

IPv6 and the Supply Chain:

Building value for the Enterprise

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Introduction

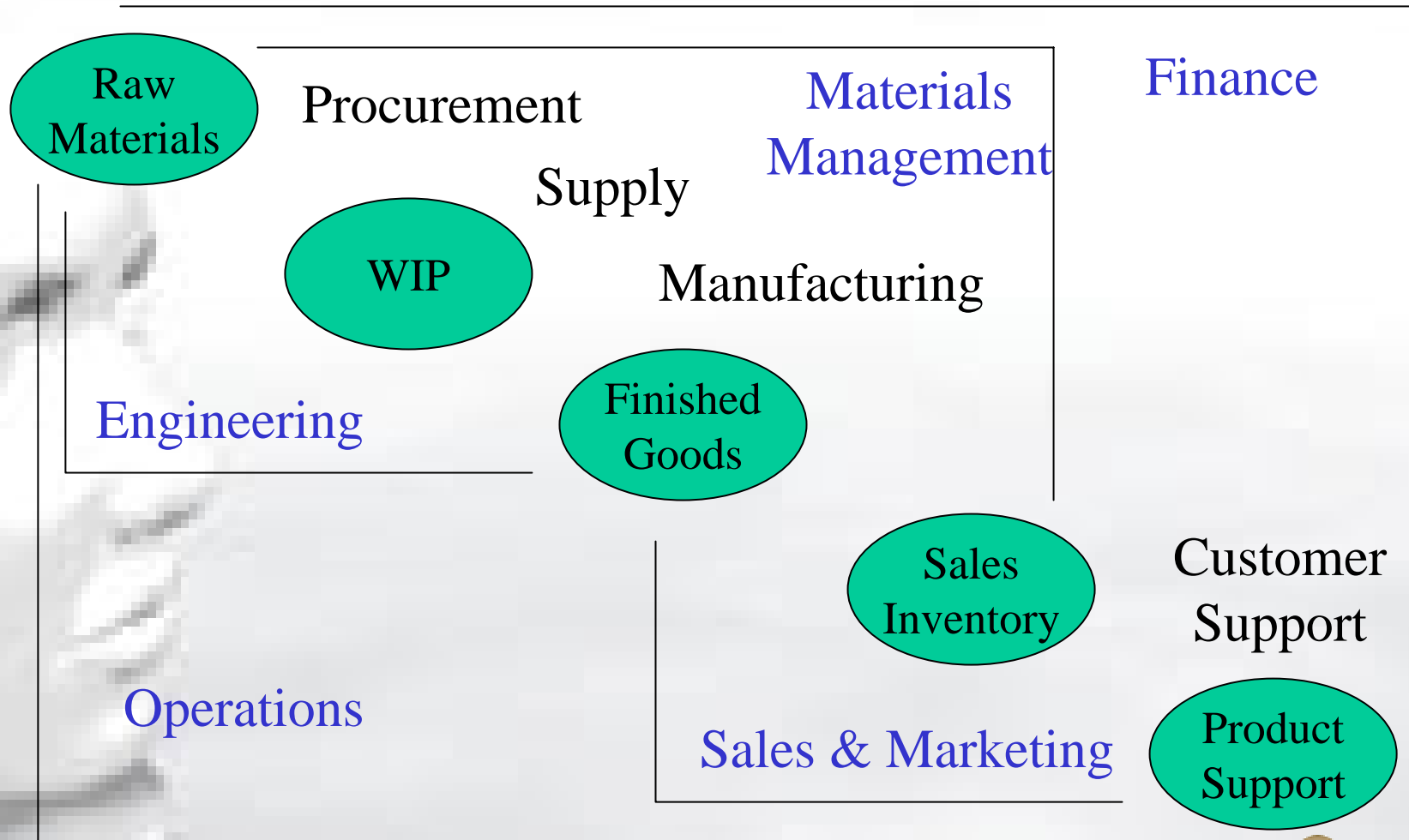
- Native6, Inc.
 - Professional Services company focused on IPv6
- North American IPv6 Task Force
 - Business Director and contributor
- Background
 - Manufacturing and technology integration
 - IPv6-related focus since 2000

A view of the “Supply Chain”

- Supply chain is much bigger than simple inventory systems! Its about:
 - Engineering specifications & changes
 - Inventory
 - Procurement & Contracting
 - Marketing & Sales
 - Customer integration
 - Product Support
- Its about real time – for you, your customers, and your vendors

*Special thanks to Mark Stevens, Materials Manager Extraordinaire!

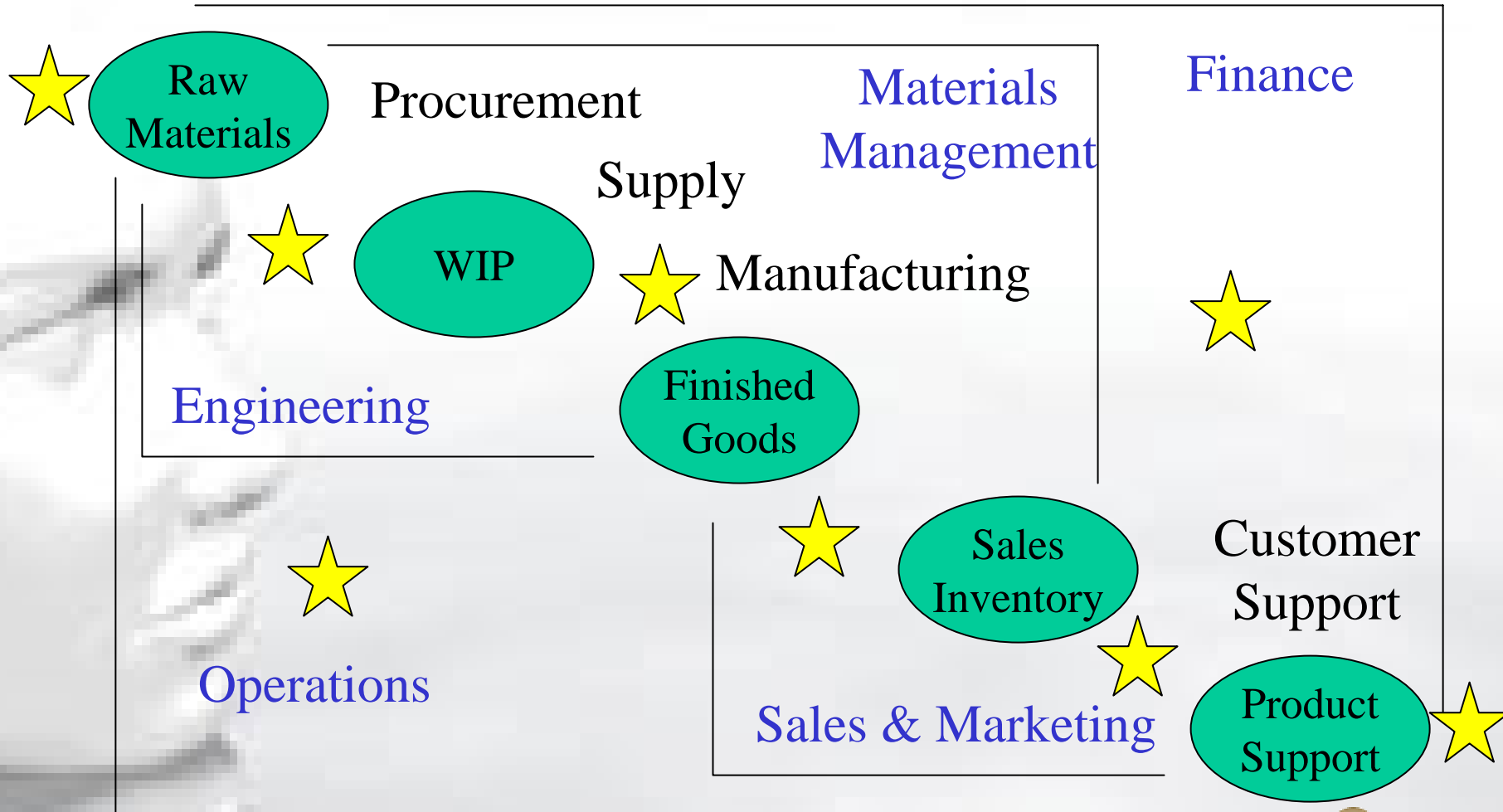
The “Supply Chain”



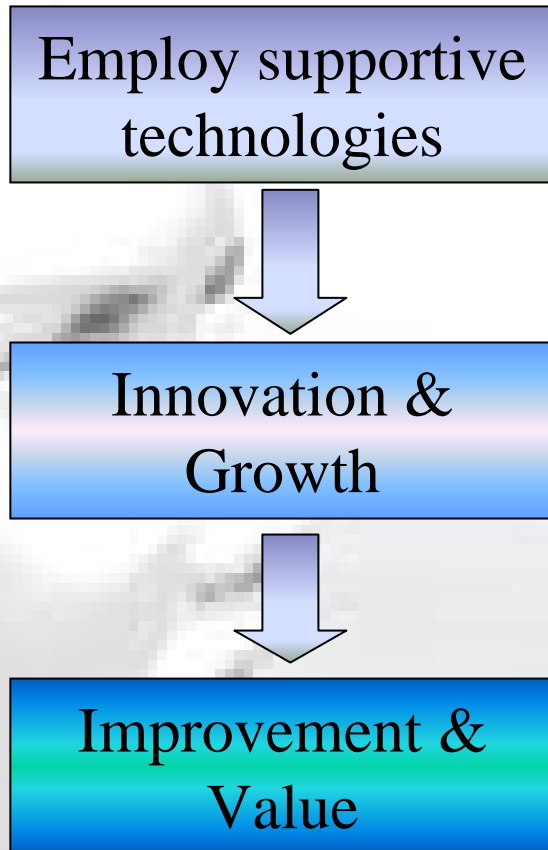
Transactions are the key

- The most successful supply chain system is the one most successful at identifying transactions and changes
 - Critical to maintaining maximum productivity
 - Critical to managing inventory and procurement
 - Critical to engineering change control process
 - Critical to accounting
 - Critical to meeting sales objectives

Technology in the “Supply Chain”



Creating Value with IPv6

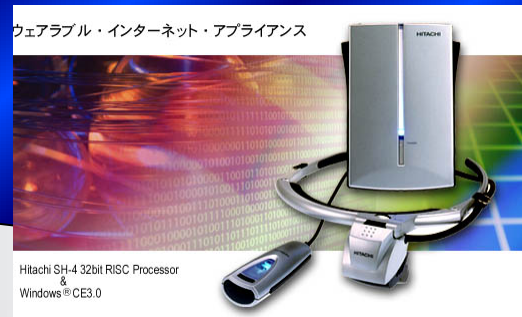
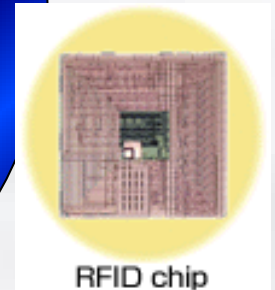
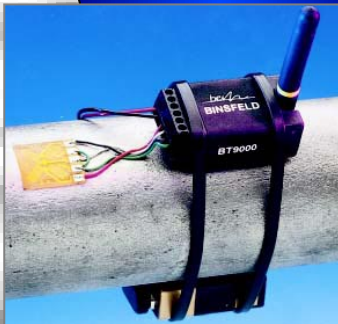


- Key characteristics of IPv6 enable or enhance the supply chain through:
 - ❖ Easier technology integration
 - ❖ Robustly supporting a mobile workforce
 - ❖ Enabling real-time, location based inventory systems

IPv6 & Workplace Technology



Employ supportive
technologies



IPv6's Value-Add for the Chain

- Autoconfiguration allows for the easier integration of hardware used in the chain
- Mobility model facilitates movement of workforce/B2B vendors while allowing constant access to ERP, MRP, CRM, Engineering, CAD, etc systems and each other.
- Multiple features enhance location-based systems, assisting in the placement identification of high value inventory items

How CE fits into the Chain

- Many current technology solutions are expensive
 - specialized equipment
 - complicated integration
 - limited in functionality
- “Off the Shelf” items are becoming more attractive
 - diverse in function
 - inexpensive in comparison
 - more network/Internet centric

CE examples



ウェアラブル・インターネット・アプライアンス



Hitachi SH-4 32bit RISC Processor
&
Windows® CE3.0



Example - Manufacturing

- Maker of high-end components for nuclear navy

<u>Department</u>	<u>Task</u>	<u>Technology solution w/ v6</u>
Engineering	Photo Documentation	Wireless digital camera with integration into engineering database
	Updating BOM & Revision Control	Electronic documentation tied to RFID system transmittable to technician on tablet PC or PDA
Materials	Build kits tracking	IPv6-enabled portable RFID scanners to quickly scan and document location or placement
Manufacturing	Time & Materials tracking	Low-cost wireless thin clients with touch screens or tablet PC to interface TM/BOM systems

Example – Health Care

- Tertiary Care facility with 400 rooms

<u>Department</u>	<u>Task/Issue</u>	<u>Technology solution w/ v6</u>
Materials Management	Tracking high-end items	Move to scanable chip technology where reader is mobile (PDA or laptop attachable) or low cost for widespread usage
	Reusable inventory tracking	Medical devices use v6 to easily integrate with hospital WLAN or LAN for tracking. Device can communicate with nursing staff/doctors PDA/Tablet/wearable computers
	Nursing closets	Use PDA/IP-based scanners that more readily integrate with modern MRP systems

IPv6 & CE for the Chain

- IPv6 enables key functionality to make supply chain more accessible to CE market
 - Autoconfiguration means easier implementation of standard technologies at lower cost
 - Uniform method for interconnecting improve B2B supplier integration
 - Enhanced mobility model better supports use of emerging access technologies for superior roaming
 - Security structure for v6 improves usage opportunities for technology in sensitive areas (health care, military) in a cost effective manner.

Questions

Thank you for your time

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DoD & IPv6 Update

Special Thanks to Jim Bound,
Chairman, NAv6TF

DoD Net Centric Value Proposition

- **DoD Net Centric Vision** one data point is that all software, platforms, and operations become interconnected using the Internet Protocol (IP) technology and network software infrastructure, based on commercial off-the-shelf products, across the DoD Global Information Grid (GIG).
- **Value Proposition** includes all DoD Tactical Operations, Enterprise Operations, Human Resource Operations, and DoD joint Government Agency Operations.
- All software, platforms, and operations **MUST** adopt a transition to Next Generation Internet Protocol version 6 (IPv6) beginning October 1, 2003, and support co-existence with current legacy systems deployed and to be deployed in the interim transition period. Please see DoD CIO Memorandums on the DISA web site.
<http://jta.disa.mil:8017/ipv6/index-public.html>

DoD Net centric value proposition

- **IPv6 Capable means that a platform or node supports IPv6 operations. That is the initial requirement for today. Other requirements are in process.**
- **DoD has required no IPv6 operations be running on production DoD networks at this time until further testing and network pilots are completed.**
- **DoD Net Centric Value Proposition may be important to the U.S. Homeland Security and Department of Commerce Net Centric Operational objectives**
- **Moonv6, facilitated in part by the NAv6TF, is playing an integral part of the decision-making process by providing a “proof-of-concept” model**