

FlowMax-Q Manual

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Preface

This manual¹ is divided into two parts. Part I deals with handling FlowMax network (nodes and edges) in a QGIS environemnt and Part II deals with using the FlowMax-Q, a QGIS plugin to work with outputs from FlowMax.

¹Version **d99dce5**

Part I

Editing in QGIS

Chapter 1

Introduction

- Economy based scenarios are to be modified in the trade-databases.
- Resilience based scenarios (GIS) fall into 2 categories:
 - node-based
 - * editing geometries;
 - * editing attributes
 - edge-based
 - * editing geometries;
 - * editing attributes
- Technology based scenarios will affect the demand (freight composition)
- Policy based scenarios will affect the route and mode choices (freight composition)

Chapter 2

Scenarios

The image below shows the underlying structure of constructing scenarios

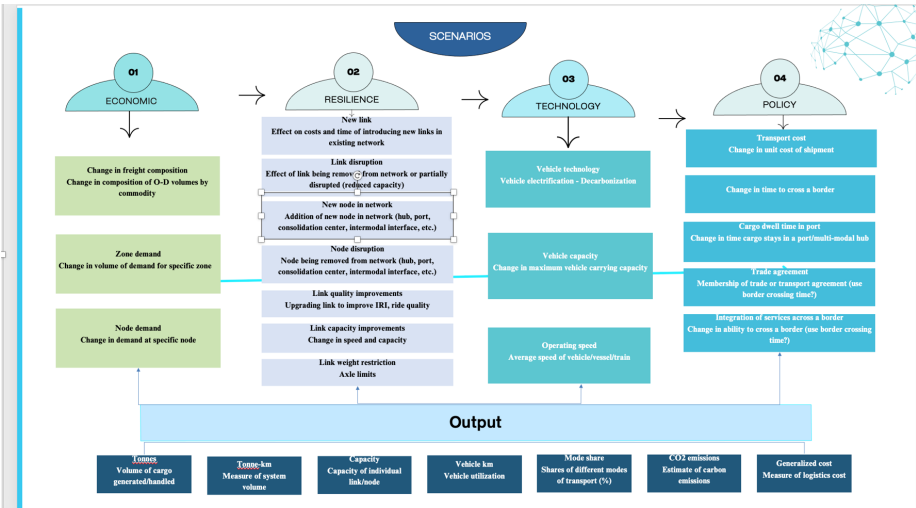


Figure 2.1: Scenarios

Chapter 3

Adding Links

3.1 Connect to an non-existing node

Is there an existing node at the source or destination of this (to be added) new link?

- No? First create a node(s) and then create a line between source and destination nodes.
- Yes ? Create a line between source and destination nodes.

3.2 Connect to an existing node

Is the new link connecting to an existing node location?

- Create a line between source and destination nodes.

3.3 Adding links - Hands-on

- Check the highest node number (NodeID_H) from the node file. To do this, open the attribute table of the shapefile **Right Click on the node layer> Open Attribute Table** . Scroll if required to see the NodeID field, **Click on the field heading** to sort the column in ascending or descending order. When in descending order, make note of the top most row to identify the current highest node number.
- Set the node file in edit mode, and add a node (point geometry) to the node file and assign it a node number = NodeID_H+1
- Fill in all other node attribute columns as necessary (see also)
- Save edits and stop the edit mode on node file.
- Check the highest edge number (EdgeID_H) from the link file.

- Set the link file in edit mode and add a link (line-geometry) from existing node to the new node created in step 2, assign this link an edge number $= \text{EdgeID}_H + 1$
- Fill in all other link attribute columns as necessary (see also)
- Save edits and stop the edit mode on link file

Chapter 4

Removing Links

Removing links is easier than adding links. It is recommended to disable links than to delete them.

Chapter 5

Modifying Node Attributes

Chapter 6

Modifying Edge Attributes

Part II

QGIS Plugin

Chapter 7

Installing the plugin