SUPPLY CHAIN MANAGEMENT

CASE STUDY - THE ROLE OF WASTE IN INBOUND LOGISTICS_WST IDENTIFICATION

Presented By
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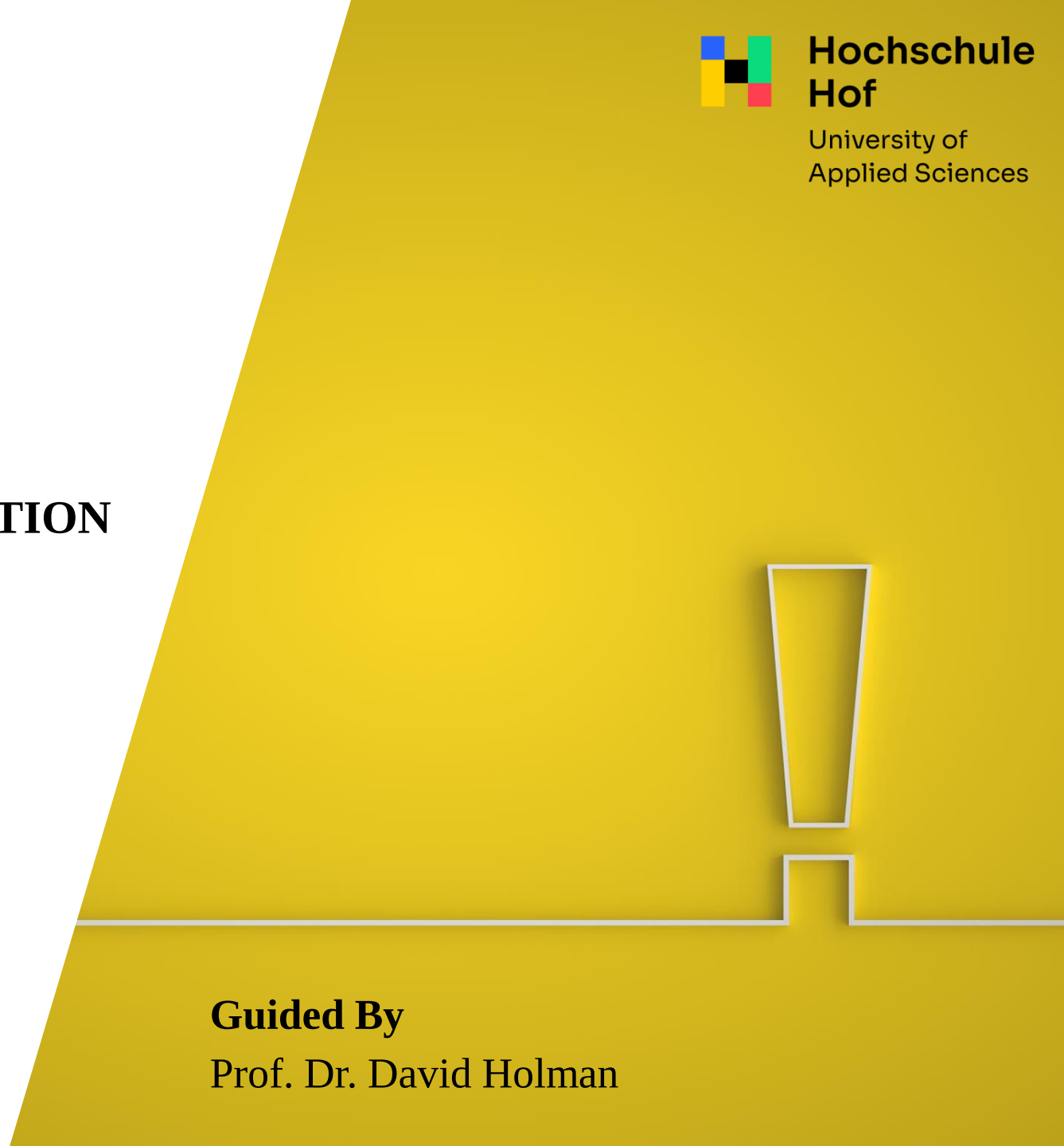

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Guided By
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1. Waste in Inbound logistics of delivery process

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	Supplier 1 : Tawesco	Supplier 2 : Varroc
Overproduction	Every week	Every day
Inventory	One week volume	Every-day volume
Transportation	5 working days	Daily deliveries
Space	Demand dependency.	Very high utilization capacity.
Motion	Requirement of high manpower	Third party manpower is enough
Delay/Waiting	Relatively no delay for the customer because of independency.	High chances of vehicle delay for the next customer to arrive.
Errors	Very minimum chance of errors due to low delivery rate	Significant chance of errors due to high delivery rate

2. Utilization of weekly used volumes and weights

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Attributes	Calculated value / unit	Calculated value / week
Volume capacity (cubic meter)	113.19	1131.9
Weight capacity (tons)	24	240

- Volume capacity: ((7,7+7,7)*2,45*3)→ (15,4*2,45*3)→113.19 m^3
- Weight capacity: 24 ton.
- Frequency: 10* week.
- Volume capacity/ week: 113.19*10=1131.9 m^3.
- Weight capacity/ week: 24*10= 240 ton.

3. Quantification

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Supplier	No of Containers	Dimension of container in m^3	Total Dimension of each container in m^3	Dimension of container in kg	Total container in kg
TAWESCO	12	1.728	20.736	666	7992
	14	2.16	30.24	386	5404
	40	0.84	33.6	678	27120
	4	0.3102	1.24	143	572
Total (Daily)	**70**		**85.82**		**41088**
Total (Weekly)	**350**				**205440**

Volume of Truck in cubic meter	100	120
Dimension in m^3	101.184	113.19
Frequency	9	10
Weekly Capacity	216000	240000
Utilization	**95.1**	**85.6**

Cost / Delivery (CZK)	11857
Cost / Year (CZK)	5,122,224
Annual Cost for transport of Air (CZK)	**2,919,667**

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Supplier	No of Containers	Dimension of container in m^3	Total Dimension of each container in m^3	Dimension of container in kg	Total container in kg
VARROC	18	1.2	21.6	80	1440
	6	1.164	6.984	106	636
	54	1.08	58.32	63	3402
	18	1.2	21.6	80	1440
Total (Daily)	**78**		**86.9**		**5478**
Total (Weekly)	**390**				**27390**

Volume of Truck in cubic meter	100
Dimension in m^3	101.184
Frequency	6
Weekly Capacity	144000
Utilization %	**85.3**

Cost / Delivery (CZK)	11415
Cost / Year (CZK)	3287520
Annual Cost for transport of Air (CZK)	**1,883,748**

4. Value Addition in context to a customer

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Customer Satisfaction revolves around these insights

- Cost.
- Quality.
- Delivery.
- Responsiveness.
- Innovation.

- **Value Added Logistics (VAL)**

The creation of a higher added value in the logistics chain. Every transport company can move products from A to B, but it is difficult to stand out with that in a market full of competition.

- **Value Added Services**

An industry term referring to non-core services. Examples in logistics include (and are not limited to) packaging services or the pick-up of the goods form the customer's premises.

5. System pyramid

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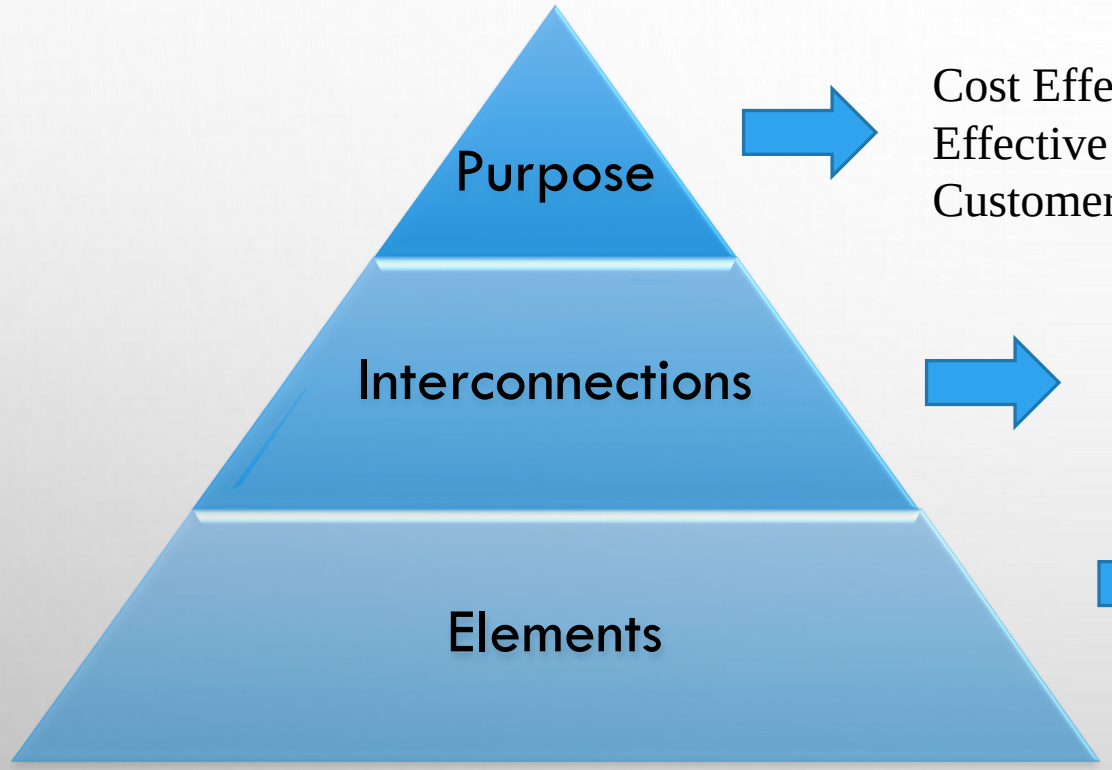

Cost Effectiveness, Service Lead time, Effective utilization, On-time delivery, Customer Satisfaction

Effective Communication between every suppliers and manufacturer, Data management strategy

Trucks, Container, Stamping equipment, Lights

Purpose of Direct delivery and Milk run

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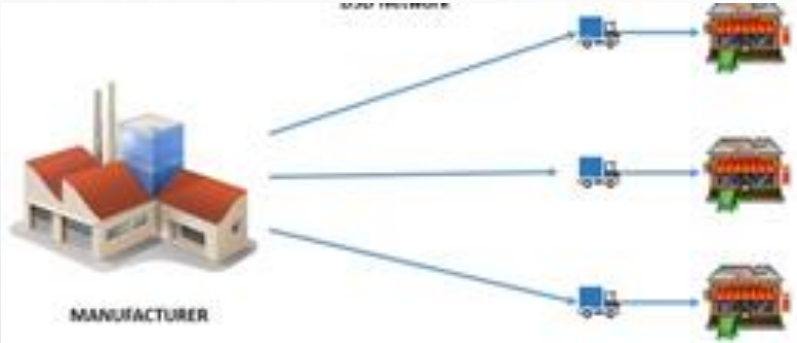

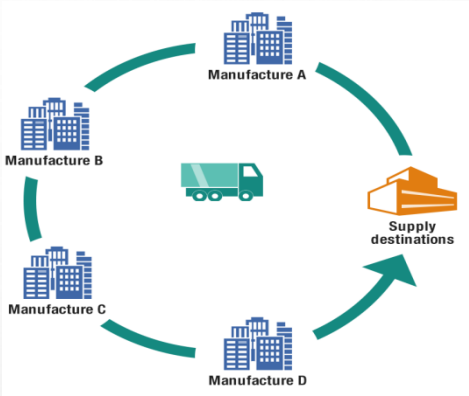

Purpose of Direct delivery :

- Every Suppliers sent deliveries independently to manufacturing unit.
- Delivery cost will be higher than Milk run which utilizes more transportation.
- Service Lead time will be minimum.
- Lower utilization of vehicle space.

Purpose of Milk run:

- Joint supply of deliveries independently to manufacturing unit.
- Fewer transshipment which lower transport costs.
- Just in time delivery possible and reduced transport time.
- Higher utilization of vehicle space.

Application of Wholeness Synthesis and Wholeness Analysis in the Milk-Run delivery option

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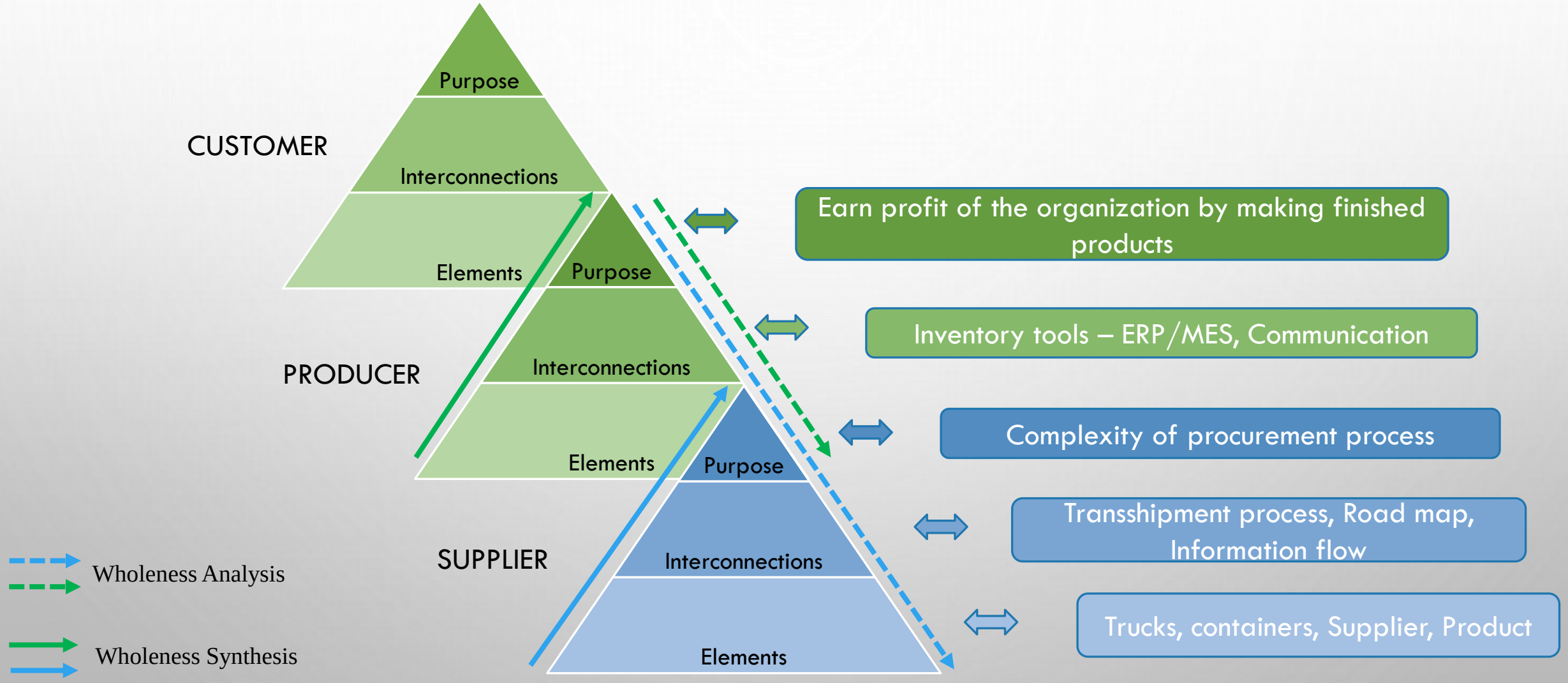

6. Reduced wastes by application of particular 4 Lean Principles

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4 Lean Principles	Waste produced
Pull	Over production
	Inventory
	Transport
One-Piece Flow	Waiting
Takt	Delay / Waiting
Zero Defects	Errors

THANK YOU