Case Study

MWI Direct Moves to Continuous Feed
Color Ink Jet Printing and High-Speed Finishing

- MBO Roll Fed Finishing
- Canon Prostream 1000
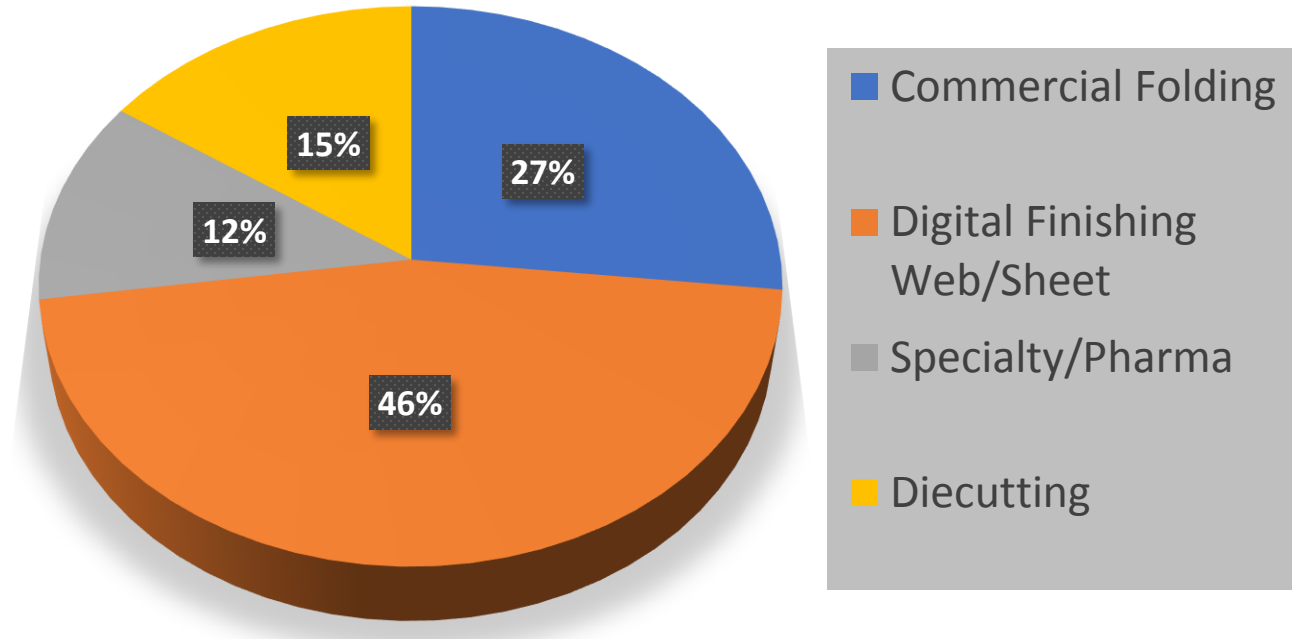
About MBO America

MBO America

MBO Letterfold Line

MBO America Business Segments

Commercial Folding — 27%

Digital Finishing Web/Sheet — 46%

Specialty/Pharma — 12%

Diecutting — 15%

Standardized Roll Fed Solutions

- Direct Mail and Letter Fold

- Self Mailer and Plow Fold

- Cut and Stack, Post Cards and Flat Sheet

- Signature, Saddlestitch, Brochure and Book Block

- DPS 60 Dynamic Perforating and Scoring Unit

- FC 23/30 Aqueous and/or UV Web Coating Unit
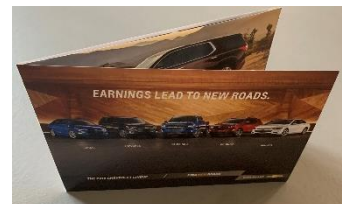
- MWI Direct
- Case Study

Dean Hart – President/CEO

- Thirty-five year industry veteran

- Started at MWI in 1994

- Purchased MWI in 1996

- Served on the board of several local organizations
  - Nebraska Diplomats
  - The Foundation for Lincoln Public Schools and Legatus
  - President for the Nebraska Diplomats in 2016
  - MWI was awarded NE Diplomats Business of the Year in 2012

- MWI Direct gives back to the local community:
  - JDRF, Lincoln Heart Ball, Pius X Bolt, United Way, Cedars Home For Children, Tabitha Meals on Wheels Program, and various others

- Managing Partner/Owner of Dino's in Lincoln – 14 years
  - *"Don't get in the restaurant business!"*

- Teaches at the University of Nebraska
  - Lincoln's Hospitality, Restaurant & Tourism Management

THE MWI DIRECT STORY

- Full-service direct marketing since 1989
- Specializing in Fortune 500 Companies and Non-Profit Organizations nationwide with data-driven programs
- Includes Acquisition, Cross-sell, On-boarding, Appeal, Renewal, and Member programs for their clients
- Manage all aspects of production in-house; single-source of services under one roof
- Focused strategy and higher response rates

Philosophy

Customer-centric: Commitment and partnership with our customers are the hallmarks of our business.

Servicing and retaining clients is the best business model

They manage complete marketing programs, not just print jobs

Full Range of Services

- Graphic Design
- Printing:
  - Conventional Web Offset and Sheet Fed
  - Digital Web and Cutsheet
- Personalization, Variable Data
- Data Management

- Folding/Finishing
- Diecutting
- Mailing & Fulfillment
- Binding
- Logistics

Meeting New Goals –Process for the Future

- Remain **_relevant_** in a fast-changing marketplace
  - Current technologies for existing customers
  - Have a model that attracts new customers
  - Drive higher ROI results for those customers
- Implement new production technologies and enhanced software solutions that position us for the future
- Seek alternatives to conventional printing and finishing methods which streamline workflows to meet demand for faster in-home dates
- Implement processes that work with market trends of more sku's with shorter qty's
  - Consolidate work centers
  - Automate processes
  - Generate more operational efficiencies.
- Lower the total cost of labor across all production work centers

Original Direct Mail Workflows

Cutsheet
Workflow

Web
Workflow

Print Shell
Guillotine
Print Data
Offline Fold
Offline Glue

Print Shell
Print Data
Inline Fold
Offline Glue

Original Shell (Pre-Print) Model-WEB

- Roll to fan makeready high cost
  - 2 people normally
  - Typical 1-2 hours

- Roll to fan print run time @ 500fpm +

- Spoilage rate for offset process
  - Makeready + overrun = 8%-10%

- Pin fed prep for finishing = paper waste / tooling

- Makeready time for toner: 5-10 min.

- Fan fed toner print time: 125fpm** (4:1)

- Scalability:
  - 1 conventional Sanden press
  - 1 toner fan fed press
  - 1 buckle folder inline

- Long time frame in aggregate

Images of Original Process Steps-WEB

Form Print Offset

Data Print Toner

Buckle Fold Finish

Original Shell (Pre-Print) Model-SHEET

Roll to sheet print <u>makeready</u> high cost
- 2 people normally
- Typical 1-2 hours

- Roll to roll print run time @ 500fpm +

- Spoilage rate for offset process
  - Makeready + overrun = 8%-10%

- Guillotine cutter step required 3 cuts/min*

- Makeready time for toner: 5-10 min.

- Cutsheet toner print time slow

- Offline buckle folder (9 machines)

- Scalability:
  - 1 conventional press
  - 1 Guillotine cutter
  - 4 toner cutsheet presses
  - 9 Buckle folders (manned as needed)

- Long time frame in aggregate

- Many handling points

Images of Original Process Steps-SHEET

Form Print

Guillotine Cut

Data Print

Fold/Finish

(2x**)

Acquiring the New Processes

Evaluation of Technology

- Hi speed color inkjet system that is capable of consolidating multiple processes with enhanced variable text and graphics

- Hi speed finishing system that can consolidate all finishing operations in one line

- Finishing NOT inline with press

- Decrease total labor hours versus conventional operations

- Decrease turnaround times

- Strong emphasis on reliability, service and support

Canon

- ProStream 1000
- Color inkjet systems that meets customer's expectations for quality
- Industry leading output speeds
- Exceptional service and support network
- CIJ device that is field upgradable
- Minimal OEM's associated within the system
- Workflow training and support

MBO America

- Near-line finishing system that is able to consolidate up to 4 off-line processes for one step finishing

- Industry leading finishing speeds of 400 - 600 ft. per min to reduce turn times

- Built for heavy production environment

- Excellent service and support network

- Reduce labor requirement 50% to 60% and increase throughput speeds 3:1
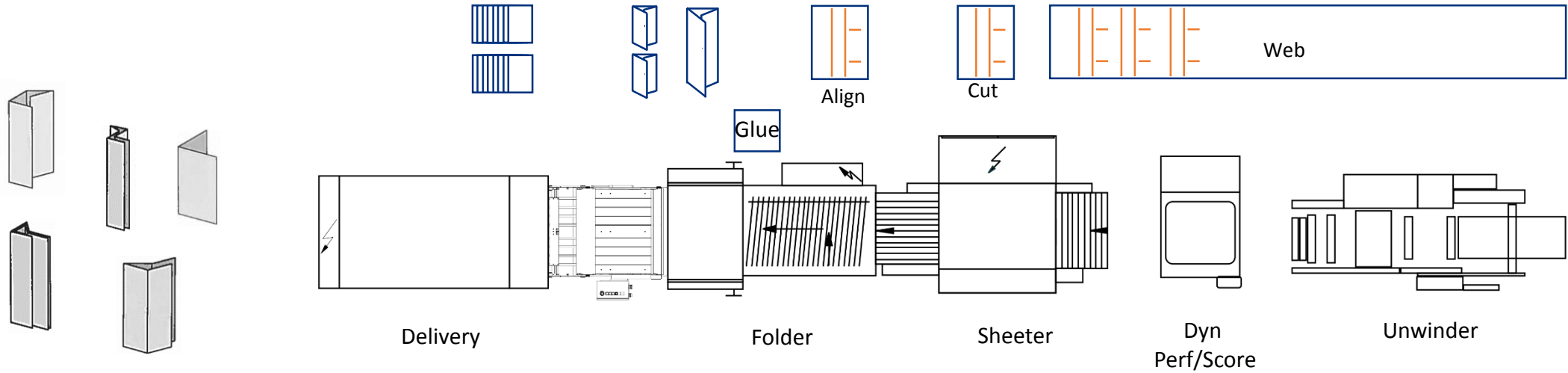
- Extensive history in production finishing solutions

Finishing Line Configurations
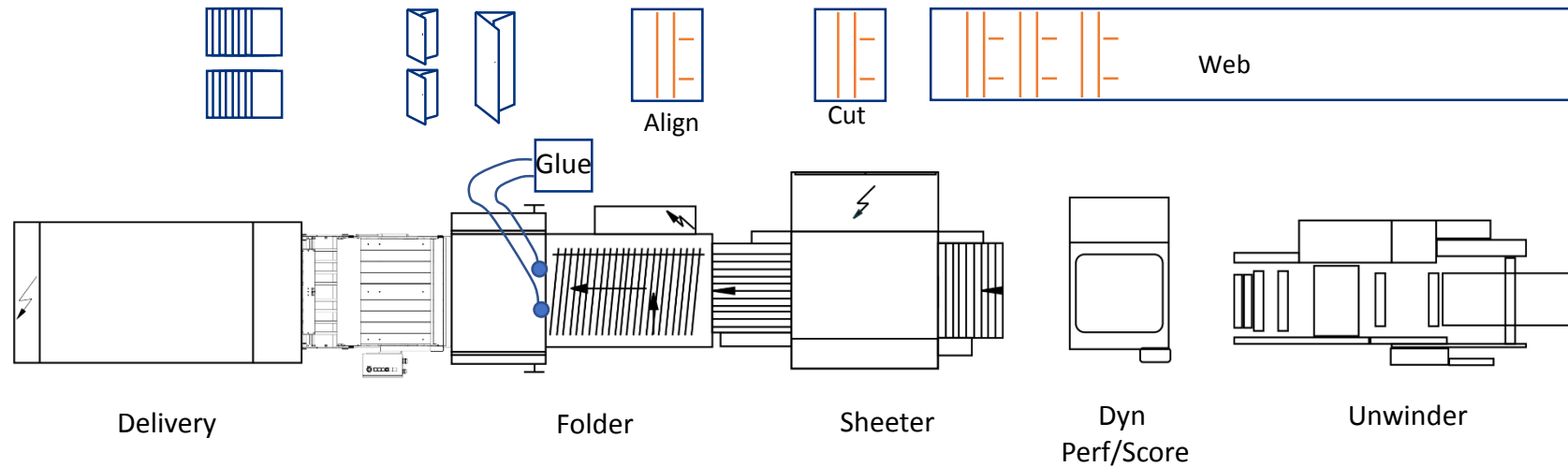
- MWI Direct
- MBO Letterfold Line with Options
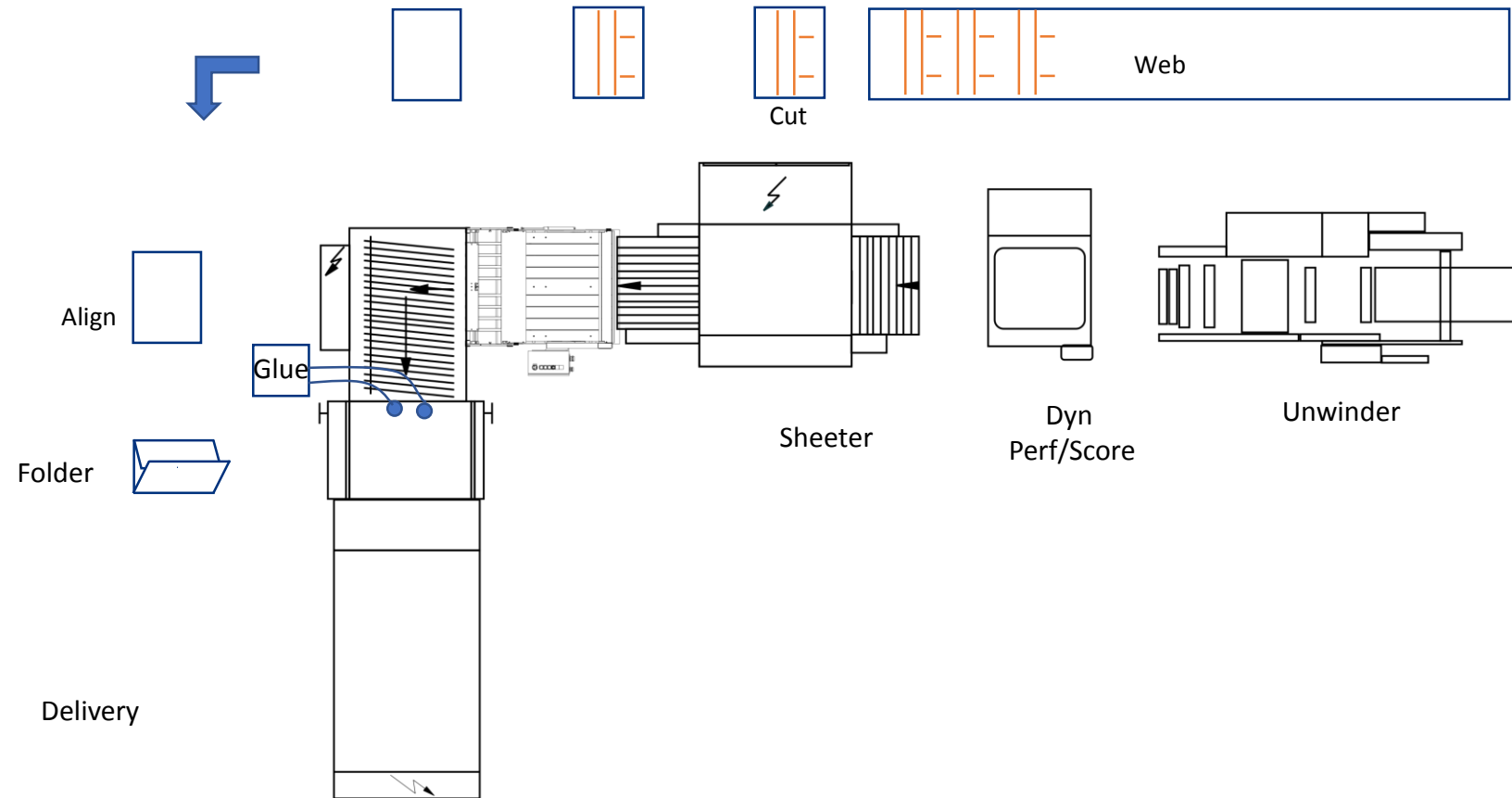
Letterfold (Primary)

- Common for letterfolds

Web

Align

Cut

Glue

Delivery

Folder

Sheeter

Dyn
Perf/Score

Unwinder

Web

Align

Cut

Glue

Delivery

Folder

Sheeter

Dyn Perf/Score

Unwinder

Letterfold (Primary)

- Self Mailers

- Glue

- Score - Perf

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mwidirect

MBO
KOMORI Group

Web

Cut

Align

Glue

Folder

Sheeter

Dyn
Perf/Score

Unwinder

Self Mailer

- Glue

- No Glue

Delivery

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Align

Cut

Web

Glue

Slit Table

Folder

Sheeter

Dyn Perf/Score

Unwinder

Delivery
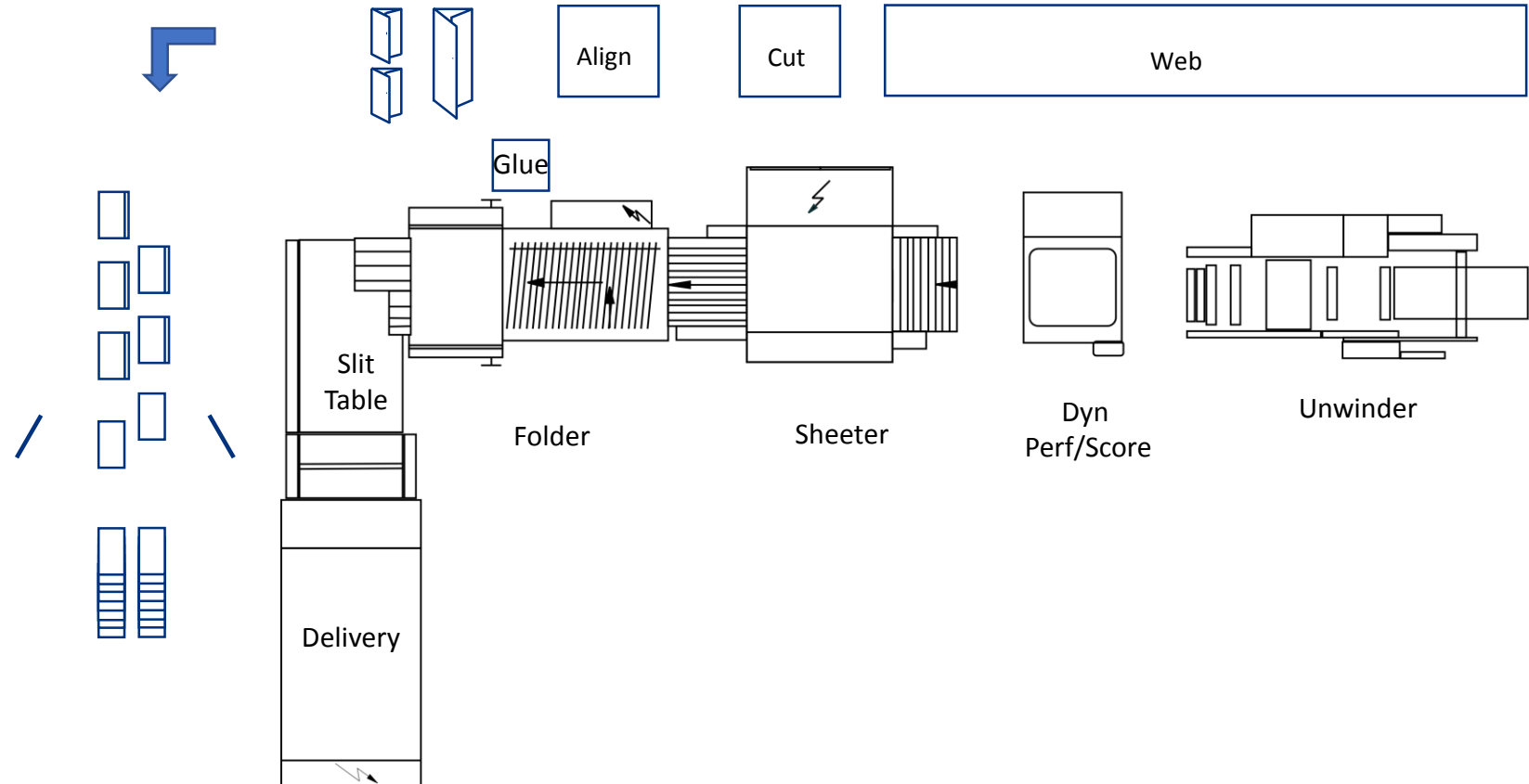
Slit and Nest

- Buck slips nested

MWI direct

Stacks   Slit   Cut   Web

Batcher/Stacker   Slitter   Sheeter   Dyn Perf/Score   Unwinder
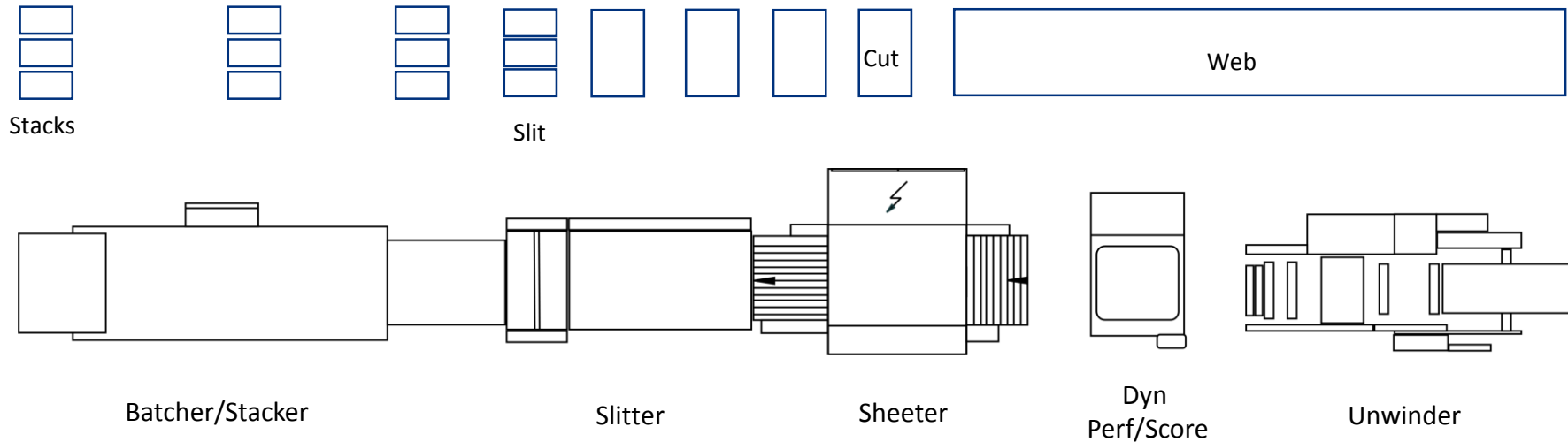
Cut and Stack

- Transactional letters
- Post cards
- Single sheets

MWIdirect

ROI: Sample Original Cutsheet Workflow

Original Method:
- Roll to sheet on Didde: 2 people
- Guillotine cutter: 1 person
- OCE toner box: 1 person
- Buckle folder: 2 person
- Offline glue/affix: 2 person

New Method:
- Roll to Roll Print Prostream: 1 person
- Roll to Finish MBO: 2 people

Savings = 5 people + turn time (= many hours)

- MWI Direct

MBO Finishing Line Video

MBO America

4 East Stow Road, Suite 12

Marlton, NJ 08053

MBOAmerica.com | 609-267-2900