A design science approach to modelling and facilitating clinical workflow and decision making

Sony Nugrahanto ¹
Iain Morrison ¹,²

1. Department of Information Systems, The University of Melbourne, Australia
2. Centre for Health Informatics and School of IT, Bond University, Australia
eCommerce meets eHealth

A SOA modelling framework to facilitate decision making
## The Framework

<table>
<thead>
<tr>
<th>BPEL</th>
<th>• Guideline (clinical workflow) execution</th>
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<tbody>
<tr>
<td>WS</td>
<td>• Facilitate linkage to clinical resources</td>
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<tr>
<td>UML, BPMN, XPDL???</td>
<td>• Modelling guideline</td>
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</tbody>
</table>
Design Science

Build

Evaluate

Instantiation

Construct

Method

Model
Research Process

Conceptualize
- Evaluate modelling standards

Evaluate
- Scenario design (MCPOP)
- Apply mapping

Build
Mapping clinical workflow - BPMN
Asthma Guideline - Narrative

Asthma Guideline

BPMN (modelling)

BPEL (execution)
Level of Representations

Narrative description of clinical workflow

<table>
<thead>
<tr>
<th>Text</th>
<th>Graphics</th>
</tr>
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</table>

Visual formal representation of clinical workflow

BPMN

Executable representation of clinical workflow

BPEL
Conclusion

• BPMN allows a descriptive and executable of a clinical workflow
• BPMN representation provides better abstraction for clinical expert
• BPMN model can form the basis for transferable and re-usable clinical models