

Appendix D: Issue and Risk Analysis

Current Barriers and Enablers to the Successful Delivery of the DETI e-Business Strategy - Issues Register

Ref:	Issue:	Impact	Recommendation/Countermeasures
Organisation & Capabilities			
I1	<p>Change 1: Customer-facing Internet systems will need to be fed with current and relevant information. Also, the imminent development of DETI's Intranet will lead to greater opportunities for information sharing. A cultural change will be required to promote freer sharing of information to make these kinds of systems work.</p>	High	Revise Appraisal and Rewards schemes to encourage, recognise and reward the required levels of information sharing within DETI.
I2	<p>Change 2: Joined-up opportunities will require Departments and Agencies to work more closely together and be more open to cross Departmental information sharing.</p>	High	The development of a culture geared to an increase in cross Departmental collaboration and information sharing will be a critical success factor for the delivery of joined-up projects.
I3	<p>Change 3: The DETI e-Business strategy implementation will require organisational and process change to accompany the delivery of the new technology.</p>	High	The portfolio of e-Business projects would benefit from being managed as a programme with a common change management strand, co-ordinating business change across all projects.
I4	<p>Roles & Responsibilities 1: Some DETI staff will be required to use new technologies.</p>	Medium	The Trade Unions should be consulted on the e-Business strategy implementation. e-Business awareness training should be provided for DETI staff.

Ref:	Issue:	Impact	Recommendation/Countermeasures
I5	<p>Roles & Responsibilities 2:</p> <p>The availability of Programme and Project Management skills and PRINCE2 experience needs to be maximised within DETI.</p>	High	The e-Business strategy implementation will require strong programme and project management skills. Programme management skills already exist within DETI and pro-active steps are being taken to develop project management skills. These skills could also be bought in, if required, from 3 rd party programme and project managers working closely with key DETI staff to maximise their effectiveness and deliver a skills transfer as an additional benefit. Planned development of an NICS Centre of Excellence for Programme and Project Management will also be a significant mitigator.
I6	<p>Roles & Responsibilities 3:</p> <p>The DETI e-Business delivery will be dependent on the allocation of a number key responsibilities including:</p> <ul style="list-style-type: none"> • Content provision; • Content management; • Security; and • Technical webmastering. <p>DETI technical resources are currently stretched. In addition, experienced project managers are in demand and programme management skills may need to be developed.</p>	High	Roles and responsibilities for activities such as content provision and content management should be defined and agreed before starting any of the new initiatives in the e-Business strategy.
I7	<p>Roles & Responsibilities 4:</p> <p>In general, the delivery of the overall e-Business Strategy will put a strain on DETI resources.</p>	High	The development of a programme plan with resource commitments will be key. This will evolve as project scoping studies and business cases are generated. The cumulative impact should be monitored regularly by the Programme Manager, the Business Change Team and the Business Change Executive.
Processes			
I8	<p>Customer Service 1:</p> <p>The Internet is perceived as a 24*7 service delivery mechanism.</p>	Medium	SLAs with the providers of DETI's electronic services (e.g. network availability and support, web-server availability and support) may require upgrade or constant monitoring to reflect the levels of continuous service required.

Ref:	Issue:	Impact	Recommendation/Countermeasures
I9	<p>Customer Service 2:</p> <p>There is a perception that services initiated through the Internet will result in an instantaneous service delivery back from the DETI. Many services will still require significant back-end validation and processing.</p>	Medium	DETI will need to manage customer expectations regarding speed of delivery through its marketing campaign, appropriate information on the Web-site and timely automatic responses, acknowledging receipt of service request and highlighting expected times to completion.
I10	<p>Customer Service 3:</p> <p>Some potential e-services will require the user to have registered to enable some form of identification mechanism (e.g. username and password, digital certificate). Departments and Agencies pursuing their own registration mechanisms can result in customers being allocated an unmanageable number of registration mechanisms for e-Services.</p>	High	The NI e-Government Unit has mandated the use of the Government Gateway portal to provide citizens and businesses with a single registration and authentication point for all government electronic services.
I11	<p>Procurement 1:</p> <p>Central Procurement Directorate has identified an unwillingness amongst some suppliers and contractors to tender, trade and receive payments electronically.</p>	Medium	<p>Supplier/contractor buy-in should be sought prior to any significant investment in e-procurement and e-tendering systems. Supplier/contractor associations should be involved in the design and development of these systems to facilitate a win-win scenario.</p> <p>This issue potentially extends to all e-Business applications in terms of stakeholder involvement (internal and external) in the design and development of these applications in order to mitigate against non-acceptance of the solution by users.</p>
Systems & Technology			
I12	<p>Standardisation & Integration 1:</p> <p>A common platform is critical to ensuring DETI staff have access to the proposed Internet-enabled systems.</p>	High	DETI is well placed currently in terms of standardised ICT architecture.
I13	<p>Technology Infrastructure 1:</p> <p>Access to the Government Gateway registration and authentication services will require connection of the DETI networks to the Government Secure Intranet (GSI) via PSN. The network will require accreditation as a pre-requisite to connection.</p>	High	DETI has already achieved PSN(R) accreditation.

Ref:	Issue:	Impact	Recommendation/Countermeasures
I14	Technology Infrastructure 2: 100% coverage of PCs on desks for relevant staff is a key enabler of e-Business for DETI.	High	PC penetration in DETI is 100%.
I15	Technology Infrastructure 3: The e-Business projects will put an additional demand on the DETI networks.	High	Each e-Business project business case should analyse the network impact and provide costs for any network upgrade requirement.
Delivery & Operations			
I16	Channel Replacement 1: Public access to the Internet in Northern Ireland is growing but relatively low compared to GB. In the short to medium term it will not be possible to replace entirely existing channels to DETI with electronic channels as this would exclude those who do not have access to the required technology from the relevant services. Costs of developing sophisticated Internet services may be prohibitive when viewed against a limited customer reach.	Medium	Existing channels will need to be maintained. Also, given that the telephone is likely to be the most prevalent electronic channel for citizens in the short to medium term, consideration should be given to providing DETI contact centre staff with access via the Intranet to the same web-based applications and user interfaces as offered to the citizen. This will ensure that the same applications are used across channels and that contact centre staff can readily assist citizens seeking help with the use of the web channel / interface.
Financial			
I17	Funding 1: Funding availability will be an issue for the implementation of the e-Business Strategy. The development and delivery of e-Business opportunities cannot be afforded within DETI's existing budgets.	High	Additional sources of funding must be identified. An investment commitment is a critical success factor for implementation of the e-Business strategy. For cross-cutting initiatives, the possibility of making an application to e-Government Fund exists. Public Private Partnerships (PPPs) could also be explored but are unlikely to be appropriate for most, if not all, the projects in this strategy.

Ref:	Issue:	Impact	Recommendation/Countermeasures
I18	<p>Funding 3:</p> <p>It may not be possible to achieve cost savings in the short to medium term. In addition to new Internet-based Service Delivery, DETI will have to maintain existing service channels in parallel in order to avoid excluding people who do not have access to the associated technology.</p>	Medium	DETI should review the uptake of new delivery channels and remain aware of initiatives that are likely to have an impact on the level of access to technology experienced by the citizen.
I19	<p>Funding 4:</p> <p>Increases in demand for public services over the Internet will result in the need for additional resources and/or investment to maintain established service levels.</p>	Medium	Careful consideration should be given to the potential impact of e-Business on the demand for and cost of public service delivery in the short, medium and long term.
Legislation			
I20	<p>Freedom of Information 1:</p> <p>The Freedom of Information Act gives the public rights of greater access to DETI records. DETI will need to be able to respond within set time-scales, typically within 20 days.</p>	High	DETI should address the potential of electronic document and records management to address this issue before rolling out EDRM across the Department. This would be a pre-requisite to the provision of records access to the public on-line.
I21	<p>Disability Discrimination 1:</p> <p>The Web can present barriers to people with different kinds of disabilities, including:</p> <ul style="list-style-type: none"> • Visual disabilities; • Hearing disabilities; • Physical disabilities; and • Cognitive or neurological disabilities. 	Medium	At the design stage of web-based e-Business projects, DETI should ensure that the design is compliant with the Disability Discrimination Act.
I22	<p>Linguistic Diversity 1:</p> <p>There may be a requirement for the DETI to support multi-language (English, Irish, Ulster-Scots) websites.</p>	Medium	DETI should examine the language issue and decide which languages are to be supported and how. This may also have technical implications with regard to the presentation of information on the DETI websites.

Potential Barriers and Enablers to the Successful Delivery of the DETI IS/e-Business Strategy - Risk Register

Ref:	Risk:	Likelihood:	Impact:	Recommendation:
Organisation & Capabilities				
R1	<p>External Influences 1:</p> <p>A review of Department and its service could take place during the lifetime of this strategy, impacting its appropriateness.</p>	Medium	High	The Business Change Team and the Business Change Executive should be constantly reviewing the appropriateness of the strategy. Regular formal updates to the strategy will also mitigate against this risk.
Processes				
R2	<p>Marketing 1:</p> <p>Faulty web applications and poor performance of the site can have a direct negative impact on DETI's corporate image.</p>	Medium	High	Ensure all Web-site applications are thoroughly tested, all content is vetted and that the site can respond to peaks in usage.
R3	<p>Marketing 2:</p> <p>Without significant marketing of the new services to be made available over the DETI Web-sites, the public may remain unaware of both the site and the services provided.</p>	High	High	<p>Plan a marketing campaign for the new services to be offered to ensure that the public know what has been e-enabled, where to find it, and how it is an improvement on their existing channels into DETI.</p> <p>It is assumed that the Northern Ireland government portal site OnlineNI will have a significant marketing campaign associated with it. Through linkages to and from this site, DETI may be able to leverage off this campaign.</p>
R4	<p>e-Services uptake 1:</p> <p>Some services provided on the DETI Web-sites may not end up being used by the public.</p>	Medium	Medium	<p>Provision of e-services should be driven by the needs of the public. A market survey would provide an effective method of determining which services are likely to be taken up by the public.</p> <p>Web-sites can be constructed to measure levels of access to services provided. This information can be used to drop unpopular services and ramp up well utilised services.</p>
Performance Management				

Ref:	Risk:	Likelihood:	Impact:	Recommendation:
R5	Success Measurement 1: An e-Business project may fail to deliver its expected benefits. Associated costs may increase.	Medium	Medium	A suitably detailed business case should be constructed for each e-Business project. The levels of benefit should be reviewed and agreed by the users/managers who will be charged with delivering the agreed benefits. Appropriate use of sensitivity analyses can also be applied during the initial business case preparation to test the impact of cost/benefit variances.
Systems & Technology				
R6	Technology Infrastructure 1: Failure to adopt NI Public Sector-wide standards will act as a barrier to the implementation of current and future joined-up initiatives.	Low	Medium	Existing NIPS standards and guidelines should be adopted.
R7	Technology Infrastructure 2: There is a possibility that technology may be superseded by the time some of the strategic e-Business projects go live.	Medium	Medium	The technologies used in delivering the DETI e-Business strategy should be extensible and adaptable where possible.
R8	Technology Infrastructure 3: Problems with the Internet, beyond the direct control of DETI, may degrade performance of DETI Electronic Service Delivery.	Medium	Medium	Whilst some elements of the Internet are simply beyond the control of DETI, DETI should ensure that they have a robust Service Level Agreement in place with BDS covering a range of performance areas including availability and the ability to cope with peak activity periods.
Delivery & Operations				
R9	Priority Conflicts 1: Differing priorities within DETI may mitigate against agreement re strategic priorities and/or common implementation approaches.	Medium	Medium	Issues which cannot be resolved by the DETI Programme Manager will be escalated to the Business Change Executive.
R10	Change Control 1: It is likely that over the lifespan of an e-Business project, requirements could change due to, for example, changes in NI Legislation, Standards, Guidance, etc.	Medium	Medium	The impact of such change should be strictly controlled using formal change control procedures. The e-Business strategy should be reviewed regularly.

Ref:	Risk:	Likelihood:	Impact:	Recommendation:
Legislation				
R11	<p>Data Protection Act 1:</p> <p>The Data Protection Act places a number of constraints on the use of citizen's personal information between Government Agencies and Departments. The current legislation in Northern Ireland may place a key constraint on the development of joined-up e-Government opportunities where citizen specific data is involved.</p>	High	High	<p>This is a broader issue facing e-Government in Northern Ireland and is not specific to DETI.</p> <p>DETI may need to lobby the Executive / Minister (via the NI e-Government Unit) to establish an appropriate Working Group to examine and propose changes to the current data protection laws in Northern Ireland if the current law is found to be an insurmountable barrier to legitimate joined-up projects.</p>
Security				
R12	<p>Authentication, Non-Repudiation and Privacy 1:</p> <p>Some electronic services will require the ability to authenticate the identity of the user. There is a risk that a user may attempt to take on a false identity in order to gain access to records of another party. Alternatively a legitimate user may subsequently attempt to deny that an information flow or transaction originated from themselves.</p>	Medium	High	<p>The NI e-Government Unit has mandated the use of Government Gateway for registration and authentication services.</p>
R13	<p>Data Integrity 1:</p> <p>Attempts may be made to intercept and alter data flowing between the DETI Web server and the browser.</p>	Medium	High	<p>Sensitive data should be encrypted using SSL, S-HTTP or similar.</p>
R14	<p>Unauthorised Access to Core Systems 1:</p> <p>Where Web services are integrated with core systems, attempts may be made to gain unauthorised access to those systems.</p>	Medium	High	<p>The DETI firewall should be configured to detect and prevent unauthorised access.</p>
R15	<p>Denial of Service 1:</p> <p>Attempts may be made to deny access to DETI Web-based services.</p>	Low	High	<p>The DETI firewall should be configured to detect and prevent such attacks.</p>
R16	<p>Content 1:</p> <p>Attempts may be made by 3rd parties to corrupt the content of the DETI Web-sites.</p>	Medium	High	<p>The DETI firewall should be configured to prevent 3rd party content editing capabilities.</p>

Ref:	Risk:	Likelihood:	Impact:	Recommendation:
R17	<p>Content 2: Undesirable content or function may be placed on the DETI Web sites by DETI staff, either accidentally or maliciously.</p>	Low	High	<p>DETI Web site policy should cover relevant security issues including:</p> <ul style="list-style-type: none"> • Version control of programs and documents; • No direct modification of code or content possible in the live environment. Formal QA and sign-off processes for code and content should exist which only allow validated changes / additions to be migrated from the development / generation environment to the live environment; • Regular testing of Web page integrity; and • Authorisation by management of program maintenance and content publishing.
R18	<p>Attacks Via the Firewall 1: The DETI firewall is key to Web services security, but access controls to the firewall itself may be breached with resultant loss of security.</p>	Low	High	<p>Encrypt remote access to the firewall. Store firewall logs in real-time on a remote host. Record access to the firewall via a security camera.</p>