

# NATIONAL STRATEGY FOR TRUSTED IDENTITIES IN CYBERSPACE

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**Governance Workshop  
June 9-10, 2011**

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U.S. Department of Commerce

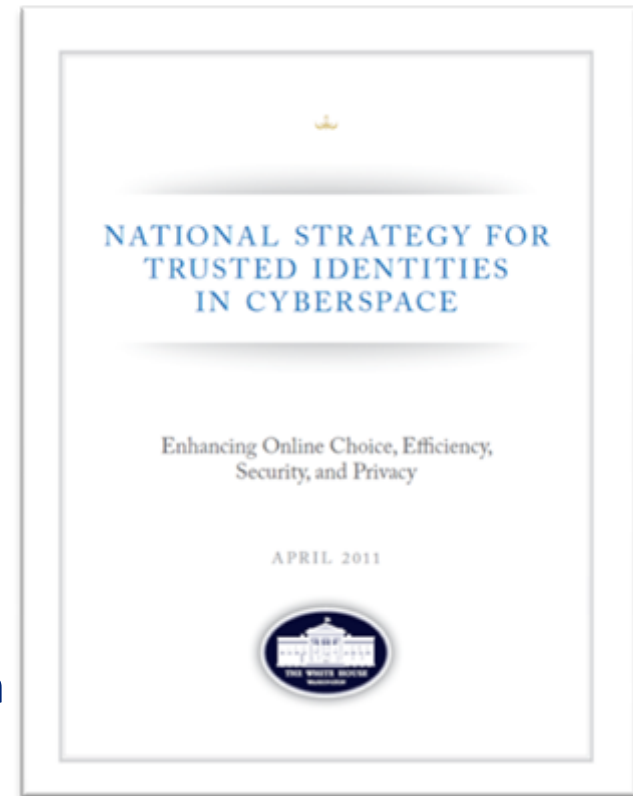
# What is NSTIC?

Called for in President's Cyberspace Policy Review (May 2009):  
a "cybersecurity focused identity management vision and strategy...that addresses privacy and civil-liberties interests, leveraging privacy-enhancing technologies for the nation."

## Guiding Principles

- Privacy-Enhancing and Voluntary
- Secure and Resilient
- Interoperable
- Cost-Effective and Easy To Use

NSTIC calls for an **Identity Ecosystem**,  
"an online environment where individuals and organizations will be able to trust each other because they follow agreed upon standards to obtain and authenticate their digital identities."



# The Problem Today

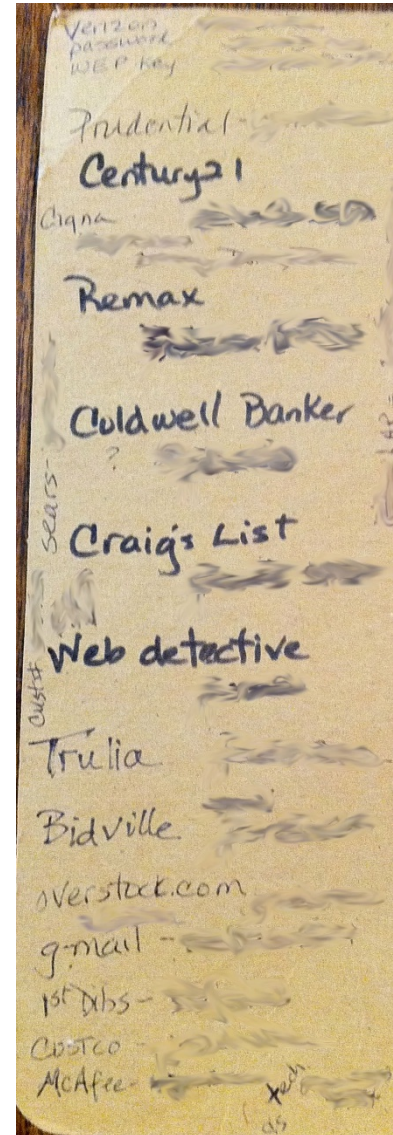
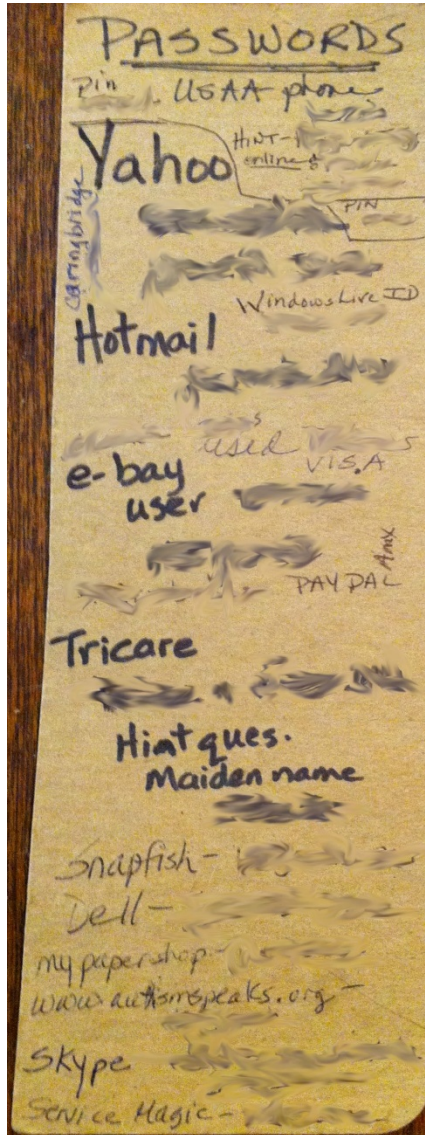
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## Username and passwords are broken

- Most people have 25 different passwords, or use the same one over and over
- Even strong passwords are vulnerable...criminals can get the “keys to the kingdom”
- Rising costs of identity theft
  - 123% increase in financial institution Suspicious Activity Reports in last 6 years (FINCEN)
  - 11.7 million est. victims over 2 years (BJS, 2008)
  - \$17.3 billion est. cost to economy over 2 years (BJS, 2008)
- Cybercrime is also on the rise
  - Incidents up 22% from 2009 to 2008 (IC3 report)
  - Total loss from these incidents up 111%, to \$560 million.

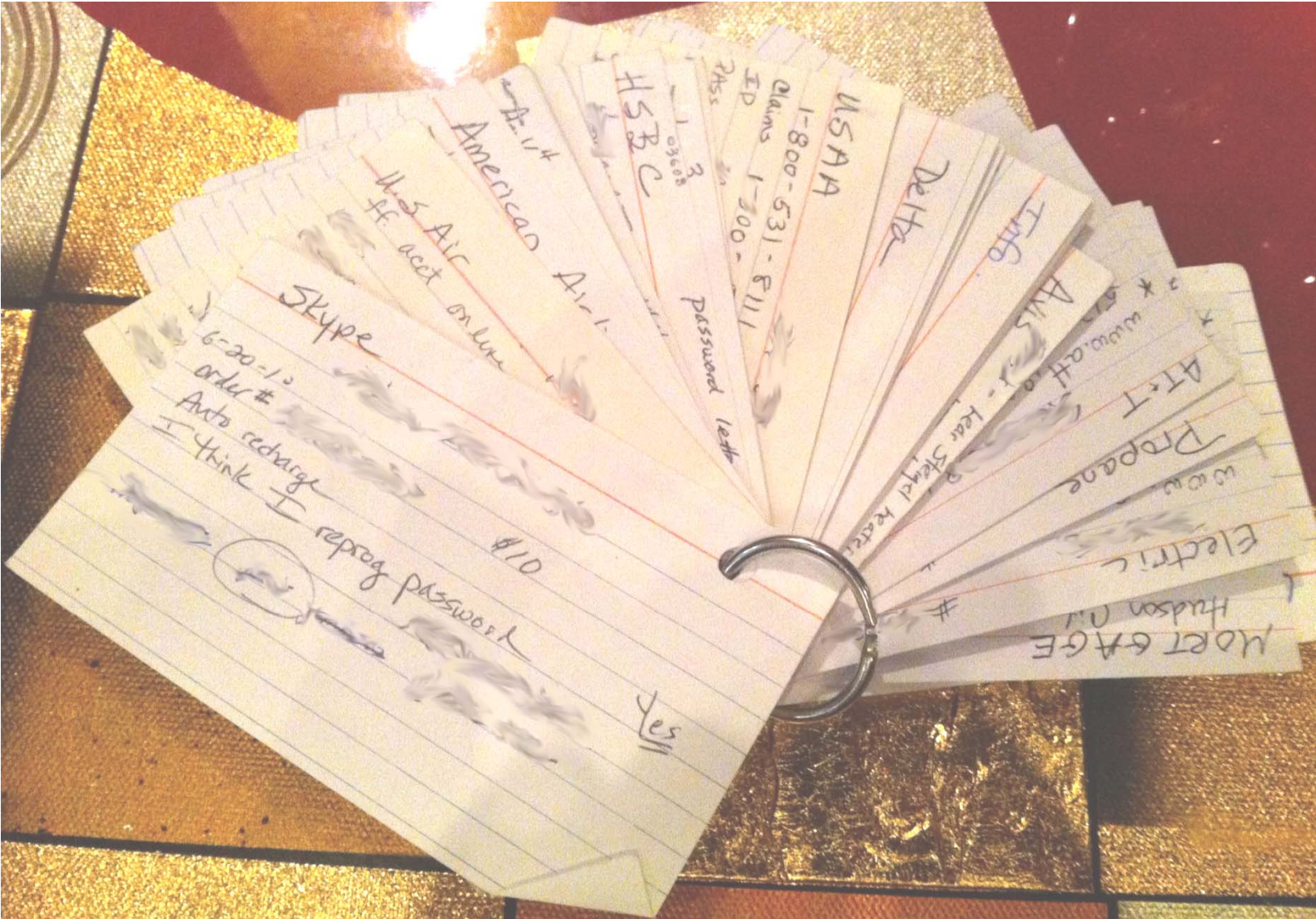


# No Seriously, There's a Problem Today





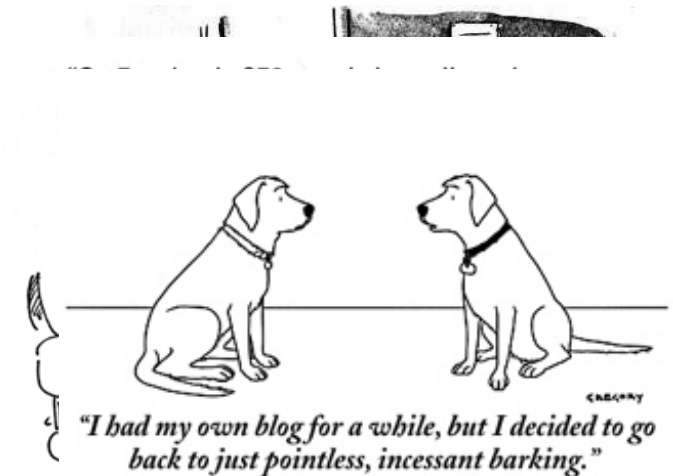
# There's a Problem Today, Travel Edition



# The Problem Today

## Identities are difficult to verify over the internet

- Numerous government services still must be conducted in person or by mail, leading to continual rising costs for state, local and federal governments
- Electronic health records could save billions, but can't move forward without solving authentication challenge for providers and individuals
- Many transactions, such as signing an auto loan or a mortgage, are still considered too risky to conduct online due to liability risks



Rev. Center for Internet Security, July 5, 2005

# The Problem Today

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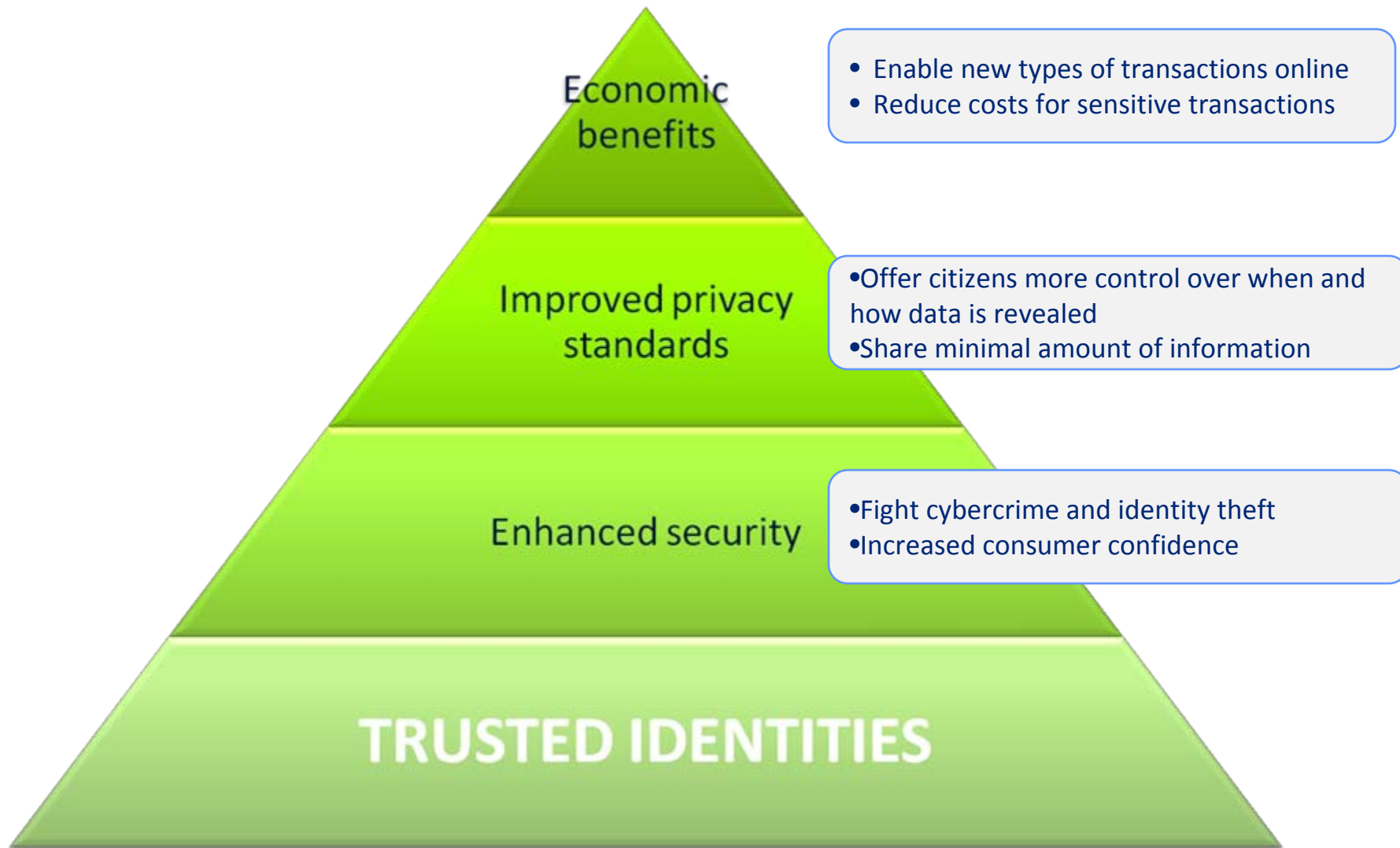
## Privacy remains a challenge

- Individuals often must provide more personally identifiable information (PII) than necessary for a particular transaction
  - This data is often stored, creating “honey pots” of information for cybercriminals to pursue
- Individuals have few practical means to control use of their information



# Trusted Identities provide a foundation

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# January 1, 2016

The Identity Ecosystem: Individuals can choose among multiple identity providers and digital credentials for convenient, secure, and privacy-enhancing transactions anywhere, anytime.

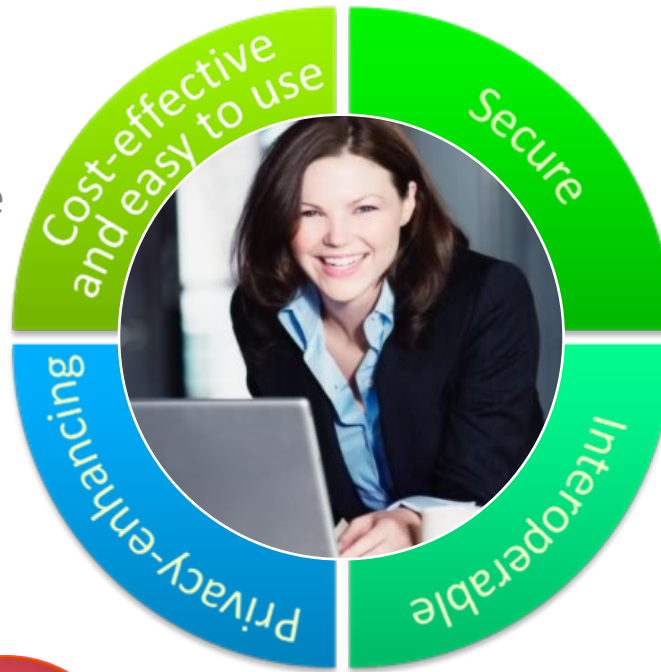


Apply for mortgage online with e-signature

Trustworthy critical service delivery



Security 'built-into' system to reduce user error



Online shopping with minimal sharing of PII



Secure Sign-On to state website



Privately post location to her friends

# NSTIC Guiding Principles

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## Identity Solutions will be:

- Privacy-Enhancing and Voluntary
- Secure and Resilient
- Interoperable
- Cost-Effective and Easy To Use

# We've proven that Trusted Identities matter

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## DoD Led the Way

- DoD network intrusions fell 46% after it banned passwords for log-on and instead mandated use of the CAC with PKI.

## But Barriers Exist

- High assurance credentials come with higher costs and burdens
- They've been impractical for many organizations, and most single-use applications.
- Metcalfe's Law applies – but there are barriers (standards, liability, usability) today that the market has struggled to overcome.

# What does NSTIC call for?



## Private sector will lead the effort

- Not a government-run identity program
- Private sector can best identify what barriers need to be overcome
- Industry is in the best position to drive technologies and solutions

## Federal government will provide support

- Help develop a private-sector led governance model
- Facilitate and lead development of interoperable standards
- Provide clarity on national policy and legal framework around liability and privacy
- Act as an early adopter to stimulate demand



## NSTIC: The specifics...

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*“Giving consumers choices for solving these kinds of problems is at the heart of this new strategy. And it is one that relies not on government, but on the private sector, to design the technologies and tools that will help make our identities more secure in cyberspace and to make those tools available to consumers who want them. It asks companies to pursue these solutions in ways that will not impinge on the vitality and dynamism of the web, or force anyone to give up the anonymity they enjoy on the Internet.”*

A handwritten signature in black ink, appearing to read "Bruce Schneier". The signature is fluid and cursive, with a large initial "B" and a stylized "S".

# NSTIC: The specifics...

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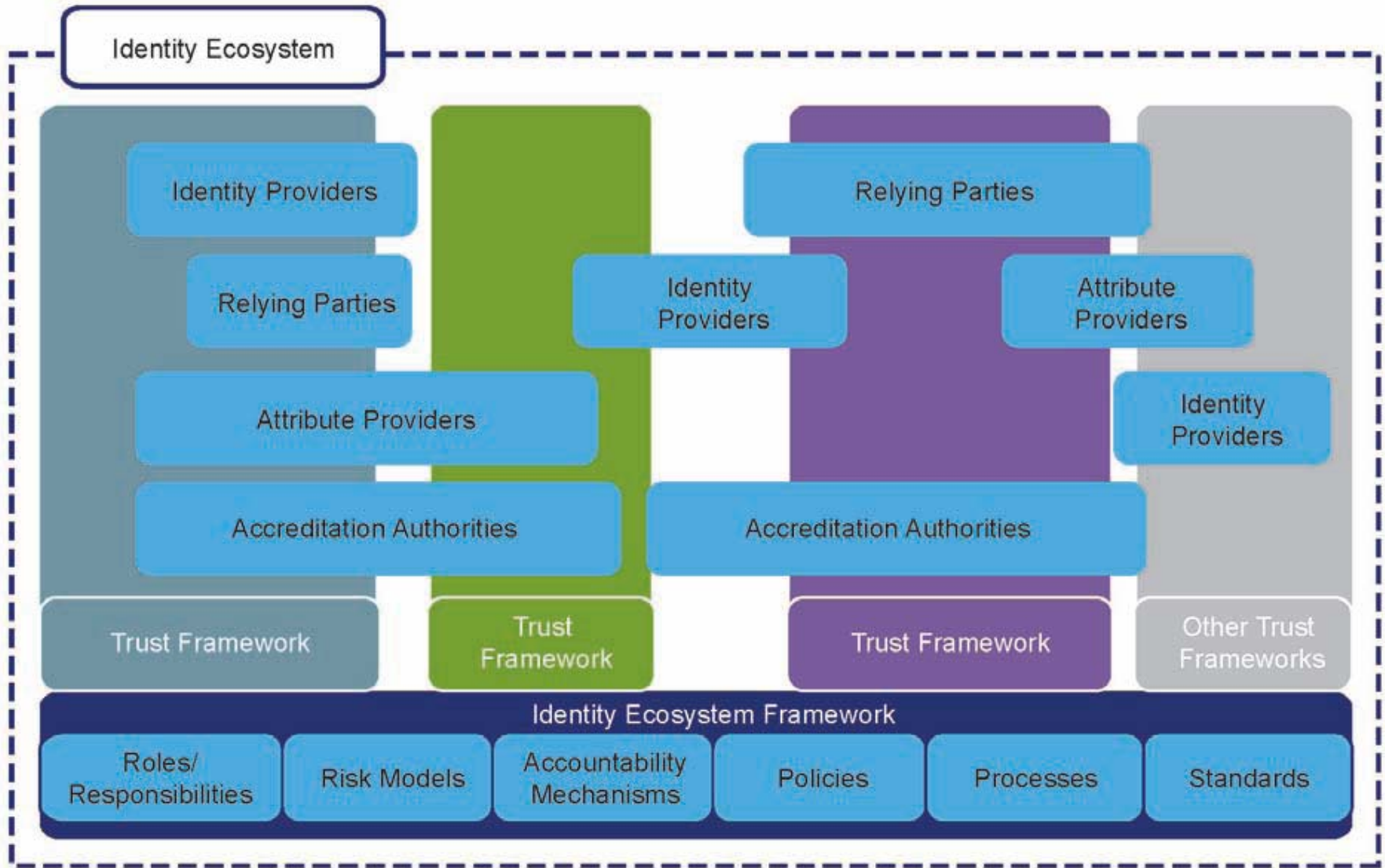
## NSTIC Goal 1 (p. 29):

### *Develop a comprehensive Identity Ecosystem Framework.*

“The Identity Ecosystem Framework is the overarching set of interoperability standards, risk models, privacy and liability policies, requirements, and accountability mechanisms that govern the Identity Ecosystem.

“It will guide the development of individual trust frameworks and will be flexible enough to accommodate the varied needs of Identity Ecosystem participants.”

# The Identity Ecosystem – an example



## **Objective 1.4: Establish a steering group to administer the standards development and accreditation process for the Identity Ecosystem Framework (p.31)**

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“The policy and technical standards necessary for the Identity Ecosystem may be developed in different fora. A steering group will thus administer the process for policy and technical standards development for the Identity Ecosystem Framework.

“The group will bring together all of the interested stakeholders to ensure that the Identity Ecosystem Framework provides a minimum baseline of privacy, security, and interoperability through standards, policies, and laws—without creating unnecessary barriers to entry.

“The steering group will work diligently to follow the Guiding Principles in this Strategy; it will organize and conduct itself in the spirit of those principles, as the inclusive, transparent, pragmatic, and committed leadership group building toward the Strategy’s vision. To that end, the steering group will also set milestones and measure progress against them. The steering group will also ensure that accreditation authorities validate participants’ adherence to the requirements of the Identity Ecosystem Framework.”



# NSTIC: The specifics...

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## NSTIC Goal 2:

### *Build and Implement the Identity Ecosystem (p.32)*

“The Identity Ecosystem Framework includes the standards, policies and laws that serve as a platform for the Identity Ecosystem; however, it is not the Ecosystem.

“The Identity Ecosystem must be built and implemented, primarily by the private sector...”

# The Private Sector Will Lead the Effort...

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## Role of the Private Sector (p. 37)

“Only the private sector has the ability to build and operate the complete Identity Ecosystem, and the final success of the Strategy depends upon private-sector leadership and innovation.

“The key operational roles within the Identity Ecosystem include: subjects, relying parties, identity providers, attribute providers, and accreditation authorities. For each of these ecosystem roles, the private sector will constitute the majority of the actors. For example, most identity and attribute providers will be private-sector organizations.

# The Private Sector Will Lead the Effort...

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## Role of the Private Sector (p.37, cont'd.)

“The Strategy can only succeed if the Identity Ecosystem is self-sustaining, which will require the development of business models for each of the service provider roles in the ecosystem. Many of these business models will be entirely new, and only the private sector can provide the innovation necessary to realize them.”

“The private sector must also play a leadership role in the design and operation of the Identity Ecosystem. The development of the Identity Ecosystem Framework and the ongoing work to maintain accountability to that framework will require a true public-private partnership. The private sector has the insight into the needs of the market that is necessary to develop effective technical and policy standards for the Identity Ecosystem. For-profit organizations can help ensure that the Identity Ecosystem Framework provides sustainable business models and is not an onerous burden on the private sector. Advocacy groups and non-profits can magnify the voices of individuals and under-represented groups, and they can work to ensure the enhancement of privacy and to otherwise support civil liberties.”

# Federal government will support the private sector...

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## Role of the Federal Government (p. 37)

- Advocate for and protect individuals;
- Support the private sector's development and adoption of the Identity Ecosystem;
- Partner with the private sector to ensure that the Identity Ecosystem is sufficiently interoperable, secure, and privacy protecting;
- Provide and accept Identity Ecosystem services for which it is uniquely suited; and
- Lead by example and implement the Identity Ecosystem for the services it provides internally and externally.

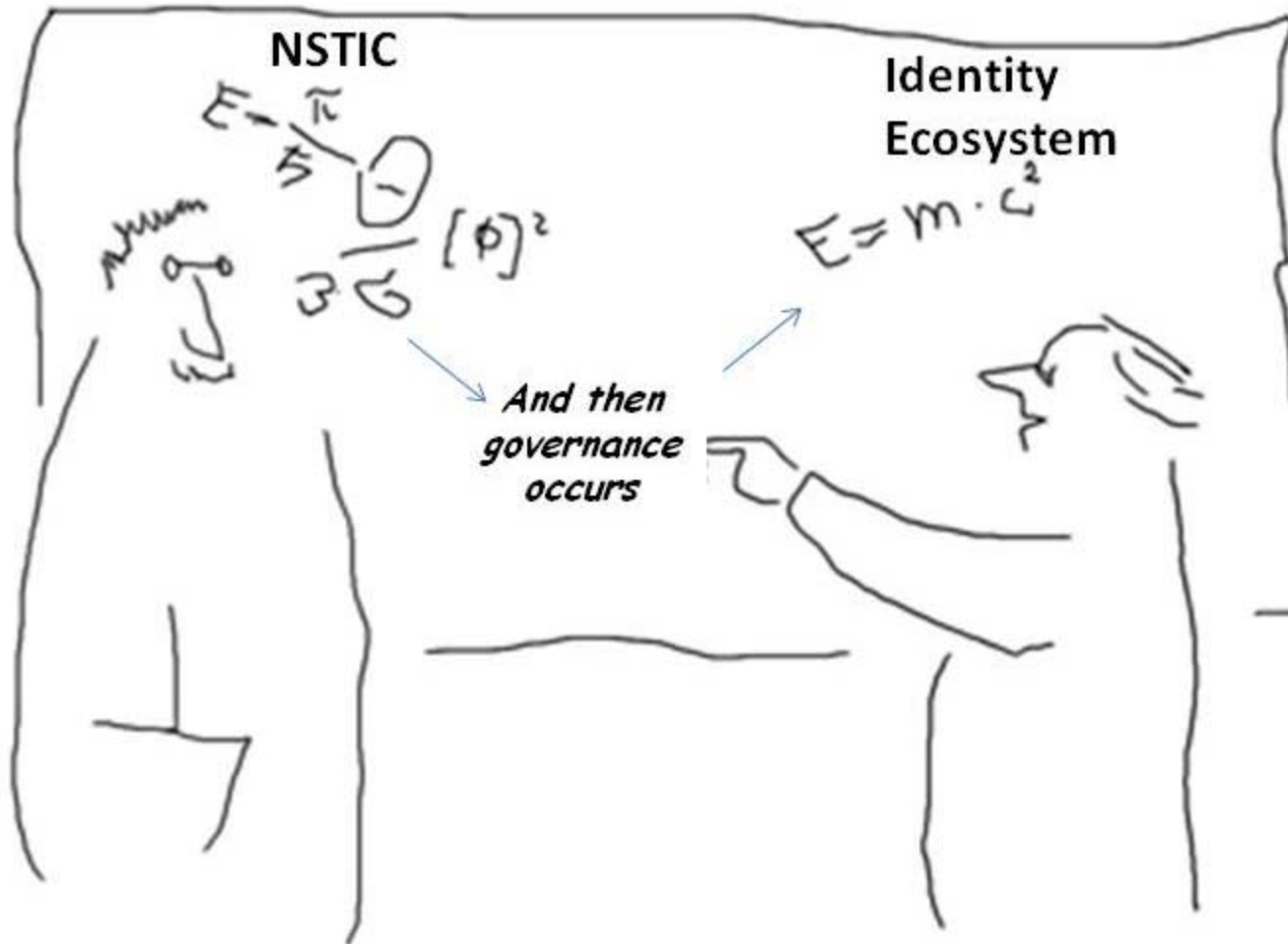


## So in summary:

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- The Steering Group to develop the Identity Ecosystem Framework must enable a true public-private partnership.
- Its objective: to take the lead in convening stakeholders from all sectors to figure out how to develop policy and technical standards necessary to create the Identity Ecosystem.
- Government will participate in this group and support it – but that does not mean we will lead it.

# What we are doing here today



"I think you should be more explicit here in step two."

# What is Governance?

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*The leadership, organizational structures and processes that ensure the Steering Body implements, sustains and extends the NSTIC vision, guiding principles, goals and objectives.*

## **Governance answers questions such as:**

- How is the NSTIC Steering Group established?
- How is it organized and structured?
- What are its responsibilities and authorities?
- How can stakeholders participate...and what are their rights?

# What is Governance?

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## NSTIC governance process should enable:

- **Collaboration** – among multiple stakeholders
- **Information input and collection** – to consider all views
- **Information dissemination** – to ensure transparency, collaboration and decision-making
- **Informed decision-making** – to reach conclusions and advance the Ecosystem
- **Implementation of decisions** – for the Identity Ecosystem Framework policies, processes, standards and rules
- **Accountability** – to ensure decisions are followed

*Ultimate goal: manage trust within the identity ecosystem*

# The NSTIC Governance Notice of Inquiry (NOI)

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**Released June 8, 2011**

- Objective: to seek comments on the requirements of, and possible models for, the NSTIC steering group
- Focus on 4 key issues:
  1. Steering Group Structure
  2. Steering Group Initiation
  3. Representation of Stakeholders
  4. International Considerations
- Comments are due on or before July 22, 2011

# The NSTIC Governance NOI

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## What we hope to gain from it

- Ideas and recommendations
- Lessons learned from other efforts
- Meaningful input from a wide array of stakeholders

## What we will do with it/how we will respond

- Inputs will inform our deliberations and decisions on the steering body; all comments will be analyzed
- All submissions will be part of the public record
- NIST will produce a public report with recommendations for addressing, at a minimum, questions raised on the four key issues



# Today

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*The purpose of this workshop is to explore the issues raised in the NSTIC NOI.*

- An opportunity to begin discussion on governance and the NOI questions.
- We are not making decisions in this workshop – only exploring issues and beginning to collaborate.
- All parties are encouraged to respond to the NOI.

# NOI Focus Area 1: Steering Group Structure

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- 1.1. Given the Guiding Principles outlined in the Strategy, what should be the structure of the steering group? What structures can support the technical, policy, legal, and operational aspects of the Identity Ecosystem without stifling innovation?
- 1.2. Are there broad, multi-sector examples of governance structures that match the scale of the steering group? If so, what makes them successful or unsuccessful? What challenges do they face?
- 1.3. Are there functions of the steering group listed in this Notice that should not be part of the steering group's activities? Please explain why they are not essential components of Identity Ecosystem Governance.
- 1.4. Are there functions that the steering group must have that are not listed in this notice? How do your suggested governance structures allow for inclusion of these additional functions?
- 1.5. To what extent does the steering group need to support different sectors differently?
- 1.6. How can the steering group effectively set its own policies for all Identity Ecosystem participants without risking conflict with rules set in regulated industries? To what extent can the government mitigate risks associated with this complexity?
- 1.7. To what extent can each of the Guiding Principles of the Strategy—interoperability, security, privacy and ease of use—be supported without risking “pull through” regulation from regulated participants in the Identity Ecosystem?
- 1.8. What are the most important characteristics (e.g., standards and technical capabilities, rulemaking authority, representational structure, etc.) of the steering group?
- 1.9. How should the government be involved in the steering group at steady state? What are the advantages and disadvantages of different levels of government involvement?

# NOI Focus Area 2: Steering Group Initiation

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- 2.1. How does the functioning of the steering group relate to the method by which it was initiated? Does the scope of authority depend on the method? What examples are there from each of the broad categories above or from other methods? What are the advantages or disadvantages of different methods?
- 2.2. While the steering group will ultimately be private sector-led regardless of how it is established, to what extent does government leadership of the group's initial phase increase or decrease the likelihood of the Strategy's success?
- 2.3. How can the government be most effective in accelerating the development and ultimate success of the Identity Ecosystem?
- 2.4. Do certain methods of establishing the steering group create greater risks to the Guiding Principles? What measures can best mitigate those risks? What role can the government play to help to ensure the Guiding Principles are upheld?
- 2.5. What types of arrangements would allow for both an initial government role and, if initially led by the government, a transition to private sector leadership in the steering group? If possible, please give examples of such arrangements and their positive and negative attributes.

# NOI Focus Area 3: Representation of Stakeholders

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- 3.1. What should the make-up of the steering group look like? What is the best way to engage organizations playing each role in the Identity Ecosystem, including individuals?
- 3.2. How should interested entities that do not directly participate in the Identity Ecosystem receive representation in the steering group?
- 3.3. What does balanced representation mean and how can it be achieved? What steps can be taken guard against disproportionate influence over policy formulation?
- 3.4. Should there be a fee for representatives in the steering group? Are there appropriate tiered systems for fees that will prevent “pricing out” organizations, including individuals?
- 3.5. Other than fees, are there other means to maintain a governance body in the long term? If possible, please give examples of existing structures and their positive and negative attributes.
- 3.6. Should all members have the same voting rights on all issues, or should voting rights be adjusted to favor those most impacted by a decision?
- 3.7. How can appropriately broad representation within the steering group be ensured? To what extent and in what ways must the Federal government, as well as State, local, tribal, territorial, and foreign governments be involved at the outset?

# NOI Focus Area 4: International Considerations

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- 4.1. How should the structure of the steering group address international perspectives, standards, policies, best practices, etc?
- 4.2. How should the steering group coordinate with other international entities (e.g., standards and policy development organizations, trade organizations, foreign governments)?
- 4.3. On what international entities should the steering group focus its attention and activities?
- 4.4. How should the steering group maximize the Identity Ecosystem's interoperability internationally?
- 4.5. What is the Federal government's role in promoting international cooperation within the Identity Ecosystem?

# How the workshop will proceed

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## Two Panels

- Options for Structuring Governance: Real World Examples
- Essential Elements of Identity Ecosystem Governance

## Two breakout sessions

- Today 3-5pm; Tomorrow 10-noon.
- Focus on first 3 NOI issues; international considerations to be considered in all 3
- Attendees can participate in whichever sessions they like
- Tomorrow morning we'll have a brief report on Day 1 breakouts; more detailed reports after lunch
- Lunch on your own both days; coffee and refreshments are included.



# Keep in mind...

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## The NSTIC Vision

*Individuals and organizations utilize secure, efficient, easy-to-use and interoperable identity solutions to access online services in a manner that promotes confidence, privacy, choice and innovation.*

## Guiding Principles

### Identity Solutions will be:

- Privacy-Enhancing and Voluntary
- Secure and Resilient
- Interoperable
- Cost-Effective and Easy To Use

# Questions?

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