

DAMAP CONFERENCE

If content is king then knowledge is divine:

Advancing the value proposition for the use of repositories as
contributors to industry capability development

Digital Asset Management – Asia Pacific Conference

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Focus

- Translation of what this presentation is about

Digital Asset Management in Transport and Logistics Industry

- The challenge has been to shift paradigms from ones focussed on:
 - digital assets as inputs within a learning and content-centric paradigm
 - management of assets as a ‘cost’ to an ‘investment’ paradigm
 - From digital content management to a knowledge paradigm relating to capability enhancement at all levels – individual, group (professional, occupational, regional, etc.), organisational, industry and national.

TILIS

- Case study and focal point

What is TILIS?

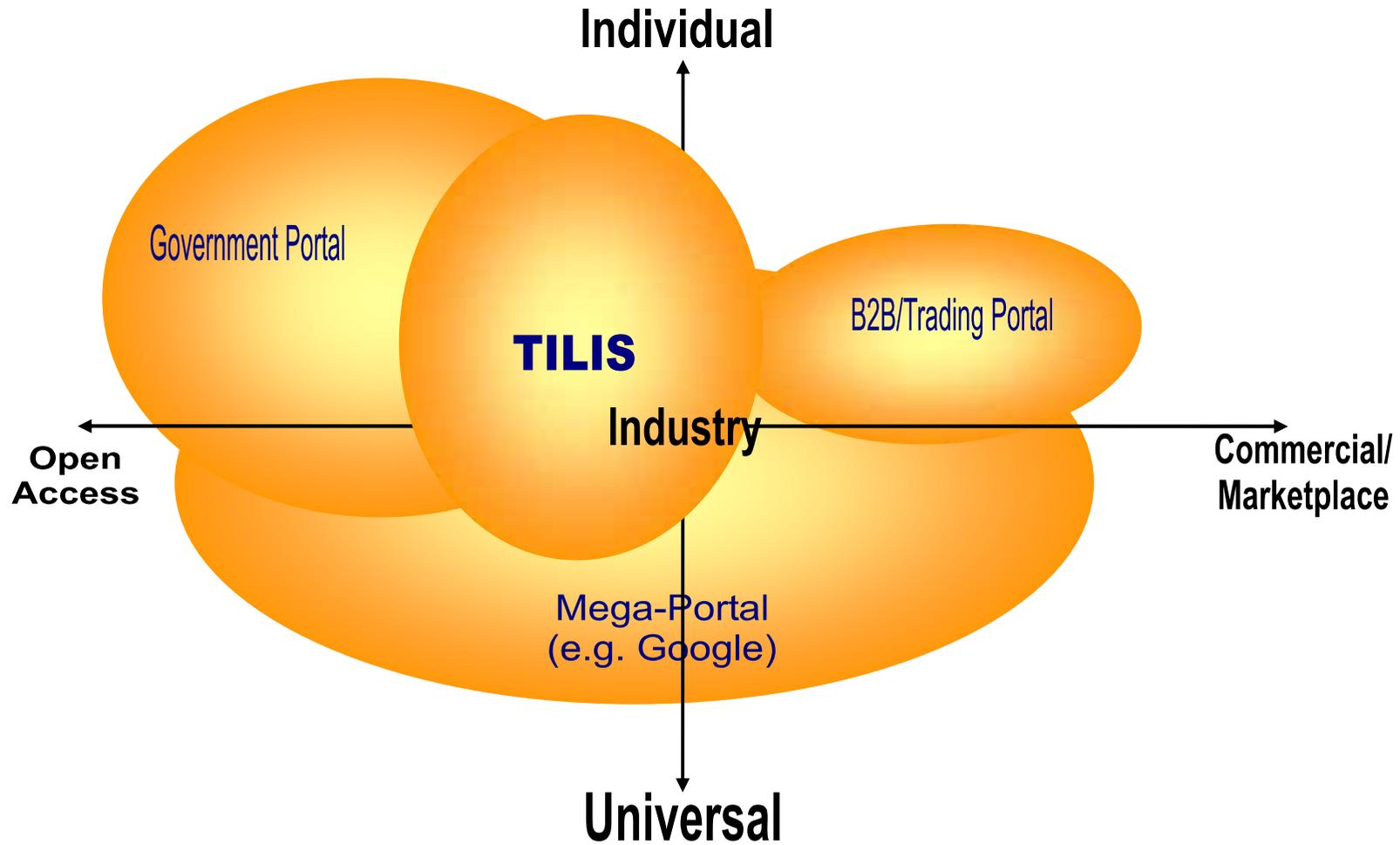
Transport Integrated Learning & Information Service
is:



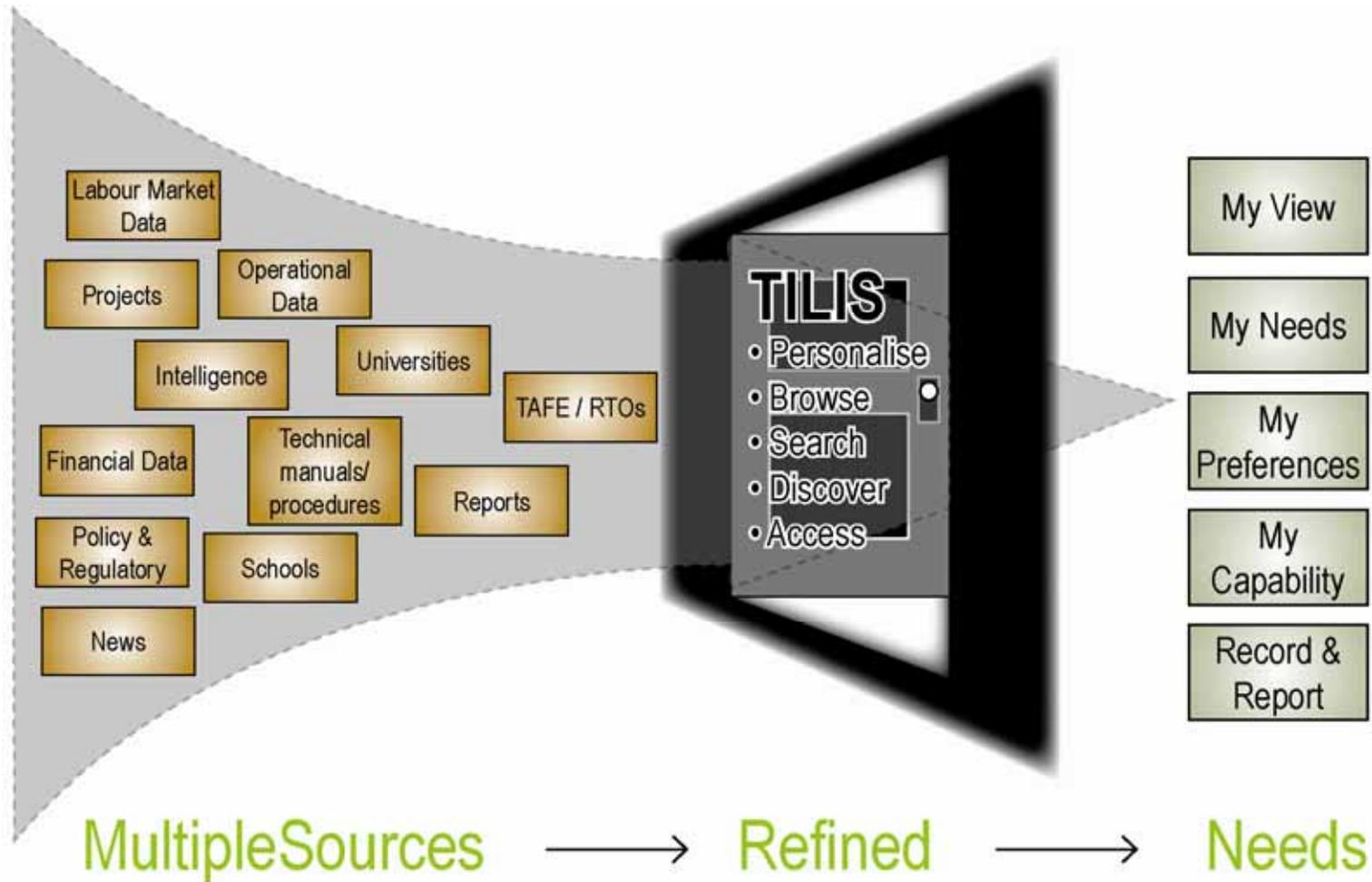
- An **ATLAS** = A view of the transport and logistics industry based on your needs and preferences
- A **MAP** = A repository of destinations and data
- A **GPS** = A registry that allows you to discover where you are and search for digital information that helps you get where you need to go

By being virtual TILIS is more dynamic and able to be oriented to the user needs and preferences

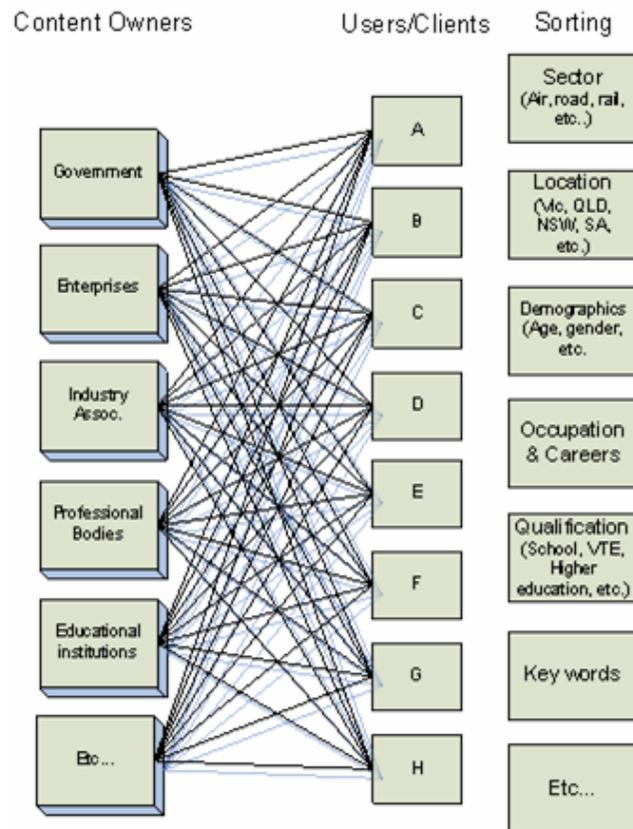
TILIS value-adds to what exists



TILIS filters The Web to T&L and user needs



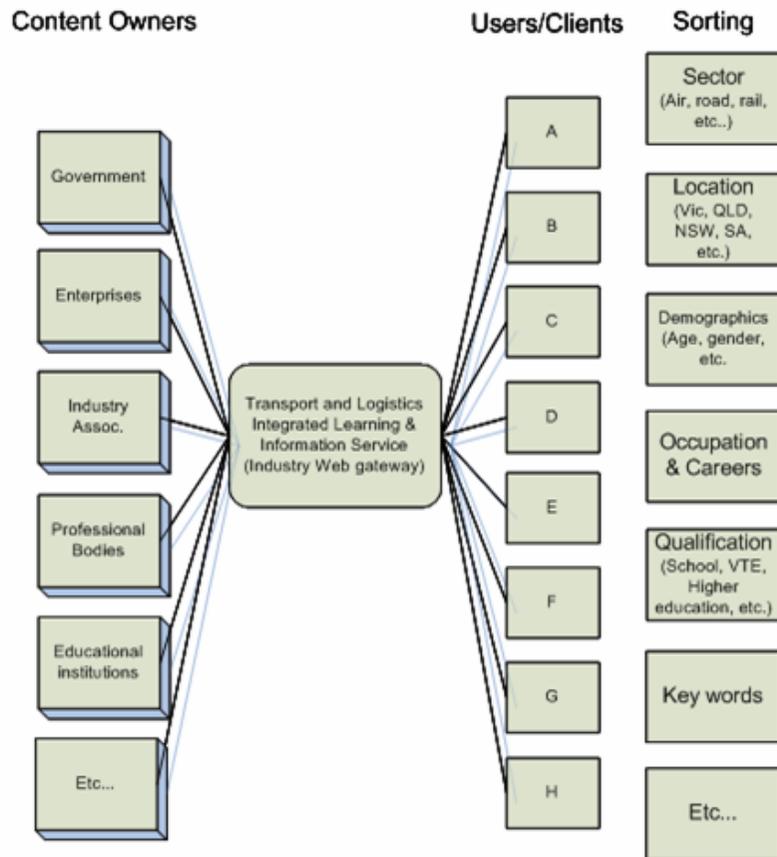
TILIS moves beyond the one to many marketplace



One provider to multiple users with an array of way to manage and control digital assets including:

- Interoperation
- Metadata
- Classification
- Search
- Discovery
- Identities
- Access rights
- Reuse
- Digital rights

TILIS enables the many to many marketplace



- Many users seeking digital assets from multiple providers. Reduced and consistent ways to address:
- Interoperation
 - Metadata
 - Classification
 - Search
 - Discovery
 - Identity management
 - Access rights
 - Reuse
 - Digital rights

TILIS - A web gateway and digital repository

- **A standards and web based, centralised facility which stores granular or compound copyrighted knowledge objects for reuse**
- **Supports single sign on and central authentication**
- **Provides rules and permissions for reuse and rendering of objects**
- **Implements a range of categorisation structures**
- **Makes objects/content discoverable and accessible where suitable permissions have been allocated with sign on**

A CORDRA Digital Repository

- **Allows content and data to be published and searched across many digital repositories, whilst maintaining user rights and privileges**

So? Why is this different?

Old 'input' paradigm

- Learning is knowledge

Old 'input' Paradigm

- Content is knowledge

New paradigm TILIS and DAM

1. TILIS will leverage T&L paradigms on the supply chain to confirm value in how digital assets are managed
2. TILIS is about knowledge capital creation and sharing
3. TILIS needs to be an investment in an industry outcome, not another input cost
4. TILIS needs to deal with multiples – multiple users, multiple suppliers, multiple networks, etc.

1. T&L supply chain paradigms can be leveraged to show value

- **Supply chain** management is about managing the activities which support the movement of a product from a firm's supplier to a firm's customers.
- The aim is to create a **value chain** where all activities operate in a coordinated, integrated manner whereby they contribute to customer-related outcomes at each stage and culminate with the optimal satisfaction of the end-customer's needs and preferences.
- The three factors shaping value are:
 - Networks
 - Infrastructure
 - Collaboration
 - Standards

1a. T&L paradigms – Network value propositions

- **Networks**

- networks usually evolve
- volume and value are positively related (Moore Principle)
- hubs/interconnections are critical
- standards support interoperability
- nodes provide the modal connection points
- nodes are the base for value-added services
- networks may carry different payloads
- need to move seamlessly down the supply chain from source to delivery

1b. T&L paradigms – Infrastructure value propositions

- **Infrastructure**

- evolves from local to global
- uses scalable, reliable existing technology
- uses standards to maximise connections
- provides common infrastructure and investment where it can add maximum value to existing providers and increase volume
- connects a supply chain seamlessly (farm gate to plate)
- builds business processes and service system, not a technology solution
- applies appropriate policies and governance
- business-based, contextual to local needs
- enables value-added services

1c. T&L paradigms – Collaboration value propositions

- **Collaboration**

- collaboration can create new knowledge
- communicate at speed improves responsiveness
- collaboration across the supply chain can improve investment in business and community outcomes
- can often enhance innovation by operating outside formal structures and procedures

1d. T&L paradigms standards accelerate adoption



DAMAP 2006



THE AGE
150 YEARS - SINCE 1854

Rail Gauge 11 Jul 1927

"Australia has a multiplicity of national problems, none of them small. But there is a background of problems larger still, and the question of a uniform railways gauge occupies the greatest amount of that background space."

Acknowledgement of original sources, with permission
Professor Dan Rehak

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2. Aspects to Knowledge Capital

Structural Capital

+

Social Capital

+

Human Capital

=

Knowledge Capital

2a. Structural capital – TILIS as digital infrastructure

- internationally compliant, standards-based
- national facility (do once everyone can use)
- support single sign-on and central authentication
- provide rules and permissions for reuse and access to objects
- implement an industry specific range of categorisation structures
- make objects/content discoverable and accessible where suitable permissions have been allocated with sign on
- the ability to share and access content based on the owners' permissions and rights management

2b. Social capital – TILIS as network hub

- a 'hub' or node to a national network
- internationally compliant, standards-based
- link the very many locally managed web sites, content and knowledge
- add volume and value to the existing industry virtual network(s)
- provide a user friendly national entry point
- support students and other non-industry users make decisions on options
- support information and content search, sharing and access
- support business systems
- work 'at scale'
- be robust and reliable
- be sustainable

2c. Human capital – TILIS as a learning and development exchange

- mechanism to enhance how industry and enterprises:
 - attract, recruit and retain staff
 - train, educate, coach and mentor
 - exchange learning objects and technical documentation to create and sustain learning related to capability needs
- supports the matching of students with education providers and learning
- supports enterprises seeking information on education providers, courses or undertaking content search, sharing and access
- enables individuals to find relevant career pathway and labour market information and services from existing providers

(See Transport and Logistics centre charter www.talc.com.au)

3. Input and output value in the digital object repository

Inputs:

- The capacity to import, classify, archive, search, harvest and manage *all* forms of explicit knowledge within a single regime that encompasses *all* aspects of the enterprise.
- Demonstrated utility of codified knowledge (its value through use - intellectual property value is confirmed)
- Cater for knowledge push and pull (learning and knowledge on demand)
- A means to communicate, collaborate and cooperate

Outputs:

- Show knowledge capital generation beyond skills development to include:
 - Utility of objects/content accessible to the organisation.
 - The improved capacity to be more agile and responsive.
 - Enhanced identification, transfer and generation of tacit knowledge
 - Devise an integrated 'currency' used to describe how content can enable outcomes across careers, jobs, performance, customer service, and process quality.

TILIS provides capacity for DAM that is an **investment** in T&L industry cap'*abilities*'

- *Accessibility* -Infrastructure supports access by many, to their preferences
- *Flexibility* to create multiple strategies for metadata, pedagogical models
- *Re-useability* of content across organisations, locations and sectors
- *Discoverability* of knowledge and content
- *Sustainability* of service
- *Accountability* of maintenance and government structure
- *Interoperability* with existing technology and systems
- *Searchability/ Browseability*
- across systems and different types of content
- *Reliability* of service
- *Affordability* - making learning objects and information sharing more cost effective
- *Scalability* of solution and service

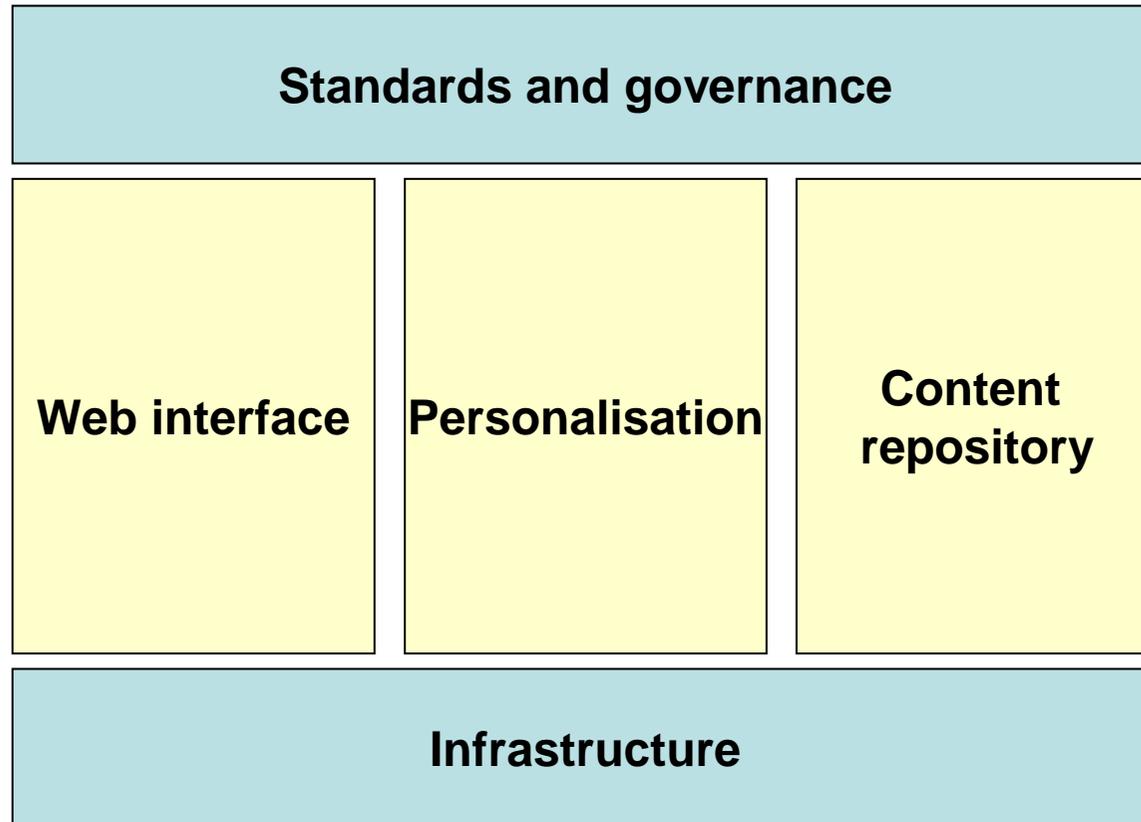
TILIS as a value adding project

- Infrastructure
- Network
- Collaboration
- Standards

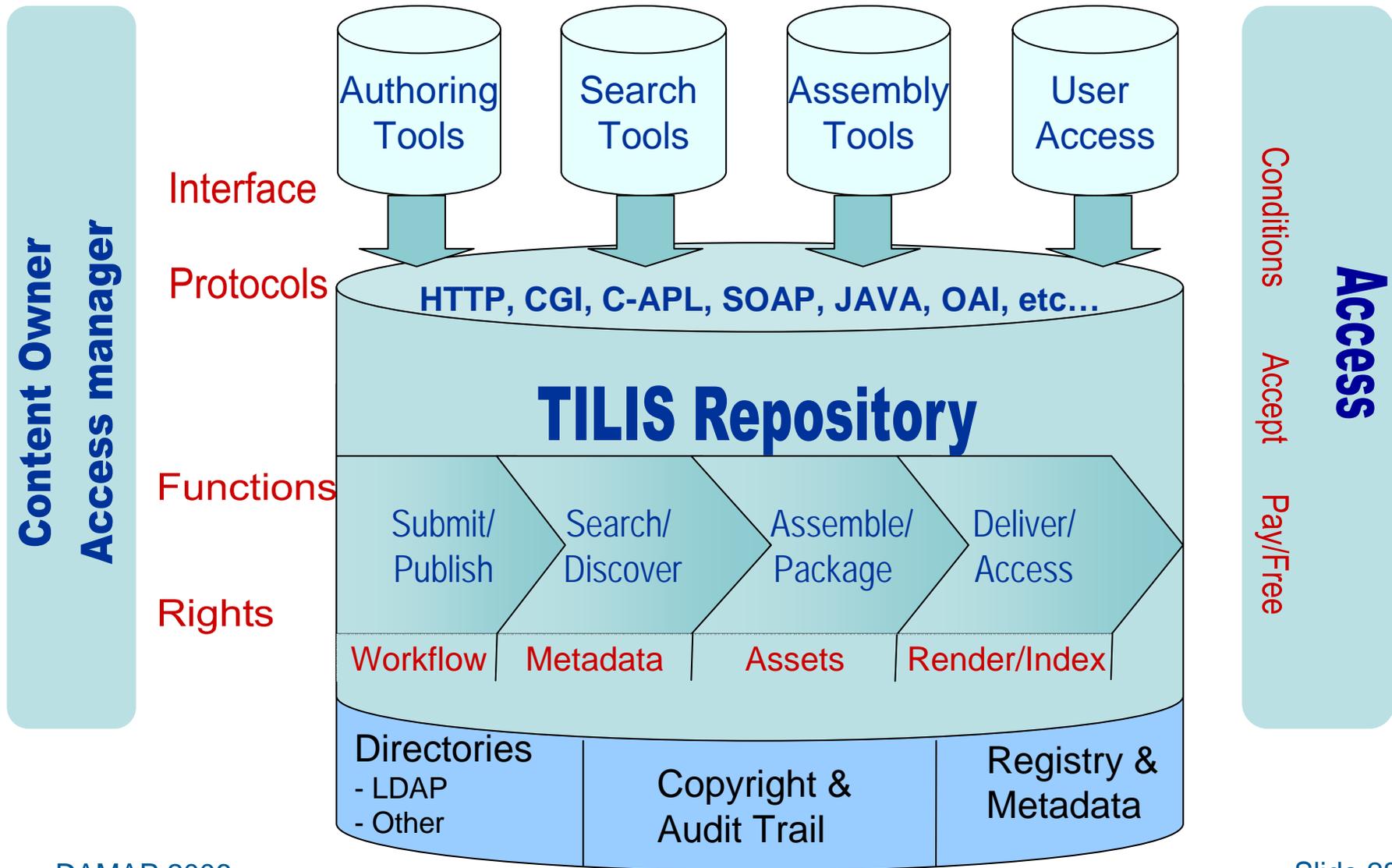
TILIS is an integrated system created for the national transport and logistics industry to enable the expansion of national capabilities through initiatives that are ultimately owned and executed locally.

Dr Daryll Hull, Director, Transport and Logistics Centre

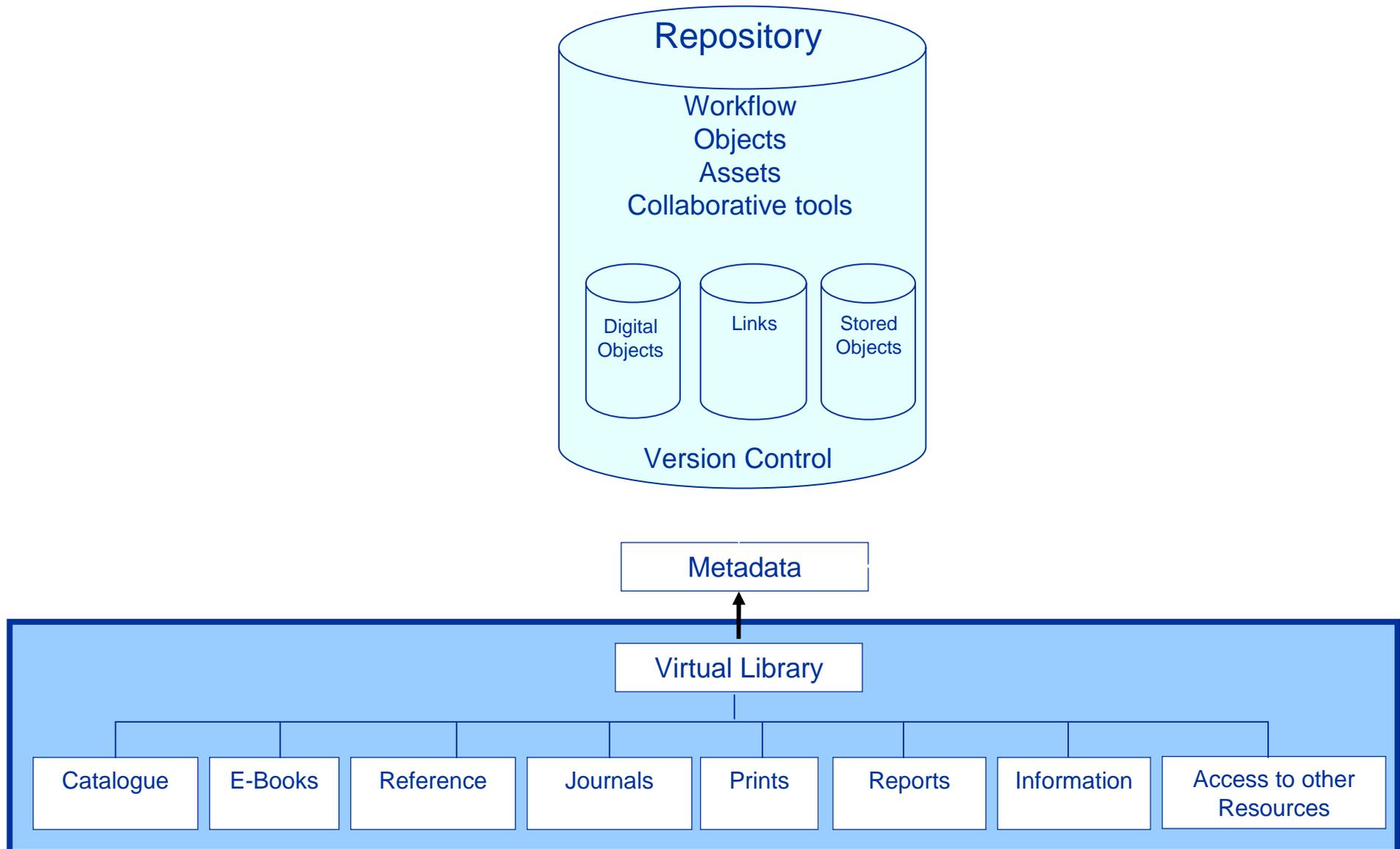
TILIS High Level Architecture



TILIS repository model



The repository service



Features of the repository

Personalised delivery

Build once, use many times

Supports multiple metadata schema

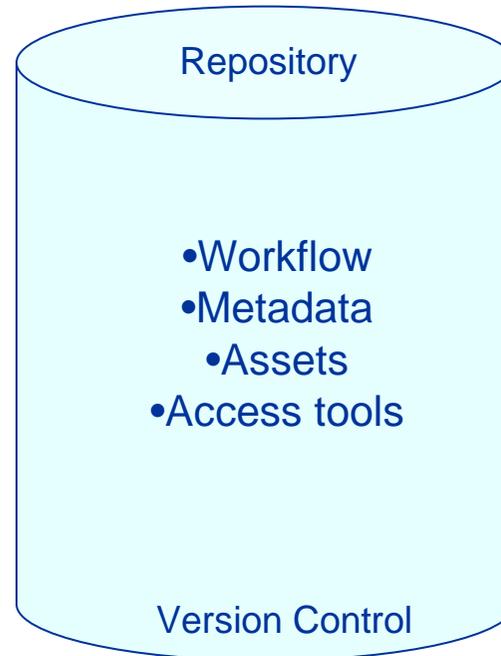
Standards compliant

Flexible output capability

Branding for reuse

Version control

Access point to discover legacy content



Collaborative tools

Manages workflows, and processes

Shared areas and mechanisms for communication

Updates made in one place are automatically changed across the whole content

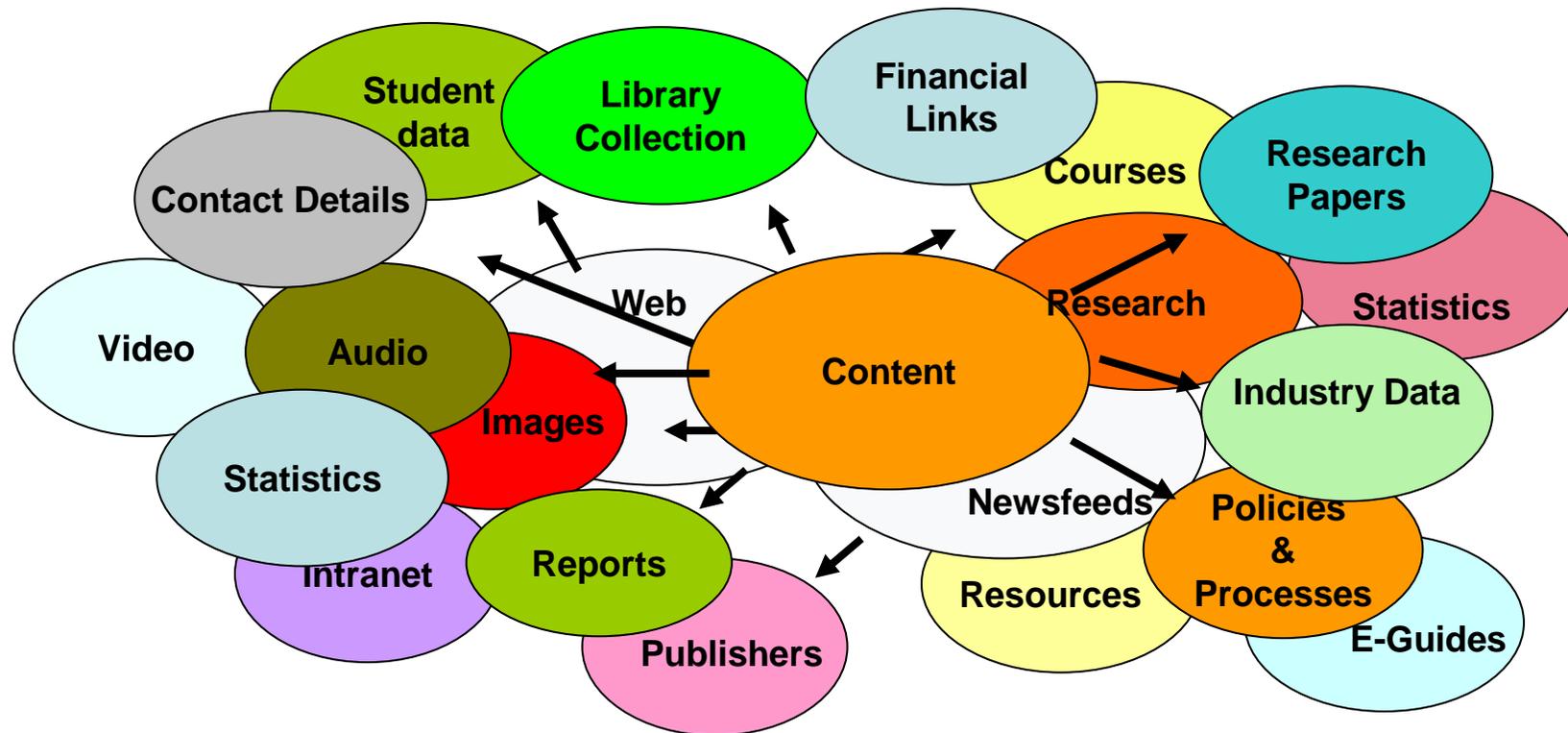
Track, trace and manage copyright

A repository for any object type

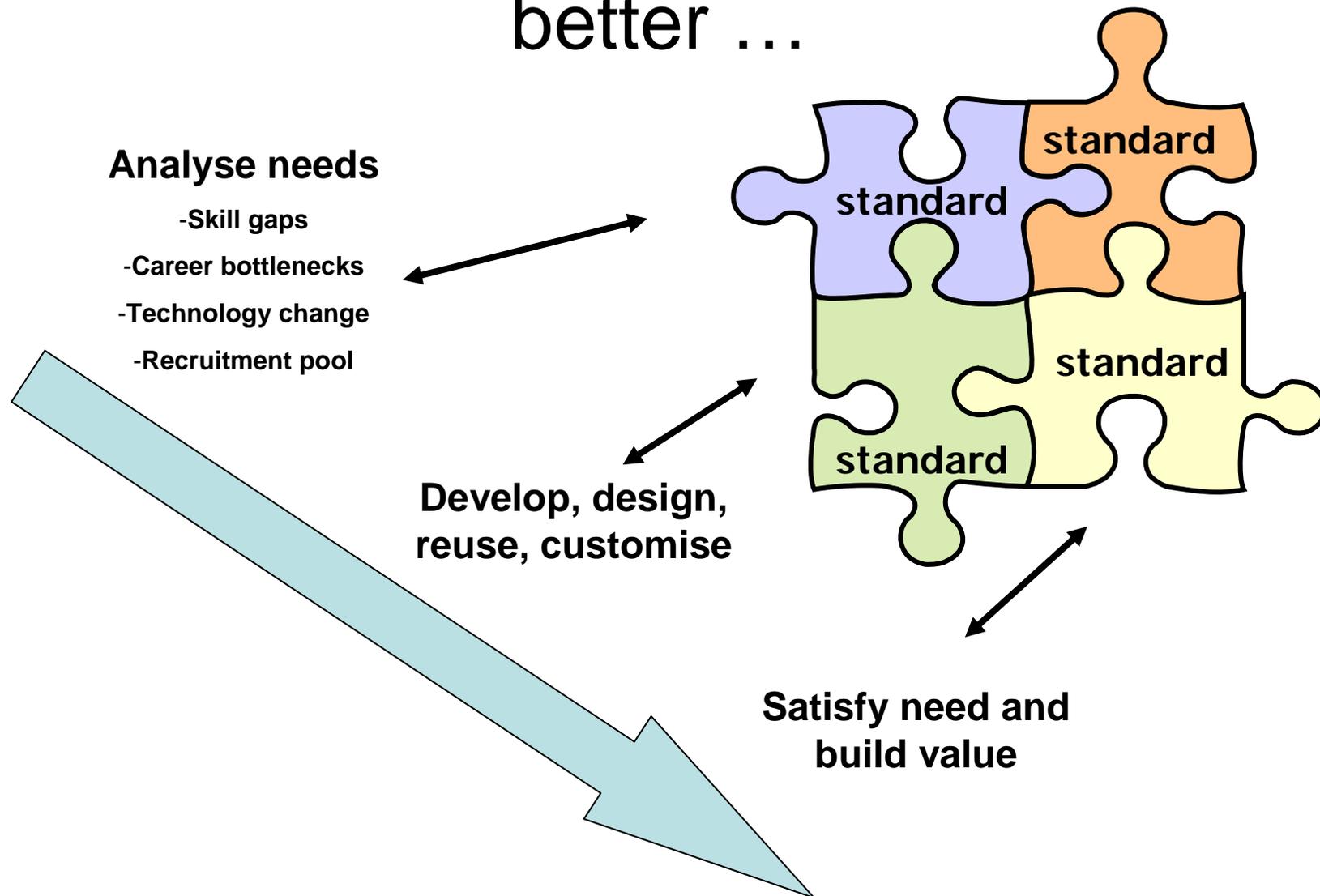
Content on the repository

- Technical manuals/documents
- Scholarly papers (advocacy campaign)
- Library collections (born-digital or digitised)
- Learning materials (interactive, multimedia)
- Research materials (texts, images, films, etc.)
- Organisation-wide shareable datasets
- Administrative records
- E-journals & E-books
- Website and intranet content

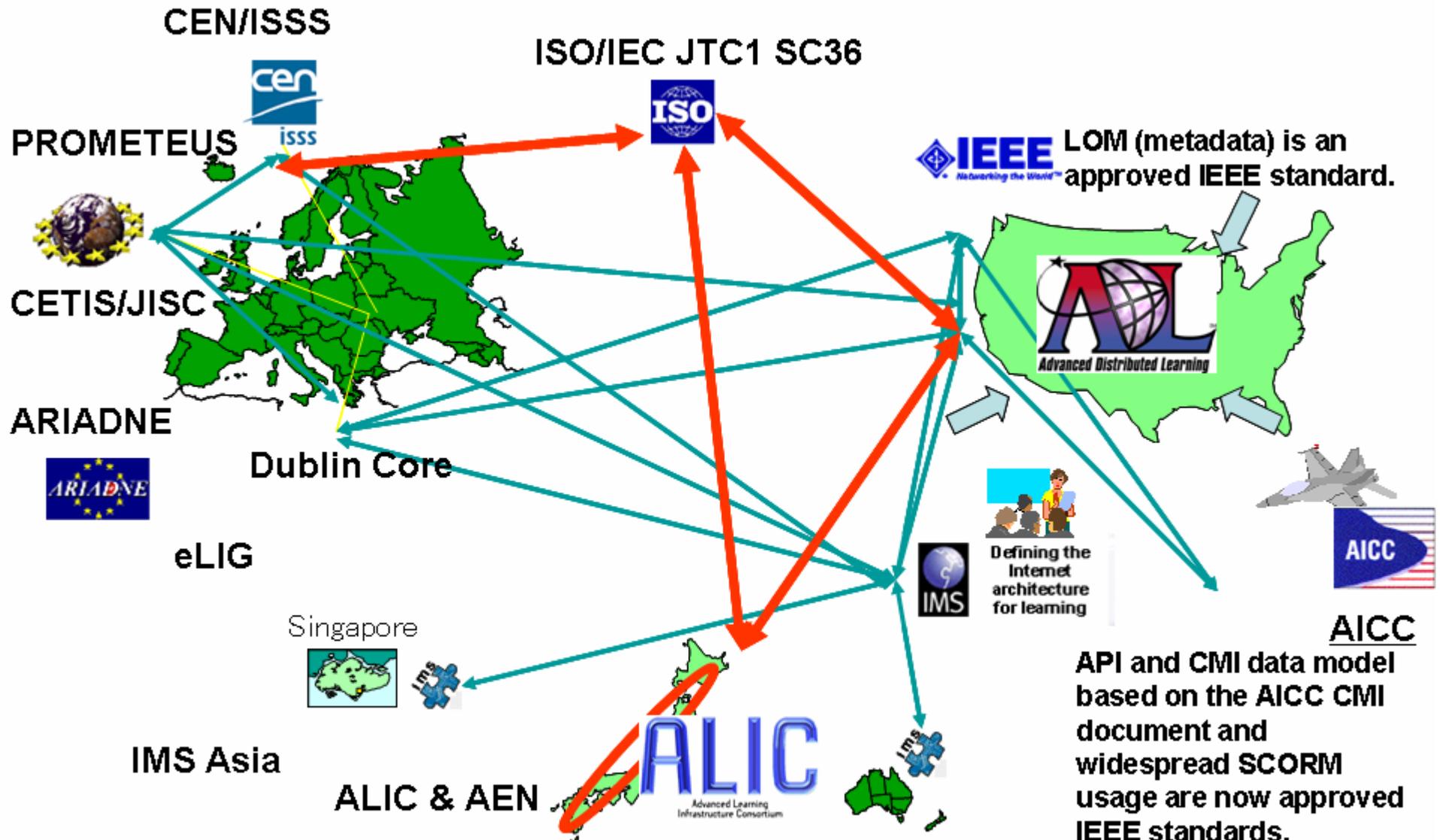
Link to different content on other repositories



Leverage existing learning objects better ...



Global approach to standards



API and CMI data model based on the AICC CMI document and widespread SCORM usage are now approved IEEE standards.

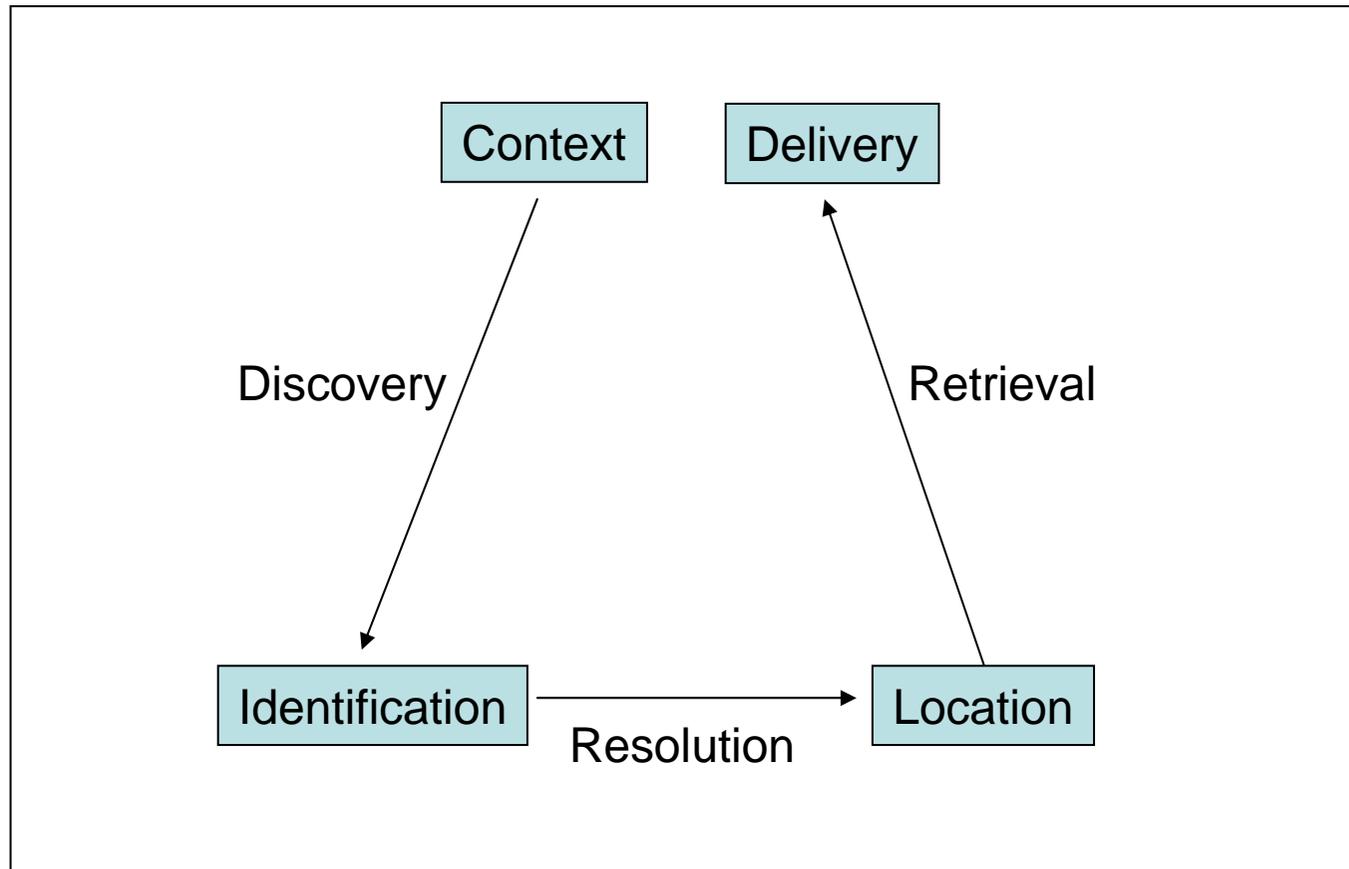
- ADL partnership
- IMS Australia

From Dan Rehak ADL Update SCORM 2004 and CORDRA, Nov 2005

TILIS and alignment with global work

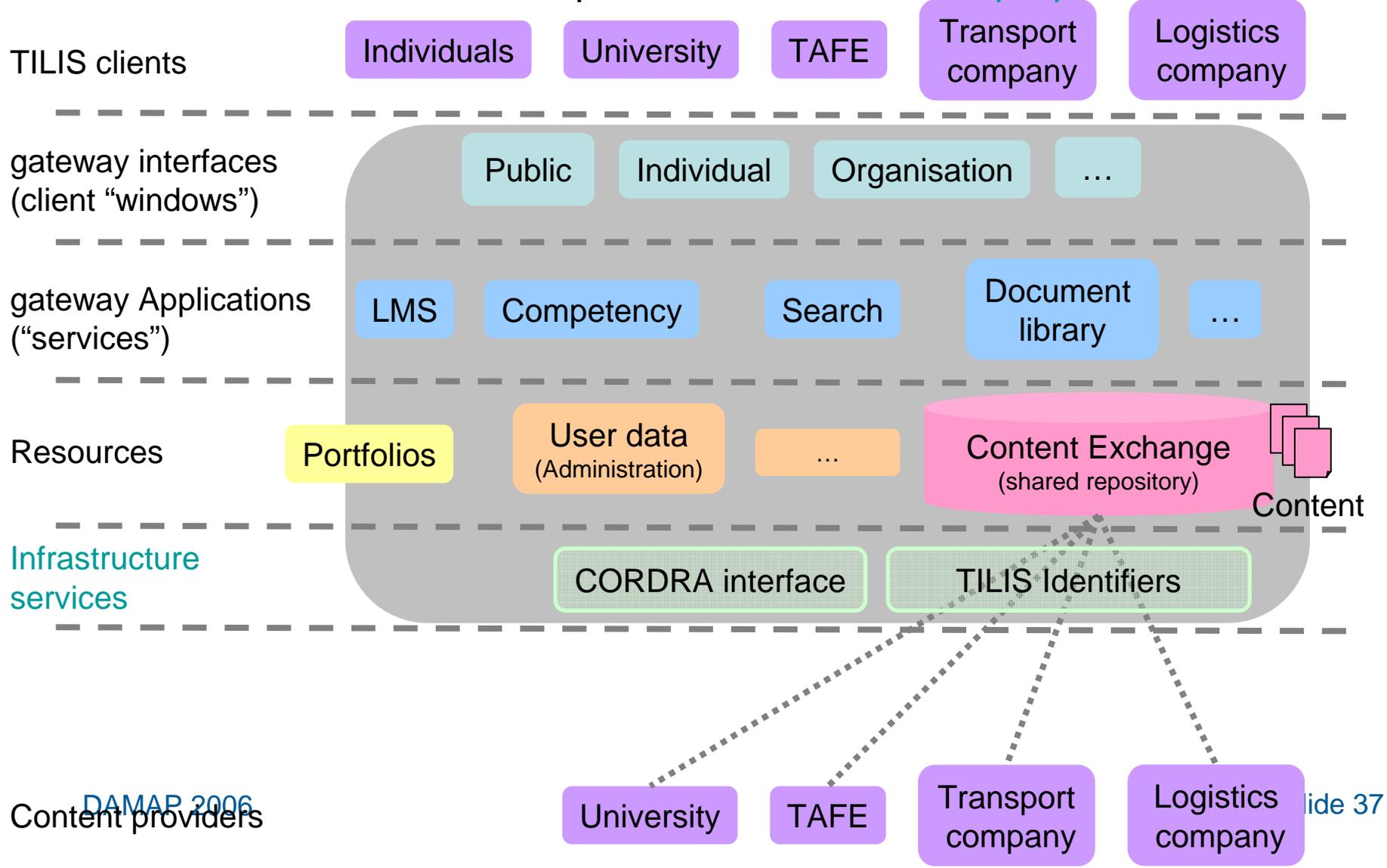
- Advanced Distributive Learning Co-Laboratories and SCORM (Sharable Content Object Reference Model)
- Job Performance Technology (S1000D)
- Content Object Repositories Discovery and Registration/Resolution Architecture (CORDRA)
- Web-services and accessibility (W3C)

CORDRA “Triangle”



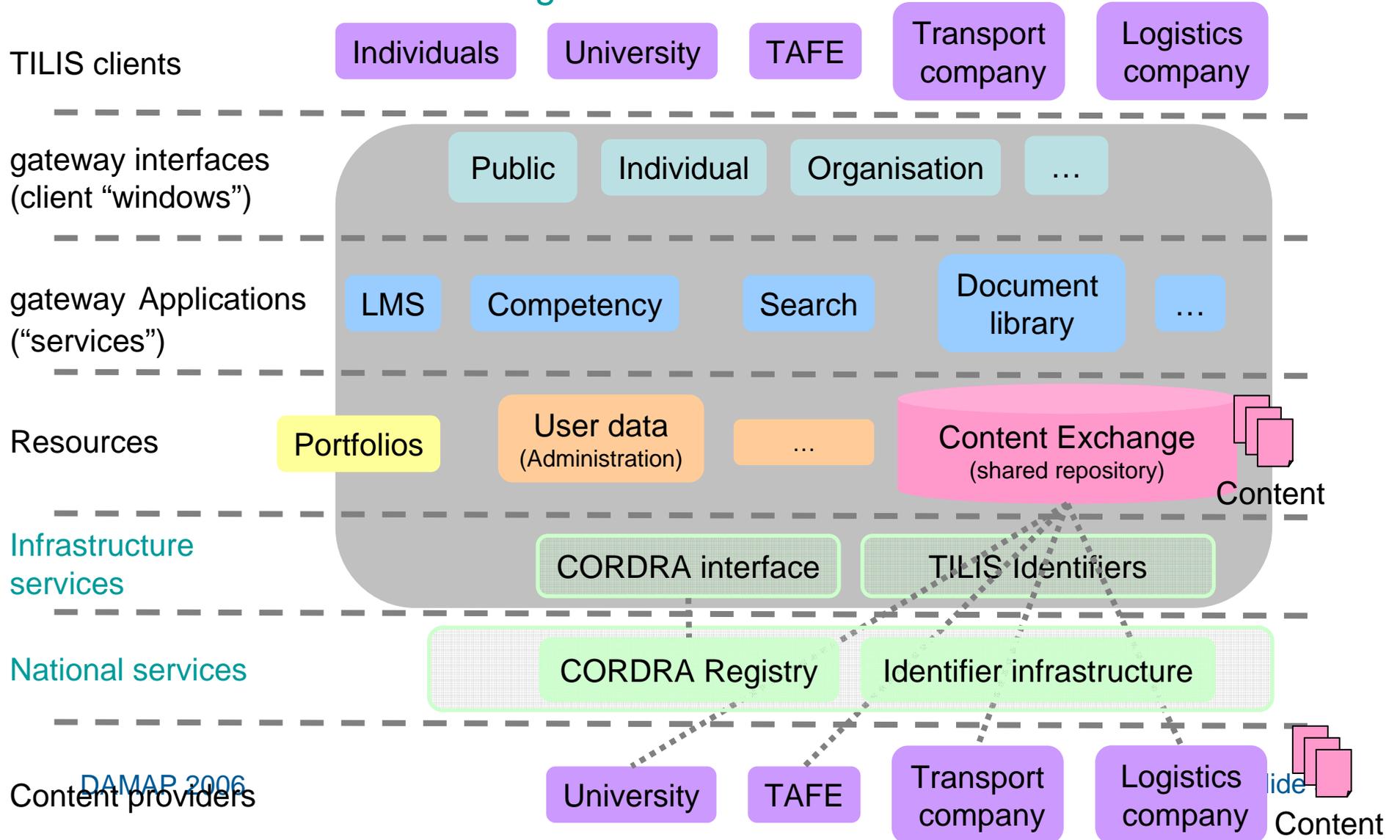
TILIS

Phase 1: Portal requirements & CORDRA preparation

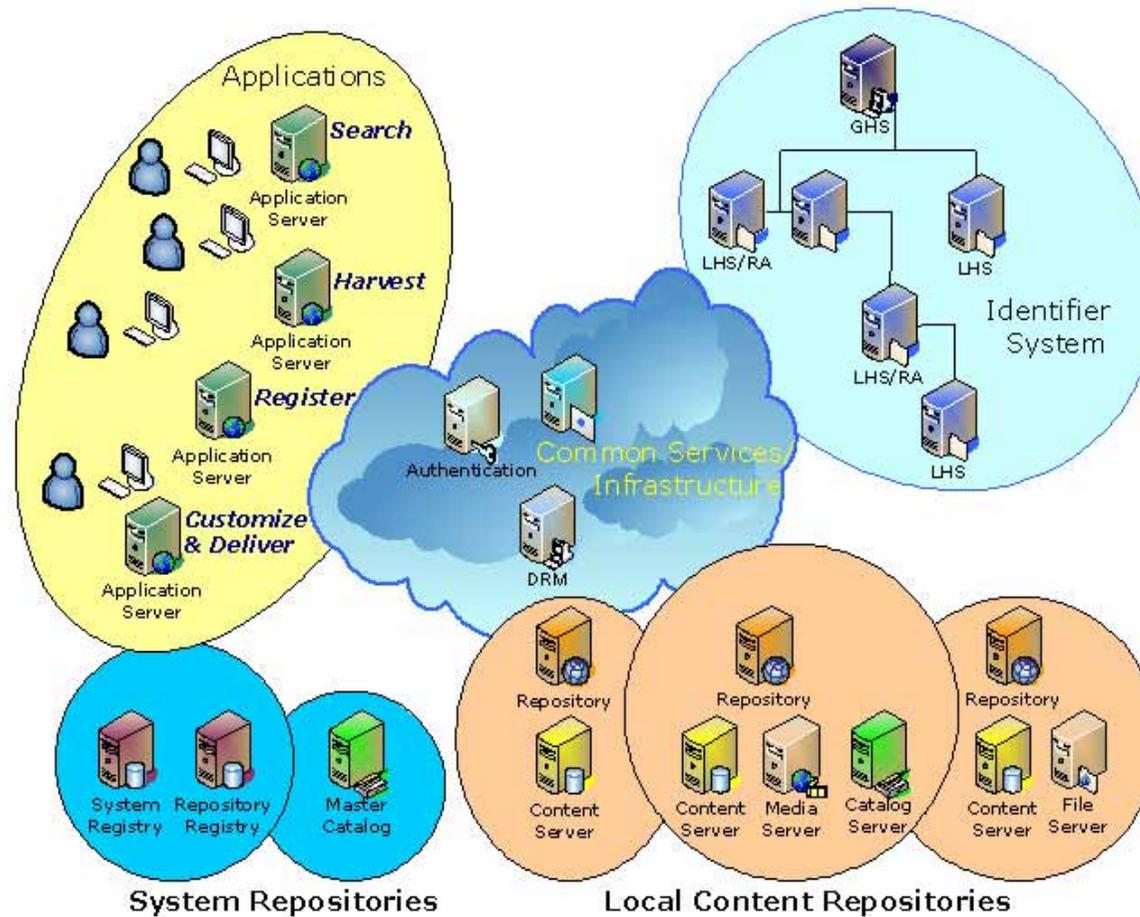


TILIS

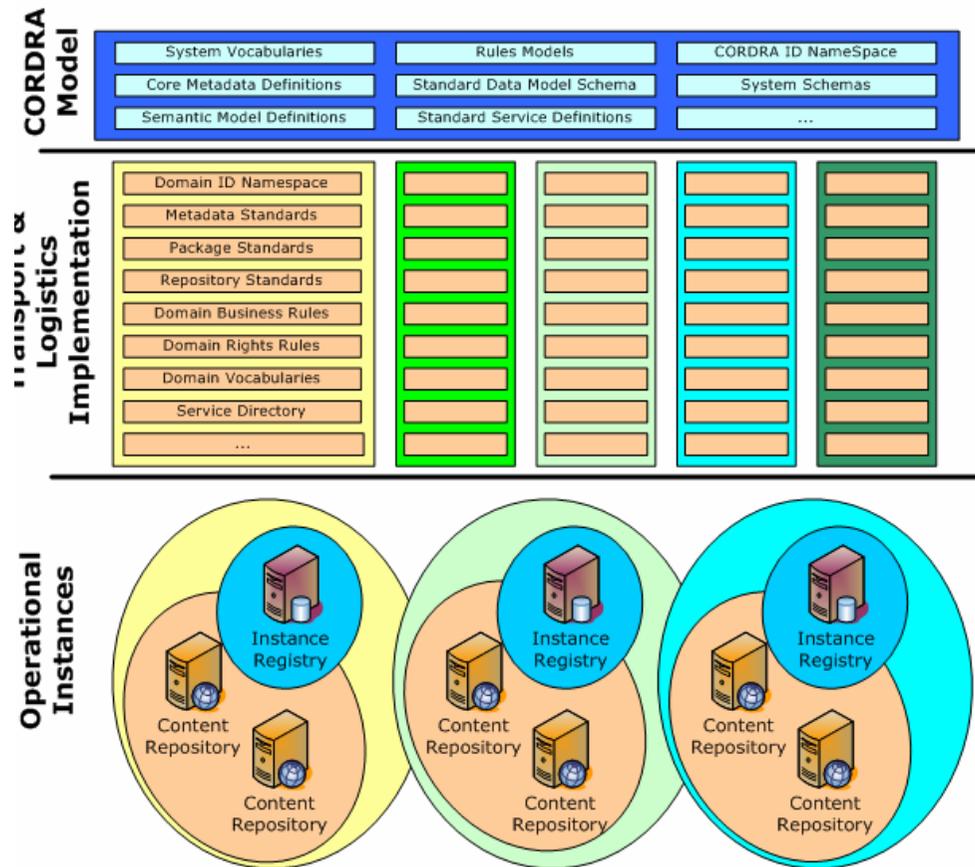
Phase 2: integrate with national infrastructure



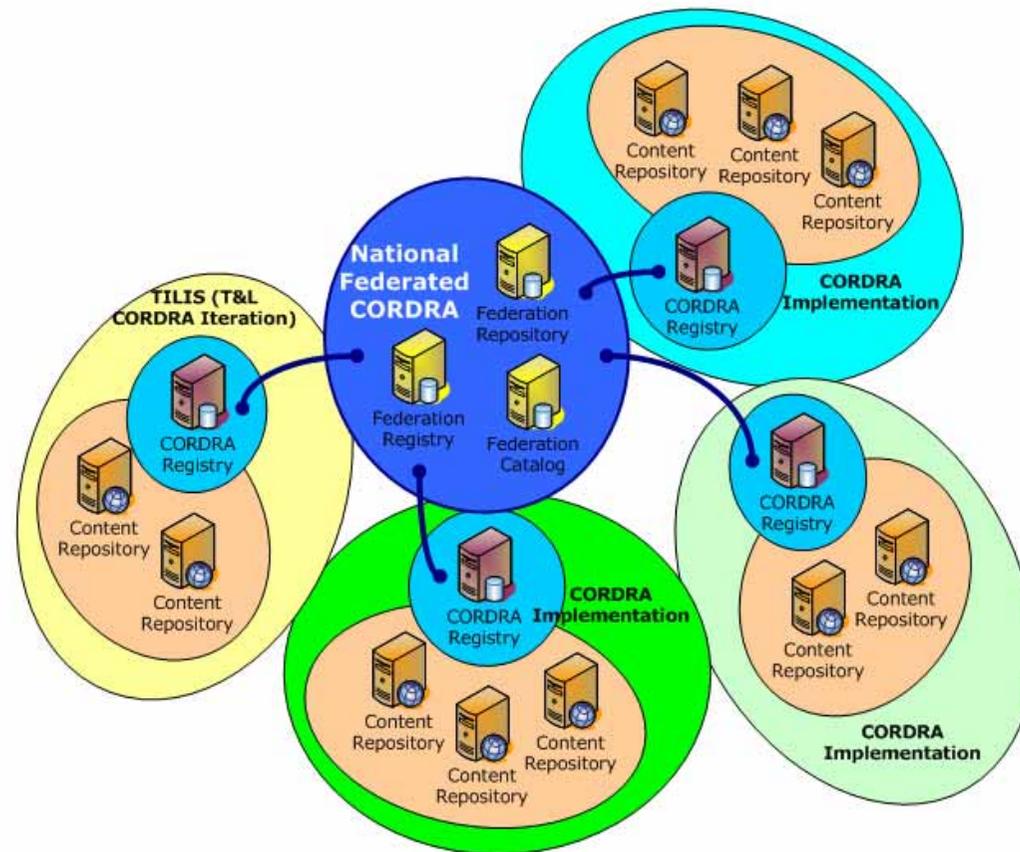
CORDRA Architecture



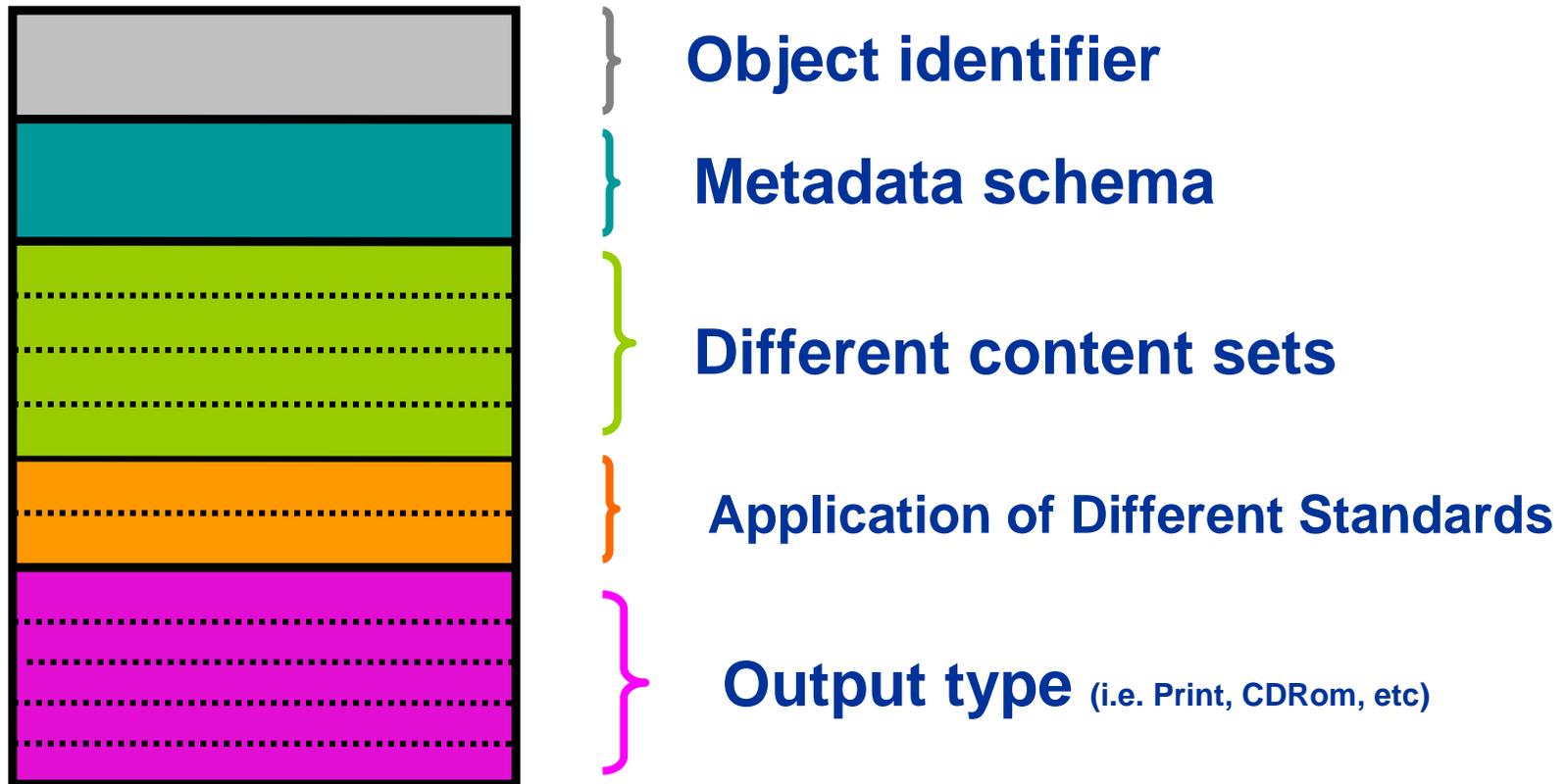
CORDRA Levels



TILIS can become part of an Australian Federated CORDRA



Search, discover and access objects/content



Adapted from the CORDRA model