Deloitte.

anyLogistix

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.
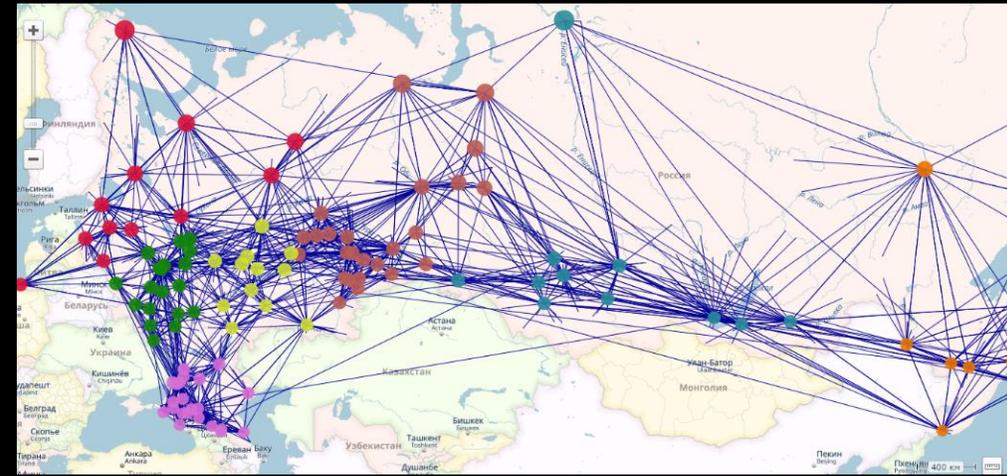
Client's request

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

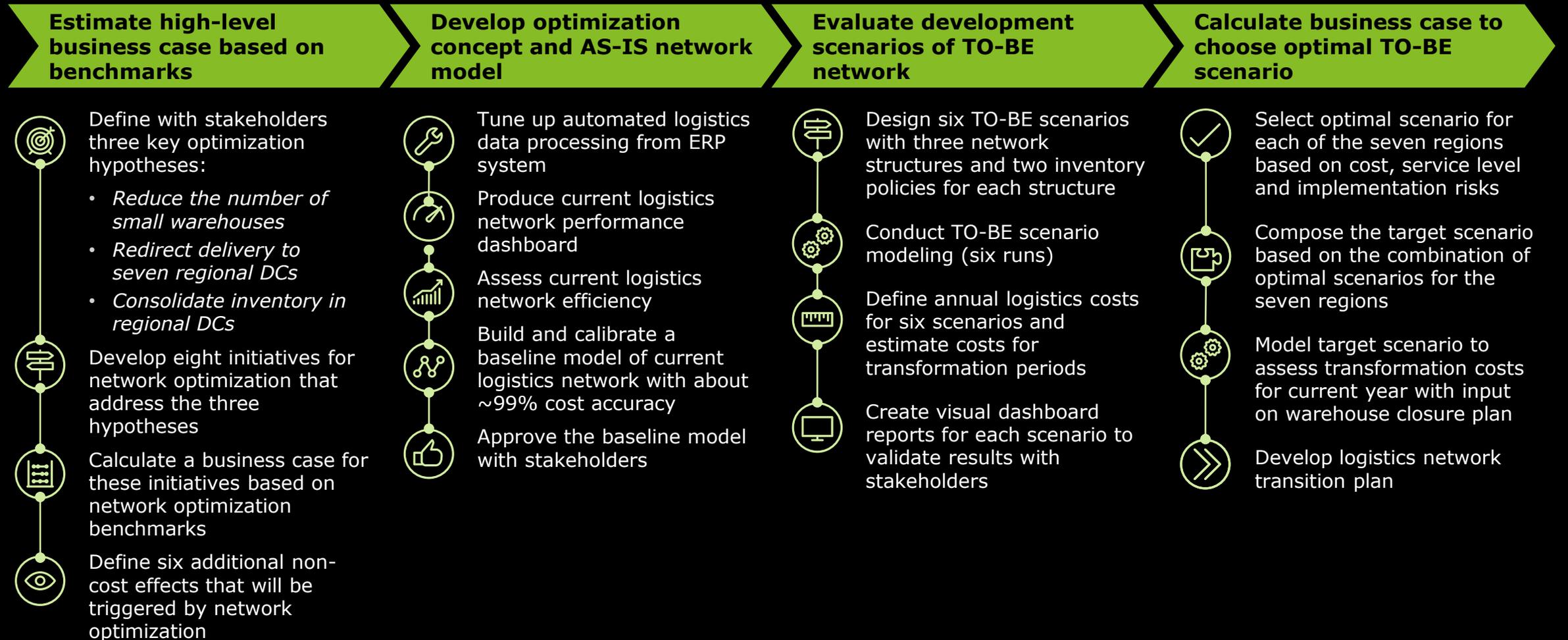**Points of Sale**
~ 2,500

Transportation
2 types
(own and hired)

Inventory
~1-10 RUB bln

Network optimization approach – How we did it

Estimate high-level business case based on benchmarks	Develop optimization concept and AS-IS network model	Evaluate development scenarios of TO-BE network	Calculate business case to choose optimal TO-BE scenario

Estimate high-level business case based on benchmarks

Define with stakeholders three key optimization hypotheses:

- *Reduce the number of small warehouses*
- *Redirect delivery to seven regional DCs*
- *Consolidate inventory in regional DCs*

Develop eight initiatives for network optimization that address the three hypotheses

Calculate a business case for these initiatives based on network optimization benchmarks

Define six additional non-cost effects that will be triggered by network optimization

Develop optimization concept and AS-IS network model

Tune up automated logistics data processing from ERP system

Produce current logistics network performance dashboard

Assess current logistics network efficiency

Build and calibrate a baseline model of current logistics network with about ~99% cost accuracy

Approve the baseline model with stakeholders

Evaluate development scenarios of TO-BE network

Design six TO-BE scenarios with three network structures and two inventory policies for each structure

Conduct TO-BE scenario modeling (six runs)

Define annual logistics costs for six scenarios and estimate costs for transformation periods

Create visual dashboard reports for each scenario to validate results with stakeholders

Calculate business case to choose optimal TO-BE scenario

Select optimal scenario for each of the seven regions based on cost, service level and implementation risks

Compose the target scenario based on the combination of optimal scenarios for the seven regions

Model target scenario to assess transformation costs for current year with input on warehouse closure plan

Develop logistics network transition plan

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

Andrey Semenov

Network Design Stream Lead,
Supply Chain Group,
Deloitte CIS Consulting

Mob.: +7 (985) 857 51 33
e-mail: andsemenov@deloitte.ru

Rostislav Ryabko

Network Design Architect
Supply Chain Group,
Deloitte CIS Consulting

Tel.: +7 (495) 787 06 00
e-mail: rryabko@deloitte.ru

Deloitte.

deloitte.ru