

# **Process Mining**

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# Business Perspective

*Through what lens do we view the End to End Experience for a Customer?*



Service Work Order

Supply Chain, Customer Notified

Ticketing System

IVR

Workflow System

Supply Chain

# End to End view of Customer Journey

*Where to begin.. What can we use for a Case ID*

## **Supply Chain**

Key = Work Order Number

## **IVR**

Key = Customer Key

## **Workflow System**

Key = Project ID

## **Customer Notified**

Key = Customer Key

## **Service Work Order**

Key = Work Order Number  
Key= Customer Key  
Attribute =Products or Service codes

## **Ticketing System**

Key = HD Ticket  
Key= Customer Key

# End to End view of Customer Journey

*Where to begin.. Add keys to other systems that match up*

## Supply Chain

Key = Work Order Number  
Add Key = Customer Key

## IVR

Key = Customer Key  
Add Key = Work Order Number

## Workflow System

Key = Project ID  
Add Key = Customer Key  
Add Key = Work Order Number

## Customer Notified

Key = Customer Key  
Add Key = Work Order Number

## Service Work Order

Key = Work Order Number  
Key= Customer Key  
Attribute =Products or Service codes

## Ticketing System

Key = HD Ticket  
Key= Customer Key  
Add Key = Work Order Number

# End to End view of Customer Journey

*Where to begin.. What do we care about filtering on? Product and Services are the focus.*

## Supply Chain

Key = Work Order Number  
Add Key = Customer Key  
Attribute =Products or Service codes

## IVR

Key = Customer Key  
Add Key = Work Order Number  
Attribute =Products or Service codes

## Workflow System

Key = Project ID  
Add Key = Customer Key  
Add Key = Work Order Number  
Attribute =Products or Service codes

## Customer Notified

Key = Customer Key  
Add Key = Work Order Number  
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## Service Work Order

Key = Work Order Number  
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## Ticketing System

Key = HD Ticket  
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Add Key = Work Order Number  
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# End to End view of Customer Journey

Where to begin.. Create the composite records.

**Supply Chain**  
 Key = Work Order Number  
 Add Key = Customer Key  
 Attribute =Products or Service codes

**IVR**  
 Key = Customer Key  
 Add Key = Work Order Number  
 Attribute =Products or Service codes

**Workflow System**  
 Key = Project ID  
 Add Key = Customer Key  
 Add Key = Work Order Number  
 Attribute =Products or Service codes

**Customer Notified**  
 Key = Customer Key  
 Add Key = Work Order Number  
 Attribute =Products or Service codes

**Service Work Order**  
 Key = Work Order Number  
 Key= Customer Key  
 Attribute =Products or Service codes

**Ticketing System**  
 Key = HD Ticket  
 Key= Customer Key  
 Add Key = Work Order Number  
 Attribute =Products or Service codes



Source	Customer Key	Work Order Number	Product Code
Supply Chain	123	W123	Product A & B
Supply Chain	345	W456	Product B & C
IVR	123	W456	Product A & B
IVR	345	W123	Product B & C
Workflow System	123	W123	Product A & B
Workflow System	345	W456	Product B & C
Service Work Order	123	W123	Product A & B
Service Work Order	345	W456	Product B & C
Customer Notified	123	W123	Product A & B
Customer Notified	345	W456	Product B & C
Ticketing System	123	W123	Product A & B
Ticketing System	345	W456	Product B & C

# End to End view of Customer Journey

Where to begin.. Create the composite records.

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## Service Work Order

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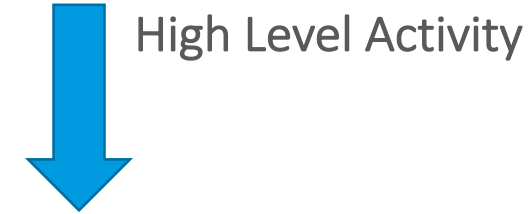


Case ID

Source	Customer Key	Work Order Number	Product Code
Supply Chain	123	W123	Product A & B
Supply Chain	345	W456	Product B & C
IVR	123	W456	Product A & B
IVR	345	W123	Product B & C
Workflow System	123	W123	Product A & B
Workflow System	345	W456	Product B & C
Service Work Order	123	W123	Product A & B
Service Work Order	345	W456	Product B & C
Customer Notified	123	W123	Product A & B
Customer Notified	345	W456	Product B & C
Ticketing System	123	W123	Product A & B
Ticketing System	345	W456	Product B & C

# End to End view of Customer Journey

Where to begin.. Create the composite records.



## Supply Chain

Key = Work Order Number  
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Ticketing System	123	W123	Product A & B
Ticketing System	345	W456	Product B & C



# End to End view of Customer Journey

*Understanding the experience at all customer touchpoints is essential for organizations.*

## IVR

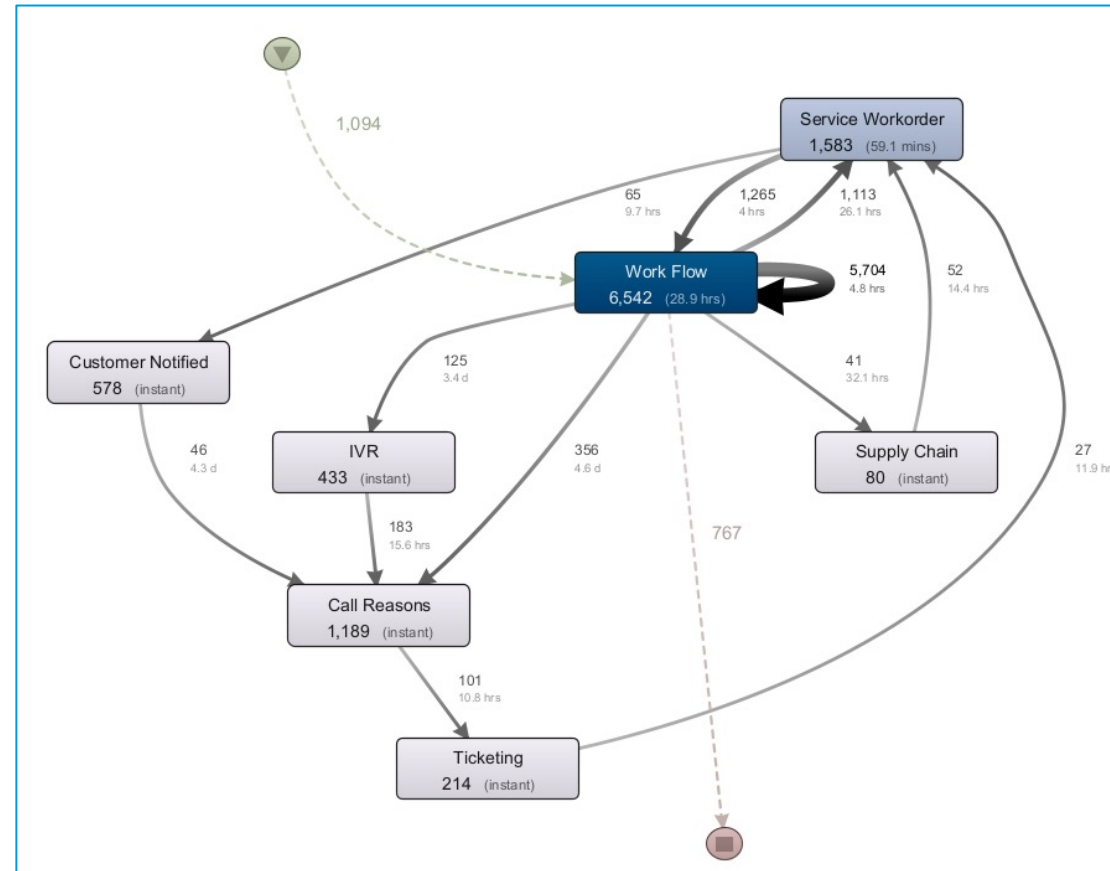
Key = Customer Key  
 Add Key = Work Order Number  
 Attribute = Products or Service codes

## Customer Notified

Key = Customer Key  
 Add Key = Work Order Number  
 Attribute = Products or Service codes

## Ticketing System

Key = HD Ticket  
 Key = Customer Key  
 Add Key = Work Order Number  
 Attribute = Products or Service codes



## Supply Chain

Key = Work Order Number  
 Add Key = Customer Key  
 Attribute = Products or Service codes

## Workflow System

Key = Project ID  
 Add Key = Customer Key  
 Add Key = Work Order Number  
 Attribute = Products or Service codes

## Service Work Order

Key = Work Order Number  
 Key = Customer Key  
 Attribute = Products or Service codes

# End to End view of Customer Journey

*Understanding the experience at all customer touchpoints is essential for organizations.*

## IVR

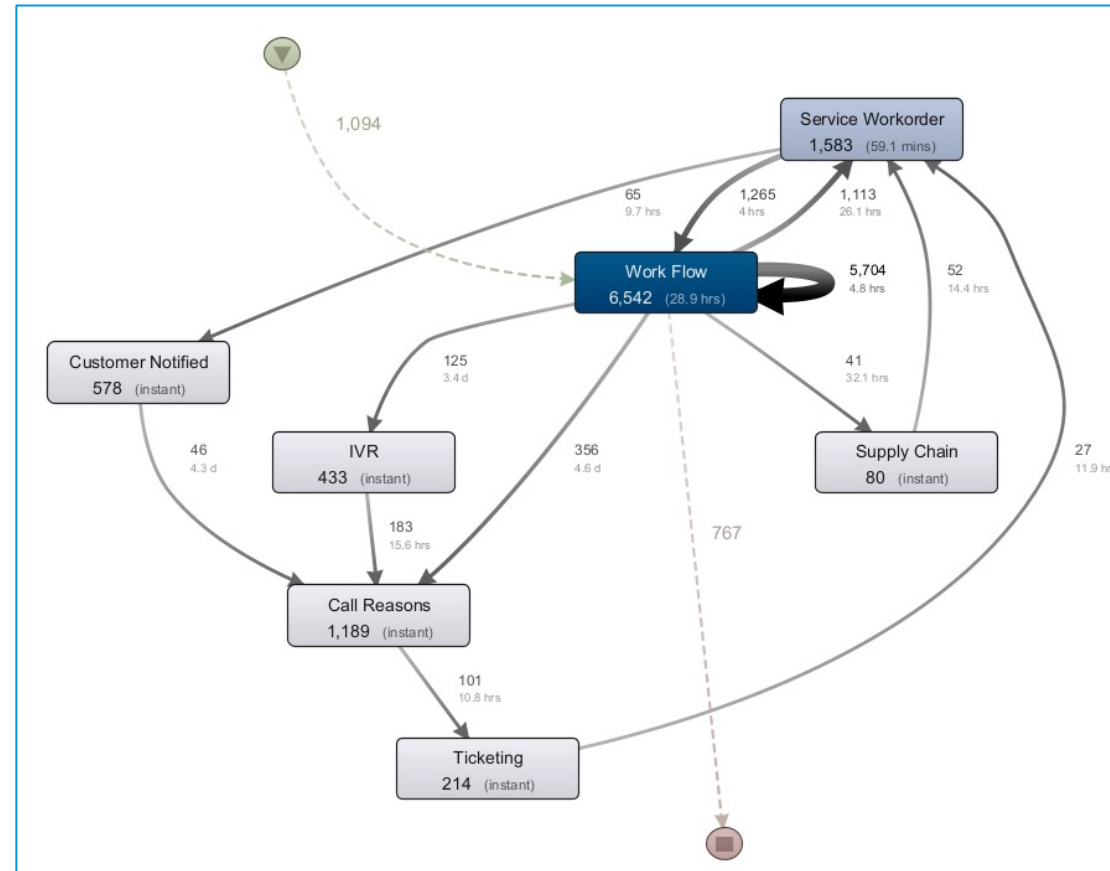
Key = Customer Key  
 Add Key = Work Order Number  
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## Customer Notified

Key = Customer Key  
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## Ticketing System

Key = HD Ticket  
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## Supply Chain

Key = Work Order Number  
 Add Key = Customer Key  
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## Workflow System

Key = Project ID  
 Add Key = Customer Key  
 Add Key = Work Order Number  
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## Service Work Order

Key = Work Order Number  
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Systems to Added →

SalesForce

NPS

Care Solutions

Construction  
Workflow

# End to End view of Customer Journey

*Adjust activity selection to a working level*



Working Level Activity

## Supply Chain

Key = Work Order Number  
 Add Key = Customer Key  
 Attribute = Products or Service codes  
 Order Shipped

## IVR

Key = Customer Key  
 Add Key = Work Order Number  
 Attribute = Products or Service codes  
 Call

## Workflow System

Key = Project ID  
 Add Key = Customer Key  
 Add Key = Work Order Number  
 Attribute = Products or Service codes  
 Project

## Customer Notified

Key = Customer Key  
 Add Key = Work Order Number  
 Attribute = Products or Service codes  
 Order Conformation

## Service Work Order

Key = Work Order Number  
 Key = Customer Key  
 Attribute = Products or Service codes  
 Create Work Order

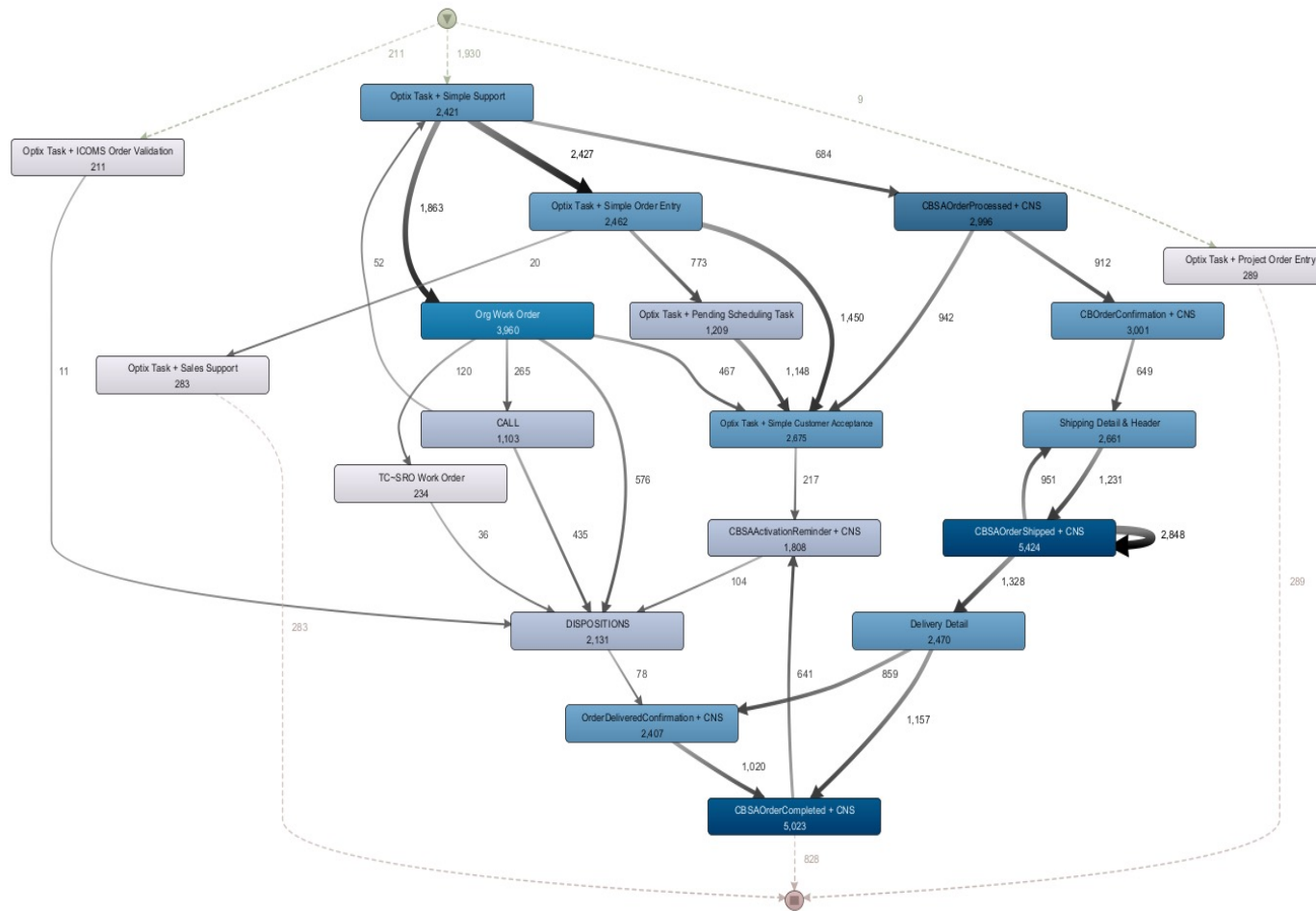
## Ticketing System

Key = HD Ticket  
 Key = Customer Key  
 Add Key = Work Order Number  
 Attribute = Products or Service codes  
 Follow up Truck roll

Task Type	Source	Customer Key	Work Order Number	Product Code
Order Shipped	Supply Chain	123	W123	Product A & B
Order Shipped	Supply Chain	345	W456	Product B & C
Call	IVR	123	W456	Product A & B
Call	IVR	345	W123	Product B & C
Project	Workflow System	123	W123	Product A & B
Project	Workflow System	345	W456	Product B & C
Create Work Order	Service Work Order	123	W123	Product A & B
Create Work Order	Service Work Order	345	W456	Product B & C
Order Conformation	Customer Notified	123	W123	Product A & B
Order Conformation	Customer Notified	345	W456	Product B & C
Follow up Truck roll	Ticketing System	123	W123	Product A & B
Follow up Truck roll	Ticketing System	345	W456	Product B & C

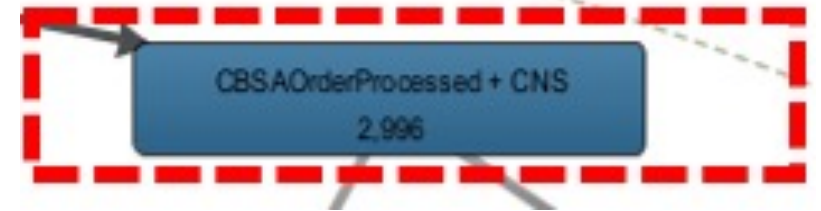
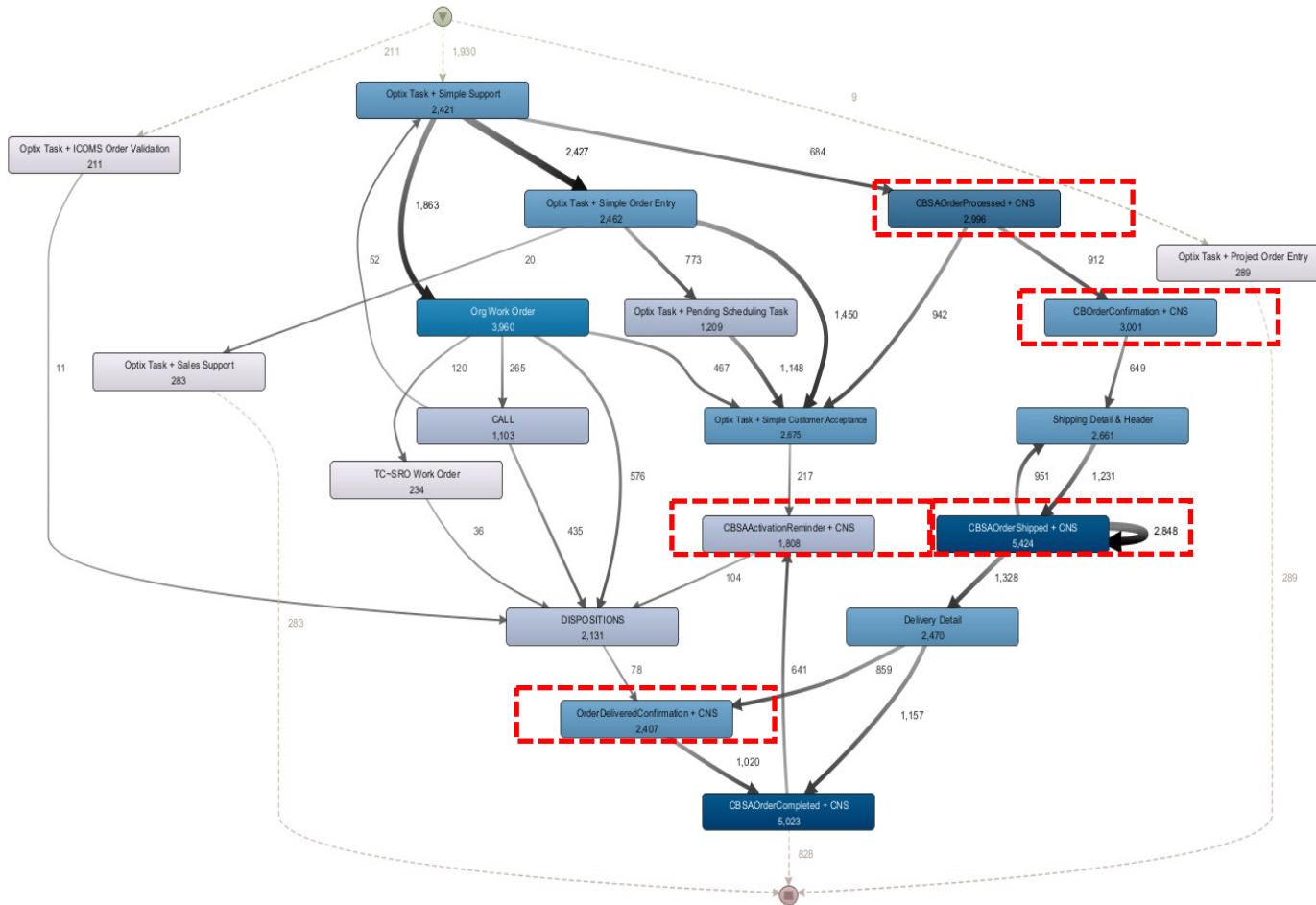
# Multi-Data Sources

*Adjust activity selection to a working level*



# Lower Level – Customer Notified

*Adjust activity selection to a working level*



Tip .. Combining task type and data source helps identify the source of data in one view.

# Validate changes to systems

*Focusing on Customer Notifications*

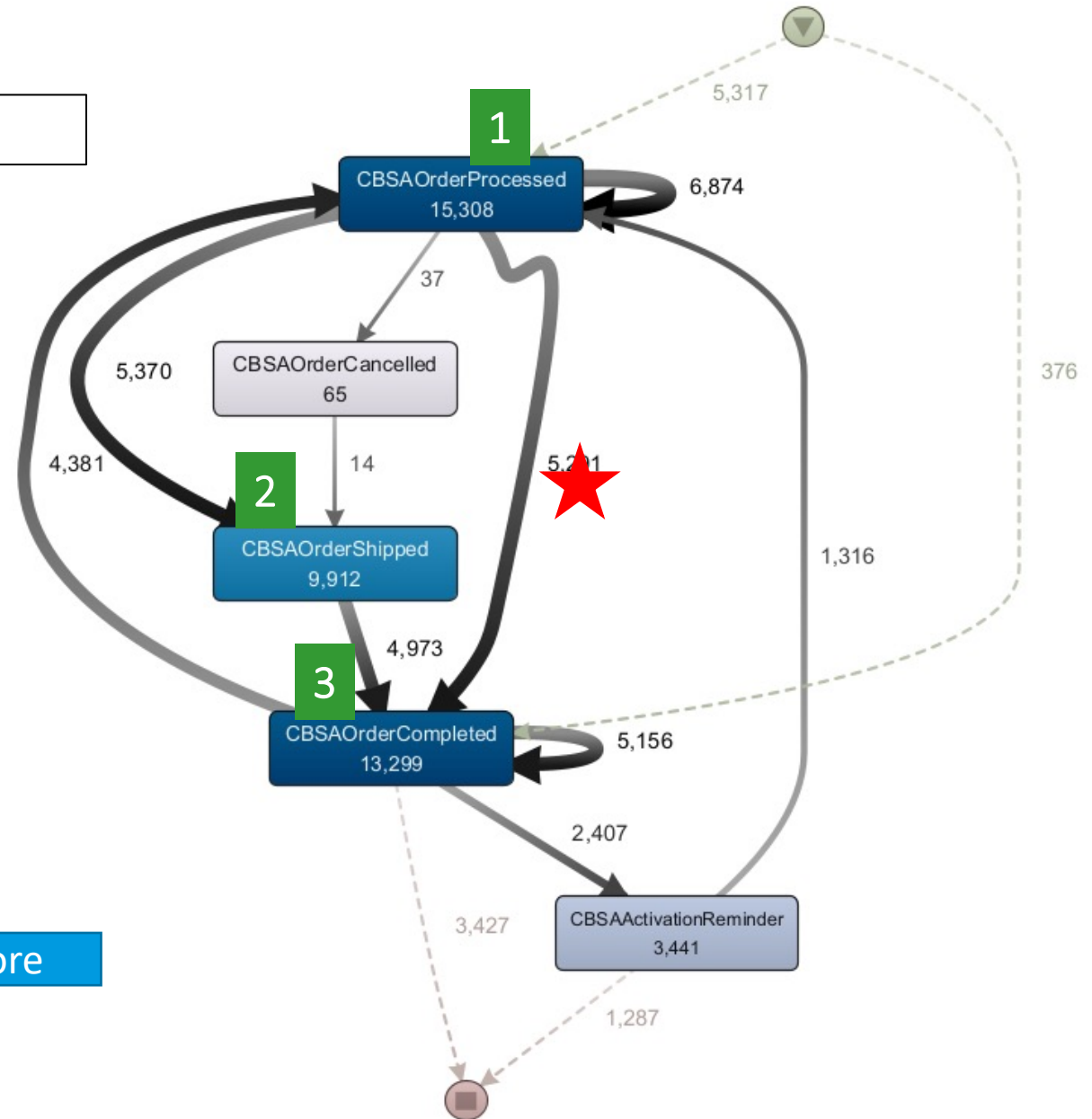
*We discovered an incorrect transaction sequence.*

*Filtered down to notice it was only wrong in a region.*

*Validated it when it was corrected.*

*Ordered Shipped should never move to Order Completed.*

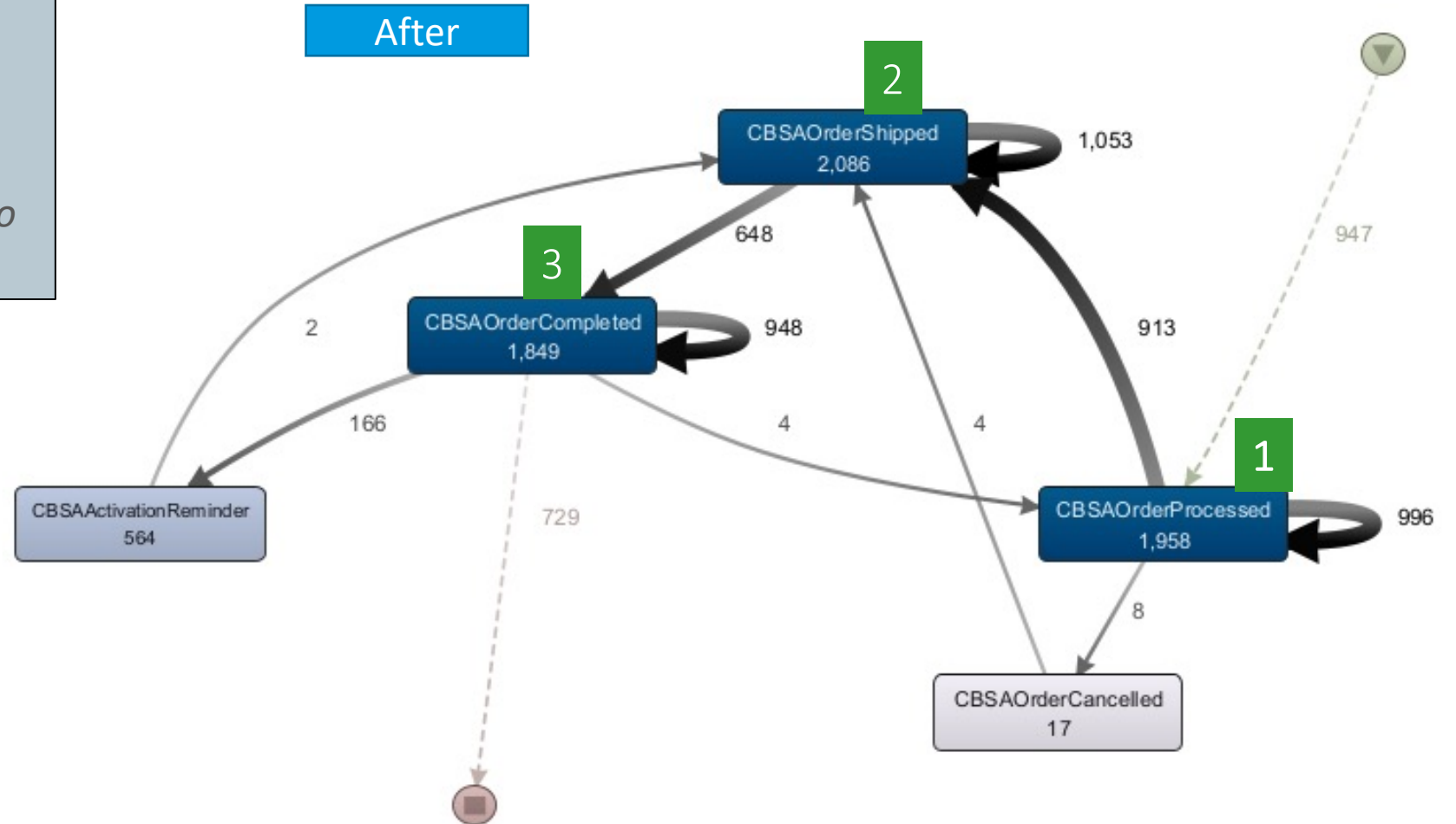
Before



# Validate changes to systems

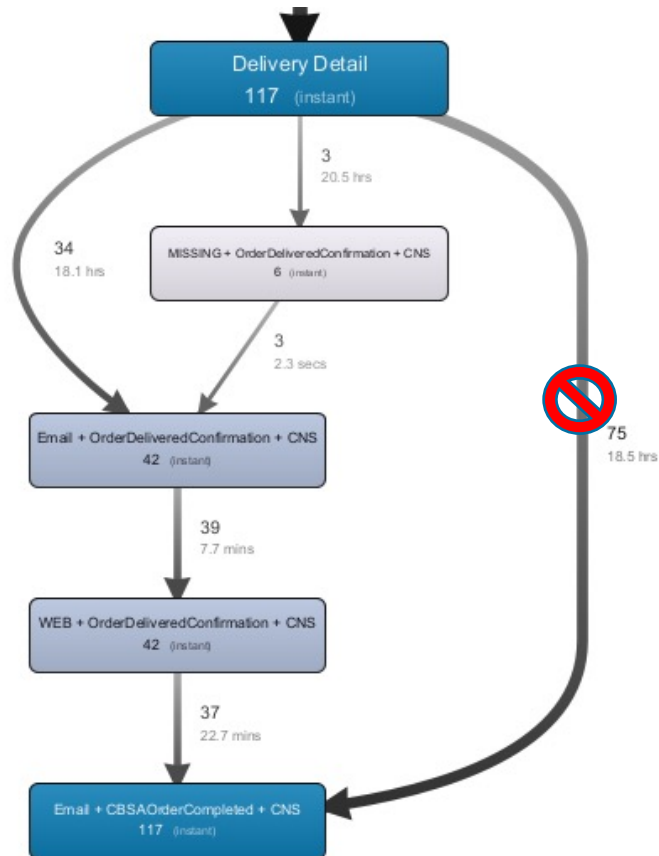
## Focusing on Customer Notifications

We discovered an incorrect transaction sequence.  
Filtered down to notice it was only wrong in a region.  
Validated it when it was corrected.  
Ordered Shipped should never move to Order Completed.



# Validate changes to systems

*We discovered missing customer notifications in this flow.*



This simple visual is able to be used to drive the conversation with system owners.

Better questions without judgement is based on the data.



# Drilling down to the task level in the process

*Researching the end-to-end view of at the customer level is easy and helpful*

Activity
Optix Task + Sales Support
Optix Task + Provisioning Details
Optix Task + Project Initiation
Optix Task + Project Order Entry
Org Work Order
MISSING + CBSAOrderProcessed + CNS
Optix Task + Pending WATTS - Task Generation
<b>Optix Task + Pending WATTS - Start EWP</b>
Optix Task + MRS Portal Entry
Optix Task + RS Order Validation
Optix Task + RS Order Validation
Optix Task + Managed Services Initiation
Optix Task + Pending WATTS - Service Activation & Test
Shipping Detail & Header
Email + CBSAOrderShipped + CNS
WEB + CBSAOrderShipped + CNS
Optix Task + Customer Acceptance
COMMENTS
Optix Task + ICOMS Check-In
Optix Task + Disconnect Check-In
Optix Task + ICOMS Order Validation
Delivery Detail
COMMENTS
HD TICKET + VoiceManager + CAL - REG - CB FIELD SERVICE + Fiber
Email + CBSAOrderCompleted + CNS
WEB + CBSAOrderCompleted + CNS

Searching for certain events or all the events for a customer is easy and a time saving

# Where can we automate tasks

*Using BOTs to automate certain task or see how successful the current BOTs are performing*

Resource	▲ Frequency	Relative frequency
COE Order Management	4,193	37.32 %
zQUE - BOT Install	1,240	11.04 %
zQUE - BOT UG/DG	980	8.72 %
zQUE-COE OM_Install_Reconnect	870	7.74 %
zQUE-COE OM_UGDG	739	6.58 %
zQUE-BOT Local	248	2.21 %
zQUE-COE OM_DigitalBuyFlow	228	2.03 %
zQUE-COE OM_Transfers	220	1.96 %
zQUE - BOT Transfer To	213	1.9 %

# Next steps...

*What can help move the program for Process Mining forward?*

- Give demos to other product teams and show them how quickly they can gain insights

# Next steps...

*What can help move the program for Process Mining forward?*

- Share with the system owners

# Next steps...

*What can help move the program for Process Mining forward?*

- Provide updates to leadership as to the benefits gained

# Next steps...

*What can help move the program for Process Mining forward?*

- Other teams will become advocates for the benefits

Thanks for your time today!