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Logistics network optimization

Case study for a Telecom company

August 2017

Case description – What we were asked to do

About Client

The Client is a major Russian telecom company operating a country-wide transportation network. The company provides B2C (business to customer), B2B (business to business), B2O (business to operator) and B2G (business to government) telecom services.

The Client has a single-tier logistics network with around 150 warehouses, 2,500 points of sale and about 20,000 operational sites holding inventory.

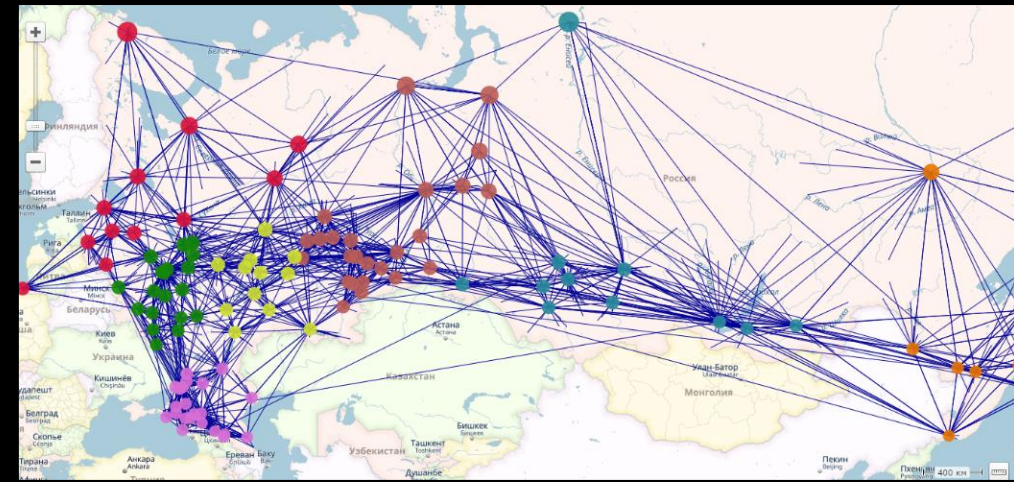
Client's request

The Client chose Deloitte CIS to develop an optimal logistics network model that would match its future demand forecasts and inventory optimization targets while maintaining a high level of logistics service at operational sites and points of sale.

During the project we answered the following questions:

- What is the optimal hierarchy for Client's network – 1- or 2-tier?
- What are the costs and effects of implementing various inventory optimization policies jointly with network optimization?
- Warehouses of what capacity and in what locations will the Client need considering future demand and inventory optimization targets?
- What is the optimal network transformation plan, including inventory relocation and timeline of warehouse closings?

Client's Network



Products
~ 145,000 SKUs



Suppliers
~ 100



Warehouses
~ 150



Operational sites
~ 20,000



Points of Sale
~ 2,500

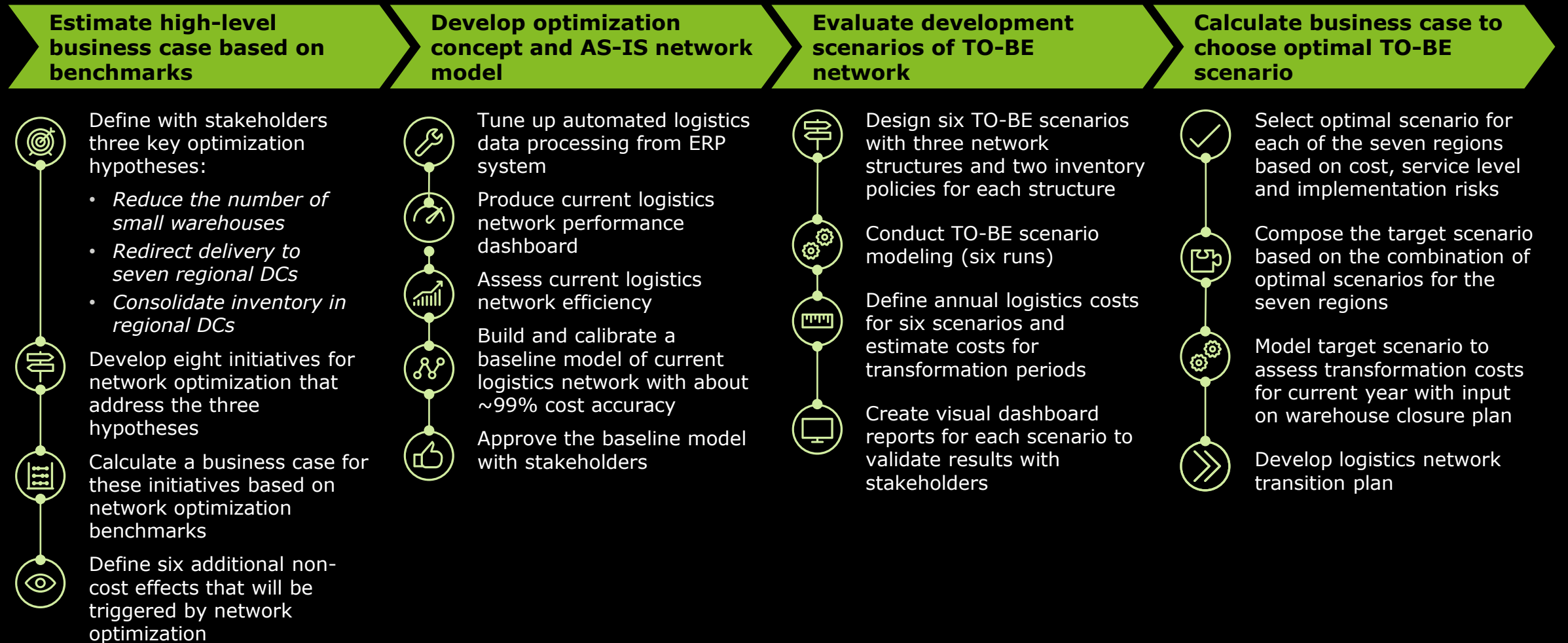


Transportation
2 types
(own and hired)



Inventory
~1-10 RUB bln

Network optimization approach – How we did it



Optimization scenarios – How we did it

Baseline scenario

99% model accuracy vs. budget/forecast

Optimization of existing transportation routes without closure of any warehouses



Local warehouse optimization

11% decrease in logistics costs | **17%** lower inventory

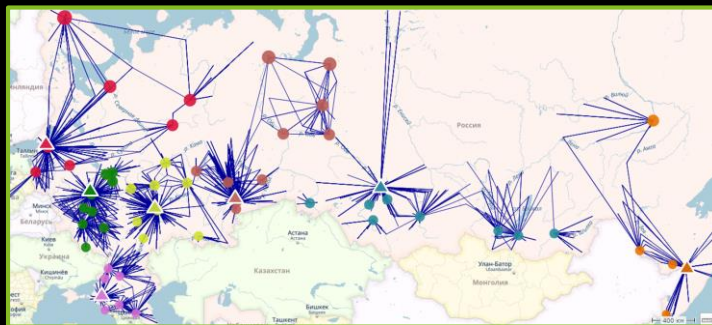
Optimization of number and capacity of warehouses organized in a single-tier network



Delivery centralization to regional DCs

9% decrease in logistics costs | **47%** lower inventory

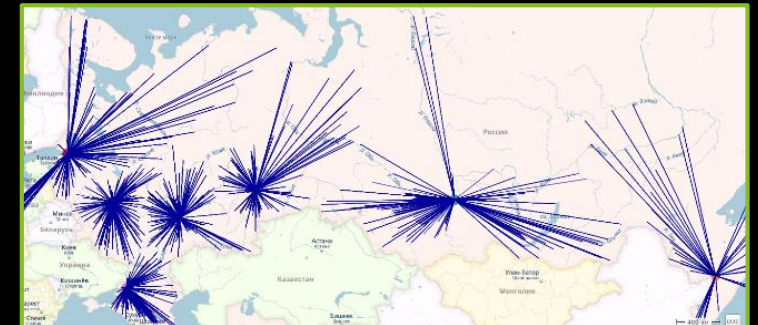
Optimization of number and capacity of storage facilities, creation of a two-tier network of regional DCs and local warehouses. Suppliers deliver to DCs and a few selected local warehouses



Delivery centralization and closure of local warehouses

22% decrease in logistics costs | **78%** lower inventory

Optimization of number and capacity of DCs and closure of all the local warehouses



Case results



Step-by-step road map of transition from current network to target state taking into account ongoing projects and other network related opportunities



Recommendations on inventory policies considering network optimization scenarios



The project involves a significant increase in the logistics efficiency, including:

- Reduction of integral logistics costs by 9%
- Reduction of the number of warehouses by 28%
- Transportation cost reduction by 5%
- Target Logistics network supports:
 - Total inventory level reduction by 18%
 - Inventory turnover increase by 26%



Automated solution for cleaning and organization of data obtained from ERP



Logistics network performance dashboard

Contact information



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