The eXperience Methodology for Writing IS Case Studies

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FHNW, School of Business, Institute for Information Systems
Types of Case Studies

IS Case Study
= description of a company dealing with a certain IS problem

IS Teaching Case
= a description of a certain IS problem in a company and questions for classroom discussion

IS Research Case
= a description of a real world company and its experiences with a specific IS problem

Cross-case Analysis
= analytical comparison between multiple companies dealing with a similar IS problem

Farhoomand 2004
Yin 1981
Bonoma 1985
Klein/Myers 1999
Eisenhardt 1989
Literature

Welcome to eXperience!

This is where you can find extensive expertise relating to implemented e-business projects and where experts reveal their skills and give insights into solutions and experiences.

Find a case study
eXperience lets you perform targeted searches based on specific criteria. Or would you prefer to view a summary of all available case studies?

Submit a case study
Your project experiences could also be interesting to others. eXperience makes the following demands of your new case study on your e-business project.

eXperience is an initiative of the SME Task Force of the Swiss State Secretariat for Economic Affairs (Seco). The concept behind eXperience has its origins at the University of Applied Sciences Basle (FHBB). The eXperience team is also responsible for editorial work and operating the platform.

There is a total of 363 case studies in eXperience

285 case studies
65 case studies
13 case studies
ecch (European Case Clearing House) is an independent, non-profit, membership based organisation dedicated to promoting the case method of learning. The ecch case collection of management case studies and journal article reprints is the largest in the world. It is a unique and accessible resource for business school and university teachers worldwide.
Real-life teaching cases based on individuals, organizational and societal experiences related to electronic commerce

Shares successes and failures in utilization and management of electronic commerce in organizations

An official publication of the Information Resources Management Association
eXperience: Yearly Process

Call for Topics & Cases

Case Study Writing

- eXperience Event
  www.experience-event.ch

- eXperience Database
  www.experience-online.ch

- eXperience Book
  Ralf Wölfle / Petra Schubert (Hrsg.)
  Business Collaboration: Standortübergreifende Prozesse mit Business Software
  www.kofobis.de

Prof. Dr. Petra Schubert
eXperience Books
The eXperience Method of Writing Research Cases
eXperience: yearly steps

- Public Call for Cases
- Selection of Case Studies
- Call for Authors
- Authors' Training Day
- Case Writing
- Feedback for Transcripts
- Case Refinement
- Approved Versions of the Case Studies
- Cross-Case Analysis
- Final Conclusions
Views

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<th>Business View</th>
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<tbody>
<tr>
<td>1</td>
<td>Involved business partners and their roles,</td>
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<tr>
<td></td>
<td>business concept, contracts, strategic and</td>
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<td></td>
<td>operative targets</td>
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<table>
<thead>
<tr>
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<th>Process View</th>
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<tbody>
<tr>
<td>2</td>
<td>Detailed business processes, process links among</td>
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<tr>
<td></td>
<td>the involved parties, assessment of process</td>
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<td></td>
<td>quality</td>
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<tr>
<th></th>
<th>Application View</th>
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<tbody>
<tr>
<td>3</td>
<td>Overview of business information systems,</td>
</tr>
<tr>
<td></td>
<td>distribution of functions, place of data storage,</td>
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<tr>
<td></td>
<td>integration layers</td>
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<table>
<thead>
<tr>
<th></th>
<th>Technical View</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>Involved system components, networks, data transfer</td>
</tr>
</tbody>
</table>
Uniform Case Study Structure

1 The Portrayed Company
   1.1 Background, Industry, Products, and Target Group
   1.2 Company Vision
   1.3 Meaning of IT and E-Business

2 Reason for the Project
   2.1 Starting Position and Reason for the Project
   2.2 Introduction of Business Partners

3 Individual Title for the Solution
   3.1 Business View/Objectives
   3.2 Process View
   3.3 Application View
   3.4 Technical View

4 Implementation and Operation
   4.1 Investment Decision
   4.2 Project Management/Change Management
   4.3 Programming and Roll-out of the Software
   4.4 Regular Maintenance

5 Experiences
   5.1 User Acceptance
   5.2 Fulfillment of Objectives and Changes
   5.3 Investment, Profitability and Financial Ratios

6 Success Factors
   6.1 Specialties of the Solution
   6.2 Reflection of „Yearly Focus Topic“
   6.3 Lessons Learned
Example Business View:
Procurement of a Machine

Manufacturer (customer)
- requisition
- sourcing
- procurement
- start of use
- operation

Producer of engine (supplier)
- sales promotion
- sales
- quotation
- order processing
- procurement
- production
- delivery
- customer service

Forwarding Agency
- sales
- route planning
- transport execution

prof. dr. petra schubert
Process View: Elements of the Event-driven Process Chain (EPC)

**Process:**
A process is the specification of a sequence of tasks which is defined for the production of a product or service. Every process has a start event and an end event.

**Event:**
An event is an achieved condition which is relevant in the respective context. An event can trigger tasks. However, it is passive itself and neither needs time nor costs.

**Task:**
A task is a coherent bundle of activities which contributes to the overall added-value with a defined (pre-)product or service. A complex task can be shown in more detail in a separate graphic.

**Control flow:**
The control flow describes the temporal and logical dependences between events and tasks.

**Connectors:**
Connectors indicate logical operations at process splits and reunifications:
- **AND:** and connector / conjunction
- **OR:** and/or connector / adjunction
- **XOR:** either/or connector / disjunction
- **DT:** decision table [Rosemann 1996]

**Process link:**
A process link shows that another process is initiated at this point.
Process View: Elements of the extended Event-driven Process Chain (eEPC)

Explanation of organization and information systems

Extended Event-driven Process Chain

- Start event A
- Fulfil task 1
- OR
- Event B
- Event C
- Process link
- Fulfil task 2 (with refinement)
- End event D

Explanation of information objects and input / output

- Is represented by document
- Creates information object
- Depends on information object attribute
- Creates goods/service
- Flow of information / material

Organisational unit
Information System
Explanation
Application View: Example System Integration in a Trading Company

Application View: Forms of Integration

System 1

client

application

data

System 2

client

application

data

client access (also browser)

function integration (also EDI)

data replication
Technical View: Example “Time Collect”

FHBB Muttenz

DMZ

Staff server zone

Staff SAP zone

Printer zone

Staff client zone

Router

Leased line 2 Mbit

FHBB Basel
(multiple sites)

Leased line 2 Mbit

Printer zone

Staff client zones

SAP R/3 with FI/CO, HR, Transaction Log

Web server

Active Directory Domain Controller

Time Collect Login server

Switches

Server Cluster

Report printing

Browser & Excel

Report printing

Browser & Excel
# Technical View:
## Features of the Hard and Software

<table>
<thead>
<tr>
<th>Server</th>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
</table>
| ➊ Web server    | Intel Xeon 2.8GHz 1024MB RAM 36GB HDD mit RAID1 | OS: Windows 2003  
SW: Microsoft IIS 6.0  
SW: Time Collect |
| ➋ Login server  | Intel Pentium 4 512MB RAM 20GB HDD | OS: Windows XP  
MW: Microsoft .net 1.0 |
| ➋ Database server | Dual Intel Xeon 2.8GHz 4096MB RAM 36GB HDD mit RAID1 72GB HDD mit RAID5 | OS: Windows 2000  
DB: Microsoft SQL Server 2000 |
eXperience Methodology: Cross-Case Analysis

Learning from Business Practice in the Use of Business Software

Some results of the year 2007:
## Business Process Excellence: Factors 1/2

<table>
<thead>
<tr>
<th>Main Process</th>
<th>Differentiating Factor</th>
<th>Case</th>
</tr>
</thead>
</table>
| **Customer order** (Sales Process) | (1) optimisation of customer processes through electronic 1:1 connection  
(2) orientation towards customer benefit for optimal IT connection  
(3) focus on core competence through IT outsourcing; service orientation and readiness to adapt | Lyreco, felix martin, Serto |
| **Supplier Orders and Inbound Logistics** (Procurement) | (1) focus on core competence through IT outsourcing  
(2) optimised warehouse management through batch management  
(3) mobile data collection | MGM, Trisa         |
| **Order processing** (incl. Planning/Disposition) | (1) order processing through the connection to networks  
(2) high level of automation through IT support  
(3) outstanding customer service and ongoing quality improvement. | Wyser, MTF Micomp Aebi |
### Business Process Excellence: Factors 1/2

<table>
<thead>
<tr>
<th>Main Process</th>
<th>Differentiating Factor</th>
<th>Case</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Production</strong></td>
<td>(1) optimisation of central corporate management and local customisation</td>
<td>Neoperl</td>
</tr>
<tr>
<td>(inc. Planning, Manufacture,</td>
<td>(2) optimised sales-driven production for decentralised sale</td>
<td>Hero</td>
</tr>
<tr>
<td>Warehouse Logistics)</td>
<td>(3) optimised warehouse management through unambiguous material numbers</td>
<td>MIFA</td>
</tr>
<tr>
<td><strong>Outbound Logistics</strong></td>
<td>(1) optimisation of person-machine-interaction in commissioning</td>
<td>Otto Fischer</td>
</tr>
<tr>
<td>(Commissioning, Dispatch)</td>
<td>(2) outsourcing of distribution logistics</td>
<td>Lagerhäuser Aarau</td>
</tr>
</tbody>
</table>

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Business Process Excellence: Summary

- **B2B integration**
  - Electronic document exchange (especially: invoices)
  - Network providers play important role
  - Business automation: cross-border integration of ERP systems

- **Customer retention**
  - Additional customer benefits from IT support

- **Logistics processes are key**

- **Individualized (customized) ERP system is seen as key aspect of successful business**

- **No “of the shelf” solutions (utility concept)**
Outlook: Extended eXperience
Thank you for your attention.

Petra Schubert and Ralf Wölfle
Terms and Definitions (1/3)

- Business Software - a collective concept for all types of business software. It covers both, ERP systems and e-business software.

- E-Business supports the connections and processes within a business with its partners, clients, employees and staff, by use of electronic media.

- E-Commerce is the part of E-Business which is oriented to sales of products and services. The E-Commerce applications provide electronic support of the sale-purchase process, which is classically divided into information and negotiation phases.

- E-Procurement consists of electronic support for the procurement process (supplies) in a business.
Terms and Definitions (2/3)

- E-Organization is focused mainly on electronic support of communication between personnel and employees or between personnel/employees and business counterparts. Software applications are used for:
  - Collaboration with partners (through support by Collaboration Tools or Groupware);
  - Project management or recording and accounting of performed activities;
  - Content Management
  - Mobile applications assist travelling partners in their work with clients. They allow remote access to product catalogues and mobile archiving of orders.
Terms and Definitions (3/3)

- Customer Relationship Management is sales oriented and aimed at covering client demand and satisfaction. The goals standing behind the CRM measures include better engagement with customers and optimization of the client’s Lifetime Values (the total amount of all purchases done by this client).

- Supplier Relationship Management is supplies oriented and consists of a concept for support of relations and processes with suppliers.

- Supply Chain Management comprises coordination and long-term strategic cooperation with co-producers over the entire networks of logistics for product development and manufacture. This includes both production and supplies, as well as product and processes innovation.
Case Study First Page (1/2)

- Title of the described case
  - should be composed of the name of the enterprise, whose portrait is developed, and of part of the content (e.g. “City mill Schenk: Vendor Managed Inventory“)

- Names of the authors

- Management summary
  - should provide the essence of the case with 4-5 sentences

- Table, enlisting all who have worked on the described case, and the role they have played.

- URL of the described solution could be indicated after the table, eventually with login, with the view of testing.
Case Study First Page (2/2)

Table: the following roles should be pointed out: contractor of the solution, IT-partners and author

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
<th>Company</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Company Representative</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IT-Partner</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Author</td>
</tr>
</tbody>
</table>

URL of the business solution

E.g.: Described solution is available in domain www.muster.ch, and could be viewed with the following test account: name / password”. If the solution is not widely accessible, this sentence, respectively the test account drops out.
Chapter 1: The Company (1/2)

- 1.1. Background of the Company: history, enterprise structure, number of employees, turnover, company culture, etc.

- 1.2. Industrial Sector, Product and Target Group
  - Industrial Sector: special facts of the sector, the situation related to the competition, the development of market potential, etc.
  - Products: types of products, volume of assortment, specific features, history, etc.
  - Target Group: clients with whom contact has been made, B2B or B2C, how they have been characterized, specific features, etc.
Chapter 1: The Company (2/2)

- 1.3. Company vision: the special position of the enterprise described against the background of the market (Unique Selling Proposition).

- 1.4. Importance of IT and E-Business: Some enterprises have defined the importance of IT and/or E-Business for the success of the enterprise. If this is the case, this importance should be briefly described.

- In sections 1.3 or 1.4 citations from some of the members of the board or from other normative documents of the enterprise could be provided.
Chapter 2: Project Trigger (1/2)

2.1. Starting Position and Reasons for the Project

The starting point, initiator and triggers to the project.

The process of decision making that has lead to the provision of the respective resources and the start of the Project. (In case alternatives have been considered for the solution, they should be stated here.)
Chapter 2: Project Trigger (2/2)

2.2. Introduction of Business Partners

IT Partner

E.g. SAP, as a provider of software and Itelligence AG, as partners in implementation for the standard software.

Internet Agency

E.g. a company who has developed the web-application. Often, such a company contributes considerably for the development of the concept.

Business partners

A business partner is a company, whose processes are integrated in case of external integration. This could mean clients, suppliers, or subjects providing services to the company.

Here description should be provided about what is the difference in services, provided by the business partner and how exactly they could be integrated.
Chapter 3: eBusiness Solution Description

- The eBusiness Solution is described as a static snapshot, regarded from four different perspectives:
  - 3.1. Business View
  - 3.2. Process View
  - 3.3. Application View
  - 3.4. Technical View

- The dynamic aspects of project implementation are discussed in Chapter 4.
Chapter 4: Project Implementation (1/2)

- 4.1. Project Management/Change Management
- How was the project initiated and organized? Who took part in it? Provide also data related to the project terms, phases and key achievements.
- Management of changes describes how agreement with the needs of the target group has been achieved, how processes have been changed and how new processes have been introduced. Motivation, training, resistance to exerted counteractions, complexity, etc., are also considered.

- Selection of partners
- If a new IT partner was selected to provide the described e-business solution, details concerning the selection procedure should be provided.
Chapter 4: Project Implementation (2/2)

4.2. Software development

- Description of the software development, testing and implementation phases.
- Customization.
- Integration with already available IT systems.

4.3. Maintenance

- Describe specific aspects related to the software provision, maintenance, accessibility, the approach used for coping with anxiety for changes, etc.
Chapter 5: Experience gained from the project (1/2)

5.1. User Acceptance
- Experience gained in relation to user acceptance.
- Initial expectations and achieved benefits.
- Needed adaptation.

5.2. Achievement of Objectives and Changes
- Reflection on the achievement of the project objectives provided in section 3.1.
- Planned and non-planned benefits and successes.
- Drawbacks and experienced problems. Formulation of the kind “In a future project we would have paid greater attention to this…” could prove being the way of positive expression of gained bad experience.
- Changes
  - What is different today if compared to the situation before the introduction of the new solution (except the aspects already described)? Here, often subjective factors should be mentioned, e.g. satisfaction of collaborators.
Chapter 5: Experience gained from the project (2/2)

5.3. Investments, Profitability and Financial Ratios

The project should be described retrospectively in terms of profitability:

Calculate the expenses in the ideal case, dividing them into internal and external expenses, as well as according to investments and production costs.

Summarize the quantitative and qualitative aspects from the point of view of effectiveness, and provide financial estimation for them.

Consider the enterprise evaluation about the profitability of investments. If possible, provide argumentations which the client would have used internally.

Provide the Key Performance Indicators (KPIs), that the company had used for evaluation of its solution.

E.g. The number of the application users (or the number of licenses) is important, in order to determine “Investment expenses for every user”.
Chapter 6: Success Factors

- 6.1. Specific features of the provided solution
  - Describe functionalities or facts, revealing the exceptionality of the solution.
  - Explain the reasons, due to which partners (clients) have decided to use the platform.

- 6.2. Reflection of “Process Excellence”
  - Describe the improvement of the business processes due to the implemented solution.
  - Emphasize on the aspects that make the business processes “superior” with the implemented business software.

- 6.3. Lessons Learnt
  - Discuss what could be learned from the described case, show mistakes that could be avoided, point out what has been done exceptionally well.