Leveraging the Extended Enterprise with Social Software

Boston SIMS September 2012

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CI&T Chief Information Architect
The MITRE Corporation

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Outline

- Strategy for Social Business Networking
- Overview of Handshake
- Business Value Assessment
  - Usage Metrics
  - Case Study Interviews
  - Value Survey
- Value Stories
- Future Plans for the Extended Enterprise
- Take Aways

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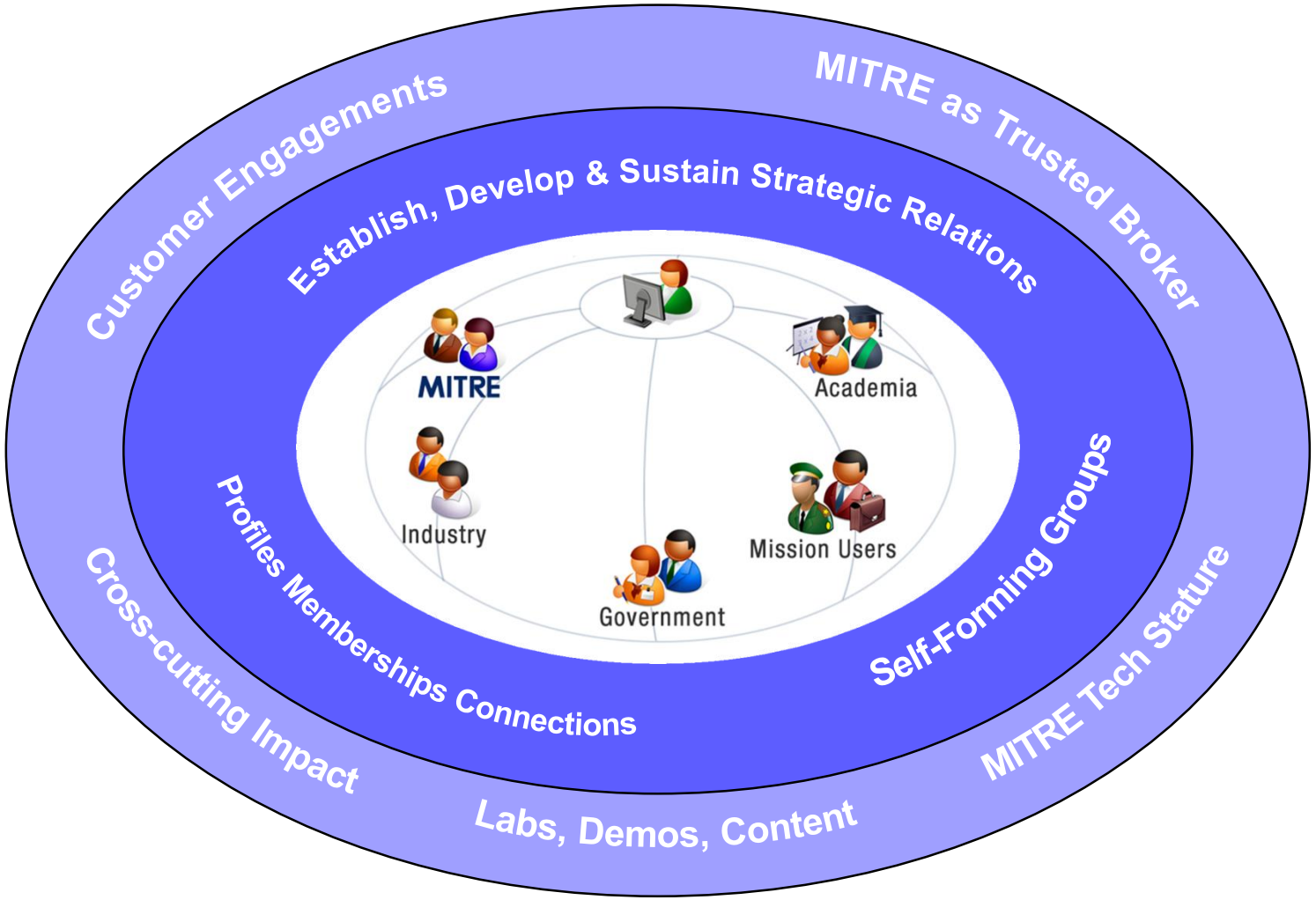
Supporting Strategic Relationships and Multi-Organizational Collaboration



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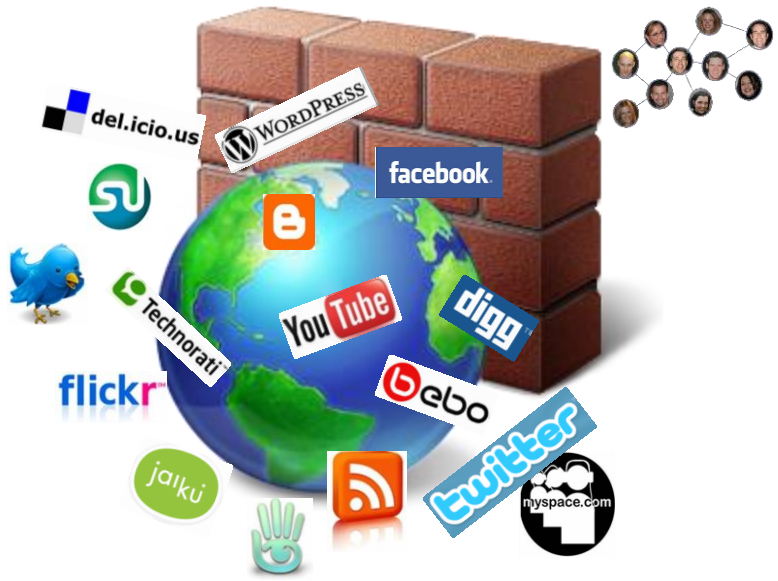
State of the Practice in 2009 …

- Social networking tools were proliferating on the internet
- Most enterprises were deploying social networking tools for *internal use only* or *for consumer product users*
- It is difficult to measure objectively how social tools impact individuals, communities, and the enterprise



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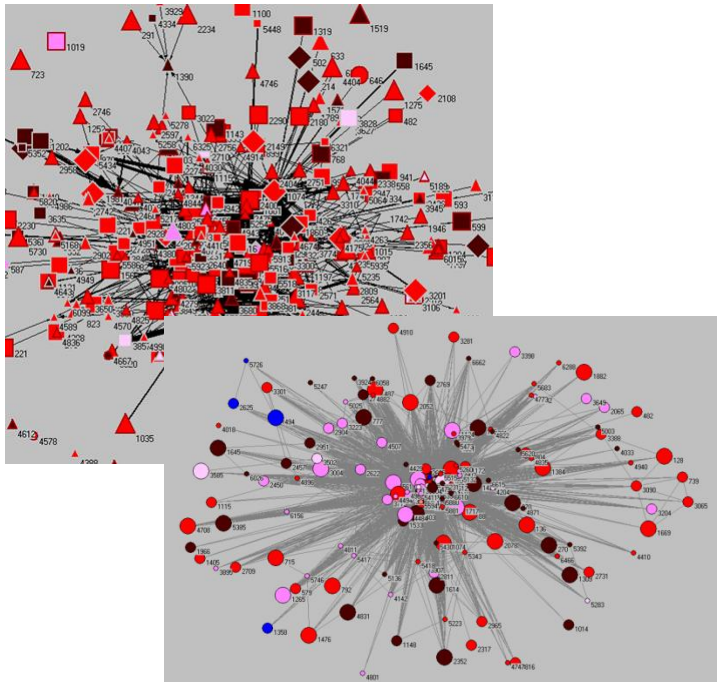
2007: MITRE-Babson Research… Social Technology Matters!

- Its not just frequency of use that is important with these tools, but rather, who you are connecting to
  - Uniqueness of the connections adds the value
- Brokerage, in both social networks and technology-mediated networks, has a positive impact on personal innovativeness
- Both of the technology networks (ListServ and social bookmarking/ tagging) provide unique, significant value
- The social network & the technology networks complement each other



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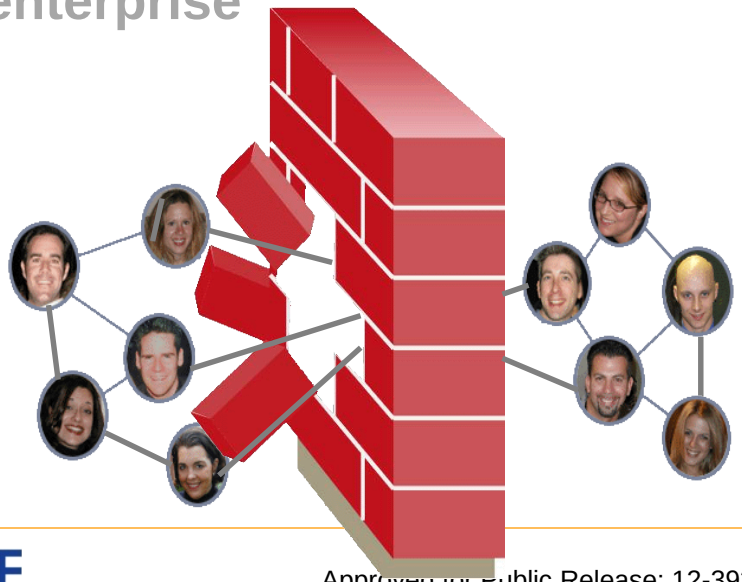

- **Deployed a single open source platform (Elgg) to support both internal and cross-organizational networking**
- **We are now entering our 3rd year and performing a longitudinal business impact evaluation**

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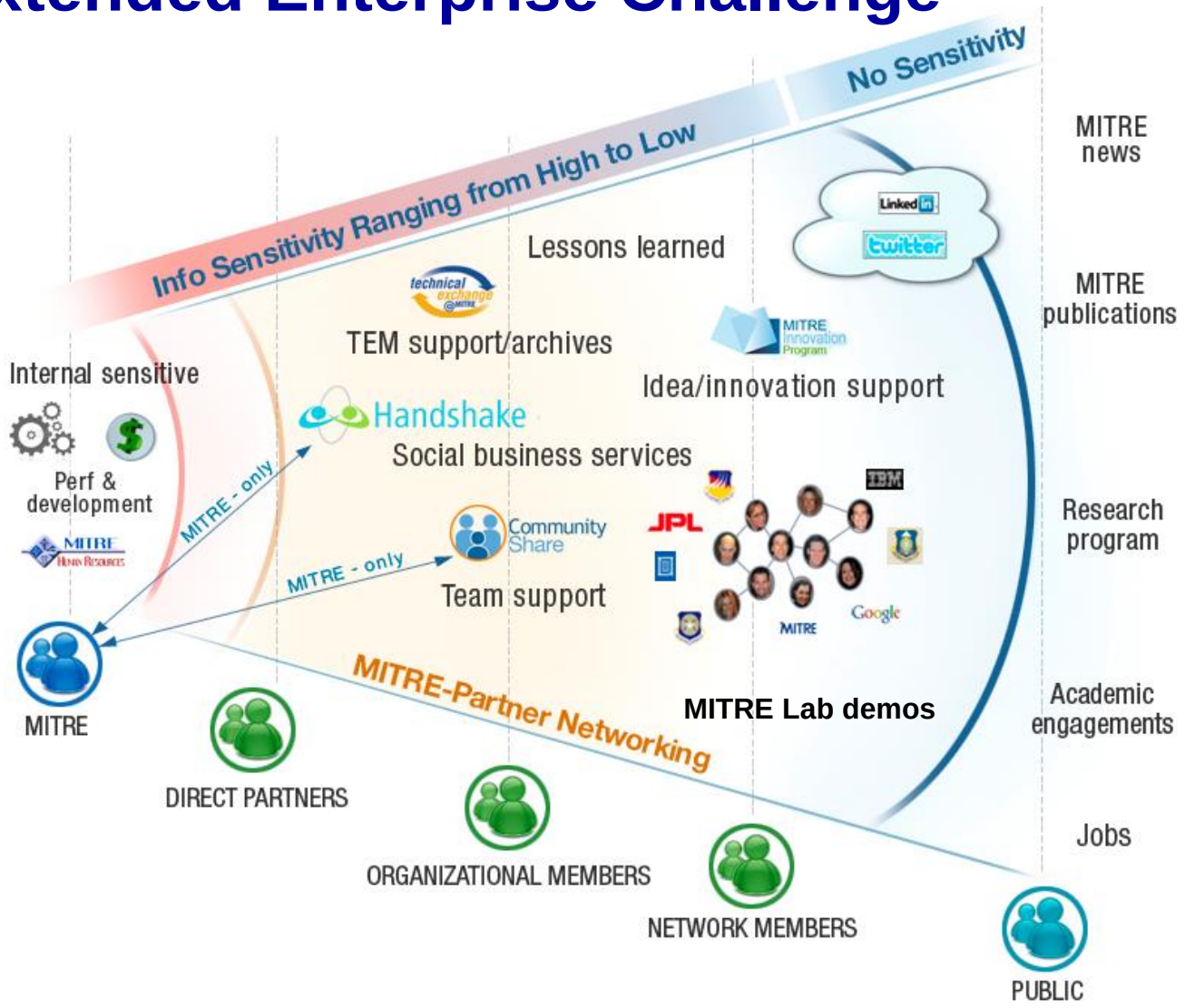
The Extended Enterprise Challenge



Flexible and Secure Architecture

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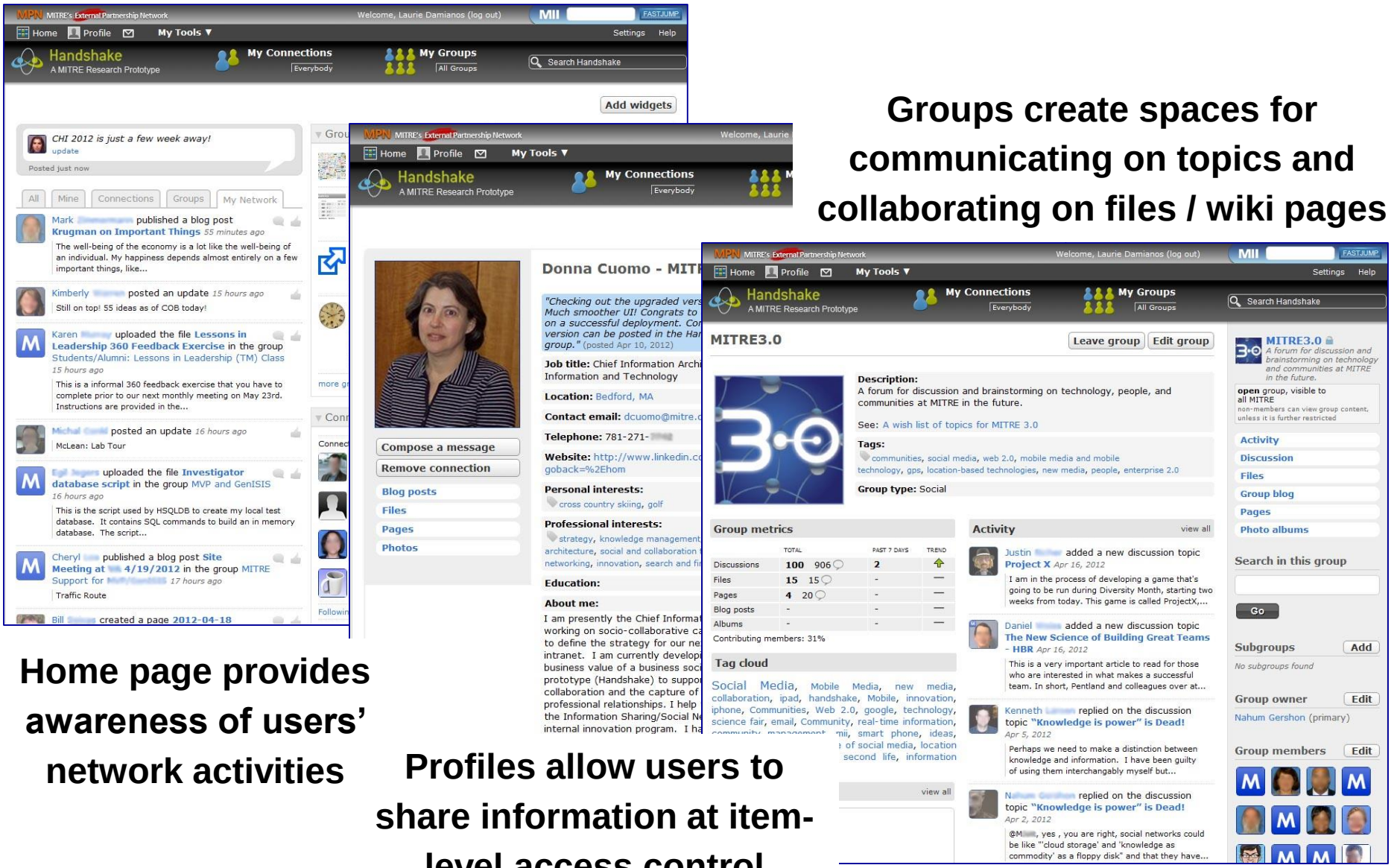
Handshake: Social Business Networking



Groups create spaces for communicating on topics and collaborating on files / wiki pages

Home page provides awareness of users' network activities

Profiles allow users to share information at item-level access control

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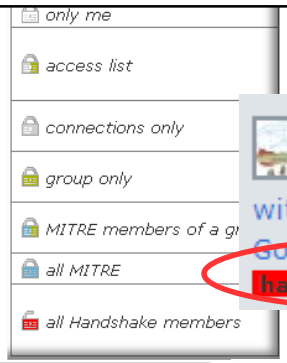
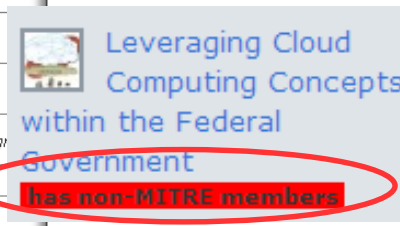
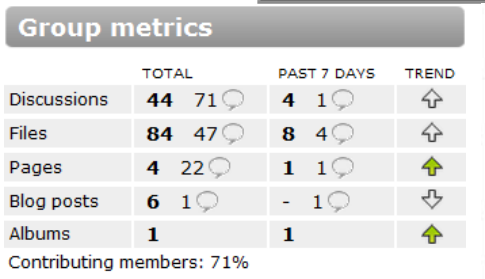
Tool Customizations & Adaptations

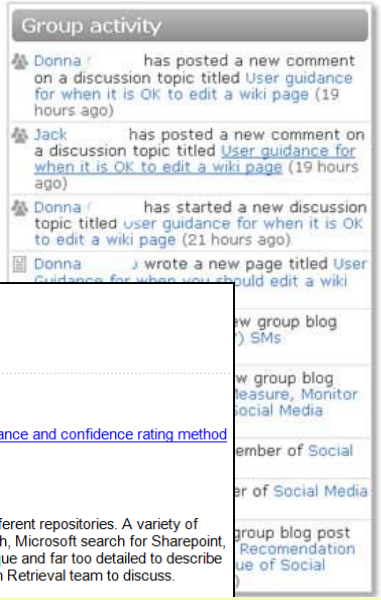
Goals: remove barriers, accelerate adoption, encourage good behavior

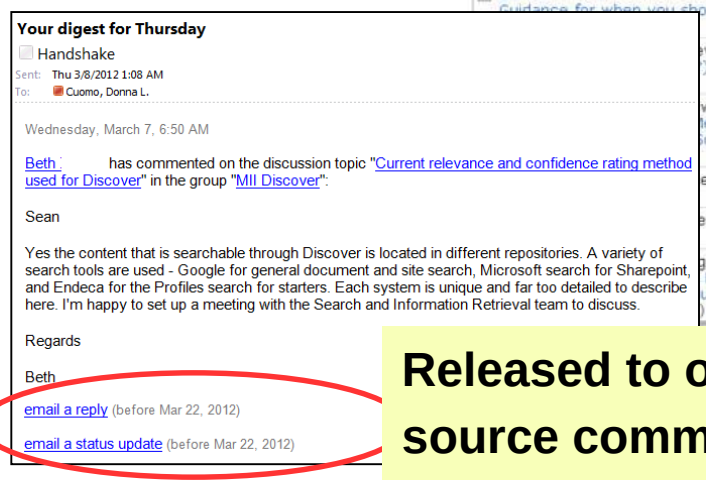
- MITRE identity model with single sign on
- "Box Model" for group permissions
  - Restricts contents to group permission level ceiling
- Visualized permissions & access
- Connect vs follow; follow groups by default
- Group activity river
- Email notifications, respond via email
- Group metrics
- Colleague recommender











Released to open source community

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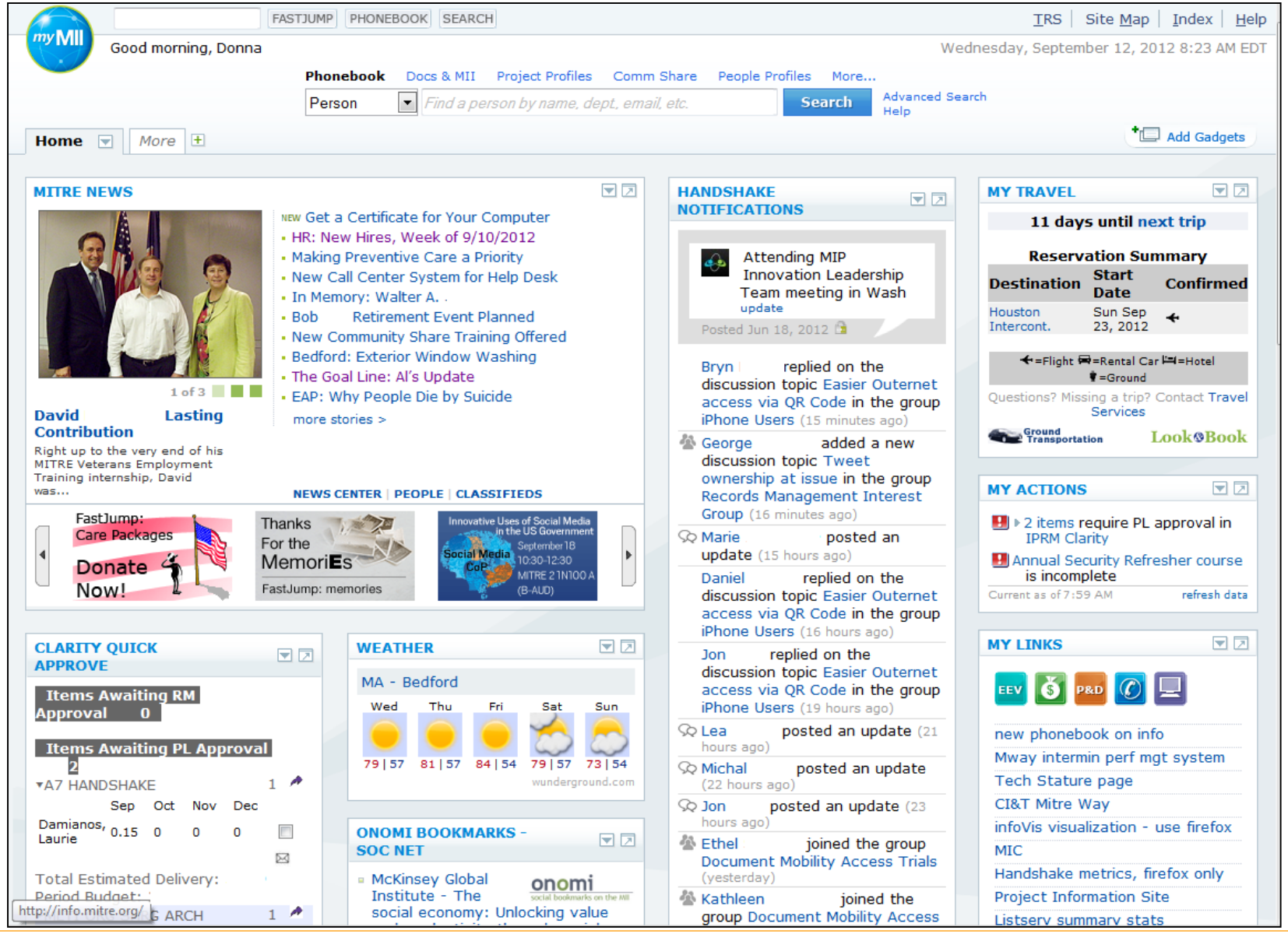
Handshake on our Intranet Homepage



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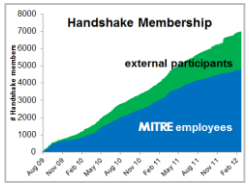
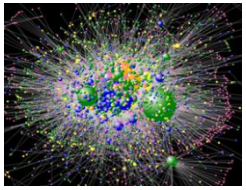
Longitudinal Evaluation Methodology

2010 … 2011 … 2012 ….

- Instrument the platform for activity and social demographics over time
- **Usage metrics reporting**
- **Handshake value survey**
- Social and intellectual capital survey baseline
- **Use case studies, over time**
- **Anecdotal stories from end users**
- **Visualization of key networks over time**





Hypothesized that business networking tool use:

- ***Social capital***
  - ***Reinforces*** **existing business connections**
  - ***Fosters*** **development of new business connections (enhancing innovative behavior)**
  - ***Expands*** **access to technical/domain expertise (internally and externally)**
- ***Intellectual capital***
  - ***Increases*** **staff's awareness of emerging technology and new industry trends**
  - ***Exposes*** **staff to new and innovative ideas**
- ***Ability to collaborate*** **more effectively**
  - **Across distributed project teams – span distances**
  - **With MITRE's partners and other stakeholders**
- ***Crowd sourcing***

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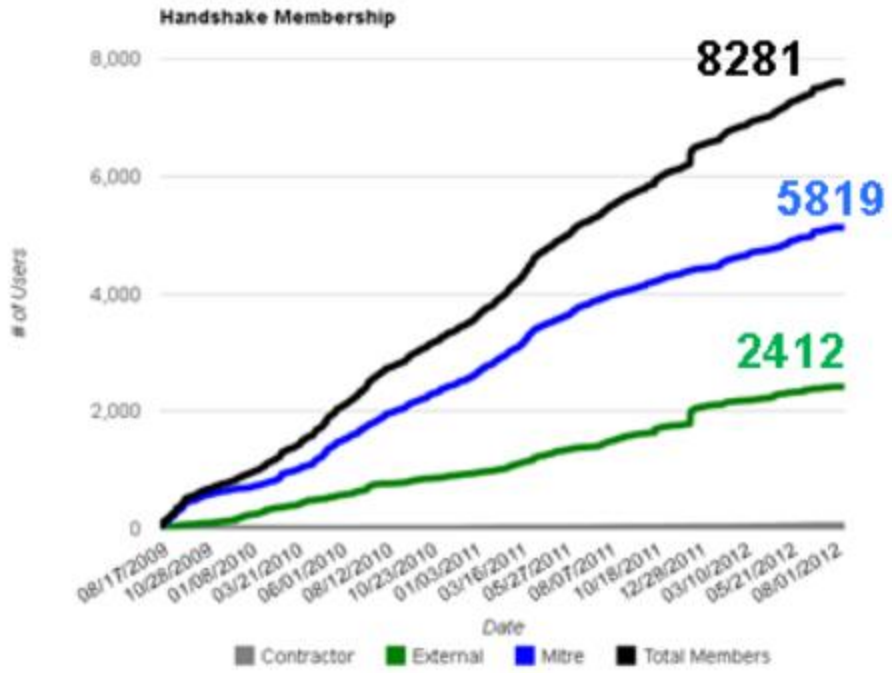
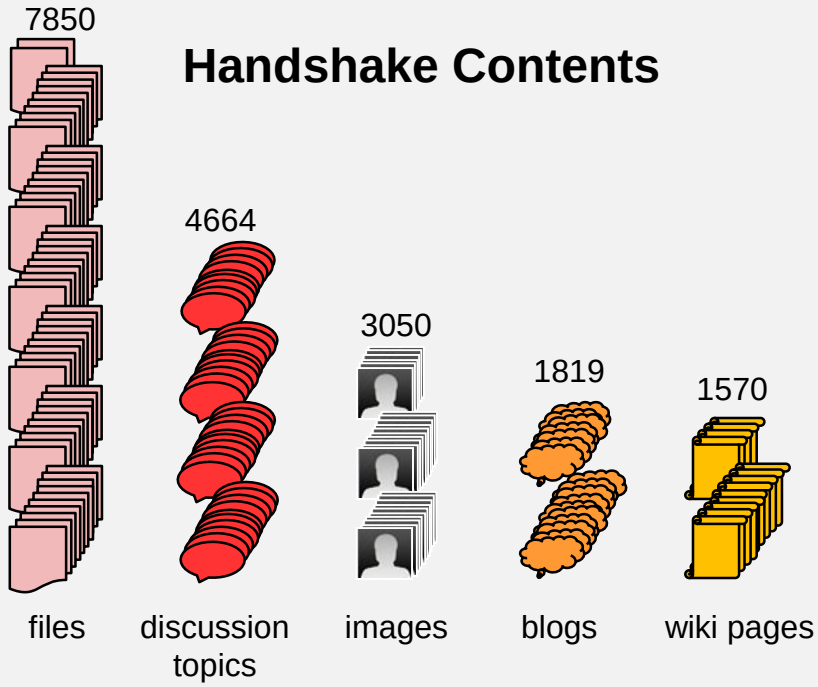
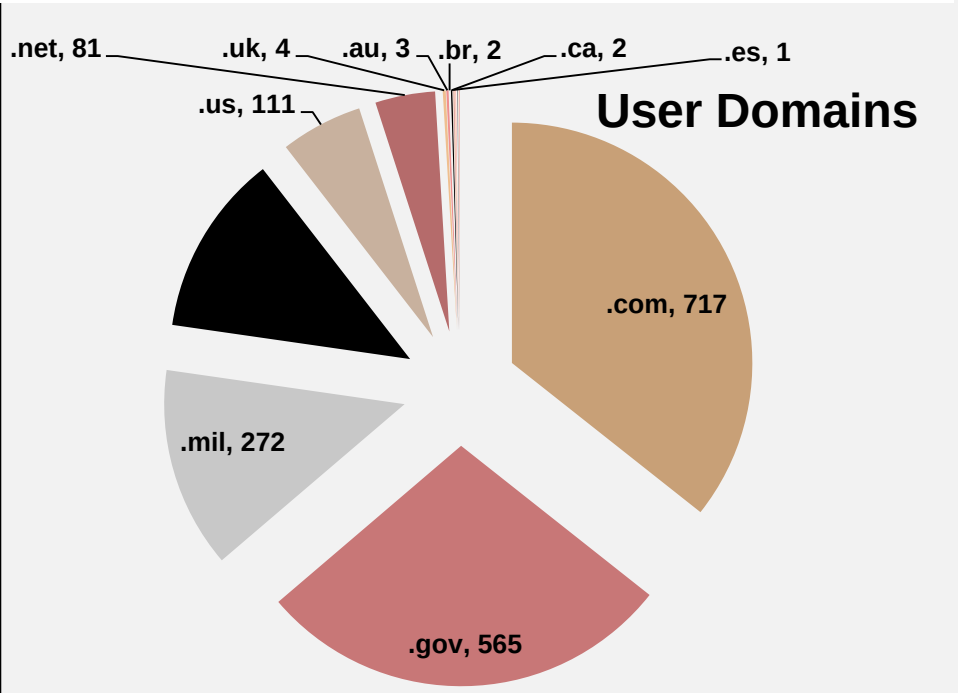
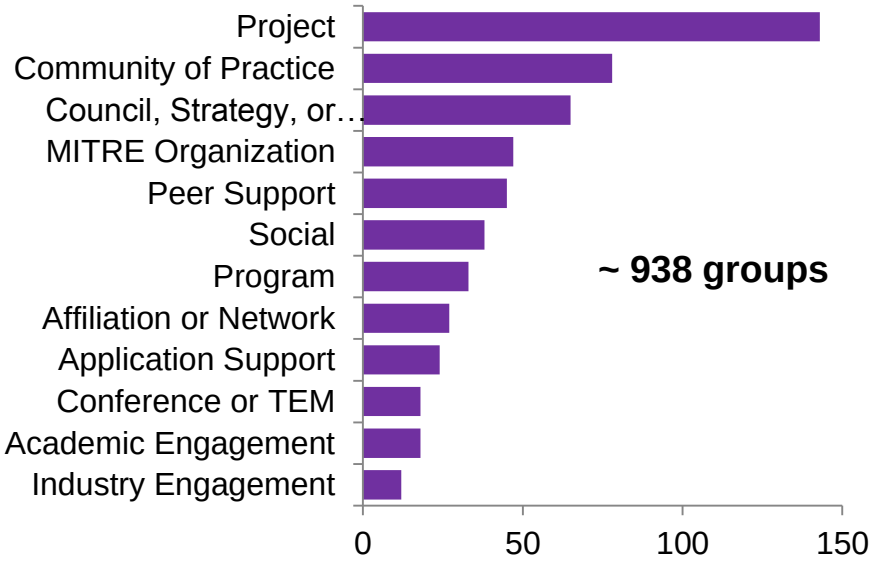

Handshake Membership
8281
5819
2412
8,000
6,000
4,000
2,000
0
# of Users
08/17/2009
10/28/2009
01/08/2010
03/21/2010
06/01/2010
08/12/2010
10/23/2010
01/03/2011
03/16/2011
05/27/2011
08/07/2011
10/18/2011
12/28/2011
03/10/2012
05/21/2012
08/01/2012
Date
Contractor
External
Mitre
Total Members


Handshake Contents
7850
4664
3050
1819
1570
files
discussion topics
images
blogs
wiki pages


User Domains
.net, 81
.uk, 4
.au, 3
.br, 2
.ca, 2
.es, 1
.us, 111
.com, 717
.mil, 272
.gov, 565


Handshake Groups
Project
Community of Practice
Council, Strategy, or…
MITRE Organization
Peer Support
Social
Program
Affiliation or Network
Application Support
Conference or TEM
Academic Engagement
Industry Engagement
~ 938 groups
0
50
100
150

Case Study Interviews

- 63 interviews with internal and external members of Handshake, face-to-face or on phone
- Interviewers followed loose script to engage participants in open-ended questioning
- Focus of interview was on perceived benefits from participating in Handshake groups

Perceived Benefits

- Facilitates cross-organizational communication and collaboration
- Improves situation awareness of critical project information
- Consolidates multiple types of information in a single location
- Enables crowd-sourced support for innovative ideas and product features
- Helps expand and strengthen business relationships
- Enhances product quality and team productivity

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Interview Results: Perceived Benefits

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  - *Having* [application users] *talk to each other has value to the product team.* [It] *helps develop more polished software faster and better.* – Application Developer
  - *These types of discussions opened up team members' minds to alternative designs and solutions, improving the product and changing their thinking*. – Application Developer

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- Enhances product quality and team productivity

  - *There is something about seeing the photos that makes you feel closer to the group… it motivates you* [to contribute] *if you see the pictures.* – Senior MITRE Manager
  - *The relationship building that Handshake permits seems to be richer than what you find on ListServ… helping solidify relationships… Now at a conference, we recognize each other and can talk*. – External participant

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Interview Results: Perceived Benefits

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- Enables crowd-sourced support for innovative ideas and product features
- Helps expand and strengthen business relationships
- **Enhances product quality and team productivity**
  - *It definitely improved the quality of the products because you have instant feedback* [about a design feature]. – Customer team member
  - *Handshake helped reduce the number of iterations we had to go through to get to the final product. It would have taken much longer, many more iterations without it*. – MITRE member of cross organizational project
  - *Handshake saved me lots of time because, at any given time, I knew what was going on in the project*. – Customer Program Manager

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Handshake Value Survey

- Survey was designed based on input from interviews
- Survey was sent to all 4600 MITRE Handshake members
- Survey construct
  - 18 Likert-scale statements on Handshake usefulness in:
    - Supporting collaboration
    - Strengthening social connections
    - Fostering situation awareness
    - Facilitating management of knowledge assets
    - Enhancing productivity
  - 4 open-ended questions pertaining to:
    - Overall value of Handshake to their work
    - Value of specific Handshake groups
    - Barriers to Handshake adoption
    - Suggested improvements

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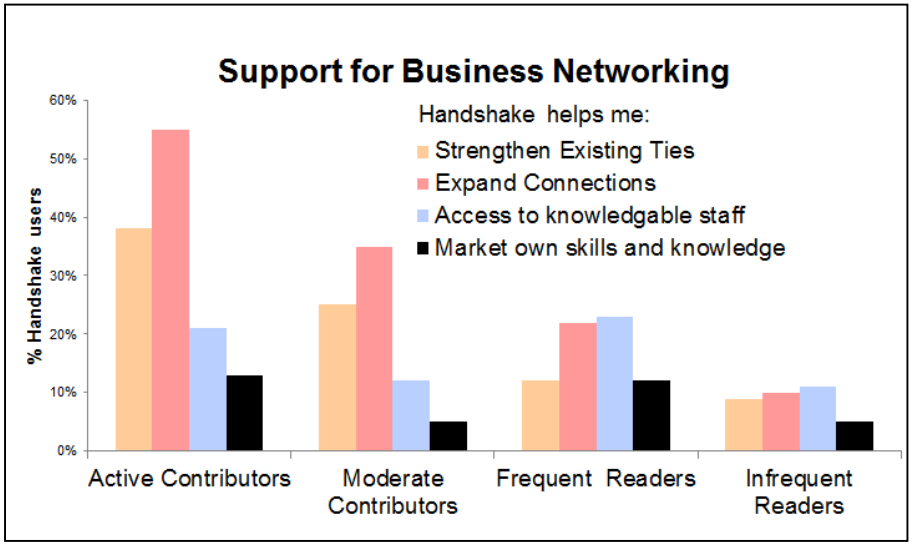
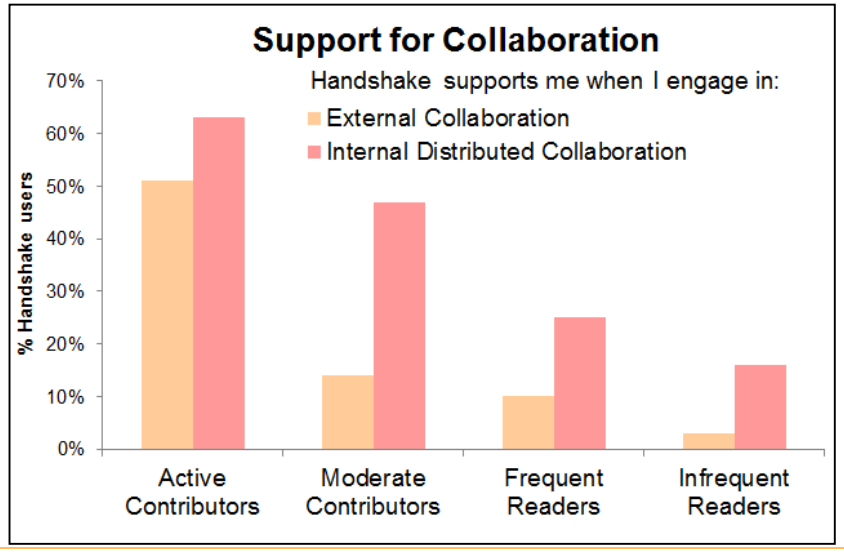
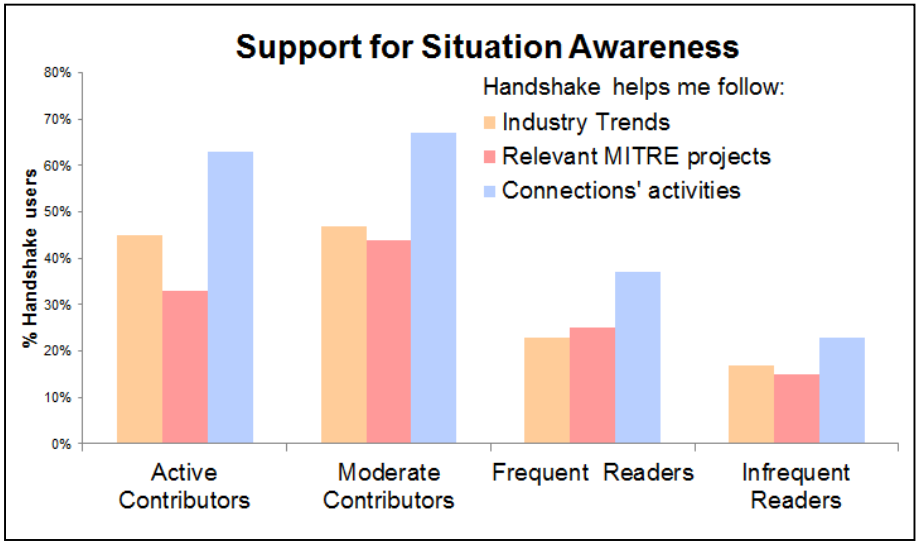
Survey Analysis Results

354 respondents

- **Active contributors realize more benefits**
- **Even consumers, however, report benefits**







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Handshake Uses

MITRE Organizations

Projects

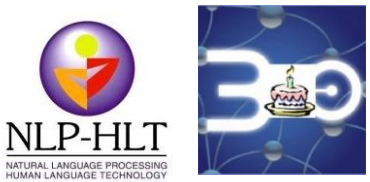
Academic Engagement

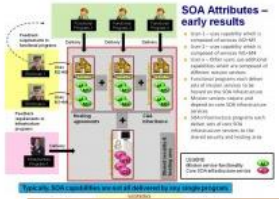
Social

Project Pages

Application Support

Event

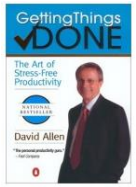




Communities of Practice

Affiliation or Network

Industry Engagement



Peer Support

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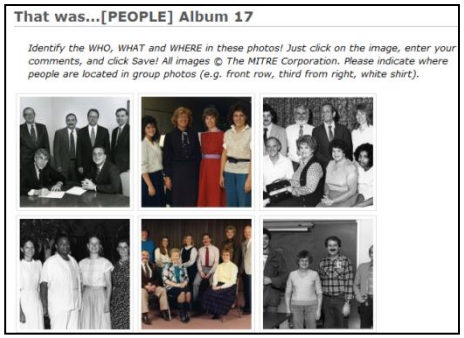
Interesting Uses of Handshake

MITRE Alumni

Crowd sourcing identification of people in old photos



MITRE3.0

Discussion lead to a grass-roots organized science fair!

Group with mission users in field

Less than 24 hr turn around time for mods to mobile apps.

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Interesting Uses of Handshake

Social Media

Request for take aways from Enteprise 2.0 leads to high-level sponsor commenting on briefing; people we didn't know were at conference join in!

Participants are self-identified

> Several hallway conversations suggested that the vendors and pa the wide range of disciplines and resources available to / needed implementations. I can't help but think about the same aspect of management.

> Excellent presentation...very interesting.

MITRE/Customer Team

Distributed team

Dynamic staffing

Aggressive timeline for deliverables

Constant communication/sharing

"At any given time, I knew what each member of the group was thinking, planning, or doing."

"Handshake was extremely effective in resolving issues as they occurred, disseminating information, and meeting deliverable deadlines. The importance of Handshake's capabilities was magnified under the aggressive schedule and tight time constraints of the project."

Self-Joining Groups

Communities of Practice

Affiliations

Peer Support

Social Groups

"I find it refreshingly open in the sense that people are asking questions and posting ideas."

"I really like the inclusiveness of it. I like the different perspectives. Each company comes with different culture as well as individuals."

Recent Use Cases

"Transparent Engineering"

MyMII Intranet Portal
community on Handshake

226 members, 65% contributing

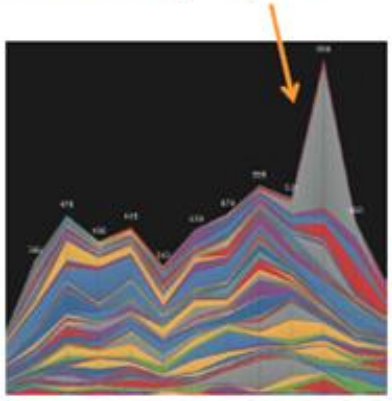
84 discussions, 636 comments

TRS Timecard
community on Handshake

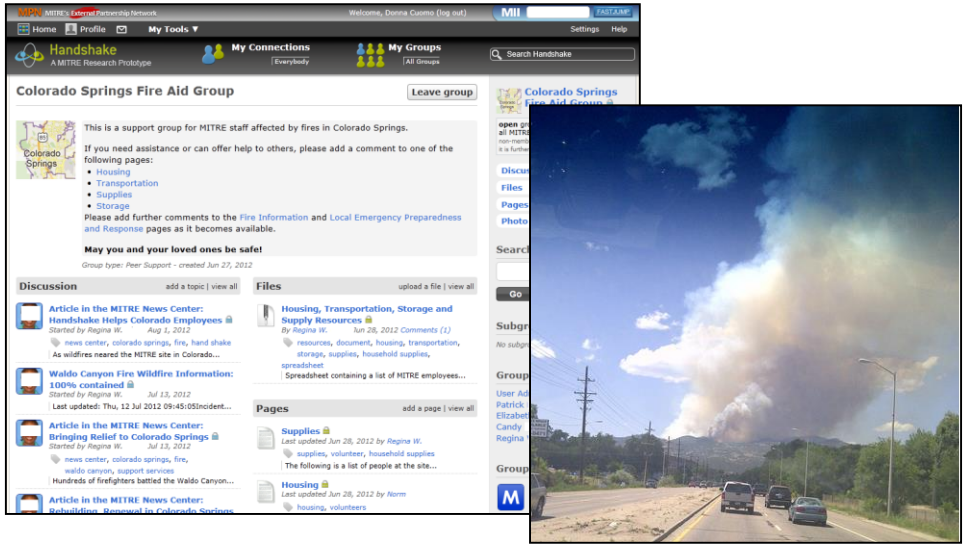
231 members, 45% contributing

128 discussions, 185 comments

biggest activity "spike"



"Colorado Springs Fire Crisis Response Support"



"The quick set up and operational support Handshake provided was very valuable… We could keep a wide audience informed about evacuations etc without risking leaving anyone out." - COS Site Leader

"You can do more on Handshake, such as upload photos and maps, and categorize things - COS HR

"It was a great meeting place," she says. "For the folks who were being evacuated, it was a comfort, knowing they could go to one place for information on who could house them or their pets or horses, without having to go through tons of emails. - COS Office Coordinator

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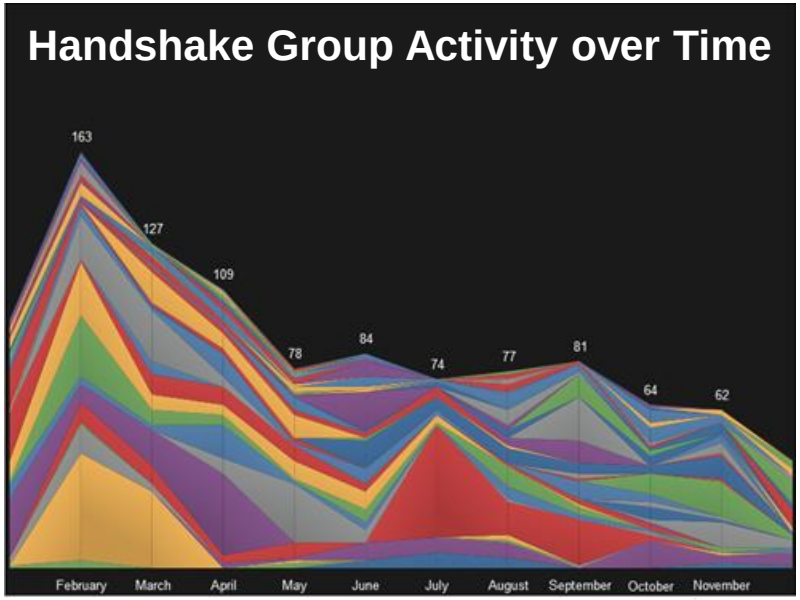
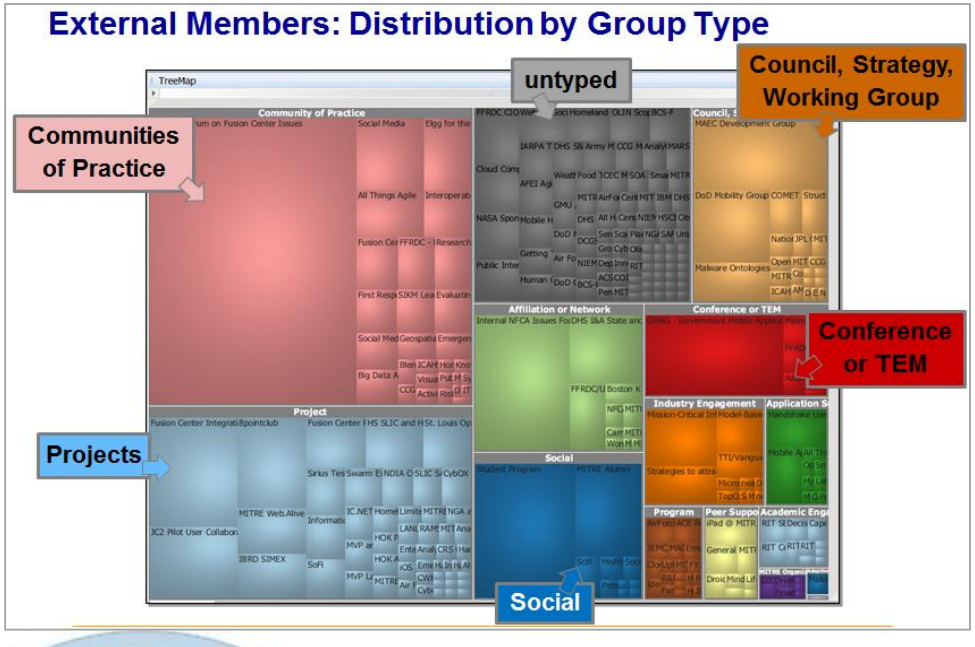
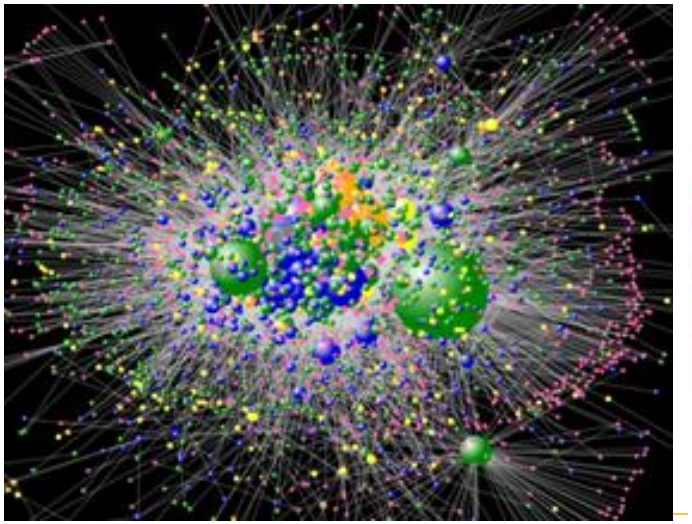
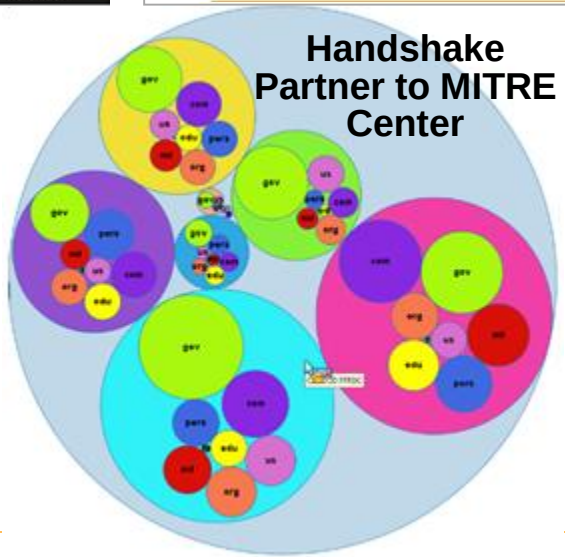
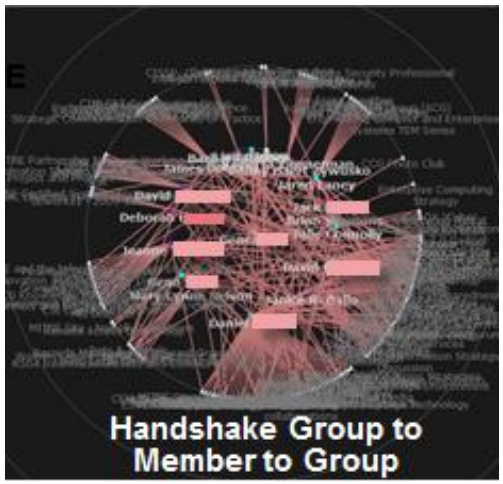
Visualizations: Informing Insights into Usage, Behavior, and Relationships











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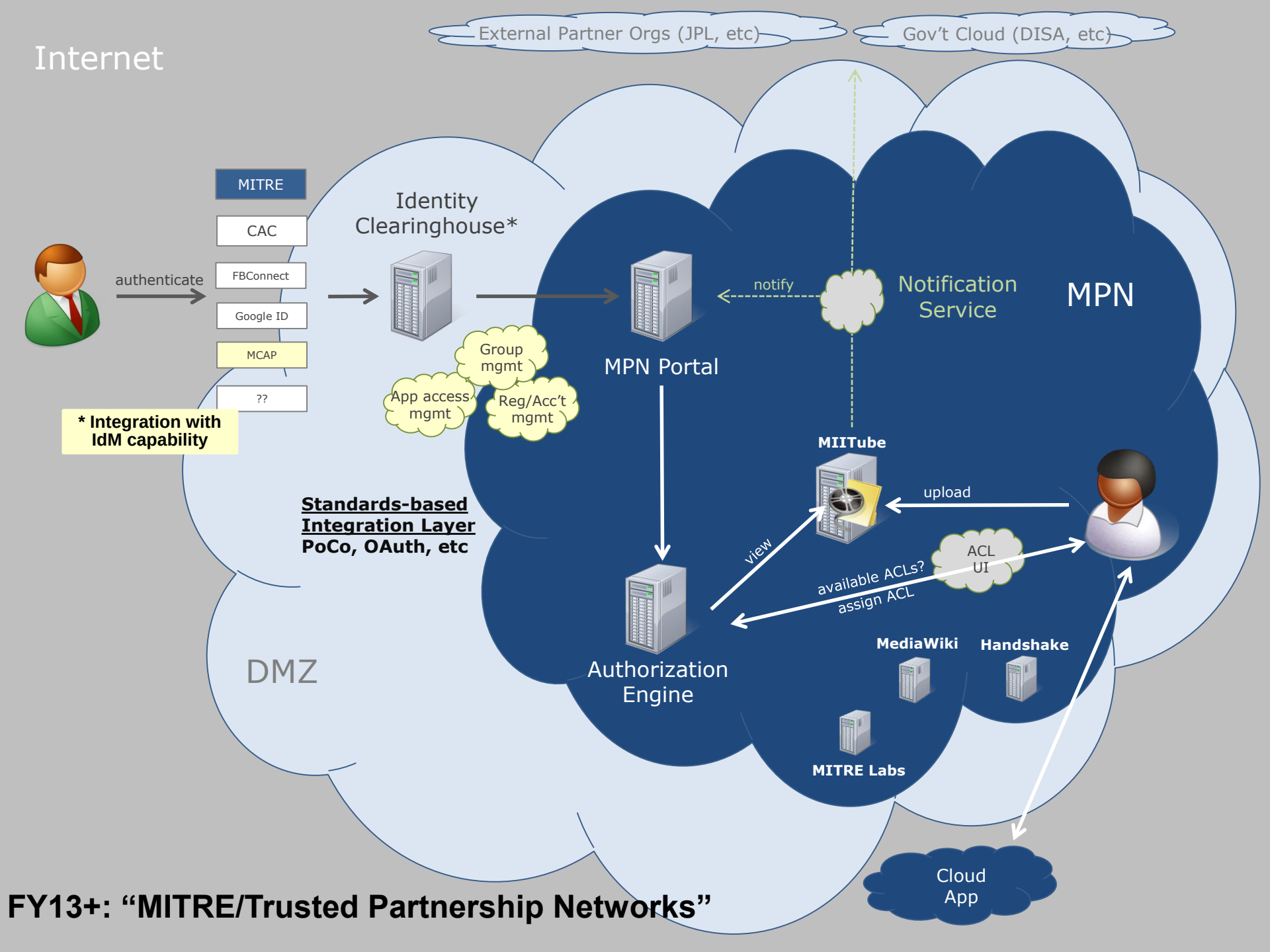
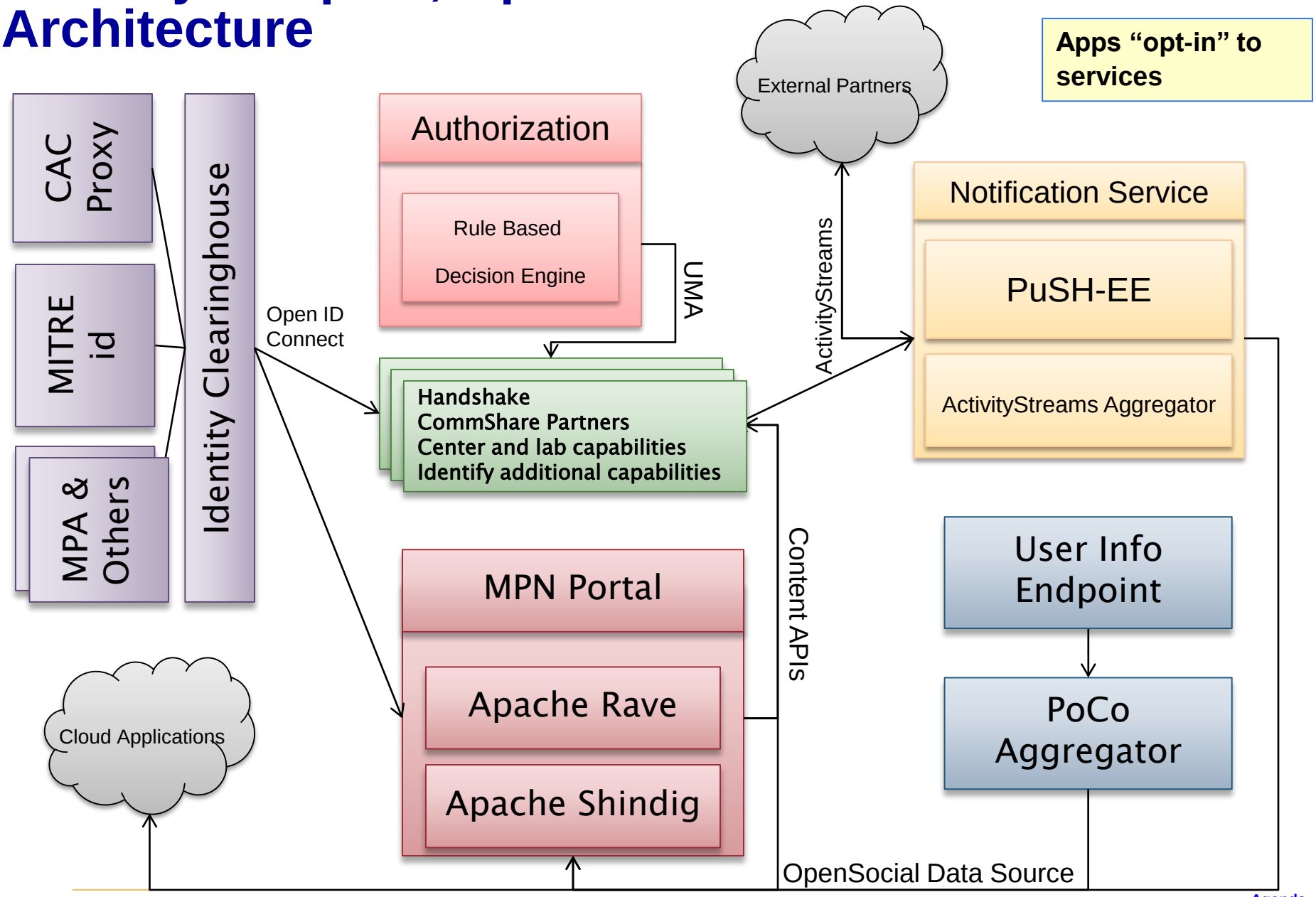


FY13+: "MITRE/Trusted Partnership Networks"

Loosely Coupled, Open Standards-Based Architecture



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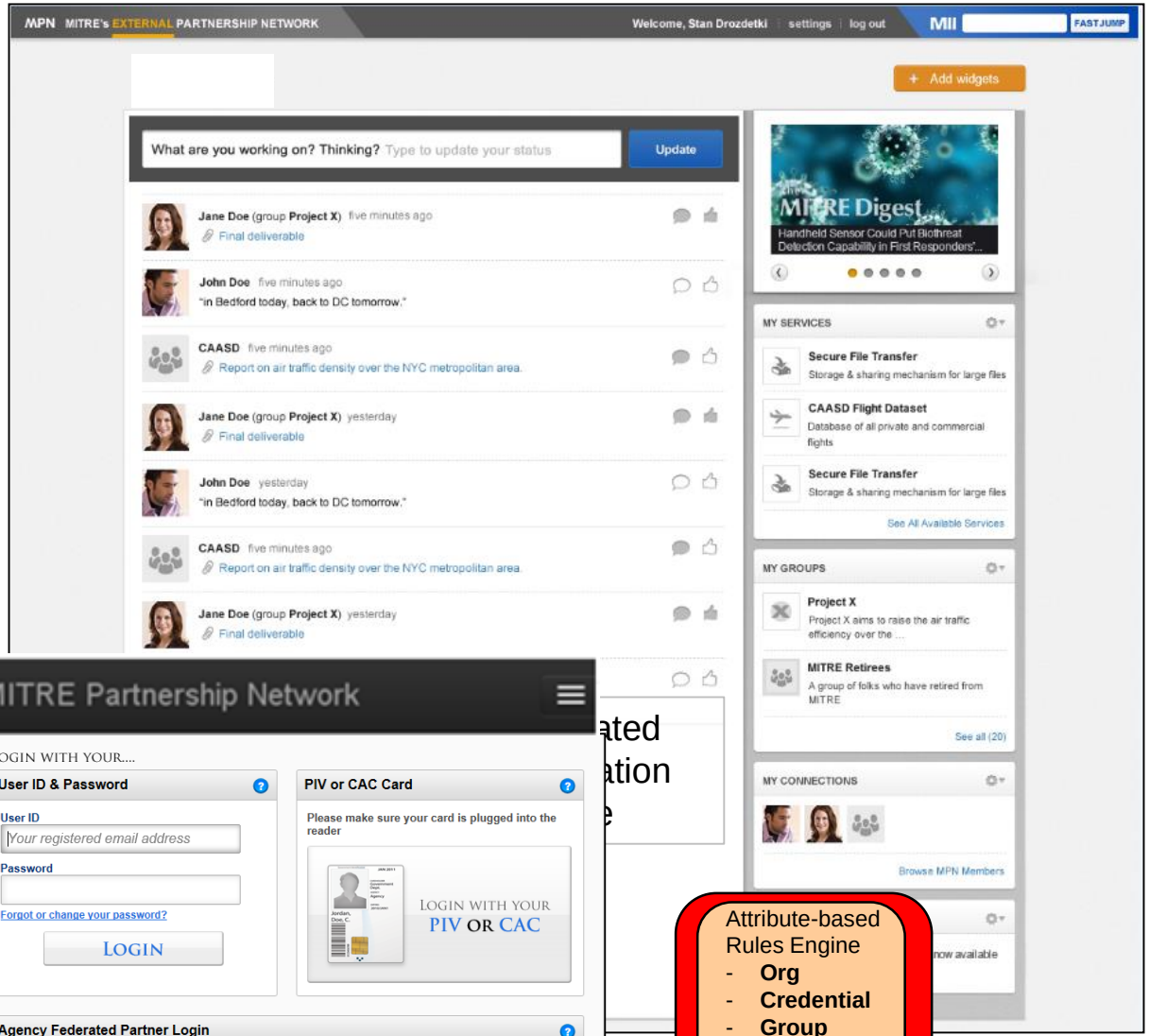
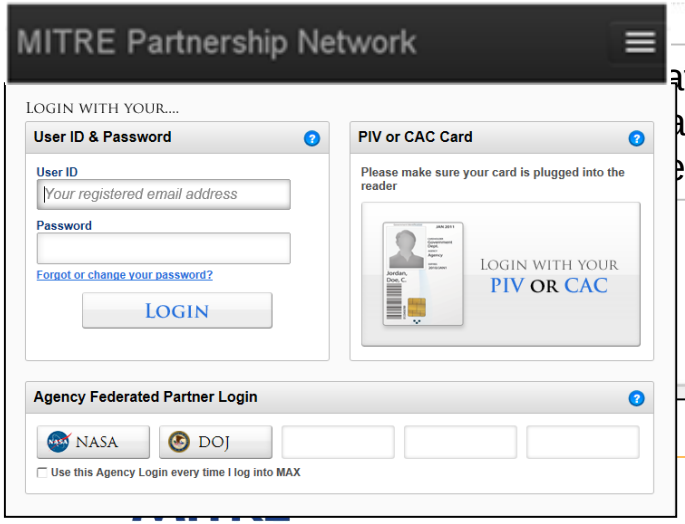
MITRE Partnership Network Vision





Attribute-based Rules Engine
- **Org**
- **Credential**
- **Group**
- **Friend of**
- **….**

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Take Aways

- Think about the networks that you want to build in your enterprise and across the extended enterprise
  - What goals do you have for them?
  - What would help sustain them?
- What processes do you have today that would benefit from being “social-enabled”?
  - E.g., Sponsors invited into research strategy prioritization, innovation research program process, early responders, internal strategy discussions, crowd-source supported products…
  - It’s a “process/outcome discussion”, not a “tool” discussion
  - Is “community” integrated with your content strategy?
- Do not read/post to the same people all the time
  - Connecting with a non-redundant set of people is more valuable

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Take Aways

- Develop on-boarding work & human resource development practices that focus not only on project success, but also relationship building
  - Pair newcomers with “brokers” in a mentoring relationship
  - Design initial projects with not only success in mind, but also relationship building as an outcome
  - Performance reviews should include not only what have you accomplished but who have you met and built a relationship with
  - Groom future brokers through job rotation
  - Recommend communities new employees should join
- Make employees aware of the social tools and the potential benefits
  - Communicate the value stories and successes of others
  - Train community stewards on successful techniques for community and network management
- Value social networking engagements (posts, status updates, information sharing, starting interesting discussions)

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Questions?

More information available at:

http://www.mitre.org/work/info_tech/software_collaboration/

Contact us

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