



SWITCH 2 PRODUCT  
INNOVATION CHALLENGE





# Smart Current Clamp

A smart current clamp that provides old machineries with new machine learning technologies to reduce the risk of machine downtime periods.



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## Problem

Machine downtime periods: the production has to be stopped and the company loses money.

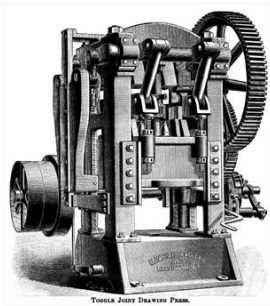
This is one of most serious problems in the manufacturing industry: due to unexpected faults the production has to be stopped and the company loses on average €250.000 per hour.

Modern machineries can prevent faults to reduce the risk of machine downtime periods.

Modern machineries can collect and analyze power consumption data to prevent faults and reduce the risk of machine downtime periods. Unfortunately, old machineries don't have the possibility to do the same thing ...

What if old machineries can take advantage of modern fault prediction algorithms?

Old machineries cannot prevent faults because they're not able to collect and analyze data on power consumption. What if we offered them this opportunity?



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## Solution

1. Our goal is to empower old machineries giving them the possibility to collect data useful to prevent faults and to reduce the risk of machine downtime periods.

2. We offer a smart current clamp that, once attached to the power cable of the machinery, it's able to collect data on the electricity consumption.

3. The smart current clamp is equipped with a fault prediction algorithm that analyze the collected data to reduce the risk of machine downtime periods.



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## The good we're bringing

The Smart Current Clamp is easy to be installed and, as Google's Chromecast allows an old television to take advantage of the functionalities of modern and expensive smart TVs, so our clamp would allow old machinery to take advantage of the functionalities of most technological ones.



### Collect

Now old machineries  
can collect power  
consumption data



### Analyze

Data can be analyzed  
in real time to prevent  
faults



### Prevent

Preventing faults we  
reduce the risk of  
machine downtime  
periods

# Competitive Scenario

Typical problems that our competitors have:

- 1) Not offering a real-time fault detection
- 2) Taking for granted that companies are able to collect power consumption data
- 3) Offering algorithms that are not specifically designed for power consumption analysis

	Loop System	Numenta	Avora	Anodot	Splunk
Possibility to prevent faults	YES	YES	YES	YES	YES
Real-Time fault detection	NO	YES	YES	YES	YES
Focus on power consumption	NO	NO	NO	NO	NO
Possibility to collect data	NO	NO	NO	NO	NO

# What do we offer more than our competitors?

- 1) Real time analysis of data to prevent faults «a priori» instead of only explaining them «a posteriori»
- 2) «Software + Hardware» solution to allow companies to collect data
- 3) An algorithm specifically designed for power consumption data in order to achieve better performances



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# What will we do when the number of 4.0 companies grows?

We know that the sales of our smart current clamp will decrease, but we plan to contact manufacturers of modern machineries to sell them our algorithm so that they can install it on their products.

Why should they buy our algorithm?

- ✓ It is specifically designed to analyze electricity consumption data (better than competitors)
- ✓ It will have been tested for years (better than designing a new algorithms from scratch)
- ✓ It will have been improved using feedback of our clients (future buyers of their modern machineries)



# Roadmap of the project



## MILESTONE 0

Looking for suppliers and comparing prototypes of the current clamp.

## MILESTONE 1

«Production to order» focusing on Italian largest manufacturing companies.

## MILESTONE 2

«Production by warehouse» to reduce delivery time

## MILESTONE 3

Sell our fault prediction algorithm specifically designed for electrical consumption



# Team



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**Thanks !**

