



# **E-Logistics & E-Fulfillment: *Beyond the “Buy” Button***

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# *Logistics*

“Logistics is that part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of **goods, services, and related information** from the point of origin to the point of consumption in order to meet customers' requirements.”

-*Council of Logistics Management (www.clm1.org)*



# *E-Commerce Logistics*

E-Commerce logistics, or **E-Logistics**, therefore, is applying the concepts of logistics via the Internet in order to conduct those aspects of business electronically.



# *E-Fulfillment*

E-fulfillment can be defined as the integration of **people**, **processes** and **technology** to ensure customer satisfaction before, during and after the online buying experience.



# E-Logistics & E-Fulfillment

- ★ Least glamorous but most important functions in E-Business
- ★ Often up to 40% of the cost of goods sold is buried in fulfillment and back-end logistics!
- ★ Lack of knowledge/visibility responsible for many e-business failures

# Today's Online Customers Demand...

- ★ Customized products delivered at high speed to anywhere in the world
- ★ Complete order flexibility and convenience
- ★ Package tracking from Buy button to doorstep (they check status online an average of 7 times!)
- ★ Easy, flawless product returns (reverse logistics)



# A Perfect Order

- ★ Delivered **complete** with all items ordered in the quantity requested
- ★ Delivered **on time** to customer's request date, using the customer's definition of on-time delivery



# A Perfect Order

- ★ Delivered with complete and accurate **documentation** supporting the order, including packing slips, bills of lading, and invoices
- ★ Delivered in **perfect condition** with the correct configuration, customer-ready, without damage, and faultlessly installed (as applicable)

Source: The Performance Measurement Group, LLC



# The Unique Challenges Posed by E-Commerce

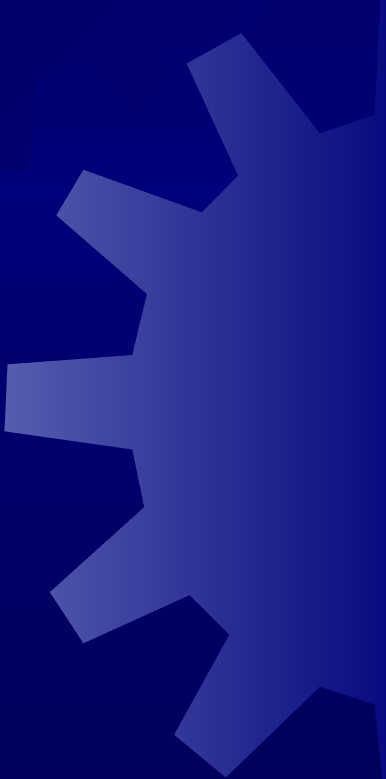
	<b>Traditional Logistics</b>	<b>Commerce Site Logistics</b>
<b>Shipment Type</b>	Bulk	Parcel
<b>Customer</b>	Strategic	Unknown
<b>Demand Style</b>	Push	Pull
<b>Inventory/order flow</b>	Unidirectional	Bidirectional
<b>Average order amount</b>	More than \$1,000	Less than \$100
<b>Destinations</b>	Concentrated	Highly dispersed
<b>Demand</b>	Stable, consistent	Highly seasonal, fragmented
<b>Accountability</b>	One link	Through the entire supply chain

**Fig. 1 - Commerce Site Logistics Differ From Traditional Logistics**

Source: Forrester Research, Inc.



# Options for Handling E-Fulfillment & E-Logistics

- ✦ Perform functions in-house
  - ✦ Outsource to a third-party
  - ✦ Use drop-shipping
- 

# *Pros: Arguments for Outsourcing E-Logistics*

- ★ Speed to market
- ★ Scalability
- ★ Maintain focus on core competency
- ★ Minimal capital investment
- ★ Focus on the customer
- ★ Capitalize on efficiencies
- ★ Shared market data

# **Cons: Arguments against Outsourcing E-Logistics**

- ★ Loss of control
- ★ E-business is still responsible for quality of customer relationship
- ★ Legally liable if anything goes astray
- ★ Few outsourcers do e-logistics and e-fulfillment well

# Perform Functions In-House?

- ★ Only if business has an existing infrastructure, warehouses, and customer service center
- ★ Requires expensive retooling for e-logistics
- ★ Requires extensive systems integration, otherwise data must be manually input from Web into supply-chain management, planning, warehouse-management, and logistics systems



# Outsourcing

## Third-Party Logistics Providers (3PLs)

- ★ Nonasset-based
- ★ Asset-based



# Nonasset-based 3PLs

- ★ Perform only the engineering services directly
- ★ Design the system and coordinate the hiring of appropriate transportation and distribution service providers.
- ★ Independent of the carriers and warehouses bidding to perform the services



# Nonasset-based 3PLs

- ★ Application Service Providers (ASPs)
- ★ Logistics Exchanges (LXs)
- ★ Logistics Visibility Providers (LVPs)

Celarix, ShipXact, BulkNet, FreightMatrix,  
KewillNet, Nistevo





# Asset-based 3PLs

- ★ Owned and operated by the largest and best carriers and warehouses; also perform the engineering services.
- ★ Assumes the system will rely principally on vehicles, employees, and facilities owned and operated by the service provider

Airborne Logistics Services, DHL, Emery, Fedex, UPS, TNT Post Group, USCO



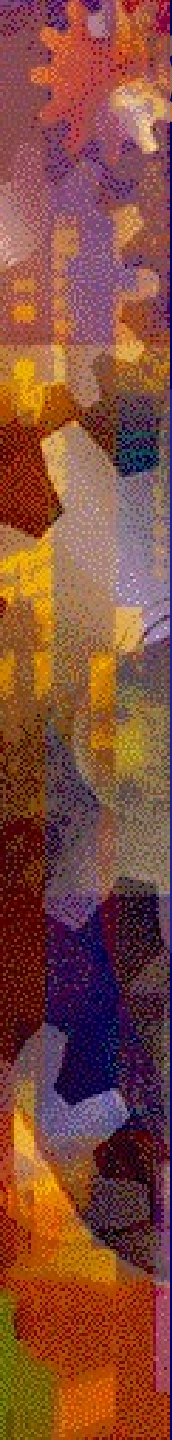
# Drop Shipping

- ★ The e-business sells a product, charges the customer, generates a purchase order, and sends the purchase order to the manufacturer or supplier, who then fulfills the order by shipping the product directly to the customer.
- ★ Saves costs associated with storing or purchasing the product

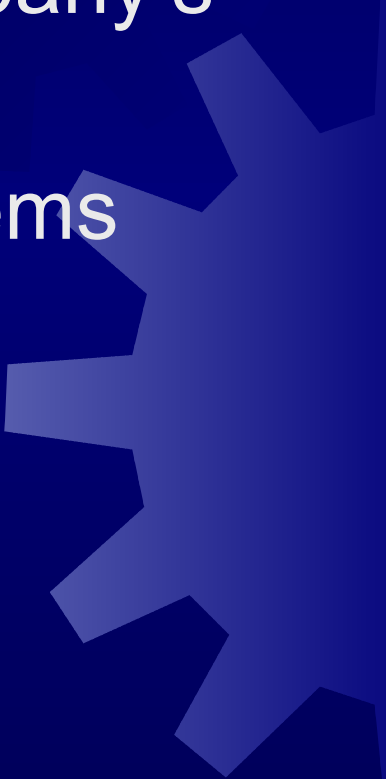


# Risks of Drop Shipping

- ✦ Product returns to various manufacturers
- ✦ Handling of customer service problems
- ✦ Partial shipments
- ✦ One order, different manufacturers, multiple shipment costs
- ✦ Tracking and tracing of packages
- ✦ Differing warranties and policies among manufacturers



# Fourth-Party Logistics Providers (4PLs)

- ★ Integrators that manage a company's supply chain from end-to-end
  - ★ Relies on sophisticated IT systems
  - ★ Designs entire process
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# E-Logistics & E-Fulfillment Software Applications

- ★ The movement of data is the precursor to moving funds and physical goods
- ★ Systems integration is crucial
- ★ Many of today's systems rely on XML-- slow movement away from EDI

# E-Logistics & E-Fulfillment Software Applications

- ★ No “off-the-shelf” applications exist that provide total visibility and movement of data, funds and goods—in forward and reverse directions—throughout the supply chain

Arzoon, Borderfree, ClearCross, Descartes, Escalate, Kewill, Exel, i2, Manugistics, Optum, Vastera, Xporta, Yantra



Source: Borderfree Ltd.



# Global E-Logistics

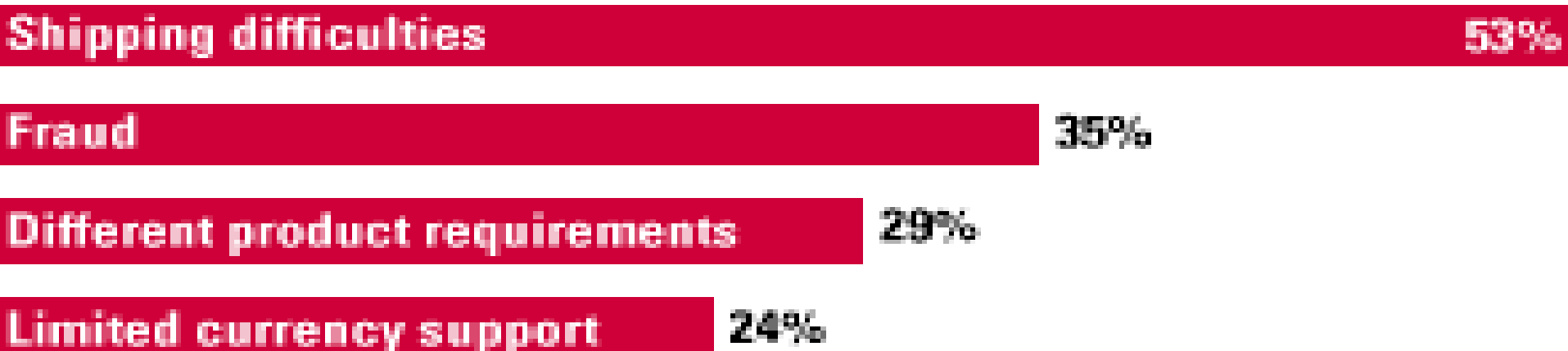
## Forrester Research:

- ★ 85% of firms could not fill international orders because of complexity of shipping across borders
- ★ Of the 15% who did handle global orders, most ship only to a few countries in Europe and Asia where they can fill orders out of local warehouses
- ★ Systems' inability to register international addresses accurately or price total delivery cost

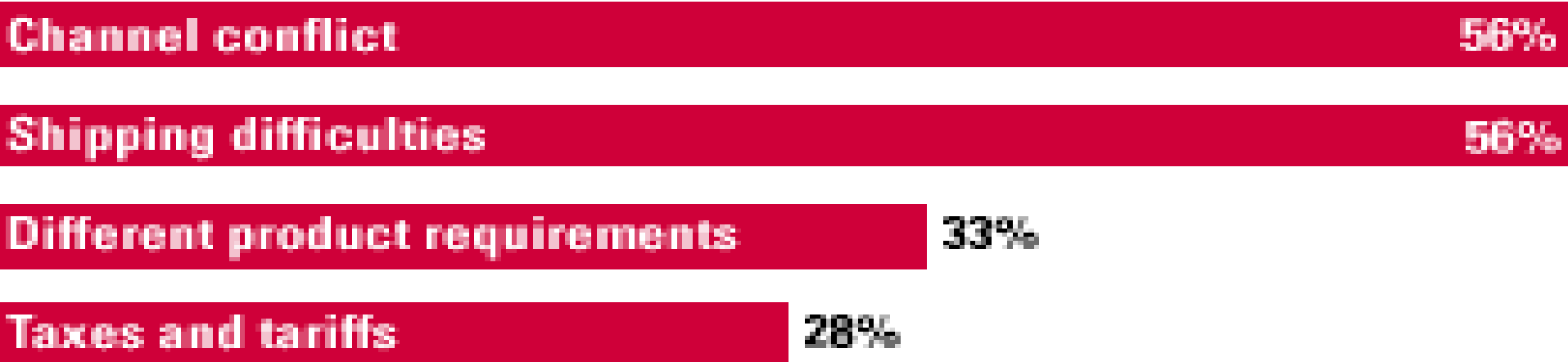


# Why did you turn away international orders from your Web site? (Multiple responses possible)

## Companies with no prior international sales\*



## Companies with prior sales experience\*\*



\*17 companies

\*\*18 companies

Source: Forrester Research



# Barriers to Global E-Logistics & E-Fulfillment

- ★ Economic and educational barriers
- ★ Lack of ICT infrastructure
- ★ Security, privacy and trust issues
- ★ Channel conflicts
- ★ Localization/globalization of content

# Barriers to Global E-Logistics & E-Fulfillment

- ✦ Global trade management
- ✦ Delivery logistics
- ✦ International terrorism and security concerns
- ✦ Geographical challenges



# Conclusion

- ★ E-logistics and e-fulfillment are critical to the growth and success of e-commerce
- ★ The obstacles developing countries face in implementing e-commerce are made even greater by the additional challenges of delivering the goods ordered online, and by meeting customer expectations after the sale



# Conclusion

- ★ Improvements underway are bringing about an environment of collaborative commerce
- ★ As collaboration among participants increases, proportionately large increases in trade and development are sure to follow