

Simulation as a Decision-Making Support Tool for Full-Service E-Commerce Providers

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Outline

- Introduction
- Full-Service E-Commerce Provider (FSEP)
- Simulation as a Decision-Making Support Tool
- Conclusion

Introduction

- The electronic commerce (e-commerce) is an important channel of distribution
- The setup and the successful operation of an online shop is a challenging task
- Setup and installation efforts
 - Installation and customization of the online shop software
 - Design and implementation of individual storefront layout
 - Integration of the IT infrastructure
- Operation efforts



Full-Service E-Commerce Provider (FSEP)

- FSEP is a service provider for the complete e-commerce channel
- The FSEP is responsible for
 - The initial setup and installation
 - The complete e-commerce process chain
- The FSEP acts as a general contractor
- The FSEP has a big partner network to provide the e-commerce services
- Performance-based remuneration
 - revenue-based, pay-per-order, pay-per-sale

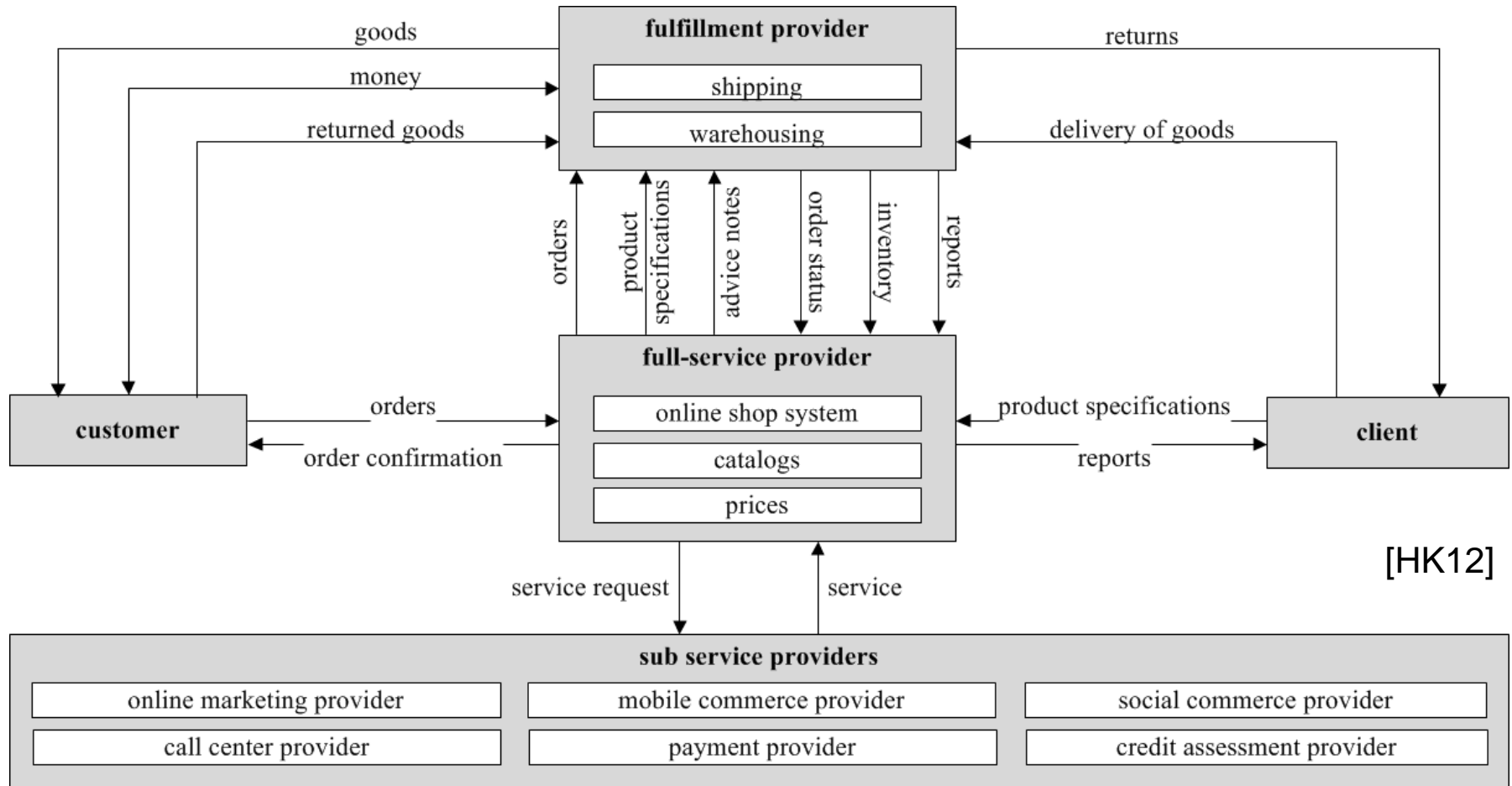
Services of FSEPs

- Accounting
- Address validation
- Business Consulting
- Content & web design
- Fulfillment
- Hosting
- Online marketing
- Payment
- Reporting
- Returns management
- Technical operations

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FSEP Case Study – Intershop Communications AG



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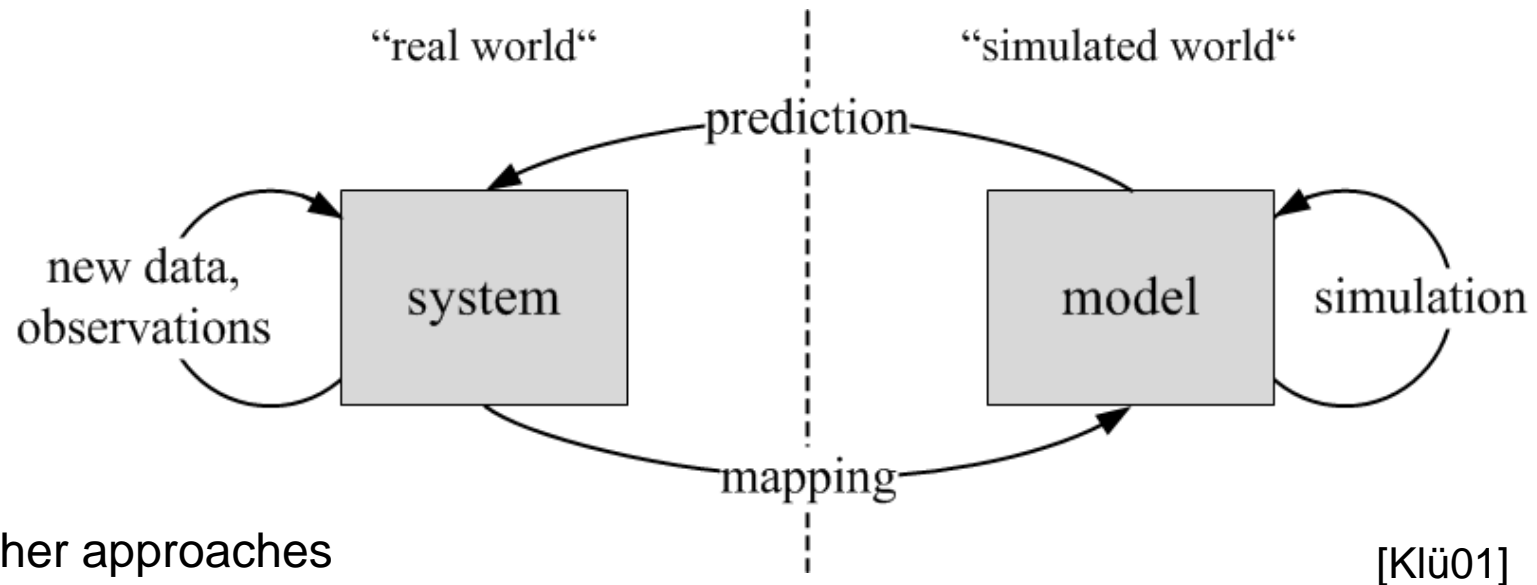
The Need of Decision Support Methods

- The optimal configuration of an online shop is a challenging task
 - Variability
 - High number of configuration parameters
 - Interconnectedness
 - Interdependencies between the configuration parameters
 - Complexity
 - Combinatorial and dynamic complexity



Simulation as a Decision-Making Support Tool

- Basic principles of the simulation approach

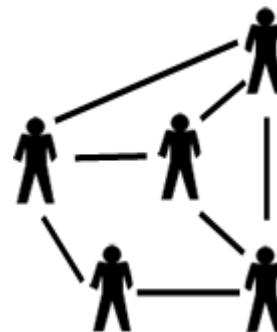
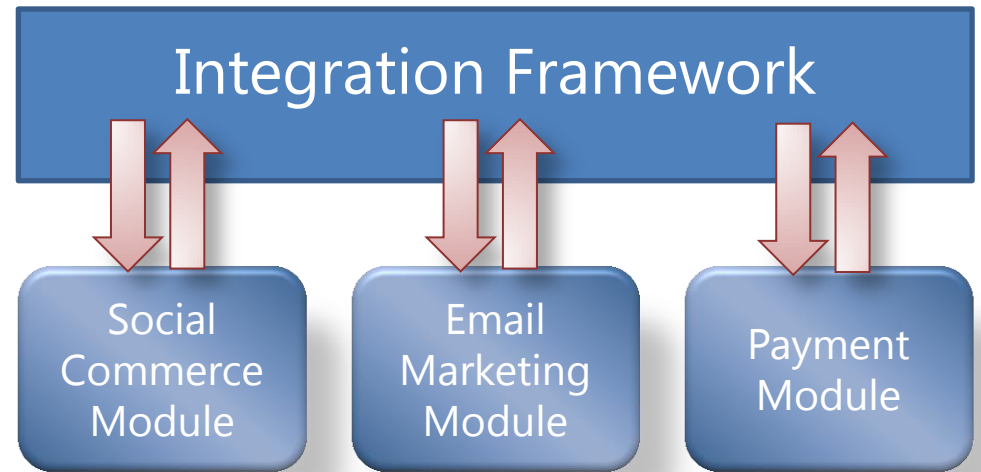


- Other approaches

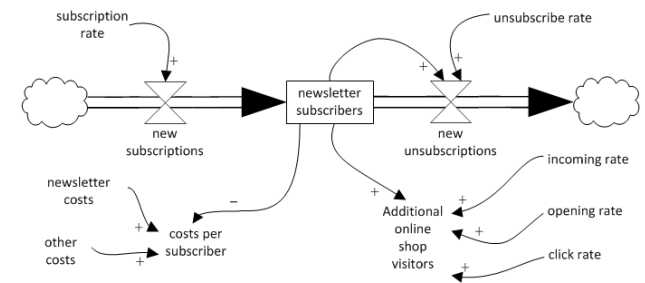
- Web Analytics
- Controlled Experiments (A/B Testing, Multi-Variable Testing)

The Research Project SimProgno

- Development of several simulation models
- Use of different simulation techniques
 - Agent-based simulation
 - Modeling of heterogeneous actors and individual behaviour
 - System Dynamics
 - Modeling of aggregated behaviour



Agent-Based Simulation



System Dynamics

Conclusion

- Full-Service E-Commerce Providers offer an efficient way to outsource the complete e-commerce channel
 - Single point of contact
 - Well-proven interfaces between the FSEP and its sub service providers
- Full-Service E-Commerce Providers require additional tools to support their decision-making processes in order to permanently improve the economic success of the managed online shops
- Simulation represents one possibility to address these needs

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