A combined project planning model for documentation/training at BNR

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Abstract

Bell-Northern Research (BNR) is a global leader in the design and development of advanced telecommunications systems and products. Documentation and training groups at BNR have historically been autonomous; that is until last year. Both organizations have now integrated under one management team. With this association was the understanding that the new organization would encounter a number of problems; for example, differences concerning culture, processes, and functions.

The basic premise of the new organization was to provide a more comprehensive service for our internal – BNR – customer base. To do this effectively, we needed an appropriate strategy to eliminate duplication of effort and reduce development interval time, and an organizational structure to accommodate our customers' requirements.

To provide a more comprehensive and coordinated service to our customers, required a formalized and planning mechanism. We developed an Information Development Plan (IDP) as a method to capture the combined project plans for documentation and training. At this point, the IDP has been used for about one year and will develop or evolve into a more integrated plan for our customer base.

Audience

This report is intended for management and team leaders involved in directing a technical writing team, a training team, or a combined team.

It is also useful for technical writers and trainers working together; so as to give them a better understanding of each others working environment and how they perform their tasks.

The past

The technical training and documentation groups support the Ottawa BNR community. Historically, training and documentation have been organized separately and were functionally distinct. The culture was such that product groups used documentation and training groups independently for their specific needs.

As a result, the relationship between documentation and training was sporadic in nature and can be best described as more coincidental than planned.

The decision to change

The basic fact of doing business in the 90's is that companies must do more with less resources. This has led to the consolidation of many groups performing similar functions; for example, documentation and training.

The synergies between documentation and training do not relate to how these groups perform their jobs, but are primarily based on a similar customer service; "information development". This is the creation and dissemination of information.

There were a number of business drivers forcing the changes in BNR. They are primarily focused around two key initiatives: customer effectiveness and internal efficiencies.

As these drivers became more and more prominent, it became clear that we had the choice of either being proactive and making the change ourselves or be forced into it through business pressures. The details concerning these drivers are detailed as follows.

Effectiveness

This focuses on the degree to which a goal has been achieved. The factors contributing to effectiveness are

- increasing commitment to particular product groups (growth) – aligning ourselves with key groups

- expanding commitment to the number of product groups (market share) – the supplier of choice

- comprehensive customer service – supplying both documentation and training

- customer satisfaction – we can meet more of the customer's needs

- industry leadership – playing a lead role in the development of this combined service

Efficiency

From an internal point of view, efficiency is primarily concerned with

- improved cost control – reducing duplication of costs

- organizational flexibility – provide a more complete service and respond better to program changes

- higher productivity of employees – they are part of a dynamic organization focusing on the right things

- using employee resources in a better way – providing the most appropriate service for our customers

- better employee relations – the feeling that management is trying to move the organization ahead and develop employees to meet customers' requirements

- expand the skill set of employees – provide an opportunity for employee growth

- reducing duplication of resources and effort – with one management team providing the service to customers

- focusing on process improvement – improving our processes to meet the customers' requirements

Obstacles to face

Once the decision was made to integrate the documentation and training groups, it became evident that it would not be as easy as just developing a combined organization structure. We had to understand the possible problems facing the new organization and how we would deal with them. These obstacles are provided as follows.

One of the primary obstacles for the new organization relates to a concept called the "value-added" supply chain. That is, the distance from the final customer (or end user) of the product, as indicated below. This concept involves upstream (closer to concept) and downstream (closer to customer) activities; as defined by [1] Galbraith and Kazanjian, 1986.

Figure 1 Value-added activities
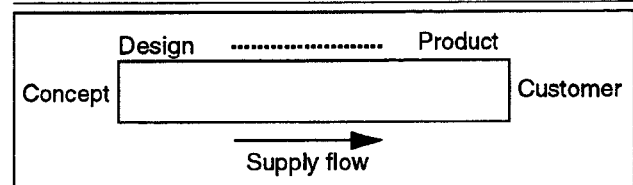
Using this model, documentation is considered to be more of an "upstream" activity characterized by technological know how and standardized products. Training, on the other hand, is more of a "downstream" activity characterized by a people-intensive and customized service with more market segmentation. This results in a more focused target audience.Another difference in upstream and downstream activities relate to management processes; for example, budget control.

Another obstacle concerns work processes. The documentation process is based on specific milestones throughout its process until there is a completed document. The workload is generally balanced throughout the documentation process.

Once the document is completed, it is given to the customer. At that point, the documentation group moves to the next project.

The training process is somewhat different. It is generally focused on creating courses for internal delivery. Although there is course development, the workload is heavily weighted at the end with course delivery over time.

A third obstacle is the manner in which both have been used at BNR. Generally speaking, writers have been involved much earlier in the development cycle than that of training. Training usually enters towards the end of the design phase when it is discovered that employees require education or training to effectively use this tool or product.

The following figure illustrates this difference; that is, the involvement during the product development cycle.

Figure 2   Documentation and training, and the product development cycle

Planning	Design	Development	Verification	Delivery

⟶ Documentation ⟶
⟶ Training ⟶
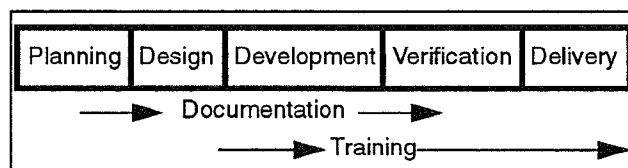
Another obstacle relates to the employees themselves. Employees in documentation and training generally have different backgrounds and skill sets. This leads to a different work process, focus on what is considered important, and differing terminology. This can lead to misinterpretation of ideas and possible conflict.

The size of each of the organizations can be another obstacle. The writing group is larger than the training group. As a result, there have been many fears of one group "swallowing" another. That is, the perceived power of one group over the other. This can lead to some fears and lack of trust between the two groups.
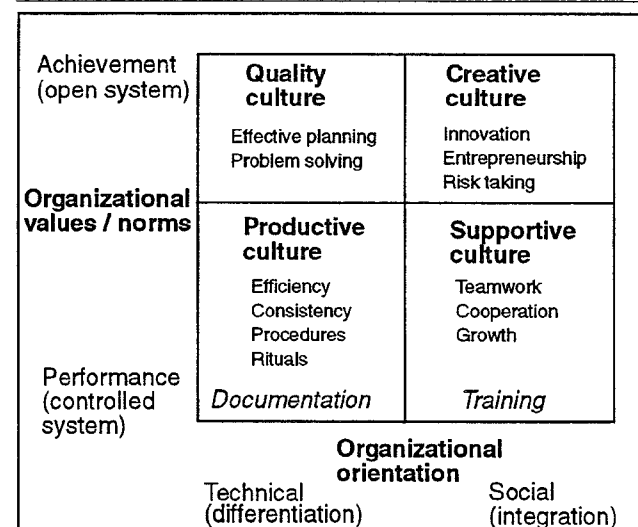
How a group is funded can also be an obstacle to change, because it affects how customers and commitments are determined. The documentation group has been funded directly from the product groups.

The training group, on the other hand, have been indirectly funded out of overhead, with a proportion of the funding allocation going to each of the product divisions. This method does not allow training to focus on key customers or give them leverage with regards to strategic directions.

The documentation group has more autonomy over choosing its customers and ultimately their strategic direction and fit in BNR.

The final obstacle focuses on organizational culture. The following diagram indicates a model detailing differences between organization values and orientation; [2] Rowe and Mason, 1989.

Figure 3   Organizational culture model

Achievement (open system)	Quality culture	Creative culture
	Effective planning Problem solving	Innovation Entrepreneurship Risk taking
Organizational values / norms		
	Productive culture	Supportive culture
	Efficiency Consistency Procedures Rituals	Teamwork Cooperation Growth
Performance (controlled system)	*Documentation*	*Training*

Organizational orientation
Technical (differentiation)   Social (integration)

When using this model it appears that the documentation group is predominantly centered around a "Productive" culture. That is, stressing a technical orientation, standards for consistent documentation, as well as methodologies for editing, usability, and release schedules.

The training group is focused around a "Supportive" culture. It stresses interpersonal competency and cooperation. It is very important when creating instructional material to deal with students, those involved in course development, and a team to develop the actual course.

When developing project plans for the new organization, we must be sensitive to the differences between documentation and training functions, and accommodate these differences in the best way possible.

Overcoming the obstacles

Once we understood that there were problems, we had to look at ways to solve them. That is, how to accomplish the task of integrating the two groups, while taking into account the actual deliverables, organizational needs and employee sensitivities?

The decision was announced that the two groups would be under the same management organization. The next step was to determine the most appropriate organizational structure to effectively service our customers and provide a supportive environment for employees.

A council was formed with members from management and senior staff from the two organizations. This council's role was to develop an organizational structure and communication strategy to employees. The council used a professional organizational specialist and facilitator to maintain focus on the tasks at hand.

When developing the new structure it was important to keep in mind the following criteria so as to develop an equitable organization; [3] Barnes,1992:

- The new organization would be a full partnership.

- The organization would be developed around a win-win situation.

- Project teams would be composed of representatives form both groups.

- Customer projects would use the mutual goals of both groups.

The present

The documentation and training groups are now organized under the same management team, as indicated in the following figure.The structure that was determined to be the most appropriate, and is in place currently, is the Strategic Business Unit (SBU) or product structure.

Since our organization supports a number of products, the goal was to group teams (both documentation and training) on a product basis. This allows management to take advantage of synergies.

For example, by supporting a particular division or product line, the amount of support provided is often greater than if the individual documentation or training groups provided the support themselves.

That is, there is a reduction in overhead costs and in duplication of resources and effort. The result is a cohesive information development effort.

With the SBU structure, more responsibility and authority is given to the operational groups from the Director because of the degree of support provided and the close linkages with customers. That is, management groups can work side-by-side with customers to determine their information needs. Once this is done, we can coordinate activities (training and documentation) to provide our services.

Figure 4   Example SBU model
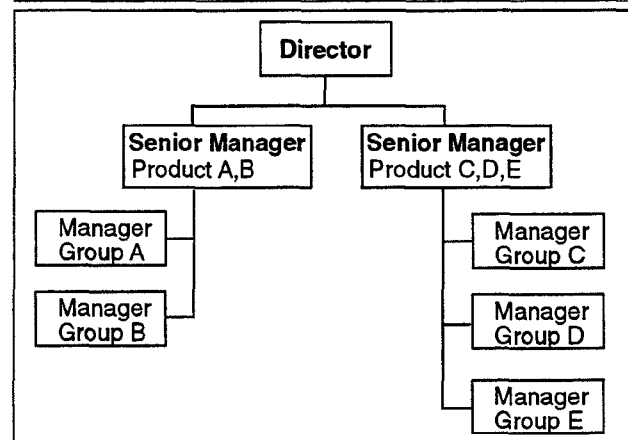
Project planning

The next decision was to determine the mechanism to develop our plans and then build the plan based on our available resources.

Before we begin discussing the details of a combined project plan for documentation and training, it is important to define the key characteristics of a project plan; [4] Pinto and Slevin (1988).

A project plan has

- a defined beginning and end (time to completion)

- a specified goal or set of goals (performance expectations)

- a series of complex or interrelated activities

- a limited budget

In the past, the documentation group developed documentation plans and, the training group, its training plan. The dilemma we faced was to support customers with a logical and cohesive planning process, to meet both documentation and training needs.

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This led to the development of an Information Development Plan (IDP) process. The IDP, to be effective, needs to meet the following criteria:

- capture how we are using resources

- indicate what type and combination of information will be developed – training and/or documentation

- use a standardized methodology

- indicate who is responsible – including the customer

- provide a more comprehensive support package for our customers

Basically, the IDP is seen as a method to capture what we will do (training and documentation) for the customer, who will do it, when it will be done, and the funding expected in return. It also identifies what the customer will provide to us, for example, product access.

From an internal perspective, the IDP provides our senior management with detailed information related to resourcing, costs, and overall commitment. Once the customer agrees with the information in the IDP, it is signed off by our management and our customer.

Current status of the IDP

The IDP, at this stage, is by no means a totally integrated plan. This was our first pass at developing a combined project plan. The sections that have been integrated are:

- Product issues and concerns

- Quality assurance

- Responsibilities

- Approval

- Schedule

Other sections relate to either documentation or training. The IDP will be refined to better meet our customer needs; that is, the development of a more integrated project planning mechanism.

Components of the IDP

The IDP is divided into the following main sections. It is designed so that each section is self-contained; that is, modular. As a result, each plan can be customized to specifically meet the customers' requirements.

Table 1 Modules of the IDP

Module	Description
Product description	A brief description of the product that requires information development.
Issues and concerns	Provides any information which may impact the project deliverables.
Documentation set	The documentation tasks detailing the users, and individual document profiles (title, purpose, audience, size).
Training set	A needs analysis is performed and the decisions on the type of media and content most appropriate for this training.
Writing and production	Describes the tools, standards, writing team, distribution, archiving, and maintenance
Quality assurance	Details concerning the review, editing process, and usability testing are described.
Responsibilities	Describes the roles and names of people with particular responsibilities in the information development process. This ensures there are no surprises later.
Approval	The types of approval and who signs-off at particular stages in the process are detailed.
Schedule	Describes the milestones throughout the process.
Costs	Costs for each activity requiring funding.

The pros

The benefits of the IDP are:

- It provides a standardized methodology for all of our customers.

- It allows you to quickly determine the status of particular tasks.

- Information regarding all our customer deliverables and commitments are kept in one place.

- Provides a mechanism to prevent "no surprises" with regards to commitments and schedules.

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The cons

The current drawbacks of the IDP are:

- It is not a fully integrated plan; there are aspects of training and documentation which are still separate.

- It requires an individual owner (team leader) to ensure that updates occur as the project evolves.

- It requires a selling job to employees; many see it as just another administrative task.

The future

The planning process for our new organization is viewed as evolutionary, moving towards a completely integrated project plan. The initial step was to try to develop a plan with as many synergies as possible. This we have done.

When developing the IDP, we must not only be concerned with what we will deliver, but how effective this information will be for our customers. We should keep in mind two key factors when developing the IDP:

- internal or project factors

- external or client factors

These factors, with their respective details, are indicated in the following figure; [4] Pinto and Slevin (1988).

Figure 5   Project Success
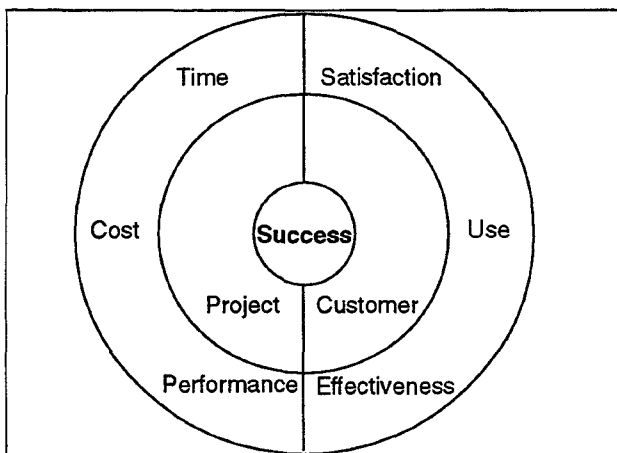
The internal factors (time, cost, and performance) represent those variables controlled by the project plan. The external factors (satisfaction, use, and effectiveness) represent the impact of the project plan and the actual delivery of our service to the customer.

The trap to avoid is to focus too much on the internal factors and ignore the external ones. The result will be a plan that is not only incomplete but is also ineffective. To deal with these internal and external factors, we require a fully integrated plan. This calls for changes in the way our training and documentation processes work today.

Currently we have a requirement for documentation or training. We need to change this requirement from *not* developing documentation or training, but information. This information development will stem from a "needs assessment". Once this investigation of the need is complete, then we can determine the best method to fill this need; documentation and/or training. This is illustrated in the following figure.

Figure 6   Example information development flowchart
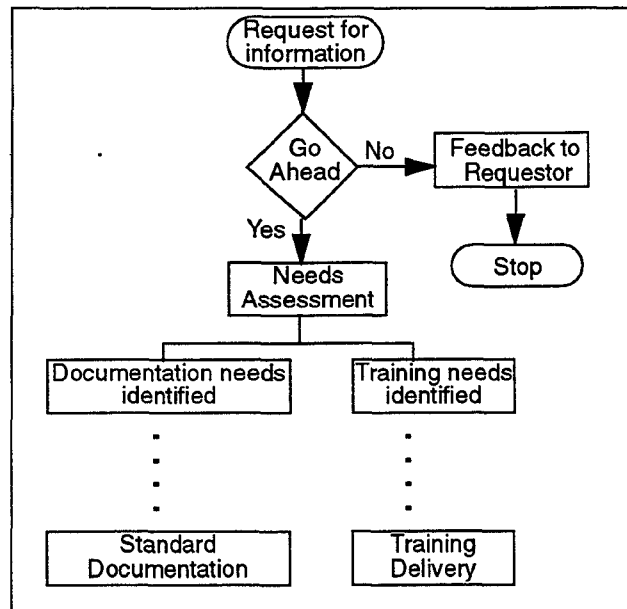
This change in process from *"we need a user guide or we need a 2-day course"* to *"we need information development"* requires a change in attitude in the way we perform our business and a change in the way customers view their needs and our organization.

We can help develop a change in our own and customers attitudes by working on the following project planning issues:

- We need to formalize this IDP process in our own organization.

- We need better linkages in our own organization; for example, (integrate funding and/or integrate career paths).

  — Employees will only get buy-in to the IDP if they understand its value to the organization. This can only occur if we have a structure and processes in place that is supported by management.

- We need to develop a more comprehensive methodology for needs assessment, to accommodate both the requirements of training and documentation. This methodology at the same time must not be cumbersome or complex.

  — A possible solution is to develop an online system with decision-making scenarios. This allows you to walk through the process to determine the best method of information development to fit your needs. Ideally, this would be available to customers to help them make a decision.

- Our customer base needs to be educated about the changes in our planning process. This information should emphasize the benefits to the customer.

Concluding remarks

Our organization will go through growing pains, for a couple of years to come, to move to a fully performing operation. The result will be changes in the way we do business.

Project planning and its role in our new organization will undergo modification and refinement as well. It will not only be a process to start or define the framework of a project, but more realistically be an ongoing mechanism throughout the life of a project to track *"what we said we would do"* and modify this commitment to best meet our customers needs.

References

[1] Galbraith, J., Kazanjain, R., "Strategy Implementation." West Publishing Co., 2nd. Edition, New York. 1986.

[2] Rowe, A., Mason, R. "Strategic Management." Addison Wesley Publishing Co., 3rd. Edition, New York. 1989.

[3] Barnes R., *"Project Partnering"* Project Management Journal., Vol 23 n4 pg: 5-9, 1992.

[4] Pinto, J., Slevin, D., *"Project Success: Definitions and Measurement Techniques"* Project Management Journal., Vol 19 n1 pg: 67-71, 1988.