



Business Study

DOH Process Troubleshooting

The DOH (PM 3771) product is produced within Organic Chemicals. This is a product that is infrequently produced and as a result there are often difficulties due to new or inexperienced production crews.

Support personnel are called in if there are problems, but they may be unavailable or have little knowledge of the process problems. Often the support personnel must manually check through previous problem reports etc. to troubleshoot the process problems.

A troubleshooting aid that was available to the production crews and the support could help in resolving problems more quickly.

Solution

After attending a 2-day training course, two non-IT experts developed a comprehensive troubleshooting wizard for the production process. The wizard asks a series of questions to guide production personnel to solutions for the situation they are encountering. The wizard was produced without any assistance from the IT department except for one feature. If a new situation is encountered that has not been thought of, an email outlining the situation is automatically sent to the expert.

The system is used often, and seems to be well accepted by the technical and production staff. Even experts refer to the Intellix system first to provide them with

the probable solution. The solution also allows more competitive bids to be made for production because there is confidence that issues can be quickly resolved, lowering the possibility of cost overruns.

Resources Used

- 2 experts total 50 hours
- Assistance on one occasion from IT-department with the implementation of automatic email feature (1 hour)

Earnings/Savings (tangible benefits)

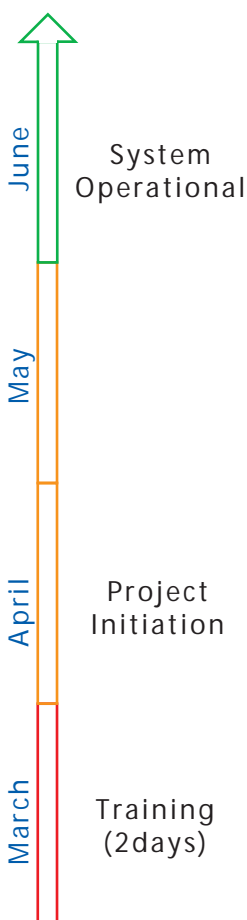
The system saves fixed costs in cycle time and troubleshooting time. Tangible cost savings are dependant on a number of factors such as the number of batches, the potential savings per batch and the number of incidents. These are estimated at \$50,000 per year.

One situation was identified just before the system was operational where if the system had been available, savings of 15,000 could have been made on a single batch.

Benefits (non-tangible)

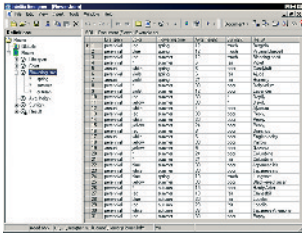
- ✓ More confidence in making lower bids for production deals more competitive.
- ✓ The automatic email notification of new situations means knowledge domain is always kept updated by the expert.

Implementation Timeline





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Intellix core products

Intellix Designer is the first of Intellix's two core products. Intellix Designer is a development platform that offers an integrated development environment with built in test facilities for the user. The other core product, Intellix Expertise Server, provides the corresponding deployment platform where the knowledge models are made accessible on an Intranet and/or on the Internet. In combination, these two products cover the full design-build-test-deploy life cycle for knowledge models.

Investment Analysis

Investment Costs list the total investments used in the completion of the project. In the investment analysis the software capital cost allocation (20% of total) is spread over 5 years using a simple straight-line depreciation model. Year 1 costs listed below include all project implementation costs (except software) plus running costs for Year one.

Return on Investment

The possibility that more production business could be secured would provide additional revenues but this is not considered in this investment analysis. Tangible Benefits due to projected cost savings only are considered. All implementation costs are taken in Year one except capital cost of software, which is spread over 5 years using straight-line depreciation. A discount rate of 5% is applied and the investment is evaluated over 5 years (including running costs, depreciation

of software investment and earnings/savings). The Net Present Value calculation is presented below:

$$NPV = \$121,745$$

Key Success Factors

- The system should be easy for non-experts to use.
- Feedback obtained from the crews should be fed back into the system so that it is kept updated and useful.

Conclusions

The system improves the competitive position of the business by ensuring consistency of operations and best-practice resolution of problems. This also saves money in fixed costs. The business case shows good financial returns, with the potential for even better results if additional business is obtained.

Investment/Costs Summary	Year One Cash Outlay (\$)	Year One Costs (\$)	Year 2-5 Costs (\$)
Internal Expert Time Costs	4,000	4,000	1,000
Internal IT dev. Costs	1,000	1,000	1,000
Internal Costs other (support, training)			1,000
Consulting Costs Intellix			
20% of Capital Investment (SW)/Depreciation	50,000	10,000	10,000
20% of yearly Licensing, training and support costs	2,000	10,000	8,000
Total	57,000	25,000	21,000

