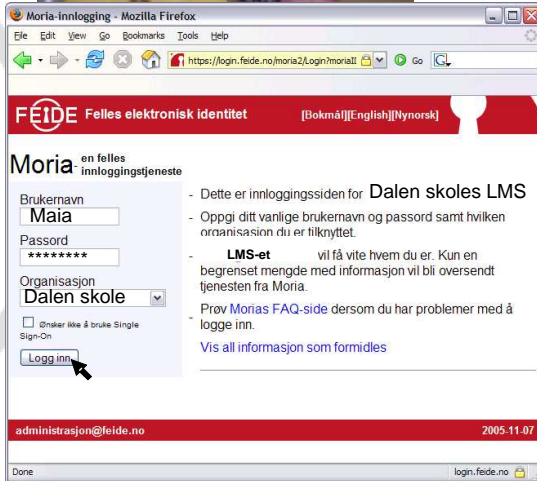


eID to all students

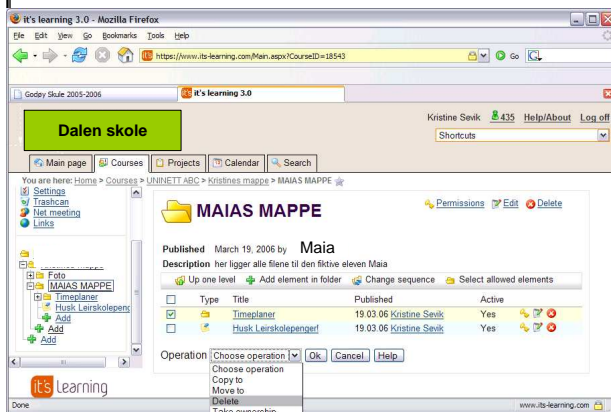
- eID – short primer
- FEIDE: Federated Electronic Identity for Education
 - ◆ Education needs access
 - ◆ One password to remember
- Campus Identity Management
- Integration
 - ◆ Service Providers
 - ◆ National PKI structure

Studying today...



- “Hei! I am Maia – a freshman student” (*Identity*)
- “...this is my FEIDE name and password to prove it (*Electronic identity*)
(*Authentication: is this the right person?*)

3



- “I want to delete a file in my Virtual Learning Environment”
(*Authorization 😊: Maia can use the services she is supposed to have access to*)
- “And I would like to change my midterm exam B into A”
(*Authorization 😞: Stop Maia from using a service she is not supposed to have access to*)

eID: Identity Management

- Electronic Identity Credentials
 - ◆ Password (various security levels)
 - ★ Something the user knows
 - ★ One-time or reuse
 - ◆ PKI-based certificates
 - ★ Software based
 - ★ Hardware based (smart cards)
- Universities issue credentials (and may register third party credentials)

Important applications

- Shared apps
 - ◆ self service interfaces
 - ◆ library services
 - ◆ administrative services
 - ◆ reporting systems
- National apps
 - ◆ Government security portal
- Local apps
 - ◆ e-learning
 - ◆ portals
 - ◆ wireless access
- Local apps with outside users
 - ◆ All of the above
 - ◆ Project workspace
 - ◆ Emerging solutions

Applications need to change

- Move login out of the service itself
 - ◆ Application does not see password
 - ◆ Need to add module or filter in application
- How to integrate with FEIDE
 - ◆ Add module in service
 - ◆ Liberty Alliance standards chosen as future integration path
 - ◆ Conformance testing ensures multi-vendor support
 - ◆ Sun Access Manager in demo June 2006

FEIDE – Federated Electronic Identity for Norwegian Education

- FEIDE is a non-commercial identity management federation for people in education
- FEIDE is technology and platform agnostic
- FEIDE offers guidelines and policy for campus identity management
- FEIDE-names are valid for all education services, and may be used internally, for community services and with educational related services

FEIDE for Norwegian education

- Start of collaboration in 2000
- Operational campus (start 2003)
 - ◆ Universities: 2003 - early 2006
 - ◆ University Colleges: 2004 - 2006
 - ◆ Lower education: phasing in from fall 2006
- Operational service providers
 - ◆ Shared services in higher ed: 2003 - 2006
 - ◆ Community web services in lower education: 2006 – 2007
 - ◆ Local university services: 2003 – 200X

FEIDE – identity management for education

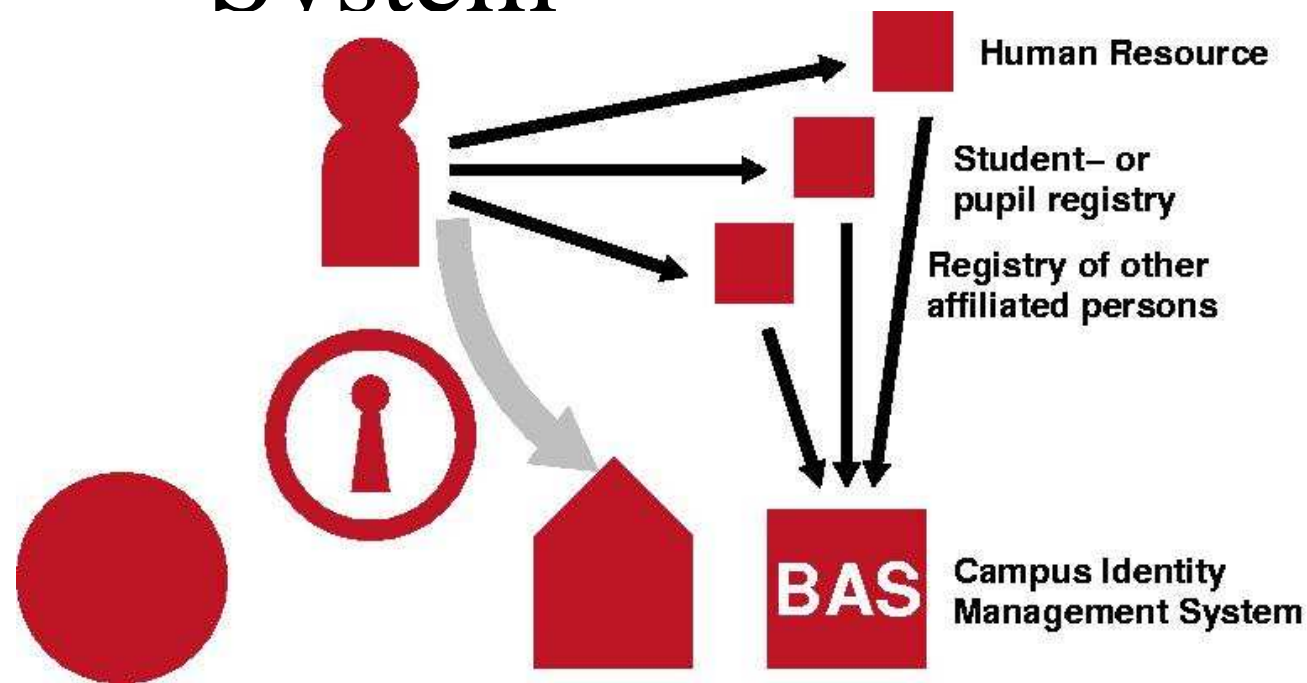
Identity management consists of:

- Information model
- Login service
- Chain of trust
- Policy issues
- Collaboration between educational institutions, service providers and vendors

FEIDE information model

- Identity providers (=campus)
- Authoritative data flows to LDAP-directory
- Information on standard format
 - ◆ eduPerson, eduOrg
 - ◆ norEduPerson, norEduOrg, norEduOrgUnit
- Standardized import/export
 - ◆ Provisioning
 - ◆ Service Provider integration
- Requirements for campus identity management

Campus Identity Management System



- Authoritative data sources
- CIMS is hub in information flow
- All updates and changes flows through CIMS
- CIMS is a necessary component

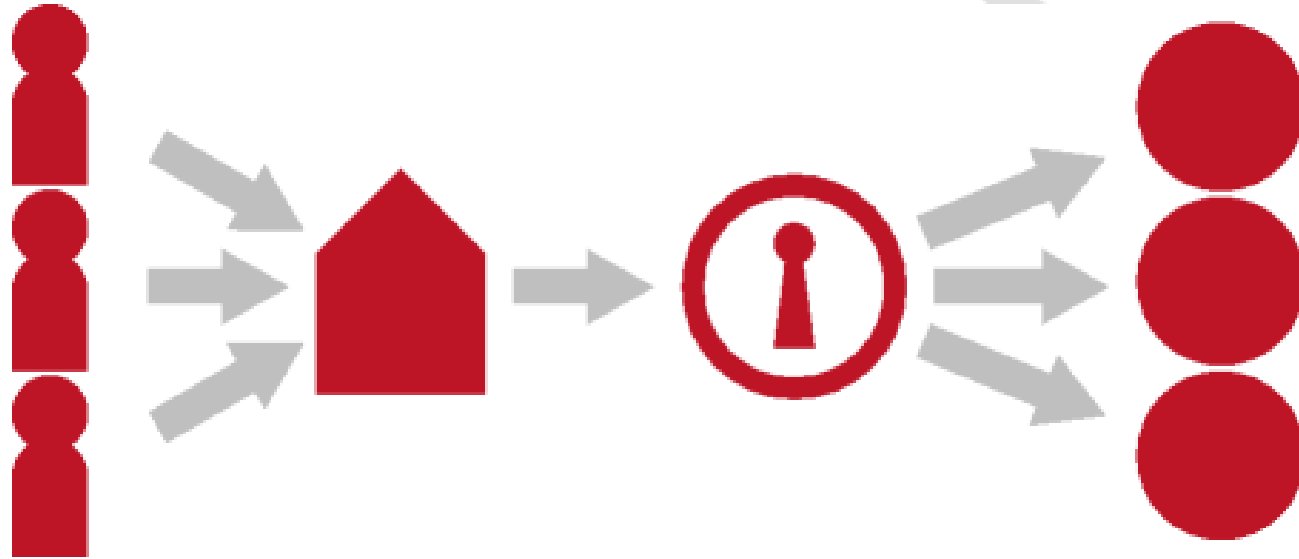
CleanIT, the BAS/CIMS process

- Identify key data
- Identify who is responsible for
 - ◆ Initial data
 - ◆ Data updates
 - ◆ Data removal
- Organizational process
 - ◆ Move data maintenance out of the IT department
 - ◆ Enable Human Resource and Student Management staff to do their jobs better

Campus status

Organization	# FEIDE names	FEIDE roll out status			FEIDE
		Students	Employees	Other	
NTNU	22000	Å	Å	Å	Å
Universitetet i Bergen	20000	Å	Å	Å	Å
Universitetet i Oslo	36000	Å	Å	Å	Å
Universitetet i Stavanger	7300	Å	Å	Å	2007
Universitetet i Troms Å	6100	Å	Å	Å	2006
UMB	2800	Å	Å	Å	2006
HÅgskolen i Agder	8000	Å	Å	Å	Å
HÅgskolen i Akershus	3500	Å	Å	Å	2006
HÅgskolen i Bergen	6000	Å	Å	Å	2006
HÅgskolen i BodÅ	4700	Å	Å	Å	2006
HÅgskolen i Buskerud	2800	Å	Å	Å	2006?
HÅgskolen i Finnmark	2100	Å	Å	Å	Å
HÅgskolen i Gjøvik	2100	Å	Å	Å	2006?
HÅgskolen i Harstad	1600	Å	Å	Å	Å
HÅgskolen i Hedmark	5600	Å	Å	Å	Å
HÅgskolen i Lillehammer	3700	Å	Å	Å	Å
HÅgskolen i Molde	1600	Å	Å	Å	Å
HÅgskolen i Narvik	1200	Å	Å	Å	April 2006
HÅgskolen i Nesna	1000	Å	Å	Å	Å
HÅgskolen i Nord-TrÅndelag	5000	Å	Å	Å	2006
HÅgskolen i Oslo	11200	Å	Å	Å	Å
HÅgskolen i Sogn og Fjordane	3000	Å	Å	Å	2006
HÅgskolen Stord/Haugesund	2500	Å	Å	Å	2006/2007
HÅgskolen i SÅr-TrÅndelag	8100	Å	Å	Å	April 2006
HÅgskolen i Telemark	6600	Å	Å	Å	2006
HÅgskolen i Vestfold	3400	Å	Å	Å	2006
HÅgskolen i Volda	4000	Å	Å	Å	April 2006
HÅgskolen i Åstfold	4200	Å	Å	Å	2006
HÅgskolen i Ålesund	1800	Å	Å	Å	Å
Samisk HÅgskole	180				
Norges HandelshÅgskole	2600	Å	Å	Å	2006
	190680				

Campus Identity Provider benefits



- Authoritative quality and control of information flow for all affiliated users
- Enhanced user management simplifies and automates
- Federated login provides access to services

Future directions, campus IdM

- Responsibility placed outside IT department
- Consolidating BAS for user management
 - ◆ Technical solutions
- Policy and regulations
 - ◆ Giving access to someone I do not control?
- Interfaces
 - ◆ XML definitions for import/export
 - ◆ LDAP based on eduPerson/noredu*
- Available software is improving

FEIDE login



- 1) User tries to access service
- 2) Service transfer user to FEIDE login
- 3) Authentication is done at campus
- 4) Authentication is confirmed with the service, possibly with attribute release

National Security Portal

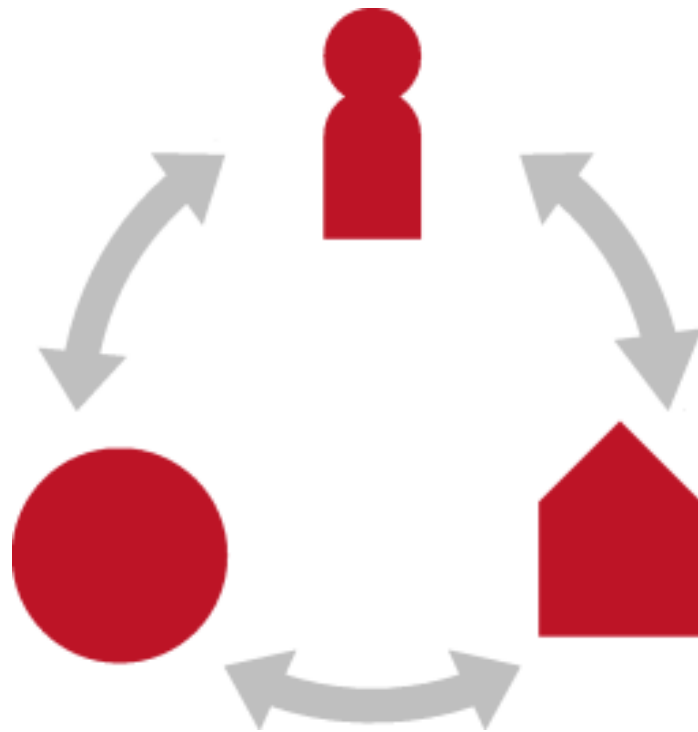
- Authentication, digital signatures, trusted archive for all government services
- Multiple PKI-vendors supply certificates
- Each citizen buys certificate
- Public services support login via portal
- Technology:
 - ◆ Authentication portal
 - ◆ Government PKI requirements
 - ◆ Public/privat standards: SEID
 - ◆ SAML and ID-FF

FEIDE and the National Security Portal



- Crossconnecting FEIDE and Security Portal
- Portal does authentication
- FEIDE does attribute retrieval
- Service Provider does authorization

Why federate?



- Users and home organizations and service providers need to exchange information
- Trust establishment
- Information exchange
- Policy
- Technology

FEIDE federates education



Federations:

- authenticate
- enforce information flow policy
- privacy control
- security
- trust establishment

Services available through FEIDE today

	HiA	HiFm	HiHm	HiL	HiMolde	HiO	HiÅls.	NTNU	UNINETT	UiB	UiO
BIBSYS	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
BrainBank	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Contempus Invoice	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Emner på nett	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Frida	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
FAS serveroversikt	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Informasjonsdesign	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Innsyn	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Lasso	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Nasjonalt bibliotek	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
SAP testkonto	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
FEIDE kundeportal	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
StudentWeb, FS	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Sympa postlister	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
UNINETT intranett	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
UNINETT wiki	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
UiO-portalen	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available

More information

- <http://www.feide.no/index.en.html>
- Email for FEIDE:
 - ◆ administrasjon@feide.no
- Questions for Ingrid
 - ◆ ingrid.melve@uninett.no

**Identity Management is the glue
that holds education together**