FLOW IN TAKTED PROJECTS – A PRACTICAL ANALYSIS OF FLOW AND RESOURCE EFFICIENCY

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● Research question
   How well can flow in takted production be planned and controlled?

● Method:
   Literature review about takt and flow
   Development of a measurement system for flow in takted projects
Basics of flow (1/2): Flow perspectives

- Product flow
- Operation flow

Source: Shingo und Dillon 1989
Basics of flow (2/2): Properties of flow

- Consistency
- Rhythm
- Continuity
- Flow efficiency (location)
- Flow efficiency (trade)

Source: Nezval 1960
Perspectives and properties of flow in takted projects

- Consistency ✓
- Rhythm ✓
- Continuity

- Flow efficiency (location)
- Flow efficiency (trade)
Measuring continuity?

- Flow efficiency (location) = $\frac{6}{(6+6)} = 50\%$
- Flow efficiency (trade) = $\frac{8}{(8+2)} = 80\%$

Source: Modig und Åhlström 2015
Measuring continuity?

Source: Modig und Åhlström 2015
How well can flow in takted production be planned and controlled?

<table>
<thead>
<tr>
<th></th>
<th>Planned</th>
<th>Actual</th>
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</thead>
<tbody>
<tr>
<td>FE Trade</td>
<td>98,02 %</td>
<td>80,03 %</td>
</tr>
<tr>
<td>FE Location</td>
<td>96,13 %</td>
<td>69,25 %</td>
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Findings and Conclusion

1. Reduction in flow efficiency during Takt Control

2. Differences in flow efficiency between the location and trade perspectives are notable