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# Technical Skills Assessment Program



## WHAT IS IT?

The Technical Skills Assessment Program (TSAP) from InSource helps you better quantify the skill level of your people in designing, implementing, maintaining, extending and upgrading their plant floor information systems.

## WHY IS AN ASSESSMENT IMPORTANT?

Your manufacturing operations depends on manufacturing information systems to deliver the expected levels of Customer Service and Product Quality to your customers. The people who are responsible for those systems determine to a large extent the levels of availability and performance these systems will deliver to the end users. People who are incapable represent a risk to the company. This risk can be identified and mitigated through assessment of skills and the creation of personal development and training plans.

## WHAT WILL YOU LEARN FROM AN ASSESSMENT?

Outcomes from assessments include a skills gap analysis on a group or individual level and recommendations on how to bridge the skills gap, which would include an individualized Training Plan. You will also gain a much better understanding of all the skills required to properly maintain systems in the industrial environment.

## WHAT TECHNOLOGY DO WE FOCUS ON?

The assessments are focused on software products provided by InSource such as Wonderware as well as essential underlying technologies such as Microsoft SQL Server. Recognizing that these systems do not operate in a vacuum, we can assess the employee's understanding of how those technologies integrate with other plant systems such as PLC's, DCS, Databases, etc.

## WHO SHOULD TAKE THE ASSESSMENT?

Typically, the people taking the assessment are responsible for some or all aspects of the plant floor information system in terms of its availability, reliability and performance. These could include technicians, controls engineers and information technology personnel. Additionally, corporate or divisional personnel responsible for administering and maintaining these systems or providing reporting and analytics could be assessed.

## WHAT KINDS OF ASSESSMENTS DO WE OFFER?

There are 2 types of assessments that can be delivered - a self-assessment (personal opinion) or a more stringent competency test designed to determine exactly what a respondent knows about the subject. In both cases, the self-assessments and competency tests are taken on-line and InSource will analyze the results and return them to you (confidentially if required) along with next step recommendations.

**Self-Assessment:** This provides a scenario to the respondent and asks them to provide their comfort level in accomplishing the task.

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## SAMPLE SELF-ASSESSMENT QUESTION:

If a Wonderware product like InTouch or Historian stopped working because of a licensing issue, describe your comfort level in resolving the issue.

- Low
- Medium
- High

Add Comments

**Competency Testing:** A Competency Test is custom designed to determine the exact level of expertise a person possesses, regardless of their opinion about what they know. It also reveals areas of expertise your organization may need but may not have known about.

## SAMPLE COMPETENCY TEST QUESTION:

When deploying objects, all of the following conditions need to be met **EXCEPT**:

- A)** Bootstrap is installed on the target computer(s).
- B)** The objects being deployed are not in an error state in the Galaxy database.
- C)** You created, configured, and checked in objects to the galaxy.
- D)** Network Account is configured properly on GR node and remote nodes.
- E)** The DI Object has been deployed first before the Application Objects would deploy.

## WHAT DO THE SKILLS ASSESSMENT RECOMMENDATIONS LOOK LIKE?

Regardless of whether you use Self-Assessment testing or Competency testing, your written results will place each employee into 4 categories or levels of expertise and provide individual commentary and recommendations. These levels and recommendations can then be used to determine your risk factor when depending on these people to properly operate and/or maintain your systems.

- **Novice – between 0 and 40% score**
  - This person is a beginner who would be able to accomplish some really basic tasks on your systems such as system health monitoring and relaying information to others for further action in trouble situations. A novice should be paired with an Associate or Expert level person to facilitate further skills development in addition to further training.

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- **Apprentice – between 40% and 60% score**
  - An apprentice shows some level of competency and can probably perform several functions within your plant systems including troubleshooting, basic additions to the system and leveraging InSource technical support to fix issues. The apprentice will need additional training and should be paired with an Associate or Expert level person to facilitate further skills development.
- **Associate – between 60% and 90% score**
  - An associate level person is accomplished in many of the requisite skills to keep your plant systems reliably operating including advanced troubleshooting, implementing major system additions and upgrades and disaster recovery tasks. This person should also be leveraged to train your Novice and Apprentice level people.
- **Expert – between 90% and 100% score**
  - Expert level people are accomplished in all systems management processes. They are typically senior level, experienced people who should be managing all processes including system architectures, upgrade planning and new system implementations. Experts should also be leveraged to develop others within the facility.

## SAMPLE COMPANY ASSESSMENT RESULTS AND TRAINING PLAN EXAMPLE:

Technologies Covered: Wonderware InTouch, Wonderware Historian and Wonderware Device Integration

### TEAM RECOMMENDATIONS:

The stated goal of this assessment was to enable automation engineering and IT functions at Sample Company (SC) to deliver an acceptable level of service to the business with respect to these information systems used by Operations, Quality, Engineering and Maintenance to manage the production environment in Sample Company’s (SC’s) 10 division facilities.

Phase 1 is focused on helping SC create and maintain more reliable Human Machine Interface (HMI), plant historical data collection systems. Plant personnel and corporate IT personnel are all responsible for these systems and their capability has been assessed through a self-evaluation survey.

People from multiple plants across the division and corporate IT support participated in this assessment and the results are seen in the table below, along with recommendations for training and professional development.

### EXAMPLE GROUP TRAINING PLAN:

Recommended Course or Action	Recommended Attendees	Supporting Survey Data
InTouch Part 1 9/2/2013 in Davidson, NC \$2400/person	Bill M Bill B Jim S David B	<ul style="list-style-type: none"> <li>• 92% of plant respondents said they had low or medium comfort level in troubleshooting PLC – HMI communications.</li> <li>• 69% of plant respondents said “I’m not sure how to get started” when asked how they would implement an HMI on a new machine in the plant.</li> <li>• 77% of plant respondents said they would “make and attempt but would need help” OR “simply call tech support to ask how” when asked to add a new tag to an InTouch app.</li> </ul>

# Assessment Results and Training Plan Example



Recommended Course or Action	Recommended Attendees	Supporting Survey Data
Special InTouch Course on Scripting, Security, Upgrades, Disaster Recovery, Troubleshooting 9/21/2013 in Davidson, NC \$2400/person	Jim S David B	<ul style="list-style-type: none"> <li>80% of plant respondents said they would not be effective at setting up an InTouch PC from scratch</li> <li>85% of plant respondents said they had a low to medium comfort level in configuring a simple scripting function in InTouch</li> <li>77% of plant respondents said they had a low to medium comfort level in upgrading an InTouch node.</li> </ul>
Special Course on Device Communications 10/21/2013 in Davidson, NC \$2400/person	Amanda T William G	<ul style="list-style-type: none"> <li>92% of plant respondents considered themselves Beginner or Intermediate in skills related to troubleshooting industrial communications</li> </ul>

## INDIVIDUAL EMPLOYEE EXAMPLE: BOBBY JOE McALISTER

Question Focus Area	Grade	Skill Level Designation
Anti-Virus Management	20%	Novice
Asset Reliability	83%	Associate
Communications	77%	Associate
Configuration Integrity	38%	Associate
System Performance	38%	Novice
Security	79%	Associate
Troubleshooting	60%	Associate

### INDIVIDUAL COMMENTARY:

Bobby Joe is considered to be at the Apprentice Level (59%) – he has shown only a basic grasp of concepts in System Platform, and will need additional mentoring and training on Security and System Performance. Perhaps more in-depth mentoring on Configuration Integrity and Anti-Virus protection among others would also help Bobby Joe to move up towards the Associate category. It is also noted that he spent the least amount of time on the exam itself out of the group. Bobby Joe's Training Plan is outlined below.

# Assessment Results and Training Plan Example



## INDIVIDUAL RECOMMENDATIONS:

Recommended Course	Recommended Attendees	Supporting Survey Data
Historian Course 9/21/2013 in Davidson, NC \$2400/person	Bobby Joe McAlister	<ul style="list-style-type: none"><li>• Bobby Joe said he would be ineffective in managing any tasks related to a Historian</li><li>• Bobby Joe said he would not be able to properly complete all tasks necessary to install/configure a new Historian</li></ul>
Special Course on Historian Upgrades, Installation, disaster recovery, advanced troubleshooting, licensing 9/21/2013 in Davidson, NC \$2400/person	Bobby Joe McAlister	<ul style="list-style-type: none"><li>• Bobby Joe said he had Low comfort level in performing a Historian version upgrade and stated this was a critical need.</li><li>• Bobby Joe said he had a low comfort level in troubleshooting a Historian using the System Management</li><li>• Bobby Joe said he had a low comfort level in resolving Historian licensing issues.</li></ul>

## TO GET STARTED

For more information or to start planning your skills assessment program, contact your InSource Account Executive at 804.378.8981 or at [www.insource.solutions](http://www.insource.solutions)