Changing Behaviors

Hierarchical
- Secrecy
- Loose Alliance
- Sluggish
- Novelty
- Tunnel Vision

Self Organizing
- Transparency
- Collaboration
- Urgency
- Innovation
- Didactic

Source: Sir Ken Robison
Motive

- **Cloud cloud cloud** — data explosion
- **Mobile mobile mobile** — device explosion
- **Go go go** — study + work + play + collaborate + organize + et cetera

- Collaboration is key to your and your team’s success!
Core Business

- Modern universities are developing towards loose conglomerates of (inter)discipline expertise

  - Collaboration is therefore a core business
  - Scientific collaboration involves groups of people in multiple institutions, disciplines and countries
  - Collaboration is about using shared services and resources

- Virtual Organization = People + Groups + Resources + Services + Policies + Funding + ...
Distributed Landscape

- Modern science combines resources from multiple sources
  - The core resources are within the VO domain, but within multiple institutions, and
  - the generic collaboration services can be found 'the cloud'
Collaboration Entropy

Virtual Breeding Environment

Virtual Organization

Virtual Project

Virtual Laboratory
Examples

Virtual Laboratory

Virtual Project

Virtual Organization

Virtual Breeding Environment
Commercial Brake

Short video explaining SURFconext
www.surfconext.nl/en
Collaboration Environments
• Create open standards glue to make campus and cloud based services usable for collaboration for both inter campus and Virtual Organization scenarios

• Let vendors provide generic and integrated services as part of the platform, whilst institutions can add specialist services

• Offer the platform as a service for smaller & ad-hoc team collaboration

• Offer the platform software for large, VO-type collaboration run-you-own
Core Components

- Federated Identity Management — SAML
- Groups Management — Grouper
- Social Network 'Portal' technology — OpenSocial
- Collaboration tools
  - Document Sharing
  - Video Collaboration
  - Learning Systems
  - Visualization
  - Data Mining
  - Workspaces
  - Et cetera
Federated Identities

- A federation is a collaboration of **trust**
- Users log in at their institution to get access to their services

Source: JISC2007
Federation Models

1 x 1  

n x m  

n + n

Identity Provider  Service Provider  Federation Hub
Groups

• Based on Grouper technology Internet2
• Groups are -currently- managed centrally
• Any acceptable user can become a group 'admin'
• Groups provide context for applications (but applications decide on AuthZ!)
• Groups feature (only) 3 roles (admin, collabmin, member)
Service domestication is key

- Domestication can be described as the process of externalizing authentication, authorization and group management from services.
- Domestication fits nicely in the Service Oriented Architecture paradigm where a platform is created for reusable services and service components.
- It becomes easier to share (generic) information among services and to replace similar services.
- It is only useful in multi-domain collaboration so (delegation of) trust is a point of concern.
Advantages Domestication

• Domesticated applications enable single sign-on features for users, as well as the ability to share group context between multiple applications

• Main Candidates
  - Identity and access control
  - Group management
  - Events like presence and activities
  - Perhaps Monitoring and Reporting and messaging?
Collaboration Services

• **In Production**
  - Commercial services — Alfresco, Liferay, Confluence
  - Campus services — Sakai, U. of Amsterdam communities
  - SURFnet — Filesender, Foodle, SURFmedia
  - Experimental — Big Blue Button, Etherpad

• **Pending**
  - Commercial services — Webex, Adobe Connect, Mendeley, Google Apps, IBM Lotus Live
  - Campus services — 3TU DataCenter, Dataverse Network U of Utrecht, MyExperiment
  - Experimental — Sharepoint2010, Exchange, IMAP

• **Wish-list**
  - Commercial services — LinkedIn, Moodle, Dropbox, Zoho Apps, Drupal, Ning, Yammer
  - Research — iRods, Zotero, Devices, Content
OpenSocial

- General purpose web integration technology by using **Gadgets**
- Open 'Social Data' API for exchanging information on people, groups, activities, et cetera

- Lightweight, '2.0' compliant and 'easy'
- Open standard, browser based components
- Vendor neutral & platform independent
- Large user community → wide spread adoption
- Uptake moving from Social Networks to R&E and Enterprise
Architecture & Design
Simplified View

Web Portal
- Gadget
- OpenSocial Container

Identity Provider
- SAML2 IdP
- Conext Engine
  - OpenSocial Rest
  - JANUS
- Group Management
  - Grouper
- Attribute Management
  - TBD
- Virtual Organizations
  - TBD
- Service Registry
  - JANUS
- Service Provider
- OpenSocial Rest
  - OAuth
- SAML2 SP
- SAML2 Metadata
Combining existing components and open standards
So far

- SURFconext Platform up and running for 3 months, GA in fall 2011
- 3 commercial Service Providers
- 46 Identity Providers
- Piloting with at 5 institutions & VOs
- Hooking up to eduGAIN and other federations
- Initially engaging with Virtual Organizations — 3TU, Clarin, LifeWatch, Bamboo
Bumpy road

• (Service) License models are currently inadequate
• Good business models required for vendors
• Collaboration applications require attributes — who is going to provide for them?
• International focus is paramount for wide adoption
• Engage early adopters, both at institutions, vendors, VOs and end users
OpenConnext

- OpenConnext is an OpenSource technology stack for creating and running Collaboration platforms
- Join and contribute www.openconnext.org
Getting started
Share services with your team