Objective

The normal strategy to keep production systems in good conditions is to apply preventive maintenance practices, with a supportive workforce “reactive” in the case of clearly detected malfunctions. This impact on quality, cost and in general, productivity. Added to this, the uncertainty of machine reliability at any given time, also impacts on product/production delivery times. It is known also that a worn-out mechanism has higher energy consumption.

The use of intelligent predictive technologies could contribute to improve the situation, but these techniques are not widely used in the production environment. Often sensors and monitors required for the production environment are non standard and require costly implementations.

Power-OM propose to use the electric current consumption monitoring and profiling, as an easy to implement condition based maintenance (CbM) technique, and manage it also as a way to improve the overall business effectiveness, under a triple
perspective:
• Optimizing maintenance strategies based on the prediction of potential failures and
  schedule maintenance operations in convenient periods and avoid unexpected
  breakdowns
• Operation: Managing energy as a production resource and reduce its consumption
• Product reliability: Providing the machine tool builder with real data about the
  behaviour of the product and their critical components
This universal solution should also be compatible with the added value information
that could come from existing sources (control) and sensors used at the machine,
and jointly this will preserve current and future investment in the field. The project will
research also in the required infrastructure and new business model for maintenance
services provider.
Power-OM will be applied in machine tools, focusing on spindles and linear guides
as responsible for the most common and cost-intensive downtimes. However, the
technology developed in this sense would have high potentials across other types of
machines.

Fields of science

Programme(s)

Topic(s)

Call for proposal

FP7-2012-NMP-ICT-FoF

Funding Scheme

CP-TP - Collaborative Project targeted to a special group (such as SMEs)

Coordinator

FUNDACION TEKNIKER

Address
Activity type
Research Organisations

EU contribution

€ 709 207

2 of 5
## Participants (6)

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<thead>
<tr>
<th>Organisation</th>
<th>EU contribution</th>
<th>Activity type</th>
<th>Address</th>
<th>Administrative Contact</th>
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</thead>
<tbody>
<tr>
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