

# Excellence in Production & Manufacturing Operations

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On-going daily management of regular production / manufacturing **with current production assets** is driven by:

- (1) That production assets be **available** to operate when needed (i.e., Reliability, from Maintenance & Operations).
- (2) That while running they achieve **Peak Operating Performance** (peak Value Generation, Lean Operations).  
Productivity and performance (with existing equipment) varies significantly with operating tools and practices.

Achieving **Excellence (approaching Optimum) in Operating Performance** has been difficult, but now is much simpler and inexpensive. Typical gains are a few \$100K to a few \$1M annually per high-volume process.

**Scope:** The actionable decisions during regular operations are the **adjustments** of process settings (e.g., setpoints and biases for temperatures, pressures, speeds, feeds, cycle times, levels) – above and beyond maintaining the equipment and its Process Control system. Tuning up operating decisions yields:

- Short term gains such as **cost reductions** (lower consumption and losses, higher efficiency and quality), **sales increases** if capacity-constrained (by increasing effective throughput), **and more reliable satisfaction of requirements** for safety, reliability, quality limits, production rate, emissions controls, etc.
- Long term gains such as **higher future market share** from higher customer satisfaction as a result of better or more consistent quality and possibly lower costs; and **delay or avoidance of capital investment** for otherwise necessary improvement projects or capacity expansions.
- A **sharper quantitative awareness and creativity of plant personnel**, including discovery of better objectives, problems and barriers, which often leads to financially sound projects for asset improvements.

Given an existing process (including those with Advanced Process Control APC) and current external conditions, **Optimal Adjustment** decisions yield **Optimal Performance Operations**: the best possible balance of all objectives and factors to maximize total benefit to the firm. Determining optimal adjustments requires thorough performance metrics and multivariable, mathematical, intelligent decision-support software accessible at the production floor – a natural product of Industrial Engineering, and sometimes of very high-end APC.

**ULTRAMAX® Advanced Process Management™ (APM) is the fastest and simplest true optimizing toolset in the market today; it often enables you to approach Peak Operating Performance in, e.g., about 100 hours of regular, normal production for 10 inputs safely readjusted hourly. ULTRAMAX also includes a superior, common-sense method to define Performance Metrics.**

**Historically users derived, on average, 400% ROI; we Guarantee 100%!**

ULTRAMAX is a real-time, self-learning (from live data) optimizing tool; it does not require up-front the lengthy creation of process models or the disruptive collection of experimental data. In addition to effectiveness and speed, it offers safety by not imposing demands or intruding into the basic production system, thus not affecting Reliability. It can be used off-line for studies, and on-line (with automatic data exchange with Process Control). It can be turned off and operations will continue as before, but now with plant personnel having enhanced awareness about peak performance. Also, it does not require that its Advice for process adjustments be followed: plant personnel are always in control, even when turning on closed-loop optimization for largely autonomous optimal operations.

**ULTRAMAX® If it can be measured, it can be optimized.™**

ULTRAMAX delivers quick and easy significant additional value generation from better (Lean) Operations (without capital investments). It is a great complement to Engineering, Lean, and Six-Sigma asset improvement projects.

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