MAXIMIZING ROI OF PTC'S SERVIGISTICS SLM SOLUTIONS

PTC SLM team with Barkawi

June 7, 2016

4 VALUE DRIVING OPPORTUNITIES FOR PTC SLM CLIENTS

1. Optimizing part prices
   - **Jon Utterback**
   - Barkawi, VP PTC SPM Practice
   - Servigistics, VP Product Management (5 years)
   - Vendavo and Deloitte pricing practices

2. Optimizing inventory
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   - PTC, VP (14 years, 10 year with MCA)

3. Leveraging connected devices in parts planning
   - **Steven Caldwell**
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4. Tuning processes and system configuration
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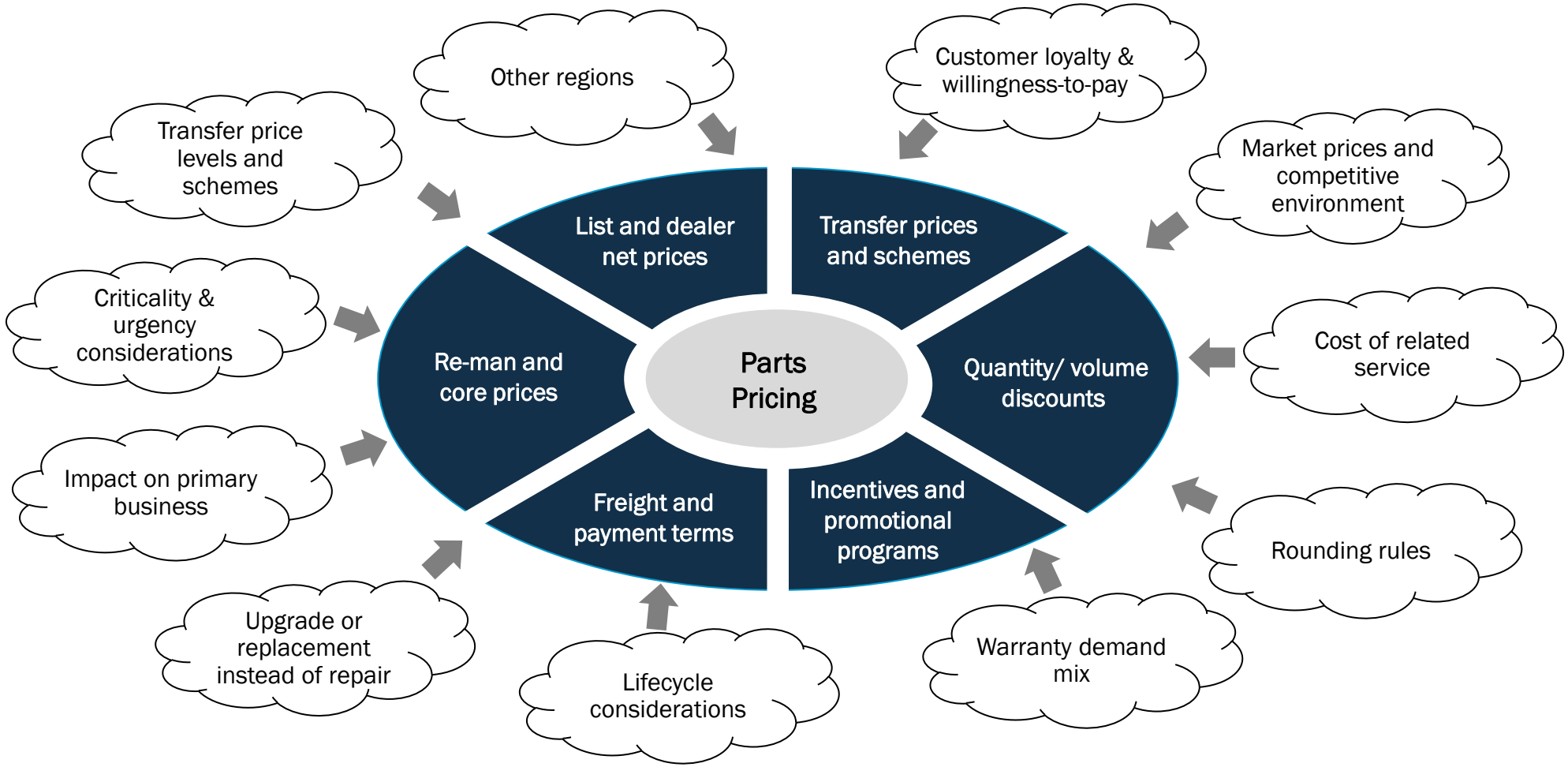
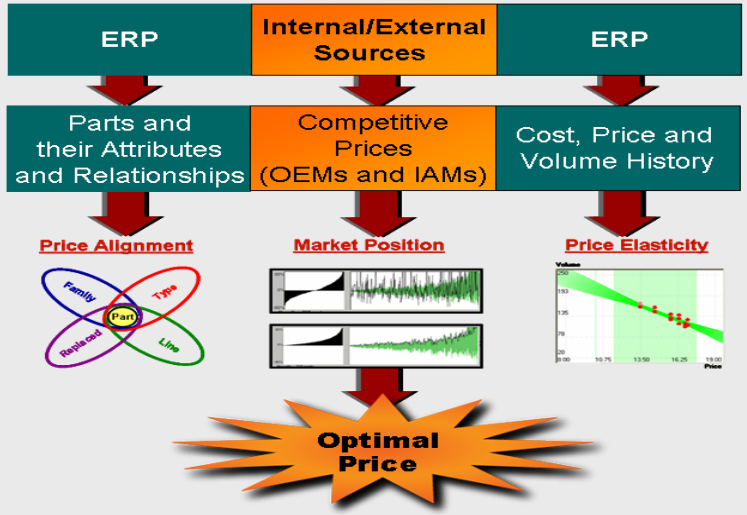
MANY INFLUENCING FACTORS FOR PRICING PARTS AND SERVICE MAKE IT A DIFFICULT CHALLENGE



SUCCESSFUL TRANSFORMATIONS ADDRESS ALL FOUR ASPECTS OF PERFORMANCE

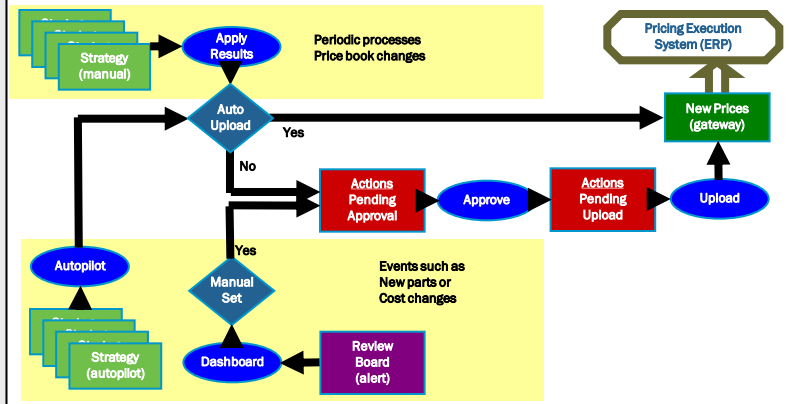
Price Determination

- Set optimal part prices in every market, channel, and location
- Meets global requirements for complex markets (e.g., Europe)



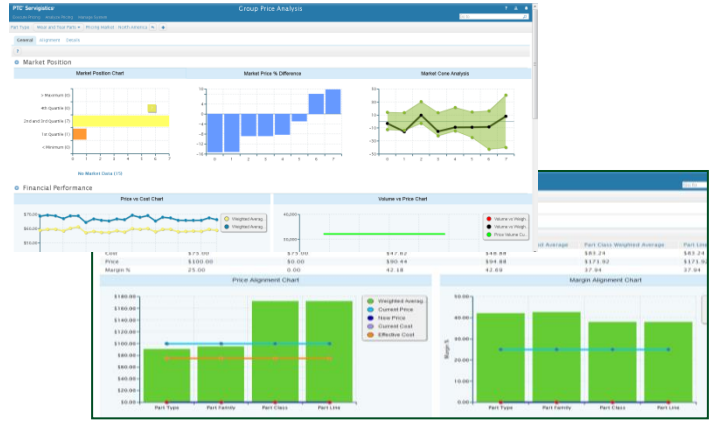
Workflow

- Price Book Project Management
- Initial part price setting based on strategy and Pricing Policies
- Multi-level approval process for periodic/event-driven changes
- Exception-based processing with alerts and notifications



Analytics

- Part Group Analysis to identify and rank conditions and trends
- Price Step Analysis
- Revenue and Profit Projections
- Market Statistics Comparison

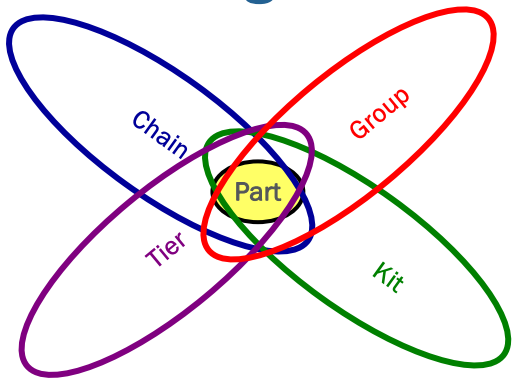


Architecture / Technology

- Scalable to millions of part/market pairs
- User-defined segmentation
- User roles and security by action and segment
- Multi-language and multi-currency

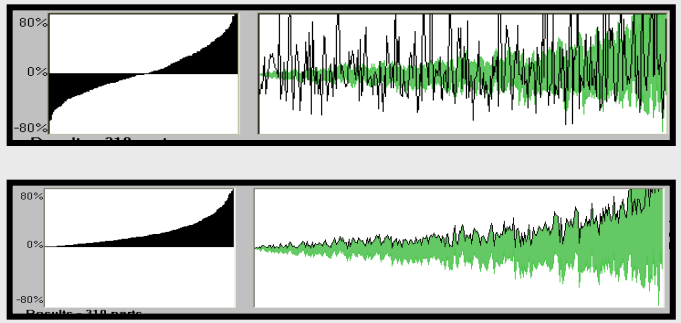
FOR SERVICE PARTS PRICING, A BLENDED APPROACH IS BEST SUITED TO OPTIMIZE PRICES

Price Alignment



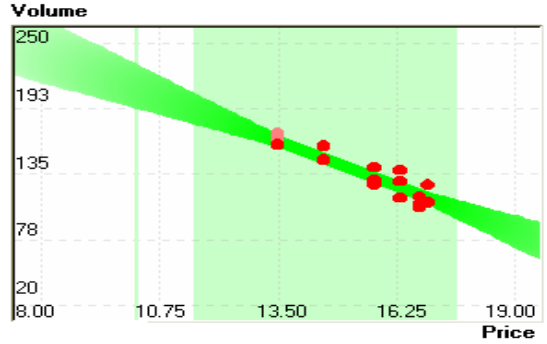
Rationalize Prices based on all the ways parts relate given form, fit, function, grade, supersession, size and equipment

Market Adaptive Pricing



Position Prices against competing market prices from both OEMs and Aftermarket Competitors

Price Elasticity



Determine Customer sensitivity to price changes throughout the lifecycle changes. Identify parts that can be priced with elasticity.

This blended approach of strategies enables the pricing team to handle the high volumes, interrelated and/or superseded parts, and the competitive nature typical of service parts pricing

PTC SERVIGISTICS SPP ENABLES CONTINUOUS IMPROVEMENT IN A NUMBER OF AREAS

	Basic	Mature	Best-in-Class
Processes	• Routine price list revisions • New parts pricing • Handling changes in cost	• Managing contracts and discounts • Collecting and processing market feedback • Responding to changes or other events	• Market / competitive research • Monitor & analyze strategy impact • Integrate strategies across pricing, sales, marketing, procurement and inventory planning
Segmentation	• Function / Type • Volume • Cost	• Lifecycle stage • Equipment/product attributes • Warranty volume mix	• Competitiveness • Price sensitivity
Pricing Strategy	• Cost plus • Price changes	• Margin curves • Attributed based • Part relationships	• Competitive positioning • Value based
Discounting Strategy	• Individually bargained based often only on volumes	• Discount rules s based on customer groups • Special programs such as seasonal discounts	• Multi-dimensional discount schemes based on part and customer criteria

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MANY OPTIONS FOR FINDING VALUE BY OPTIMIZING INVENTORY

Inventory Optimization	Value Generation Area
Single Item Optimization	• Use comprehensive segmentation to manage item service levels • Model supply/demand variability (assuming independent locations) • What-if Analysis with scenario modeling
Basic Multi-echelon Optimization	• Part mix optimization to decide best depth and breadth of stocking • Multi-Echelon coordination to reduce redundant safety stocks • Accurate service levels by modeling of lead-time and wait time • Multi-period budget target optimization • Ease of service targeting, aligning targets to business objectives
Rotable Pool Optimization	• Get maximum coverage from limited inventory by maximizing off-shelf fill and a guaranteed pooled fill in a local/regional pool • Accurate modeling of Rotables' supply chain
Churn Control Optimization	• Optimize part mix taking into account existing inventory • Reduce period to period churn in stocking levels • Optimal burndown of excess and procurement reduction

MANY OPTIONS FOR FINDING VALUE BY OPTIMIZING INVENTORY

Inventory Optimization	Value Generation Area
Contract/Product Based Optimization	• Create service targets using installed base attributes such as contract, product and customer. • Optimize part mix to provide high service to premium contracts without increasing inventory for everyone
Product Uptime (Availability) Optimization	• Guarantee product uptime and fill rates • Support high revenue generating outcome based service contracts with minimum inventory investment and downtime risk • Optimize multiple indentures of stocking (assembly/ subassembly/ components) at all echelons to achieve time-cost balance
Emergency Back-up (Referral) Location Optimization	• Guarantee fill rates and wait times at primary and backup locations • Coordinated stocking in a region to optimize inventory of expensive items

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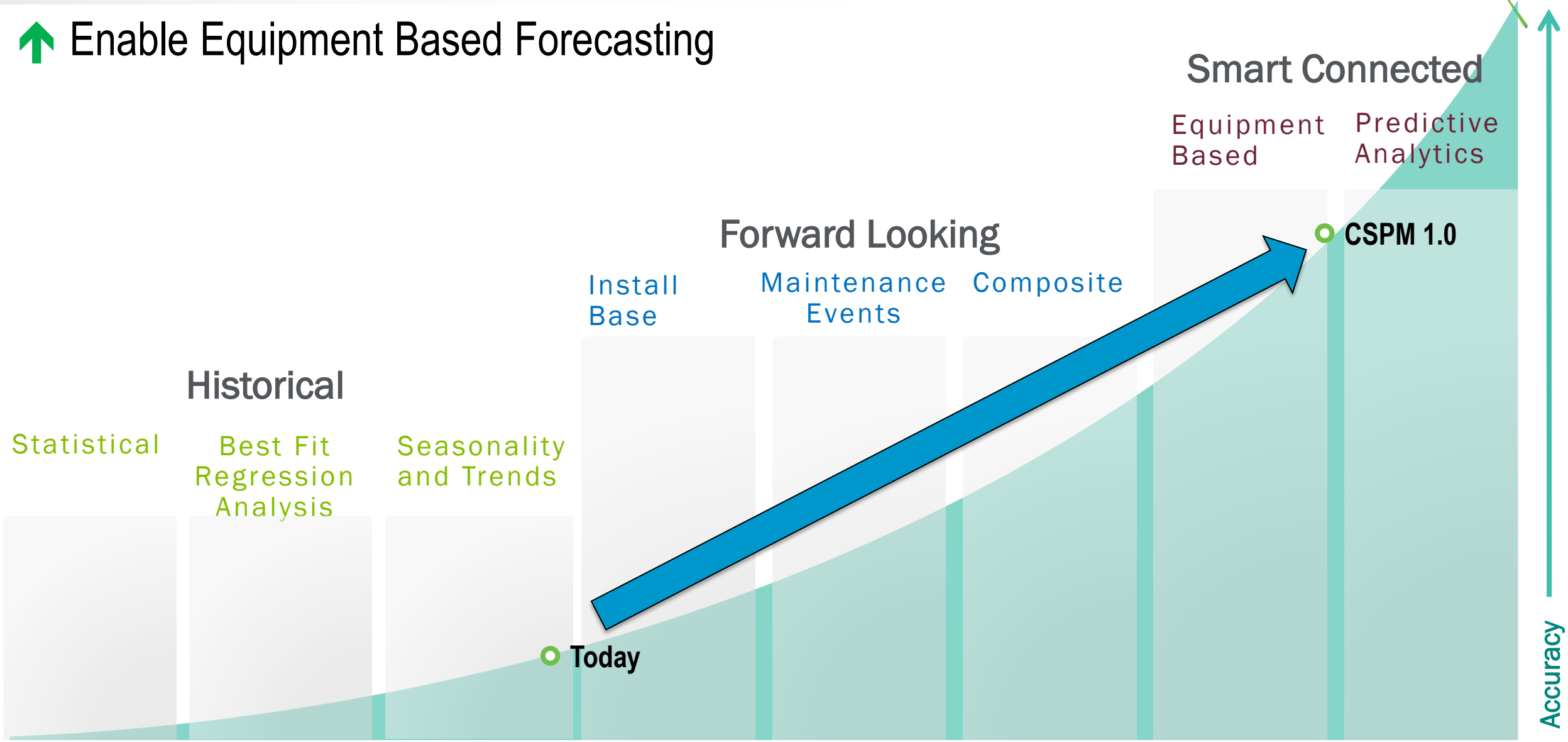
LEVERAGING CONNECTED DEVICES IN PARTS PLANNING

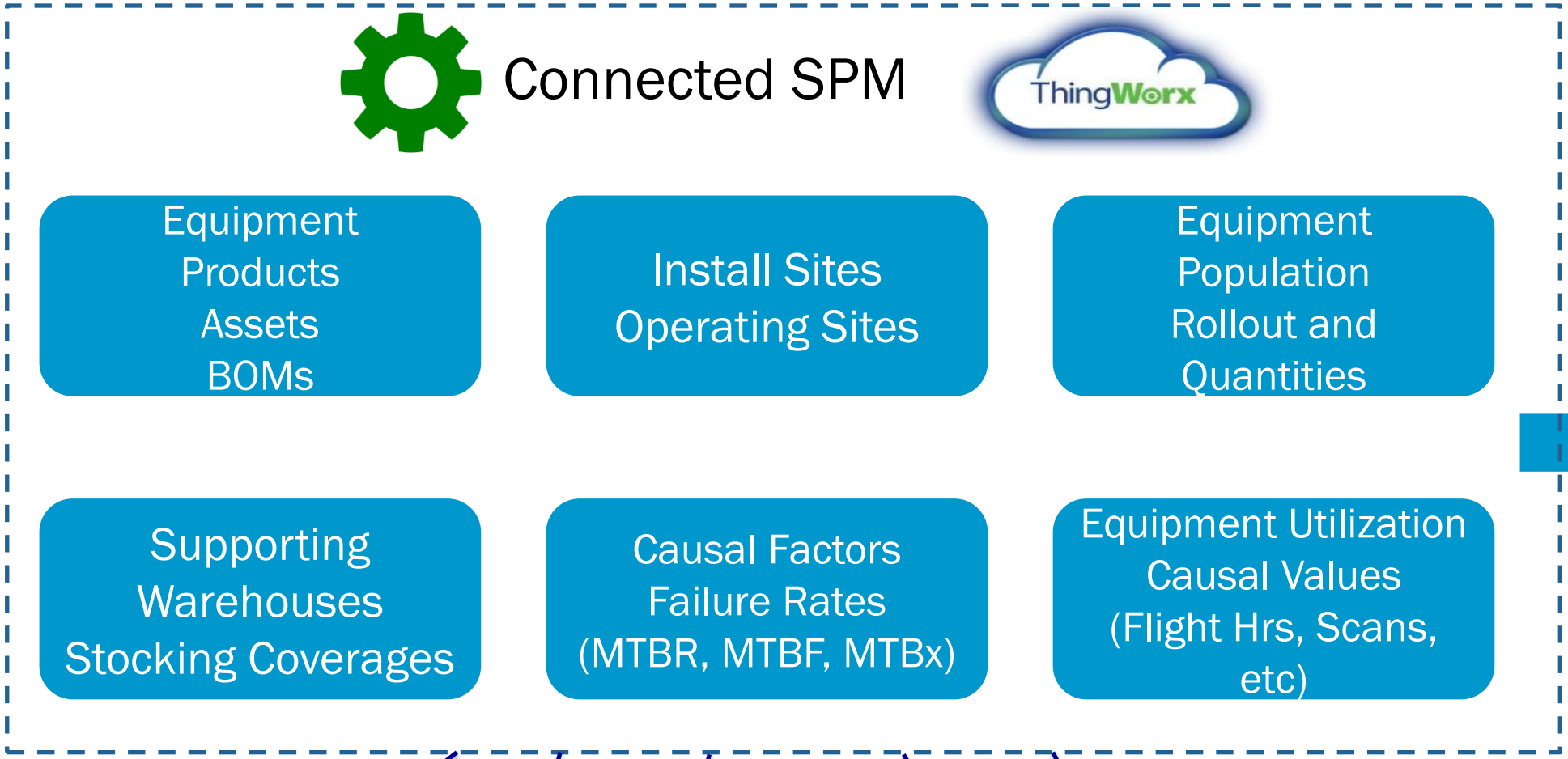
Connect to your assets and **plan** spares using equipment data

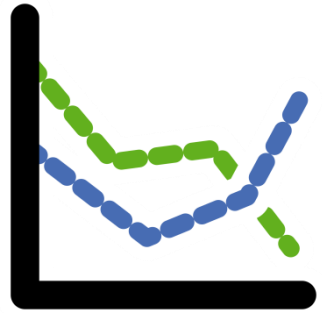
SERVICE PART DEMAND FORECASTING

Enable Equipment Based Forecasting



EQUIPMENT BASED CAUSAL FORECASTING



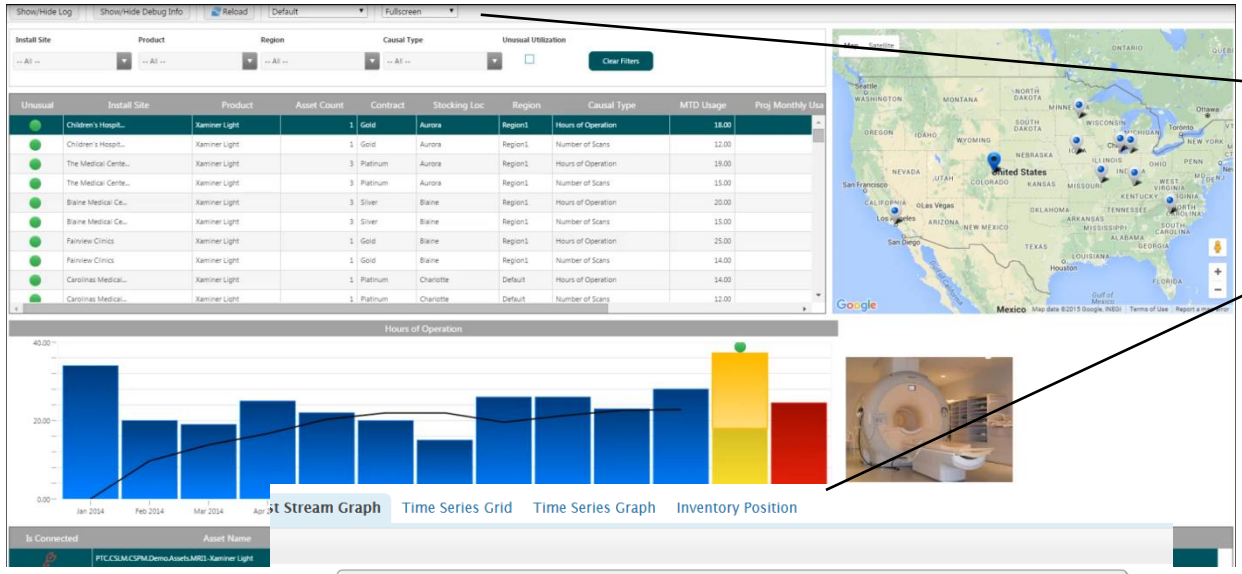


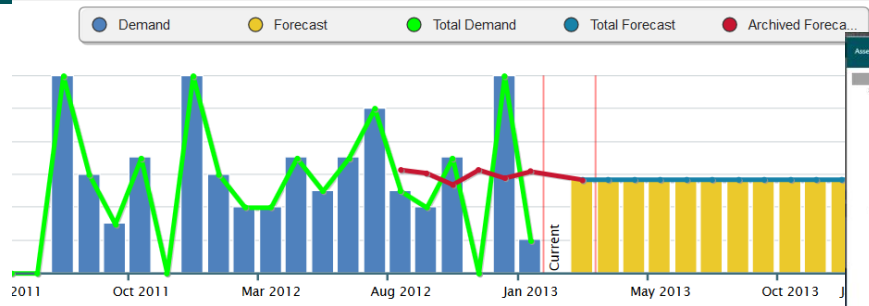
Demand Forecast

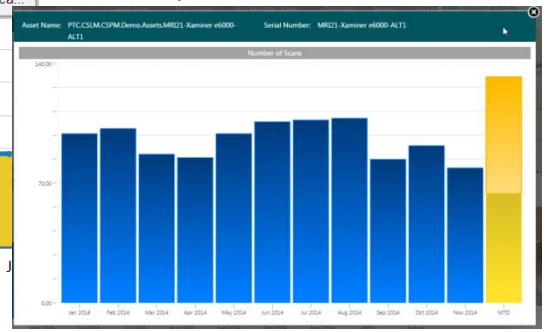
CONNECTED SERVICE PARTS MANAGEMENT

CAPABILITIES

- Collects and analyzes data directly from connected assets
- Models and forecasts asset utilization
- Provides warning for outlier equipment utilization
- Dashboards visualize install base and stocking strategies adapting to asset utilization







Connected Equipment Utilization

Proactive Causal Forecast

Predictive Stocking Strategies

BENEFITS

- Increase Forecast Accuracy
- Reduce Inventory Investment
- Improve Service Levels and Availability
- Proactive Demand Forecasting

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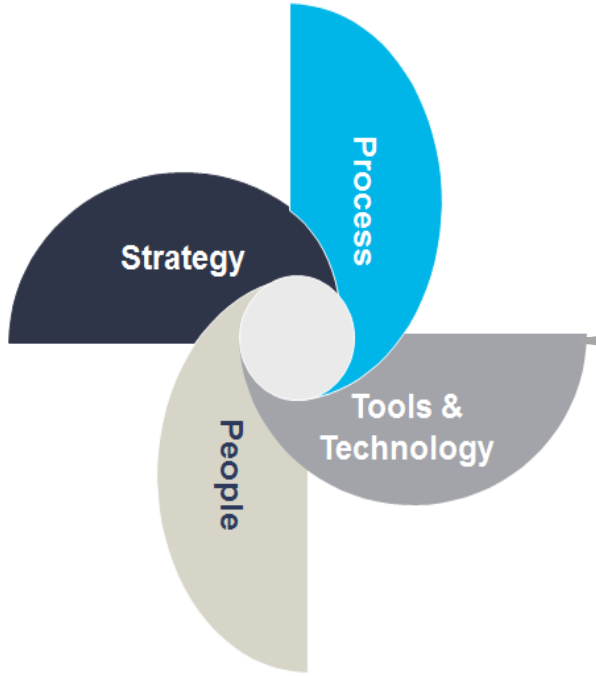
ADDITIONAL VALUE CAN BE FOUND BY ADDRESSING ALL ASPECTS THAT IMPACT PERFORMANCE AND RESULTS, FROM VISION TO VALUE



- Supply Chain Analytics
- Data Integration
- Resource Planning Optimization
- Business Intelligence
- Operations Research
- Solution Modeling

Discover	Assess	Deliver
Analyze business and system KPIs to Identify critical pain points and value-driving initiatives / opportunities	*Define business vision and strategy, process and technology requirements, and go-forward plan, budget and ROI*	*Implement new processes and capabilities to capture value with continuous improvement*

DISCOVERY (HEALTH CHECK) PROJECTS EVALUATE CURRENT BUSINESS AND SYSTEM PERFORMANCE TO IDENTIFY IMPROVEMENT OPPORTUNITIES

Tasks and Activities

1. Analyze business performance
   - Top-of-mind questions
   - KPI trends and benchmarks
2. Analyze current system performance
   - Setup and configuration
   - Capability footprint
   - Gaps with available versions/options

Goals and Deliverables

1. Vision definition and alignment
2. Initiative road map with ROI, readiness and key requirements
3. Project plans and budgets for key initiatives

Business Performance (examples)

1. Customer service and ordering experience
2. Inventory availability and fulfillment
3. Channel performance
4. Supplier performance
5. Operational costs and capacity effectiveness
6. Volume leaks / sales potential
7. Pricing / promotions strategies and effectiveness
8. Working capital (inventory) levels
9. Material flow and logistics costs
10. Dealer and customer loyalty

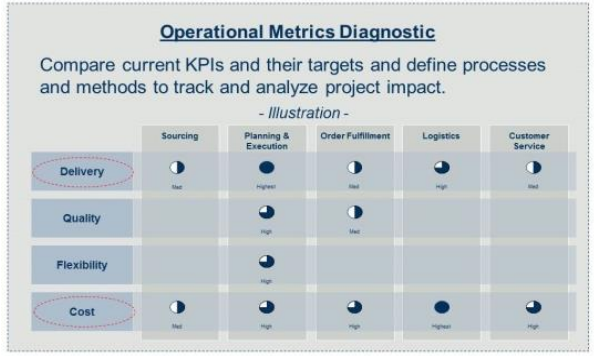
Systems Performance

1. System speed and scalability
2. Custom code effectiveness
3. Results accuracy and impact
4. Outlier management
5. Configuration complexity and validity
6. Segmentation definition
7. Strategies setup and management
8. Result manual overrides
9. Alerts and exception handling
10. User adoption and effectiveness

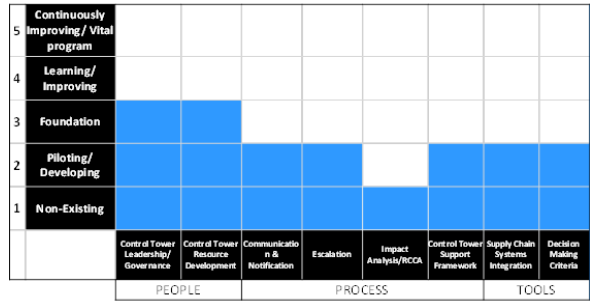
ASSESSMENT PROJECTS MEASURE THE BUSINESS CASE AND DETERMINE THE RIGHT PATH TO VALUE

- Define vision and prioritize requirements
- Plan processes and change management
- Analyze KPIs and develop business case
- Assess organizational and data readiness
- Define key requirements
- Create implementation project plan and budget

Operation Improvement KPI Measures



People, Process, Tools Maturity Matrix



Finance ROI and NPV Modeling

Cost of Capital	20%

Measurement	JOP	Year 0	Year 1
Forecast Accuracy	**60%**	**75%**	**85%**
Fill Rate	**80%**	**85%**	**90%**
TTL Transportation Spend	$ 4,000,000	$ 3,500,000	$ 3,000,000
Expedite Spend	*$ 1,500,000*	*$ 1,000,000*	*$ 5,000,000*
Obsolence Write-offs Reduction	$ 2,000,000	$ 800,000	$ 100,000
Total Inventory Level	$ 100,000,000	$ 90,000,000	$ 85,000,000
Excess Inventory	*$ 20,000,000*	*$ 10,000,000*	*$ 5,000,000*
Inventory Reduction (Burn-off)		*$ 10,000,000*	*$ 5,000,000*
Y-over-Y ROI		***$ 3,700,000***	***$ 2,200,000***

Software Solution Evaluations Scorecard

Criteria		Tool 1	Tool 2	Tool 3	Tool 4	Tool 5	Tool 6
Demand Planning	Forecasting Strength	▲	▲	▲	▬	▲	▲
	Ease of Collaboration	▲	▲	▬	▲	▬	▬
	Ability to Review & Edit	▲	▲	▲	▲	▲	▲
	Scenario Planning	▲	▲	▲	▲	▲	▲
Supply Planning	Modeling GPC SC Complexity	▲	▬	▲	▲	▲	▲
	Rough Cut Capacity Planning	▲	▼	▬	▲	▲	▲
	Constraint Planning & Optimizing	▲	▬	▲	▬	▲	▲
S&OP	Ease of Collaboration	▲	▲	▬	▲	▬	▲
	Reporting	▲	▲	▬	▲	▲	▲
Cost/ Implementation	ROM Cost (License)	$300-400K	$350-400K	$250-325K	$250-500K	$500-600K	$1.1-1.4M
	ROM Cost (Implementation)	$50-75K	$150-200K	$250-325K	$250-500K	$500-600K	$1.0-1.2M
	ROM Cost (Maintenance)	$300-400K	$50-60K	$35-50K	$50-100K	$100-120K	$240-300K
	ROM Implementation Schedule	~3-4 Months	~3 Months	~5 Months	~9 Months	~8 Months	~12-18 Months

▲ = Full Capabilities ▬ = Partial Capabilities ▼ = Lacking Capabilities

QUESTIONS

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