Transforming Information Governance Using SharePoint 2010

Stephen Howard
NATS
4000 Parkway, Whiteley,
Fareham, Hants, PO15 7FL, UK
+44 (0)1489 446925
Stephen.howard@nats.co.uk

ABSTRACT

NATS, an international air navigation service provider, deployed SharePoint 2010 to approximately 4500 users over 18 months. This paper provides an overview of the main aspects of the project, including the business case and change management delivery model. It outlines the key role of an information governance framework, including a network of Local Information Managers and Information Points of Contact, underpinned by an Information, Records & Archives Management policy. The paper also details information architecture choices and configuration for records management. Finally, the results of a comprehensive lessons learned exercise are reviewed, including informal benchmarking against other SharePoint implementations. The project proved to be more complex than envisaged at the outset, and high initial user expectations have not always been met. In particular, records management functionality will be provided during a secondary implementation phase using third-party tools. Users remain engaged and are optimistic that the collaborative and data management capabilities of the new common platform will lead to innovation in business processes and deliver tangible benefits.

Categories and Subject Descriptors

Benchmarking RM and information governance; evolution from RM into global information governance; latest developments and best practices in RM.

Keywords

SharePoint 2010; information governance; enterprise content management.

1. INTRODUCTION

"In any organisation, once the beliefs and energies of a critical mass of people are engaged, conversion to a new idea will spread like an epidemic, bringing about fundamental change very quickly." ***[1]***

NATS is the UK's leading provider of air traffic control services. Each year NATS handles 2.2 million flights and 220 million passengers in UK airspace. In addition to providing services to 15 UK airports, NATS works in more than 30 countries around the world. Established as a public/private partnership in 2001, NATS is one of the first Air Navigation Service Providers (ANSPs) to be privatized and one of the leading commercial ANSPs in Europe.

The business information technology function within NATS (Information Solutions) outsources all technical services to multiple business partners, and is focused primarily on service development, customer service delivery, supplier coordination and change management. In June 2011, after extensive internal consultation, market evaluation and proof of concept trials, the NATS Chief Information Officer launched a long-term initiative called "Our Future Workspace". Two core elements of the programme included the virtualization of the standard IT desktop and the adoption of Microsoft's SharePoint Server 2010 at the heart of a strategic content and data management infrastructure to facilitate collaboration and mobility **[2]**. This paper focuses upon the core SharePoint 2010 collaborative team site (Team HUB) deployment at NATS from October 2012 to April 2014. It does not address data warehouse analysis using SharePoint for business intelligence, nor the development of NATS applications built upon the new platform. It also does not cover the related SharePoint project at NATS to launch a new intranet, training 450 contributors and transitioning over 15000 pages within 6 months using a governance model that was a useful foundation the main Team HUB rollout.

2. SHAREPOINT BUSINESS CASE

The original SharePoint business case described how NATS retained a significant amount of content for operational, regulatory and legal purposes. This was stored and managed within the Livelink legacy content management system in a manner which did not fully support effective and efficient collaboration. There was no automated implementation of retention policies and if no action was taken, it was argued, the content and cost of storage would become unmanageable. The savings arising from the decommissioning of Livelink would deliver a timely return on the project investment.

SharePoint Server 2010 was identified as the only integrated and cost-effective solution that was capable of meeting NATS' specific information management and wider capability requirements. The anticipated benefits included:

- Reduced operating costs, compared to implementing point solutions for records management and the intranet.
- Reduced legal, regulatory and security risks; improving the management of personal and non-personal data; applying retention policies and improving access controls.
- Improved productivity since an accurate and authentic "single version of the truth" could be found more easily when stored in shared areas; more effective; information-

based processes streamlined using automated workflows; rich business intelligence reporting.

- Alignment with the NATS business growth strategy, since the platform provided a single common platform for web content management, business application development and wider innovation.

The SharePoint project was originally approved in August 2011 at a total forecast capital and revenue cost of £2.8m including internal labour costs, all supplier services, licensing and the establishment of a resilient on-premise SharePoint infrastructure delivering satisfactory performance across the NATS estate. The project deliverables were subsequently revised in light of emerging complexity and additional business requirements. Due to this extended scope, the total project budget was amended in November 2012 to £5.5m to cover additional implementation, development, deployment and internal labour costs.

3. INFORMATION GOVERNANCE

An Information Management Steering Group (IMSG) composed of sponsors from each business area was established in the early phases of the SharePoint rollout with a monthly agenda of project updates and relevant information governance decision-making. In early 2013 a new Information, Records and Archives Management Policy was approved by the IMSG, which after a long period of consultation obtained Executive approval in February 2014. The new policy clarified NATS' commitments and articulated an information governance framework that would prove vital to the SharePoint project and to subsequent information management initiatives **[see Annex 1 below]**.

The policy obliged business areas to appoint a Local Information Managers (or LIM) to ensure the appropriate management direction, processes and tools were in place to efficiently manage information arising from their functions. For larger business areas, LIMs would be supported by Information Points of Contact (IPOCs) from each sub-function. As SharePoint site collection owners, LIMs and IPOCs manage and maintain local Team HUB content and structure, set permissions and approve local changes to sites on a routine basis. They participate in the NATS information management community (e.g. the Electronic Document and Records Management Forum), share their knowledge with colleagues, answer local user enquiries in the first instance, promote best practice and aspire to continuous improvement in the management of their information. A total of 28 LIMs and 204 IPOCs across all business areas were appointed, trained and supported during the project.

4. PROJECT DELIVERY

The SharePoint project team was composed of 14 NATS and supplier staff, including SharePoint architects and subject matter experts, project managers, information management analysts and NATS change agents. The 18-month implementation plan divided NATS into 8 key tranches of 12 weeks' duration, with each tranche containing several business areas. The balancing of the effort required across each tranche was more an art than a science. The core business functions of the operational centres, engineering and programmes obtained significant extensions to their tranches at the project board.

The project team approached senior managers within each business area well in advance of the schedule and obtained agreement to follow the rollout plan to build, populate and launch their Team HUB **[see Figure 1 below]**.

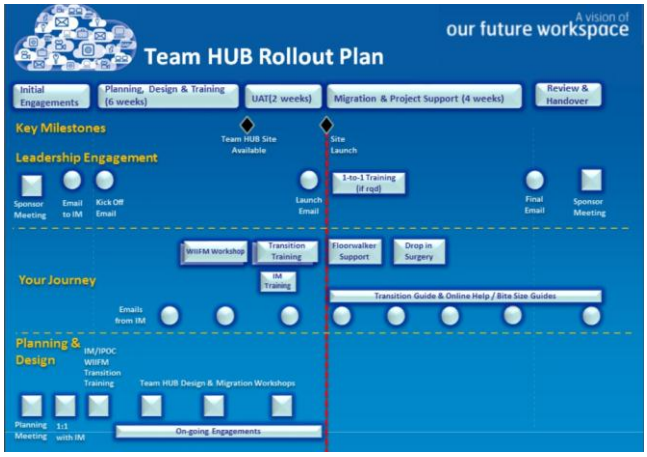

Figure 1

LIMs and IPOCs were the primary point of contact for the project team to collate business areas requirements for Team HUB design, permissions, retention and content migration. Each business area was required to complete a pre-engagement audit questionnaire to better understand each function and review existing content management practices. LIMs and IPOCs were strongly encouraged to prepare for engagement with the project team by housekeeping their existing Livelink and shared drive folder structures, deleting any expired content, and identifying any documents that could not be held in SharePoint due to size or file type limitations. In particular, LIMs and IPOCs were tasked with rationalizing deep nested folders within Livelink that would not work well in a SharePoint environment.

LIMs and IPOCs were also directly involved in the delivery of communications about the Team HUB rollout and assisted in the scheduling of "What's in it for me?" and hands-on transition training for all business area employees. They also ensured their team's attendance at detailed site design workshops and coordinated user acceptance testing, migration verification and sign-off prior to go-live. The project team offered floorwalker support and drop-in surgeries to supplement SharePoint computer-based training and wiki guides. Issues captured by the LIMs and IPOCs were routed to the project team for resolution.

5. INFORMATION ARCHITECTURE PRINCIPLES

It is essential that information governance arrangements are robust enough to enforce a disciplined approach to key SharePoint architectural principles and design decisions. Examples from the NATS project included:

5.1 Naming conventions and site hierarchy

The names of web applications, managed paths, sites, libraries and lists should follow standard naming conventions. All URLs should be succinct to minimise the risk of the total file path exceeding the technical limit of 255 characters and exclude

spaces. Where not a Community or Project site (which have their own managed path), all new Team HUB site collections should be created using a "Functions" managed path and named using a 3-letter acronym agreed with Information Management and the relevant LIM to describe that function. Document IDs should be set to replicate the relevant site collection 3 letter acronyms as a prefix to create a unique identifier across the SharePoint farm.

5.2 Team HUB template

Site libraries should be structured according to the functional breakdown of activities relevant to each business area, with their name and number approximately equivalent to the top-level folders of legacy content on shared drives following a thorough housekeeping exercise in liaison with the Information Management team. Folders should be replaced with metadata where practical. In line with the collaborative vision of the SharePoint project, permissions to access site collections and functional libraries should ordinarily be set to all NATS staff unless there is a compelling business reason to restrict access to a more limited group i.e. due to the presence of protectively-marked content. Library check-in/out functionality should be set to default to OFF to avoid issues with bulk upload, updating in datasheet view, co-authoring and storing drafts to local storage. Versioning should be set to permit major and minor versions. A default All Documents view should be enforced using columns selected from the default Content Type to standardize the user experience.

5.3 Content types and metadata

The standard NATS-Document content type must include the columns detailed in **Table 1** below.

Table 1

Metadata	Mandatory?	Description
Name	√	File name (to naming conventions) User defined
Title		Plain English description
NATS Subject		local picklist created by LIM
NATS Owner	√	Default to creator
NATS Protective Marking	√	Default to library setting
Document ID	√	Auto filled

Child content types should be created for each major Office application and linked to a standard document template issued by NATS Internal Communications e.g. NATS-Word, NATS-Excel, NATS-PowerPoint. The mandatory column NATS Protective Marking can be set to default accordingly for each particular location based upon the normal sensitivity of the record series and can be presented in the document header/footer itself as a smart tag label.

5.4 Records management configuration

The implementation of records management and retention controls was a core element of the NATS SharePoint business case. SharePoint 2010 provides basic records management functionality, but the project team developed an increasing awareness of the limited capabilities when scaled to meet the demands of a large and complex organisation **[3, 4 and 5]**. Critical issues included the lack of aggregation to rationalize disposition decisions, the weaknesses in the audit trail of disposition and the lack of a unique document ID that could survive routing across site collections.

NATS and its SharePoint delivery partner explored ways of configuring an effective records management solution using out-of-the-box functionality and limited customisation, but the known issues could not be confidently resolved in a cost effective manner and without placing future SharePoint upgrades at risk. NATS thus reviewed the marketplace for a specialist SharePoint records management plug-in written and supported by a reputable third-party supplier.

This was also an opportune moment for NATS to seek a method of effectively capturing and applying retention schedules to email records. The lack of integration between SharePoint 2010 and Outlook 2010 does not allow for an intuitive and effective way to manage email records. RecordPoint were the winning vendor, who also supplied the Email Manager Outlook plug-in by Colligo. NATS is still in the process of deploying these tools onto its production SharePoint and desktop environments and planning their full implementation.

6. PROJECT ACHIEVEMENTS

At end of the deployment in April 2014, the Team HUB web application contained 1310 Team sites representing 36 business areas and attracted 1400 unique visitors each day. Team HUB training had been delivered to approximately 1400 employees across all office locations, and every NATS SharePoint user was granted ownership of an individual "My Site". Two computer-based training packages were available to all staff via the intranet, supported by 422 wiki pages of frequently asked questions. Over the duration of the deployment, 776 issues were captured and resolved by the project team, and 42 significant change requests were implemented by a Change Control Board to deliver business requirements outside of the original scope of the rollout. Over 1.7 TB of legacy content was migrated from Livelink to SharePoint.

The project ultimately delivered within the constraints of the revised budget, and in line with the scope and schedule agreed by the project board. For the first time in recent memory all NATS business areas are using the same enterprise content management system. The organisation as a whole has learned a lot about SharePoint over the past 18 months, and most LIMs are engaged with the platform and have ideas about taking it forward. There are good examples of LIMs exploiting the potential of SharePoint to build sites that cut across organisational boundaries and enable more efficient collaboration between teams e.g. Swanwick and Prestwick centres share libraries of operational instructions;

Business Development and NATS Services share libraries of commercial bids.

7. LESSONS LEARNED

NATS commissioned an independent auditor to conduct a mid-flight project review in March 2013. This was followed up in April 2014 by an experienced independent SharePoint consultant who conducted an evaluation of the project and conducted some informal benchmarking against 5 organisations who had implemented SharePoint **[See Annex 2]**. One month after the formal end of the project, over fifty LIMs, IPOCs and supplier representatives attended an afternoon workshop to review the lessons learned, and celebrated the conclusion of a long, complex but ultimately rewarding project.

7.1 Stakeholder engagement

Stakeholder engagement was complicated since ambitious but unrealistic expectations were set in the early phases of the project and not recalibrated when the scope was changed. Neither of the corporate-wide implementations benchmarked (organisations B and D) promised records management, workflow or extranets. Even C which is proceeding with a very slow, phased and targeted implementation, have postponed records management and extranets until a later stage.

On the other hand, business areas were to some extent unprepared for engagement with the project team. There was widespread misunderstanding of the gravity and scale of the LIM and IPOC roles, and the majority of business areas struggled to meet the resource requirements for effective information governance during the transition to SharePoint. Not all of the LIMs had the time and/or the SharePoint knowledge to configure document libraries to adapt SharePoint to their own needs. Some business areas were fully occupied with existing projects or change initiatives and could not fully exploit the information management opportunities presented to them by Team HUBs.

7.2 Underestimation of effort

It was recognized at an early stage that the deployment of SharePoint is much more than the installation of the software. Team HUBs profoundly affected the way that business areas worked and represented a personal challenge to many staff members familiar with the legacy platform. Business areas also required far more assistance to carry out a detailed analysis of their existing content than was originally planned and needed enhanced support to define and implement appropriate information management structures. An extended period of engagement and user acceptance testing within each business area and additional analyst support was needed to capture requirements, increasing the budget allocation.

Even with the additional budget, the project team was perceived by the business areas as lightly resourced and heavily reliant upon the LIM and IPOC network. Due to the ambitious and congested project schedule, engagement with the next tranche of business areas had frequently already started prior to the full resolution of issues from the previous tranche. Although the deployment did eventually establish a successful rhythm, at times there were bottlenecks as the tranche issues doubled-up.

NATS also required additional training support (provided by Ipso Facto Ltd) for the LIMs and IPOCs, who reflected that earlier training opportunities would have provided a better insight to the full capabilities of the new platform, enabling more innovation at the design workshops and ultimately helping to build better solutions. NATS suffered from a lack of SharePoint experience in comparison to most of the other organisations benchmarked (C & E had learned from previous unsuccessful SharePoint 2007 projects). NATS also suffered from a lack of settled personnel, and key posts were vacant when the rollout started.

7.3 Information architecture

Early Team Hub workshops devoted much effort to the creation of a full catalogue of content types from each business area, with a view to specifying metadata for each content type and linking them to retention and lifecycle management policies. In practice, the 12-week engagement model did not give enough time for the business areas to agree on bespoke content types. The project board approved the simplification of the standard site template in Feb 2013, a few months into the rollout. The use of the managed metadata column “NATS Subject” was unclear, and by default the whole Subject term set was available for every site library. It was unrealistic to expect a central authority to manage the “NATS Subject” list to the level of granularity needed by the business and from tranche 4 onwards, NATS Subject was an optional column of controlled values populated by Local Information Managers as appropriate.

In some instances the project team delegated nodes of the Term Store to LIMs, however SharePoint Managed Metadata was exposed as an immature feature of SharePoint 2010 to be used with caution and in agreement with each business area. NATS content type ambitions were thus eroded, creating some confusion and inconsistency. In comparison, organisations D and B had made their key information architecture choices before the start of the roll out and stuck to them all the way through.

Despite the project team’s efforts to standardize templates and architectural design decisions, there is inconsistent use of folders, content types and metadata. It proved to be unrealistic to expect existing sites to be migrated to a new version of the site template, and there are variations in templates that may potentially complicate user support. A number of valid special cases were identified across the business, and bespoke site templates were created for projects and for engineering assets.

The recommendation to create broader, flatter site structures reflecting business functions was not always followed. “Function” was often interpreted to mean “Department” and hierarchical site collections were constructed based upon temporary organisational structures. It did not take long before the project team received requests to relocate sub-sites to new site collections due to organisational change – with associated complications of losing identifiers specific to the parent site collection.

7.4 Migration

The decommissioning of Livelink was a central element of the SharePoint business case, and the project was overshadowed by

the need to migrate Livelink and file share content to business area Team HUBs. Time that could have been spent in designing the information structures of the new Team HUBs and innovating in ways of working was instead used in migration mapping.

The path of least resistance for some business areas unprepared for engagement with the project was to simply "lift and shift" Livelink folders into SharePoint. In some cases those folder structures were deep nested folders and impractical in a SharePoint environment. Replicating folder structures in this manner failed to exploit the strength of SharePoint in managing content with metadata. Where content was important enough to be needed in Team Hubs ideally it should have been imported with metadata values added to the fields required in the library.

Most of the other organisations surveyed took a simpler approach to migration. C did not migrate any comment from its 2007 instance to SharePoint 2010. E will import content from its legacy electronic records management system into a SharePoint records centre. In contrast, NATS attempted the more difficult task of importing Livelink content area by area into each relevant team HUB.

The migration task itself was lengthy and complicated, with a wide range of errors reported due to filenames, sizes or formats. The migration from Livelink frequently broke links to documents that existed in other documents and databases across NATs, and a bespoke Livelink search redirection service had to be built to provide a workaround. Even though a significant amount of content was migrated and deleted from the legacy system, Livelink retains some unique content and is currently still in operation in read-only mode, a clear example of where the project did not fully meet its objectives.

7.5 Security levels and access controls

Permissions remain the key administrative overhead for site collection owners, and a frequent source of support calls in light of their apparent fragility and complexity. The project team recommended the placing of service requests to edit Active Directory groups rather than directly editing SharePoint groups. It was only after the end of the project that a tool was provided to LIMS and IPOCs for updating Active Directory in real-time. Further investigation of permissions management plug-ins to set security based on metadata values (e.g. protective marking) will be undertaken. Business areas have also requested enhanced reporting capabilities to easily investigate the permissions allocated to an individual.

7.6 Limitations and missed opportunities

The implementation of records and email management plug-ins will address some of the key functionality gaps in SharePoint. However the configuration of the retention process in the records management plug-in will require the resources of IS, suppliers and the LIMs. In hindsight, greater efforts should have been made to implement RecordPoint earlier in the project and NATS should now take a long term view of the application of retention rules.

A range of product weaknesses complicated the SharePoint rollout. Some applications (e.g. AutoCAD, Acrobat) did not easily integrate with SharePoint. The software boundaries and limits were frequently encountered. Users were frustrated in performing simple tasks like moving documents across libraries. Offline working with SharePoint Workspace was disappointing, and optimizing access to Team HUBs from mobile devices was not fully considered. On the other hand, some business areas were frustrated that advanced SharePoint features were not fully enabled and available at an early stage to LIMs and IPOCs e.g. SharePoint Designer for custom workflows, InfoPath data collection and Business Connectivity Services to external data sources.

Search performance was consistently disappointing due to a proliferation of document versions eroding confidence in the SharePoint search results. The project team was unable to prioritise change requests to the FAST search configuration and in this respect did not fully meet business expectations.

7.7 Platform stability and support

The concurrent delivery of the desktop virtualization project across all business areas complicated the Team HUB deployment in a variety of ways, and it is strongly recommended that organisations deploy SharePoint on a desktop environment with the latest versions of standard office applications. Supplier management was hindered by a complex contract, lengthy contract negotiations, and changes in personnel. Business areas perceived that there was very limited access to the technical resource who could fix user issues.

The early phases of the project established a platform that was not fully resilient. Major system outages occurred during the deployment that caused delays and undermined confidence in the platform and project. A comprehensive technical improvement plan restored trust in SharePoint; however NATS continues to experience technical issues with third-party tools for backup, administrative reporting and document migration. The launch of extranets was significantly delayed due to technical issues.

8. BENEFITS REALISATION

NATS defined projects benefits that were arguably too generic, making them less useful as a guide to decision making in the project and difficult to measure. In September 2014, 6 months after the closure of the project, LIMs and IPOCs were invited to complete a questionnaire to summarize their experience of the deployment and answer the key question "To what extent do you feel that Team HUB rollout has improved the overall level of information management within your business area?" **[See Figure 2 below]**.

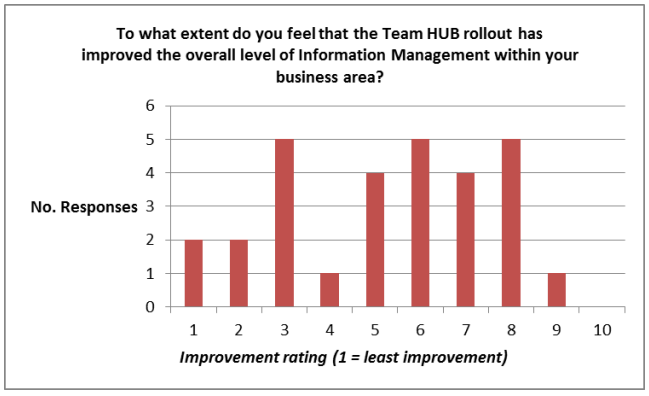

Figure 2

From 29 responses, the average measure along the scale of improvement was 5.24 on a 10 point scale. The wide spread of responses reflect the differing levels of exploitation of SharePoint's potential e.g. business areas that have simply imported Livelink folder structures into SharePoint have seen little or no improvements. The low scores typically represent the earlier tranches, before the project team made key adjustments. The informal survey suggest that business areas have seen a positive impact in their governance of information and are reaping the rewards of engaging with the project team, beginning their SharePoint journey and learning en route. There is broad acceptance that SharePoint has been beneficial to NATS and has the potential for further innovation.

It is interesting to compare this response with results of a survey of more than 600 members of the AIIM community in 2013 [6]. In particular, in response to the question "Thinking about the scope and development of your SharePoint ECM project, how would you describe progress"? The AIIM survey suggests that a majority of SharePoint deployments (61%) are stalled, struggling or failing and only 6% report an unqualified success **[See Figure 3 below]**.

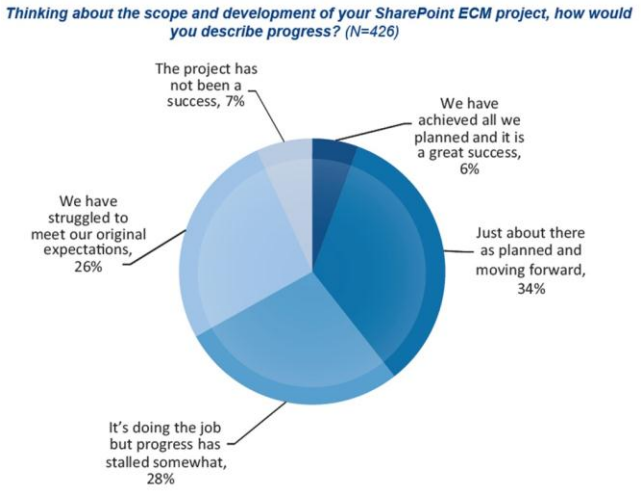

Figure 3

9. CONCLUSION

The end of a corporate roll out creates the risk of a loss of organisational focus and momentum. In attempting to transform information governance using SharePoint 2010, NATS arguably took on a project that was too ambitious, with insufficient knowledge of the product, in too short a time frame. At this stage is has an enterprise content management system with an architecture that needs further optimization. The priority over the next two years should be to support business areas to improve the quality and consistency of document libraries and where appropriate support the transition from documents to data through the innovative use of lists and external data connections.

LIMs and IPOCs are already talking about SharePoint 2013 and Office 365, and Information Solutions will be creating a SharePoint innovation team to help deliver tangible benefits to the business through targeted developments. The implementation project was just a small step on a long SharePoint journey for NATS. SharePoint has the potential to give further business benefit if the ideas and energy of the LIMs and IPOCs can be harnessed and supported. NATS has reached a tipping point in its use of SharePoint, with a critical mass of adoption.

10. ACKNOWLEDGMENTS

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12. ANNEX 1

NATS information, records and archives management policy

1 Policy

1.1 Global leadership and innovation in air traffic solutions, airport performance, and air safety requires the effective management of NATS information, records and archives to the highest international standards. This must be underpinned by an appropriate infrastructure of organisational commitments, consisting of a chain of managerial accountability, and sufficient resources and expertise to implement a framework of controls and procedures.

2 Scope

2.1 This policy applies to the management of all NATS information assets, records and archives created or received by any NATS employee or contractor in the

course of NATS' business or held by third parties (e.g. regulators, customers, partners, suppliers), including:

a) Physical and electronic documents, intranet and internet web pages, emails, blogs, instant messages and SMS text messages.

b) Data within structured data systems (such as SAP, the Business Intelligence (BI) Data Warehouse, databases and operational systems) since issues relating to records retention, categorisation and security will apply equally to such data sources and equivalent controls must be put in place.

3 Objectives

3.1 The implementation of this policy has the following objectives;

a) To empower NATS employees and support responsible, intelligent and effective decision-making based on timely and accurate information.

b) To enable the efficient delivery of NATS services and functions, facilitating organisational transformation.

c) To make decisions and performance transparent to stakeholders through effective records management and improved communications.

d) To reduce administrative costs by providing timely access to full and accurate records and streamline the handling of information, reducing time lost in retrieval and the duplication of work.

e) To minimise accommodation and information storage costs by ensuring the timely and secure disposal of expired physical and electronic records.

f) To provide organised and reliable records for the management of property, assets, finance, human resources, organisational performance, safety and risk.

g) To facilitate collaboration across NATS and partner organisations through the appropriate sharing of information.

h) To maintain and exploit NATS' institutional memory and knowledge over time, helping to establish lessons learned, maintaining competitive advantage and assisting research and innovation.

i) To comply with legal requirements for maintaining privacy, security, confidentiality, authenticity and integrity of information and support the NATS Information Security Policy.

j) To protect NATS and its employees against litigation.

k) To safeguard NATS' vital records and support business continuity.

l) To ensure the long-term preservation of NATS' archival records to facilitate future business activity, research, reuse and public access.

4 Definitions

Categorisation: the logical grouping of records that assists the management, retrieval and disposal of information. Categorisation is not to be confused with security classification, which assigns protective markings, security levels and access controls to information.

Disposition: the range of processes associated with implementing records retention, destruction or transfer decisions which are documented in retention schedules.

Retention schedules: detail the mandatory retention period for records and the appropriate disposition action at the end of each period. They demonstrate conformance to legislation, statute, regulation, common or local procedure, contract, specification or as required for the operation or maintenance of equipment or services.

Information: an asset recognised by its capacity or potential to provide (directly or indirectly) data or any knowledge, regardless of format or medium. Examples of information would include: documents, photographs, maps, diagrams, electronic files, databases, audio-visual data files, email, voice and facsimile transmissions and recordings.

Non-record: information that is not captured in NATS records management systems, including non-business documents e.g. spam, junk mail, copies or extracts of documents distributed for convenience or reference, ephemera that does not set policy, establish guidelines, procedures, certify a transaction or become a receipt, and personal messages. Information with limited or no retention value that is created or received, such as draft, duplicate or routine information that does not add value to the overall business activity.

Record: information created, received or maintained by NATS as evidence and an audit trail of business activity or transactions. Records include policy statements, standards and implementation plans, directives, decisions and approvals for a course of action, documents that initiate, authorise, change or complete business transactions, briefing papers, reports and background papers, agendas and minutes of meetings, correspondence, key project documentation and case files. A sub-set of records may be selected as archives for permanent preservation. Not all physical and electronic information created, received or maintained by NATS are records (see Non-record definition above).

5 Policy statements

NATS makes the following organisational commitments:

5.1 Information ownership

5.1.1 All information will be assigned a unique Owner who is responsible for its management unless they formally transfer that ownership to someone else (for example when changing roles).

5.1.2 Although the information Owner is responsible for the management of all the information that they own, all information created or received as part of any individual's role at NATS remains the intellectual property of NATS as a whole and not to any individual, group or business area.

5.1.3 NATS will ensure that all employees, contractors, suppliers and partners are aware of their information management responsibilities when they assume or change their roles and provide relevant training opportunities. In managing information, Owners shall comply with all relevant statutory, regulatory and

security requirements – including not to destroy information where there is a legal obligation or business need to retain it.

5.1.4 Information ownership shall be addressed as part of organisational changes to ensure that information (including records and archives) retains correct ownership. Upon termination of contracts with NATS, all manual and electronic records in the custody of an employee or contractor role must be transferred appropriately and any information management responsibilities (e.g. to update the NATS website or intranet) must be immediately re-assigned.

5.2 Information assets recognised as a valuable corporate resource

5.2.1 Information shall be created, used, shared, stored and disposed of in accordance with licence terms, law, statute, regulation, business requirements, generally accepted practice and relevant contracts or agreements.

5.2.2 Electronic and manual information assets will be stored in an efficient and effective manner throughout their lifecycle, from creation through to disposition.

5.2.3 NATS will create full and accurate records of its business activity in line with operational and legal requirements, supporting business processes. Records must be authentic, reliable, accessible, complete, comprehensive, compliant and secure.

5.2.4 NATS will design and implement records management systems reflecting NATS business policy and requirements and in general accordance with international records management standards and best practice.

5.2.5 Adequate search aids and tools shall be maintained to enable effective and efficient retrieval (or disposal) of information assets.

5.2.6 The costs of managing information to comply with this policy should be commensurate with the value of the information being managed. Consideration should also be given to the size of risk (for example in terms of potential legal liability) associated with an information asset.

5.2.7 Consideration should be given to any unique Intellectual Property Rights (IPR) belonging to NATS contained in any information asset. If this is the case, the information should also be treated in accordance with any relevant IPR policies.

5.3 Quality, reliability and timeliness of information

5.3.1 The quality of information held in NATS systems will be supported by documenting protocols for data collection, entry, verification and maintenance - noting any special arrangements for protection and retrieval.

5.3.2 Regular reviews of information assets should be held to reduce costs associated with information management, e.g. rework; redundancy; over-processing; over-production. Such reviews should be considered when there are significant changes that affect the nature of NATS' business or operations, e.g. reorganisations, new business activities or changes in legislation and regulation.

5.3.3 Records will be given a meaningful and consistent title according to file naming conventions, and organised and categorised coherently and consistently in accordance with corporate guidance issued by Information Management.

5.3.4 Appropriate intellectual and technical information relating to each record (e.g. Owner and Title metadata) will be collected in accordance with the corporate guidance issued by Information Management.

5.3.5 One version of the truth shall be maintained. Copies/duplicates of documents and other information should not ordinarily be stored. The master version of an information asset should be stored under the supervision of its owner in a shared location; all other users of this information should refer to the master version.

5.3.6 Unnecessary duplication should be avoided by integrating different manual and electronic information systems into a single records management system that is pragmatic and fit for purpose.

5.3.7 Employees responsible for updating the NATS website or intranet will do so in a timely fashion, and ensure that the content is appropriate, current, accurate and compliant with corporate guidance issued by Corporate Communications.

5.4 Secure management and sharing of information assets

5.4.1 NATS is one organisation and internal access to information will only be limited if required by the arms-length separation of activities, sensitivity as defined by the Protective Marking Scheme or a specific business requirement established by the Owner.

5.4.2 In accordance with the NATS Security Policy and related NATS Protective Marking Standard, all NATS employees and authorised contractors will:

- Ensure that all the information they own is assigned the correct level of protective marking, security and access controls to prevent unauthorised disclosure of NATS information
- Ensure that protectively-marked material is secure when circulated, stored and disposed of
- Ensure that only authorised employees within their business area use NATS information systems
- Ensure that information is not disclosed to unauthorised individuals
- Promptly report any breach or potential breach of security e.g. lost keys, misplaced papers or electronic media to their Line Manager and to Corporate Security

5.4.3 Information Owners, in liaison with Business Process Owners, will identify records that are essential for business continuity and ensure that back-up procedures are in place to promptly restore these vital records in the event of a disaster as defined in NATS resilience plans.

5.5 Retention and disposition of information assets

5.5.1 The retention and disposition of NATS manual and electronic records will be managed according to the NATS Records Retention Schedules issued by Information Management.

5.5.2 The maximum period for the retention of non-records is two years.

5.5.3 NATS' General Counsel shall be able to suspend information destruction and disposal should it be necessary, e.g. in the case of an internal or external investigation.

6 NATS roles & Responsibilities

NATS General Counsel:

- Sponsors this Information, Records and Archives Management Policy (in partnership with the Chief Information Officer).
- Approves record retention periods and maintain the overall list retention schedules for NATS records.
- Applies 'legal hold' to suspend the disposal of records and information if required.

Business Process Owners (BPOs):

- Ensure that information created, used or referred to by their process meets the policy commitments set out above by maintaining effective systems of information management control.

Business Support Managers (BPOs/BSMs/BMs):

- Ensure that information managed within their business area meets the policy commitments set out above by maintaining effective systems of information management control.
- Nominate and support one or more employees to ensure the tasks of the Local Information Manager and Information Points of Contact are performed.
- Provide appropriate representation for their business area on the Information Management Steering Group, Electronic Document & Records Management (EDRM) Forum and Hub Publishing Forum.

Local Information Managers (LIMs), on behalf of their business area:

- Act as a strategic focal point for information, records and archives management and develop expertise and experience in this area via briefing and training.
- Participate in the Information Management Steering Group and assist in the development and implementation of NATS-wide policies.
- Ensure that appropriate local governance structures are in place and that all employees are aware of their information management responsibilities and performance objectives.
- Co-ordinate information management activities including development and review of local policies, standards and retention rules, adopting corporate information management standards where applicable.
- Maintain a network of Information Points of Contact to champion and implement information management standards.
- In conjunction with their HUB Publishing Forum representatives, ensure that their HUB content remains relevant and timely.
- In conjunction with their EDRM Forum representatives, ensure that Team HUBs are managed in line with corporate standards and best practice.
- Ensure that information management improvement activities are considered during business and budget planning.
- Ensure information management requirements are included in the contractual terms and conditions for new support or service contracts.
- Ensure the effectiveness of the Information Management strategy to enable new ways of working is regularly assessed and tracked against the objectives and desired benefits within the business area.

Information Points of Contact (IPOCs)

- Serve as a link between business area teams and the Local Information Manager network.
- Support and assist employees within their business area with a wide range of information and records management activities e.g. capture and organisation of information and records; promotion of email best practice and disciplined use of shared electronic folders; liaison with Content Editors to manage intranet and internet content, where appropriate; preservation of information security in the office; and coordination of the team's use of NATS information services.

Information management team (within the Office of the Chief Information Officer):

- Implements the necessary standards, competency frameworks, procedures and systems to support this Policy.
- Provides professional advisory services across NATS on all information, records and archives management issues, promoting and co-ordinating best practices.
- Facilitates training for Local Information Managers and other stakeholders to implement NATS information, records and archives policy commitments within their business area.
- Designs, implements and regularly reviews policies, records retention schedules and corporate guidance on managing information.
- Monitors, designs and controls workflows to ensure efficient management, archiving and preservation of NATS records.
- Chairs the Information Management Steering Group, EDRM and Hub Publishing Forums.

Information Management Steering Group (IMSG):

- Comprises senior representatives from each functional area.
- Sets the strategic direction for information, records and archives management.
- Oversees and approves this Information, Records and Archives Management Policy, and its supporting processes and systems.
- Identifies, prioritises, co-ordinates and manages information management projects, and make recommendations to relevant business, information and technology investment boards.
- Manage the risk relating to NATS information assets.
- Report to the NATS Senior Management on a regular basis.
- Identifies training needs, defines training, and reviews delivery.

Electronic Document & Records Management (EDRM) Forum:

- Comprises Local Information Managers and/or Information Points of Contact.
- Discusses and make recommendations to the IMSG concerning management of electronic documents and records.
- Promotes the delivery of records management training and advice to employees as appropriate.
- Consults with and communicates to their business areas on matters relating to records management.

Hub Publishing Forum:

- Comprises Hub Contributors writing for the intranet.
- Defines, develops and owns appropriate standards and processes for the management and exploitation of the intranet HUB Publishing tool.
- Identifies requirements and opportunities to continually improve the intranet, and enable the sharing of best practice.

Information Solutions team:

- Provides an appropriate and resilient information technology platform, including storage capacity and records management applications to support the NATS's information management requirements.
- Ensures integration of relevant IT infrastructure into the NATS Security Policy and resilience plans.
- Provides appropriate technical support for all components of IT systems including capacity, application licenses, upgrades and updates.

Security /Cyber Security teams:

- Provide guidance and advice to management and employees in the area of information security.
- Assess the risks to NATS information and information resources and identify appropriate risk management approaches.
- Set information security standards and provide information security training and support to NATS.
- Coordinate the monitoring and periodic audit of compliance with information security policy, standards and procedures.

Business Intelligence Competency Centre (BICC) team:

- Provides guidance and advice to management and employees in the area of business intelligence.
- Provides an appropriate and resilient business intelligence (BI) platform, including storage capacity, service delivery infrastructure and BI applications to support the NATS's information management and business intelligence requirements.
- Provides appropriate technical support for all components of the BI service.

Corporate Communications team:

- Disseminates information fit for publication to the public.
- Provides news media with information needed to ensure transparent, fair, complete and accurate reporting on NATS.
- Establishes a communications structure to inform employees about NATS developments.

Facilities Management

- Manages the contract and services for offsite storage of physical records.

All employees and contractors:

- Keep accurate and complete records of their business activities, including all relevant correspondence and emails.
- Manage these in accordance with this Policy and any other relevant processes or business area arrangements.

7 Legislative framework

7.1 This policy supports compliance with all NATS' regulatory obligations in accordance with our licence and legal context:

- Companies Act 2006
- Data Protection Act 1998
- International Standard for Records Management BS ISO 15489

- International Standard for Quality Management Systems BS EN ISO 9001
- Limitation Act 1980

Note that this is not an exhaustive list.

7.2 Particular attention is drawn to the Data Protection Act 1998 (DPA) which makes provision for the regulation of the processing of information relating to living individuals. The aim of the Data Protection Act is to provide a balance between the rights of individuals and legitimate data processing operations. Information shall contain personal details (as defined by the DPA) only where it is strictly necessary. Information containing personal information as defined by the Data Protection Act shall not be shared with external organisations without prior agreement from the Data Protection Officer. See Chapter 6 of the Corporate Security Manual for more details.

7.3 NATS is not directly subject to the Freedom of Information Act (FOI) or Environmental Information Regulations requests but other organisations with which NATS deals might be.

13. ANNEX 2

Five other organisations were consulted during the lessons learned exercise.

A. A public transport organization had an unsatisfactory SharePoint 2007 implementation. They created a site for every single department and invited them to use it during an overnight roll out to 29,000 people. The result was a huge number of unused, underused or abandoned sites.

B. A government body rolled out to 800 staff in 9 months, using only included document libraries and no collaborative features. They set up around 150 content types and disallowed folders. Each area of the business had one document library and was told to select as many of the content types as were relevant for use in the business. They migrated 40% of content from their previous document system and deleted the rest.

C. One cultural organization is rolling out SharePoint (with the Automated Intelligence plug-in) in a targeted approach, to areas they think will benefit from SharePoint. They have rolled out to 100 users in one year and are defining specific content types/workflows for teams as needed as they proceed. They had a previous SharePoint 2007 implementation but did not migrate from it.

D. A provider of care services rolled out to 4,000 people in two years with a simplified roll out that involved the definition of only one generic corporate content type, and the provision of libraries for each piece of work. No folders were allowed.

E. A government organization plans to implement to 14,000 people in 18 months (with the Automated Intelligence plug-in). They have a legacy electronic records management system and plan to migrate all its content into the SharePoint Records Centre.