

# Advanced Process Control and Online Optimization Market Research

FIVE-YEAR MARKET ANALYSIS AND TECHNOLOGY FORECAST THROUGH 2023

## MARKET DRIVEN BY NEED FOR PRODUCTION OPTIMIZATION

Capital spending on process assets, hydro processing, and chemical manufacturing continues to shrink, which in turn has provided the window of opportunity for process manufacturers to optimize existing assets. The advanced process control (APC) and online optimization software and services market has shown sustainable high single-digit growth.

APC demand will increase by the need for production optimization. In the downstream refining and chemicals market, planning and scheduling SMEs are pushing for more stable operations in an effort to close the gap between “plan versus actual.” Dynamic, real-time optimization coordinates multiple units in closed loop by automatically adjusting APC to more closely coordinate plant operations.

This functionality is aimed at the control engineer, sustainability, model maintenance, and simplification of APC implementation services.

Artificial intelligence (AI) and machine learning has begun to play a role in model calibration and accuracy. “Seed models” from process engineering simulation and other planning data models are used as inputs with years of historical data to produce better APC models used in close loop or as inputs to the model calibration and update process. AI and machine learning also help to address process applications with non-linearity in chemicals and polymers industry.

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## STRATEGIC ISSUES

The advanced process control and online optimization market is in a state of flux as suppliers focus on accommodating evolving users’ needs. This report will help suppliers and users stay on top of these changes. Strategic questions addressed include:

- What are the key issues involved in integrating APC and online optimization software with other applications?
- What are the key elements for success in the APC and online optimization software business?

## RESEARCH FORMATS

This research is available as a Market Intelligence Workbook (Excel) and/or a concise, executive-level Market Analysis Report (PDF), with or without detailed charts.

## RESEARCH FOCUS AREAS

### STRATEGIC ANALYSIS

Major Trends  
Economic Factors  
Industry Trends  
Regional Trends  
Strategic Recommendations

### COMPETITIVE ANALYSIS

Market Shares of the Leading Suppliers  
Market Shares by Region  
North America  
Europe, Middle East, Africa  
Asia  
Latin America  
Market Shares by Application  
Advanced Process Control  
Online Optimization  
Market Shares by Revenue Category  
Software and SaaS  
Implementation Services  
Maintenance  
Market Shares by Industry  
Cement & Glass  
Chemical/Petrochemical  
Electric Power Generation  
Food & Beverage  
Metals

Mining  
Oil & Gas  
Pharmaceutical & Biotech  
Pulp & Paper  
Refining  
Water & Wastewater

Market Shares by Customer Tier  
Market Shares by Sales Channel

### MARKET FORECASTS & HISTORIES

Total Shipments of Advanced Process Control & On-line Optimization

Shipments by Region  
Shipments by Application  
Shipments by Revenue Category  
Shipments by Industry  
Shipments by Customer Tier  
Shipments by Distribution Channel

### INDUSTRY PARTICIPANTS

The research identifies all relevant suppliers serving this market.

The Worldwide APC and Online Optimization Market

