

# FEA & ECM

Federal Enterprise Architecture &  
Enterprise Content Management

Content Technologies for Government

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# The FEA is...

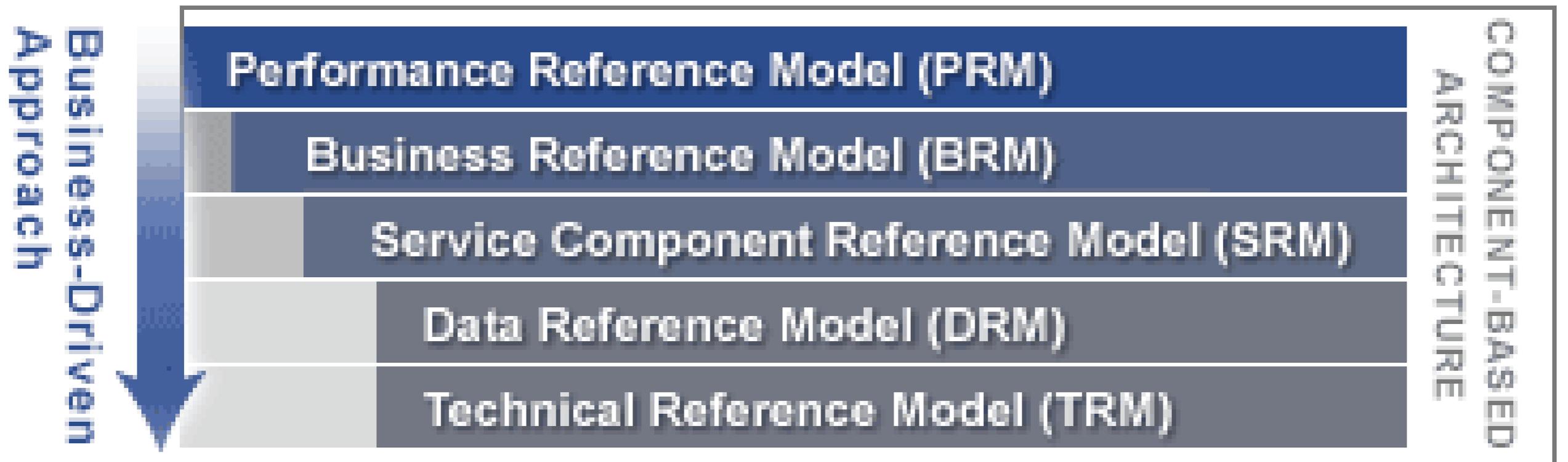
- an IT planning tool
- for the entire federal government
- to enable cross-agency analysis
- to identify redundancies, gaps, and opportunities for collaboration between agencies.

# The FEA is...

- business-driven,
- meaning that it is concerned with efficiency and effectiveness,
- and organized around 'Lines of Business'
- (which are essentially business functions).

# The FEA is...

- composed of 5 inter-related reference models:



# A 'reference model' is...

- a framework for describing and working with a domain.
- Most of the FEA reference models are **taxonomies**:
- hierarchical lists of categories.

# ECM and the FEA

There is no FEA reference model for **content**.

However...

- Business Reference Model (BRM) is a **top-level taxonomy** for categorizing the functional domain of everything in government
- Data Reference Model (DRM) deals with the categorization, discovery, and use of **unstructured data** (i.e. documents and other content)
- Service Components Reference Model (SRM) deals with all **horizontal services** (e.g. document categorization or records imaging)

# ECM and the FEA

**BRM**

Business Reference Model

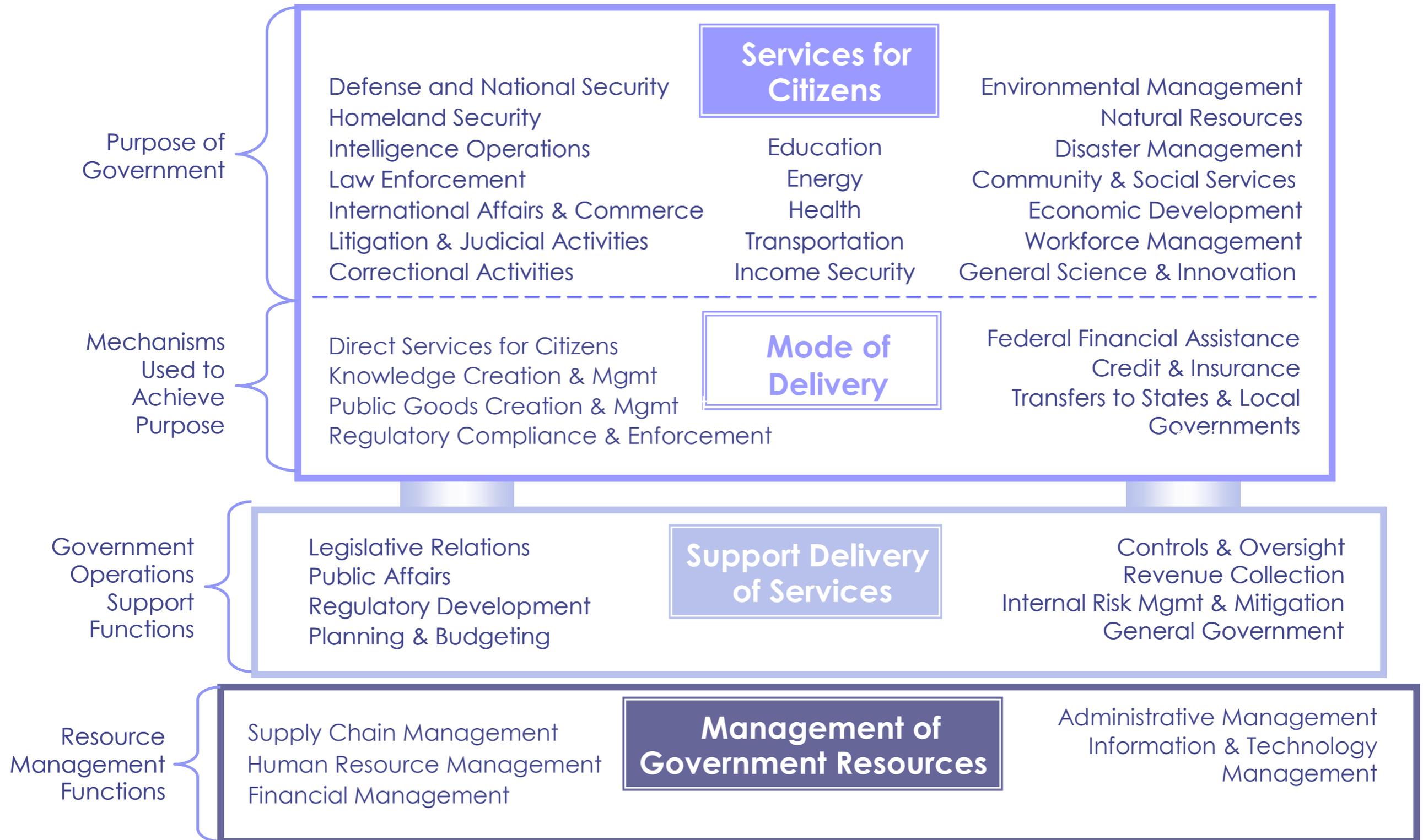
**DRM**

Data Reference Model

# The BRM is...

- the business-based anchor for the FEA;
- a high-level taxonomy of all government functions.
- It is functional, not organizational.
- It identifies Lines of Business that the federal government conducts, regardless of which agency conducts them.

# Business Reference Model



# Business Reference Model

- Mission
- Mode of Delivery
- Mission Support
- Resource Management

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Every agency  
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sets of functions

# Business Reference Model

- Mission

- e.g. Public Affairs; Legal Services

- Mission Support

- Resource Management

Every agency  
conducts these two  
sets of functions

e.g. Human Resources; Financial Mgmt.

# Business Reference Model

- Mission
- Mode of Delivery

Each agency has a different combination of these functions

- Mission Support
- Resource Management

# Business Reference Model

e.g. Disaster Management; Law Enforcement

- Mission
- Mode of Delivery

Each agency has a different combination of these functions

e.g. Regulatory Compliance and Enforcement

- Resource Management

# Business Reference Model

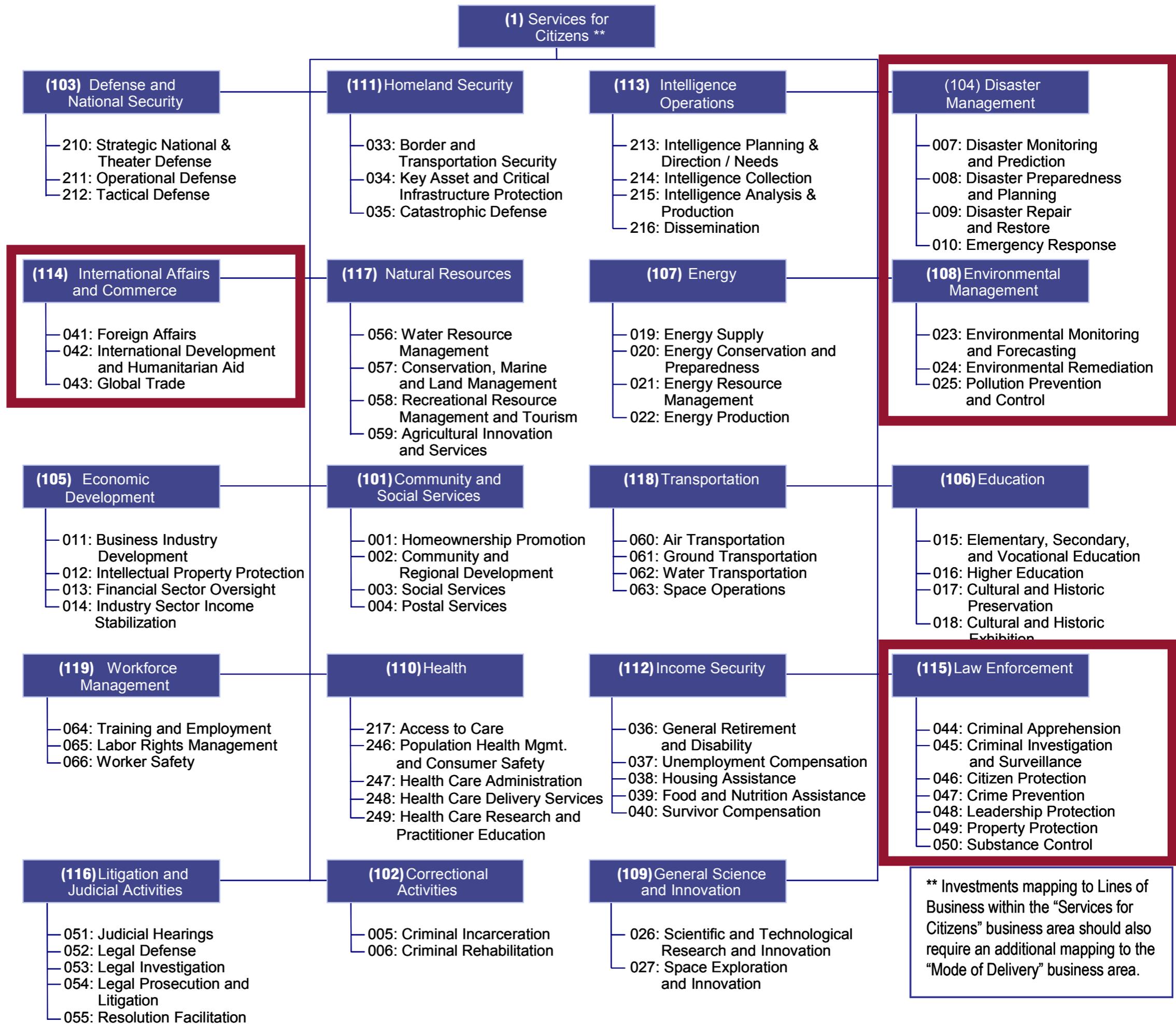
- Mission
- Mode of Delivery

“Unique”

- Mission Support
- Resource Management

“Common”

# EPA





## (4) Management of Government Resources

### (403) Human Resource Management

- 250: HR Strategy
- 251: Staff Acquisition
- 252: Organization and Position Management
- 253: Compensation Management
- 254: Benefits Management
- 255: Employee Performance Management
- 256: Employee Relations
- 228: Labor Relations
- 257: Separation Management
- 258: Human Resources Development

### (405) Supply Chain Management

- 143: Goods Acquisition
- 144: Inventory Control
- 145: Logistics Management
- 146: Services Acquisition

### (404) Information and Technology Management

- 136: System Development
- 137: Lifecycle/Change Management
- 138: System Maintenance
- 139: IT Infrastructure Maintenance
- 140: Information Systems Security
- 141: Record Retention
- 142: Information Management

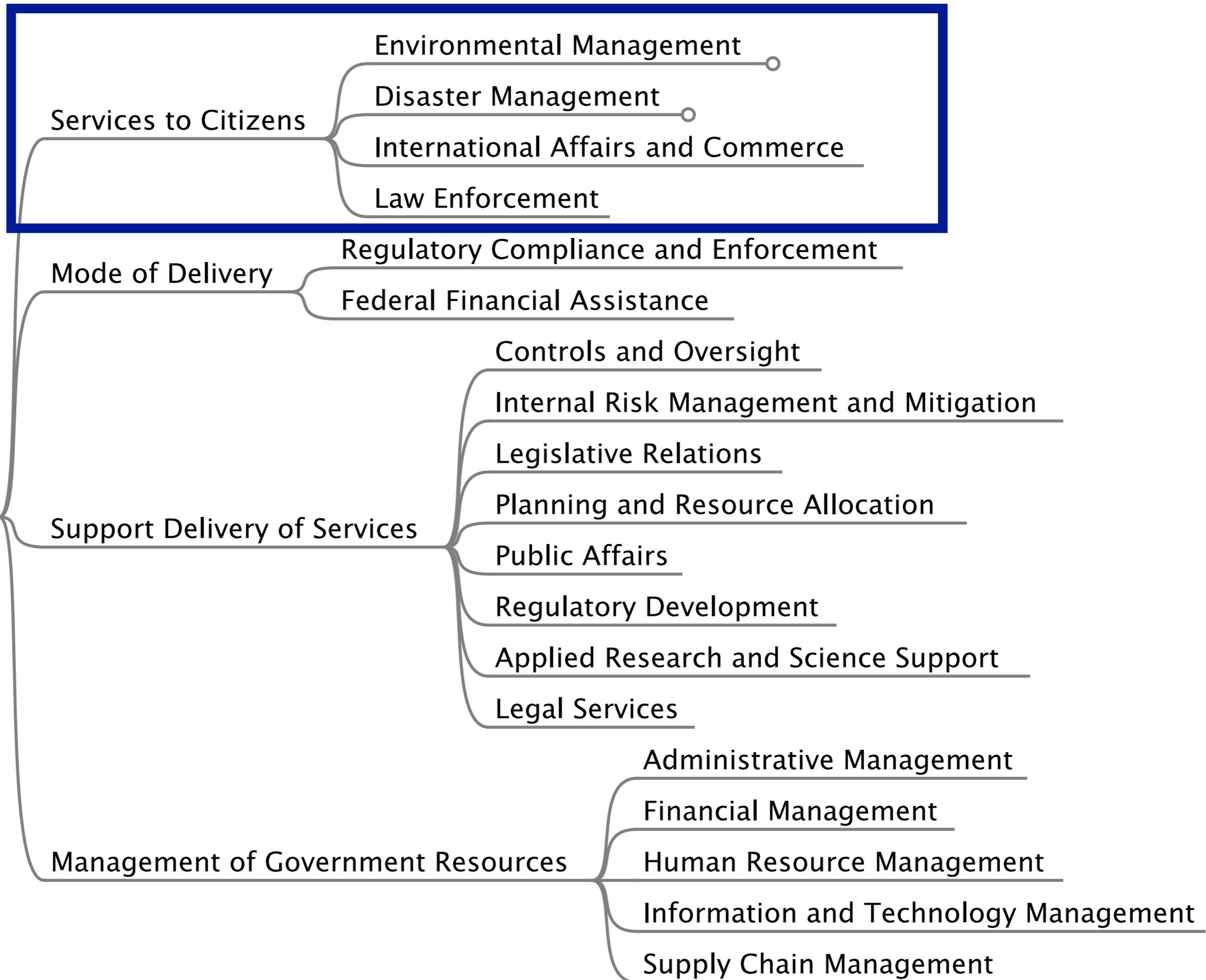
### (401) Administrative Management

- 119: Facilities, Fleet and Equipment Management
- 120: Help Desk Services
- 121: Security Management
- 122: Travel
- 123: Workplace Policy Development and Management

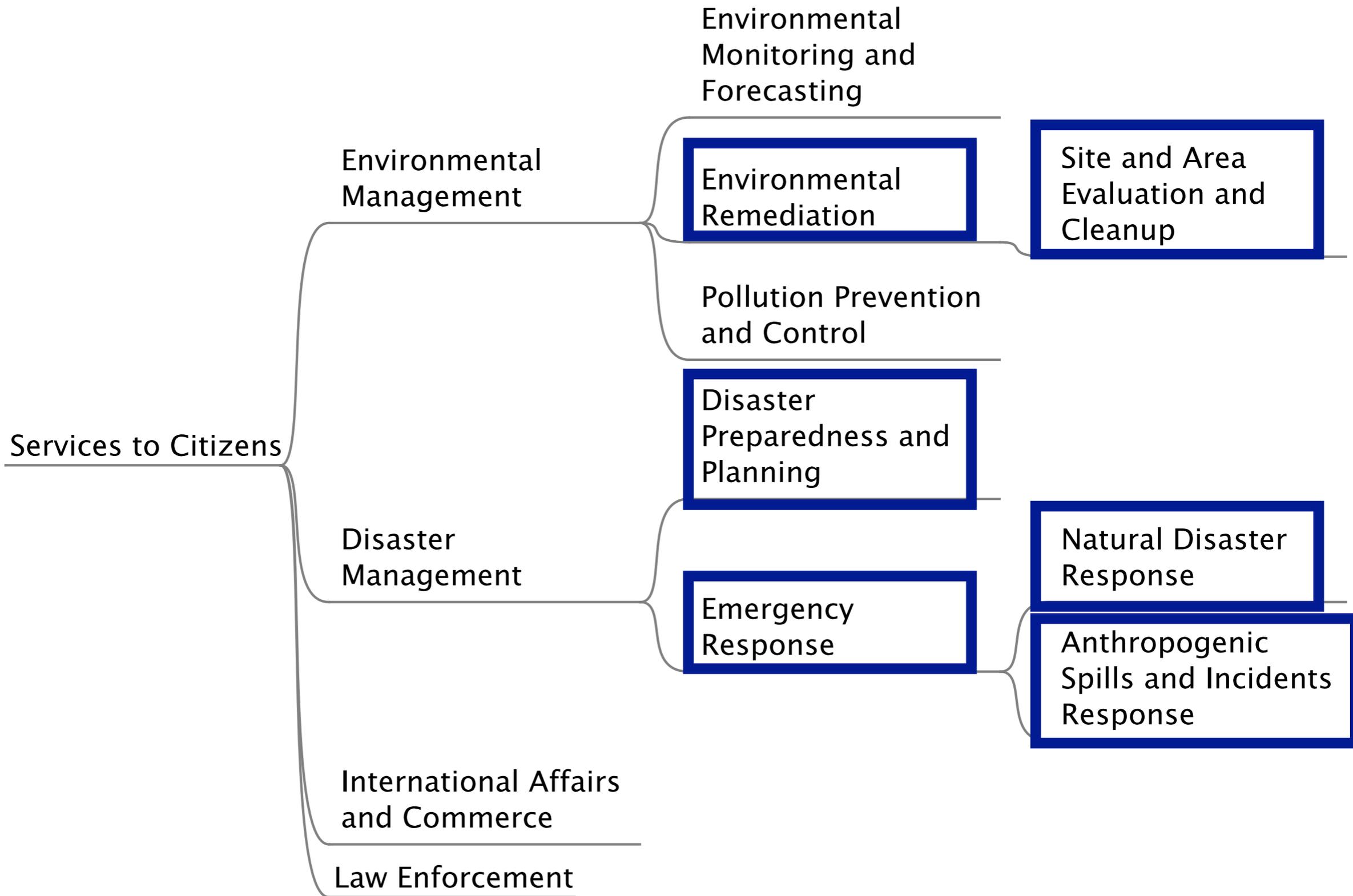
### (402) Financial Management

- 124: Accounting
- 125: Funds Control
- 126: Payments
- 127: Collections and Receivables
- 128: Asset and Liability Management
- 129: Reporting and Information
- 261: Cost Accounting / Performance Measurement





# EPA Office of Solid Waste and Emergency Response



includes “Superfund” and “Brownfields” programs

# How to use the BRM taxonomy for ECM:

- The BRM is a comprehensive taxonomy of business functions,
- common across all agencies,
- with each agency making its own higher-granularity refinements.

# BRM for ECM at EPA



- **Records Management:**  
BRM as the top-level file plan
- **Process Management:**  
BRM as the top-level workflow structure

# BRM in Records Management

- Relevant subset of BRM is basis for file plan
- Records retention schedules mapped to BRM-based file plan
- Logical implementation within ECM solution, tied to DoD5015.2-certified life-cycle management

# BRM in Business Process Reengineering

- Full business process documentation, building down from BRM to workflow level
- Direct agreement with agency Enterprise Architecture, IT funding and systems stewardship
- Systematic agreement with BRM-based records solution, so records capture and indexing simplified

# Issues with using the BRM

- Lack of granularity
- Little guidance on semantic metadata
- May not match existing agency taxonomies
- May not match agency Public Affairs terminology

# ECM and the FEA

**BRM**

Business Reference Model

**DRM**

Data Reference Model

# The DRM is...

- a common framework to describe, categorize and share data.
- This should simplify collaboration between agencies, and
- enable cross-agency systems.

# The DRM has 3 Parts

- **Data Description**

Provides a means to uniformly describe data, thereby supporting its discovery and sharing.

- **Data Context**

Facilitates discovery of data through an approach to the categorization of data according to taxonomies, including the BRM.

- **Data Sharing**

Supports the access and exchange of data where access consists of ad-hoc requests (such as a query of a data asset), and exchange consists of fixed, recurring transactions between parties. Enabled by capabilities provided by both the Data Context and Data Description standardization areas

# A simple example: Data Description

- valid vCard address
- valid XHTML

```
<address class="vcard">  
<a class="fn url" href="http://thedredge.org">Andy Hume</a>  
<span class="email">andyhume@thedredge.org</span>  
<span class="org">The Dredge</span>  
<span class="title">Web Developer</span>  
<span class="bday">1980-01-20</span>  
<span class="adr">  
<span class="street-address">34 Arnison Road</span>  
<span class="locality">London</span>  
<span class="postal-code">KT8 9JP</span>  
</span>  
<span class="tel">07957 208843</span>  
</address>
```

# A simple example: Data Context

- BRM categorization
- valid XML

```
<drm:Taxonomies>
  <drm:Taxonomy rdf:id="#BRM_EPA_Refinements">
    <drm:Nodes>
      <drm:Node rdf:id="#104-010-01" drm:nodeType="collection">
        <drm:NodeName>Natural Disaster Response</drm:NodeName>
      </drm:Node>
    </drm:Nodes>
  </drm:Taxonomy>
</drm:Taxonomies/>
```

# How to use the DRM model for ECM:

- **Description:**
- Create and adopt microformats
- Register and harmonize internal schemas
- **Context:**
- Adopt the BRM taxonomy
- Register and harmonize internal taxonomies

# Issues with the DRM

- Flexibility may lead to lack of standardization
- Vendor dependencies
- Unresolved differences between human search and machine discovery

# Conclusions

- FEA provides a useful framework for some ECM activities
- BRM, in particular, is a useful taxonomy for classifying records and for organizing workflow
- DRM machine-to-machine applications will outstrip human search interfaces, but the model is still quite useful for the long-term

# Questions?

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