

Honeywell

Honeywell Process Solutions: Recipient of the
2008 North American Process Automation
Green Excellence of the Year Award



Pictured from left to right: Jack Bolick, Honeywell Process Solutions, CEO and Bill Archer, Vice President of Marketing, Frost & Sullivan

“We accelerate growth.”

2008 North American Process Automation Green Excellence of the Year Award

Award Description

The Frost & Sullivan Green Excellence Award for Global Leadership in the Process Automation industry is presented to a company that has demonstrated a concerted initiative towards envisioning and implementing a strategic framework for institutions, communities and nations at a global level to adopt sustainable and environmentally conscious practices.

Research Methodology

Global leadership, focused on environmental priorities and long-term sustainability, is assessed regularly through continuous monitoring amongst organizations within specific industry sectors.

Frost & Sullivan's analyst teams perform extensive interviews with companies within specific industries to evaluate their initiatives and thrust in influencing global environmental strategies.

In addition, research within that industry space is performed to benchmark the Award recipient's efforts against others. Also considered are elements such as long-term viability of such enterprise, acceptance and acknowledgement in the international platform and continued pursuit of such initiatives.

Measurement Criteria

Specific measurement criteria used to determine the final award recipient are as follows:

Enterprise Characteristics

- Participation in global efforts to improve environmental protection and understanding around the world and share appropriate preventive technology, knowledge and methods to effect changes
- Notable stewardship in stimulating a global discourse to promote a sense of responsiveness to changing environmental priorities:
- Prudent proposition
- Result-driven solutions
- Dedicated and persuasive continuation of purpose

Accomplishment & Outreach

- International acknowledgement of the endeavor and interest in putting it into practice
- Achievement of plausible and cost-effective mitigation of adverse environmental impacts
- Applicability and ease of adoption in different geographies
- Relative assessment of objectives vs. target milestones realized

The recipient of 2008 Frost & Sullivan Award for Green Excellence Global Leadership in Process Automation is Honeywell Process Solutions (HPS), a Honeywell Automation and Control Solutions business. Process industry customers have consistently recognized HPS as the preferred vendor for its capability to understand their needs and deliver solutions that have enabled them to drive profitability. The combination of its advanced lifecycle solutions and control systems along with the expertise of UOP LLC and Honeywell Enraf B.V. has enabled HPS to deliver unprecedented value towards driving environmental green excellence for its customers.

Worldwide, process industries are working towards the dual objectives of maintaining sales growth as well as demonstrating sustainable environmental practices. In order to achieve these dual objectives, the productivity per ton of carbon emitted should consistently increase. While there are multiple ways to achieve sustainability, energy efficiency improvements, play a major part. Automation and control systems act as an enabler of green manufacturing by increasing efficiency as well as reducing waste and minimizing downtime.

HPS has a suite of solutions to help manufactures use energy more efficiently, improve environmental compliance, decrease emissions, and improve overall business performance. The suite, which includes Experion® Process Knowledge System (PKS), Manufacturing Execution Systems (MES), Profit Suite (advanced process control solution), and UniSim (simulation lifecycle management solution), provides unparalleled value addition to the customers in achieving energy efficiency and sustainability. The customer first approach of HPS has resulted in development and integration of energy efficient solutions.

Process industries operating on legacy systems consistently face problems of deteriorating efficiency, questionable safety, and a lack of seamless integration to the enterprise systems. Customers are under increased pressure to upgrade these legacy systems in order to achieve sustainability, reduce emissions and improve operational efficiency. The consequent challenge is the downtime involved in migration and the inability to maximize return on investment (ROI) on legacy investments. Experion provides its customers with the unique ability to leverage investments made in existing legacy systems while at the same time benefiting from state-of-art advanced lifecycle solutions. Customers of HPS vouch for its expertise in providing a most cost effective upgrade path.

A case in point is that of Honeywell's solution for Maritsa East 2. As one of the largest thermal power plants (TPP) in Bulgaria, Maritsa East 2 needed to modernize its legacy distributed control system and improve process efficiency and reliability while ensuring plant safety. Maritsa turned to Honeywell for its power industry and technical expertise to help update its plant. Honeywell provided a complete solution anchored by its Experion Process Knowledge System for all of Maritsa's process automation needs. With advanced applications including Safety Manager, Profit@ Loop, Uniformance® PHD, field hardware devices and OneWireless™ solutions, Maritsa is able to provide operators and engineers with the information they need to improve plant performance. The solution enabled the Bulgarian TPP to reduce energy costs, which helped boost plant efficiency. Other benefits include improved operational performance, increased safety and increased.

Efficient operation of a well-designed facility ensures significant lifecycle cost benefits for any process, increasing safety, productivity and reducing maintenance costs, and in some cases emissions. Along with its flagship Experion, Honeywell has consistently strived to provide solutions that enable customers to improve plant performance through improved designing, development of operations simulation and finally optimization of the plant. UniSim simulation lifecycle solution enables customers to achieve innovation through dynamic design models, operator training, performance monitoring, troubleshooting, production management, and asset management tools. UniSim thus provides customers the ability to enhance plant performance throughout the lifecycle of the plant thereby ensuring green practices.

A key issue faced consistently by the process industry of both developed and emerging markets is shortage of technical talent. The shortage of technical talent mandates effective training and utilization of existing manpower. Worldwide, process industries lose billions of dollars due to process mishaps caused by human errors. UniSim's training tools provide the operators with much needed process as well as operations training ensuring operational efficiencies and reducing downtime.

A large EPC contractor, on winning a \$500 million contract to construct a methanol plant in Oman, deployed HPS and its UniSim solution for design and optimization of the process as well operator training. HPS with its unique ability and experience modeled the process using the UniSim suite and ensured full operability testing of the model integrated with the third party distributed control system (DCS), even before the actual installation of the plant. The detailed modeling and the operator training handled by UniSim in a rapid manner has resulted in significant process efficiency for the customer.

Another way to tackle the shortage of technical talent is to encourage young engineers to enter this field. Honeywell's commitment towards nurturing technical talent on an ongoing basis resulted in HPS launching the UniSim Design academic program. As part of this program, HPS provides the participating universities with the latest version of UniSim training tool at no cost. This program will indirectly aid the process industries to be sustainable by providing the right talent who can handle sophisticated process systems.

Increasing crude prices and depleting oil and gas resources challenge the refineries to maintain their refining margins. The ability to maintain good refining margins is reflected by the capability of the plant to refine sour crude. In order for the plant to have this capability it needs to incorporate sophisticated process and automation systems. At the same time, the refining industry (along with other industries) is under increased pressure to reduce GHG emissions by means of implementing sophisticated technology. The concept of Green Chemistry, wherein the whole process is reengineered to ensure sustainability, is increasingly being accepted. HPS with the expertise of UOP's process knowledge and the capability to incorporate that in its UniSim Design suite enables refineries and petrochemical industries to re-design and implement processes with increased energy efficiency and reduced GHG emissions. Customers of HPS in the chemicals and refining industries vouch for its capability thus ensuring leading market share.

Identifying the right process and control solutions is the first step towards ensuring a sustainable process; the subsequent need is efficient system integration and architecture design. HPS, with its commitment to sustainability and global implementation capabilities, differentiates itself from the competition by providing the services on schedule and at significant cost advantages. The sustainable lifecycle services provided by HPS have won accolades from the end-users of different process industries.

A case in point is that of Konya Sugar based in Turkey. Konya Sugar needed to replace and upgrade its Siemens Teleperm M human machine interface (HMI) due to parts obsolescence and discontinuation of service support. Since the cost of migration from Teleperm M HMI to Siemens PCS7 HMI was too high, other alternatives were explored. Honeywell's offer for replacing the entire distributed control system (DCS) including HMI was cheaper than the first alternative. According to Konya Sugar, Honeywell's Experion Process Knowledge System is the best process control system considering capacity, speed, capabilities and ease of configuration. With the solution, Konya was able to reduce its overall production costs due to a substantial decrease in total energy production. Konya also experienced the following benefits as a result of migrating to Experion including significant improvement in product quality resulting in increased sales and more than 15 percent increase in sugar production.

Efficient operation of the process is another aspect of ensuring sustainability. HPS Profit Suite applications provide multivariable predictive control and optimization solutions that enable customers across a wide variety of process industries operate their plants more efficiently. The ability to consistently run the plant up against operating limits while protecting the plant from violating any constraints (including environmental constraints), helps drive improved productivity and lower energy costs.

A recent example involved the implementation of a Profit Suite advanced control application at Saskferco's Nitric Acid plant in Canada. The Profit Controller application enabled tighter more efficient control of the tail gas combustor that is used to incinerate NOx gases - a critical environmental specification on production. As a result, Saskferco realized reduced energy consumption in the combustor and reduced emissions of GHGs while maintaining tight control of the NOx emissions.

Wireless is considered a key enabler to sustainability initiatives that drive significant cost savings as well as increase energy efficiency in the process. HPS with its OneWireless differentiates itself from the competition by means of scalability, security, and reduced energy consumption. The leading market share of Honeywell in the wireless sensors and transmitters space indicates the customer confidence.

While providing solutions that enable its customers to practice sustainability, HPS also follows green practices internally with set goals. It has dual objectives of continuously training its value chain partners to become greener as well as providing green solutions for its customers. Honeywell has set a five-year target of GHG reduction by increasing energy efficiency in its facilities. The target is to reduce the company's greenhouse gas emissions by 30 percent and increase energy efficiency by 24 percent. In order to achieve these objectives, it is making significant investments towards certification and manufacturing best practices.

Continuation of purpose is key to success of any initiative, especially the drive towards sustainability. HPS spends nearly 40-50 percent of its yearly R & D expenditure towards developing solutions that enable customers to attain energy efficiency and reduce GHG emissions. The drive towards providing customers with a suite of process automation solutions as well as the lifecycle services that assesses and maintains the customers' process control systems have ensured industry leading sales growth for HPS. This concerted initiative towards envisioning green manufacturing initiatives for its customers through its automation and control solutions makes HPS the worthy recipient of 2008 Frost & Sullivan Green Excellence Award for Global Leadership in Process Automation.



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