNR have been characterised by a relative lack of leadership and sponsorship from the business Divisions, and by a lack of attention to the non-technology related aspects of its projects.

For these reasons, ISD has decided to commit to a stronger role in the leadership of change within the Department over the period of this Strategy. In addition, ISD will

seek to work more closely with the other Central Divisions, particularly Strategic Change and Moderisation Division, to deliver a more ‘joined up’ approach to the delivery of change initiatives to the Department.

In terms of tangible changes to how it does its work, ISD will seek to engage more closely with the business Divisions to address the process and people issues associated with delivering new technology. ISD will seek to communicate that its role is to provide the technology and tools which underpin change initiatives, while the business Divisions must assume responsibility for the leadership of those changes. There will be more formal processes around communications, transition planning, post-go-live support and user training. New initiatives will be delivered not just by ISD, but by joint teams from the other Central Divisions *and* ISD.

Key Theme 2: Deriving value from investments in ICT

The purpose of any IT investment is to deliver improvements to the Department’s performance. The recent controversy surrounding the PPARS and FISP projects for the Health Service Executive has highlighted the need for public sector organisations to ensure that they derive value for the money they are spending on ICT projects, and that such spending delivers tangible performance gains for the Department.

Research evidence suggests that over 70% of organisations have no formal justification and post-implementation review process for IT investments. ISD have been very proactive as regards forward strategic planning, with this ICT Strategy Project being the 4th Strategy developed within the Division over the past 6 years. While ISD have been careful to set its projects within an overall strategic context, it has not been as active with regard to measuring the benefits associated with its projects, after they have been implemented.

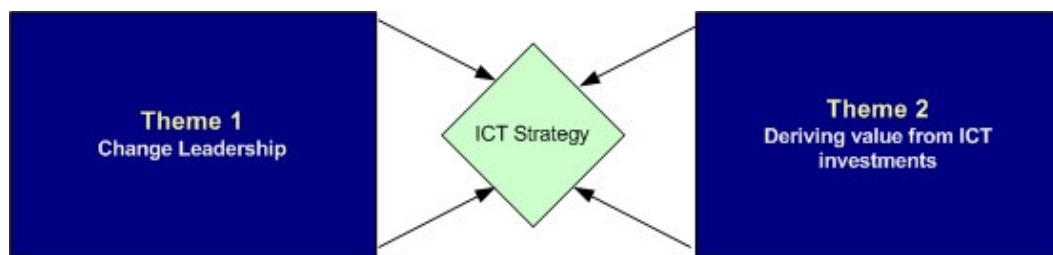
There are a number of other reasons for ISD to ensure a more formal approach to benefits management. Firstly, there is a drive across the public sector to ensure that ICT projects deliver tangible business benefits and that there is a compelling business case for change. Secondly, focusing in on the delivery of business benefits will help ISD to improve how projects are delivered over time. ISD has been gradually improving how it manages projects over time, and formal post-project reviews will help with further refining its approach to project management. Lastly, a focused benefits management process will ensure that the business Divisions are actively using the new technologies that have been delivered, and that such initiatives are enabling tangibly better performance from Departmental staff.

Overall then measurement of project benefits will become an integral part of how ISD manages the development process. Before projects are started, ISD will thoroughly evaluate and prioritise projects based on the benefits they should deliver, as well as carrying out thorough post-implementation reviews of realised benefits after those projects have been delivered.

1 Introduction

This Strategy marks a new focus for the development and management of ICT within the Department, in that it is focused on people and process issues, rather than technology. While previous strategies recognised the importance of the former, in the last 3 years the Department has concentrated on making strong and effective investments in building the right IS delivery capability, by developing and refining its technical infrastructure, development processes and IS organisation. The IS Division now has an excellent platform and ‘production line’ to deliver new projects and applications to the business. The challenge for the IS Division now is to maximise that investment in its core IS delivery infrastructure by using technology as a means to further improve the efficiency and effectiveness of DCMNR’s processes and staff. Given that the Department is now in a strong position vis-à-vis its ability to deliver technology to the business, the two key themes of this Strategy are:

1. Improving how the change associated with introducing new technology is managed
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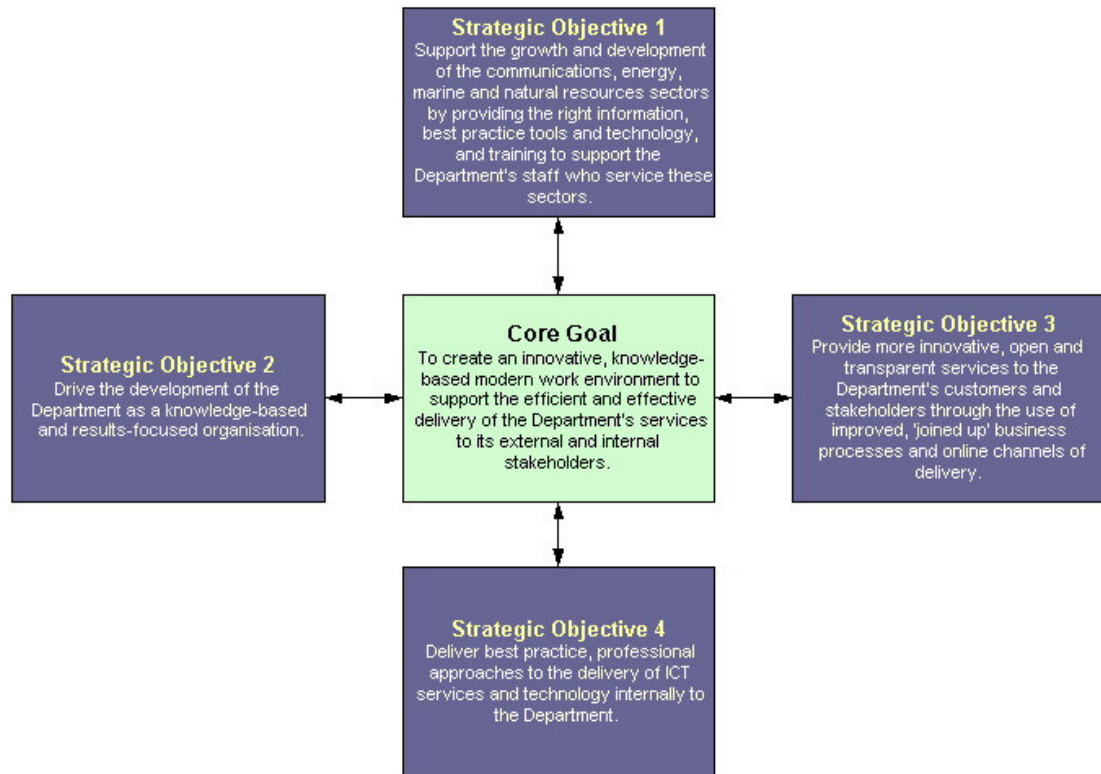


The objective of this document is to define a strategic framework for ICT within DCMNR to ensure that all future investments in process improvement and technology are made in a planned and measured way over the next 3 years.

The background and context to this Strategy is set initially. The key internal driver for the ICT Strategy is the Department’s recent issue of a new ‘business’ strategy, which outlines the new drivers and objectives for the Department for the period 2005-2007. In addition, there are a wide range of external drivers mandating this new ICT Strategy, including the decentralisation agenda, the Public Sector Modernisation Programme, eGovernment developments, and the Department’s commitments under the Sustaining Progress Agreement. The Information Society agenda in particular stresses the key role that ICTs have in delivering and underpinning more innovative, modern ways of working.

The ICT Vision then describes what the target is for the Department’s Strategy, and represents a business view of how ICT can contribute to the effective management and execution of the Department’s business processes. From the Department’s business strategy and the vision for ICT come the goals and objectives of the ICT Strategy.

Section 5 outlines the 4 key objectives for the IS Division over the next 3 years, and discussed the key actions that are required to achieve those objectives. The 4 key objectives are closely aligned with, and derived from, the Department’s 7 high level goals for the period 2005-2007.

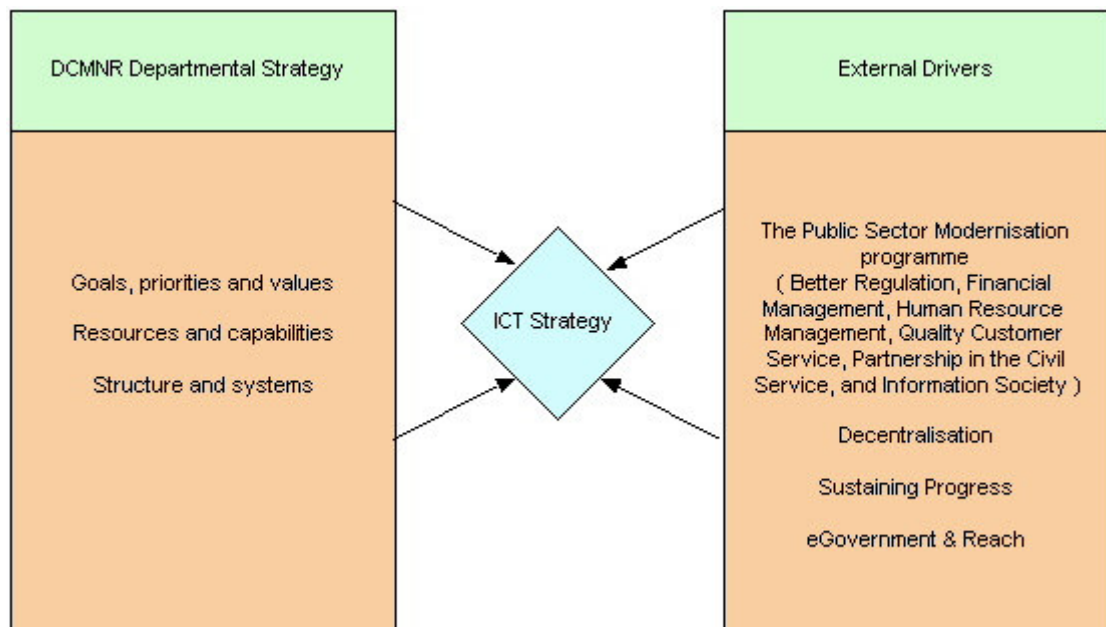


Section 6 outlines how the Information Systems Division should be organised over the next 3 years.

Finally Section 7 provides a brief discussion of implementation issues.

2 Background and context

The Department published its previous Information and Communications Technology (ICT) Strategy in October 2003, and has successfully implemented the majority of the programme of work outlined therein. In early 2005, the Department redeveloped its corporate strategy given that there had been significant developments in the communications, energy, marine and natural resources sectors, as well as in its own internal processes. The revised Statement of Strategy for 2005-2007 was published in September 2005 and IS Division carried out a project to refresh the strategy for ICT so that it reflects the key priorities and drivers from the new DCMNR Strategy, and takes better cognisance of some of the external drivers impacting on the Department. The two strategies are highly interrelated.



The key internal and external strategic issues driving changes in the ICT strategy are discussed in more detail below.

2.1 The Department's Statement of Strategy 2005-2007

The mission statement of the Department from the Statement of Strategy is

To promote the sustainable development, management and regulation of the communications, energy, marine and natural resources sectors in support of national economic and social policy objectives.

The Department's economic remit spans communications, broadcasting and energy together with seafood, maritime transport, maritime safety and natural resources. In terms of activities, the Department determines the regulatory environment and policy for a number of economic sectors, governs a wide range of commercial and non-commercial organisations, and delivers a range of services to its customers, both businesses and individuals.

The 7 high level goals that reflect the Departments new priorities for the next 3 years are:

- Goal 1.** To optimise the contribution of the communications, energy, marine and natural resources sectors to growth, competitiveness, innovation, environmentally sustainable and regionally balanced development, and social inclusion;
- Goal 2.** To contribute to the cost effective provision of national and regional infrastructure priorities;
- Goal 3.** To deliver sustainable returns for the economy and communities from indigenous marine, renewable energy and natural resources;
- Goal 4.** To protect the consumer and society through high standard seafood and maritime safety services, marine emergency response and safe energy infrastructure and security of energy supply;
- Goal 5.** To deliver effectively on our corporate governance and shareholding responsibilities;
- Goal 6.** To provide best practice, legal, regulatory and business environments for our sectors;
- Goal 7.** To position the Department as knowledge based and results focused organisation, operating to the highest public service values and standards of service delivery.

These goals were discussed with senior management from the Department's business and within the IS Division, and the set of high level objectives for IS outlined in Section 5 were defined and agreed.

2.2 External Drivers of the Strategy

In addition to the revised key Departmental objectives, a number of external drivers are mandating an update of the ICT Strategy. Firstly, the Government's Public Service Modernisation Programme is a strong driver for the update of the Strategy. This programme incorporates a number of thematic areas which complement and reinforce each other, including Better Regulation, Financial Management, Human Resource Management, Quality Customer Service, Partnership in the Civil Service, and finally, Information Society. This ICT Strategy will ensure that the Department can continue to effectively contribute to these key Government-wide initiatives, and in particular to the Information Society programme. This DCMNR ICT Strategy is strongly driven by the Information Society agenda, and will contribute toward the realisation of the Information Society by implementing best practice in public sector deployment of ICTs. DCMNR has recently made its submission for the third progress report on New Connections, and excellent progress has been made on committed projects, as well as the addition of new projects, such as the Corporate Vessel Register.

Other key Government-wide initiatives that the Department has a range of commitments to are the *Sustaining Progress Agreement* and the decentralisation programme.

The next Section goes on to set out the vision for the Department's ICT-enabled future.

3 Current State Assessment and Key Themes

The full Current State Assessment document for how the Department uses ICTs in mid-2005 has been published as a separate document, and is available from ISD.

Previous ICT strategies within DCMNR were focused on building a base of core technologies, infrastructure, and approaches to software development. While the Department has made excellent progress on these issues, ISD now needs to turn its attention to further maturing its approach to how it interacts with the business Divisions to which it provides services.

In particular, there are two key areas or themes where ISD can further improve its approach to the delivery of ICT services: around change leadership, and value from ICT investments.

3.1 Key Theme 1: Change Leadership

The Department's approach to the management of IT projects has improved significantly over the period of the last ICT Strategy. There is now a formal approach to the governance of such projects, and the establishment of a Programme Office in ISD has led to a standard approach to the delivery of projects. While ISD has been mobilising to improve how it gets new technology out to the business Divisions, the business Divisions have not had the same level of commitment to the management of change. New ICT projects tend to have a significant implications for how processes operate and how people do their day-to-day jobs, and this change needs to be managed closely. The evidence from major IT projects around 'why projects fail' suggest that resistance to change and lack of leadership for change initiatives are responsible for the major issues on projects, and that projects rarely fail for purely IT reasons. The ICT-related projects within DCMNR have been characterised by a relative lack of leadership and sponsorship from the business Divisions, and by a lack of attention to the non-technology related aspects of its projects.

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3.2 Key Theme 2: Deriving value from investments in ICT

The purpose of any IT investment is to deliver improvements to the Department's performance. The recent controversy surrounding the PPARS and FISP projects for the Health Service Executive has highlighted the need for public sector organisations to ensure that they derive value for the money they are spending on ICT projects, and that such spending delivers tangible performance gains for the Department.

Research evidence suggests that over 70% of organisations have no formal justification and post-implementation review process for IT investments. ISD have been very proactive as regards forward strategic planning, with this ICT Strategy Project being the 4th Strategy developed within the Division over the past 6 years. While ISD have been careful to set its projects within an overall strategic context, it has not been as active with regard to measuring the benefits associated with its projects, after they have been implemented. The Programme Office have been tasked with this role, but as yet have not had the capacity to direct a formal benefits management process within ISD.

There are a number of other reasons for ISD to ensure a more formal approach to benefits management. Firstly, there is a drive across the public sector to ensure that ICT projects deliver tangible business benefits and that there is a compelling business case for change. Secondly, focusing in on the delivery of business benefits will help ISD to improve how projects are delivered over time. ISD has been gradually improving how it manages projects over time, and formal post-project reviews will help with further refining its approach to project management. Lastly, a focused benefits management process will ensure that the business Divisions are actively using the new technologies that have been delivered, and that such initiatives are enabling tangibly better performance from Departmental staff.

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4 Vision of the DCMNR's ICT-enabled future

The vision for ICT within DCMNR demonstrates how ICT can help the Department to deliver on its goals and objectives. It provides an outline description of the target for the ICT Strategy – that is, where the Department is trying to get to. It is best outlined by way of a practical description of what characterises the Department's ICT-enabled future. The IS Division is shifting its focus from being primarily concerned with the development and deployment of technology to being focussed on the challenge of enabling effective business change, and improvement of people and processes.

4.1 Overall Vision

The Information Systems Division will be one of the primary agents for driving innovation into how the Department conducts its business. ICT within DCMNR will no longer be seen as merely a set of tools to increase productivity or cut costs, but as a means to enabling real change in how the Department executes its business processes. While the need for change must be recognised and led by the business Divisions, ISD can help to drive and enable that change through the use of a variety of collaboration technologies, coupled with better change management and technology deployment processes.

Up to now the Department's IS Division has been concentrating on building and refining its 'production line' for getting new technologies, applications and projects out to the business Divisions, but in the future the IS Division will concentrate as much on the benefits realised from new projects, as how the IS 'factory floor' operates. ISD will look at how new initiatives can help the Department's staff to work more effectively and efficiently, and measurement of those benefits will become an integral part of the development process. Key to this will be improved approaches to managing the changes associated with getting new projects out to users, how users can be educated so that they can use the technologies deployed better, and how ISD can provide stronger support to the business users once the new systems have been rolled out.

ISD, the other Corporate Divisions and the Sectoral Business Divisions will work very closely together to ensure that all business process improvement initiatives will be delivered through cross-functional, integrated teams. Neither ISD nor the Business Divisions will singularly 'own' the responsibility for a project, rather it should be governed and led by the Business Divisions, with ISD having a strong driving and enabling role.

4.2 Vision for the how the Business Divisions use ICT

The business Divisions will be easily able to access the knowledge and information they need to carry out their business processes effectively. Experienced staff will have the tools to allow them to pass their knowledge on, and demonstrate best practice to the less experienced staff in their Divisions. New staff joining the Department will quickly be able to get up to speed on the key activities and processes in their Section. These staff will have easy access to the relevant documents, databases and other sources of data and information they use to inform their decision-making and activities.

Departmental staff will be able to access all the tools they need to do their work by logging in through the Departmental Intranet. When they sign in, they will see their own workspace, which will be personalised based on their role and access rights. This workspace will show the user relevant documents, tasks and applications to which they need access to do their work. Staff will be able to easily send and receive email, regardless of whether they are in the office or not, as well as being able to access their calendar and contacts.

All of the major business processes of the Department, such as Fisheries Management, Exploration and Mining Licensing, Coastal Zone Management, and Petroleum Exploration and Production Licensing will have best practice supporting applications, which make management of the various processes efficient and effective. Where a new specific line-of-business application is required by a particular Division, they will communicate their requirements to ISD through the strategy and business planning processes. ISD will proactively prioritise emerging requirements. Where users need immediate ad-hoc support to develop quick, tactical applications, ISD will provide guidance and policies for developing those relevant applications.

The Department's staff will be easily able to work together on the creation of complex documents and will have access to the latest document collaboration and authoring technologies. Staff will be able to communicate with each other on Departmental issues through the most appropriate of a range of communication technologies, from video and web conferencing to instant messaging to shared team workspaces.

Staff will be able to easily search for documents and information based on a range of search criteria, including keywords or using more structured metadata, such as by Section or date. Where staff members need to access information or documents related to a specific location or area, they can search for such information using simple map and location-based search facilities, accessible through the Intranet.

Staff in the Department's policy Divisions will have the most up to date data, impact analysis models, and tools to manage consultations, so that they can test assumptions and understandings around the DCMNR's social and economic policies.

Where staff need to interact with other Government agencies and statutory bodies to deliver government services, they will use secure collaborative applications which will make structured transactions uncomplicated to manage, and non-structured interactions secure and traceable. Staff who manage the corporate governance of the 55+ bodies under the aegis of the Department will use best practice compliance and regulatory technologies to monitor their performance.

Financial management will be devolved to the various business divisions, and all units will be able to quickly get a snapshot of their financial position, and generate relevant financial reports. Project costing will be transparent and understandable both to internal staff and to external customers. All payments taken from the Department's customers from the various different sectoral applications will be promptly reflected in the central financial application.

As the Department decentralises and moves to multiple offices around the country, staff will be given better access to mobile and remote working technologies, to reduce the impact of being away from the office.

4.3 Vision for the IS Division's Processes

The IS Division will proactively prioritise business Divisions' emerging requirements through the ICT strategic planning process. The ICT Strategy sets the direction and workplan for the Division's activities in the short to medium term but over time, new requirements may emerge from the business Divisions, as their priorities and initiatives change. While the IS Division will be responsive to service requests and will manage the request queue based on available resources, all emerging requests from the user Divisions must demonstrate a clear business value, and should be aligned with the Department's overall business strategy.

The IS organisation will function as a business service provider, which will require effective processes around financial and service management, organisation and governance, as well as strategy development and business planning. It will promote close working relationships with other business Divisions, particularly the other Corporate Divisions, to deliver projects which will generate strong business benefits.

While the business Divisions will provide the overall governance for new projects, ISD will drive the change forward through professional approaches to project delivery and management. In particular, the IS Division will improve how it engages with the users during projects, so that the changes to their work practices are managed more closely and users have better understanding of, and a sense of ownership for, new systems.

As regards software development processes, once new user requirements have been identified, the Common Data Authority and Business Analysts will assess the data and process requirements, compare them to existing data structures and application components already in use, and develop project initiation and scope documentation. From there the business analysts will work closely with the end users to understand and model their requirements, before handing over the use case specifications to the development teams. There will be a comprehensive set of common components available which will ensure that the development of the next generation of the

sectoral systems will be significantly faster. The Test team will initially test the newly developed systems, before showing the end users how to carry out formal user acceptance testing.

When new projects have been delivered, the business and IS teams will measure the benefits derived from the change associated with those projects, and the costs associated with those projects. This will enable the IS Division to demonstrate the value it adds, and the benefits of the new processes or technology to the business Divisions. This will ensure that ISD maintains a professional, results-oriented approach to the delivery of new projects, and that business Divisions understand the positive contribution that ISD is making to help them do their work better.

Where staff are having difficulty with applications or hardware, ISD will respond quickly to agreed service levels and will work closely with the user to resolve those problems, and where necessary will mobilise input from other parts of the Corporate Services team. The Helpdesk will maintain a local presence in each of the Department's key offices around the country. Users will be given a view of the problems they have raised over time and how the Helpdesk and other members of the problem-solving team resolved their issues.

As well as being responsive to user requests, ISD will proactively carry out trials of emerging new technologies to assess their suitability for deployment to the user Divisions. Where such technologies are assessed to have a potential business benefit, ISD will need to work closely with the user Departments to ensure that there are specific use cases where such technology improves how the user works.

4.4 Vision for the Technology

The key building blocks for the Department's software technical architecture are in place, are industry standard, and should continue to include:

- ❑ Internet Explorer as the presentation client for most of the Department's applications
- ❑ Microsoft Windows XP on the desktop
- ❑ Oracle 10g for storage of data and information related to strategic applications (spatial and non-spatial information) and certain package applications
- ❑ ESRI ArcGIS for GIS services
- ❑ Oracle 9iAS for enterprise application management and browser deployment
- ❑ Microsoft Windows 2003 Server for server management
- ❑ Microsoft Exchange and Outlook for email and calendar services
- ❑ Microsoft SQL Server for data storage and management for a variety of internal applications including staff travel and related information
- ❑ Microsoft Access for short-term, tactical application and database development
- ❑ Microsoft NT Active directory / LDAP for user authentication and access

- ❑ Microsoft Content Management Server for management of the Intranet and a variety of Internet sites
- ❑ Oracle Discoverer for management reporting

These technologies are largely from three main enterprise software suppliers: Microsoft, Oracle and ESRI. While these suppliers often offer very strong all-round technology and good support, they are not necessarily always best-of-breed for the deployment of specific applications. The Department will therefore, trial individual technologies and applications for specific needs where the major enterprise software players do not have an industry leading position. In addition, while the Department has made significant investments in a number of key enterprise technology suppliers, it has not yet evaluated the applicability of open source technology to its IT operations yet. Although there are justifiable concerns over the support and maintenance of many open source components, support services will improve significantly over the period of the strategy for key open source technologies, and are likely to be mature enough to consider as part of an enterprise architecture.

The Department's key application portfolio should be presented to the user through an Internet browser, accessed through the Intranet and should continue to be architected as n-tier applications. Given the strong experience built up in J2EE development frameworks, the Department will continue to develop its key sectoral applications using Java. Internal Intranet applications will be developed on Microsoft technologies, including ASP.net, Sharepoint and CMS. Location information remains a key attribute in many of the Departments' processes and applications, and the Department should make the tools available to the user community to maintain their own GIS datasets, through the ArcGIS suite of technologies.

The Department will implement further technologies in the area of document and content management, since the present systems in place in this area need to be updated and improved.

A key issue for the Department in terms of its software technical architecture will be to continue to ensure that the highest levels of security are maintained on all Departmental systems to prevent both external intruders and unauthorised internal users from damaging or stealing Departmental data. Given the significant risks associated with a lax approach to electronic security, it is key that the Department continue to invest in strong security around its systems.

The Department will continue to trial emerging collaboration and communication technologies with key business users in the Department. The key issue here is people related, in that these types of technologies must enhance how users do specific tasks. If the user doesn't see a clear efficiency gain or business benefit to their usage, then they should be avoided. Some of the technologies that are appropriate for DCMNR to trial include shared team electronic workspaces and IP-based digital communications technologies, such as instant messaging, video- and web-conferencing. These types of technologies will be useful to minimise the impact of having 3 major Departmental offices spread across the country post-decentralisation.

As the number of applications that users need to access to do their work rises, they will have to remember more and more passwords. The Department will therefore try

to reduce the number of passwords that users need to keep by maintaining a single sign on environment that all new Departmental applications should conform to.

Mobile technologies will continue to be rolled out to the Department, particularly to the staff who are by necessity away from the office for long periods. In particular, ISD will look at introducing mobile applications to facilitate the work of those who are based primarily in the field doing inspections, surveys and rescue work.

A key issue in the Technology area is the resilience and recoverability of the key systems that support the business of the Department, including the network, servers, and applications. Two key issues were highlighted during discussions with the teams responsible for the infrastructure:

1. Failover capability - there needs to be stronger investment in the Department's ability to failover key servers to alternative locations.
2. Recovery capability - although there has been a recent project to create a disaster recovery strategy for the Department, there has been relatively little hands-on testing of the Department's tangible capacity to recover its systems in the event of a disaster at its key Adelaide Road site. This needs to be addressed as a priority and needs to be an ongoing activity for ISD.

As regards the physical infrastructure, the Department has seen a proliferation of servers and a key goal over the course of the strategy is the consolidation of the infrastructure.

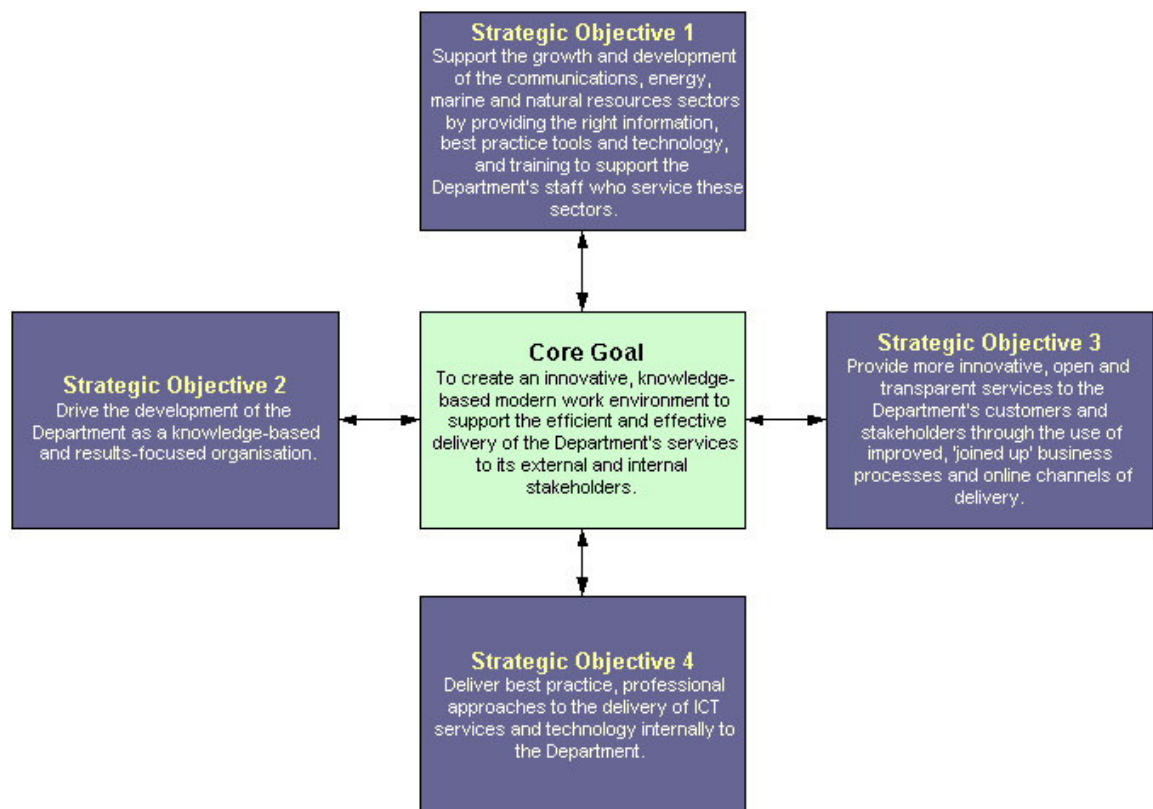
5 Strategic Goals for ICT

In the process of developing the ICT Strategy an overall goal for ICT within DCMNR was defined by the senior management team, along with 4 supporting key strategic objectives.

The overall goal for ICT is:

To create an innovative, knowledge-based modern work environment to support the efficient and effective delivery of the Department's services to its external and internal stakeholders.

The four supporting key supporting objectives are:



Each of these objectives is discussed in detail below, and the actions necessary to achieve these objectives are outlined.

5.1 Goal 1 – Support the growth and development of the communications, energy, marine and natural resources sectors

Underpinning all aspects of the deployment of IT within DCMNR is the necessity to enable staff to effectively service the 4 key sectors for which the Department has responsibility. Staff from each of the Divisions responsible for these areas need to have the right tools and systems in place to be able to regulate, make policy for, and manage these sectors. ISD have delivered a number of the major sectoral systems suggested in the previous ICT Strategy, for the fishing sector and the mining sector, and are in the process of delivering a Coastal Zone Management system for the aquaculture sector, and a Corporate Vessel Register (through the SafeSeaNet project) for the marine sector. ISD has developed a strong capability to deliver these types of systems, and has gradually built a set of common components, and an underlying common data model, which can be used and re-used in multiple sectoral applications. The sectoral development teams will need to continue to enhance their capability to deliver such applications efficiently. There are currently a range of specific business processes within the Department that need improved support.

Actions	Outputs
<p>[1]</p> <p>Improve how the Coast Guard manages its incident response services</p>	<ul style="list-style-type: none"> ❑ Commissioning of a new Search and Rescue system, which would be integrated with their new new Integrated Command and Control (ICCS) system ❑ Better out-of-hours support from ISD for the Search and Rescue system
<p>[2]</p> <p>Develop a system whereby Petroleum Affairs Division can improve the management of their customer communication and licensing processes.</p>	<ul style="list-style-type: none"> ❑ New PAD system developed and successfully in operation in Petroleum Affairs Division

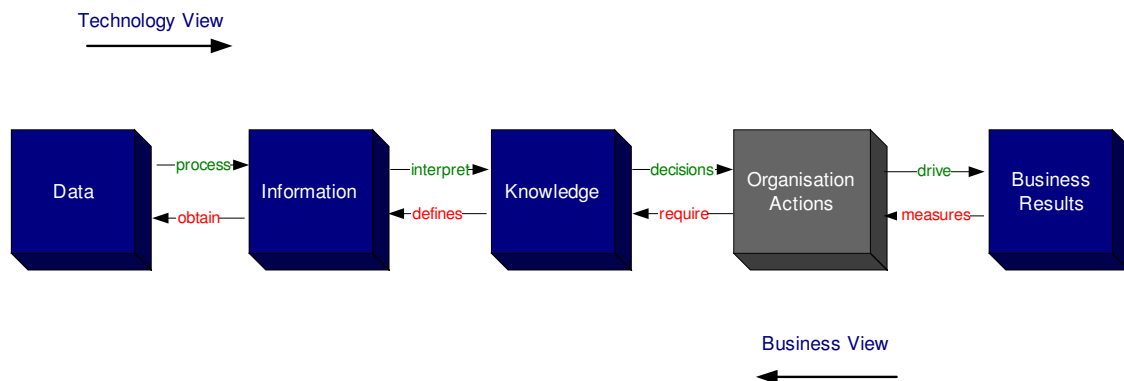
Actions	Outputs
<p>[3]</p> <p>Continue to develop and enhance the major sectoral systems already committed to by the Department - IFIS, COZaS, SafeSeaNet/CVR, and MAPS</p>	<ul style="list-style-type: none"> ❑ IFIS, COZaS, SafeSeaNet/CVR, and MAPS successfully implemented and improved business processes evident in the various user Divisions ❑ Additional requirements for each of the key systems captured and business cases evaluated, for example, Harbour Section's requirements for IFIS around charges on vessels, and billing for Harbour services
<p>[4]</p> <p>Implementation of the key projects within the GSI's DIGiT Programme, the GSI's 3D project, and some internal projects.</p>	<ul style="list-style-type: none"> ❑ Implementation of DIGIT Project 1 - Centrally Organised Network of Records (CONoR) ❑ Implementation of DIGIT Project 2 - Document Management System (DMS) ❑ Implementation of DIGIT Project 3 – Location-Aware Data (through the ArcIMS GIS engine) ❑ Implementation of DIGIT Project 4 – eCommerce Website ❑ Implementation of DIGIT Project 5 – Seabed data ❑ Implementation of the 3D Data Modelling Project ❑ In addition to the core DIGIT project, the GSI have a range of other internal projects which will need funding over the next 3 years.
<p>[5]</p> <p>Develop a system to assist the Marine Survey Office to manage their vessel surveying and other processes.</p>	<ul style="list-style-type: none"> ❑ Registration, Surveying, Certification, Licensing, Monitoring and Marine Safety modules developed and successfully in operation to support the MSO's processes. This should be a follow-on phase to the current SafeSeaNet/CVR project
<p>[6]</p> <p>Implementation of the GIS Strategy for the Department prepared in early 2005</p>	<ul style="list-style-type: none"> ❑ Continue to include geographic information in each of the major sectoral systems ❑ Increased usage of location information in the business processes of the Department

Actions	Outputs
<p>[7]</p> <p>Provision of up to date data, impact analysis models, and tools to manage consultations for staff in the Department's policy Divisions</p>	<ul style="list-style-type: none"> ❑ Better tools rolled out to the Department's policy Divisions so that they can test assumptions and understandings around the DCMNR's social and economic policies ❑ Trial use of the Internet to publish embryonic policy out to the public and to solicit feedback from consultations
<p>[8]</p> <p>Use of best practice compliance and regulatory technologies help staff who monitor the performance and corporate governance of the 55+ bodies under the aegis of the Department</p>	<ul style="list-style-type: none"> ❑ Trial of new compliance technologies, for example, explore how a secure portal or extranet technology could provide more structured communication channels to the Bodies ❑ Improvement of the Board Appointments database, both internally and externally ❑ Improvement of how the bodies report financials and staffing numbers ❑ Create an electronic resource area for corporate governance knowledge and information ❑ Improved corporate governance processes
<p>[9]</p> <p>Improve how seafarer related processes are managed by the MSD</p>	<ul style="list-style-type: none"> ❑ Develop a new Seafarer Management system and consolidate the various seafarer datastores around the Department
<p>[10]</p> <p>Improve marine safety reporting</p>	<ul style="list-style-type: none"> ❑ Develop a system to help with managing and reporting on marine safety incidents and investigations to help to meet the MSD's reporting needs
<p>[11]</p> <p>Improve how the Coast Guard manages its stores</p>	<ul style="list-style-type: none"> ❑ Develop a system to manage the Coast Guard's stores and inventory, which is a major area of work in IRCG, and still relies on paper trails.

Actions	Outputs
[12] Improve the modelling of the Energy Sector	<ul style="list-style-type: none"> ❑ Commissioning of a specialist application to help the Energy Division’s Chief Technical Advisor with modelling and analysis of changes in the Irish energy system. This application will be used to provide an independent view on potential changes in the Irish energy infrastructure, including possible switches to alternative or renewable energy sources.
[13] Continue to refine how sectoral systems are developed, rolled out to, and used by, the business Divisions	<ul style="list-style-type: none"> ❑ Faster, more efficient and better quality development processes evident within ISD for the key sectoral systems ❑ Refined approach to how the business process change associated with new systems is managed ❑ Better user satisfaction with new business processes and supporting applications

5.2 Goal 2 – Drive the development of the Department as a knowledge-based and results-focused organisation

A key issue for this ICT strategy is how it can enable DCMNR to move towards being able to make better decisions and the measurement of the outcomes of those decisions. These are key issues for the Department, since business processes cannot function effectively unless staff executing those business processes have the right knowledge to make decisions. ICT has a pivotal role to play in ensuring that data is captured, stored and accessible, so that it can be turned into information, which combined with experience leads to the knowledge to make the right business decisions and determine Departmental policy. There is a strong link between data, information, knowledge, business process (or organisational actions) and results. The Department needs the right systems in place to be able to measure its business performance and outcomes, so that it can make better decisions in the future.



A key pillar in moving towards a mechanism for measurement of business results was put in place with the recent completion of the first phase of the implementation of the Agresso Financial Management System. While DCMNR has made significant progress on its MIF Programme with the implementation of Agresso, there are a number of ongoing drivers for further moves towards performance reporting and evidence-based policy-making – 1. the Department’s commitments to implement the second phase of MIF on performance management, and 2. the DCMNR’s responsibility to feed into the National Statistical Strategy. ICT has a strong role to play in helping to achieve a closer linking of resource allocation, output/outcome indicators and performance measurement.

As the decentralisation gathers pace, loss of Departmental knowledge will become a major risk. While the knowledge management project will help to capture some of the know-how around business processes and organisational ‘memory’, it is recognised that it can only go part of the way towards the capture of the experience built up in the Department. Knowledge management should be an ongoing, enduring Departmental project, and will need the continuing support of the IS Division.

One of the key tools for the dissemination of information is the Departmental Intranet, which is widely regarded internally as an easy to use and intuitive ‘gateway’ to access the DCMNR’s internal information and applications. It is both a source of information and documents, and an access mechanism for key internal applications. It also serves as the repository for more and more ‘quick win’ internal applications, such as Correspondence Tracking, and the Departmental Org Chart. The Department has built a strong capability to create and deploy internal applications rapidly on the Intranet, and can respond promptly to business divisions’ needs to capture data around specific processes.

A significant proportion of the Department’s information has a locational element. Many of the Department’s business processes have a strong interdependence with geography, for example, mining licensing and coastal zone management. GIS can help the Department’s managers and policy-makers to make better informed, evidence-based decisions in situations where location counts. While some of the Department’s data is inherently geographical in nature, there are significant amounts of documents, reports and drawings that have a relevant location. Where information and documents are spatially indexed, they can be retrieved by using maps and location searches, which is how many non-specialist users prefer to access information. The Department has recently defined a new GIS Strategy, which will

govern how location-based information will be integrated into the Department’s processes and how spatial datasets will be managed and developed. This ICT Strategy fully endorses the programme of work contained therein, and re-emphasises the importance of integrating locational information into its business processes and sectoral systems.

Actions	Outputs
<p>[14]</p> <p>Improved capture, retention and accessibility of the Department’s knowledge assets</p>	<ul style="list-style-type: none"> ❑ Improved ability of the Department’s staff to access the right knowledge and information about their business processes ❑ Successful deployment and usage of the Knowledge Management system ❑ Implementation of a new document management system with better functions for users to search for documents, store and retrieve documents, version documents, and collaborate on documents.
<p>[15]</p> <p>Improve how the Department’s staff collaborate and communicate</p>	<ul style="list-style-type: none"> ❑ Further enhancement of the Department’s Intranet ❑ The Department’s staff making more effective use of a range of existing and new collaboration technologies ❑ Trial and implementation of a number of newer collaboration tools, such as instant messaging, shared team workspaces and web conferencing

Actions	Outputs
<p>[16]</p> <p>Provide better tools and technologies to allow Divisional managers to measure the results of their business processes</p>	<ul style="list-style-type: none"> ❑ A more performance-oriented approach to business processes ❑ Consistent monitoring and management of business performance at various levels in the Department ❑ Better metrics for the results of business processes ❑ Further rollout of additional modules and improved training on the Agresso financial system, and associated financial applications ❑ Creation of a single data warehouse into which multiple data sources can feed, and which will provide a platform for better evidence-based decision making ❑ Implementation of better business intelligence technologies
<p>[17]</p> <p>Improve how the Department manages its own internal personnel</p>	<ul style="list-style-type: none"> ❑ Implement Peoplesoft and any necessary supporting applications ❑ Roll out of more ‘self-service’ functionality to allow Departmental staff have better visibility and management over their own personnel information

Actions	Outputs
<p>[18]</p> <p>Provide better tools and support for the mobile workforce within the Department</p>	<ul style="list-style-type: none"> ❑ Field-based workers such as Sea Fisheries Officers, and Marine Surveyors can easily and efficiently access Departmental data and systems while in the field, and have less reliance on returning to the office to do their work. Sea Fisheries would like to be able to capture data related to field inspections of boats ❑ Provide better training to users of mobile devices so that they understand what's possible and practical to achieve using such devices ❑ Previous 'dead time', such as travelling to and from meetings, is utilised, with staff using converged mobile devices ❑ Provision of out of business hours support for the mobile workforce ❑ Improve the availability and support for better mobile devices, including smartphones, telephony-enabled BlackBerry email devices and PDAs ❑ Increased budget for mobile technologies within the ISD budget
<p>[19]</p> <p>Increased use of geographic information systems to help provide better evidence for the Department's decision making</p>	<ul style="list-style-type: none"> ❑ Continued improvement of the Department's capture and management of location-aware information ❑ Creation of additional mapping services to provide internal decision makers with access to relevant spatial information to support their decisions ❑ Investigation of the Energy Division's requirements around an Energy Infrastructure GIS Dataset
<p>[20]</p> <p>Better work planning and rostering tools</p>	<ul style="list-style-type: none"> ❑ Trial of new software to enable better staff rostering and work planning, possibly with Sea Food Control Division

5.3 Goal 3 – Provide more innovative, open and transparent services to the Department's customers and stakeholders

The Department has significant commitments under the Government’s Action Plan for the Information Society (*New Connections*), which addresses a number of crucial areas such as Telecommunications Infrastructure, Legal and Regulatory Environment, ICTs in Government and eInclusion. DCMNR has recently made its submission for the third progress report on *New Connections*, and overall excellent progress has been made on committed projects. In addition, a new project not identified in the original *New Connections* document, the Corporate Vessel Register is now under way. The Department has to strive to make more and more of its services available to its customers through whatever channels they find most accessible, and especially through online channels of delivery. While online delivery of information and services is appropriate for many of the Department’s customers, it is not appropriate for all. For example, while the fishing community are becoming more and more technically savvy, many of the Department’s more traditional customers may struggle with online systems, and may prefer walk-in, over the counter type access to services. The Department needs to ensure that any initiatives to provide new services to customers are through mechanisms the customers will use.

Actions	Outputs
[21] Develop an improved web-based portal whereby Petroleum Affairs Division can make their information available to their stakeholders and customers seamlessly on the Internet	<ul style="list-style-type: none"> ❑ New web-based portal being accessed extensively by the public and PAD’s customers ❑ New content management system successfully in operation in Petroleum Affairs Division, which will allow PAD to easily update their information to the portal
[22] Develop a Maritime Safety Portal	<ul style="list-style-type: none"> ❑ Development of a single portal for the Maritime Safety Directorate that covers all aspects of maritime safety including public access to the vessel register, access to licensing information, regulatory affairs, advice to the public (similar to www.safetyonthewater.ie), Coast Guard information, weather, area based services, for example, charts, wrecks etc., Commissioner of Irish Lights information etc

Actions	Outputs
<p>[23]</p> <p>Develop an improved web-based portal whereby GSI can make their information available to their stakeholders and customers seamlessly on the Internet</p>	<ul style="list-style-type: none"> ❑ Migration of GSI's data to a standard Oracle database under the CONoR project completed ❑ CONoR database spatially enabled ❑ eCommerce site developed
<p>[24]</p> <p>Better interaction with the Coast Guard's Volunteers</p>	<ul style="list-style-type: none"> ❑ Computerisation and networking of the 54 IRCG stations ❑ Development of an Intranet site for the Volunteers. ❑ Evaluate potential impact of eLearning on the Volunteers ❑ Develop a new Intranet based database for tracking Coast Guard volunteers.
<p>[25]</p> <p>Provision of online fisheries-related information and data capture services</p>	<ul style="list-style-type: none"> ❑ Publication of enforcement policies and methods and the outcome of enforcement programs ❑ Identification of appropriate IFIS information to be delivered online, with Sea Fisheries Division ❑ Assess feasibility of capturing electronic fishing logs directly from larger fishing boats directly into IFIS over the Internet ❑ Assess feasibility of the capture of fish sale and transport data directly into IFIS over the Internet
<p>[26]</p> <p>Provide additional and improved map services to the public on the Internet, as per the Departmental GIS Strategy</p>	<ul style="list-style-type: none"> ❑ The Department should establish a catalogue on which the metadata for spatial data holdings can be listed and exposed to the Internet. ❑ Divisions should identify those GIS data sets over web services which their customers would like to access
<p>[27]</p> <p>Provision of an online vessel data service</p>	<ul style="list-style-type: none"> ❑ When the Corporate Vessel Register becomes operational, the MSD wish to make vessel related data available online

Actions	Outputs
[28] Identify opportunities to avail of the Government's central eGovernment services architecture	<ul style="list-style-type: none"> ❑ Specific opportunities identified for exposing DCMNR's services through the Public Services Broker (PSB) ❑ The Department should identify map services which it should link into the PSB ❑ Government-to-Government web services provided by Reach utilised by the Department, e.g. personal and business authentication
[29] Improve how the Department manages its responsibilities under the democratic process	<ul style="list-style-type: none"> ❑ Improvements to the Parliamentary Questions (PQs) system ❑ Improvements to the eCabinet system ❑ Creation of a database of consultants used and consultancy projects commissioned by the Department, since the Department regularly gets Parliamentary Questions on what consultants are used and what was spent on each project.
[30] Improve how the Department manages its customer and stakeholder base	<ul style="list-style-type: none"> ❑ Business Divisions take ownership of the management of customer-related data ❑ Retooling of some systems to provide better customer data management

5.4 Goal 4 – Deliver best practice, professional approaches to the delivery of ICT services and technology internally to the Department

IS Division has refined its structures and processes significantly over the period of the previous Strategy, and now has 4 Sections responsible for delivering the range of IS services to the Department, *Business Systems*, *Information Society*, *Service Delivery* and *Infrastructure*. The Division has significantly improved its use of project management and software development methodologies, and now has a reliable and structured approach to developing new systems. There is a good Intranet in place, which serves as a gateway for Departmental staff to access key internal information and systems. There is a responsive Helpdesk in place, and overall, staff around the Department are very satisfied with the level of service they receive from the IS Division.

While the 4 Sections are well integrated and their roles and responsibilities are clearly defined, there are a number of areas where the processes within ISD can be further enhanced and developed. In particular, ISD needs to improve how it measures the business benefits derived from ICT investments, and it also needs to work on the management of the change associated with the deployment of new projects.

Actions	Outputs
<p>[31]</p> <p>Become the agent for change within the Department by proactively helping the business Divisions to implement process improvements</p>	<ul style="list-style-type: none"> ❑ Develop close working relationships with other business Divisions, particularly the other Corporate Divisions, to deliver projects which will generate strong business benefits. ❑ Provision of best practice project management and other skills (process modelling etc.) to the business Divisions ❑ Implementation of improved collaboration, workflow and process management technologies
<p>[32]</p> <p>Ensure that each new project has a strategic context</p>	<ul style="list-style-type: none"> ❑ While the IS Division will be responsive to service requests and will manage the request queue based on available resources, all emerging requests from the user Divisions must demonstrate a clear business value, and should be aligned with the Department’s overall business strategy. ❑ Documented business cases maintained by ISD’s Programme Office
<p>[33]</p> <p>Continue to refine how ISD develops and delivers new projects</p>	<ul style="list-style-type: none"> ❑ Improved dialogue with users during projects, so that the changes to their work practices are managed more closely, and users have better understanding of, and a sense of ownership for, new systems ❑ Improved processes around business analysis, software development and testing
<p>[34]</p> <p>Measure the results of each initiative and project that ISD delivers</p>	<ul style="list-style-type: none"> ❑ Post-implementation reviews for all projects ❑ Work closely with the users to understand and document the tangible and intangible business benefits of new initiatives

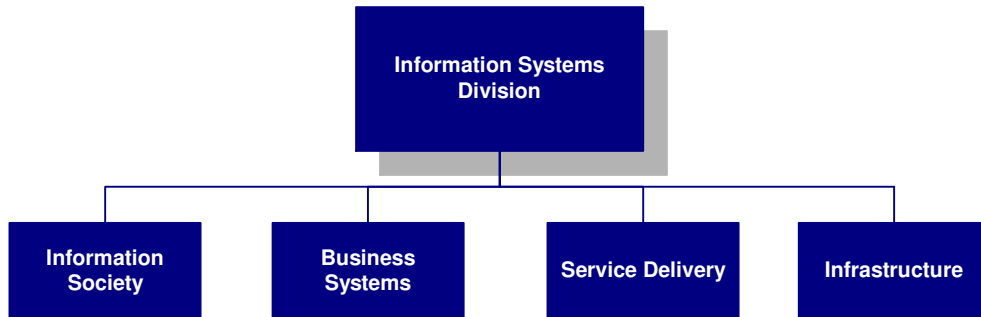
Actions	Outputs
<p>[35]</p> <p>Use strategic sourcing and external skills procurement to augment the IS Division's internal capabilities</p>	<ul style="list-style-type: none"> ❑ Improvement of the IS Division's skills around procurement of services from the marketplace ❑ Continue to outsource the provision of the IT Helpdesk service to specialist service providers ❑ Continue use of specialist hosting services infrastructure and services from the LGCSB around the communications network, management of the databases and application servers, and security for its main Internet applications.
<p>[36]</p> <p>Minimise the impact of the decentralisation programme</p>	<ul style="list-style-type: none"> ❑ Evaluate the network bandwidth possibilities in place in each of the Department's proposed locations, since a lack of network bandwidth may potentially necessitate a move towards more decentralised technical architecture ❑ Assess the business continuity impacts, given that systems and servers will need to be moved during the decentralisation process ❑ Trial and deploy new technology to facilitate better linkages between the various physical locations, in terms of messaging and videoconferencing ❑ Continued assessment of the impact of decentralisation on both internal staff and external staff and service providers

Actions	Outputs
<p>[37]</p> <p>Provide users with strong support under clearly defined service levels</p>	<ul style="list-style-type: none"> ❑ Quick and efficient problem resolution statistics ❑ Strong user satisfaction ratings for the Helpdesk ❑ Improved support for Departmental users who work 24/7, primarily IRCG and Fisheries ❑ Where necessary, mobilise input from other parts of the Corporate Services team ❑ Maintenance of a local presence in each of the Department’s key offices around the country ❑ Provide users with a view of the problems they have raised over time and how the Helpdesk and other members of the problem-solving team resolved their issues
<p>[38]</p> <p>Continually trial and review the most appropriate technologies for the Department</p>	<ul style="list-style-type: none"> ❑ Annually plan for all necessary refreshes and updates of the Department’s technology components (e.g. Oracle upgrades, operating system upgrades etc.) ❑ Review of the speed and usability of the Department’s network, especially at the remoter offices ❑ Assess the applicability of various emerging mobile technologies to support Departmental staff in the field ❑ Review of the applicability of open source technologies for specific point solutions
<p>[39]</p> <p>Ensure that the highest levels of security are maintained on all Departmental systems</p>	<ul style="list-style-type: none"> ❑ Continue to ensure that security is a key priority for the Department to prevent both external intruders and unauthorised internal users from damaging or stealing Departmental data ❑ Continued alignment of security strategy with ISO 17799 ❑ Reduction of the number of passwords that users need to keep by maintaining a single sign on environment that all new Departmental applications should rely on

Actions	Outputs
[40] Ensure that the Department can quickly and reliably recover its ability to operate in the event of a major disaster	<ul style="list-style-type: none">❑ Complete the current project to create a Disaster Recovery Plan❑ Commission a follow on phase of work to physically test restoration of systems so that the Department can rely on its business continuity capability
[41] Improve how the Department's corporate services are managed	<ul style="list-style-type: none">❑ Development and successful deployment of a building management system

6 IS Organisation

The IS Division has recently undergone a major restructuring and now has 4 main Sections, whose respective responsibilities broadly reflect the key objectives of the Strategy.



Business Systems deliver a mixture of software development, and support and maintenance for a wide range of primarily internal applications. They are responsible for development of the Intranet and for the support of the Department's various websites. They contribute to key internal business projects, such as the Financial System implementation and the Knowledge Management initiative. This team are key to the development of the Department as a knowledge-based and results-focused organisation.

The Information Society Section deliver major software projects to support the growth and development of the communications, energy, marine and natural resources sectors. They are currently working on a number of key sectoral system projects, such as IFIS, COZaS and SSN / CVR. They are also responsible for the maintenance and support of a number of applications, such as MAPS and the Fishing Seafarer's Database. They also support the provision of GIS technology and services to the wider Department. They are responsible for the provision of more innovative, open and transparent services to the Department's customers and stakeholders.

Service Delivery provide the front line key IT support services to the Business Divisions through the IT Helpdesk. They are responsible for the overall "health" of the network and technology infrastructure, which are absolutely vital to the ability of the Department to do its work on a day-to-day basis. To date they have been very successful in delivering a highly available network, and the maintenance of good service to staff across the Department. The Service Delivery area also manages the procurement activities of ISD, including the key relationship with the external service provider for the Helpdesk.

In addition, Service Delivery is responsible for the Programme Office. This team ensure that the Department delivers best practice, professional approaches to the administration and delivery of ICT services internally to the Department. The Programme Office ensures that projects within DCMNR are consistently and

professionally managed, and that there is a strong project governance in place which ensures an ongoing focus on the benefits of each of the projects undertaken by the Department.

Infrastructure are responsible for the planning and maintenance of the three elements of the technical architecture- system software, physical hardware and networks. They are responsible for ensuring security across the systems in the Department, and they also trial new technologies to evaluate their applicability for deployment in the Department. Again, this Section seek to deliver best practice technologies and infrastructure to the Department.

A dedicated Test team has been in place in the IS Division since early 2004, and this team has provided specialist testing services into a number of projects since its inception. This team has proven a valuable addition to the Division, since it has helped to improve the quality of software before it reaches the users for user acceptance testing (UAT). This team has also been valuable because members of the Test team have provided a significant body of training and assistance to users in approaches to testing, as well as with specific knowledge of the new applications in UAT.

6.1 Staffing

Some principles have been established within DCMNR in relation to staffing for ICT service delivery. These are that ISD will not attempt to deliver all IS services from the internal staff complement. Instead, ISD will maintain key resources in each discipline required and procure any additional delivery capacity from the marketplace. This ensures that ISD personnel develop the required skills and knowledge to keep abreast of their area of expertise, while drawing the latest required skills from the marketplace. This change of approach from outsourcing of software projects towards carrying out development and support projects internally has been a move which has been acknowledged as giving the Department more control and flexibility over the deliverables of the projects. In addition, the Division engages in some specific outsourced contracts for a number of projects and services, such as the IT Helpdesk.

Since ISD utilise external specialist resources, there is a need to continue to build ISD's capability to effectively procure and project manage these resources. It is recommended that the IS Division focus its training and development efforts on furthering its project and supplier management capability. This will allow them to service more business initiatives, particularly as new projects come on stream over the course of the implementation of the Strategy.

A number of issues were raised around the structures and processes within the IS Division, and these are discussed below.

6.2 Approaches to Development

There are broadly two main styles of software development within the Department, and they are split across the two main development units within ISD, the Information Society Unit and the Business Systems Unit. Within the Information Society Unit, the style of development has moved away from the more traditional waterfall-method style of development to a hybrid of a more rapid and user-focussed development methodology, Dynamic Systems Design Methodology (DSDM). This methodology provides a structure to include users more actively in the design of the system, with one of the key tenets of the methodology being the importance of prototyping to allow users to see application functionality earlier. Reusability of code is a major design goal for the Information Society development team since they have made a major investment in a set of Common Components. While earlier projects were hampered by slow development cycles due to the complexity of building and deploying these common components, the comprehensive set of common components now built should make the development of the next generation of sectoral systems significantly faster.

The Business Systems Unit makes use of a similar prototype-focused application development methodology, and develops primarily internal, bespoke systems that are deployed through the Intranet. Their style of development allows for rapid development and deployment of internal systems, and ensures that if users have a high priority need for an internal application, this can be created and rolled out quickly.

While there is a good balance between the structure associated with the enterprise architecture used by the Information Society team, and the rapid application development capability of the Business Systems team, there is a perceived lack of shared software components, data and methodology across the two teams, which can lead to inconsistent data across the two areas. For example, the Information Society team is responsible for fishing seafarers, whereas the Business Systems team is responsible for a commercial seafarers datastore. Also, as regards communication with the Department's customers, the Business Systems team maintains a Correspondence Tracking system, whereas the Information Society team maintain a number of common components in this area, like Consultations and Document Handling. Over the course of the Strategy the development teams will need to work more closely together to address these issues.

6.3 Service Delivery

Overall, the perception around the Department is that the quality of service received from the ISD Helpdesk is excellent. There are however a number of concerns as regards IT service delivery that will need to be managed over the course of the Strategy.

Firstly, the IRCG is moving towards decentralisation to Drogheda for HQ staff and closure of the Marine Rescue Co-ordination Centre (MRCC) in Dublin. When this

comes about there will be 2 RCCs, at Malin Head and Valentia, and a HQ in Drogheda. A fully integrated communications/computer system will be required to operate in this remote environment especially when dealing with major air/sea emergencies. A present concern exists about IRCG systems vulnerability as there is no 24/7 ISD support for Malin Head, Dublin and Valentia RCCs (Rescue Coordination Centres). A serious problem commencing on a Friday evening may not receive attention until the following Monday morning. If a system went down it could mean going back to pen and paper. ISD and the IRCG will need to work closely together to ensure the right level of support for

Secondly, there was a perception that ISD could provide significantly better support to events. One of the Business Divisions recently organised an international conference and felt that they could have received stronger support from the ISD with relation to networks, backups and Internet access etc. ISD will need to retain the capacity to support such events from time to time as they arise.

Thirdly, although Divisions that are away from HQ are very happy with the level of IT support services they get from ISD, they have stressed that they want the local presence from the Helpdesk maintained in their local offices. In addition, as decentralisation takes place, ISD will need to ensure that the remote offices get the right level of support from the Helpdesk.

6.4 Change Management & Training

Although there is greater proficiency amongst all Departmental staff in last 12 months thanks largely to ECDL and the knowledge management projects, there is a perception however that ISD assume a common minimum level of competence with ICT, and that communications and policy statements in relation to technology from ISD could be easier to understand. There is still a need for a continuous training programme and concentrated efforts specifically on new systems, and it has been suggested that more use should be made of one-to-one training and follow ups. In the past the effort involved in transitioning from old systems to new systems was underestimated, and staff felt that they couldn't get the information they needed out of the newer systems.

In addition, there is a perception that IT projects, as a Central service, are 'rolled out' to the Business Units, sometimes without necessarily having their full buy-in. ISD will need to ensure that business Divisions drive any initiatives that have an ICT element, rather than ISD leading these projects. Part of the issue here is about communication and dialogue. Divisional staff must have a good understanding of the benefits of leaving the current ways of doing their jobs. If such questions are not addressed, resistance to the change naturally develops across the Department and creates risk to the implementation and sustainability of the ICT change initiatives. More concentrated efforts and structures around the change management process can help to reduce these levels of resistance.

6.5 Project Management

A number of improvements need to be made in terms of how projects are transitioned from development to production. The Service Delivery and Development teams need to work more closely and define project handover procedures to ensure that the Helpdesk team who provide first line support for the application receive the right preparation and documentation.

6.6 Operations Review

A key improvement recommended within ISD is the establishment of an Operations Review Group, who would review the technical implications of the various projects and initiatives being undertaken by the Department. This Group should have representatives from each of the key areas – Infrastructure, the Helpdesk, the Database Management team, the Software Architecture area and the Business Systems team. This would ensure that the various relevant technical authorities in the Department review and assess the potential impact of technical changes associated with projects before they are implemented.

7 Strategy Implementation

This Section outlines the plan for the implementation of the Strategy and the achievement of the goals and objectives for ICT over the next 3 years. Rather than setting out a specific, granular programme of projects for the next 3 years, Senior Management within the Division have indicated that they will undertake 4 main categories of initiatives and projects over the course of the Strategy:

- ❑ Information Society Projects
- ❑ Business System Projects
- ❑ Infrastructure Projects
- ❑ Service Delivery Projects

The current organisational structure within ISD reflects these categories, and ISD will retain a capability to deliver projects within these categories. The list of candidate projects and initiatives for 2005-2007, that were identified during the strategic planning process are detailed in Appendix 1 below, and these derive closely from the actions defined in Section 5 above. The annual business planning process and feedback from the Department's Management Committee will determine the specific order of implementation for the projects with the highest priorities. For ISD's current work commitments, see Appendix 2.

APPENDICES



APPENDIX 1 – CANDIDATE PROJECTS 2005-2007

Project	Priority	Classification	Sponsoring Organisational Unit
Coast Guard Search and Rescue System	High	Sectoral	Irish Coast Guard
Computerise IRCG Volunteer Network	High	Sectoral	Irish Coast Guard
CoZAS Phase 2	High	Sectoral	Marine Coastal Zone Management
GSI DIGIT - CONoR	High	Sectoral	Geological Survey of Ireland
Maritime Safety Web Portal & Intranet	High	Sectoral	Maritime Safety Directorate
PAD Licensing	High	Sectoral	Petroleum Affairs
PQs / Ministers Reps Enhancement / Redevelopment	High	Corporate	Central Division
Performance Management System / Data Warehouse	High	Corporate	Corporate Planning and Finance
Financial Management Information System Phase 2	High	Corporate	Corporate Planning and Finance
Peoplesoft	High	Corporate	Human Resources Division
Technology Innovation Forum	High	Corporate	Information Systems Division
Library & Document Management	High	Corporate	Information Systems Division
Corporate Governance System	High	Corporate	Strategic Change and Modernisation Division
Network review	High	Infrastructural	Information Systems Division
Disaster Recovery Testing	High	Infrastructural	Information Systems Division
Key Software Upgrades	High	Infrastructural	Information Systems Division
Energy Systems Modelling	Medium	Sectoral	Energy
GSI DIGIT - DMS	Medium	Sectoral	Geological Survey of Ireland
GSI DIGIT - Location Aware Data	Medium	Sectoral	Geological Survey of Ireland
GSI DIGIT - Seabed Data	Medium	Sectoral	Geological Survey of Ireland
GSI 3D	Medium	Sectoral	Geological Survey of Ireland
GSI DIGIT - eCommerce engine	Medium	Sectoral	Geological Survey of Ireland
GSI Internal Projects	Medium	Sectoral	Geological Survey of Ireland
Public Services Broker Integration	Medium	Sectoral	Information Systems Division
IRCG Volunteers Intranet	Medium	Sectoral	Irish Coast Guard
Coast Guard Equipment Register	Medium	Sectoral	Irish Coast Guard
IRCG Volunteer eLearning	Medium	Sectoral	Irish Coast Guard
Coast Guard Volunteer Database Rewrite	Medium	Sectoral	Irish Coast Guard
Fishing Seafarer's System Rewrite	Medium	Sectoral	Marine Survey Office
Online Applications for Marine Surveys	Medium	Sectoral	Marine Survey Office
Marine Safety Incidents Reporting System	Medium	Sectoral	Maritime Safety Directorate
Online Vessel Data	Medium	Sectoral	Maritime Safety Directorate
IFIS / Lirguard Integration	Medium	Sectoral	Sea Fisheries Administration
Mobile Field Inspection Application	Medium	Sectoral	Sea Fisheries Administration
Online fish sales and transport system	Medium	Sectoral	Sea Fisheries Administration
Online publication of enforcement information	Medium	Sectoral	Sea Fisheries Administration
Fishing logbook data capture	Medium	Sectoral	Sea Fisheries Administration
FSAI/DCMNR Seafood Safety System	Medium	Sectoral	Seafood Control
IFIS Phase 2	Medium	Sectoral	Seafood Sectors and Coastal Zone Management
Customer Management	Medium	Corporate	Central Division
Publications System	Medium	Corporate	Central Division
Scanning Solution Deployment	Medium	Corporate	Central Division
Personnel Notices Database	Medium	Corporate	Human Resources Division
ISD Communications Policy	Medium	Corporate	Information Systems Division
ISD Support for Events	Medium	Corporate	Information Systems Division
Integration of PMDS and Training databases	Medium	Corporate	Strategic Change and Modernisation Division
Remote Access Technology Training	Medium	Infrastructural	Information Systems Division
Document Collaboration and Authoring Technology	Medium	Infrastructural	Information Systems Division
Decentralisation System Change Planning	Medium	Infrastructural	Information Systems Division
IP Technology Research	Medium	Infrastructural	Information Systems Division
Energy Infrastructure GIS Map Service	Minor	Sectoral	Energy
eCabinet Improvements	Minor	Corporate	Central Division
Building Services Helpdesk System	Minor	Corporate	Central Division
Departmental Statistical Data Strategy	Minor	Corporate	Corporate Planning and Finance
Consultants Database	Minor	Corporate	Engineering
Work Programming and Planning	Minor	Corporate	Seafood Control
Board Appointments Database	Minor	Corporate	Strategic Change and Modernisation Division
Open Source Technology Evaluation	Minor	Infrastructural	Information Systems Division
Secure Instant Messaging	Minor	Infrastructural	Information Systems Division

APPENDIX 2 – CURRENT ISD WORK COMMITMENTS

Work Type	Project	Project Type	ISD Section Responsible	Sponsoring Division
Project	Disaster Recovery Management	Infrastructural	Infrastructure	Information Systems Division
Service	Security Infrastructure Maintenance	Infrastructural	Infrastructure	Information Systems Division
Service	Infrastructure Maintenance	Infrastructural	Infrastructure	Information Systems Division
Project	Windows 2003 Server and XP desktop rollout	Infrastructural	Infrastructure	Information Systems Division
Project	GSI Projects	Development	GSI	Geological Survey of Ireland
Service	Data Mapper Maintenance	Maintenance	Business Systems	Human Resources Division
Project	SCOOP	Development	Business Systems	Central Division
Service	HR Decentralisation Support System Maintenance	Maintenance	Business Systems	Human Resources Division
Service	Correspondence Tracking System Maintenance	Maintenance	Business Systems	Central Division
Service	Training Database Maintenance	Maintenance	Business Systems	Human Resources Division
Service	PAS Maintenance	Maintenance	Business Systems	Human Resources Division
Service	Minister's Diary Maintenance	Maintenance	Business Systems	Central Division
Service	Prose FMS Maintenance	Maintenance	Business Systems	Corporate Planning and Finance
Project	ICT Strategy	Strategy	Business Systems	Information Systems Division
Service	Access Control Maintenance	Maintenance	Business Systems	Human Resources Division
Service	Freedom of Information Maintenance	Maintenance	Business Systems	Central Division
Service	Transfer Maintenance	Maintenance	Business Systems	Corporate Planning and Finance
Service	Clockwise Maintenance	Maintenance	Business Systems	Human Resources Division
Service	Agresso Maintenance	Maintenance	Business Systems	Corporate Planning and Finance
Service	Corepay Maintenance	Maintenance	Business Systems	Human Resources Division
Service	PQs / Ministers Reps Maintenance	Maintenance	Business Systems	Central Division
Project	Commercial Seafarer's System Rewrite	Development	Business Systems	Mercantile Marine Office
Service	Intranet Maintenance	Maintenance	Business Systems	Central Division
Service	www.ecap.ie Maintenance	Maintenance	Business Systems	Central Division
Service	www.killybegsharbour.ie Maintenance	Maintenance	Business Systems	Central Division
Service	www.euromed.ie Maintenance	Maintenance	Business Systems	Central Division
Service	www.ecap.ie Maintenance	Maintenance	Business Systems	Central Division
Service	www.broadbandart.ie Maintenance	Maintenance	Business Systems	Central Division
Service	www.safetyonthewater.ie Maintenance	Maintenance	Business Systems	Central Division
Service	Online Library Maintenance	Maintenance	Business Systems	Central Division
Project	Intranet and Internet Accessibility	Development	Business Systems	Information Systems Division
Project	Knowledge Management	Development	Business Systems	Strategic Change and Modernisation Division
Project	Content Management	Development	Business Systems	Central Division
Service	www.fishingnet.ie Maintenance	eServices	Business Systems	Central Division
Service	www.broadband.ie Maintenance	eServices	Business Systems	Central Division
Service	www.dcmnr.ie Maintenance	Maintenance	Business Systems	Central Division
Project	www.gsi.ie Migration	eServices	Business Systems	Geological Survey of Ireland
Project	Corporate Vessel Register / SafeSeaNet Phase 1	Development	Information Society	Marine Survey Office
Project	GIS Mapping Services	Development	Information Society	Information Systems Division
Service	GIS Maintenance	Maintenance	Information Society	Information Systems Division
Project	IFIS Phase 1	Development	Information Society	Sea Fisheries Administration
Service	Corporate Data Model	Development	Information Society	Information Systems Division
Service	MAPS Maintenance	Maintenance	Information Society	Maritime Transport, EMD, PAD, GSI
Project	CoZAS Phase 1	Development	Information Society	Marine Coastal Zone Management
Service	www.minex.ie Maintenance	eServices	Information Society	Central Division
Service	Programme Office Support	Maintenance	Service Delivery	Information Systems Division
Project	Helpdesk Software Procurement	Infrastructural	Service Delivery	Information Systems Division
Service	ICT Procurement	Infrastructural	Service Delivery	Information Systems Division
Service	Helpdesk Service Delivery	Maintenance	Service Delivery	Information Systems Division

APPENDIX 3 - IMPACT OF THE STRATEGY FOR THE CENTRAL DIVISIONS – SARA WHITE'S AREA

The Central Division is key to the implementation of the ICT Strategy, given that ISD is part of this Division, but more importantly because a number of the other Sections with the Central Division have key roles to play in terms of the implementation of the Public Sector Modernisation Programme. For this ICT strategy to be successful, ISD will need to work more closely with the other corporate Divisions who are driving change in financial management, corporate governance and human resources processes within the Department, and in particular with the Strategic Change and Modernisation Division.

Change leadership & 'Joined-up' corporate support services

One of the key areas where the Department can make improvements is the process around how new technology is introduced to the various business Divisions, and in particular how the change associated with new technology is managed. In the past ISD tended to create systems to automate Divisional processes, without suggesting how those processes could be enhanced or reengineered first. One of the key areas that ISD could improve on is to first look at the opportunities for refining the process, and then designing the solution to support the improved process. While ISD can provide the technical solution to address the process, SCMD and the business Divisions should drive the process improvements. SDU and ISD will need to work more and more closely together to actively manage the training aspects of new projects.

Peoplesoft

The Department is an intensive user of internal, staff-related data. While a significant proportion of this data is stored and managed through the key Personnel Administration System (PAS) system, the Department has no one central location for information on staffing. A plethora of other applications, such as Corepay, Clockwise, Datamapper, and a variety of other homegrown Access databases and Excel spreadsheets are also used. Overall, there are over 7 separate repositories of staff-related data, and HR staff find that they need to revert to the paper personnel file regularly.

While PAS has records for all permanent staff, it does not allow for temporary staff members. Staff lists provides information on all staff including temporary / technical / industrial but it reduces these to numbers and provides no information on the individual. Access has a central list of all staff file numbers and supervisors but again, staff information is kept minimal. In conjunction with these information is stored in Datamapper, Clockwise and numerous spreadsheets and Word documents.

It is not possible to produce many of the Department's everyday staffing reports without manually extracting the information. The reporting requirements of the Department are significant and the absence of a central system inhibits the accuracy and timeliness of many reports requested. Finally, no log of dealings with staff are

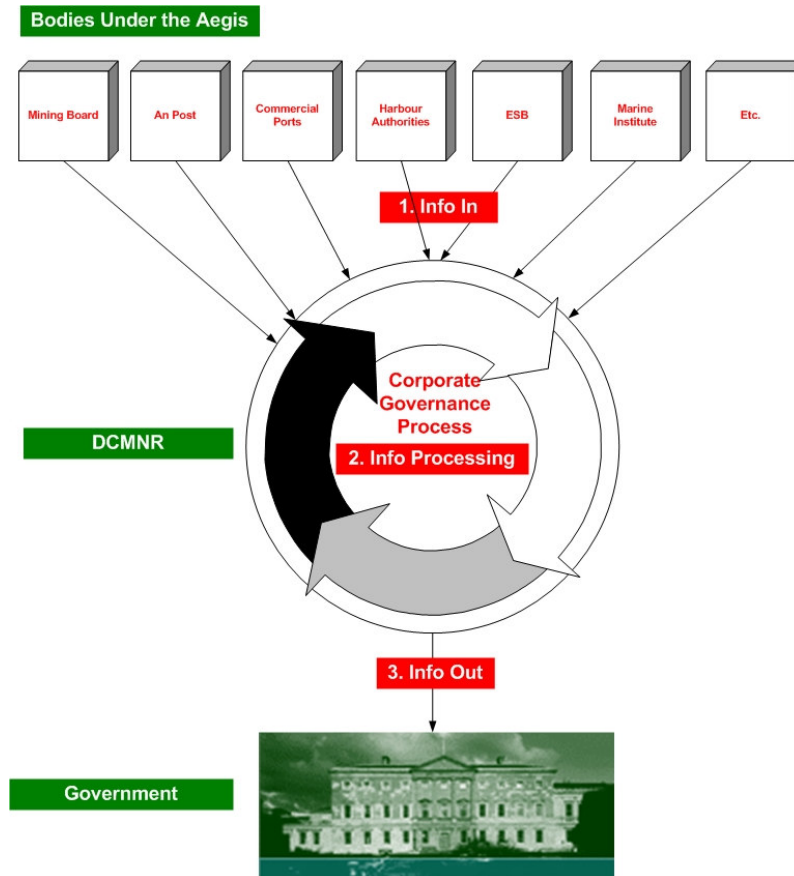
kept apart from the personnel file. If a file goes missing or is in use by another member of staff, it is difficult for the Department to correctly and promptly address staff queries.

The Department of Finance has centrally selected Peoplesoft as the preferred HR software package for the public sector, and it has put a framework agreement in place with an external supplier for its purchase and implementation. While over half of the other government Departments have implemented Peoplesoft, the Department of Finance have not yet scheduled an implementation slot for DCMNR. As staff transfer into DCMNR, they are need to bring their staff record with them, and since the majority of government agencies now use Peoplesoft, it is not possible for DCMNR to import their electronic record into PAS. They will need to input manual data from Peoplesoft printouts.

As the decentralisation programme gathers pace, the current systems will become more and more unmanageable, since updating a person's data necessitates 7 separate database updates, and reporting is currently a manual process. While Peoplesoft has been identified for implementation, it is as yet unclear as to what percentage of HR requirements it will fulfill. There are very specific DCMNR requirements that other Departments do not have, like how Sea Fisheries Officers and Coast Guard staff are rostered and paid.

Corporate Governance

The Department has responsibility for the corporate governance of over 55 commercial, non-commercial or regulatory bodies. A considerable amount of work has been carried out already on how the corporate governance process is managed in DCMNR. There are a variety of different practices and procedures across the various Divisions, as well as huge variation in the types of organisations managed – from large commercial to small non-commercial bodies. How the Department carries out corporate governance could be characterised as a 3 step information management process – 1. the Bodies Under the Aegis reporting into the Department (information in), 2. the Department gathering, analysing and summarising the data from the Bodies Under the Aegis (information processed), 3. the Department providing Annual Reports and accompanying Assessment Memoranda to Government about each of the Bodies (information out).



At present the majority of corporate governance work happens through email, telephone or face-to-face meetings, but there are a number of issues with these channels. For example, as regards email, there is concerns about the level of security in email transmission, given that often commercially sensitive data is being submitted. Also if the email recipient is away, problems can arise. ICT can help to introduce innovation into the corporate governance process and many of the senior managers within the Department were keen to explore how a secure website or portal technology could provide more structured communication channels to the Bodies. Such a system would add more security to the communications, and would help with the more clerical aspects of ‘chasing up’ of submissions from the external bodies. It would ensure that any material that was due wasn’t overlooked, and could also help to provide a structured online mechanism for borrowing and capital expenditure applications. These innovations would help to free up staff time to concentrate on the more qualitative aspects of corporate governance.

In addition, there is a Board Appointments database in place, managed by Strategic Change and Modernisation Division (SCMD), which keeps a list of all Board appointments and positions for each of the Bodies Under the Aegis. The problem with this database is that it can be difficult to get the individual Sections responsible for corporate governance of specific bodies to keep this database up to date. SCMD ends up chasing each Division to see if their list is up to date. There is potential for improvement of the database, so that responsibility for its update is devolved to the individual Divisions. It might also be possible to push responsibility for its update out to the bodies being managed.

Finally, there was a feeling amongst senior management within the Department that a central resource area for corporate governance would help to improve the process. For example, a knowledge repository around pensions would help to share experience around this complex area.

Financial Management

DCMNR has made significant progress on its MIF Programme with the implementation of the Agresso Financial Management System, which provides for improved financial management and devolved responsibility for budgetary and resource administration to the various Divisions. Although the core financial system is now in place, a number of follow-on ‘mini’-projects need to be carried out to further improve the financial management process and the operation of Agresso. For example, a number of interfaces still need to be completed – like Corepay, and an asset register for the Department needs to be purchased or developed. A number of the business Divisions feel that reporting from Agresso is not sufficient yet and that it can be difficult to manage budgets. Overall, therefore further rollout of additional modules and improved training on the Agresso financial system will be required.

Performance Management & Business Intelligence

Now that the core functionality of the financial system is in place, there are a number of drivers for further moves towards a more performance-oriented approach to the Department’s processes

1. the Department’s commitments to implement the second phase of MIF on performance management and evidence-based policy making
2. the DCMNR’s responsibility to become compliant with the National Statistical Strategy. Currently, external organisations provide much of the data that DCMNR needs to determine its policy – e.g. ComReg, SEI and BIM but an initiative is needed to determine what data is needed, whether we capture that data internally, what the data gaps are and what we need to measure?

ICT has a strong role to play in helping to achieve a closer linking of resource allocation, output/outcome indicators and performance measurement. The Agresso system will provide the core financial reporting but the likelihood is that an alternative system or add-on to Agresso will be required to capture, manage and report on sectoral and non-financial Departmental performance. In 2007 the Estimates process will change in that the Department will be forced to declare what it expects the allocation of resources to achieve in terms of outcomes, and the present systems do not permit this type linkage.

In terms of the technology aspects of implementing a performance management approach, two key technology components are required. Firstly, the creation of a single data warehouse into which multiple data sources can feed, and which will provide a platform for better evidence-based decision making. Secondly, the implementation of better business intelligence technologies, so that relevant information can be extracted from the data repositories.

Knowledge Management



Since the previous Strategy was completed, a major knowledge management (KM) initiative has been instituted in the Department, led by the Strategic Change and Modernisation Division. There are a number of phases to this project, with the development of a knowledge capture and management software application being just one of the threads. The phase currently under way is the Mobilisation phase, which broadly seeks to educate Divisions as to the knowledge, information and document handling behind the execution of their business processes. At the time of writing, over half of the Department has been addressed by the KM team and the feedback is that it has been very useful, particularly around the lessons learned on management of files & folders. While the knowledge management project will help to capture some of the know-how around business processes and organisational ‘memory’, it is recognised that it can only go part of the way towards the capture of the experience built up in the Department. There are also concerns about how well people would adopt and use the new system, once the technology phase is delivered. These issues will have to be managed closely but overall, knowledge management should be an enduring Departmental project, and will need the continuing support of the IS Division.

The Democratic Process

The Department uses a number of systems to help manage its responsibilities under the democratic process. These include:

- ❑ The eCabinet system
- ❑ The Parliamentary Questions (PQs) system (includes Representations (Reps))
- ❑ The Freedom of Information (FOI) system
- ❑ The Correspondence Tracking system

A number of issues were identified with how these processes work and with how each of these systems operates. In particular, a number of shortcomings were identified for the PQs and eCabinet applications. Although the Parliamentary Questions system is supplied by the Department of Finance, there are many perceived weaknesses with this system, in the areas of distribution, ownership, classification, authoring, approval, retrieval and search. The process of answering PQs can be prone to mistakes being made, and staff using the ‘system’ can get frustrated with the problems associated with PQ analysis and responses. Part of the problem here is the human factor of lack of knowledge of the PQ process, and training may also help to address this.

eCabinet is also a centrally provided system from the Department of An Taoiseach and there was a strong feeling across DCMNR that there are significant usability issues with the application. There is no proper documentation for the system, and what documentation is there, is out of date. In addition, a number of staff have not had proper training on the eCabinet application.

Policy Definition & Measurement

ICT has a strong role to play in the process of how the Department develops, implements and measures its policies. Within the Department there are a large

number of Divisions that are involved in policy development. This necessitates the sharing of information, collaborating and consulting with the general public as well as other relevant organisations that would be interested in the particular area that the policies would affect. It also involves communications and collaboration with other Government agencies and Departments. To execute the development of such policies, a large amount of research needs to be compiled and gathered as well as the gathering of documents and data and the formulation of reports and papers. There are a number of issues with how policy is developed. These include:

- ❑ Ensuring that the right information, data and reports are available to the key staff responsible for the development of policy. Performance indicators do exist (over 365 were identified for the Department) of which only 50-60 were financially based.
- ❑ Soliciting information from stakeholders in the area in which policy is being developed. Consultation with external bodies tends to be managed largely through e-mail and standard face-to-face meetings.
- ❑ The policy making process tends to be different every time, and is not a repeatable or transactional type process. There is a sense of ‘re-inventing the wheel’ when new policy needs to be developed in an area.
- ❑ Policy making involves quite a bit of collaborative working and document authoring both internally and externally. There is a view that the Department has not yet achieved best practice in terms of document collaboration and co-authoring.

Technology has a strong role to play in improving some of these policy-making processes. For example, a number of the senior managers within the Department were enthusiastic about the use of the Internet to publish information out to the public and to solicit feedback from consultations.

Mobile working

Over the past number of years ISD have continually assessed the applicability of various emerging mobile technologies to support Departmental staff who work from home, who travel extensively, and who work primarily in the field. Mobile and out-of-office technologies will continue to be rolled out to the Department, particularly to the staff who are by necessity away from the office for long periods. Previous ‘dead time’, such as travelling to and from meetings, will be utilised, with staff using converged mobile devices. ISD will work with SDU to provide better training to users of mobile devices so that they understand what’s possible and practical to achieve using such devices. ISD will step up the provision of out of business hours support for the mobile workforce. There will be an increased budget for mobile technologies within the ISD budget.

Knowledge Management

Since the previous Strategy was completed, a major knowledge management (KM) initiative has been instituted in the Department, led by the Strategic Change and Modernisation Division. There are a number of phases to this project, with the

development of a knowledge capture and management software application being just one of the threads. The phase currently under way is the Mobilisation phase, which broadly seeks to educate Divisions as to the knowledge, information and document handling behind the execution of their business processes. At the time of writing, over half of the Department has been addressed by the KM team and the feedback is that it has been very useful, particularly around the lessons learned on management of files & folders. While the knowledge management project will help to capture some of the know-how around business processes and organisational ‘memory’, it is recognised that it can only go part of the way towards the capture of the experience built up in the Department. There are also concerns about how well people would adopt and use the new system, once the technology phase is delivered. These issues will have to be managed closely but overall, knowledge management should be an enduring Departmental project, and will need the continuing support of the IS Division.

APPENDIX 4 - IMPACT OF THE STRATEGY FOR THE ENERGY DIVISION – MARTIN BRENNAN'S AREA

The Energy area is focused mostly on regulation, corporate governance and policy definition and they coordinate all policy making, reporting and planning for the Energy Sector. They don't have any need for transactional systems to support their business processes, although they do rely heavily on the basic infrastructure of email and access to documents. Much of their information and data needs are outsourced to external organisations like Sustainable Energy Ireland (SEI) and consultancies, like ESRI. Energy Efficiency is a new Division, recently constituted. There are however a number of areas where their business processes could be supported by ICT.

Corporate Governance

The Energy Division has responsibility for the corporate governance of a number of major energy-related bodies, including the ESB and SEI. As with other divisions, at present the majority of corporate governance work happens through email, telephone or face-to-face meetings, but there are a number of issues with these channels. For example, as regards email, there is concerns about the level of security in email transmission, given that often commercially sensitive data is being submitted. Also if the email recipient is away, problems can arise. ICT can help to introduce innovation into the corporate governance process and many of the senior managers within the Department were keen to explore how a secure website or portal technology could provide more structured communication channels to the Bodies. Such a system would add more security to the communications, and would help with the more clerical aspects of 'chasing up' of submissions from the external bodies. It would ensure that any material that was due wasn't overlooked, and could also help to provide a structured online mechanism for borrowing and capital expenditure applications. These innovations would help to free up staff time to concentrate on the more qualitative aspects of corporate governance.

In addition, there is a Board Appointments database in place, managed by Strategic Change and Modernisation Division (SCMD), which keeps a list of all Board appointments and positions for each of the Bodies Under the Aegis. The problem with this database is that it can be difficult to get the individual Sections responsible for corporate governance of specific bodies to keep this database up to date. SCMD ends up chasing each Division to see if their list is up to date. There is potential for improvement of the database, so that responsibility for its update is devolved to the individual Divisions. It might also be possible to push responsibility for its update out to the bodies being managed.

Finally, there was a feeling amongst senior management within the Department that a central resource area for corporate governance would help to improve the process. For example, a knowledge repository around pensions would help to share experience around this complex area.

PQs

This Division uses a number of systems to help manage its responsibilities under the democratic process. These include:

- ❑ The eCabinet system
- ❑ The Parliamentary Questions (PQs) system (includes Representations (Reps))
- ❑ The Freedom of Information (FOI) system
- ❑ The Correspondence Tracking system

A number of issues were identified with how these processes work and with how each of these systems operates. In particular, a number of shortcomings were identified for the PQs and eCabinet applications. Although the Parliamentary Questions system is supplied by the Department of Finance, there are many perceived weaknesses with this system, in the areas of distribution, ownership, classification, authoring, approval, retrieval and search. The process of answering PQs can be prone to mistakes being made, and staff using the 'system' can get frustrated with the problems associated with PQ analysis and responses. Part of the problem here is the human factor of lack of knowledge of the PQ process, and training may also help to address this. eCabinet is also a centrally provided system from the Department of An Taoiseach and there was a strong feeling across DCMNR that there are significant usability issues with the application. There is no proper documentation for the system, and what documentation is there, is out of date. In addition, a number of staff have not had proper training on the eCabinet application.

The Energy Division will benefit from improvements to the PQs and eCabinet systems.

GIS (Energy Infrastructure Dataset)

This Division was keen to explore the development of an energy infrastructure geospatial database. They would like to be able to know exactly what infrastructure is in what location. This would help with policy making and with reporting. At present, much of the statistical data that is required by the Division is collected and managed by Sustainable Energy Ireland.

The Department has recently defined a new GIS Strategy, which will govern how location-based information will be integrated into the Department's processes and how spatial datasets will be managed and developed. This ICT Strategy fully endorses the programme of work contained therein, and re-emphasises the importance of integrating locational information into its business processes and sectoral systems. The GIS team within ISD can provide the GIS infrastructure so that the Division can update and manage the data.

Energy Systems modelling technology

A specialist application is required by the Energy Technical Area to help with modelling and analysis of changes in the Irish Energy system. This application will be used to provide an independent view on potential changes in the Irish energy infrastructure, including possible switches to alternative or renewable energy sources. It will also guide where funding on research and development should be directed. It

would assist on answering questions around the costs and benefits associated with alternative energy supplies.

Mobile working

Over the past number of years ISD have continually assessed the applicability of various emerging mobile technologies to support Departmental staff who work from home, who travel extensively, and who work primarily in the field. Mobile and out-of-office technologies will continue to be rolled out to the Department, particularly to the staff who are by necessity away from the office for long periods. Previous 'dead time', such as travelling to and from meetings, will be utilised, with staff using converged mobile devices. ISD will work with SDU to provide better training to users of mobile devices so that they understand what's possible and practical to achieve using such devices. ISD will step up the provision of out of business hours support for the mobile workforce. There will be an increased budget for mobile technologies within the ISD budget.

Performance Management & Business Intelligence

Now that the core functionality of the financial system is in place, there are a number of drivers for further moves towards a more performance-oriented approach to the Department's processes

1. the Department's commitments to implement the second phase of MIF on performance management and evidence-based policy making
2. the DCMNR's responsibility to become compliant with the National Statistical Strategy. Currently, external organisations provide much of the data that DCMNR needs to determine its policy – e.g. SEI provide a lot of data to the Energy Division but an initiative is needed to determine what data is needed, whether we capture that data internally, what the data gaps are and what we need to measure?

ICT has a strong role to play in helping to achieve a closer linking of resource allocation, output/outcome indicators and performance measurement. The Agresso system will provide the core financial reporting but the likelihood is that an alternative system or add-on to Agresso will be required to capture, manage and report on sectoral and non-financial Departmental performance. In 2007 the Estimates process will change in that the Department will be forced to declare what it expects the allocation of resources to achieve in terms of outcomes, and the present systems do not permit this type linkage.

In terms of the technology aspects of implementing a performance management approach, two key technology components are required. Firstly, the creation of a single data warehouse into which multiple data sources can feed, and which will provide a platform for better evidence-based decision making. Secondly, the implementation of better business intelligence technologies, so that relevant information can be extracted from the data repositories.

Policy Definition & Measurement

ICT has a strong role to play in the process of how the Energy Division develops, implements and measures its policies. Policy development necessitates the sharing of information, collaborating and consulting with the general public as well as other relevant organisations that would be interested in the particular area that the policies would affect. It also involves communications and collaboration with other Government agencies and Departments. To execute the development of such policies, a large amount of research needs to be compiled and gathered as well as the gathering of documents and data and the formulation of reports and papers. There are a number of issues with how policy is developed. These include:

- ❑ Ensuring that the right information, data and reports are available to the key staff responsible for the development of policy. Performance indicators do exist (over 365 were identified for the Department) of which only 50-60 were financially based.
- ❑ Soliciting information from stakeholders in the area in which policy is being developed. Consultation with external bodies tends to be managed largely through e-mail and standard face-to-face meetings.
- ❑ The policy making process tends to be different every time, and is not a repeatable or transactional type process. There is a sense of ‘re-inventing the wheel’ when new policy needs to be developed in an area.
- ❑ Policy making involves quite a bit of collaborative working and document authoring both internally and externally. There is a view that the Department has not yet achieved best practice in terms of document collaboration and co-authoring.

Technology has a strong role to play in improving some of these policy-making processes. For example, a number of the senior managers within the Department were enthusiastic about the use of the Internet to publish information out to the public and to solicit feedback from consultations.

Knowledge Management

Since the previous Strategy was completed, a major knowledge management (KM) initiative has been instituted in the Department, led by the Strategic Change and Modernisation Division. There are a number of phases to this project, with the development of a knowledge capture and management software application being just one of the threads. The phase currently under way is the Mobilisation phase, which broadly seeks to educate Divisions as to the knowledge, information and document handling behind the execution of their business processes. At the time of writing, over half of the Department has been addressed by the KM team and the feedback is that it has been very useful, particularly around the lessons learned on management of files & folders. While the knowledge management project will help to capture some of the know-how around business processes and organisational ‘memory’, it is recognised that it can only go part of the way towards the capture of the experience built up in the Department. There are also concerns about how well people would adopt and use the new system, once the technology phase is delivered. These issues will have to be managed closely but overall, knowledge management

should be an enduring Departmental project, and will need the continuing support of the IS Division.



APPENDIX 5 - IMPACT OF THE STRATEGY FOR THE MARITIME SAFETY DIRECTORATE & THE COAST GUARD – MAURICE MULLEN'S AREA

Maritime Safety & the Coast Guard area have responsibility for a broad range of services and policy development around maritime safety, including Maritime Leisure and Safety Policy, Coast Guard, Maritime Regulation, Marine Environment, Enforcement, Surveys, Security, Port Waste, Accident Investigation etc. They have staff in a range of remote offices around the country – Cork, Ballyshannon etc. They have to feed into a range of policy areas and they are subject to more and more EU reporting requirements.

Overall they are happy with the service that they receive from the IS Division in their own administrative function but they are facing a number of specific issues that will need to be dealt with by the ICT Strategy. Given that there is a possibility that these Divisions may become a distinct organisational entity, separate from the Department, the ICT Strategy should consider this area of responsibility as a single discrete organisational unit, albeit as yet, within the remit of DCMNR. They are also keen to take a more proactive, driving role to any ICT initiatives that develop from this ICT strategy, since in the past they feel that IT projects have been mandated to them.

Search and Rescue Operations

A key function of the Coast Guard is to respond to maritime safety incidents. IRCG currently operate an application called the Radio Maritime System (RMS - which is built on a DataEase platform) for operational incident logging. They have a requirement for a new Search and Rescue system which will address a number of the major weaknesses associated with the current RMS.

Up to 2004 the RMS was a DOS-based application but because this DOS version could not be remotely fixed by ISD and because the OS version was also going out of date, it was decided to upgrade DataEase to a Windows based version. Following a period of teething problems this upgraded application is now relatively stable. However, there are a number of other problems with RMS / Dataease.

Firstly, Dublin, Malin and Valencia use separate logging databases, and although PC Anywhere is used to access the remote instances of Dataease from Dublin, this causes performance problems locally.

RMS can't be accessed by IRCG management from home when incidents occur, which means that operators have to explain the problems by phone to management while they should be spending the time organising the incident response.

In addition, it is difficult for the Coast Guard to match the incident details on RMS with the incident reports received subsequently from the area officers.

Finally, due to ageing analogue remote Transmitter/Receiver/Control and communications room equipment, IRCG is presently working towards replacing these with a new Integrated Command and Control (ICCS) system. A small group management and staff has been researching/visiting/exchanging ideas for possible

systems and has come to the realisation that in order to have a fully integrated modern communication system, it will also be necessary to consider installation of a new digital logging system integrated with the ICCS system. The UK MCA Vision system is an example of this type of integrated system, which can display location mapping from both OS and Admiralty mapping, has caller I/D, records events from the ICCS system, deals with logging and has many other features.

ISD support for IRCG Search and Rescue Operations

The IRCG is moving towards decentralisation to Drogheda for HQ staff and closure of the Marine Rescue Co-ordination Centre (MRCC) in Dublin. When this comes about there will be 2 RCCs, at Malin Head and Valentia, and a HQ in Drogheda. A fully integrated communications/computer system will be required to operate in this remote environment especially when dealing with major air/sea emergencies. A present concern exists about IRCG systems vulnerability as there is no 24/7 ISD support for Malin Head, Dublin and Valentia RCCs (Rescue Coordination Centres). A serious problem commencing on a Friday evening may not receive attention until the following Monday morning. If a system went down it could mean going back to pen and paper.

Vessel & Seafarer Data

The MSD want to ensure that vessel and seafarer data are properly managed, and that both be developed over time. The objective of the Corporate Vessel Register (CVR) project is to improve and support the provision of services in relation to the Department's management and administration of Vessel-related activities including Registration, Surveying, Certification, Licensing, Monitoring and Marine Safety. This initiative will employ the Internet as a method for sharing data related to the Irish fleet between the Dept's Marine Safety Directorate [MSD], its customers, its agencies, the EU/EMSA (European Maritime Safety Agency), and the general public.

In terms of vessels, they were keen to see layers of data built up on the CVR datastore – including basic vessel data, survey data, mortgage data and safety data. They were also keen to ensure that all vessels were included in the CVR, from fishing vessels to commercial ships to leisure craft. They are also intent on exploring the possibility of making vessel information accessible to the public online – for example, the results of the last survey of a particular vessel. Finally, they believe that they need to address how seafarer data could be managed better, since there are a number of seafarer datastores around the Department.

Marine Survey Management

As a follow on phase in the Corporate Vessel Register project they are keen to enhance the scope, so that it includes the development of a Survey Management module. They are also keen to allow their external customers to apply online, and pay online, for surveys to be carried out.

Maritime Safety Web Portal & Intranet

They are keen to begin the development of a single portal or sub-area on the Department's website that covers all aspects of maritime safety (and all areas under Maurice Mullen's responsibility). This could include:

- ❑ Public access to the vessel register, including access to licensing information
- ❑ Regulatory affairs
- ❑ Advice to the public (similar to www.safetyonthewater.ie)
- ❑ Coast Guard information
- ❑ Weather
- ❑ Area based services, for example, charts, wrecks etc.
- ❑ Commissioner of Irish Lights information
- ❑ RNLI information

Closely tied to this, they would like to develop a dedicated Intranet site, specific to the Maritime Safety and Coast Guard area.

ISD Support for the IRCG Volunteers

All the administrative work associated with managing the 900 volunteers is handled by IRCG, i.e. exercise payments, ESB bills, phone bills, etc. To improve the management of this function, they need the 54 Units to be computerised and added to the IRCG / DCMNR network. This would speed up the administrative process and save considerable time for the admin staff. Currently all queries are handled by phone or by letter with associated significant time delays. An IRCG Volunteer network would alleviate these time delays. Closely tied into the issue of better ICT Support for the volunteer network would be an Intranet site tailored to their needs. Also they would like to have the possibility of rolling out elearning to the volunteer network.

Volunteers Database

A data base was set up for the Volunteers (personal details, training, certs etc.), but IRCG feel that this is not meeting their needs and is not very stable. They currently have over 900 volunteers whose records need to be kept up to date. A new Intranet based database for tracking Coast Guard volunteers should be developed.

Reporting on Marine Safety Incidents

Maritime Safety require a system to help with managing and reporting on marine safety incidents and investigations. For example, they have to produce casualty statistics, whereas the Coast Guard's RMS / Database system is geared up to report by incident calls. They would like a system with a link to the Coast Guard RMS system, which would help to meet their reporting needs.

IRCG Stores Management

The need for an electronic stores system was highlighted in the previous strategy and IRCG are still keen for this issue to be tackled. As regards asset management, Agresso has relatively recently been introduced into the Department, however the Coast Guard feel that it does not meet all IRCG's needs regarding a stores system. Agresso does provide for procurement, and asset registering, however they require additional information concerning location of stores and expiry/replacement/repairs of stores. Additional modules may be added to Agresso to cover this, and either this should be done or a stand alone stores system should be purchased. Storing, which is a major area of work in IRCG, is still relying on paper trails. Over €2 million is spent on Coast Guard equipment every year, and this is still largely managed using manual inventory lists.

GIS

This Division has a number of uses for GIS data, most notably the location of emergency events for the Irish Coast Guard, and for marine environment management. The Department has recently defined a new GIS Strategy, which will govern how location-based information will be integrated into the Department's processes and how spatial datasets will be managed and developed. This ICT Strategy fully endorses the programme of work contained therein, and re-emphasises the importance of integrating locational information into its business processes and sectoral systems. The GIS team within ISD can provide the GIS infrastructure so that the Division can update and manage the data.

Mobile working

The MSD feel that they do not have the right levels of remote access to the Department's systems. Both management and the surveyors need access to email and files when travelling remotely on Departmental business, in Ireland and abroad. For surveyors, if they have better remote access, then they need to spend less time in the office, and that means they can spend more time on the road and get more surveys done. They do however acknowledge that there is a significant cost associated with this type of access. In addition, training on the remote access facilities available for these staff may help to alleviate their issues.

Over the past number of years ISD have continually assessed the applicability of various emerging mobile technologies to support Departmental staff who work from home, who travel extensively, and who work primarily in the field. Mobile and out-of-office technologies will continue to be rolled out to the Department, particularly to the staff who are by necessity away from the office for long periods. Previous 'dead time', such as travelling to and from meetings, will be utilised, with staff using converged mobile devices. ISD will work with SDU to provide better training to users of mobile devices so that they understand what's possible and practical to achieve using such devices. ISD will step up the provision of out of business hours support for the mobile workforce. There will be an increased budget for mobile technologies within the ISD budget.

PQs



This Division uses a number of systems to help manage its responsibilities under the democratic process. These include:

- ❑ The eCabinet system
- ❑ The Parliamentary Questions (PQs) system (includes Representations (Reps))
- ❑ The Freedom of Information (FOI) system
- ❑ The Correspondence Tracking system

A number of issues were identified with how these processes work and with how each of these systems operates. In particular, a number of shortcomings were identified for the PQs and eCabinet applications. Although the Parliamentary Questions system is supplied by the Department of Finance, there are many perceived weaknesses with this system, in the areas of distribution, ownership, classification, authoring, approval, retrieval and search. The process of answering PQs can be prone to mistakes being made, and staff using the 'system' can get frustrated with the problems associated with PQ analysis and responses. Part of the problem here is the human factor of lack of knowledge of the PQ process, and training may also help to address this. eCabinet is also a centrally provided system from the Department of An Taoiseach and there was a strong feeling across DCMNR that there are significant usability issues with the application. There is no proper documentation for the system, and what documentation is there, is out of date. In addition, a number of staff have not had proper training on the eCabinet application.

The MSD will benefit from improvements to the PQs and eCabinet systems.

Policy Definition & Measurement

ICT has a strong role to play in the process of how the Maritime Safety Policy Division develops, implements and measures its policies. Policy development necessitates the sharing of information, collaborating and consulting with the general public as well as other relevant organisations that would be interested in the particular area that the policies would affect. It also involves communications and collaboration with other Government agencies and Departments. To execute the development of such policies, a large amount of research needs to be compiled and gathered as well as the gathering of documents and data and the formulation of reports and papers. There are a number of issues with how policy is developed. These include:

- ❑ Ensuring that the right information, data and reports are available to the key staff responsible for the development of policy. Performance indicators do exist (over 365 were identified for the Department) of which only 50-60 were financially based.
- ❑ Soliciting information from stakeholders in the area in which policy is being developed. Consultation with external bodies tends to be managed largely through e-mail and standard face-to-face meetings.
- ❑ The policy making process tends to be different every time, and is not a repeatable or transactional type process. There is a sense of 're-inventing the wheel' when new policy needs to be developed in an area.

- Policy making involves quite a bit of collaborative working and document authoring both internally and externally. There is a view that the Department has not yet achieved best practice in terms of document collaboration and co-authoring.

Technology has a strong role to play in improving some of these policy-making processes. For example, a number of the senior managers within the Department were enthusiastic about the use of the Internet to publish information out to the public and to solicit feedback from consultations.

Knowledge Management

Since the previous Strategy was completed, a major knowledge management (KM) initiative has been instituted in the Department, led by the Strategic Change and Modernisation Division. There are a number of phases to this project, with the development of a knowledge capture and management software application being just one of the threads. The phase currently under way is the Mobilisation phase, which broadly seeks to educate Divisions as to the knowledge, information and document handling behind the execution of their business processes. At the time of writing, over half of the Department has been addressed by the KM team and the feedback is that it has been very useful, particularly around the lessons learned on management of files & folders. While the knowledge management project will help to capture some of the know-how around business processes and organisational ‘memory’, it is recognised that it can only go part of the way towards the capture of the experience built up in the Department. There are also concerns about how well people would adopt and use the new system, once the technology phase is delivered. These issues will have to be managed closely but overall, knowledge management should be an enduring Departmental project, and will need the continuing support of the IS Division.

APPENDIX 6 - IMPACT OF THE STRATEGY FOR THE COMMUNICATIONS & BROADCASTING DIVISIONS – EAMONN MOLLOY'S AREA

The Communications, Broadcasting and Postal Divisions are concerned mostly with Corporate Governance, regulatory and policy making activities. The Division is responsible for corporate governance for An Post, RTE, the Communications Regulator, the Digital Hub, the replacement organisation for Media Lab Europe and the Broadcasting Commission of Ireland. Their major concern for the period 2005-2007 was that much of the staff in the Division are about to face into a period of significant change because of decentralisation, and that carrying out the key tasks would be more difficult because of personnel turnover and location change.

Similar to the Energy Division, they feel that they have a critical reliance on the core desktop productivity applications and infrastructure – network access, email, documents etc. It is important that staff in this Section are exposed to, and use information & communications technologies, since many of the bodies they interact with are commercial, private-sector companies who operate in the telecommunications and technology sectors. They feel that the key objective of the ICT Strategy should be consolidation and improvement of the systems already in place in the Department, since the overhead associated with preparation for the decentralisation process will make it difficult to take on new initiatives. Although the majority of staff are now using the core productivity applications well, there is room for improvement and the ICT Strategy should address this, particularly in terms of IT training.

The Division manages a number of websites – www.broadband.gov.ie and www.gbs.gov.ie. They have received strong assistance from ISD on the management of these websites.

PQs

This Division uses a number of systems to help manage its responsibilities under the democratic process. These include:

- ❑ The eCabinet system
- ❑ The Parliamentary Questions (PQs) system (includes Representations (Reps))
- ❑ The Freedom of Information (FOI) system
- ❑ The Correspondence Tracking system

A number of issues were identified with how these processes work and with how each of these systems operates. In particular, a number of shortcomings were identified for the PQs and eCabinet applications. Although the Parliamentary Questions system is supplied by the Department of Finance, there are many perceived weaknesses with this system, in the areas of distribution, ownership, classification, authoring, approval, retrieval and search. The process of answering PQs can be prone to mistakes being made, and staff using the 'system' can get frustrated with the problems associated with PQ analysis and responses. Part of the problem here is the

human factor of lack of knowledge of the PQ process, and training may also help to address this. eCabinet is also a centrally provided system from the Department of An Taoiseach and there was a strong feeling across DCMNR that there are significant usability issues with the application. There is no proper documentation for the system, and what documentation is there, is out of date. In addition, a number of staff have not had proper training on the eCabinet application.

The Communications and Broadcasting areas will benefit from improvements to the PQs and eCabinet systems.

Policy Definition & Measurement

ICT has a strong role to play in the process of how the Communications and Broadcasting Division develops, implements and measures its policies. Policy development necessitates the sharing of information, collaborating and consulting with the general public as well as other relevant organisations that would be interested in the particular area that the policies would affect. It also involves communications and collaboration with other Government agencies and Departments. To execute the development of such policies, a large amount of research needs to be compiled and gathered as well as the gathering of documents and data and the formulation of reports and papers. There are a number of issues with how policy is developed. These include:

- ❑ Ensuring that the right information, data and reports are available to the key staff responsible for the development of policy. Performance indicators do exist (over 365 were identified for the Department) of which only 50-60 were financially based.
- ❑ Soliciting information from stakeholders in the area in which policy is being developed. Consultation with external bodies tends to be managed largely through e-mail and standard face-to-face meetings.
- ❑ The policy making process tends to be different every time, and is not a repeatable or transactional type process. There is a sense of ‘re-inventing the wheel’ when new policy needs to be developed in an area.
- ❑ Policy making involves quite a bit of collaborative working and document authoring both internally and externally. There is a view that the Department has not yet achieved best practice in terms of document collaboration and co-authoring.

Technology has a strong role to play in improving some of these policy-making processes. For example, a number of the senior managers within this Division were enthusiastic about the use of the Internet to publish information out to the public and to solicit feedback from consultations.

Corporate Governance

Communications and Broadcasting have responsibility for the corporate governance of a number of major bodies, including An Post, RTE, the Communications Regulator, the Digital Hub, the replacement organisation for Media Lab Europe and the Broadcasting Commission of Ireland. As with other divisions, at present the

majority of corporate governance work happens through email, telephone or face-to-face meetings, but there are a number of issues with these channels. For example, as regards email, there is concerns about the level of security in email transmission, given that often commercially sensitive data is being submitted. Also if the email recipient is away, problems can arise. ICT can help to introduce innovation into the corporate governance process and many of the senior managers within the Department were keen to explore how a secure website or portal technology could provide more structured communication channels to the Bodies. Such a system would add more security to the communications, and would help with the more clerical aspects of 'chasing up' of submissions from the external bodies. It would ensure that any material that was due wasn't overlooked, and could also help to provide a structured online mechanism for borrowing and capital expenditure applications. These innovations would help to free up staff time to concentrate on the more qualitative aspects of corporate governance.

In addition, there is a Board Appointments database in place, managed by Strategic Change and Modernisation Division (SCMD), which keeps a list of all Board appointments and positions for each of the Bodies Under the Aegis. The problem with this database is that it can be difficult to get the individual Sections responsible for corporate governance of specific bodies to keep this database up to date. SCMD ends up chasing each Division to see if their list is up to date. There is potential for improvement of the database, so that responsibility for its update is devolved to the individual Divisions. It might also be possible to push responsibility for its update out to the bodies being managed.

GIS

This Division was interested in potentially being able to represent the broadband infrastructure on a GIS dataset. The Department has recently defined a new GIS Strategy, which will govern how location-based information will be integrated into the Department's processes and how spatial datasets will be managed and developed. This ICT Strategy fully endorses the programme of work contained therein, and re-emphasises the importance of integrating locational information into its business processes and sectoral systems. The GIS team within ISD can provide the GIS infrastructure so that the Division can update and manage the data.

Mobile working

Over the past number of years ISD have continually assessed the applicability of various emerging mobile technologies to support Departmental staff who work from home, who travel extensively, and who work primarily in the field. Mobile and out-of-office technologies will continue to be rolled out to the Department, particularly to the staff who are by necessity away from the office for long periods. Previous 'dead time', such as travelling to and from meetings, will be utilised, with staff using converged mobile devices. ISD will work with SDU to provide better training to users of mobile devices so that they understand what's possible and practical to achieve using such devices. ISD will step up the provision of out of business hours support for the mobile workforce. There will be an increased buget for mobile technologies within the ISD budget.

APPENDIX 7 - IMPACT OF THE STRATEGY FOR THE MARITIME TRANSPORT, EMD, PAD, GSI DIVISIONS – MICHAEL GUILFOYLE'S AREA

There are a range of Divisions under Michael Guilfoyle's responsibility, with a broad variety of functions and roles, from Maritime Transport to Inland Fisheries to the GSI to Petroleum Affairs. In terms of ICT Strategy, the various different areas differ in levels of requirements and how they have been looked after by ISD to date. EMD, PAD and GSI have significant requirements for specific administrative, transactional and geographical systems to support their business processes, While the other areas do not have the same need for such transactional or geographical systems, they do have informational needs to help support policy making and governance functions.

Staff from these Divisions were particularly keen to explore how ICT could facilitate better evidence-based policy making. In particular, the Government and the Department's policies around petroleum exploration and licensing policies has come under the spotlight as a result of the Rossport 5 issue. A key focus for the Strategy would be the question of whether the Department can capture and report on the data that reflects the outputs of policy making, e.g. how would we answer questions around “..the level, quality and geographic spread of petroleum exploration...”.

EMD have recently implemented the Minerals Administration and Programme Support (MAPS) system and are in the process of bedding that down.

The GSI as an entity have significant needs from this ICT Strategy, since they are an organisation that makes intensive use of geological data. They have had a strong programme of ICT development over the past number of years and they now need to continue to build on the investment they have put into ICT to date. They have developed many geospatial and geological datasets and want to make them more available to the public over the Internet.

PAD have quite a few strong technical resources inhouse, and while they manage a significant amount of geophysical information using Access databases, their administrative processes could be improved through the deployment of information technology.

Petroleum Exploration Licensing

PAD could improve the management of their licensing processes, particularly around document management. Their volume of licenses per annum is low but the complexity of the process is high.

The GSI ICT Programme

The GSI must make obtain, manage and make available to customers quality geological data which is spatially referenced and customised to their needs. The GSI are keen to ensure that user-friendly information be increasingly made available in digital format over the Internet. GSI has already made considerable investments in building the foundations of such systems. A digital document management system

containing over half a million items has been created and ongoing investment is needed to create integrated databases that are both multisectoral and multidisciplinary. The rate of visits to GSI websites doubled in 2004 from the 2003 figures, and there is ample room for the GSI to double and triple that number of users, as more and more datasets become available online. There is strong demand from the GSI's customers for online data, so it is critical that the GSI's datasets are populated with further information in order to improve on the high-quality service to customers.

The GSI are currently working on a programme of information technology projects called DIGIT (Digital Information on Geology of Ireland in Total) to facilitate the delivery of the GSI's data to its customers over the Internet. DIGIT proposes to create a Web-based, virtual Geological Data Warehouse for the Republic of Ireland.

In addition, the GSI are about to undertake a major programme of geoscience research around a number of themes, such as climate change, human & animal health, pollution, coastal erosion and landslides, and it will need to put in place the right systems to capture and manage the data associated with this programme, especially 3D data. Geoscience contributes to several sectors of national life, for example, effective development of infrastructure, protection of vital groundwater resources, and effective management of fisheries, energy, shipping and ports.

The following are the major projects that make up the IT aspects of the DIGIT Programme, the Geoscience programme, plus a number of the other IT initiatives that need to be tackled that are not formally part of DIGIT.

DIGIT Project 1 - Centrally Organised Network of Records (CONoR)

The CONoR project seeks to centralise a number of geological datasets onto a central Oracle database. At present the GSI's datasets are stored in multiple databases and maintained by multiple staff members. Centralising datasets onto one single Oracle database environment will help to standardise access to, and maintenance of, these datasets, as well as facilitating spatially-enabling the data. Seven datasets are planned to be completely migrated to the Oracle environment by end of 2005, including Boreholes, Bedrock Maps (plus the 'Map Catalogue'), Sea Bed Survey, Mineral Exploration Reports, Geotech (Reports / Boreholes / tests), Groundwater Wells and Mineral Localities. However, there are a large number of additional datasets (approximately 20) that need to be migrated to this database, and a programme of investment is needed to extract, cleanse and load these datasets to the new CONoR database.

DIGIT Project 2 - Document Management System (DMS)

A large proportion of the GSI's data is not held in structured datasets, rather is held in document format. The GSI currently have a document repository with over 1.5 terabytes of reports, maps, multipage images, and large A0 sized maps in 24bit colour raster. These are only available internally at present and are available to the public only through the Customer Centre where customers can view and buy maps and reports and take them away on CD. The GSI now has three main requirements around its document management system:

1. A large number of other documents need to be scanned and indexed into the document repository
2. They would like to make this repository available to its customers over the the public Internet.
3. They would also like to add a spatial dimension to these documents, so that they can be accessed through GIS.

DIGIT Project 3 – Location-Aware Data (through the ArcIMS GIS engine)

While the CONoR project seeks to create a structured database of geological data, the GSI need to ensure that this data can be accessed using a spatial or locational dimension. Many of the GSI's customers have a specific project in a specific location and they need to access the GSI's data in relation to that specific location. For this reason, the GSI have instituted a project to spatially-enable its data through the deployment of ArcIMS, a leading GIS application. As a first project all geotechnical data (borehole information in site investigations) will be spatially referenced and linked into ArcIMS. This data is used in planning controls and engineering projects in all the major cities, and for major public projects such as LUAS. However, this infrastructure is currently being developed internally only. The GSI now need to purchase the hardware, develop the software and test this infrastructure for online ordering, sale and delivery of spatial data.

DIGIT Project 4 – eCommerce Website

In order to sell its data and documents, the GSI needs to ensure that its website has an online shop. The current online shop only sells non-digital physical items, such as maps, books and other GSI publications. In addition, the current ecommerce engine behind this shop is no longer supported. Therefore a new ecommerce engine is needed for the GSI which is capable of selling both physical and more especially, digital data parcels.

DIGIT Project 5 – Seabed data

A large dataset of multibeam data, navigation data, reports etc. are currently available for sale through HEANET to academics through UCG in Galway. The GSI would like to make this data available for sale to everyone else over the Internet.

3D Data Modelling Project

Since the GSI have made good progress on capturing their 2 dimensional data through the CONoR project, they now have a requirement to begin capturing, modelling and visualising 3 dimensional data. A number of the GSI's projects for 2005-2007 need to capture 3D data, particularly the geothermal deep drilling project, and the protection of group ground water schemes project. A 3D data modelling project is needed to establish the systems, methodologies, protocols, data management regimes and best practice procedures to enable GSI to make the step change to delivery of 3D information as a routine output. A scoping study is needed

to examine the longer term options for the development of a full 3D Geology Framework.

Internal GSI Projects

In addition to the core DIGIT project, the GSI have a range of other internal projects which will need funding over the next 3 years. These include:

1. Support from a specialist GIS Analyst regarding Bedrock mapping, borehole and cross section plotting, and mineral exploration records. This work should be part of the new GIS Strategy's implementation programme.
2. A new metadata server is required for the GSI and DCMNR web server.
3. Microsoft Access assistance is required for GSI Sections waiting for CONoR.
4. The Disaster Recovery project that is in progress needs to be completed for the GSI, since they have major data stores and hence, significant data recovery issues.
5. The GSI web site needs to be redone using the DCMNR's CMS which will allow any user to submit data to "approvers " for inclusion in the site. Some time is needed from the Business Systems team.

The GSI would also like to upgrade their links to Leeson Lane and Adelaide Road as their Internet speed is significantly slower than Adelaide Road. In addition, with the rollout of Agresso and other Intranet applications they feel they need faster connections.

Corporate Governance

The Maritime Transport area are responsible for policy and corporate governance of the 10 Commercial Ports and 14 Harbour Authorities, and were especially keen to explore any initiatives that freed up staff time to work on the less clerical aspects of corporate governance. As with other divisions, at present the majority of corporate governance work happens through email, telephone or face-to-face meetings, but there are a number of issues with these channels. For example, as regards email, there is concerns about the level of security in email transmission, given that often commercially sensitive data is being submitted. Also if the email recipient is away, problems can arise. ICT can help to introduce innovation into the corporate governance process and many of the senior managers within the Department were keen to explore how a secure website or portal technology could provide more structured communication channels to the Bodies. Such a system would add more security to the communications, and would help with the more clerical aspects of 'chasing up' of submissions from the external bodies. It would ensure that any material that was due wasn't overlooked, and could also help to provide a structured online mechanism for borrowing and capital expenditure applications. These innovations would help to free up staff time to concentrate on the more qualitative aspects of corporate governance.

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for corporate governance of specific bodies to keep this database up to date. SCMD ends up chasing each Division to see if their list is up to date. There is potential for improvement of the database, so that responsibility for its update is devolved to the individual Divisions. It might also be possible to push responsibility for its update out to the bodies being managed.

Performance Management & Business Intelligence

Now that the core functionality of the financial system is in place, there are a number of drivers for further moves towards a more performance-oriented approach to the Department's processes

3. the Department's commitments to implement the second phase of MIF on performance management and evidence-based policy making
4. the DCMNR's responsibility to become compliant with the National Statistical Strategy. Currently, external organisations provide much of the data that DCMNR needs to determine its policy – e.g. ComReg, SEI and BIM but an initiative is needed to determine what data is needed, whether we capture that data internally, what the data gaps are and what we need to measure?

ICT has a strong role to play in helping to achieve a closer linking of resource allocation, output/outcome indicators and performance measurement. The Agresso system will provide the core financial reporting but the likelihood is that an alternative system or add-on to Agresso will be required to capture, manage and report on sectoral and non-financial Departmental performance. In 2007 the Estimates process will change in that the Department will be forced to declare what it expects the allocation of resources to achieve in terms of outcomes, and the present systems do not permit this type linkage.

In terms of the technology aspects of implementing a performance management approach, two key technology components are required. Firstly, the creation of a single data warehouse into which multiple data sources can feed, and which will provide a platform for better evidence-based decision making. Secondly, the implementation of better business intelligence technologies, so that relevant information can be extracted from the data repositories.

Knowledge Management

Since the previous Strategy was completed, a major knowledge management (KM) initiative has been instituted in the Department, led by the Strategic Change and Modernisation Division. There are a number of phases to this project, with the development of a knowledge capture and management software application being just one of the threads. The phase currently under way is the Mobilisation phase, which broadly seeks to educate Divisions as to the knowledge, information and document handling behind the execution of their business processes. At the time of writing, over half of the Department has been addressed by the KM team and the feedback is that it has been very useful, particularly around the lessons learned on management of files & folders. While the knowledge management project will help to capture some of the know-how around business processes and organisational 'memory', it is recognised that it can only go part of the way towards the capture of

the experience built up in the Department. There are also concerns about how well people would adopt and use the new system, once the technology phase is delivered. These issues will have to be managed closely but overall, knowledge management should be an enduring Departmental project, and will need the continuing support of the IS Division.

The Democratic Process

This Division uses a number of systems to help manage its responsibilities under the democratic process. These include:

- The eCabinet system
- The Parliamentary Questions (PQs) system (includes Representations (Reps))
- The Freedom of Information (FOI) system
- The Correspondence Tracking system

A number of issues were identified with how these processes work and with how each of these systems operates. In particular, a number of shortcomings were identified for the PQs and eCabinet applications. Although the Parliamentary Questions system is supplied by the Department of Finance, there are many perceived weaknesses with this system, in the areas of distribution, ownership, classification, authoring, approval, retrieval and search. The process of answering PQs can be prone to mistakes being made, and staff using the 'system' can get frustrated with the problems associated with PQ analysis and responses. Part of the problem here is the human factor of lack of knowledge of the PQ process, and training may also help to address this.

eCabinet is also a centrally provided system from the Department of An Taoiseach and there was a strong feeling across DCMNR that there are significant usability issues with the application. There is no proper documentation for the system, and what documentation is there, is out of date. In addition, a number of staff have not had proper training on the eCabinet application.

Policy Definition & Measurement

This Division have strong responsibility for the definition of policy around Ireland's use and promotion of natural resources, inland fisheries and the development of the ports. ICT has a strong role to play in the process of how the Department develops, implements and measures its policies. Within the Department there are a large number of Divisions that are involved in policy development. This necessitates the sharing of information, collaborating and consulting with the general public as well as other relevant organisations that would be interested in the particular area that the policies would affect. It also involves communications and collaboration with other Government agencies and Departments. To execute the development of such policies, a large amount of research needs to be compiled and gathered as well as the gathering of documents and data and the formulation of reports and papers. There are a number of issues with how policy is developed. These include:

- Ensuring that the right information, data and reports are available to the key staff responsible for the development of policy. Performance indicators do

exist (over 365 were identified for the Department) of which only 50-60 were financially based.

- ❑ Soliciting information from stakeholders in the area in which policy is being developed. Consultation with external bodies tends to be managed largely through e-mail and standard face-to-face meetings.
- ❑ The policy making process tends to be different every time, and is not a repeatable or transactional type process. There is a sense of 're-inventing the wheel' when new policy needs to be developed in an area.
- ❑ Policy making involves quite a bit of collaborative working and document authoring both internally and externally. There is a view that the Department has not yet achieved best practice in terms of document collaboration and co-authoring.

Technology has a strong role to play in improving some of these policy-making processes. For example, a number of the senior managers within the Department were enthusiastic about the use of the Internet to publish information out to the public and to solicit feedback from consultations.

Mobile working

Over the past number of years ISD have continually assessed the applicability of various emerging mobile technologies to support Departmental staff who work from home, who travel extensively, and who work primarily in the field. Mobile and out-of-office technologies will continue to be rolled out to the Department, particularly to the staff who are by necessity away from the office for long periods. Previous 'dead time', such as travelling to and from meetings, will be utilised, with staff using converged mobile devices. ISD will work with SDU to provide better training to users of mobile devices so that they understand what's possible and practical to achieve using such devices. ISD will step up the provision of out of business hours support for the mobile workforce. There will be an increased budget for mobile technologies within the ISD budget.

APPENDIX 8 - IMPACT OF THE STRATEGY FOR THE SEAFOOD SECTORS AND COASTAL ZONE MANAGEMENT DIVISIONS – CECIL BEAMISH'S AREA

Seafood Sectors and Coastal Zone Management have staff in a range of locations around the country – including Dublin, Cork, Tralee, Galway and Ballyshannon. They are very dependant on ICT and this dependence derives from a number of issues:

1. The geographical spread of the personnel of the Division around the ports of Ireland.
2. The large numbers of personnel within the Division.
3. A number of distinct legal requirements to provide fisheries statistics to the European Commission and to other groups.
4. The Division needs the capacity to be able to interact effectively with a number of other agencies that are partners in Food Safety and Fisheries Conservation.

This Division are working on two major projects which have a significant ICT element, Integrated Fisheries Information System (IFIS) and Coastal Zone Administration System (COZaS). IFIS provides a single centralised database containing all information pertinent to the administration and enforcement of Sea Fisheries. The objective of IFIS is to provide a single system which will integrate the related business processes of Licencing, Registration and Sea Fisheries Control online. There will be an ongoing programme of further enhancement work around the IFIS application over the course of this Strategy.

They have also been working on a new Coastal Zone Administration System to contribute to the effective management of Departmental activities in the areas of Foreshore and Aquaculture Licencing. This application will provide integrated information on foreshore and aquaculture licence approval, inspection and enforcement and monitoring of coastal changes. While this project is currently in user acceptance testing, there are plans for a further phase 2 of development to add GIS and payment functionality.

In addition to these two main projects, they have a number of business processes where they see the potential for ICT to introduce innovation into how they carry out their work.

Internet Submission of fish sales and transport data

They would like to potentially reengineer how they manage the capture of fish sale and transport data and see strong potential for the use of Internet technology to facilitate the gathering and automated storage of this data.

Internet publication of enforcement information

They would like to make more frequent use of the DCMNR website to post information on enforcement policies and methods and the outcome of enforcement programs.

Database for capturing fishing logbook data

They have a requirement for a mechanism to capture fishing logbook data directly.

Mobile Field Inspections

They are keen to explore the use of hand-held devices to permit the automated download and subsequent business processing of information gathered during field inspections.

Consultants Database

They feel that a database of consultants used and consultancy projects commissioned by the Department would be useful, since the Department regularly gets Parliamentary Questions on what consultants are used and what was spent on each project etc.

GIS

The Engineering Section within this Division makes extensive use of GIS data. The Department has recently defined a new GIS Strategy, which will govern how location-based information will be integrated into the Department's processes and how spatial datasets will be managed and developed. This ICT Strategy fully endorses the programme of work contained therein, and re-emphasises the importance of integrating locational information into its business processes and sectoral systems. The GIS team within ISD can provide the GIS infrastructure so that the Division can update and manage the data.

Corporate Governance

This Division is responsible for the corporate governance of a number of organisations including BIM and the Marine Institute. As with other divisions, at present the majority of corporate governance work happens through email, telephone or face-to-face meetings, but there are a number of issues with these channels. For example, as regards email, there is concerns about the level of security in email transmission, given that often commercially sensitive data is being submitted. Also if the email recipient is away, problems can arise. ICT can help to introduce innovation into the corporate governance process and many of the senior managers within the Department were keen to explore how a secure website or portal technology could provide more structured communication channels to the Bodies. Such a system would add more security to the communications, and would help with the more clerical aspects of 'chasing up' of submissions from the external bodies. It would ensure that any material that was due wasn't overlooked, and could also help to provide a structured online mechanism for borrowing and capital expenditure applications. These innovations would help to free up staff time to concentrate on the more qualitative aspects of corporate governance.

In addition, there is a Board Appointments database in place, managed by Strategic Change and Modernisation Division (SCMD), which keeps a list of all Board appointments and positions for each of the Bodies Under the Aegis. The problem with this database is that it can be difficult to get the individual Sections responsible for corporate governance of specific bodies to keep this database up to date. SCMD ends up chasing each Division to see if their list is up to date. There is potential for improvement of the database, so that responsibility for its update is devolved to the individual Divisions. It might also be possible to push responsibility for its update out to the bodies being managed.

Performance Management & Business Intelligence

Now that the core functionality of the financial system is in place, there are a number of drivers for further moves towards a more performance-oriented approach to the Department's processes

1. the Department's commitments to implement the second phase of MIF on performance management and evidence-based policy making
2. the DCMNR's responsibility to become compliant with the National Statistical Strategy. Currently, external organisations provide much of the data that DCMNR needs to determine its policy – e.g. ComReg, SEI and BIM but an initiative is needed to determine what data is needed, whether we capture that data internally, what the data gaps are and what we need to measure?

ICT has a strong role to play in helping to achieve a closer linking of resource allocation, output/outcome indicators and performance measurement. The Agresso system will provide the core financial reporting but the likelihood is that an alternative system or add-on to Agresso will be required to capture, manage and report on sectoral and non-financial Departmental performance. In 2007 the Estimates process will change in that the Department will be forced to declare what it expects the allocation of resources to achieve in terms of outcomes, and the present systems do not permit this type linkage.

In terms of the technology aspects of implementing a performance management approach, two key technology components are required. Firstly, the creation of a single data warehouse into which multiple data sources can feed, and which will provide a platform for better evidence-based decision making. Secondly, the implementation of better business intelligence technologies, so that relevant information can be extracted from the data repositories.

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ISD will look at introducing mobile applications to facilitate the work of those who are based primarily in the field doing inspections, surveys and rescue work, which will mean that field-based workers such as Sea Fisheries Officers, and Marine Surveyors will be able to easily and efficiently access Departmental data and systems while in the field, and have less reliance on returning to the office to do their work.

ISD will step up the provision of out of business hours support for the mobile workforce. There will be an increased budget for mobile technologies within the ISD budget.

