

Competitive Production Location

- Analysis and Selection of an optimum location for expansion of the production capacity

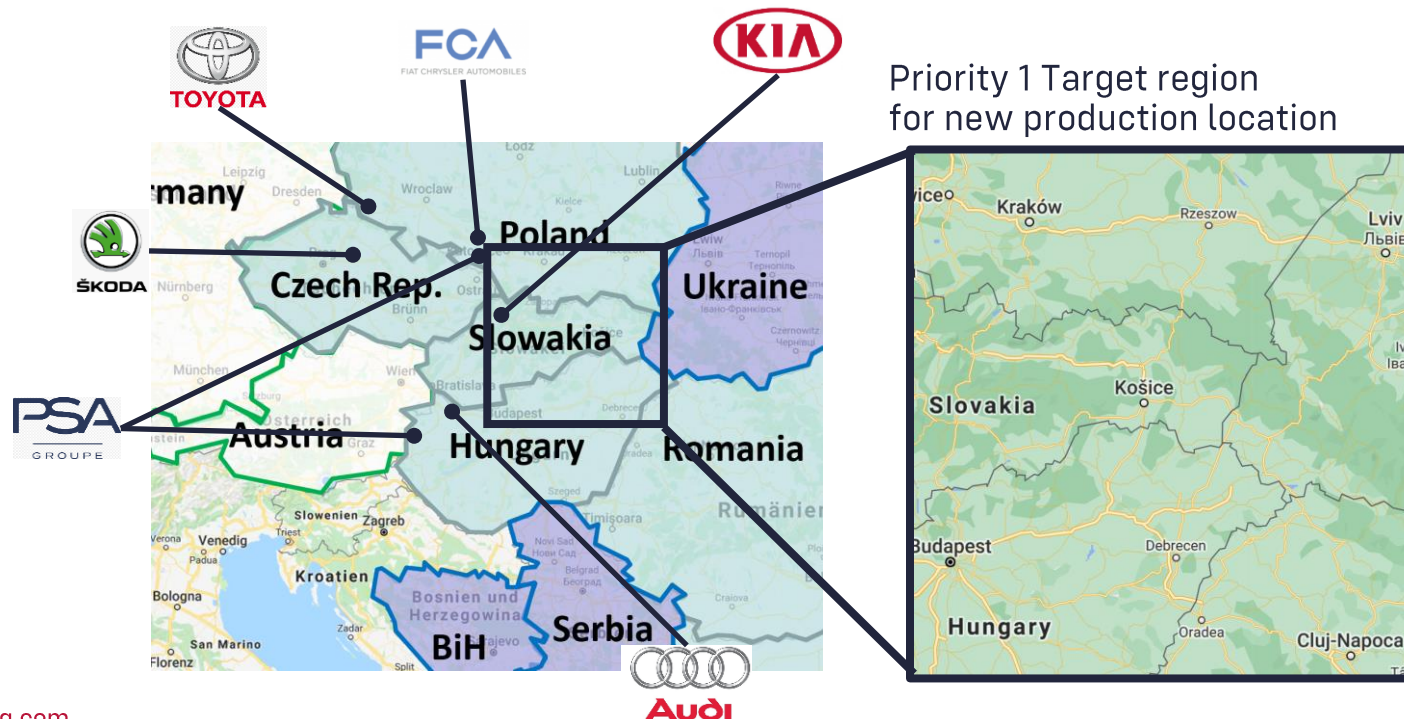
Customer: Globally acting tier 1 supplier for the automotive industry

Customer Product: Exhaust gas turbo charger

Competitive Production Location

Initial situation

- The customer operates production plants in Europe, Asia and America
- The production capacity of existing plants will no longer cover the customer demands starting in 2021, especially for commercial vehicle customers.
- Deliveries for new projects are planned to customer production locations mostly in Central Easter Europa (CEE).
- The competitive situation requires lowest possible production cost. Therefore the investment shall happen only in LCC location
- The map below shows the location of plants of the potential customers and the priority 1 target area for the new production location.



Competitive Production Location

Project key data

Main requirements to the production location

- Minimum production cost
- Optimum logistic connections to the final customer engine plants
- Production processes: mostly assembly
- Employee availability for
 - production (cost) but also
 - Process- und product development (Qualification)
 - Central functions such as e.g. IT-services
- Production capacity for approx. 2 mio. products/year (3 shift)
- Approx. 8000 m² below roof for production and logistic
- ~450 employees in final stage

Time schedule from project start

- | | |
|---|----------|
| ▪ Project start | 0 month |
| ▪ Decision for location | 4 month |
| ▪ Local partner for realisation (contract closed) | 6 month |
| ▪ Production plant readiness | 12 month |
| ▪ Set up production line | 16 month |
| ▪ First start of production | 17 month |

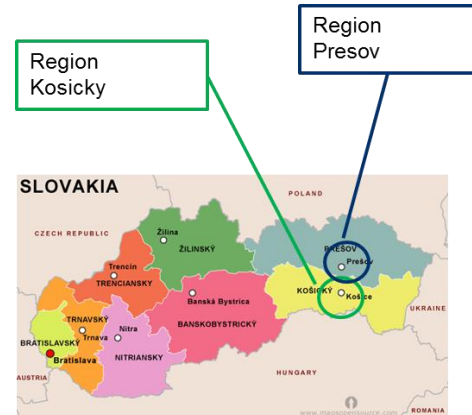
Competitive Production Location

Analysis carried out



Region
Podkarpackie

Region
Malopolskie



Region
Kosický

Region
Presov



Region
Bihor

Region
Cluj



Region
Livivska

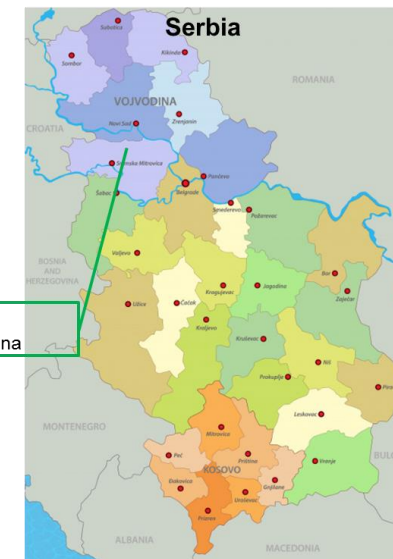
6 Länder, 8 Regions analysiert/besucht

Region :Borsod-
Abaúj-Zemplén

Region
Hajdu-Bihar

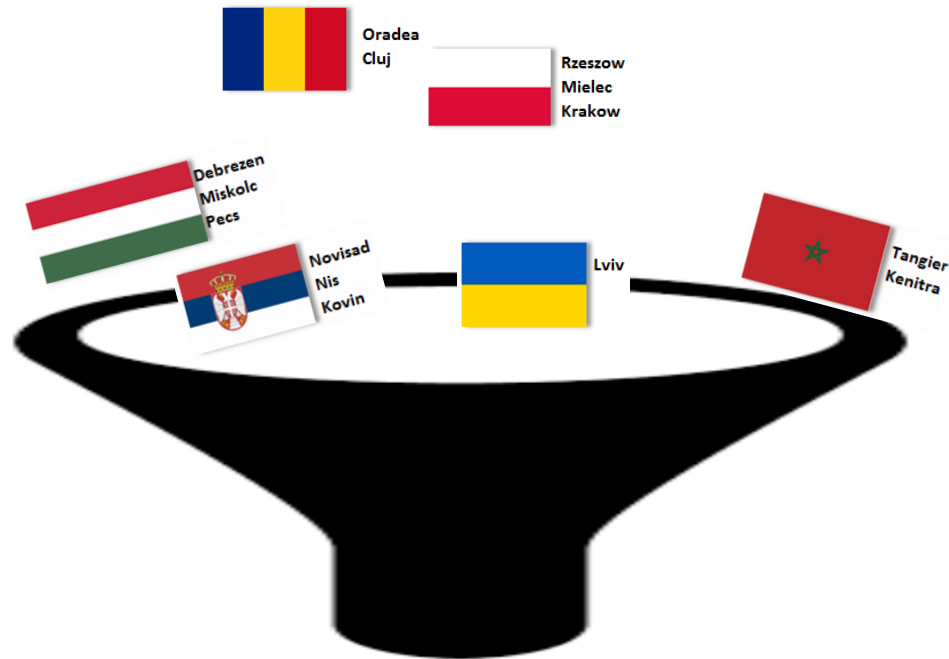






Region
Vojvodina



Competitive Production Location

Preselection



	Ukraine	Lviv	"Best prepared"
	Hungary	Pecs or Miskolc	"Save EU harbor"
	Serbia	Novisad	"Competitive alternative"
	Morocco	Tangier or Kenitra	Specific "PSA" solution

Competitive Production Location

Specific comparison of locations (Remarks and comments exemplary only)

Remarks:

Analysis was carried out for a production scenario of 0.6 mio. pcs/year production

On a 5 years perspective.

Quantitative Evaluation:

Considered were cost for personnel, building, logistics

Lowest personnel cost in UA. Increase of personnel cost are expected
Generally. However relative difference will not change.

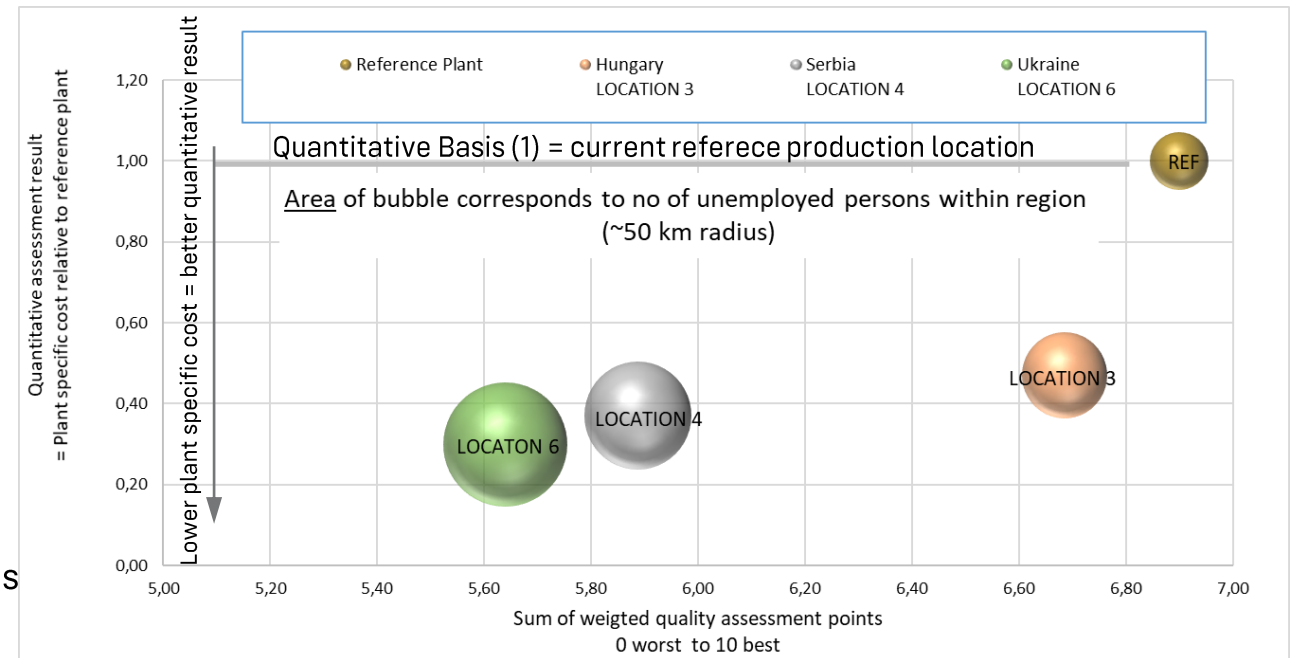
Highest logistics cost are expected for UA (no EU, distances)

Qualitative Evaluation:

Non-EU locations show a disadvantage related to infrastructure

UA offers best long-term potential with respect to personnel resources
At competitive cost

High value of "Corruption Perception Index" is valid for UA and SRB



Incentives for investment is not considered in quantitative evaluation:

Up to 50% for Hungary

Up to 10 % for Serbia/Novi Sad (up to 50% in special strategic cases)

Non for Ukraine (will be available in the future)

Competitive Production Location

Decision for location

- Decision for location was made by the customer for a location in Serbia based on the following criteria:
 1. Result of the specific comparison of location carried out during the project
 2. Availability of personnel with good education at competitive salary level.
 3. Availability of a potential partner as investor for the building (Build to Lease)
 4. Risk evaluation with involvement of known enterprises with existing production locations on site
 5. Option of subsidies for investment