

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



Supply Chain Strategy Management



STRATEGY and logistics mgmt. – introduction:

- In general, management, logistics management is focused on operational perspective – **day-to-day activities**.
- However, 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.

Supply Chain Strategy Management



Strategy is *direction and destination*



Supply Chain Strategy Management



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!*

Supply Chain Strategy Management



STRATEGY – definitions:

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

Supply Chain Strategy Management



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)?
- ✓ ?



Supply Chain Strategy Management



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 observation); big picture of our business model.

Strategy Management



Supply Chain Strategy Management



STRATEGY MANAGEMENT – definitions:

- The **SET** of managerial (business) decisions and actions 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 moves and managerial approaches used to achieve organizational objectives.

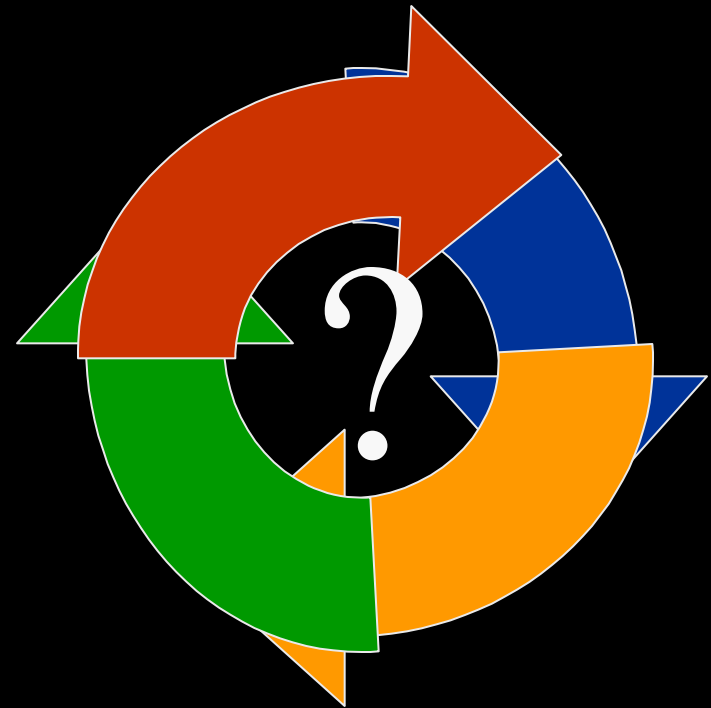
Arthur A. Thompson, A.J. Strickland, **Strategic Management. Concepts and Cases**, R.D. Irwin, USA 1993, p. 6.

Supply Chain Strategy Management

STRATEGY MANAGEMENT – definitions:

The strategic **management process** consists of four steps:

- ✓ **PLAN**
- ✓ **ORGANIZE**
- ✓ **IMPLEMENT**
- ✓ **CONTROL**
- ✓ **?**



Supply Chain Strategy Management



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** competitive advantage (extraordinary business value).

Supply Chain Strategy Management



STRATEGY MANAGEMENT as a ploy

- It is a business game ...



Supply Chain Strategy Management

STRATEGY MANAGEMENT business game



CONCENTRATION vs DIVERSIFICATION

dr. Marian Krupa



<http://www.sun.com>

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



Supply Chain Strategy Management



LOGISTICS STRATEGIES (Logistics MIX)

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

Supply Chain Strategy Management



Logistics STRATEGIES (manufacturing model / MIX):

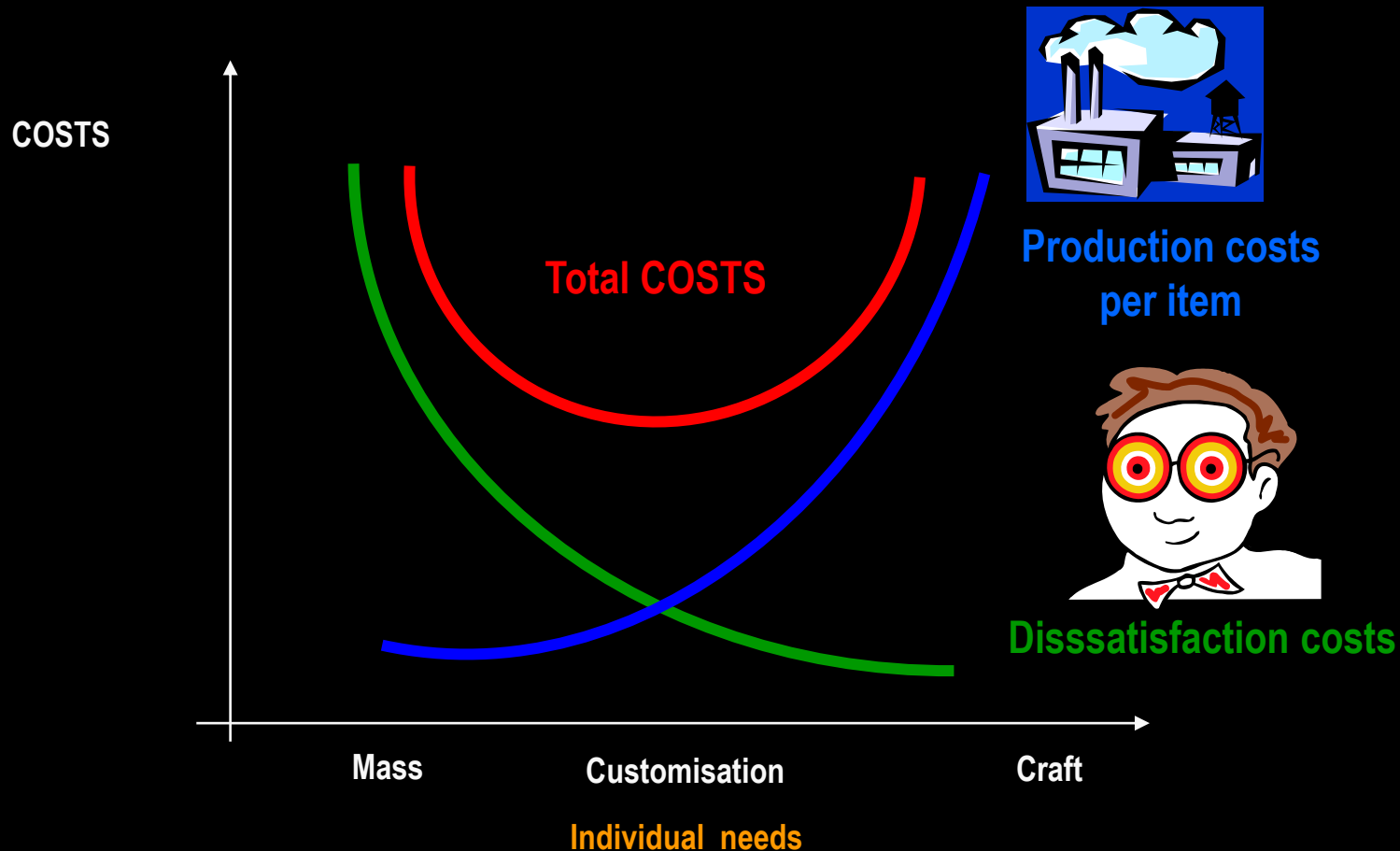
- ✓ **CRAFT production** – individual needs / low volume / high cost
- ✓ **MASS production** – standard model / high volume / low cost
- ✓ **MASS CUSTOMISATION** – individual / standard / moderate
cost of production

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

Supply Chain Strategy Management



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**

Supply Chain Strategy Management



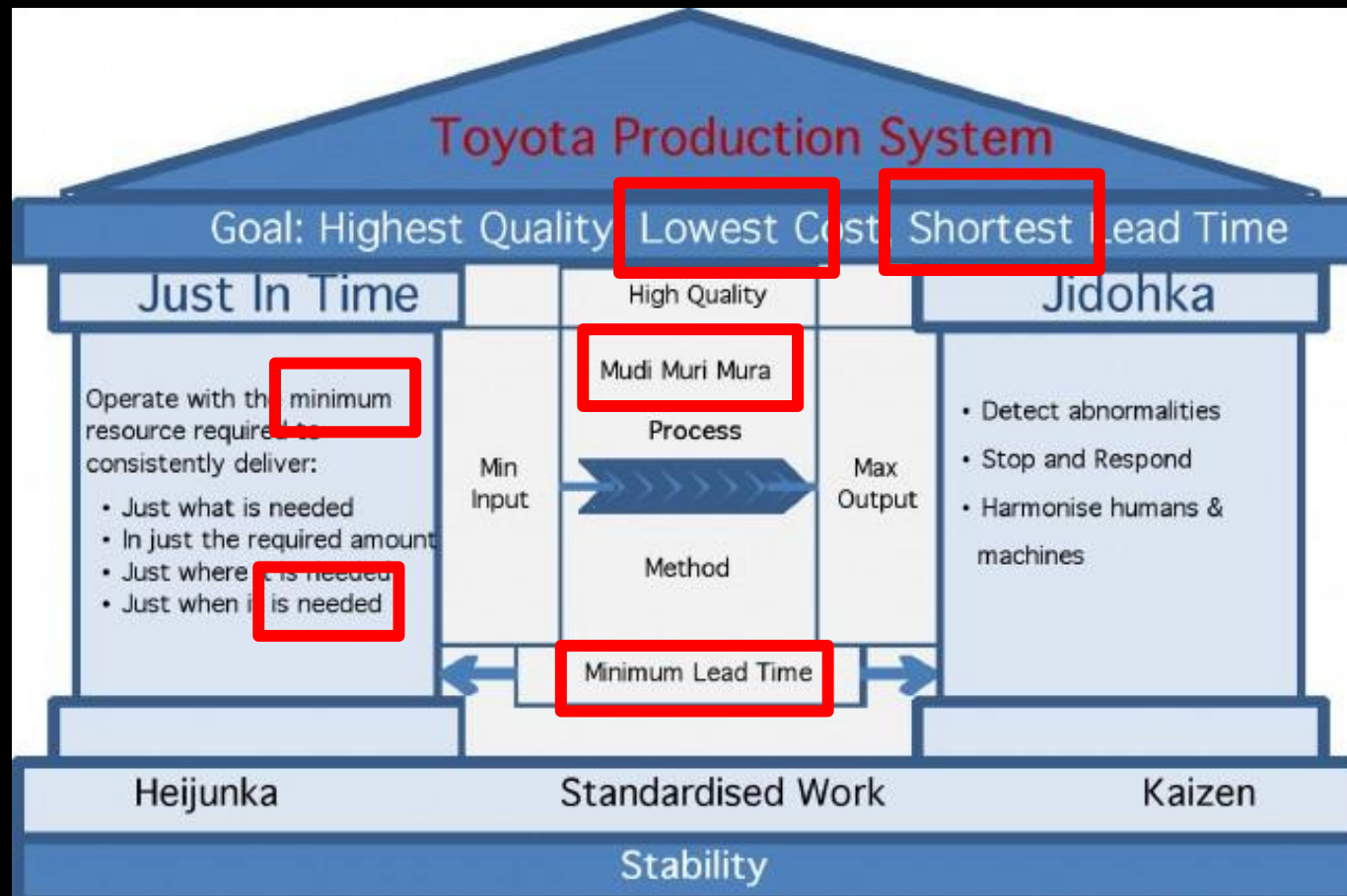
LEAN production and logistics strategy

- **LEAN** is concerned with eliminating waste in a pull-based (mass production) value stream of activities.
- Lean/TPS (**Toyota Production System**) points out the need to eliminate 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

Supply Chain Strategy Management



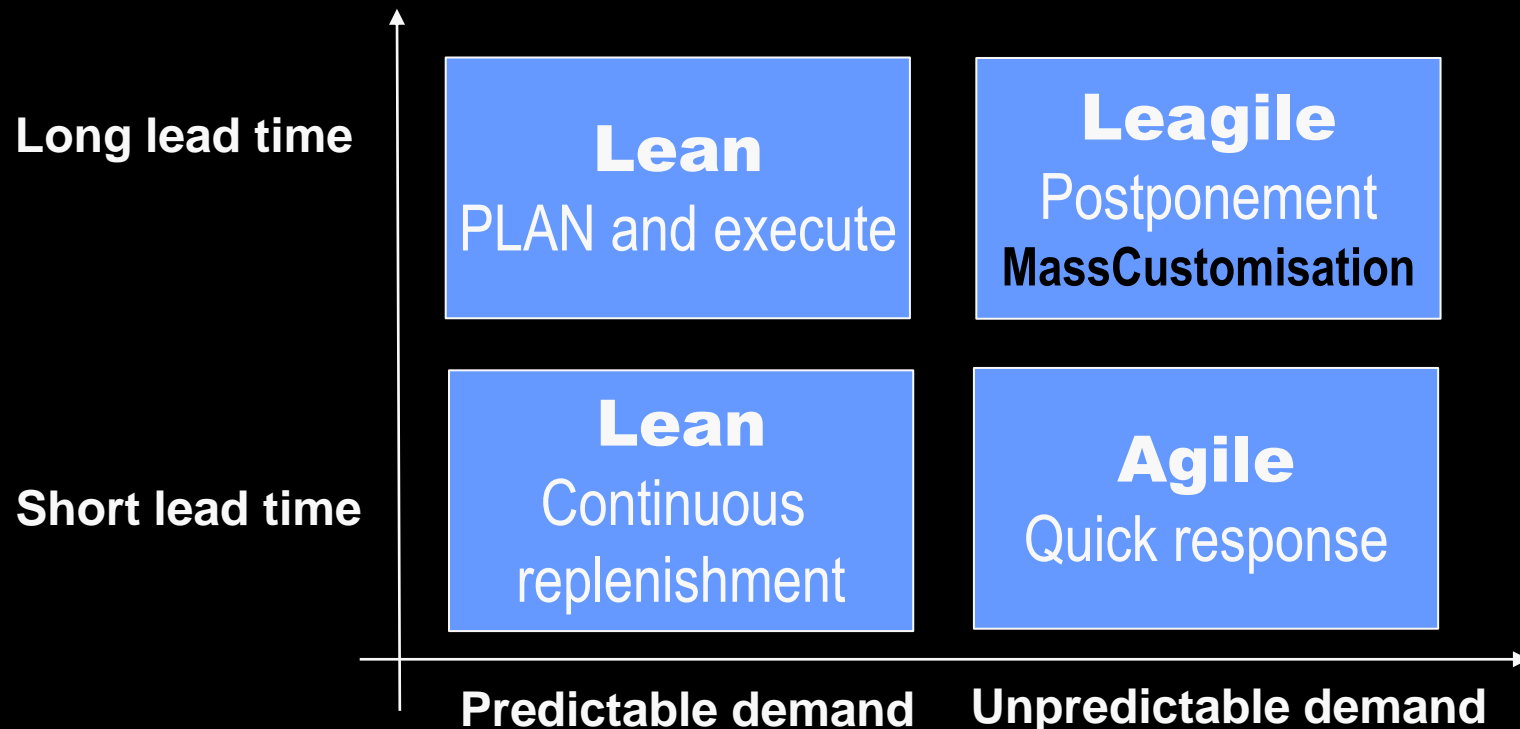
TPS and Lean Management



Supply Chain Strategy Management



Combined Supply Chain Strategies / SUPPLY model



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

Supply Chain Strategy Management **and Business Intelligence**

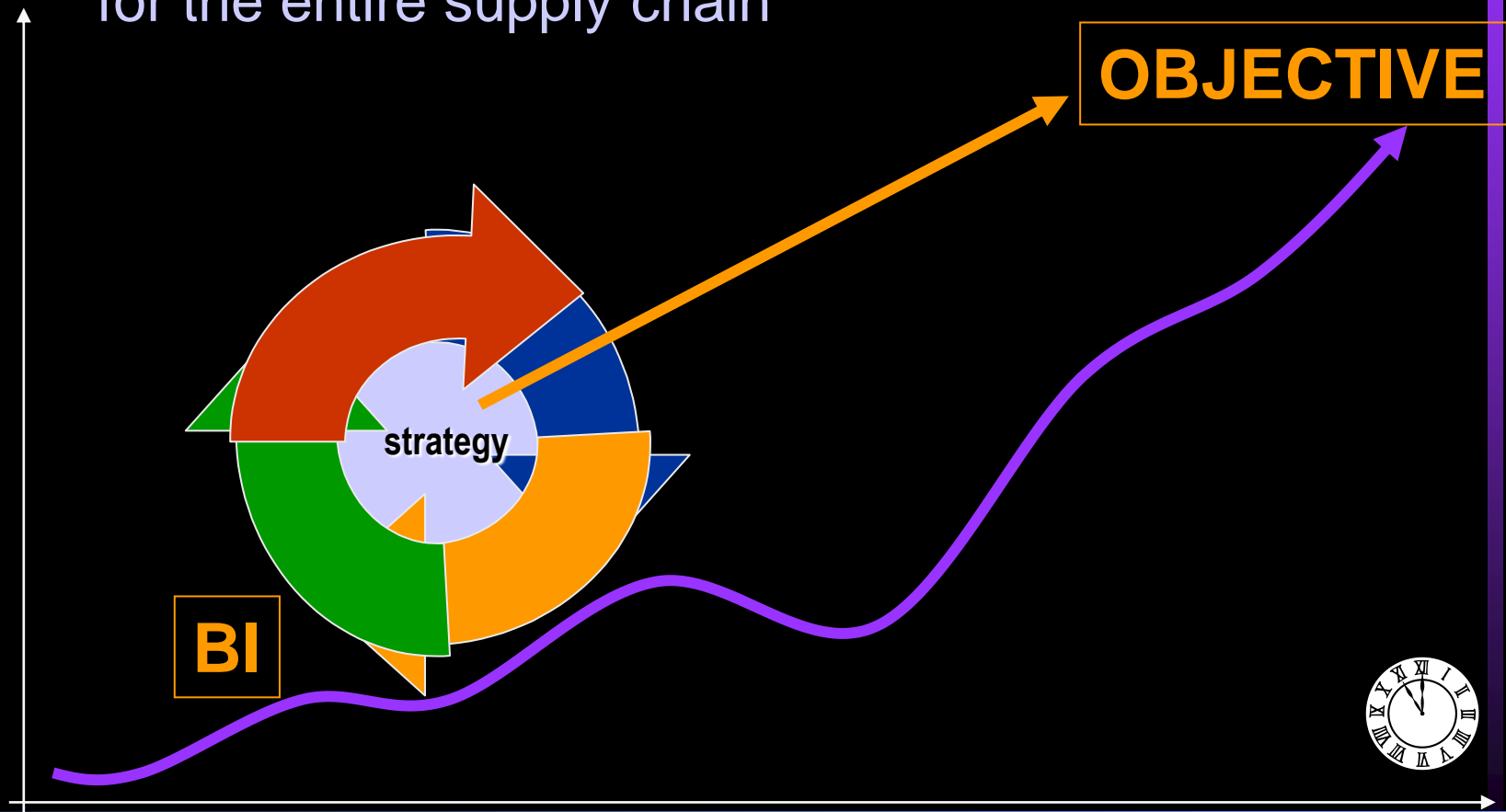


Supply Chain Strategy Management



Supply Chain Strategy Management:

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



Supply Chain Strategy Management



The contemporary Supply Chain Strategy Management Headquarters – towards BI



BI in International Logistics Mgmt



Business Intelligence (BI) – definitions:

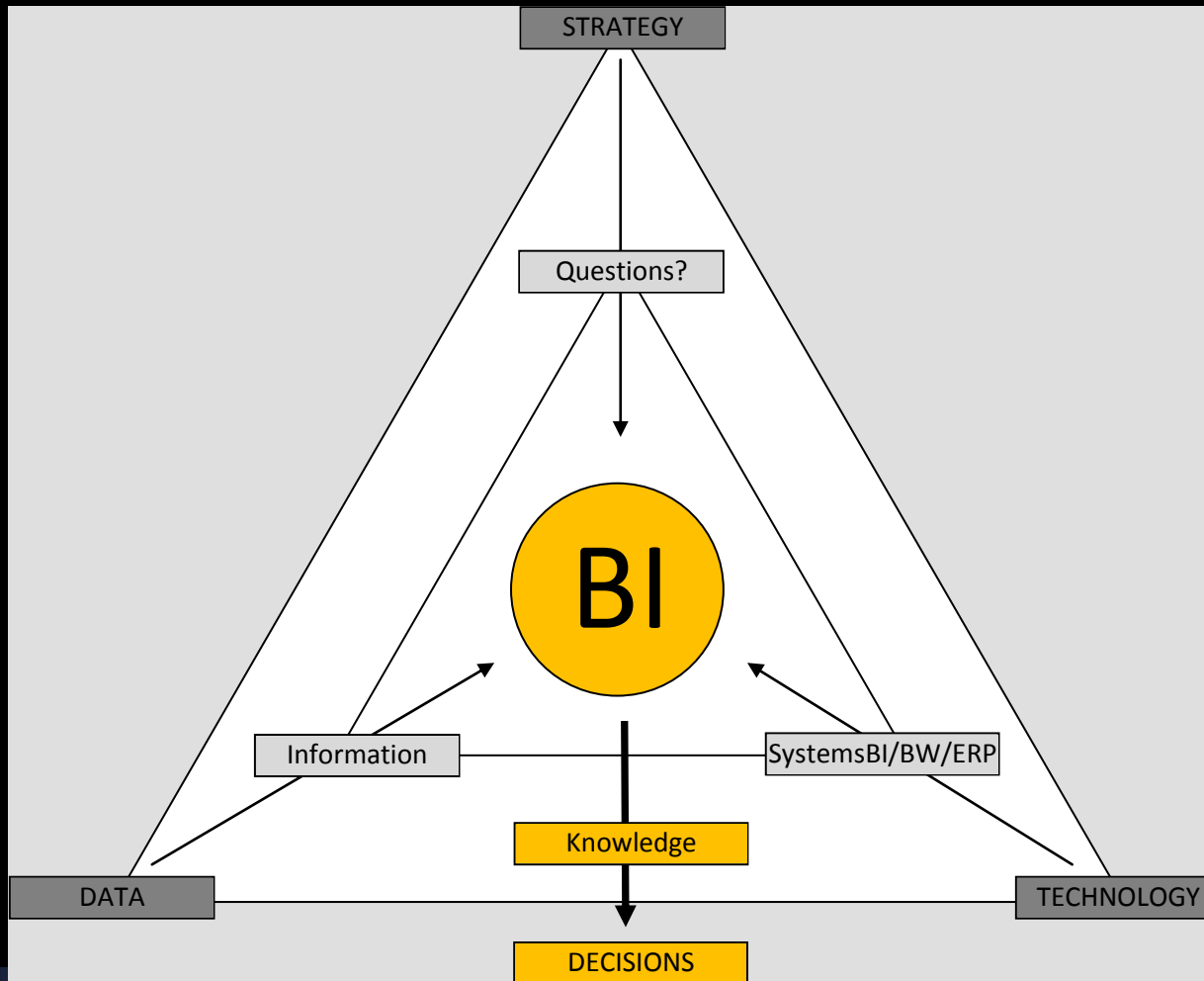
- Business intelligence (BI) is an umbrella term that includes:
 - the (software) applications,
 - (IT) infrastructure and tools,
 - and best practices / benchmarking

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

BI in International Logistics Mgmt



Business Intelligence Triangle [MK]:



BI in International Logistics Mgmt



Business Intelligence (BI) – objectives - **BENEFITS:**

- **BI** includes:
 1. **understanding** of a firm's internal and external strengths and weaknesses (SWOT);
 2. 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.

BI in International Logistics Mgmt



Business Intelligence (BI) – software functionalities:

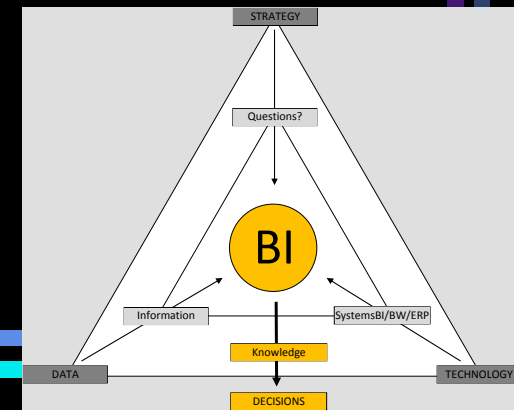
- **BI** allows a wide range of users' activities, from:
 - search and navigation to **advanced analytics**,
 - enterprise **data query**,
 - **reporting and analysis**,
 - dashboards and **visualization**, and
 - **Information Management**

BI in International Logistics Mgmt



Business Intelligence (BI) – CONCLUSIONS:

- **BI** 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)

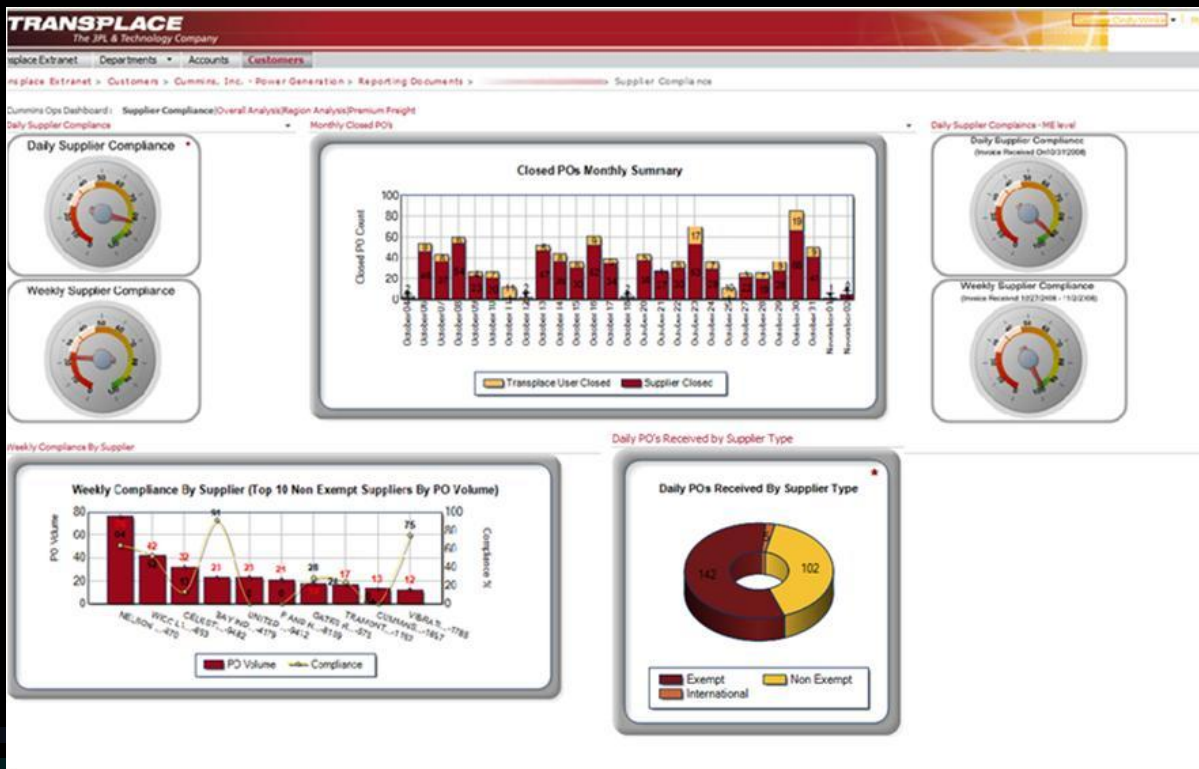
- examples

BI in International Logistics Mgmt



BI: 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.



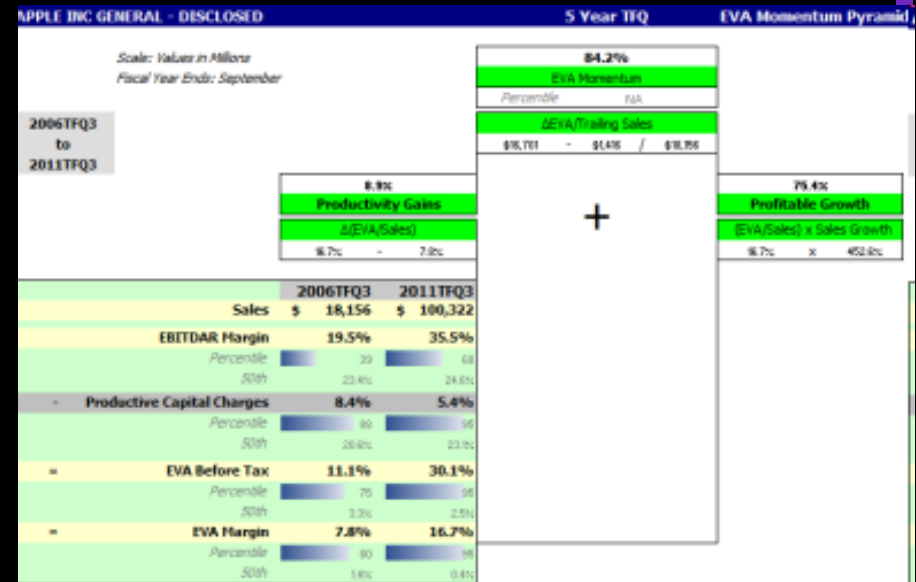
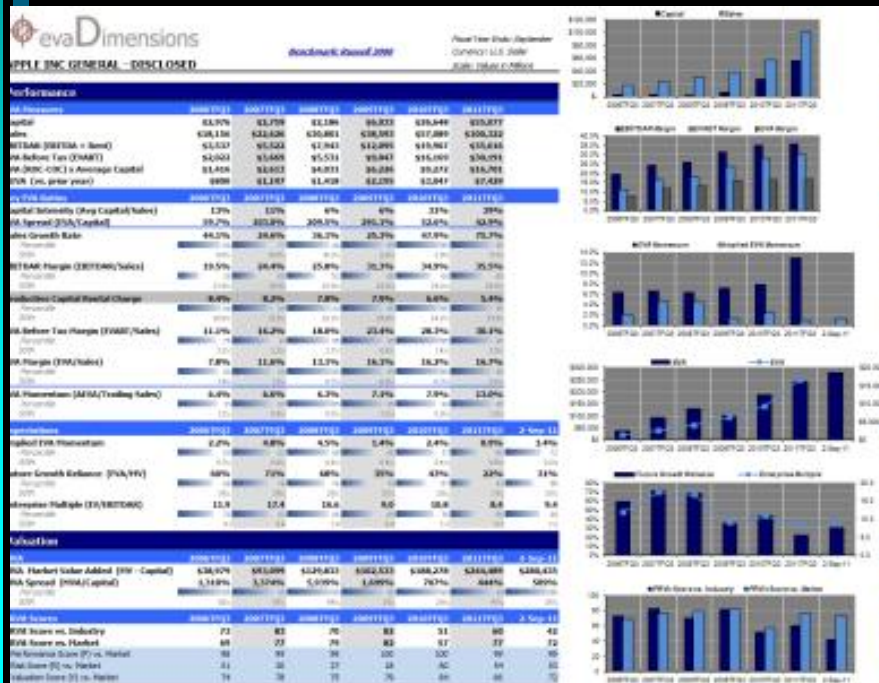
<http://logisticsviewpoints.com/wp-content/uploads/transplace-supplier-compliance-dashboard.jpg>

BI in International Logistics Mgmt



BI: Analysis and benefits

- ✓ **Financial analysis** – quick financial evaluation of business performance. EVA type analysis, „what-if”, benchmarking etc.



BI in International Logistics Mgmt



BI: Analysis and benefits

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

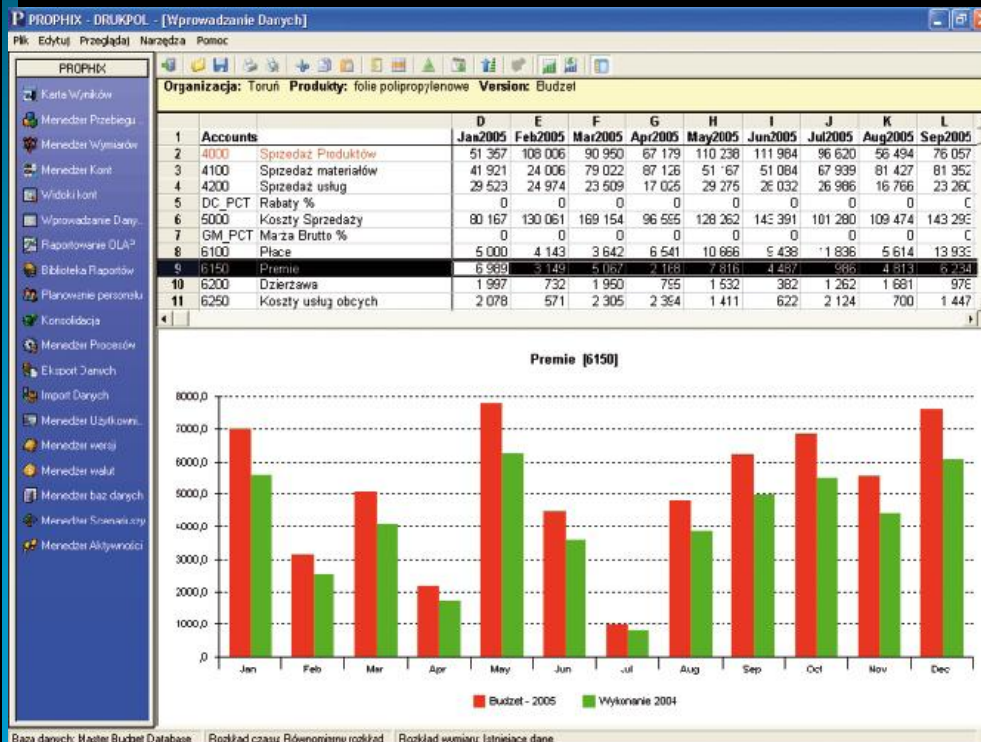


BI in International Logistics Mgmt



BI: Analysis and benefits

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

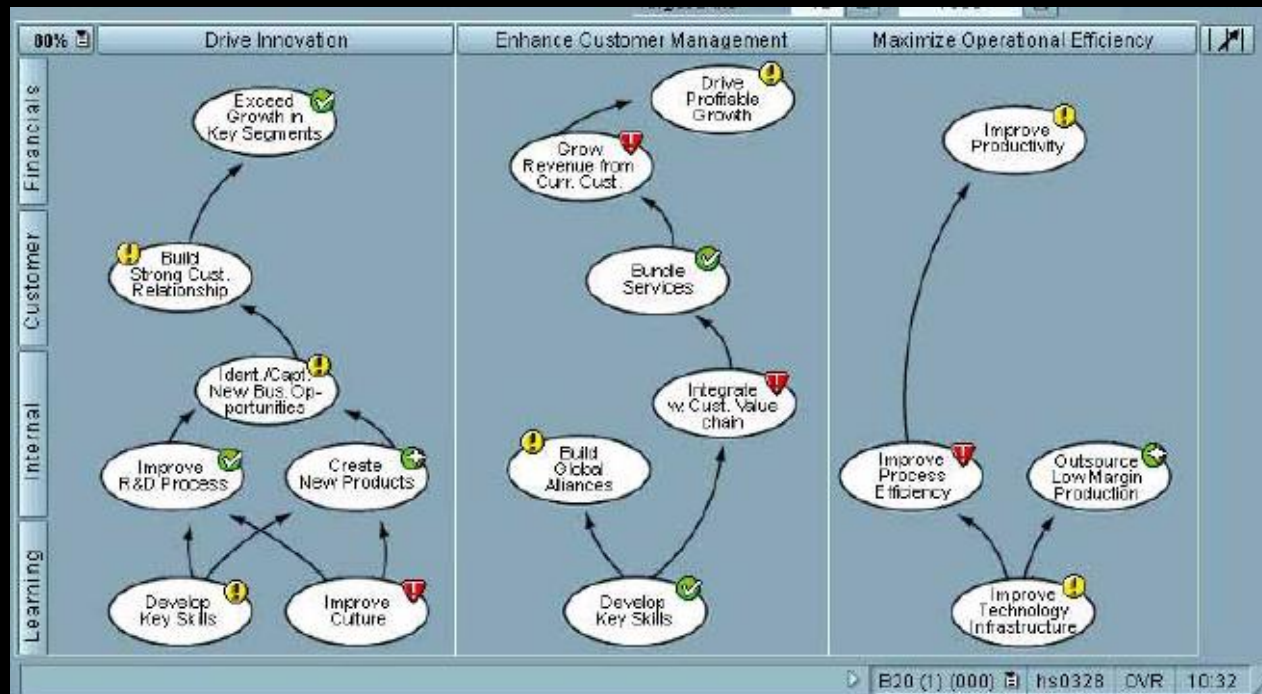


BI in International Logistics Mgmt



BI: Analysis and benefits

- ✓ **Strategic management** – cause and effect analysis, multidimensional analytical models, long term performance analysis.



BI in International Logistics Mgmt



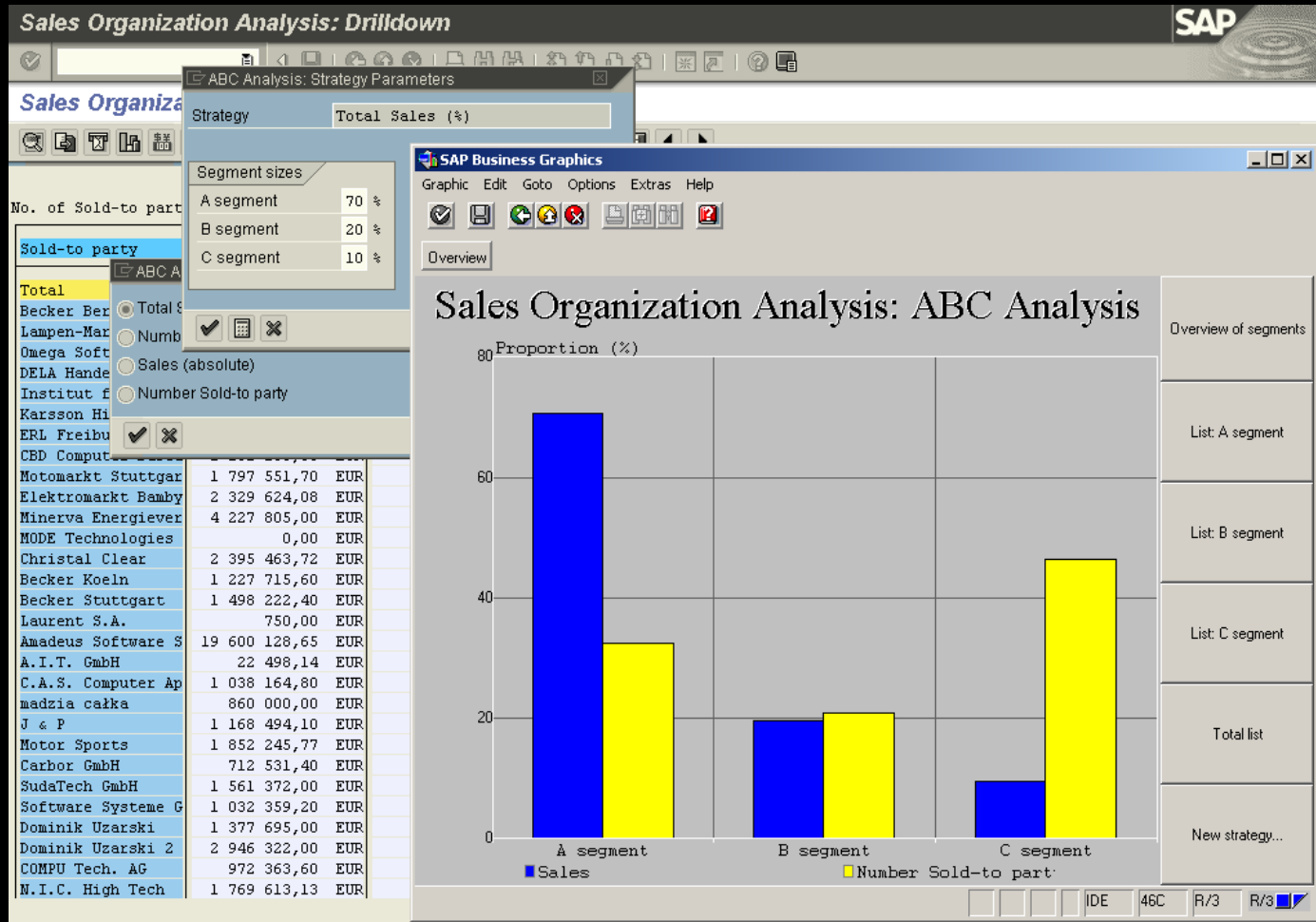
Business Intelligence: examples

- ✓ *SAP ERP (IS)*
- ✓ *SAP BI OnDemand*
- ✓ *SAP LUMIRA*
- ✓ *SAP Xcelsius (Dashboard Design)*

BI in International Logistics Mgmt

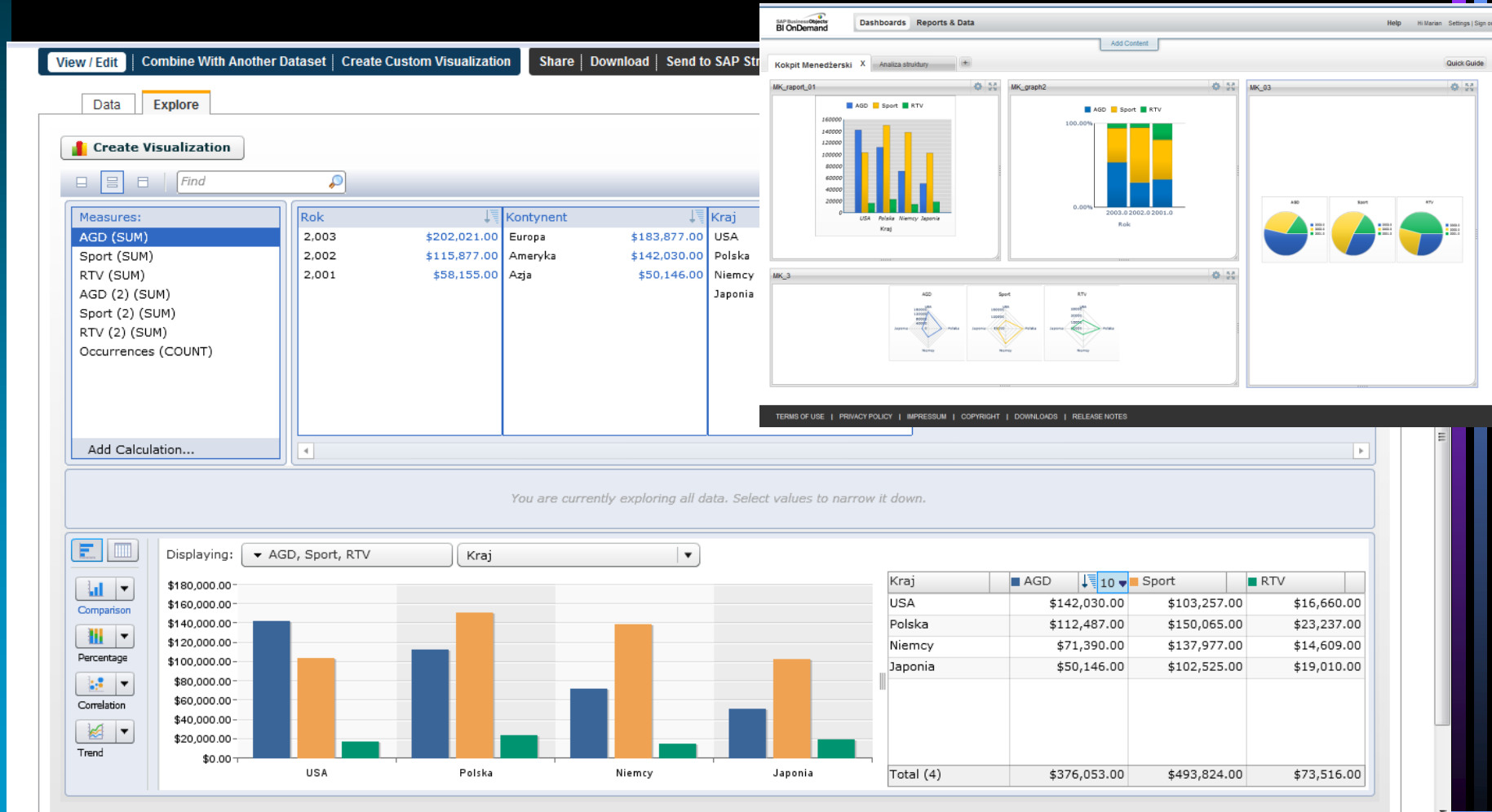


Business Intelligence: SAP ERP

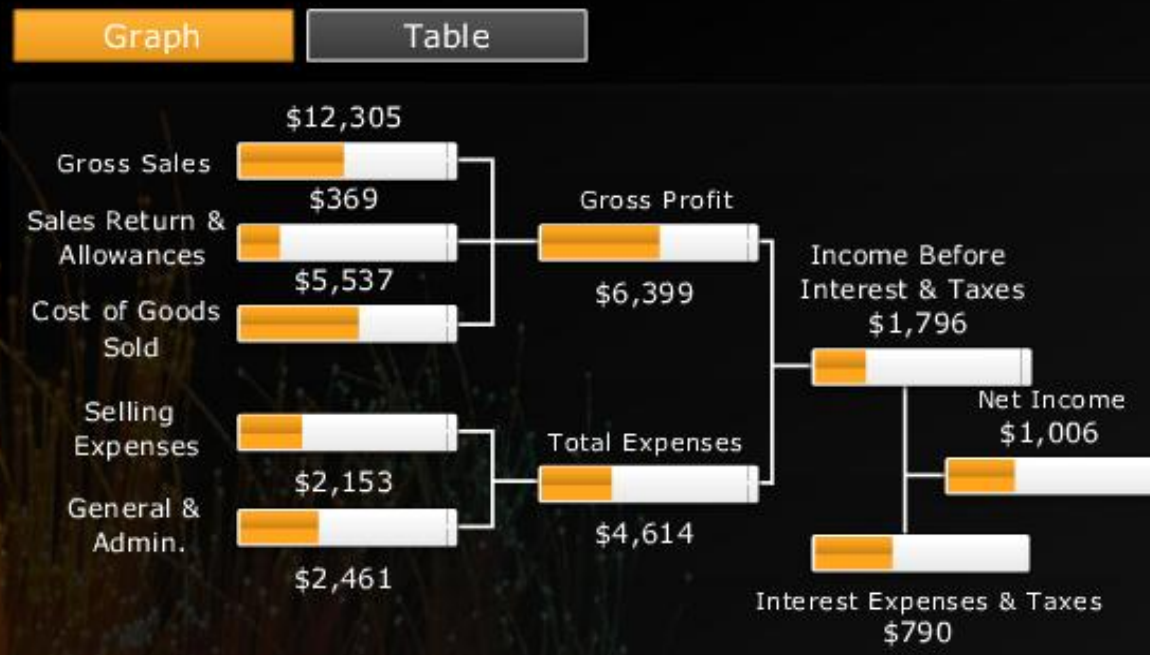


BI in International Logistics Mgmt

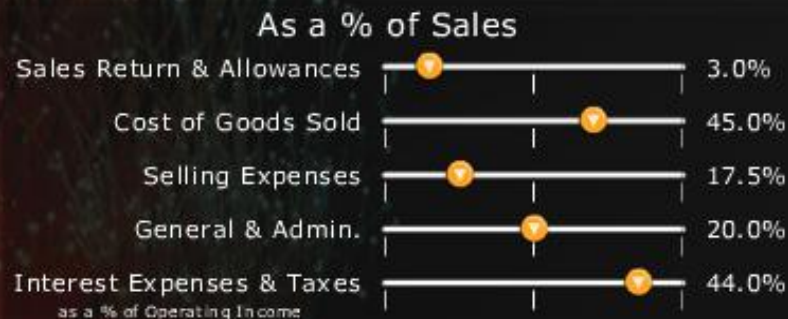
Business Intelligence: SAP BI onDemand



Business Intelligence: Xcelsius



Business Objects



Business Intelligence: Xcelsius



Monthly Sales Dashboard

Year to Date Sales

\$162,606

Year to Date Budget

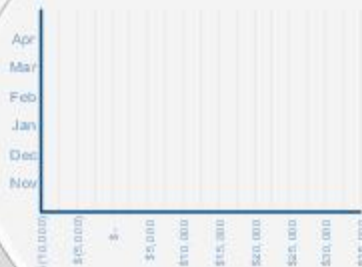
\$91,281

Difference

71,324.81

Actual vs Budget

Monthly Variation



Sales Rep 1
Sales Rep 2
Sales Rep 3
Sales Rep 4
Sales Rep 5
Sales Rep 6
Sales Rep 7
Sales Rep 8
Sales Rep 9
Sales Rep 10
Sales Rep 11
Sales Rep 12
Sales Rep 13
Sales Rep 14

Contribution
6.64%

Monthly Sales by Sales Rep

Sales Rep 1



■ Actual ● Budget ○ Projection

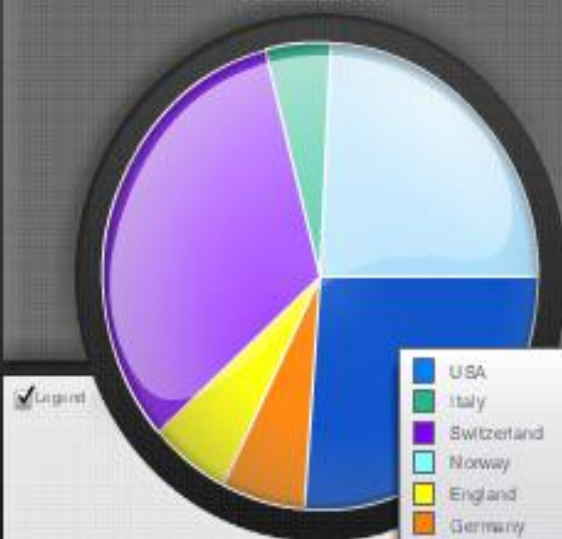
Business Intelligence: Xcelsius



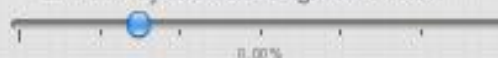
Acme Inc.

Annual Sales by Region vs Top Competitors

World Sales By Region
Forecasted FY07



FY07 Projected sales growth: USA



FY06 Total Worldwide Sales

\$217,385,072

FY07 Forecasted Total Worldwide Sales

\$217,385,072

USA Annual Sales
Actual and Forecast



USA Marketing Expense
Actual and Forecast



Powered by **crystalxcelsius**

Market Presence

Questions ?



- dr Marian Krupa