



**TALSICO™**

# Commissioning Your People



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## In This Issue

### » Articles

▶ [Elements Of Performance](#)

### In Previous Issue

▶ [Behaviors or Beliefs](#)

▶ [Changeovers](#)

### Sample Procedures

▶ [Machine Changeover](#)

▶ [Lockout Tagout](#)

▶ [E-mail distribution](#)

### Results Data

▶ [Quantifiable & Qualitative](#)

### Products

▶ [PPM software FREE trial](#)

▶ [Workplace Learning & Assessment Systems](#)

Most plant upgrades involve hundreds, even thousands, of man hours spent analyzing problems, researching solutions, visiting sites, comparing equipment and vendors, negotiating, planning, engineering, cost justifying, gaining approvals, installing, commissioning and validating. Among all this activity the question will be asked "how are we going to train our people on the new equipment/process?". This question is not as simple as it appears as nearly every production manager has a horror story to tell about commissioning training that did not hit the mark. In this article we are going to look at the issue of 'Commissioning People', what works, what doesn't work, and how you can turn your next commissioning project into a long term success.

### » Case Study - Metals Manufacturer

In 1998 a Metals Manufacturer approached us for assistance in resolving production issues on a complex piece of equipment they had installed the previous year. According to the production manager, the initial operation of the equipment had gone well. At the beginning of the project they had selected a group of high-performing operators (whom we will call the A Team) to work on this project. The A Team was fully involved in the commissioning process. They had close involvement with the project team, and with the vendor who provided a series of training classes. They were further responsible for writing all operations procedures for the equipment. The result was an initial group of operators who were highly skilled, highly motivated with a strong sense of ownership. The start-up and initial operation of the equipment was a success.

Three months following the upgrade our production manager added a second shift (whom we will call the B Team) to increase their production capacity, and here is where the client's problems began. The A Team ran a training program for the B team that included classroom training, hands-on experience and an on-the-job coaching component. To ensure adequate learning opportunities several A Team personnel were asked to work on B shift and visa-versa. On the surface this seemed a good plan. The result, however, was a disaster. Throughput, this client's key performance indicator, fell some 40% across both shifts. Instead of producing at the desired level, production was highly variable and fell to an average of 5,000 units per shift.

So, what happened? How had this successful plant upgrade gone so badly wrong?

### » Information Degradation - how skill levels decline:

The training approach used by our client followed a formula commonly used around the world, e.g. the vendor trains a small group of handpicked operators, who then participate in the commissioning and become in-house subject matter experts (SMEs). These SMEs are then responsible for training the next intake, or generation, of operators and so on.

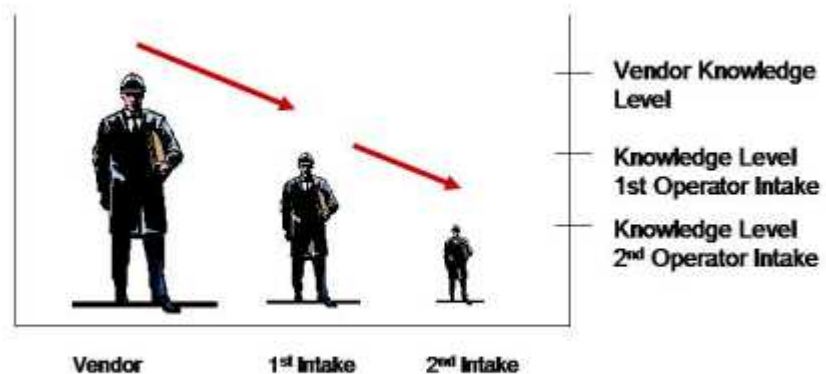
There are two problems inherent in this approach: one is that is that training

alone cannot replicate the energy, dedication and intimate knowledge that is generated as a result of being involved in the commissioning and having to write all the procedures.

**Key Point:** An effective learning strategy must look beyond training to learning activities that improve skills and promote a sense of ownership.

The second problem with the training approach used by our client is that of information degradation. On average each generation only receives approximately 50% of the knowledge of the previous generation. Which means that by the time you reach the second generation of operators, they are receiving on average only 25% of the knowledge held by the vendor.

## Information Degradation



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### » Responding to Information Degradation:

While most manufacturing professionals recognize that passing information and skills from one generation to another is difficult, few have addressed the core issue - how do we improve the transfer of knowledge from one individual to another. This is why so many organizations end up with significant variability in skill levels from one intake of personnel to another.

### » Improving the transfer of knowledge:

Any discussion of improving the transfer of knowledge needs to focus on three issues, these are:

1. **Volume and Quality** - how do I ensure that as close to 100% of the information that matters is transferred from generation to generation?

**Key Point:** A robust learning system should actually grow the amount of knowledge being transferred from one generation to another. In other words, the design should not only capture what I originally learned, but it should allow me to add lessons of experience so that each generation ends up with a greater body of knowledge.

**Key Point:** It is also important to note that we're not interested in transferring all information, to do so would weight the system down with inconsequential information. Rather we want to focus on transferring information that matters, in other words

information that is going to help me do my job correctly and to the desired standard.

2. **Integrity** - how do I maintain the integrity of the transfer - ensuring that the correct information is passed and that this information is received correctly by the learner?

A common illustration of declining integrity is to line up a row of people and to whisper a story to the person on one end of the line that must be related from person to person until it is received by the person at the other end of the line. The result is eye opening. The story received by the person at the end of the line often bears no resemblance to the original story. Unfortunately, the same problem was occurring in our client's workplace. Critical information was being omitted, twisted and/or misunderstood.

**Key Point:** A learning system has to be capable of maintaining the integrity of the information being transferred, and checking to ensure that it was properly received and understood.

### » **Back to the Case Study:**

So, what went wrong with our client's upgrade?

Very simply, they did not have a system for transferring knowledge that ensured the volume, quality or integrity of the knowledge transfer, as a result they experienced a dramatic decline in operator skills from one 'generation' to another.

In the end this was not a difficult problem to solve. Once the management team gained a better understanding of knowledge transfer we were able to implement a learning system that captured the knowledge, skills, attitudes and beliefs of the SMEs. The system includes numerous learning exercises that improved knowledge and promoted a sense of ownership. The result was a rigorous transfer of knowledge from generation to generation.

This client is now on their fourth intake, or generation, of operators. Their production level is at a highly stable 7,000 units per shift and improving!

If you have any questions about 'Commissioning People', or if you would like more information please feel to contact your Talsico nearest representative.

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