

Terminology Services: Supporting Information & Knowledge Management in Government

Over the past decade there has been unprecedented change in the way information is created, disseminated and used, and nowhere has this change been more apparent than within and between government bodies and in their interaction with private individuals and corporations.

Previous government initiatives focussed on *Electronic Service Delivery* and *Transformational Government* have helped establish new systems and practices based on web tools and back-office case handling procedures utilising sophisticated workflow applications and data management systems.

Such are the advances made in moving from previous paper-based processes to those of the digital era that a resulting challenge for Government organisations has become one of ensuring that information generated by these numerous, discreet systems is managed cohesively, and is *collectively* accessible.

Vocabulary Management

Vocabulary Management is central to developing a successful Knowledge and Information Management (KIM) strategy, through which all information is made available to the right people at the right time.

Controlled Vocabularies - taxonomies, thesauri, ontologies - consolidate terms into a structure that reflects an organisation's business activities and resources. They provide defined terms to give precise categorisation to individual records and other unstructured content, to avoid ambiguity and to support corporate understanding.

The accurate classification of information assets against structured data can substantially enhance the repeated retrieval and use of their content, whether by individual staff members and external content consumers or by systems to which they are linked.



The effective management of *all* information held within an organisation, in which content is retrievable in its correct context with all related material, can lead to an organisation's ultimate goal, to manage *knowledge*.



Controlled Vocabularies

Controlled vocabularies play an important role in defining the classification of information resources, as well as supporting the successful fulfilment of broader metadata strategies designed to deliver enterprise-wide, or even sector-wide, systems interoperability. The e-GMS metadata standard and the provision of a standardised vocabulary (the Integrated Public Sector Vocabulary – IPSV) are central to the e-Government Interoperability Framework.

IPSV alone is rarely sufficient to completely satisfy the specific classification needs of individual government organisations, however. The use of additional, organisation or domain-specific vocabularies can enhance the successful retrieval, or ‘findability’, of information significantly. The e-GMS allows for the use of additional controlled terminologies and a number of government departments have developed their own taxonomies or thesauri tailored to the needs of their own subject areas and audiences.

While the effective operation of e-GMS can be achieved through multiple vocabularies, the most efficient outcome in this respect can only be achieved through *collective* vocabulary management. Without this, the uncontrolled use of system-specific vocabularies configured within individual enterprise applications, such as portals, WCM's and EDM's etc, results in multiple, disconnected vocabularies that require duplicated management, and undermine the principle value of a controlled vocabulary.

A Vocabulary Bank

Consolidating vocabularies into a centralised, trusted data source for organisation-wide approved terminologies overcomes the risks of divergence across enterprise applications. Standards-based integration can enable synchronisation of approved terminologies across multiple systems and provide dynamic updates of classification changes within these applications as they occur.

Of key importance, is the function of the vocabulary ‘bank’ to enable creation and management of multiple vocabularies and thereby support mappings between the individual terms they contain. The mapping and reuse of individual terms held in existing vocabularies, such as IPSV, to those required in bespoke vocabularies, is central to the provision of consistency in metadata practices employed across an enterprise and between organisations.

By linking together vocabularies through term reuse and cross-mappings, the various content resources (and their supporting systems) individually tagged with metadata containing one or other of these controlled vocabularies also become linked. In this way, the mapping of vocabularies provides the foundations for establishing semantic interoperability between content-based systems and the organisations and users that access them.



Vocabulary Applications

The use of a vocabulary bank with standards-based application interfaces (API's) can enable integration with a variety of information-centric solutions. Terminology management applications include:

Metadata tagging: It is now common practice that certain metadata elements for content items are only given values from a specific list, or controlled vocabulary, rather than being anything assumed to be appropriate. The permissible terms can be made available in application interfaces, such as drop down menus, so that users do not have to type in the word or phrase.

Enhancing search: The use of vocabularies containing term relationships can disambiguate non-preferred terms, or identify other forms of association, offering useful ways to guide, broaden or narrow content search. Through effectively inserting an interpretive layer of semantics between search terms entered by a user and the underlying database, the original intention of the user's terms can be better represented, and the discovery and reuse of content maximised.

Navigation: Controlled vocabularies can be used to define the hierarchical structure of content, as presented to a user for browsing. When applied via a Web Content Management System, for example, the entire navigation architecture for a website can be defined in this way. This can provide a well-planned hierarchical navigation system that can be dynamically updated via the independent terminology service.

Faceted classification: Using facets, the classification of a resource using a single controlled term can infer other structured information about that resource using facets of that term. This approach can be used in many ways, from providing assisted tagging to users classifying data, to offering similar content to an end user browsing a navigational structure.



Centralised Terminology Services

Creating and publishing vocabularies outside of the systems and tools that utilise them can simplify the development and implementation of these applications and place management of vocabularies in the hands of knowledge experts. On a practical level, this can enable classification taxonomies and navigation structures to be developed in parallel with new system implementations, reducing deployment time and costs considerably. This approach can also streamline the process of data migration and individual system upgrades, and ensure that content 'knowledge' is not irretrievably bound-up in systems and platforms that may in the future be replaced.

At an enterprise level, operation of a dedicated terminology service supports an architecture in which common infrastructure services are separated from individual applications. As part of a Service Orientated Architecture (SOA), terminology management can become deliverable as a Web Service, fulfilling individual application terminology needs while simultaneously enabling system interoperability. Subsequent terminology changes can be undertaken independently of the systems that consume them, with revised classifications being synchronised across the enterprise. Importantly, creation and management of all vocabularies can then be overseen by information management experts, ensuring classification practices are in-line with corporate-wide objectives.

Time, resource and cost savings achieved while deploying and maintaining individual applications creates an ROI for a terminology service compelling in itself, but unifying information resources within (and between) organisations offers even greater operational advancement.

When controlled vocabularies are used consistently across diverse systems in multi-department organisations, the constraints of separate data silos are overcome. Documents, records and content become interlinked with structured search data, and intelligent system interoperability can be achieved to enrich corporate knowledge.

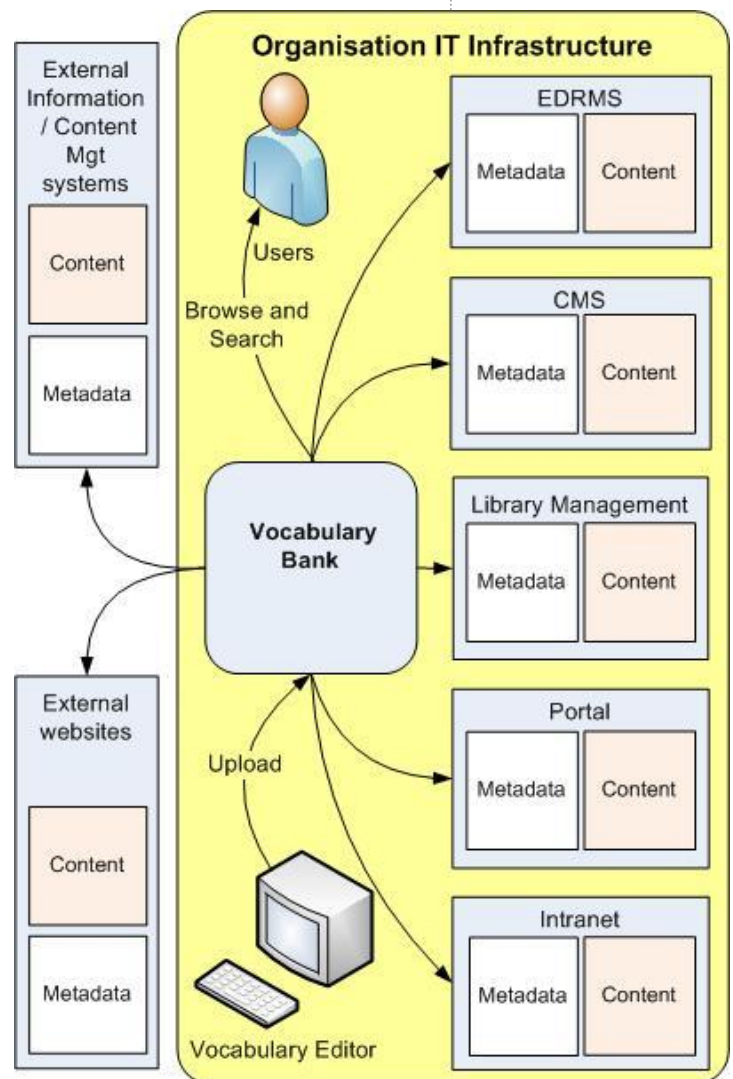
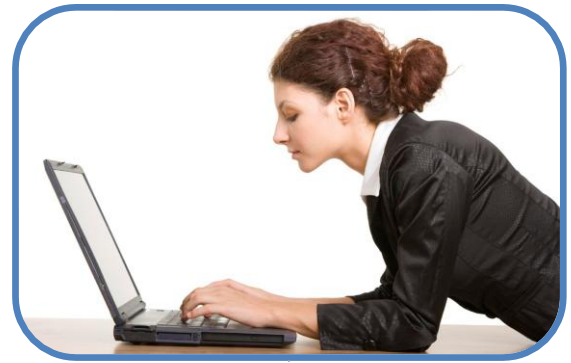


Figure 1 A vocabulary bank providing terminology services to multiple enterprise applications





Lexaurus Bank is a powerful vocabulary server that provides an online repository for managing and publishing controlled vocabularies. Available as an on-site solution or hosted service, Lexaurus Bank brings class-leading performance and management facilities in a scalable web server application.

Lexaurus Bank enables users to identify and view definitive terms, ascertain their relationships, context, previous iterations, linguistic equivalents and unique web address identifier, and download these individual terms or complete vocabularies. All historical information relating to term and vocabulary development is retained. This provides a centralised, trusted data source for organisation or sector-wide approved terminologies, and Web Service synchronisation of metadata models, schemas and business semantics between enterprise applications and information systems.

Vocabulary Information		
Identifier	IPSV-0001	
Name	IPSV	
Term Information		
Term Type	PT	
Identifier	692	
Name	Business and industry	
	Welsh	Business and industry
	English (United Kingdom)	Business and industry
Authority	default	
Status	active	
Term Relations		
	NT Business people	
	NT Business practice and regulation	
	NT Business sectors	
	NT Companies	
	NT Consumer affairs	

Home - Browse - Search - System Administration - User Home - Logout

Browse

- Child skills GCSE maths higher AQA-4
- Early Years Foundation Stage
- Housing
- ICS Geologic Timescale, 2008
- IPSV
 - Business and industry
 - Business people
 - Business practice and regulation
 - Business advice services
 - Business development
 - Business management
 - Public administration
 - Business planning
 - Cooperation
 - Agreements
 - Partnership working
 - Committees
 - Partnerships
 - Managing relationships (partnerships)
 - Multi-agency working
 - Multiagency working
 - Relationship management (partnerships)
 - Teamwork
 - Collaboration
 - Liaison
 - Decision making
 - Financial management

Vocabulary Information	
Identifier	IPSV-0001
Name	IPSV
Term Information	
Term Type	PT
Identifier	6072
Name	Business planning
Scope Note	Applies to public as well as private sector bodies
Authority	default
Status	active
Term Relations	
	Business management
	Corporate policy
	Feasibility studies
	Prioritising
	Business continuity planning
	Council policies and plans
	Organisational development
	Action plans
	Business plans
	Forward plans
	Planning (business)
	Strategic planning

This term does not occur in any other vocabularies currently in the

About Vocabulary Management Group

Vocabulary Management Group was formed in 2005 by two UK-based partner companies, Schemeta and Knowledge Integration, bringing together more than 50 person-years of experience in knowledge organization. Today, Vocabulary Management Group is a leading international software and consultancy company for the

creation, management and dissemination of digital vocabularies and similar structured information, with an established and growing customer base in the Education, Cultural, Government and private sectors in the UK and Europe, and supporting systems ranging from hundreds to millions of terms.

