

# **International Logistics**

## **Modes of Transportation**

### **Workshop 4**



# ***Project***



***The international transportation systems:***

***How to select the best mode of transportation?***



# ***Project***

## **TASK:**



**Firm Y (production plant) is located in Gdansk (Poland). They plan to establish a new market for their products in Great Britain.**

**The Firm manufactures mobile phones for elderly customers with special functions and communications capabilities (myphone1050 simply).**

**The management of the company has decided to open one big warehouse in a greater London municipal area. so they plan to sell 100 000 phones annually (20 / standard 20 ft containers).**

**By implementing a *comparison in-pair approach*, evaluate the best mean of transportation for transporting phone mobile products from Gdansk (Poland) to London (Great Britain).**



# ***The best mode of transportation?***



## **Modes of transportation:**

1	road
2	rail
3	air
4	water - sea
5	water - inland

**Combine?**

# ***The best mode of transportation?***

- comparison in pair approach

**KLPI (COST):** What is less expensive?

	1	2	3	4	5	Points
1		1				1
2	0					0
3						0
4						0
5						0
						1

1	road
2	rail
3	air
4	water - sea
5	water - inland

# ***The best mode of transportation?***

- comparison in pair approach

**KLPI (COST):** What is less expensive?

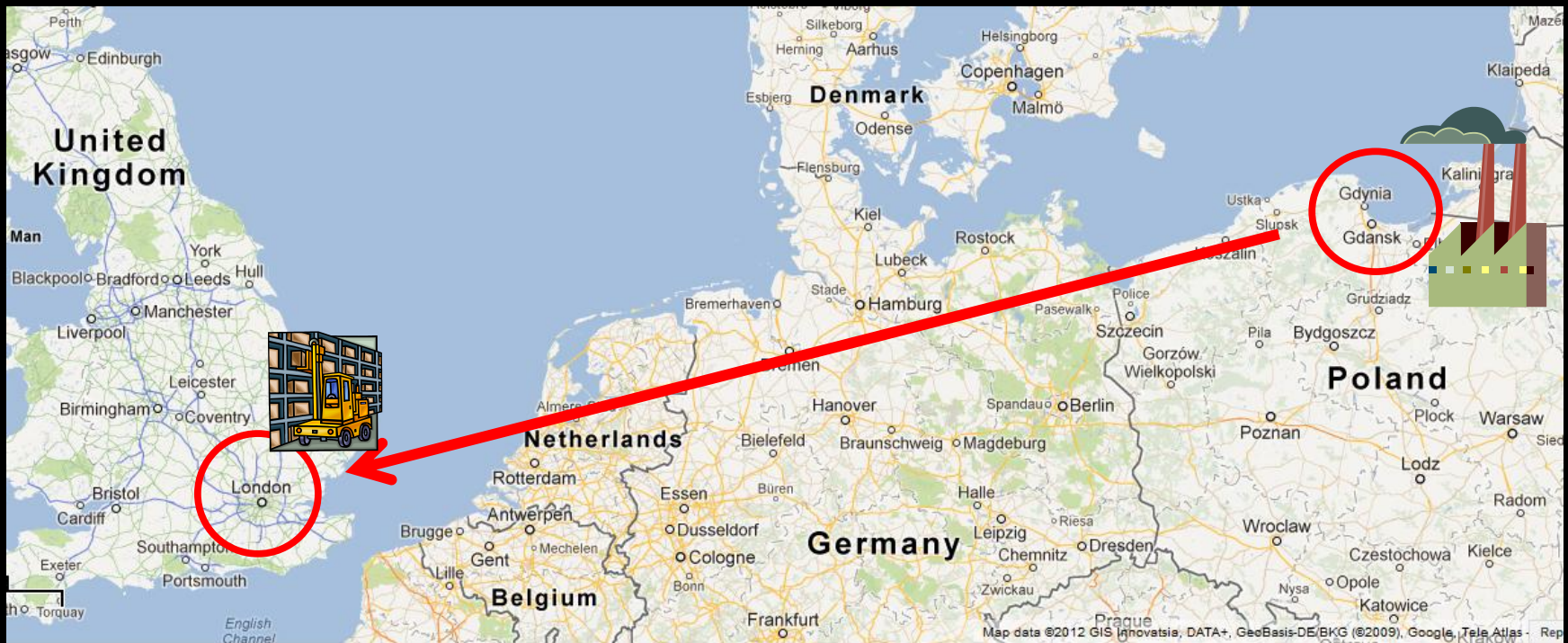
	1	2	3	4	5	Points
1		1	1	1	1	4
2	0		1	1	1	3
3	0	0		1	1	2
4	0	0	0		1	1
5	0	0	0	0		0
						10

1	road
2	rail
3	air
4	water - sea
5	water - inland

# ***The best mode of transportation?***

- comparison in pair approach

## **Geography**



# ***The best mode of transportation?***

## **- Key Logistics Performance Indicators (KLPI)**

<b>KLPI: SCORE:</b>	6 (max)	5	4	3	2	1 (min)
<b>Term - duration</b>	A	R	C	RL	WS	WL
<b>Delivery Time - On time</b>	A	R	C	RL	WS	WL
<b>Costs</b>	RL	WS	WL	C	R	A
<b>Route flexibility</b>	R	C	A	RL	WS	WL
<b>Risk of delay</b>	R	A	C	WS	RL	WL
<b>Polution</b>	WL	RL	WS	C	A	R
<b>Inventory costs</b>	A	R	C	RL	WS	WL

**A**– Air plane

**R** – Road / truck

**RL** – Railway

**CT**– Combine transport (road&railway)

**WS** – Water Sea

**WL** – Water inland

# ***The best mode of transportation?***

## **- Key Logistics Performance Indicators (KLPI)**

KLPI:    MODE:	A	R	RL	WS	WL	R&RL
Term – duration [h]	3	12	40	150	200	60
Delivery - On time [%]	80%	95%	70%	50%	40%	60%
Costs [EUR/container]	1000	300	200	100	100	500
Route flexibility [%]	80%	99%	10%	20%	5%	50%
Risk of delay [h]	1	2	8	24	30	16
Polution[1-5 points]	3	5	2	2	1	3
Inventory costs [EUR/item]	1	2	3	4	4	3

**A**– Air plane

**R** – Road / truck

**RL** – Railway

**CT**– Combine transport (road&railway)

**WS** – Water Sea

**WL** – Water inland

# *The best mode of transportation?*

## - Key Logistics Performance Indicators (KLPI)

Tool: **Excel**

Transportation\_template - Microsoft Excel

Narzędzia główne Wstawianie Układ strony Formuły Dane Recenzja Widok Deweloper

Wklej Wytnij Kopia Malarz formatów Schowek Czcionka Wyrównanie Ogólne Formatowanie warunkowe Formatuj jako tabelę Style Wstaw Usun Format Komórki Autosumowanie Wypełnienie Wyczyść Sortuj i Znajdź i filtruj Edycja

A1

Transport in SCM / Mode selection		
Modes of transportation / scope of analysis		
1		
2		
3		
4		
5		

Key Logistics Performance Indicators (KLPI)		Priority [100%]
1		15%
2		40%
3		5%
4		25%
5		15%
		100%

Mode / Means of transportation:

- 1 road
- 2 rail
- 3 air
- 4 water - sea
- 5 water - inland
- 6 MULTIMODAL / combine modes (road, rail)

Key Logistics Performance Indicators (KLPI):

- 1 cost of transportation
- 2 time factor / delivery on time
- 3 term of delivery / duration
- 4 customs costs
- 5 risk of delay
- 6 route flexibility
- 7 inventory management - economics of scale

United Kingdom

Netherlands

Germany

Belgium

Denmark

Poland

Gotowy

KLPI 1 / 2 / 3 / 4 / 5 Ranking

100%

10:48 2012-11-21

# Questions?



- dr Marian Krupa