A Viewpoint for Dealing with Change in Migration to Services

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Change lies in the heart of migration to services
Background

Migration as series of changes

Source State

Target state

Change
Dutch Electronic Health Record System
LSP Law: All healthcare providers have to connect to EHRS

Q1) How these changes impact the target service-based system

Q2) To what extent already partially migrated services can be used
Change Viewpoint: to guide the reasoning required for dealing with change.
Architects Mental Model of Dealing with Change

1. Select a source of change

2. Find the impact of change

3. Change
**Purpose:** guide the reasoning required for dealing with change

**Concern 1:** What is the source of change?

**Concern 2:** What is the impact of change?

ISO/IEC/IEEE 42010 standard for documenting views and viewpoints
**Concern 1: What is the source of change?**

**What type of knowledge is the source of change?**

External or Internal?

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<thead>
<tr>
<th>Scope</th>
<th>Before</th>
<th>Requirements</th>
<th>Design Issues</th>
<th>Change Impact Path</th>
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<td>confidentiality</td>
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<td>D2: How to delegate authorization to patients data?</td>
<td>D6: How to retrieve patient data?</td>
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<td>Opt2: P2P information sharing</td>
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Withdrawal of LSP law
Concern 2: What is the impact of change?

What knowledge might change?

What to trace?

Change Impact Path

Withdrawal of LSP law

After

confidentiality

integrity

D2: How to delegate authorization to patients data?
D3: How to authenticate healthcare providers
D4: Where to store patients medical history?
D5: What architectural style fits best the coordination of information exchange in EHR?
D6: How to retrieve patient data?

Design Issues

Requirements

Design

Design Options

Rejected

Decided

Opt1: central service broker

Opt2: P2P information sharing

Opt1: central service broker

Opt2: P2P information sharing
**Scenario 1: Scoping Change in Problem Space**

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<th>Business Goals</th>
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<tr>
<td>Before</td>
<td>BSN as unique ID</td>
<td>privacy</td>
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<tr>
<td></td>
<td>index right</td>
<td>promote evidence-based medicine</td>
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<td>governmental financial support</td>
<td>improve quality of care</td>
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<td>single communication path</td>
<td>support innovative health care</td>
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<td>opt-out policy</td>
<td>reduction of costs</td>
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<td>support mobility</td>
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Support mobility
How the change viewpoint helps architects reasoning

1- Supporting focus on chain of changes

2- Bringing structure on the relevant knowledge

3- Supporting logical thinking
Summary and next steps

• A viewpoint in-line with architects natural way of thinking

• Tool support

• Empirical validation of the effects of change viewpoint in architects reasoning
Thank You

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