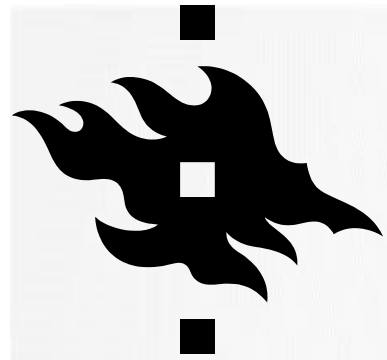




LEARNING FROM FINNISH EXPERIENCE WITH THE JOINT DEVELOPMENT OF INFORMATION SYSTEMS

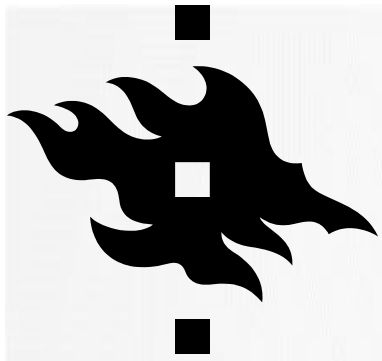
INTERNATIONAL WORKSHOP

Use of Business Intelligence Systems in Learning and Teaching
Management Tartu 3.-4.9.2016



NATIONAL DEVELOPMENT

- Ministry of Education RAKETTI project (Supporting Structural Development of Universities by ICT governance) 2008-2013
- One initial goal of the project was to build in nationwide collaboration new SIS system for all Universities and Universities of Applied Science
- In 2011 ministry realised that the goal can not be reached (Universities became autonomous from government in 2010)
- Instead the RAKETTI project started to develop national reference architecture and shared terminology to enhance interoperability and commensurability of SIS systems
- Universities could start their own projects for renewing SIS



REFERENCE ARCHITECTURE TERMINOLOGY VIRTA DATAWAREHOUSE

- Reference architecture for education sector was developed in collaboration between Finnish Universities and Universities of Applied Science
 - Includes main processes and services
- National terminology work of teaching and studying affairs → OKSA terminology
- VIRTA datawarehouse was built
 - Universities import every day in agreed form certain information from their SIS
 - Ministry uses the data in supervising universities example in setting performance goals and allocating money for Universities

Planning of Programs

Planning of Teaching

Planning of Teaching Offerings (Timetable)

Teaching

Admission

Support Services for Teaching

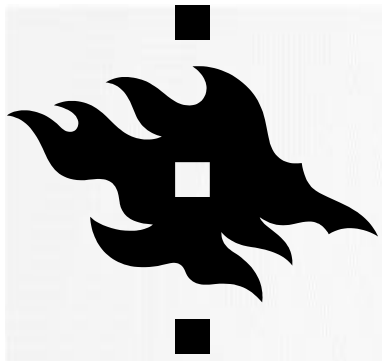
Maintaining rights to study

Support Services for Studying

Applying

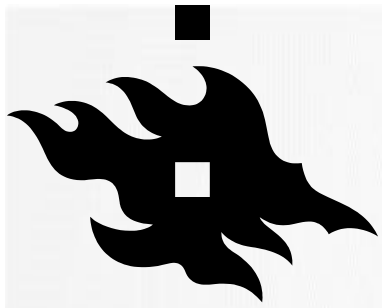
Planning of Studies

Studying



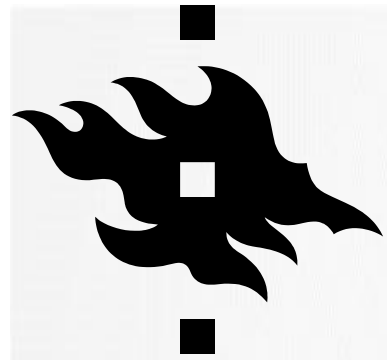
COLLABORATION IN SIS BETWEEN UNIVERSITIES IN FINLAND

- Since 1997 OODI consortium provides OODI SIS system
 - 9 universities including University of Helsinki and Aalto University
 - Our current SIS system
- OPSU system built and maintained by Universities of Tampere and Turku
- WINHA system provided by private company CGI.
 - Used at the moment in most of Universities of Applied Science
- Funidata Inc provides "OTM / SISU" system
 - New system built by University of Helsinki, University of Tampere and Aalto University
- PEPPI consortium provides PEPPI system.
 - New system built by Universities of Applied Science Metropolia and TAMK.



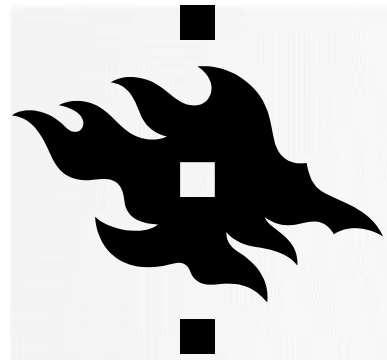
OTM PROJECT MODERNISATION OF SIS

- Started 2011 Partners Aalto University, University of Helsinki and University of Tampere
- University of Jyväskylä joined spring 2015
- Pre study 10/2011 – 6/2012
- Specification of system concept 1 - 12/2013 (One year contract)
- System development 1/2014 – 12/2016 (3 years contract)
- Budget 2013 – 2016 6 m€ (Total investment 7.3 m€ to Funidata Inc.)
- System will replace OODI system for Uni Helsinki and Aalto, OPSU system for Uni Tampere and ROTI and KORPPI systems for Uni Jyväskylä
- System use starts 2017 in founding Universities.
- SIS services will be provided by joint in house corporation Funidata Inc.
- Negotiations with other Uni's to join in have started.



STRATEGY

- At the beginning just few partners (Helsinki, Aalto, Tampere) who cover all the disciplines.
- Modern development methods supported by good decision making ability
- Informing interest groups regularly about the progress – Open seminars every 6 months
- Developing new kind of collaboration model
- When there is evidence about results the collaboration will be opened to other universities through new collaboration model

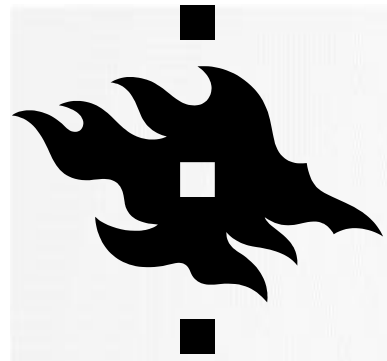


PROJECT GOALS

- Replacing old SIS systems with modern solutions in technology and service model
 - Long lifetime
 - Controlled and cost effective maintainance
 - Supports primarily students and teachers processes
 - Enables process automation. Estimation is that 80% routine administration can be reached
 - Enables further development in other areas of services (contains masterdata for many other services)
 - Effective governing model for the end product: in house corporation

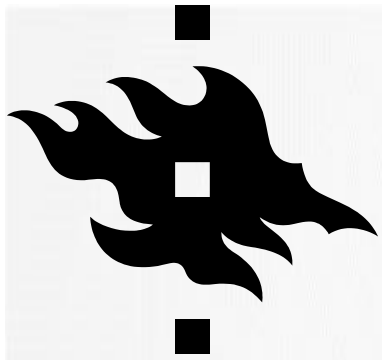
REASONS FOR DEVELOPING THE SYSTEM OURSELF

- During the pre study we did market analyses
 - Most of the products available are targeted to US market. The legislation and model of organizing education is different "students are paying customers"
 - → Needs for localisation of the product would have been enormous and expensive.
 - → We would have had minor influence to the further development of the product
 - It seemed that these products were also at the same point in their lifeline as our old system
- We would have had in the beginning licence and localisation costs and then maintenance and service payments plus licence costs.
- As minor client what would be service level for our new localisation needs
tex. legislation changes?



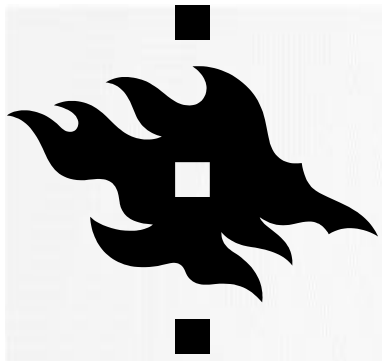
BASIS FOR WORKING

- **Process studies**
 - Critically evaluating current processes
 - **Harmonising** processes between partner universities
 - creating the best process for students and teachers
- Ensuring know how
 - Best experts from the partner universities, best service providers
- Strong service orientation
 - Building up the system one service after another. "Student register" will form from the service pieces at the end of the project
- Students, teachers (and administrative staff) involved
- Own control (we buy workhours not products from service providers)



CHOOSING TOOLS AND TECHNOLOGY

- Established tools without binding commitment to outside service providers
- Requirements for long lifetime
- Ensuring large knowledge base for tools and technology
- Open source tools preferred
- Outside consultation
- Regular outside audit



OTM PROJECT ORGANISATION

Interest group

Steering group

Experts advice group

Project group
-Project manager
-Product owners

Developers
Service providers

Reference groups

Aalto project

Uni Helsinki project

Uni Tampere project

Planning of Programs

Planning of Teaching

Planning of Teaching Offerings (Timetable)

Teaching

Admission

Support Services for Teaching

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Support Services for Studying

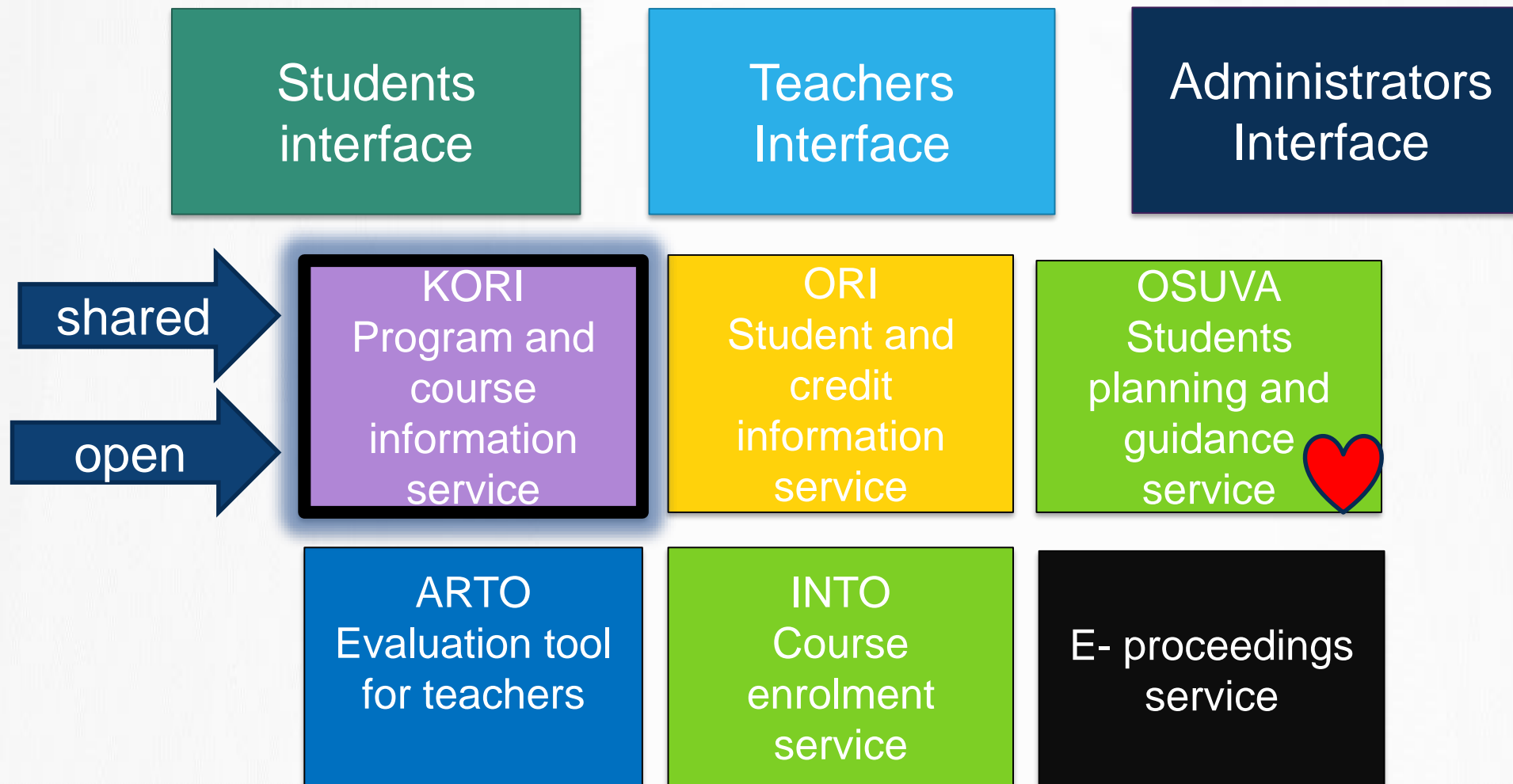
Applying

Planning of Studies

Studying



SYSTEM STRUCTURE



[Create a new plan](#)

KAUPPATIETEELLINEN KOULUTUS (LASKENTATOIMI) 29.09.2016

[DELETE PLAN](#)

▼ Kauppatieteellinen koulutus (laskentatoimi)

PLAN.STATE.INCOMPLETE

▼ Kauppatieteiden kandidaatin tutkinto

PLANNED_CREDITS

109 / 180 Cr

PLAN.STATE.INCOMPLETE

▼ Liiketoimintaosaamisen perusteet

PLANNED_CREDITS

55 / 60 Cr

PLAN.STATE.INCOMPLETE

6 Cr	22A00110 Introduction to Accounting
6 Cr	31A00110 Principles of Economics
6 Cr	71A00200 Introduction to Corporate Communication
6 Cr	23A00110 Introduction to Marketing Management
3 Cr	21A00410 Corporate Responsibility and Ethics
1 Cr	20A00601

6 Cr	32A00130 Introduction to Business Law
6 Cr	28A00110 Introduction to Finance
6 Cr	35A00310 Introduction to Operations Management
6 Cr	21A00110 Introduction to Management
1 Cr	20A00602 Real Case 2
1 Cr	20A00511

UNPLANNED.TITLE (5)

[ABOUT](#)[SEND FEEDBACK](#)



KAUPPATIETEELLINEN KOULUTUS (LASKENTATOIMI) 29.0...

Summer periods



Add personal note

autumn 2016		spring 2017			autumn 2017		spring 2018			autumn 2018		spring 2019		
I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
61A00... Business...	72A001... Swedish ...	22A001... Introduc...	28A001... Introduc...	22C002... Manage...	23A00... Introduc...	22C003... Manage...	22C999... Bachelor...	21A004... Corporat...	22C999... Maturity ...		21A001... Introduc...			
32A00... Introduc...	31A001... Principle...		22C001... Introduc...	30A020... Introduc...										
18 / 24 Cr		30 / 36 Cr			12 / 24 Cr		13 / 36 Cr			6 / 24 Cr		0 / 36 Cr		

Kauppatieteiden kandidaatin tutkinto Total 79 / 180 Cr

Kauppatieteiden kandidaatin tutkinto

Liiketoimintaosaamisen perusteet	Laskentatoimen erikoistumisalueen opinnot	Sivuopinnot	Kieli- ja viestintäopinnot	Vapaasti valittavat opinnot
6 Cr 71A00200 Introduction to Corporate ...	6 Cr 22C00400 Financial Accounting	»	»	»
6 Cr 35A00310 Introduction to Operations...	6 Cr 22C99904			

ABOUT

SEND FEEDBACK



August 29 – September 4 2016

TODAY

WEEK

MONTH



In calendar

Teaching not selected

Week 36	Monday 8/29	Tuesday 8/30	Wednesday 8/31	Thursday 9/1	Friday 9/2	Saturday 9/3	Sunday 9/4
All day							
8.00							
9.00							
10.00	10.00 - 11.00 en: curwiz-2016-07-04 - en: random name - S111, Aqua (en)		10.00 - 11.00 en: curwiz-2016-07-04 - en: random name - S103	10.00 - 11.00 Ihmissutten historian tentti - Lectures - S36, Porthania (en)			
11.00							
12.00	12.00 - 12.00 - 12.00 - en: Ihmissutten curwiz-2016-07-04 - en: 66 - - en: S111, Aqua (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)
13.00	12.00 - 12.00 - 12.00 - en: Ihmissutten curwiz-2016-07-04 - en: 66 - - en: S111, Aqua (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)
14.00	12.00 - 12.00 - 12.00 - en: Ihmissutten curwiz-2016-07-04 - en: 66 - - en: S111, Aqua (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)
15.00	12.00 - 12.00 - 12.00 - en: Ihmissutten curwiz-2016-07-04 - en: 66 - - en: S111, Aqua (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)	12.00 - 16.00 en: curwiz-2016-07-04 - en: random name - S51, Scorpius (en)
16.00							
17.00							
18.00							
19.00							
20.00							

KAUPPATIETEELLINEN KOULUTUS (LASKENTATOIM...

I / 2016 - 2017

- 3 Cr 72A00100 Swedish Business Communication 1
- 6 Cr 30A02000 Introduction to Statistics

II / 2016 - 2017

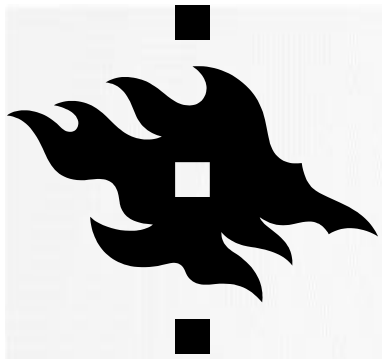
- 6 Cr 22A00110 Introduction to Accounting
- 6 Cr 31A00110 Principles of Economics

III / 2016 - 2017

- 3 Cr 61A00200 Business Communication Skills
- 6 Cr 22C00100 Introduction to Financial Accounting

ABOUT

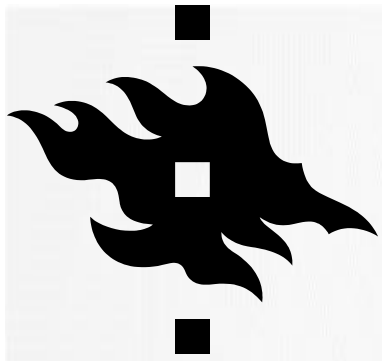
SEND FEEDBACK



COLLABORATION MODEL

FUNIDATA INC

- Stable longterm serviceprovider in universities own control
- Effective decisionmakeing moldel suported by corporative law
- Strong influence possibilities to the product (compared to commercial products)
- Savings in purchases and serviceproviders competition processes (in house inc)
- Volume benefits in purchases and competition processes
- Professional leadership and management of service - COO
- Useing outside knowledge - Board
- Provides overall picture of the service and serviceintegration needs
- Service delivery as modelled SAAS service packages
- Preventing technolpgy and development dept
- Ensureing best know how to uiversities use.
- Capitalisation and new priceing model reduces needs to large one time investments. Foreseeable costs
- Better ability to react to new service development collaboration needs
- Strategic development planning



- Founded in January 2016
- COO Mika Peura



Board

Customer steering group

COO

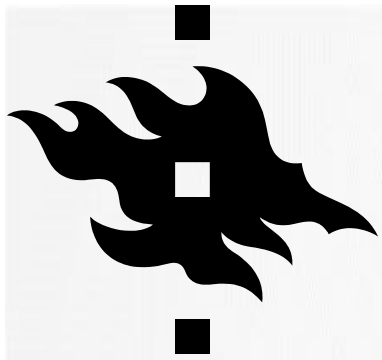
Staff

Developers Service providers

Aalto Project

Uni Helsinki Project

Uni Tampere Project



PLANNED NEW PRICEING MODEL

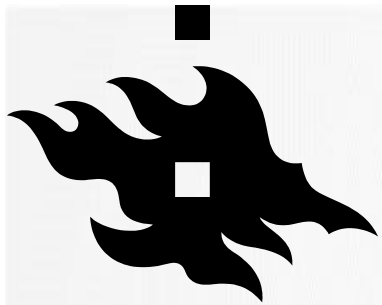
- Founding universities have capitalized Funidata Inc by moving the capital of building new SIS in to the company.
- In serviceprices Funidata collects the investment back and has in the future own capital to make new investments to new modules or services.
- Other universities can become service users trough ownership in the company.
- When joining in new users also pay part of the investment trough allowance in service price

Service maintainance
SAAS

-direct cost of mantaning and
delivering SIS

Maintainance development x %

Allowance of investment



CHALLENGES

- During the specification of system concept the strategy for building the system changed from pre study
- The war of technology religions
- Adapting new agile methods of building a service is / was not easy
- Universities who were left out of collaboration in the beginning did not like it
- Building up in house corporation was delayed for almost a year
- During the development period collaboration between universities and universities of applied science have become deeper in many areas.
- Negotiations with University of Jyväskylä and Peppi consortium took time from development work
- There has been too little resources allocated for communication of the project



Uitgeverij - New journals



Uitgeverij - New journals



60° 10 1.2 N, 24° 57 18 E