Improving the quality of an industrial process

We may help an Industry improve the quality of its processes. Usually, this is done the following way, using probabilistic methods:

- Finding, in the process, what are the parameters which have the strongest influence on the overall quality;
- Finding, for these parameters, the tuning which correspond to best results;
- Designing a strategy for checking the smallest number of parts, still ensuring the highest confidence on all parts;
- Designing an overall "guaranty strategy" (how much should the guaranty cost and to what parts should it apply?);
- Defining an "early warning system", which will help the Industry detect the situations where many returns may occur (small numbers of failures, which may turn later to large numbers of failures).

Recent References

- Groupe Total, 2010: Probabilistic methods for the evaluation of the amount of pollutant.
- Caisse Centrale de Réassurance, 2010-2011: Probabilistic methods for the evaluation of extreme phenomena.
- PSA Peugeot Citroën, 2011: Probabilistic studies for the extension of guarantees for the cars.
- Groupe Total, 2011-2012: Investigation about possible breaches in large oil containers.
- Air Liquide, 2011: Hierarchy of parameters and construction of a similarity index between pipelines.
- Réseau de Transport d’Electricité, 2012: Comparison between a connected network and an isolated network, in terms of quality of service.
- Réseau Ferré de France, 2012-2013: Defining criticity indicators for the delay of trains.
- Air Liquide, 2012: Databases for reliability
- DCNS, 2013: Preliminary analysis of the reasons for insufficient quality on a production site
- Coop de France déshydratation, 2013: Hierarchy of parameters and their influence upon a dehydratation process.