

Late Night Discussion

SKY-temporary

Supply Chain Automotive I

Automotive supplier



Iron Mill



Transport



Raw material stock
(parent coils)



Slitting and leveling



Finished good stock

Processed steel supplier



Transport



Raw material stock



Part Production



Part stock



Assembly line



Car stock

Car Manufacturing



Transport



Car dealer

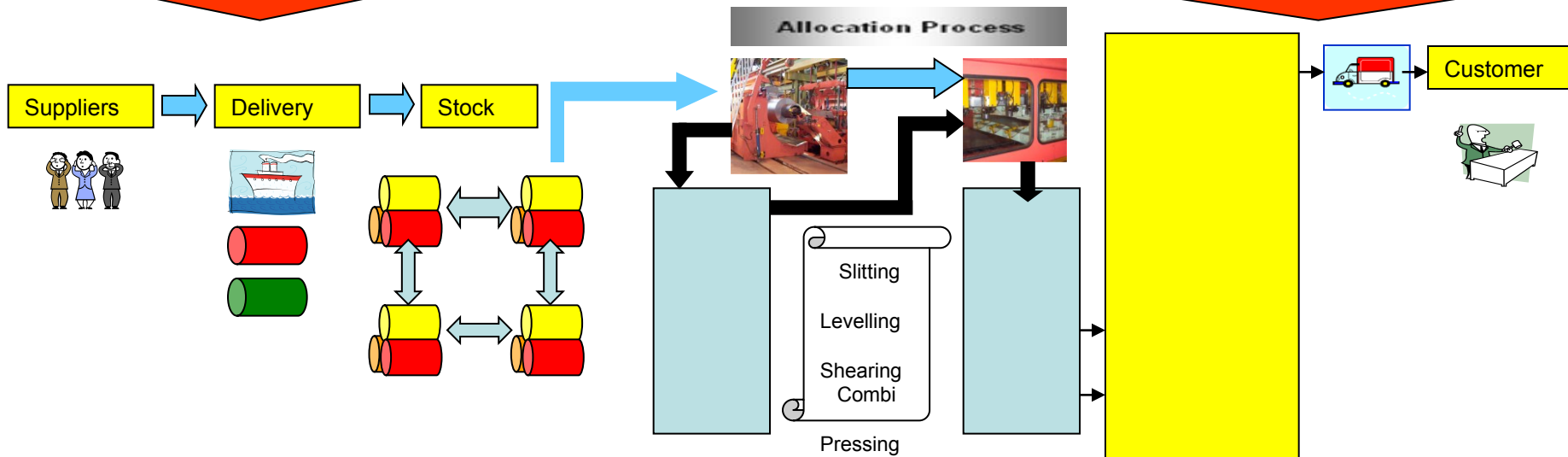
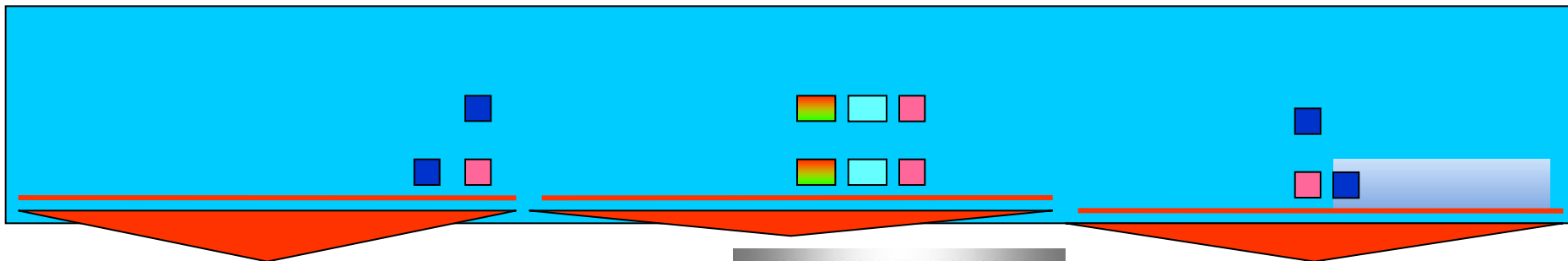


Dealer stock



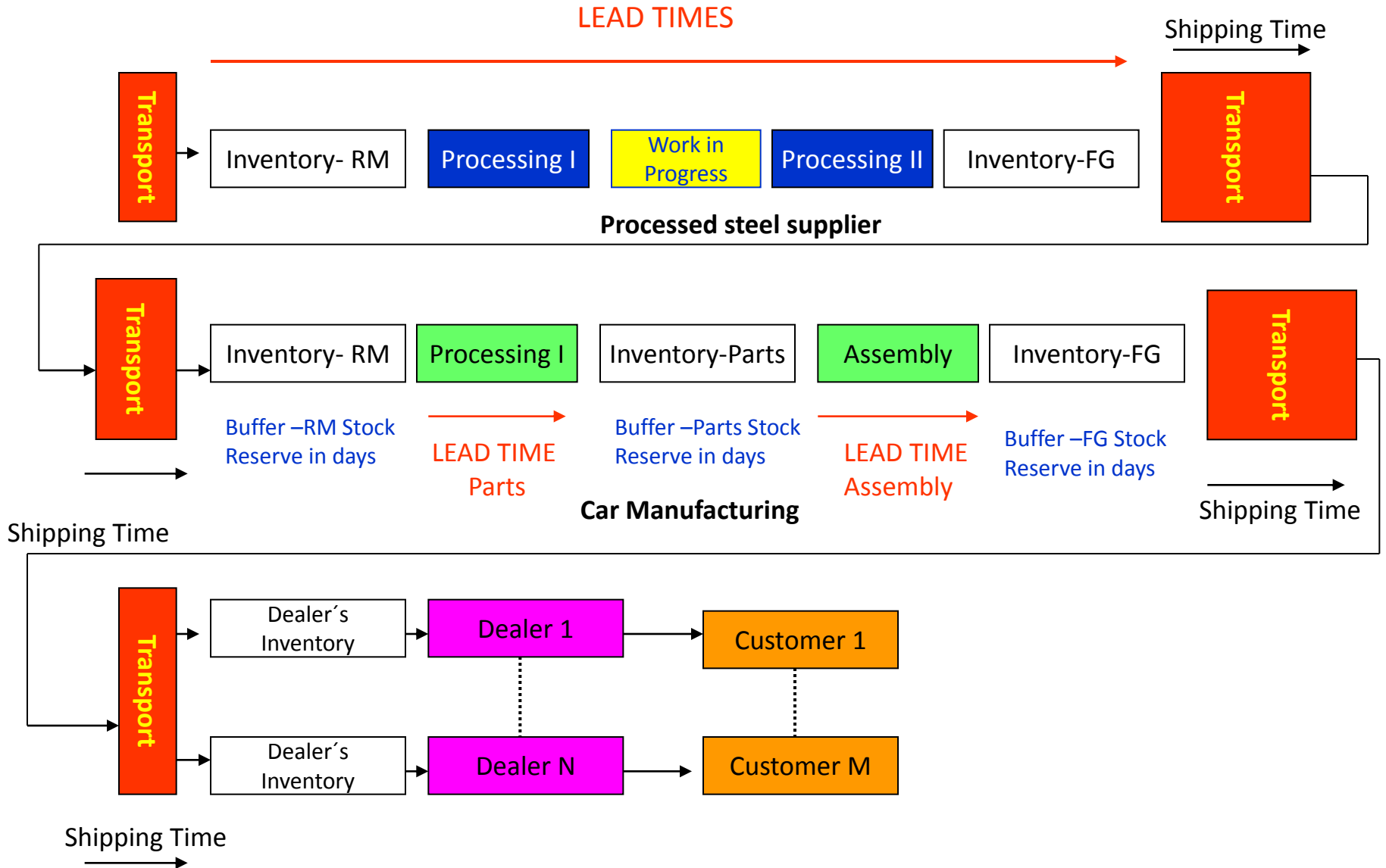
Customers

Automotive supplier

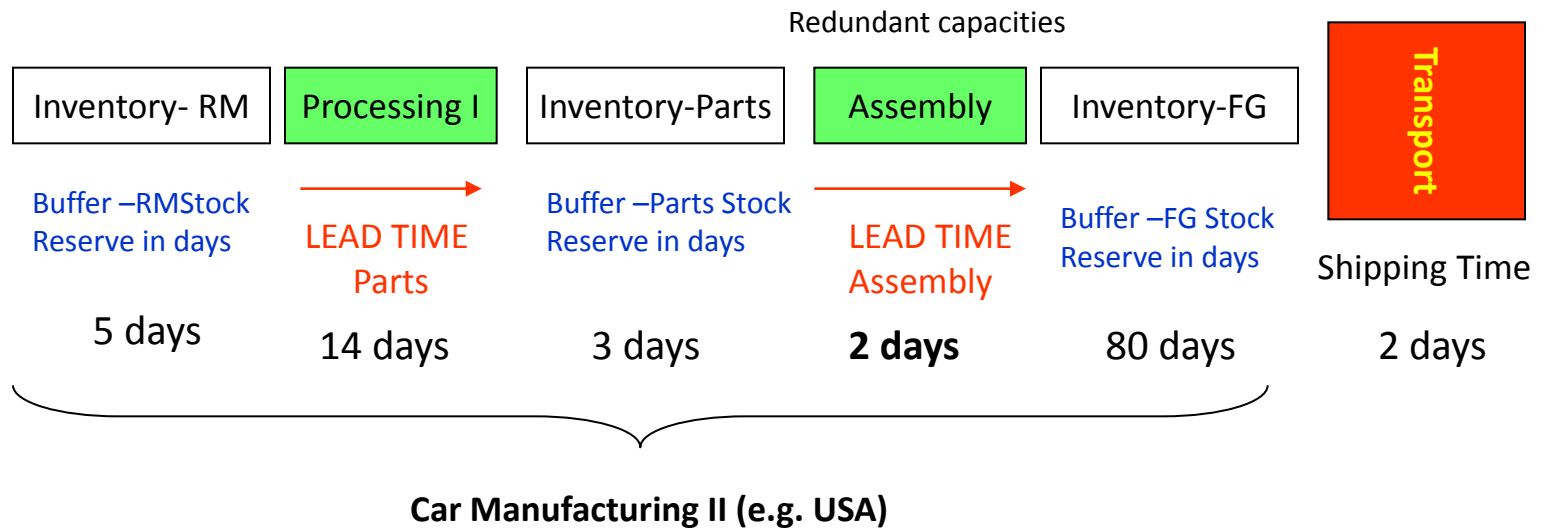
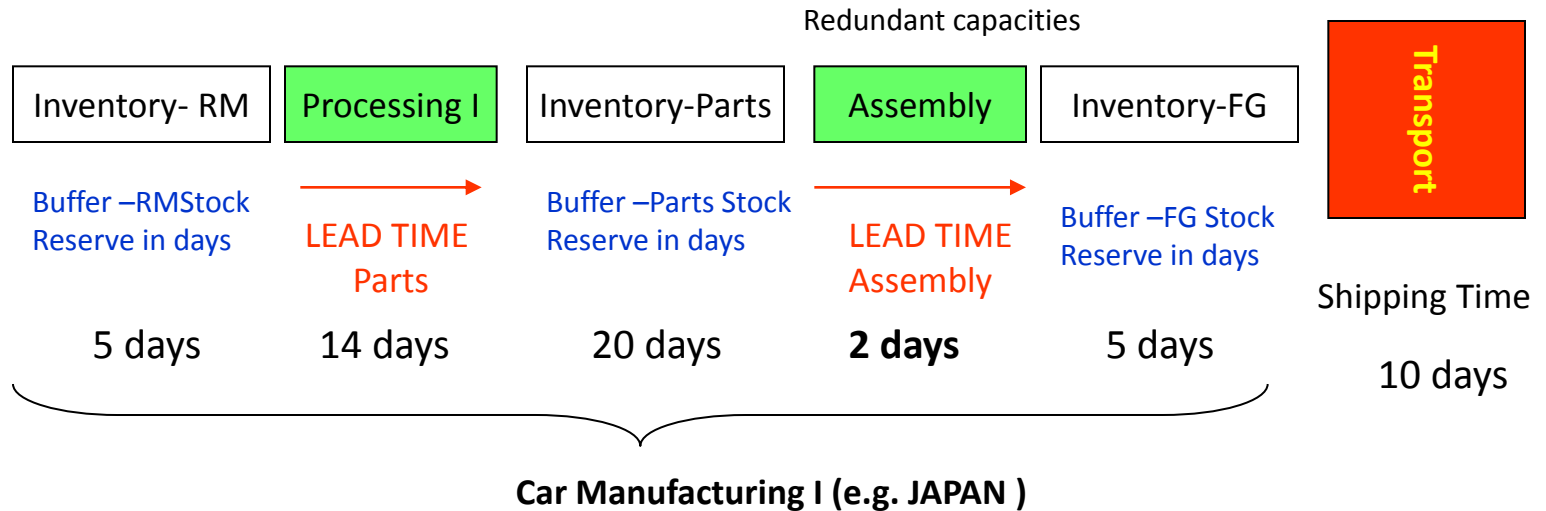


Bespoke Functionality

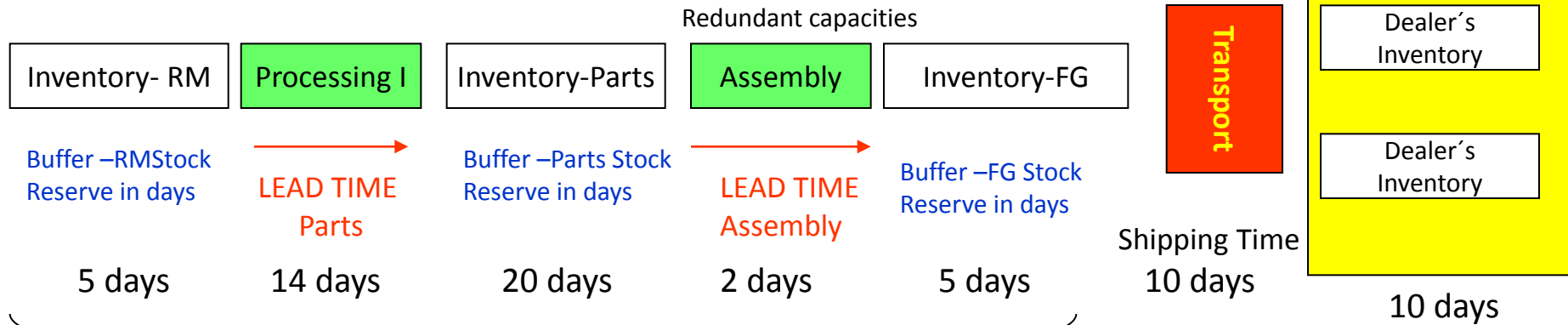
Supply Chain Automotive II



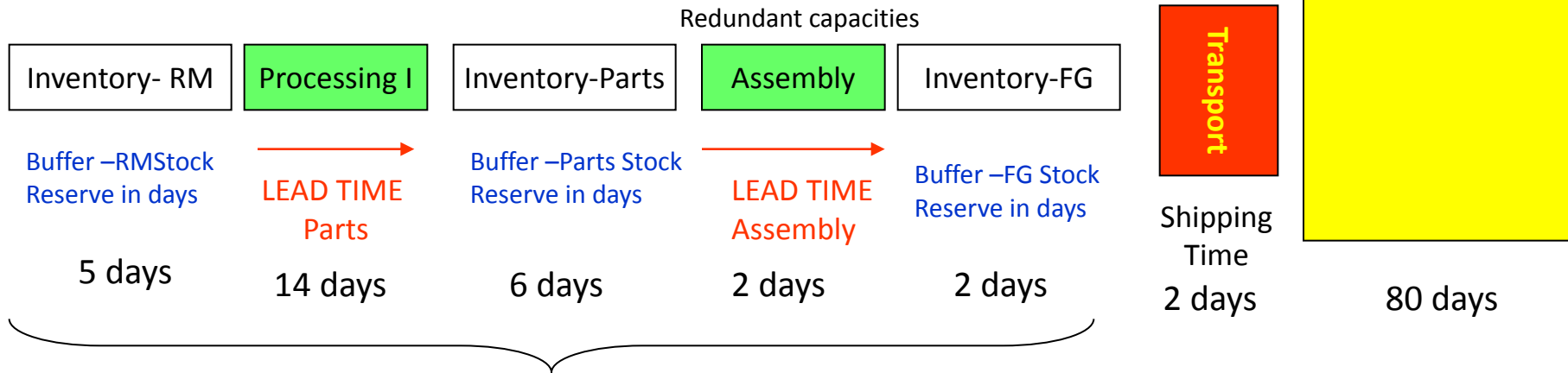
Supply Chain Automotive III



Supply Chain Automotive IV



Car Manufacturing I (e.g. JAPAN)



Car Manufacturing II (e.g. USA)

Some facts I

- If the company is not producing to firm order, than inventory in front of assembly must be bigger **in order to react as fast as possible**
- To boost sales every company business is driven by so called **model-year-change**, which means, that all FG are declared obsolete and the companies (dealers) must get rid of them within a matter of weeks. **Who is giving the rebates ?**
- 80 days of FG were moved to the dealers, they paid up front the merchandise to the car producers and dealer's collateral (pawn, pledge) is all cars themselves
- As long as the end customer did not purchase the car it definitely still belongs to the manufacturer- **means inventory is liability**
- Japanese are closer to American markets (e.g. 1 month) in contrast to USA producers, where you can calculate e 80 days
- Despite the tremendous investments of US producer to Automation, Logistics, and QM, still the proximity to the market is critical.



Comments : FG=Finished Good
RM= Raw Material

Some facts I

- **Where is the core problem?** How to break devastating bind of unnecessarily big inventory of FG ?
- In financial report of car manufacturer the dealer's inventory are registered as a completed sale.
- If the manufacturers take this monkey off the dealers back, this will be interpreted as a huge drop of sales
- Probability of sales (the forecast must be carefully introduced in order to purchase RM and to plan more accurate the level of finished part inventory buffer and levels of FG inventory
- Design you own car (configuration tool) – motor, hoods, doors, etc. – in time of the design, which is done by customer the car is still not produced.
- Logistical problem to add a few dozen of components to already existing tens of thousands that were all the time required before- it would be a piece of cake.
- The resulting proximity will be lets say no more than one months.

ERP system as a tool to solve and support problems

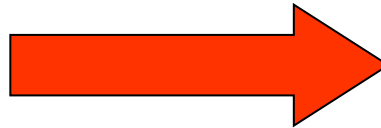
such as:

- **purchase of the raw material (planning and ordering) based on :**
 - replenishment having reason in planned production orders
 - replenishment having reason in expected production orders (forecasts)
 - replenishment having reason in safety stock levels
- **acceptance of customer requirements (sales order) and planning production orders**
- **EDI communication and call – offs generation**
- **warehouse management**  See next slides
- **financial management and statistics**
- **quality management**  See next slides

This could be not a fairytale..

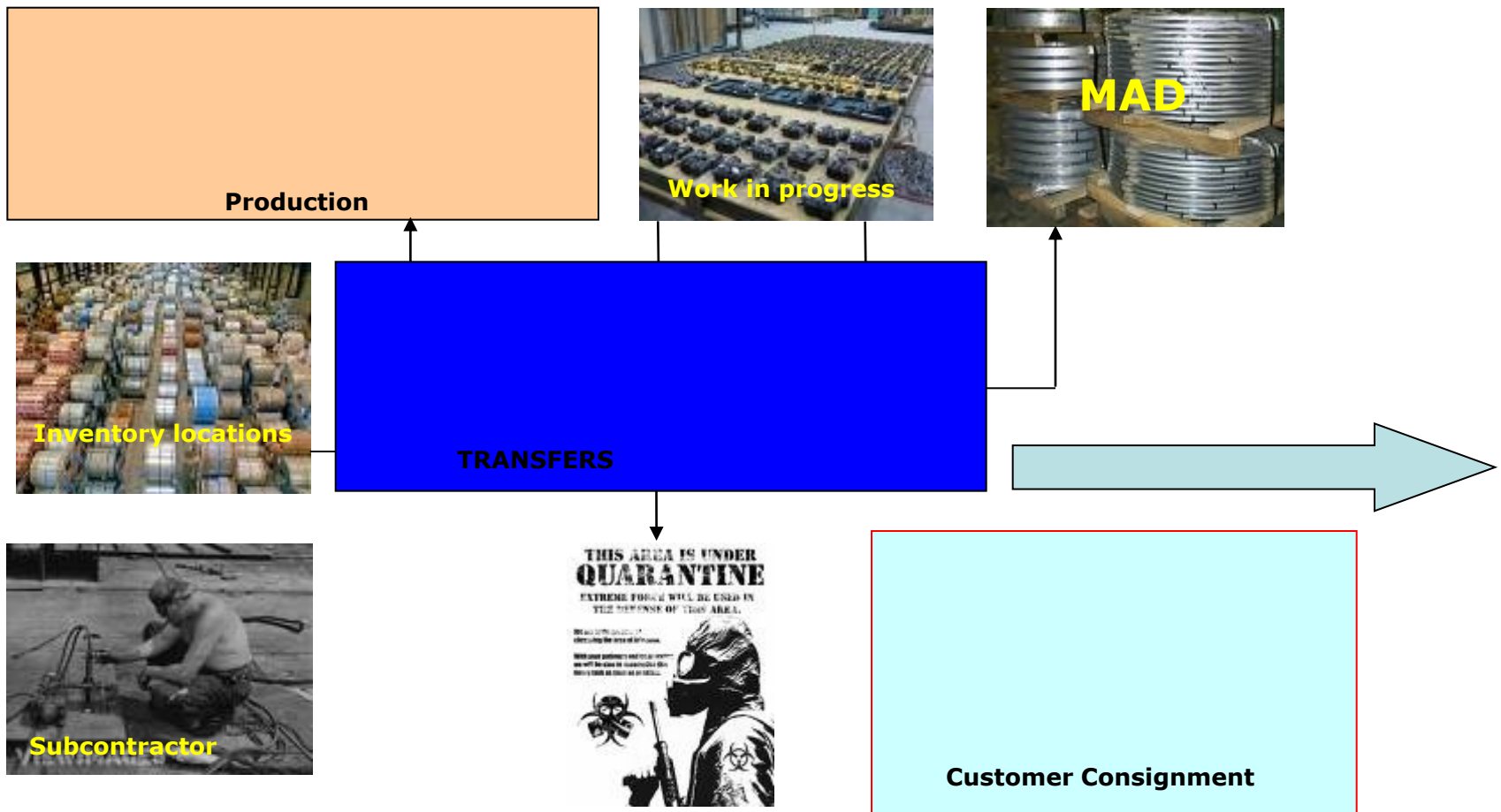


Before implementation ERP

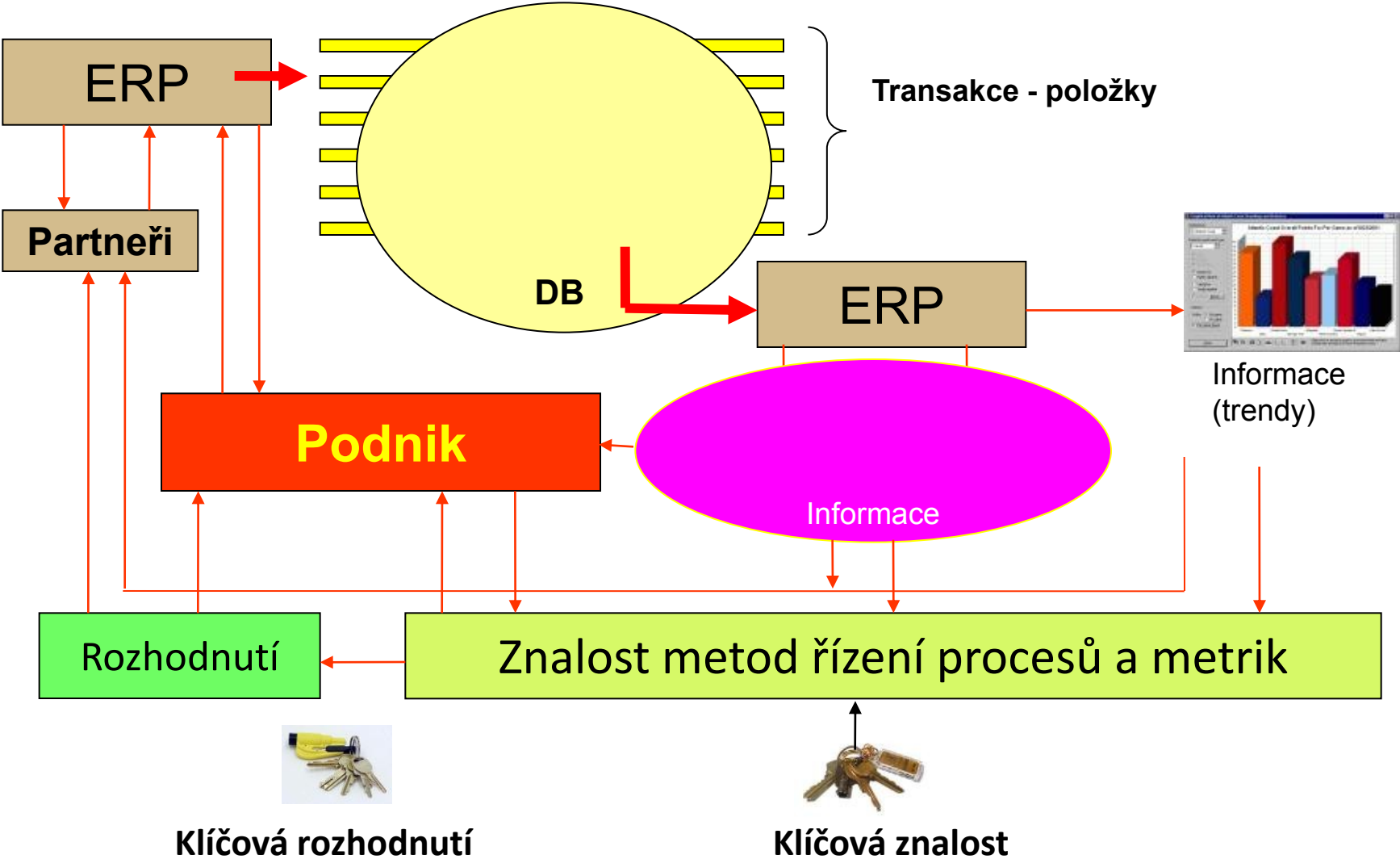


After implementation ERP

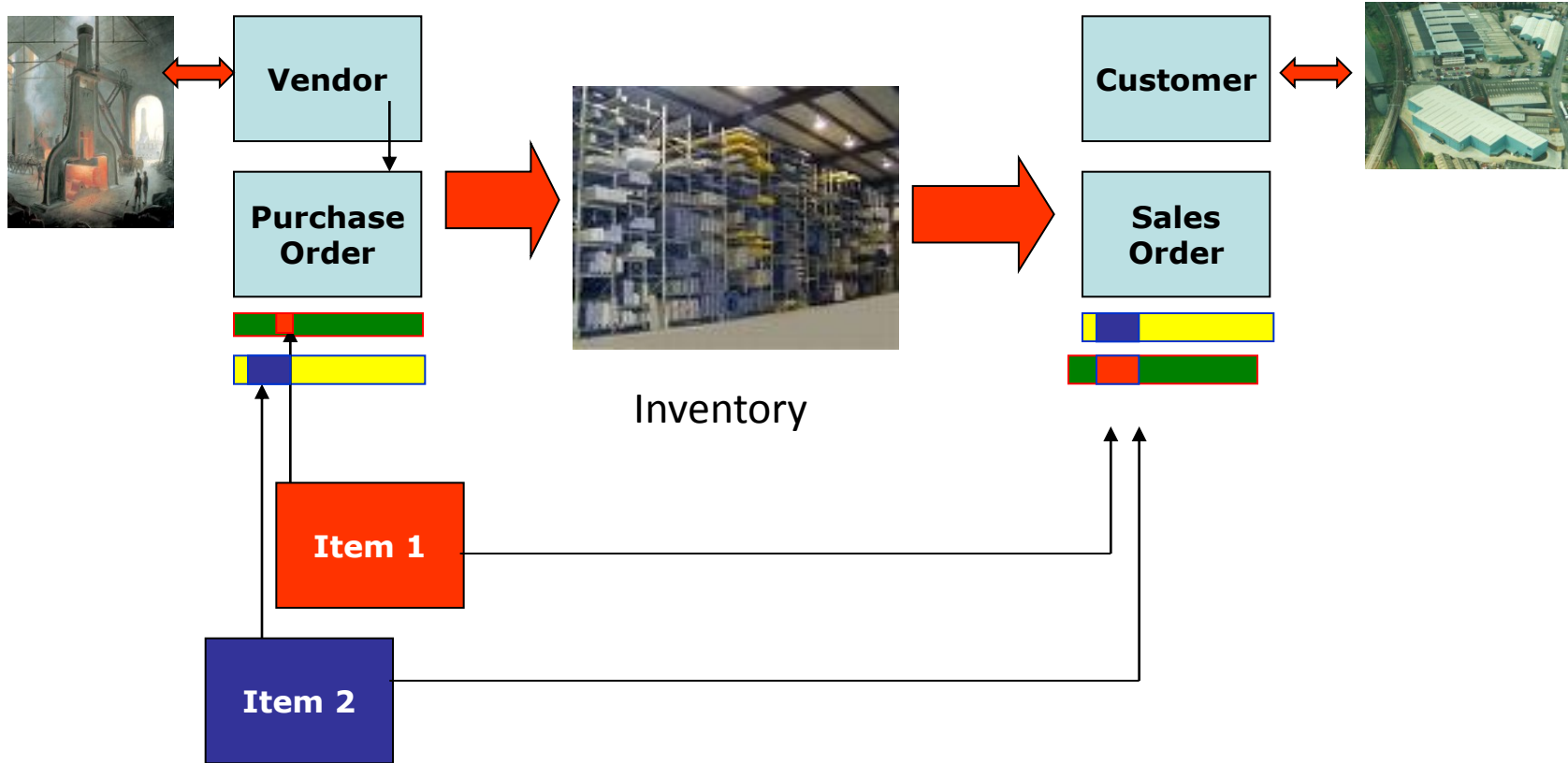
ERP stock management system and location structures



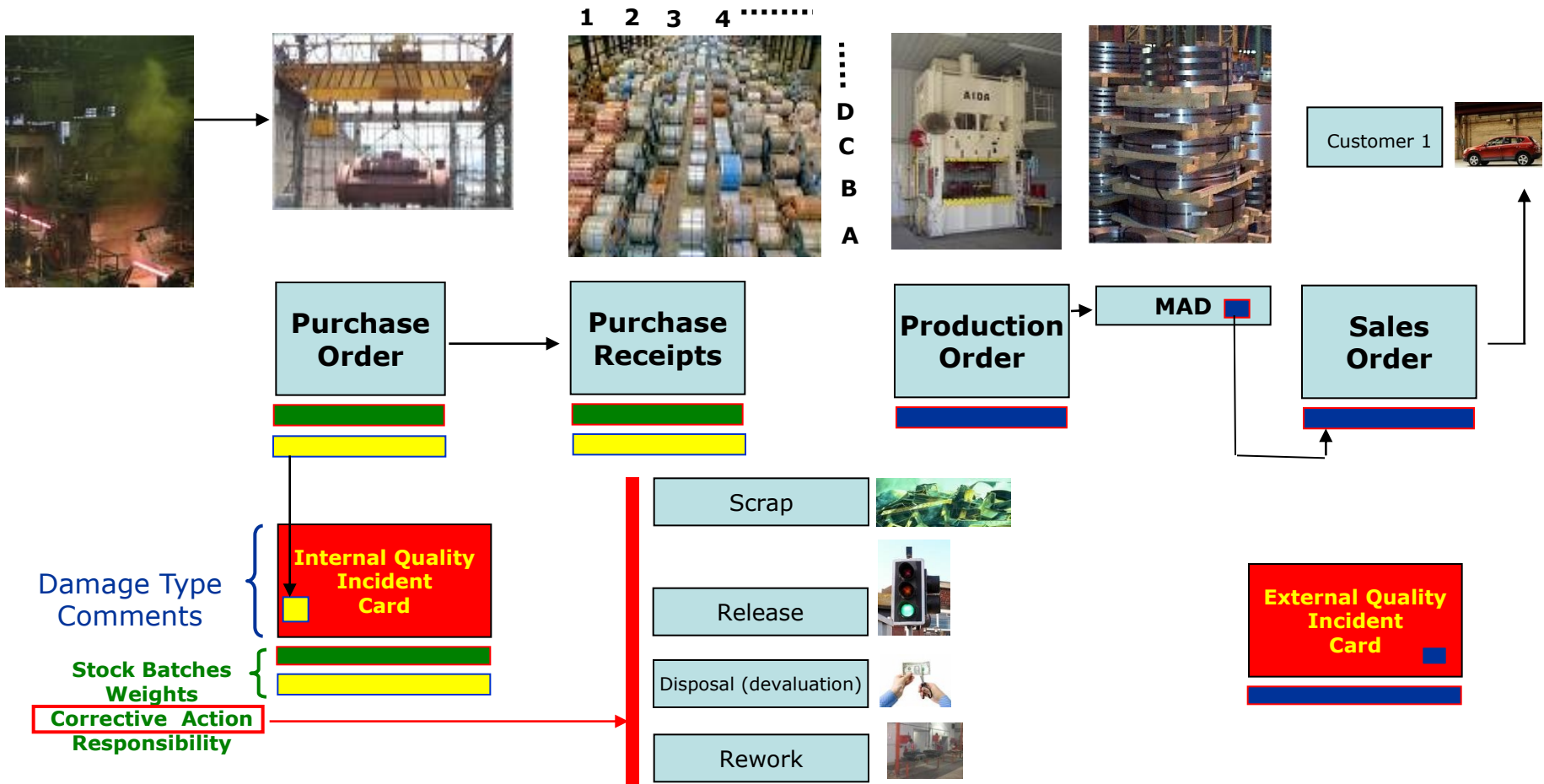
Basic ERP Structure I



Basic ERP Structure I

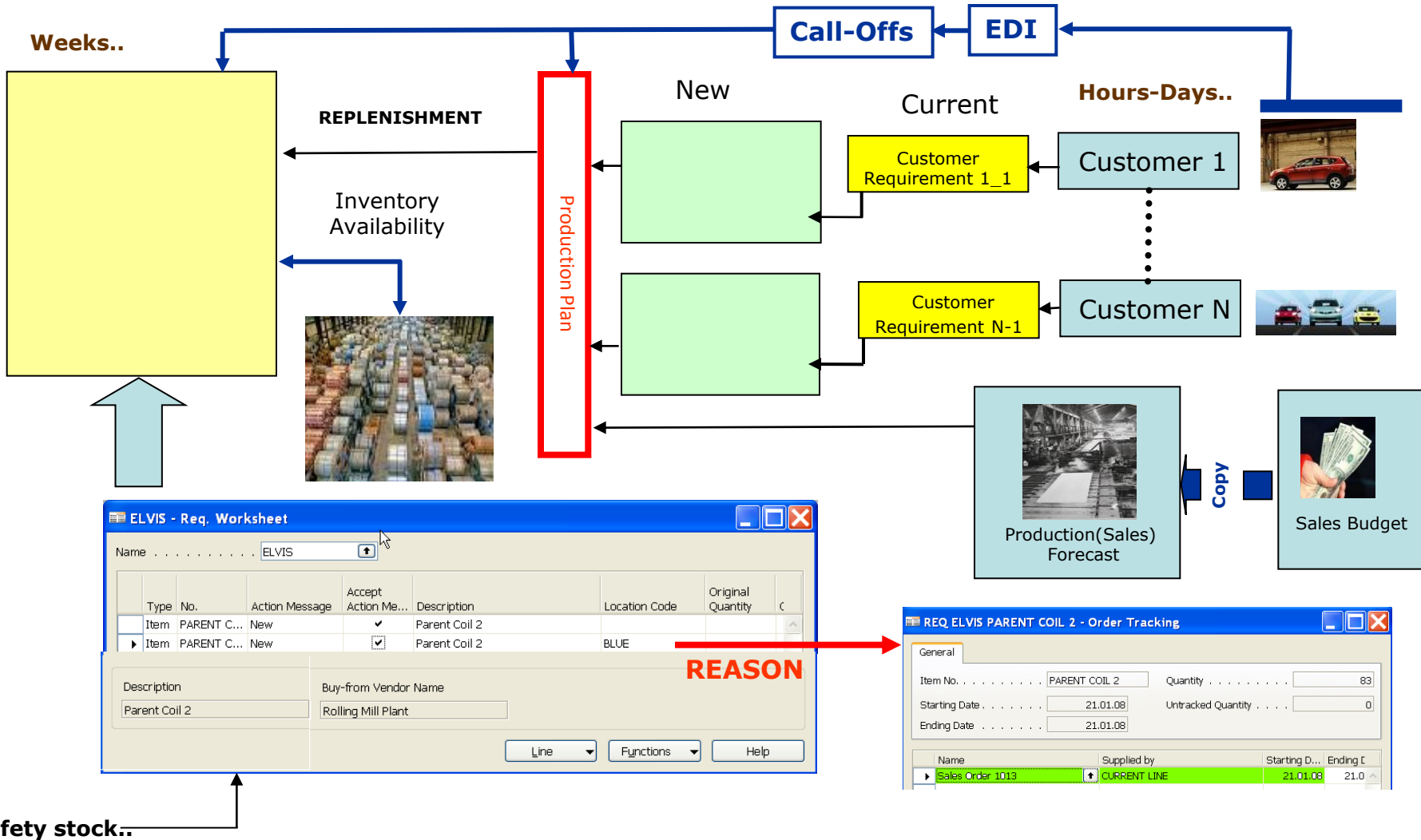


Quality management simplified diagram



Purchase management simplified diagram

Purchase Orders ↔ Row Material Purchase Plan



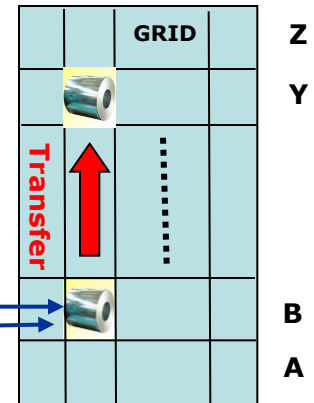
Purchase management simplified diagram

Purchase Order Header – Vendor and condition specification

	Ty...	No.	Week of Delivery	Shipping Status	Vessel Number	Mill Coil Number	Date at Docks	Offsite Location	Description	Location Code	Quantity	Unit of Meas... Code
	Item	CHILD COIL 1	4W	In Port	TITANIC_01	MC03924	22.02.08	BRIST...	Child coil 1		20	TONNE
▶	Item	CHILD COIL 2	3W	In Stock	TITANIC_02	MC03924	22.02.08		Child coil 2	WK_001	40	TONNE



Quality checking



Inventory