

# Supply Chain of the Future

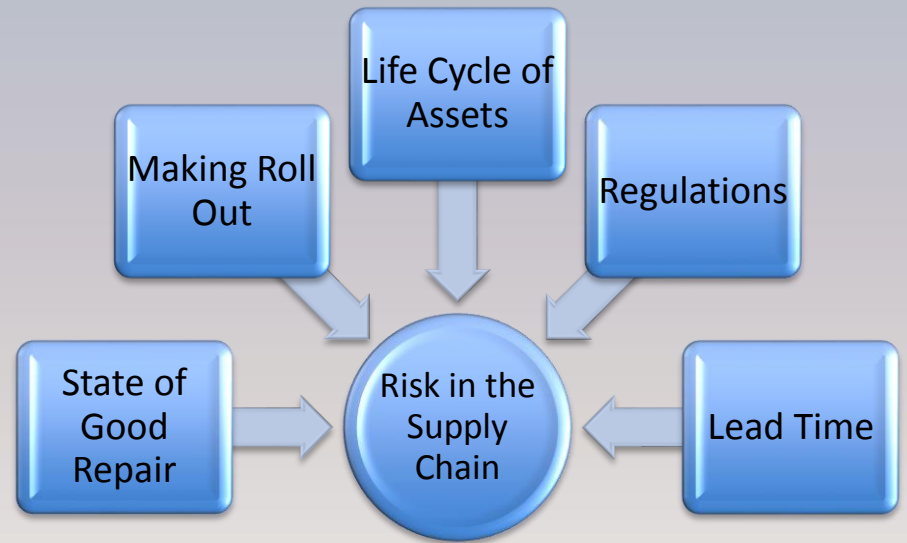
Los Angeles County Metropolitan Transportation  
Authority

PROCUREMENT & MATERIALS  
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# Understanding the Risks in Metro's Supply Chain

- Keeping revenue assets in a State of Good Repair (SGR)
- Making Roll Out – No Buses or Railcars down for materials
- Understanding the Life Cycle of materials (avoiding obsolescence)
- Regulations - lowest cost, best value procurements
- Managing vendor lead times



# Understanding your Supply Chain as a Process

Understand Material Needs

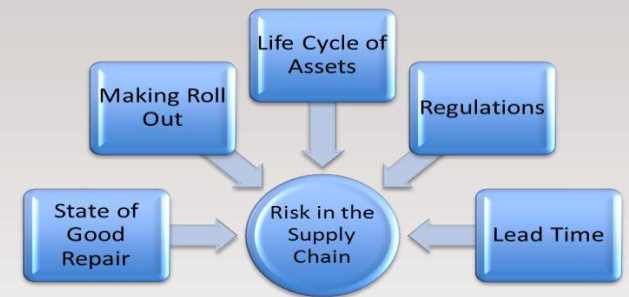
Risk Checklist

Stakeholder Buy-in

- Start with a risk checklist:
  - Checklist for capabilities (strategic)
  - Checklists for individual materials or commodities (tactical)
  - Managing stakeholder expectations (monitoring and control)
- From the risk checklist comes the risk plans
  - Strategic risk plan
  - Tactical risk plan
- Stakeholder Buy-in is essential for any plan

# Risk Checklist (Strategic)

- Operational Risk Management (ORM) is a continuous process where risk assessment, risk decision making, controlling risks is determined at a Strategic Level
- Four principals of ORM:
  1. Avoid unnecessary Supply Chain risk – making roll out
  2. Plan against Supply Chain risk where you can – state of good repair
  3. Accept risk where the benefits outweigh the cost – lead time, life cycle
  4. Make decisions at the right level – regulations, lowest cost- best value
- The ORM should match the Agency's Capabilities to accomplish the Mission Statement (MS)



*Metro is responsible for the continuous improvement of an efficient and effective transportation system for Los Angeles County*

# Risk Checklist (Tactical)

- Tactical risk is risk that is associated with hazards that exist due to the presence of the enemy on the battlefield
- Material battlefield - the ability to supply material where it is needed, when it is needed, in the quantities needed over time (against the cost of doing so)
- Management looks at each material (see example below) and develops a tactical risk management plan
- The Supply Chain of the future will be a tally of these calculations

Risk Model - Tactical Case Study  
 Risk of a Supplier Stocking Out of Material 123456  
 Annual Usage: \$500K

Lead Time = 90 Days

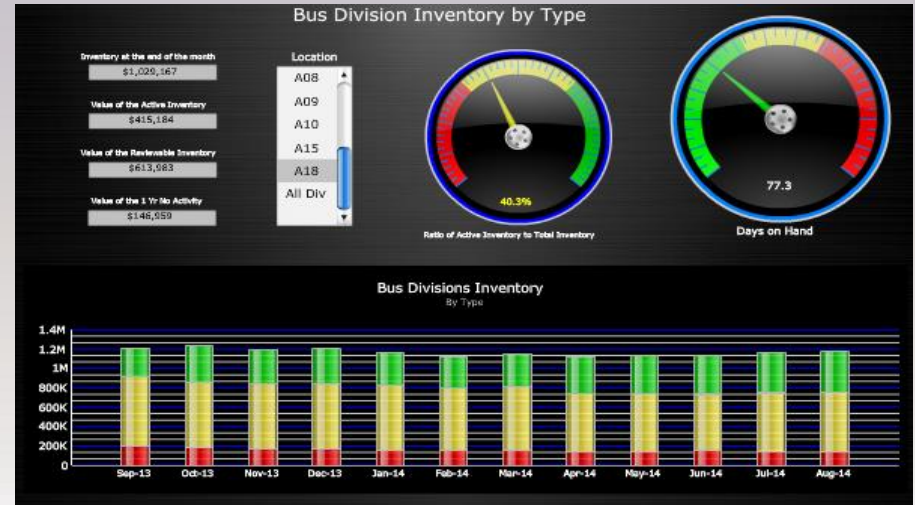
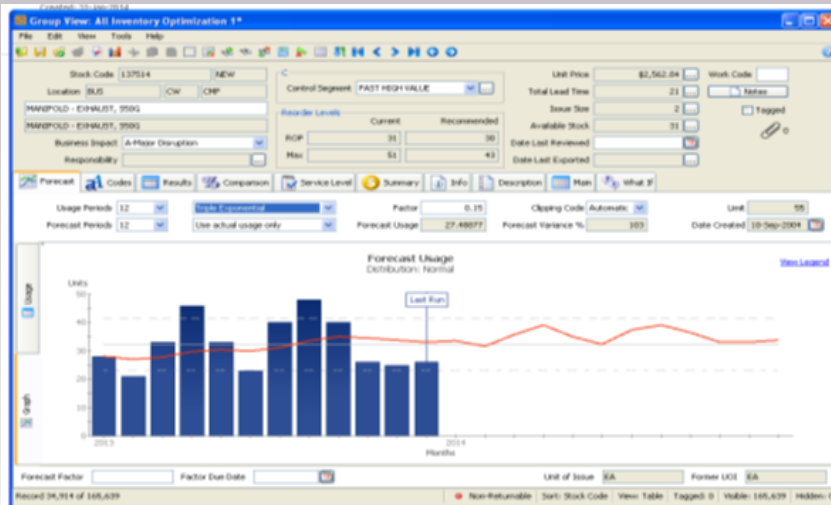
Importance	Probability			
	Frequent	Likely	Occasional	Seldom
Catastrophic	E	E	H	M
Big Deal	H	H	M	M
Small Deal	M	M	L	L
Not Important	L	L	L	L

	Service Level	Inv Value
E (Extremely High)	99%	\$150K
H (High)	95%	\$100K
M (Medium)	85%	\$85K
L (Low, no impact)	80%	\$75K



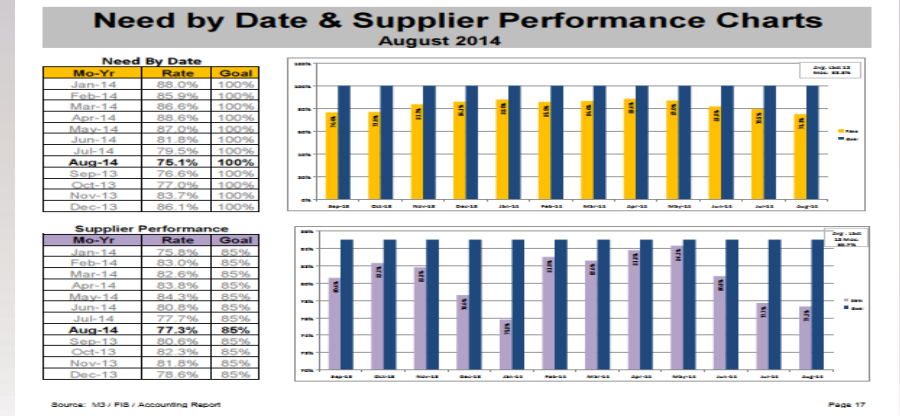
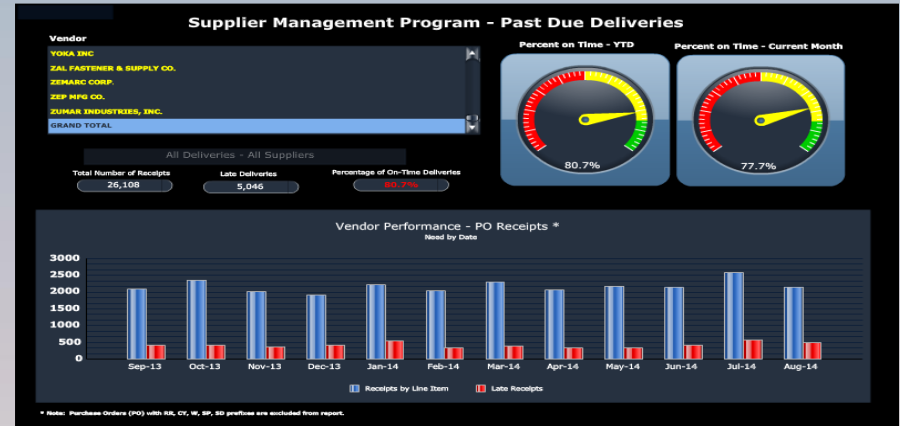
# Material Risk - Right Sized Inventories

- Materials held in inventory in the right quantities, at the right location can manage much of the material risk
- The material held in inventory should match the demand and replenishment profile for that material at that location over time
- Calibrating and re-calibrating inventory levels over time is a key element in the supply chain of the future



# Vendors and Risk

- Metro has over 700 active vendors
- Metro issues over 26,000 purchase orders each year
- Risks include:
  - On-Time Performance
  - Lead Time Inconsistencies
- Controlling elements of risk:
  - Vendor On-Time
  - Vendor Need-by-Date (NBD)
- Vendors with high *on-time delivery* percentages *and* the ability to consistently book replenishment orders on or before *the need-by-date* helps Metro manage their Supply Chain risk



# Summary – Next Steps

- Metro is in the process of developing its Supply Chain of the future
- At the center of our Supply Chain capabilities is the ability to manage *strategic* and *tactical* risks for materials across the Agency
- Metro is currently focusing on two new software implementations (order points/forecasting and contract management) and will be following up with risk management/total cost modeling in the future
- We will go deeper with the Vendor Management program in 2015

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