#### Education, Skills and Children’s Services

**Information Standards Board**

***Business Plan 2007-2008***

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# Summary

This document provides an overview of the Information Standards Board (ISB) for Education, Skills and Children’s Services and plans for standards activity over the coming year. It also sets out the plans for the transition of the Working Group to a fully operating ISB in 2007-2008.

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| Tim Wright | CIO, DCSF |
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# Contents

[Contents 3](#_Toc174165509)

[1 Introduction by the Interim Chair of the ISB 6](#_Toc174165510)

[2 Executive Summary 7](#_Toc174165511)

[3 Introduction 10](#_Toc174165512)

[4 Overview of the ISB 10](#_Toc174165513)

[4.1 ISB Scope, Vision and Purpose 10](#_Toc174165514)

[4.2 Ministerial Authority 11](#_Toc174165515)

[4.3 The Benefits of System-wide Information Standards 11](#_Toc174165516)

[4.4 Why Do We Need the ISB? 12](#_Toc174165517)

[4.5 Key Stakeholders and Their Expectations 12](#_Toc174165518)

[4.6 Principles 15](#_Toc174165519)

[4.7 Membership 16](#_Toc174165520)

[4.8 Core Values and Partnership 17](#_Toc174165521)

[4.9 Meetings and Members’ Responsibilities 17](#_Toc174165522)

[4.10 Relationship to Education, Skills and Children’s Services Governance 17](#_Toc174165523)

[4.11 The Business Model 18](#_Toc174165524)

[4.11.1 Function and Service Model 18](#_Toc174165525)

[4.11.2 Organisational Structure 18](#_Toc174165526)

[4.11.3 Current Status 21](#_Toc174165527)

[4.11.4 Standards Champions 21](#_Toc174165528)

[4.11.5 Vocabulary Management Strategy Special Interest Group 23](#_Toc174165529)

[4.11.6 International Working Group 23](#_Toc174165530)

[4.12 Relationships with other Standards Organisations 24](#_Toc174165531)

[4.12.1 Cabinet Office, Delivery and Transformation Group 24](#_Toc174165532)

[4.12.2 Local e-Government Standards Board (LeGSB) 25](#_Toc174165533)

[4.12.3 NHS Information Standards Board 25](#_Toc174165534)

[4.12.4 Pan Public Sector Standards Group 25](#_Toc174165535)

[4.13 International Strategy 25](#_Toc174165536)

[4.13.1 Background 26](#_Toc174165537)

[4.13.2 Context of the Strategy in the ISB Vision and Blueprint 26](#_Toc174165538)

[4.13.3 Benefits of International Standards 26](#_Toc174165539)

[4.13.4 Aims of the ISB International Strategy 27](#_Toc174165540)

[4.13.5 Scope of the Strategy 28](#_Toc174165541)

[4.13.6 Vision 28](#_Toc174165542)

[4.13.7 Outline Programme of Action 28](#_Toc174165543)

[4.13.8 Priorities 29](#_Toc174165544)

[4.13.9 Engagement Channels 30](#_Toc174165545)

[4.13.10 Ways of Working and Delivery Plan 30](#_Toc174165546)

[4.14 UK, European and International Relationships 31](#_Toc174165547)

[4.14.1 UK: British Standards Institution (BSI) 31](#_Toc174165548)

[4.14.2 Europe: Comité Européen de Normalisation (CEN) - European Committee for Standardisation 31](#_Toc174165549)

[4.14.3 Global: International Standards Organisation (ISO) 32](#_Toc174165550)

[4.14.4 Other International Standards Bodies 33](#_Toc174165551)

[5 Information Standards Register 34](#_Toc174165552)

[6 Standards with Formal ISB Status 35](#_Toc174165553)

[7 Strategic Objectives for 2007-2008 37](#_Toc174165554)

[7.1 Government Strategic Imperatives and Business Drivers 37](#_Toc174165555)

[7.2 Information Strategy for Education, Skills and Children’s Services 37](#_Toc174165556)

[7.3 Stakeholder Priorities 38](#_Toc174165557)

[7.4 Objectives for 2007-2008 38](#_Toc174165558)

[8 Standards Development Plan 39](#_Toc174165559)

[9 ISB Governance and Operations Development Plan 40](#_Toc174165560)

[9.1 Recruitment of Independent Chair for the ISB 41](#_Toc174165561)

[9.2 Relationships with Other Public Sector Standards Bodies 41](#_Toc174165562)

[9.3 Secretariat 42](#_Toc174165563)

[9.4 ISB/Technical Support Business Model 42](#_Toc174165564)

[9.4.1 Resourcing 42](#_Toc174165565)

[9.4.2 Expert Resource Procurement Framework 43](#_Toc174165566)

[9.4.3 Funding 43](#_Toc174165567)

[9.4.4 Sustainability 43](#_Toc174165568)

[9.5 Technical Support Service 43](#_Toc174165569)

[9.6 Performance Management 44](#_Toc174165570)

[9.7 Standards for Standards 44](#_Toc174165571)

[9.8 Tools 44](#_Toc174165572)

[9.8.1 Online Information and Data Standards Library 44](#_Toc174165573)

[9.8.2 Vocabulary Management Tools 45](#_Toc174165574)

[9.9 Activities Planned for 2008/9 and Beyond 45](#_Toc174165575)

[9.9.1 Standards Expert Procurement Framework 45](#_Toc174165576)

[9.9.2 Interoperability Compliance Testing 46](#_Toc174165577)

[9.9.3 Tools 46](#_Toc174165578)

[9.10 Stakeholder Management 46](#_Toc174165579)

[9.11 Implementation Project Plan 48](#_Toc174165580)

[10 Outline Business Case and Funding 49](#_Toc174165581)

[10.1 Costs 49](#_Toc174165582)

[10.2 Benefits 50](#_Toc174165583)

[10.3 Financial Case 50](#_Toc174165584)

[11 Key Risks 51](#_Toc174165585)

[12 Glossary 53](#_Toc174165586)

[Annex A Information Standards Register 57](#_Toc174165587)

[Annex B Education, Skills and Children’s Services Current Approved Standards 58](#_Toc174165588)

[Annex C Interoperability Roadmap 61](#_Toc174165589)

[Annex D Education, Skills and Children’s Services Standards Activity (2007-2008) 66](#_Toc174165590)

[Annex E ISB Implementation Project Plan (2007-2008) 80](#_Toc174165591)

Introduction by the Interim Chair of the ISB

Much good work is being, or has been, done on information standards around the system. Very positive collaborative work is being done in the Managing Information across Partners (MIAP) programme and in relation to the Every Child Matters agenda. JISC is acknowledged as a leader in the development of standards for higher education and Becta leads on implementation of the e-strategy. Together they are taking forward work in specific areas such as data definition alignment and course related information. On the schools data side, Data Services Group has done good work in setting standards for information about pupils, and are now extending this to the workforce and to early years.

Standards are an essential element of a system-wide information strategy because they help to ensure that information from one place can be understood, and carry full value, in another e.g. from professionals or agencies to schools. This helps to reduce collection burdens, save money and improve outcomes for children, parents and learners through better use of information about them and their learning. The aim of information standards in Education, Skills and Children’s Services should be to ensure that, increasingly, all data used in the system can be used anywhere else in the system and shared with other partners in England, the UK and internationally.

This can be hard to deliver for reasons that are complex. Work on information standards is detailed and demanding. It requires both excellent understanding of service delivery and good technical data management skills. Though standards are intrinsically cross-cutting they are often developed as a result of particular business needs and applied more locally than is desirable. Perhaps for the same reasons developers often forget to cater for permanence of their standards, for managing change and dissemination. By contrast standards developed on a wider front have sometimes been of poor quality because insufficiently attached to business need. At root, the underlying problem is probably that standards are intrinsically cross-system and that there has been a market failure in the development and delivery of these “public goods”.

It is important to consider, though, how the market has failed and therefore how that failure should be addressed. It would not help, for example, to pull all the work away from the business need into the centre. That could make things worse, not better. Looking at what is wrong, the issues are to do with the breadth, permanence and accessibility of the work that has been done, and to do with avoiding duplication and inconsistency.

Better value for money is needed from the creditable work being done by experts and enthusiasts around the system. Better governance is the way to achieve this, and consultation around the system has confirmed that people and organisations in both the public and private sectors look to the Department to take a lead.

The Department has therefore initiated a programme of work to design and deliver the standards governance arrangements. Many of you have been contributing to the programme through the Information Standards Board Working Group and its activities. This Business Plan is testimony to the hard work and determination of all of our partners. Within the year we should have all the key arrangements in place.

As I hand over to Dorian Bradley, our new independent Chair, I know that I shall be leaving the Information Standards Board in very capable hands. The work that is being taken forward by the Board is extremely important and will help us develop a system that is both efficient and effective as well as one which helps put children, parents, learners and the front line at the centre of what we do. I look forward to the development of better and more durable standards over the coming months and years. I wish you all the best for the future.

**Alan Cranston**

**Deputy Director, DCSF Information Strategy and Knowledge Management Unit**

**Interim Chair, Information Standards Board**

Executive Summary

This Business Plan sets out the work programme of the Information Standards Board (ISB) in 2007-2008. The ISB will publish a business plan annually and it is hoped that the structure of this first plan will provide a model for those in the future.

The plan owes an enormous amount to the members of the ISB Working Group, who have commented on the early drafts of the Plan and contributed to the working papers on which it is based.

The plan was as at advanced stage before the recent Machinery of Government changes. Conceptually the Departmental changes do not affect the need for more joined-up strategic thinking and governance on the information strategy and standards, so as to improve outcomes for children and learners. Any changes to the scope or remit of the ISB will be reflected in an updated business plan if and when required.

*Planning for development and operations*

The purpose of the business plan is to: 1) define the current baseline of known information standards and their formal status if any; 2) set the priorities for information standards making in the coming year; and 3) set out how the machinery of the ISB will be developed to a fully operational state.

The ISB has over the last year had a dual role: it has been overseeing the work required to bring it to a fully operational state whilst maintaining a watching brief over standards making. Over the coming year, these two themes will continue although the balance will shift over the course of the year from internal process and operations to engagement in standards making in Education, Skills and Children’s Services.

*Defining the current baseline of known information standards*

The ISB Secretariat has compiled a register of all known information and data standards being used or developed in the Education, Skills and Children’s Services system. We intend over the coming year to transfer details of all standards into an internet namespace, i.e. a single place on the web with links to all of our standards with unique, meaningful names. This simple step will save the time of developers and suppliers in locating relevant standards and simplify the process of later aligning standards across the system.

*Setting the priorities for information standards making*

A wide range of Government policies and strategies are driving the need for information and data standards. They include, but are not limited to the e-Strategy for Education, Skills and Children’s Services, the Transformational Government agenda, the Varney Report, the Leitch Report, the 14-19 Education and Skills White Paper, and the Gilbert review on personalising teaching and learning for children and young people aged 5-16, Information Strategy for Education, Skills and Children’s Services.

The Department’s information strategy will define the key information outcomes required to support these imperatives. Whilst work is currently ongoing to develop and publish the strategy, there is consensus around a number of the key outcomes. The information strategy will:

1. Facilitate the flow of information between the different sectors and bodies in the Education, Skills and Children’s Services system (inter-operability).
2. Create a unique and persistent identity for children and learners across Education, Skills and Children’s Services.
3. Address data protection and policy issues constraining agreements between public sector bodies for exchanging information.
4. Create a single view across DCSF, DIUS, QCA and LSC on the role and format of the Learner Achievement Record.
5. Facilitate the availability of adult career information from sources across the system.
6. Enable the provision of better information for Ministers on Early Years learners.
7. Enable the provision of “near real time” management information for DCSF and DIUS policy purposes.
8. Promote modular, mixed and remote learning independent of time and place
9. Enabling greater personalisation of learning.
10. Enable the development of lifelong e-portfolios for learners.
11. Enable formative e-assessment across the learner’s lifetime.
12. Reduce duplication between systems and databases with similar purposes (for example Educational Maintenance Allowances and Student Loans; the UK Register of Learning Providers and Eduserv).
13. Integrate frontline e-services in ways that make sense for customers (for example a “one stop shop” for starting and attending school covering admissions, grants for transport and clothing, free school meals, music fees etc.)
14. Integrate frontline systems used to deliver Education, Skills and Children’s Services (for example by supporting the development of Government Connect).
15. Provide a range of common services for use across the system (for example user authentication, payments, matching learner achievement to course/employer needs).
16. Create a shared way of describing what we do and how we do it.

By the end of 2007-2008 it is expected that the ISB will have started taking a proactive stance to information standards making in the system and will have intervened successfully to align activity in at least three areas of standards activity. This will include:

* Creating a single set of basic data definitions for use throughout the system
* Consulting on standards for service orientated architectures (SOA)
* Mandating and facilitating implementation of system-wide adoption of common metadata and vocabulary standards for web services
* Supporting JISC in encouraging take-up and internationalisation of course-related information schema
* Ensuring that a system-wide approach is taken to establishment data (providers)
* Agreeing a data model for UK SIF implementations.

*Fully implementing the machinery of the ISB*

By the end of 2007-2008 it is expected that the ISB will have been launched and will have met as a formally constituted body at least once. This will entail:

* Recruiting an independent Chair for the ISB
* Putting into operation a Technical Support function
* Creating an online information and data standards library and guidelines for creating standards
* Set up a service for managing vocabularies

*Making it happen*

We have set ourselves the challenging objective of representing in the Business Plan all of the standards making activity under way or planned in relation to Education, Skills and Children’s Services, so as to give a clear baseline for prioritising activity on the ground. We would like our partners to see the Business Plan as their collective view and a focus for mutual action. Whilst we have endeavoured to ensure completeness and accuracy, we urge you to take time to read the business plan and feed back any clarifications and changes to the ISB Secretariat at [ITgovernance.SECRETARIAT@education.gsi.gov.uk](mailto:ITgovernance.SECRETARIAT@education.gsi.gov.uk).

CIO Group, as the ISB Secretariat, intends to hold 1:1 discussions with partners to review details of current activities, agree system-wide priorities for action and agree partners’ role in delivering them.

The major cost will be to provide Technical Support to the Information Standards Board. This is expected to be of the order of £500k per annum. We have included a section on ISB funding but at the time of publication final decisions have yet to be made on Comprehensive Spending Review (CSR) allocations, secretariat and technical staffing resources.

Introduction

This business plan sets out the work programme of the Information Standards Board (ISB) for Education, Skills and Children’s Services (ESCS) in 2007-2008. The ISB will publish a business plan annually and it is hoped that the structure of this first plan will provide a model for those in the future:

|  |  |
| --- | --- |
| Section 4 | **Overview of the ISB** describes the ISB as an organisation, including its vision, purpose, functions, structure, membership and relationships with other national and international standards bodies. |
| Section 5 | **Information Standards Register** contains a reference list of all known de facto and developing Education, Skills and Children’s Services information standards. |
| Section 6 | **Standards with Formal ISB Status** will in future versions list information standards for which the ISB has approved a formal status for use within Education, Skills and Children’s Services. In this version it describes how the ISB will establish a baseline of standards. |
| Section 7 | **Strategic Objectives for 2007-2008** sets out the Government policies and strategies and business imperatives driving standards making in the coming year and the ISB’s targets and objectives. |
| Section 8 | **Standards Development Plan** sets out the main areas of standards activity in 2007-2008, linking them back to the targets and objectives and placing them in the context of a longer term standards roadmap. |
| Section 9 | **ISB Governance and Operations Development Plan** sets out how the ISB’s operational machinery will be developed in 2007-2008. |
| Section 10 | **Outline Business Case and Funding** sets out the anticipated costs of the ISB and a quantification of the benefits arising. |
| Section 11 | **Key Risks** sets out the major risks and plans to mitigate them. |
| Section 12 | **Glossary** explains technical terms and abbreviations used in this document. |

Overview of the ISB

## ISB Scope, Vision and Purpose

The ISB will be the authority for system-wide information and data standards for the Education, Skills and Children’s Services system in England.

The aims of the ISB are to:

* Develop information standards to help front line delivery
* Promote the personalisation of learning and children’s services
* Improve the use of information to aid learner progression and transition
* Facilitate sharing of information between agencies, system-wide
* Ensure greater efficiency and better outcomes for children and learners
* Ensure the bureaucratic impact on the front line is minimised.

The ISB is intended to:

* Be the system-wide authority for all information and data standards including but not limited to standards for: information presentation, operational and management information, learning platforms and e-portfolios, teaching and learning content, technical interoperability and accessibility (for disabilities etc).
* Be recognised by all parts of Education, Skills and Children’s Services as essential to good information governance
* Be visible, participative, open and authoritative in its decision making
* Provide an approvals process which is effective and efficient, rather than burdensome
* Be able to engage effectively to support the development of system standards and the development process, where necessary
* Demonstrate clear progress towards the development of standards that support the information strategy
* Work with the businesses to ensure the needs of ICT-enabled policy programmes are met
* Communicate developments in the system, with suppliers and developers, and across Government and internationally.

## Ministerial Authority

On 6th February 2006, Ministers expressed themselves content with recommendations on the proposed broad shape, scope and next steps on arrangements for establishing and launching an Information Standards Board for Education, Skills and Children’s Services.

In brief, these recommendations proposed setting up a Board which would, essentially, govern by consensus. It would not be an NDPB or have any kind of separate status, statutory or otherwise. It would be led by DfES (as was) and have a membership drawn from key partners. It would cover standards for both “data” (information about learners and others) and for e-learning though it might build its remit in stages. It would set priorities, co-ordinate work done around the system and provide quality assurance, formal approval and change control. It would police the system by virtue of the authority given to it by the partners, not by any statutory powers or suchlike.

The Secretary of State made an announcement about creating an ISB at BETT on 11th January 2006 as a signal of intent, at the same time making clear that the Department should develop the idea with others. The ISB was formally launched in April 2006 but its remit and mode of operation was not finalised by then: it was charged with its own subsequent development, accountable to all partner organisations. Information standards are a key component in taking the e-Strategy forward, and we believe that early progress can be made and will be welcomed.

## The Benefits of System-wide Information Standards

System-wide information standards will enhance the capacity and capability to access and use information to best effect across the Education, Skills and Children’s Services system by:

* Reducing the implementation time and costs of developing and delivering sector programmes and solutions, increasing value for money
* Reducing operational costs by enabling data to be created once and used many times across different sectors
* Creating a more open and competitive market for educational software
* Enabling the creation of innovative, high value online services for enhancing learner and child outcomes.

## Why Do We Need the ISB?

The direct benefits to learners and practitioners will usually be enabled and delivered by ICT-enabled change programmes throughout the system, contributing to the delivery of Departmental Strategic Objectives and Public Service Agreements.

The ISB’s role is to provide governance of standardisation, i.e. publishing consensual documents. The ISB will contribute by:

* Providing a “one stop shop” for knowledge about information standards and standard solutions in Education, Skills and Children’s Services.
* Providing strategic direction to help system wide interoperability, overcome existing rigidities and gaps in data and information use and avoid future rigidities and barriers to creating a citizen- and learner-focused system.
* Working collaboratively with partners to improve synergy, share and reduce costs, and eliminate overlaps and duplication whilst helping ensure developments are shared more effectively, lessons learned and interdependencies addressed across major operational implementations.
* Providing online collaborative tools to enable partners to work together on standards.
* Developing a definitive set of system-wide standards approved by partners across the system.
* Successfully engaging with UK, European and international standards bodies.

The ISB may also in the future provide services to assure the compliance of products and services with approved information standards.

The ISB will not:

* Specify standards
* Undertake trials of standards
* Develop standards
* Support and maintain standards

NOTE: It is currently envisaged that the ISB will not be responsible for:

* Information and data standards relating to organisations’ internal management and administration, for example HR/workforce and financial management.
* Standards relating to management, process and systems development other than in relation to information management.

## Key Stakeholders and Their Expectations

| **Stakeholder Group** | **Accountabilities** | **Expectations** |
| --- | --- | --- |
| **Ministers** | Answerable to the public for Education, Skills and Children’s Services. | * Standards are developed that help front line delivery. * Personalisation of learning and children’s services is improved. * The use of information to aid learner progression and transition is improved. * Information sharing between system organisations is facilitated. * The ISB promotes greater efficiency and better outcomes for children and learners. * The bureaucratic impact on the front line is minimised. |
| **Sponsors**  Examples   * DCSF/DIUS Boards * Directors * Director of Corporate Services * Group CIO Council * CIO | Accountable for:   * Delivery of Department strategy * Effective use of public funds * Successful delivery * Value for money | * The ISB demonstrates Departmental commitment to the Government modernisation and reform agenda. * The ISB provides demonstrable quality and value. * The ISB is responsive to the changing needs of the business. * The ISB is focused on the delivery of benefits to the business. * The ISB complies with all relevant legislation and the policies and procedures required by UK Government. * The ISB follows best practice in standards making. * The ISB makes me aware of its accomplishments and plans and makes me confident that it is managing its risks and issues. * The ISB is an enabler for Departmental our partners’ business and helps spread good practice. |
| **Directors of NDPBs**  Examples   * LSC * QCA | Accountable for:   * Delivery of organisational strategy * Effective use of public funds * Successful delivery * Value for money | * The ISB is responsive to the changing needs of my business. * The ISB consults my people on decisions about information standards. * The ISB is an enabler for my business and gives a clear strategic lead. * The ISB provides information and resources for my staff and suppliers to meet my business needs. |
| **Programme solution architects**  Examples   * ContactPoint * MIAP * DSG | Responsible for designing business and technical solutions on ICT-enabled change programmes. | * The ISB offers high quality objective advice and guidance on the application of information standards to achieve my business objectives. * The ISB supports the delivery of the Departmental and system architectures. * The ISB provides a clear framework of standards to inform my solution design. |
| **Standards specifiers**  Examples   * Procurement framework managers (e.g. Becta) * Local Education Partnerships * Educational institutions | Responsible for specifying standards to which products and services procured externally should comply. | * The ISB provides a clear framework of standards to help me specify business and technical requirements. * The ISB provides partners with effective leverage in negotiations with external ICT suppliers. |
| **Standards makers**  Examples   * Public and private sector developers | Responsible for defining specific standards to address a perceived gap in order to meet a business need. | * The services provided by the ISB are clearly defined and the responsibilities of all parties are understood. * The ISB complements the activities of my own team and works cooperatively with them. * The Board listens to my suggestions for information standards. * The ISB has a technical framework for standards development that is clear and fit for purpose. * The ISB’s procedures are easy to use and efficient. * The quality criteria for approving standards are clear and reasonable. * The resources provided help me to be clear about system strategies on standards, reduce costs of development and programme time savings |
| **Subject matter experts**  **Examples**   * Partner organisations * OGDs * Academia | Acknowledged as experts in their chosen field in education or children’s social services provision. | * I am consulted about and contribute to decisions about the adoption of information standards that relate to my field of work. * The ISB makes decisions that reflect a good understanding of my area of interest and are appropriate to the matter at hand. |
| **Delivery and Transformation Group**  **Examples**   * CIO Council * CTO Council | Accountable for ensuring that coherent standards are adopted across Government and domain standards are defined by appropriate Departments. | * The Department shows leadership in setting information standards for Education, Skills and Children’s Services. * In its standards making, the Department consults effectively and productively with us and with other Government departments. * The Department shares and adopts good practice with other standards makers wherever appropriate. * The Department participates fully in standards processes being developed across Government. |
| **Other Government Departments**  Examples   * NHS * DWP | Responsible for information standards in their own domain. | * We are aware of the Education, Skills and Children’s Services ISB and understand its purpose and objectives. * We understand where we have mutual interests with the Education, Skills and Children’s Services ISB. * We have an agreed MOU in place which defines the boundaries for our work and highlights areas of collaboration to help achieve value for money and exchange of best practice. * The Education, Skills and Children’s Services ISB consults us before setting standards for shared information. * The Department shares and adopts good practice with other standards makers wherever appropriate. |
| **Other UK national administrations**   * Scottish Executive * DELNI * DELLS Wales | Responsible for ensuring inter-operability across national domains. | * The Department provides a clear strategic lead on standards enabling our business to benefit from collaboration and to solve more effectively mutual problems. * The Department enables me to share and adopt its work on standards where appropriate. * The Department is mindful of the need to ensure inter-operability across the UK. |
| **International community**   * EU * Other countries | Responsible for ensuring inter-operability across national domains. | * The UK plays a constructive role in the development of pan-European standards. * Participation in standards governance has increased as a result of the ISB’s work. * The UK is seen as a leader in the development of global standards. |

## Principles

The ISB intends to adopt “ground rules” or principles for its operation: a working draft set of such principles appears below. The ISB will approve a final set of principles during 2007-2008.

* It is Education, Skills and Children’s Services businesses, not the ISB, that are responsible for the pre-standardisation work of specification development, trialling and defining usage and scope, and the post-standardisation work to support maintain and ensure sustainability of the standard.
* The ISB has system-wide authority over data management gatekeeper functions such as the schools’ Star Chamber, FE Information Authority and HESA.
* All sector standards being developed or adapted shall be referred to the ISB so that their system-wide implications may be considered.
* The ISB shall formally review and approve all standards deemed to have possible system-wide, government-wide, UK-wide or international application.
* All standards set by higher level standards bodies with Government-wide, UK, European or international scope shall be treated as de facto Education, Skills and Children’s Services standards where no overriding business functional area[[1]](#footnote-1) standard has been set.
* Any variation agreed by the ISB to standards set by higher level standards bodies with Government-wide, UK, European or international scope will be referred back to the relevant standards body to consider for inclusion in the higher level standard.
* There shall be a process for mutual recognition of standards approved by the ISB and the standards bodies for other public sector domains with which it has a Memorandum of Understanding, such as Health, Criminal Justice and Local Government (to be confirmed).
* The ISB shall approve only open standards, i.e. standards that are developed collaboratively through due process, are platform independent, vendor neutral, extensible, reusable, publicly accessible, and not encumbered by royalties.
* The ISB shall not approve standards that unduly constrain innovation in meeting the evolving business needs of Education, Skills and Children’s Services.
* Every data and functional object should have a name which is unique, consistent and meaningful in the Education, Skills and Children’s Services business functional area.
* Programme sponsors are responsible for ensuring that sustainable governance, management and funding is in place to maintain standards-based inter-operability for the lifetime of the system (standard). It should not be assumed that the ISB or central data management gatekeeper functions can provide this service.
* ISB members are committed to ensuring fair and responsive application of the principles of due process, transparency, openness, impartiality and the voluntary nature of standardisation.
* The ISB’s resources will be focused where only the centre has the authority or expertise; it will take advantage of expertise and work elsewhere in the system by building links and relationships with other bodies rather than duplicating effort or functions.
* Any work that the ISB carries out or directs should be to provide optimum and immediate benefits to key stakeholders rather than ‘nice ideas for the future’.

## Membership

The following organisations are members of the ISB as at March 2007:

|  |  |
| --- | --- |
| ADASS | Association of Directors of Adult Social Services |
| ADCS | Association of Directors of Children’s Services |
| Becta | British Educational Communications and Technology Agency |
| DTG | Delivery and Transformation Group, Cabinet Office |
| CEL | Centre for Excellence in Leadership |
| CETIS | Centre for Educational Technology & Interoperability Standards |
| DCSF (CIOG) | DCSF Chief Information Officer Group |
| DCSF (CYPFD) | DCSF Children Young Persons and Families Directorate |
| DCSF (DSG) | DCSF Data Services Group |
| DIUS (HED) | DIUS Higher Education Directorate |
| DIUS (LLSD) | DIUS Lifelong Learning and Skills Directorate |
| DCSF (SD) | DCSF Schools Directorate |
| IA | Information Authority (for Further Education) |
| Hefce | Higher Education Funding Council for England |
| HESA | Higher Education Statistics Agency |
| JISC | Joint Information Systems Committee |
| LSC | Learning and Skills Council |
| NAA | National Assessment Agency |
| Ofsted | Office for Standards in Education, Children's Services and Skills |
| QCA | Qualifications and Curriculum Authority |
| QIA | Quality Improvement Agency |
| TDA | Training and Development Agency for Schools |
| UCAS | Universities and Colleges Admissions Service |

## Core Values and Partnership

Organisations who are partners in the ISB are committed to the following principles:

* To mandate to the ISB the authority for governing system-wide standards for Education, Skills and Children’s Services
* To work towards a holistic view of information across Education, Skills and Children’s Services
* To secure the production and development of standards for use many times
* To prioritise standards work in accordance with the agenda set out in ICT strategy *Harnessing Technology* and Information Strategy
* To avoid promoting narrow organisational, sector or commercial interests, for example by developing sector focused standards that are incompatible with the objectives, principles or decisions of the ISB
* To facilitate and accelerate the process of setting standards by building on the foundations provided by Becta, JISC, MIAP and Agenda for Change, and by developments in other UK countries, Europe and internationally
* To accept the Terms of Reference for the ISB.

## Meetings and Members’ Responsibilities

The ISB meets approximately every 4-6 weeks in London (Caxton House) with other meetings of sub-groups as appropriate.

At present all members have an equal role on the ISB and their membership is open-ended. Participation provides colleagues with an insight into how policy and strategy around standards is developed system-wide and an opportunity to exchange ideas and best practice.

Members work includes reading and commenting on papers from an Education, Skills and Children’s Services system perspective and providing expertise to the Technical Support Steering Group and International Strategy Group.

The ISB accepts substitutes providing they are, like all members, in a position to take away Board decisions and secure commitment from senior management of the organisation(s) they represent.

Members receive remuneration and expenses from their home organisations for their work on the ISB. Member organisations are expected to have a mutual interest in the success of the Board, as explained above.

## Relationship to Education, Skills and Children’s Services Governance

The ISB approach aligns fully with the concept of establishing an effective DfES Group (as was) as required by the Capability Review Implementation Plan. One aspect of this is the creation of a Group Chief Information Officer (CIO) Council. We intend that the ISB will report to the Group CIO Council, as will the Information Strategy Steering Group with which the ISB has strong links. All of these arrangements form part of the evolving system-wide IT governance, the final details of which are yet to be confirmed – see diagram below:



## The Business Model

### Function and Service Model

The ISB will undertake a number of functions and provide services as described in section 4.4. The ISB has Ministerial authority although its success in achieving its aims will depend on convincing partners and suppliers of the benefits of the functions and services offered.

The ISB will seek mechanisms for reinforcing its authority through Departmental standards, procedures, NDPB remit letters, supplier frameworks etc.

### Organisational Structure

The emerging organisational structure and business model for the ISB is shown below.

Technical Support will be provided as a managed service by external provider(s) in the public and/or private sector. The Secretariat will act as the “customer” for the Technical Support service and will work with the supplier(s) to put in place arrangements for managing the performance of the service. These will depend on the ISB’s business model and the nature of the relationship. The business model will be finalised in 2007-2008 – see section 9.4.



The terms of reference for the three permanent supporting roles/functions of the ISB are:

|  |  |  |
| --- | --- | --- |
| **Chair of the ISB** | **Secretariat** | **Technical Support** |
| Acting as figurehead for the Information Standards Board for Education, Skills and Children’s Services and providing effective leadership of the Board and oversight of all of its activities.  Representing the ISB in contacts with a range of stakeholders including: Industry, Standards Boards across Government, International Standards Bodies, Ministers, DCSF/DIUS and Other Government Department Directors, Agencies and Non-Departmental Public Bodies (NDPBs), and the media.  Chairing meetings of the Information Standards Board (approximately 10 per annum at monthly intervals) ensuring that these are conducted in an expeditious manner, including taking steps to ensure:   * agenda and reports are timely and sufficient; * all members contribute to deliberations; and * access to appropriate professional advice is available.   Ensuring that the ISB operates as an effective and efficient mechanism for governing data and information standards in Education, Skills and Children’s Services.  Promoting agreement between the bodies and individuals represented on the Board by working to create mutual understanding and by facilitating action to resolve differences in the event of disagreement.  Ensuring Board members, collectively and individually:  understand their roles and responsibilities;  act in accordance with Nolan’s seven principles of public life and relevant laws and regulations.  Agreeing requirements and expectations with individual Board members; ensuring support is provided in the form of induction, development and mentoring where necessary; and reviewing the performance of Board members.  Identifying the Board’s stakeholders and ensuring that there is effective communication with, and feedback from, stakeholders.  Proactively driving forward the ISB’s strategic agenda by ensuring that its work is undertaken efficiently in communication with the appropriate ISB working group chairs.  Liaising with the Department to agree the ISB Business Plan is and to report on progress and delivery. | ISB planning and project management.  Contributing to information, knowledge and standards strategic development and delivery.  Ensuring all practical arrangements are made for meetings (rooms, video/audio links, refreshments, passes etc), producing agendas, co-ordinating papers, producing meeting notes, following up actions  Facilitating collaboration and partnership engagement to take forward the ISB business plan and standards strategy  Using technical skills and experience to challenge and influence projects and programmes across the Education, Skills , and Children’s Services system to achieve the CIOG strategic outcomes  Representing and promulgating the Information strategy and influencing/facilitating delivery of strategic outcomes.  Researching information, knowledge and standards issues to help inform strategic decision making and ISB  Liaison with Minister’s, senior officials and ISB partners to help develop the ISB’s strategic direction.  Drafting submissions, Ministerial and official correspondence about the ISB.  Operational delivery  Communicating with key stakeholders in the DCSF/DIUS and in the system as a whole to help deliver strategic objectives.  Supporting the procurement of, and contract management of, services in support of the ISB.  Undertaking assurance and evaluation of the ISB’s work to ensure value for money, impact assessment and benefits realisation.  Monitoring the ISB budget, ensuring that affordability and value for money is considered at all times, reviewing and checking invoices and reporting the current budgetary position to CIOG.  Promulgating the ISB mission and strategy to wider stakeholders through conferences and workshops. | **Assurance**   * Act in an enabling and coordinating capacity ensuring that all work on standards and their use is fit for purpose. * Mapping of the existing standards landscape for Education, Skills and Children’s Services with a Road Map * Recommending adoption of relevant sector-specific standards for system-wide adoption * Identifying strategic needs and priorities for new standards * Identifying practitioner and user requirements to benefit the front line of Education, Skills and Children’s Services * Work with Special Interest Groups (SIGs) and standard champions/owners to further system wide work on standards. * Engaging with user communities and industry stakeholders * Arrange for expert review of proposed standards * Bringing forward proposals for standards adoption, with assurance to the Governance Panel * Compiling and maintaining a database of ISB standards and making it accessible to everyone in the system * Routing relevant standards to a higher authority e.g. DTG * Engaging with information standards across the UK, in Europe and internationally to enable * Securing channels for disseminating standards to partners, providers and stakeholders * Ensuring sustainability and renewal of the standards and channels. * Working with and giving authority to standards work and data collection in the constituent sectors of LSDS, e.g. DSG and NAA for schools, early years and children’s services; FEISA for post-16; and HESA and CETIS for higher education. * Develop a standards assurance framework that includes testing and evaluation at a technical level (e.g. plugfests) and for delivering the business benefits required.   **Monitoring**   * Scan the horizon * Understand business needs in the sector, * Understand the impact of government initiatives * Understand developments in the wider environment such as standards development by eGU, BSI and ISO. * Assess the compliance burden of standards for frontline service delivery.   **Commissioning**   * Enable the deployment of appropriate resources which exist across the system, supplemented by a framework contract of experts. * Clarify impact on service delivery areas.   **Communication and dissemination**   * Influence and engage with stakeholders (including suppliers and frontline practitioners); * Disseminate and publish standards and guidance * Promote business benefits * Interact at sector, national and international level * Enable through the use of a portal to provide access to information on standards, the provision of guidance, such as templates for the development of business cases and via the coordination of engagement with stakeholders. |

### Current Status

As at March 2007:

* The **Information Standards Board** also acts as a working group with a focus on full operational implementation of the ISB and helping to develop system wide standards via key business programmes and cross-cutting activity
* **ISB Technical Support** is co-ordinated on an interim “best endeavours” basis by DCSF CIO Group
* The **ISB Secretariat** is provided by DCSF CIO Group
* **Standards “champions”** have yet to be formally agreed (see 4.11.4)
* **Special interest Groups** a Vocabulary SIG has been established initially led by Becta (see 4.11.5).
* Two **Working Groups** have been established in addition to the working group function of the ISB itself:
  + a **Technical Working Group**, to develop and implement the ISB Technical Support function
  + an **International Working Group**, to develop the ISB’s international strategy (see 4.11.6)
* No **Standards Review Panels** have yet been commissioned
* The **Independent Assurance** function has yet to be established, although this is expected to be provided by DCSF CIO Group.

Plans for the full operational implementation of the ISB are provided in section 9.

### Standards Champions

The blueprint for the Information Standards Board (ISB) identifies the role of champions for various types of information standards. The ISB Secretariat, provided by DCSF CIO Group, would now like to identify knowledgeable and committed people from DCSF, DIUS and partner organisations to take on this role.

The champion will act on behalf of the ISB as a focal point and co-ordinator for a specific area of standards making activity. Those acting as champions will be free also to present the views of their own organisations providing at all times they declare on whose behalf they are speaking.

Champions will be expected to take a system-wide perspective (across schools, further and higher education, skills and children’s services) to further the aim of the ISB in creating more personalised, joined-up services to enhance leaner and child outcomes and improve efficiency.

The ISB’s permanent Technical Support function will co-ordinate and support the champions.

*Role Specification*

Champions will:

* Act as a focal point for specific types of standards and standards making activity. A list of proposed standards types is provided in Annex A.
* Be key contributors to the annual ISB Business Plan, identifying standards making activities in their areas and associated resource needs.
* Participate, where appropriate, in the ISB’s International Steering Group, making recommendations to the ISB on the position it should take on UK, European and international standards and acting as the ISB’s representative at committee meetings of BSI IST/43, CEN TC353 and ISO JTC1 SC36 as required.
* Lead and sustain a cross-sector network of technical standards expertise to complement the cross-sector governance role of the Board.
* Where agreed by the ISB, chair and co-ordinate an associated Special Interest Group of sector experts from around Education, Skills and Children's Services to develop strategy and facilitate the development of system-wide standards.
* Review business cases for proposed standards to ensure they are compliant with the ISB Business Plan before they are formally submitted to the ISB for approval.
* Work with Technical Support to:
  + Ensure developing standards are subject to appropriate review and assurance
  + Find and liaise with subject matter experts for the technical assurance of developing standard(s)
  + Provide expert advice on standards related matters
  + Work to include all information and data standards in their area into the Education, Skills and Children's Services standards namespace using the ISB’s defined addressing scheme as it is implemented
  + Establish areas for development and examples of good practice which might be built upon from a system wide perspective
  + Liaise with other standards making bodies such as the NHS Information Standards Board and the Local eGovernment Standards Board
  + Work with consortia and suppliers as necessary
  + Implement ISB decisions.
* Work with data custodians and solution/data architects on major Education, Skills and Children's Services programmes to input strategic considerations and help plan and implement convergence with system-wide information and data standards.
* Agree and take responsibility for leading or facilitating work on behalf of the ISB or its Technical Support service, consulting with other partners as required and reporting back regularly to the ISB or its Technical Support service on progress and issues.

*Person specification*

Those selected as champions will if possible:

* Be acknowledged within Education, Skills and Children's Services as having expertise in standards making in their area.
* Have a good knowledge of existing and planned standards in their area.
* Be personally committed to the ISB’s aims and objectives as set out in its Terms of Reference, Partnership Agreement and Business Plan.
* Have strategic and system-wide vision and a commitment to equality, efficiency and system reform.
* Be aware of the business, technical and systems development issues in implementing a standards-based approach.
* Be able to form and develop relationships across a diverse range of stakeholders and act as an ‘enabler’ for partnership activity – by bringing people together, brokering agreements, providing constructive challenge and gaining agreement.

*Funding*

No additional funding will be available to support champions as the work is considered to be a key responsibility of all partners that are members of the ISB. Champions’ home organisations will be responsible for any expenses incurred for travel, subsistence etc. Partners will benefit from contributing to the ISB by taking a leadership role in a particular area of standards making, being able to influence system wide change, and ensuring that their business objectives are future proofed and integrated with system wide changes over time.

For that reason, partners are expected to nominate a replacement in the event that a champion on its staff leaves his or her job or is unable to fulfil the role owing to other work commitments.

### Vocabulary Management Strategy Special Interest Group

The Terms of Reference for the SIG are to explore and determine the value of a controlled vocabulary strategy for the English education sector by:

* identifying current and planned uses in the sector of controlled vocabularies including thesauri, taxonomies and authority lists
* investigating the benefits, costs and options for collaborative development and use of controlled vocabularies taking into account evidence from wider research and educational vocabularies
* determining the scope of a controlled vocabulary strategy including a stakeholder map
* drawing conclusions on where vocabularies can be harmonised and the extent to which independence should exist in the system
* highlighting existing good practice in the implementation and management of educational vocabularies
* considering the need for common toolsets and resources including the Becta Vocabulary Management Service
* formulating a proposal for a sector specific strategy for controlled vocabularies for the consideration of the ISB

The SIG has members from the following organisations: QCA, QIA, CETIS, JISC, DCSF (CIO Group, Library, Children’s Services, Education Controlled Vocabulary), LTS, Becta, LSC, LSC, MIAP,

The first output from the ISG will be a proposal on future work to the ISB before the end of August 2007

### International Working Group

The aims of the working group are to advise on the ISB requirement to align ISB standards with UK, EU and international standards. At this first meeting the working group is invited to consider the most effective ways of working to deliver this requirement. The output will be to feed back into the draft Vision and Blueprint and inform the Technical Support scoping study.

The working group will consider the scope of the UK, EU and international programme of the ISB, how this programme can be delivered through the Technical Support service and processes, and how the work of the ISB can mesh with national and international standards activities.

For more details of the ISB’s international strategy, see section 4.13.

## Relationships with other Standards Organisations

The ISB is establishing effective working relationships with analogous bodies in other sector. These relationships need to be defined with reference to:

* Shared objectives, values and aspirations.
* Practical working arrangements including formal communications, seeking out suitable opportunities for cross-sectoral planning and lobbying.
* Establishing suitable cross-sectoral governance arrangements on matters of common interest.
* A process for mutual recognition of standards approved by the ISB and the standards bodies for other public sector business functional areas with which it will have Memoranda of Understanding, such as Health, Criminal Justice and Local Government (to be confirmed).

The ISB’s relationships with other standards organisations are shown below.



### Cabinet Office, Delivery and Transformation Group

Delivery and Transformation Group has taken over the functions of the former e-Government Unit. Work on standards in future is being led by the Information domain group of the CTO Council which is developing a cross-government enterprise architecture (xGEA). ‘Exemplars’ of good practice in IT within each domain will be written up, disseminated and mapped to the xGEA. This will help users find exemplars for their purpose and help share and re-use work. It will include guidance on which standards are required and will promote the benefits of standards use. As a result of a change to an orchestration role and the xGEA, standards development will now be much more business driven and focus on business need (not standards for standards sake).

### Local e-Government Standards Board (LeGSB)

The ISB has met the Director of Standards of LeGSB appointed during 2006/7 to explore the future relationship of the two bodies. LeGSB intends to adopt a systemised approach to operational links with business functional area standards bodies. It will carry out is operational work through Communities of Practice (CoPs). Where work is being carried out on an area of joint interest (e.g. on ContactPoint), these CoPs will include representation from local authorities, ESCS ISB and other relevant bodies.

LeGSB has expressed its wish to work with ‘standards partners’ across the public sector. It has initiated a pan-public sector standards group, and is inviting the Cabinet Office, NHS ISB, ESCS ISB, PITO (Police Information Technology Organisation) to take part.

The ISB agrees with this approach and the ISB TS working relationships with analogous bodies should support it. We intend to formalise the relationship between the ISB and LeGSB via a Memorandum of Understanding during 2007-2008.

### NHS Information Standards Board

The NHS ISB places great importance on working with relevant ‘standards partners’ across the public sector.

The ISB Secretariat is in regular contact with the NHS ISB to discuss matters of mutual interest. Both ISBs are committed to the principle of mutual recognition of standards.

The ISB and NHS ISB will invite representatives from the other body as invited observers.

We intend to formalise the relationship with the NHS ISB via a Memorandum of Understanding during 2007-2008.

The DCSF has recently secured an agreement with the NHS for periodic downloads of demographic and GP data from the Connecting for Health system.

### Pan Public Sector Standards Group

The ISB Secretariat has, with the NHS ISB and LeGSB, formed a pan public sector standards group for discussion of matters of mutual interest. There has been one meeting of the Group to date.

The benefits of such cross government working are:

* Avoiding different parts of central and local government commissioning independent solutions resulting in duplication and an inability to collaborate.
* Ensuring that there is a coherent approach to local government on information standards across all functional areas within Government.
* Sharing of good practice, models and exemplars across functional areas and domains.
* Ensuring that the channels and relationships are in place for resolving substantive information sharing and standards issues as they arise.
* Reducing the inefficiencies of having to work around competing standards.

## International Strategy

This section sets out revised aims, scope and vision for the proposed ISB International Strategy in the light of the previous feedback from the ISB Working Group. It makes explicit the remit for standards for data and statistics and includes relevant bodies. It emphasises the focus of the international strategy on engagement for strategic influence and representation. Additionally it proposes an approach to prioritisation by segmentation according to sector and domain; and identifies key channels and players for engagement with the UK, Europe and international standards.

The UK, European and international standards bodies are described in more detail in section 4.15.

### Background

In June 2006 the ISB Working Group agreed to establish an International Standards sub-group to consider how ISB should engage with the UK four nations, Europe, and international standards. The sub-group was also asked to prepare a draft strategy for consideration by the Working Group. The sub-group met on 14 December 2006 and considered the scope of the UK, EU and international programme of ISB, how this programme can be delivered through the Technical Support service and processes, and how the work of ISB can mesh with national and international standards activities.

The ISB Working Group at its meeting on 2 February gave a cautious welcome to the proposal for an ISB international strategy set out in paper ISB WG 37. However, members emphasised that the international strategy should be highly targeted and with clear priorities. Members made a number of comments on the aims and nature of the strategy as well as its scope, and priorities. They remitted the draft strategy to the reconvened sub-group for further development.

### Context of the Strategy in the ISB Vision and Blueprint

The ISB draft Vision and Blueprint includes an aim to communicate developments in the system across Government and internationally. Key stakeholders include other UK national administrations, and the international community, which have an interest in and responsibility for ensuring interoperability and exchange of data across national and international domains. Stakeholder expectations of ISB are stated to be:

* The UK plays a constructive role in the development of pan-European standards.
* Participation in standards governance has increased as a result of the ISB’s work.
* The UK is seen as a leader in the development of global standards.

The ISB Project Management key activities include:

* setting up an ISB working group with the aim of building an understanding of the international landscape for educational information standards and formulating a strategy for managing them; and
* developing a strategy for international standards making for education, skills and children’s services.

### Benefits of International Standards

International standards such as those developed through ISO/IEC embody principles of global openness and transparency, consensus and technical coherence. International standards facilitate benefits of global trade; improve quality, security and consumer protection; and enable global dissemination of technologies and good practices, to support economic and social progress.

In the domain of education, skills and children’s services, the benefits lie in specific applications for example improving the global educational market, knowledge and education exchange, cultural diversity, and mobility of skills. Effective standards can also offer efficiencies in procurement and testing both for suppliers and customers, and greater scope for re-use and consolidation of technologies.

Standardisation in the field of IT for learning, education and training supports individuals, groups, organisations and indeed nations, and enables interoperability and reusability of resources and tools to drive forward good practice. Innovation and improvement in education, skills and children’s services are linked to UK competitive advantage and exploitation of a strong supplier base in an international market.

With an expanding international market there continues to be a strong need for standards and specifications to be used by stakeholders within the domain – such as learning content developers, education and training service providers, educational authorities, university consortia and so on. Users of standards who can be defined as learners include home users, mobile or nomadic users, institutional users, children, parents and carers.

The benefits of the strategy will additionally support the ISB partners in addressing international statistical and data requirements such as those set by UNESCO and Eurostat. Effective exchange of data and information supports national and international benchmarking.

DCSF and DIUS support through ISB will therefore demonstrate international and national leadership to standards, in order to internationalise and personalise education and enable international exchange of information and statistics. Correspondingly, widening the UK educational market through acceleration of interoperability will assist in removing barriers to entry for UK suppliers of content, learning platforms and other products including e-portfolios. These benefits were the basis of the case submitted for DfES (as was) support for the international work of SC36, which was announced by ministers at BETT in January 2006.

Engagement with international standards can also support delivery of the DCSF/DIUS International Strategy, which includes priorities for global information and educational exchange.

### Aims of the ISB International Strategy

It is proposed that the ISB international strategy should aim to

* improve delivery of the education, skills and children’s services system objectives and ensure that Education, Skills and Children’s Services in England benefit from and contribute to UK-wide interoperability; European mobility, the development of a digital society and knowledge exchange; and the internationalisation of education;
* reflect ministerial and Departmental priorities for international education
* influence international standards that benefit the education, skills and children’s services domain, working across the UK and internationally; and
* promote England and the UK as global leaders in education and children’s services, understand and monitor the UK, Europe and international standards landscape and the implications for the education, skills and children’s services community and the work of ISB
* encourage other organisations to act internationally, including those that may currently lack the capability to support key activities such as Plugfests
* contribute to and influence the formulation of external standards requirements including statistics to ensure that these are compatible with the needs of ISB and its partners.

### Scope of the Strategy

The scope of the strategy will be:

* the UK, Europe and international. Each of these domains presents specific issues and will call for tailored processes.
* all sectors of education, skills and children’s services.

* standards to support exchange and collaboration in services and processes, transactions, information and statistics. The scope will include international statistical and data requirements. The types of standards are covered in the ISB Categorisation of Standards, and the international strategy will be consistent with this approach.
* Within this overall scope, there could be potential for differentiation and segmentation by sector as well as territory in order to arrive at priorities, channels and methods of working. Educational exports and exchange however could reach across sectors, and include innovation and exploitation of academic and industry products
* UK-wide issues such as the Unique Learner Number, learner mobility, a coherent children’s service and standards for UK statistics will be treated separately, and engagement between the four nations will be essential. Additionally the position of the Isle of Man, Channel Islands and other small ‘nations’ will need to be addressed.
* Engagement with Europe should include Commission officials and working groups, in order to influence the policy agenda at an early stage. This is particularly necessary as calls for trans-national standards research and development exclude policymakers go direct to providers and the industry
* Wider international priorities will need to take account of the landscape of both global industry consortia and standards bodies such as IMS, ADL, SCORM and ISO, and IEEE.

### Vision

The vision is to enable ISB partners and their communities to share in system-wide and world-wide open and common standards to support educational improvement, through engagement with channels to reach, influence and persuade policymakers, partners, and industry stakeholders.

The main thrust should therefore be for an engagement strategy with third parties active in standards policy and development, rather than a standards strategy per se. A primary focus of engagement will be with the national and international standards bodies and policy makers including the European Commission and the Bologna Secretariat, which the UK currently holds.

### Outline Programme of Action

In order to achieve these aims, the strategy will need to identify a programme of action. Examples of tasks to deliver the programme could be to:

* monitor and report on the standards landscape, including scrutiny of types of standard relevant to education, skills and children’s services sectors and communities, and the various standards domains e.g. (UK interoperability, European education and skills mobility, international education and exchange)
* anticipate developments in regulation and policy that impact on education, skills and children’s services, and harmonise key milestones and targets
* prioritise standards and types of standards according to strategy and policy and their potential impact on education, skills and children’s services for inclusion in ISB Business plan
* identify and exploit channels to influence and engage with national and international policy and standards setting
* target resource to support expert engagement with standards bodies and processes to represent and promote the interests of the ISB, its partners and stakeholders[, England and the UK]
* disseminate and promote the uptake of international standards among the education, skills and children’s services community
* promote the wider adoption of education, skills and children’s services domain standards in the UK, Europe and internationally.

### Priorities

The scope of the international strategy is potentially very wide, and priorities for the programme of action will need to be sharply defined. This definition will be assisted by segmentation according to domain, sector and types of standards. The main criterion will be relevance and strategic fit with the priorities of the ISB, its partners, and the ESCS ‘businesses’. For example, as far as international standards are concerned, the higher education sector is likely to be a priority, as this sector is intrinsically international in nature, both in education and in research. Table 1 below shows indicative policy drivers by sector and domain. From these, it may be possible to distil early priorities.

Table 1 Policy drivers and priorities

|  |  |  |  |
| --- | --- | --- | --- |
|  | UK | Europe | International |
| Schools | ULN  Data sharing |  | Moving Young Minds  SIFA |
| Post-16 | ULN |  |  |
| Skills | MIAP |  |  |
| Higher education | HESA | Europass  Bologna process  EUROSTAT | SCORM and Global Governance  e-framework  UNESCO  Research |
| Children’s services | IS Index |  | UNESCO |
| JIU |  | Europass  Bologna process | Global Gateway  DCSF/DIUS International Strategy |

Additionally, it is useful to identify the landscape for engagement by looking at key players by domain, in order to establish and exploit channels to progress the priorities. Table 2 below presents players in policy, standards, industry and statistics by domain. The table could also be further developed to show ‘force fields’ or spheres of control and influence.

Table 2 Players

|  |  |  |  |
| --- | --- | --- | --- |
|  | UK | Europe | International |
| ISB Partners | Becta  JISC  JISC-CETIS  JISC-TechDIS | JISC  CETIS | JISC  CETIS |
| Standards bodies/industry consortia | BSI  LeGSB | CEN  LIFE  EIFEL | ISO  ADL/SCORM  SIFA  IMS  IEEE |
| Data and statistics bodies | HESA | Eurostat | UNESCO |

### Engagement Channels

From this analysis, it is possible to identify channels and players for engagement with relevant standards bodies and activities. Some channels are standing committees or standards bodies, for example:

UK:

- Becta UK Standards Forum

- BSI IST/43

- e-GIF

Europe:

- Bologna Secretariat

- CEN

International:

- ISO SC 36

- LETSI and SCORM Global Governance

- JISC e-Framework

Other channels could be ISB Partners or Champions acting on behalf of ISB – for example, HESA in dialogue with UNESCO or Eurostat – or individual experts nominated through the International Standards Special Interest Group to represent Education, Skills and Children’s Services in standards activities and processes.

An additional area for engagement is the DCFS/DIUS/DWP Joint International Unit, which includes both Europe and International policy initiatives, and has responsibility for implementation of the DCSF/DIUS International Strategy. JIU has the policy lead on the Bologna process; Europass; and the Global Gateway. ISB can support JIU and delivery of the International Strategy in information and data standards; and can exploit JIU contacts and channels.

### Ways of Working and Delivery Plan

The ISB Technical Support Scoping Study recommendations and findings include processes for engagement with national and international standards. Delivery of the international strategy will be embedded in the Technical Support, rather than be considered as a separate activity or services.

Depending on the decision of the ISB Working Group, any Technical Support Executive, as well as expert panels and groups will therefore need to include international experts, as well as the engagement of relevant bodies such as BSI, CETIS and so on.

Some level of financial support might be needed to facilitate systematic engagement with international standards by education, skills and children’s services, for example to allow educational experts to engage with the processes. The ISB Business Plan will therefore need to include how funding might be obtained e.g. from DTI for these purposes.

It is proposed that an expert Special Interest Group for international standards is formed to steer the strategy and work programme, support the Technical Support team, and remit members and others to act as Champions to engage with the UK, Europe and international channels and represent ISB interests. Membership of the SIG will be drawn from ISB Partner organisations, experts appointed to the ISB Framework, and other independent experts.

The delivery plan for this work will mesh with that of Technical Support, and will therefore be phased to cover initial set up, start up, and rollout.

## UK, European and International Relationships

### UK: British Standards Institution (BSI)

ISB partners are represented on the national standards body BSI IST 43 (Information Technologies for Learning, Education, and Training). The members are: DCSF, JISC-CETIS and Becta.

IST/43 is responsible for standardisation in the field of information technologies for learning, education, and training to support individuals, groups, or organisations, and to enable interoperability and reusability of resources and tools. IST/43 may take work from appropriate international standards organisations and localise it for use in the United Kingdom. IST/43 will also take, promote or recommend such action as may be considered appropriate for furthering standardisation within the scope of IST/43.

IST/43 will not create standards or technical reports that define educational standards, cultural conventions, learning objectives, or specific learning content. Its standards and other deliverables will not duplicate work done by other BSI Committees or panels with respect to their component, speciality or domain. Instead, normative or informative references to other standards will be included when appropriate. Examples include documents on speciality topics such as multimedia, web content, cultural adaptation, and security

BSI is a gateway and route to influencing bodies such as CEN (see section 4.14.2) and ISO (see section 4.14.3). BSI nominates national experts to engage with the work of international standards on behalf of the UK. The ISB is developing its strategy for engagement at the UK, European and international level.

BSI has stated that it does not wish its primarily commercial approach to impede working with the ISB. It is currently undertaking a DTI funded and DCSF supported scoping study on alternative commercial models for BSI, including ‘pay to play’. For example, DIN in Germany sells standards and charges members to be part of technical committees. The ISB will liaise with BSI on how it can contribute for mutual benefit. It is also exploring the opportunities for selling services within the ESCS domain.

### Europe: Comité Européen de Normalisation (CEN) - European Committee for Standardisation

The key aim for e-learning at the European level is the possibility to share, collaborate, twin, and move people and resources across Europe. In particular European stakeholders’ needs include:

* Much cheaper learning content production and hence a better support of European pedagogical and business models.
* Greater availability of quality learning content
* Easier access to learning content
* Greater inclusion of people with accessibility needs
* Harmonised assessment
* More effective assessment
* Greater physical and virtual mobility during Life Long Learning
* Avoiding duplicate and erroneous information in admin systems for education.
* Better support of the learning process

The CEN board has approved TC353, a new European technical committee on Information and Communication Technologies for Learning Education and Training, to replace BT/WG 183 eLearning Technologies which is disbanded. Its scope is to produce standards in the field of information and communication technologies relating to learning, education and training. The European Standards (EN), Technical Specifications (TS) and Technical Reports (TR) that are developed will have a well-defined European scope. These may also include:

* Guidelines for the implementation of international standards from a European  
  perspective
* Mature CEN Working Agreements (CWAs) converted into standards if appropriate
* Europeanisation of national standards.

The technical committee has its first meeting on 10/5/07 with Mike Collett of Schemata as Chair.

CEN TC353 has the following working groups:

* Vocabularies and Frameworks
* Quality
* Competencies

CEN TC353 will be co-located with the CEN/ISSS WSLT, a community for all European e-Learning experts and a platform for the exchange of experiences, good practice and expertise. It has its focus on the publication of standards for Learning Technology and has produced a large number of CEN Working Agreements (CWAs), but this is not enough as it focuses primarily on the specification stage of the standardisation process, leaving the dissemination and adoption stages to others.

CEN ISSS is also responsible for the Learning Technologies Standards Observatory (LTSO). This is intended as an accessible and sustainable web based repository that acts as a focal access point to projects, results, activities and organisations that are relevant to the development and adoption of e-learning technology standards. Contents included in the Learning Technology Standards Observatory are mostly taken from the web sites of other institutions and bodies and edited for presentation.

### Global: International Standards Organisation (ISO)

The body responsible for international standards for ICT in learning is ISO/IEC JTC 1 SC36, which is concerned with technical standards to support education. DCSF supported the UK assumption of responsibility for the international Secretariat of SC36 until 2008 and is supporting BSI through funding of the operation.

ISO/IEC JTC 1 SC36 has the following working groups:

* *WG1: Vocabulary* - developing domain-specific terminology standards harmonised with the existing ISO/IEC 2382 series for IT vocabulary. WG1 provides a consolidation of all terms and definitions used in the creation of standards for information technologies for learning, education, and training (ITLET)
* *WG2: Collaborative Technology* - developing several standards to support the IT aspects of learner collaboration. The objective is the development of data models that achieve interoperability for collaborative learning. Standards that support collaborative learning enable the interoperation of systems and the reuse of data associated with learning that involves the collaboration of multiple participants.
* *WG3: Learner Information* - developing standards that specify data models, bindings, codings, APIs, protocols, etc., for data interoperability and data exchange of information associated with learners (e.g. grades, preferences, abilities, objectives, portfolios and peers)
* *WG4: Management and Delivery of Learning, Education, and Training* – focused on producing a multi-part standard and metadata for learning resources. The proposed data model includes a flexible framework for specifying disjointed conceptual schemas that define structures and data elements for metadata instances associated with learning resources.
* *WG5: Quality Assurance and Descriptive Frameworks* - focused on developing standards that provide guidelines and support functions specifically for the field of learning, education and training, in particular e-learning.
* *WG6: International Standardised Profiles* - developing profile standards consisting of existing ISO, IEC and consortia standards, enabling the use of needed multiple domain standards that support e-learning environments.
* *WG7: Culture, Language, and Human Functioning Activities* - developing a framework for content and user interfaces to be accessible by users with disabilities – where ‘ disability ’ is conceived not as something a person lacks, being instead a mismatch between learner needs and the education delivered.
* *RG1: Marketing Rapporteur Group (MRG)* - responsible for coordinating and in many cases delivering marketing and communications to support the engagement of stakeholders in the standards development process and awareness and adoption of our work products.
* *SWG Business Planning* – focused on implementing and maintaining a formal business planning process for SC36.
* *Ad-Hoc on Privacy* – Created at the 2006-09 SC36 Plenary. Task is to define Privacy Requirements for Learning, Education and Training.

The international strategy will be shaped and should be built on existing processes for engaging at an international level. There is a formal process for taking part in ISO deliberations. Representation to ISO must come through membership of a BSI Committee.

### Other International Standards Bodies

Outside the formal arena other bodies develop standards, such as trade associations, government department and consortia, on behalf of the sector. Much work on standards is done at an informal level and there is a need to communicate with this wide range of international standards bodies. JISC CETIS is already communicating with many of these groups as part of its current remit, see <http://zope.cetis.ac.uk/static/whos-involved.html> [accessed 2015-09-03]

* IMS <http://www.imsglobal.org/> [accessed 2015-09-03]
* European IMS Network (EIN)
* ADL/LETSI [www.adlCommunity.net/LETSI](http://www.adlCommunity.net/LETSI) [This link no longer maintained, instead [International Federation for Learning, Education and Training Systems Interoperability (LETSI)](http://letsi.org/) and [Advanced Distributed Learning (ADL)](http://www.adlnet.gov/) available as separate websites accessed 2015-09-03]
* SIFA [www.sifa.org](http://www.sifa.org) [This link no longer maintained, use [SIF Association](https://www.sifassociation.org/Pages/default.aspx) site accessed 2015-09-03]
* AICC <http://www.aicc.org/> [This link no longer maintained, use [SCORM ADL](http://www.adlnet.gov/scorm) site accessed 2015-09-03]
* IEEE LTSC <http://ieeeltsc.org/> [This link no longer maintained. IEEE website states that the page for LTSC (Learning Technology Standards Committee) is no longer active. IEEE site accessed 2015-09-03]
* ARIADNE <http://www.ariadne-eu.org> [accessed 2015-09-03]
* OASIS [www.oasis-open.org](http://www.oasis-open.org) [accessed 2015-09-03]
* W3C [www.w3.org](http://www.w3.org) [accessed 2015-09-03]
* WSI [www.ws-i.org](http://www.ws-i.org) [accessed 2015-09-03 where website explains that WSI is part of OASIS]
* Dublin Core Metadata Initiative (DCMI) <http://dublincore.org/> [accessed 2015-09-03]

Information Standards Register

The ISB maintains a register of known de facto standards in existence or under development. To compile the register, the ISB Working Group agreed on 1st February 2007 that a questionnaire should be circulated to key individuals to find out what information standards have been or are currently being adopted, adapted or developed for use in the Education, Skills and Children’s Services business functional area.

The purpose of the register is to:

1. Scope the standards which will be of interest to the ISB in its governance role
2. Categorise standards so that they can be handled by the ISB and its Technical Support function in the most appropriate way
3. Help the Working Group identify and agree champions and special interest groups (SIGs)
4. Provide a baseline from which to plan future standards development activity to address system wide and specific business needs.

Data and information standards known to the ISB as at June 2007 are shown in Annex A.

The ISB Secretariat welcomes corrections and additions to the register – please contact ISB Secretariat at [ITgovernance.SECRETARIAT@education.gsi.gov.uk](mailto:ITgovernance.SECRETARIAT@education.gsi.gov.uk).

Standards with Formal ISB Status

There are currently no standards formally approved by the ISB. The ISB will begin formally approving standards in 2007-2008.

The ISB will actively manage the Education, Skills and Children’s Services approved standards list through its Technical Support service. It will approve standards for a defined period of time, which will vary from standard to standard according to the ISB’s judgement about the likely impact of standards development work in the pipeline. A standard will lose its status as approved as a result of any of the following:

* A higher level standards body (e.g. BSI, CEN, ISO) approves a standard which overrides it, or
* The ISB approves an Education, Skills and Children’s Services business functional area specific extension or other standard that supersedes or overrides it, or
* The ISB withdraws its approval for a standard, or
* The defined lifetime of the standard is reached and, after critical review, the ISB decides not to re-approve it.

The e-Government Inter-operability Framework (e-GIF) Technical Standards Catalogue (TSC) v6.2[[2]](#footnote-2) lists a number of e-learning standards in development at the time of publication (2 Sep 2005). The ISB has adopted the e-GIF list of BSI and ISO standards and consortium specifications as *de facto* Education, Skills and Children’s Services standards with the status allocated at the time of publication. These standards are shown in diagrammatic form below and are listed in Annex B.



The ISB Secretariat welcomes corrections and additions to the list of de facto standards – please contact the ISB Secretariat at [ITgovernance.SECRETARIAT@education.gsi.gov.uk](mailto:ITgovernance.SECRETARIAT@education.gsi.gov.uk).

Each standard has been allocated a formal status according to the scheme adopted for e-GIF in 2005:

|  |  |  |
| --- | --- | --- |
| F | For future consideration | This will mainly apply to standards that are not yet completed or published, but which are likely to be needed by public sector IT systems. These standards are listed mainly to give notice to IT developers of their existence.  Standards listed as being ‘For future consideration’ must:   * be required for interoperability of IT systems in the public sector * be open, or demonstrate the intention of being open once published * not be overruled by an existing international standard * not clash with or be a rival to a standard already listed |
| U | Under review by an ad-hoc group | * be required for interoperability of IT systems in the public sector * be open, or demonstrate the intention of being open once published * not be overruled by an existing international standard * not clash with or be a rival to a standard already listed * be published or very soon to be published * being actively assessed by DCSF, DIUS or their partners |
| R | Recommended for consideration | * be required for interoperability of IT systems in the public sector * be open * be scalable * not be overruled by an existing international standard * not clash with, or be a rival to, a standard already listed * be complete and published * have clear indication of market support |
| A | Adopted | * meet all of the criteria listed above * not clash with, or be a rival to, a standard already listed * be used in a public sector ICT system and proven effective |

The ISB intends to convene a working group to:

1. Review these criteria, considering whether they should be:

* Redefined to cover standards not directly related to interoperability
* Extended to cover some or all of:
  + Early evaluation of the available systems that implement the standard that indicate that the standard is likely to meet the meet the stated needs.
  + Evidence that using the standard allows interoperability.
  + Formal conformance test suites that are accepted by stakeholders. Conformance tests are relatively expensive to develop and therefore tend to come later in the lifecycle when there are sufficient implementations of a standard to justify the costs.
  + Reference implementations of the standard, one for each ‘end’ of the interoperability exchange (client/server; sender/receiver; content authoring tool / content delivery system; etc.).
  + A requirement for there to be a known system that has passed a formal conformance test.

1. Identify and include standards from the Children’s Services sector if any.
2. Add emerging standards currently under development in Education, Skills and Children’s Services.
3. Update the status allocated to each standard, reflecting the current state of development and current business requirements.

1. Update the interoperability roadmap originally developed for e-GIF in 2004, showing anticipated progression of standards through the drafting and approval process (see Annex C).

Strategic Objectives for 2007-2008

## Government Strategic Imperatives and Business Drivers

* The e-Strategy for Education, Skills and Children’s Services[[3]](#footnote-3)
* The Transformational Government agenda[[4]](#footnote-4)
* The Varney Report on opportunities for transforming the delivery of public services[[5]](#footnote-5)
* The Leitch Report on the UK's long-term skills needs[[6]](#footnote-6)
* 14-19 Education and Skills White Paper[[7]](#footnote-7)
* The Youth Matters Green Paper[[8]](#footnote-8)
* Every Child Matters[[9]](#footnote-9)
* The Higher Education White Paper[[10]](#footnote-10)
* Raising the school leaving age[[11]](#footnote-11)
* The Gilbert review on personalising teaching and learning for children and young people aged 5-16[[12]](#footnote-12)

## Information Strategy for Education, Skills and Children’s Services

The objectives for the Information Standards Board will in large part be driven by the Department’s information strategy for Education, Skills and Children’s Services. This will define the key information outcomes required to support the strategic imperatives and business drivers above.

Whilst work is currently ongoing to develop and publish the strategy, there is consensus around a number of the key outcomes. The information strategy will:

1. Facilitate the flow of information between the different sectors and bodies in the Education, Skills and Children’s Services system (inter-operability).
2. Create a unique and persistent identity for children and learners across Education, Skills and Children’s Services.
3. Address data protection and policy issues constraining agreements between public sector bodies for exchanging information.
4. Create a single view across DCSF, DIUS, QCA and LSC on the role and format of the Learner Achievement Record.
5. Facilitate the availability of adult career information from sources across the system.
6. Enable the provision of better information for Ministers on Early Years learners.
7. Enable the provision of “near real time” management information for DCSF and DIUS policy purposes.
8. Promote modular, mixed and remote learning independent of time and place
9. Enabling greater personalisation of learning.
10. Enable the development of lifelong e-portfolios for learners.
11. Enable formative e-assessment across the learner’s lifetime.
12. Reduce duplication between systems and databases with similar purposes (for example Educational Maintenance Allowances and Student Loans; the UK Register of Learning Providers and Eduserv).
13. Integrate frontline e-services in ways that make sense for customers (for example a “one stop shop” for starting and attending school covering admissions, grants for transport and clothing, free school meals, music fees etc.)
14. Integrate frontline systems used to deliver Education, Skills and Children’s Services (for example by supporting the development of Government Connect).
15. Provide a range of common services for use across the system (for example user authentication, payments, matching learner achievement to course/employer needs).
16. Create a shared way of describing what we do and how we do it.

## Stakeholder Priorities

Informal soundings taken during the Technical Support Scoping Study identified the following as stakeholder priorities for ISB action:

* Developing an agreed strategy for identity management.
* Securing the adoption of CDD across the sector.
* Determining a joined-up approach to e-portfolios and skills portfolios.
* The Learning Achievement Record (LAR).
* The Qualifications and Curriculum Framework (QCF).
* 14-19 Agenda.
* Implications of Leitch.
* Advancing the state of inter-operability (e.g. of document formats and or messaging standards).

## Objectives for 2007-2008

The ISB Working Group has over the last year had a dual role: it has been overseeing the work required to bring it to a fully operational state whilst maintaining a watching brief over standards making. Over the coming year, these two themes will continue although the balance will shift over the course of the year from internal process and operations to engagement in standards making in Education, Skills and Children’s Services. By the end of 2007-2008 it is expected that:

* The ISB will have been launched and will have met as a formally constituted body at least once
* The ISB will be taking a proactive stance to information standards making in the system and will have intervened successfully to align activity in at least three areas of standards activity.

The ISB’s objectives to support these targets are to:

|  |  |
| --- | --- |
| **Information standards making**  **(for details, see section 8)** | **Development of governance and operations**  **(for details, see section 9)** |
| * Create a single set of basic data definitions for use throughout the system * Consult on standards for service orientated architectures (SOA) * Mandate and facilitate implementation of system-wide adoption of common metadata and vocabulary standards for web services * Support JISC in encouraging take-up and internationalisation of course-related information schema * Ensure that a system-wide approach is taken to establishment data (providers) * Agree a data model for UK SIF implementations. | * Recruit an independent Chair for the ISB * Put into operation a Technical Support function * Create an online information and data standards library and guidelines for creating standards * Set up a service for managing vocabularies |

Standards Development Plan

This section sets out the main areas of standards activity in 2007-2008. Each activity is linked back to the information strategy outcomes in section 7.2 and the ISB targets and objectives in section 7.3.

Annex D contains a table of activities with the following details where available:

* **Current/Possible Standards Developments** are either in progress, planned, or have been identified by the ISB as gaps where work may be required. They are grouped according to putative ISB champions/special interest groups (shown by sub-headings in grey):
  + Vocabularies
  + Metadata
  + Data Collections and Statistics
  + e-Learning Content
  + Collaboration
  + Assessment & Qualifications
  + Establishments and Services
  + Transition
  + Quality Assurance and Metrics
  + Accessibility
  + Data Sharing
  + Identification and Authentication
  + Information Security
  + Interconnection and Integration
  + Other
* The **estimated completion** date is for initiatives that are in progress or planned.
* **ESCS engagement via** shows the route through which Education, Skills and Children’s Services partners will engage with this initiative.
* **ESCS representation** lists the partners accountable for the success of the initiative on behalf of the ISB.
* **ISB commentary** provides further background, describes the issues, and presents the ISB’s position.
* **ISB action plan/outcomes** describes the ISB’s agreed action, including the responsible partner and expected outcomes in 2007-2008.
* **Benefits** lists the business benefits of the ISB action.
* The **strategic outcomes** show how the action supports the strategic outcomes described in section 7.2 and are numbered as in the table above.

ISB Governance and Operations Development Plan

The ISB Blueprint is a controlled document, agreed by the ISB Working Group, specifying what the ISB and its ancillary functions will look like in a fully operational state. In practice, the ISB is likely to develop to a state of full maturity over a number of years, as defined in a draft five stage maturity model:

|  |
| --- |
| **LEVEL 1 Ready for start-up**  Agree:  Service delivery model  Procure:  Technical Support services  Agree:  Contractual arrangements for the proposed framework contract |
| **LEVEL 2 Start up**  Plan:  Communications  Engaging with stakeholders  Governance arrangements with Partners and analogous bodies  Prioritised work programme  Procurement of expert support to complement existing expertise within sector bodies.  Implementation of ICT infrastructure  Identify:  Expertise residing in sector bodies  Develop:  Assurance process, including ‘standards for standards’  Baseline of standards in the ESCS sector |
| **LEVEL 3 Partially ICT enabled**  Implement  Portal for the dissemination of information on standards  Helpline for users (coordination role, forwarding request to most appropriate body, e.g. Becta or DSG).  Manage:  ICT infrastructure  Relationship with experts  Relationship with stakeholders  Relationship with analogous bodies  Assurance process |
| **LEVEL 4 Fully ICT enabled**  Implement  Online collaborative workspace  Email lists for automatic communication of changes  Wikis  Manage:  ICT infrastructure  Relationship with experts  Relationship with stakeholders  Relationship with analogous bodies  Assurance process  Standards development in the sector |
| **LEVEL 5 Expanded remit**  Contribute to:  System wide Design Authority remit  Development of standards across-government (beyond ESCS sector)  Manage:  Pool of standards expertise for use by stakeholders within and beyond the sector |

During 2007-2008, the target is for the ISB Working Group to have achieved Level 2 in the maturity model.

A summary of the key development activities is set out below.

## Recruitment of Independent Chair for the ISB

The ISB has agreed to appoint a senior independent Chair from outside of DCSF to:

* raise the profile, status and authority of the ISB within the Education, Skills and Children’s Services community
* facilitate contacts with senior figures in Parliament and Government

Selection will be on merit by fair and open process conforming to the guidance of the Office of the Commissioner for Public Appointments, including independent scrutiny and equal opportunities. The appointment may be made by the Secretary of State for Education and Skills, depending on the ISB’s agreed status as a public body (currently being determined).

The Chair will be bound by a Code of Practice governing senior public appointments, and will be required to observe the highest standards of impartiality, integrity and objectivity in relation to the independent service they provide to the ISB.

The initial appointment will be for a period of two years and will then be reviewed. The role will be part time at 2 days per month. As the ISB will probably meet about 10 times a year, the Chair’s commitment is likely to be 24 days per year. A daily fee rate will be agreed with the successful candidate.

## Relationships with Other Public Sector Standards Bodies

The CIOG CTO and ISB Secretariat will meet with DTG to discuss range of issues including:

* improving relationships, e.g. by better stakeholder participation in any future process.
* clarifying where boundaries were going to be drawn between the ESCS business functional area and the cross Government enterprise architecture (xGEA) and standards domains.
* Avoiding complex bureaucratic arrangements for standards through domain working groups.
* Moving e-GIF forward coherently as a framework beyond the future developments on xGEA standards agenda
* possibly sharing standards through one cross-government portal led by a Department.
* options for re-contracting GovTalk by September 2007.

The ISB will seek to put in place a mechanism for working with the Health business functional area as an invited observer on the NHS ISB. The ISB will make a reciprocal offer to the NHS ISB.

The ISB will seek to build on and develop the pan-public sector standards group that has already been established. It is expected that the standards bodies of other public sector business functional areas and Delivery and Transformation Group will join the Group in the coming year.

The Local e-Government Standards Board has proposed Communities of Practice to jointly examine common issues of interest. The Secretariat will monitor developments through the pan-public sector standards group and seek ISB Working Group approval for membership of Communities of Practice if and when proposed.

## Secretariat

The estimated resource requirement for the Secretariat is 2 FTEs: an administrator/manager and a technical standards specialist. These resources will be provided by DCSF and role specifications are provided below.

These roles are already being performed on an ad hoc basis by the existing ISB development team. Resources are required to:

* Fill these positions permanently thereby providing robust and effective support for the ISB to deliver Ministerial commitments.
* Allow for an anticipated increase in secretarial duties as new International and Technical Support working groups are established to support the development of the ISB and as standards working groups are set up for the development of standards.
* Expand the team’s capability and expertise in technical information standards making, in order to offer insight and challenge in working with stakeholders throughout the system to plan and manage the ISB’s activities.
* Provide drive and continuity to ensure a rapid transition of the ISB from development to live operation.

The ISB development team currently comprises only one permanent member of staff. In failing to resource these roles there would be a significant risk of failing to deliver the Departments’ e-strategy and information strategy.

## ISB/Technical Support Business Model

The ISB Working Group will come at an agreement on the business model for the Technical Support service (as part of the wider ISB structure – see section 4.11). This will be based on the commissioning and assurance model set out in detail in the Technical Support Scoping Study report.

Following agreement, the Working Group can begin the procurement of the service.

The key issues to be addressed by the business model are set out below.

### Resourcing

The workload of Technical Support is expected to vary depending on the demands from strategic programmes for standards advice, guidance and approval. Resources will be required for special interest groups (SIGs), working groups and review panels. Flexible resources will be required to meet these demands and will be obtained as follows (in order of priority):

1. Specialists from DCSF, DIUS and their partners.
2. External standards expertise, procured through contracts with approved suppliers appointed to procurement framework.

The service provider will determine the level of resourcing required to deliver the Technical Support service. It is likely to comprise a core team of 6 FTE at start-up at the equivalent level of seniority of one Grade 6, two Grade 7 and three SEOs.

The procurement team will draw upon the Skills Framework for the Information Age (SFIA) and identify the full range of technically oriented competencies required. The resource model will fulfil the following criteria:

* Access to the leading experts
* Choice of experts for specific pieces of work
* No guaranteed minimum volume of work for individuals or organisations
* No constraints on experts working elsewhere
* Minimal administration required to call off experts for particular work

### Expert Resource Procurement Framework

A procurement framework will be provided for Technical Support, enabling it to call off flexible resources in response to business demands.

The framework will be made available to other organisations in the system and possibly to other standards bodies (for example in the NHS), providing a funding mechanism can be found to cover the additional costs (on the analogy of the levy imposed by OGC on work undertaken through its Catalist frameworks).

Further advice will be taken to ensure that implementation of this framework is consistent with Government procurement rules.

### Funding

It is expected that the ISB will have baseline funding from the CSR 2007 settlement. This will cover both the development costs and day-to-day operational costs of the Chair of the Board, the Secretariat and Technical Support, including ICT support, for the core activities shown in the table overleaf.

The time and expenses of specialists from DCSF, DIUS and their partners in support of the ISB will be funded by their home organisations. All partners are expected to share the vision and benefits of the ISB and to make a contribution to the costs and resources needed.

The ISB will require additional funding above its normal baseline for external procured standards expertise and any work agreed by Technical Support outside its core activities. The mechanisms for obtaining this top-up funding will be explored in the coming year.

The costs of Independent Assurance will be met by CIO Group.

### Sustainability

The aim will be to keep the ISB as lean as possible. It will however require a minimum level of funding and it is considered impractical to obtain an income stream, for example by direct charging for services. If the expected funding is obtained through CSR 2007, the ISB will be sustainable to the end of 2010/11. It will be the responsibility of CIOG, as the ISB sponsor, to demonstrate that the ISB has delivered value for money over this period in order to secure ongoing funding.

## Technical Support Service

This activity requires negotiation with the body or bodies identified as being best placed to deliver the Technical Support service. The work will include agreement of contractual obligations or changes to sector body remit letters. On completion of negotiation and agreement of requirements, the body delivering the service may need to begin recruitment of additional staff resources to fulfil the specification. Procurement of the Technical Support service will put in place the capacity to begin the start-up activities to launch the service.

## Performance Management

The Secretariat will work with the Technical Support service provider to define key performance indicators (KPIs) at the outset to ensure delivery against key objectives for initiating and establishing the service.

Technical Support will be managed by reference to the benefits delivered through each business change programme that include a standards element. The feasibility of a benefits-based approach to performance management will clearly depend on the robustness of change programmes’ benefits management processes and data. If these are inadequate, proxy measures of performance, based on measurable indicators, will need be defined then discussed and agreed at future ISB meeting.

In the longer term, the ISB will consider KPIs around brand recognition and customer satisfaction determined by research with stakeholders.

## Standards for Standards

The ISB will propose and develop a framework and guidelines for information and data standards, including:

ISB Action:

* *XML Schema guidelines.* Becta have drafted guidelines for XML schema. They will be treated as a draft Education, Skills and Children’s Services standard. DCSF as interim technical support will arrange for the guidelines to be reviewed by a small panel of subject matter experts drawn on a "best endeavours" basis from stakeholders including CIOG, DSG and CETIS prior to making a recommendation for approval by the ISB.
* *Application Profile guidelines.* The ISB will provide guidance on when and how application profiles should be created, including a requirement to incorporate ISB fundamental standards and to lodge a copy of the profile in the Applications Profile Library (see below).

## Tools

### Online Information and Data Standards Library

CIOG is to conduct a feasibility study with a view to setting up an online information and data standards library. This will provide a single point of access to information and data standards for Education, Skills and Children’s Services.

The library is intended to:

* Create for the first time a consistent naming framework (namespace) for Education, Skills and Children’s Services using persistent identifiers for resources.
* Meet the needs of the Information Standards Board (and its technical support service), internal DCSF/DIUS information management, and, potentially, internal information management of system partners.
* Allow different governance arrangements for different resources in a federated model.
* Provide for de facto standards as well as standards with a formal status gained through the open process of recognised standards bodies (such as the system-wide Information Standards Board).

The feasibility study will clarify the objectives and develop a blueprint for the Library. It will examine existing repositories of the main standards making organisations to identify if it is possible to re-use them or incorporate them into the Library. The Study will establish with DTG whether use of the redeveloped Govtalk website is an appropriate (e.g. in terms of the Government channel strategy) and feasible host for the Library. Finally it will define technical options for implementation and recommend a solution based on an evaluation of the costs and benefits of each.

The study will investigate whether the following should be included in the Library:

* A library of free text standards documents
* A glossaries store
* A vocabulary store and/or tools
* A data dictionary of common basic data element definitions
* An XML schema registry
* An application profile registry.

### Vocabulary Management Tools

Becta intends to manage the vocabulary management service (via agreed SLA) and identify a long term future. Long term funding and rules of engagement are to be agreed by October 2007.

The ISB will ensure that Becta’s Vocabulary Management Strategy fits with the ISB’s strategy for system-wide use of tools (e.g. as a part of the Information and Data Standards Library (see above)). It will also ensure that the charging mechanism if any is clarified and agreed before commitments are made. This work will be undertaken through the Vocabulary Management Strategy Special Interest Group (see 4.11.5).

## Activities Planned for 2008/9 and Beyond

### Standards Expert Procurement Framework

Although resources from partner organisations will always be used where available, for the work of the Technical Support service to be carried out effectively, it is likely to require access to standards expertise from elsewhere in the public and private sector.

The ISB will establish a framework contract to be populated by experts (both individuals and firms / institutions employing such experts) from which it may from time to time choose to commission technical work in support of its mission.

Work will be required to ensure the procurement strategy maintains compliance with public sector procurement policy. The ISB Working Group will consult with the OGC to confirm whether this approach is acceptable and workable, determine the process for putting it into operation, and whether the Catalist frameworks might be used.

The ISB could in time make the expert resource framework available to others inside and outside the sector (e.g. NHS ISB, LeGSB) - an indicator of identifiable benefit and potential source of income for the ISB. The framework’s specification will balance the needs of other bodies against the core requirements of the ISB.

The framework contract is expected to have an initial 4 year ‘life-span’ with an option to extend.

The framework will be structured into formal lots providing each lot can be populated with enough experts so that the mini-competitions required under EC law will be effective and meaningful.

As a first step, CIOG will discuss further with DCSF Procurement the feasibility of establishing the framework and carry out market analysis on standards expertise (including that required for UK, European and international work), with a view to presenting a report and procurement strategy to a future ISB Working Group meeting. The analysis will include early communications to test the market’s reaction and gauge levels of interest and enthusiasm.

### Interoperability Compliance Testing

For standards developed and adopted to be authoritative will require a robust, replicable, transparent, and clearly understood assurance process.

The ISB will ask the Technical Support service to consider a more robust assurance process through conformance testing, testing and evaluation at a technical level (e.g. through plugfests) once the technical support service is operational and effective. The process that suits the requirements of the ESCS sector is expected to be between that of the NHS ISB and LeGSB models. The ISB will consider developing a "plugfest methodology". It will also need to be in line with European arrangements for ensuring concerted interoperability compliance testing in EU countries, acknowledging the local nature of learning technology markets.

Ultimately, some form of ‘branding’ of standards that conform to the assurance process might need to be implemented.

### Tools

* Collaborative Workspace for Standards Community

Online collaborative workspaces will be required to offer visibility on standards development and provide a means for key stakeholders to comment on and contribute to work undertaken.

The ISB TS will consult the DCSF CTO, Group CIO Council or other system-wide governance for ICT to ensure that any proposed ICT fits with the overall developments on the use of collaborative software within the sector.

CIOG will include provision of collaborative tools and software as part of the CIOG pipeline funding under the ISB Implementation project work strand.;

* Standards Observatory

The ISB will consider what arrangements are required to provide stakeholders in Education, Skills and Children’s Services with news and notices of standards development activities and events. Existing arrangements, such as CEN’s Learning Technologies Standards Observatory (LTSO), will be used if possible.

## Stakeholder Management

An important function and key activities relate to setting up and maintaining processes for effective stakeholder engagement, if development of standards is to be business owned and driven. The purpose of robust stakeholder engagement is to identify:

* What needs to be done.
* What work is being carried out.
* Which organisation(s) or part of the sector is best placed to commission standards development.

DCSF CIOG will retain strategic oversight of business stakeholder engagement to ensure that it is integrated with the Information Strategy. The Technical Support provider will report back to the Working Group on proposals for engaging with technical standards community, as part of the appointment process or shortly after.

One of the early activities will be to launch ISB Technical Support to:

* Inform relevant stakeholders as to the existence of the ISB, its form and function.
* Provide details on how stakeholders can and will be involved.
* Provide details as to planned activities.
* Set out the means by which the processes governed by the ISB will be administered.

The ISB Secretariat will identify, coordinate and support:

* *Special Interest Groups (SIGs)* – comprising knowledge and expertise at a cross-ESCS sector level, with participants that have an interest and involvement in areas related to their business requirements. The ISB will facilitate bringing together distributed pockets of expertise, interest and need.
* *Standards Champions* –.
  + The Secretariat has proposed champions for each area of interest. Partners will review and agree this list and provide the Secretariat with the names of those they believe can add value through participation in special interest networks or groups that might be established by the ISB and its champions now and in the future.
  + The Secretariat will maintain a list of such nominations until the Technical Support Service is put in place.
  + The terms of reference in section 4.11.4 will be agreed with champions and their home organisations.
  + Nominating organisations will include the terms of reference in champions’ personal objectives and agree an investment of time as part of individuals’ existing responsibilities for information and data standards.
  + Champions will be briefed on their role and responsibilities on behalf of the ISB.
  + The Secretariat will review and agree priorities for the standards activity in their area documented in the ISB Business Plan 2007-2008.
  + A final list of champions will be submitted for approval to the ISB Working Group, probably at its meeting on 14th September 2007.

Becta will work on proposals for engagement with suppliers, leading to some form of consultative forum within the ISB’s governance structure.

As Technical Support is established, it will take over responsibility for managing these consultation arrangements.

The arrangements will be:

* created in line with the stakeholder engagement plans for the Information Strategy, currently being developed by DCSF CIO Group
* built where possible on existing stakeholder arrangements (e,g. Becta, MIAP)
* designed to engage and support a wider group of stakeholder organisations, such as awarding bodies, that are not members of the ISB, for example by providing them with guidelines on the use of standards, engaging them as observers or active members of SIGs to aid exchange of good practice.

## Implementation Project Plan

The ISB Implementation Project Plan in contained in Annex E. A table of milestones from the ISB Implementation Plan follows.

|  |  |
| --- | --- |
| Planning | Thu 05/07/07 |
| Draft/agree terms of reference with Standards Champions | Thu 05/07/07 |
| Draft/agree ISB Communications Strategy and Plan | Sat 30/06/07 |
| Develop international strategy | Thu 05/07/07 |
| ISB Business Plan 2007-2008 agreed | Thu 05/07/07 |
| Secretariat | Sat 30/06/07 |
| Identify resources | Fri 29/06/07 |
| ISB Secretariat in place | Sat 30/06/07 |
| Independent Chair for the ISB | Fri 10/08/07 |
| Prepare advertisement and interview process | Fri 08/06/07 |
| Receive applications | Fri 29/06/07 |
| Interview candidates and select | Fri 10/08/07 |
| Independent ISB Chair in post | Fri 10/08/07 |
| ISB/Technical Support business/funding model | Thu 16/08/07 |
| Update Blueprint and Framework/Process based on Technical Support Scoping Study | Thu 02/08/07 |
| Draft/agree Technical Support service delivery model | Thu 16/08/07 |
| Draft/agree action plan for Technical Support procurement | Thu 16/08/07 |
| Draft/agree/publish Technical Support ITT (if formal procurement) | Fri 21/09/07 |
| Receive Technical Support supplier proposal(s) (if formal procurement) | Fri 16/11/07 |
| Select and confirm Technical Support supplier(s) (if formal procurement) | Fri 30/11/07 |
| Relationships with internal/OGD data mgmt/standards bodies | Thu 29/11/07 |
| Clarify relationship with Delivery & Transformation Group | Thu 29/11/07 |
| Establish reciprocal Board membership with NHS ISB | Tue 31/07/07 |
| Develop pan-public sector liaison on standards | Thu 29/11/07 |
| Update of Standards Status and Roadmap | Fri 30/11/07 |
| Review the criteria for including a standard in the interoperability roadmap | Fri 05/10/07 |
| Identify and include standards from the Children’s Services sector if any | Fri 05/10/07 |
| "Add emerging standards currently under development in Education, Skills and Children’s Services" | Fri 05/10/07 |
| Update the status allocated to each standard | Fri 02/11/07 |
| Update the interoperability roadmap | Fri 30/11/07 |
| Conduct feasibility study and design interim online information and data standards library | Fri 28/12/07 |
| Design and implement vocabulary management tools | Thu 06/09/07 |
| Maturity level 1 (Ready for start-up) achieved | Fri 30/11/07 |
| Draft/agree Service Level Agreement for Technical Support service | Tue 15/01/08 |
| Transition to live technical support operation | Tue 12/02/08 |
| Draft/agree launch/operationalisation plan including governance and communications | Tue 08/01/08 |
| Confirm and implement stakeholder engagement approach/methods | Tue 15/01/08 |
| Transition Technical Support service to full operation | Tue 12/02/08 |
| Relationships with internal/OGD data mgmt/standards bodies | Fri 29/02/08 |
| Agree MoUs with other (sector/OGD) data management and standards bodies | Fri 29/02/08 |
| Establish interim online information and data standards library | Tue 12/02/08 |
| Maturity level 2 (Start-up) achieved | Mon 31/03/08 |
| First formal meeting of ISB by | Fri 29/02/08 |
| Draft/agree first ISB annual report | Tue 01/04/08 |
| Complete interdependency analysis of work on standards | Fri 29/02/08 |
| Complete ESCS standards roadmap | Mon 17/03/08 |
| Draft/agree ISB Business Plan 2008/9 | Fri 25/04/08 |
| Standards assurance process | Mon 22/09/08 |
| Design/consult on assurance process for standards | Fri 20/06/08 |
| Implement assurance process for standards | Mon 22/09/08 |
| Draft/agree principles and process for reviewing/approving xGEA/eGIF standards with Cabinet Office | Fri 18/07/08 |
| Publish ITT for standards expert framework procurement | Thu 01/05/08 |
| Receive bids for standards expert framework procurement | Mon 16/06/08 |
| Select experts and establish framework | Mon 14/07/08 |
| Implement ISB Helpline for users | Mon 22/09/08 |
| Implement permanent ISB portal, flexible and scalable to meet future requirements | Mon 22/09/08 |
| Maturity Level 3 (Partially ICT enabled) achieved | Mon 22/09/08 |
| Phase 4: Implement Full ICT Support | Tue 31/03/09 |
| Design online collaborative workspace | Mon 22/12/08 |
| Implement online collaborative workspace (including Wikis) | Tue 31/03/09 |
| Maturity Level 4 (Fully ICT enabled) achieved | Tue 31/03/09 |
| Phase 5: Expand Technical Support Remit | Tue 30/06/09 |
| Establish relationship with system-wide architecture design authority | Tue 30/06/09 |
| ISB making effectively contribution to cross-government standards making | Tue 30/06/09 |
| Maturity Level 5 (Expanded remit) achieved | Tue 30/06/09 |

Outline Business Case and Funding

## Costs

The costs of the Information Standards Board comprise:

* Initial start-up costs in implementing the ISB
* Ongoing costs of providing an ISB secretariat and technical support service.

Notes:

1. Figures are in £’000 and are prorated in the start-up year (2007-2008) where necessary
2. Secretariat staff costs assume 1xG7 and 1xSEO.
3. Chair costs assume 24 days per annum at £650 per day, plus expenses.
4. It is assumed that all technical support options have similar cost implications. This needs to be confirmed by further work.
5. Estimates are not adjusted for optimism bias.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **2007-2008** | **2008-2009** | **2009-2010** | **2010-2011** |
| **Resource costs** |  |  |  |  |
| Secretariat staff (fully loaded) | 168 | 224 | 224 | 224 |
| Independent Board Chair | 10 | 16 | 16 | 16 |
| Independent Board Chair recruitment (inc. VAT) | 24 |  |  |  |
| Non-staff |  |  |  |  |
| **Total resource** | **202** | **240** | **240** | **240** |
|  |  |  |  |  |
| **Capital** |  |  |  |  |
| Technical Support service | 200 | 500 | 500 | 500 |
| Consultancy (inc. VAT) | 241 |  |  |  |
| **Total capital** | **441** | **500** | **500** | **500** |
|  |  |  |  |  |
| **TOTAL EXPENDITURE** | **643** | **740** | **740** | **740** |

## Benefits

We have quantified the potential efficiency savings from having system-wide information standards. There are in addition a range of currently non-quantified benefits made possible by a standards-based approach.

*Quantified Benefits*

Notes:

1. Working calculations and assumptions available on request.
2. All figures are per annum.
3. This estimate ignores savings in the children's services sector.

|  |  |
| --- | --- |
| Reducing the implementation time and costs of policy programmes | £1,050,000 |
| Reducing operational costs by enabling data to be created once and used many times across different sectors | £19,480,519 |
| Creating a more open and competitive market for educational software | £5,000,000 |
| System-wide Information Standards - Benefits (per annum) | £25,530,519 |

*Non-quantified Benefits*

System-wide information standards will in addition:

* Enable the creation of innovative, high value online services for enhancing learner and child outcomes.
* Encourage innovation at the front line and within/between institutions
* Help deliver the Transformational Government, Varney report, e-Strategy and information strategies.

## Financial Case

Revenue funding will be required to fund a Secretariat for the ISB, interim expert technical input (if available) in the areas of information standards and standards making, and an intelligent customer function for the proposed technical support service.

Capital funding is required to put in place the necessary technical support arrangements for the Information Standards Board, on the assumption that the service will be project-based and provided externally to the DCSF/DIUS. Capital funding will also be required to develop technology to enable technical support, such as: web-accessible databases for information standards, online collaborative tools and forums for system-wide standards development, governance process automation.

The balance of capital and revenue funding required for the technical support service is dependent on the way forward agreed as a result of a Technical Support Scoping Study, for which the draft final report was made available on 30th March 2007.

Capital investment in support of the Information Standards Board will create revenue costs of capital and depreciation. Interventions by the Information Standards Board may create the demand for further capital investment in DCSF/DIUS and NDPBs.

It is understood that programme capital funding is available under the former ICT in Schools programme budget. The availability of revenue funding is currently unknown.

Key Risks

|  |  |
| --- | --- |
| **Risk 1**  The ISB fails to build enough senior level buy-in across DCSF, DIUS and partners to enable success resulting in failure to implement the ISB | 1. Ask partners to sign Partnership Agreement. 2. Define strategy for stakeholder engagement. 3. Brief DCSF and DIUS Directorates 4. Hold 1:1 meetings with key partners. |
| **Risk 2**  The system-wide authority of the ISB governance arrangements is insufficiently strong to enforce the standards resulting in failure to realise the benefits from system-wide information standards. | 1. Establish a policy for compliance. 2. Set out compliance strategy in ISB Business Plan. 3. Communicate ISB decisions. 4. Work with funding partners to promulgate standards 5. Include obligation to implement and promulgate standards in NDPB remit letters. |
| **Risk 3**  A change in Government, a change of Minister, or a change in Government policy may remove the strategic drivers and/or available funding for the ISB, resulting in a need to find an alternative approach to delivering the benefits of inter-operability across the system. | 1. Ensure that any review of the Information Strategy includes an assessment of the impact on information standards. 2. Include bid for funding in CSR08 which is not contingent on change of Government. |
| **Risk 4**  Partners that are already investing heavily in sector focused standards may be resistant to extending them for system-wide use, resulting in a failure to realise the benefits from system-wide information standards**.** | 1. Countermeasures for compliance (see Risk 2). 2. Consider funding standards activities in partners to promote system-wide approach. |
| **Risk 5**  The ISB is unable to demonstrate to Treasury or other stakeholders a measurable impact on education standards or value for money, resulting in failure to secure funding for ongoing operation of the ISB. | 1. Ask Becta to provide background research on benefits of system-wide standards, e.g. reduced project lead times, more effective procurement through standards-based frameworks. 2. Collect case studies of success from ISB intervention. 3. Raise profile of role in working with DTG on e-GIF. |
| **Risk 6**  Standards are unduly influenced by the commercial interests of suppliers, resulting in distortions to the market for educational software products and services, resulting in less innovation and higher costs for learning providers. | 1. Engage suppliers through international strategy. 2. Monitor suppliers via Technical Support. 3. DCSF and DIUS to engage in consortia and other networks (e.g. SIFA, IMS) to understand supplier motivations and drivers. 4. Provide supplier forums (similar to Industry Club) to engage the industry in strategic direction and standards requirements |
| **Risk 7**  Nimble partners and suppliers are able to establish de facto standards as the ISB engages in lengthy consultation and consensus building, resulting in distortions to the market for educational software products and services, resulting in less innovation and higher costs for learning providers. | 1. ISB/Technical Support to promote through channels including the Industry Special Interest Group, the schedule, programme, business plan and timelines for ISB 2. Use channels and Technical Support scanning function to gain intelligence on industry de facto standards landscape 3. Consult on programme |
| **Risk 8**  Partners and commercial suppliers are confused by evolving and possibly incompatible data standards emerging from different parts of the education system (ESCS/ISB) and international (BSI/ISO) processes, resulting in failure to realise the benefits from system-wide information standards. | 1. International strategy to engage with international processes, and feed into Technical Support 2. ISB and Technical Support remit to include processes for articulation with (or departure from) international standards and promulgation of reasons |
| **Risk 9**  Data providers claim intellectual property rights or otherwise assert their ownership over data, formats or standards that the programme wishes to include in the KA, resulting in failure to realise the benefits from system-wide information standards. | 1. Engage and negotiate with data providers who are IPR owners in relation to existing standards 2. Negotiate re IPR of future standards |
| **Risk 10**  The performance of the Technical Support provider is adversely affected by its dependence on the co-operation of standards champions and other system stakeholders with whom there are no back-to back service agreements, resulting in poor value for money from the Technical Support service and failure to deliver the benefits from system-wide information standards. | 1. Champions to have lead Special Interest Groups or networks and engage in strategic requirements setting through articulation with Technical Support processes 2. Champions’ networks to be facilitated through the online ISB channel/website |
| **Risk 11**  ISB activities and projects do not have the right people, with the right skills, in the right place, resulting in our inability to deliver planned work. |  |

Glossary

Acknowledgements[[13]](#footnote-13)

|  |  |
| --- | --- |
| AMD | (ISO/IEC JTC1 acronym)Amendment. A relatively small set of additions to an existing standard. An Amendment describes the changes. Usually, Amendments are "rolled up" (incorporated) into the next revision of a standard. (See also **TCOR**) |
| BRM | (ISO/IEC JTC1 acronym)Ballot Resolution Meeting. A meeting convened for the purposes of resolving ballot comments. |
| BSI | British Standards Institution (see section 4.14). |
| Business functional area | One of a number of areas into which **DTG** divides the work of Government for the purposes of formulating information strategy, architecture and standards. |
| CD (and FCD) | (ISO/IEC JTC1 acronym)Committee Draft and Final Committee Draft. The normal development process of standards involves several successive steps, e.g., CD1, CD2, etc., FCD. A CD and an FCD are ballot the **SC**-level. |
| CEN | Comité Européen de Normalisation, the European Committee for Standardisation (see section 4.14.2 and <http://www.cen.eu/> ) [accessed 2015-09-03] |
| CIOG | Chief Information Officer Group in DCSF |
| CWA | **CEN** Workshop Agreement |
| DCSF | The Department for Children, Schools and Families, that replaced the Department for Education and Skills on 28th June 2007. See also **DIUS**. |
| DIS | (ISO/IEC JTC1 acronym)Draft International Standard. The last step before a *fast-track document* is approved as an International Standard. Note: The fast-track process is a different process than the normal development process. DIS documents are balloted and approved at the **TC**-level. |
| DIUS | The Department of Innovation, Universities and Skills, that replaced the Department for Education and Skills on 28th June 2007. See also DCSF. |
| Domain | In general use, equivalent to **business functional area**. Used by **DTG** to refer to elements of the **xGEA** Reference Model: see <http://www.cio.gov.uk/documents/cto/pdf/enterprise_architecture_uk.pdf> [This link no longer active (2015-09-03), no alternative identified.] |
| DSG | Data Services Group in **DCSF.** |
| DTG | Delivery and Transformation Group, of the Cabinet Office |
| DTR | (ISO/IEC JTC1 acronym)Draft Technical Report. The last step before a technical report is approved. |
| e-Portfolio | A repository of information about a particular learner provided by the learner and by other people and organisations, including products in a range of media that the learner has created or helped to create alongside formal documents from authoritative sources, such as transcripts of assessed achievement, which the learner has chosen to retain. (Note: the concept of an e-portfolio is developing and many other definitions exist). |
| ESCS | Education, Skills and Children’s Services, the **functional area** or **domain** for which the **ISB** will provide governance of information standards. |
| FDIS | (ISO/IEC JTC1 acronym)Final Draft International Standard. The last step before a document (under the normal development process) is approved as an International Standard. FDIS documents are balloted and approved at the **TC**-level. |
| FDISP | (ISO/IEC JTC1 acronym)Final Draft International Standardised Profile. The last step before an international standardised profile is approved. |
| FPDISP | (ISO/IEC JTC1 acronym)Final Proposed Draft International Standardised Profile.  The equivalent of "**FCD**-stage" for International Standardised Profiles.  Latter stages are **FDISP** and **ISP**. |
| IEC | (ISO/IEC JTC1 acronym) [International Electrotechnical Commission](http://www.iec.ch/) [accessed 2015-09-03] |
| IS | (ISO/IEC JTC1 acronym)An approved International Standard. |
| ISB | Information Standards Board |
| ISO | International Standards Organisation (see 4.14.3 and[International Standards Organisation](http://www.iso.ch/)) [accessed 2015-09-03] |
| ISP | (ISO/IEC JTC1 acronym)International Standardised Profile.  A "bundle" of *references* to standards. |
| ISSS | **CEN** Information Society Standardisation System (see <http://www.cen.eu/cenorm/businessdomains/businessdomains/isss/about_isss/>  [accessed 2015-09-03] |
| ITLET | Information Technology for Learning, Education and Training |
| JTC1 | (ISO/IEC JTC1 acronym)[Joint Technical Committee 1](http://www.jtc1.org) [accessed 2015-09-03]. JTC1 is a joint committee of **ISO** and **IEC**. The scope of JTC1 is information technology standardisation. |
| L or L-member | (ISO/IEC JTC1 acronym)Liaison member. A Liaison Organisation does not vote. |
| LAR | Learner Achievement Record |
| Learning platform | An umbrella term used to cover software whose core role is to manage learning materials for students. Learning platforms give every learner access to personal online web space, where they can store course work and their achievements. They also give every teacher access to teaching resources and tools to support planning, information sharing. They also support 'personalised learning' by enabling teachers to tailor the curriculum to individual learners' needs. |
| LeGSB | Local e-Government Standards Board |
| LETSI | Learning-Education-Training Systems Interoperability, a body set up to govern **SCORM**. |
| LGfL | London Grid for Learning |
| LLN | Lifelong Learning Network |
| LO | (ISO/IEC JTC1 acronym)Liaison Organisation. A organisation the liaises with a committee. |
| LTSO | **CEN** Learning Technologies Standards Observatory |
| N | (ISO/IEC JTC1 acronym)A document number, such as ISO/IEC JTC1 SC36 N0000, or just SC36/N0000, or just N0000. There are no revisions or versions of document numbers (e.g., N0000R2) -- revisions or new versions are simply assigned a new document number. |
| NB | (ISO/IEC JTC1 acronym)National Body. The primary unit of membership in **ISO/IEC**. |
| NBLO (also NBLOs) | (ISO/IEC JTC1 acronym)A National Body or Liaison Organisation. "NBLOs" refer to all National Bodies and Liaison Organisations. |
| NP | (ISO/IEC JTC1 acronym)New Work Item Proposal. A description of a project and scope of work. The approval of the NP signals the official beginning of a project. Typically, **WP**s will be submitted to the **WG**, **WD**s will be developed, successive **CD**s will be approved, the **FDIS** will be approved, and the result will be an **IS**. An NP is balloted an approved at the **SC**-level. |
| O or O-member | (ISO/IEC JTC1 acronym)Observing member. A National Body that does not vote. |
| P or P-member | (ISO/IEC JTC1 acronym)Participating member. A National Body that can vote. |
| PDISP | (ISO/IEC JTC1 acronym)Proposed Draft International Standardised Profile.  The equivalent of "**CD**-stage" for International Standardised Profiles.  Latter stages are **FPDISP**, **FDISP**, and **ISP**. |
| PDTR | (ISO/IEC JTC1 acronym)Proposed Draft Technical Report.  The equivalent of a "**CD**-stage" for Technical Reports. Latter stages are **DTR** and **TR**. |
| Plugfest | Forum at which suppliers meet to test the compatibility of their products |
| PWI | (ISO/IEC JTC1 acronym)Preliminary Work Item. A **WP** that discusses potential **NP**(s). This WP is not intended for balloting (NPs are balloted). |
| RG | (ISO/IEC JTC1 acronym)Rapporteur Group. A committee that is responsible for writing a report, as scoped by (say) an **SC**. An RG is a special kind of ad hoc committee. RGs do not develop standards. |
| SC | (ISO/IEC JTC1 acronym)Subcommittee. An SC works on a relatively broad area of technology standards *within* a **TC**. Example: SC36 work on Information Technology for Learning, Education, and Training all *within* JTC1's scope of Information Technology. SCs ballot and approve **NP**s, **CD**s, **FCD**s, etc., but not **WD**s, **DIS**s, **FDIS**s, etc.. |
| SCORM | Sharable Content Object Reference Model |
| SIF | Schools Interoperability Framework |
| SIG | Special Interest Group |
| SWGfL | South West Grid for Learning |
| TC | (ISO/IEC JTC1 acronym)Technical Committee. A standards committee with a very broad scope of work, e.g., JTC1 is information technology. Both **DIS** and **FDIS** documents are balloted and approved at the TC-level. |
| TCOR | (ISO/IEC JTC1 acronym)Technical Corrigendum. Errata and corrections to an existing standard or amendment. (See also **AMD**) |
| TR | (ISO/IEC JTC1 acronym)An approved Technical Report. A TR is developed like a standard, but its purpose is just to provide technical information and not to make requirements on implementations (conformance). |
| UKRLP | UK Register of Learning Providers (in FE) |
| VMS | Vocabulary Management Service, provided by Becta |
| WD | (ISO/IEC JTC1 acronym)Working Draft, e.g., WD3 refers to Working Draft #3. WDs are developed and approved at the **WG**-level. |
| WG | (ISO/IEC JTC1 acronym)Working Group. A WG works a very specific area of technical standards. Usually, WGs develop standards that are scoped by approved NPs. The WGs produce successive **WD**s, and then **CD**s, and then the **FDIS**. |
| WI | (ISO/IEC JTC1 acronym)Work Item. An approved project within a programme of work. |
| WSLT | **CEN ISSS** Learning Technologies Workshop |
| XCRI | eXchange of Course Related Information |
| xGEA | Cross-Government Enterprise Architecture, as defined by **DTG** |

# Annex A Information Standards Register

The Information Standards Register will be put online during 2007-2008. Until then, owing to its size, it is most conveniently provided as an embedded spreadsheet. To view it, double click on the icon below. There are three tabs:

1. Guidelines: these describe the contents of the Register.
2. Information Standards Register: this contains all known e-learning/Education, Skills and Children’s Services published, de facto, working and developing standards. It also contains relevant standards from other domains, such as the NHS. These are the standards that are the core business of the Information Standards Board.
3. Other Standards in Use: this contains non-domain-specific standards reported as being in use somewhere in the sector. These may be of interest to others, but the ISB will only take action where there is a need to resolve a conflict, recommend use of one standard over another, etc.



# Annex B Education, Skills and Children’s Services Current Approved Standards

|  |  |  |
| --- | --- | --- |
| **Industry Standard and Sponsoring Organisation** | **ISB status\*** | **Comments** |
| IMS Content Packaging (V1.1.2) Information Model  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| IMS Content Packaging (V1.1.2) XML Binding  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| SCORM 1.2 Content Aggregation Model application profile  Sponsor: ADL  <http://www.adlnet.gov/> [Updated link to the referenced page added 2015-09-03] | U | Under review by DTG/ESCS e-learning Working Groups |
| SCORM 1.2 Runtime API application profile  Sponsor: ADL  <http://www.adlnet.gov/> [Updated link to the referenced page added 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| IEEE 1484.12.1: 2002 LOM  Sponsor: IEEE  <http://www.ieee.org/> [accessed 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| IMS Meta-data (V1.2.1) XML Binding  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| IMS Question and Test Interoperability (V1.2.1) Information Model  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| IMS Question and Test Interoperability (V1.2.1) XML Binding  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| IMS Enterprise (V1.1) Information Model  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | U | Under review by DTG/ESCS e-learning Working Groups |
| IMS Enterprise (V1.1) XML Binding  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | U | Under review by DTG/ESCS e-learning Working Groups |
| IMS Learner Information Package (V1.0) Information Model  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| IMS Learner Information Package (V1.0) XML Binding  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | U | Under review by DTG/ESCS e-learning Working Groups |
| IMS Reusable Definition of Competency or Educational Objective (V1.0)  Sponsor: IMS Global Learning Consortium, Inc. <http://www.imsproject.org/> [accessed 2015-09-03] | U | Under review by DTG/ESCS e-learning Working Groups |
| IMS Digital Repositories (V1.0)  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | U | Under review by DTG/ESCS e-learning Working Groups |
| IMS Simple Sequencing (V1.0)  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | U | Under review by DTG/ESCS e-learning Working Groups |
| IMS Learning Design (V1.0)  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | U | Under review by DTG/ESCS e-learning Working Groups |
| IMS Guidelines for Developing Accessible Learning Applications (V1.0)  Sponsor: IMS Global Learning Consortium, Inc.  <http://www.imsproject.org/> [accessed 2015-09-03] | R | Recommended for consideration by DTG/ESCS e-learning Working Groups |
| BS7988:2002  A code of practice for the use of IT in the delivery of assessments  Sponsor: BSI  <http://www.bsigroup.com/en-GB/> [Updated link to the referenced page added 2015-09-03] | R | Recommended for consideration by eGU/ESCS e-learning Working Groups |
| BS8426:2003  A code of practice for e-support in electronic learning systems  Sponsor: BSI  <http://www.bsigroup.com/en-GB/> [Updated link to the referenced page added 2015-09-03] | R | Recommended for consideration by eGU/ESCS e-learning Working Groups |
| BS8419:2005  Interoperability between Metadata Systems used for Learning, Education and Training  Sponsor: BSI  <http://www.bsigroup.com/en-GB/> [Updated link to the referenced page added 2015-09-03] | F | This is under development and will be considered in the future by DTG/Education, Skills and Children’s Services e-learning Working Groups |
| BS8788:2006  UK Lifelong Learning Profile – ’UKLeaP’  Sponsor: BSI  <http://www.bsigroup.com/en-GB/> [Updated link to the referenced page added 2015-09-03] | F | This is under development and will be considered in the future by DTG/ESCS e-learning Working Groups |

# Annex C Interoperability Roadmap

This currently contains the interoperability roadmap prepared in 2005. This will be updated by Technical Support to reflect anticipated standards development over the period from 2007.

***Metadata***

Metadata is information about something, such as a learning object. This category includes specifications concerning

* Learning object (or resource) metadata
* Content packaging information
* Metadata repositories and interoperability guidelines
* Accessibility support descriptions

|  | Current status | 2004 | 2005 |  | 2006 |  | 2007 |  | 2008 |  | 2009 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 |
| e-GMS version 3 | Final  A |  |  | W |  |  |  |  |  |  |  |
| e-GMS version 4 |  | Draft | A |  |  |  |  |  |  |  |  |
| LOM  1484.12.1-2002 | Final  R | A |  |  |  |  |  |  |  |  |  |
| IMS metadata  XML 1.2.1 | Final  R |  | W Replaced by LOM |  |  |  |  |  |  |  |  |
| LOM XML 1484.12.2 | Draft  U | Final  R |  | A |  |  |  |  |  |  |  |
| UK Common Metadata LOM Profile | Draft  X | F | U | R | A |  |  |  |  |  |  |
| Curriculum Online v1 | Final  X | Revised  U Schools |  |  |  |  |  |  |  |  |  |
| IMS Content Packaging Information model v1 | Revised 1.1.2 R | Revised 1.1.4  R | A |  |  |  |  |  |  |  |  |
| IMS Content Packaging XML v1 | Revised 1.1.2 R | Revised 1.1.4  R | A |  |  |  |  |  |  |  |  |
| SCORM 1.2 Content Aggregation Model | Final  U | Revised 1.3 U | R |  |  |  |  |  |  |  |  |
| BS8419 Interoperability between Metadata Systems | Draft F | Final  U |  | R | A |  |  |  |  |  |  |

Activities that should be noted include:

* changes to the content packaging specifications
* harmonised UK e-learning metadata schemes and sector specific profiles

***Learner information***

Data concerning learners, groups or organisations. This category includes

* learner information
* e-portfolios
* learner support
* accessibility preferences

|  | Current status | 2004 | 2005 |  | 2006 |  | 2007 |  | 2008 |  | 2009 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 |
| IMS LIP Information Model 1.0 | Final R |  |  | W |  |  |  |  |  |  |  |
| IMS LIP XML 1.0 | Final U |  |  | W |  |  |  |  |  |  |  |
| IMS LIP Accessibility (ACCLIP) | Final X | U | R |  | A |  |  |  |  |  |  |
| BS8788 UK LeaP | Draft F | Final U | R | A |  |  |  |  |  |  |  |
| IMS Reusable Definition of Competency 1.0 | Final U | R |  | W  Replaced by 1484.20.1 |  |  |  |  |  |  |  |
| IEEE P1484.20.1 Reusable Competency Definitions | Draft X | Final  U | R | A |  |  |  |  |  |  |  |
| DCSF Common Basic Data Set | Final  X | R  Schools |  | A |  |  |  |  |  |  |  |

Activities that should be noted include:

* European definitions of competencies
* consideration of UK learner information formats and requirements
* unique learner numbers

***Run-time***

Run-time rules and information about learning platforms

This category will include

* learning design
* sequencing
* run-time communications

|  | Current status | 2004 | 2005 |  | 2006 |  | 2007 |  | 2008 |  | 2009 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 |
| SCORM 1.2 Run-time API | Final  R | Revised 1.3  R |  | W |  |  |  |  |  |  |  |
| IEEE 1484.11.2  (replaces SCORM API) | Final X | Final R |  | A |  |  |  |  |  |  |  |
| IEEE 1484.11.1  (replaces SCORM API) | Draft X | Final R |  | A |  |  |  |  |  |  |  |
| IMS Simple Sequencing 1.0 | Final U | R |  | A |  |  |  |  |  |  |  |
| IMS Learning Design 1.0 | Final U | F | U |  | R |  |  |  |  |  |  |

Activities that should be noted include:

* Schools Interoperability Framework
* web services
* review of IMS Simple Sequencing
* IMS Shareable State Persistence
* the Becta Learning Platform Conformance Regime

***Assessment***

Information related to assessment and results exchange. This category will include

* question and test description
* online assessment guidelines

|  | Current status | 2004 |  | 2005 |  |  | 2007 |  | 2008 |  | 2009 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Q2 | Q4 | Q2 | Q4 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 |
| IMS QTI Info Model 1.2.1 | Final R |  | A |  |  |  |  |  |  |  |  |
| IMS QTI XML binding 1.2.1 | Final R |  | A |  |  |  |  |  |  |  |  |
| BS7988 A code of practice for the use of IT in the delivery of assessments | Final R |  |  | A |  |  |  |  |  |  |  |

Activities that should be noted include:

* review of the IMS QTI specification

***Vocabularies and taxonomies***

Set of values that can be used in elements of one or more schemes. This could include any of the wide range of published vocabularies, curriculum mappings, learning resource types, pedagogical types, localised value spaces for metadata, accessibility descriptions and thesauri. It is likely that the sectors that are relevant will need to be clarified before a vocabulary is “Adopted”.

|  | Current status | 2004 | 2005 |  | 2006 |  | 2007 |  | 2008 |  | 2009 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 |
| CELEBRATE based  Resource types | Final X | U |  |  |  |  |  |  |  |  |  |
| Curriculum Online  (Various – to be decided separately) | X | U |  | R |  |  |  |  |  |  |  |
| European Schoolnet Thesaurus | Final  X | F | U | Revised R |  |  |  |  |  |  |  |
| IMS Vocabulary Definition Exchange 1.0 | Final  X | U | R |  |  |  |  |  |  |  |  |

The issues for supporting vocabularies, taxonomies and value spaces can be more complex than the maintenance of other standards and may need to be managed on a term-by-term and prescribed subset basis. A registry of concepts and values could be considered as an efficient and flexible way to manage vocabularies.

Activities that should be noted include:

* the development of registries for vocabulary terms
* standards for taxonomy definitions

***Services***

This category refers to information about a range of services such as registration authorities, digital identifiers and miscellaneous specifications. It will include

* digital rights
* exchange protocols
* content caching and distribution
* digital identifiers

|  | Current status | 2004 | 2005 |  | 2006 |  | 2007 |  | 2008 |  | 2009 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 |
| IMS Digital Repositories 1.0 | Final  U |  | R |  |  |  |  |  |  |  |  |
| Digital Object Identifiers | Final  U | R |  | A |  |  |  |  |  |  |  |
| IMS Enterprise Information Model 1.1 | Final U | R |  |  |  |  |  |  |  |  |  |
| IMS Enterprise XML 1.1 | Final U | R |  |  |  |  |  |  |  |  |  |

Activities that should be noted include:

* the adoption of the Handle and other digital object identifier systems
* development of brokerage systems
* the ADL Content Object Repository Discovery and Resolution Architecture

***Other***

This category includes specifications that do not clearly belong in other categories. It could include quality assurance, support and mobile learning.

|  | Current status | 2004 | 2005 |  | 2006 |  | 2007 |  | 2008 |  | 2009 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 | Q4 | Q2 |
| IMS Accessibility Guidelines 1.0 | Final R |  |  |  |  |  |  |  |  |  |  |
| BS8426 A code of practice for e-support in electronic learning systems | Final R |  | A |  |  |  |  |  |  |  |  |

# Annex D Education, Skills and Children’s Services Standards Activity (2007-2008)

| **Current/Possible Standards Dev.** | **Timetable** | **ESCS engagement via** | **ESCS repr-esentation** | **ISB commentary** | **ISB action plan/outcomes** | **Benefits** | **Strategic out-comes (6.2)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Vocabularies*** | | | | | | | |
| System-wide Vocabulary Strategy |  | ISB Vocabularies SIG | DCSF/DIUS  Becta  +others | Issues include:   * Design of vocabularies to meet the needs of a specific communities or business areas * A strategy to ensure that existing vocabularies, including the proposed DCV, are mapped, aligned and integrated with other vocabularies. * Use of the Becta Vocabulary Spine (or alternative such as MultiTes) to enable this strategy. | Create blueprint for a small number of vocabularies to meet the needs across the system without duplication. | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1  13  14  16 |
| System-wide Glossary Strategy |  |  |  | Schoolsweb have no plan to maintain the Glossary (see below) or add the higher, further or adult learning terms or terms relating specifically to the sector. A complete list, properly maintained would be of great value and save duplication of work across the sector. It would be a useful exercise to compare this with the thesaurus - there is some overlap and it might be possible to create one vocabulary. |  | Consistency in terminology.  Improved mutual understanding of technical terms and more effective co-working | 16 |
| Schools Glossary |  |  |  | The Schoolsweb team are creating a schools glossary (with over 1300 terms) from the multiple glossaries that currently exist. |  | Consistency in terminology.  Improved mutual understanding of technical terms and more effective co-working | 16 |
| Departmental Controlled Vocabulary |  | ISB Vocabularies SIG |  | The DCV will bring together controlled vocabularies that have been developed and are in use across the Department. They are:   * Schoolsweb CV * E-channel CV (ECV) * Education and Skills Thesaurus (used in the library, EDRMS and the intranet) * Other CVs   Should it incorporate IT Vocabulary from ISO/IEC 2382-36? |  | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1  13  14  16 |
| Education Controlled Vocabulary |  | ISB Vocabularies SIG |  | Not clear how this relates to the work below. | Becta | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 16 |
| Schools and Curriculum Vocabularies |  | ISB Vocabularies SIG |  | Becta will work with QCA to update curriculum vocabularies, using Becta’s VMS and vocabulary spine concept. To incorporate:   * Qualification subject codes * Sector subject areas (SSA) * Curriculum Online Keywords * Curriculum area * Becta Vocabulary Bank |  | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 16 |
| Vocabularies for Course-Related Information |  |  | JISC? | See XCRI Support. |  | Consolidation of data sets possible. | 1  16 |
| Vocabulary Management Tools/ Vocabulary Spine |  |  |  | See section 9.8.2 |  | Common terminology, less maintenance and better retrieval. | 16 |
| ISO/IEC 2382-36 Information technology -- Vocabulary -- Part 36: Learning, Education, and Training, | Ed1: FDIS 6/07  Ed 2:  CD  10/07  FCD  6/08  FDIS  4/09 | IST/43 as channel to  ISO/IEC JTC 1 SC36 Information Technology for Learning  *WG1: Vocabulary* | TBD | Intended to facilitate international communication in information technology for learning, education, and training. It presents, in English and French, terms and definitions of selected concepts relevant to the field of information technology for learning, education and training and identifies relationships among the entries*.* | Engage via IST/43.  These outcomes when completed will be considered for adoption for Education, Skills and Children’s Services by the Vocabularies SIG. | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. |  |
| ***Metadata*** | | | | | | | |
| Common metadata for documents |  |  |  | Adopt e-GMS as a standard for Education, Skills and Children’s Services. Consider Education, Skills and Children’s Services specific metadata standard? |  | Better retrieval. | 13  15 |
| Convergence of Basic Data Element Definitions |  | Currently ISB |  | The ISB intervened in 2006/7 to expand the scope of a study commissioned by the MIAP programme to include four sets of data definitions (also known as metadata sets) used in the UK Education, Skills and Children’s Services sector: the Common Basic Data Set (CBDS), the MIAP Common Data Definitions (CDD), the Information Sharing Index (IS Index) and the Client Caseload Information System (CCIS).  Future work will need to be commissioned to address the following issues:   * Plan for implementation of changes recommended in the study. * Strategy to converge on a more comprehensive, system-wide set of standard data definitions. * Sponsorship of the alignment programme * Accountabilities with respect to sets of data definitions, * Arrangements for sustainability of aligned data definitions. * Progress reporting to ISB * Communication of changes, for example to suppliers (e.g. via a portal) | DCSF has requested that Becta undertake some work to produce a single "core" set of data definitions for the Education, Skills and Children’s Services sector and use this to move forward the SIF data standards.  The objectives of this work are:   * To extend the previous alignment report to an implementation phase. This will:   + define documentation standards that can be used throughout the sector.   + produce common data definitions and XML schemas for all those data definitions where alignment was recommended in the previous report.   + propose a mechanism and governance scheme for the future maintenance and extension of this set of definitions. * To define the priorities for the SIF UK Data Model and recommend changes based on these and the result of the phase 1 work. * To assist SIFA UK in the implement-ation of the next phase of the data model. | Consolidation of data sets possible.  Greater flexibility in creating system interfaces.  A more open and competitive market for educational software  More cost effective system development and implementation | 1  13 |
| Supplier Independent Interoperability Framework |  |  |  | There are currently no standards for MIS-MIS or MIS-VLE interoperability. Becta consulted on a functional specification for MIS systems during 2006. It has subsequently adopted SIF as the architecture for exchanging data between school systems. BSF tenders often cite the draft MIS specification. Becta is planning to develop these standards in the timescale of their 2010 learning platforms target. | **Becta** intends to introduce a supplier independent interoperability framework for data and learning services, with agreement on the interoperability specification by September 2007. | A more open and competitive market for educational software  More cost effective system development and implementation | 1 |
| Sustaining Interoperability of Local Authority Citizen-Facing Services |  |  |  | There is a need for arrangements to ensure the sustainable maintenance of standards developed by business programmes. This is a particular issue for interoperability standards for exchange of data with local authorities, as there are no cross-local authority governance arrangements. For example the XML schemas developed for e-Admissions are currently maintained by DCSF. |  | More innovative web based services enabled. | 13  15 |
| Schools Interoperability Framework |  |  |  | This will enable inter-school and school-LA exchange and inter-school/college working (e.g. as envisaged in the BSF programme for 14-19 students). |  | A more open and competitive market for educational software  More cost effective system development and implementation | 1  7  13 |
| ***Data Collections and Statistics*** | | | | | | | |
| Europe -  Data collection standards |  | International SIG  Eurostat | HEFCE? | Eurostat creates data standards and has the power to impose them on EU countries. | The UK needs to take a more proactive stance in Eurostat to influence new standards. |  | 1 |
| ***Digital e-Learning Content*** | | | | | | | |
| Digital Content Standards |  |  |  |  | **Becta** intends to refine Content Quality principles and gain adoption by target audiences | Enhanced learner outcomes | 8  9 |
| Education Content Display Standards |  |  |  | These standards are required for web browsers, particularly to enable wider use of PDAs, phones, mobile computers and other devices. |  | Enhanced learner outcomes | 8  9 |
| Resource Discovery |  |  |  | Becta has done a series of studies on resource discovery in order to inform its policy on flexibility and personalisation of learning. | **Becta** proposing to undertake detailed mapping of metadata standards and encoding schemes that can be used for resource discovery. Need to rationalise these to ensure consistent retrieval within each sector (Schools, FE, HE etc.) | Consistent retrieval of learning materials | 8  9 |
| Europe – Calibrate (Calibrating eLearning in Schools) | March 2008 |  |  | Builds on FP5 projects [CELEBRATE](http://celebrate.eun.org/), [ITCOLE](http://www.euro-cscl.org/site/itcole) and VALNET. It will support content exchange/ collaboration between owners of educational repositories by:   * Developing and ensuring take-up of an open source technical architecture and learning toolbox that supports the collaborative use of learning resources and course building tools * Researching and testing new approaches that can improve semantic interoperability related to the discovery and evaluation of learning resources. |  | Consistent retrieval of learning materials | 8  9 |
| Lesson Plans |  |  |  |  | Becta is developing a data dictionary. | Consolidation of data sets possible. | 8  9 |
| Pedagogically Adaptive Solutions |  |  |  | Standards for different technologies (for example in the domain of accessibility, assessment, educational content, etc.) to build more pedagogically-adaptive software for teaching, learning and training, supporting learning styles, learning preferences etc. |  | Enhanced learner outcomes | 9 |
| Europe - [Learning Interoperability Framework for Europe (LIFE)](http://life.eun.org/) |  | CETIS | CETIS | LIFE is funded by the EC DG for Education and Culture. Through a series of expert meetings, plugfests and conferences, LIFE has developed recommendations for European action in the field of standards-based eLearning. |  | A more open and competitive market for educational software  More cost effective system development and implementation | 8  9 |
| Sharable Content Object Reference Model (SCORM)  Being considered as an ISO standard, see ISO/IEC 19788-1 ITLET - Metadata for Learning Resources |  | Learning-Education-Training Systems Interoperability (LETSI) | Becta  JISC  CETIS  Stephen Molyneux is the only UK Sponsor | * Made up of standards and specifications from several sources at different stages of maturity, robustness and implementation * In constant development, though reasonably stable in some areas * Not a one model fits all and needs profiling   Potential duplication of effort, conflicts of interest and IPR issues | BECTA and JISC/CETIS to present a paper to ISB on engagement objectives. | A more open and competitive market for educational software  More cost effective system development and implementation | 8  9 |
| ISO/IEC 19788-1 ITLET - Metadata for Learning Resources -- Part 1: Framework  Part 2: Data elements | CD2 ballot deadline 25/08/07  FCD 11/07  FDIS 6/08 | ISO/IEC JTC 1 SC36  *WG4: Manage-ment and Delivery of Learning,*  *Education, and Training* |  | SCORM (q.v.) is being considered by ISO to form the basis for an international standard for learning objects. SCORM, like UK LOM Core is an application profile of the IEEE LOM metadata standard |  | Improve access to learning objects and allow learners to devise own learning programmes | 8  9 |
| ***Collaboration*** | | | | | | | |
| ISO/IEC 19778-1 ITLET -- Collaborative technology -- Collaborative workplace – | Parts 1-3 FDIS 6/07 | ISO/IEC JTC 1 SC36  *WG2: Collaborative Technology* |  | Part 1: Workplace Data Model  Part 2: Collaborative Environment Data Model  Part 3: Collaborative Group Data Model |  | Enhanced learner outcomes | 8 |
| ISO/IEC 19779-1 ITLET -- Agent to Agent Communication | Currently WD  CD 11/07  FCD 9/08  FDIS 6/09 | ISO/IEC JTC 1 SC36  *WG2: Collaborative Technology* |  |  |  | Enhanced learner outcomes | 8 |
| ISO/IEC 19780-1 ITLET -- Collaborative technology – Collaborative Learning Communication | FDIS 6/07 | ISO/IEC JTC 1 SC36  *WG2: Collaborative Technology* |  | Part 1: Text-Based Communication |  | Enhanced learner outcomes | 8 |
| ***Assessment & Qualifications*** | | | | | | | |
| Assessment & Qualifications Standards alignment |  |  |  | Issues to be addressed include:   * Improvements to assessment/qualifications standards. * Who should own assessment/ qualifications data standards and therefore sponsor improvement work. | **CIOG** intends to work with **QCA**’s newly formed Data Standards and Coding Structure Group to focus a study around producing a set of combined requirements, a strategy and phased plan. | Enhanced learner outcomes | 1 |
| Minerva | Sep 2007 |  |  |  | **Becta** will work with **QCA** to agree specifications and ensure they are in line with other system wide activity. | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1 |
| ***Establishments and Services*** | | | | | | | |
| Establishment Data Standards |  |  |  | Issues include:   * Use of Edubase to provide citizen-facing services (such as e-Admissions) * Ensure the gap analysis is system-wide * Need to review both processes and data. * Review of service provision * Stakeholders awareness of their responsibilities for maintaining data * Dealing with contract timescales issues etc * How the solution might relate to the proposed data warehouse. | **CIOG** to focus work on a system-wide strategy for establishment data, including registration of early years and childcare providers and a possible merger of Edubase (expiry of contract in Aug 2008) with the FE UK Register of Learning Providers (UKRLP) and a number of other registers. | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1  13 |
| Children’s Services Directory |  |  |  | We would however like to ensure that the schema meets various requirements and actions agreed at meetings of the ISB Working Group before making a recommendation for approval.  In particular we need confirmation that the schema:   * Aligns with the Every Child Matters agenda and has central government ownership and sponsorship * Aligns with other DCSF/DIUS divisional policies and strategies * Is in accordance with the draft XML schema guidelines * Is compliant with the aligned basic data element definitions agreed through the Education, Skills and Children’s Services Metadata Alignment project | **DCSF** to consider whether this work needs to aligned with the proposed Establishment data programme (see item above). | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1  13 |
| ***Transition*** | | | | | | | |
| XCRI Support | March 2009 |  |  | A lightweight schema optimised for Course Advertising and orientated to colleges with limited software development capacity (the XCRI Course Advertising Profile – XCRI-CAP) was released in August, 2006.  JISC-funded national trials of XCRI-CAP beginning March 2007. These trials are focusing on the ease with which relevant information can be gathered, published as XCRI-CAP XML and harvested by an open-source national aggregator. | **JISC** will   * Continue to develop the XCRI-CAP, e.g. * Refine the schema * Create extensions (See XCRI – Use in other sectors) * Use of controlled vocabularies * Support initial implementations in HE and FE. * Support regional federations and other lifelong learning projects. * Provide implement-ation support services such as online valid-ation and demonstr-ation code * Promote the specification at home and abroad. | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1  5  13 |
| XCRI – Transition to open standard | March 2009 | ?? |  | By the end of the support project, in March 2009, CETIS is required to have made the appropriate transition of the XCRI specification(s) to an open standards process. | **CETIS** will be consulting broadly on an appropriate 'home' for XCRI in the long term. | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1  5  13 |
| XCRI – Use in other sectors |  |  |  |  | **Becta, LSC** and **HED** to examine: demand for service-oriented course advertising and the potential for XCRI within the UK space, e.g.   * 14-19 Prospectuses, available by autumn 2007. * UCAS bulk data entry of course entry profiles and course entry requirements. * Student Loans Company bursaries and fees and course term dates. * Regional LLNs for aggregating data from Learning Directory and local providers. * International use (See FP7) | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1  5  13 |
| Europe - [TENCompetence](http://www.tencompetence.org/) |  | CETIS | CETIS |  | A European Framework 6 Integrated Project developing a new infrastructure for competence-based lifelong learning in Europe. |  | 5 |
| Europe - Europass |  |  | JISC | Europass is directly relevant to competence and requires review.  The Language Passport and Mobilipass are directly relevant to schools and colleges within the Bruges process as well as HEIs within the Bologna process. The Diploma Supplement is directly relevant to universities and will become increasingly relevant to colleges as new vocational degrees are developed. There is a danger that a de-facto Europass standard will be formalised. There is no business case for the development of the national Europass repositories funded by the Commission. There therefore is a need to review Europass. More generally there are issues of how competence frameworks and credit frameworks interact. |  | Enhanced learner outcomes | 9  10 |
| Europe - Fedora |  | ?? | JISC | A major gap in UK work is the use of federated repositories for learner information. | Investigate the benefits for the UK of adopting Luk Varvenne and Ingo Dahn’s work on federated repositories to expose personal information for services supporting learning in education and employment and manage the data they produce. | Common terminology, less maintenance and better retrieval.  Consolidation of data sets possible. | 1  9  10 |
| HR-XML |  | ?? | JISC | The HR XML specification is funded by big employers in the US.  How transferable is it to small/medium sized enterprises and agencies supporting competency development? | JISC-CETIS to sign up for the European consortium involving the big HR suppliers such as SAP Oracle and IBM to assess current implementations and contribute to a new version HR-XML 3.0 in order to ensure that it meets UK needs, specifically in the area of diplomas. This will enable exchange of personal information between educators and employers, help establish competency frameworks, and contribute to wider work on e-portfolio for employability (see FP7 Trust and Security for e-Portfolio). | Enhanced ICT for LLNs to make best use of Minerva and LAR.  Vocational pathways from LLNs to HE. | 5 |
| Europe - Framework Programme 7 (FP7) Trust and Security for e-Portfolio: Employability and Skills Development |  | ?? | JISC | The European Commission is seeking tenders for a total €153M project centred on e-Portfolio for employability. This 4 year project would provide:   * an abstract model of the secure, trusted architecture required to enable organisations in the employment and education sectors to make use of a shared e-Portfolio * pilot implementations in UK and the Netherlands.   The UK part of the bid is for €12M. It is proposed that the UK (the University of Nottingham) would lead the requirement gathering and pilots. In the UK this will centre on the East Midlands and the Derbyshire / Nottinghamshire LLN and therefore on the needs of the 14-19 diplomas: - Dutch / Belgian partners have particular experience in linking educational ICT systems and employer's HR systems. This allows employers to audit the skills of their workforce, plan and monitor workforce development and identify skills needs to education / training providers. NTI East Midlands will have an important role to play with SMEs. | The ISB has asked DCSF and Becta to support the bid. Factors include:  The work would allow the UK to do things in areas where it is weak (e.g. the use of federated repositories in which there is German expertise - Fedora) while contributing in areas in which the UK is strong (e.g. scenario planning and e-Framework services).  The work will follow a demand led model; this will avoid the supply led issues which led to the abandonment of Progress Files.  As UKLeaP indicates it is unwise to standardise immature specifications and a downside of FP7 is that the call requires a level of conformance not expected of trials (although this is not a direct concern of the department it may distract from more fundamentally important issues for implementation). | More flexibility in pathways in FE, HE and skills | 5 |
| ISO/IEC 24763 ITLET - Conceptual Reference Model for Competencies and Related Objects (project 24763) | PDTR 10/07  DTR 4/08 | ISO/IEC JTC 1 SC36  *WG3: Learner information* |  |  |  | More flexibility in pathways in FE, HE and skills | 10 |
| Competencies and Skills Management Architecture Study (6-months) |  | ISO/IEC JTC 1 SC36  *WG3: Learner information* |  |  |  | More flexibility in pathways in FE, HE and skills | 10 |
| M-Learning NWI proposal |  | ISO/IEC JTC 1 SC36  *WG3: Learner information* |  |  |  | More flexibility in pathways in FE, HE and skills | 10 |
| ISO/IEC 24725 ITLET -- Profiles of standards and specifications | Part 1:  FCD 5/08  FDIS 12/08  Part 2:  FDISP 4/08  Part 3:  WD  CD 5/08  FCD 12/08  FDIS 5/09 | ISO/IEC JTC 1 SC36  *WG6: International Standardised Profiles* |  | Part 1: Framework  Part 2-Profile of Rights Expression Language  Part 3 Platform and Media Profiles (PMP) |  | More flexibility in pathways in FE, HE and skills | 10 |
| ***Quality Assurance and Metrics*** | | | | | | | |
| ISO/IEC 19796 ITLET Quality Management, Assurance, and Metrics | Part 2:  CD 10/07  FCD 10/08  FDIS 4/09  Part 3:  FCD ballot deadline 9/9/07  FDIS 4/08  Part 4:  PDTR 10/07  DTR 4/08  Part 5:  PDTR 5/08  DTR 12/08 | ISO/IEC JTC 1 SC36  *WG5: Quality Assurance and Descriptive Frameworks* |  | Part 1: Already published (see section 7).  Part 2: Harmonised Quality Model. WD  Part 3: Reference methods and metrics.  Part 4: Best Practice and Implementation Guide FDIS  Part 5: How to Use ISO/IEC 19796-1 | ISB members to comment on final version of Part 3. | Enhanced learner outcomes | 8 |
| ***Accessibility*** | | | | | | | |
| ISO/IEC 24751 ITLET -- Individualised Adaptability and Accessibility in E-learning, Education and Training | Parts 1-3: FDIS 11/07  Parts 4-7:  WD 9/07  CD 3/08  FCD 9/08  FDIS 5/09  Part 8 :  CD 9/07  FCD 3/08  FDIS 11/08 | ISO/IEC JTC 1 SC36  *WG7: Culture, Language, and Human Functioning Activities* |  | Part 1: Framework  Part 2: AccessForAll Personal Needs and Preferences Statement  Part 3: AccessForAll Digital Resource Description  Part 4: Non-digital resource description  Part 5: Personal needs and preferences for non-digital resources.  Part 6: Personal needs and preferences for events and places.  Part 7: Description of events and places.  Part 8: Language accessibility and Human Interface Equivalencies (HIEs) in e-Learning applications | ISB Action: For consultation through TechDis or SIG? | Enhanced learner outcomes | 9 |
| ***Data Sharing*** | | | | | | | |
| Electronic Patient Record for Health and Social Care |  |  |  | ADCS and ADSS are promoting effective implementation of the Electronic Patient Record, by establishing a cross-Departmental Board with authority to ensure consistency in the development of personal care record systems across the NHS, adult and children’s social care services and responsibility for the consistent implementation of personal care record standards, confidentiality guarantees and quality systems relating to personal electronic records. |  |  | 3 |
| ***Identification and Authentication*** | | | | | | | |
| Identification |  |  |  | For:   * Children and learners * Parents * Workforce * Establishments * etc |  | Enhanced child safety  Enhanced learner outcomes | 2 |
| User Authentication |  |  |  | * Children and learners - ? * Parents – Government Gateway? * Workforce - Shibboleth and issues relating to access to national education networks. Pilot work is being progressed to implement single-sign-on using Shibboleth in a few areas, particularly LGfL and SWGfL. |  | Enhanced child safety  Enhanced learner outcomes | 2  8 |
| ***Information Security*** | | | | | | | |
| Central Sponsor for Information Assurance (CSIA) Strategy |  | DCSF/DIUS information security unit | CIO Group | The UK Government CSIA will be publishing a strategy in 2007-2008. CIO Group will engage with the DCSF and/or DIUS unit responsible for implementation, which may wish to use the ISB to advise on or propagate standards. |  |  | 2  8 |
| Network security and inter-connection standards |  |  |  | There may be a need for standards on network lock-down to prohibit use of unacceptable content whilst not inhibiting collaboration across school or LA networks or stopping educators helping young people appreciate how to use social networking sites effectively and in safety. |  | Enhanced child safety  Enhanced learner outcomes | 2  8 |
| ***Interconnection and integration*** | | | | | | | |
| Coherence and functionality of technology provision in schools |  |  |  | Becta’s aim is to improve the coherence and functionality of technology provision by ensuring 100% of all future building investment programmes follow Becta guidance on best practice, including adoption and implementation of functional and technical specifications by March 2008. | **Becta** will:   * Develop, agree and introduce standards through a coherent approach under the governance of the ISB. * Develop and maintain functional and technical specifications for data, learning, connectivity and institutional infrastructure services based wherever possible on international standards, including addressing environmental sustainability concerns. All * Review functional and technical specifications annually. * Include specifications in building investment programme policy developments and planning such as Partnerships for Schools (PfS) BSF output specification, DCSF Academies and Schools Capital. * Work to get standards included in the conditions for funding agreements. * Develop a campaign to ensure effective take up of standards from both the supply and demand side. * Ensure effective engagement with partners and across the education system to sell the benefits particularly to capital project teams. | Enhanced learner outcomes | 14 |
| Promulgate WS-I standards |  |  |  | Under e-GIF (and xGEA) web standards from the following bodies have been adopted. However their use has not been actively promoted within the sector. | Promulgate the use of web standards endorsed by WS-I to improve interoperability and access to information. | Improved interoperability and access to information | 1  13 |
| Other | | | | | | | |
| Further interventions as required |  |  |  |  | ISB Technical Support will monitor standards activity in the system and will make recommendations to the ISB on appropriate intervention to secure system-wide benefits. |  | 1-16 |
| ISO/IEC DIS 29500 (ECMA-376) Microsoft Office XML exchange specification |  | BSI IST/41 Document Description and Processing Languages  Chair: Francis Cave | Becta | Becta has an interest in relation to learning platforms and will participate in 5-month Fast Track Ballot to scrutinise. |  |  | 1 |
| ?? |  | ISO PC 232 Educational (Learning) Services |  |  | The ISB will be interested to learn more on this work and determine through the international strategy how best to engage with this work through discussion with partners about representation on ISO committees. |  | 5 |
| Europe - Qualification of Personnel (CEN BT TF 192) |  | BSI mirror committees made up of relevant industry associations, professional bodies, and government departments |  | Proposed | The ISB will be interested to learn more on this work and determine through the international strategy how best to engage with this work through discussion with partners about representation on CEN committees. |  | 5 |

# Annex E ISB Implementation Project Plan (2007-2008)

For legibility, the ISB Implementation Plan has been included as an embedded document. To view it, double click on the icon below.



Note added 04 July 2012: The ISB Implementation Plan embedded document above is an old format MDI file. It might not open in newer versions of Microsoft Office. If you would like to see the Project Plan please email the [ISB Secretariat](mailto:ITgovernance.SECRETARIAT@education.gsi.gov.uk) who can provide a copy.

1. i.e. domain. Here and elsewhere this document for consistency uses the terminology of the Delivery and Transformation Group at <http://www.cio.gov.uk/documents/cto/pdf/enterprise_architecture_uk.pdf> . See Section 11 Glossary for definitions. [This link no longer active (2015-09-03), no alternative identified.] [↑](#footnote-ref-1)
2. http://www.govtalk.gov.uk/schemasstandards/egif\_document.asp?docnum=957 [↑](#footnote-ref-2)
3. *Harnessing Technology* <http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/1296-2005PDF-EN-01.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-3)
4. <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228602/6970.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-4)
5. <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/229012/011840489X.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-5)
6. 'Prosperity for all in the Global Economy: World Class Skills <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/354161/Prosperity_for_all_in_the_global_economy_-_summary.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-6)
7. <http://webarchive.nationalarchives.gov.uk/20130401151715/http://education.gov.uk/publications/eorderingdownload/cm%206476.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-7)
8. <http://webarchive.nationalarchives.gov.uk/20130401151715/https://www.education.gov.uk/publications/standard/publicationdetail/page1/cm6629> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-8)
9. <https://www.education.gov.uk/consultations/downloadableDocs/EveryChildMatters.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-9)
10. <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31384/11-944-higher-education-students-at-heart-of-system.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-10)
11. <https://www.education.gov.uk/consultations/downloadableDocs/Raising%20Expectations%20pdf.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-11)
12. *2020 Vision: Report of the Teaching and Learning in 2020 Review Group* <http://dera.ioe.ac.uk/6347/1/6856-DfES-Teaching%20and%20Learning.pdf> [Updated link to the referenced document added 2015-09-03] [↑](#footnote-ref-12)
13. Acronyms used within ISO/IEC JTC1are from the website <http://old.jtc1sc36.org/acronym_summary.html> [This link no longer active (2015-09-03), no alternative identified.] [↑](#footnote-ref-13)