[**The ExxonMobile Guide to Successful Project Execution**](https://www.honeywellusersgroup.com/live/?p=7444)

By June 14th, 2012 10:31 am at Honywell HUG 2012

"We had to figure out how to be smarter to get our work done.” ExxonMobil's Sandy Vasser dicussed how the global energy giant has learned to effectively manages dozens of simultaneous projects around the world.

“You need a lot of passion for what you’re doing because it is so hard. Without passion, any rational person would give up.”

So began ExxonMobil’s Sandy Vasser, applying this Steve Jobs quote on entrepreneurship to project execution, as he addressed the 2012 Honeywell Users Group Americas Symposium this week in Phoenix. “Successful project execution,” Vasser said, “is very hard but achievable.”

“I’m going to leave you with three major messages,” Vasser said. “First, you have to plot out and plan to deal with the significant major dependencies that make up any project; then you have to create a comprehensive project plan that covers all activities and all participants in the project, from beginning to end; and then everyone involved has to work together as a single project team.”

ExxonMobil has more than 100 projects on six continents and in 50 different countries at the present time. These projects are very diverse. No longer, Vasser allowed, does Exxon just build refineries. “This is a very high level of project activity,” he said, “with numerous projects happening simultaneously around the world. We have difficult marching orders too: we are required to have shorter project execution times, with lower capital costs, and we have a very small staff. We had to figure out how to be smarter to get our work done.”

“So we created an acronym: the MICC, or Main Instrumentation and Control Contractor,” Vasser said. “This is an organization that is capable of helping us from the design phase to the execution stage of the project and that has the expertise and best practices to do it the way we want.”

In order to best use the MICC, Vasser’s team built a model:

\* Identify all activities early, and develop a “flawless” execution plan for each of them;
\* Contract the very best resources, and assign each of them the activities they are best able to execute;
\* Use best-of-breed, proven technologies;
\* Expect innovation and cost reduction from partners; and,
\* Remove any barriers that will keep those resources from performing flawlessly.

“Our early experiences,” Vasser said, “led us to engage the MICC even before we brought on the engineering, procurement and construction (EPC) firm, because if we did so, we had reduced cost, consistent designs–what we call D1BM or ‘design one build many’–and we found that creating a climate of competition fosters excellence on the part of our suppliers.”

“We found that over time, I/O count continued to grow, with many of them requiring a change order, sometimes even post-FAT [Factory Acceptance Test]. This is very expensive, so we established another acronym program, MOSS which stands for ‘make our suppliers successful.’ We looked for suppliers with I&C toolkits tailored for ExxonMobil, with structures that mirror our global practices, and develop technologies to handle those late changes.”

Honeywell’s answer to these challenges, Vasser said, include Universal I/O as well as virtualization. Universal I/O allows the productization of I/O, the reduction of wiring costs, and eliminates junction boxes and marshaling cabinets, making these project costs and complexities simply disappear. Virtualization, now released in the new Experion Process Knowledge System Orion, eliminates the need to recycle PCs and other components soon after installation. Entire projects can be done on development servers, and then downloaded directly to the newly purchased and installed computer hardware. Effectively, this can eliminate the need for SATs (site acceptance tests) and FATs.

“But we still had two recurring problems with our automation design execution process and our I/O management program,” Vasser said. “We researched the problem and discovered that instrumentation and control (I&C) owns less than 1% of the I/O count. Process engineers simply do not realize the impact of late I/O changes on the project execution and the I&C design. To add a simple control loop may require more than 50 changes.”

Vasser’s message was that external dependencies *must* be managed. His team establishes ownership of dependencies, conducts training to get process engineers to understand the issue of late I/O addition and the true impact of late changes on project costs and time to completion, creates a detailed timeline so they can track and steward data, and establishes a very strict management of change (MOC) program.

“My second major message for you is that you must create a comprehensive plan,” Vasser said. “The third is that you must create a single project team. I encourage all the team members to not identify themselves as the EPC or the MICC, or whichever vendor, or ExxonMobil staff—they are the Project Automation Collaboration and Execution (PACE) Team.”

“Select the best resources and then let them do the things they do best. Have state-of-the-art toolkits and a complete set of best practices that are global and capital efficient. Manage *all* dependencies through a detailed and comprehensive plan with your PACE team, and then drive to closure.”