



Transparency Models

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IT Operations and Security Conference
Quality Management Conference

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- Director of Quality for the [USEPA Office of Environmental Information](#). Jeff served as the Director of Quality [USEPA ORD National Risk Management Research Laboratory](#) (NRMRL) and as the Director of Quality Assurance for [TechLaw, Inc.](#) He is an American Society for Quality ([ASQ](#)) [Certified Quality Manager](#) and [ASQ Certified Quality Auditor](#). Jeff is an elected [ASQ Fellow](#), a founding member of the Government Division, [Past-Chair of the ASQ Energy & Environment Division](#), and a member of the ASQ Division Affairs Council. He is a founding member and past Director of the International Association for Information and Data Quality (IAIDQ). Jeff served as Editorial Board member for Quality Assurance, Science, and the Law, the Journal of Environmental Forensics, Environmental Laboratory magazine, and Environmental Testing and Analysis magazine.
- He has been with the Federal Government since 1994. Jeff co-led a team authoring the combined quality and management system for EPA's Environmental Technology Verification (ETV) program. He co-led the EPA team developing EPA's Information Quality Guidelines. Jeff co-authored peer review journal papers receiving 1) the USEPA Science and Technological Achievement Award (STAA), Level III for equating EPA policies and procedures to U.S. Supreme Court Sound Science Criteria (2002) and 2) an STAA Honorable Mention for developing electronic recordkeeping QA parameters (2006).
- Jeff received a National Security Telecommunications and Information Systems Security (NSTISSI) 4011 Certificate for information systems security (INFOSEC) professionals at the National Defense University (NDU) Information Resources Management College (IRMC) and recently completed the Chief Information Officer coursework at IRMC.
- Jeff served as a [Peace Corps Volunteer](#) in Kpandu, Ghana from 1977-1979.

DISCLAIMER

The opinions expressed in this technical presentation are those of the author and do not necessarily reflect the views of the US EPA.



OVERVIEW

- Transparency - historical perspective
- **The “Information Connection”**
- **General Transparency Concepts**
- **Private Sector Transparency**
- **Public Sector Transparency**
- **Transparency and Quality**
- **Measuring Transparency**
- **Federal Transparency**
- **EPA Transparency**



Transparency - historical perspective

Is "TRANSPARENCY" new?



Freedom of the Press Act 1766

Sweden: *Tryckfrihetsförordningen*

Freedom of expression to be uninhibited, except for "violations", including:

- blasphemy and
- criticism of the state.

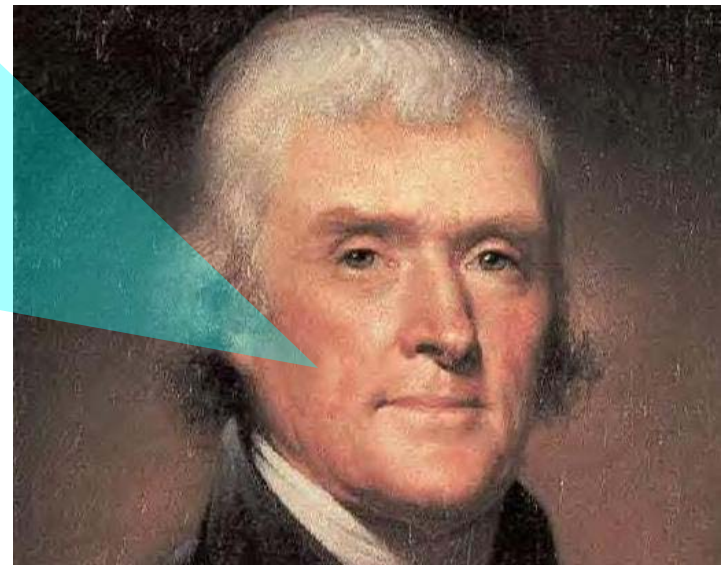
“Fixed in 1810”



Thomas Jefferson

1802

"We might hope to see the finances of the Union as **clear and intelligible** as a merchant's books, so that every member of Congress and **every man of any mind in the Union should be able to comprehend them**, to investigate abuses, and consequently to control them."



James Madison



"A popular government without popular information or the means of acquiring it, is but a Prologue to Farce, or a Tragedy, or perhaps both. Knowledge will forever govern ignorance. and a **people who mean to be their own Governors, must arm themselves with the power which knowledge gives.**"

Transparency and Open Government

Open government model includes:

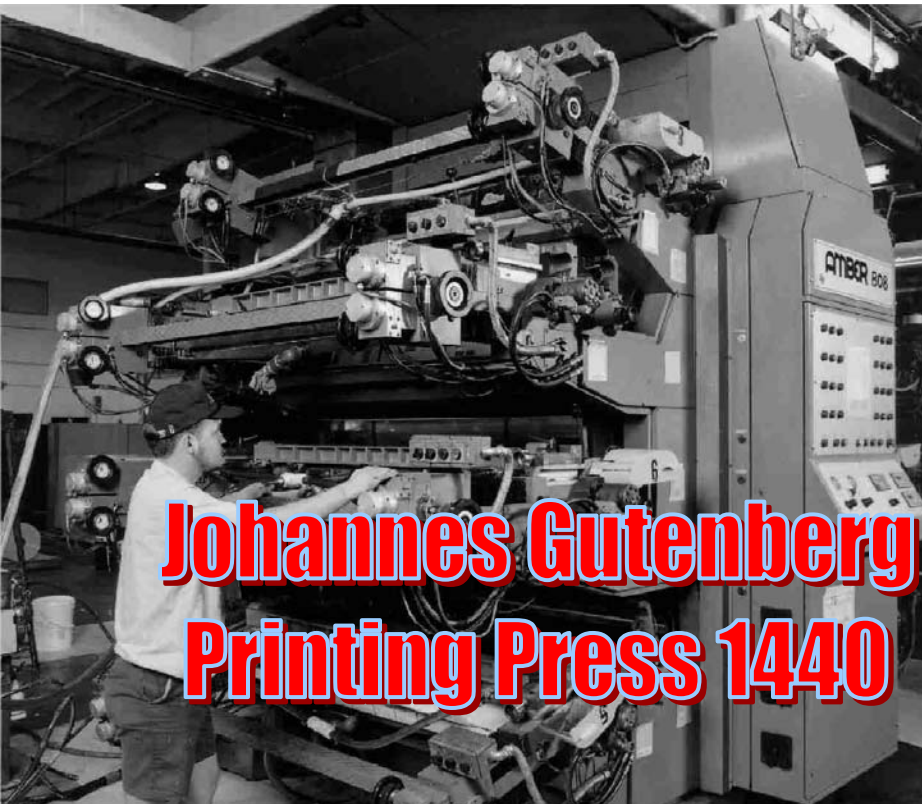
Part 1: Collaboration

Part 2: Participation

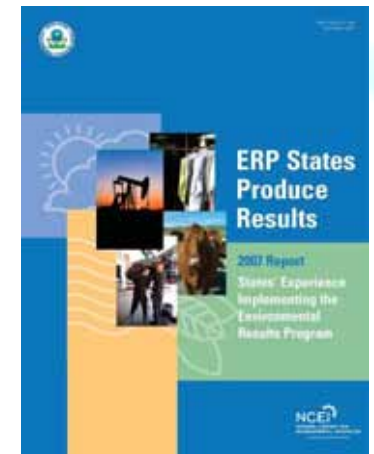
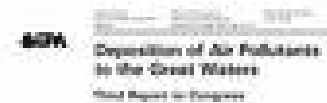
Part 3: Transparency

The “Information Connection”

What is the relationship between information and transparency?



**Johannes Gutenberg
Printing Press 1440**






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- > MONDAY: EPA, NASA Administrators to

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- > Air pollution
- > Acid rain
- > Climate change
- > Drinking water

Get Involved

It's My Environment video project
Show how it's your environment by



Administrator Lisa P. Jackson



The “Information Connection”

“Transparency

- Describes an information state intended to meet certain goals.
- Process” are those actions taken to accomplish the goals.

Transparency is an information-centered activity. (i.e., a communication-centered activity)

Transparency – in terms of the 3 Major Information Dimensions (states)

- (information) **transparency content** – the “what” of information
- (information) **transparency format** – the manner in which the information is stored that gives it value, e.g., data tables vs. a map
- (information) **transparency function** – the ability for the information to interact and be information in motion to perform work

Transparency Concepts

Q. What is transparency?

A. I will know it when it see it.



General Transparency Concepts 1

Moving towards a model.....

What is transparency?

What is the purpose of transparency?

Who is responsible for transparency?

Who are the customers?

What are the measures?

How and how often should I measure?

How do I plan for transparency?

Do I need to improve transparency?

Private vs. Government Transparency Purposes

PRIVATE – business & customer relationship

- Increased trust = better customer relations
- Increased trust = more sales and more profits
- Increased trust = friendly regulatory environment

GOVERNMENT – organization and worker relationship with citizen

- Enable collaboration = efficient governance
- Increased participation = better governance
- Increased accountability = increased trust & better citizen relationships

Private Sector Transparency Concepts

Trust! & Consumer Information

- Financial business sector
 - Measuring **opacity**, the inverse of transparency
 - Understanding risk
- General products
 - Safety
 - Recalls
 - Complaints
 - Consumer information
- Increased expectations
 - Where do these come from?

Public Sector Transparency Concepts

Accountability and Trust!

- Supporting collaboration and citizen involvement
- Increasing accountability for resources and mission status
- Increasing understanding of government operations and priorities
- Accountability for accomplishing work
- Understanding sources of information
- Veracity of decisions
- Understanding government processes
- Increased citizen expectations
 - Where do these come from?

General Transparency Concepts 1



**Does more
information =
better
information?**

Transparency

- you tell me everything about yourself and I'll tell you when to stop.





How much information is enough?

**More Information =
More maintenance =**

PII

COST- \$\$\$\$?

Privacy

**Information
glut**

- Trust
- Accountability
- Involvement

**No
information**

**All possible
information**

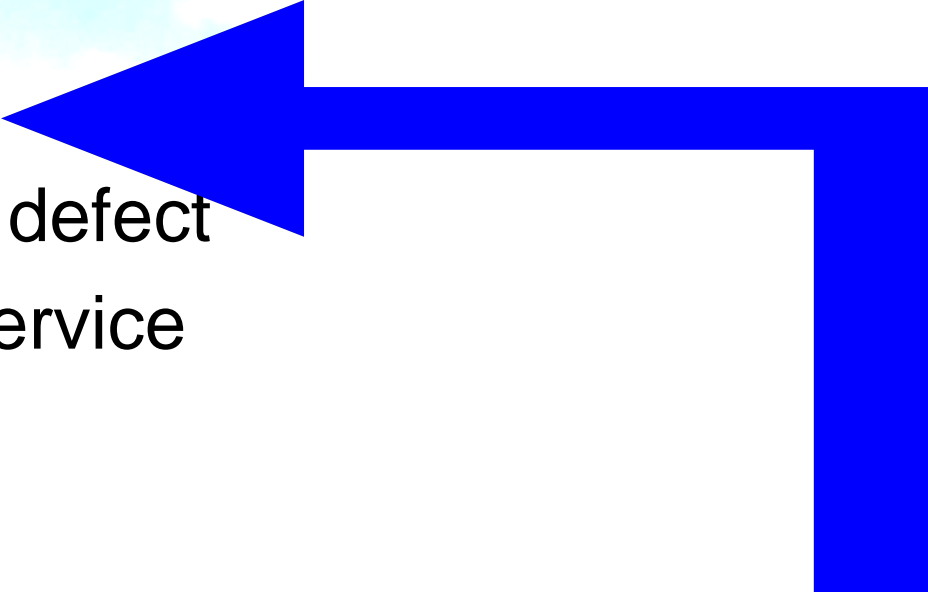


Transparency Models from Available on the Internet

A Sampling of terms:

- eTransparency
- Environmental Transparency
- Transparency theory
- The Transparency Movement
- Fiscal transparency
- Government transparency
- Tactical transparency

Transparency & Quality

- Quality (for products and services)
 1. **Features**
 2. Freedom of defect
 3. Customer service
 4. Efficiency
 - **Transparency** is a major quality feature
- 

The transparency quality feature

- How much quality?

Quality

for its intended purpose.

- How much transparency?

Transparency

for its intended purpose.

Transparency..... for its intended purpose.

- **PURPOSE: Organization transparency**
 - Vision, Mission, Strategy, Goal status
 - Performance
- **PURPOSE: Program transparency**
 - Program purpose and impact
 - Outcomes and performance
- **PURPOSE: Data (i.e., facts) transparency**
 - Source (e.g., provenance, pedigree)
 - reproducibility

Measuring Transparency

Why measure transparency?

“You can’t manage what you cannot see”

- To.....
 - survey
 - better understand
 - get a benchmark
 - make improvement
 - increase the value
 - manage it better

Measuring Transparency

What to measure?

- Setting formal categories or features
- Agreeing on intended outcomes

POSSIBLE FEATURE CATEGORIES

- Authenticity
- Usability
- Understandability

Tracking Measures

- **INDEX** – monitoring and reporting status of selected measures over time.....

EXAMPLES

- Stock index
- Quality index – American Customer Satisfaction Index (ACSI) <http://www.theacsi.org/>
- Transparency Index?????

Transparency Indices **Examples**

- **E-government Transparency Index** – ratings for 14 U.S. agencies based on citizen surveys <http://www.thedigitalcitizen.com/the-digital-citizen/2010/02/the-inaugural-foresee-results-egovernment-transparency-index.html>
- **China Pollution Information Transparency Index** - government reporting http://switchboard.nrdc.org/blogs/awang/the_first_annual_pollution_inf.html
- **Revenue Transparency Index** -corporate revenue and expenditure watch <http://www.revenuewatch.org/our-work/issues/expenditure-transparency.php>
- **Governance and transparency index** – Singapore - how companies communicate with their investors <http://bschool.nus.edu.sg/CGFRC/Projects/GovernanceTransparencyIndex.aspx>
- **Digital transparency index** – indicates how active legislators are in the online world <http://digitaltransparency.appspot.com/>
- **Anti-Counterfeiting Trade Agreement (ACTA) transparency scorecard** – a tracking of which countries favor ACTA transparency <http://www.michaelgeist.ca/content/view/4822/125/>
- **Charity Scoreboard's Transparency Scoreboard** – transparency of charities http://www.charityscorecard.org/wiki/Transparency_Scorecard

Planning Information Transparency (strategy)



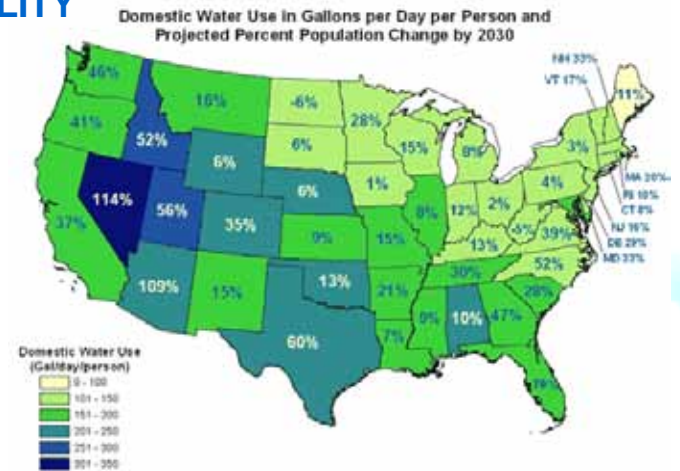
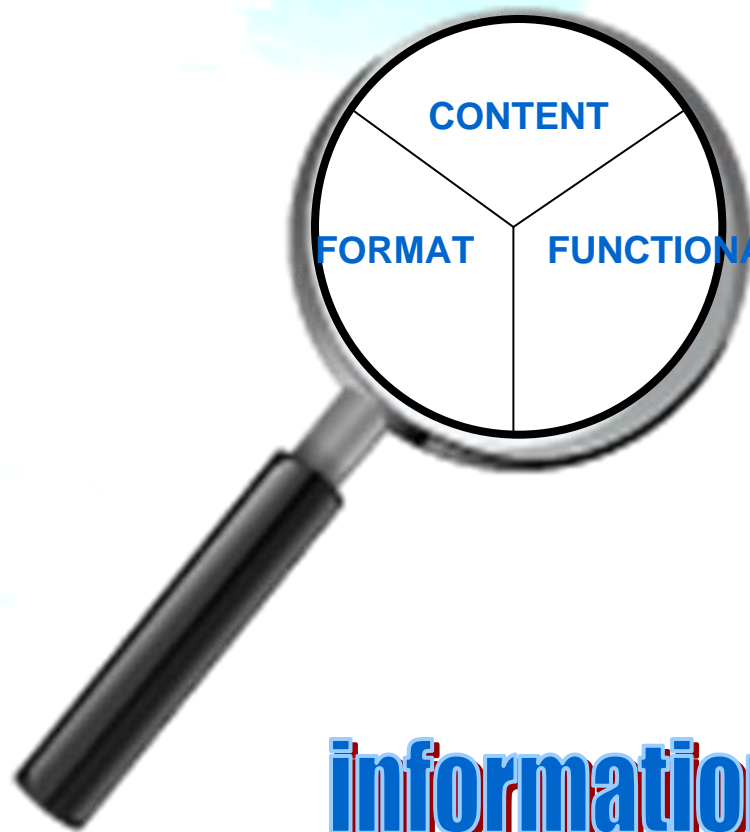
1. Understand
information states **DONE**
2. Identify critical
transparency features
DONE
3. Understand processes
4. Implement action plan

Building the

TRANSPARENCY CUBE

- **3 Potential Information/Transparency States**
 - Content
 - Format
 - Function
- **3 Potential Critical Transparency Characteristics**
 - Authenticity
 - Usability
 - Understandable
- **3 supporting IQ “safeguards” - *actions***
 - Technology
 - Policies & procedures
 - (human factors) People & training

The 3 Major Information States (dimensions)

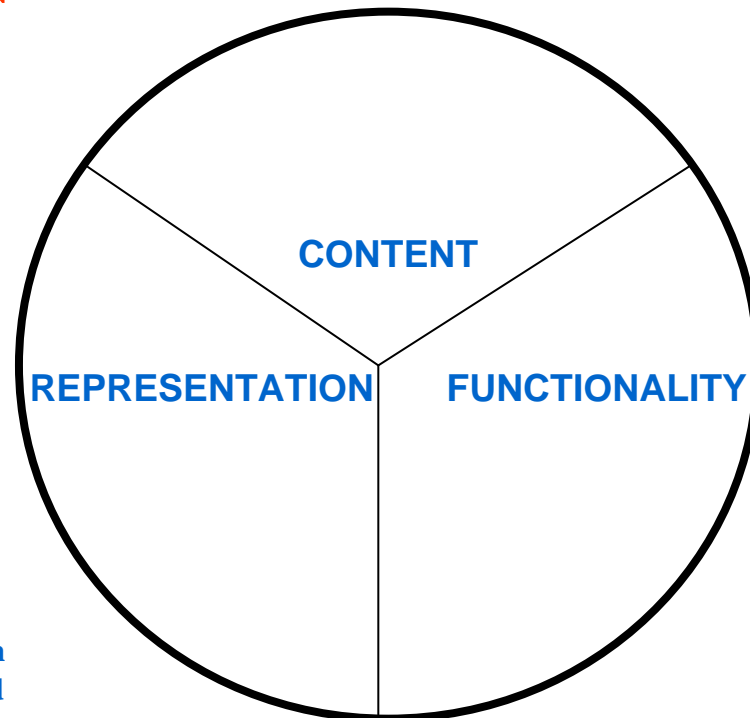


**information in motion vs.
information at rest**

Three Major **DIMENSIONS** for Product Features for Information

TARGETING INFORMATION

What the information is



How the
information
is presented

How to interact
with the
information

The 3 major Information Critical Information Quality Characteristics

- **Authenticity (general)** – there is enough information about the information I am interested in to easily determine “it is what it is purported to be”
- **Usability** – the information is of use to me for my intended purpose (e.g., I can determine the value of the information, or I can easily know it’s quality)
- **Understandability** – there is enough information about the information to allow me to understand what the information is or how it may have value to me

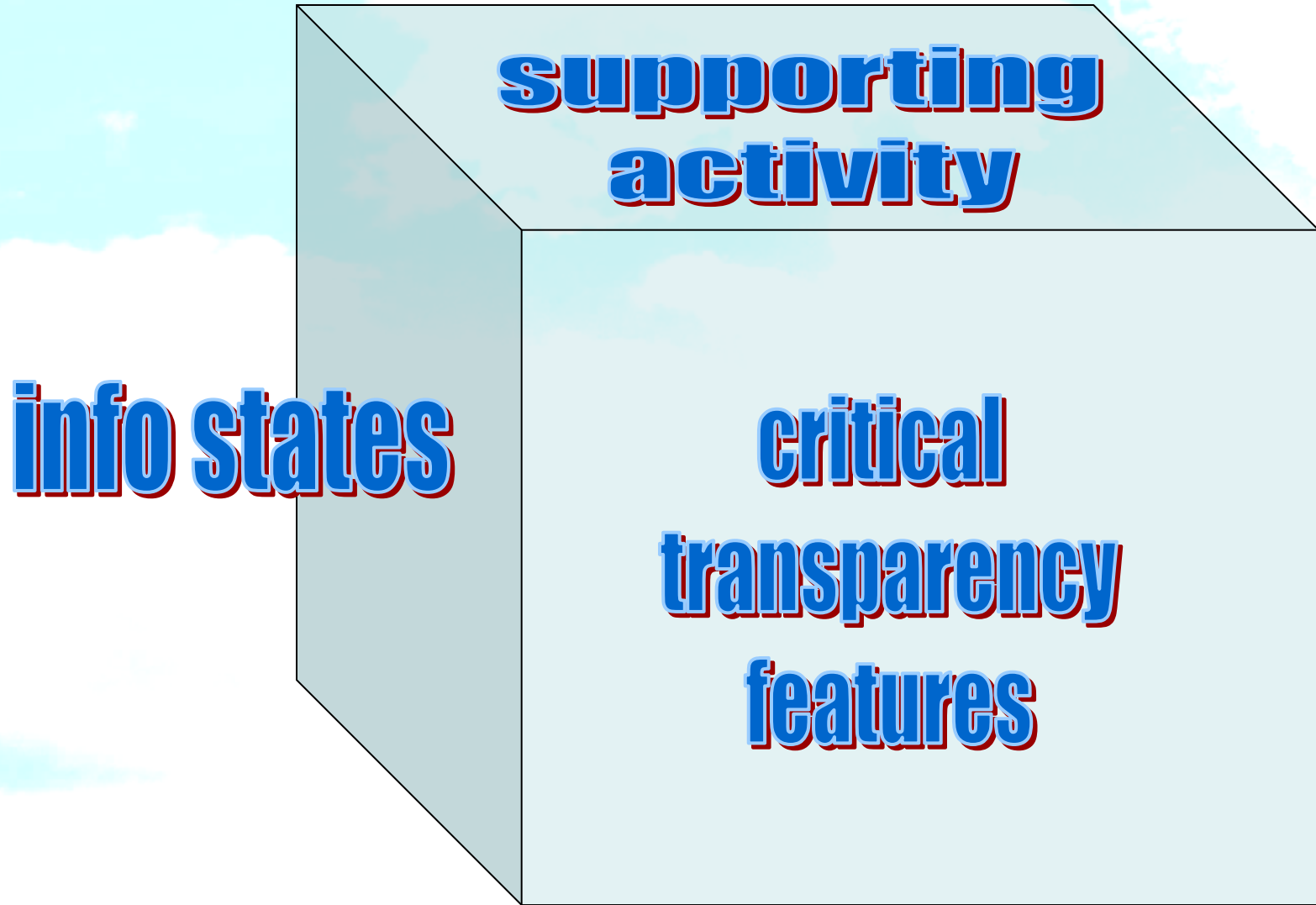
Transparency Supporting Activities

Safeguard or “Action” areas

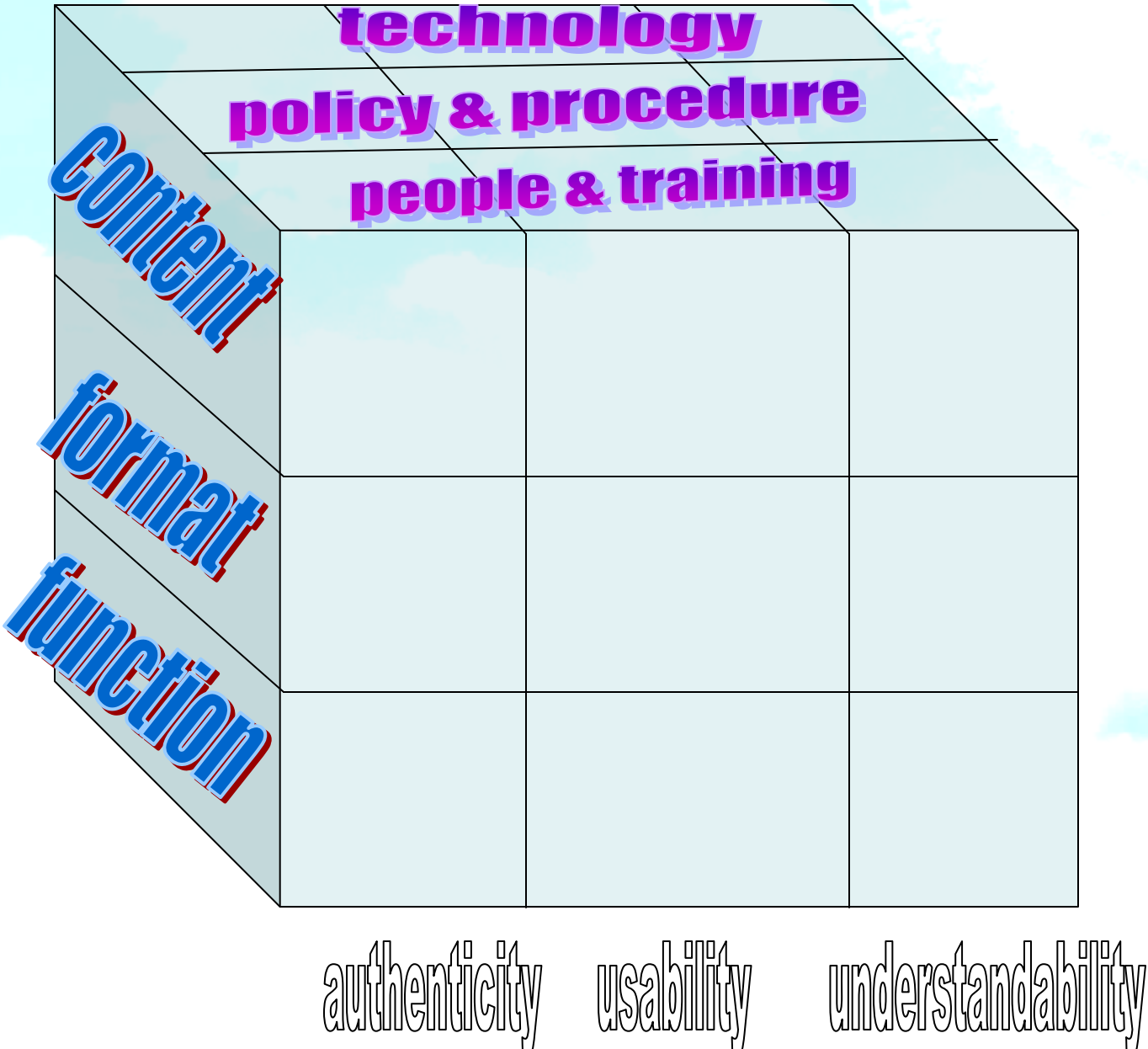
What actions can an organization take to ensure transparency?

- Education, training, and awareness
- Policies and practices
- Technology

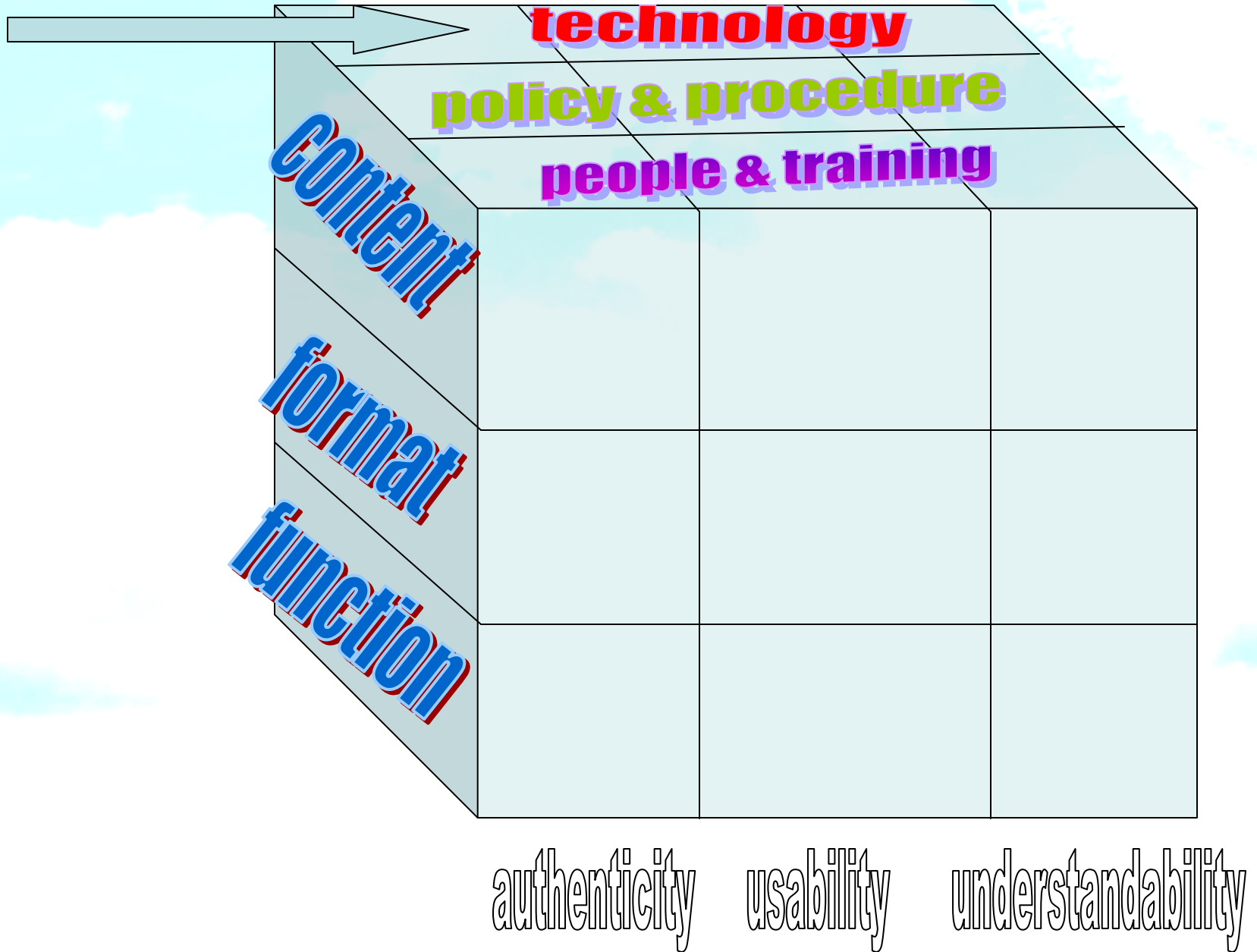
Transparency Action Cube



Transparency Action Cube



Information Quality Cube



Technology Safeguard Example

	Transparency Authenticity	Transparency Usability	Transparency Understandability
Content	(accuracy, completeness) <ul style="list-style-type: none">• Physical, software, and cyber security• Peer review• Quality system	(timeliness, comparability) <ul style="list-style-type: none">• Quality system• Peer review	(completeness) <ul style="list-style-type: none">• Content management system
Format	(correctness, representativeness) <ul style="list-style-type: none">• Technical format standards	(consistency) <ul style="list-style-type: none">• Technical format standards• Data standards	(plain English) <ul style="list-style-type: none">• Content management system• Data standards
Function	(computer integrity) <ul style="list-style-type: none">• Verification and Validation• Other security requirements• Functional requirements	(system compatibility) <ul style="list-style-type: none">• Functional requirements• Computer standards	(accessibility, currency) <ul style="list-style-type: none">• Robust software

Federal Transparency

A standard government approach.....

Transparency defined.....

This is what it means to be transparent.....



Federal Transparency

- Federal Funding Accountability and Transparency Act of 2006

- Created www.USAspending.gov

- Transparency of.....

- All spending
- Data quality = data timeliness and data completeness



- American Recovery and Reinvestment Act of 2009

- Created www.recovery.gov

- Transparency of....

- Accountability
- Where money is going
- Opportunities



Federal Transparency

White House Open Government Initiative

<http://www.whitehouse.gov/open/documents/open-government-directive>

- **Presidential Memorandum on Transparency and Open Government** issued on January 21, 2009 laid out 3 principles:
 - **Transparency**
 - *Participation*
 - *Collaboration*
- **Open Government Directive** Issued by OMB Director on January 21, 2009
 - **Transparency** promotes accountability by providing the public with information about what the government is doing.
 - *Participation* allows members of the public to contribute ideas and expertise so that their government can make policies with the benefit of information that is widely dispersed in society.
 - *Collaboration* improves the effectiveness of Government by encouraging partnerships and cooperation within the Federal Government, across levels of government, and between the Government and private institutions.

Federal Transparency

Required STEPS from the *OPEN GOVERNMENT DIRECTIVE*

1. **Publish government information online – expand access to information by making it available online in open formats.**
 - **Publish information online**, preserve and maintain electronic information consistent with the Federal Records Act. Timely publication of information is an essential element of transparency.
 - **Use an open format** – this is a format that:
 - Can be retrieved, downloaded, indexed, and searched by commonly used web search application and
 - Is platform independent, machine readable, and made available to the public without restrictions that would impeded re-use of that information.
 - **Use modern technology** – to disseminate useful information (rather than waiting for specific requests under FOIA)
 - **High-value Data Sets** – deadline to provided three sets of previously unavailable high-value data to data.gov
 - **Open government web page** – deadline to establish at each at each Agency
 - **Public interaction mechanism** on open government web page for
 - Public feedback on and assessment of the quality of published information;
 - Public input about which information to prioritize for publication; and
 - Public input on the agency's Open Government Plan
 - **Public Input Response** – respond to public input
 - **Open format Annual FOIA Report**
 - **Conform to all Presidential open government initiatives**

Federal Transparency

Required STEPS from the *OPEN GOVERNMENT DIRECTIVE*
(continued)

2. **Improve the quality of government information**
3. **Create and institutionalize a culture of open government**
4. **Create an enabling policy framework for open government.**

Federal Transparency

OPEN GOVERNMENT DIRECTIVE *THE OPEN GOVERNMENT PLAN*

Transparency – steps the agency will take to conduct its work more openly and publish its information online, including any proposed changes to internal management and administrative policies to improve transparency. Specifically, as part of the plan to enhance information dissemination, describe how the agency is currently meeting its legal information dissemination obligations, and how it plans to improve its existing information dissemination practices by providing:

Strategic Action Plan for Transparency that

1. Inventories agency high-value information currently available for download;
2. Fosters the public's use of this information to increase public knowledge and promote public scrutiny of agency services; and
3. Identifies high value information not yet available and establishes a reasonable timeline for publication online in open formats with specific target dates.
 - Benefits could include:
 - Increased agency accountability and responsiveness,
 - Improved public knowledge of the agency and its operations,
 - Further the core mission of the agency,
 - Create economic opportunity, or
 - Respond to need and demand as identified through public consultation.
4. Plan for Timely Publication of Underlying Data – in cases where the agency provides public information maintained in electronic format.
5. Transparency initiative guidance compliance details AND activities and timing to address any gaps. Areas covered include:
 - Data.gov
 - eRulemaking
 - IT Dashboard
 - Recovery.gov
 - USAspending.gov

Federal Transparency

OPEN GOVERNMENT DIRECTIVE *THE OPEN GOVERNMENT PLAN* (continued)

6. **Proposed significant agency actions and business** to inform public
7. **Records Management Requirements conformity** – publicly available website:
8. **FOIA process** – public link to a website including:
 - Description of staffing, organizational structure, and process for analyzing and responding to FOIA requests;
 - Assessment of agency’s capacity to analyze, coordinate, and respond to such requests in a timely manner, together with proposed changes, technological resources, or reforms that the agency determines are needed to strengthen FOIA response processes; and
 - If agency has a significant backlog, milestones that detail how the agency will reduce its pending backlog of outstanding FOIA requests by at least ten percent each year.
9. **Congressional request responses** – public link to the agency process for staffing, organizational structure, and process for analyzing and responding to Congressional requests for information.
10. **Agency Declassification Process** – web link where the public can learn:
 - How to access declassified materials, and
 - Provide input about what types of information should be prioritized for declassification, as appropriate.

Information Quality Guidelines - Transparency Model

AGENCY IQG INFORMATION TYPES		QUALITY									
		OBJECTIVITY					INTEGRITY (security)		UTILITY		
		PRESENTATION <i>correct, clear, complete, unbiased</i>			SUBSTANCE <i>accurate reliable unbiased</i>		PRODUCTION <i>samples, records, Chain-of-custody, lab, field</i>	DISSEMINATION <i>cyber physical</i>	freedom from defects	computer functionality	increased utility transparency <i>e.g., labelling, source, public value</i>
		increased objectivity transparency		unbiased presentation	good methods to develop data & results	peer review option					
INFLUENTIAL	influential Original and supporting data	<u>OPTIONS</u> A. required B. not required									
	influential Analytic results	<u>OPTIONS</u> A. sufficient to allow independent analysis B. robustness check C. exempted (FOIA)									
	influential Risk analysis	<u>OPTIONS</u> A. Adopt SDWA B. Adapt SDWA									
OTHER INFORMATION TYPE?		not applicable, reproducibility is only required for influential data									
OTHER INFORMATION TYPE?		not applicable, reproducibility is only required for influential data									

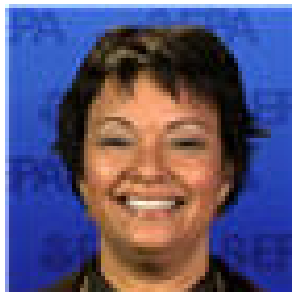
EPA Transparency



<http://www.epa.gov/open/>

Transparency

Transparency promotes accountability and provides information about what government is doing.



*The success of our environmental efforts depends on earning and maintaining the trust of the public we serve. The American people will not trust us to protect their health or their environment if they do not trust us to be **transparent** and inclusive in our decision-making. To earn this trust, we must conduct business with the public openly and fairly.... In short, we will let more sunlight into our Agency.*

-- Administrator Lisa P. Jackson in an [April 2009 memo to EPA employees](#)

EPA Transparency

The EPA *OPEN GOVERNMENT PLAN*

Innovative activities being reported

- [Map of 2009 Enforcement Actions](#) | [View raw data in XML or HTML format](#)
- [EPA's Data Finder](#)
- [Senior Manager Schedules](#)
- [Information Access Strategy \(PDF\)](#) (23pp, 813K, [About PDF](#))
- [MyEnvironment](#)

Comments.....

- If the work did not have a quality plan does not mean it was not done well.....
- If the information does not include backup data, it does not mean it is incorrect.....
- Just because the additional information is not immediately available does not mean the information is a concern.....

SUMMARY

1. Transparency IS a model
2. Transparency must be defined
3. Transparency can be planned.....
 - Define features
 - Define measures and units (and indices)
 - Establish procedures and processes
 - Include improvement processes
4. The Federal Model for transparency is defined
 - Agencies can provide further definition (see their websites)



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Humankind cannot bear very much reality.

T.S. ELIOT