Integrated Campus-Portal

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Baden-Wuerttemberg Cooperative State University (DHBW)

11. November 2013
Agenda

1. Introduction
2. Central software systems
3. The portal strategy
4. Identity management
5. Possibilities of SharePoint integration
6. Integration of different systems into the campus-portal
7. Workflows using functions of different systems
8. Demo
9. Summary and Outlook
Baden-Wuerttemberg Cooperative State University (DHBW)

- 30,000 students at 12 locations all over Baden-Wuerttemberg
- Each student has a fixed contract with a company for internships
- 60% part-time lecturers
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- Founded in 2009 accrued from eight *Berufsakademien*
- Many different structures, especially IT-structures
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  $\implies$ it is a challenge to harmonize them
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Central software systems

Campus-Management: DUALIS

- Basic claims data of the students, the lecturers and the companies
- Ressource planning of lecturers
- Ressource planning of premises
- Timetable planning
- All exams and the credentials

\textsuperscript{1}Campusnet, Datenlotsen GmbH, Hamburg
DUALIS

Architecture
EvaSys

Student-evaluation of lectures
Central software systems

Reporting-Tool: Dualis Data Visualizer (DDV)

- Java rich-client
- Bases on jreport$^2$
- In-house development

$^2$Jinfonet Software

Plümicke (DHBW)
Central software systems

DDV

Architecture

![DDV Architecture Diagram](diagram.png)
Central systems prepared for soon introduction

- **CRM (MS-Dynamics)**
  - Three groups of customers:
    - potential companies for the student’s internships
    - potential part-time lecturers
    - student applicants
Central software systems

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- **Alumni-tool (product of Datenlotsen)**
  - uses MS-Dynamics
  - integrated into Sharepoint
Planned central systems

- **e-learning:** Moodle
- **email-tool:** MS-Exchange/Outlook
At the moment only the communication functions are used:

- central intranet and intranets for all campus
- interchange platform for all central boards
- contact persons
- information about laws
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The portal strategy

**Goal:** All users can reach all central IT-systems from one account on one platform.
Identity management

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Identity management

- Authentication and authorization to the systems
- **Goal**: one-to-one relation user to identity
- **Challenge**: 12 campus are responsible for their identity management

This is typical for universities: all faculties have their own identity management.
Active Directory Federation Service (ADFS)

- **MS-Description:** *ADFS provides an identity federation solution for organizations looking to share identity information with their partners in a secure manner.*

- **In our Situation:** partners = locations/faculties

- **Single sign-on**
  Users need not to authenticate them multiple times for using different web-applications.
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Link: Changing the web-application by a link.

In combination with ADFS the user do not feel leaving an applications, when entering another application.
Possibilities of SharePoint integration

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**IFrame-Integration:** Allows to display a web-site in another web-site.

In combination with ADFS multiple web-applications can be presented in one web-site.
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**Web-Servives:** W3C consortium: A *web-service is a software system designed to support interoperable machine-to-machine interaction over a network.*

In the framework of SharePoint web-services could be used to call functions of different applications.
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**Workflow-Integration**: In SharePoint workflows can be modelled with functions of different applications by using web-services.
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Integration of different systems into the campus-portal

DUALIS/EvaSys-Integration I

- Fat-Client
- DUALIS Portal
- Web-Client
- IFrame-Integration
- mobile devices
## DUALIS/EvaSys-Integration II (Workflow-Integr.)

<table>
<thead>
<tr>
<th>No.</th>
<th>Process</th>
<th>User</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Planning courses</td>
<td>head of department, secretary</td>
</tr>
<tr>
<td>2</td>
<td>Course evaluation (with EvaSys)</td>
<td>head of department</td>
</tr>
<tr>
<td>3</td>
<td>Students enrollment, exmatriculate and grant students leave absence</td>
<td>secretary</td>
</tr>
<tr>
<td>4</td>
<td>Relations administrating (students ⇔ companies)</td>
<td>secretary</td>
</tr>
<tr>
<td>5</td>
<td>Fees administrating</td>
<td>administration</td>
</tr>
<tr>
<td>6</td>
<td>Remission fees</td>
<td>administration</td>
</tr>
<tr>
<td>7</td>
<td>Recoveries of amounts verifying</td>
<td>administration</td>
</tr>
<tr>
<td>8</td>
<td>Salaries and contracts accounting</td>
<td>administration</td>
</tr>
<tr>
<td>9</td>
<td>Grates typing and unblocking</td>
<td>lecturers, secretary, head of depart</td>
</tr>
<tr>
<td>10</td>
<td>Transcript of records, credentials providing</td>
<td>secretary</td>
</tr>
</tbody>
</table>
Process modelling

- 52 processes of studies and teaching are identified
- Modelled in workshops
- Summarized in a process companion
Example: Planning of lessons
CRM–Integration

**IFrame-Integration**: Standard functions of MS-Dynamics web-client
CRM–Integration

IFrame-Integration: Standard functions of MS-Dynamics web-client

Workflow-Integration: DHBW-processes:

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</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Adminstration and acquisition of partner companies</td>
<td>head of department</td>
</tr>
<tr>
<td>12</td>
<td>Adminstration of lecturers</td>
<td>head of department secretary</td>
</tr>
<tr>
<td>13</td>
<td>Students recruitment (exchange platform)</td>
<td>head of department partner companies</td>
</tr>
</tbody>
</table>
Alumni: SharePoint-application
Integration of the other systems

Alumni: SharePoint-application

Reporting (DDV): Workflow-Integration

In DVV all functions are callable as a web-services.
Integration of the other systems

Alumni: SharePoint-application

Reporting (DDV): Workflow-Integration
   In DVV all functions are callable as a web-services.

Moodle: IFrame-Integration, as Moodle has a web-client
Integration of the other systems

Alumni: SharePoint-application

Reporting (DDV): Workflow-Integration
   In DVV all functions are callable as a web-services.

Moodle: IFrame-Integration, as Moodle has a web-client

Outlook: IFrame-Integration, as Outlook has a web-client
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Workflows using functions of different systems

- In SharePoint-workflows web-services of different systems can be called.
- It is possible to implement processes using different systems.
- The user works process-oriented and not system-oriented!
Workflows using functions of different systems

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**Example:** Process: Planning of lessons

At the moment the workflows ends with *make course public*

Additional functions:

- Generate student evaluation (EvaSys)
- Generate an e-learning course (Moodle)
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Summary and Outlook

Summary

- Campus-portal integrating all central systems
- Portal bases on MS-SharePoint
- Integrated systems: student administration, evaluation, customer relationship, alumni-management, eLearning and reporting

**Great benefit:** All central applications are used by one application.
Summary

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**Great benefit:** All central applications are used by one application.

Outlook

- Optimizing the processes independent from the systems
- Corresponding workflow-implementation