

Objectives

Technical

- A scalable and secure RDF (Resource Description Framework)-based Semantic Content Infrastructure (SCI)
- Optimal distribution of semantic content within an administrative domain
- Efficient notification system for distributed content changes
- Efficient search of semantic content based on applied taxonomy and folksonomy

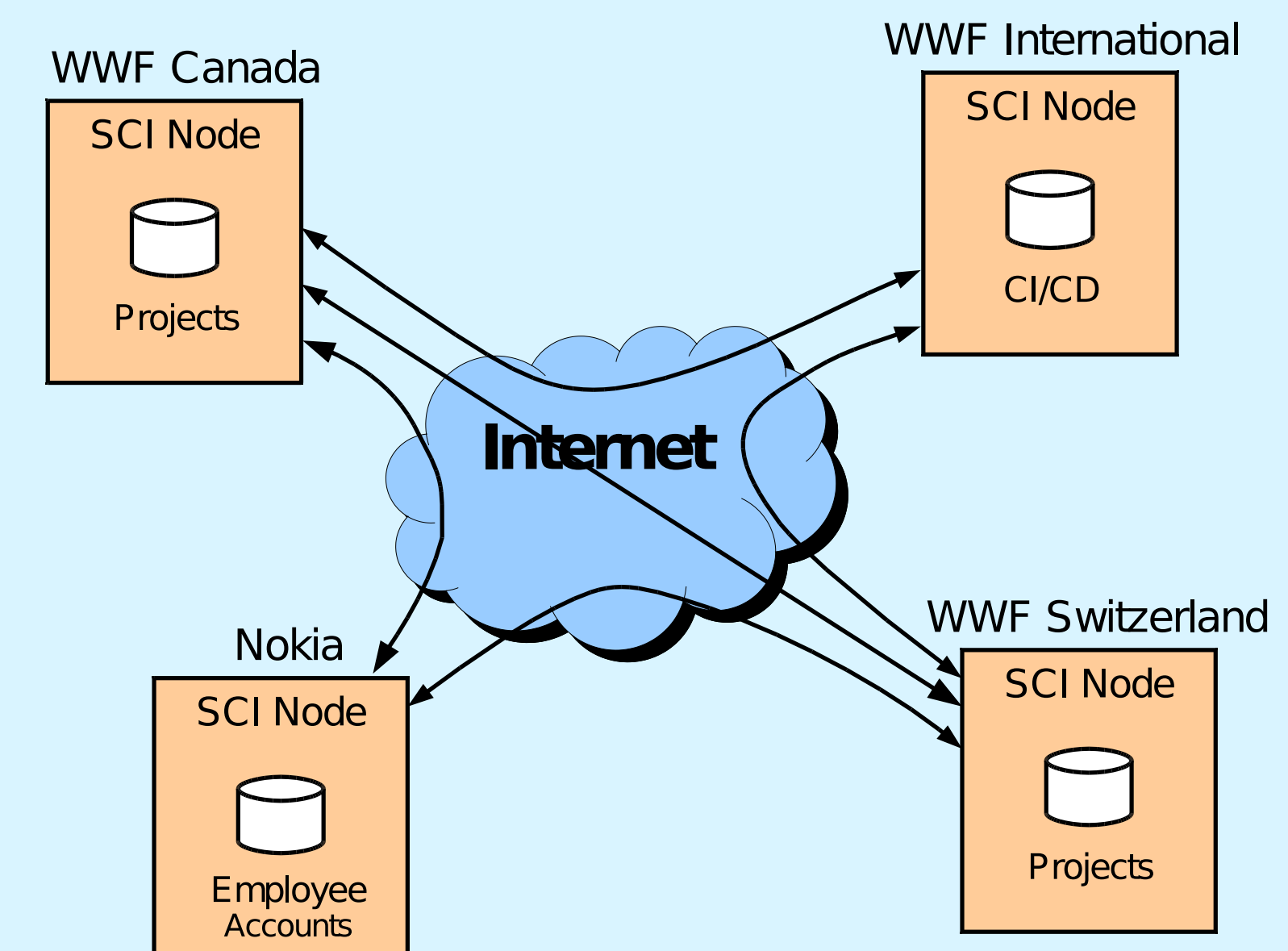
Business and Economic

- Deployment of SCI-based solutions within WWF (World Wide Fund For Nature) Network
- Disseminate SCI and SCI-based solutions, in particular through involvement of Open Source community
- Building up knowledge of cutting edge technology in Semantic Web

Project Partners

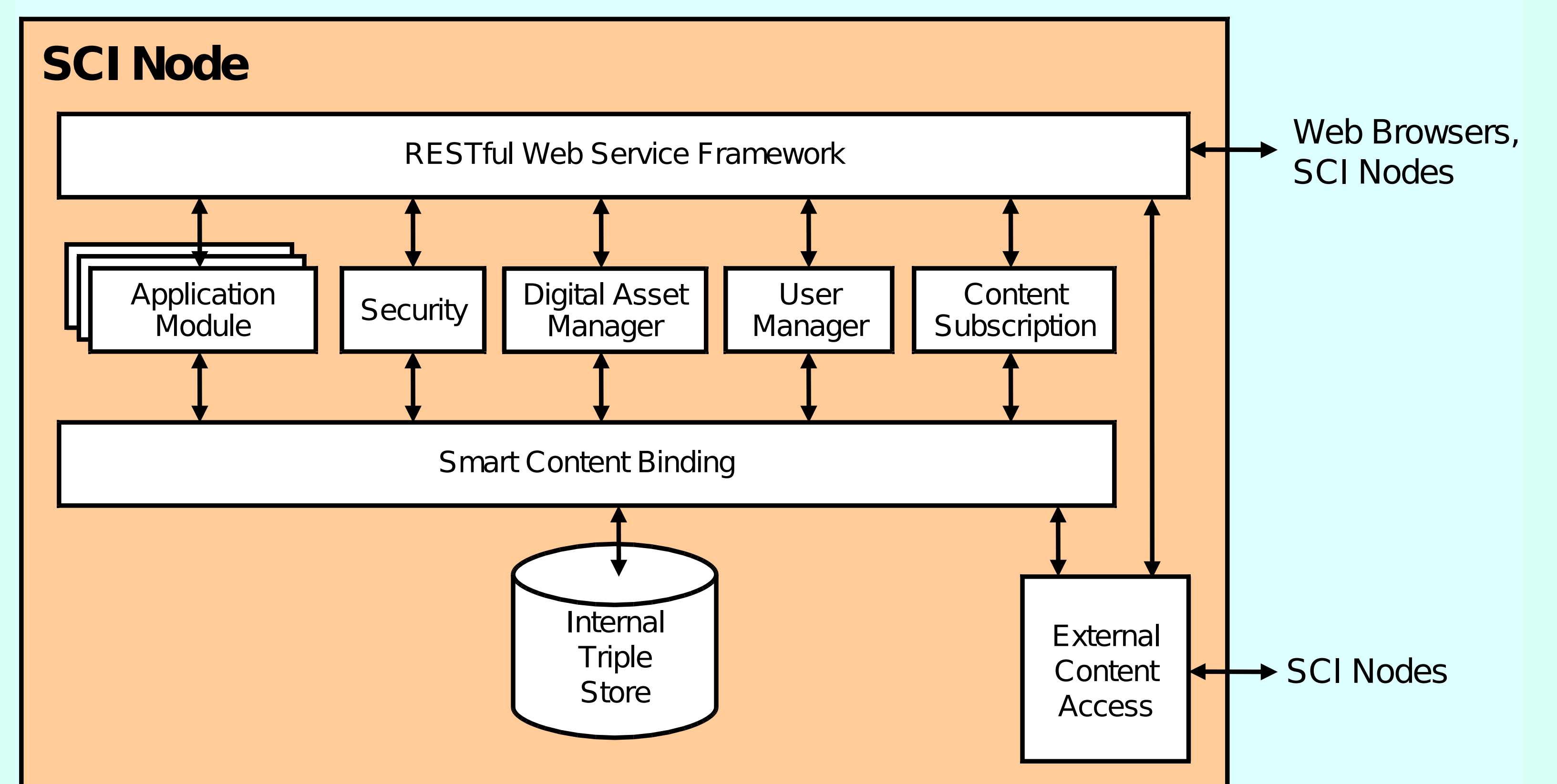
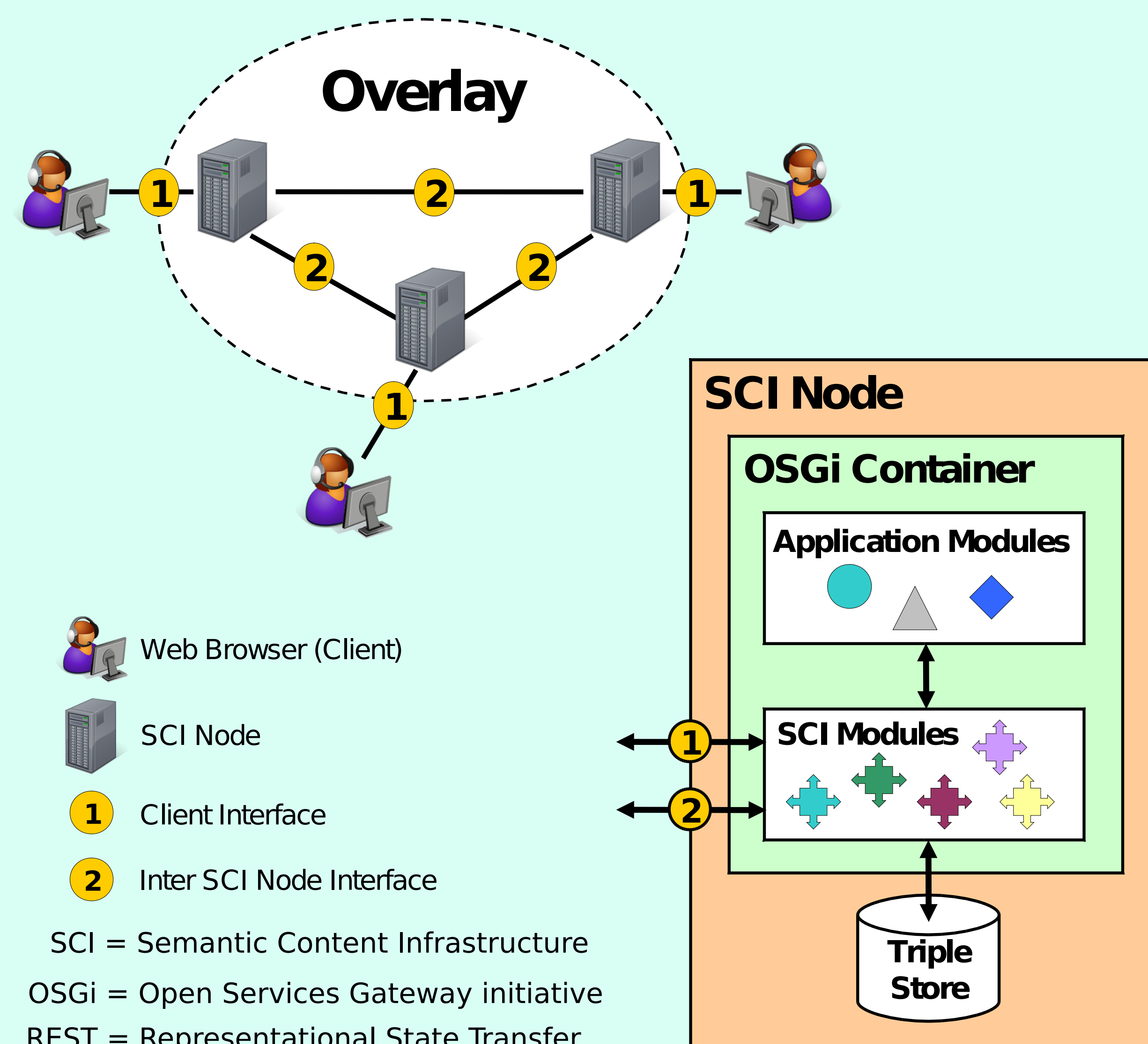


Scenario



- Co-operating organizations manage their own data and share them
- Data are semantically related through the use of common ontologies
- Access to data are secured through an authentication and authorization system

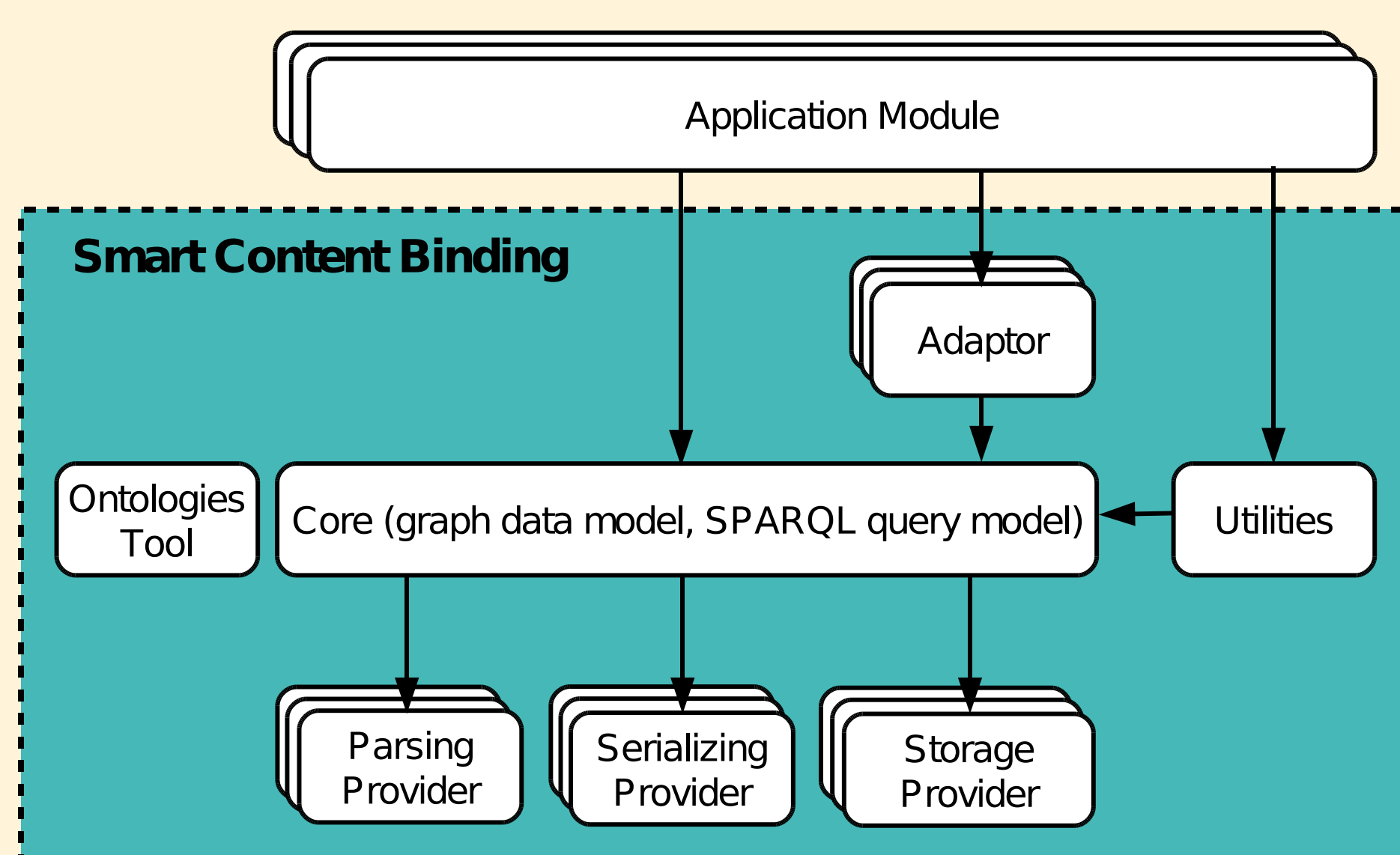
Architecture



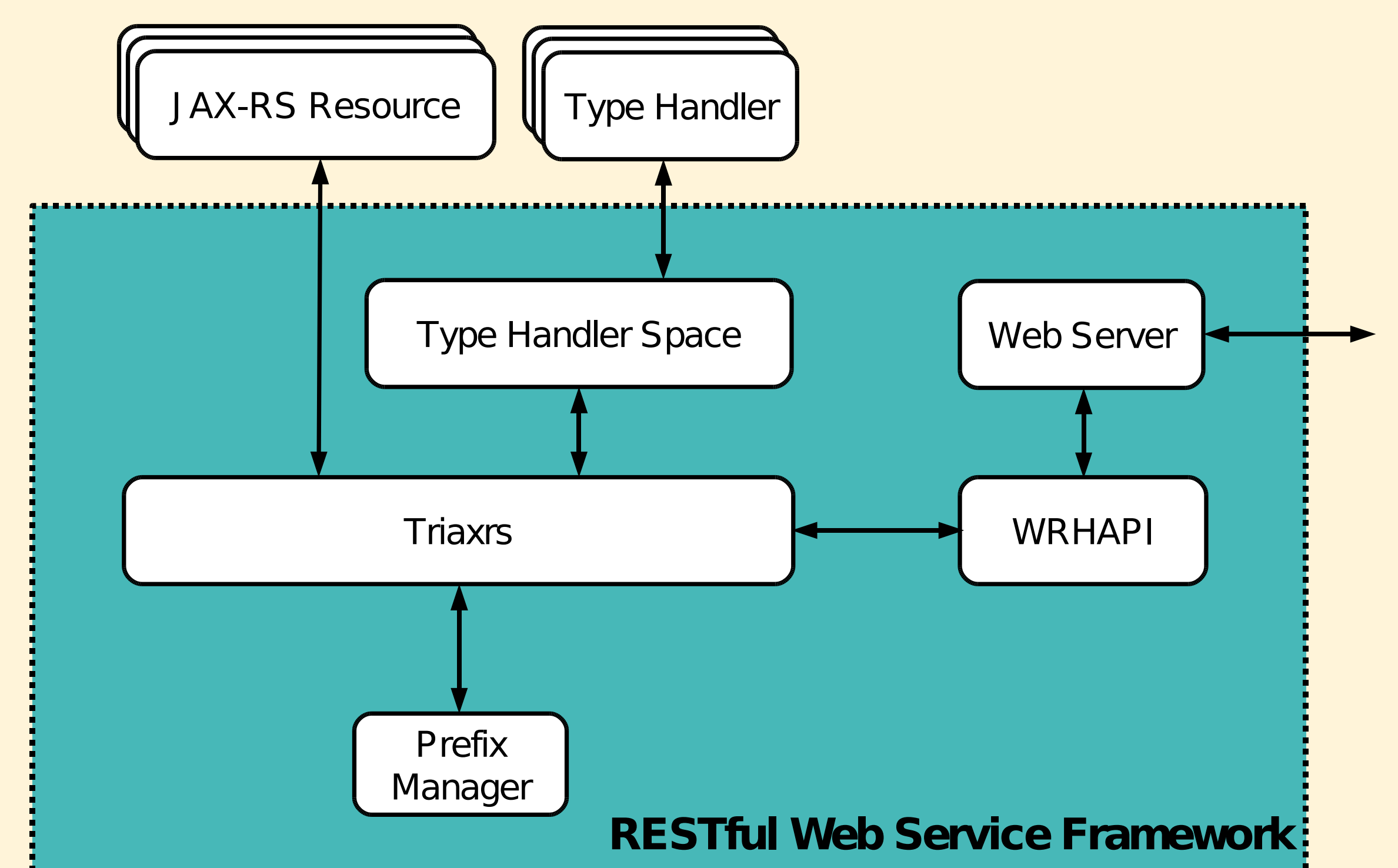
Approaches

Smart Content Binding

- A graph access layer independent of triple store technology used
- Graph data model based on W3C (World Wide Web Consortium) Resource Description Framework (RDF)
- Support the notion of mutable and immutable graphs
- Parsing and serialization of RDF graphs in various serialization formats
- Support of SPARQL (SPARQL Protocol and RDF Query Language) for content query
- Adaptors for supporting legacy modules which uses specific triple store Application Programming Interfaces (APIs)
- Support OSGi runtime environment



RESTful Web Service Framework



- Provide functionality for easy development of RESTful web services
- WRHAPI (Web Request Handler API): An API for handling web requests
- Triaxrs: Based on Java API for RESTful Web Services (JAX-RS) specification
- Prefix Manager: Definition of path prefix for bundle resources
- Type Handler: Handling of Web requests on resources of a specific RDF type
- Support OSGi runtime environment