

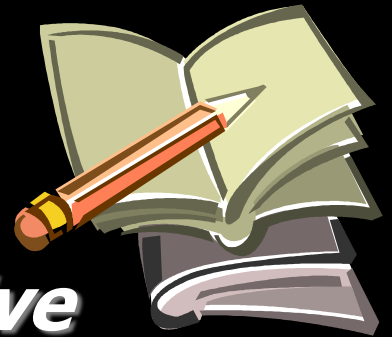
International Logistics

Transportation Model

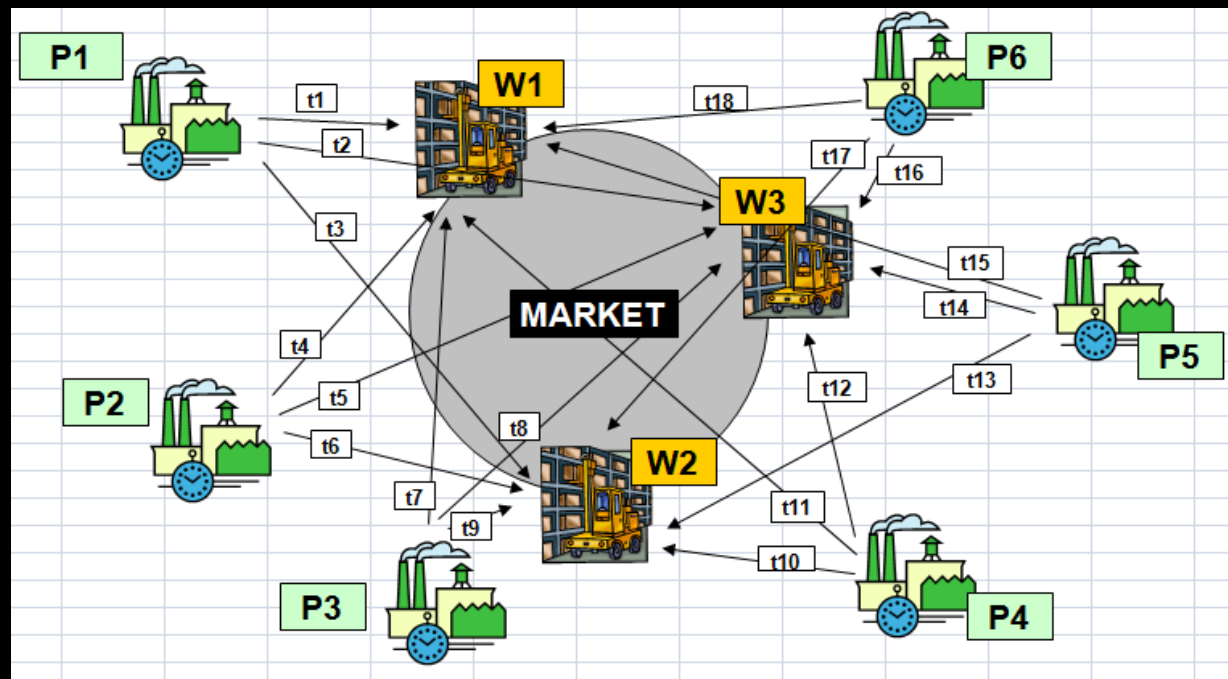
Workshop 5



Project



How to build the most cost effective transportation system?

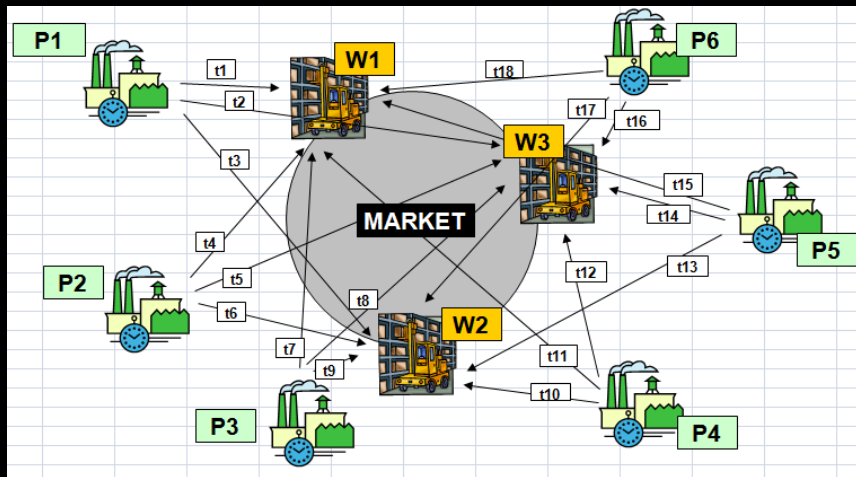


TRANSPORTATION MODEL



Transportation model – example:

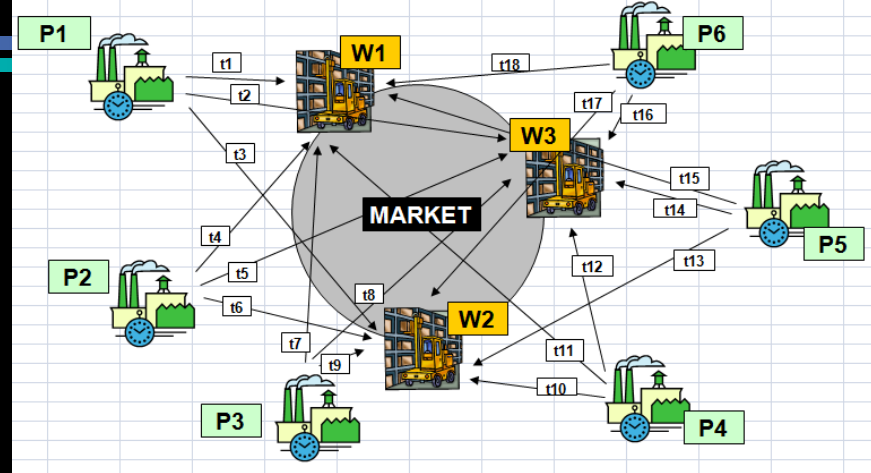
How to build the most cost effective transportation system?



Solution: linear programming / transportation model algorithm

Linear programming (LP, or linear optimization) - a mathematical method for determining a way to achieve the best outcome (such as maximum profit or lowest cost) in a given mathematical model for some list of requirements represented as linear relationships.

Transport. model – table:



PLANTS (SUPPLY)	Number of shipping units / production	Real / planning number of units	Arches (routes)	W	Number of units	Time of shipment per 1 unit [min.]	Total shpment time	Warehouse (DEMAND)	Demand for units	Real number of units delivered	difference	
P1			t1	W1				W1				
			t2	W3				W2				
			t3	W2				W3				
P2			t4	W1			Total:	0	0	Total:		
			t5	W3				DEMAND	Shipment			
			t6	W2								
P3			t7	W1				SUPPLY				
			t8	W3								
			t9	W2								
P4			t10	W2							DEMAND	
			t11	W1								
			t12	W3								
P5			t13	W2				Shipment				
			t14	W3				Delivery				
			t15	W1								
P6			t16	W3								
			t17	W2								
			t18	W1								
Total:	0	0	Total transport time:					minutes				
	SUPPLY	SHIPMENT			0 shipments			hours				
						COST:		EUR				

Questions?



- dr Marian Krupa