MONASH University
Information Technology

Go Boldly.

Presented by
Dr Joanne Evans, Centre for Organisational and Social informatics
Faculty of IT, Monash University

Designing for interoperability

Experiences arising from the Clever Recordkeeping Metadata Project

Clever Recordkeeping Metadata Project

ARC Linkage Project mid 2003-2006

- Chief Investigator Professor Sue McKemmish, Monash University
- Partner Investigators Professor Anne Gilliland-Swetland, UCLA, and Mr Adrian Cunningham, National Archives of Australia

MONASH University
Information Technology

Australian Government
National Archives of Australia

Industry Partners and Collaborators

GSE&IS

AUSTRALIAN SOCIETY of ARCHIVISTS Inc

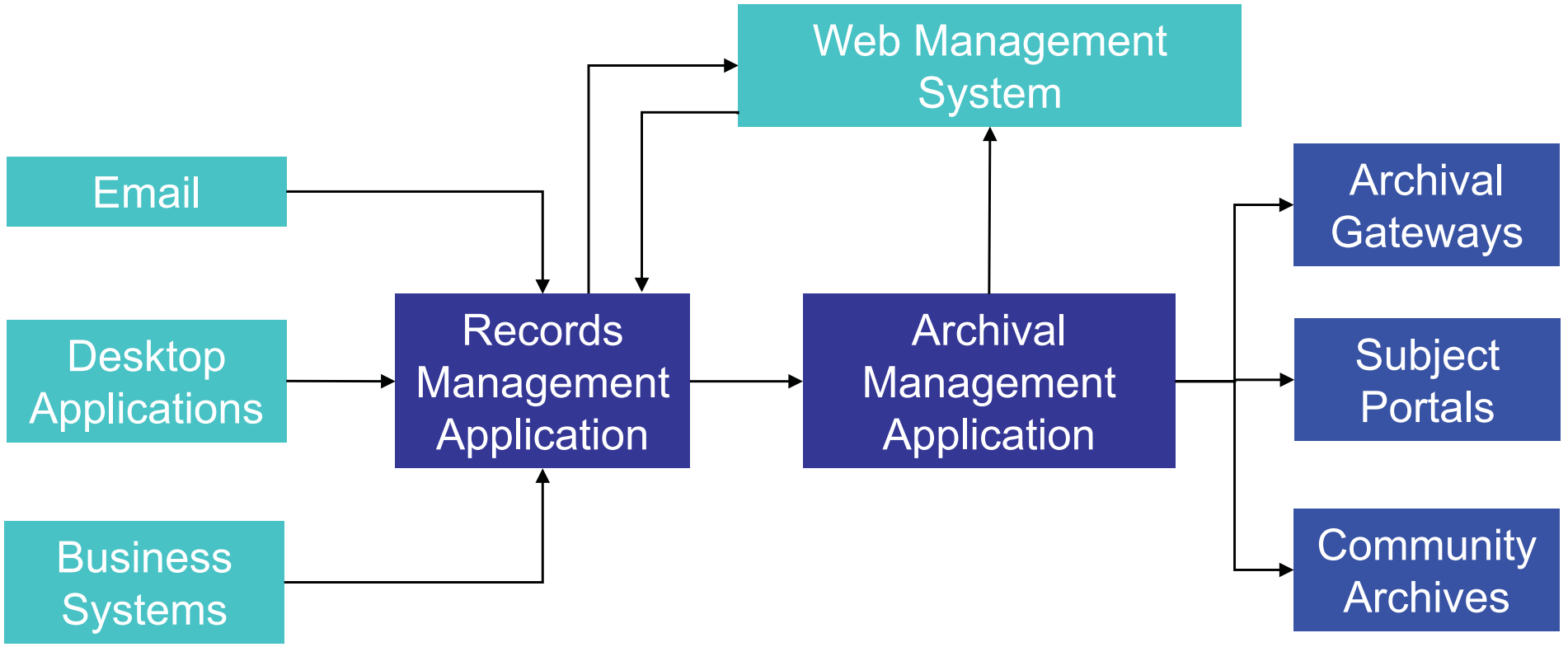
STATE RECORDS
NEW SOUTH WALES

Project Links

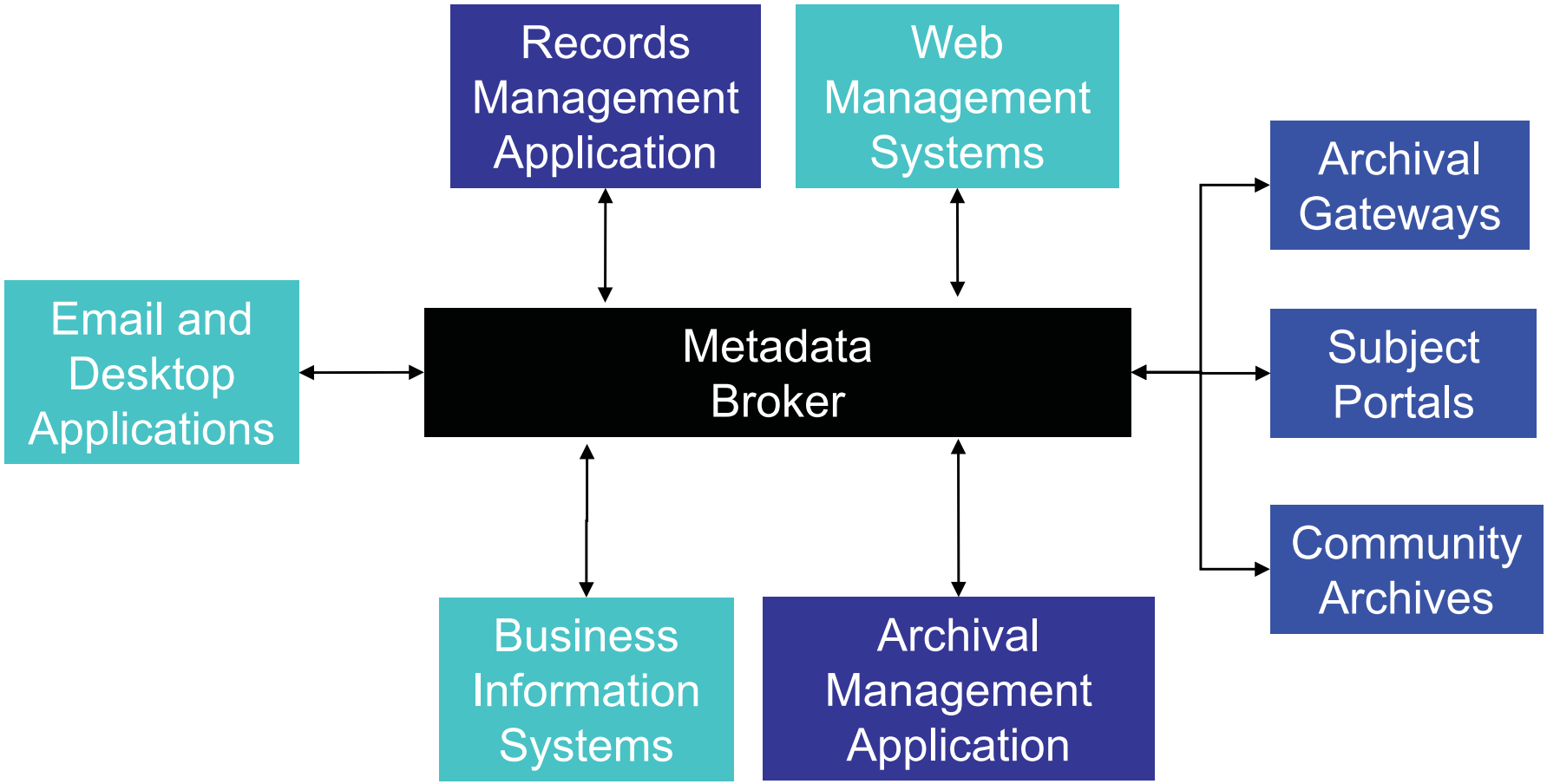
- InterPARES - the MADRAS Metadata Registry
- ISO23081 and IT21/7 – Recordkeeping Metadata Standards
- NAA Redevelopment of Commonwealth Recordkeeping Metadata Standard

http://www.infotech.monash.edu.au/research/groups/rcrg/crkm

Traditional recordkeeping architecture

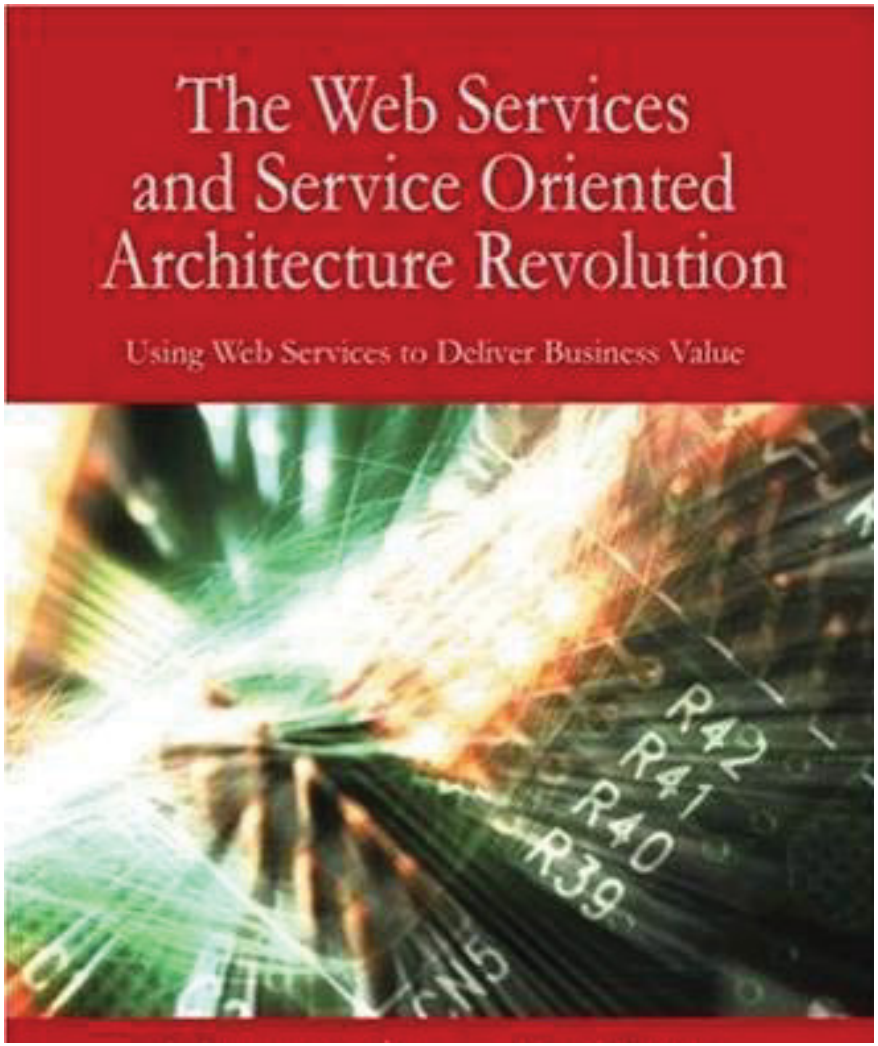


Recordkeeping metadata brokering

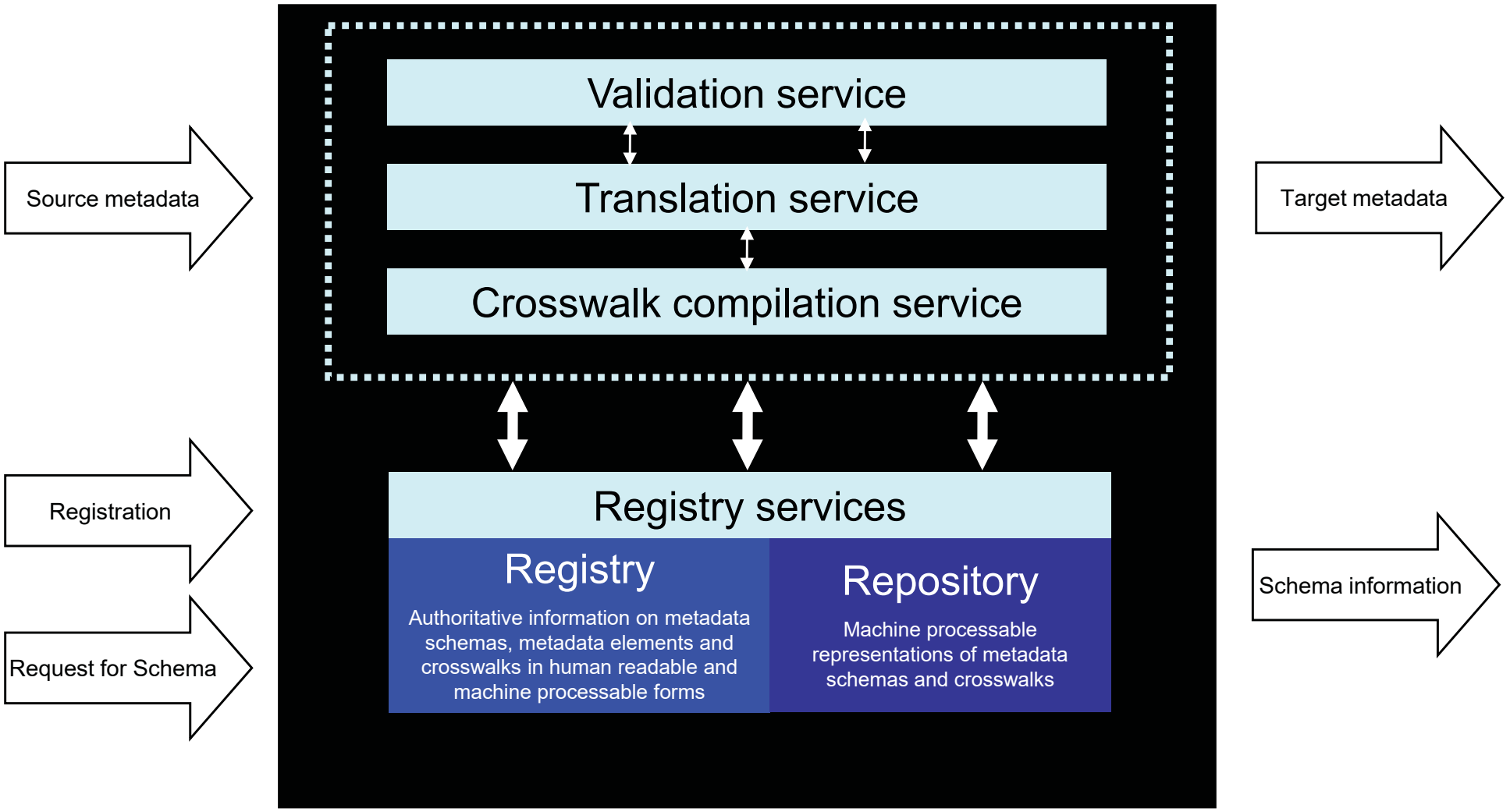


Web services and service oriented architectures

- **Constructing IT systems from re-usable components ('services') for greater flexibility, adaptability and interoperability**
- **Build enterprise systems from process rather than application-centric perspective**
- **Extend beyond the boundaries of the enterprise as necessary – shared services**
- **Becoming a practical reality through web services – lightweight communication and exchange protocols based around internet protocols**
- **Open systems, open standards, open communication protocols**



CRKM Metadata Broker



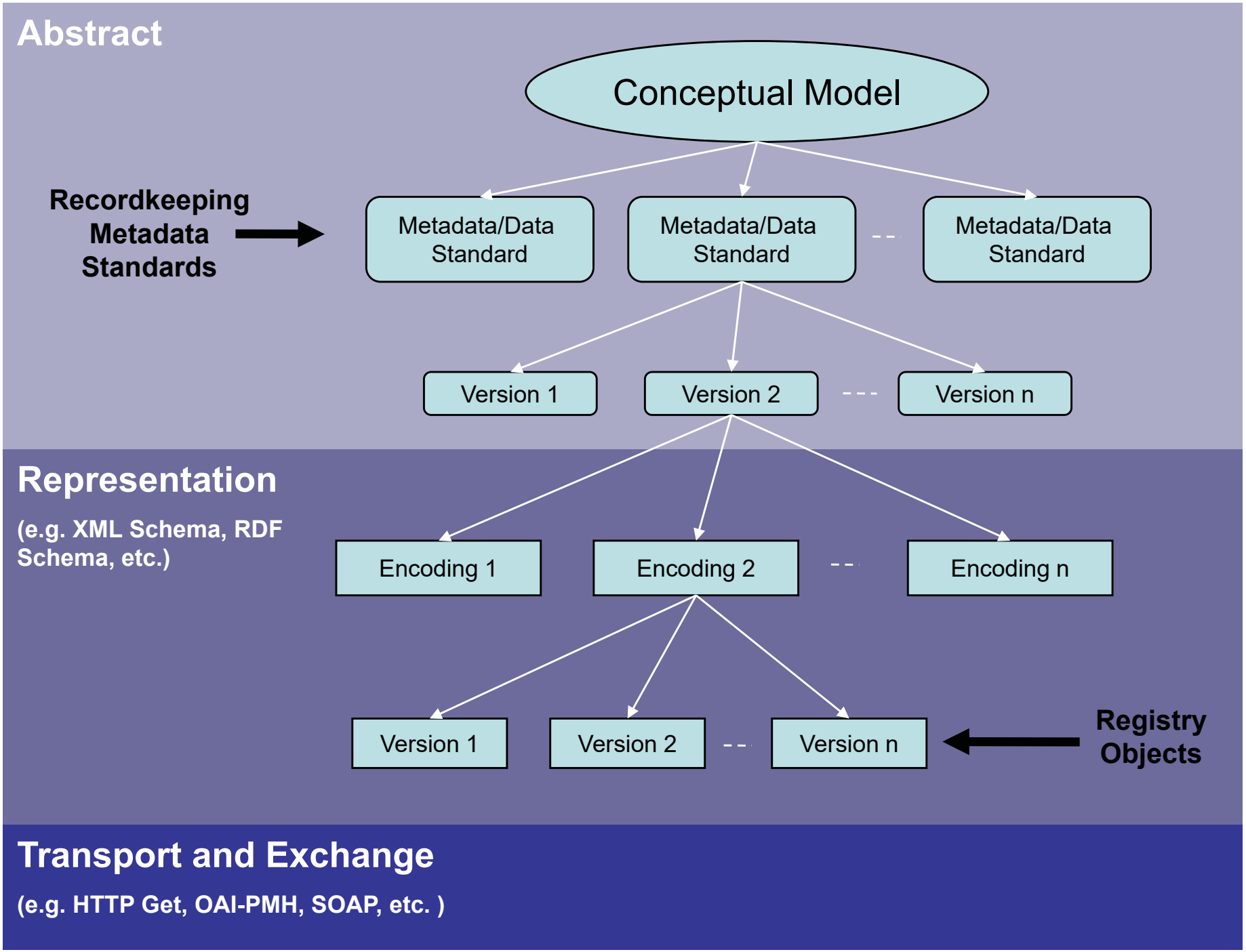
Designing for interoperability

- **Interoperability to permeate design and development processes**
- **Overcome siloed attitudes that optimise parts at the expense of the whole**
  - Exemplified in challenges 1 and 2 with multiple client data collection systems and multiple quality assurance frameworks
- **Address through challenge 4 and the development of a shared vision for interoperability**

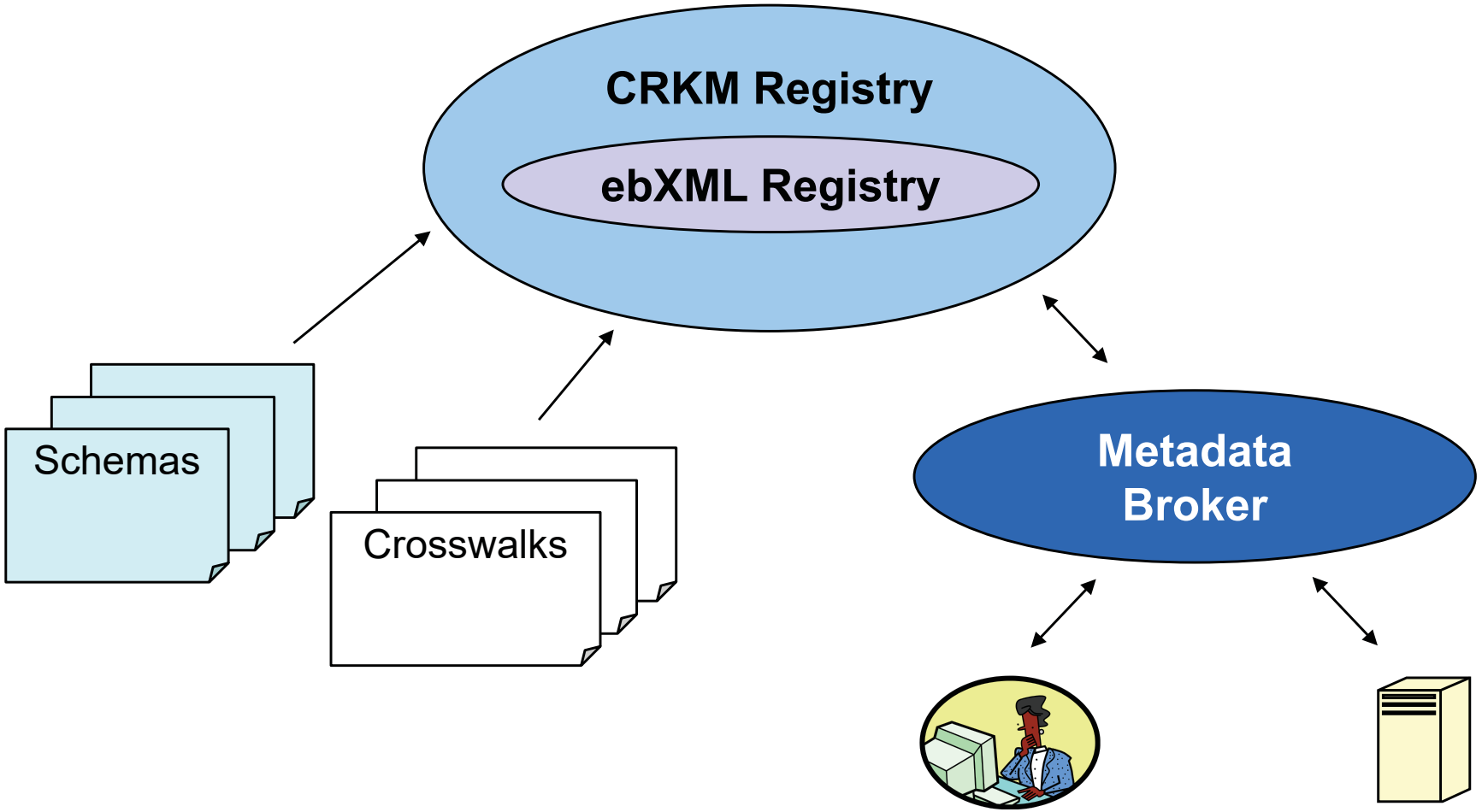
  '… *the rationale for interoperability is to permit greater service system integration and reduce the compliance burden in order to facilitate higher quality delivery of community services that are more responsive to existing and emerging community needs*.' (p. 6)

Designing for interoperability

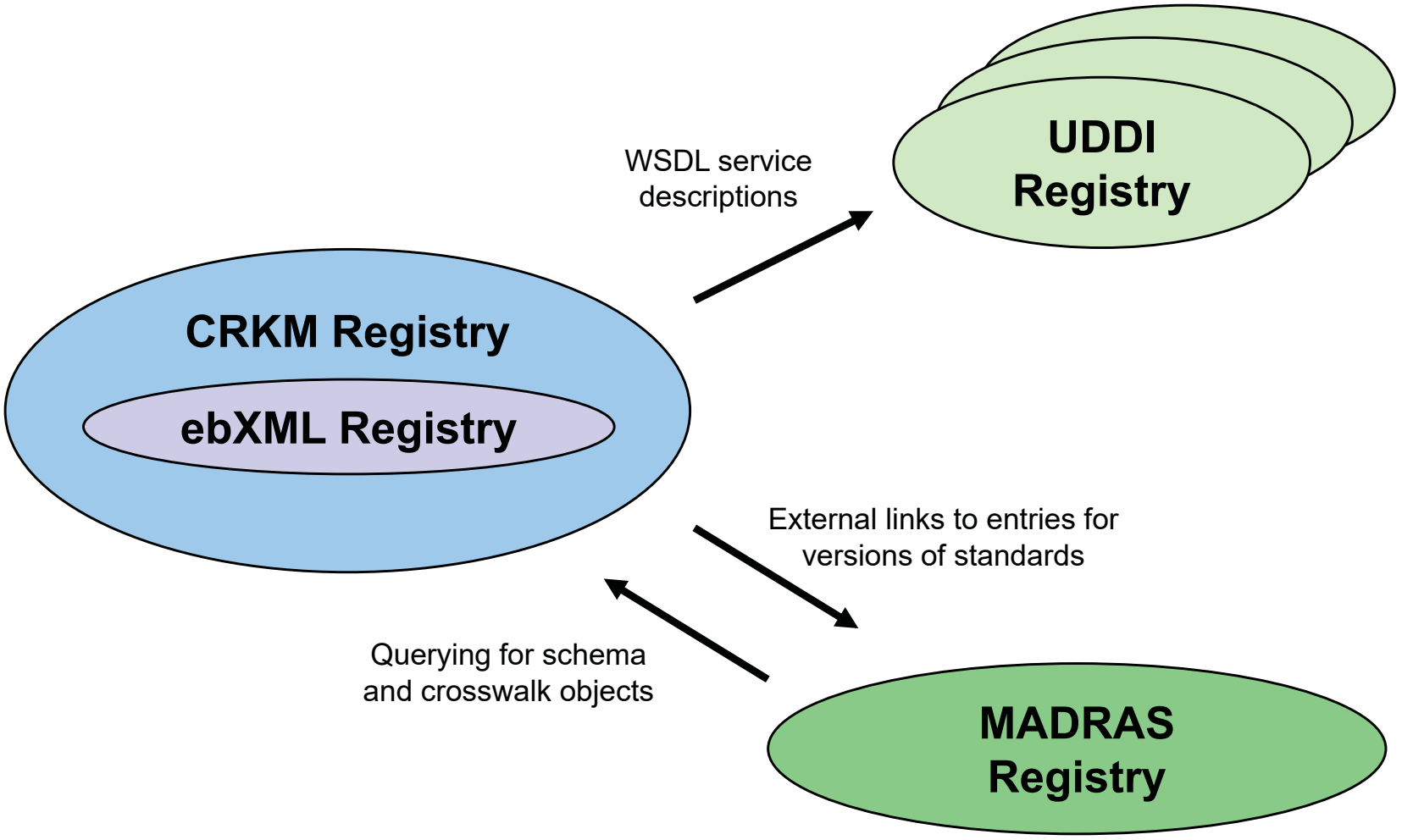
- **Understanding distinctions between:-**
  - Standards for compliance and standards for interoperability
  - Paper standards and digital standards
  - Current best practice standards versus standards for next generation models

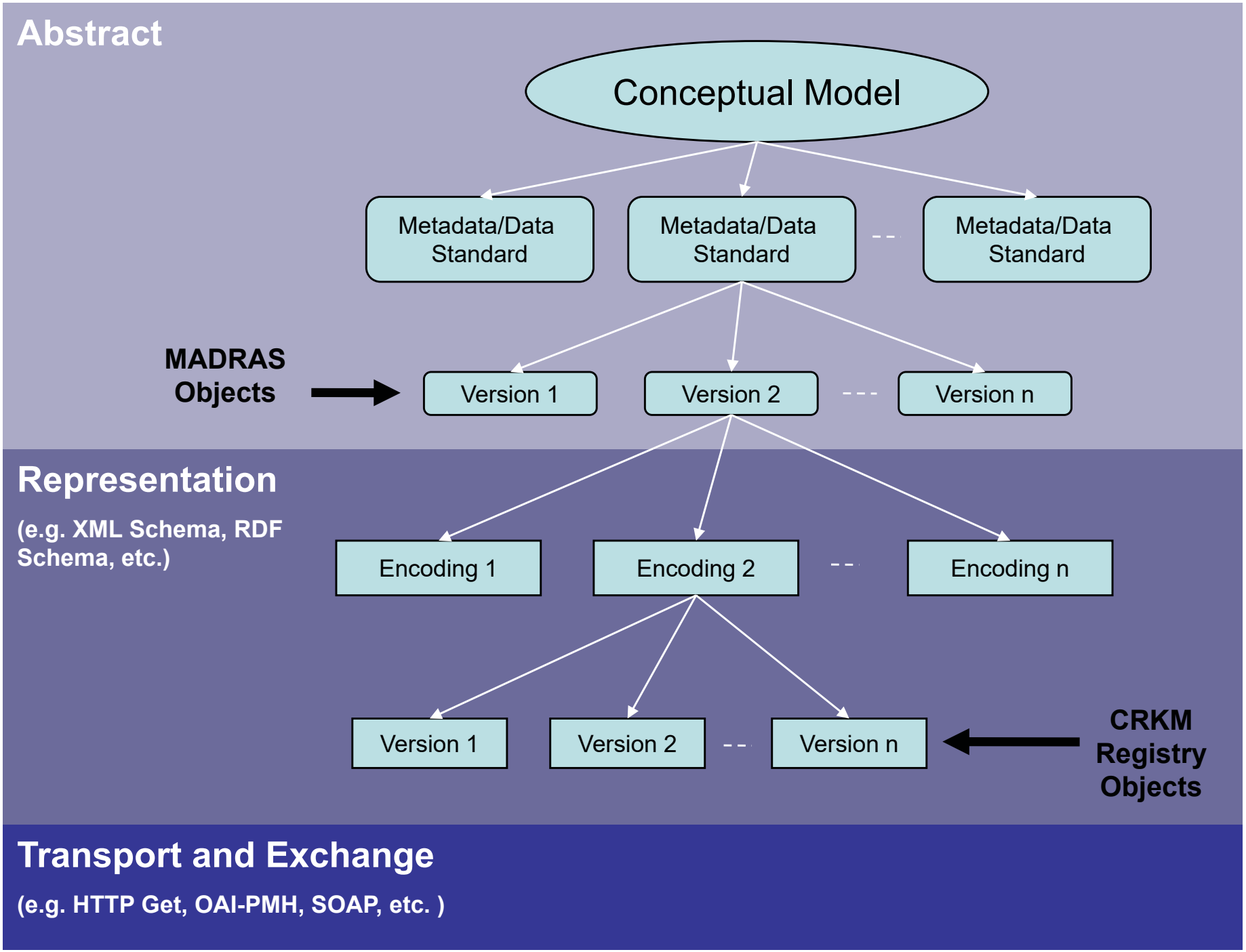

Abstract
Conceptual Model
Recordkeeping Metadata Standards
Metadata/Data Standard
Metadata/Data Standard
Metadata/Data Standard
Version 1
Version 2
Version n
Representation
(e.g. XML Schema, RDF Schema, etc.)
Encoding 1
Encoding 2
Encoding n
Version 1
Version 2
Version n
Registry Objects
Transport and Exchange
(e.g. HTTP Get, OAI-PMH, SOAP, etc.)

Sharing infrastructure



Sharing infrastructure (cont.)

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Conceptual Model
Metadata/Data Standard
Metadata/Data Standard
Metadata/Data Standard
MADRAS Objects
Version 1
Version 2
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Representation
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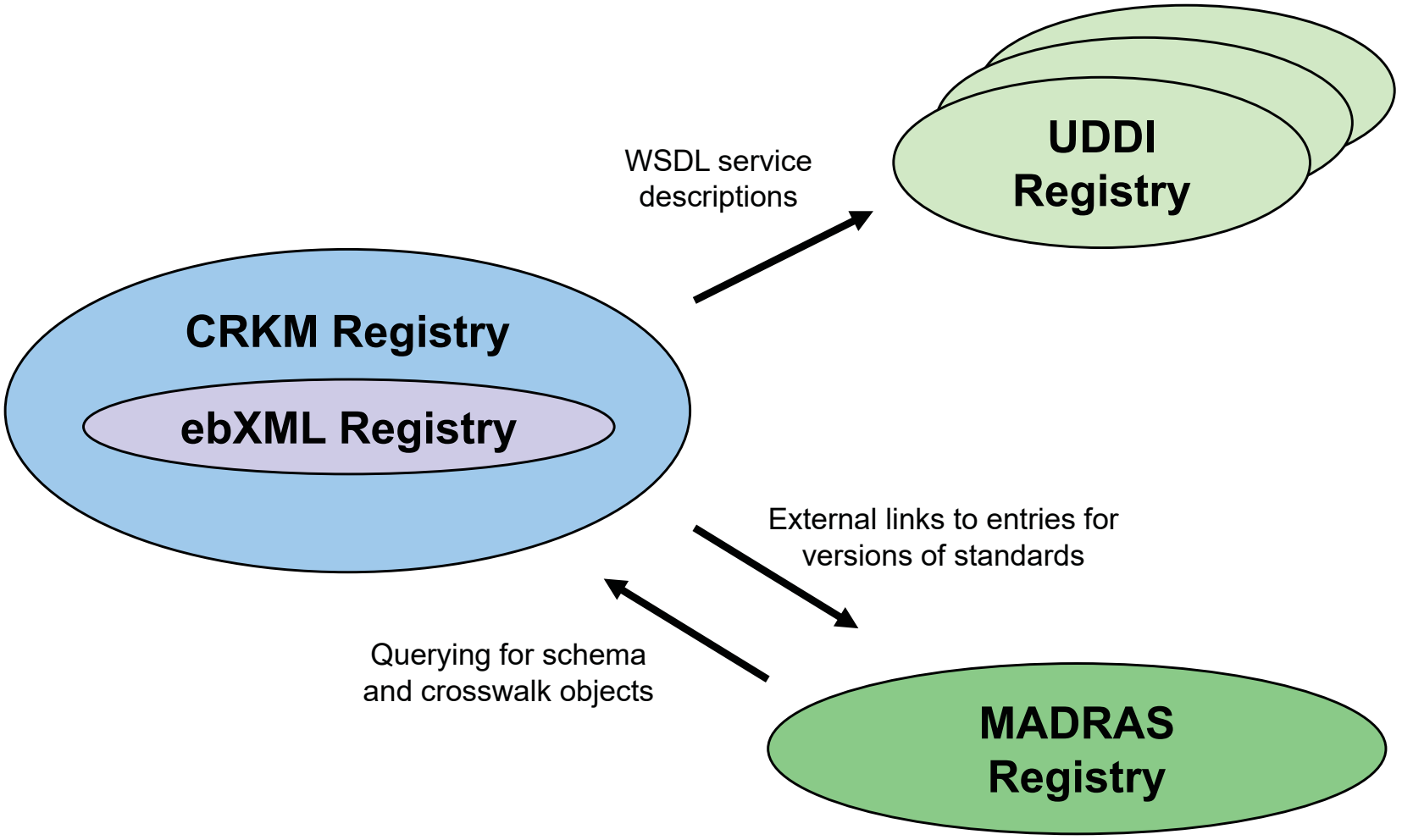
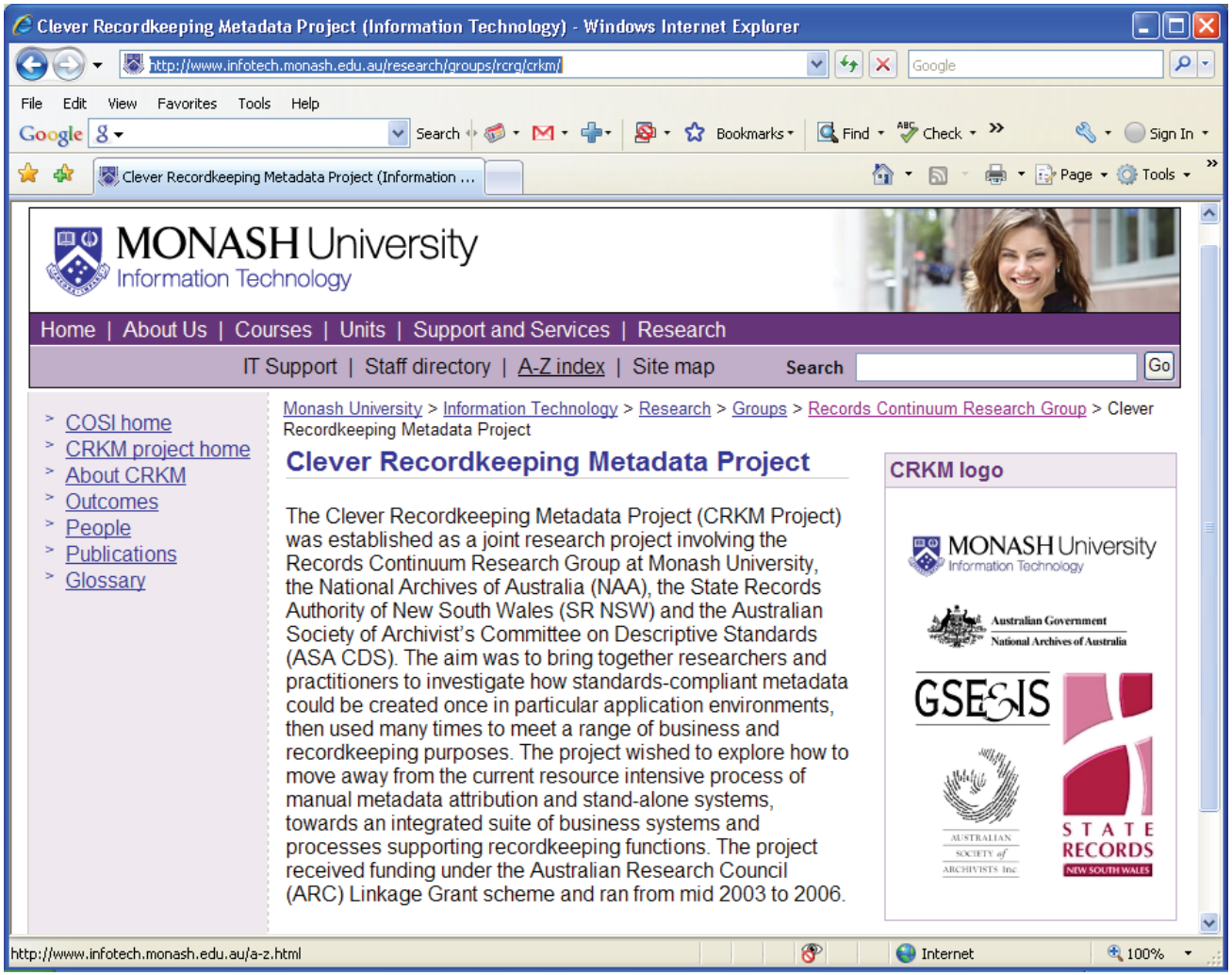


Pathways to interoperability

- **Iterative, agile, reflective research and development projects**
- **Design processes in which appropriate opportunities for the voices of direct and in-direct stakeholders to be heard**
- **Learn from failures as well as successes**



- http://www.infotech.monash.edu.au/research/groups/rcrg/crkm/