Solution Provider

Power

Control

Motion

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PMC HYDRAULICS - Your global expert in hydraulics

Hydraulic expertise for your application

PMC Hydraulics is the leading provider of customized hydraulic systems and components for customers in the industrial, energy, mobile and marine sectors.

Nordic leader with global reach and local presence

Having operations across the Nordic countries, and production sites in Poland, China and India, we are the global expert for our customers with a strong local presence.

Hydraulics power optimized to your needs

Our comprehensive choice extends from components to customized systems. We also represent brands from leading component suppliers.

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The Case

How can we be more Cost Effective and Improve our Competiveness,

with a different Warehouse Set-up and the Way of Working with

Equal or Improved Customer Service

» *Reduce Cost, both Fixed and Direct*

» *Improve our purchasing to get a positive effect on Quantity Based Discounts*

» *Improve Inventory Performance*

» *Lead time effects*
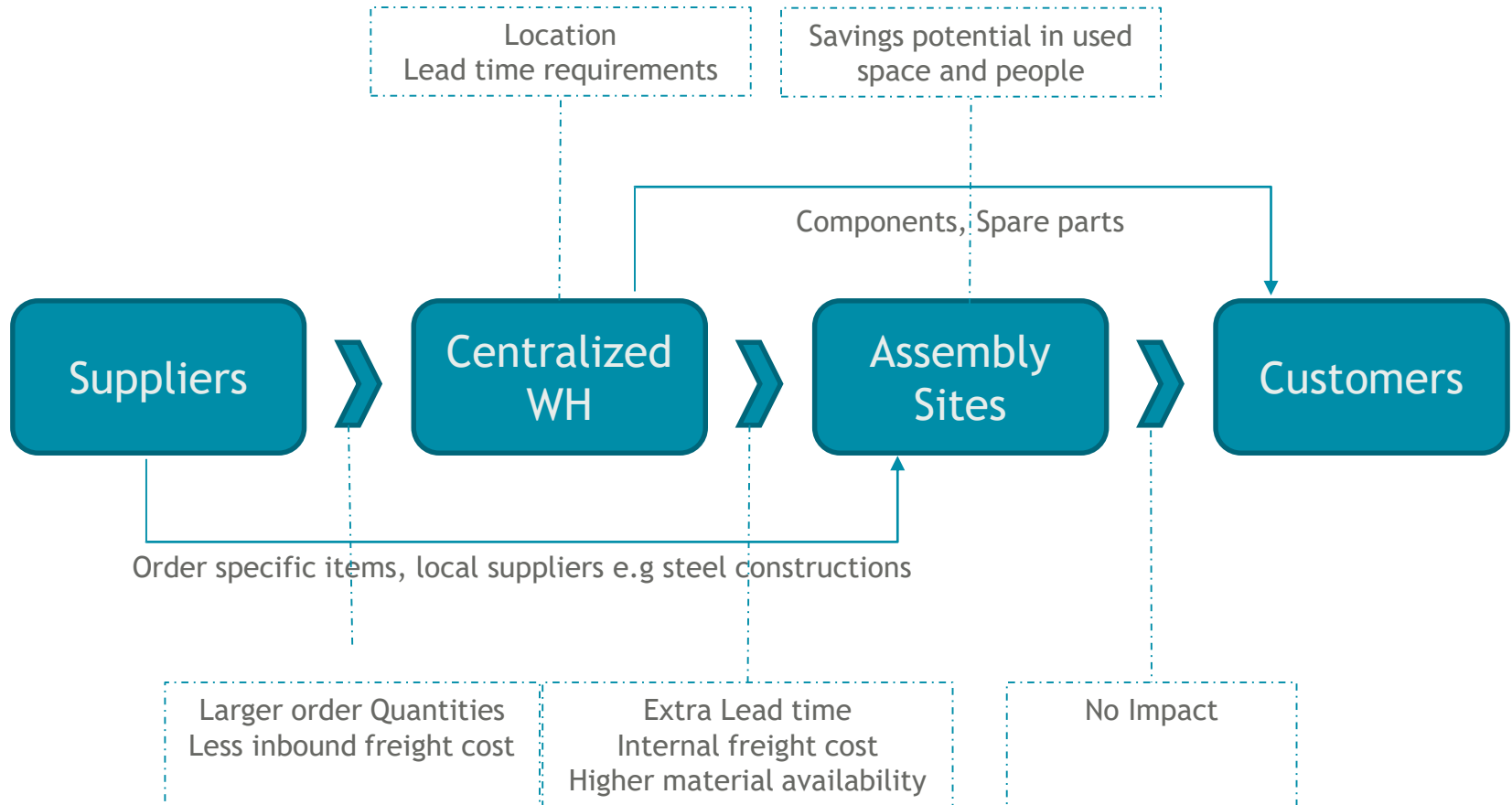
Can we have one Central Warehouse and if Yes,

Where?
What is the Expected Effect?

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Present Set-up

Country	Assembly	WH
SWEDEN	3	3
FINLAND	2	3
DENMARK	2	2
POLAND	1	1
CHINA	1	1
INDIA	1	1
COUNT	10	11

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Centralized Warehouse

Location
Lead time requirements

Savings potential in used space and people

Components, Spare parts

| Suppliers | > | Centralized WH | > | Assembly Sites | > | Customers |

Order specific items, local suppliers e.g steel constructions

Larger order Quantities
Less inbound freight cost

Extra Lead time
Internal freight cost
Higher material availability

No Impact

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Scenarios

1. Existing Warehouses remains in each country,
   but optimization based on what items to be purchased from each country

2. Centralized WH – on "optimal" location, might require some Hubs in different countries

   1. Existing premise/location

   2. New location

3. Centralized WH in Poland – close to existing factory in Szczecin
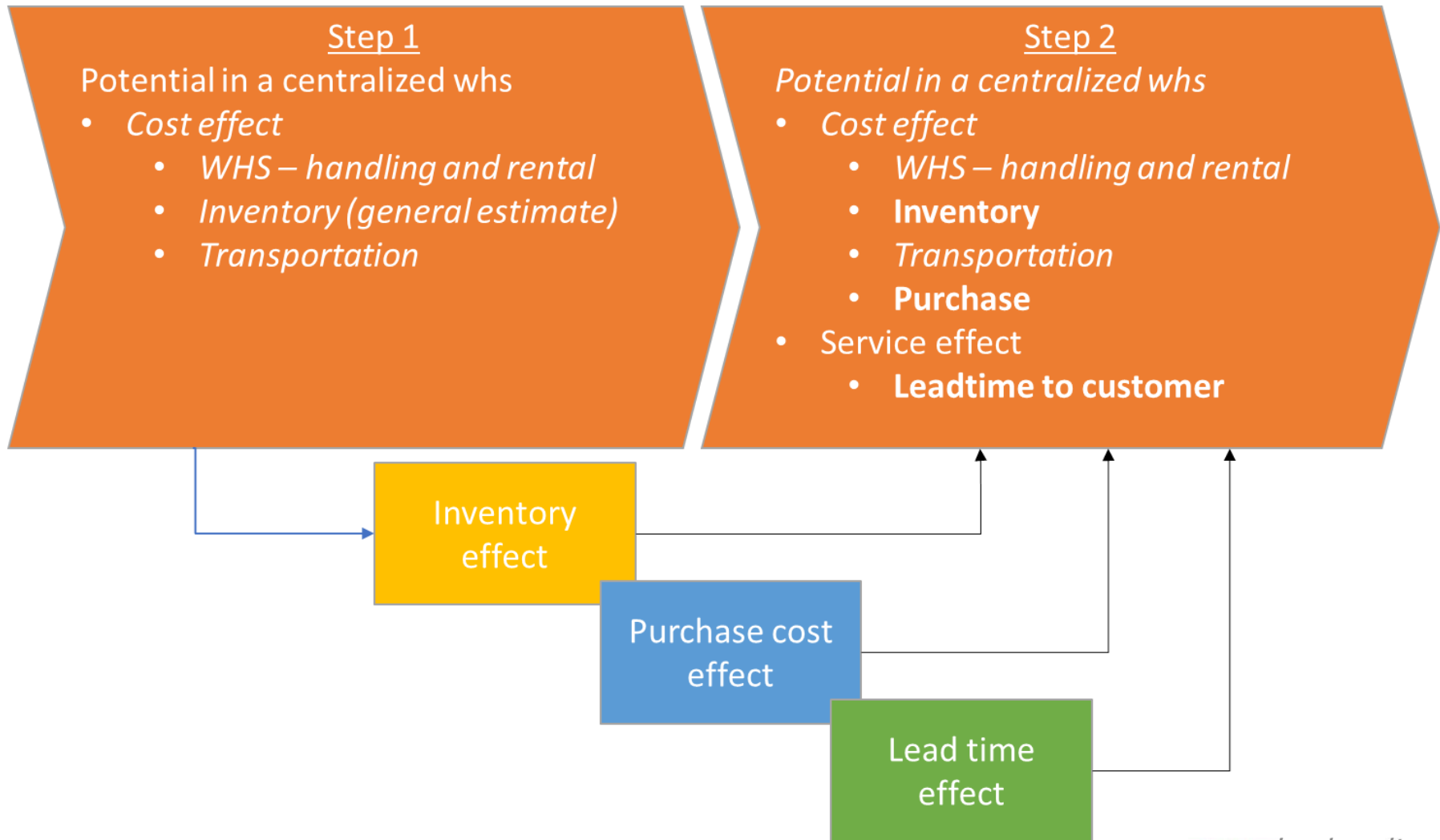   This require renting new premise / building a new WH

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Selection Process

- Meetings with different Consultant Companies

- Important to get facts, for decision making and to be able to convince other stakeholders

- Time for deliverables was extremely important

- Experience from similar projects and existing tools/processes

- Not a *one man show,* and someone to question our own pre-assumptions

- Resource demand from our company should be limited

- *"At the end a good feeling"*

The Project

- Time plan very tight with clear dates with deliverables

  - Decision to make the project in two phases

- Project Team, Project Meetings

  - Critical with correct resources able to extract data from ERPs

  - Able to make simplifications on inaccurate data

  - Follow-up for validation and checks

- Data

  - Cost Components

  - Transaction data

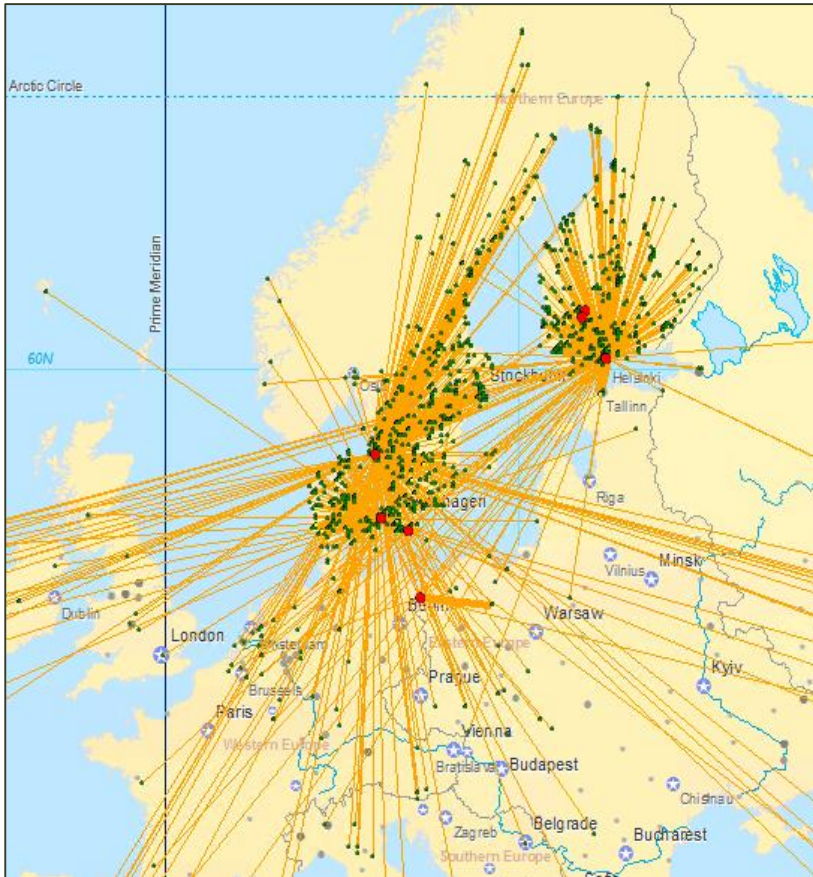 - Most data extracted from different ERPs but also freight cost/times from freight forwarders

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Concept of analysis in two steps

Step 1

Potential in a centralized whs
- *Cost effect*
  - *WHS – handling and rental*
  - *Inventory (general estimate)*
  - *Transportation*

Step 2

Potential in a centralized whs
- *Cost effect*
  - *WHS – handling and rental*
  - **Inventory**
  - *Transportation*
  - **Purchase**
- Service effect
  - **Leadtime to customer**

Inventory effect

Purchase cost effect

Lead time effect

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Supply Chain model to optimize network

- Point of Gravity calculation for demand

- Minimize total cost per scenario

  - Transport

  - Inventory

  - Purchase

  - Fixed WHS

- Sensitivity analysis

  - 2019 demand

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Current network (as-is): Existing supply chain with 7 local warehouses
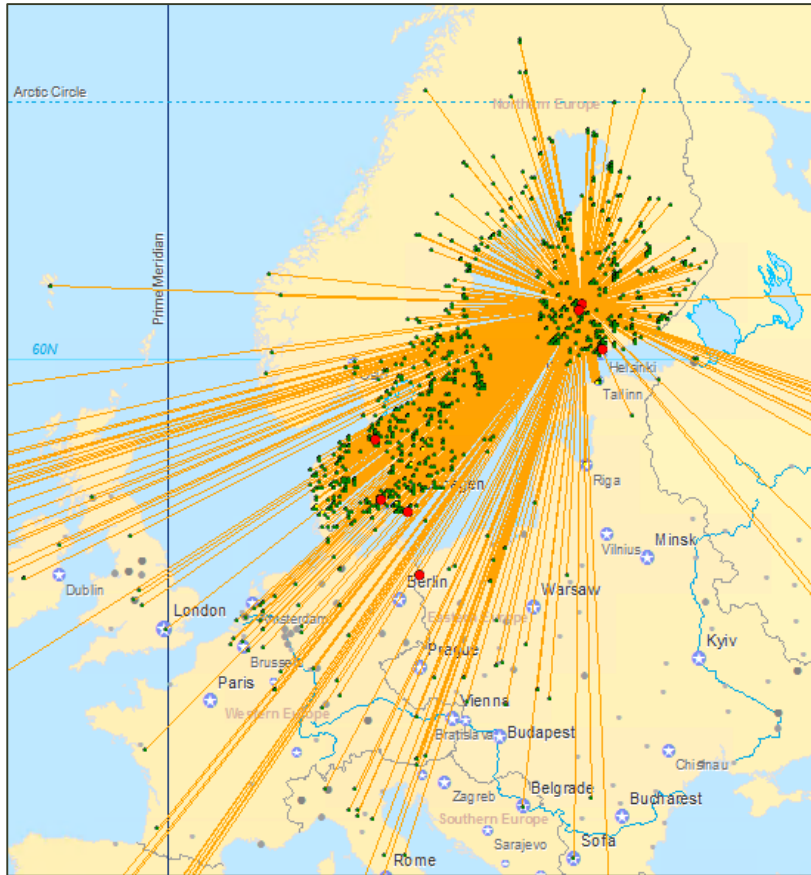

Outbound flows from each whs

- Local presence in all market

- The total supply chain cost in the model equals **XX MEUR**, covering the components and spare parts sales from 7 WHSs in 4 countries

Total supply chain cost

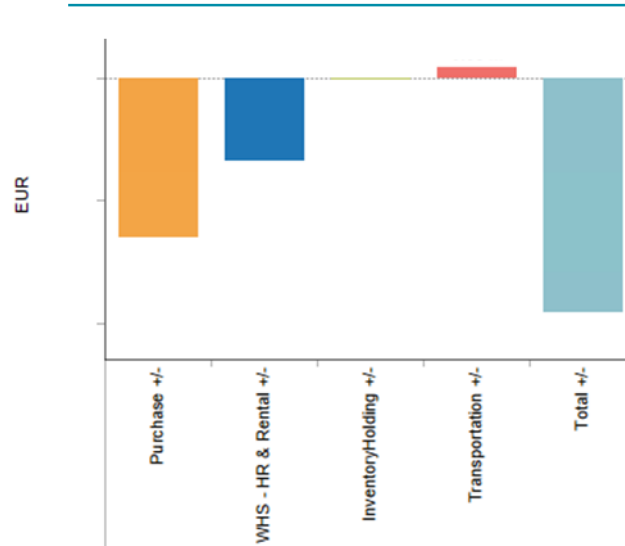|	
Purchase	WHS - HR & Rental	InventoryHolding	Transportation	Total

EUR

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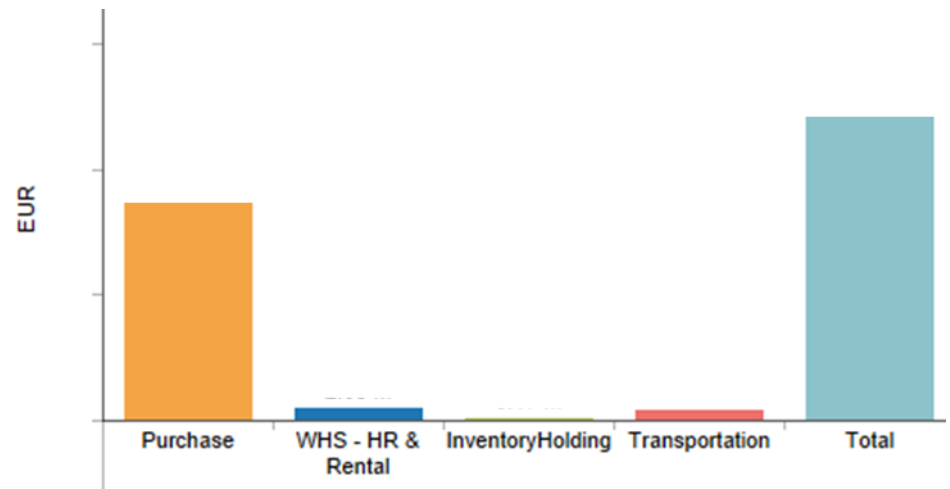
SC1: One WHS based on point of gravity suggests a central warehouse in Tampere
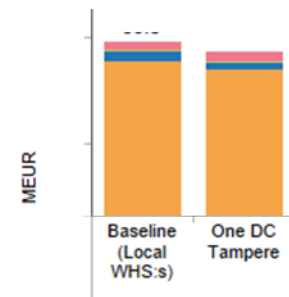

Outbound flows from central whs

- Potential in total cost reduction with only one WHS in Finland used instead of 7 local WHSs.
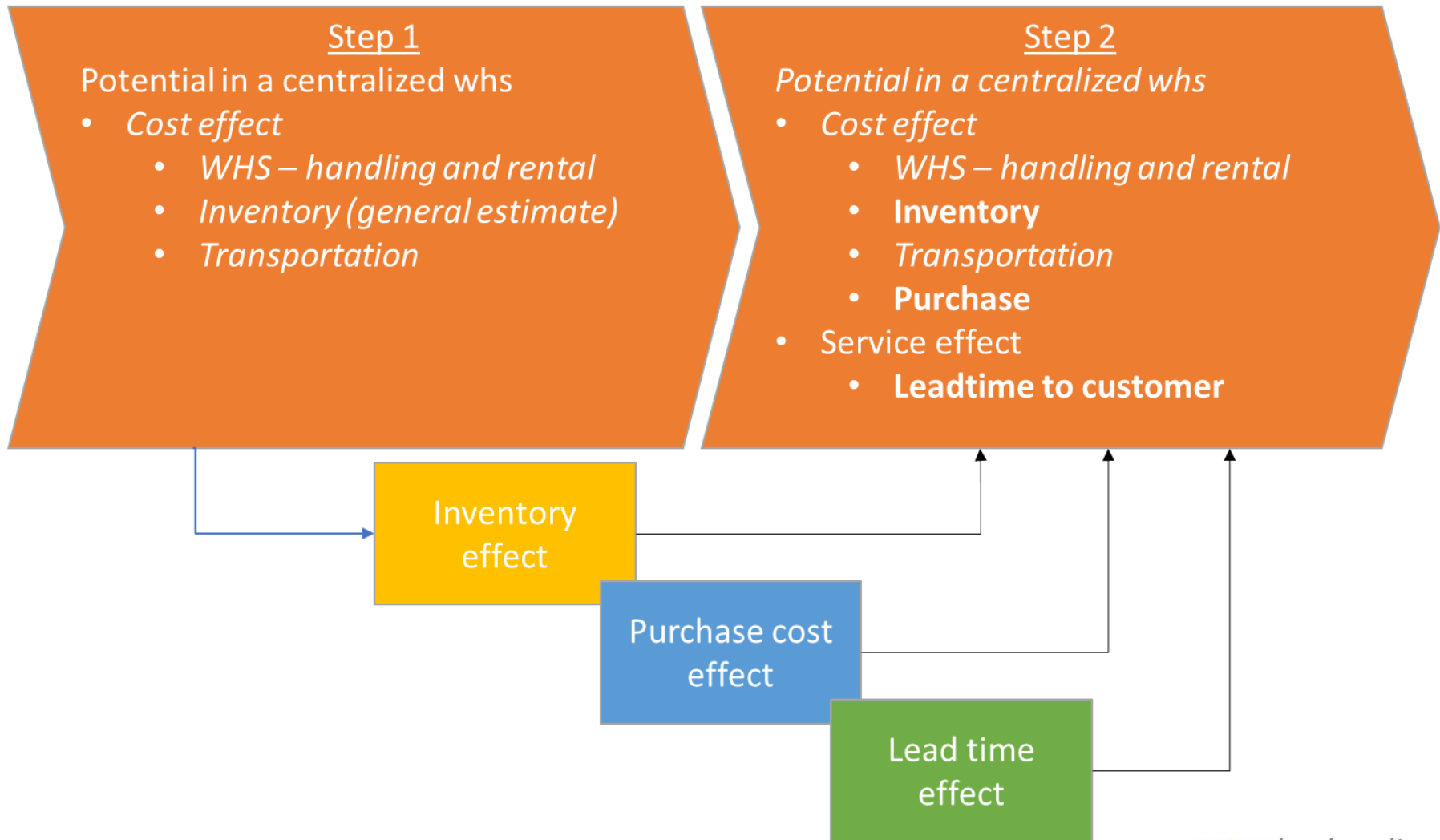
- Increased lead time to customer

Change in supply chain cost

Total supply chain cost

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Concept of analysis in two steps

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Step 2
Potential in a centralized whs
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- Service effect
  - **Leadtime to customer**

Inventory effect

Purchase cost effect

Lead time effect

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SC1: Small overlap in assortment limits the purchase cost effect

- Purchase cost per country

- Best price applied to all countries

- Potential saving

|	FIN	SWE	DEN	POL	Grand Total
Total Purchase Value (EUR)					
Purchase Value multi site products (EUR)					
PurchaseValue Min multi site products					
Potential					

- The effect of a central purchase setup is independent of the location of the warehouse

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SC1: Total inventory level has a small potential to be reduced by a central WHS structure

- By centralizing stock to one WHS total inventory value can be reduced

  – Limited potential due to small overlap in assortment between markets

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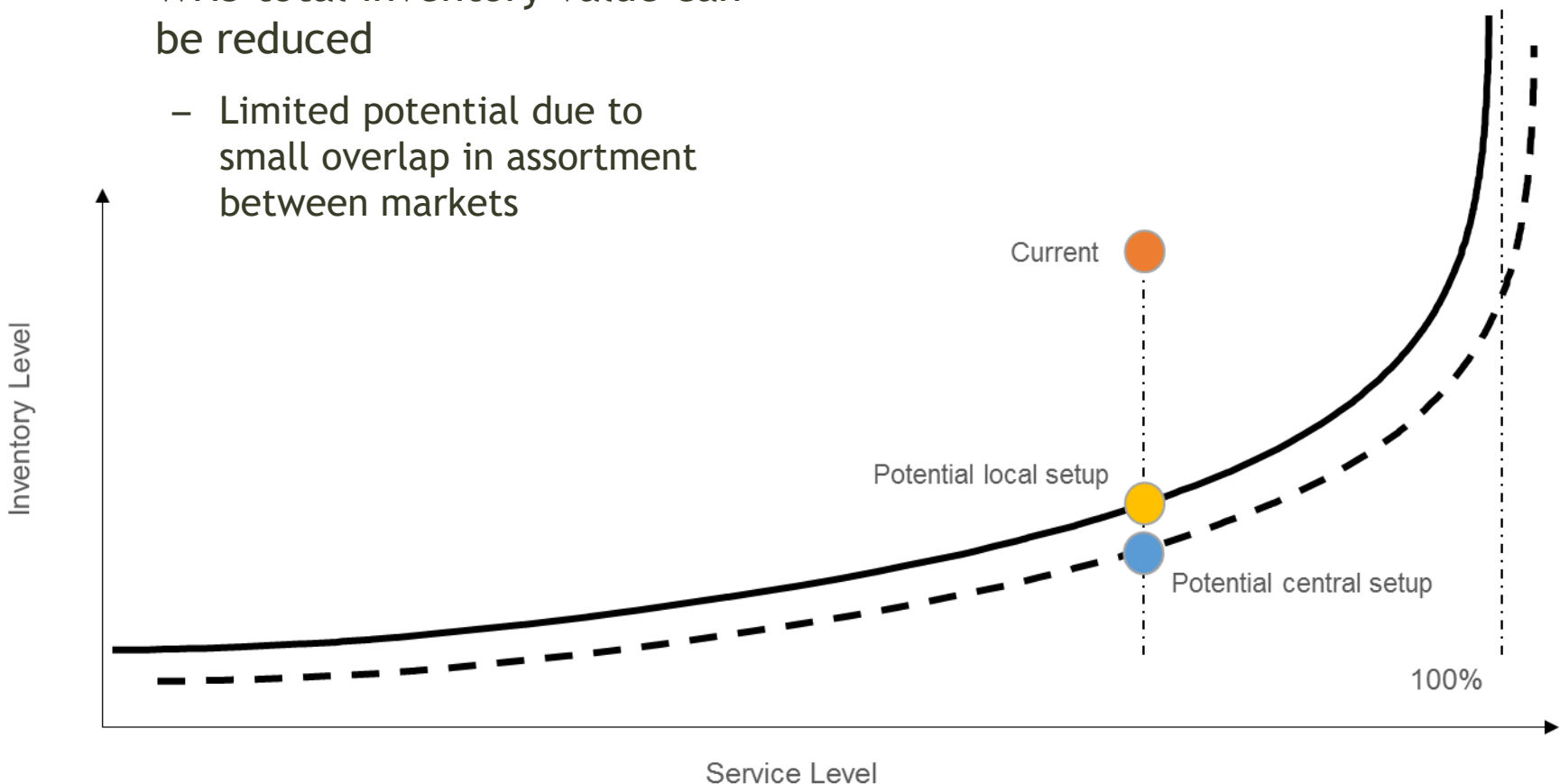
SC1: Transport time to customers from Tampere is in many cases a couple of days longer than today
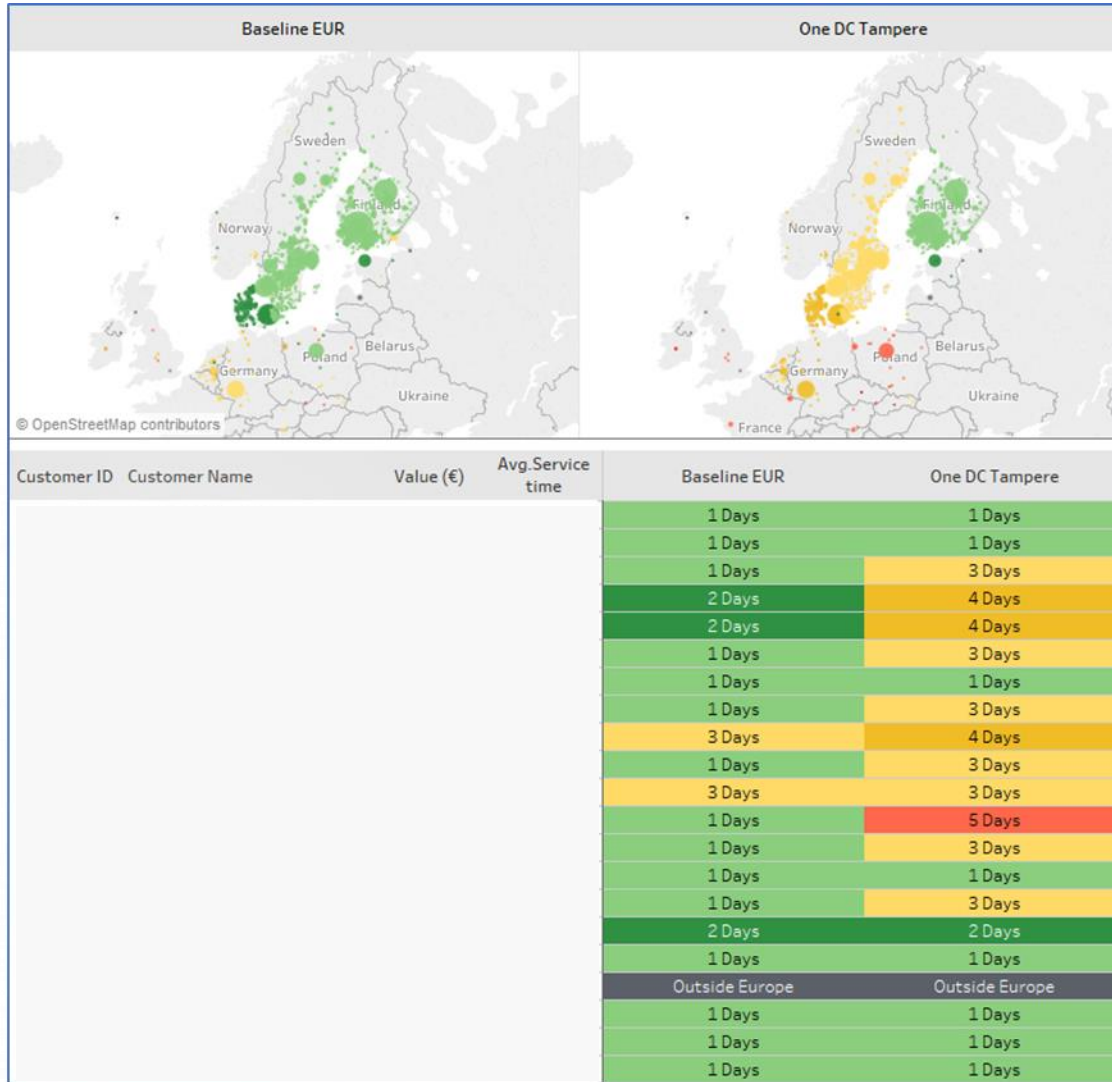
Findings

- Overlapping articles far less than assumed
  - Effect will be less positive than expected

- Point of Gravity (Volume and distance factor)
  - Opens up two pretty equal candidates
  - Will lower Customer service

- Lowest Cost option point on
  - One specific location of centralized WH
  - Worst Customer Service

- Best Customer Service
  - One WH in every country

Lessons learned:
- Great with some quantitative data for decision making

- Several options to be considered dependent on what factor to optimize – at the end a qualitative decision

- A lot of findings that can be used to build up a different strategy for a longer term

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