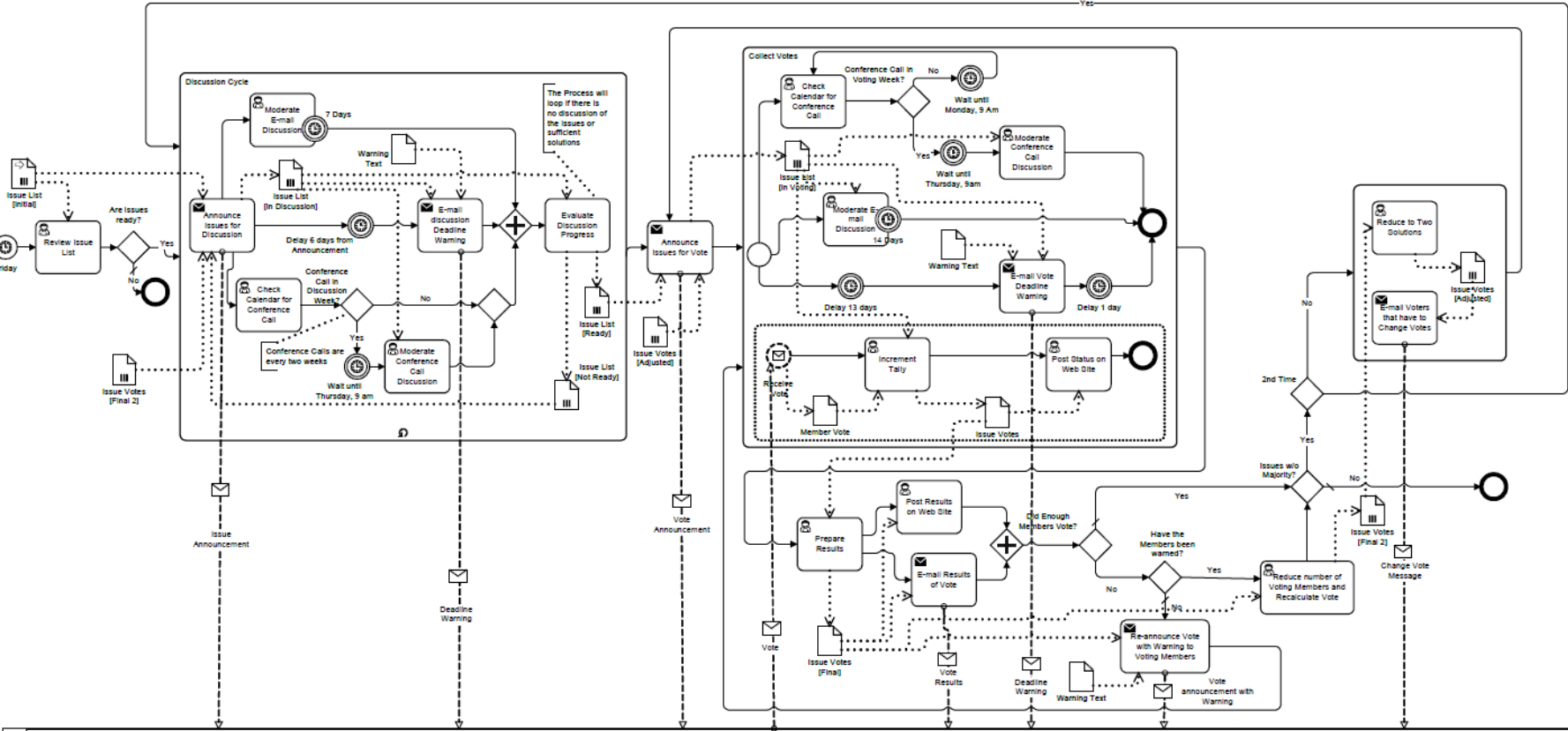# BPMN Modeling
with Method and Style

Bruce Silver

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methodandstyle.com
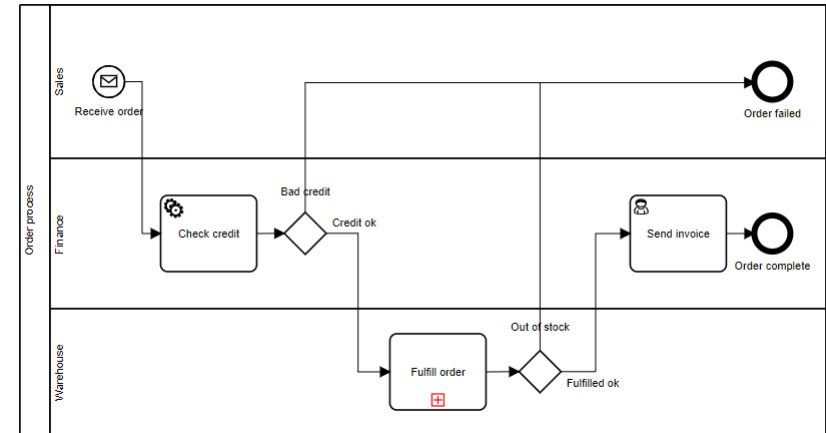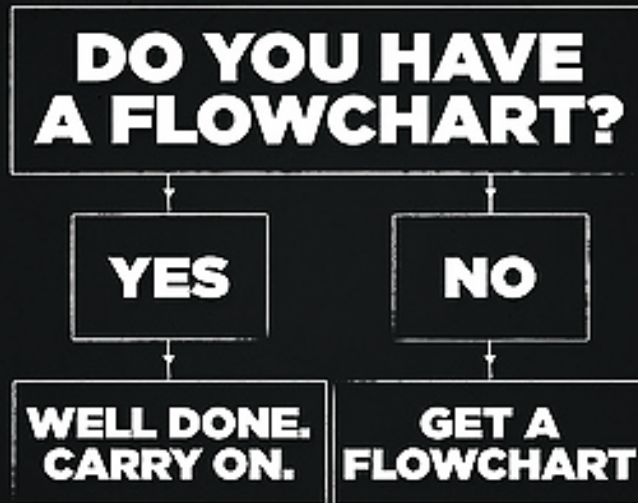
There Is a Lot of BPMN Out There…

… and most of it is BAD.

Isn't it just a flowchart?

- BPMN looks like a traditional flowchart, so outwardly familiar

- Same purpose: Communicate the process logic visually through diagrams

- But differences are significant

3

1. Shapes and symbols have a specific meaning

… defined by a standard, independent of the tool or methodology…

BPMN Business Process Model and Notation (BPMN)

Version 2.0

OMG Document Number: formal/2011-01-03
Standard document URL: http://www.omg.org/spec/BPMN/2.0
Associated Schema Files:
dtc/2010-05-04 -- http://www.omg.org/spec/BPMN/20100501
XMI: BPMN20.cmof
BPMNDI.cmof
DC.cmof
DI.cmof
XSD: BPMN20.xsd
BPMNDI.xsd
DC.xsd
DI.xsd
Semantic.xsd
XSLT: BPMN20-FromXMI.xslt
BPMN20-ToXMI.xslt
dtc/2010-05-15 -- http://www.omg.org/spec/BPMN/20100502
Infrastructure.cmof
Semantic.cmof

right   **wrong**

…and there are rules. Your model could be invalid!

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2. BPMN Is Inherently Hierarchical

- Subprocess: One definition, two views
  - Collapsed as single activity in parent process level
  - Expanded as flow from start to end in child process level
- How does it work?
  - When sequence flow arrives in parent level…
    - … continues from start of child level
  - When child level reaches end event…
    - … process continues on outgoing sequence flow in parent level

Collapsed (parent level)

Hierarchical expansion (child level)
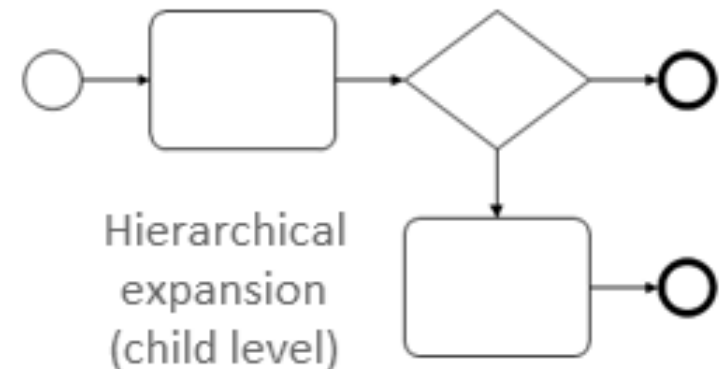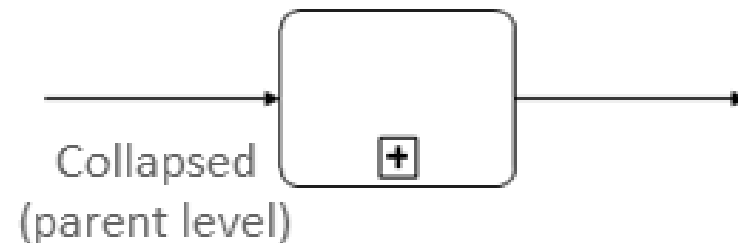
- *This lets you visualize the process as a whole on a single page*
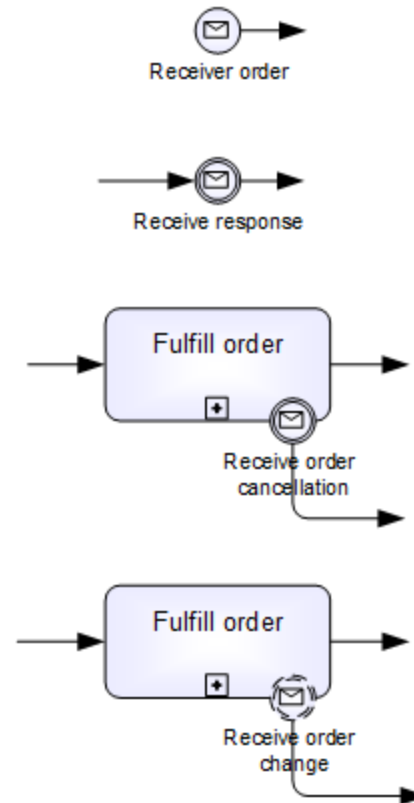 - *… without creating a separate high-level model*

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3. BPMN Places Process in Larger Context
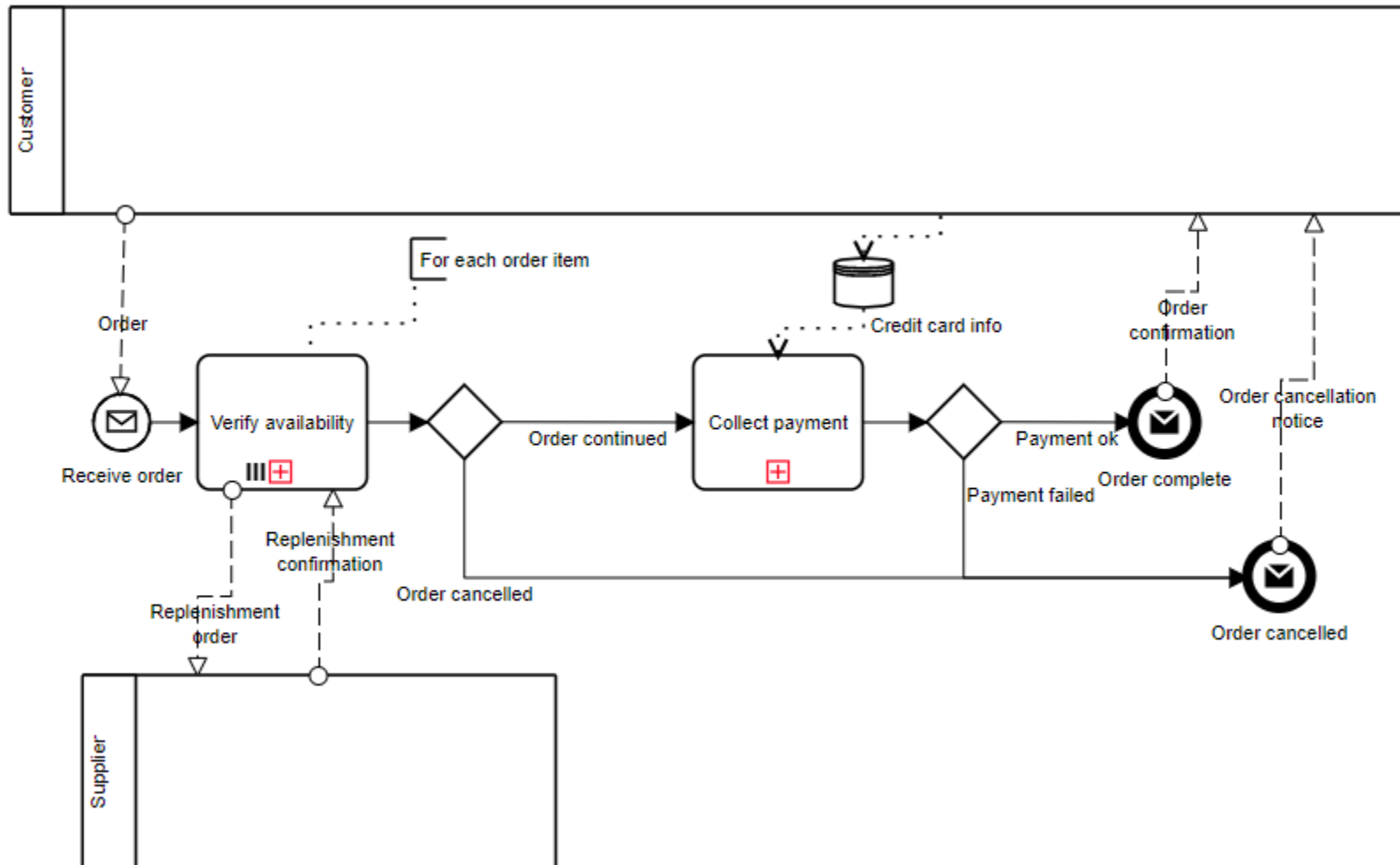
4. BPMN Visualizes Event-Triggered Behavior

- **Start event**
  - Create new instance

- **Catching event**
  - Resume on trigger

- **Interrupting boundary event**
  - Terminate and redirect on trigger

- **Non-interrupting boundary event**
  - Initiate parallel flow on trigger

Receiver order

Receive response

Fulfill order

Receive order cancellation

Fulfill order

Receive order change

7

Bad BPMN

1. … uses the shapes and symbols incorrectly
    - The diagram does not reflect the modeler's intent
2. … does not clearly communicate the process logic
    - Only understood by those who already know how the process works
3. … is incomplete
    - Does not reveal how the process starts, what the instance represents, its possible end states, or its interactions with other entities and processes
4. … does not reflect a consistent methodology or structure
   - Prevents shared understanding across all stakeholders

Good BPMN

1. ... is correct
   - Per rules of the spec. Shapes and symbols used correctly.
2. ... is clear
   - Process logic unambiguous from the printed diagram alone (even to those unfamiliar with the process)
3. ... is complete
   - Tell at a glance how the process starts, what the instance represents, its possible end states, its interactions with external entities
4. ... is consistent
   - Given same set of facts, all modelers should create (more or less) the same diagrams

- The BPMN spec deals only with #1... says nothing about #2, 3, or 4
- Those require *additional conventions/constraints* beyond the rules of the spec

Method and Style

- A way to create consistently "good BPMN"

- Need "style rules" to make the meaning clear from the diagrams

- Also need a methodology for creating the models

  - … to ensure completeness, consistency, and structural correctness

- Method and Style is a learnable skill

  - Requires NO technical expertise or deep experience in process modeling

  - … just a disciplined approach to creating the models

What Does This Diagram Mean?
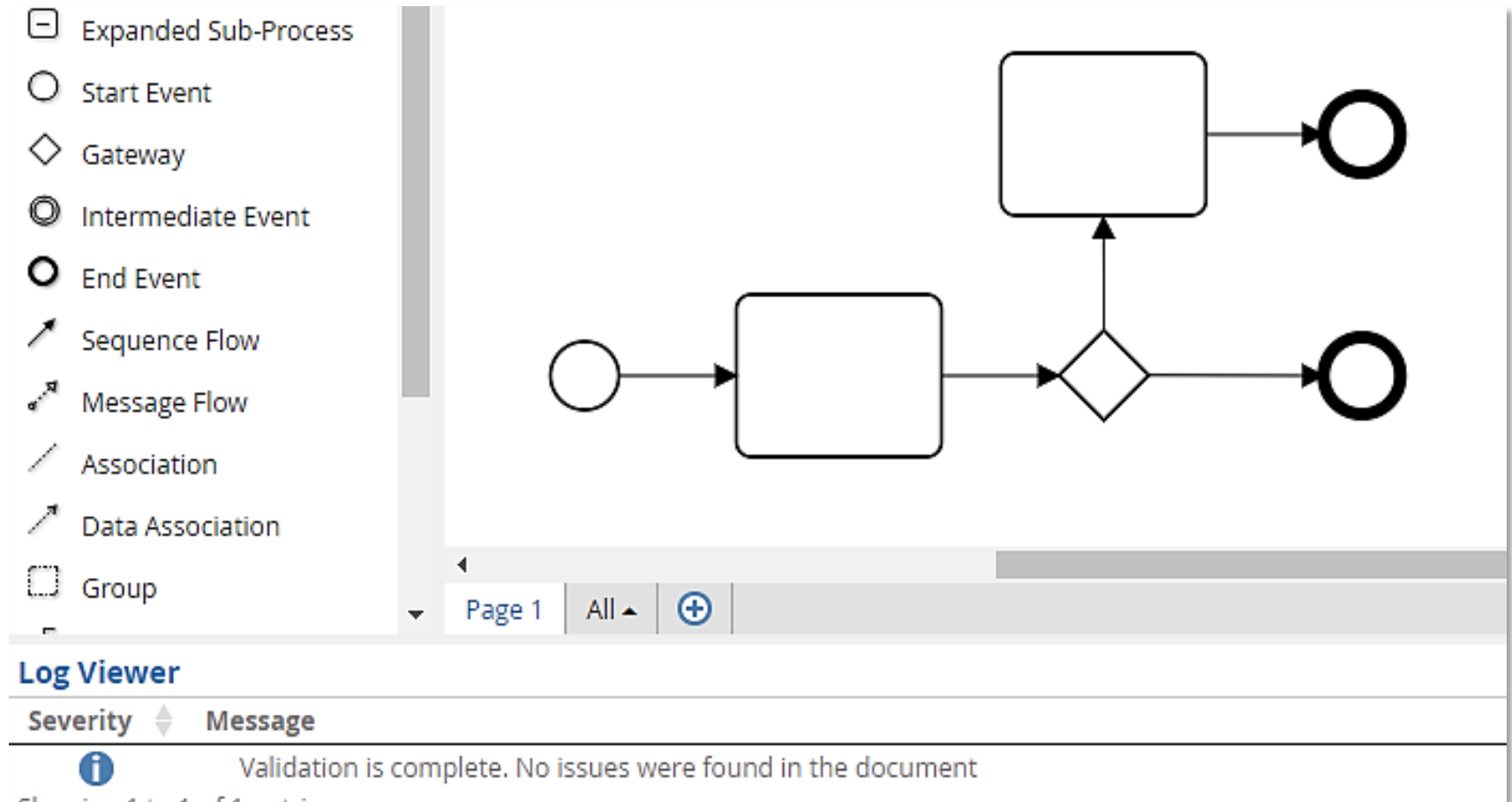
Style Rules

- Conventions/ best practices intended to make the process logic clear from the printed diagram alone
  - Implemented as rules that can be validated in the tool

Basic Principle of BPMN Style

Use icons and labels to make flow logic clear from the diagram

- How the process starts (start event trigger)
- Alternative end states (end state label)
- Task types (use task type icons)
- Gateways and gates (with end state label matching)
- Triggered events (label all of them)
- Message flows (show them, with labels)
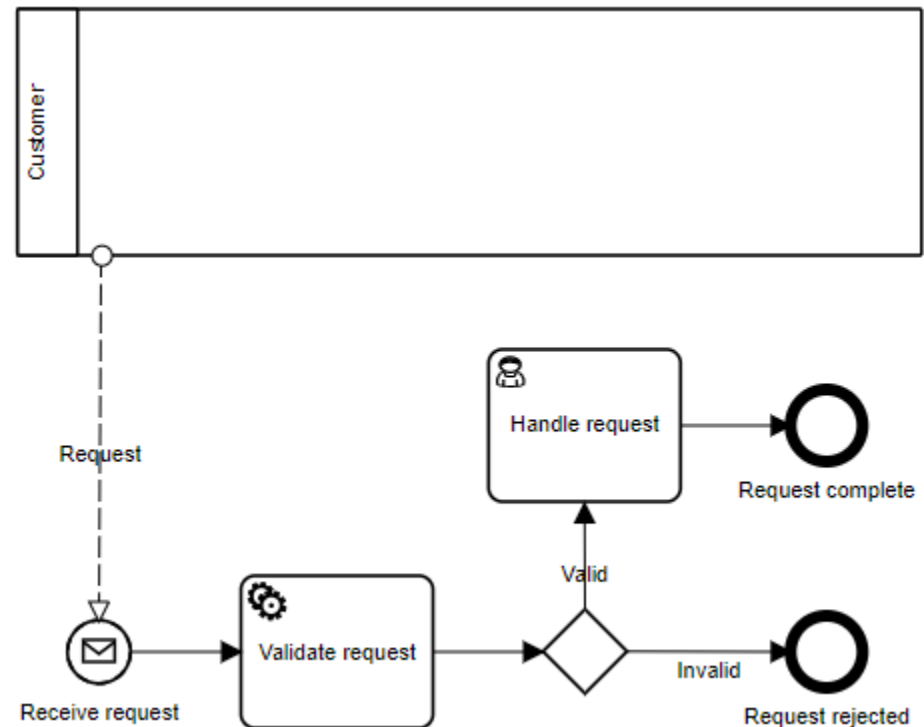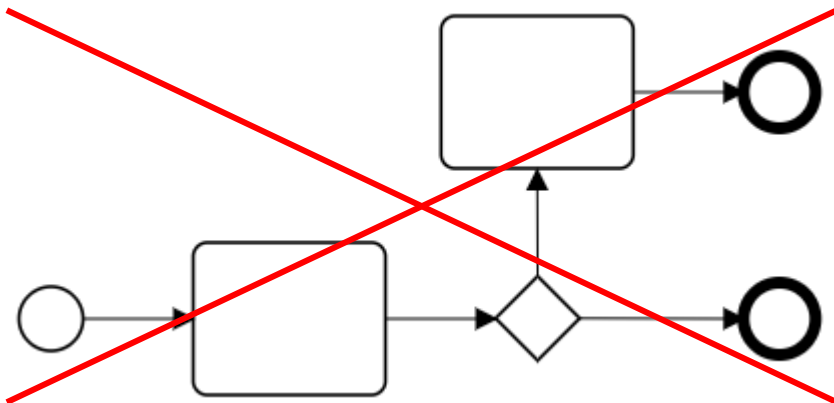
Subprocess and Process Levels

- Subprocess is both an activity and a process
  - Is displayed *collapsed* as an "opaque" activity in parent-level diagram...
  - ... and *expanded* as a process in hyperlinked child-level diagram
  - When sequence flow arrives in parent level, continues from start event in child level
    - When child level ends, flow continues on sequence flow out of parent-level subprocess
- "End state": How did the process or activity end, successfully or in some exception state?
  - Each distinct end state of a process or child level is represented by a separate end event
 - ... labeled with the end state (noun-adjective)

Collapsed
(parent level)

Hierarchical
expansion
(child level)
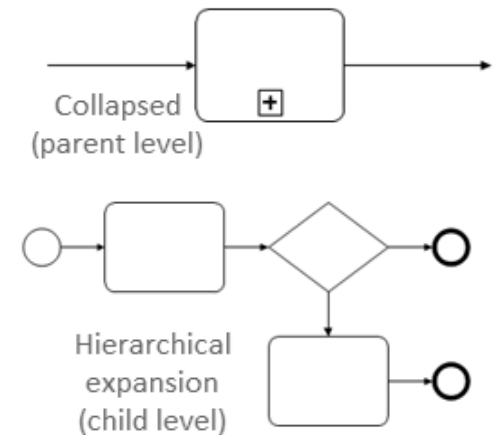
Gateways and End States

- Gateway: When activity ends, where to go next?
  - Spec says gateway tests value of process data
    - … but process data typically not defined in the model
  - Method and Style convention: *Gateway tests the end state of the preceding activity*
  - Each activity end state corresponds to a different next step

- Gateway labeling
  1. Each gate label is prior activity end state, or…
  2. Gateway label is one end state + question mark, with gates *yes* and *no*
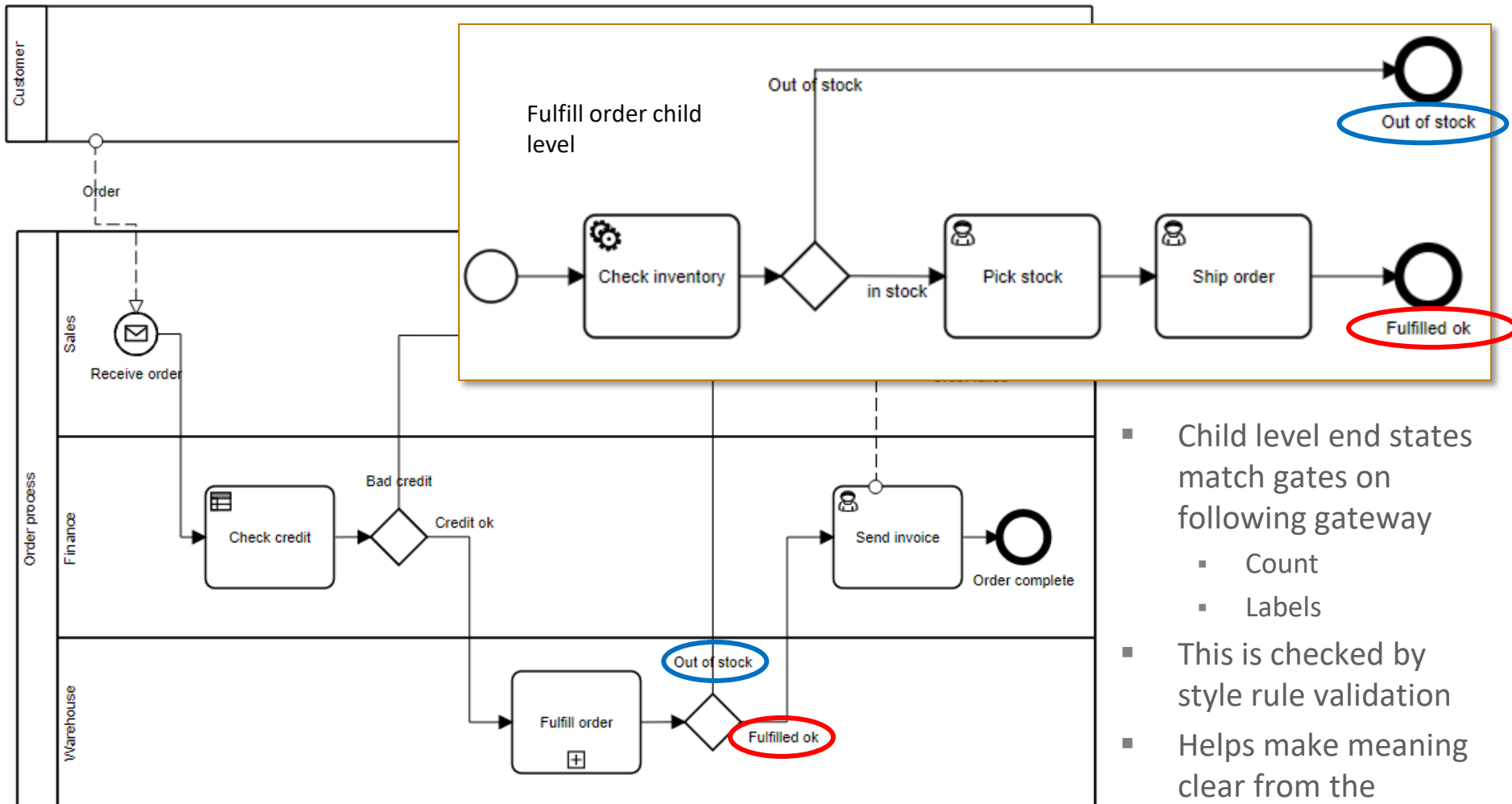

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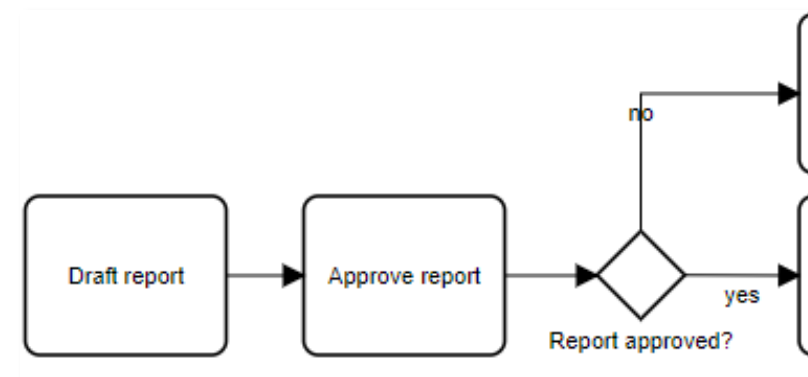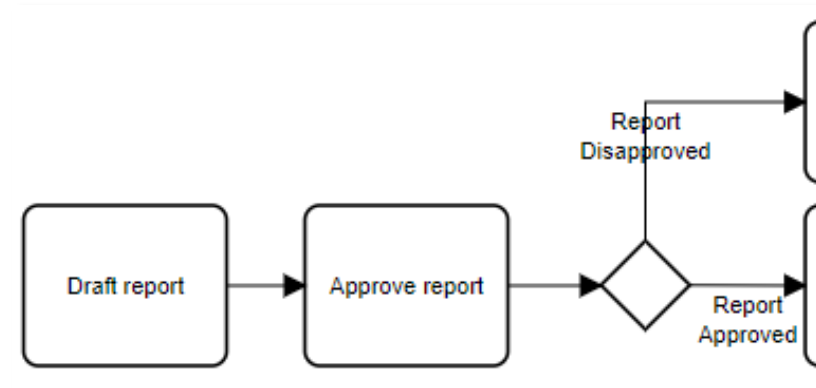
Gateways and End States
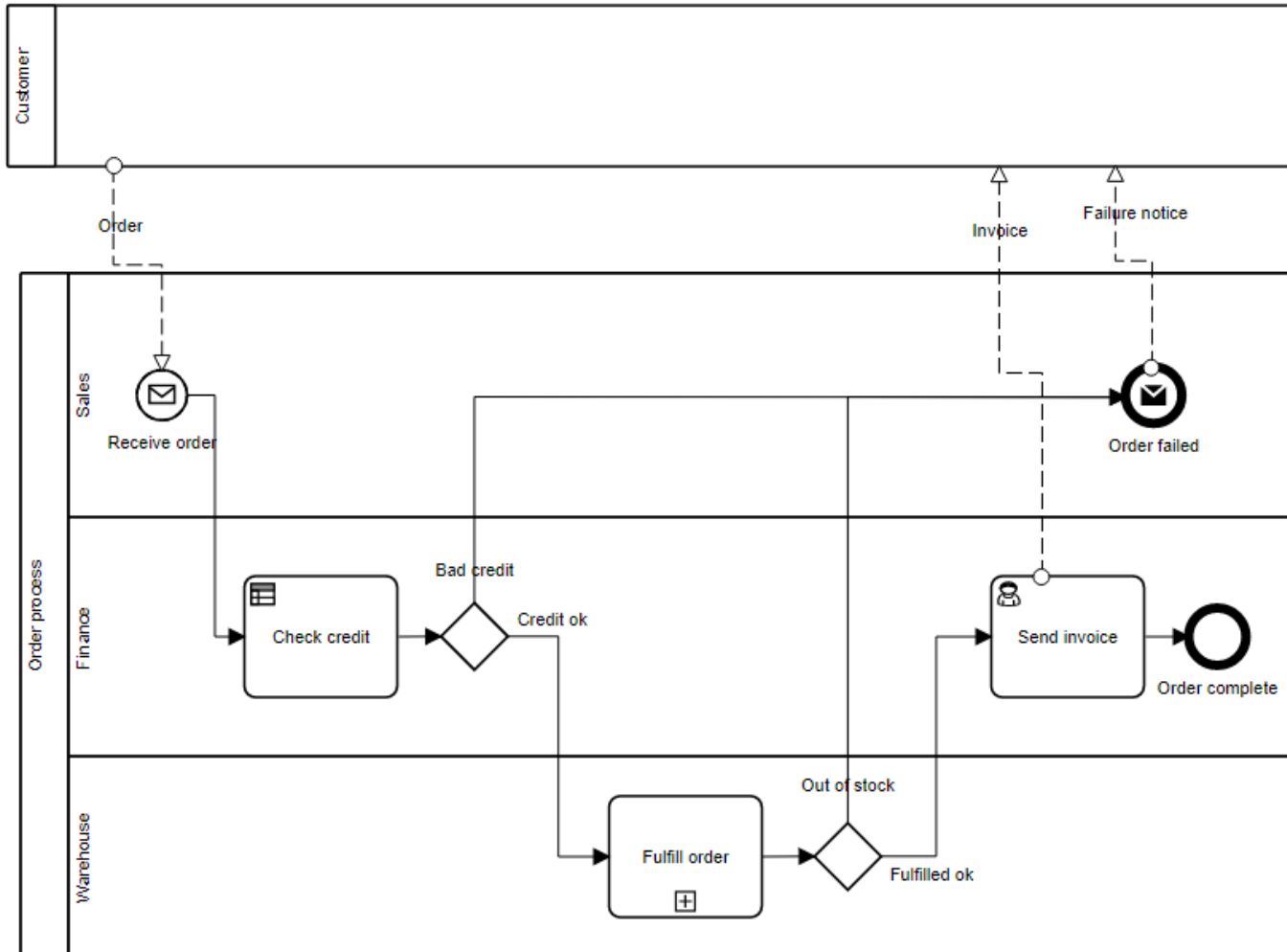
- Process has 2 end states
  - Order complete
  - Order failed
- Task Check Credit has 2 end states
  - Credit ok
  - Bad credit
- Subprocess Fulfill order has 2 end states
  - Fulfilled ok
  - Out of stock
- Each activity end state corresponds to a different next step

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Gateways and End States

Fulfill order child level

- Child level end states match gates on following gateway
  - Count
  - Labels
- This is checked by style rule validation
- Helps make meaning clear from the printed diagrams alone

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Complete Information
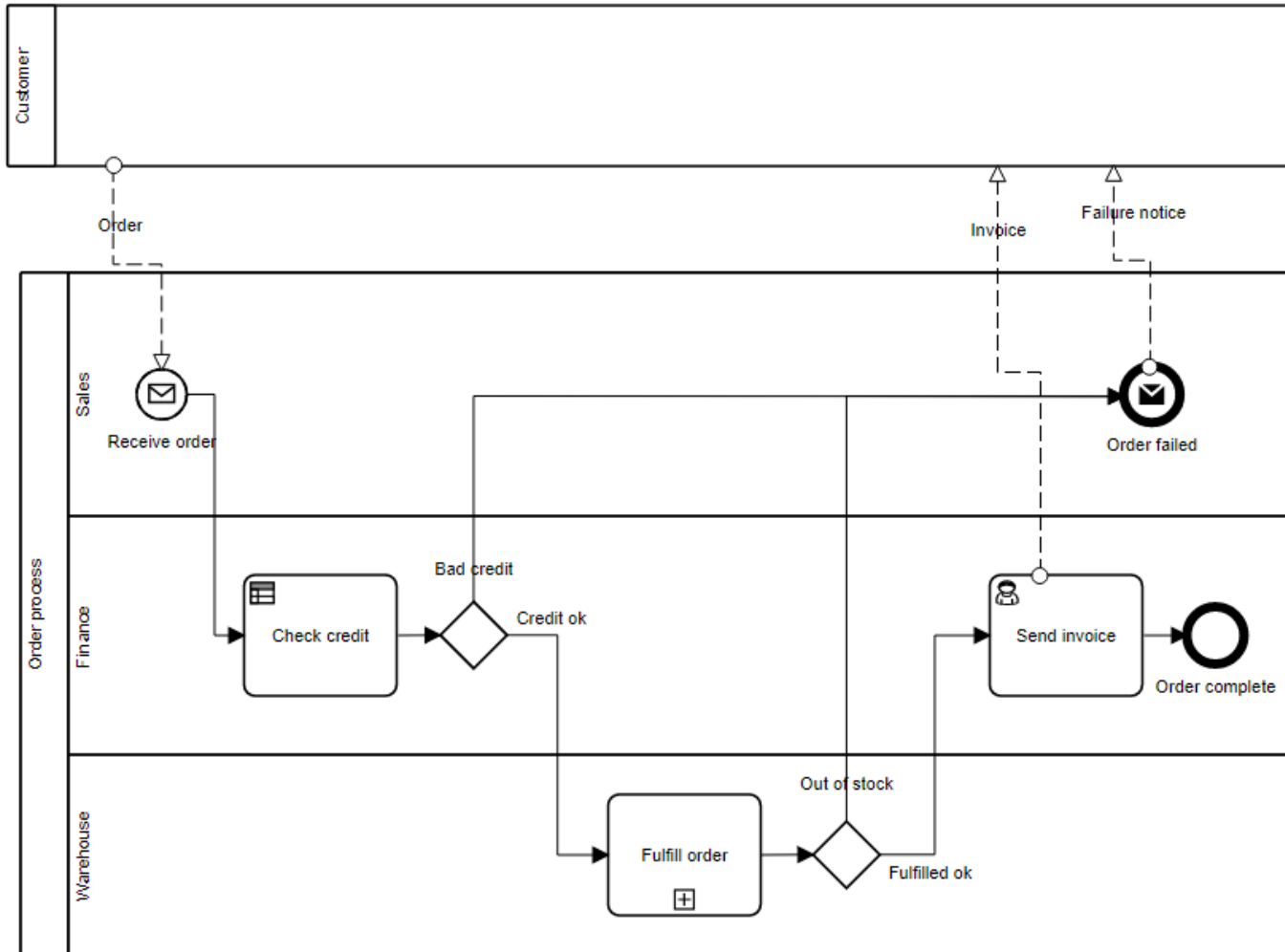
- Can see at a glance
  - How the process starts
  - What the process instance represents
  - All possible end states
  - All possible paths from start to end
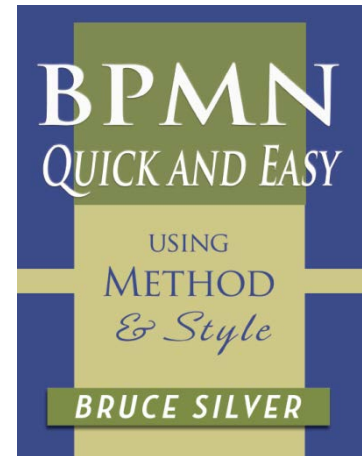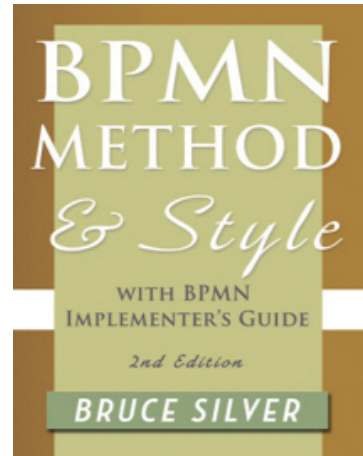 - All interactions with external entities and processes

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In Summary

- Method and Style is a disciplined approach to BPMN
    - Imposes additional rules and a methodology...
    - Designed to ensure your models reveal the process logic...
        - Correctly
        - Clearly
        - Completely
        - Consistently
    - Preserving the value of all those stakeholder interviews and workshops
    - Creating precise, consistent business requirements for IT
    - Gets your whole team "on the same page"
- It requires no technical knowledge or experience
- Works best when supported by style rule validation in the tool

How Do You Learn BPMN Method and Style?

1. From a book
   - BPMN Quick and Easy is newest, aligned with the training

   - https://www.amazon.com/BPMN-Quick-Using-Method-Style/dp/098236816X

2. From an app (bpmnPRO)
   - 400 quiz questions and puzzles
   - Gamified, progress through 10 levels
   - https://methodandstyle.com/bpmnpro/

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How Do You Learn BPMN Method and Style?

3. From training

- Hands-on exercises with tools
- Live-onsite (private for teams), public live-online, web/on-demand anytime
- Post-class certification

Exercise 6-6 – Message Handler

- After receiving an **order**, the order process has the following steps:
  - **Pick stock**
  - **Pack for shipment**
  - **Ship order**
  - **Prepare invoice**
  - Send *Invoice* message and end in *Order Complete* end state
- If customer cancels any time before the end of **Pack for shipment**…
  - Abort the activity, do not ship or invoice
  - Send *Cancellation confirmation* message and end in *Order Cancelled* end state
- If customer cancels during **Ship Order**…
  - Abort the activity
  - Add restocking fee
  - Send *Restocking Invoice* and *Cancellation confirmation* messages and end in *Order Cancelled*
- If customer cancels during **Prepare Invoice**…
  - Notify the customer unable to cancel, send return authorization; Continue the activity, send *Invoice*, and end in *Order Complete*

METHOD & Style

Home   Training   Certifications

Certified Students

Name	Organization	Certification	Certification Date
Kristi Champ	Validus Group	DMN Advanced	March 19, 2018
Jean-Philippe Bérubé	Trisotech	BPMN Method and Style	March 19, 2018
Michelle McWilliams	AmeriFirst Home Mortgage	BPMN Method and Style	March 15, 2018
Dina Kosho	QuickenLoans	BPMN Method and Style	February 27, 2018
Courtney Harasymowycz	QuickenLoans	BPMN Method and Style	February 16, 2018
Jean-Philippe Bérubé	Trisotech	DMN Basics	February 7, 2018
Molly Bergseid	Promontech	BPMN Method and Style	February 2, 2018
Colin Walsh	Promontech	BPMN Method and Style	February 2, 2018
Roanuk Zaman	Booz Allen Hamilton	DMN Basics	January 31, 2018
Danielle Walker	Promontech	BPMN Method and Style	January 31, 2018

Next live/online class May 22-24
- https://methodandstyle.com/product/bpmntraining/
- 10% off with discount code WEBINAR

Web/On-Demand anytime
- https://methodandstyle.com/product/bpmn-web-ondemand/

Certification

- Built into the training

- 60-day post-class period

  - Step 1: Short online exam

  - Step 2: Student exercise

    - Open ended but must contain certain required elements
    - Must conform to both the spec and Method and Style conventions
    - Student fixes all validation errors before submission
    - Reviewed by me personally
    - Iterate until it is perfect

  - This is where the material "sinks in"

- Recognized on methodandstyle.com

  - Over 1300 students certified

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Thank you

For any questions about Method and Style, training content, certification, consulting/mentoring etc., contact
bruce@brsilver.com
More information on methodandstyle.com