



# The Human Capital Project: Steps to launch operator excellence

Just as launching a capital project requires significant planning and preparation, the development of human capital is a major project — especially when it is associated with a new facility start-up. Years of experience have proven that developing operators is vital for successful capital project start-ups and continued operations excellence. In fact, sources indicate the root cause of up to 90 percent of all incidents that occur in process plants can be attributed to operator error, indicating a systemic problem that results in operators trained more for compliance than for excellence. To remedy the problem, a human capital turnaround is needed — a project approach to human capital development that achieves operator excellence to help:

- Minimize human factor risk.
- Maximize project start-up success.
- Meet compliance requirements for regulated processes.
- Manage competency requirements across diverse job types.

An Operator Excellence Model can be found at <http://oilgas.gpstrategies.com> that illustrates a high-level model of a project approach for training and qualifying field

and control room distribution control system (DCS) operators to achieve operator excellence involving the following significant elements:

- Foundational processes
- Training and qualification
- Observation and selection
- Mastery and sustainability

The program illustrated in the diagram, which can be found at <http://oilgas.gpstrategies.com/common/pdf/oilGas/ogDevOpExcel.pdf>, can be achieved through the following steps:

1. Establish core foundational processes. These processes originate with the goals of operator excellence defined by the organization, considering the key operational requirements of the process. Examples of foundational processes include the training system, recordkeeping requirements, safety and compliance programs, process documentation and operating standards such as procedures, policies and operating limits.

2. Implement a structured field personnel training program. Field personnel are the eyes and ears of operational excellence in the process. Training should occur using a structured approach that starts with the basics,

builds progressively to achieve higher skills and knowledge, and employs blended training solutions that help ensure the human capital is developed with performance in mind. Blended solutions use a variety of learning activities including self-directed learning, eLearning, on-the-job training, group/classroom instruction and dynamic simulation. Typically, an operator excellence program provides progression from basic operator training to area- and unit-specific training to more specific job task-related training based on predefined job requirements.

3. Implement an observation and selection process. Through careful observation, evaluation and assessment, selection of the best operators for more advanced and challenging job posts can be accomplished. This is especially important when selecting operators to control the process or supervise other operations personnel.

4. Implement a structured control room operator training program. Control room operators are vital to troubleshooting and optimizing the process for operator excellence. Advanced topics such as process control, abnormal situation management, troubleshoot-

ing and optimization are essential to operating the DCS and maintaining high-quality control of the process.

5. Define and implement an advanced (master operator) training program. This type of program provides a means to prepare operators for leadership positions. Topics such as advanced process troubleshooting, equipment monitoring, personnel leadership and supervisory training can be included.

Finally, establish methods of evaluating trainee performance at each step of the qualification/certification process. Practical and documentable performance-based evaluations are preferred. This is essential to the Human Capital Project and provides evidence the operators are ready for their job responsibilities.

By using a Human Capital Project approach, organizations can launch into operator excellence. This technique will result in more effective operators, improved reliability of process operations and ultimately reduce the risk of human error.

**For more information, visit [www.gpstrategies.com](http://www.gpstrategies.com), email [rfaciane@gpstrategies.com](mailto:rfaciane@gpstrategies.com) or call (800) 727-6677. ●**

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