

If the absolute value of a number in a matrix cell is greater than the number in the small box at left, then the data streams identified by that cell's row and column labels are correlated to provide predictability at least 95% of the time. Larger absolute values in cells reflect stronger relationships.

Correlation Coefficient @95% = 0.4258

OBS =>	16	M/R & Run 1	Tear Off 2	Butt Rolls 3	Trim 4	REOP 5	Other 6	Total 7
M/R & Run	1	1.0000	0.3502	0.4718	0.1957	0.2989	0.0967	0.9136
Tear Off	2	0.3502	1.0000	0.0654	0.1934	0.4896	(0.1729)	0.3374
Butt Rolls	3	0.4718	0.0654	1.0000	0.3580	0.0791	0.5212	0.6477
Trim	4	0.1957	0.1934	0.3580	1.0000	0.4256	0.3526	0.3899
REOPS	5	0.2989	0.4896	0.0791	0.4256	1.0000	0.3713	0.4936
Other	6	0.0967	(0.1729)	0.5212	0.3526	0.3713	1.0000	0.4667
Total	7	0.9136	0.3374	0.6477	0.3899	0.4936	0.4667	1.0000

Obs	M/R & Run	Tear Off	Butt Rolls	Trim	REOP	Other	Total
Jan 98	15.49	0.61	1.34	0.61	0.27	1.90	20.22
Feb 98	16.06	0.60	1.57	0.71	0.38	3.43	22.75
Mar 98	13.49	0.62	1.35	0.79	0.30	2.37	18.92
Apr 98	14.33	0.70	1.52	0.61	0.19	2.53	19.88
May 98	12.94	0.58	1.29	0.58	0.15	2.43	17.97
Jun 98	14.17	0.53	1.41	0.63	0.29	2.90	19.93
Jul 98	14.11	0.49	1.33	0.61	0.12	2.80	19.46
Aug 98	13.60	0.49	1.37	0.66	0.15	2.73	19.00
Sep 98	14.51	0.55	1.42	0.64	0.04	2.61	19.77
Oct 98	13.74	0.52	1.48	0.60	0.15	2.61	19.10
Nov 98	12.73	0.44	1.55	0.65	0.04	2.91	18.32
Dec 98	13.41	0.46	1.35	0.63	0.14	2.53	18.52
Jan 99	15.01	0.56	1.52	0.70	0.01	2.38	20.17
Feb 99	15.20	0.49	1.48	0.63	0.06	2.42	20.28
Mar 99	15.10	0.53	1.55	0.61	0.08	2.34	20.21
Apr 99	13.26	0.53	1.17	0.54	0.00	1.95	17.43
(a) Average	14.20	0.54	1.42	0.64	0.15	2.55	19.50
(b) Sigma	0.97	0.07	0.11	0.06	0.11	0.37	1.23
(c) 6 sigma	5.81	0.40	0.67	0.35	0.68	2.22	7.39

Notes: If the results are obtained without human intervention (adjustments to the process), then (c) = range between lower and upper control limits. In other words, the process must be improved in order to prudently expect outcomes with variation less than the range defined by 6 sigma.

Also, one can conclude (with 95% confidence) that any outcomes outside the control limits below are evidence of a change in the process.

(a) + (3*b) = Upper Limit	17.10	0.74	1.76	0.81	0.49	3.66	23.19
Average (Mean)	14.20	0.54	1.42	0.64	0.15	2.55	19.50
(a) - (3*b) = Lower Limit	11.29	0.34	1.08	0.46	(0.19)	1.44	15.80

Three conclusions that can reasonably be drawn from the data are:

- 1) Make-ready & run waste is the best predictor of total waste with a correlation coefficient of **0.9136**
- 2) A one-month total waste percentage reduction from 20.73 to 18.27 might very likely be due to "random" factors (**19.50 +- 1.23**) rather than process improvement and therefore would not be cause for reward.
- 3) Two consecutive months below **19.50** would be adequate (statistical) evidence of process change to justify positive feedback (donuts, praise, etc.).