



# Information Sharing in a Diverse Community

Presented to:

Environmental Information  
Symposium 2010  
Philadelphia, PA

# Agenda

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- The Transition
- The Implications
- The Challenges
- An Engineering Approach
  - Case Study
    - National Housing Locator System (NHLS) - HUD



# The Transition

- Migrating to a digital world.
- Shifting to a paradigm of collaborative communities.
- Data and information volumes continue to explode
- The same data is often repurposed to identify trends, infer information and create profiles in areas such as pandemics, environment, terrorism, and crime.

***In the digital world, Communities are information-based institutions***



**DATA FUSION  
DATA MINING  
DATA SHARING**





# Digital Age Implications: For Better or Worse



- Data as an asset or liability
- Competitive Advantage
- Situational Awareness
- Business Intelligence
- Cost and Risk Reduction
- Immediacy
- Unpredictability
- Intangibility
- Acceleration

RECOVERY.GOV



***Data and information sharing enable community awareness***



# The Key Goal and Principle

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- Key Goal: As government transforms towards openness, transparency, and collaboration the demand for discoverable, accessible, and reliable information naturally increases.
- Guiding Principle: Data and information must be managed as community assets to meet these demands.



# The Challenges to Overcome

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- Information is still hidden in organizational stovepipes that are not designed to share
- Incompatible tools, technologies, processes
- Conflicting standards
- Barriers against trust across boundaries
  - No common approach to data quality
  - Security risk perceptions
- Availability of information is overwhelming

***Information-based institutions build to share***



# Functioning in an Information Rich World



## ■ Agencies need to be characterized as information-based institutions

- Pull together data and content outside their original databases or applications to understand the information in context of the business and not just in context of the application.
- Need to be able to aggregate content to understand information consumers' patterns and preferences
- Need to be able to use shared information for different purposes

***An example of this principle in action is  
HUD's National Housing Locator System (NHLS)***



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# An Engineering Approach Case Study

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HUD's National Housing  
Locator System (NHLS)

# Case Study: National Housing Locator System



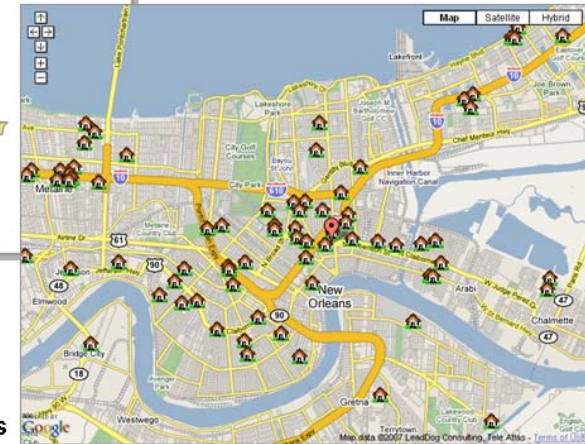
- NHLS objective: Identify available and habitable rental housing for temporary housing during disasters
- Data mash-up dynamically linking commercial and government housing databases.
- NHLS database contains basic identifying attributes with links to provider sites.
- Assets and Partners
  - Multi-Family and Single-Family Housing
  - Public Housing
  - USDA
  - VA



Find housing available  
anywhere in the U.S.

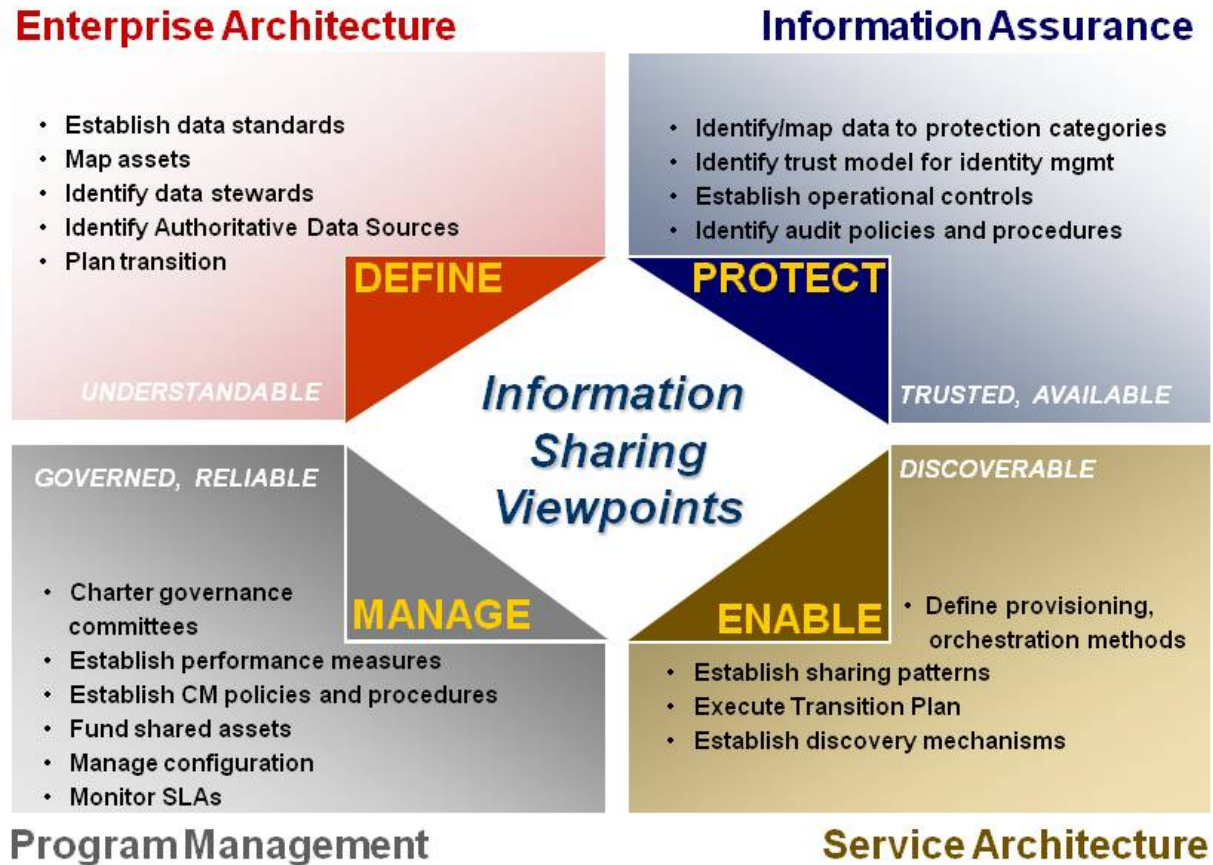


Locate housing in any area,  
browse via interactive maps

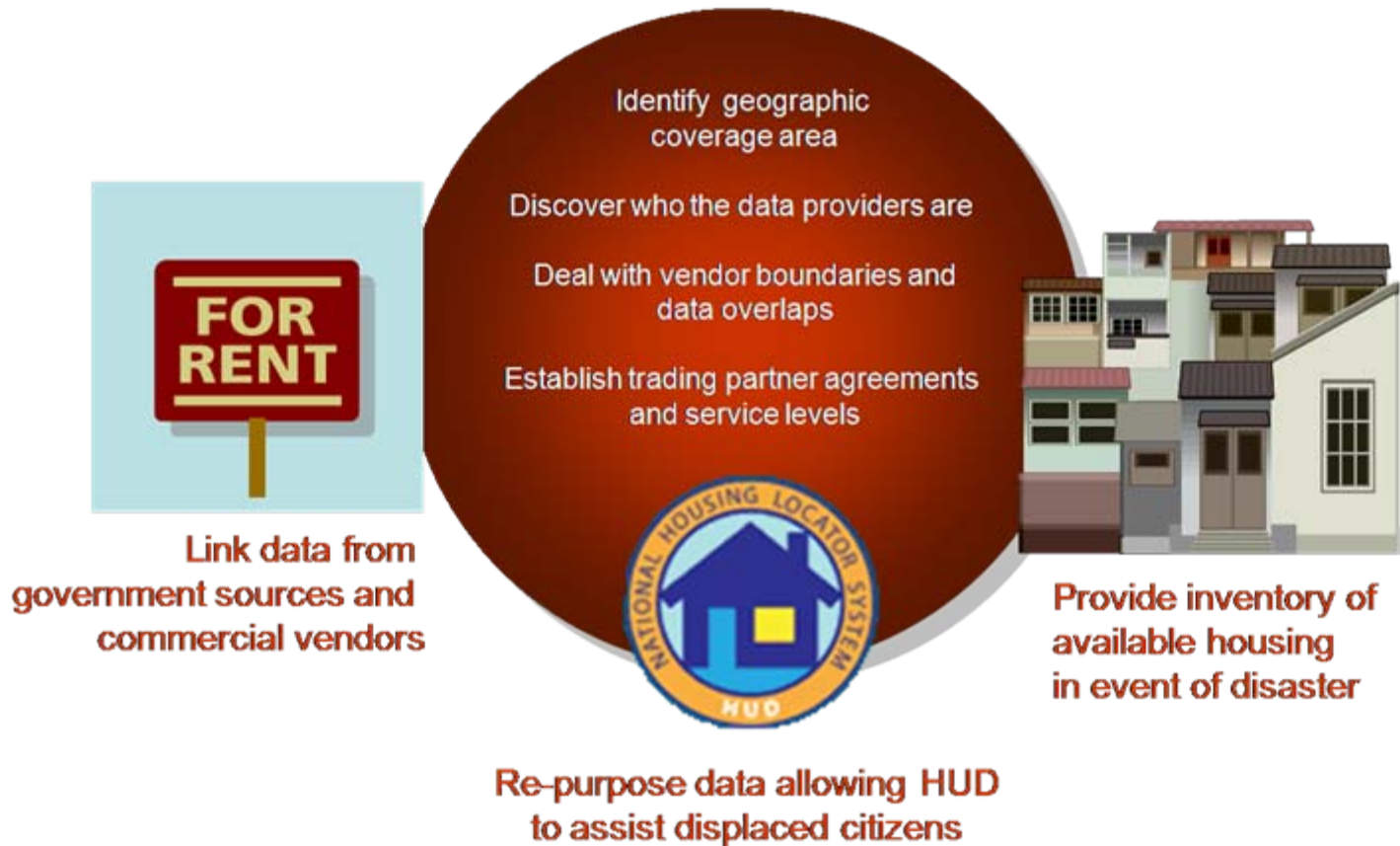


***Lesson learned from Katrina: the U.S. government lacked a national inventory of available housing.***

# Integrating Multiple Perspectives

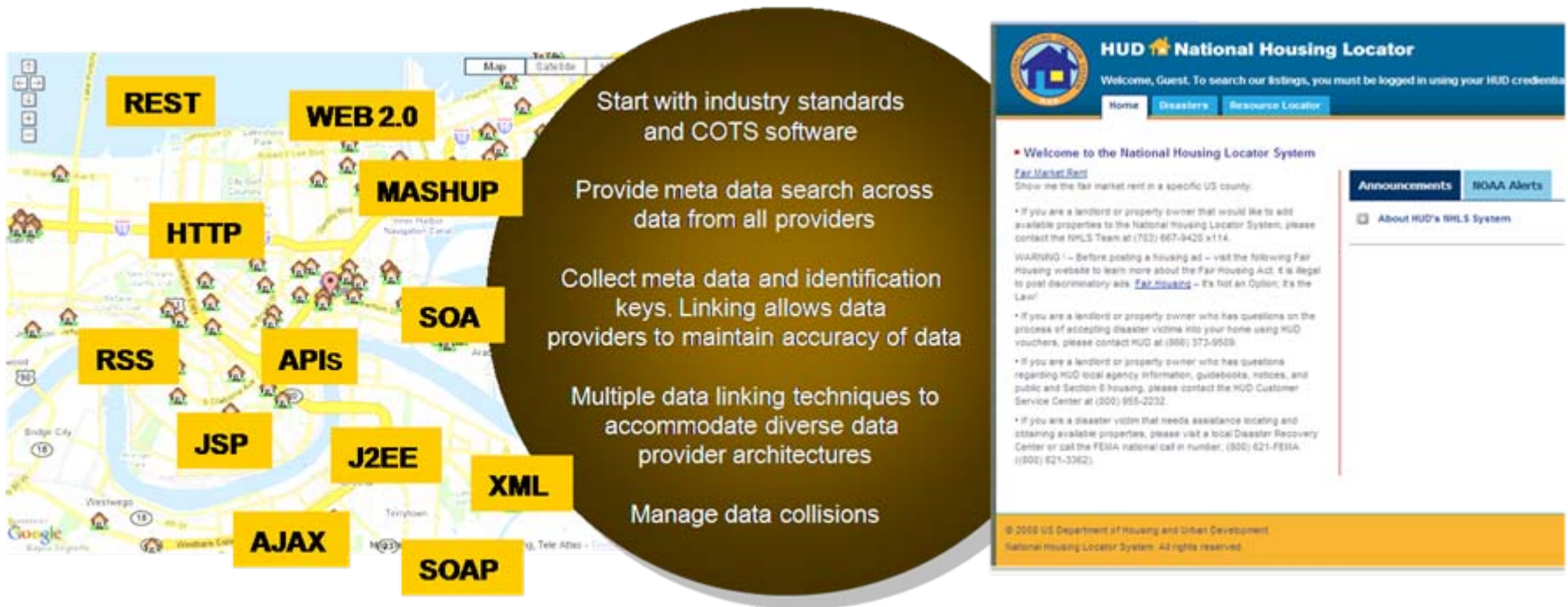


# Define the Community and Requirements



***Scoping and defining requirements for the community***

# Enable the Solution



**REST**   **WEB 2.0**   **MASHUP**   **HTTP**   **SOA**   **RSS**   **APIS**   **JSP**   **J2EE**   **XML**   **AJAX**   **SOAP**

Start with industry standards and COTS software

Provide meta data search across data from all providers

Collect meta data and identification keys. Linking allows data providers to maintain accuracy of data

Multiple data linking techniques to accommodate diverse data provider architectures

Manage data collisions

**HUD National Housing Locator**  
 Welcome, Guest. To search our listings, you must be logged in using your HUD credentials.  
 Home   **Disasters**   Resource Locator

• **Welcome to the National Housing Locator System**  
[Fair Market Rent](#)  
 Show me the fair market rent in a specific US county.

• If you are a landlord or property owner that would like to add available properties to the National Housing Locator System, please contact the NHLS Team at (703) 667-0420 x114.

WARNING! - Before posting a housing ad - visit the following Fair Housing website to learn more about the Fair Housing Act. It is illegal to post discriminatory ads. [Fair Housing](#) - It's Not an Option, It's the Law!

• If you are a landlord or property owner who has questions on the process of accepting disaster victims into your home using HUD vouchers, please contact HUD at (800) 373-9503.

• If you are a landlord or property owner who has questions regarding HUD local agency information, guidebooks, notices, and public and Section 8 housing, please contact the HUD Customer Service Center at (800) 955-2032.

• If you are a disaster victim that needs assistance locating and obtaining available properties, please visit a local Disaster Recovery Center or call the FEMA national call number, (800) 621-FEMA, ((800) 621-3362).

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 National Housing Locator System. All rights reserved.

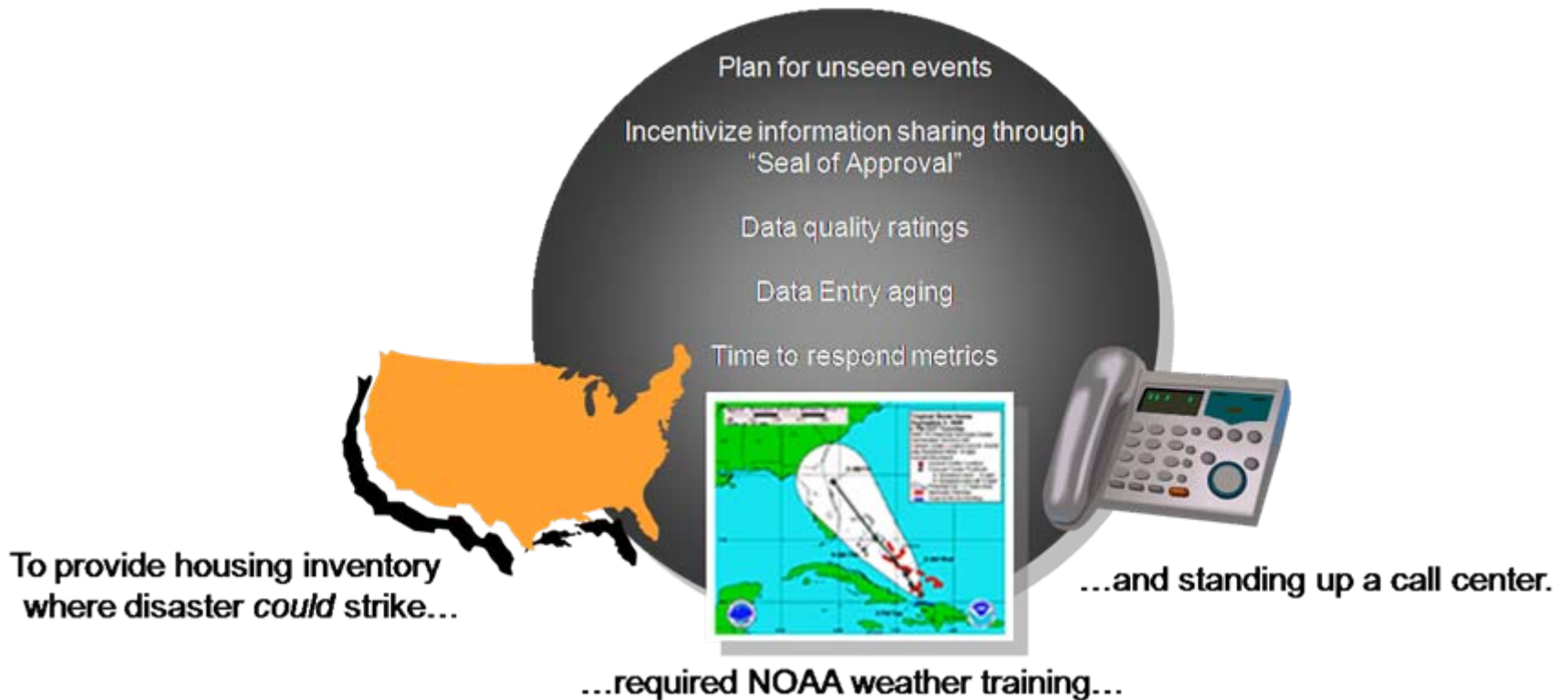
***Enabling information discovery and access for agility***

# Protect the Assets



*Ensuring information security, confidentiality and integrity*

# Manage and Measure the Results



***Manage and Measure: Enable the community to rapidly respond to an event while ensuring the quality and coverage of the information***

# Summary

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- Transitioning to a digital world means a different paradigm for sharing data and information.
- The guiding principle is to manage data and information as national assets.
- Sharing information across organizational boundaries provides significant value but also has risks.
- Organizations need to plan information sharing using a services paradigm from multiple perspectives.



# Questions



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