BPMN Modeling
with Method and Style

Bruce Silver
bruce@brsilver.com
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
1. Shapes and symbols have a specific meaning

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

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:

  XML: BPMN20.xml
  BPMN20.xsd
  DCl.xsd
  Dd.xsd

XSD:
  BPMN20.xsd
  BPMN20.xsd
  DCl.xsd
  Dd.xsd
  Semantics.xsd

XSLT:
  BPMN20-FrontXML.xsl
  BPMN20-TaxMI.xslt

  Infrastructure.xml
  Semantics.xml

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

- *This lets you visualize the process as a whole on a single page*
  - ... without creating a separate high-level model
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
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

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Log Viewer

Severity  Message                                                                 Element  Element Type  Page
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×          Activity missing name.      Task       Page 1
×          Activity missing name.      Task       Page 1
×          Duplicate end event name.  End Event   Page 1
×          End event missing label.   End Event   Page 1
×          End event missing label.   End Event   Page 1
×          Gates must be labeled.     Exclusive Gateway Page 1
×          Method and Style Validation completed with 6 errors. Page 1

Showing 1 to 7 of 7 entries
```
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)
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*
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
Gateways and End States

- 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
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
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

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

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

Web/On-Demand anytime
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
Thank you

For any questions about Method and Style, training content, certification, consulting/mentoring etc., contact

bruce@brsilver.com
More information on methodandstyle.com