

APICS2013

Multi Enterprise Collaboration and Visibility at Intel



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Agenda

- 1 Intel APICS CSCP program
- 2 Collaboration/visibility journey
- 3 Pilot program overview
- 4 Key Learning's/Summary



Presenter Bio



John Dawson, CPIM, CSCP

- 40+ years of experience in a variety of senior management roles in operations, purchasing, supply chain, sales/marketing, quality, manufacturing, and information technology
 - Led several MRPII/ERP implementations across multiple plants and geographies
 - Majority of career between IBM and Intel
- 18 years at Intel in various operations and supply chain roles
 - Currently Strategic Planning Manager/CVBI Program Manager, with Intel's Global Sourcing and Procurement organization
 - Chair the APICS Core Team, which is responsible for APICS education/certification programs across Intel
 - APICS member for 27 years and have held a variety of chapter board positions. As a CSCP Lead Instructor, conduct classes within Intel and with the Portland APICS Chapter



Co-presenter Bio



Radha Krishna, CFPIM, CSCP

- Twenty years of combined industry and IT consulting with mix of USA/Asia experience
 - Industry verticals include Hi-Tech, Retail and FMCG
- Focus areas include enterprise architectural responsibilities, re-design of business processes and IT implementation across the supply chain – (demand management, supply planning, manufacturing and distribution networks).
- Joined Intel June 2003 as Engineering Manager –IT Supply Demand Enterprise App. team
- Prior experience include IBM, PricewaterhouseCoopers in Supply Chain Consulting Practice



Contributors

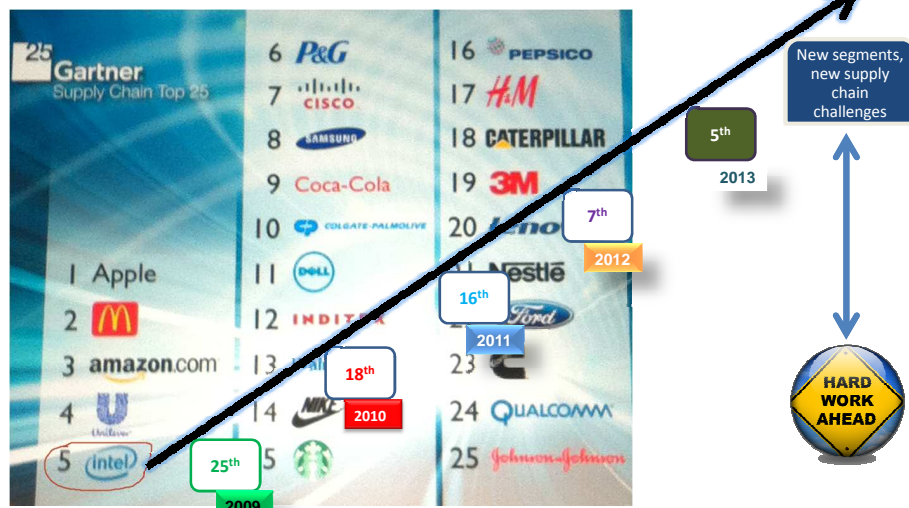
- **Mark Handy:** is a Senior Program/Project Manager specializing on tool and business improvement opportunities on Intel's Global Inbound Supply Chain.
- **Krishna Subramanian, CSCP:** is a Supply Chain Project Manager in Systems and Factory support. He has led projects focused on supply/demand alignment, supplier integration, new business supply chain and development. Krishna is also an Intel CSCP instructor.



Intel's Manufacturing Supply Chain by the Numbers



Gartner Top 25 Supply Chain



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Supply Chain Transitioning

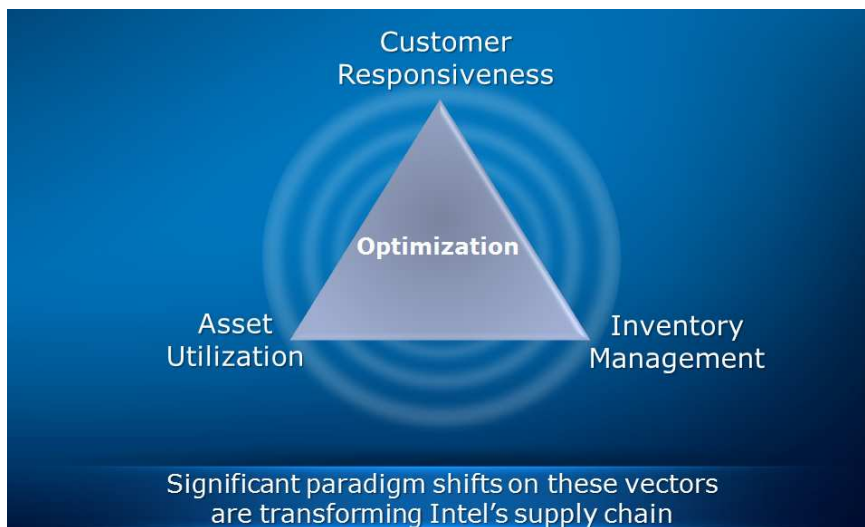
Growing New Segments



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Supply Optimization Challenge

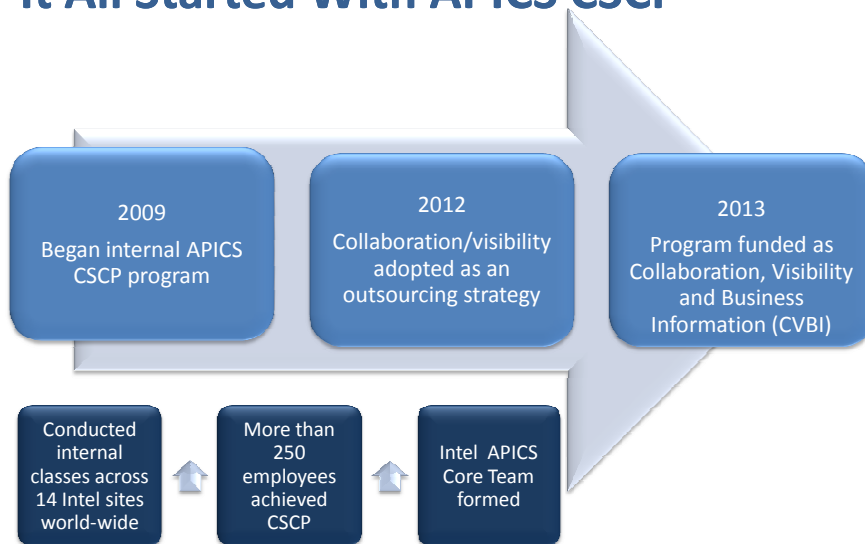


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It All Started With APICS CSCP



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How CSCP benefited Intel employees

More than half of the Supply Chain Strategic Roadmap team, a cross-organization team that develops Intel's 1-3 year supply chain strategies, are APICS-certified.

Here are some of their thoughts on the value of APICS certification:

- "APICS certification provides foundation for critical thinking..."
- "APICS certification provides industry credibility..."
- "I use APICS every week for reference material for biz problems...future direction of supply chain."
- "I use the practices and learning's from the two certification programs to think about strategy and initiatives..."
- "My APICS certification provides a foundational baseline to work on cross functional, cross Intel supply chain management improvements..."

Problem Statement

Collaboration/Visibility/Business Information capability to support outsourcing and internal manufacturing are fragmented and not scalable to support future business growth and complexity.



"As Is" State

- Lack of supply chain visibility/analytics is an acute problem in the outsource space
- Business units have multiple/siloed reporting interfaces, systems/tools, and datasets
- Lack of data integration to conduct effective analysis and reporting
- No workflow and exception management

What we need to do	Do what	What is the barrier
Need financial if analysis	Lack of timely customer requirements across objects, inconsistent based on manufacturing	Manual exchange of data, manual entry, data to be required
On-time capability	Workflow, root cause analysis and correction activity	Some activities
Connectivity to supply chain	Network, inventory visibility of sources, Global, un-integrated planning not possible	Manual exchange of data, no-to-legacy, un-integrated reconciliation of data
Operational dashboards	Unable to identify key issues, poor visibility	Quality of reporting from various sources, IT, manual data processing
SCM management	No real time data on dashboard	Complex, inconsistent information
Workflow management	Lack of system generated tool steps to take activity	Some activities

	Supply and Demand	Supply Chain Events
Plan	Forecasting Manufacture data integration, use of information	Supply and demand Supply chain events
Source	Supplier selection Inventory management Supply chain optimization	Lack of integration and communication activity Supplier practices not visible
Deliver	Customer service Network, inventory	Lack of integration and communication activity Lack of SC execution
Perform	Lack of integration and communication activity	Lack of SC execution
Other	Manufacture data integration, use of information Lack of integration and communication activity	Lack of SC execution Supplier practices not visible

“To Be” State

One tool, one interface, one version of the truth, and near real-time data across the extended enterprise.



WHAT: Increase revenue, win deals, faster ramps, better supply/demand balancing, improve customer responsiveness, reduce inventory, increase agility, drive employee efficiency....

HOW: Implement integrated system to achieve supply chain end-to-end visibility, collaborative “what if”, risk and revenue based decision making

A system of technologies and processes that senses and responds to real-time demand signals across a supply network of customers, suppliers and employees.

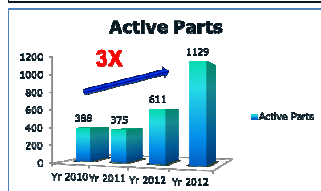
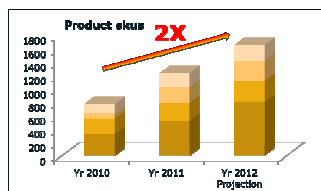


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Source: 2012 Gartner Top 25

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Business Value

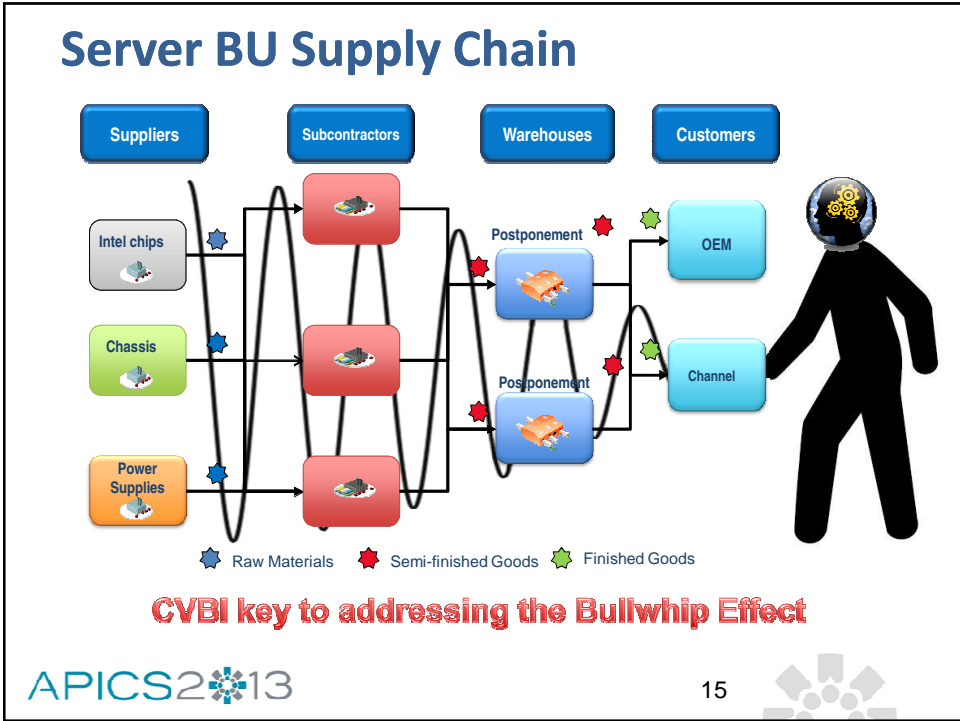


Business is getting complex; steep growth in SKUs and parts require scalable supply chain collaboration, visibility and BI solutions

Quicker Ramps	<ul style="list-style-type: none"> Solution is BU/product agnostic Scalable to support quick ramp
Better Revenue Vs. Risk decisions	<ul style="list-style-type: none"> Scenario assessment/what-if modeling to make fast and accurate data based decisions
Inventory & Scrap Cost Reduction	<ul style="list-style-type: none"> Lower engineering change impact on inventory Financial liability analysis to lower inventory exposure Scrap root cause visibility
Customer Satisfaction	<ul style="list-style-type: none"> Respond to customer request in hours not days/weeks
Employee productivity	<ul style="list-style-type: none"> Workflow management for internal collaboration Event management with drill down for quick root cause and corrective action
Better OHS scores	<ul style="list-style-type: none"> Less stress on employees = better organization health scores

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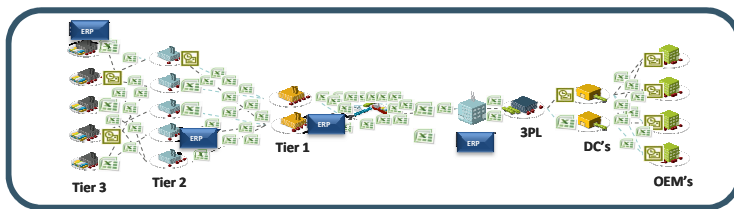
Stage 4 Work-in-Progress

Stage	1: Multiple Dysfunction	2: Semi-Functional Enterprise	3: Integrated Enterprise	4: Extended Enterprise
Internet	Static Web sites	Online catalogs	Intranets across all functions	E-commerce
Integration	None; no teamwork	Batch	Internal process integration; teams	SC networks; process integration
SC planning	Little information exchange	Informal; no initiative coordination	Formal/global; enhanced logistics	Integrated global planning; SC vs. SC. competition
Production scheduling	Basic MRP	MRP II	MRP—ERP	Externally integrated ERP
Integration with suppliers	Fax/phone	EDI; seek low price	EDI with all large suppliers	VMI, online RFQ
Customer delivery	Research	Local inventory	ATP	CTP

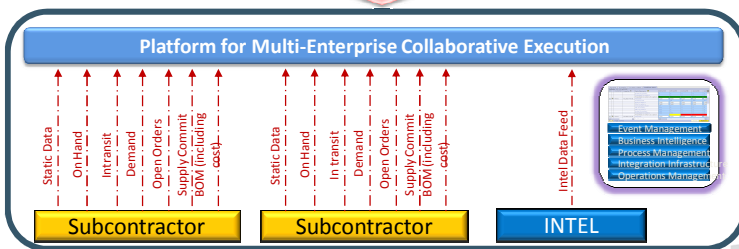
Source: APICS CSCP Learning System

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What's Changing?



- ↳ Streamlined information flow
- ↳ Integrated and automated data
- ↳ Highlight business exceptions
- ↳ Rapid resolution process

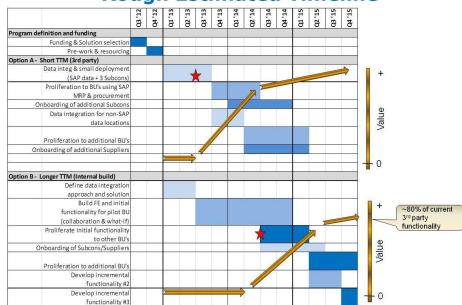


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Make vs. Buy Comparison

Rough Estimated Timeline



Make

- Better control of solution and roadmap
- Still behind best-in-breed after 3 years (i.e. – vendors have taken 5-10 yrs. or more to develop their solutions)
- Challenge to agree on requirements, design, and data integration
- Expandability cross different segments?

Buy

- ~9-12 months → Quicker implementation/time to value
- Latest technology – best-in-breed
- Proven solutions in high tech industry
- Highly expandable
- SaaS uncharted territory
- Data security risk for Fab's?



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CVBI Pilot Timeline

Key Deliverables

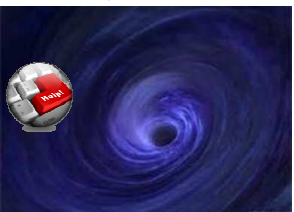
- Complete inventory visibility
- Global supply demand view and exception management
- ODM BOM visibility and critical parts management
- “What-if” scenario planning capability


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The Transformation

File Name	Frequency
Hot List (shortage file)	Weekly or Adhoc Daily
PO List summary file	Weekly or Adhoc Daily
PO List detailed file	Weekly or Adhoc Daily
Excess report	Monthly
Agentic inventory report	Monthly
Hot List (shortage file)	Weekly or Adhoc Daily
PO List summary file	Weekly or Adhoc Daily
PO List detailed file	Weekly or Adhoc Daily
Excess report	Monthly/ Bi-weekly
Cycle count report	Monthly
Tag report	Monthly
Shipment cut off	Monthly
Receiving cut off	Monthly
Adjustment cut off	Monthly
DCR	Weekly or Adhoc Daily
RAC	Daily
Shipping	Daily

Visibility Black Hole



BOM, Demand, Inventory, Orders all in one place, near real time
Instant demand/supply mismatch view
Dashboards, exceptions, alerts
No more daily/weekly exchange of critical information on excel


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Collaboration/Visibility Execution

- Analytics & What-If's**
 - Continuously monitor activities
 - Prevent disruptions: big, fast data
 - Evaluate impact and collaborate decision
- N-Tier Process Orchestration/Execution**
 - Seamless processes
 - Exception-Driven Alerts
 - Integration with existing systems
- Single Source of Truth**
 - Panoramic visibility
 - Single version of truth
 - Total Concurrency: instant impacts
- Trading Partner On Boarding/Connectivity**
 - Real-time on cloud-based platform
 - Any-to-any connectivity
 - Self-Service Partner Onboarding

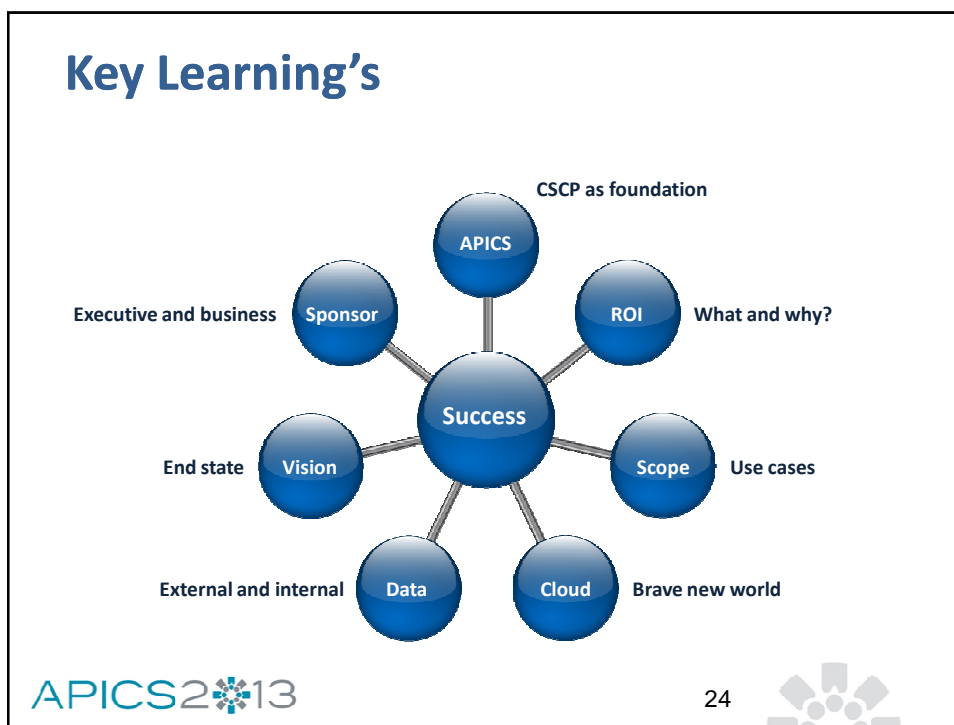
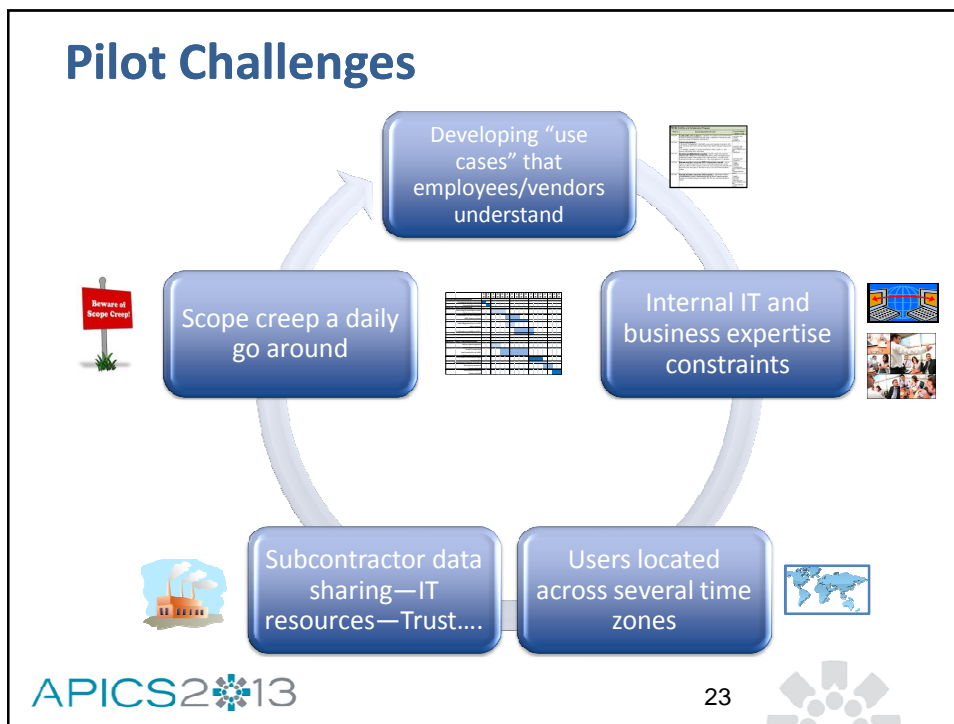
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Results Achieved

CVBI Server BU Pilot

- B2B connectivity to multiple suppliers
- Multi-level inventory visibility across the supply network
- Response to customer upsides in hours
- Exception management with drill down capability
- “What if” analytics to make faster decisions
- One tool, one version of the truth

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QUESTIONS

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Thank You

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Survey



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