**Case Study #3 - The USI Dilemma**

United Semiconductor International (USI) is one of the fastest growing semiconductor manufacturing companies in the world thanks to revolutionary technology invented by their engineers that dramatically increases power and saves battery life in mobile phones and other devices using audio. A USI powered phone or PDA can go for almost twice as long as any competitor’s device on a single battery charge. This technology advantage has created much demand for USI’s audio and communications chips.

USI chip design and manufacturing is mainly carried out in Poland and Israel but with the huge demand for these chips, it will be necessary to begin adding manufacturing lines to USI’s factories in Mumbai, India; Cavite, Philippines and Trenton, NJ.

The Poland and Israel factories are superbly run operations but they are unable to supply the total number of chips required to fulfill incoming sales orders. Both of these factories are fiercely proud of their almost perfect record of safety and lack of manufacturing defects. However, when their senior management was approached on sharing this knowledge, both factory GMs were very reticent to share their knowledge and methods. Examples of excuses given were:

* “This will take critical resources away from the manufacturing floor, where we need them”
* “Our methods and processes are particular to our country/culture. It would be very difficult to copy what we do”
* “Our training materials and specifications are not written in English - therefore, everything would have to get translated. This would take an impossibly long amount of time”

USI’s senior management does not believe these excuses hold any water and wants to begin implementing a training and knowledge management strategy in order to bring the three new factories online as soon as possible.

The three new factories must come online within two months and each has 200 employees working in three shifts that will need to be trained on the new process and new machines employed.

One problem is that the two working factories use different procedures and systems for their manufacturing although their equipment is identical. Which factory’s system and procedures would you use to create you training program? The folks in the corporate office have been talking for years about starting up a “copy exactly” program that would completely standardize the processes and procedures at all of the company’s factories. Perhaps this is a good time to start such a program?

After an exhaustive search, you have been hired as the new USI Corporate Factory Training Manager. Your task will be to provide all the appropriate training for the three new factories that will be coming online in the next few months. You have a team of three instructional designers at your disposal as well a 10 somewhat reluctant SMEs (5 from each factory) assigned to help you with the design of the training material.

Management has also asked you to consider working with them on the implementation of a Copy Exactly program for all of the factories. A program such as this one would take precedence over the training program as it would be a prerequisite before any standardized training material would be produced. Management wants to carry out this program but will leave up to you as to when to implement it – either before the new training is rolled out or after the training. If the decision is made to implement the Copy Exactly program prior to the new factory training, you will get an additional two months for this.

Most of the work that these factory folks do is mainly to load an unload wafer “boats” into the different processing machines. These machines communicate to their user via a 15 inch LCD panel that provides status information and also indicate when they need to be reloaded with a new set of wafers. It is critically important to follow the right order in processing each wafer boat as a misstep could cost over $100K per wafer (each wafer contains hundreds of microprocessor chips or “dies”). Once the machine is done processing the wafers, it releases them back into the boat and the operator then hands it off to the automated material handling system where it goes to the next station.

It should also be noted that safety is of the utmost importance because these machines are fed with highly volatile and poisonous chemicals through an internal system. But if any mishap should occur, the operator needs to know how to immediately shut down before any catastrophic accident happens.

Ideas to consider:

* What technology will you use to get this project off the ground?
* What will you spend your budget on?
* How will you get the folks at the different geographies to cooperate?
* What strategy will you use to roll out the training in such a short time period?
* Will you opt for the implementation of the Copy Exactly strategy first? Why?
* What does your project timeline look like?
* How will you check for operator competency?

You will need to present your strategy proposal to a Management Review Committee (MRC) who will have the ultimate approval authority for your project.