Delivery Management Strategies
&
Resource Optimization

Last Mile of the Supply Chain

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Topics

- **Introduction**

- **General Definitions / Market Landscape**

- **Industry Background & Evolution**

- **Last Mile of the Supply Chain**

- **Business Impact & Return on Investment**

- **Case Profiles**

- **Q&A**
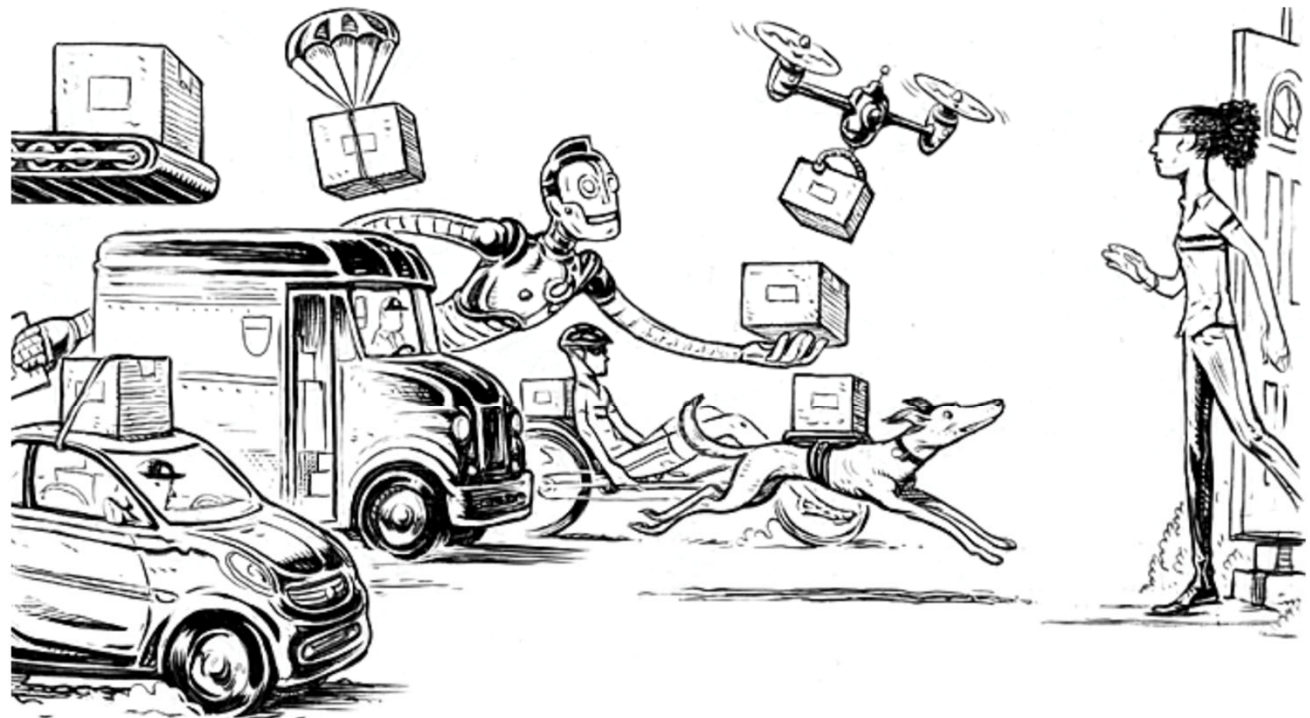
The Last Mile Exchange

Illustration by Lars Leetaru

General Definitions & Landscape

- **Last Mile of the Supply Chain**
    - **What does that mean?**
    - **Market Segment: Wholesale Distribution**

- **Company Objectives**
    - **Reduce: Mileage, Vehicles, Product Shrink, Paper & Supplies**
    - **Improve: DSO, Customer Satisfaction, Margins, 'The Perfect Order'**

Mobility / Outside the 4 Walls

Mobility / Outside the 4 Walls

Recipe	Manufacture	Market	Sell	Deliver

Last Mile Supply Chain

Merchandising	New Orders	Order Fulfillment

Industry Background & Evolution

- **Solving the Business Challenges**
  - **Routing / Optimization**
  - **Direct Store Delivery / Proof-of-Delivery & Clean Invoicing**

- **Differentiators**
  - **Time Windows**
  - **Customer Service / Order Accuracy ('The Perfect Order')**
  - **Right Product at the Right Time (Major events, Seasonality)**

- **Evolution: Paper Based to Electronic Delivery Capture**
  - **Route Optimization Algorithms**
  - **Direct Store Delivery & Customer Service**
  - **Clean Invoicing & Electronic Capture**

How Many Left Turns will a UPS Truck make during a daily route:

Last Mile of the Supply Chain: *Prepare for the Race*

- ## Route Optimization – Elements

  - **Dynamic vs. Standard**
  - **Standard Route / Preferred ID**
  - **Account Status: Gold, Preferred, etc.**
  - **Zone Routing**

- ## Business Objective - Balance

  - **Reduce Cost**
  - **Improve Customer Service**

Case Profile: Dynamic Routing
- McDonald's Distributor
- Single Customer
- Captive Audience
- Key Drops/ Unattended
- $12m Savings Estimated

Mile Hi Foods

High Customer Service Levels ←————————→ **Reduced Cost**

Typical Results & Business Benefits: Route Optimization

- **Reduction in Total Fleet Miles: 10-15%**

- **Reduction in Overtime: 15-35%**

- **Reduction in Fleet Size (Vehicles): 5-10%**

- **Improved Time Window Accuracy / On-Time Deliveries: 75%**

Theatre of the Possible

Vehicles	Stops	Possibilities
1	5	120
1	10	3.6 million
5	10	37.3 quadrillion

Optimized Routing

10% Savings in Mileage

15% Savings in Overtime

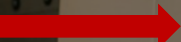# Results Profile: Grupo Modelo

- **Reduction in Total Fleet Kms: 30%**

- **Reduction in Overtime: 2 hours per day, across the fleet**

- **Reduction in Total Daily Routes: 6%**

- **Improved Route Profitability: 20%**

- **ROI: 12 months**

Business Challenge: Achieve greater efficiency in routing the 3,000 company-owned vehicles across Mexico.

Last Mile: *Running the Race*

- **Mobile Direct Store Delivery & ePoD**
  - **Pre-Sales & Order Management**
  - **Customer History & Service Management**
  - **Electronic Signature Capture**
  - **Proof-of-Delivery & "Clean Invoicing"**

- **Business Objectives**
  - **Increase Revenue per Stop**
  - **Order Accuracy (Returns, Inventory, Overage)**
  - **Immediate invoicing: Reduce Days Sales Outstanding**
  - **Improve Customer Service**
  - **Eliminate Paper**

Clean Invoicing: *Managing full-cycle new product delivery, returns, damaged, expired items in a single transaction. This includes signature capture, notes and related photos.*

Delivery Management: *Profile & Potential ROI*

- **Broadline Wholesale Distribution**
  - **Food & Beverage**
  - **Center of the Plate**
  - **Baked Goods (Including Tortillas)**

- **Measurement**
  - **Circa 500 vehicles / routes**
  - **Delivery Driver – Pre-Ignition / Post-Ignition duties**
  - **Customer face time**
  - **Clean Invoicing**
  - **Cross-Docking between Distribution Centers**

The Chefs' Warehouse (NASDAQ: CHEF) *Circa $1.3B annual revenue, headquartered in Ridgefield, CT; operations across the US and Canada.*

Delivery Management: *Profile & Potential ROI*

Drivers	Totals	Annual Rate *(Fully Loaded)*	Hourly Rate *(Fully Loaded)*	Annual Impact	30% Improvement	50% Improvement
	13	$45,000	$23			
Admin / Pre & Post Trip (Paperwork) - Daily Hours - 30 Minutes		$ 1,950		$45,703	$13,711	$22,852
On-Site Activity / Manual Processes (12 Stops / Day) - 10 Min/Stop		$ 7,800		$182,813	$54,844	$91,406
Supplies: Forms, Printer, Mailings, Invoices, Log Books, etc. (Invoice at $.25 / invoice)		46,800	$0.25	$11,700	$3,510	$5,850
Finance & Admin	15	$45,000	$23			
Admin / Pre & Post Trip / Order Corrections, Re-Key, etc. - 30 Min / day			150	$52,734.38	$15,820	$26,367
Dispatcher / Warehouse	15	$45,000	$20			
Pick Load/ Order Corrections, Misc. - 30 Min / day			150	$3,000	$900	$1,500
				$295,950	**$88,785**	**$147,975**

Fundamental Scale: *Average Tortilla Manufacturer has circa 10-15 vehicles under management, 10-15 Stops per Route, 5 Days per week*

Efficiencies in Delivery Management:
Tortilla Market Results

- Streamline Route Sales & Delivery Management
- Improve order fulfillment
- Implement "Clean Invoicing"
- Eliminate paper based / manual processes

- Provide greater inventory accuracy
- Central visibility into delivery operations
- Extensive reporting & business intelligence

INDUSTRY TRENDS & JUSTIFCATIONS

Efficiencies in Delivery Management:
Tortilla Market Results

- Streamline route sales and delivery management

- Improve order fulfillment

- Implement clean invoicing

- **Eliminate paper based / manual processes**

- Provide greater inventory accuracy

- Collapse DSO Cycle

- Extensive reporting & business intelligence

HANDWRITTEN ORDER FORMS

- **Hard to read handwriting**
- **Pricing calculation errors**
- **Product quantity miss counts**
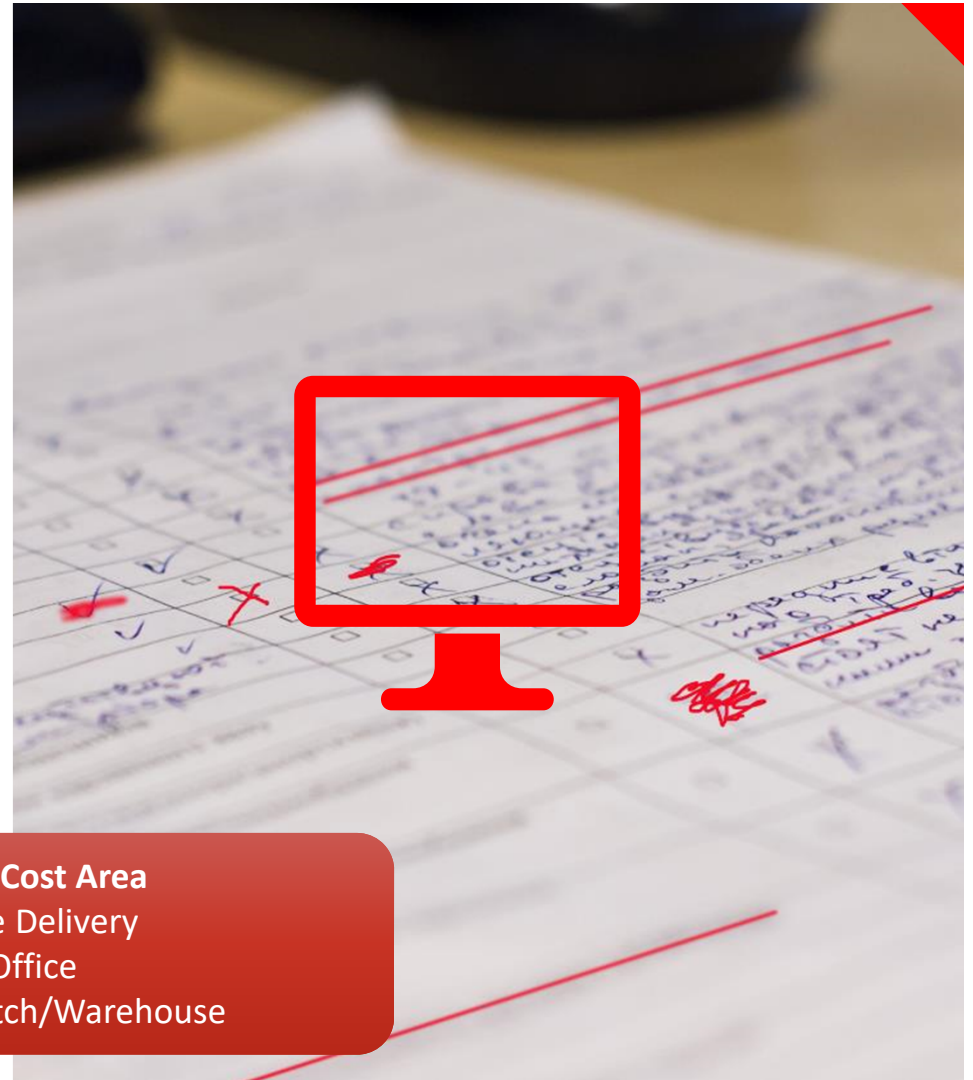- **Lack of back office visibility**

Resulting Cost Area
- Driver Paperwork
- Paper Supplies

EXTENDATA®
MOBILECONDUCTOR

ORDER FORM ERRORS

- **Miss delivered product**
- **Returning to customers to correct errors**
- **Multiple conversations to understand order forms**
- **Back office data entry becomes time consuming and frustrating**

Resulting Cost Area
- Onsite Delivery
- Back Office
- Dispatch/Warehouse

MANUAL
DATA ENTRY

- Data entry delayed until paper work is physically available
- Time consuming process
- Incorrect data from drivers
- Data errors due to manual entry
- Multiple corrections
- Inaccurate and delayed reporting

Resulting Cost Area
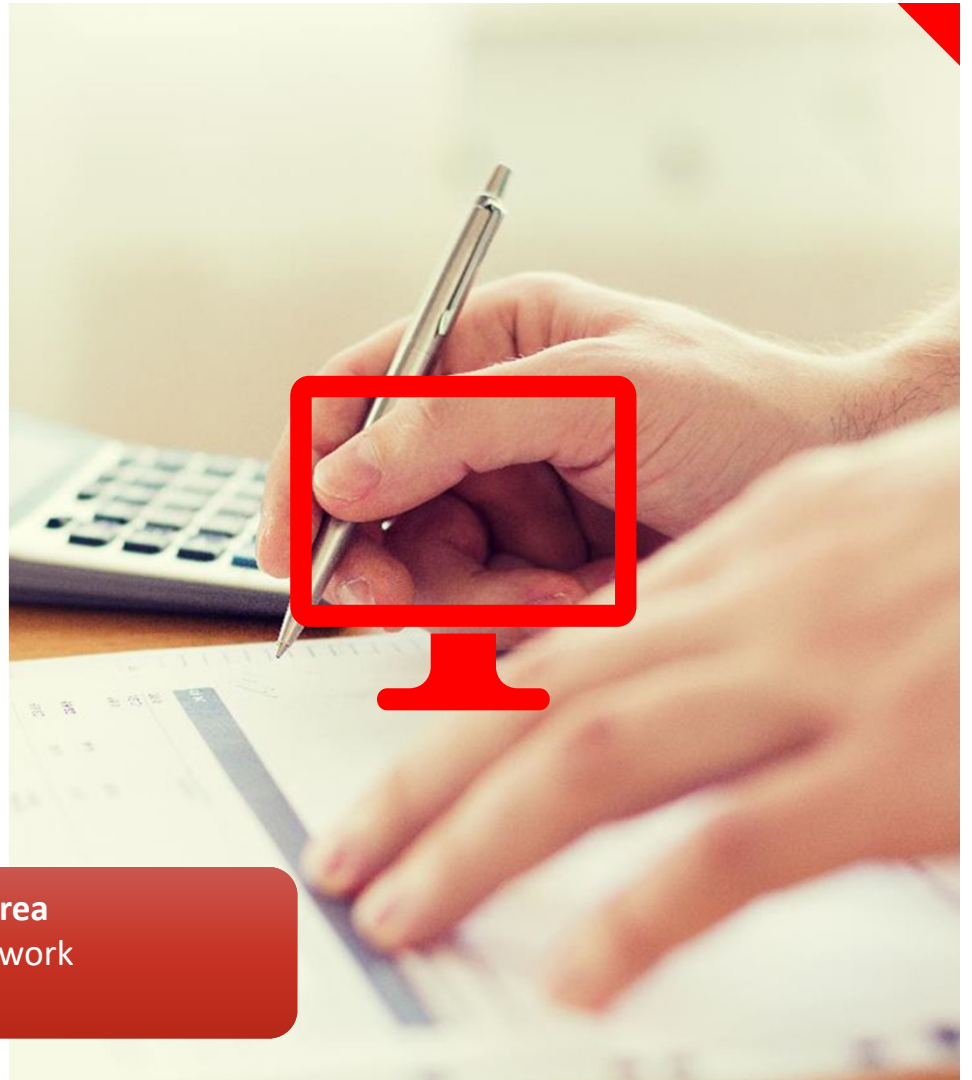- Back Office

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END OF DAY SETTLEMENT

- Handwritten accounting error prone
- Possibility of theft
- Lack of sales accountability
- No sales reports and cash/check settlement

Resulting Cost Area
- Driver Paperwork
- Back Office

DAYS SALES OUTSTANDING

Is your DSO over 30 – 45 days?

DAYS SALES OUTSTANDING

- Days to get order form entered into system

- Days to correct order/invoice errors

- Payment terms

- Timeline increased due to customer disputes

- Total days to get paid

Resulting Cost Area
- Back Office

Last Mile: How Did We Measure?

- **Planned v. Actual?**
  - **Results from Optimized Routes**
    - **Fuel, Mileage**
    - **Total Number of Vehicles**
  - **Right Sales / Delivery Teams**
  - **Right Product for The Perfect Order / Clean Invoice**

- **Business Objectives Achieved**
  - **Revenue per stop**
  - **Revenue per customer, per route**
  - **Reduction in DSO, Improved margins**
  - **Eliminate Paper?**

THANK YOU

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