Using Product Lifecycle Analytics to Tackle COVID-19 Challenges in Manufacturing

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Through the acquisition of OptimalPlus, NI accelerates companies’ digital transformation initiatives by coupling NI leadership in automated test with new advanced product analytics for enterprises.

“We’re confident NI’s enterprise software strategy unlocks the value of test data by embracing digital transformation and bringing it to the analog world.”

Eric Starkloff, NI President and CEO
July 6, 2020
Agenda

The four phases of the COVID-19 crisis

Challenges for manufacturing industries

Product Lifecycle Analytics

An opportunity to accelerate…

Discussion
Four phases of the crisis

- Crisis
- Aftershock
- Recovery Ramp
- Back to business
Four phases of the crisis

- Crisis
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Four phases of the crisis

1. Crisis
2. Aftershock
3. Recovery Ramp
4. Back to business
COVID-19 is creating unique challenges

Examples:

• Remote access
• Need for cost reduction
• Supply chain disruption
• Equipment, operator and consumables degradation
• Quality excursions
• NPI acceleration
Product Lifecycle Analytics

- **Design & Eng.**
  - Design
  - Chip
  - Board
  - Module
  - Product

- **Manufacturing**
  - In use

- **Customer**
  - Returns

- **Design spec** • **Machine** • **Process** • **Metrology** • **Test** • **Rework** • **Genealogy** • **Performance** • **Reliability** • **Usage** • **Warranty**

- **Visibility** • **24x7 Analytics** • **Alerts** • **Automated Action**
Solving COVID-19 challenges

Examples:

- **Remote access**
  Consolidated view of operations with real-time alerts and automation

- **Need for cost reduction**
  Active OEE monitoring adaptive manufacturing

- **Supply chain disruption**
  Transparency into supply chain operations and early warning on interruptions

- **Equipment, operator and consumables degradation**
  Automatic detection of changes to operating parameters and KPIs like yield

- **Quality excursions**
  Real-time algorithms to detect changing trends, outliers and escapes

- **NPI acceleration**
  Tools for remote automation and collaboration
An opportunity to accelerate…
About 70 percent of executives from Austria, Germany, and Switzerland said the pandemic is likely to accelerate the pace of their digital transformation.

McKinsey & Company

“Digital strategy at a time of crisis”
Recap of key challenges and opportunities

- **Remote access**
  Consolidated view of operations with real-time alerts and automation

- **Need for cost reduction**
  Active OEE monitoring adaptive manufacturing

- **Supply chain disruption**
  Transparency into supply chain operations and early warning on interruptions

- **Equipment, operator and consumables degradation**
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- **Quality excursions**
  Real-time algorithms to detect changing trends, outliers and escapes

- **NPI acceleration**
  Tools for remote automation and collaboration

- **Digital transformation**
  Use engineer down-time to accelerate strategic projects
Thank you!

Looking forward to hearing from you

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