International Logistics

Management



• dr Marian Krupa

AGENDA:

- **1.** Introduction to the International Logistics Management
- 2. International Supply Chain Management (SCM)
- 3. IT and International Logistics Management ERP software overview
- 4. International transportation systems
- 5. International logistics structures and networks management
- 6. Global Logistics Excellence case study
- 7. Strategic and operational information management in Logistics towards Global Business Intelligence (BI)

7. Strategic and Operational Information Management in International Logistics

Strategy Strategy Management Combined Logistics Strategies Supply Chain Strategy Management and BI



Strategy





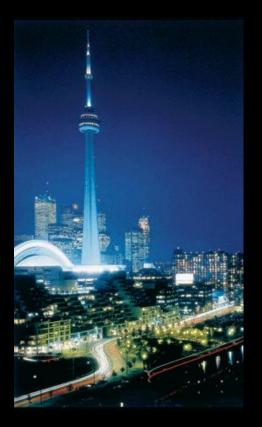
STRATEGY and logistics mgmt. – introduction:

- In general, management, logistics management is focused on operational perspective – day-to-day activities.
- Howerver, there is a strong relationship of enterprise strategy to logistics and supply chain management.
- For many business models, supply chain strategy is a key component that drives the growth of the enterprise.



Strategy is direction and destination







STRATEGY – definitions:

- Planning and configuring the organization for the future in accordance with stakeholder expectations (*business goals for the future*).
- Particular long term plan for success (if you don't plan success you plan ...)

Organization without strategy is like a ship without a compass!

STRATEGY – definitions:

- The path by which you create sustainable (permanent, long-lasting), long term <u>competitive</u> <u>advantage</u>.
- It is a long-term and it is concerned with the type of decisions that require <u>substantial investment</u> of time, resources and capital;
- Decisions that will have an impact <u>far into the future</u> (3-5 years).



STRATEGY - a set of key answers to be delivered

- ✓ What business (core) are we in?
- What products and services do we offer?
- ✓ To whom?
- ✓ At what price?
- On what terms?
- Against which competitors?
- ✓ On what basis will we compete (KLPI)?





STRATEGY is... plan, pattern, position, ploy and perspective

- As a plan how do we intend to realize our goals (business objectives)?
- As a pattern strategy is the "rhyme and reason" that emerges in the course of making the endless decisions (management style).
- As a position strategy is the stance (position) managers take on key issues, such as: be the low-cost provider, (preferences / priorities).
- As a ploy (game)- strategy is a ruse* (trick), it relies on secrecy and deception.
 - As a **perspective** strategy is part of a vantage point (point of <u>observation</u>); big picture of our business model.

Strategy Management





STRATEGY MANAGEMENT – definitions:

 The SET of managerial (business) <u>decisions and</u> <u>actions</u> that determines the long-run performance of an organization.

Stephen P. Robins, Mary Coulter, Management, Pearson educational International/ Prentice Hall, USA 2005, p. 180.

 The PATTERN of organizational <u>moves and</u> <u>managerial approaches</u> used to achieve organizational objectives.

Arthur A. Thompson, A.J. Strickland, Strategic Management. Concepts and Cases, R.D. Irwin, USA 1993, p. 6.



STRATEGY MANAGEMENT – definitions:

The strategic management process consists of four steps:

✓ PLAN
 ✓ ORGANIZE
 ✓ IMPLEMENT
 ✓ CONTROL
 ✓ ?



Supply Chain Strategy Management (SCSM):

 SCSM: Process of long term planning, organizing, implementing and controlling the entire logistics system (supply chain) from the global perspective (vantage point) to create sustainable <u>competitive advantage</u> (extraordinary business value).



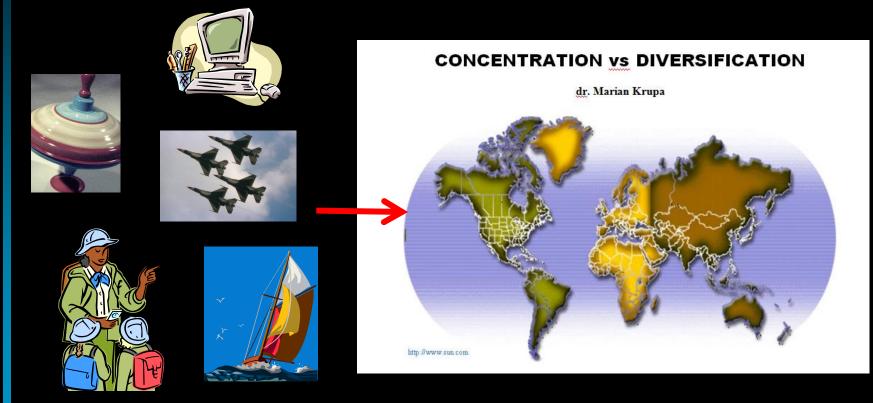
STRATEGY MANAGEMENT as a ploy

• It is a business game ...





STRATEGY MANAGEMENT business game



GAME KEY OBJECTIVE:

It is to invest the capital into five different industries on six global markets to achieve the highest level of return (ROI).

Combined Logistics Strategies





LOGISTICS STRATEGIES (Logistics MIX)

- Logistics (supply chain) strategy definines the service levels (quality level – 8R model / KLPI) at which its logistics organization is at its most cost effective.
- Supply chains <u>are constantly changing</u> and evolving, a company may develop a number of logistics strategies for specific product lines, specific countries or specific customers.



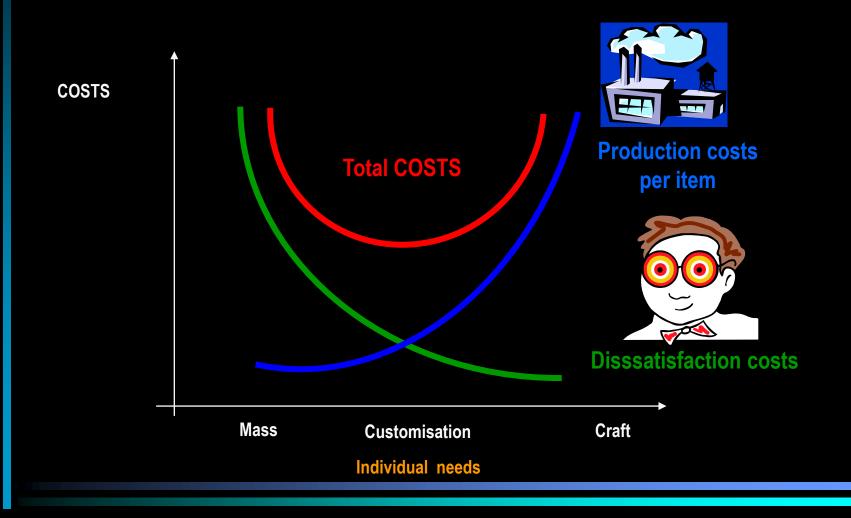
Logistics STRATEGIES (manufacturing model / MIX):

CRAFT production – individual needs / low volume / high cost
 MASS production – standard model / high volume / low cost
 MASS CUSTOMISATION – individual /standard / moderate cost of production

LEAN production – Pull / JiT / TPS / MTO (Make-to-Order)
 AGILE Supply Chain – Unpredictable demand, Postponement production (late stage customisation)



Mass vs Customisation (total logistics cost model)



MASS CUSTOMISATION CASE STUDY Modul Production for C-Class Mercedes

9 models of engines 2 steering wheels 2 gears 3 market versions = 96 standard options 14 paint types 5 colours of interior desing 3 types of car upholstery 80 optional extras

For example: The car door cover 36 part of 1600 options

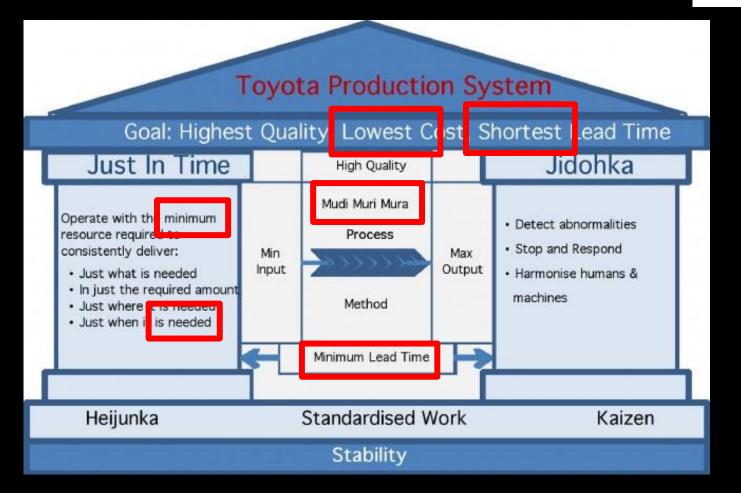
> In total: 6 635 000 000 000 000 options



LEAN production and logistics strategy

- LEAN is concerned with eliminating waste in a pullbased (mass production) value stream of activities.
- Lean/TPS (Toyota Production System) points out the need to elminate any type of waste (*MUDA*):
 - 1. Overproduction (MTS/make-to-stock) vs MTO
 - 2. Waiting KANBAN approach / pull inventory model mgmt.
 - 3. Transportation adding value to the idle time
 - 4. Inappropriate processing overprocessing
 - 5. Unnecessary inventory Just-in-Time inventory mgmt.
 - 6. Unnecessary motion in-plant erratic (chaotic) transportation
 - 7. Defects low quality, wasteful downtime / TQM

TPS and Lean Management

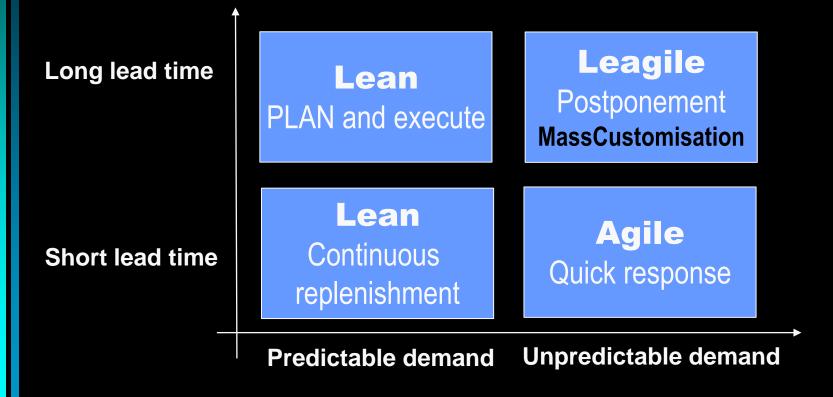


ΤΟΥΟΤΑ

http://guardianlv.com



Combined Supply Chain Strategies / SUPPLY model



Lead time – the time between placing an order and receiving iventory

Mangan, Lalwani, Butcher, Javadpour, Global Logistics and Supply Chain Management, Wiley & Sons, 2012.

Supply Chain Strategy Management and Business Intelligence





OBJECTIVE

Supply Chain Strategy Management:

strategy

B

The strategy management as a value creation process for the entire supply chain





The contemporary Supply Chain Strategy Management Headquarters – towards BI





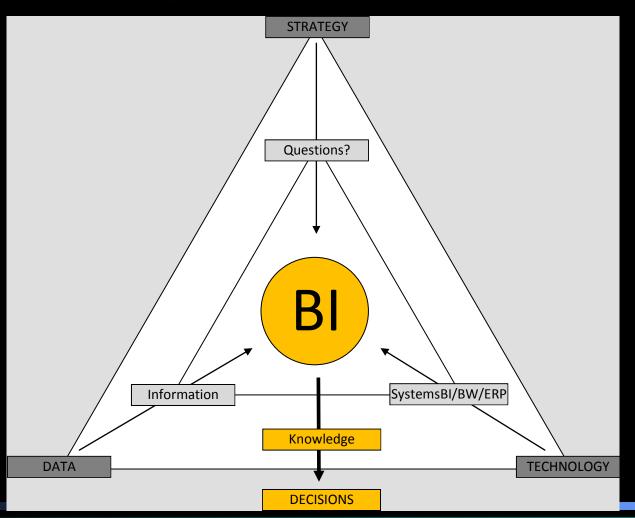
Business Intelligence (BI) – definitions:

- Business intelligence (BI) is an umbrella term that includes:
 - the (software) applications,
 - (IT) infrastructure and tools,
 - and best practices / benchmarking

that enable access to and analysis of information to improve and optimize decisions and (business) performance [Gartner].



Business Intelligence Triangle [MK]:





Business Intelligence (BI) – objectives - BENEFITS:

- **B** includes:
 - understanding of a firm's internal and external strengths and weaknesses (SWOT);
 - understanding of the relationship between different data for better decision making;
 - **3.** detection of opportunities for innovation, and;
 - 4. cost reduction and optimal deployment of resources.



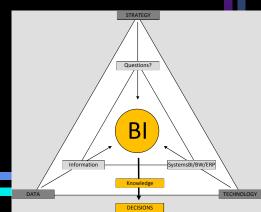
Business Intelligence (BI) – sotware functionalities:

- BI allows a wide range of users' activities, from:
 - search and navigation to advanced analytics,
 - enterprise data query,
 - reporting and analysis,
 - dashboards and visualization, and
 - Information Management



Business Intelligence (BI) – CONCLUTIONS:

- **B** is the process of
 - 1) collecting business data and
 - 2) turning it into information that is meaningful and
 - 3) actionable towards a strategic goal (strategy) by
 - 4) using Information Technology [MK].

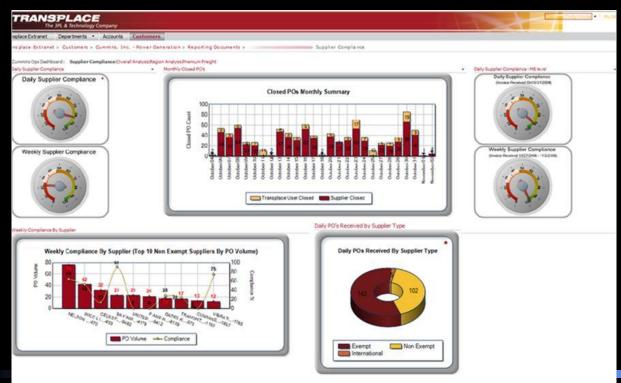


Business Intelligence (BI) - examples



B: Analysis and benefits

Logistics analysis – Deliver integrated, accurate, and timely intelligence reports across borders. Analyze loads, routes, carriers, tendering, bookings, customs filings, freight audit and payment on a by-order basis.



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BI: Analysis and benefits

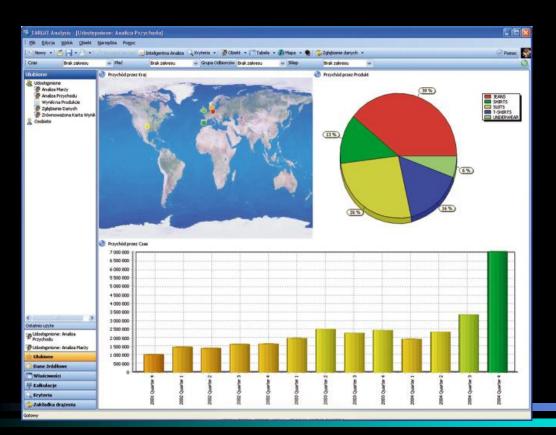
Financial analysis – quick financial evaluation of business performance. EVA type analysis, "what-if", benchmarking etc.

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B: Analysis and benefits

SALES analysis – quick evaluation of sales performance. Product life cycle mgmt., portfolio and sales offices mgmt, "what-if", etc.





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B: Analysis and benefits

Budgeting and controlling – quick evaluation of overall business performance. Profitability evaluation by department, product, region etc. Budget planning and control.

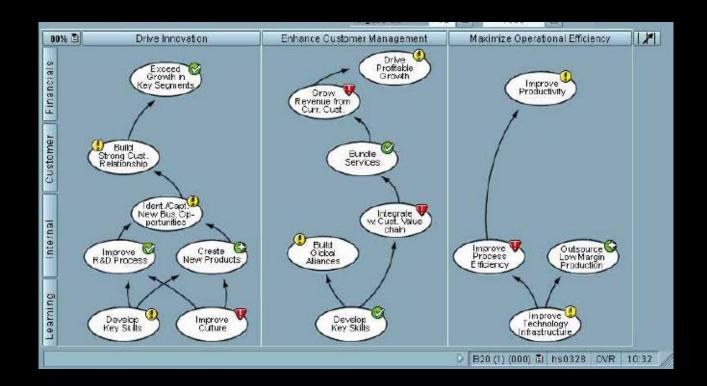
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BI in International Logistics Mgmt BI: Analysis and benefits

Strategic management — cause and effect analysis, multidimensional analytical models, long term performance analysis.





Business Intelligence: examples

✓ SAP ERP (IS)
 ✓ SAP BI OnDemand
 ✓ SAP LUMIRA

SAP Xcelsius (Dashboard Design)



Business Intelligence: SAP ERP

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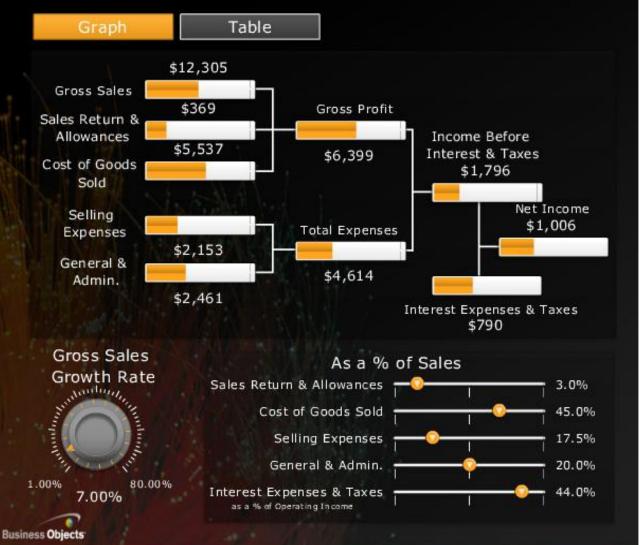


Business Intelligence: SAP BI onDemand

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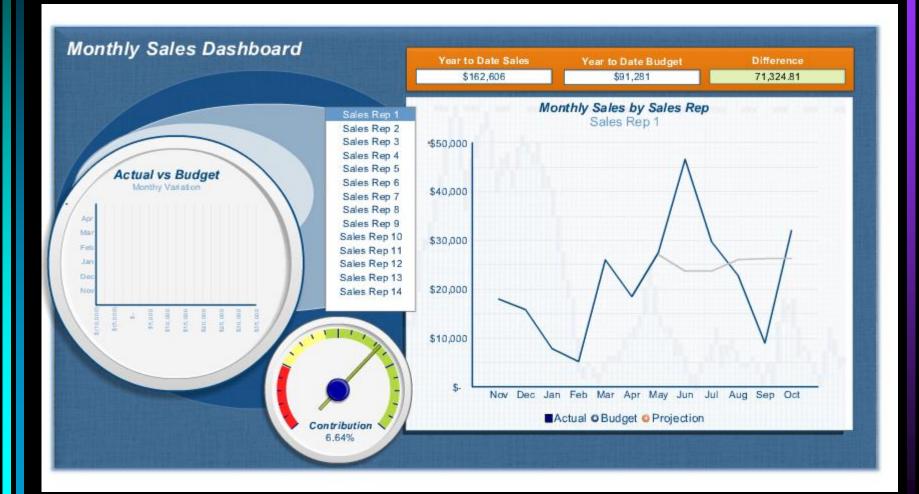
Business Intelligence: Xcelsius





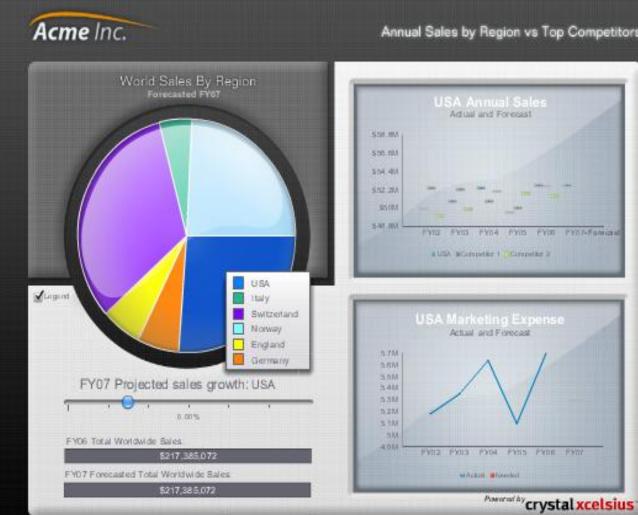
Business Intelligence: Xcelsius





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Annual Sales by Region vs Top Competitors

Market Presence

Questions ?



• dr Marian Krupa