



Increasing the Value of your Maximo Implementation

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PulseANZ2010

Meet the people who can help
advance your infrastructure



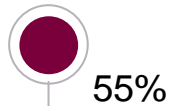


Agenda

- Potential Business Benefits
- Inventory and Procurement Challenges
- Best Practice Implementation for Inventory and Procurement

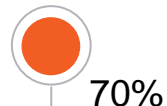


The collective insights from 400 Supply Chain Executives identify five major challenges



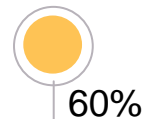
COST CONTAINMENT

Fighting integral costs as such as might be futile, but being flexible can identify cost savings elsewhere



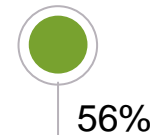
SUPPLY CHAIN VISIBILITY

Supply chain visibility is inhibited by a lack of capabilities and an unwillingness to collaborate.



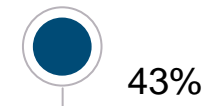
RISK MANAGEMENT

Process, data, & technology are identified as the roadblocks to good risk management, yet they are the key enablers.



INCREASING CUSTOMER DEMANDS

Customers have increased demand for more: right product, right place, right time, right price, sooner.



GLOBALIZATION

Lead times, delivery, and quality are top challenges, but overall globalization has been a positive boon for the leaders.



Benefits Realised from Maximo implementations

Business Scenarios	ROI Points	Customer Examples
Labor Utilization	Up 10-20%	<ul style="list-style-type: none"> A major US railroad saved US \$5M by better tracking labor to specific work
Asset Utilization	Up 3-5%	<ul style="list-style-type: none"> A large OEM reduced overhaul process time from 56 days to 21 days
Equipment purchases	Down 3-5%	<ul style="list-style-type: none"> A fleet management company saved US \$9.5M by meeting 100% availability with less
Warranty recoveries	Up 10-50%	<ul style="list-style-type: none"> A consumer products company increased warranty recovery 50%
Inventory needs	Down 20-30%	<ul style="list-style-type: none"> A large passenger railroad was able to identify US \$18M in excess or obsolete inventory
Inventory carrying costs	Down 5-20%	<ul style="list-style-type: none"> A nuclear power conglomerate reduced inventory value and associated carrying costs by 26%
Material Costs	Reduced 10-50%	<ul style="list-style-type: none"> A rail maintenance service company reduced costs 20% by optimizing material purchases.
Purchasing labor	Reduced 10-50%	<ul style="list-style-type: none"> A fleet management company reduced purchasing staff by 20%

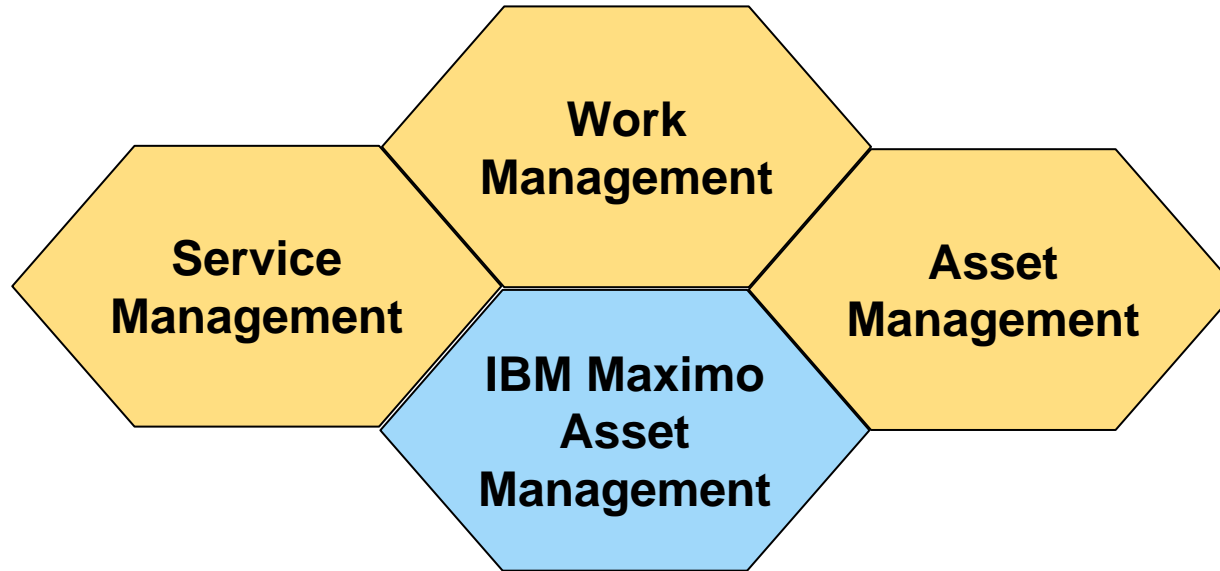


Functional Maximo Areas



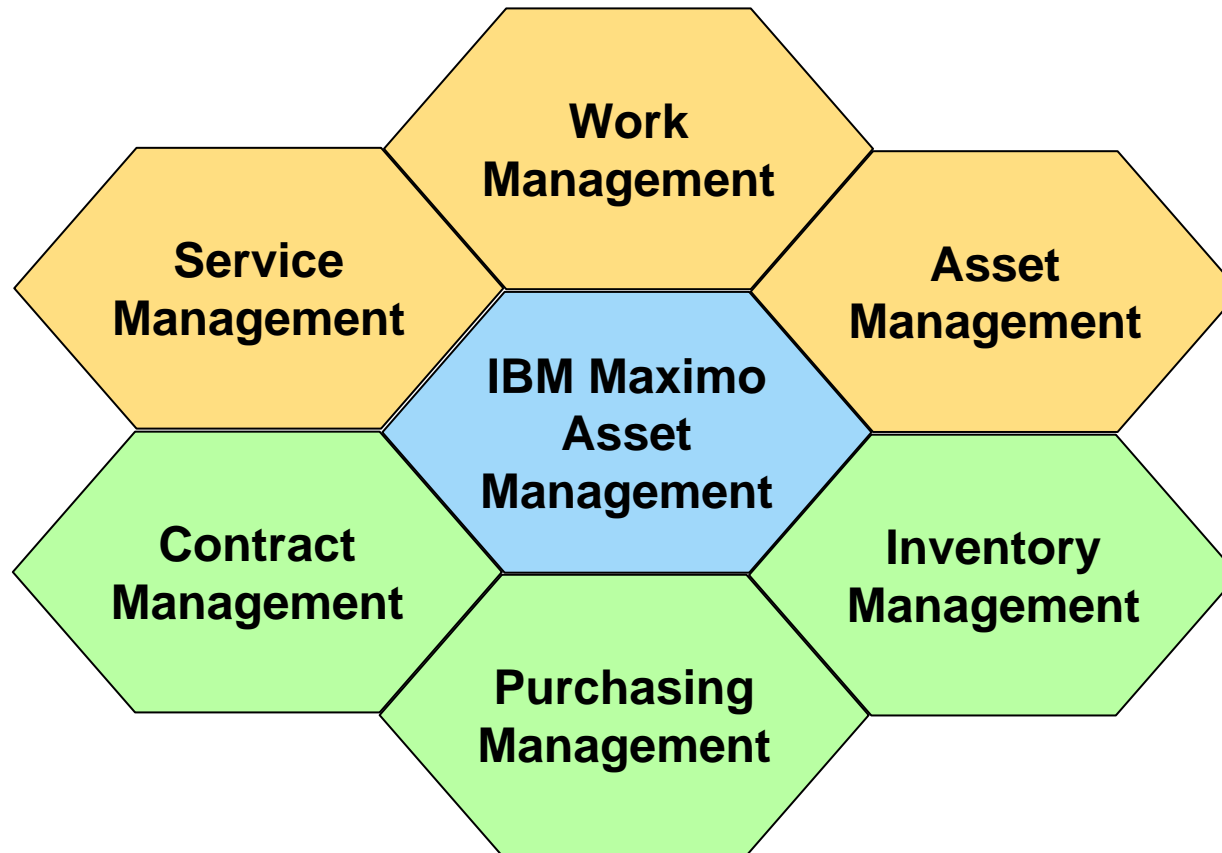


Functional Maximo Areas





Functional Maximo Areas





Inventory and Procurement Challenges

Material Management is complicated by complex and multi-dimensional part characteristics

- Part costs can vary from a few cents to thousands of dollars
- Some parts may have regular demand patterns (consumables), while others have highly sporadic demand that is impacted by environment and other factors
- Part criticality can vary by failure rates and importance to asset operation (operability, safety)
- Different types of assets from the same supplier
- Supercession of parts due to design changes
- Same type of asset from different suppliers
- Discontinuation of production by supplier requiring life-time buys



Inventory and Procurement Challenges

Global supplier base creating complexity and variability in replenishment

- Risk and uncertainty associated with supply disruptions caused by global events
- Total landed cost considerations outweighing unit cost
- Longer asset in-service lifetimes requiring dependence on after-market and specialty parts



Inventory and Procurement Challenges

Lack of adequate forecasting and replenishment

- Simple approaches to estimating future demand – 6 months average consumption is a common approach
- Siloed organisation structures and measurements lead to lack of collaboration or visibility across maintenance and procurement teams
- Lack of continued improvement programs
- Coverage or ABC based replenishment approach has no understanding of cost tradeoffs
- Budget constraints frequently drive inventory levels, sometimes seriously impacting service levels
- Initiatives to cut parts budget across the board



Inventory and Procurement Challenges

Technical obstacles limit the ability to understand demand/supply characteristics

- Poor data controls
- Different codes for the same part/supplier across sites/business units limits understanding of total demand and spend
- Poor capture of supercession data
- Basic lack of visibility to obsolete inventory
- Maximo is integrated with financial systems
 - Preventing flexibility in approval processes
 - Access not granted to both systems
 - Integration challenges drives business process



Implementation Steps - Inventory

1. Determine Asset Criticality

Deciding what is critical will create an understanding as to what the high value items are.

2. Setup Item classifications

Defining classifications groups and categorises the items. It assists in defining the like for like items, caters for standardisation of item descriptions and cataloguing.



Implementation Steps - Inventory

3. Forecast demand

Using PM schedules, proactively plan for higher than anticipated demand, or level work to match inventory availability predictions

4. Monitor Vendor lead times

Analyse your vendor reports, see if they deliver to their promised date.

Consider geographic sourcing - plan acquisition of stock as part of work schedules



Implementation Steps - Inventory

5. Maintenance lead times

Consider factors like receiving, kitting, installation, commissioning, access to asset, preparatory works etc when planning order lead times



Implementation Steps – Inventory Optimisation

6. Analyse historical inventory demand and optimise stocking and replenishment policies and parameters

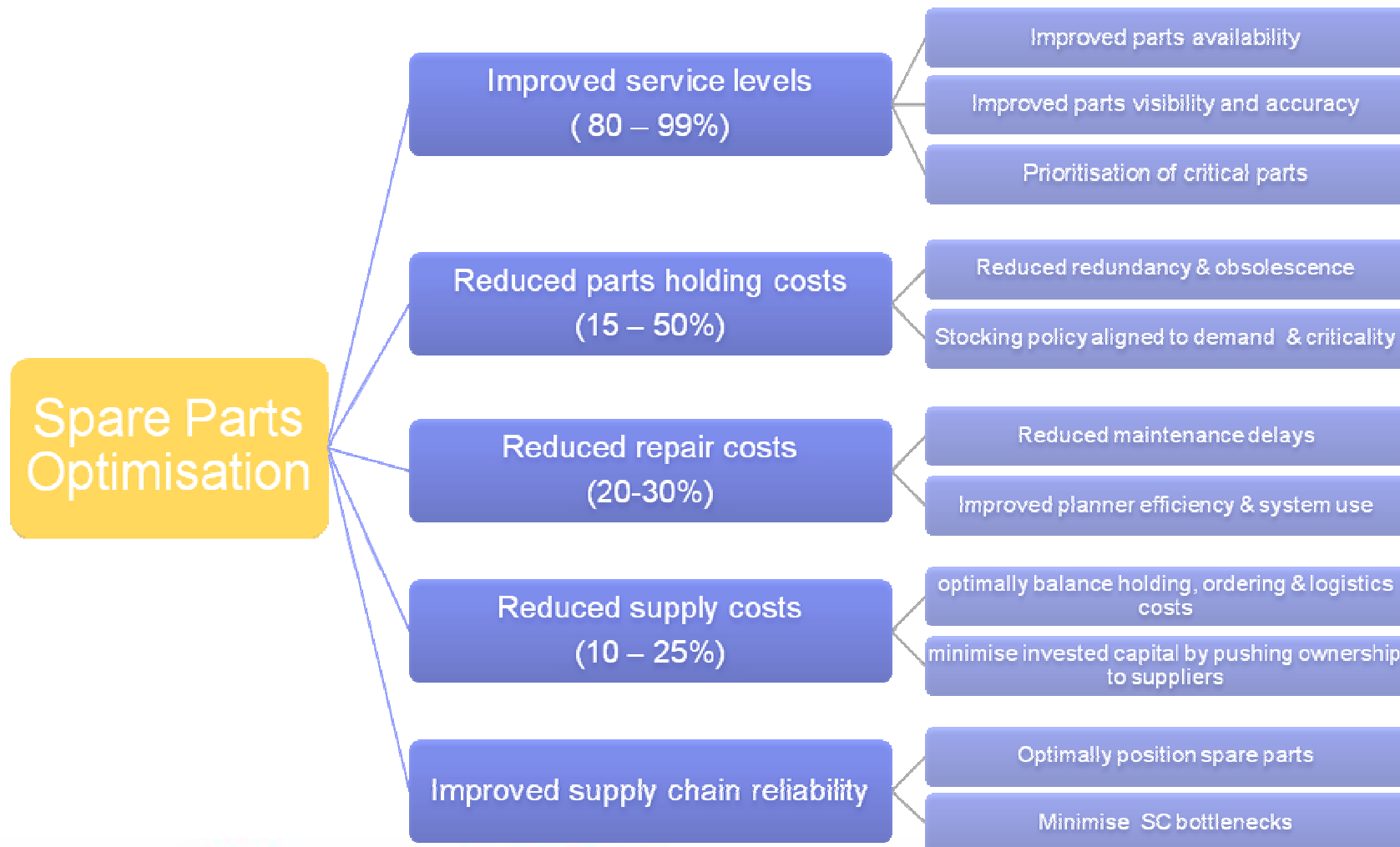
A number of IBM tools are available to perform single or multi-echelon inventory optimisation (DIOS and ILOG) as well as network optimisation (ILOG)

Getting this right is critical for maintenance spares:

- Using rules of thumb leads to significantly higher inventory levels
- Optimising stocking and replenishment parameters leads to immediate results
- Part availability (service level) needs to be aligned to part criticality
- Unplanned demand on spares should be tracked and forecast separately to planned demand
- Network optimisation is often required to strategically design the parts network to meet required lead times for parts over and above their availability (centralised vs decentralised)
- Lead time variability and alternate sources of supply need to be modelled, run sensitivity analysis and over time.

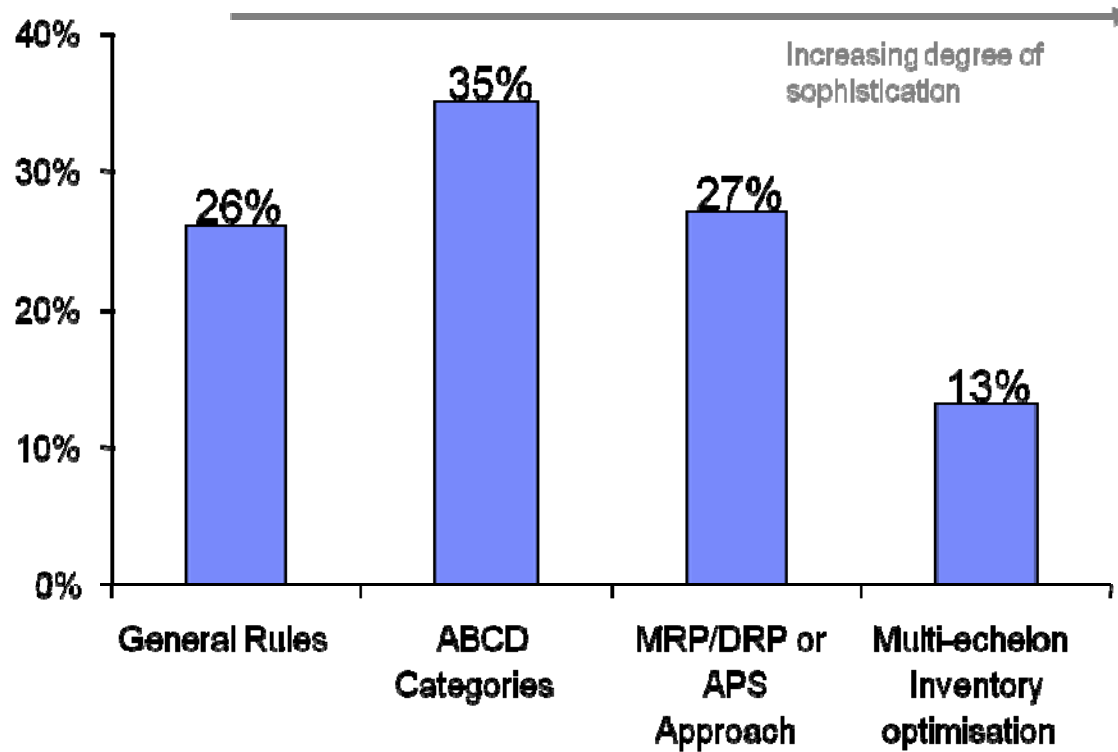


Past experience shows that considerable benefits can be achieved



Causes of Inventory problems.

How Companies Set Spare Parts Policies





Spare Parts Inventory Optimisation Case Studies

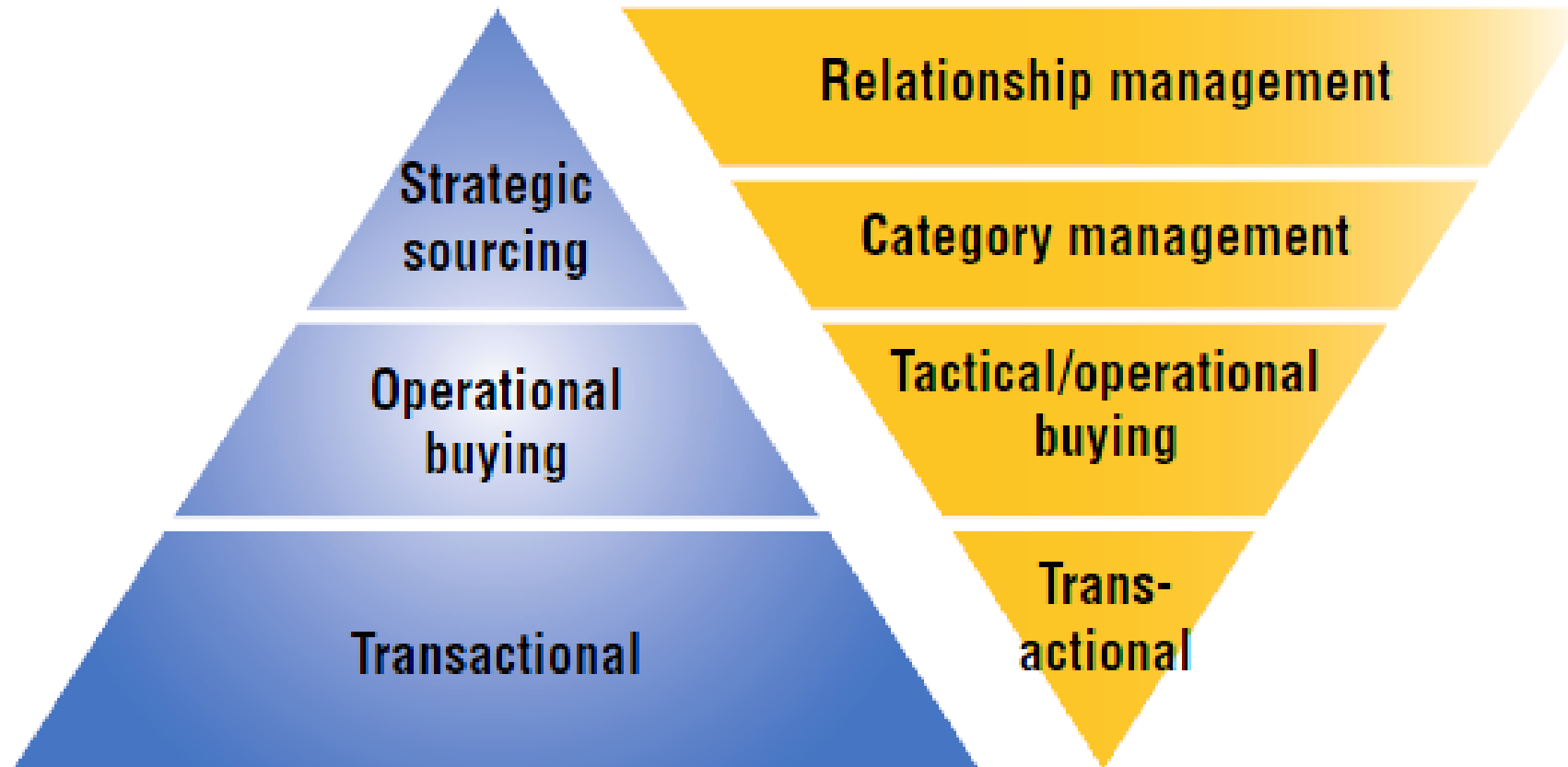
Client	Challenge	Benefit
British Energy	<ul style="list-style-type: none"> • Implementing a wide-ranging Supply Chain Strategy • Target of reducing spares inventory • Also wanted to reduce the risk of lost revenue due to spares unavailability. 	<ul style="list-style-type: none"> • Significant contribution to client's target of reducing inventory by £20M • "DIOS is the best tool I've seen for my needs." - Materials Planning Manager, British Energy
BMW	<ul style="list-style-type: none"> • BMW wanted to optimise their world-wide spare parts business and model the cost structure of their logistics processes in great detail • Requirement was to calculating optimal stocking and replenishment strategies for parts with highly sporadic demands in a multi-echelon network 	<ul style="list-style-type: none"> • Spare parts business now run at minimum costs while ensuring target service levels • Provided a high degree of automation for planners • Using simulation scenarios different planning strategies were evaluated
LA Metro	<ul style="list-style-type: none"> • Rapidly increasing inventory was exceeding budget goals • Inventory levels could not be controlled without impacting parts availability 	<ul style="list-style-type: none"> • According to Metro's Lonnie Mitchell, "the pilot has given us deep insight and confidence that an inventory reduction of 28% is achievable. We expect to realize a significant portion of this reduction within the next 12 months.
OneSteel	<ul style="list-style-type: none"> • An assessment required to identify opportunities to reduce spare parts inventory, improve service levels and reduce replenishment costs 	<ul style="list-style-type: none"> • Inventory savings in the range of 10% to 30% were identified based on the balance between reducing inventory and investment required to deliver target service levels



Procurement Models

Traditional model

New procurement model





Implementation Steps - Procurement

1. Set Up Warranty Contracts

2. Setup common Services and Items

Find out what your vendors can provide and build relationships to enable integration of your business with theirs.

Consistency enables grouping of which vendors and can provide what.

3. Request for quotes against high ordered items

Maximo 7.x contains new functionality that enables comparison of quotes and creating PO's



Implementation Steps - Procurement

4. Leverage purchase agreements/contracts for high volume, single sourced SKUs

Consolidate non-critical parts and search for the best price for volume.

Creating contracts guarantees a set price and vendor for items/services.
It can also lead to streamlining business processes for approvals.

5. Trade lead time against purchase costs to meet criticality requirements.

Use tools to simulate business outcomes and justify when a part is required to be delivered.

6. Ensure the process for new stocked items and services are adequately catered for within the procurement processes



Final Comments

- It takes a strategic team to implement Maximo
 - 80% of improvements will be related to process and organisation
 - Technology is not solution but enabling tools can be leveraged
 - If the business process doesn't change, then implementation of new software only glosses over (or automates) existing problems. Never assume the improvement will manage itself.



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