VM / PDM SERVICES

- Identification of benefits from VM and PdM applications in your enterprise including feasibility studies and return-of-invest (RoI) estimation
- Data mining services and analysis of process and equipment data
- “Virtual Equipment”: Dedicated software tool for development and test of VM and PdM algorithms
- Development of VM and PdM solutions for your production data and applications
- VM and PdM algorithms ready for integration in your production environment

What is your application?

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NOVEL CONTROL METHODS

Statistical models for predictive process and equipment control

Application description:

- **Virtual Metrology (VM):**
  - Virtual measurement of quality parameters based on available equipment, process and logistic data

- **Predictive Maintenance (PdM):**
  - Support for maintenance planning by prediction of best point-in-time for maintenance and repair

- **Assessment of VM/PdM models:**
  - Test and optimization of existing models with an exclusive virtual equipment test bench

VIRTUAL METROLOGY

Prediction of process results from equipment and process data

Benefits:

- **Improved product control:**
  - Enables 100% wafer-to-wafer control without additional metrology equipment
  - No metrology delay

- **Metrology cost reduction:**
  - Reduction of required metrology equipment within a fab
  - Improved cycle time due to omitted metrology operations

- **Support for APC systems:**
  - Improvement of run-to-run control by providing virtual metrology results for each wafer

PREDICTIVE MAINTENANCE

Prediction of equipment failure and wear part degradation

Benefits:

- **Better maintenance planning:**
  - Prevention of unscheduled downtime
  - Just-in-time allocation of personnel and spare parts

- **Improved process control:**
  - Reduction of scrap and equipment failures
  - Enabling of recipe updates based on equipment condition

- **Improved control planning:**
  - Equipment-health monitoring enables adaptive control strategies
  - Prevention of unnecessary measurements