

IHTSDO educational workshop April 2010

IHTSDO Workbench development experiences and opportunities for collaboration

Ian Arrowsmith, Gwen Smith, Ravi Natarajan
UK Terminology Centre



Workshop objectives

To share the UK experiences in terms of current and proposed Workbench developments

- To explore the technical and operational challenges of Workbench Implementation and development
- To explore the development process
- To explore collaboration opportunities and benefits

Structure of session

Introduction and workshop objectives – Gwen Smith

Background services and tools – Gwen Smith

Current and proposed Workbench developments: the UK experience –
Gwen Smith

Technical challenges of Workbench Implementation – Ravi Natarajan

Operational challenges of Workbench Implementation – Ian Arrowsmith

The Workbench development process IHTSDO, Technical and operational
perspectives – Gwen Smith, Ravi Natarajan, Ian Arrowsmith

Collaboration options and benefits – Gwen Smith

Open session to explore collaborative opportunities, including areas of
common interest and need – all workshop participants

2:45pm



UKTC - Who are we delivering to?

“Companies / organisations with a registered and approved requirement to receive reference data, and to distribute that data on to their end points”

Current End Points:

- NHS Organisations & Suppliers
- Application Developers
- Research & Development Organisations
- Others – International Organisations

UKTC - What do we deliver?

Sub-packs

Currently:

- SNOMED CT UK Sub-pack
- SNOMED CT drugs Sub-pack
- Read Code Sub-pack (to facilitate migration and translation of Read encoded data to SNOMED CT)
- LE Backup Sub-pack
- LE RTS Cache Sub-pack (used by LE to do the Read to SNOMED CT mapping).
- NHS Organisation Codes
- Weekly dm+d in XML format
- Message Implementation Manual
- OPCS
- Logical Record Architecture artefacts

Future:

- ICD
- NHS Data Dictionary
- ??

A familiar picture ?

Evolution vs Revolution

Maintain legacy – build new

Architecture ?

It does the job

- Open Source
- Commercial products / In house developments
- Multiple platforms / databases
- Integrated?

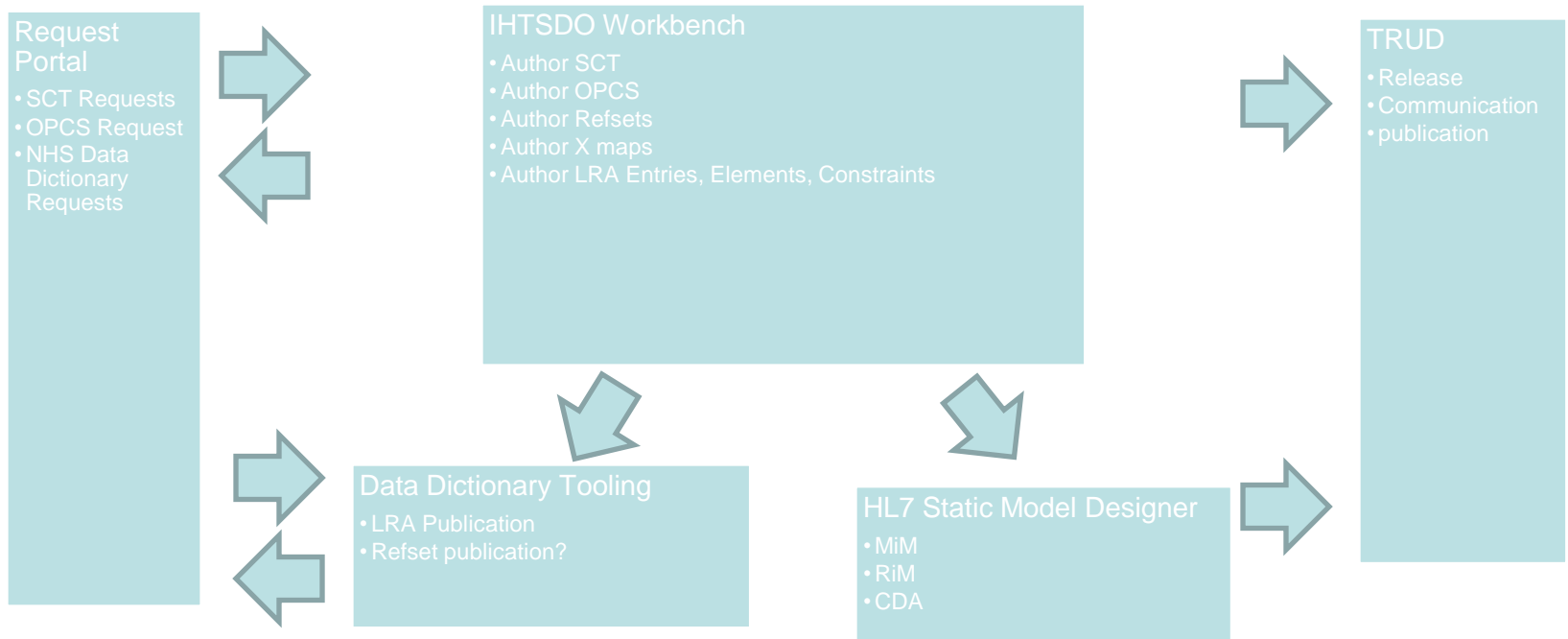
UK – Current projects

- IHTSDO Workbench
 - Refset project
 - Xmapping project- generic / ICD10
 - UK Implementation of WB Read codes / SNOMED CT / xmapping
- Request Submission Portal – long term
- TRUD portal enhancements

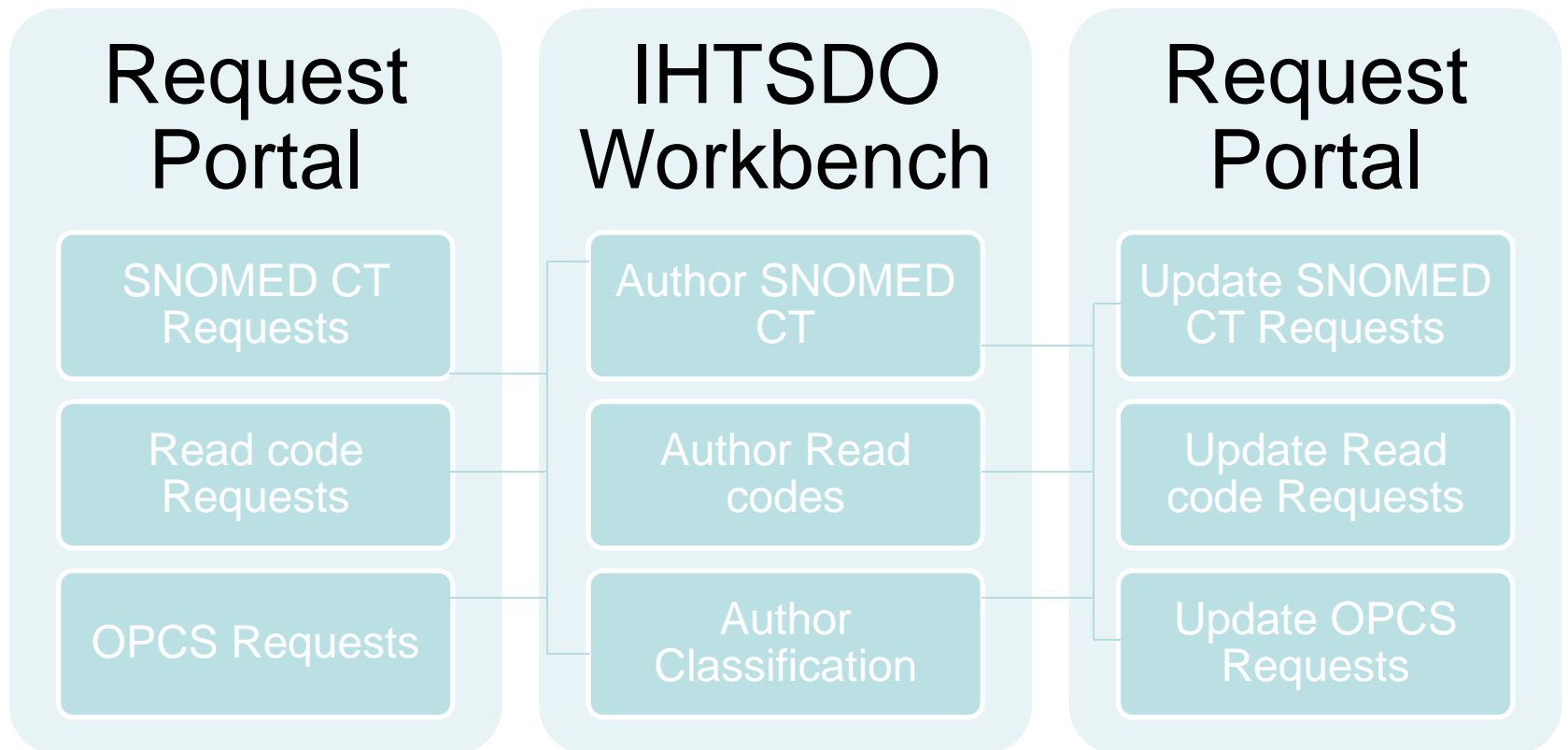
UK - In the pipeline

- Refset – further developments
- WB Integration with Request Submission Portal
- Implementation of Logical Record Architecture modelling in WB
- WB Interface to (HL7)Static Model Designer (SMD)
- WB Interface to publication tool (NHS Data Dictionary)

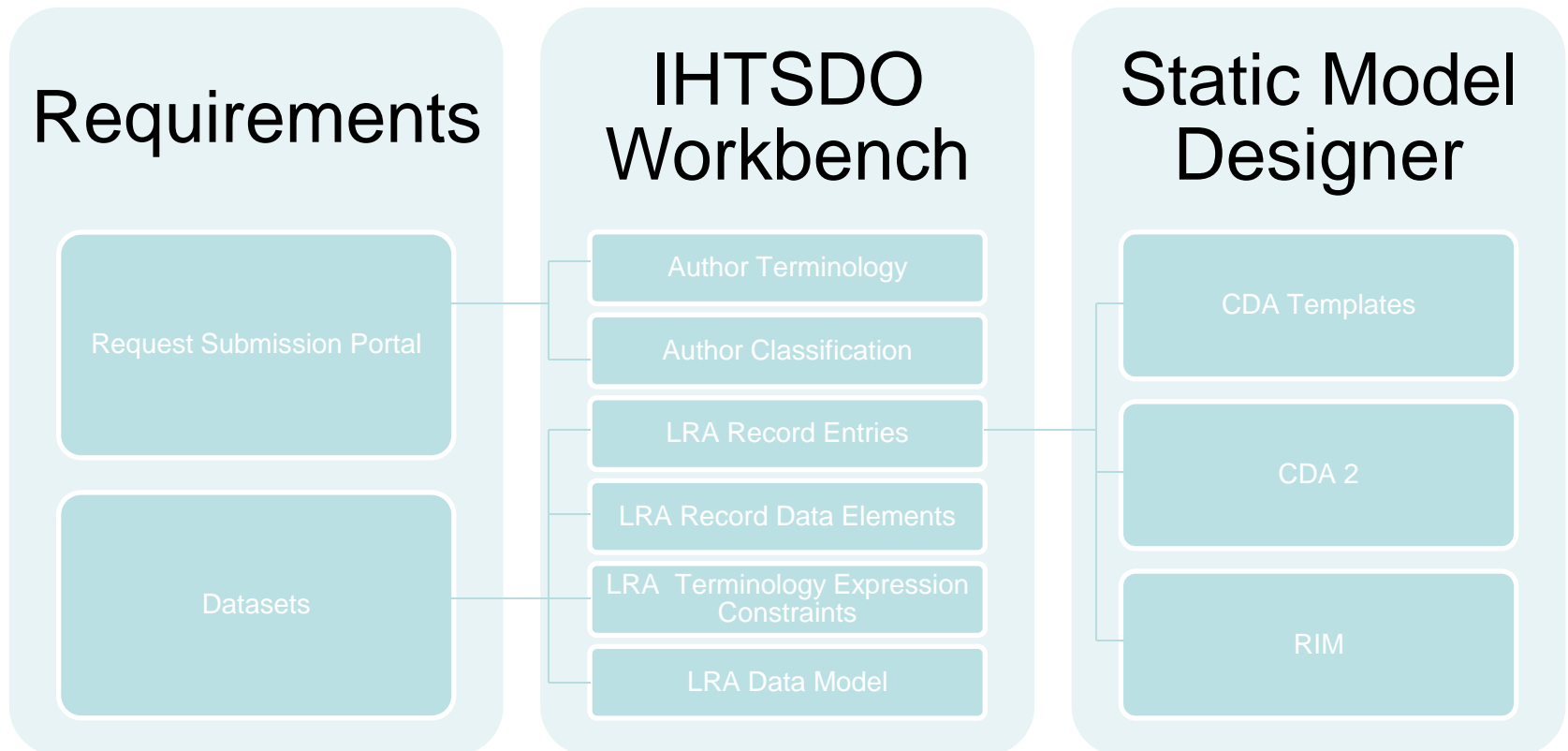
Terminology - The plan 😊



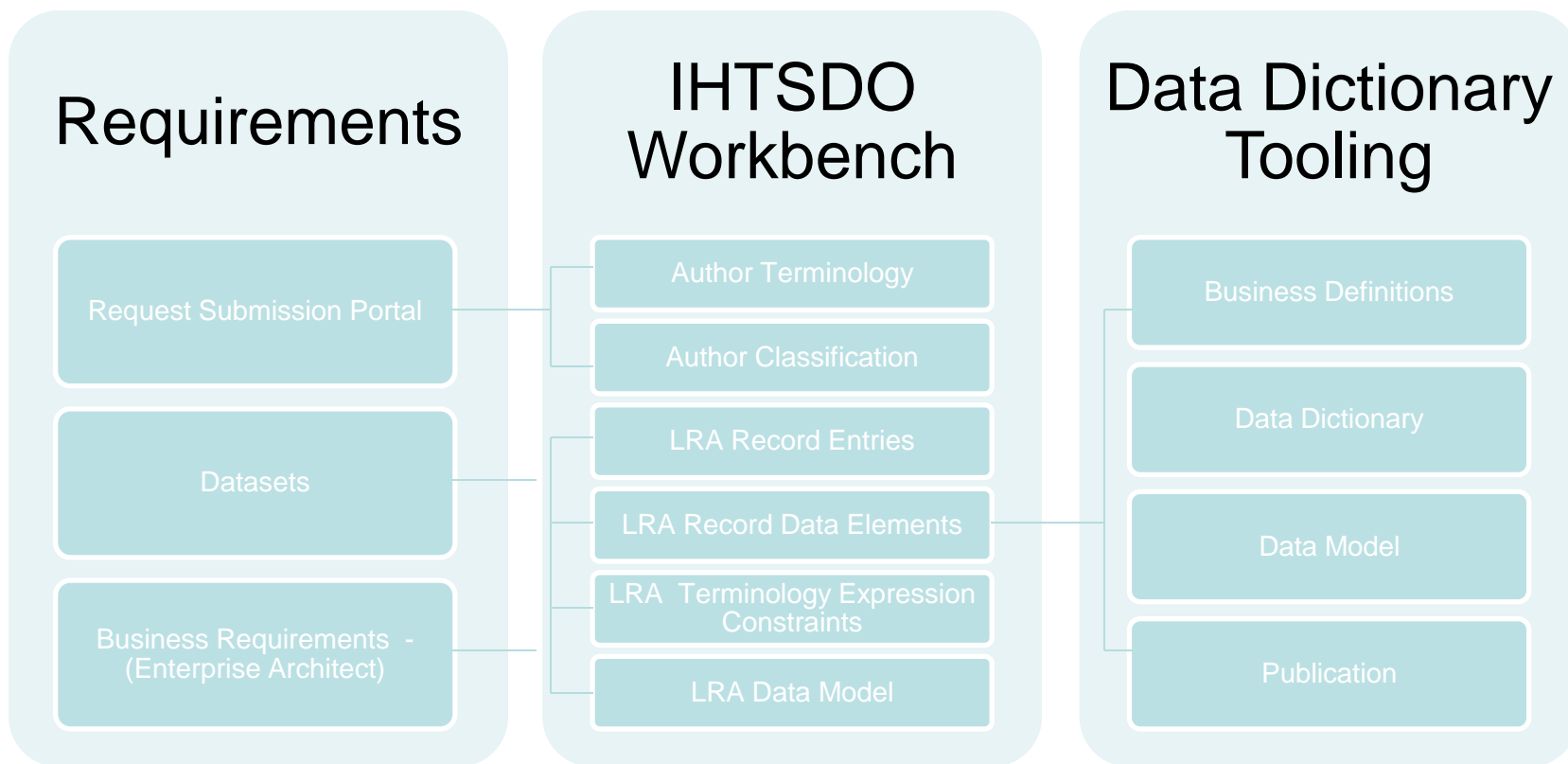
Integration – Request Submission Portal / IHTSDO Workbench



Integration – SMD / IHTSDO Workbench



Integration – Data Dictionary / IHTSDO Workbench



Technical challenges of Workbench Implementation

- Software skills
 - Java
 - Eclipse
 - Development Environment
 - Workflow
 - JINI
 - UI
 - Swing
 - Maven
- Database / Indexing
 - Berkeley DB
 - Lucene
- Versioning
 - Subversion
- Development Process
- Migration
 - Ontologies
 - Architecture
 - Publication
- Collaboration
- Infrastructure / Build
 - Versioning
 - Subversion
 - Collabnet
 - Hudson
 - Archiva
 - Maven
- Tooling Configuration

Operational challenges

Services/context

- UKTC maintain a number of terminology products on behalf of NHS
- Services also include requests for change and bi-annual distribution of all products (except pharmacy – 4-weekly)
- Team of 20-30 staff: technical, clinical, pharmacy and cross-mapping and support

Products supported

SNOMED CT

Read codes (v2 and CTV3 including drugs)

OPCS-4 procedure classification

Clinical imaging procedure codes

Dictionary of medicines and devices (dm+d)

Mappings

Read v2/CTV3/SNOMED/Imaging/OPCS-4/ICD-10/

Tooling

Distribution (TRUD)

Request submission

- OPCS-4

- SNOMED

- Read

- helpdesk (imaging, plus anything else)

Editing tools

- Combined SNOMED/Read/Mapping (ICD/OPCS)

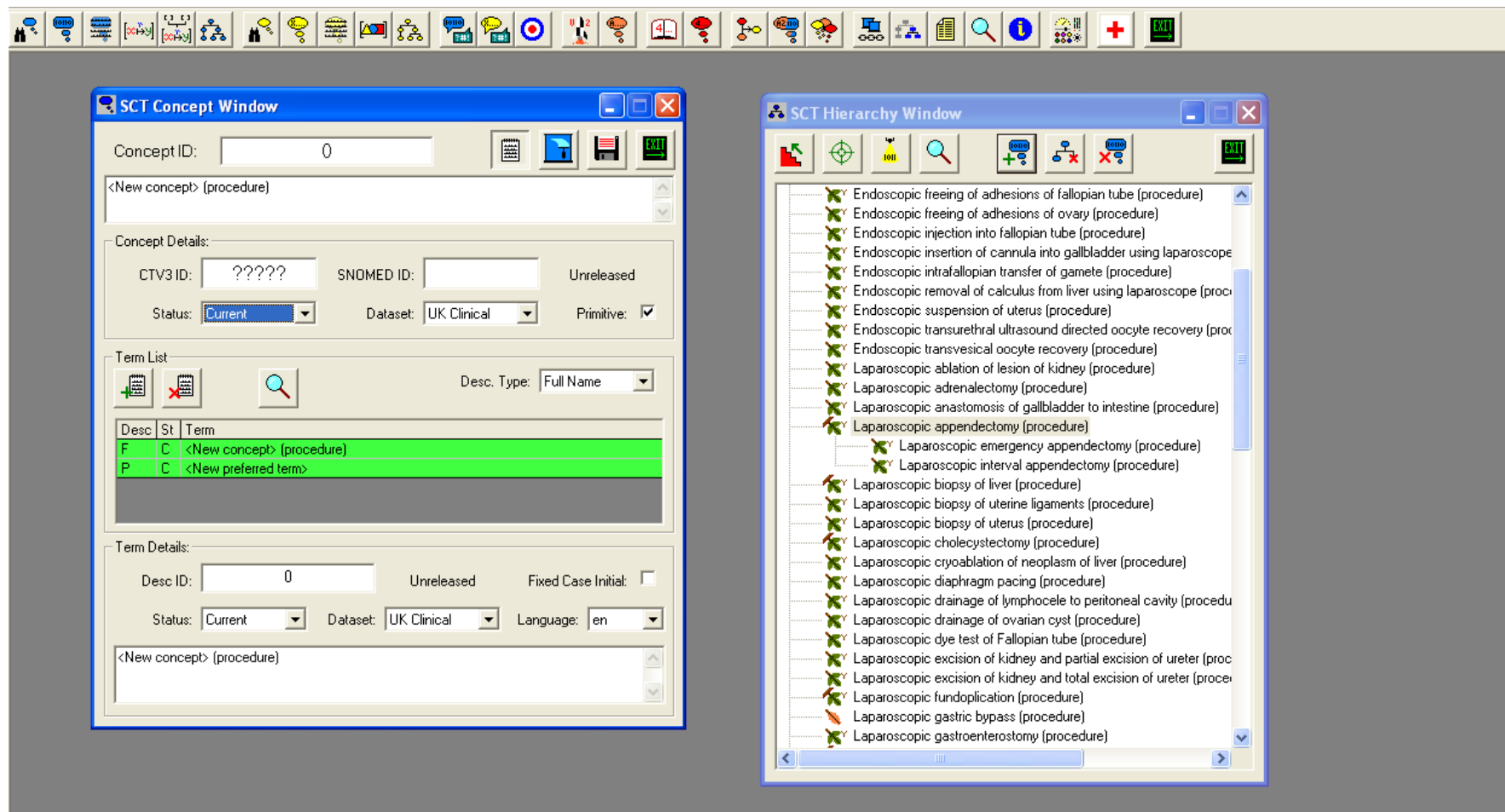
- Read drugs

- dm+d

- Clinical imaging

Subsets/Refsets

Bespoke authoring tool - CLIVE



Authoring tool - current

- Originally created to author Read codes
- Expanded to include SNOMED CT
- Inbuilt ability to maintain mappings between terminologies
- Built to meet specific requirements of the UK authoring team
- Lacks an internal classifier
- . . . soon to be redundant . . .

Overarching objectives for UKTC

A single integrated editing environment for all products and derivatives

Integration of national editing environment with (single) submission and distribution tools

Integration with international editing environment and submission and distribution tool

Start up

Need to first set up effective management oversight/governance

Establish relative priorities using sensible criteria

Set realistic objectives/milestones and develop a plan both for technical development and operational deployment

Criteria to consider when planning

- What developments will improve efficiency of editing teams across all products and services
- How can we reduce the burden of maintaining existing tools and interfaces
- How must ensure we maintain business continuity
- Which constraints of existing tools are the most limiting
- What new improved ways of working (international collaborative editing, workload management, release frequency, delta releases, conflict resolution etc) will make the most difference to our customers and processes
- What resources are available to deliver the plan !!

Approach

Establish requirements

Map existing workflows

Introduce process improvements/efficiencies

Identify roles/actors

Identify constraints (tools/human/process)

Design workflows to integrate other tooling/processes

Test, test, test

Important to understand deployment arrangements and associated human factors such as training and user manuals

Dual running

Fall back arrangements

Develop associated policies (quality assurance, editorial etc)

Opportunities

Not necessarily replication of what has gone before

- Single authoring, dual review
- Dual independent authoring

Maximise integration opportunities

- Allow subsets to be built synchronously with content development
- Creation of all mappings at same time as concept creation
- Re-use of descriptions in different terminologies

Prepare for new ways of working

- Accreditation processes
- Authoring into core
- Additional quality assurance routines (eg run-time checks)

Example work flows

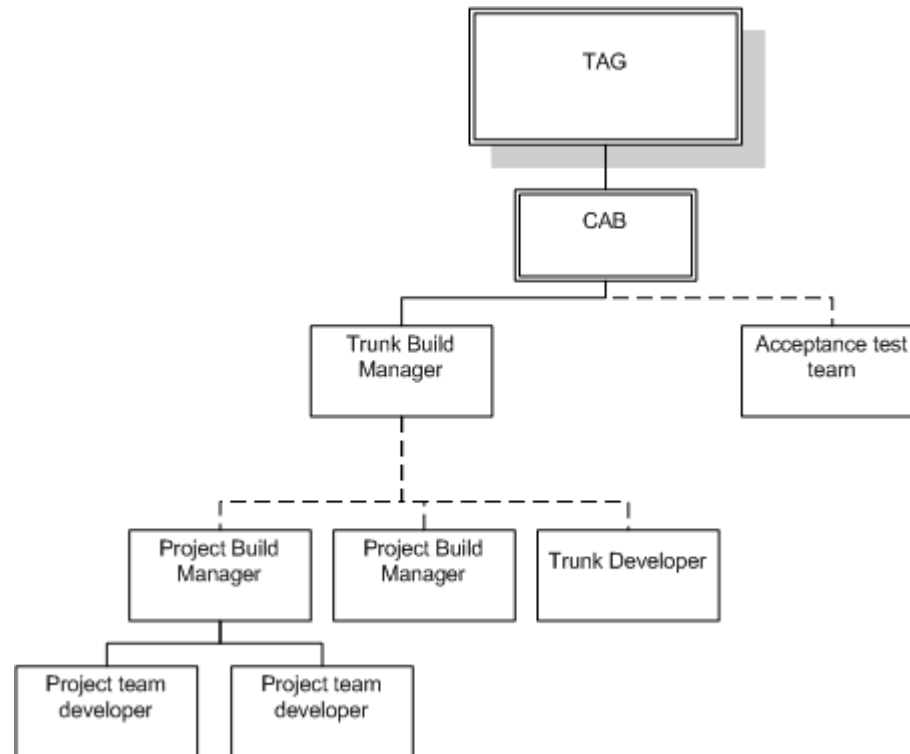
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Workbench development & Release process

References:

- IHTSDO Development Process - in progress to be published

IHTSDO development structure



Development Process – startup

- Register potential project
- Establish collaboration partnership / common interest
- Generate initial documentation / scope
- Establish funding
- Establish project board

Development Process (cont)

- Submit project definition to CTO
 - Name, type, overview, branch management details, proposed schedule
- Review / approval by CAB
- Startup - inform
- Development / synchronise with Trunk

Development Process (cont)

- Sign off by project
- Submission to CAB for merge to Trunk
- Merge to Trunk
- Workbench release
 - IHTSDO
 - Member specific

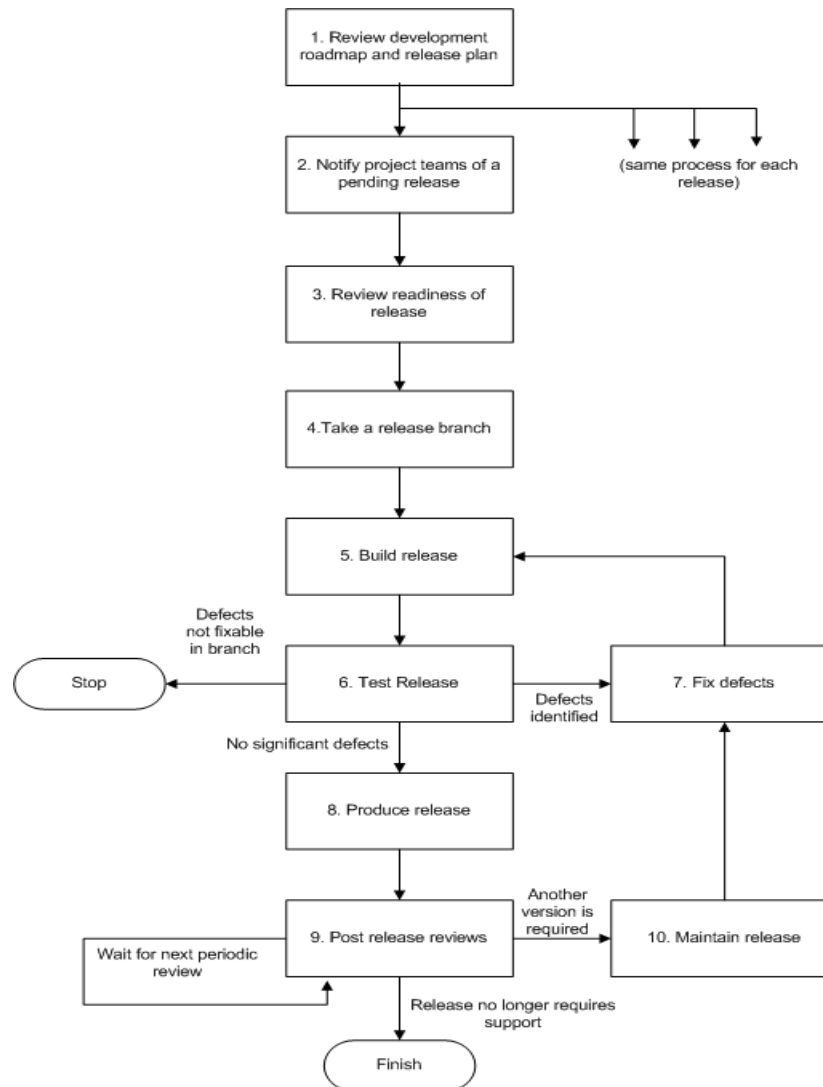
IHTSDO Forms

[PROJECT DEFINITION FORM.docx](#)

[PROJECT PHASE DEFINITION FORM.docx](#)

[MERGE PACK FORM.docx](#)

Release Process



Role of operational teams

- Stakeholder identification and requirements gathering
- Requirements elaboration/agreement
- Involved in review of delivery/changes
- User acceptance testing – stakeholder identification
- Change control
- Sign-off

Role of Technical Development Team

- Stakeholder engagement
- Development Process
- Branch Approval
 - Branch Manager
- Testing Process – Technical & UAT
- Change Approval Process
- Code merge into trunk
- Maintain Code

Collaboration - development options

- Joint member – joint Internal development
- Jointly funded – external development rfp (ihtsdo / Member)
- Jointly funded – single Member development
- Non Member collaborations
- Combination of any of the above

Collaboration benefits

- More rapid deployment of tools which is truly open and collaborative
- Benefit from development of others
- Harness modelling and technical resource to improve
 - Timeframes (many hands)
 - Quality (many eyes)
 - Innovation (many minds)

Collaboration enables....

- Ability to share tools, processes and resources
- Similar needs – sharing best practice and resource.

Opportunities

What are your plans?

Can we help each other?

Can we collaborate?