

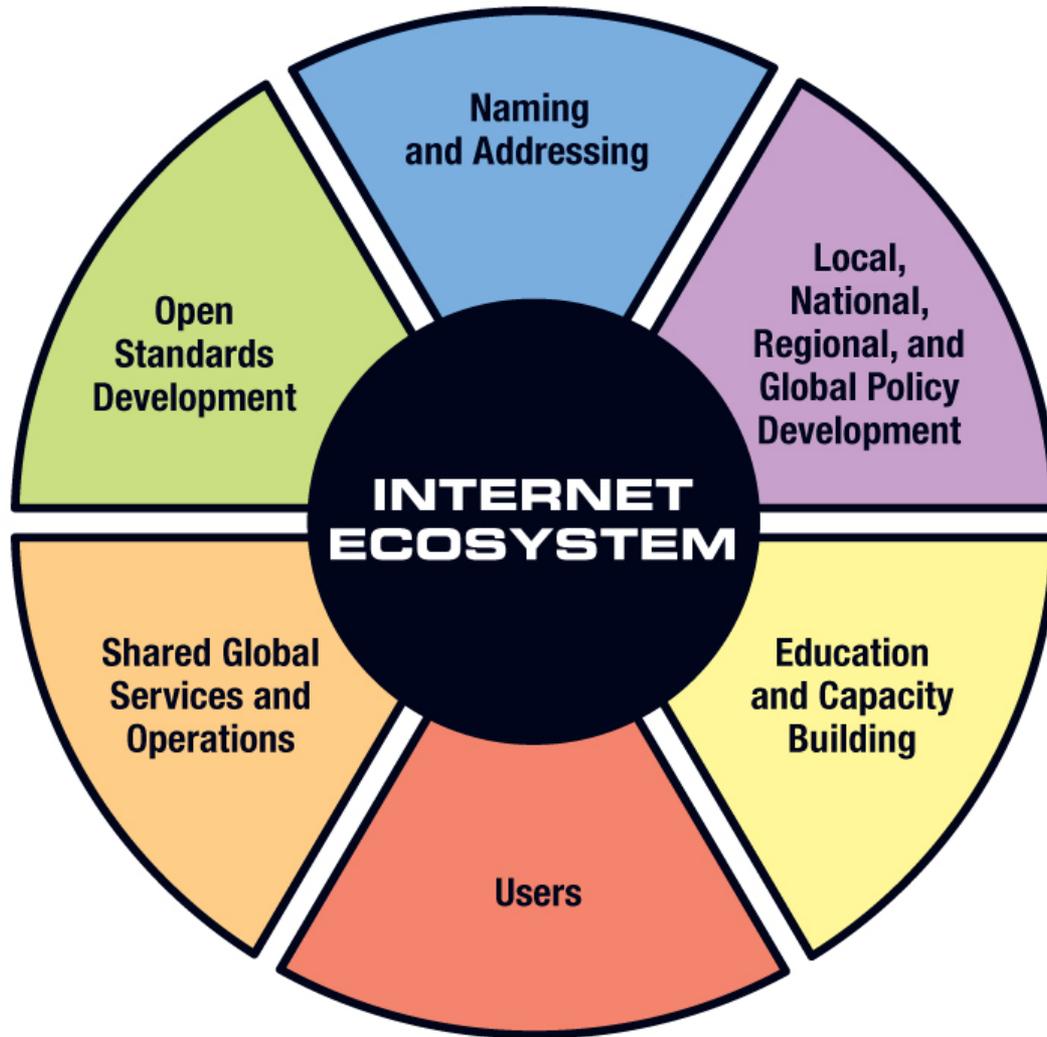
The Global Identity Ecosystem

Internet Society Overview

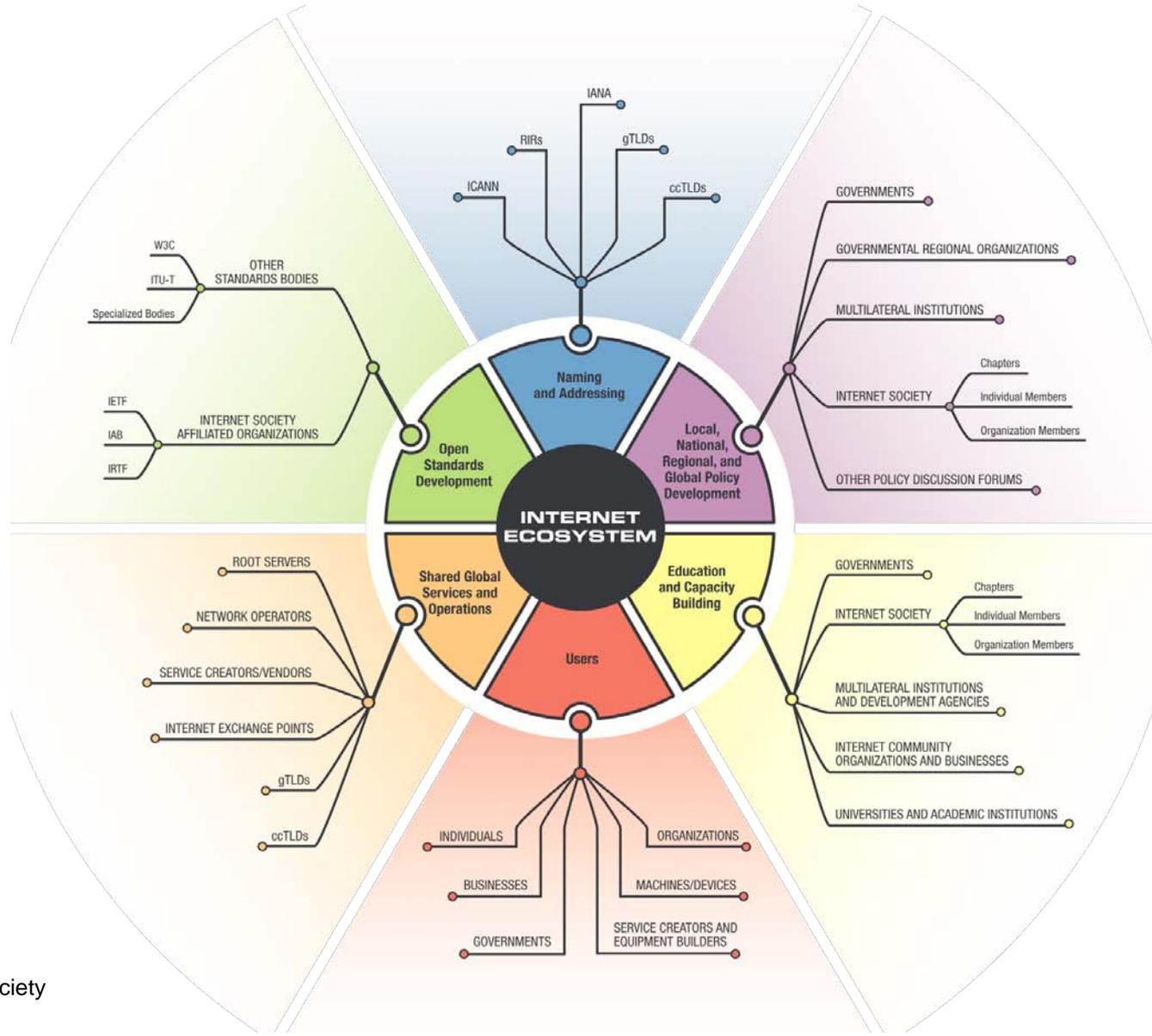
- **Non-profit based near Washington, DC and Geneva, Switzerland**
- **Founded in 1992 to provide leadership in Internet related standards, education, and policy**
- **Membership:**
 - 100+ Organization Members
 - 80+ Global Chapters
 - 44,000+ Individual Members
- **Standards Body Relationships**
 - Internet Engineering Task Force (IETF)
 - Internet Architecture Board (IAB)
- **Regional Bureaus: Africa & the Middle East, Europe, Latin America & the Caribbean, North America and Asia**



Internet Ecosystem



Internet Ecosystem – detailed



Mapping the Identity Ecosystem Workshop

Amsterdam – December 14-15, 2012



Mapping the Identity Ecosystem Workshop

- **Objective: Facilitate an international multi-perspective conversation on the Global Identity Ecosystem**
 - Bring together a cross-section of the Identity Ecosystem representing technology, policy, and economic perspectives.
- **Agenda**
 - Ecosystem Map
 - Values
 - Gap Analysis
 - Technology Gaps
 - Policy Gaps
 - Economic Gaps
 - Near Term Actions

Who makes up the Identity Ecosystem?

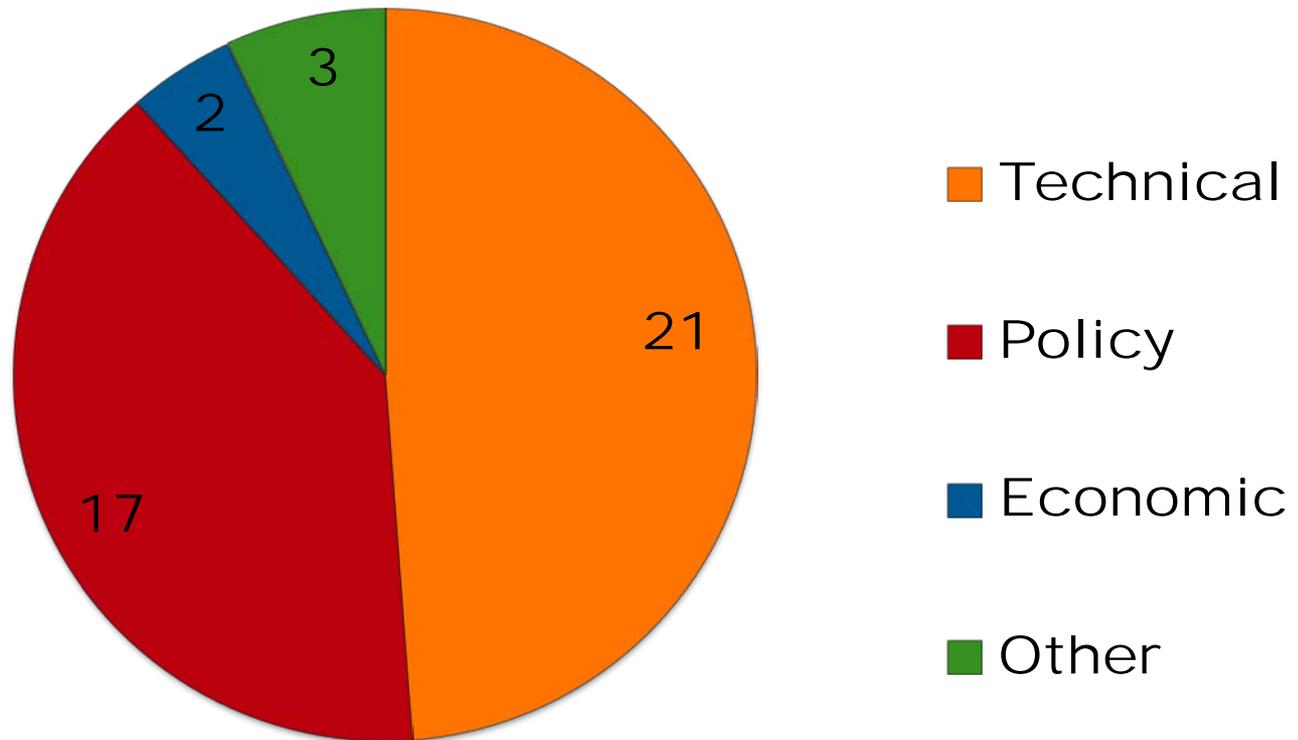
Roles

- **Identity Provider**
- **Relying Party**
- **Federation Operator**
- **User/Consumer**
- **Inter-federation Facilitator**
- **Sources of Authoritative Attribute Information**
- **Attribute Provider**
- **Auditor**
- **Gateway/Portal Provider**
- **Advocate**
- **Legislators and Regulators**
- **Governance for Trust Frameworks**
- **Dispute Resolution**

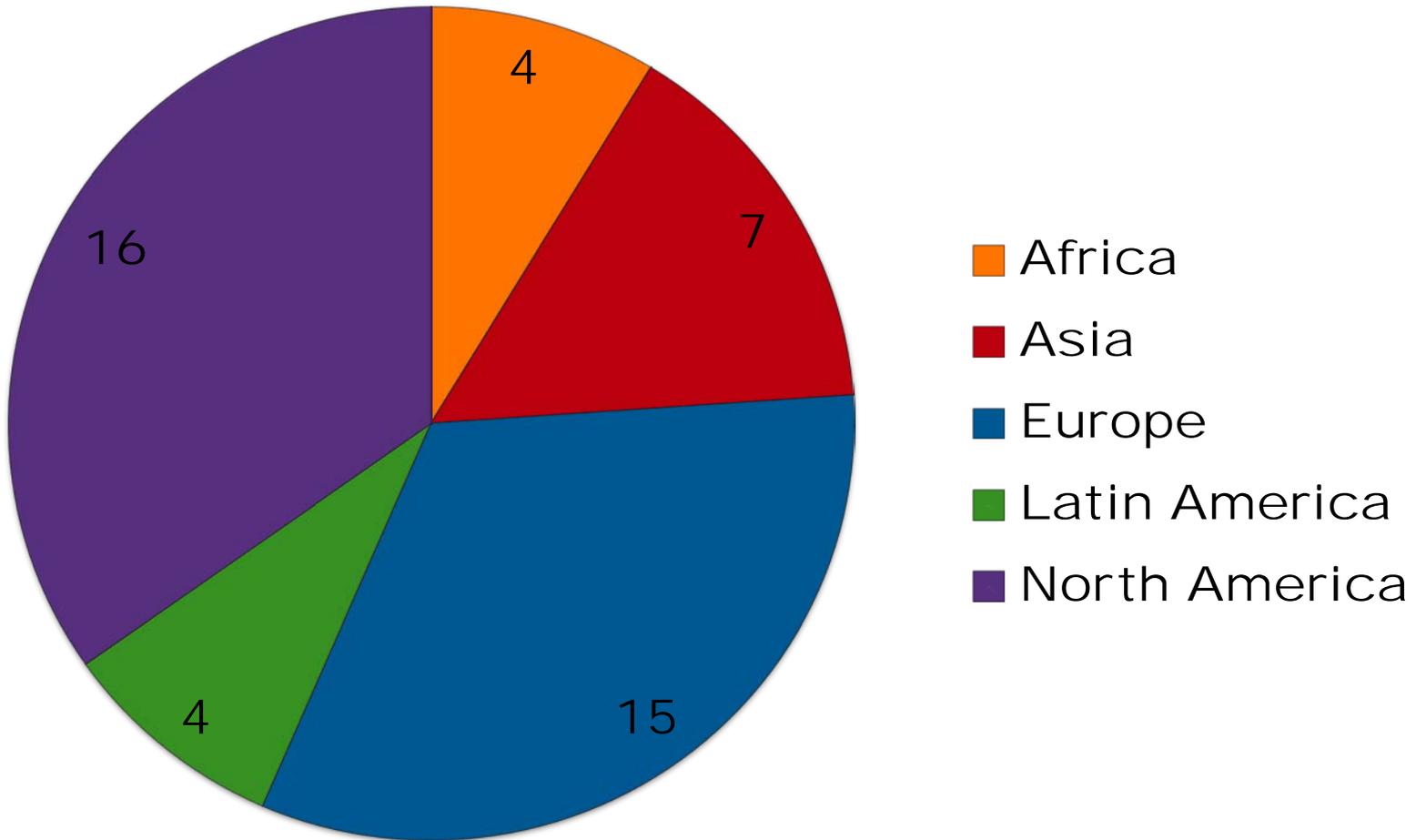
Communities

- **Ecosystem Development Communities**
 - Standards or Collaboration entities
 - Civil Society
 - Government
 - Product Developers
- **Identity Consumer Communities**
 - Research & Education
 - Healthcare
 - Finance
 - Security Industry
 - Telecommunications
 - Advertisers
 - Sales and Marketing
 - National security, first responder, law enforcement
 - Real End Users

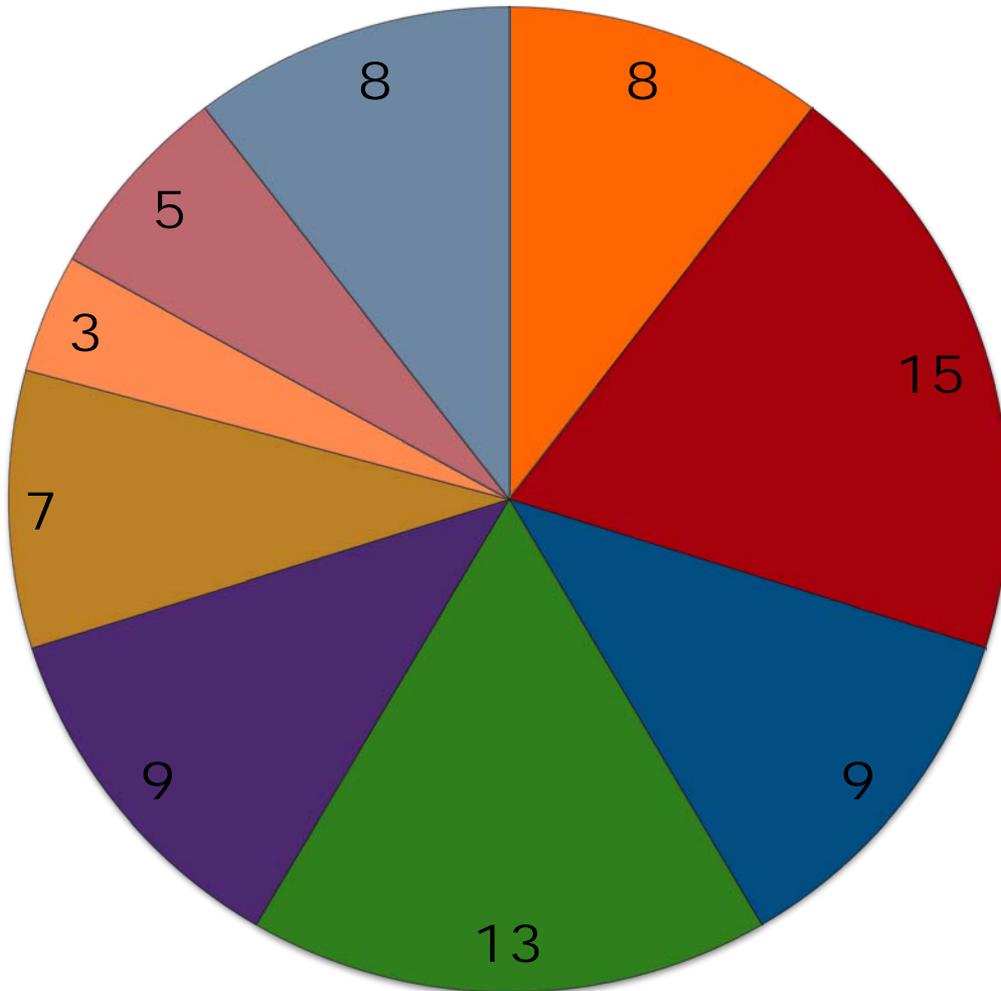
Workshop Demographics: Areas of Expertise



Workshop Demographics: Regions

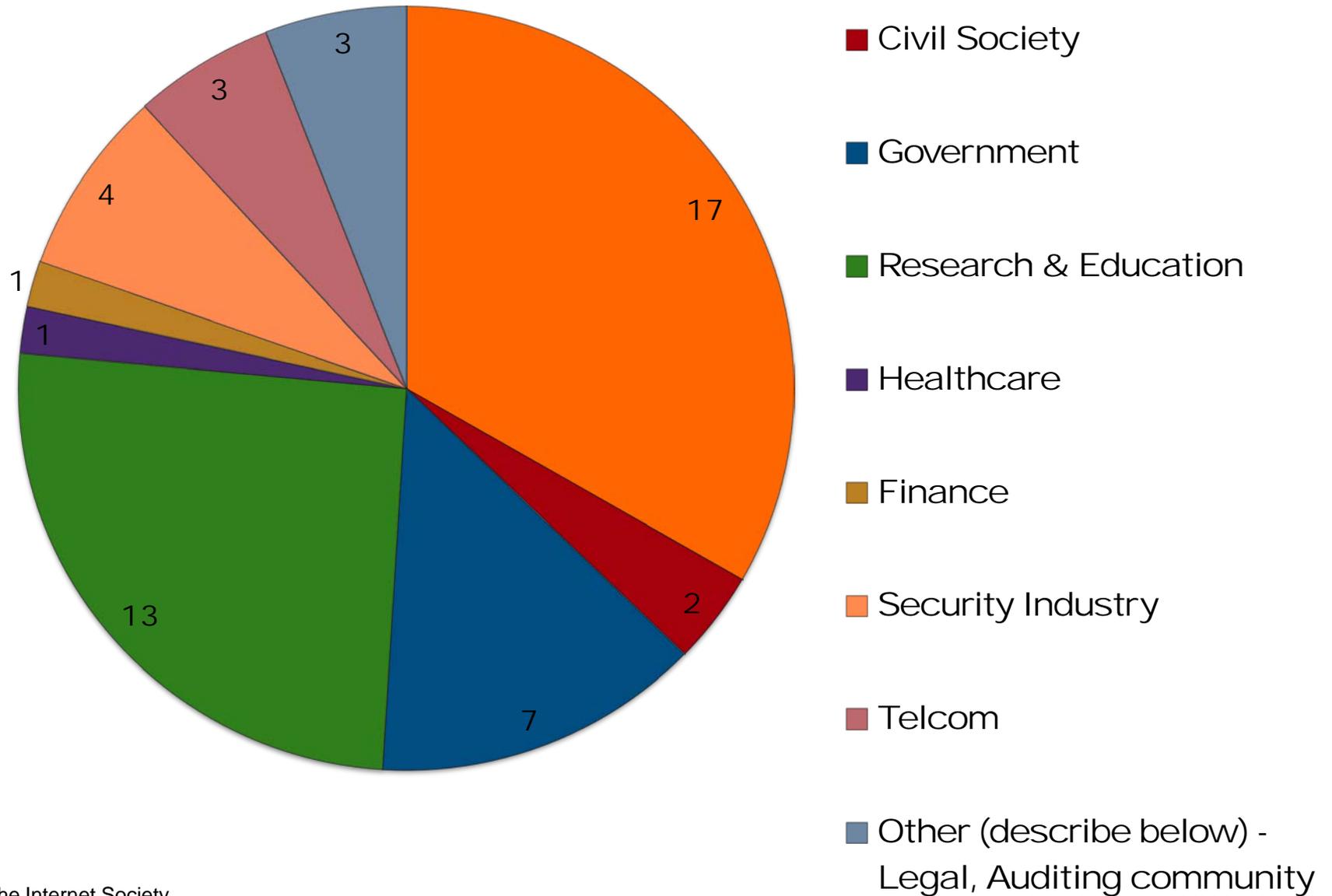


Roles



- Identity Provider
- Relying Party
- Federation Operator
- User/Consumer
- Interfederation Facilitator
- Attribute Authority
- Auditor
- Gateway/Portal Provider
- Other (describe below)

Communities



Values ...

The Identity Ecosystem...

- **Encourages ease of collaboration (e.g. Harmonization of language (glossary and schema); agreement on how to extend that language to meet local needs)**
- **Has low barriers to entry into the ecosystem for identity related services**
- **Promotes usable privacy-respecting solutions**
- **Allows for the separation of individual identities for the consumer space based on desired context (e.g. Citizen identity, Consumer identity, Social identity – the concept of identity is too fluid for a static model)**

And More Values ...

The Identity Ecosystem also...

- **Uses unencumbered technology**
 - Allows anyone the ability to implement freely
 - Is interoperable across protocols
 - Is interoperable across legal systems
 - Avoids fragmentation of the identity ecosystem and associated marketplace
- **Allows for the portability of identity data**
 - Supports choice in the marketplace
- **Is cost effective, efficient and easy to use**
- **Is secure and resilient**



Technology Gaps

- **Addressing non-web-based applications that require identity and attribute information**
 - mobile networks, virtualization networks, services below the web
- **Matching technology to the legal requirements**
 - Informed choice and the issue of consent
- **Balancing scalability versus deployability**
 - the challenges of interfederation
- **Coming to terms with the Attribute space**
- **Addressing context**
 - changing context with various parties

Law and Policy Gaps

- **Different national approaches to identity**
- **Different (sometimes incompatible) laws regarding personal data**
 - Impact on legitimate cross-border use of online identities/attributes
- **Changing notions of identity**
 - a single verified government-issued identity
 - identities provided by one or more private entities (IdP) with varying levels of assurance
 - user-created identities based on true and/or false information
 - “throwaway” identities
 - use of attributes (e.g. age, location) rather than identities
 - anonymous authenticated identity
- **Balancing commercial and private interests**
- **Ownership/Control of personal data disclosed in various contexts**

Economic Gaps

- **Insufficient understanding of the commercial incentives and drivers for identities and attributes**
- **Insufficient appreciation of the differences among:**
 - Identity as a service (provided in the context of an established agreement, government ID, federations in education)
 - Identity as leverage (monetization of subject in exchange for service)
 - Identity as a credential (e.g. client, entitlement, earned benefit)
- **Identity as a commodity masquerading as identity as a service**
 - The cost of free
 - Identity portability
- **The tussle between the monetary and the non-monetary value of personal data**
- **How to assess the value of unverified self-asserted attributes?**

Some tough questions ...

- **Is the Identity Ecosystem an ocean of islands?**
 - Are Identity Ecosystem actors developing standards, rules and practices in isolation?
 - How do we connect the islands?
- **Is this a land grab?**
 - Is this a race to market dominance?
 - Is there a first-mover advantage?
- **Building walls, digging moats and installing electric fences**
 - Is there a commercial incentive to drive the development of proprietary standards?
- **Treasures and trinkets**
 - Where monetary value concentrated in the ecosystem?
 - Who gets the largest share?



More tough questions...

- **Identity Ecosystem or Attribute Ecosystem?**

- Are attributes more important than identity?
- Are attributes more valuable (\$\$\$) than identity?
- Do attributes open the way for business models based on authorization?
- How will attributes effect both data minimization and data correlation?

- **Federations and Collaboration**

- Is there as much or more value in collaborating across verticals than there is within verticals?
- Are federations and collaboration the new reality?
 - Research and education communities are strongly encouraged.
 - Governments are mandated.

- **How does the system handle risk and liability?**

Final Thoughts and Next Steps

- **Many questions – not many answers**
- **Enable connections, facilitate coordination, encourage collaboration**
- **Encourage efficiency of effort among bodies addressing the same or similar topics**
- **Next Steps**
 - Convene a workshop to focus on attributes
 - Facilitate further cross vertical collaboration (EU government and research and education communities)
 - Produce a workshop report (coming soon)
 - Develop a collaboration and coordination workspace (under development)

Moving Forward with an Internet Attribute Infrastructure

- **Workshop held 12 March 2012 in Gaithersburg, MD**
- **Productive and energetic discussion (thanks to all who participated!)**
- **Notes and short report to follow**
- **Long list of topics for further discussion**
- **Proposed near term action items:**
 - White paper on attribute issues
 - Requirements document for an attribute registry
 - Collaboration on NSTIC governance bylaw discussion

Additional Information

- **For more information:**

- www.internetsociety.org/privacy
- www.internetsociety.org/identity (Coming Soon)

- **Collaborative workspace:**

- Mailing list: identity-ecosystem@elists.isoc.org
- Wiki: www.tid.isoc.org/trac/ideco
- Currently has controlled access: contact us for details
- Working on making the collaboration space openly accessible

- **Contact us:**

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