

PM Schedule Optimisation

Newsprint & LWC Case Study

This case study is based on a real-world comparison of Greycon's optimisation-based scheduling against the manual practice as conducted by one of our customers. Although the name of the customer is not revealed, the results presented here are extracted from the customer's own internal presentation to senior managers.

Definition of Success

The customer defined the following success criteria:

Improved On-Time Shipping performance

- Fewer Late orders (number of orders, number of tons)
- Fewer Early orders (number of orders, number of tons)

All mill rules adhered to without manual intervention

- Run length minimums (100mt)
- Basis weight switchovers (low to medium, medium to high, high to medium, etc.)
- No jumping of high to low or low to high basis weights without passing through 30#

Repeatability

- Once a model has been developed and tuned in the test system, we will reload the data with updated information and run the model again
- Model must be able to produce a new schedule that again beats the loaded schedule

Methodology

Get data from live production system

- 275 orders with ship dates between January 21st and March 3rd
- All Newsprint product – 3 basis weights, low, medium & high

Establish Baseline

- Use same set of orders
- Planner manually sequences runs, orders and run lengths

Configure Optimiser

Run the Optimiser

Results

Performance

	Manual	Optimiser	Difference
Creation Time	60 min	5 min	85% reduction
Late Orders	222	158	29% reduction
Early Orders	0	1	(small increase)
Average Lateness	1.2 days	1.3 days	(small increase)
Tons × Days Late	18,509	20,987	13% increase
Number of runs	37	20	46% reduction

- Average lateness increased by 3 hours, which is negligible
- Switchover cost reduction is worth about \$17,000 for the 30 day cycle, implying a potential annual savings of \$204,000
- Tons × Days Late increase was because order size was **deliberately** not taken into account; customer felt that it is preferable, within reason, to have one large order late rather than many small ones. This can be changed according to the user's preference.

Mill Rule Adherence

- Original schedule showed 5 mill rule violations (undesirable basis weight changes)
- Optimiser schedule had no violations

Repeatability

- New data set provided for repeatability analysis
- Planner established new baseline and comparison yielded:

	Manual	Optimiser	Difference
Creation Time	60 min	5 min	85% reduction
Late Orders	163	133	18% reduction
Early Orders	0	2	(small increase)
Average Lateness	0.9 days	0.6 days	(small improvement)
Tons × Days Late	9,857	7,490	24% reduction
Number of runs	39	33	8% reduction

To arrange a trial with your own data contact:



GREYCON

www.greycon.com

Greycon Ltd.
7 Calico House,
Plantation Wharf,
York Road,
London SW11 3TN,
UK

☎ +44 (0) 20 7978 0700

Greycon Inc.
One Independence Plaza,
Suite 720,
Birmingham,
AL 35209,
USA

☎ +1 205 870 1310

Greycon Latin America
Maggiolo 724,
Montevideo,
CP 11300,
URUGUAY

☎ +5982 712 4917

Greycon Asia Pacific
300-1055 West Hastings,
Vancouver,
B.C. V6E 2E9,
CANADA

☎ +1 604 609-6184