

My Two Cats Are a Community of Interest

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Outline



- **History**
- **Current situation**
- **Proposed direction**

History of COIs

- DoD Data Admin program, 1991-2000
- Data Interoperability Rapid Improvement Team, 2000
- AF SAB “Database Migration” study, 2001
- DoD Data “Broad Area Review”, 2002
- Net-Centric Data Strategy, 2003
- AF Information and Data Management Strategy, 2004
- IT Portfolio Management, 2004
- OSD(NII) COI Pilots, 2005
 - C2 Space Situational Awareness
 - Blue Force Tracking
 - Maritime Domain Awareness

Three “Correct” Meanings of “COI”

■ Vocabulary COI

- People who have a common vocabulary for their domain
- Deliberate vocabulary creation/teaching effort
- Data standards consortia

■ Sharing COI

- People who are actually sharing data with each other
- Real producers, real consumers

■ Proponent COI

- People who want a new/improved sharing capability
- Not the people who develop or know the vocabulary
- Not the people who actually produce or consume data
- People with authority and money

Useful Common Elements

- COIs solve a data-sharing problem
- COIs *per se* don't do anything; their members do

Proposed Definition

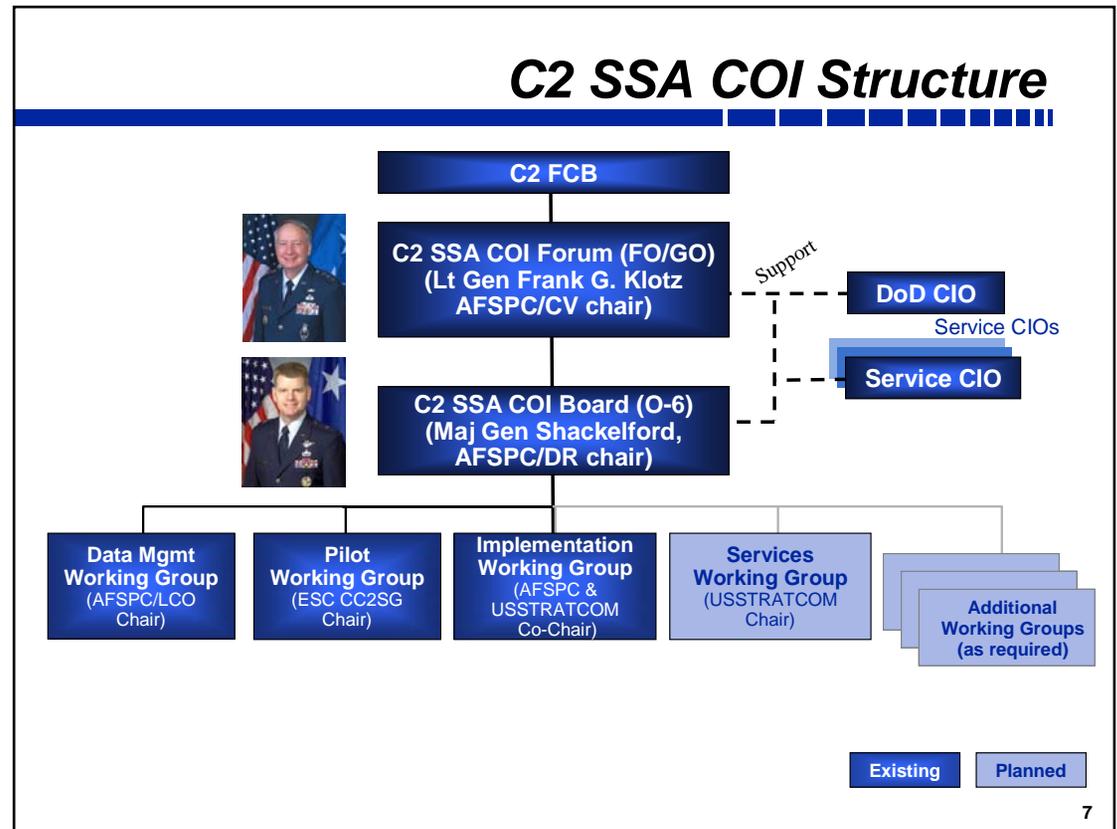
- **Within the context of the NCDS, a “community of interest” is defined as a group of people who cooperate to solve a problem in net-centric data sharing**

- **To solve their problem, the members may**
 - **Form and promulgate a common vocabulary**
 - **For discovery metadata**
 - **For machine-to-machine data exchange**
 - **For architecture descriptions**
 - **Actually exchange information with each other**
 - **Develop new capabilities for new/improved info sharing**

- **COIs do not overtly control resources or direct activities**
They act entirely through the cooperation of their members and their respective organizations

Who Cooperates?

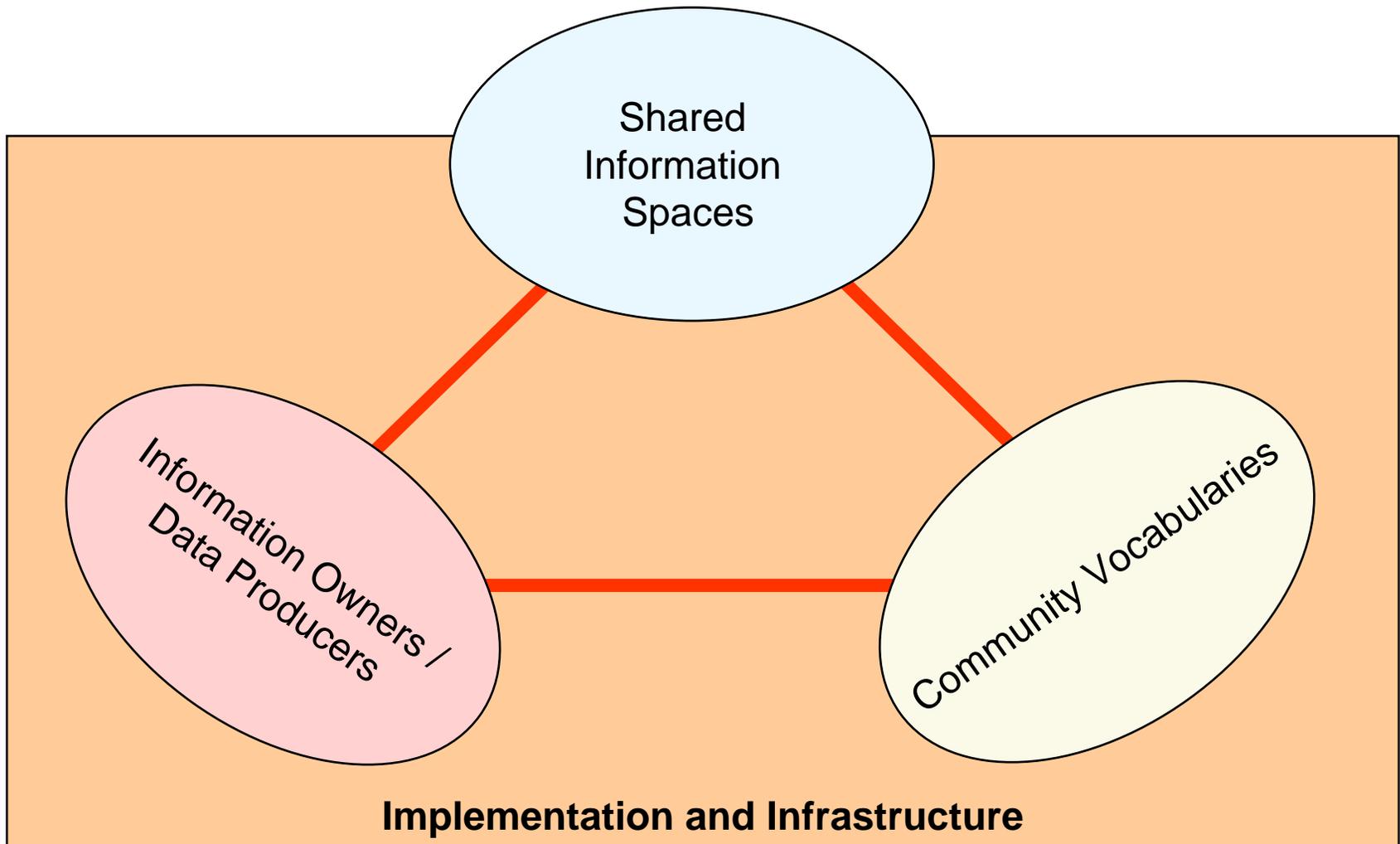
- If COIs act through the cooperation of their members... then who does the cooperating?



Roles of the Cooperators

- Information owners
- Shared information space controllers
- Semantic communities

AF Information & Data Mgt. Strategy: The “Triangle Foundation”



Shared Information Spaces

Shared Information Space

Consumers and the information they need

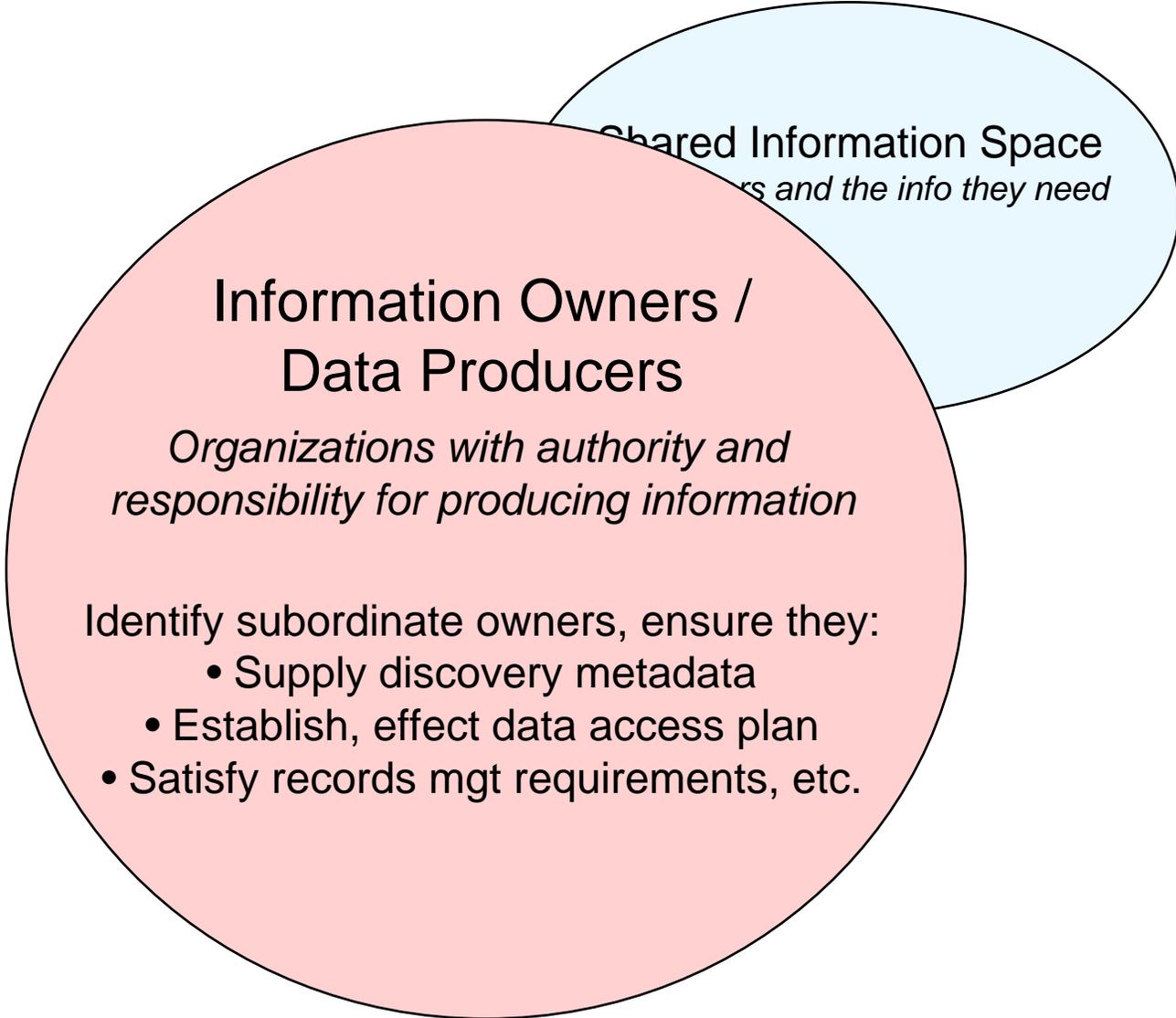
Validated info needs, driven by CONOPS and TTP
Designated authoritative sources meeting requirements

Access control (users, roles, permissions)

Priority and Quality of Service

Controlling authority

Information Owners



The diagram consists of two overlapping circles. The left circle is pink and contains the text 'Information Owners / Data Producers' and a list of responsibilities. The right circle is light blue and contains the text 'Shared Information Space' and 'Users and the info they need'. The intersection of the two circles is the area where the two sets of text overlap.

Information Owners / Data Producers

*Organizations with authority and
responsibility for producing information*

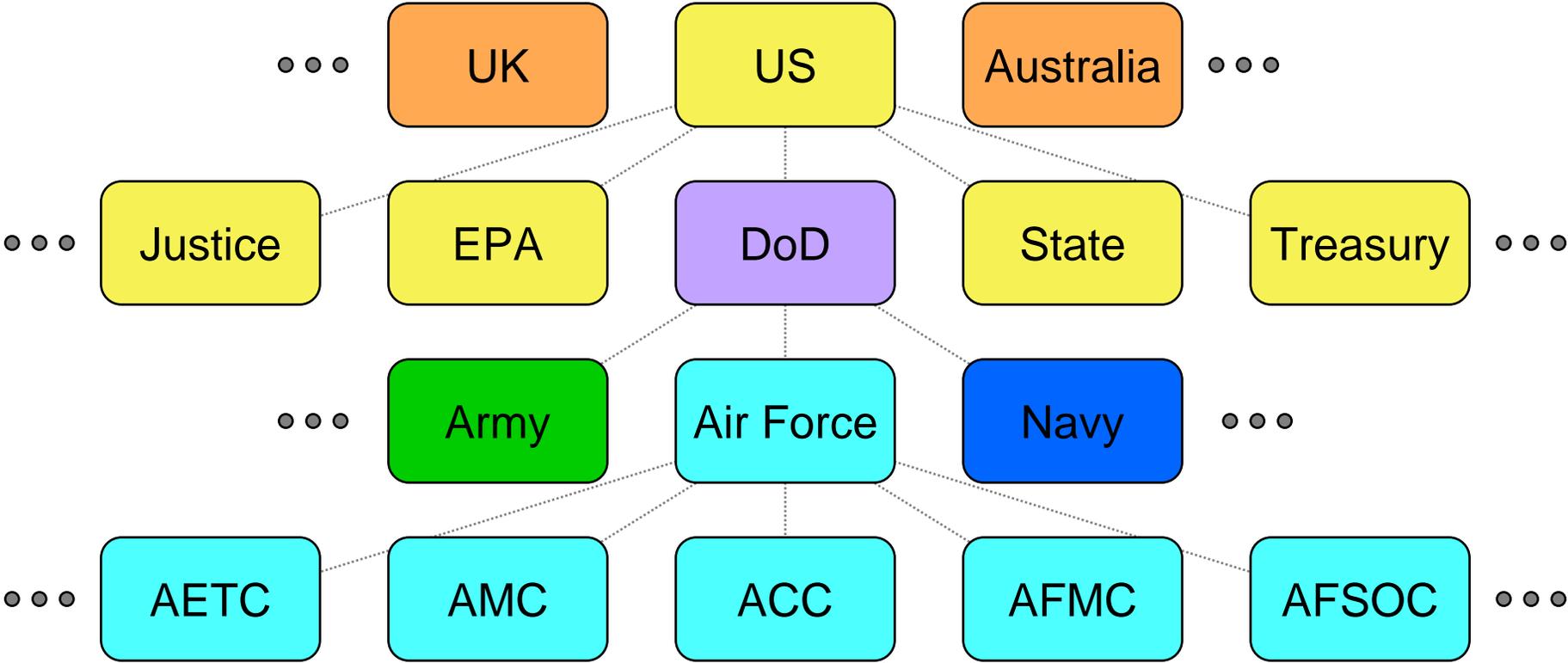
Identify subordinate owners, ensure they:

- Supply discovery metadata
- Establish, effect data access plan
- Satisfy records mgt requirements, etc.

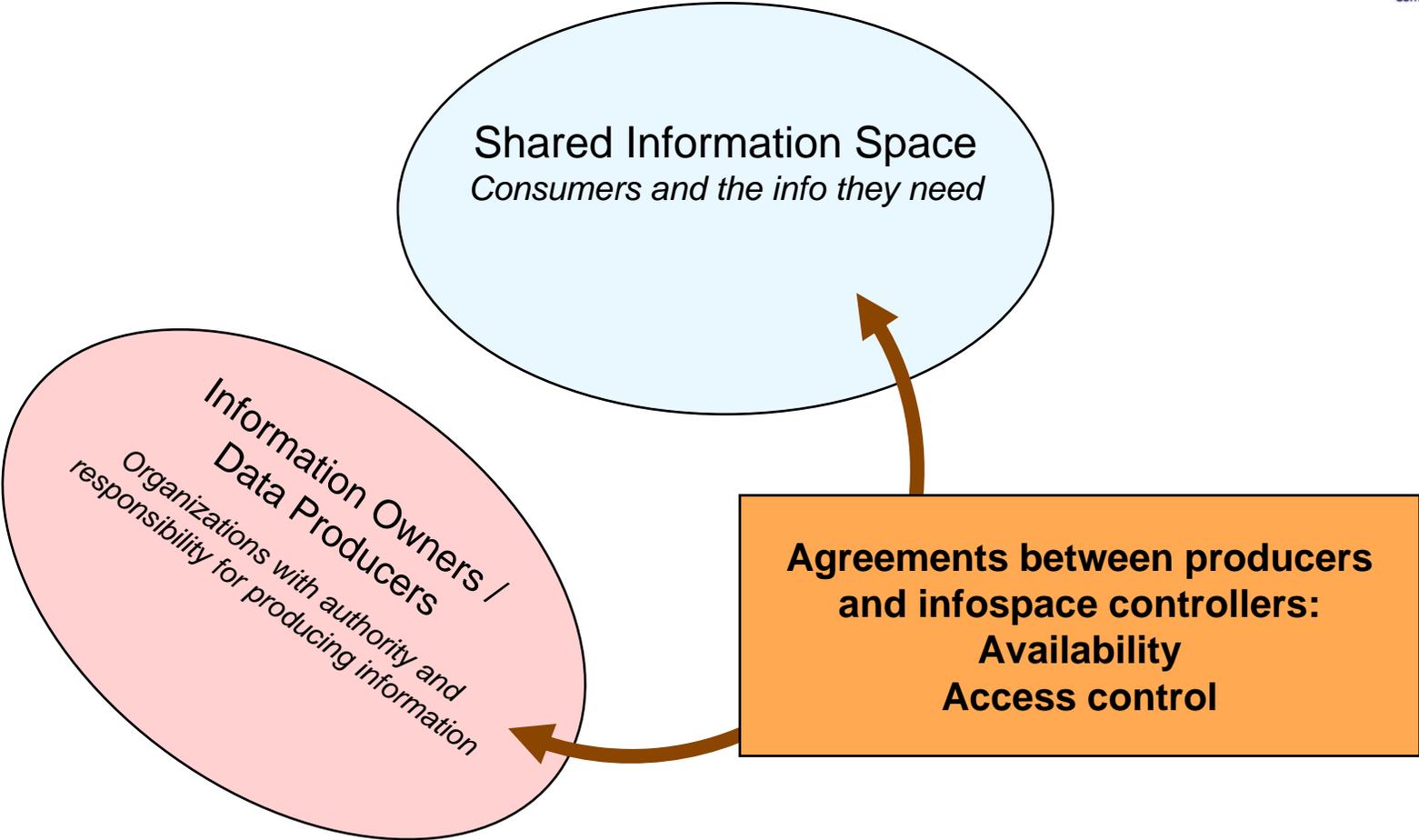
Shared Information Space
Users and the info they need

The Enterprise: Subordinates and Partners

You can't just say "all information is owned by the enterprise"



Data Service Agreements Are Required



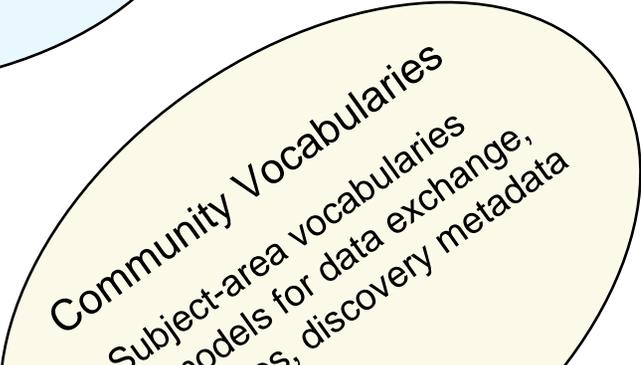
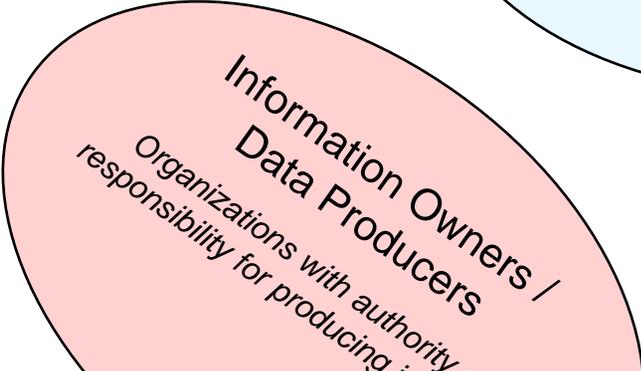
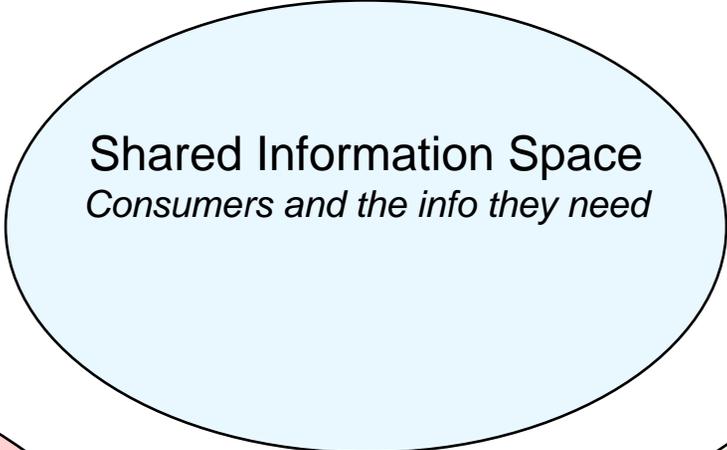
Community Vocabularies

Shared Information Space
Consumers and the info th

Information Owners /
Data Producers
*Organizations with authority and
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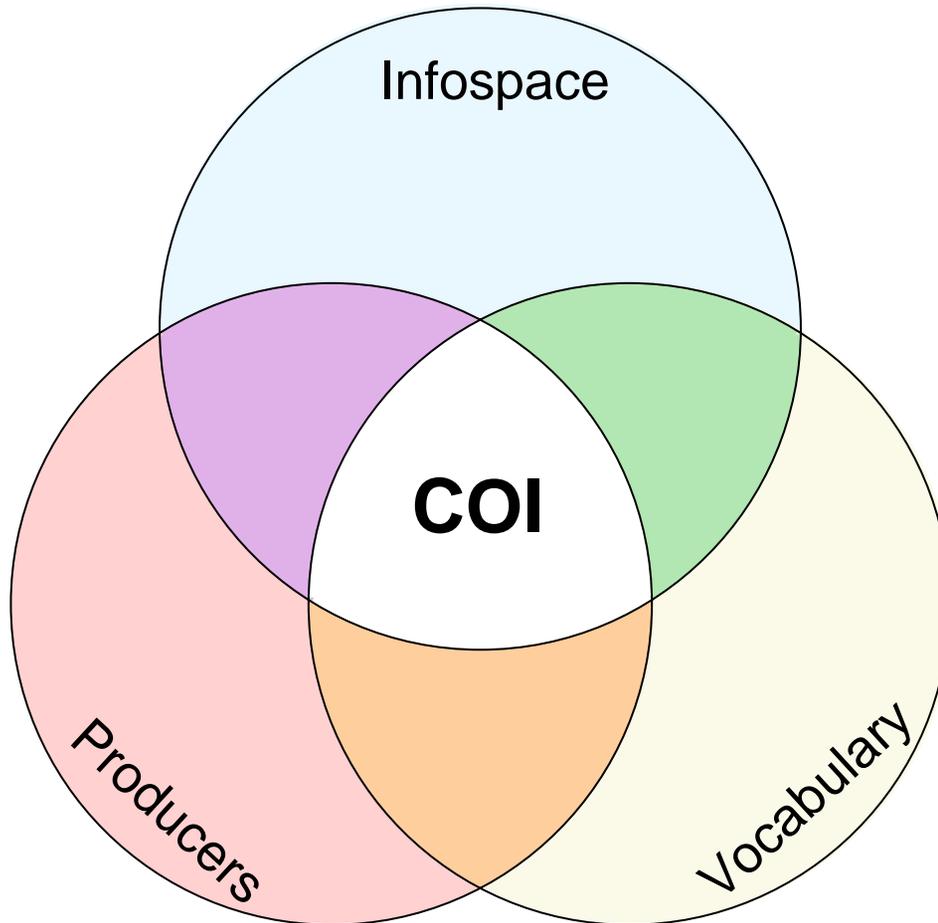
Community Vocabularies
Hierarchy of subject-area vocabularies
Community understanding of
data models for runtime data exchange,
architectures, discovery metadata,
information owner descriptions

Implementation Infrastructure

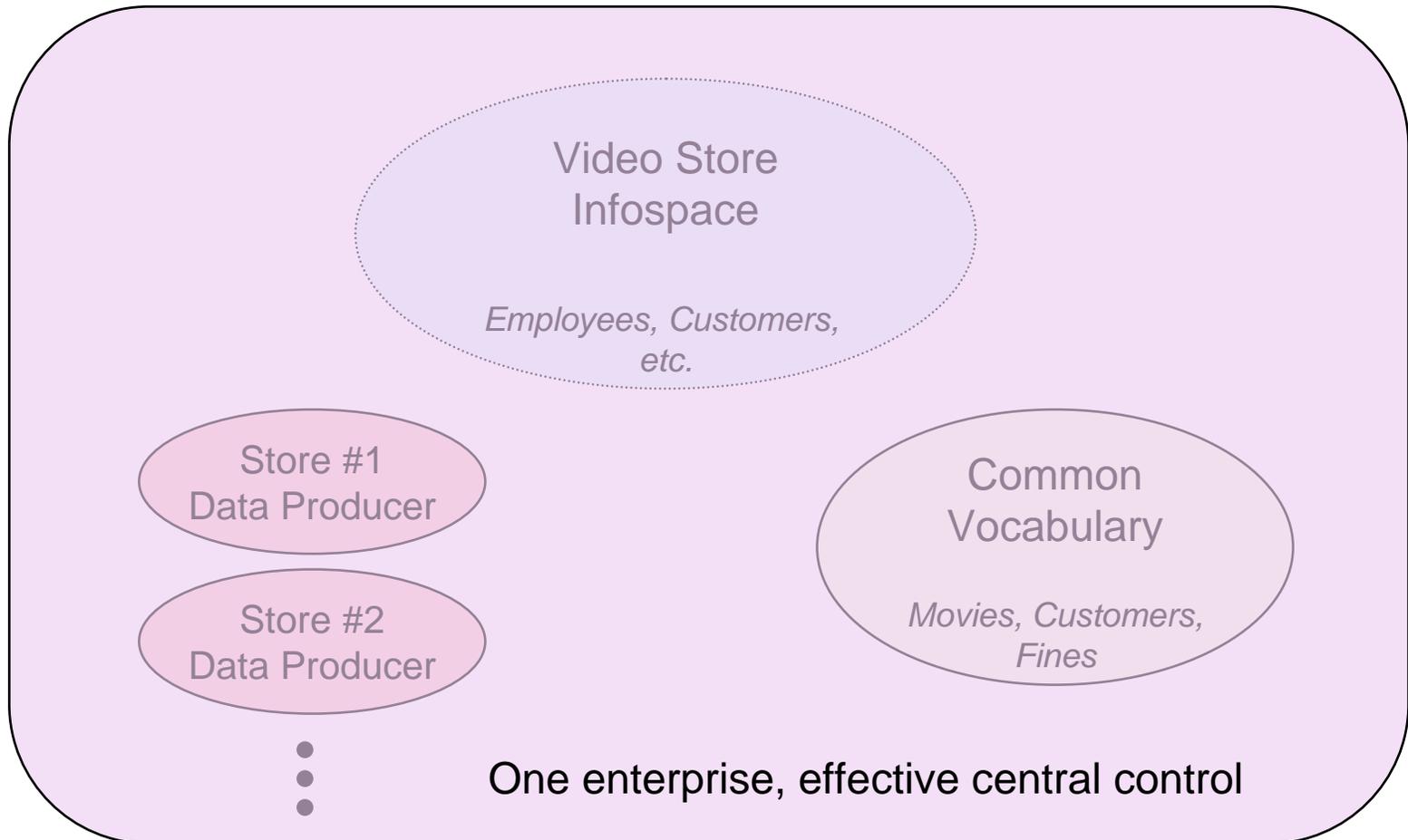


Implementation and Infrastructure
Data access implementation (warehouse, pub/sub, web service, portal, etc.)
Physically located at producers, consumers, or someplace in between.
Core services for identity, authentication, etc.

COIs Operate at the Intersection

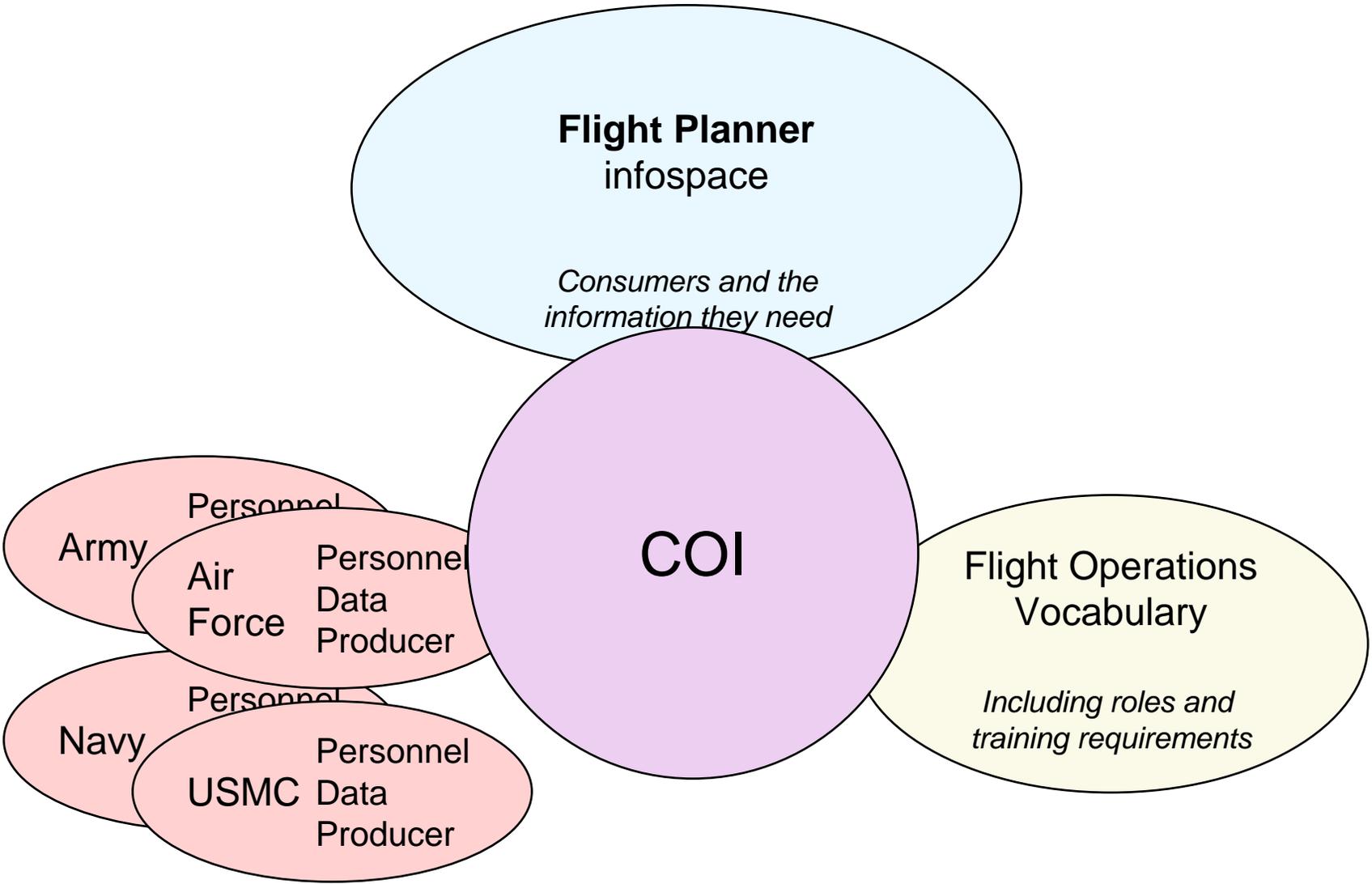


A Simple Enterprise

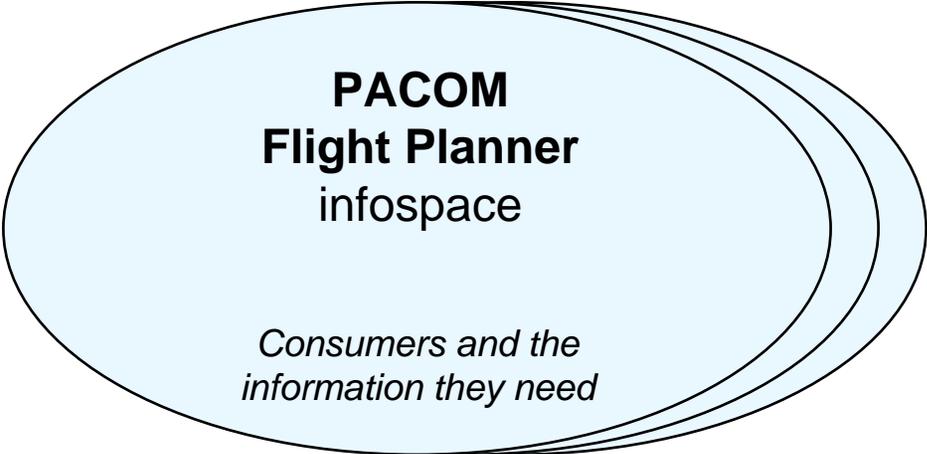


When effective centralized, top-down control is feasible,
no need to separate producer, infospace, vocabulary concerns

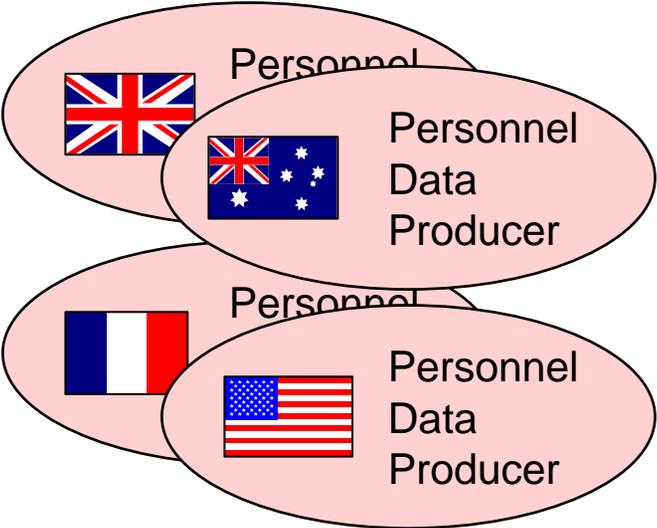
A More Complex Enterprise



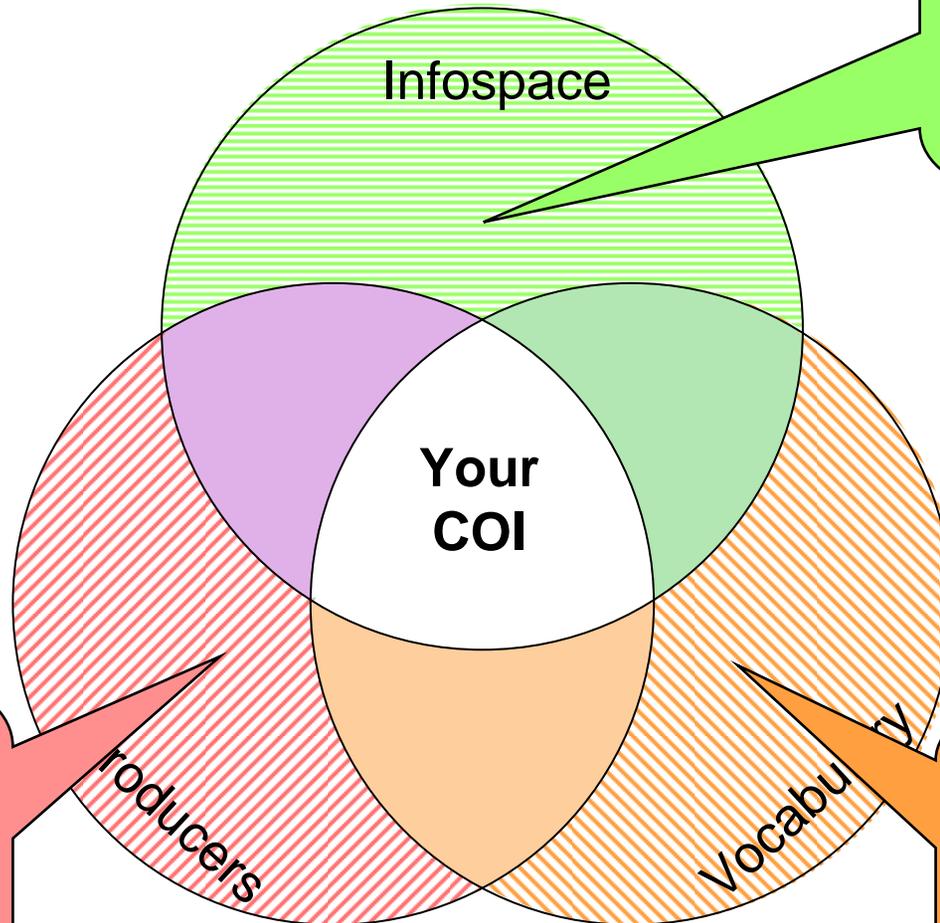
Still More Complex



..... *several
infospheres*



Expanding To The Enterprise

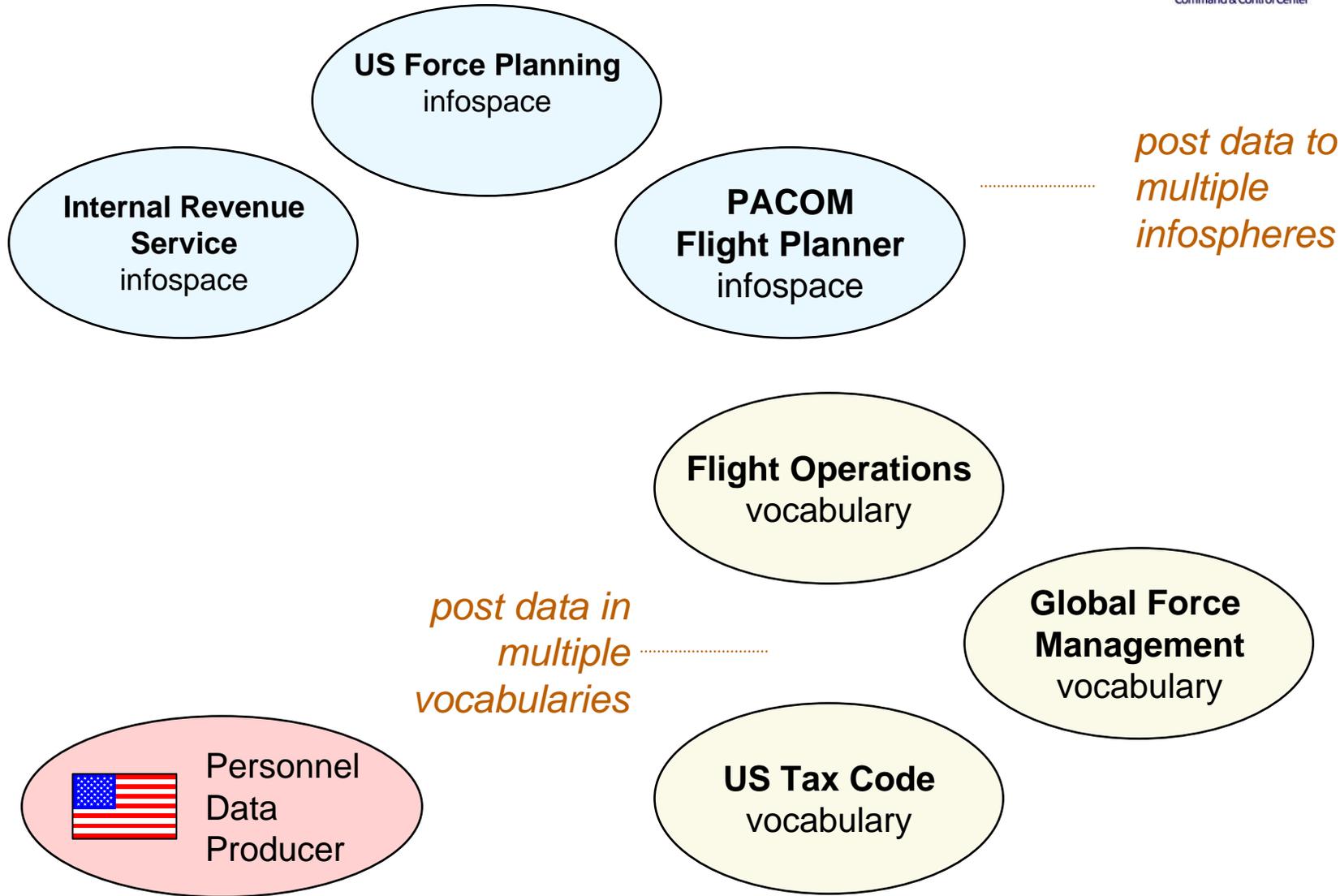


The infospace will include information from other producers, following other vocabularies

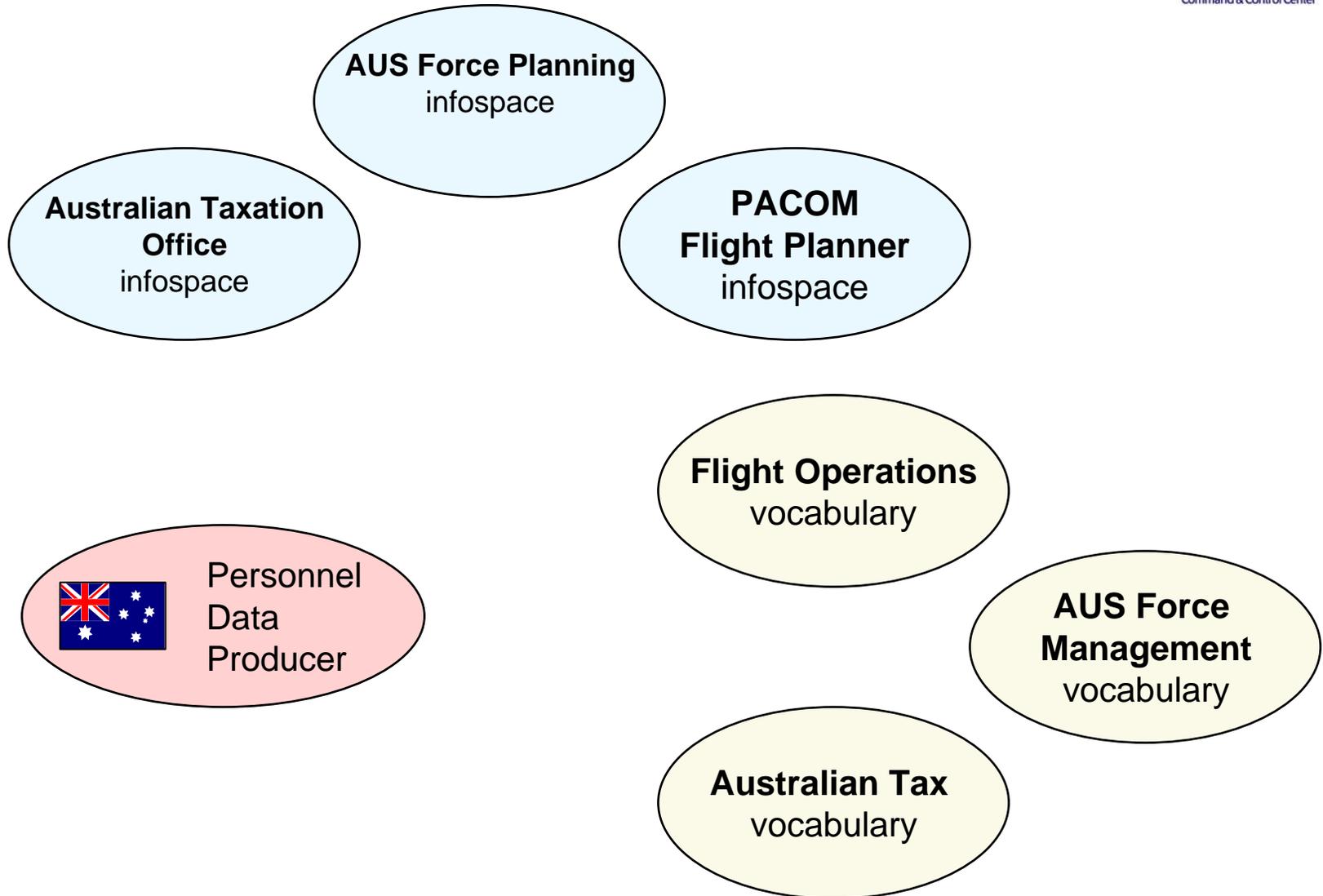
Producers will post to other infospaces, using other community vocabularies

Other producers and other infospaces will use the community vocabulary

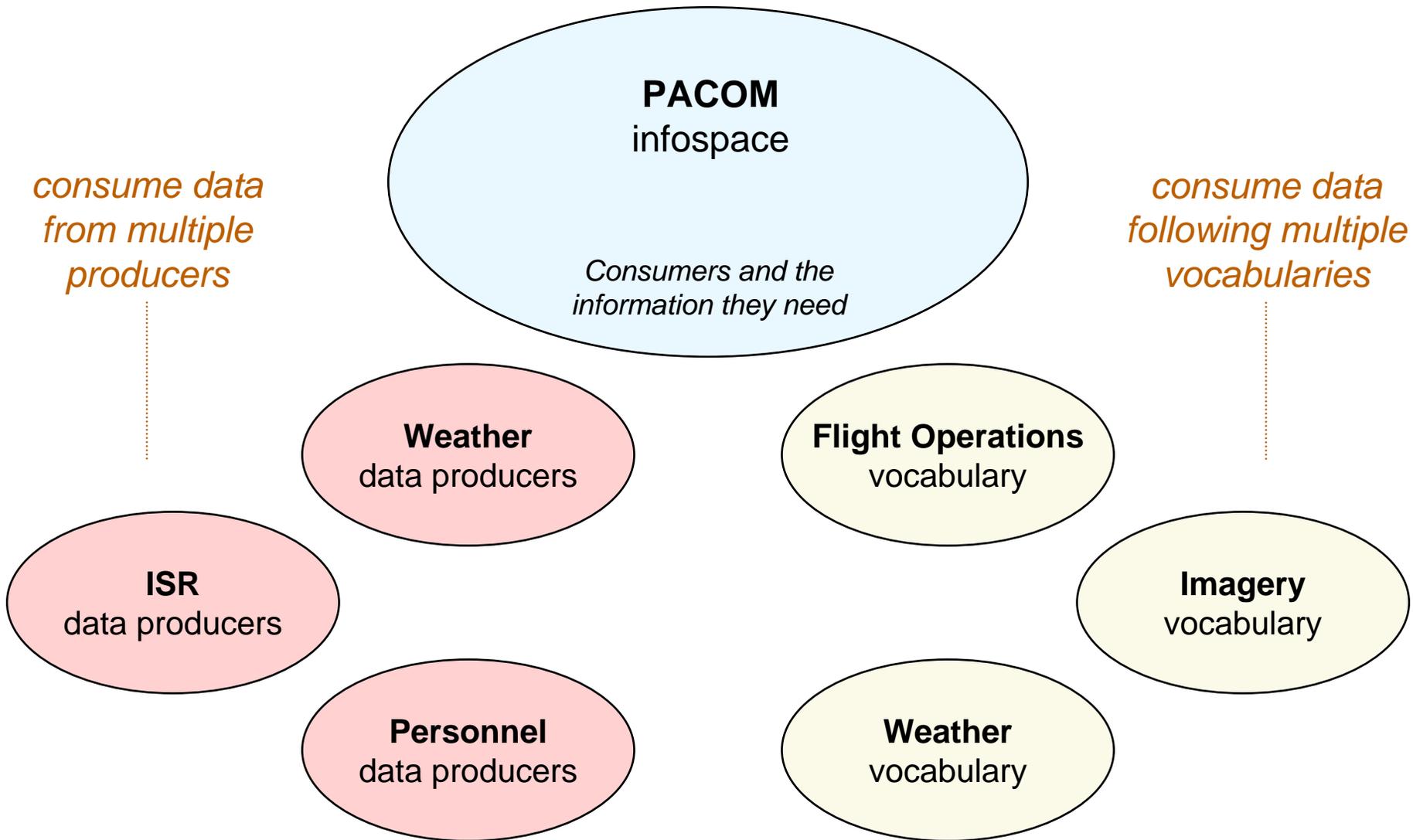
Even More Complex: Producer View



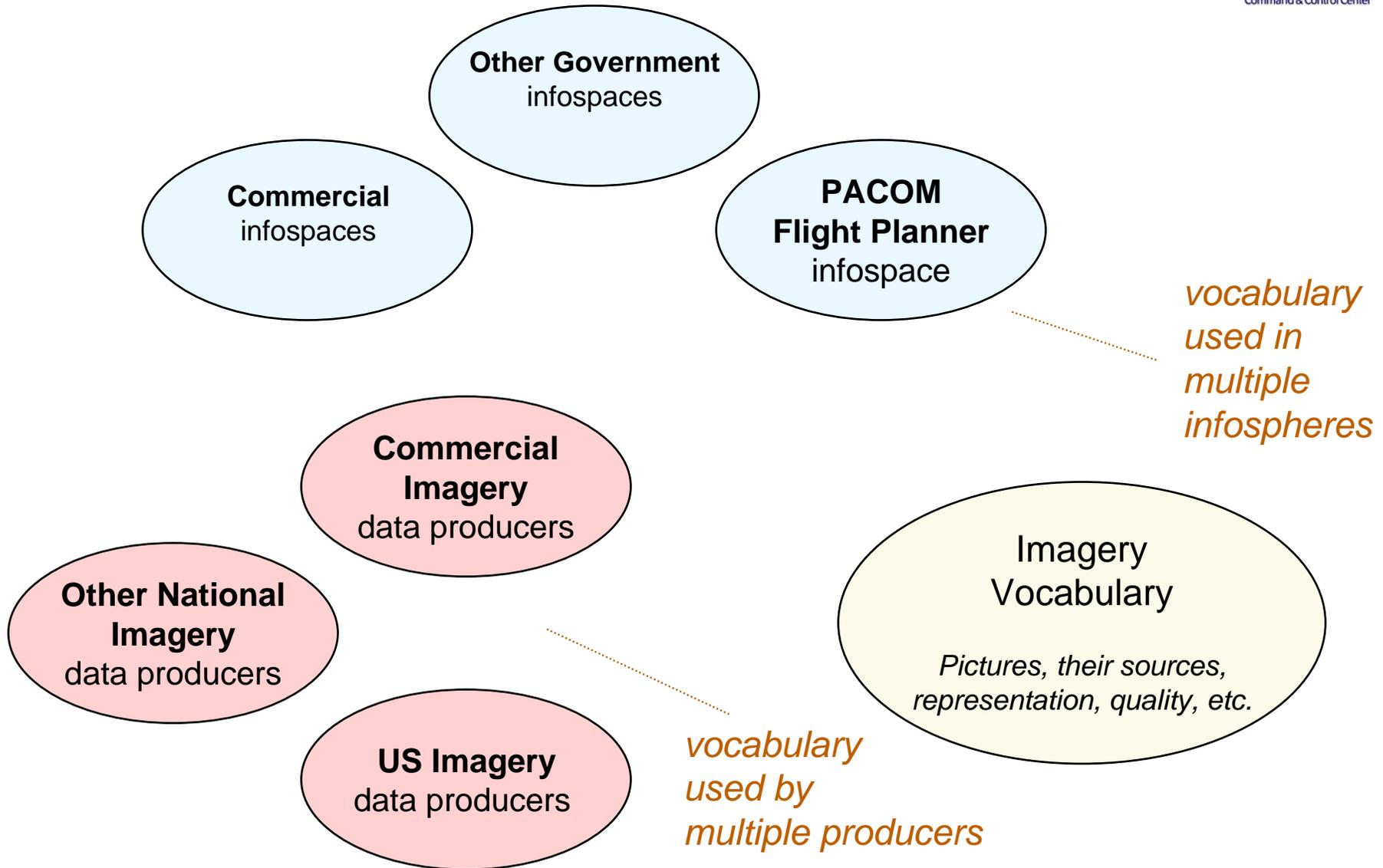
Even More Complex: Producer View



Even More Complex: Infospace View



Even More Complex: Vocabulary View



Summary

- **Too many meanings of “COI”**
- **Common elements in the useful definitions**
 - **Solve a net-centric data sharing problem**
 - **Work through cooperation of COI members**
- **Elements of an information management architecture**
 - **Information owners**
 - **Infospace controllers**
 - **Semantic communities**
- **Future direction: governance and management of those three elements**

