QPR ProcessAnalyzer

Advanced Process Mining for Maximum Process Efficiency
1,000,000+
Licenses sold

2000+
Customers

Local support in
50+
countries

70+
Gartner recognitions

400+
Process mining projects

- QPR Software Plc (Nasdaq Helsinki: QPRV1) offers software and solutions for
  - Process Mining
  - Strategy Execution
  - Performance Management
  - Process Management
  - Enterprise Architecture

- Worldwide leading Process Mining provider
- Founded in 1991
- Headquartered in Helsinki, Finland
Why Engage in Process Mining?
Traditional Process Discovery is Old-Fashioned

- Manual process discovery through interviews and workshops is:
  - Time consuming
  - Expensive
  - Subjective
  - Unreliable
  - Imprecise
  - Quickly outdated

STOP
The Madness!
Process Mining Automates Process Discovery & Analysis

Objective & Fair
Skip gut-feelings and hearsays – see what really happened.

Fact-based
Let data tell you how your processes really run.

Fast & Efficient
Forget about month-long or even week-long waits. We’re talking real-time.

Detailed
Drill down, pan, zoom, hide, uncover – all the tiniest nuances of your processes are available at your fingertips.
Go Beyond Traditional BI Tools

Turn transactional data into visual process intelligence
Manage Exceptions Effectively

Identify the Critical 20% of Business that Takes Up 80% of Your Effort

- 80% of business performs according to agreed process
- 20% of effort
- 80% of effort
- 20% consists of exceptions

Business volume

Effort
The QPR Business Intelligence Concept

**HAPPY CUSTOMER**
- Keep your customer promise
- Example measures:
  - On Time In Full
  - Invoicing Accuracy

**HAPPY FLOW**
- Follow the agreed process
- Example measures:
  - First time right
  - Lead time

**HAPPY PROCESS**
- Get it First Time Right
- Example measures:
  - Perfect order

**EXTERNAL EFFECTIVENESS**

**INTERNAL EFFICIENCY**

**INCREASED PROFIT**
# Process Mining Use Cases and Application Areas

<table>
<thead>
<tr>
<th>WHAT</th>
<th>RESULTS</th>
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</thead>
<tbody>
<tr>
<td><strong>Discover inefficient processes through bottlenecks, undesirable rework, and other symptoms of waste.</strong></td>
<td><strong>Significant cost savings by shortened lead time, reduced working capital, less rework, and fewer order changes.</strong></td>
</tr>
<tr>
<td><strong>Identify relevant process KPIs and measure them correctly and transparently.</strong></td>
<td><strong>Continuously improved process performance via focus on relevant KPIs.</strong></td>
</tr>
<tr>
<td><strong>Understand the root causes of problems.</strong></td>
<td><strong>Better quality process KPIs with full transparency, leaving no room for internal arguments about data correctness.</strong></td>
</tr>
<tr>
<td><strong>Get a fact-based view of the actual ERP process execution.</strong></td>
<td><strong>Optimized business process support from the ERP. Significantly reduced risk in all ERP related developments. Reduced ERP maintenance, development, and support costs.</strong></td>
</tr>
<tr>
<td><strong>This insight is invaluable in both pre- and post- ERP implementation as well as in ERP consolidation related tasks.</strong></td>
<td><strong>Fast realization of planned synergies through harmonized processes.</strong></td>
</tr>
<tr>
<td><strong>Get a fact-based, objective understanding of the actual process execution and system usage in often politically delicate situations to make educated decisions about the way forward.</strong></td>
<td><strong>Significant cost savings and improvement of efficiency and quality through optimized adoption of process automation and robotics.</strong></td>
</tr>
<tr>
<td><strong>Identify automation opportunities and application areas.</strong></td>
<td><strong>Reduced risk levels through increased process compliance.</strong></td>
</tr>
<tr>
<td><strong>Ensure process compliance. Find deviations and violations in actual process execution.</strong></td>
<td><strong>Improved audit efficiency, quality, and coverage.</strong></td>
</tr>
</tbody>
</table>
Process Mining & Robotic Process Automation (RPA)

The RPA Journey

1. Initialization
   - Select target processes
   - Visualize and analyze processes
   - Identify automation opportunities
   - Develop business cases

2. Implementation
   - Utilize process insight
   - Understand process deviations and variations

3. Scale-up
   - Monitor end-to-end processes continuously
   - Investigate problems and identify solutions
Process Mining & Robotic Process Automation

Process Mining Benefits for an RPA Journey

- **RPA implementation timeline**
  - Without Process Mining: -50%
  - With Process Mining: -50%

- **RPA Business Value**
  - Without Process Mining: +40%
  - With Process Mining: +40%

- **RPA Project Risk**
  - Without Process Mining: -60%
  - With Process Mining: -60%
QPR Process Mining Maturity Model

PAST
Identify process exceptions and seek out root causes to reduce process waste

PRESENT
Use on-going data for determining Process KPIs and for monitoring performance

FUTURE
Identify problems using predictive analytics and prevent problems for on-going cases based on information gained from other data
Process Mining Value Realization Model

What are the business benefits?
- Increase profit
- Increase sales
- Save costs
- Improve customer service

How to utilize process mining to create business value?
- Process improvement initiatives and actions
  - BPI (Lean, 6σ)
  - RPA
  - Compliance
  - IT system development
- Findings with root causes
- Fact-based transparency to as-is and historical process execution

What does process mining deliver?
- Increase profit
- Increase sales
- Save costs
- Improve customer service
Process Mining Benefits
Measurable Cross-Industry and Cross-Application Area Benefits

**HIGHER INTERNAL EFFICIENCY**
- Process automation rate: +50%
- Number of invoice corrections: -80%
- Business critical order changes: -50%
- Lead time from delivery to invoice: -55%
- Savings in inventory levels: +€1m
- Working capital released by: €100m
- First Time Right Rate: 40% → 80%

**BETTER CUSTOMER EXPERIENCE**
- Transportation blocks causing late delivery: -50%
- Delivery accuracy improvement: 65% → 80%

**INCREASED SALES REVENUES**
- Value of uninvoiced order lines discovered: ★ €17m
- Overall sales growth: +20%
Value Propositions
In the Words of Our QPR ProcessAnalyzer Customers

On Getting Insight

“We can now verify if business processes run as planned”
“Now we see how changes affect the process, cause manual work, rework, and inefficiency”
“SAP is gigantic, now we have transparency into how the processes flow in it”

On Intelligent Process Development

“The possibility to drill down leads to root causes of inefficiencies”
“Understanding the real processes helped in SAP consolidation”
“Visualizing real processes finally pinpointed to where the problem was”

On Continuous Monitoring & Fine-Tuning

“Gave input to ‘Happy production’ KPI’s”
“Now we have means to continuously measure and improve process performance, variations, and process compliance”
Analyst Recognitions
2011–2018

2018
- Market Guide for Technologies Supporting a DTO, July
- Market Guide for Process Mining, April

2017
- 12 Powerful Use Cases for Creating a Digital Twin of Your Organization, October
- Market Guide for Enterprise Business Process Analysis, June
- Analytics and Business Intelligence Market and Vendor Guide Cross-Reference Tool, May
- Magic Quadrant for Enterprise Architecture Tools, May

2016
- How a Business Operating System Can Guide CIOs to Digital Business Success, October

2015
- Market Guide for Enterprise Business Process Analysis, March

2014
- Magic Quadrant for Enterprise Architecture tools, September

2013
- MarketScope for Enterprise Business Process Analysis, November
- Hype Cycle for Business Process Management, July
- Identify ABPD’s Business Benefits and Understand Vendor Strength, May
- Business Intelligence, Analytics and Performance Management Market and Vendor Guide Cross-Reference Tool, May

2012
- Hype Cycle for Performance Management, August
- Hype Cycle for Analytic Applications, August
- Hype Cycle for Business Process Management, July
- Magic Quadrant for Corporate Performance Management Suites, March

2011
- Magic Quadrant for Business Process Analysis tools, December

2013–2016
- CPM Technology Value Matrix
QPR ProcessAnalyzer

Enterprise Solution for Process Mining
QPR ProcessAnalyzer
Key Capabilities

- Plug-and-Play Integration
- Process discovery
- Analytics and root causes
- KPIs and dashboards
- Prediction

Logos of various software companies like Oracle, SAP, Salesforce, ServiceNow, IFS, and others are shown.
<table>
<thead>
<tr>
<th>Analysis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowchart Analysis</td>
<td>Visualize real end-to-end processes automatically</td>
</tr>
<tr>
<td>Process Comparison</td>
<td>Compare selected process variants visually based on any dimension</td>
</tr>
<tr>
<td>Duration Analysis</td>
<td>Identify highest time lags per case for further investigation and actions</td>
</tr>
<tr>
<td>Influence Analysis</td>
<td>Discover which attributes influence process variations</td>
</tr>
<tr>
<td>KPI ChartView</td>
<td>Present process KPIs through web-based dashboards</td>
</tr>
<tr>
<td>Benchmarking</td>
<td>Benchmark processes against each other based on any dimension</td>
</tr>
<tr>
<td>Variation Analysis</td>
<td>Understand the most common deviations to the agreed process</td>
</tr>
<tr>
<td>Trend Analysis</td>
<td>Analyze trends in process changes</td>
</tr>
<tr>
<td>Path Analysis</td>
<td>Analyze what leads to process changes and issues</td>
</tr>
<tr>
<td>Profiling Analysis</td>
<td>Validate data and analyze distribution over case attributes</td>
</tr>
<tr>
<td>Event Type Analysis</td>
<td>Summarize event types in the process model</td>
</tr>
<tr>
<td>Prediction</td>
<td>Predict outcome of individual cases based on artificial intelligence algorithms</td>
</tr>
</tbody>
</table>
Easy access to the most relevant analyses

Fully customizable visual identity
Visualize as-is process flowchart and lead times

- 9% of cases go through “Purchase Order Created”
  - Lead time from Purchase Order Created to Confirmed Delivery Date is 25 days and 11 hours
Duration Analysis for any specific flow

1. Select Flow
2. View the lead time distribution
Influence Analysis for Case Attributes

1. Analyze how cases going through Customer pick-up differ from other cases

2. Influence analysis shows that customer pick-up occurs the most with the Customer Group "Women"
Influence Analysis for Flowchart
Reveal root causes for Process Analysis findings

1. Analyze root causes for cases going through "Returned with Notification"

2. Red color indicates areas that are visited more often for selected cases

1. Analyze root causes for cases going through “Returned with Notification”

2. Red color indicates events that are visited more frequently for selected cases
Benchmark and compare regional processes with the general process

1. Analyze cases where the product group is “Jeans”

2. These cases are less likely to go through the “Purchase Order Created” event. Is this item stocked?
Dynamic Dashboards with Data Queries
Conformance Analysis
As-designed (BPMN) process versus the Process Mining generated actual process

Fact-based process mining model

Editable As-designed BPMN

Compare as-designed with the actual process

Conformance trend

Conformance Analysis

Design model

Conforming vs nonconforming cases

Cases: 4.3k vs 6.1k (64.1%)
Average case duration: 42.8 vs 47.9 days
Average number of events: 6.9 vs 6.9 events

Conformance trend

Reasons for nonconformance

For nonconformance

<table>
<thead>
<tr>
<th>Reason for nonconformance</th>
<th>Cases</th>
<th>Duration</th>
<th>Step impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmed Delivery date occurred directly after Skipment Sent</td>
<td>11.7%</td>
<td>3.3 days</td>
<td>-2.2 events</td>
</tr>
<tr>
<td>Picking Done occurred directly after Picking Done</td>
<td>10.4%</td>
<td>4.9 days</td>
<td>1.2 events</td>
</tr>
<tr>
<td>Purchase Order Created occurred (unscheduled event)</td>
<td>8.5%</td>
<td>17.6 days</td>
<td>-1.5 events</td>
</tr>
<tr>
<td>Purchase Order Created occurred directly after Sales Order Created</td>
<td>8.2%</td>
<td>17.6 days</td>
<td>-1.5 events</td>
</tr>
<tr>
<td>Delivery Changed occurred (unscheduled event)</td>
<td>4.8%</td>
<td>10.1 days</td>
<td>1.8 events</td>
</tr>
<tr>
<td>Refund with Notification occurred (unscheduled event)</td>
<td>4.6%</td>
<td>32.7 days</td>
<td>-2.8 events</td>
</tr>
<tr>
<td>Delivery Changed occurred directly after Picking Done</td>
<td>3.8%</td>
<td>17.2 days</td>
<td>-1.5 events</td>
</tr>
</tbody>
</table>

Top violating variations

<table>
<thead>
<tr>
<th>Cases</th>
<th>Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>641 cases</td>
<td>Sales Order Created -&gt; Picking Done -&gt; Skipment Sent -&gt; Confirmed Delivery Date -&gt; Invoice Created -&gt; Payment Received</td>
</tr>
<tr>
<td>525 cases</td>
<td>Sales Order Created -&gt; Purchase Order Created -&gt; Confirmed Delivery Date -&gt; Invoice Created -&gt; Payment Received</td>
</tr>
<tr>
<td>490 cases</td>
<td>Sales Order Created -&gt; Picking Done -&gt; Skipment Sent -&gt; Confirmed Delivery Date -&gt; Invoice Created -&gt; Payment Received</td>
</tr>
<tr>
<td>630 cases</td>
<td>Sales Order Created -&gt; Picking Done -&gt; Skipment Sent -&gt; Delivery Completed -&gt; Invoice Created -&gt; Payment Received</td>
</tr>
<tr>
<td>360 cases</td>
<td>Sales Order Created -&gt; Picking Done -&gt; Skipment Sent -&gt; Confirmed Delivery Date -&gt; Invoice Created -&gt; Payment Received</td>
</tr>
<tr>
<td>357 cases</td>
<td>Sales Order Created -&gt; Picking Done -&gt; Skipment Sent -&gt; Delivery Completed -&gt; Invoice Created -&gt; Confirmed Delivery Date -&gt; Payment Received</td>
</tr>
<tr>
<td>251 cases</td>
<td>Sales Order Created -&gt; Picking Done -&gt; Skipment Sent -&gt; Delivery Completed -&gt; Invoice Created -&gt; Confirmed Delivery Date -&gt; Payment Received</td>
</tr>
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</table>
All model elements are available as dimensions.

Select from a wide range of chart types to show user-defined KPIs.
QPR ProcessAnalyzer versions

QPR ProcessAnalyzer

On-Premise

- Collaborative web UI
- Multiuser server environment
- No hard limit for model size
- No limits for database size – runs on Microsoft SQL Server
- Automated data import

QPR ProcessAnalyzer

Cloud

- Collaborative web UI
- Multiuser server environment
- No hard limit for model size
- 500 GB database included (extendable)
- Automated data import
- No need to invest in own hardware
- Customer-specific private cloud available
- Provided by Amazon Web Services
QPR ProcessAnalyzer
Feature Showcase Videos

- Duration Analysis
  - https://vimeo.com/226710825/892bf396f9

- Flowchart Analysis
  - https://vimeo.com/225212257/d5e99ed0fe

- Root Cause Analysis
  - https://vimeo.com/225240413/640a64f078

- Process Variations
  - https://vimeo.com/227397956/a0240338a2
QPR Process Mining Webinars

Join QPR Community to get full access to our process mining webinar recordings, e.g.:

- Process Mining for Insurance Claim Process
- Process Mining for Incident Management Process
- Process Mining for Finance
- Process Mining for Lead to Order Process
- Process Mining for Healthcare
- Process Mining for Purchase-to-Pay Process
- Process Mining for Manufacturing
- Process Mining for Order to Cash Process
- Microsoft Dynamics 365 Process Mining Solution
- Robotic Process Automation and Process Mining
- Invoicing Lead Time Process KPI
- Machine Learning and Predictive Analytics
- Order Change Impacts Process KPI
- Microsoft Dynamics AX Process Mining Solution
- Cash Discount Utilization Process KPI
- On Time In Full (OTIF) Process KPI
- Towards Lean Business Processes in Salesforce
Dare to improve.

**Founded**
1991

**Corporate headquarters**
Helsinki, Finland

**Stock symbol**
QPR1V: Nasdaq, Helsinki

**Sold licenses**
Over 1 million worldwide

**Customers**
Over 2000

**Industry recognitions**
Gartner, Ventana Research, Palladium, Forrester Research

**Products**
QPR ProcessAnalyzer
QPR Metrics
QPR ProcessDesigner
QPR EnterpriseArchitect