



Networking Knowledge Organization Systems to Support Regulatory Activities

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Navigators in a Sea of Data

The opinions expressed are solely mine and do not reflect those of the US Environmental Protection Agency or any of its employees.

Regulated
Facilities

Information Systems

Data El

Services

Chemical



Organisms

Dataset Descriptions

EPA Semantic Resources from System of Registries
(www.epa.gov/sor)

Regulatory Information Challenges

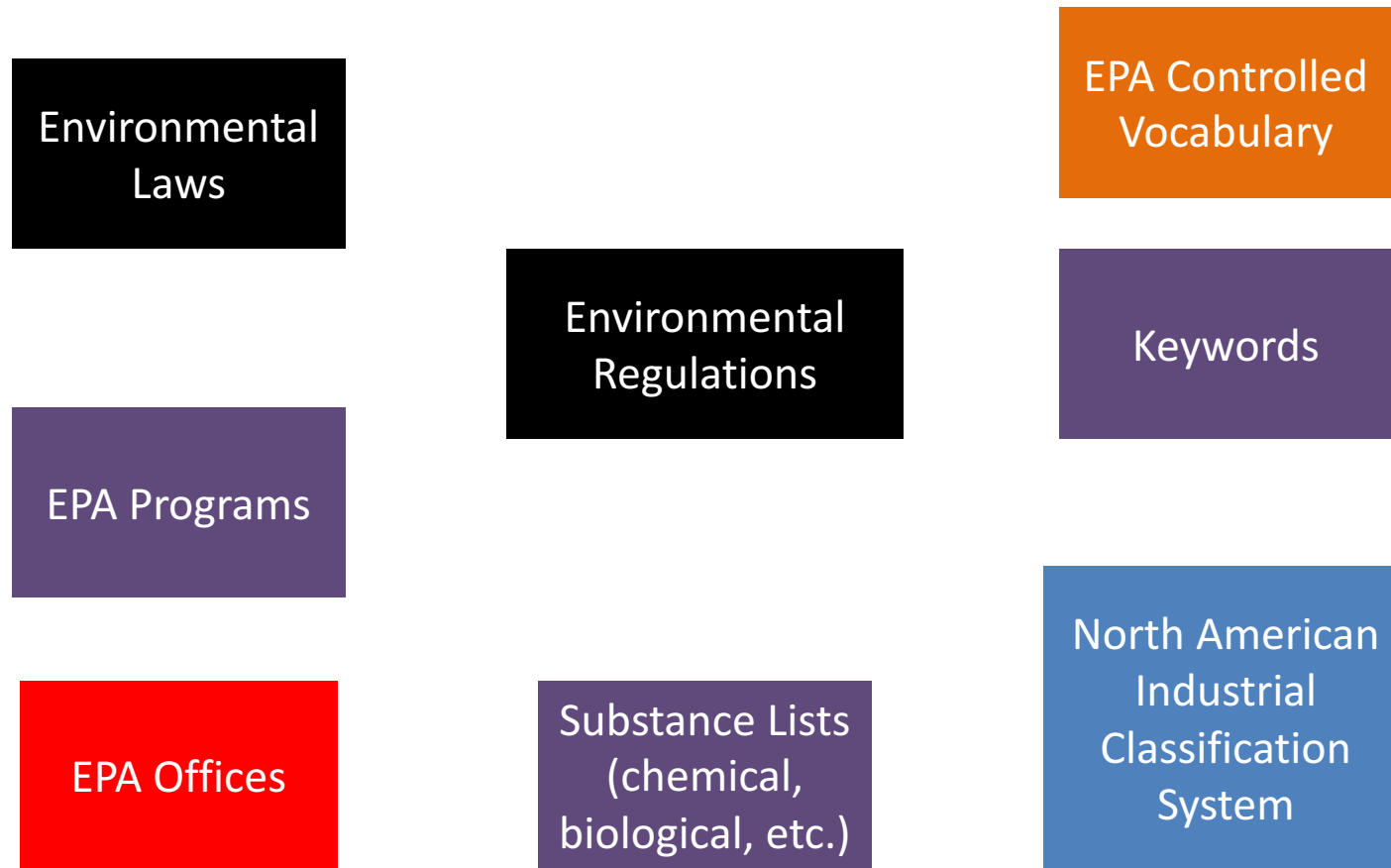
- Information builds on previous information
- Numerous activities and documents in the regulatory workflow
- Change is hard to anticipate
- Regulations may be rescinded or superseded
- Minor changes can have major impacts
- Some regulations are by industry, others by process, chemicals or emission levels
- Regulatory ecosystem involves multiple levels of government



Laws and Regulations Services (LRS)

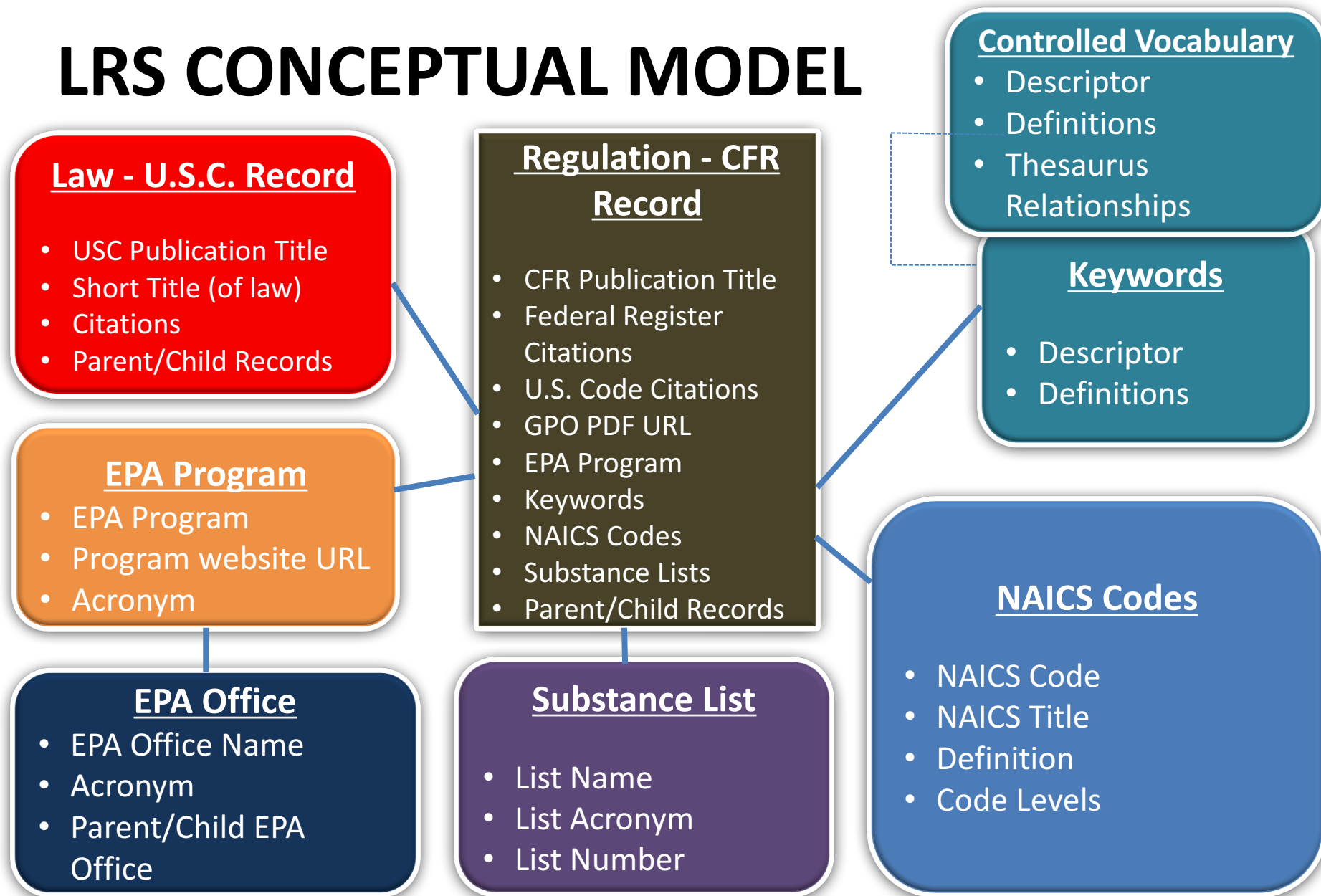
- Provide authoritative content to support businesses in identifying EPA regulations and the programs which affect them
- Currently no system that systematically connects laws, regulations and EPA programs
- Create efficiencies for regulated entities
- Provide useful access to information for EPA partners
- An initiative of EPA's Office of Information Management
- Content built using Synaptica KMS

LRS Objects Span KOS Spectrum

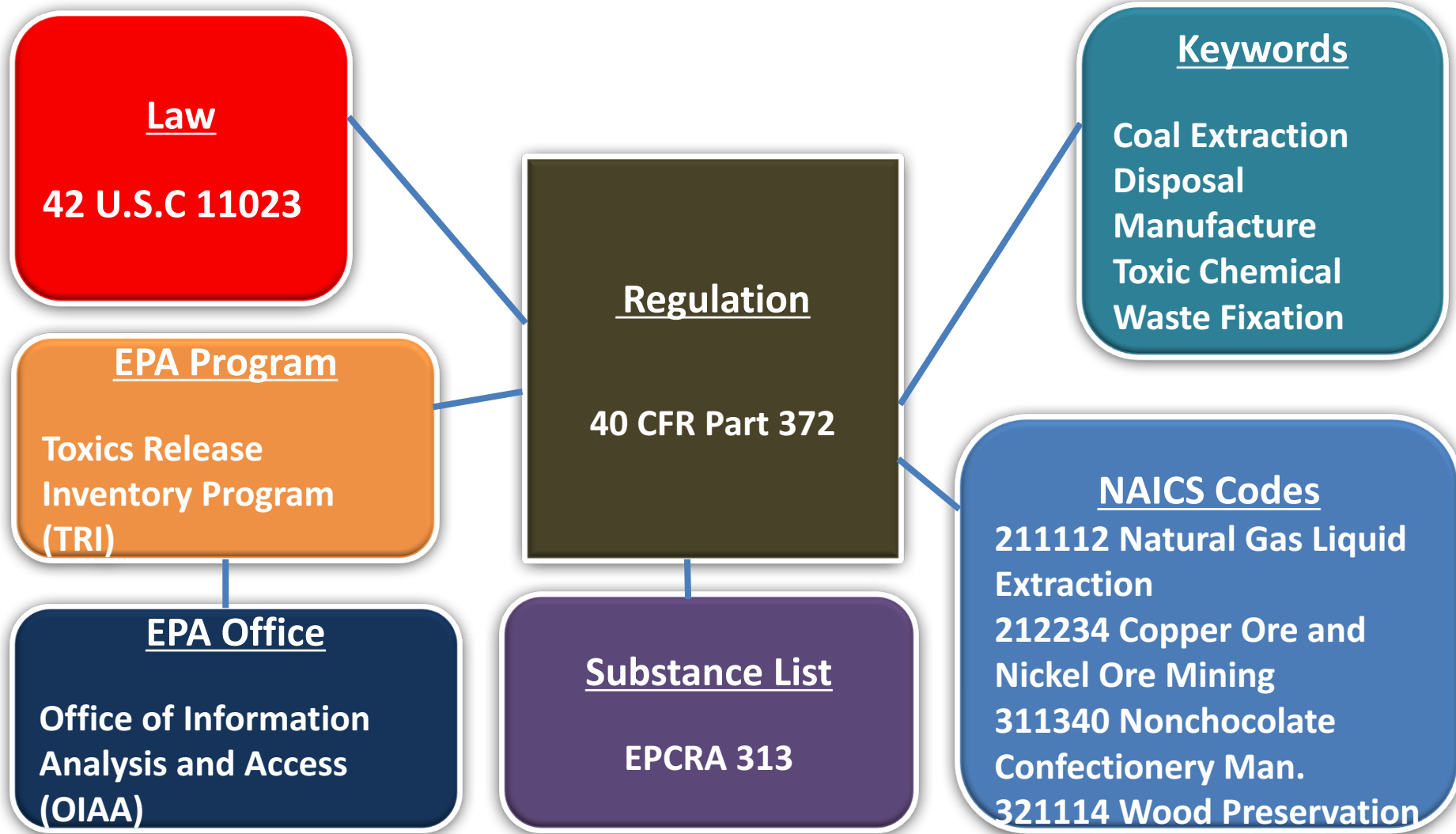


Purple = Simple List; Red = Simple Hierarchy; Black = Simple Hierarchy with extensive metadata; Blue = Classification Scheme; Orange = Thesaurus

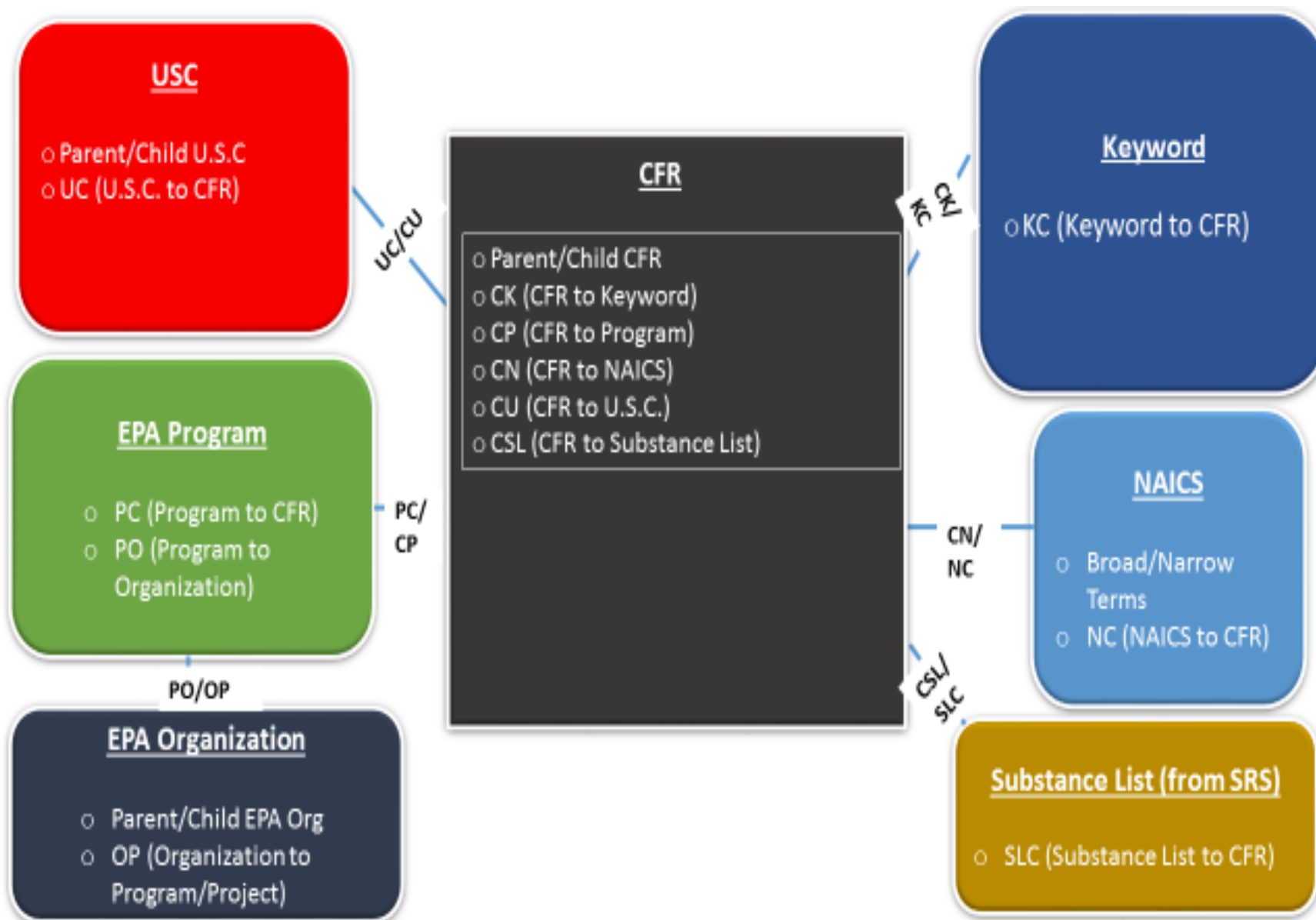
LRS CONCEPTUAL MODEL



LRS EXAMPLE



KOS Relationships



Networking the KOSs

- Terms in KOSs linked with special relationship types
- In an application, most content is accessed through web services or API calls
- Increased flexibility and ease of adding information (internal and external)
 - GPO URLs for full text of a regulation;
 - GPO's Federal Register APIs for historic and new FR notices;
 - EPA's Substance Registry web service for all chemicals on a list

Status

- LRS used in Reg Finder pilot developed as one of EPA's E-Enterprise projects
- Aimed at small to mid-sized chemical manufacturers
- Provides access to U.S.C. and CFR citations, popular names for laws, and chemical names and CAS numbers
- Pilot is still under internal evaluation
- From the content standpoint, continue to enhance LRS:
 - Adding more NAICS-CFR relationships
 - Relating process keywords to NAICS

Extended Applicability

- Potential model for other regulatory information
- Use of Terminology Management System to link different KOS types
- Does not rely on an interface to bring the information together
- Networked resource to support multiple applications and different interfaces for different user communities

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