

## Port Clearance Rules

A decision model capable to decide if a ship can enter a Dutch port on a certain date. The rules for this challenge are inspired by the international Ship and Port Facility Security Code. They were originally developed for The Game Of Rules, a publication of the Business Rules Platform Netherlands.

*Submitted to DM Community March 2016*

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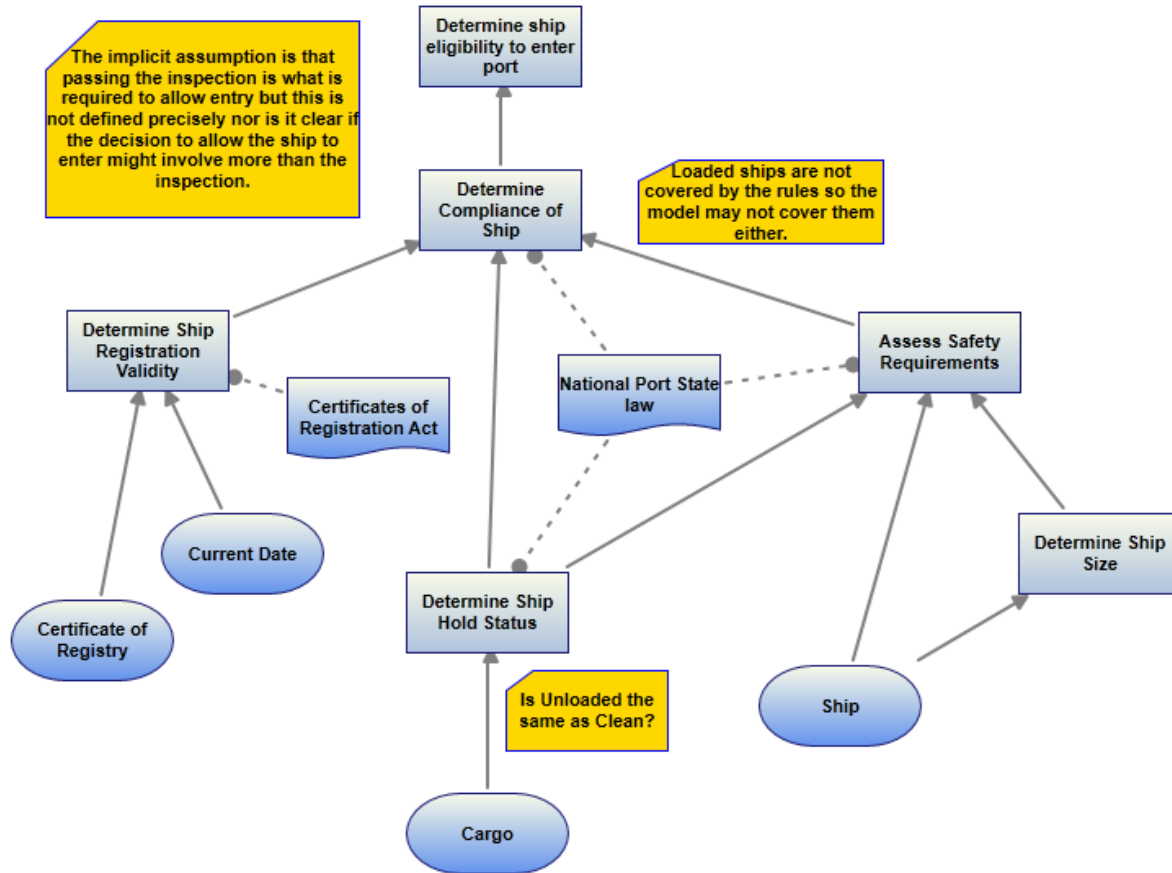
### Notes

The model was developed in DecisionsFirst Modeler and generated as a Word document. A small number of edits were made to the generated document for clarity. In addition the Knowledge Sources are added by the author.

# Port Clearance Example

## Decision Requirements Diagram

An example of a model for Port Clearance rules for DM Community #port



| Nodes            |  | Description   |
|------------------|--|---|
| Decision         | Determine Ship Size                      | Use information about ship to determine its size category                                       |
| Decision         | Determine Ship Registration Validity     | Assess the ship's registration certificate to see if it is valid #port                          |
| Decision         | Assess Safety Requirements               | Consider the safety requirements for the ship #port   |
| Decision         | Determine Ship Hold Status               | Asses the state of the ship's hold #port  |
| Decision         | Determine ship eligibility to enter port | Assess if the ship can be allowed to enter #port  |
| Decision         | Determine Compliance of Ship             | Consider the ship's cargo, safety and registration for compliance #port.                        |
| Input Data       | Ship                                     | Information about the ship itself #port   |
| Input Data       | Cargo                                    | Information about the ship's cargo #port  |
| Input Data       | Certificate of Registry                  | Ship's certificate #port  |
| Input Data       | Current Date                             | #port #utility  |
| Knowledge Source | Certificates of Registration Act         | Zeebrievenwet probably #port  |
| Knowledge Source | National Port State law                  | Port State Control in the Netherlands determines inspections rules #port Wet Havenstaatcontrole |

## Determine Ship Size

### Operational Decision

Use information about ship to determine its size category

#### Question: How large is this ship?

**Answer Type** Value from explicit list

**Answers** Large, Small

#### Requirements Network

| Requires   |      | Description                             |
|------------|------|---|
| Input Data | Ship | Information about the ship itself #port |

| Required by |                            | Description   |
|-------------|----------------------------|---|
| Decision    | Assess Safety Requirements | Consider the safety requirements for the ship #port |

## Determine Ship Registration Validity

### Operational Decision

Assess the ship's registration certificate to see if it is valid #port

#### Question: Is this ship's certificate of registry valid?

**Answer Type** Yes / No

**Default Answer:** No

#### Requirements Network

| Requires         |                                  | Description                  |
|------------------|----------------------------------|------------------------------|
| Input Data       | Certificate of Registry          | Ship's certificate #port     |
| Input Data       | Current Date                     | #port #utility               |
| Knowledge Source | Certificates of Registration Act | Zeebrievenwet probably #port |

| Required by |                              | Description  |
|-------------|------------------------------|--|
| Decision    | Determine Compliance of Ship | Consider the ship's cargo, safety and registration for compliance #port. |

## Assess Safety Requirements

### Operational Decision

Consider the safety requirements for the ship #port

**Question: Does this ship meet the safety requirements in its current state?**

**Answer Type** Yes / No

**Default Answer:** No

### Requirements Network

| Requires         |                            | Description  |
|------------------|----------------------------|--|
| Input Data       | Ship                       | Information about the ship itself #port  |
| Decision         | Determine Ship Size        | Use information about ship to determine its size category  |
| Decision         | Determine Ship Hold Status | Asses the state of the ship's hold #port   |
| Knowledge Source | National Port State law    | Port State Control in the Netherlands determines inspections rules #port<br>Wet Havenstaatcontrole |

| Required by |                              | Description  |
|-------------|------------------------------|--|
| Decision    | Determine Compliance of Ship | Consider the ship's cargo, safety and registration for compliance #port. |

## Determine Ship Hold Status

### Operational Decision

Asses the state of the ship's hold #port

**Question: What is the status of the ship's hold?**

**Answer Type** Value from explicit list

**Answers** Clean, Contains cargo remainder

**Default Answer:** Contains cargo remainder

### Requirements Network

| Requires         |                         | Description  |
|------------------|-------------------------|--|
| Input Data       | Cargo                   | Information about the ship's cargo #port   |
| Knowledge Source | National Port State law | Port State Control in the Netherlands determines inspections rules #port<br>Wet Havenstaatcontrole |

| Required by |                              | Description  |
|-------------|------------------------------|--|
| Decision    | Assess Safety Requirements   | Consider the safety requirements for the ship #port                      |
| Decision    | Determine Compliance of Ship | Consider the ship's cargo, safety and registration for compliance #port. |

## Determine ship eligibility to enter port

### Operational Decision

Assess if the ship can be allowed to enter #port

**Question: Can this ship enter port in its current state?**

**Answer Type** Yes / No

**Default Answer:** No

### Requirements Network

| Requires |                              | Description  |
|----------|------------------------------|--|
| Decision | Determine Compliance of Ship | Consider the ship's cargo, safety and registration for compliance #port. |

## Determine Compliance of Ship

### Operational Decision

Consider the ship's cargo, safety and registration for compliance #port.

**Question: Is this ship in compliance with port clearance regulations at this time?**

**Answer Type** Yes / No

**Default Answer:** No

### Requirements Network

| Requires         |                                      | Description  |
|------------------|--------------------------------------|--|
| Decision         | Determine Ship Registration Validity | Assess the ship's registration certificate to see if it is valid #port                             |
| Decision         | Assess Safety Requirements           | Consider the safety requirements for the ship #port  |
| Decision         | Determine Ship Hold Status           | Asses the state of the ship's hold #port   |
| Knowledge Source | National Port State law              | Port State Control in the Netherlands determines inspections rules #port<br>Wet Havenstaatcontrole |

| Required by |  | Description                                      |
|-------------|--|--|
| Decision    | Determine ship eligibility to enter port | Assess if the ship can be allowed to enter #port |

## Ship

### Input Data

Information about the ship itself #port

### Requirements Network

| Required by |                            | Description   |
|-------------|----------------------------|---|
| Decision    | Determine Ship Size        | Use information about ship to determine its size category |
| Decision    | Assess Safety Requirements | Consider the safety requirements for the ship #port       |

## Cargo

### Input Data

Information about the ship's cargo #port

### Requirements Network

| Required by |                            | Description                              |
|-------------|----------------------------|--|
| Decision    | Determine Ship Hold Status | Asses the state of the ship's hold #port |

## Certificate of Registry

### Input Data

Ship's certificate #port

### Requirements Network

| Required by |                                      | Description  |
|-------------|--------------------------------------|--|
| Decision    | Determine Ship Registration Validity | Assess the ship's registration certificate to see if it is valid #port |

## Current Date

### External, Structured Input Data

#port #utility

### Requirements Network

| Required by |                                      | Description  |
|-------------|--------------------------------------|--|
| Decision    | Determine Ship Registration Validity | Assess the ship's registration certificate to see if it is valid #port |

## Certificates of Registration Act

### Knowledge Source–

Zeebrievewet probably #port

### Requirements Network

| Required by |                                      | Description  |
|-------------|--------------------------------------|--|
| Decision    | Determine Ship Registration Validity | Assess the ship's registration certificate to see if it is valid #port |

## National Port State law

### Knowledge Source–

Port State Control in the Netherlands determines inspections rules #port Wet Havenstaatcontrole

### Requirements Network

| Required by |                              | Description  |
|-------------|------------------------------|--|
| Decision    | Assess Safety Requirements   | Consider the safety requirements for the ship #port                      |
| Decision    | Determine Ship Hold Status   | Asses the state of the ship's hold #port                                 |
| Decision    | Determine Compliance of Ship | Consider the ship's cargo, safety and registration for compliance #port. |