

BIC Roundtable: Training

Today, industry is seeing fewer young people entering the workplace and an increasing number of baby boomers retiring. To address the diminishing work force, companies are being proactive by modifying and upgrading training programs in an effort to strengthen the knowledge and skill of the workers they currently have and to advance that of the newest members of the industrial work force.

BIC recently visited with training professionals to discuss the nature of their business. Panelists included Gary Allison, technical training superintendent, Valero St. Charles, La., Refinery; Tom Broom, operations learning and development manager, Shell Exploration & Production Co. (Shell Robert, La., Training and Conference Center); Rod Lincoln, manager of organization development and training, Cytac Industries, Fortier Manufacturing Complex; and Eric Newby, training coordinator, BASF Corp.

BIC: How do you develop your training program?

ALLISON: First and foremost, we recognize training as an evergreen process. With that philosophy, we implement a very detailed five-phase approach to training program development.

BROOM: Shell Exploration & Production Co. recently established the Operations Learning and Development organization within the Regional Production Directorate to focus on providing learning opportunities for our operations' employees. Shell provides resources to enable operations learning, such as the Robert Training & Conference Center (RTCC), our regional operations learning facility in Robert, and a team of instructors and learning administrators who are dedicated to operations learning and development.

Each Shell employee completes an annual Individual Development Plan (IPD), containing the courses the employee and his supervisor desire for the following year. The Operations Learning and Development team prepares an annual learning program for each operations employee. We combine the courses from the IPD with the mandated courses from our learning management system to create a program for our employees — our "learning roadmap."

LINCOLN: We identify regulatory, mandated, developmental and supervisory skills/knowledge training, and developmental assignments needed for the upcoming three-year period. This is put into a departmental training matrix, which includes the names of each employee in the department; required training/project/assignment; who requires it; the

provider of the training, if known; dates of expected completion; and a sign-off by management committing that the training will take place. The supervisor and employee are jointly responsible for the training. The manager is responsible for providing the resources in a timely manner to get the employee trained.

NEWBY: At BASF our training programs are developed to address targeted competencies the company desires in its employees, including teamwork, safety awareness, quality orientation and managing change, just to name a few. In addition, BASF provides technical training to meet the needs of the various processes and products within our diverse range of businesses. Our process operators and maintenance technicians receive training that ranges from environmental and safety requirements to process chemistry and advanced troubleshooting.

BIC: How do you implement your training program?

ALLISON: Phases one to three are designed to identify the training need, content, scope, the most effective instructional method for the program, desired knowledge transfer, critical tasks, mandated requirements, required resources and a cross-referencing of data to determine if any procedure development needs are being generated, from development of a new or revised training program.

In phase four, the final curriculum and training program development are completed, followed by a subject matter expert (SME) program review and validation prior to delivery. A training schedule is then issued, and the program is implemented.

Phase five evaluates the effectiveness of our program. Once performance standards have been met, the five-phase process is repeated, thereby continually raising the performance standards and quality of the overall work force.

BROOM: We implement the learning roadmap throughout the year. Most of our operations employees work a rotational schedule of 14 days on and 14 days off. They commute to work by helicopter and spend 14 days on production platforms or drilling rigs throughout the Gulf of Mexico. Our policy is to provide courses for our employees on their "days on." We bring them to RTCC for seven of those days. We strive to provide them with all of their annual courses during these seven days.

LINCOLN: Our role is consultant to help managers/supervisors solve problems related to training and organizational performance. The training/organizational development department schedules training required by multiple departments and

coordinates new employee orientation. With most training being owned by the departments, it allows us time to monitor training sitewide and address other more strategic issues. We audit and troubleshoot training when requested.

NEWBY: Basic operator training is provided through partnerships with our local colleges. Process and technical training are conducted on site by SMEs. Teamworking skills are developed through blended learning exercises conducted by both BASF and outside training professionals.

BIC: What are your largest areas of focus?

ALLISON: Process safety management, which covers all of our new hire training, basic operator training and refresher training. We are currently in another review cycle of these training deliverables, as we routinely compare them to other industry best practices, and modify our deliverables as necessary to ensure that we are providing the best training available for our employees. We are very vigilant in assuring that adequate research is also included to ensure that our training meets or exceeds all regulatory requirements associated with the training.

BROOM: Providing foundational courses to our new employees and interns and development courses to our experienced employees. We provide these foundational and development courses in all five of our curriculums: production, drilling, HS&E, computers and operations capacity builders.

LINCOLN: New employee orientation, skill and knowledge enhancement, organizational change, recruitment, succession planning and counseling.

NEWBY: Safety awareness, teamwork and technical competencies.

BIC: How do you maintain a training program that is productive and keeps trainees focused?

ALLISON: We maintain productive and robust training programs through interdependent relationships with our employees. Their open and honest feedback gives us the ability to maintain evergreen training programs that have employee ownership and overall buy-in.

BROOM: We utilize experiential learning at RTCC that is combined with a program of blended learning on the jobsite. Our experiential learning is delivered through a combination of computer-based learning, traditional classroom lecture, hands-



train-ing • [trey-ning] —noun 1. the education, instruction, or practice that is being trained: 2. the status or condition of a person, animal, or object, of, pertaining to, or used in or for training: 4. introductory, or transitional period

on learning in our equipment displays and scenario learning on our simulators. This experiential learning is augmented by on-the-job learning at the employee's jobsite.

LINCOLN: With so many employees with trainer skills, we try to create training that is fun, participative and challenging. We concentrate on trainee/organizational performance and return on investment (ROI). We are sensitive to new technology and trends that will impact our business and have a rigorous enough process to address company needs quickly. We try to keep our employees in the loop when it comes to organizational changes.

NEWBY: Various delivery methods are utilized to keep people engaged and challenged by the training content. In addition to hands-on and classroom training, participants receive computer-based and self-paced exercises to provide comprehensive, up-to-date learning.

BIC: How has training changed over time?

ALLISON: There have been considerable changes in training over the years, and history has shown that e-learning and other computer-based technologies are magnificent tools for enhancing an overall learning management system (LMS) but will never replace all instructor-led training. Some learning simply does not lend itself to the computer-based delivery method. Unfortunately, several years ago, some companies switched to 100-percent e-learning philosophies, and time has proved that they found themselves with major gaps in workplace knowledge and understanding, resulting in a negative impact on safety in the workplace, quality of final products and overall mechanical integrity.

The fact is that most learners have varied perspectives, i.e., one learner may ask a question in the classroom environment that no other learner had thought of, and during the course of time that the instructor conveys detailed answers and explanations to the question, all learners effectively elevate together to a higher level of understanding. Of course, the instructor is charged with keeping the learners

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engaged and intellectually stimulated.

BROOM: We have moved from traditional classroom lectures to blended learning. We continue to deliver classroom lectures at RTCC. However, our employees are likely to prepare for the classroom lectures by taking prerequisite computer-based courses before they arrive. The classroom lectures will be enhanced with opportunities to develop their skills on equipment displays and simulators. After returning to the jobsite, our employees continue the learning by working with their supervisor and co-workers to augment what they have learned at RTCC.

LINCOLN: Many training departments like Cytec's have transitioned from a "basic" training department focused on teaching new employee orientation, basic job skills and regulatory requirements to one with a more "strategic" approach centered on organization/individual performance and measuring ROI. Taking on a strategic approach adds many new tools and processes such as succession and work force planning, organizational analysis, quality tools, assessment models, performance coaching, etc., to a department's value.

NEWBY: With new and ever-changing technology and regulations the challenge has been to maintain training resources that can be easily updated and revised to keep up with business demands and ensure sustainability. While computer-based training cannot provide every element of learning and development, its use in a blended format enables us to provide up-to-the-minute training to meet our changing business needs.

BIC: What are the biggest training challenges that you face?

ALLISON: Keeping the right balance. To have an effective and complete learning system, all methods of instruction must be used, evaluated and linked to the overall LMS, regardless of the method. Blended learning continues to be a buzzword, and the embodiment of the term should always include just the right blend of classroom instruction, self study, structured on-the-job training, computer-based training and e-learning/Web-based technologies.

BROOM: The utilization of technology in the E&P industry has increased dramatically in recent years. This is especially true in our deepwater and subsea fields.

Our biggest challenge is to provide courses that prepare our employees to utilize this new technology to meet the challenges of these difficult operating environments.

LINCOLN: We focus on overall goals more than training goals. Many of our goals are the same as those of management, so we are in partnership with management. Our challenges change with the organization's needs. My two greatest challenges are providing adequate ROI on Cytec and achieving organizational goals within the expected time limit. Currently, retaining, recruiting and training our work force in a very competitive, technologically challenging environment is our biggest challenge.

NEWBY: Time and resources. With the recent expansions in our industry and the loss of so many experienced baby boomers to retirement, the need to recruit and train new technicians has become a primary focus. Vying for the limited number of candidates and providing them with the necessary training in time to bring them up to speed has forced us to review and revise both our content and delivery methods.

BIC: How do you overcome those challenges?

ALLISON: Staying in touch with the employees' training needs is the key, along with delineating the appropriate training module/program and delivery method for maximum effectiveness.

BROOM: We continuously upgrade our simulators and equipment displays as the technology of the E&P industry advances. We work closely with our operations readiness team and our vendors to ensure that our simulators and equipment displays are representative of those on our production platforms and drilling rigs. Our instructors are constantly challenged to keep their skills current as well. They attend industry conferences and conventions to stay abreast of the latest technological innovations. We also collaborate with the employee's team leader to ensure that the employee has an opportunity to practice on the jobsite what he has learned at RTCC.

LINCOLN: We stay focused on organizational goals and timelines and are sensitive to management's needs and objectives. To improve the performance of both the employees and the organization requires continuous learning, an understanding of

trends and their long-term impact on the business, a significant knowledge of tools and resources, a well constructed strategic plan, and an open door to speak to key organization leaders about the projects.

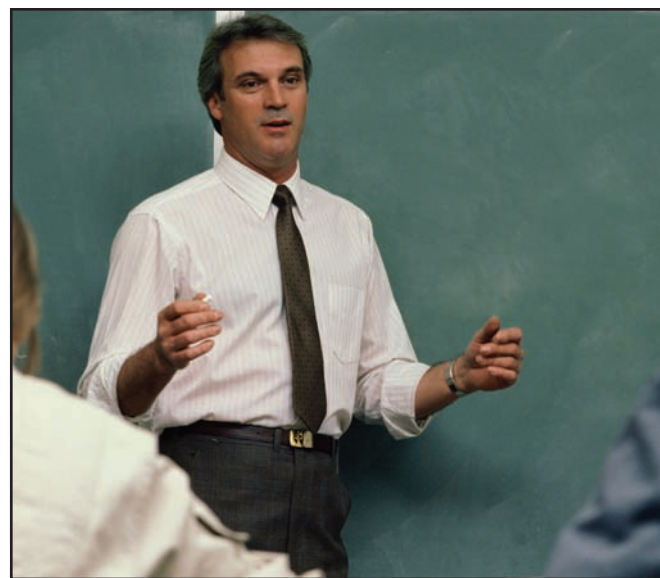
CYTEC: Cytec approached the challenge in the 1990s by requiring all employees interested in training others to attend an intense three-day train-the-trainer workshop, which included how to develop training programs and how to present training. At one time nearly one-quarter of our facility had completed the training. This created a continuous learning and training emphasis, multiplying our ability to train employees quickly and more efficiently than most other companies.

NEWBY: Vigorous and expansive recruiting campaigns coupled with the cooperation of our educational partners have enabled us to keep up with staffing and training demands into the foreseeable future.

BIC: Are there any particular products/services that have been helpful in your training?

ALLISON: Yes, in comparing our needs for various products and services, we, like most others, are continually evaluating the latest and greatest training products and services that are on the market today, and, in doing so, we often find something that is a great match. One such example is a troubleshooting workshop we found that is designed specifically for operators of process units. All of our operators have successfully completed this workshop, and we continue to receive rave reviews on how well this related directly to their job and how they have effectively been using what they learned.

LINCOLN: There are so many products and services available, and their value revolves around the priorities we have at the time. The single most useful product over the long haul that I use is the "Human Resource Management & Development Handbook" by William R. Tracy. It addresses both training and organization



development issues.

NEWBY: Effective utilization of our LMS, along with the services provided by our college partners and corporate vendors, has created a dynamic and comprehensive process to develop, deliver and maintain the training function.

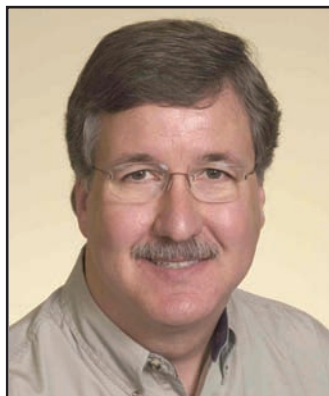
BIC: Do you have a need for a particular product/service/program that would aid in your training program?

ALLISON: Yes, not only our needs in refining, but everyone in the petrochemical, power generation, and oil and gas industries has a tremendous need for highly qualified plant operators. That is being generated by current and projected retirement rates across the nation, and this need will continue for several more years. One way we are assisting in closing this gap is a close relationship we have forged with our local technical and community colleges that now offer a two-year Associate Degree in process technology (PTEC). This degree program produces graduates that are ready for lucrative careers as plant operators. Working with others, we have also established a college-level introduction to PTEC program into our local high schools that is a pathway right into the college program.

LINCOLN: We are always on the lookout for products providing a high ROI. I am particularly anxious to see graduates of the new beta version of the industrial maintenance mechanic training curricula coming from Region 7 of the Louisiana Technical College in Reserve, La. It will provide new graduates with a National Center for Construction Education and Research certificate at graduation, require an aggressive skill assessment and have them prepped for the ISA national certification three years after graduation. This new curriculum is expected to become a national model for other technical colleges. This is something industry has needed for a long time — nationally certified mechanics who do not need retraining. □



Gary Allison, technical training superintendent, Valero St. Charles, La., Refinery.



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If you are an environmental manager at a petrochemical or refining facility, and you would like to participate in our next BIC Roundtable, please e-mail Kaye Benham at kaye@bicalliance.com.