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U.S. Approach to E-Freight Electronic Freight Management

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Freight Transport Logistics
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U.S. Department
of Transportation
**Federal Highway
Administration**





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Background

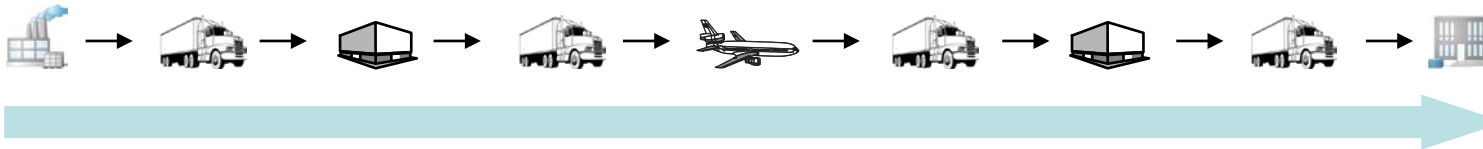
- Collaborated with industry to improve freight flow between Consignor and Consignee
- Conducted several demonstration projects with home grown standards
- Agreed to use UBL standards with Limited Brands, Inc., a Fortune 250 company
- Results published in Public Roads
<http://www.fhwa.dot.gov/publications/publicroads/09janfeb/06.cfm>
 - the EFM system improved freight tracking across the board.



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Manufacturer's
Factory

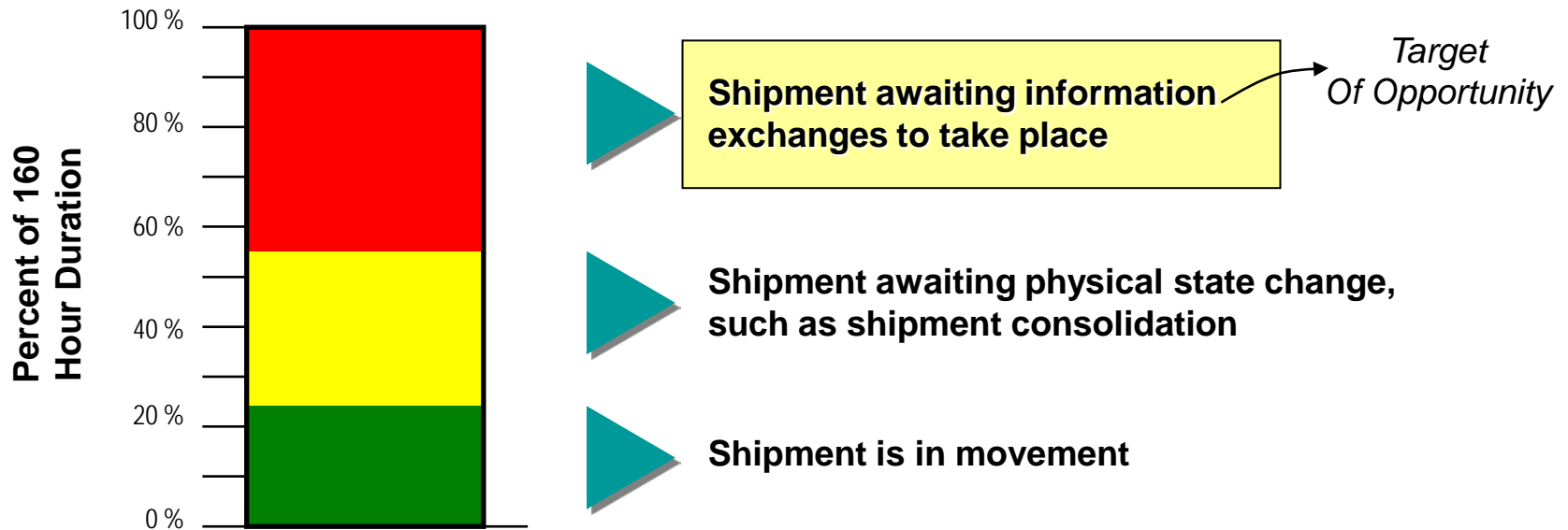
Distribution
Center



← Mean duration of the Deployment Test's supply chain →

Time = 0

160 hours

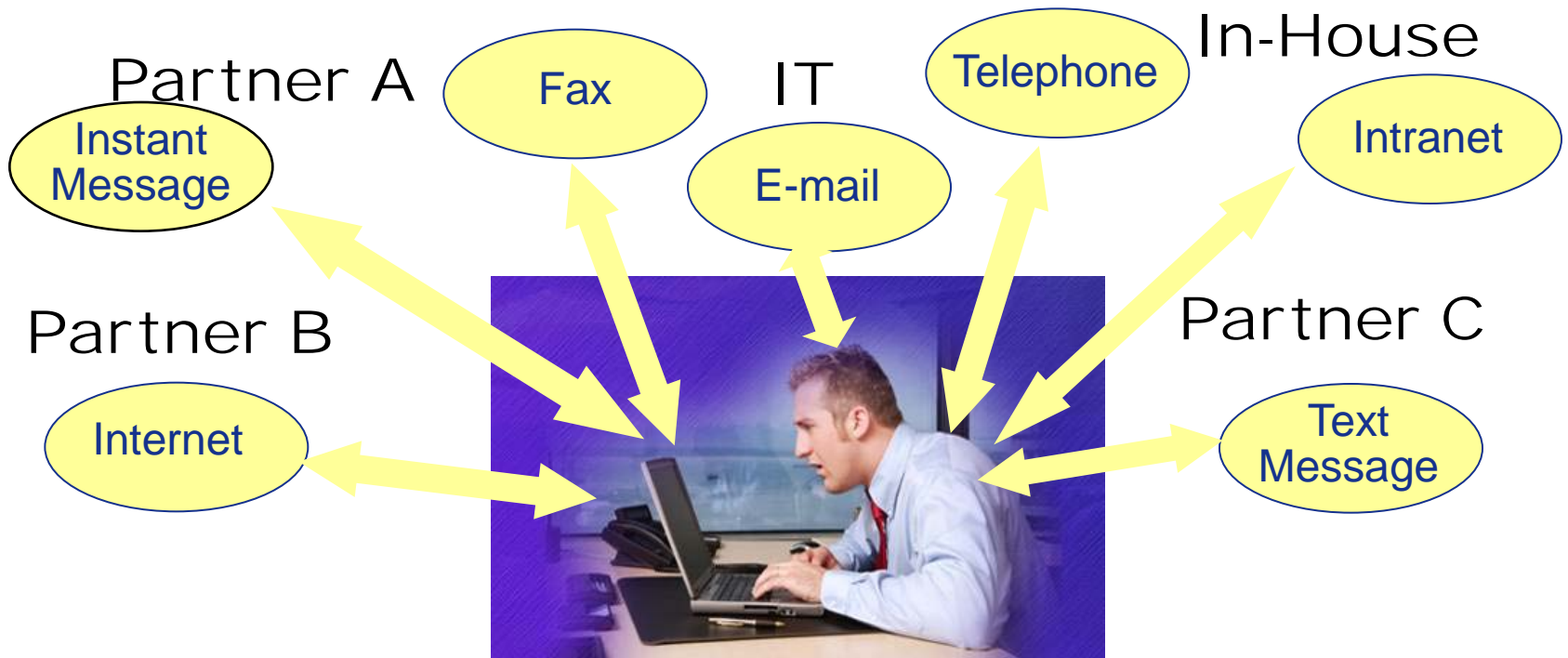


Data are based on preliminary qualitative findings collected during baseline activities along the target supply chain.



Shipment Coordination Today

TODAY



- *Integrated solutions are only available in closed systems*
- *Manual Inputs are required to support sharing of data*



Shippers Want Automated Coordination

- Real-time status of orders from the time a Purchase Order is issued until product is delivered – this doesn't exist in an open environment.
- Visibility, accountability, flexibility, efficiency, performance monitoring
- Secure exchange of data to facilitate decision making



EFM Concept-Meet Shippers Need



Happiness is - An Open Information Sharing System



EFM Prototype Test Results

- **Timeliness of the freight release process:**
 - Goods released 6 to 24 hours in advance of normal release.
- **Status information:**
 - Provided near real-time automated status reports.
- **Timeliness of supply chain data:**
 - Provided downstream partners earlier access to data on purchases, booking, and tendering.
- **Data quality on the supply chain:**
 - Fewer errors in data entry because of reduced data entry and no rekeying of data



Collaboration with EU

- Both have compatible technical approaches
 - EU uses connectivity through data standards & e-docs
 - US uses web services & federated data sharing
- Both EU and US have input transport information requirements to the UBL standards development process.
- Both primarily focus on small and medium enterprises (SME's)
- Both eliminate freight delay through push and pull data sharing



Standards For Information Sharing

- Compatible OASIS-UBL Transport Messages in XML format
- US tested standard data sets successfully with industry
- Standardized methodology for operation through ISO (ISO TS24533)
- Working on Governance approach through ISO



Governance of Electronic Freight Information Sharing

- Identifies core set of information elements
- Identifies 'how' you communicate the information elements to your partners
- Includes generic rules and procedures for refining a tool for use within your organization
- May include code lists, message schemas, etc.
 - Also licensing agreement
 - Also implementation guide



e-Freight/EFM Governance Questions

- Service provider/business model?
- Who has governance authority (who owns the brand?)
- What is the role of the users group?
- What are the conditions for the registry/registries?
- What is included in the licensing agreement?
- What is the content of the implementation guide?



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DEMDACO

- **Goal:** visibility of EDI status and ETA information to DEMDACO via the Kansas City Trade Data Exchange (TDE)
- **Partners:** Ocean Carriers (MSC and APL), dray carrier (IXT) and Kansas City SmartPort (administrator of the TDE)
- **Processes Targeted:** purchase order, rail status, dray status, ETA
- **Benefits:** the benefits below result in less time spent by DEMDACO to research and monitor shipments, improved timeliness in EDI information, and access to new information
 - New visibility over PO details such as weight and quantity in status messages
 - New generation of and visibility over real-time ETA
 - Single point of access (the TDE) for DEMDACO to view booking, status and ETA information in real-time.
 - All data exchanges via EFM web services and UBL message schemas



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Interdom – Pride Trucking

- **Goal:** automation of all information exchanges between Interdom Partners and Pride Trucking
- **Partners:** Interdom Partners (3PL) and Pride Trucking (dray carrier)
- **Processes Targeted:** order, pre-note, status, invoice
- **Benefits:** automation of previously manual transactions improves both the speed and accuracy with which they are completed and integration of the EFM package into Interdom's and Pride's legacy systems.
 - Improved timeliness and accuracy of all processes
 - Reduced labor costs associated with completing manual transactions (elimination of redundancy)
 - Reduced labor costs associated with correcting errors in manually entered information
 - Integration of the EFM package allows for continued use once pilot concludes.



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Interdom - Agmark

- **Goal:** direct connectivity of supply chain partners
- **Partners:** Interdom Partners (3PL) and Agmark Intermodal (3PL)
- **Processes Targeted:** order and status
- **Benefits:** reduced dependency on third party data providers for EDI translation and rail status information
 - Reduction in cost associated with utilization of a VAN to transfer order information between Interdom and Agmark.
 - Reduction in costs associated with Agmark receiving rail status via a 3rd party data provider.
 - Reduction in costs associated with the VAN facilitating the collection and transfer of EDI 322 (status) from the railroad to Interdom.



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Worldwide Logistics

- **Goal:** direct connectivity of supply chain partners
- **Partners:** Worldwide Integrated Supply Chain Solutions (3PL) and Griffin Pipe Products Co.
- **Processes Targeted:** status of shipment
- **Potential Benefits:**
 - More efficient labor utilization for WorldWide due to accuracy, completeness and timeliness of data and information.
 - Improved shipment visibility through WorldNet and integration of EFM web service into WorldNet, specifically the visibility into active load shipment status.
 - Cost reductions associated with more accurate shipment delivery dates
 - A single point of access for Griffin Pipe in viewing shipment status and details.
 - Additional customers can be added at any time without making any changes or additional cost to the EFM implementation
 - Web services/automation of messaging reduces redundancy of effort (by WorldWide).



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Express Systems International (ESI)

- **Goal:** direct access to status and availability information via smart phone and automation of invoicing process.
- **Partners:** ESI (3PL), dray carrier (to be confirmed)
- **Processes Targeted:** status and invoice
- **Potential Benefits:**
 - Smart phone app: will provide a shipment status query and a container availability status to the Android phone for on-demand access by ESI's customers.
 - It is anticipated that the benefits to this app will largely be qualitative.
 - Invoice:
 - The EFM package will automate the invoicing process between ESI and one of their dray carriers (currently in the process of confirming).
 - 60 invoices/week are manually received and re-keyed into their system. Use of the EFM package will eliminate the need to receive, print and re-key, offering large labor savings.



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Freightgate ISP & Carter Transportation

- **Goal:** To improve productivity, data quality and lower transaction cost for all parties involved in the shipment booking process.
- **Partners:** Involves Shipper (Best Slip Covers), Broker (Carter Transportation), Information Service Provider (Freightgate) and Truck Carriers
- **Processes Targeted:** Automated booking process using UBL-compliant booking messages
- **Potential Benefits:**
 - Resulted in transaction cost reduction of 85%.
 - The startup cost for Carter was \$39,500, including training, system setup, custom configurations and documents and message integration.
 - Annual potential savings of \$24,710, based on volume at the time of the case study
 - Significant refocusing of principle owner's time from operations to sales and service



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New EFM Case Study - Canada and China

- Transport Canada hired Freightgate, a 3PL service provider, to assist in the test implementation of EFM on supply chains originating in China. Partners are:
 - Alliance International, a NVOOC ; LOGWIn Logistics, a China based freight forwarder; CBSA (Customs); Port of Prince Rupert (Western Canada); Maher Terminals (Eastern US); Canadian National Railway; Canadian Motor Carrier.
- Purpose-demonstrate the increased shipment visibility and efficiency resulting from the use of the EFM information exchange platform and to measure its Return on Investment (ROI)



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Demonstration Project - EU & US

- MOU in place between EU and USDOT
 - 2010, EU largest trading partner of the US, (\$560 billion)
- High level agreement among partners, includes:
 - Exposure level, known risks/liabilities, expected outcomes, duration of test, interest in adoption (sustained over long term)
- Partners include:
 - Consignors, consignees, shippers, brokers, forwarders, logistics firms, carriers, and public sector parties at national and local levels as needed.
- Identify funding sources methods for obligating:
 - EU and US governments plus industry share



How Demo Would Work?

- Identify willing trading partners in EC and US
- Identify supply chains and partners
- Get Agreement on governance rules for test
- Establish evaluation parameters
- Make application for grant funds with match pledges
 - include all agreements to ensure high level of success
- Engage consulting and IT support
- Determine requirements, conduct design, test all elements and begin production.
- Evaluate results.



Getting Underway

- What is keeping us from conducting this prototype test?
- Identifying it as a high priority project in EC and US terms?
- It has ITS at its heart, can improve security through improved visibility, and also includes greening freight movement through reduced emissions, eliminating unnecessary traffic, etc.
- What else is needed?
- Let's get underway!



Questions-Comments

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EFM websites

<http://www.efm.us.com/>

<http://www.efm-saic.com/EFM-Site/index.html>