

IT Self-Service Blueprinting – A Visual Notation for Designing IT Self-Services

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Introduction

Agenda

- Motivation
- Theoretical Foundations
- Research Objective
- Research Design
- Research Results
- Implications and Future Research

Motivation

IT self-services are one extreme of IT service processes

- IT services are processes that represent sequences of tasks, which allow for the production of IT-related service outcomes
- In IT self-services, employees outside of the IT operations function perform a portion of the service tasks on their own and independent from the IT personnel

The rationale for IT self-services is the reduction of the IT personnel's workload

- Free up the IT personnel from performing routine, recurrent service tasks
- Allow the IT personnel to focus on more strategic tasks

The reduction of the IT personnel's workload in IT self-services cannot be taken for granted

- Often employees are not capable of performing devolved service tasks correctly
- Correction of failures takes more time than performing the service tasks

Theoretical Foundations

Services are processes representing sequences of service tasks that allow for the production of the service outcome

Props and physical evidence	
Customer	Line of interaction
Onstage personnel/systems	Line of visibility
Backstage personnel/systems	Line of internal interaction
Support personnel/systems	Line of implementation
Management	

Theoretical Foundations

The design of IT self-services requires the analysis of several concepts not included in existing visual notations for service design

The input and outcome dimensions are important for the analysis of IT self-services

- Capabilities required to perform the devolved service tasks correctly
- Capabilities possessed by the involved employees
- IT resources required for the production of the outcome
- Constraints for using the produced outcome

The required concepts are not included in existing visual notations for service design!

Research Objective

What is a cognitively effective visual notation for designing IT self-services from an IT operations perspective?

The objective of this research is to extend the visual notation for service blueprinting and add the required concepts to it to develop a cognitively effective visual notation for designing IT self-services

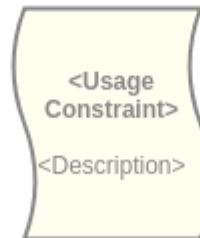
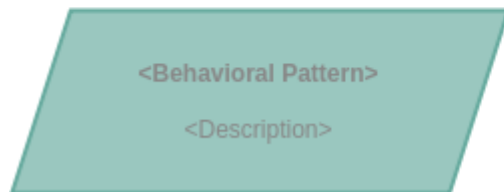
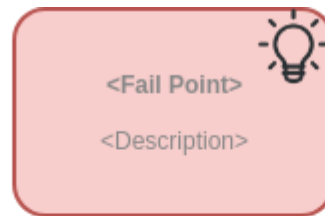
Research Design

The visual notation was developed taking into account the principles for cognitively effective visual notations

Principle	Definition
Semiotic clarity	1:1 mapping between concepts and graphical symbols
Perceptual discriminability	Graphical symbols are easily and accurately distinguishable
Semantic transparency	Graphical symbols intuitively reflect their semantics
Complexity management	Constructs for different levels of abstraction and information filtering exist
Cognitive integration	Explicit mechanisms to support navigation between diagrams are provided
Visual expressiveness	Full range of visual variables are used
Dual coding	Graphical symbols are complemented by textual description
Graphic economy	Number of different graphical symbols is not too large
Cognitive fit	Visual notation is adaptive to the audience

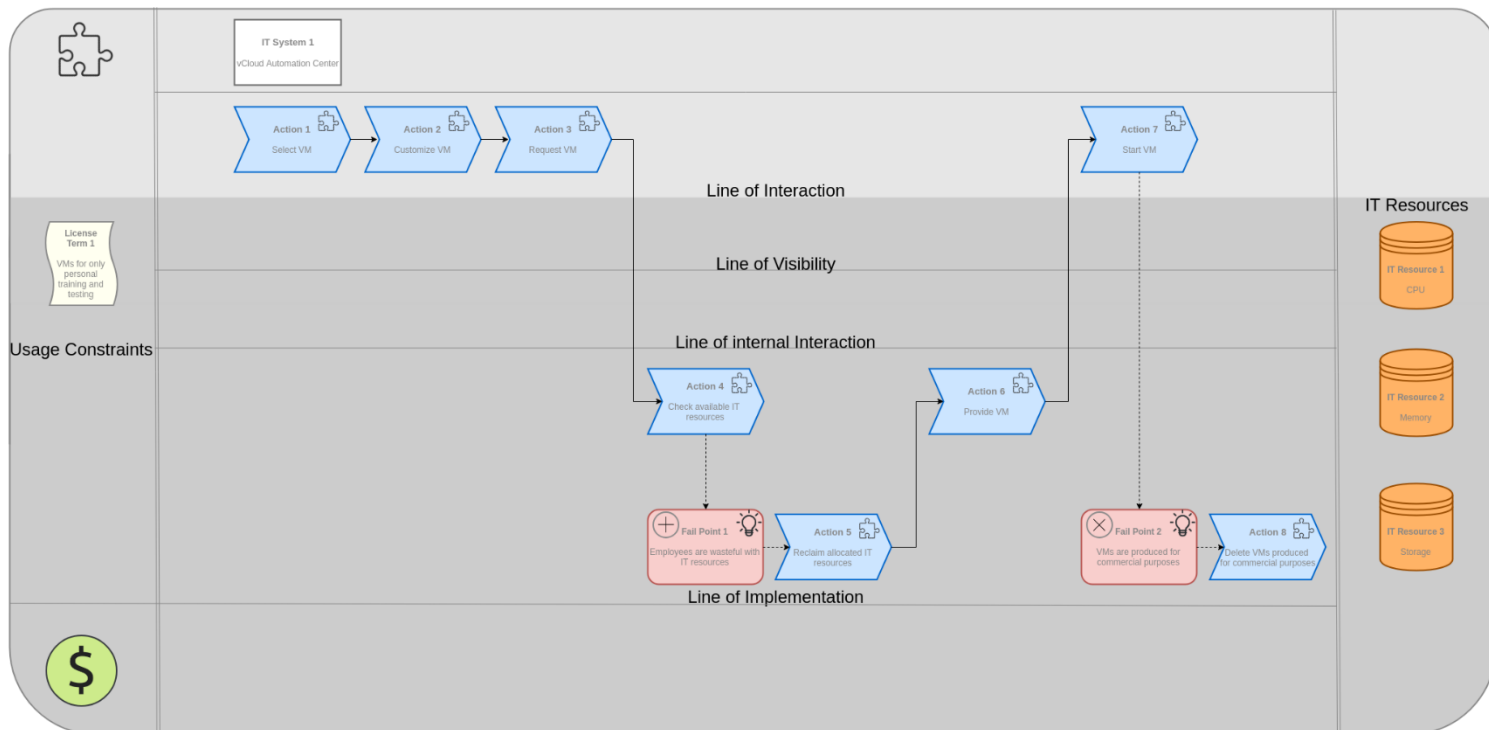
Research Results

Concepts required for designing IT self-services are included in the visual notation



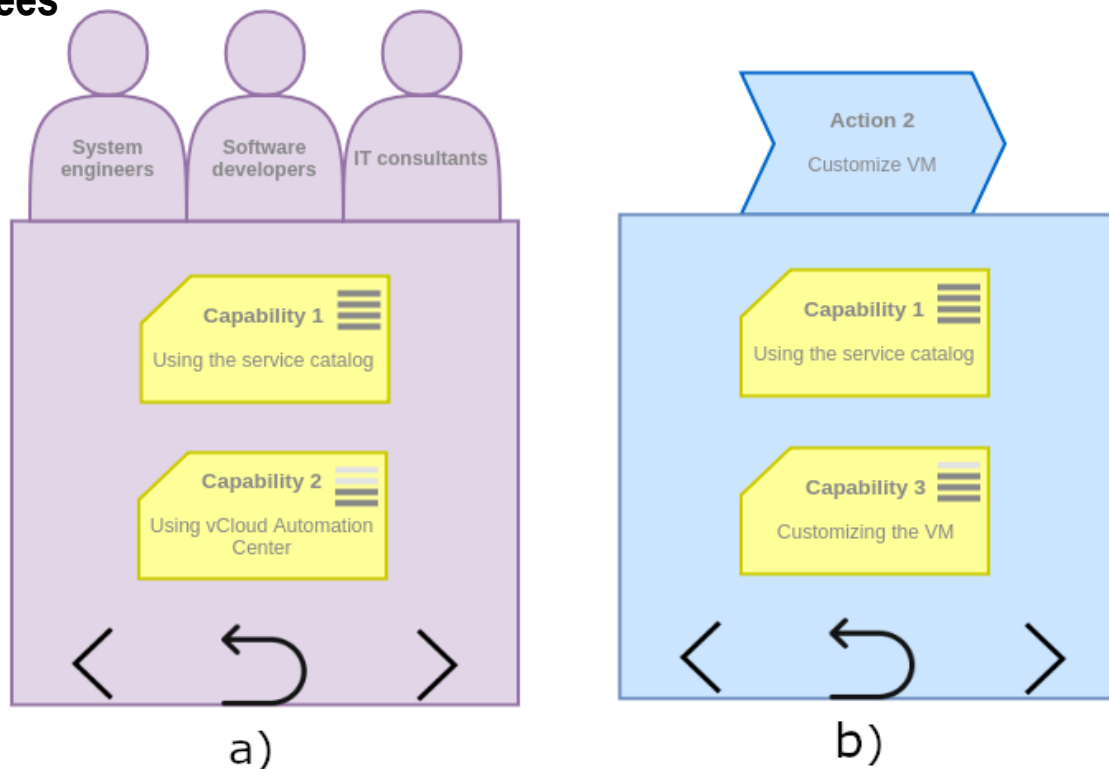
Research Results

An IT self-service blueprint includes all the required concepts



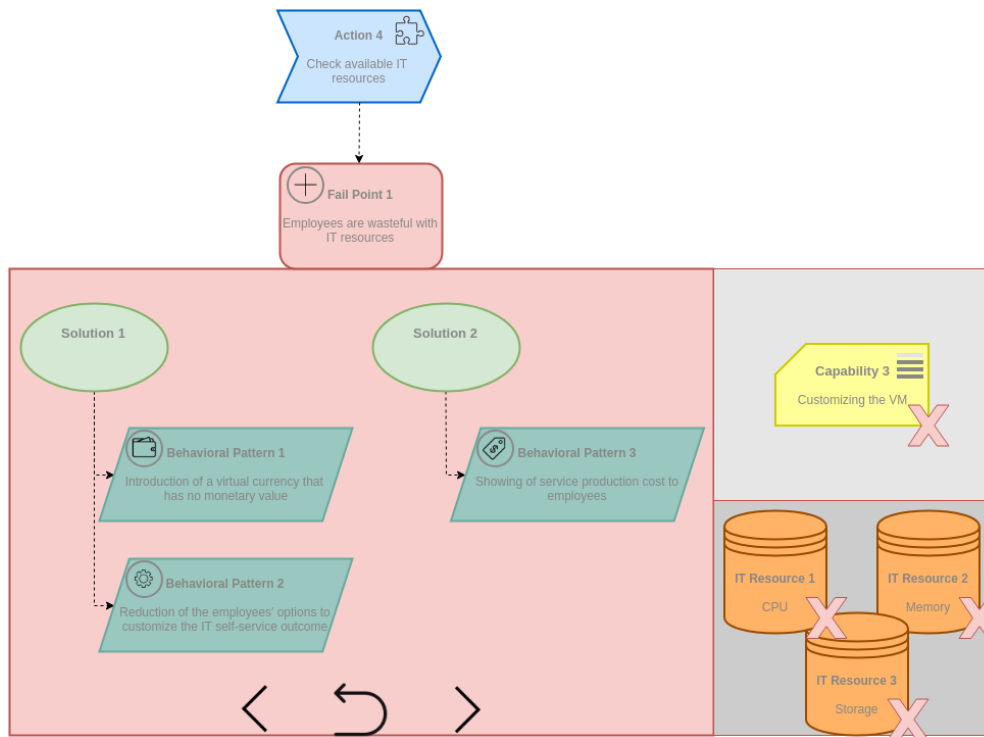
Research Results

Separate models specify the capabilities possessed by /required from the involved employees



Research Results

For each fail point solutions comprising behavioral patterns must be specified



Research Results

The visual notation complies with the principles for cognitively effective visual notations

Principle	Definition
Semiotic clarity	Each included concept is represented by a graphical symbol
Perceptual discriminability	Graphical symbols differ in shape and color
Semantic transparency	Icons specify the fail point and behavioral pattern classes
Complexity management	Separate models represent the IT self-service at multiple levels of abstraction
Cognitive integration	Icons allow to navigate between separate models and the context diagram
Visual expressiveness	Horizontal position, shape, and color are the used visual variables
Dual coding	Descriptions to graphical symbols convey additional information
Graphic economy	Must be evaluated in the future by applying complexity metrics
Cognitive fit	Need for different visual dialect for different audiences must be evaluated

Implications and Future Research

The visual notation might be suitable for designing all kinds of self-services

- The visual notation supports IT operations at analyzing the devolvement of service tasks at the design stage
- The visual notation adds concepts required for the design and analysis of IT self-services to service blueprinting
- The visual notation must be evaluated in other contexts such as financial services and retail services