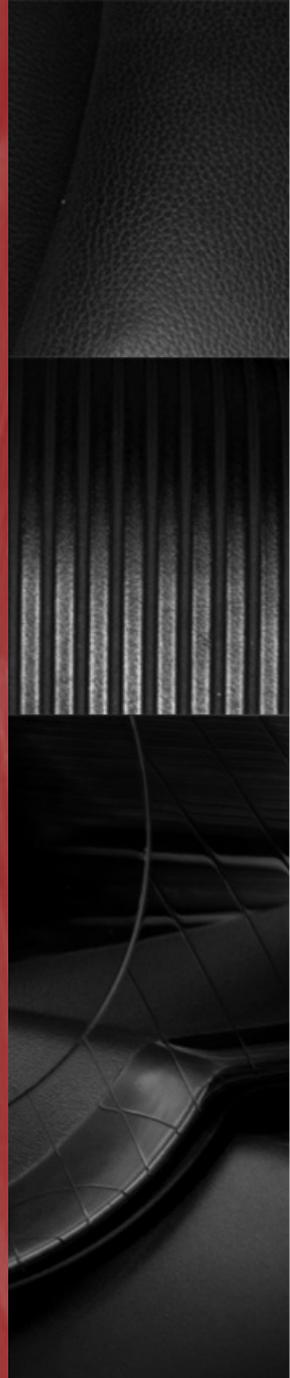


# BNL Bar code process

Frank D'Agostino,

Inventory Supervisor





# History

- I joined the lab in August of 2008
- At that point, there was no aisle/row/bin system in place
- Inventory had never been conducted in building 452
- Only stat sample inventories had been conducted in the main warehouse



# No defined process

- Packages were signed for and information was re-written two or three times per box
- Tracking lost packages could take half an hour per package
- UPS and FedEx's online capabilities were ignored
- Staff preferred manual entry
- UPS preferred manual entry



## 2008-2009

- Aisle/row/bin implemented for all warehouses
- Full count annual inventory begun for all warehouses
- Peoplesoft no longer considered the reason for our problems



# 2009-2011

- Vulnerabilities identified included:
- Undefined processes
- No metric measurement of performance
- Complaint-driven corrective actions
- No preventative measures taken
- Staff resistant to change



## 2009-2011

- Through the Six Sigma process, we gained support to implement a bar code system in the warehouse.
- Worked in conjunction with enhancements we were already making to the workflow
- Original plan included pick tickets, but had to be scaled down



## 2009-2011

- Organization flattening provided new opportunities for growth
- Bar code system greenlit by middle and upper management in spite of resistance



# Bar code system

- Purpose: to be able to track all packages delivered to the warehouse through their delivery.
- Also allows visibility of processing times, employee workload management, number of packages delivered daily, and error rate



# Original Proposal

- **SCAN 1: ARRIVED (INITIAL BAR CODE PRINT OUT):** Done at loading dock. BNL employee scans a package. This prints out a bar code with the tracking number the employee just scanned as well as an internal BNL bar code number. We would like this number to contain the six-digit date, six-digit time, and a four-digit number that will be unique for each package that day. Ideally, there would be a space between this information (so we can read the date and time easily)
- In Peoplesoft, the tracking number and internal BNL number are now married together. Their records are stored on the same page. We should be able to locate this package either by original tracking number or BNL internal bar code at this point.
- In cases when a package does not have a tracking number, our staff should be able to “force” a label that has no original tracking number. Also, in cases when a label is unreadable, our staff should be able to manually enter that number.



# Original Proposal

- **SCAN 2: PREP:** We would like to be able to scan these packages onto a cart. Each cart will be labeled by a number, i.e. “Cart 09.” For all of our scans, it is important that we scan the destination FIRST, then we scan the packages, and then we close out the destination.
- For example: An employee goes into their scanner and chooses “scan to location.” They scan “Cart 09,” and then they scan 7 packages, placing each onto the cart. They then press “complete” on their scanner, which closes out the location on the screen and returns them to the menu.
- **SCAN 3: PROCESSING:** This will be when the cart is brought to a cubicle. The employee will scan a bar code at the cubicle, such as “Cubicle A-1,” then Cart 09. Again, this should require a close-out in the menu.



# Original Proposal

- **SCAN 4: PROCESSING COMPLETE (ADDRESS LABEL PRINT OUT):** When a PO is taken into Peoplesoft, we would like an address label to print out. This label should gather information from PS and print out the Enduser's name, building, and associated Truck Route. We would like our employee to scan their "completed order" cart and the package again, which will update the status to "Processing Complete."
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- For credit cards, our staff will input the above information manually and print a label out, then scan the package as above.
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- If the order cannot be processed, the package will take the "Exception" route (see Scan 8, below).



# Original Proposal

- **SCAN 5: STAGED FOR DELIVERY:** Carts with packages that have completed processing will be brought to the truck carts for expediting. The Truck Cart will be scanned first (North Truck Cart, etc.), and then the completed item will be scanned. Inventory items will be scanned onto an “Inventory” cart and be considered delivered for our metric data.
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- **SCAN 6: OUT FOR DELIVERY:** When our driver arrives at the warehouse, he will load packages onto his truck. As with all scans, he will scan the destination first (a bar code in his truck which says “East Truck”), and then he will scan each package as he loads them.



# Original Proposal

- **SCAN 7: DELIVERED:** Each delivery point will have a bar code. The driver will scan the bar code and then scan each package being dropped off. When the driver returns to the warehouse and docks their scanner, this information will upload and an e-mail will be sent to the corresponding Enduser letting them know their package has arrived. I will need advice from BSD on how to coordinate this with credit card orders, since at this point they have not been entered into Peoplesoft and there is no automated way of notifying the enduser.



# Original Proposal

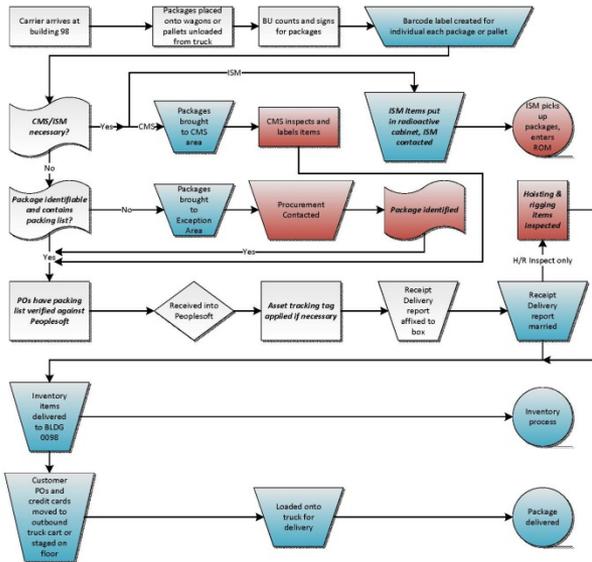
- **SCAN 8: EXCEPTION:** This will be for packages which cannot be processed. This is usually due to a lack of information on the package, such as no packing list or an incomplete purchase order. Each of these packages will be scanned into a BNL Stores Inventory Location, categorized by Aisle Row Bin. We would like the ability to view these packages by location as well as tracking numbers. These packages will be listed as an “Exception” (and scanned as an Exception instead of scan 4) and Endusers who search these items in eTrack will be told to contact the warehouse.



# Sign installation

- Difficulty location endusers
  
- Users complained about building signs

FY12 Receiving Flow chart





# Final results

- We can demonstrate that 96% of packages leave the warehouse within 1 business day
- Packages can be tracked down within seconds
- Orders can easily be prioritized
- Work can be distributed evenly
- Our reputation is enhanced



# Questions