

RECP Best Practices Catalogue

*Improvement and control of the process by
setting up and applying the Six Sigma
method*

Developed within the framework of MED TEST II



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



The SwitchMed Programme is
funded by the European Union

Best Practice - Improvement and control of the process by setting up and applying the Six Sigma method

SECTOR:	Food & Beverage
SUBSECTOR:	Bakery and farinaceous products
PRODUCTS	Pasta and couscous made from durum wheat
CATEGORY	Process control or modification
APPLICABILITY	Process
COMPANY SIZE	70



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Description of the Problem	The company generates raw material losses at the production process level
Description of the Solution	<p>Applying and implementing the Six Sigma method continuously improves and optimises the production process.</p> <p>Implementing this method requires selecting three people as a foundation who will apply this method. So training sessions are essential.</p> <p>The 3 people:</p> <ul style="list-style-type: none">• 1 'Black Belt', who carries out the Six Sigma method throughout by training the other employees.• 2 'Green Belts', who assist and help set up the Six Sigma system for half of their time. <p>The process can take about 1 month to learn and understand the system. Implementation must be progressive and in parallel with internal training.</p> <p>Concrete projects are defined. For example: "Reduction of losses on line C3, by at least 50%, which would be a gain in productivity worth about 45,000 €/year".</p> <p>We will apply the DMAIC (Define, Measure, Analyze, Improve and Control) principle and also use the results of the statistical means, which are necessary.</p>

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Economic Gain	Losses and the rate of recycled products are expected to be significantly reduced. It is almost impossible to accurately calculate the gains. The costs of non-product outputs (NPOs) are to be taken as indicators. It is estimated that NPO costs can be reduced by 5%. The calculations are: Total NPO costs (Couscous): (€~ 720,000), 5% = (€ 36,000)
Environmental Gain	With the application of the Six Sigma method and based on a 5% reduction estimate of NPOs, the following environmental gains are projected: ~150,000 KWh (total, 2015: 2,971,999) ~75 tons of fuel oil (total, 2015: 1,549) ~1,500 m ³ of water (total, 2015: 29,196) ~200 tons CO ₂ (calculated total, 2015: 4,027) ~1,136 tons of raw materials.
Health and Safety Impact	Yes

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Investment and Financial Indicators	€ 9,150 for training and coaching € 9,150 per year in personnel costs (Time for Return on Investment: 6 months)
Suppliers	Design office or specialised office in Six Sigma
Other Aspects	This requires conviction and determination of the company management
Implementation	Planned before the end of 2018