International Logistics Facility location – international network management Workshop 6



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How to design the most effective international distribution network?





Facility location - international network management



Formula for Domain Point:



C(X;Y)- coordinates of the optimal point X/Y

- Mi coordinates for delivery points (markets)
- Si coordinates for supply points (natural resources)
- *Di* number of transportation units (goods to be sold)
- di number of transportation units (material and resources)
- *Ri* transportation rate for goods delivery (markets)
- ri transportation rate for materials and resources

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Facility location – international network management Methodology:



- Create a graph (net) over the geographical map (i.e, map of Europe) and put an appropriate scale on x/y coordinates.
- 2. Define x/y coordinates for all points of supply (S) and demand (M)
- 3. Enter all input data to the appropriate defined, structured table.
- 4. Based on the presented **formula** perform all calculations. Evaluate coordinates for the new localization of plant.
- 5. Point out the optimized localization of the logistics point on the map.
- 6. Perform some "what if" analysis for different business scenarios.

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Project: Facility location

Evaluation Table (1/2): numenator



	Procurement / Markets	Transport rate	Transport units	Coordinates		Calculation (formula)	
	[names]	[R] [r]	[D] [d]	Mi	Si	X	Y
	PROCUREMENT	[EUR/t/km]	[t]	х	у		
1							
2							
3							
4							
5							
	TOTAL:	-	0		TOTAL:	0	0
	MARKETS			х	у		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
	TOTAL:	-	0	2	TOTAL:	0	0

Project: Facility location



Evaluation Table (2/2): denominator

			Calculatio	ulation (formula)	
PROCUREMENT			X	Y	
0			0	0	
0			0	0	
0			0	0	
0			0	0	
0			0	0	
		TOTAL:	0	0	
MARKETS					
0			0	0	
0			0	0	
0			0	0	
0			0	0	
0			0	0	
0			0	0	
0			0	0	
0			0	0	
0			0	0	
0			0	0	
	4	TOTAL:	0	0	
	NUMERATOR total:		0	0	
	DENOMINATOR total:		0	0	
			X	Y	
	DOM	AIN POINT:			



Questions?



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