

CASE STUDY 1

*Introduction of a Production
Efficiency Improvement project.
Paper and Cardboard Plant
belonging to a Multinational company*



✓Leading group in the packaging sector on the Iberian Peninsular, manufacturing paper, corrugated cardboard and packaging, offering customers the widest range of products.

INITIAL SITUATION: Indicators



The preliminary stage of the project consisted of carrying out a diagnosis, through which RIBATE personnel got to know the products and processes of the Company, and defined the lines of work to be carried out in order to achieve the objectives, which were quantified by means of a series of indicators.

The quantification of these indicators (sept'04) characterised the starting point of the Company:

CONCEPT	INDICATOR	VALUE
Flexibility of production system	Lead Time	3 days
MOD costs	% with respect to final price	60%
Productivity	M2/HxH	107 M2/h*h
Average change time	Minutes	35,628 min
% Non programmed Stoppages	% with respect to hours of presence	20.147%
Product in progress	M2 of warehouses	589 m2

LINES OF WORK

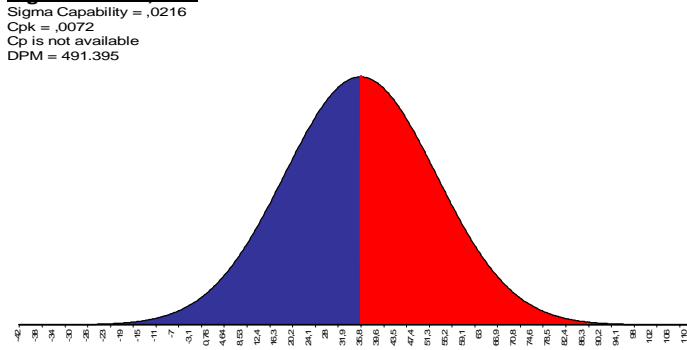
In each work area, the following lines of work were opened in sequence:

1. Specialisation in production families
2. Definition of production units (lay-out off work stations)
3. Packaging stations brought nearer (change in macro lay-out)
4. Multi-task workers (reassignment of tasks)
5. Introduction of the 5 S (new business culture)
6. Application of the SMED (rapid change)
7. Improvement groups under SEIS SIGMA methodology



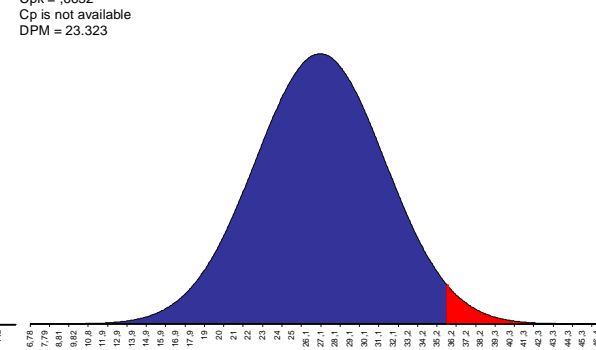
Mean = 35,628
 StdDev = 17,256
 USL = 36
 LSL is Not Defined
Sigma Level = .0216
 Sigma Capability = .0216
 Cpk = .0072
 Cp is not available
 DPM = 491.395

TIEMPOS DE CAMBIO 2004



Mean = 27,042
 StdDev = 4,5027
 USL = 36
 LSL is Not Defined
Sigma Level = 1,9895
 Sigma Capability = 1,9895
 Cpk = .6632
 Cp is not available
 DPM = 23.323

TIEMPOS DE CAMBIO 2005



RESULTS: Indicators

At the end of the project the improvement was quantified by means of the indicators defined at the beginning of the project:



CONCEPT	INDICATOR	INICIAL VALUE	FINAL VALUE	IMPROVEMENT
Flexibility of production system	Lead Time	3 days	1.5 days	50%
MOD costs	% with respect to final price	60%	43%	28%
Productivity	M2/HxH	107 M2/h*h	129 M2/h*h	21%
Average change time	Minutes	35,628 min	11,993 min	66%
% Non programmed Stoppages	% with respect to hours of presence	20.147%	16.037%	20%
Product in progress	M2 of warehouses	589 m2	121 m2	80%