

APPLICATION PROTOTYPING IN A DECENTRALIZED ENVIRONMENT

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Leadership, Planning and Support are the keys to any undertaking. In particular, I will show how a SAS[®] project for a midwest utility was structured to include these factors.

In general, centralized information systems departments are in trouble. The work backlogs and the problems with communications with end-users are well-documented. People in the user departments are looking for ways to keep the application development process more consistent with their needs and bypass the long waiting period in the central department. Currently, some businesses are experimenting with decentralization and prototyping.

Prototyping is a method in which a project is developed in small parts with early, modifiable "deliverables". This allows for changes throughout the development instead of "nailing all of the specifications down" first. We all know the specs ALWAYS change.

Decentralization is the swing back from centralization of application programming under a separate department. Some companies now urge their other departments to take on the development themselves. In this way they control the budget and timetable.

I was employed for one year as a SAS[®] consultant for a project to computerize information for emissions and plant operations. This data is vital to the regulatory agencies as well as internal managements.

As usual in this field, everything was rush, rush. When the word from the computer center was a two-year wait, this project was a candidate for decentralized development. The scope was also small: a total of 30 people would use it and 800 data elements would be involved. The data did not have to interact with other production systems. Now, 3 SAS[®] Databases hold approximately 5 years of information.

This was the first mainframe-based system developed in a decentralized environment, so procedures were not clear. And, although there was general agreement that a central database was needed, the definition of outputs was not clear.

With all of these unknowns, this project was a good prototyping candidate. The important thing was to get something working quickly, so that it would be more real. Then ideas would flow.

An ideal project has the following components:

- . Important to the company
 - . A clear benefit to the users
 - . Evolutionary in development.
- These are explored more fully in Implementation of Strategic Planning by Peter Lorange. As mentioned, this project was important and evolutionary, we did have some immediate user resistance. More about that later.

The project was supported by a network of people. They each play an important role.

High-level Management Support

This is the first and most important part. People can say that an idea is important, but it isn't until a budget is set and the political will is created that anything can happen. Without this support, the project can be drawn off course, especially when it is setting precedents.

System Support

The Information Systems Department has a lot to gain by facilitating decentralized development. They can concentrate on the large corporate projects and look at smaller projects after a prototype has been working. However, there are concerns about security and control, so each project must be taken on its own merit.

The Support Center would provide integrated development tools for easy screen and database creation. There should be technical advice for problem solving and trouble-shooting. They should also establish standards and provide resources to support this type of project.

Steering Committee

This is a group of high-level people who have a stake in the project. They set priorities and communicate the progress to their departments. This group also gives the project visibility and credibility in the company.

Project Manager

The manager must be a good communicator. This person must straddle the worlds of the user and the technical people. He or she must be patient but persistent, unafraid of conflict. Because there's always conflict.

User Group

Ideally, this group is as committed as the Top Management. However, projects of this sort mean change and that is difficult. Also, it sometimes means more work. We tried to maintain contact with them throughout the development.

With the help of these support elements, the Emissions and Plant Operations Information System (EPOIS) was begun. We used color terminals for maximum impact and menu-driven screens for ease of use. Throughout the year, changes were made to the base system as new systems were added. The worst part was keeping the documentation up to date.

The biggest stumbling block during the project was the DATA ANXIETY that occurred as soon as the screens were working. This phenomenon caught us by surprise because everyone had seen design documents. It started when real data appeared on a terminal screen when it had always been on paper in someone's desk.

The concerns include security, visibility, ownership, accuracy and use of the data. Other fears of change, loss of job security and fear of competence all played a part.

We could not ignore this panic. It still has not settled down completely. Education and training, open dialog and small meetings were tried. Finally, upper management stepped in to get things moving ahead. However, one of the compromises we made was to restrict access of some data to those in charge of it. This was not the original intent.

In summary, decentralized development can be successful if the project is right and Leadership, Planning and Support are strong.

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