

Process Mining for Logistics Guide

Learn how to:

- **Identify and remove process bottlenecks to make deliveries faster**
- **Optimize warehouse locations**
- **Identify relevant data for logistics process improvement**

Challenges in Logistics

On-time delivery fails

- Goods are delayed, lost, or damaged during shipment.
- Goods are delivered to the wrong destination.
- Wrong goods are delivered.
- Order amounts are not met.

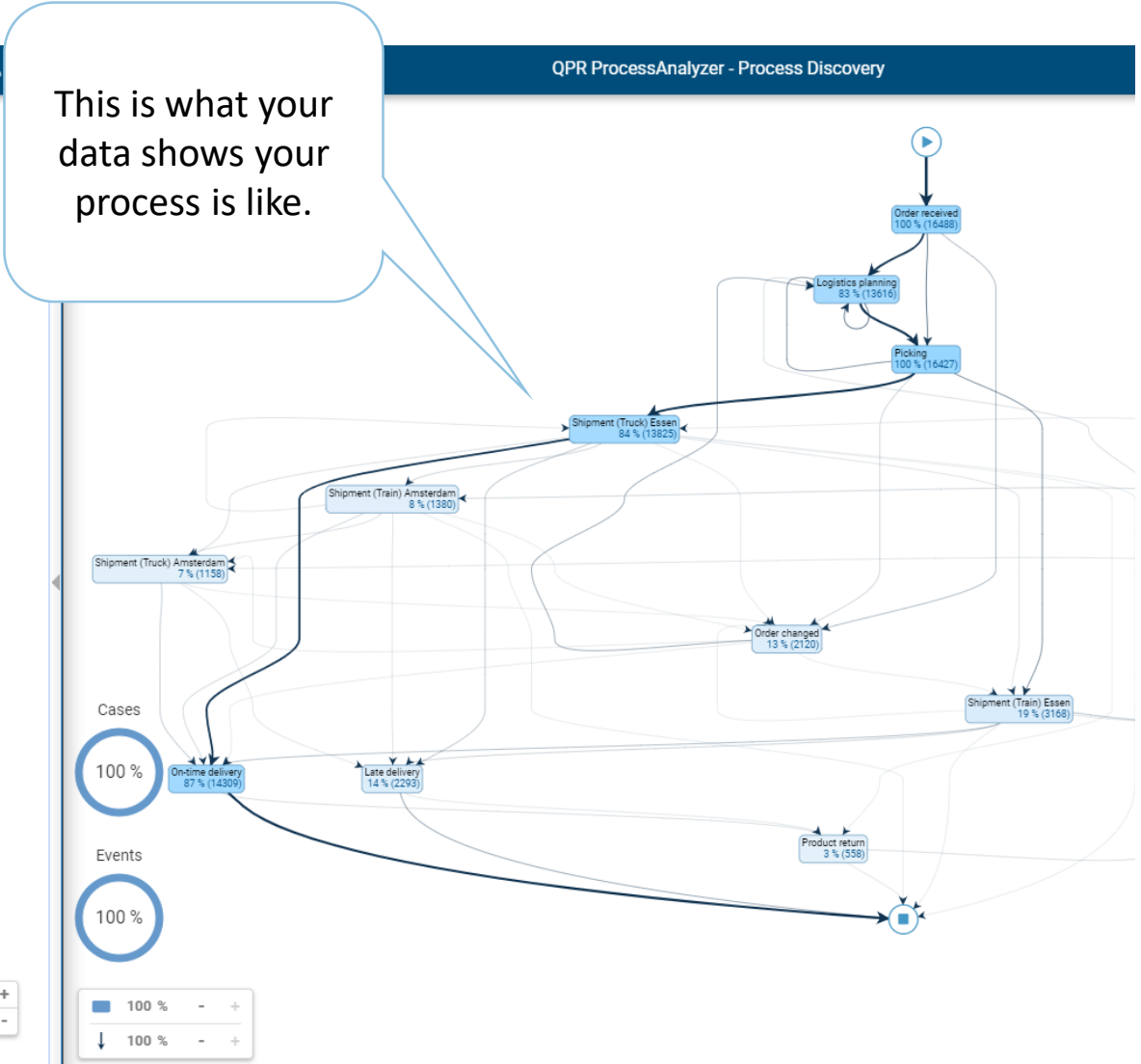
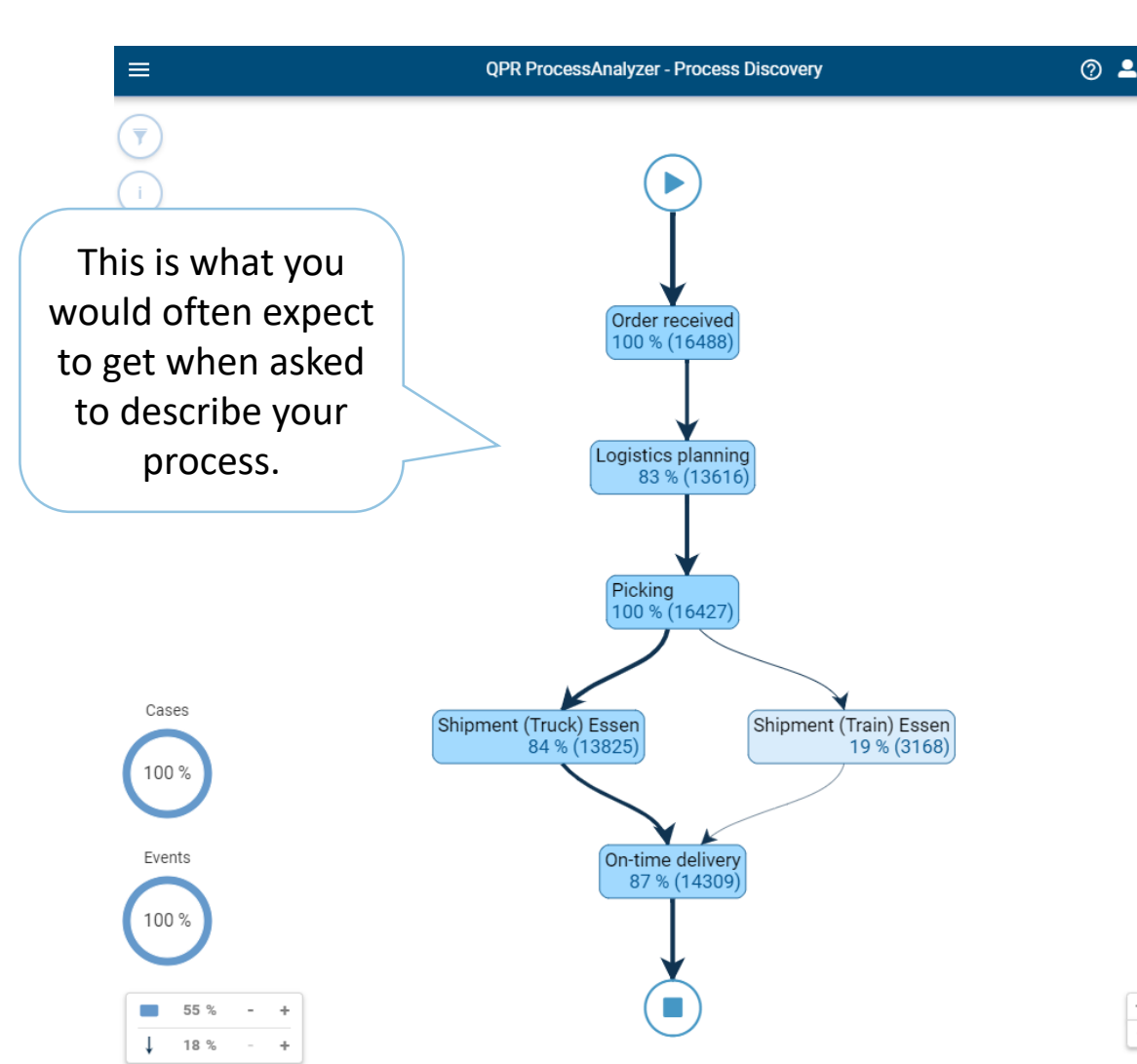
Too high warehousing costs

- Organization cannot pinpoint from which warehouse or distribution center the problems originate.
- Mistakes in sorting and inventories.
- Too high warehouse levels.
- Vessel capacity is too low.

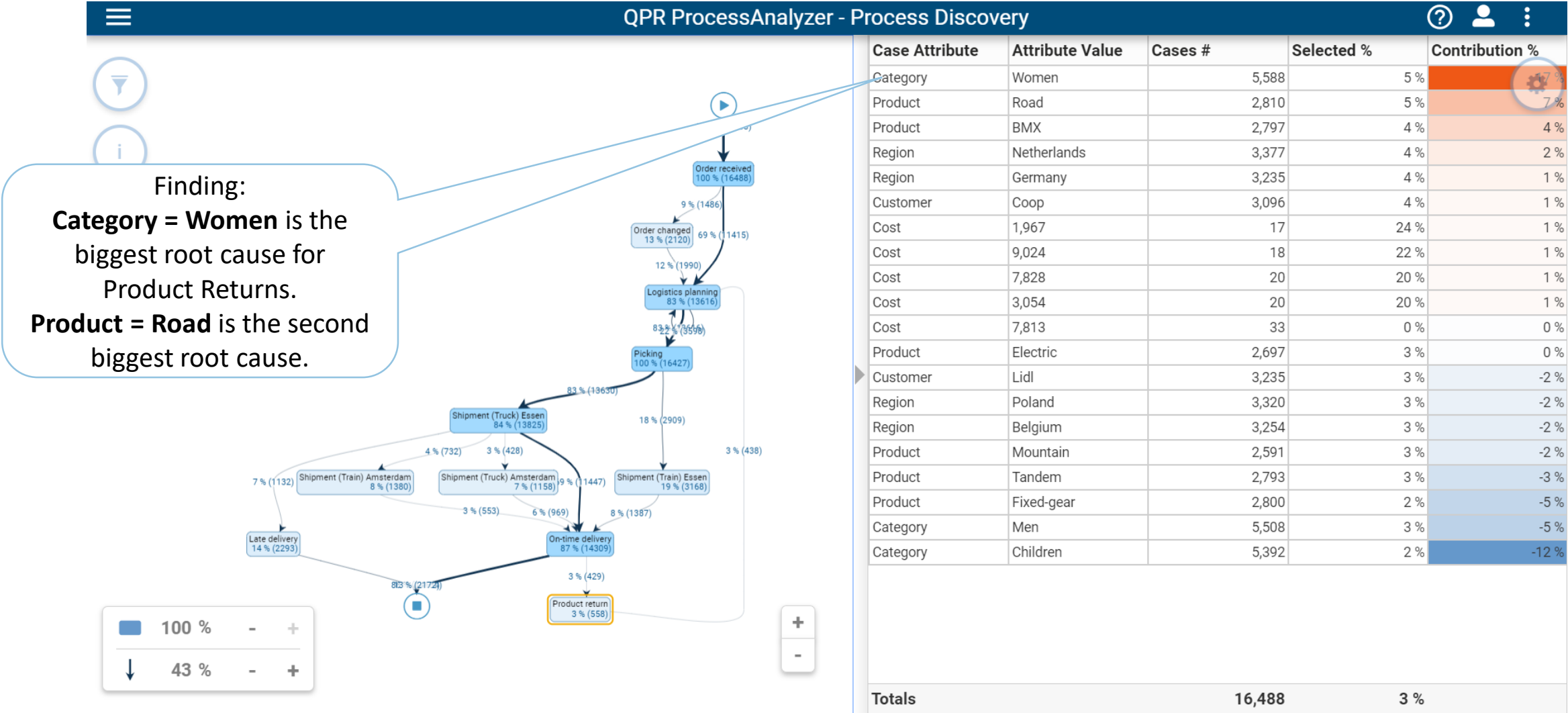
Difficult to manage Supply Chain

- Too high transportation costs.
- Rules and regulations are not followed.
- Too much data in operative business systems about supply chain performance and key influences.
- Logistics data is rarely used for process improvement.
- No proper visibility to ERP - what logistics data it actually contains and what can be drawn out.
- Strategic objective to develop new supply models to address gaps in existing delivery capabilities or to move from Make-to-Stock to Make-to-Order supply model.
- No clear visibility to supply chain.
- Production is halted due to missing raw materials.

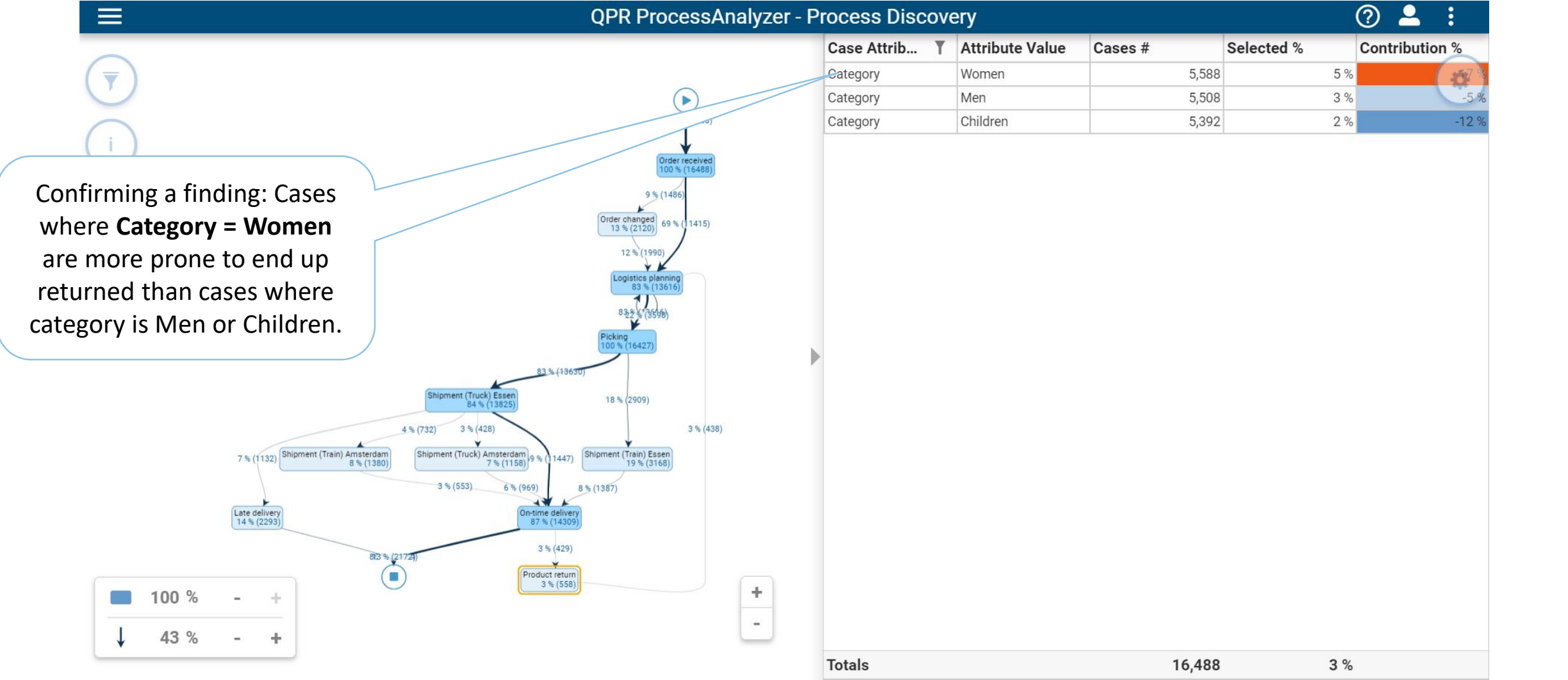
Transparency to as-is end-to-end logistics process



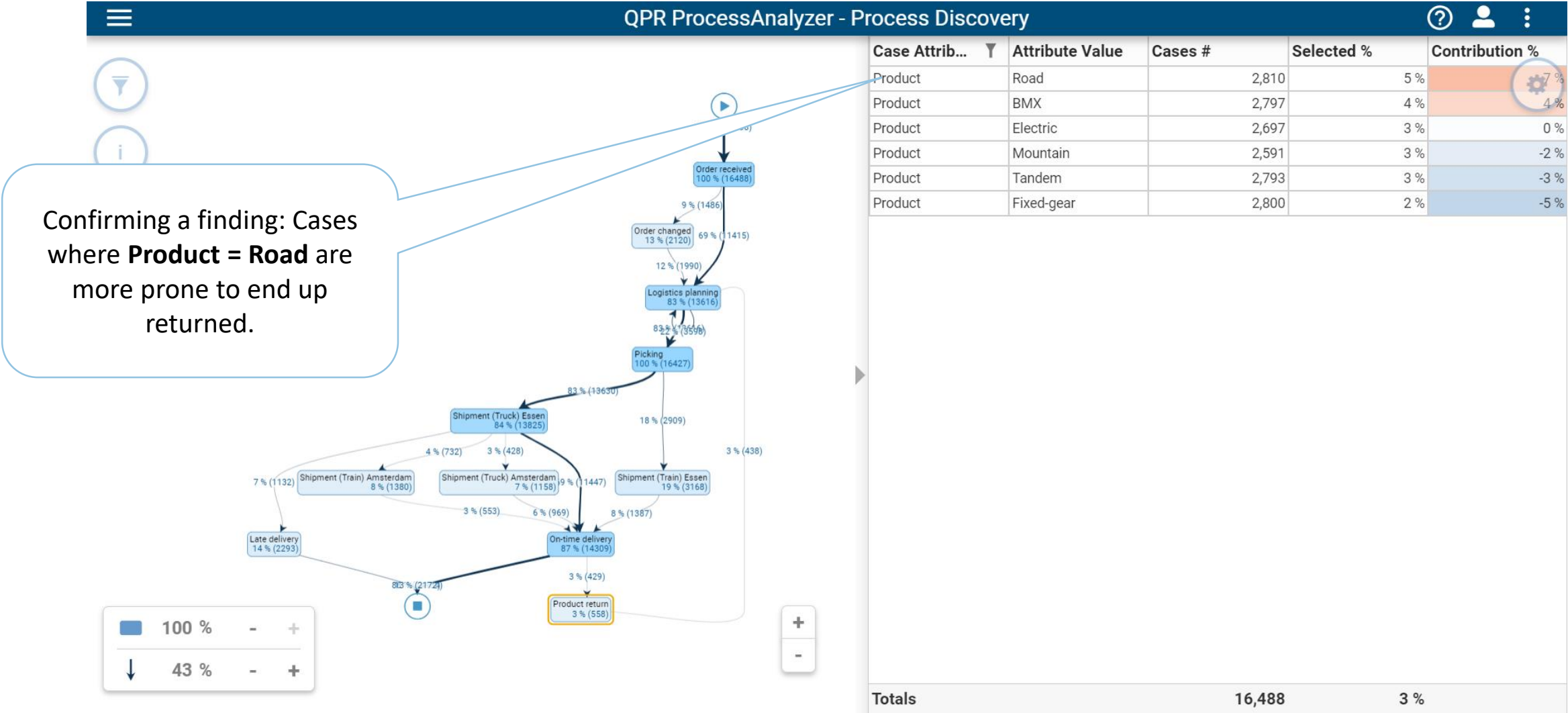
Product returns and reverse logistics – root causes



You can double-check your findings by focusing on particular case attributes



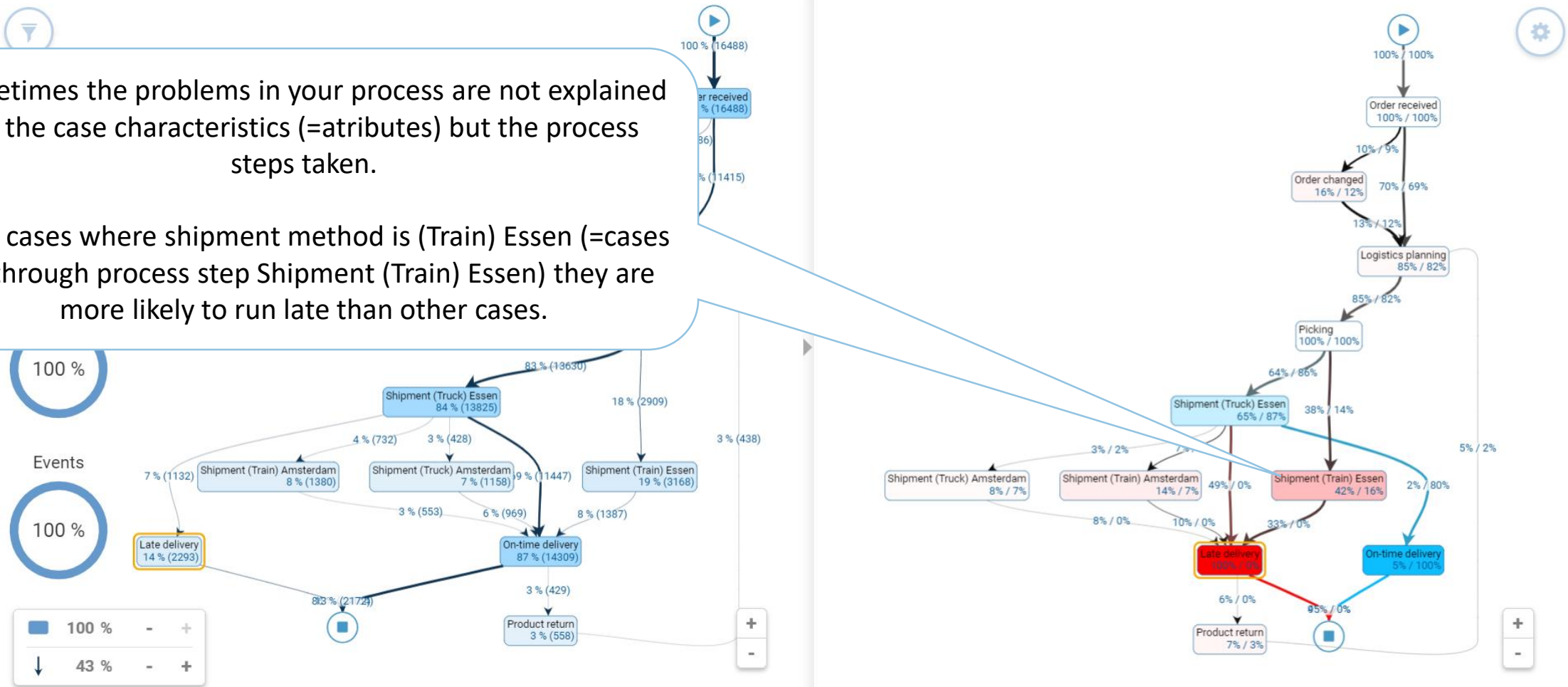
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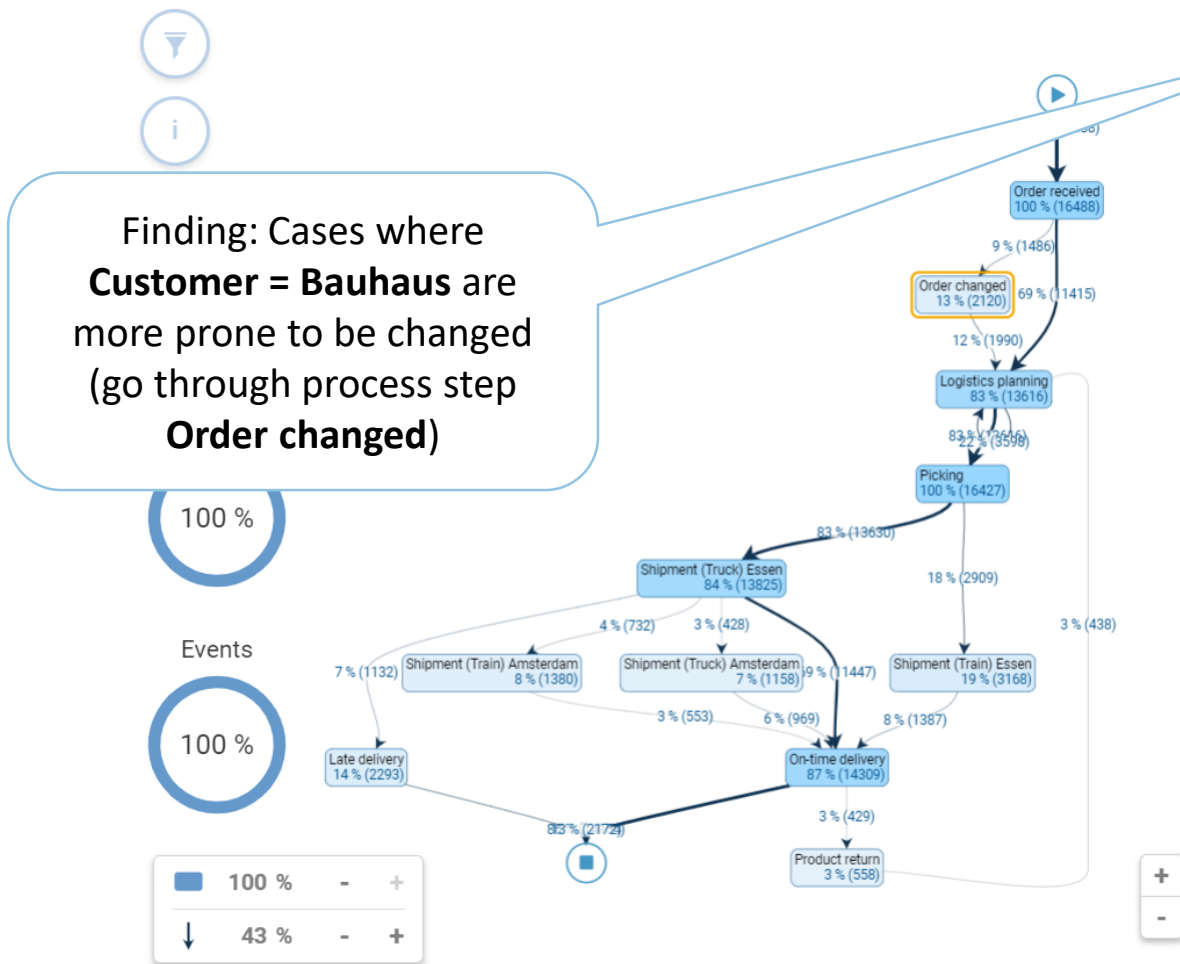


Dependency between process steps and successful process execution

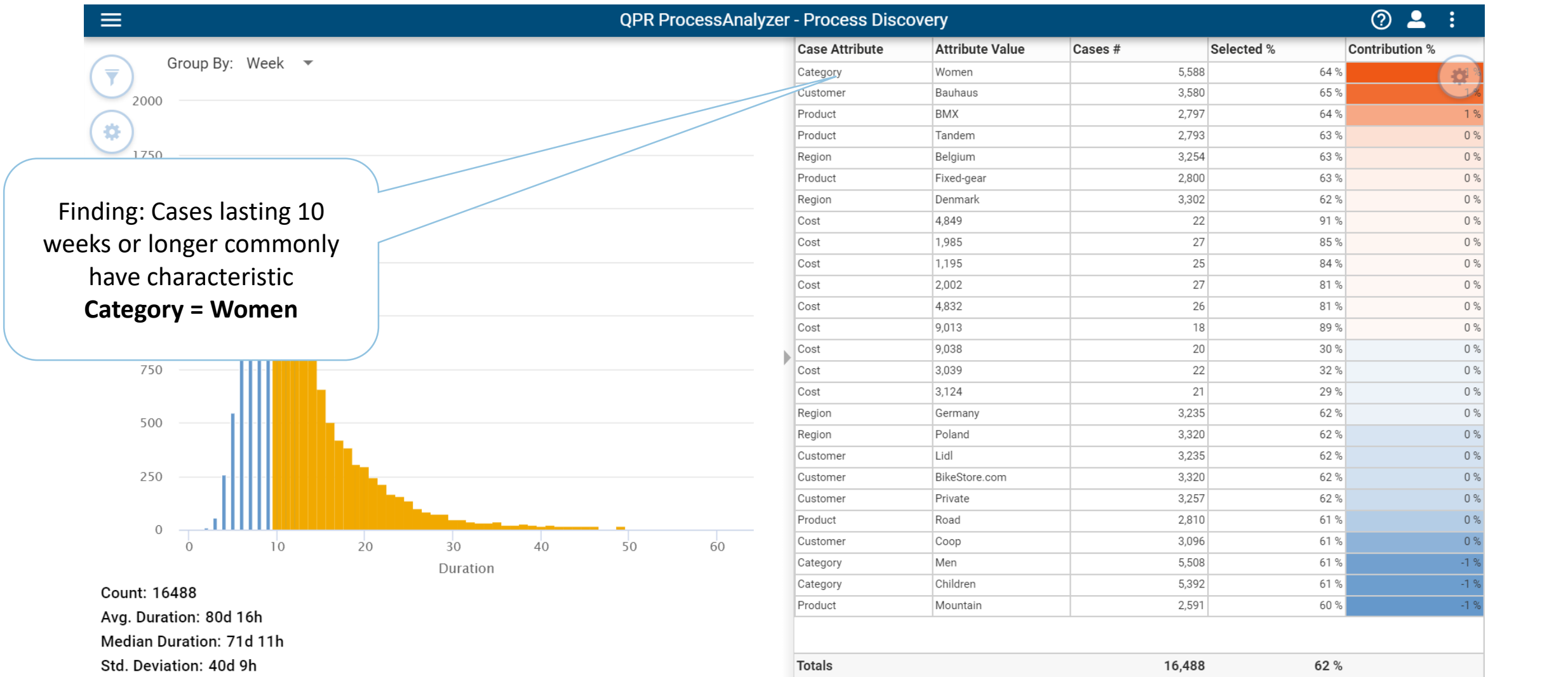
Sometimes the problems in your process are not explained by the case characteristics (=atributes) but the process steps taken.

Here cases where shipment method is (Train) Essen (=cases go through process step Shipment (Train) Essen) they are more likely to run late than other cases.





Case Attribute	Attribute Value	Cases #	Selected %	Contribution %
Customer	Bauhaus	3,580	18 %	9 %
Category	Women	5,588	14 %	2 %
Product	BMX	2,797	14 %	2 %
Region	Denmark	3,302	14 %	1 %
Region	Germany	3,235	14 %	1 %
Customer	BikeStore.com	3,320	13 %	1 %
Cost	3,041	20	50 %	0 %
Cost	3,113	22	36 %	0 %
Cost	1,242	23	35 %	0 %
Cost	2,089	27	30 %	0 %
Cost	9,009	29	28 %	0 %
Product	Electric	2,697	13 %	0 %
Cost	7,733	22	32 %	0 %
Cost	3,066	23	0 %	0 %
Cost	7,725	24	0 %	0 %
Cost	4,841	26	0 %	0 %
Product	Tandem	2,793	13 %	0 %
Region	Netherlands	3,377	13 %	0 %
Customer	Lidl	3,235	13 %	0 %
Category	Men	5,508	13 %	-1 %
Region	Poland	3,320	12 %	-1 %
Region	Belgium	3,254	12 %	-1 %
Category	Children	5,392	12 %	-1 %
Product	Mountain	2,591	11 %	-2 %
Customer	Private	3,257	10 %	-4 %
Customer	Coop	3,096	9 %	-5 %
Totals		16,488	13 %	



QPR Process Mining Benefits for Logistics

On-time delivery +13%

- Goods delivered on time.
- Order amounts are met.
- Right goods delivered to right destinations.

40% savings in warehousing costs

- Less mistakes in sorting and inventories.
- Warehouses on adequate level.

20% wider geographical reach

- Optimized warehouse and distribution center location.
- Adequate vessel capacity.

Customer cases – Nokia & Terumo Europe

<https://www.qpr.com/customers/nokia>



 Nokia Success Story

 Nokia - Value of Process Mining in Supply Chain Presentation by Fauzia Khan

<https://www.qpr.com/customers/terumo-europe>



 Terumo Europe Success Story

 Terumo Europe - Combining Effectiveness of KPIs & Efficiency of Process Mining

How can we help?

- Do you have questions regarding this Process Mining for Logistics guide?
- Would you like to speak to our experts to learn more about how process mining can help improve your logistics or supply chain processes?

Chat with us today

