



Integrating the Supply Chain: a Pharmaceutical Contracting Case Study

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CTO

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AGENDA

- Industry Status
- Business Problem Addressed
- Technical Overview
- Lessons Learned

MedContrax Business

- What we are: *Healthcare Contracting & Sales Information Network Solution Company*
- What we do: *Organize, categorize and synchronize contracting information between trading partners*
- How we add value: *Unique, secure conduit that streamlines processes and improves cost efficiencies*
- Initial market focus: *Healthcare (pharmaceutical and med/surg)*
- What we are not: *Trading partner, Exchange, or a "dot something"*

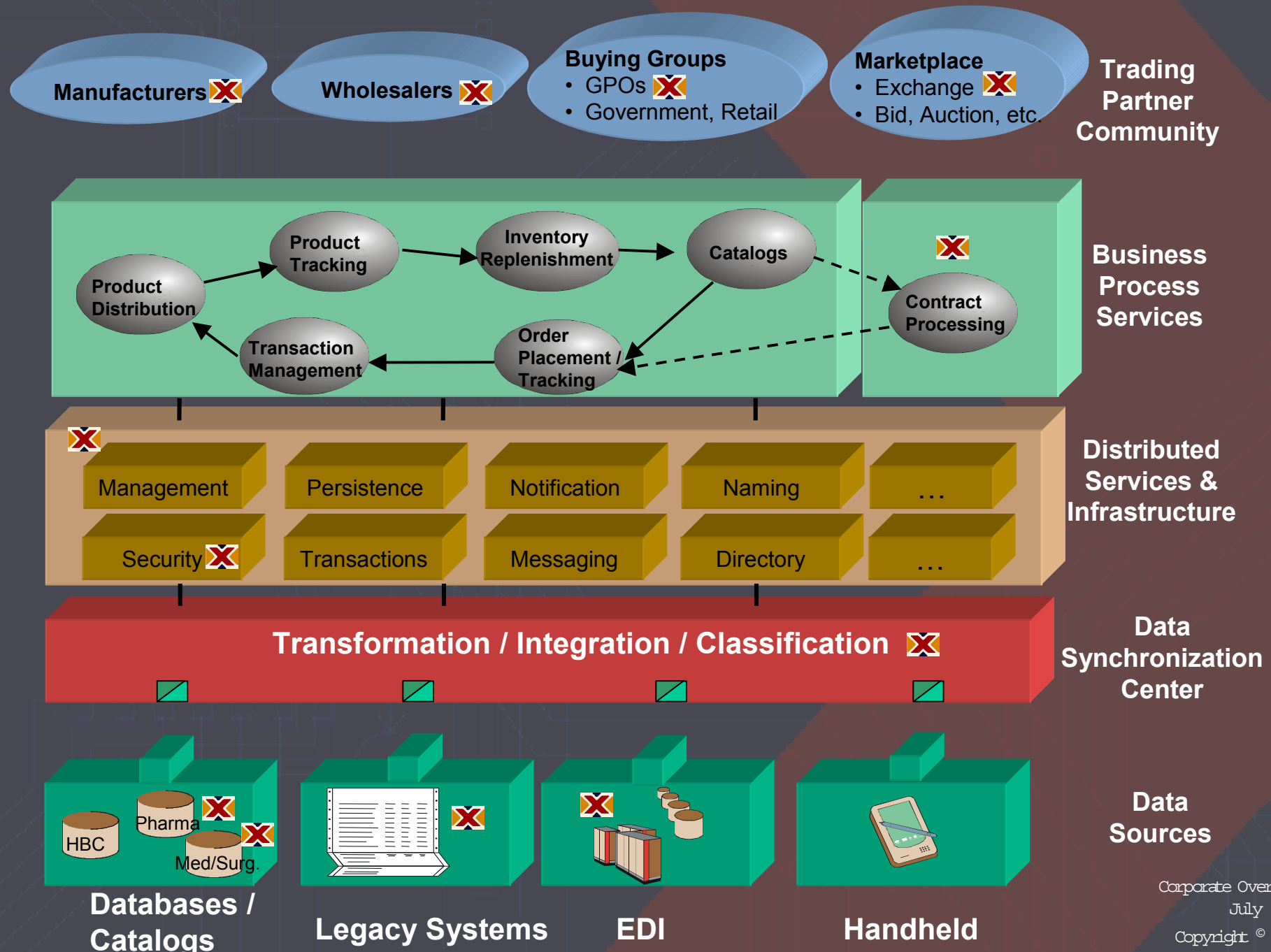
Healthcare Problem

- \$63B of \$230B of Pharma and Med/Surg sales contract-dependent
- Contracting is an industry wide problem
 - No standards
 - Divergent contract legacy systems
 - 85 % home-grown
 - 15 % custom-built by 11 vendors
 - Transaction processing costly
 - Paper-driven process (53 % of transactions)
 - Transactions cost 3-5 % of revenue
 - Lack of traceability
 - Rebate and chargeback rejection
 - Additional 30-50 % staffing requirement
- 78.2 % of healthcare companies are NOT eBusiness ready

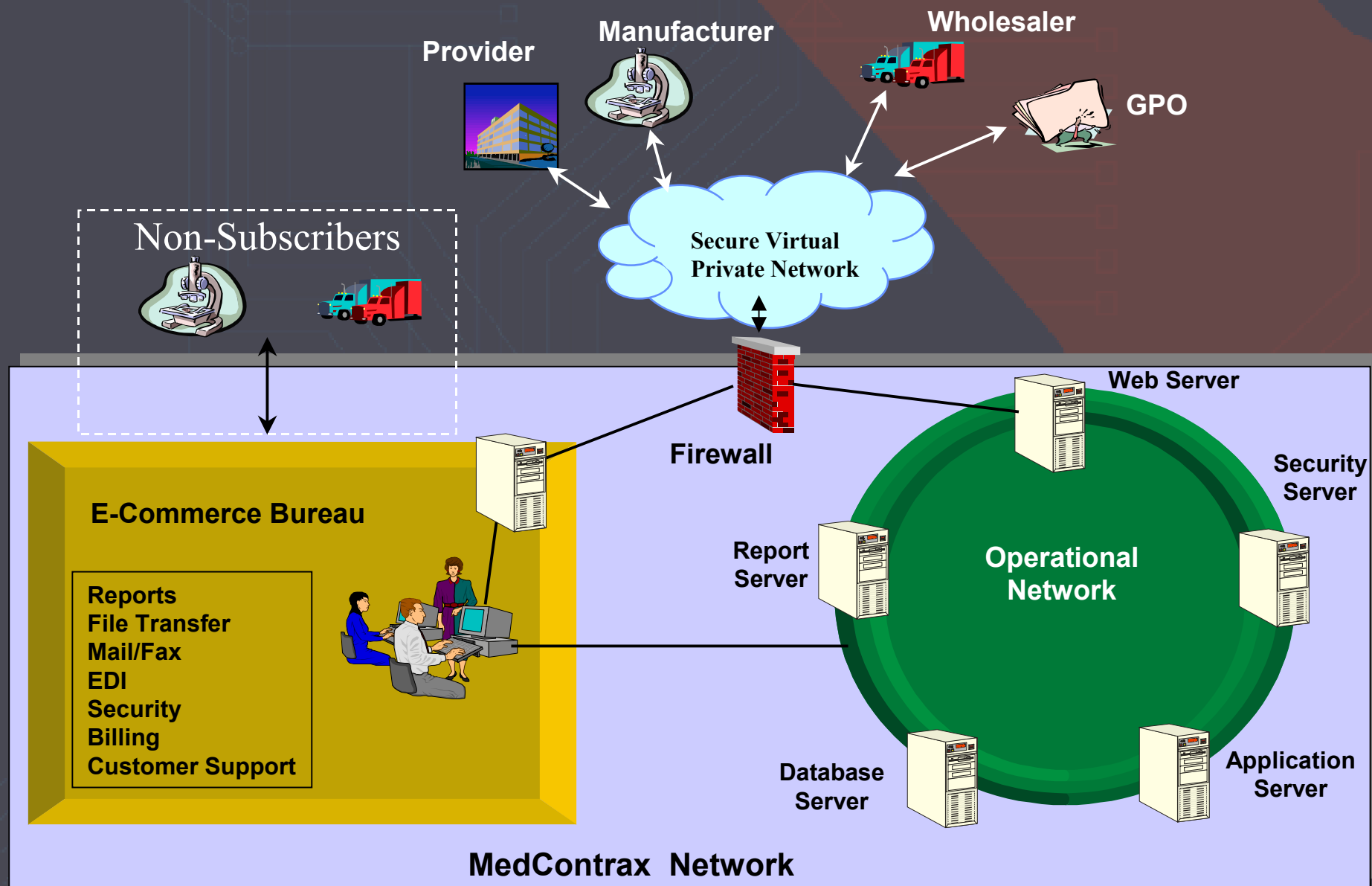
The Solution

- A neutral network interface between trading partners
- Manage current contracts and easily create and track new ones
- Provide for increased contract volume and complexity
- Highly integrated and synchronized information
 - State-of-the-art security
 - User-friendly Web access
 - Sophisticated scalable infrastructure
 - Open architecture and multi-legacy systems integration
- Customized to fit each trading partner's need
- Dynamic and collaborative system
- Features Highlight
 - Membership and eligibility
 - RFQ and contracts
 - Purchase history and custom reports

Architectural Overview



Network Architecture



Pharma Initiative

- Trading partners joining together

- Cross-industry representation

- Manufacturer – Geneva
 - Wholesaler – Bindley Western
 - GPO – Premier and Amerinet
 - Industry Association – NWD A
 - Technical Association – O M G

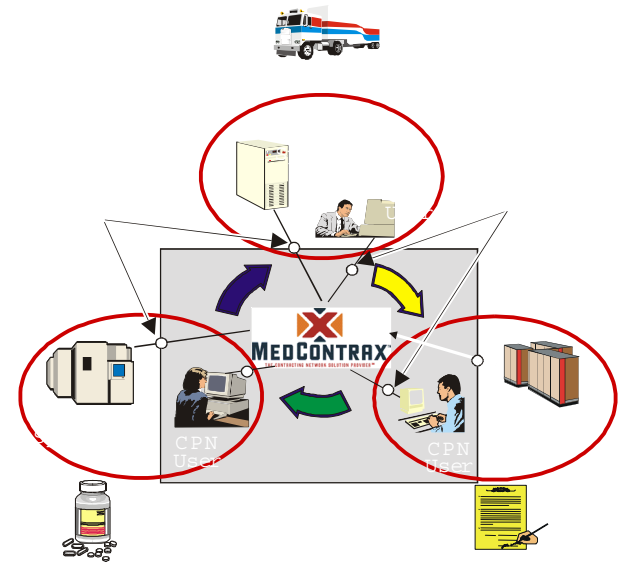
- Other participants

- Ubizen, Sterling Commerce...

- To address industry lack of system interoperability and standards.

- Initial application

- External interfaces to MedContrax Contract Processing Network
 - Showcase end-to-end scenario with CPN as centerpiece



Centralized Membership

- 1** Group Purchasing Organization (GPO) approves Health Care Provider (HCP) request for membership & requests contract eligibility from the manufacturer.

Behind the scenes: GPO logs on to MedContract Contract Processing Network (CPN) and adds HCP to centralized membership list, identifying manufacturers to receive contract eligibility requests. Request is forwarded to manufacturer via Internet or EDI.

- 2** Within seconds, the manufacturer(s) receives & processes the request for eligibility. Both the GPO & manufacturer can use CPN to check request status.

Behind the scenes: The message requesting contract eligibility is translated into manufacturer's internal format & determination is made of eligible HCP contracts. With the improved quality of identifiers, the time consuming manual step of cross-referencing customers is eliminated.

- 3** The manufacturer sends a response to the "eligibility request" to CPN, making the HCP eligible for appropriate contracts & authorizing communication to the servicing wholesalers.

Behind the scenes: The manufacturer's internal systems are updated & a response is formatted including a list of eligible contracts, eligibility dates, and if desired, a reason for denial(s).

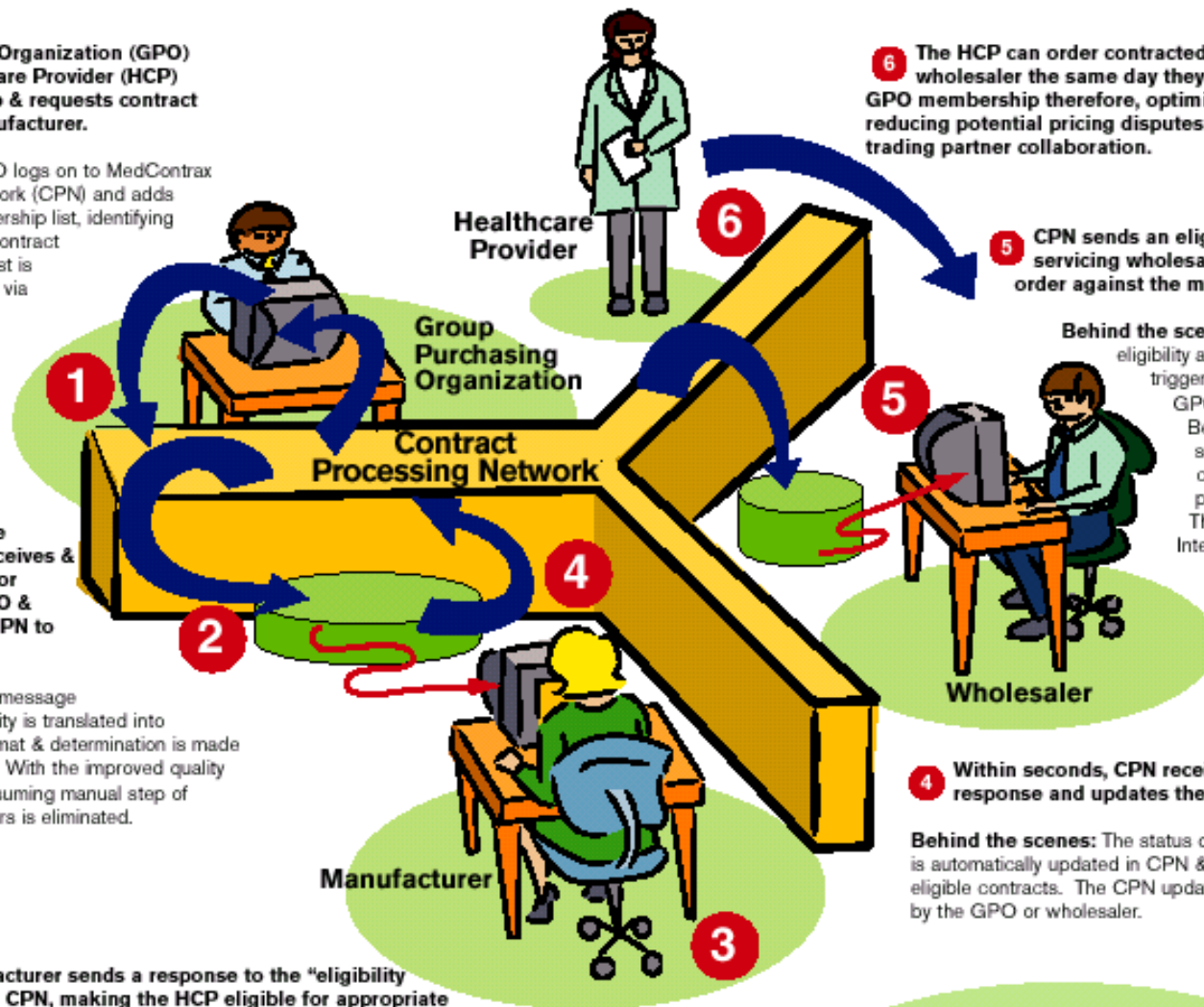
- 6** The HCP can order contracted product from the wholesaler the same day they are accepted for GPO membership therefore, optimizing service, reducing potential pricing disputes and improving trading partner collaboration.

- 5** CPN sends an eligibility notification to the servicing wholesalers to allow the HCP to order against the manufacturer's contract.

Behind the scenes: The receipt of the eligibility acceptance automatically triggers a notification to the GPO's approved wholesalers. Because the HCP has been selected from a centralized customer database, the process will be streamlined. This notification is sent via Internet or EDI.

- 4** Within seconds, CPN receives the manufacturer's response and updates the eligibility files.

Behind the scenes: The status of the request for eligibility is automatically updated in CPN & the HCP is added to the eligible contracts. The CPN update is available for review by the GPO or wholesaler.



Initial Partners

Bindley Western	OMG
Geneva Pharmaceuticals	Premier, Inc.
MedContract	Sterling
NWDA	

Overall Lessons Learned Thus Far

- Start with a solution to a business problem
 - Not a "hot" technology
 - Not a "cool idea"
 - Internet technologies just one means of deployment
 - Don't underestimate politics or paradigm shift
- Process is critical, don't take short cuts
 - Architecture
 - Requirements
 - Development
 - Configuration management
 - Quality Assurance
 - Gauging yourself is the first step

Overall Lessons Learned Thus Far

- Development and operations
- “Bi-focal approach” – time-to-market without sacrificing testing or quality
- Robust and scalable
- Redundant access
- Highly secure!!!
- Build for your customers, don’t build and “see if they come”
- Consider limitations of the existing infrastructure and build organization and processes to support (e.g., e-commerce bureau)

Overcoming Challenges

- Qualified staff
- Strong operations and client support
- Strong data base architecture and administration
- Data Center facility (details include AC, security, fire protection, lines, power)
- Hardware and software costs (look around for bargains)
- Telecom installation will always take longer than expected and produce problems
- Partnerships
- Lack of classification (med/surg)
- Data cleanup

Initiative Lessons Learned

- Start with a model, build the architecture and then select the technologies and integrate - integration technologies work if you follow the steps
- Integrate with a framework that can integrate with old as well as emerging technologies
- "It's the semantics stupid!"
- Most companies do not have the required infrastructure to connect with each other properly or securely
- Security architecture for system-to-system communication can be complex

State of the art security is critical

● Three Levels

- VPN – authentication and data integrity and protection
- Application – authorization and access control
- Database – access control and data separation

● Complex security issues addressed

- Non-repudiation in complex B2B environment
- User-access rights tailored by role
- All data encrypted between client systems and CPN
- Minimal impact on trading partner's infrastructure
- Along with neutrality, addresses potential FTC B2B "telegraphing" concerns

Customer Involvement is Critical to Getting Proper Requirements

- Advisory Board
 - Trading partners (22)
 - Industry association (N W D A)
 - Technical association (O M G)
- Alpha/Beta participation
 - Alpha screen and process review, hands-on training
 - Beta connectivity from client site, similar to operational environment
 - Representation from all trading partners
 - Great feedback and detailed requirements
 - Customer ownership
- Association endorsements
 - N W D A
 - HIDA