UCore: Breaking the Barrier to Information Sharing

November 2008

Information Sharing

Today's Characteristics	Emerging UCore Opportunity
Tailored formats	**Leverage minimum essential data elements**
Point-to-point connections	**Operate across organizations**
Pre-engineered interfaces	**Accommodate legacy systems**
Human Translations	**Employ system-independent language**
Numerous unique systems	**Include unanticipated users**
Manual entry (& re-entry)	**Reduce complexity, cost and time**
Minimal discovery	**Adhere to the rule of "simplicity"**
Time consuming	**Enhance collaboration**
Human error prone	**Exchange between heterogeneous IT infrastructures**
Pre-identified/pre-determined users	

FRAGILE

AGILE

The Universal Core - UCore

VISION

Improve information sharing by defining and exchanging a *small number* of important, *universally understandable* concepts across a *broad stakeholder base*

VALUE

Improved degree of information sharing between known and *unanticipated users*

Cost and *time savings* due to reuse and modular design

UCore is based on….

WHO, WHAT, WHEN, and WHERE

4 **QUESTIONS** ➡️ *The minimum set of information commonly needed*

1 **SPECIFICATION** ➡️ *The most common technical elements needed for essential interoperability*

2 **ENABLERS** ➡️ *Mission data and information enterprise governance*

*"…the standard is refreshingly minimalist…"*

GNC September 2008

What is the Universal Core?

An information exchange specification and implementation profile

- **Vocabulary of most commonly exchanged concepts**

    Who, What, When, Where

- **XML representation of the concepts**

- **Extension rules to allow tailoring to specific mission areas**

- **Security markings to permit controlled access, electronic tear lines**

- **Messaging framework to package and unpackage the content consistently**

UCore V2.0 Conceptual Data Model
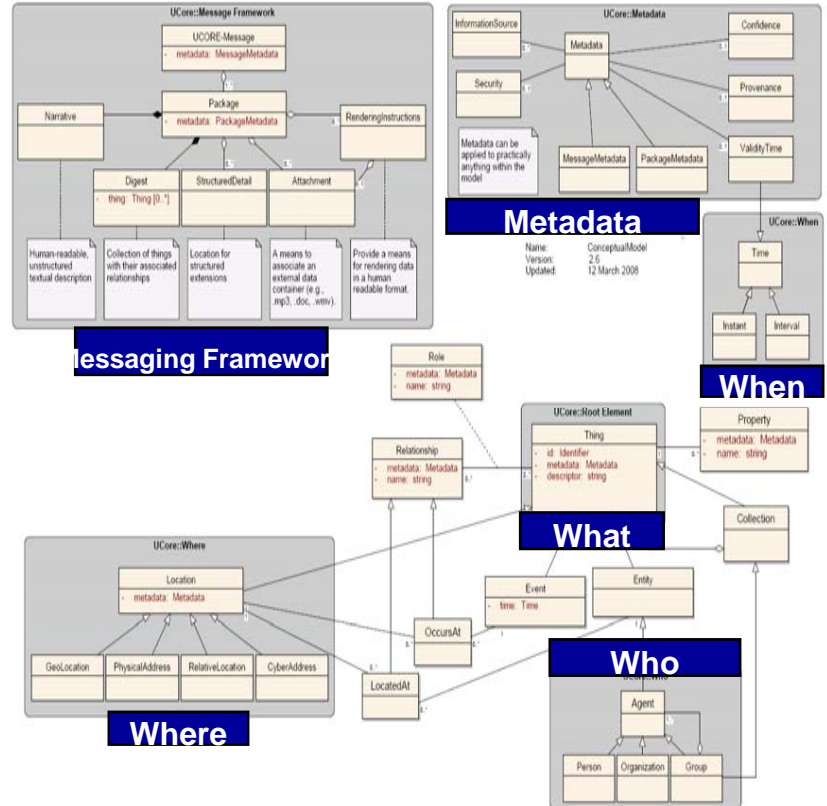
UCore helps implement Federal Transformation and is consistent with the President's eGovernment goals and objectives

UCore Success Strategy

MINIMALIST APPROACH	*VS.*	*Model Everything*
COLLABORATIVE DEVELOPMENT	*VS.*	*External Mandate*
STANDARDS	*VS.*	*Proprietary*
MODULAR REUSABLE PARTS	*VS.*	*Domain Stovepipe*
NEW CODE ONE TIME	*VS.*	*New code each time*
COMMON SECURITY LABELS	*VS.*	*Non-standard markings*
MACHINE-TO-MACHINE	*VS.*	*Manpower intensive*

The Way Ahead

HAS BEEN…	IS NOW…	CAN BECOME…
"N" Stovepipes	Founding Partners	All Mission Partners

IS NOW… panel:
Federal
- DOJ
- DHS
- DNI
- DOD

4 W's

CAN BECOME… panel:
State · Federal Depts/Agencies · Industry · Unanticipated · Coalition · NGO · Local

4 W's
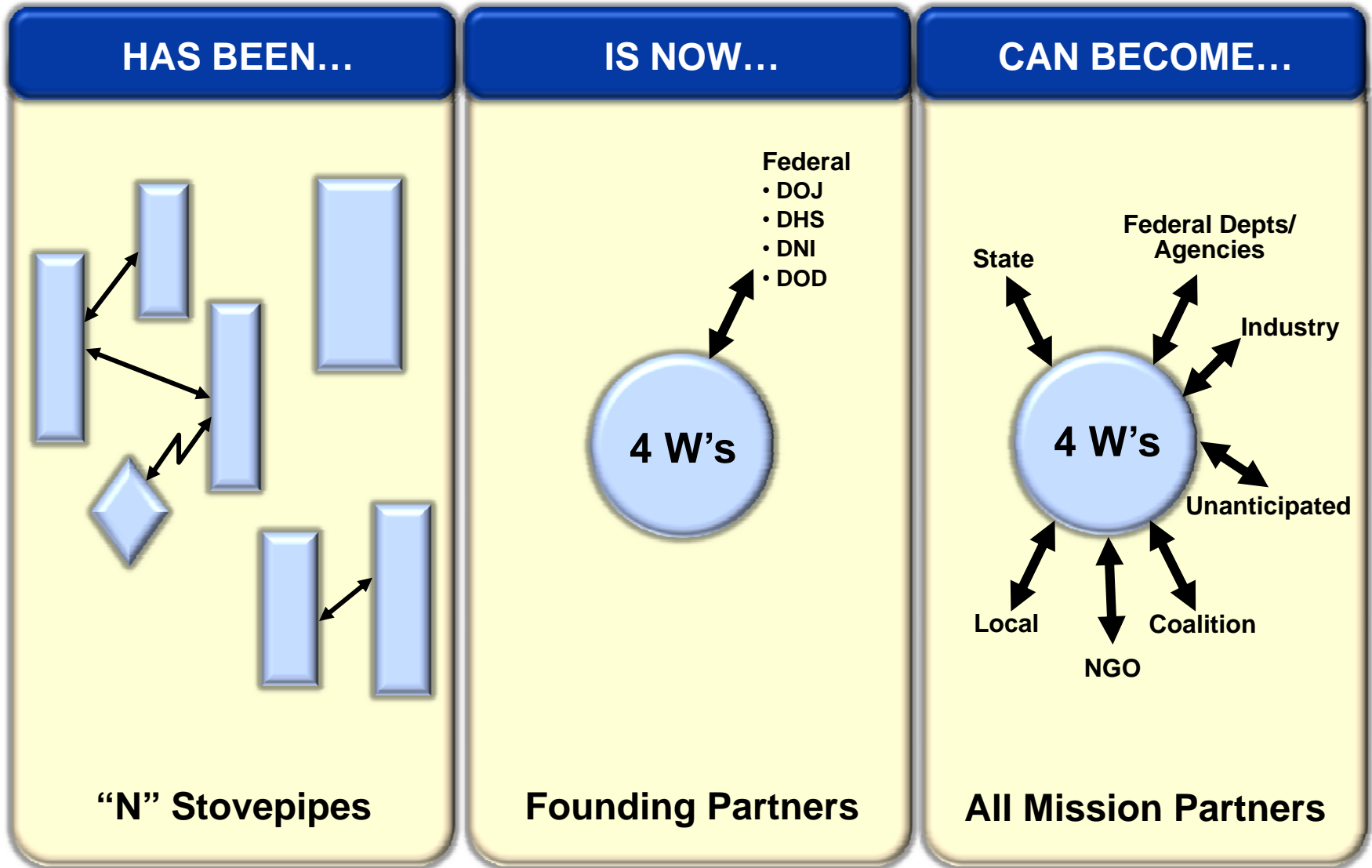
UCore Design Qualities

SUITABILITY → *Minimal set of foundational concepts*

SIMPLICITY → *Simple to explain, understand, implement, test*

EXTENSIBILITY → *Allows extensions to meet richer data sharing needs*

LEVERAGABILITY → *Leverage existing technical standards and best practices*

SUPPORTABILITY → *Use Systems Engineering best practices (Dev, PM, CM) and pilot to reduce risk*

MODULARITY → *Develop UCore objects to be loosely coupled*

INTEROPERABILITY → *Allow interoperability between systems developed in disparate enterprises without substantial reengineering*

UCore Summary

Framework for sharing the most commonly used data concepts

Starting point for interagency info sharing

Basis for data level interoperability

Content exchange between heterogeneous IT infrastructures

Supports more effective and efficient Government