Business Operating System

Miika Nurminen, SVP
There is a growing need to connect design to reality

Digital business transformation creates increasing need for process re-design, change implementation and co-ordination of multiple interdependences.

Operative indicators are needed to track change implementation and customer experience. These indicators can be used to continuous improvement even after the change is completed.

Operative indicators are taken from the event data of information systems. Event data provides visibility to any part of business models.

Without this visibility the risk of failure grows in rapidly changing digital business.
Gartner’s Business Operating System

In Research
Gartner’s Top 10 Strategic Technology Trends for 2017

Artificial intelligence, machine learning, and smart things promise an intelligent future.

AI and machine learning increasingly will be embedded into everyday things. This phenomenon is closely aligned with the emergence of conversational systems, the expansion of the IoT into a digital mesh and the trend toward digital twins.

Gartner’s Top 10 Strategic Technology Trends for 2017

Business Operating System
A BOS Is Like a Digital Twin to Enable Your Organization to Adapt

Create a Digital Twin of Your Organization to Optimize Your Digital Business Transformation Program

Published: 14 July 2017    ID: G00331992
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Summary
Coordinating the many interdependencies within complex digital business transformations is extremely challenging, yet key to success. PPM leaders can leverage this case study to create a transformation roadmap enabled by a business operating system — analogous to a "digital twin."

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A BOS Can Act as Your Organization's Navigation System

Like an in-vehicle navigation system, it will guide your organization to its desired destination using five basic elements:

1. **Destination**
   - Enter Your Destination Into the BOS

2. **Map**
   - Use a Business Operating Model to Map Your Transformation Journey

3. **Performance**
   - Measure Your Performance

4. **Situation**
   - Create Situational Awareness

5. **Decision**
   - Make Informed Decisions

### The Technology Components of a Business Operating System

<table>
<thead>
<tr>
<th>Navigation System</th>
<th>Destination</th>
<th>Map</th>
<th>Performance</th>
<th>Situation</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supporting Technology</td>
<td>Economic architecture tools</td>
<td>Enterprise business process analysis (EBPA)</td>
<td>Enterprise performance management frameworks</td>
<td>Operational intelligence platforms (OIPs)</td>
<td>Advanced analytics, Decision support</td>
</tr>
</tbody>
</table>

- = technology components

Source: Gartner (October 2016)

Business Operating System

In Practice
Process manager

Process Execution
Execute business, monitor performance, analyse and optimize execution

1. Define
2. Design
3. Execute
4. Monitor
5. Optimize (continuous)

Process Development
Define requirements, design processes, continuous improvements

Process owner
Operational Development Model

Continual Improvement Methodology

- **Why? What?**
  - Business Design
    - Strategy & Business Models

- **How?**
  - Operations Design
    - Capabilities & Operating Models
  - Process Mining
    - As-is Processes & Root Causes
  - Solution Design
    - Solution Architectures & Work Packages
  - Performance Management
    - Development Roadmaps & KPIs

Tools

- **Enterprise Architecture / Enterprise Business Process Analysis**
  - Design your digital strategy & “To-be” transformation

- **Process Mining / Process Intelligence**
  - Data-driven analysis & measurement of “As-is” processes

- **Corporate Performance Management**
  - Performance management and strategy execution automation
  - Collaboration and reporting
  - Mobile access to performance data and analytics
Vision: To be the best value creator in xxx by 2020 through yyy and zzz.
Strategy-driven Operational Development

1. Why
   Crystallize strategy

2. What
   Evaluate business model

3. How
   Redesign operating model

4. When & who
   Manage development roadmap

Business outcomes

Development needs

Solution blueprints

Strategic goals

Capabilities
- People
- Processes
- IT
Operating Model Analysis with Process Mining
Business Process Improvement is the key for process success

Traditional
Interviews and workshops
Subjective
Time consuming and expensive
Vulnerable to human interpretation

Process mining
Fact based
Fast and efficient
Detailed and fair
Besides flowcharts delivers also the process metrics

Optimal results are achieved by combining the methods
The idea: Turn transactional data into visual Process Intelligence

Flowcharts, Influence Analysis, Profiling, Process KPIs, Case Attributes, Flow Duration analysis
Benchmarking the process based on any dimension. Recycled metal orders have a double amount of order changes which leads to 5 times more product returns than the other purchasing units have.
Moreover, it is valuable to understand, how these outlier orders differ from the quick orders. Red boxes: there are more order changes and other failures.
What is the root-cause for the process issues? Metadata has an answer for this behavior. The red lines at the heat map explain the outlier orders based on the data dimensions. It is clear that especially Recycled metal purchasing unit is failing which leads to stock out. 

- QPR ProcessAnalyzer -
QPR Operational Development Model

Solution Design with Enterprise Architecture
4. Manage development roadmap

Business outcome

Capability

People
Processes
IT

Work package

Dependency

2014 2015 2016 2017 2020

Strategy-driven Operational Development Methodology

Why
Crystallize strategy

What
Evaluate business model

How
Redesign operating model

Capabilities

People
Processes
IT

Redesign operating model
QPR Operational Development Model

Performance Management
Monitoring the continuous improvement actions with dashboards. It is important to have the visibility, how effectively the development actions are leading to the wanted outcomes.

### Problematic Cases

<table>
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<tr>
<th>Case</th>
<th>Customer</th>
<th>Start Date</th>
<th>D...</th>
<th>Last Event</th>
<th>Last Event ...</th>
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<th>Responsibility</th>
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Understand, Harmonize, and Automate

**Understand**

- Use on-going data for determining Process KPIs and monitoring the performance in order to prevent unwanted process deviations.

**Harmonize**

- Existing data used for identifying process exceptions and seeking out root causes for reducing process waste.

**Automate**

- Identify problems using predictive analytics for on-going cases based on information gained from other data.

**Future Data**

- Complexity

**Present Data**

- Business Value

**Past Data**

- QPR
Clear business benefits

**HIGHER INTERNAL EFFICIENCY**

- Number of invoice corrections decreased by 80%
- Business critical order changes reduced by 50%
- Lead time from delivery to invoice decreased by 55%
- Savings in inventory levels >€1m
- Working capital released by €100m

**BETTER DELIVERY ACCURACY**

- Transportation blocks causing late delivery reduced by 50%
- Delivery accuracy improved from 65% to 80%

**INCREASED SALES**

- Value of uninvoiced order lines discovered €17m
- Increased delivery accuracy and internal efficiency, leading to increased sales by 20%
Founded 1991
Corporate headquarters Helsinki, Finland
Stock symbol QPR1V: Nasdaq Helsinki
Sold licenses >1 million worldwide
Customers 2000+
Industry recognitions Gartner, Ventana Research, Palladium, Forrester Research
Products QPR Metrics
QPR ProcessDesigner
QPR ProcessAnalyzer
QPR EnterpriseArchitect