# APICS
## Industrial Crescent Chapter

# Cloud Computing: Aspirin for Supply Chain Headaches
## February 16, 2016

**MURANO CORPORATION**

The Value Chain Integration Company

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OUR MISSION

HELP ORGANIZATIONS BUILD RESILIENT, INTEGRATED, STREAMLINED, AND EFFICIENT (RISE) SUPPLY CHAINS

SUPPLY CHAIN MANAGER

CLOUD
NEXT-GEN ERP
SUPPLY CHAINS

FORTUNE 1000 COMPANIES
PUBLIC SECTOR
SMALL & MEDIUM ENTERPRISES

FAST
EASY
AFFORDABLE

FOCUS ON YOUR CORE
SIMPLIFY OPERATIONS
'RISE' SUPPLY CHAINS

SWITCH FROM OLD TO NEW

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# Supply Chain Manager
## Cloud Supply Chain Resource Planning Software

*Supply Chain Manager* Webinar on
Feb 23, 2016
Registration Details:
www.muranocorp.com

- Online B2B Marketplaces
- Big Data & Analytics
- Customer Relationship Management
- Enterprise Resource Planning
- Supplier Relationship Management
- Integrated Job Portal
- Supply Chain Visibility & Integration

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# Key Cloud Takeaways

- Small & Medium Enterprises can Automate Operations in 3 Months

- Fortune 1000 Enterprises can Rapidly
  - Automate Growth Market Business Units
  - Deploy a Complimentary Cloud App

- Integration is the Holy Grail

- Establish an Integrated and Resilient Supply Chain Network of the Future

- Embrace Cloud: It is Supply Chain Professional's Best Friend

| Cloud Computing is … | Cloud Computing is NOT … |
|---|---|
| Ubiquitous | If you can NOT easily access your ERP from outside your offices using an Internet Browser |
| Convenient | If you can NOT access your ERP from your iPad |
| On-Demand Network Access | If you can NOT add new users, lines of business, geographies easily without having to rely on expensive consultants |
| Shared Pool of Configurable Computing Resources (Networks, Servers, Storage, Applications, and Services) | If you host your ERP instance in a remote data center |
| Rapid provisioning (Speed) | If you have wait many years to bring online a new business unit |
| Minimal management effort or service provider interaction (Effort) | Relying on expensive consultants for many years to implement ERP is NOT Cloud Computing |

Source: National Institute of Standards and Technology (NIST) defines Cloud Computing (http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf)

# Agenda

- 'Supply Chain Headaches' Remedied with Cloud Computing

- Small and Medium Enterprise Case Study
  - *Asian Electrical Devices Manufacturer Improves Operational Efficiency Using Cloud Computing*

- Fortune 1000 Enterprise Cloud Options

- Supply Chain Network of the Future

- Seven Steps to Successful Cloud Adoption

# Speaker Bio

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- o 23 years of Fortune 500 Experience
- o Help Organizations Solve Supply Chain Challenges using Innovative and Modern Technology
- o Manufacturing (with focus on Medical Device Industry), Distribution, and Consumer Packaged Goods (CPG) Industries
- o Responsible for Sales, Marketing & Implementation of Murano Corporation's flagship Enterprise Cloud Software, Supply Chain Manager
- o Frequent Speaker at APICS Chapter Meetings

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# What causes Bullwhip Effect in Supply Chains?

a. Lack of synchronization among supply chain members
b. Supply patterns do NOT match demand patterns
c. Lack of collaboration and communication between supply chain members
d. Lack of information visibility into inventory levels, anticipated production, and material in transit
e. All of the above
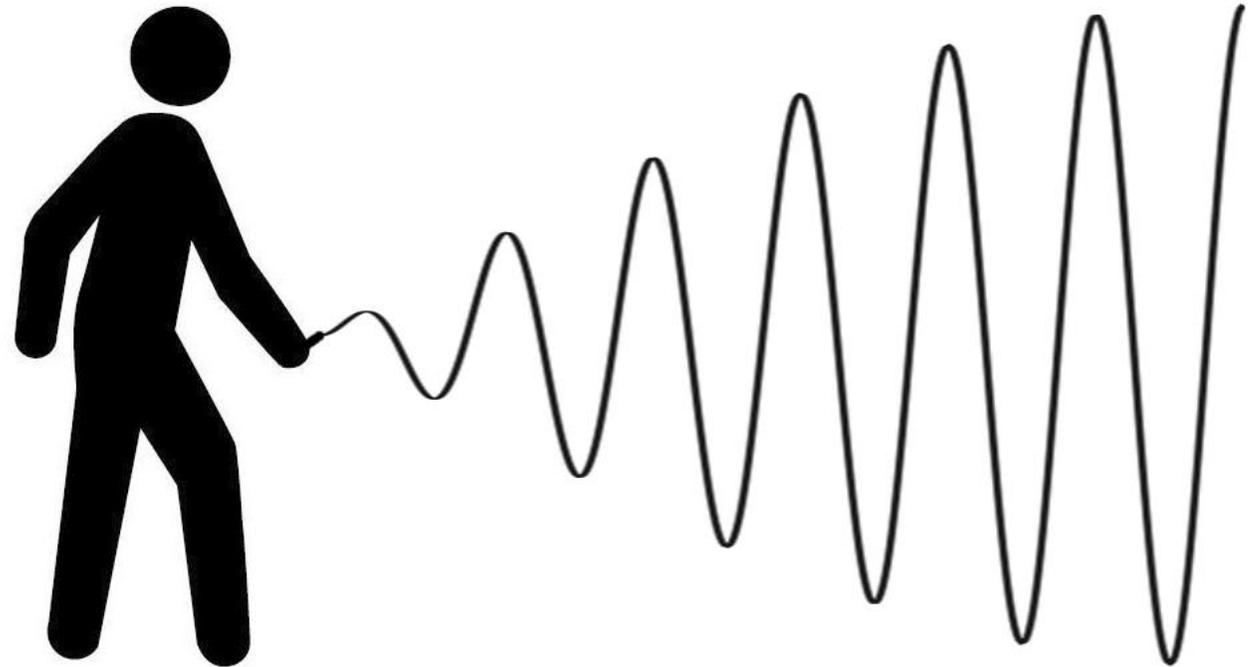
| TRIGGER | SYMPTOM | IMPACT | MEDICINE | MONITOR |
|---------|---------|--------|----------|---------|
| Parts Shortages | Production Shutdown | Line Down Costs | Supply Chain Visibility | Inventory Turns |
| Customer Demand | Higher Component Prices | Cost of Goods Sold (+) | Online Marketplace | Gross Margin |
| Component Deliveries | Invoicing Errors | Profits (-) | E-Invoicing & Spend Analysis | Direct Spend |
| Rush Customer Orders | Air Freight Charges | Cost of Goods Sold (+) | Supply Chain Collaboration | On-Time In-Full (OTIF) |

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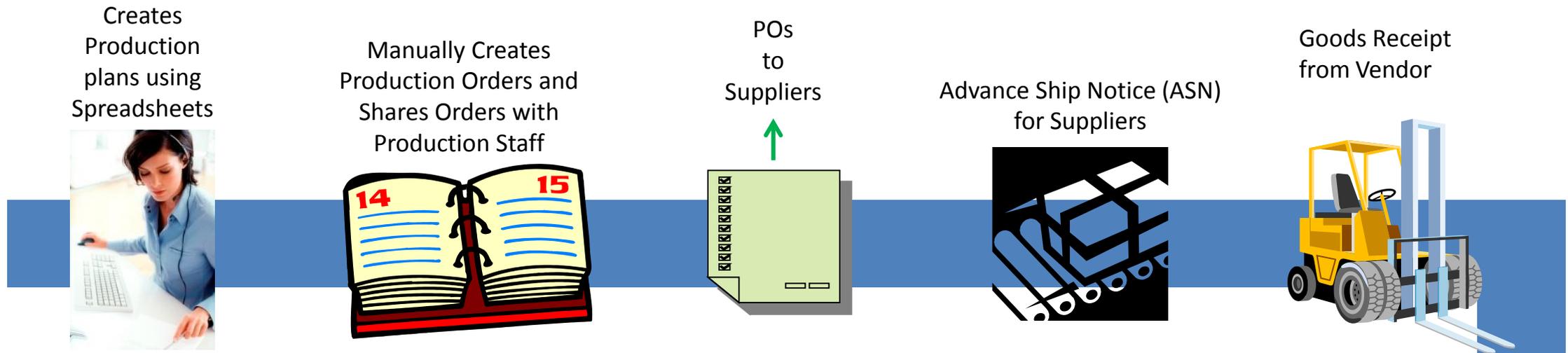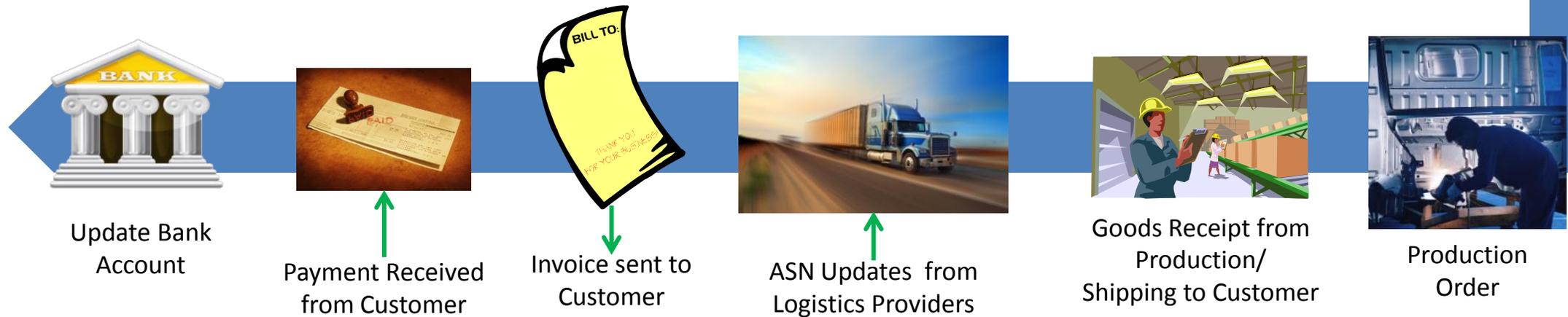The Value Chain Integration Company

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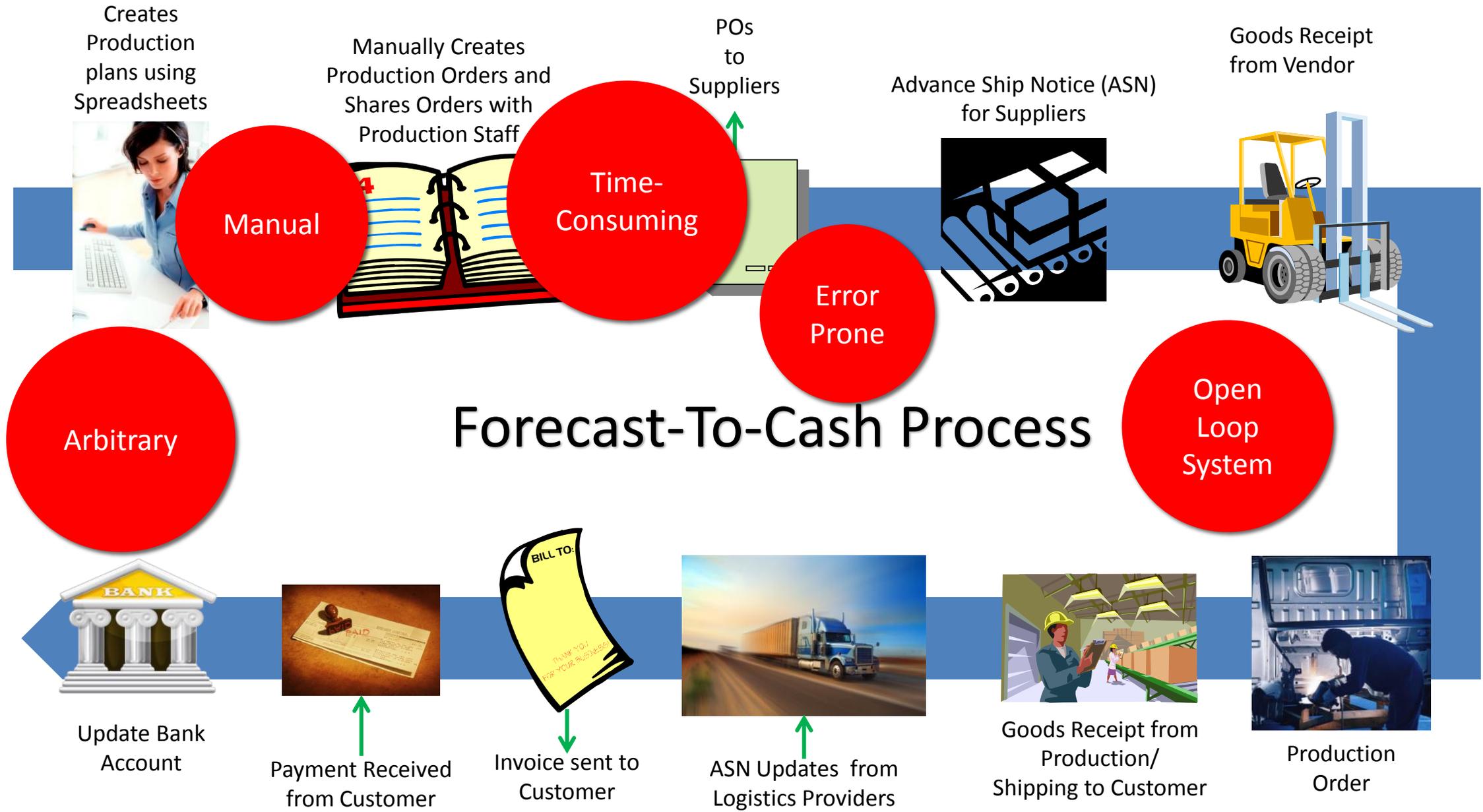- Seven Steps to Successful Cloud Adoption

**MURANO CORPORATION**
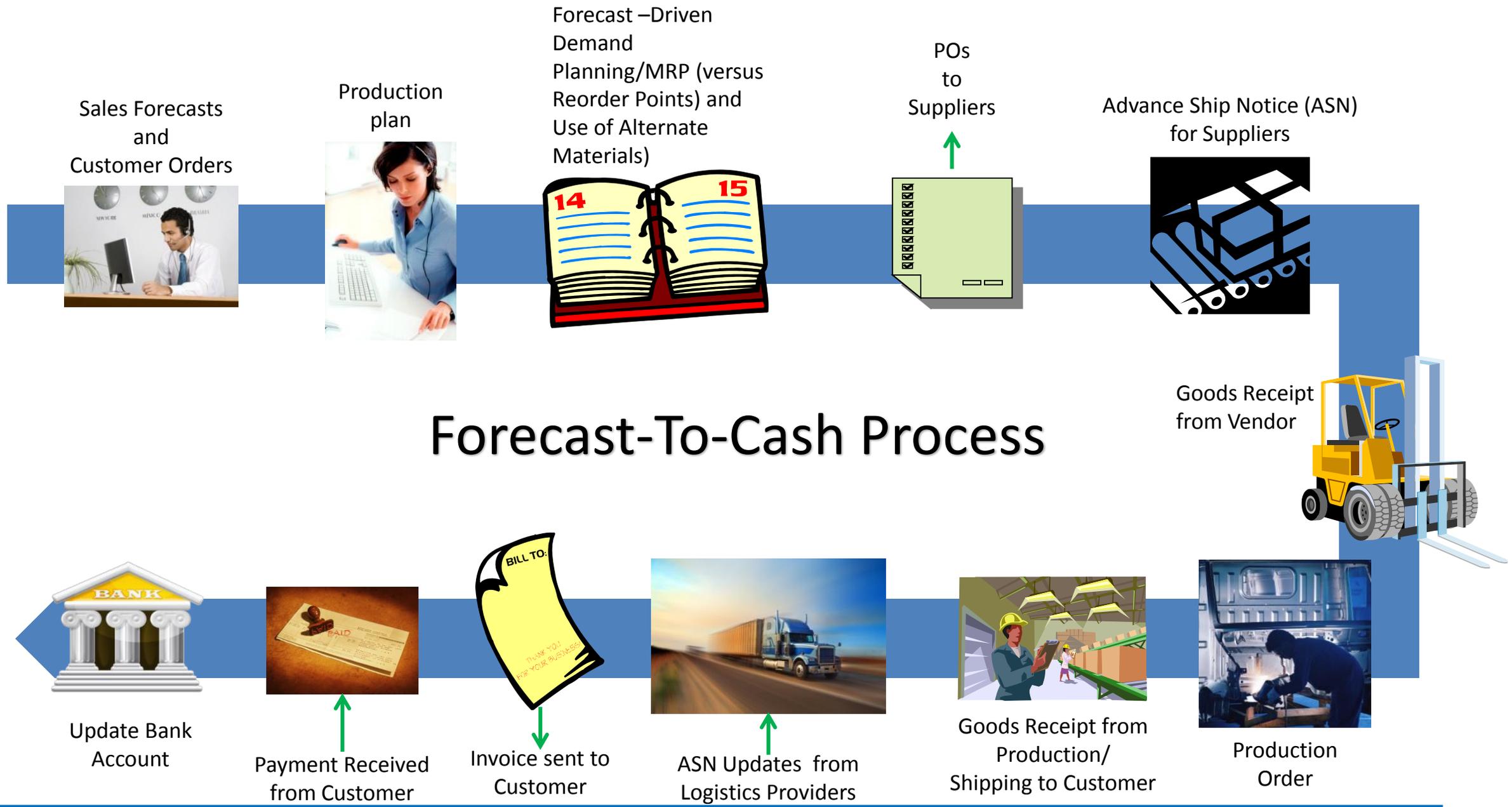The Value Chain Integration Company

# Forecast-To-Cash Process
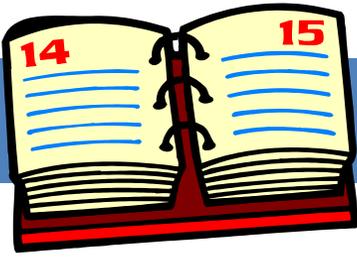
**Legacy Forecast-To-Cash Process**

Creates Production plans using Spreadsheets

Manually Creates Production Orders and Shares Orders with Production Staff

POs to Suppliers

Advance Ship Notice (ASN) for Suppliers

Goods Receipt from Vendor

Update Bank Account

Payment Received from Customer

Invoice sent to Customer

ASN Updates from Logistics Providers

Goods Receipt from Production/ Shipping to Customer

Production Order

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Forecast-To-Cash Process

Legacy Forecast-To-Cash Process

Creates Production plans using Spreadsheets

Manually Creates Production Orders and Shares Orders with Production Staff

POs to Suppliers

Advance Ship Notice (ASN) for Suppliers

Goods Receipt from Vendor

Manual

Time-Consuming

Error Prone

Arbitrary

Open Loop System

Update Bank Account

Payment Received from Customer

Invoice sent to Customer

ASN Updates from Logistics Providers

Goods Receipt from Production/ Shipping to Customer

Production Order

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Forecast-To-Cash Process

Cloud Forecast-To-Cash Process
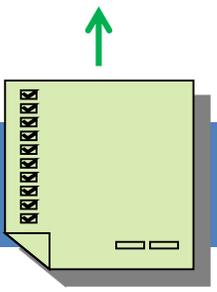
Sales Forecasts and Customer Orders

Production plan

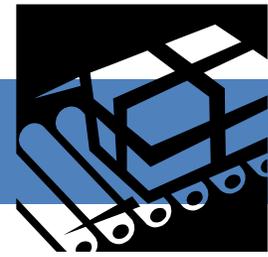Forecast –Driven Demand Planning/MRP (versus Reorder Points) and Use of Alternate Materials)

POs to Suppliers

Advance Ship Notice (ASN) for Suppliers

Goods Receipt from Vendor

Update Bank Account

Payment Received from Customer

Invoice sent to Customer

ASN Updates from Logistics Providers

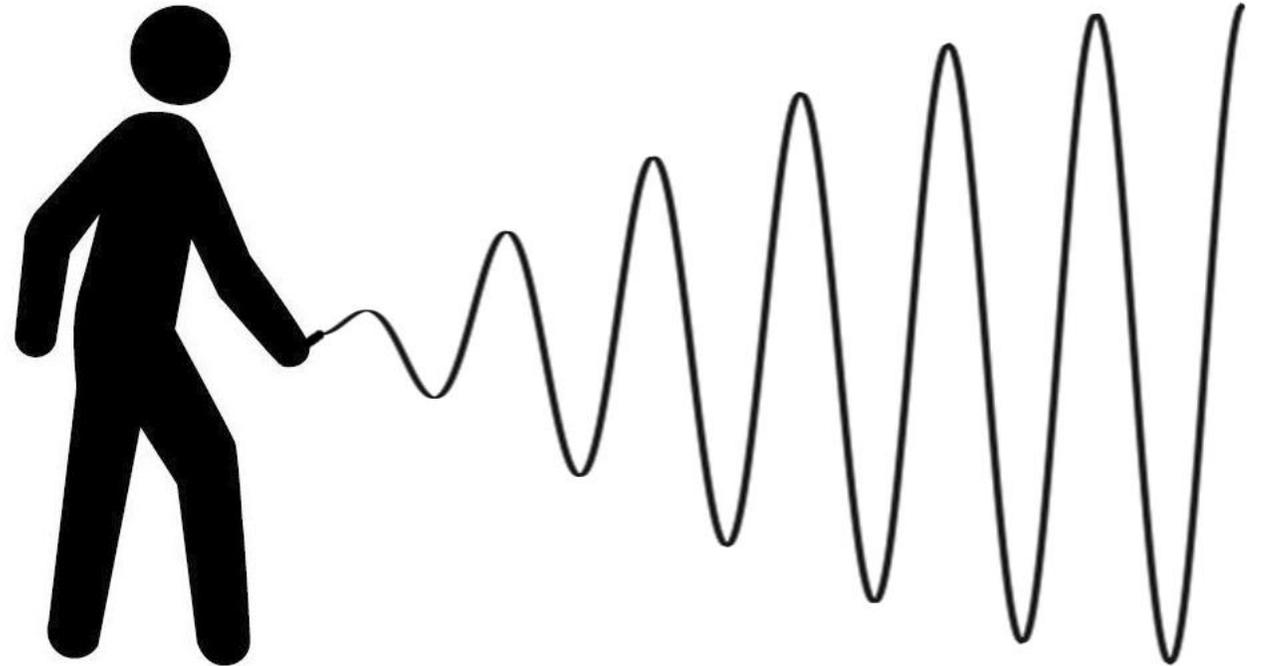Goods Receipt from Production/ Shipping to Customer

Production Order

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# Forecast-To-Cash Process



Cloud Forecast-To-Cash Process

Sales Forecasts and Customer Orders

✓Accurate
Production plan

Forecast –Driven Demand Planning/MRP (versus Reorder Points) and Use of Alternate Materials)

POs to Suppliers

✓Fast
Advance Ship Notice (ASN) for Suppliers

✓Automated

Goods Receipt from Vendor

✓Integrated

✓Efficient

Update Bank Account

Payment Received from Customer

Invoice sent to Customer

ASN Updates from Logistics Providers

Goods Receipt from Production/ Shipping to Customer
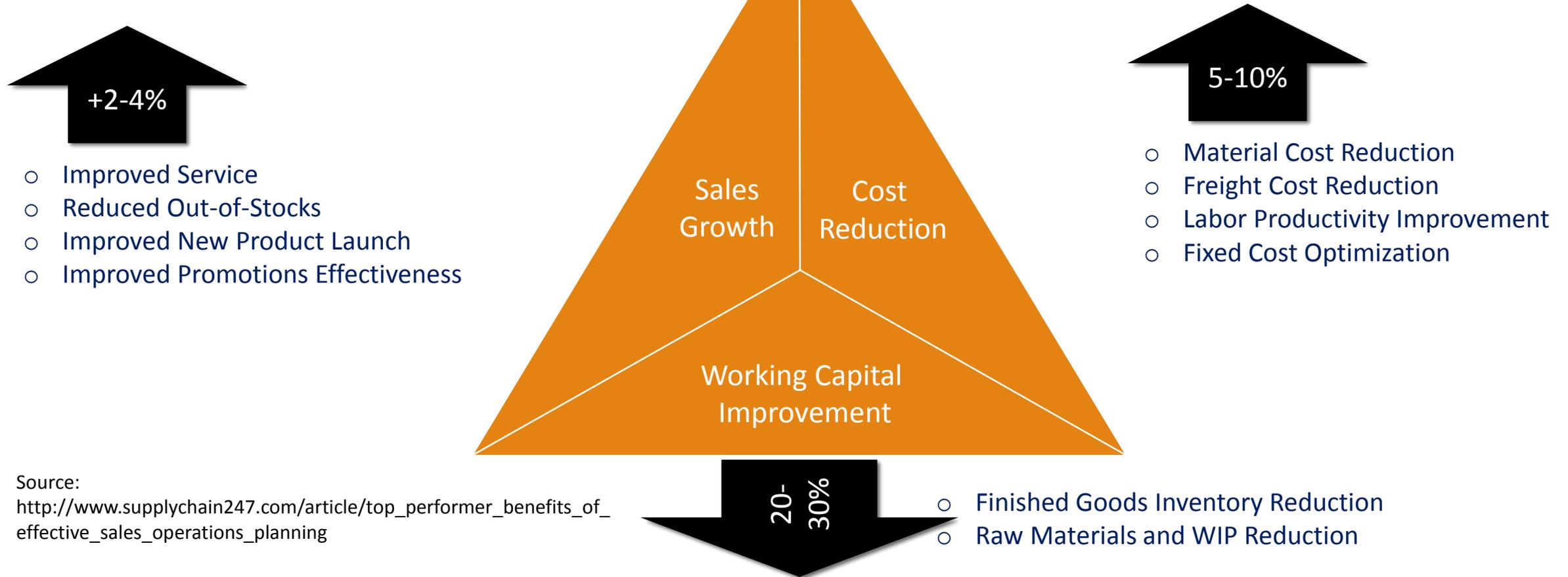
Production Order

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# What Factors can Affect Sales Forecasts?

a. Sales Demand Patterns
b. Economic Conditions
c. Competitor Actions
d. Market Research
e. Product Mixes
f. Pricing and Promotional Activities
g. All of the above

# Sales & Operations Planning (S&OP) in the Cloud
## *Business Benefits*



**+2-4%**

- Improved Service
- Reduced Out-of-Stocks
- Improved New Product Launch
- Improved Promotions Effectiveness

**Sales Growth**

**Cost Reduction**

**Working Capital Improvement**

**5-10%**

- Material Cost Reduction
- Freight Cost Reduction
- Labor Productivity Improvement
- Fixed Cost Optimization

**20-30%**

- Finished Goods Inventory Reduction
- Raw Materials and WIP Reduction

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**Sales & Operations Planning (S&OP) in the Cloud**

*Process*

**Sales Forecasting**
Predict future sales based on historical sales data, analysis of market trends, customer surveys and sales estimates

**Demand Planning**
Validates the sales forecast, considers the production capacity and incorporates statistics to meet market demand

**Supply Planning**
Review available capacity and scheduling the production based on available resources, costs and duration

**Pre-S&OP**
Balance between Demand and Supply
Cross-Functional Teaming

**Executive S&OP**
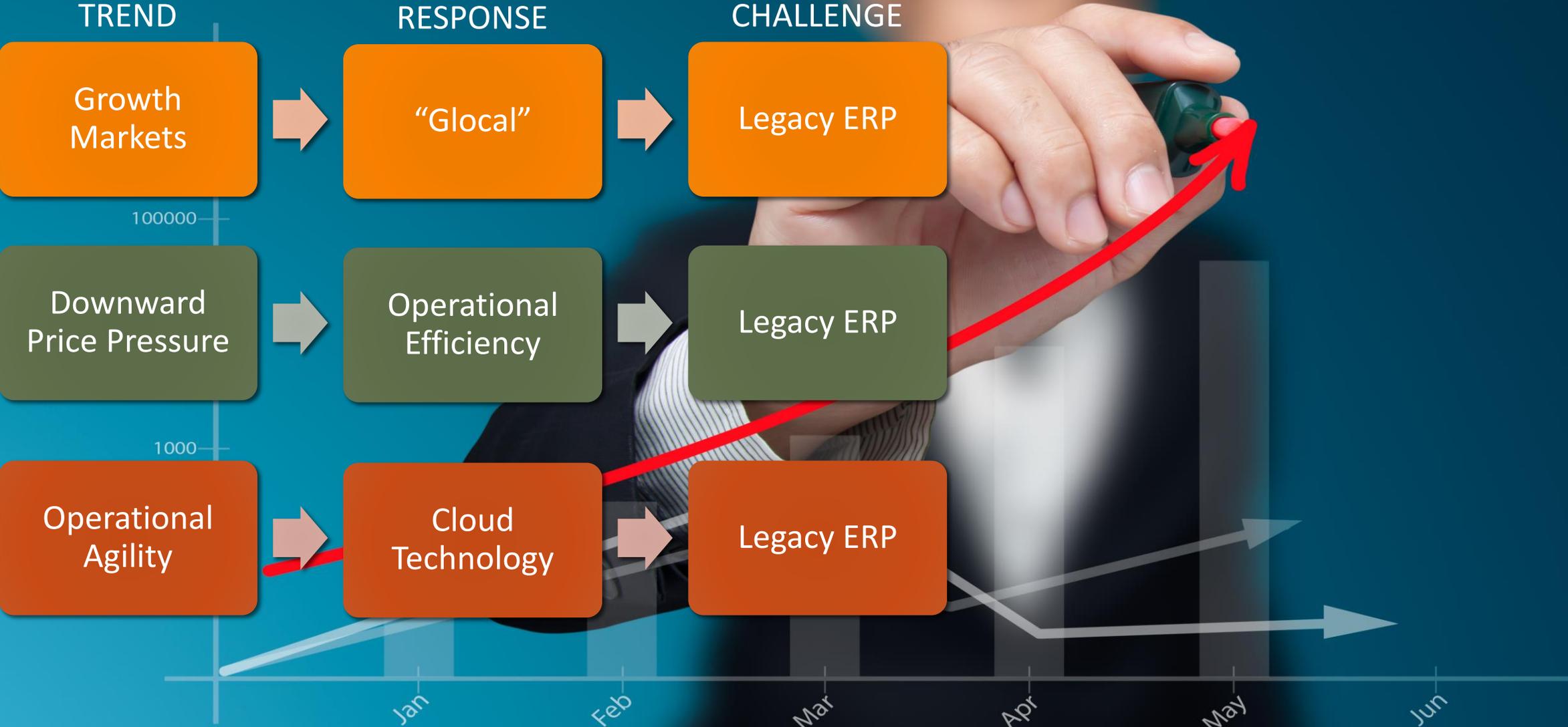Data-Driven Decision Making
Closed Loop Systems

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| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG |
|---|---|---|---|---|---|---|---|---|
| SALES | X | X | X | X | X | X | X | X |
| OPERATIONS | X | X | X | X | X | X | X | X |
| INVENTORY | X | X | X | X | X | X | X | X |

| Material Number ▾ | On Hand | Safety Stock | Prior Period Sales | Target Production | Actual Production |
|---|---|---|---|---|---|
| FG-000001---DPM 1 BOR | | | | | |
| FG-000002---DPM 1.5 BC | | | | | |
| FG-000003---DPM 2 BOR | | | | | |
| FG-000005---DPM 2.5 BC | | | | | |
| FG-000006---DPM 3 BOR | | | | | |
| FG-000007---DPM 7.5 BC | | | | | |
| FG-000008---DPM 7.5 DC | | | | | |
| FG-000010---DPM 10 BO | | | | | |
| FG-000027---DPM 1.5 TT | | | | | |
| FG-000028---DPM 2 TTC | | | | | |
| FG-000029---DPM 2.5 TT | | | | | |
| FG-000044---DPM 7.5 TT | | | | | |
| FG-000046---DPM 10 DO | | | | | |
| FG-000047---DPM 7.5 TT | | | | | |

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  - *Asian Electrical Devices Manufacturer Improves Operational Efficiency Using Cloud Computing*

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- Seven Steps to Successful Cloud Adoption

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# "New Normal" for Multinationals

TREND → RESPONSE → CHALLENGE

| TREND | RESPONSE | CHALLENGE |
|---|---|---|
| Growth Markets | "Glocal" | Legacy ERP |
| Downward Price Pressure | Operational Efficiency | Legacy ERP |
| Operational Agility | Cloud Technology | Legacy ERP |

# Complex Organizational Hierarchies and Business Models

International

**Core Operations**

**Sales Only Country Operations**

**Global HQ**

**Growth Strategic Business Units**

**Sales & Manufacturing Country Operations**

Local

# Complex and Heterogeneous Technology Footprint

**International**

**Core Operations**

**Sales Only Country Operations**

**Global HQ**

**Multiple Software**
- Vendors
- Instances
- Versions

Slow
Heavy
Complex
Paralyzing

Global Strategic Business Units

& Manufacturing Country Operations

**Local**

# "Glocal" Enterprise Software Model
*"New Normal" | Grow Your Markets | Faster, Leaner, and Simpler*

International

**Core Operations**
*(Legacy)*

**Sales Only Country Operations**
*(Cloud)*

**Global HQ**
*(Legacy)*

**Growth Strategic Business Units**
*(Cloud)*

**Sales & Manufacturing Country Operations**
*(Cloud)*

Local

# "Glocal" Enterprise Software Model
*"New Normal" | Grow Your Markets | Faster, Leaner, and Simpler*

International
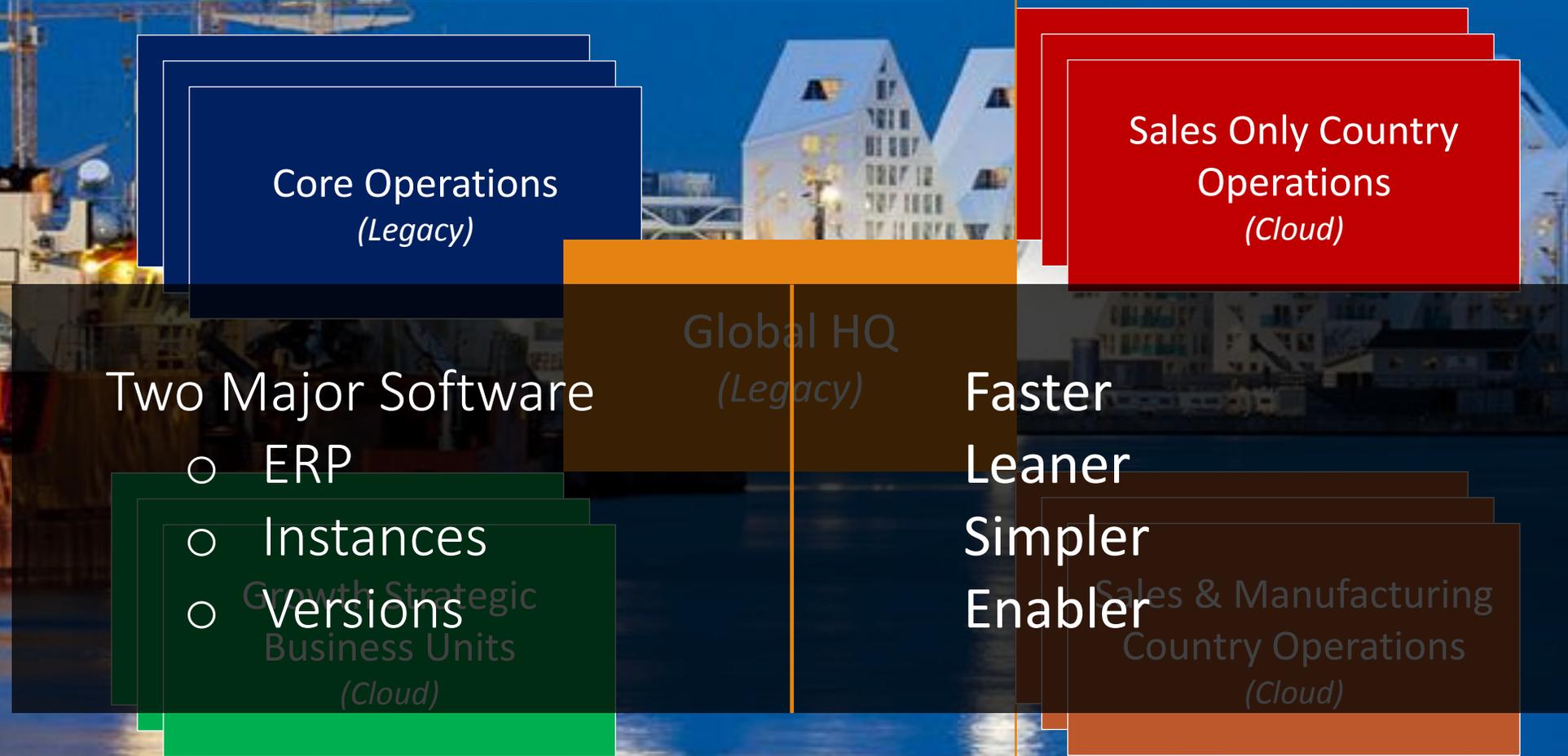
**Core Operations**
*(Legacy)*

**Sales Only Country Operations**
*(Cloud)*

**Global HQ**
*(Legacy)*

Two Major Software
- ERP
- Instances
- Versions

Faster
Leaner
Simpler
Enabler

Growth Strategic Business Units
*(Cloud)*

Sales & Manufacturing Country Operations
*(Cloud)*

Local

# Cloud Supply Chain Manager
## Source-To-Pay Process Features

**Sourcing Projects**
**Shortlist Vendors**
**RFx**
**Vendor Selection Scorecard**
**Select Vendor**

**Manage Contracts and Catalogs**
**Vendor Onboarding**
**Vendor Portal**
**Vendor Geotagging**
**Vendor Diversity**
**Sustainability**

**ERP/ Legacy Systems**

**Banks**

**Opportunity Identification**
**Compliance Tracking**
**Performance Management**
**Commodity Hedging**
**Currency Hedging**
**Diversity Management**
**Supplier Risk Management**
**Commodity Forecasting**
**Reverse Auction**
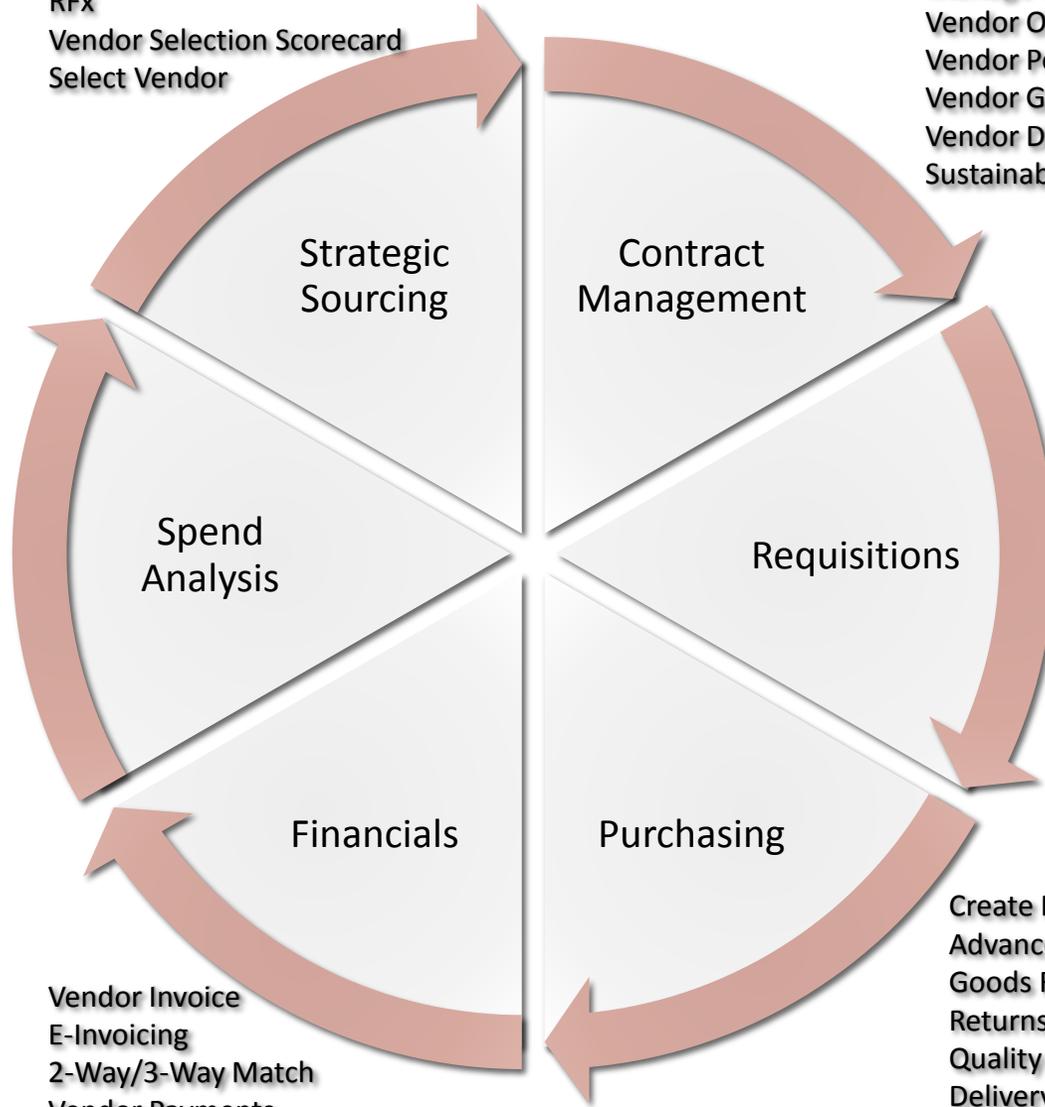
**Search Catalogs**
**Check Prices**
**Check Availability**
**Create Online Shopping Carts**
**Create Requisitions**
**Requisition Workflow & Approval**

**Suppliers**

Circle segments: Strategic Sourcing, Contract Management, Spend Analysis, Requisitions, Financials, Purchasing

**Contractors**

**Create Purchase Order**
**Advance Ship Notice (ASN)**
**Goods Receipt**
**Returns**
**Quality Inspections**
**Delivery Tolerances**
**Supplier Performance**

**Logistics Providers**

**Vendor Invoice**
**E-Invoicing**
**2-Way/3-Way Match**
**Vendor Payments**

Features in this pen are in SCM roadmap and will be available at no additional cost

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  - *Distributor Solves Quote-To-Cash Business Process Challenges Using Cloud Computing*

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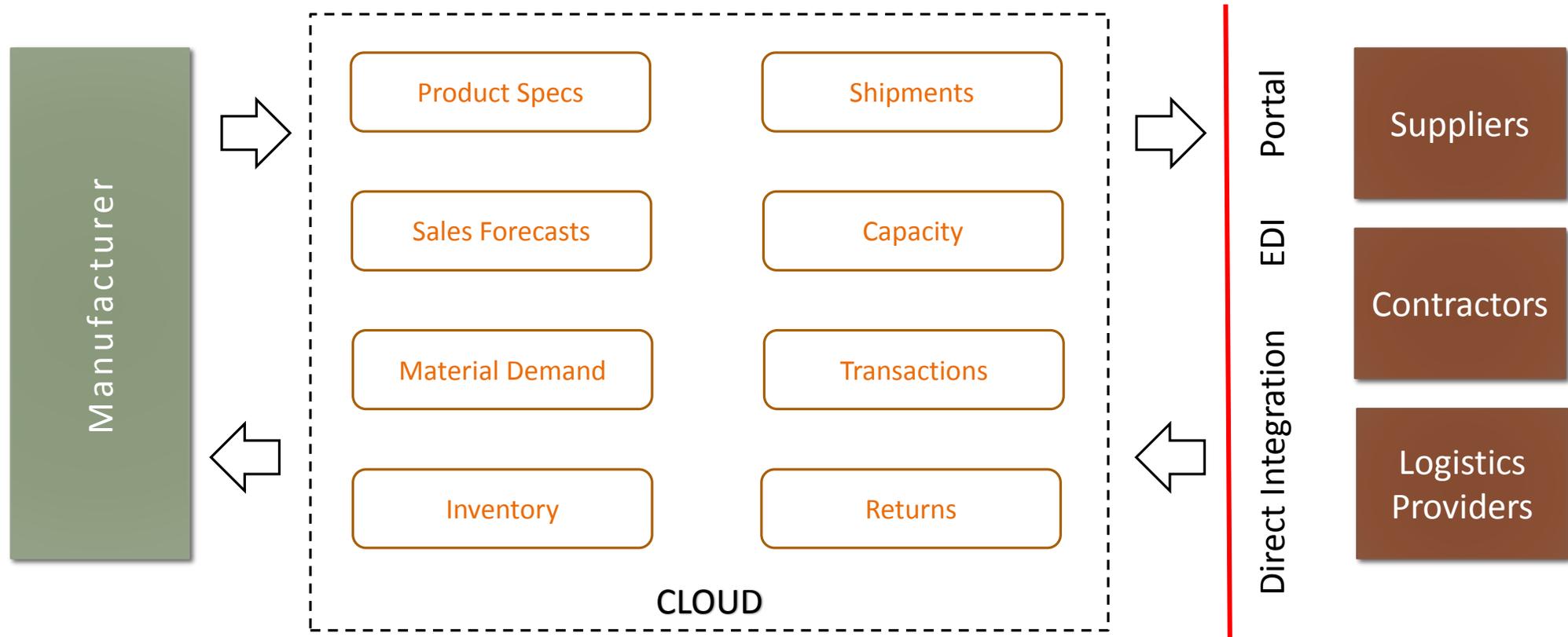
- Seven Steps to Successful Cloud Adoption

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# Cloud Supply Chain Manager
## Industry Supply Chain Solutions

Share Critical and Non-Confidential Supply Chain Information Securely and Expeditiously
Easy to Implement and Adopt
Minimal Infrastructure Needed
Reduce dependence on expensive and antiquated EDI
Gain Improved Supply Chain Visibility & Integration
Minority and Disadvantaged Vendor Friendly

**Manufacturer**

| Product Specs | Shipments |
| Sales Forecasts | Capacity |
| Material Demand | Transactions |
| Inventory | Returns |

**CLOUD**

Portal

EDI

Direct Integration

**Suppliers**

**Contractors**

**Logistics Providers**

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# Today, Amazon Sells 2.2 Million Products from 17 Categories to Businesses

# Online Industry Marketplaces: Connecting Buyers and Sellers

**Suppliers**

Multi-Vendor Catalogs

Inventory Visibility

E-Invoicing

Integrated Shipment Tracking

## Integrated Online Marketplace

| Purchasing | Customer Service |
| Logistics | Order Management |
| Inventory | Fulfillment |
| Shipping | Shipping |
| Accounts Payable | Transportation |
| Spend Analysis | Accounts Receivable |

**Online Superstore**

**Customers**

B2B

B2C

Global

Marketplace

Diversify   New Geographies   Integrated   Supply Chain Insights   Big Data   Predictive Analytics
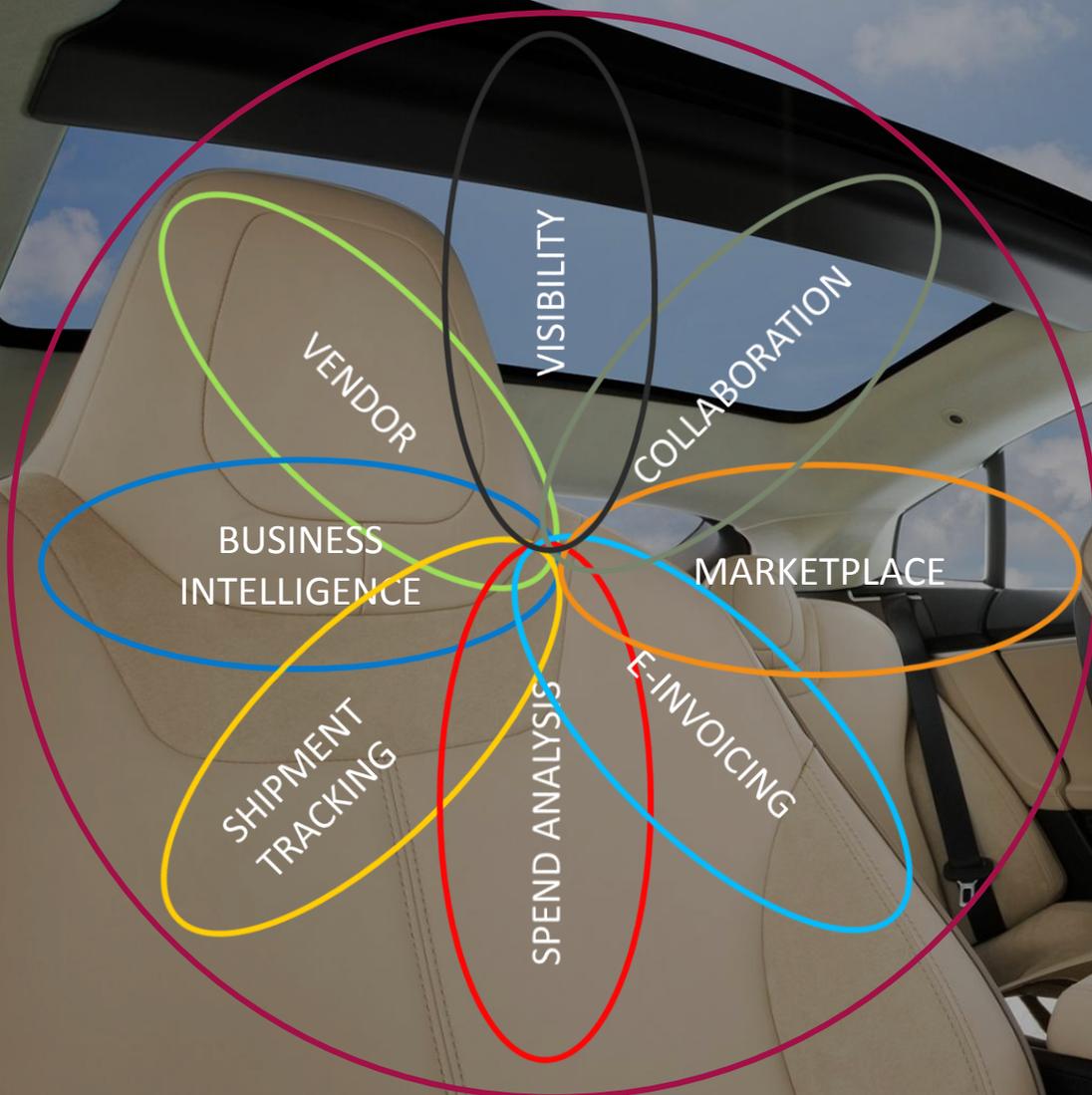
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# Seven Steps to Successful Cloud Adoption

- Identify Business Challenges and Expected Business Outcome(s)

- Nominate a Business Champion and Sponsor

- Build Supply Chain Partner Support

- Establish a Cross-Functional/Cross-Supply Chain Pilot Team

- Evaluate Cloud Options {pay close attention to Data Ownership, Security and Service Level Agreements (SLA)}

- Implement New Processes and Cloud Technology

- Measure Business Performance

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# CLOUD VERSUS ON-PREMISE

VISIBILITY

VENDOR

COLLABORATION

BUSINESS INTELLIGENCE

MARKETPLACE

SHIPMENT TRACKING

SPEND ANALYSIS

E-INVOICING

| Requirement | Cloud | On-Premise |
|---|---|---|
| Supply Chain Visibility | Y | N |
| Supply Chain Collaboration | Y | N |
| Online B2B Marketplace | Y | N |
| E-Invoicing | Y | N |
| Spend Analysis | Y | N |
| Integrated Shipment Tracking (ASN) | Y | N |
| Business Intelligence | Y | N |
| Multi-Vendor Catalogs | Y | N |

# Supply Chain Manager
## Cloud Supply Chain Resource Planning Software

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ask

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Online B2B Marketplaces

Customer Relationship Management

Big Data & Analytics

Enterprise Resource Planning

Integrated Job Portal

Supplier Relationship Management

Supply Chain Visibility & Integration

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