

Chapter 4

REVERSE LOGISTICS

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2012 E.C**

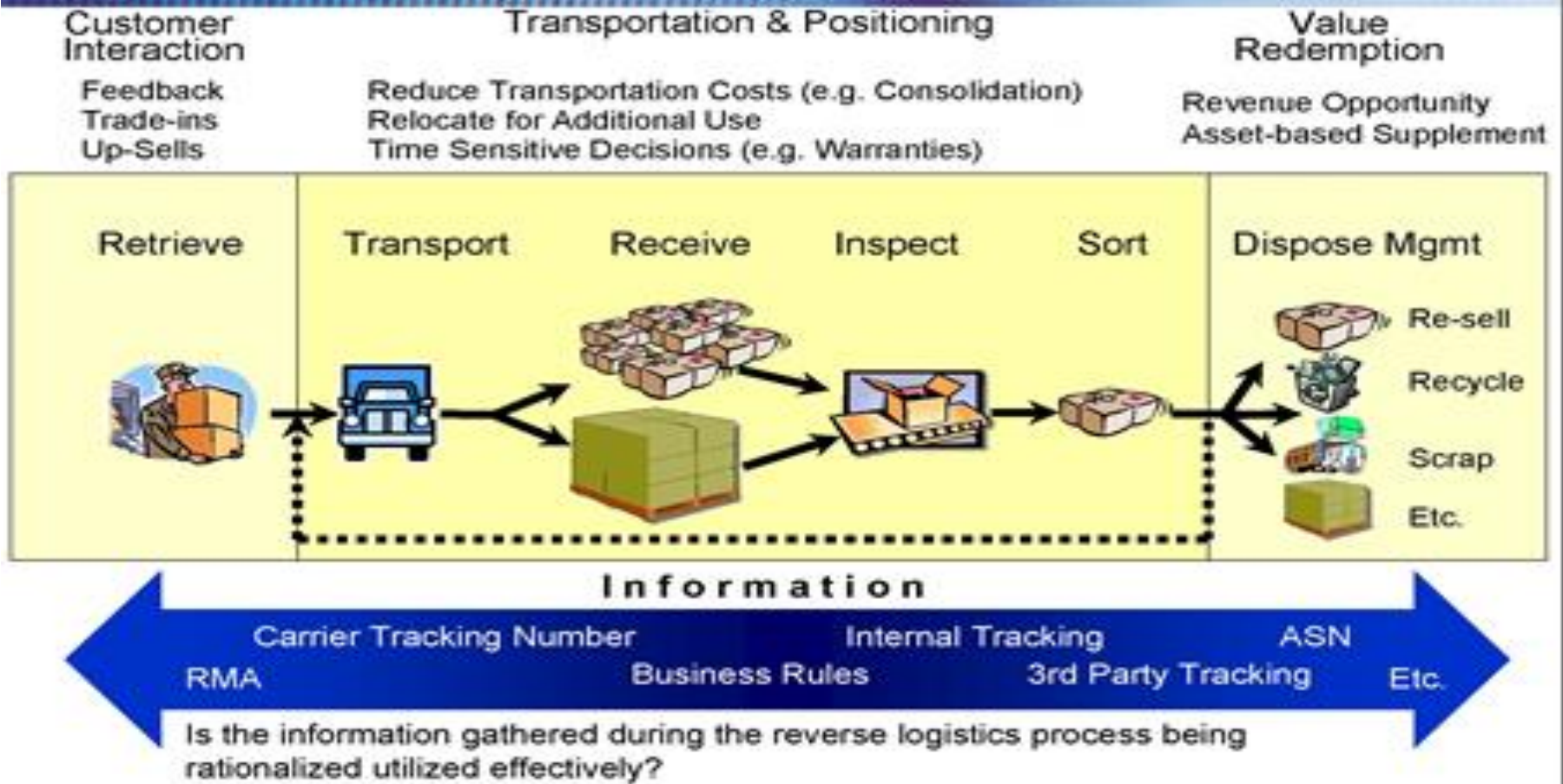
Reverse Logistics Activities

- ✓ Handling of returned merchandise
 - Damage
 - Seasonal inventory
 - Resell via outlet
 - Salvage of outdated products
 - Stock–balancing returns
- ✓ Recycling and reuse
 - Material reuse
 - Remanufacturing / refurbishing
- ✓ Hazardous materials disposition



The Reverse Logistics Process

Three Step Focused Approach



Size of Reverse Logistics

“Reverse logistics costs in the United States are estimated to be approximately 4% of total U.S. logistics costs”

- ROGERS, D., Reverse Logistics Challenges, 2002 -

- Roughly \$47 billions in 2006

“It is estimated that reverse logistics costs account for almost 1% of the total United States gross domestic product”

- MOORE, R., Reverse logistics: The least used differentiator, 2006.

- Roughly \$132 billions in 2006

“The Center for Logistics Management at the University of Nevada conservatively estimates that 6% of all goods may be returned, but concedes that the true number may be closer to 8%”

- MOORE, R., Reverse logistics:

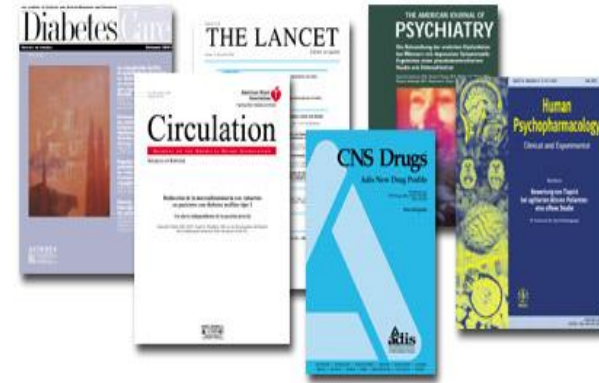
The least used differentiator, 2006.

Return Percentages

Industry	Percent
Magazine Publishing	50%
Book Publishers	20-30%
Book Distributors	10-20%
Greeting Cards	20-30%
Catalog Retailers	18-35%
Electronic Distributors	10-12%
Computer Manufacturers	10-20%
CD-ROMs	18-25%
Printers	4-8%
Mail Order Computer Manufacturers	2-5%
Mass Merchandisers	4-15%
Auto Industry (Parts)	4-6%
Consumer Electronics	4-5%
Household Chemicals	2-3%

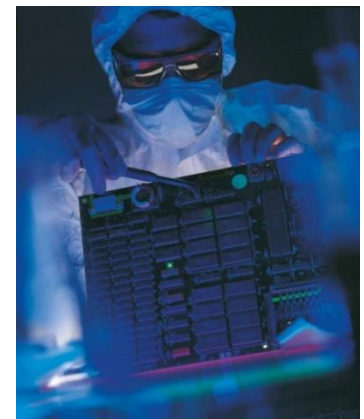
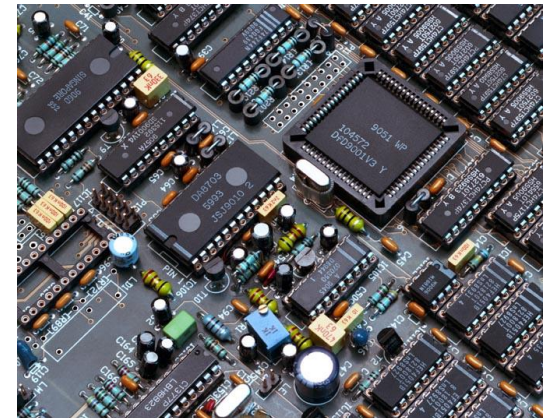
Publishing Industry

- ✓ Highest rate of unsold copies (28% on average)
- ✓ Growth of large chain stores: More square footage requires more books
- ✓ To secure a prominent display in superstores, publishers must supply large quantities of books
- ✓ Superstores sell less than 70% of books they order
- ✓ Shorter shelf life



Computer / Electronic Industry

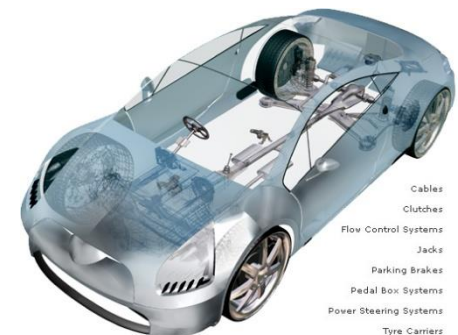
- ✓ Shorter life cycles
- ✓ Approximately 325 million PC's became obsolete in the US between 1985 and 2005
- ✓ Opportunities to reuse and create value out of a nearly omnipresent asset
- ✓ How to recover and reuse materials contained within E-waste?
 - ✓ Lead, copper, aluminum gold, plastics and glass
 - ✓ E-waste includes computers, televisions, cell phones, audio equipment and batteries
- ✓ Remanufacturing of toner cartridges: 12,000 remanufacturers, employing 42,000 workers, sell nearly \$1 billion annually



Automotive Industry

✓ Three primary areas:

- Components in working order sold as is
- Other components, such as engines, alternators, starters, and transmissions are refurbished before they can be sold
- Materials are reclaimed through crushing or shredding



Retail Industry

- ✓ Profit margins are so slim that good return management is critical
- ✓ Returns reduce the profitability of retailers marginally more than manufacturers
 - ✓ Returns reduce the profitability of retailers by 4.3%
 - ✓ The average amount that returns reduce profitability among manufacturers is 3.80%



Forward vs. Reverse Logistics

Differences Between Forward and Reverse Logistics

Forward	Reverse
Forecasting relatively straightforward	Forecasting more difficult
One to many distribution points	Many to one distribution points
Product quality uniform	Product quality not uniform
Product packaging uniform	Product packaging often damaged
Destination / routing clear	Destination / routing unclear
Disposition options clear	Disposition not clear
Pricing relatively uniform	Pricing dependent on many factors
Importance of speed recognized	Speed often not considered a priority
Forward distribution costs easily visible	Reverse costs less directly visible
Inventory management consistent	Inventory management not consistent
Product life cycle manageable	Product lifecycle issues more complex
Negotiation between parties straightforward	Negotiation complicated by additional considerations
Marketing methods well known	Marketing complicated by several factors
Visibility of process more transparent	Visibility of process less transparent

STRATEGIC USE OF REVERSE LOGISTICS

- Reverse Logistics as a Strategic Weapon

- Many firms have not yet decided to emphasize reverse logistics as a strategic variable.
- The handling of reverse logistics challenges is an strategic capability.

Reverse logistics is strategically used to:

- Reduce the risk of buying products that may not be “hot selling” items.
- Increase the switching costs of changing suppliers.

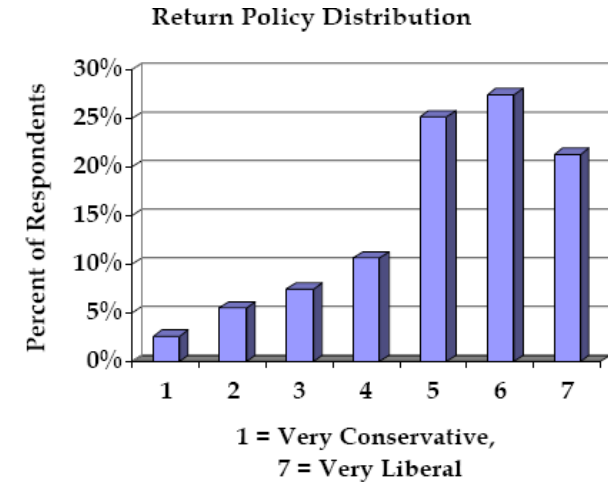
Strategic Role of Returns

Role	Percentage
Competitive Reasons	65.2%
Clean Channel	33.4%
Legal Disposal Issues	28.9%
Recapture Value	27.5%
Recover Assets	26.5%
Protect Margin	18.4%

STRATEGIC USE OF REVERSE LOGISTICS

• Competitive Reasons

- Liberal return policies over the last few years due of competitive pressures.
- Taking back unwanted products or products customers believe do not meet needs.



■ Good Corporate Citizenship

- Use reverse logistics capabilities for altruistic reasons, such as philanthropy.
- These activities enhance the value of the brand and are a marketing incentive to purchase their products.

STRATEGIC USE OF REVERSE LOGISTICS

• Clean Channel

- Clean out customer inventories, so that they can purchase more new goods.
- Fresher inventories can demand better prices, which in turn, protects margin.



STRATEGIC USE OF REVERSE LOGISTICS

■ **Recapture Value and Recover Assets**

- Large portion of bottom-line profits is derived from asset recovery programs.
- Profit derived from materials that were previously discarded.

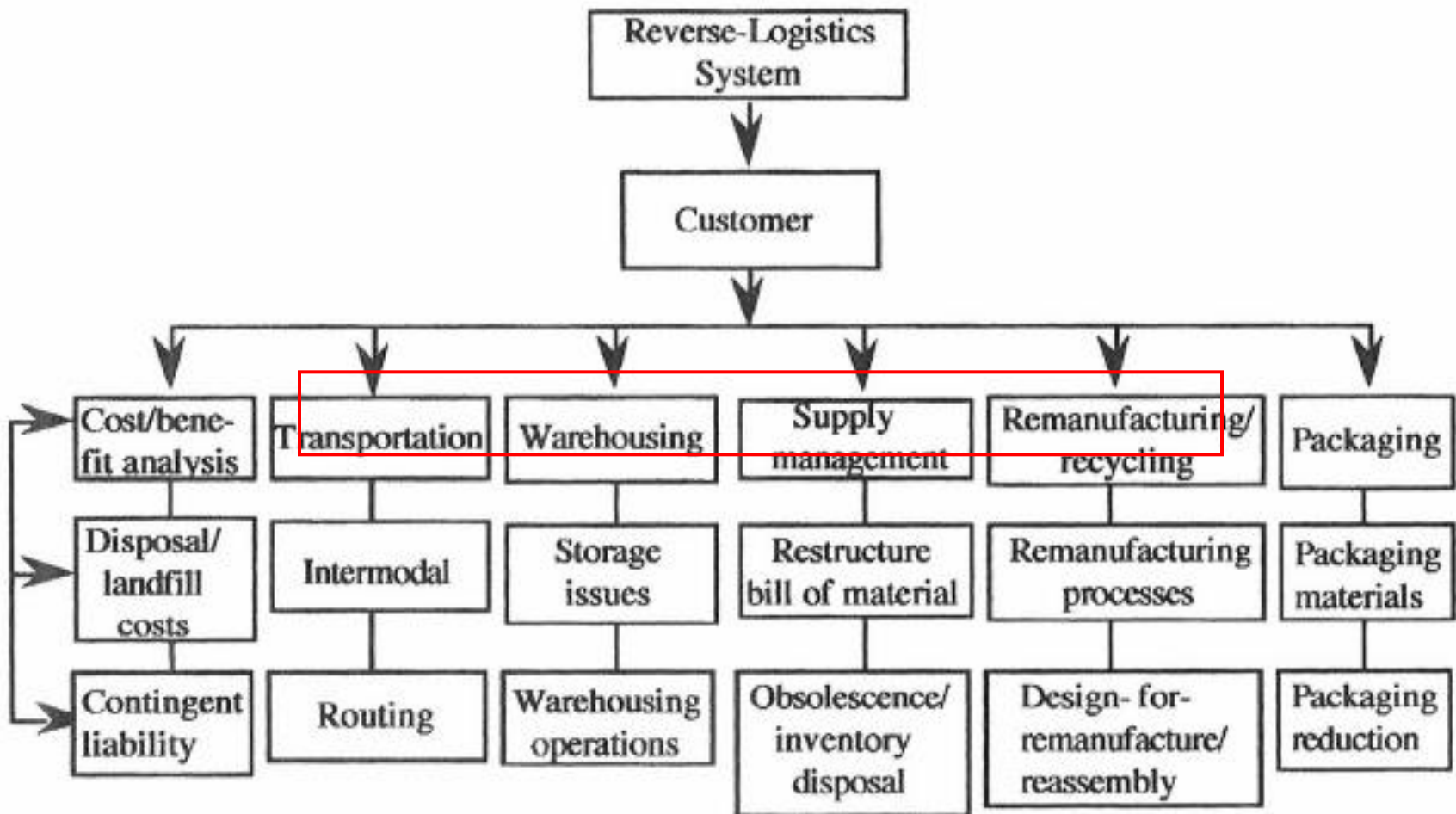
■ **Legal Disposal Issues**

- As landfill fees increase, and options for disposal of hazardous material decrease, legally disposing of non-salvageable materials becomes more difficult.

STRATEGIC USE OF REVERSE LOGISTICS

• Operational Factors in Reverse Logistics Systems

- A holistic view of reverse logistics is essential for a profitable and sustained business strategy.



Key Reverse Logistics Management Element

• Avoidance

Goal: design its merchandise and systems in a manner that will minimize returns since the impossibility of fully prevent customers from sending purchased products back

Preventive Measures:

- To increase Quality – minimize returns by defective products
- Return agreements with retailers / distributors
- Customer Service – providing toll-free numbers that customers can call before returning products

Key Reverse Logistics Management Element

○ GATEKEEPING

“The screening of defective and unwarranted returned merchandise at the entry point into the reverse logistics process”

Rogers, Dale, and Don Tibben-Lembke

Compacting Disposition Cycle Time

- ❖ Goal: to reduce the amount of time to figure out what to do with returned products once they arrive
- ✓ Important to know beforehand what to do with returned goods
- ✓ When material often comes back in to a distribution center, it is not clear whether the items are: defective, can be reused, or refurbished, or need to be sent to a landfill
- ✓ The challenge of running a distribution system in forward is difficult – employees have difficulty making decisions when the decision rules are not clearly stated and exceptions are often made

Key Reverse Logistics Management Element

■ Reverse Logistics Information Systems

- ❖ One of the most serious problems that the companies face in the execution of a reverse logistics is the dearth of a good information systems.
- ❖ To work well, a flexible reverse logistics information system is required.

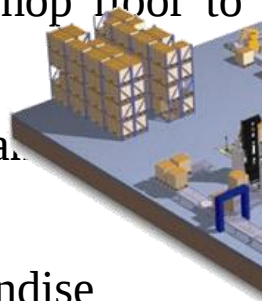
Zero Returns

- ✓ A program where the company in question does not accept returns from its customers.
- ✓ Rather, it gives the retailer an allowable return rate, and proposes guidelines as to the proper disposition of the items. Such policies are usually accompanied by discounts for the retailer
- ✓ It passes the returns responsibility onto the retailer, while reducing costs for the manufacturer or distributor
- ✓ The drawback: the manufacturer losses control over its merchandise

Key Reverse Logistics Management Element

Centralized Return Centers (CRC)

- Consistency in disposition decisions and minimizations of errors
- Space saving advantage for retailers who want to dedicate as much of the shop floor to salable merchandise as possible
- Labor cost reduction – due to specialization, CRC employees can typically handle returns more efficiently than retail clerks can
- Transportation cost reduction – empty truckloads used to pick up return merchandise
- A selling tool – the easy disposition of returned items represent can be an appealing service to retailers, and may be a deal-maker for obtaining or retaining customers
- Faster disposition times – it allows the company to obtain higher credits and refunds stay idle for smaller periods of time, thus losing less value
- Easier to identify trends in returns – an advantage to manufacturer who can detect and fix quality problems sooner than if these returns were handled entirely by customer service personnel



Key Reverse Logistics Management Element

■ Remanufacture and Refurbishment

The advantage to using reworked parts is felt through cost saving

✓ Five categories of remanufacture and refurbishment:

Make the product reusable for its intended purpose

- 1) Repair
- 2) Refurbishing
- 3) Remanufacturing

Retrieving reusable parts from old or broken products

- 4) Cannibalization

Reusing parts of products for different purpose

- 5) Recycling

BOSCH



XEROX



Key Reverse Logistics Management Element

■ Negotiation

- ✓ Negotiation is a key element for all parties of the reverse logistics process.

Because of the inherent lack of expertise on product returns, negotiations usually are informal and approached without formal pricing guidelines. Firms often do not maximize the residual value of returned product

■ Financial Management

- ✓ Probably the most difficult part of reverse logistic and also one of the most important
- ✓ Returns are sometimes charged against sales. People in the sales department may tend to fight returns and delay them as much as possible. Furthermore, accounts receivables are impacted by returns

■ Outsourcing

- ✓ Reverse logistic is usually not a core competence of the firm. In many cases, however, it makes more sense for the firm to outsource their reverse logistics functions than keep those in-house.

REVERSE LOGISTICS CHALLENGES

• **Retailer – Manufacturer Conflict**

- Inefficiencies that lengthen the time for processing returns:
 - √ Condition of the item
 - √ Value of the item
 - √ Timeliness of response
- They have to develop a working partnership to derive mutual benefit.

Symptoms

- Returns arriving faster than processing or disposal
- Large amount of returns inventory held in the warehouse
- Unidentified or unauthorized returns
- Lengthy processing cycle times
- Unknown total cost of the returns process
- Customers have lost confidence in the repair activity.

Problem Return Symptoms

- Lack of information about the process.
- If you aren't measuring it, you aren't managing it.

REVERSE LOGISTICS CHALLENGES

- **Cause and Effect**

- Poor data collection leads to uncertainty about return causes.
- Improving the return process decreases costs.
- Being able to see defective products and to track return issues.

- **Reactive Response**

- Government regulation or pressure from environmental agencies
- It has not been possible to justify a large investment in improving reverse logistics systems and capabilities.

Reverse Logistics and the Environment

- Environmental considerations have a greater impact on many logistics decisions.
- For example:
 - Many products can no longer be placed in landfills
 - Firms forced to take back their products at the end of their useful lifetime.
 - Decrease of landfill availability and increase in Landfill costs.

Green Logistics and Reverse Logistics

- Reverse Logistics refers to all efforts to move goods from their typical place disposal in order to recapture value.
- Green Logistics refers to minimizing the ecological impact of logistics, for example, reducing energy usage of logistics activities and reducing usage of materials.

CONCLUSIONS

- More firms will give considerable attention on reverse logistics
- Efficient handling and disposition of returned product can make a competitive difference.
- Excellent reverse logistics practices add to the company's bottom line.
 - Aspects to reduce the cost of reverse logistics:
 - Improved Gatekeeping technology
 - Partial returns credit
 - Earlier disposition decisions
 - Faster processing / shorter cycle times
 - Better data management

