



August 1998

Building a Knowledge Base: Process vs. Heroes

The Montague Institute Review is published by the Montague Institute and edited by Jean Graef.

© Copyright 1998 - 2015 Jean L. Graef. All rights reserved.

Are an organization’s intellectual assets the by-product of a business process or the creative output of individuals — or both? Building a knowledge base as a by-product of regular business processes is appealing because it eliminates the cost of separate tasks for finding, classifying, and compiling information. It’s often used when companies want to make the tasks of finding, packaging, and applying knowledge more efficient (the “process” approach). In contrast, a “heroes” approach (i.e. hire good people and leave them alone) is more often used when a

company wants to improve its knowledge creating activities.

These two approaches are not mutually exclusive. They can be viewed as opposite ends of a knowledge base publishing continuum. Where a project is located on the continuum depends on the desired outcome, level of risk, corporate culture, and other factors. For example, a project to reduce lag times and improve the quality of knowledge on the front lines may use the process approach while a project to increase the number of “breakthrough” products may lean toward the heroes approach. See Table A below.

Table A: Process vs. Heroes approaches. Adapted from Davenport et al., “Improving knowledge work processes.”

	Heroes Approach	Process Approach
Strategy	Hire good people and leave them alone	Do work differently
Focus	Inputs and outcomes	Activities
Detail	Macro	Micro
Evaluation	Multi-yearly	Hourly/daily
Level	Individual	Large group
Participation	Broad	Narrow
Commitment	Persuasion	Mandate
Analytic emphasis	Understanding existing environment	Designing new environment
Work done by	Insiders	Outsiders
Primary barrier	Loyalty to discipline	Fear of change

In general, organizations trying to improve knowledge creation processes steer toward the heroes end of the continuum, while those trying to make business processes more efficient lean toward the process end. In practice, most knowledge management projects are near the middle, using elements of both approaches. (For an in-depth discussion of the variations with examples from 30 companies, see “Improving knowledge work processes.”)

Three perspectives

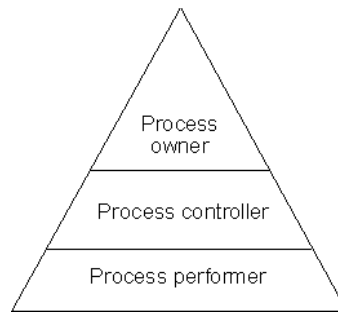
Three perspectives illustrate the range of possibilities:

- a project to make an accounts payable system more efficient;
- an article advocating a product management role in the IT [information technology] function;
- a discussion on the usefulness of the project summary as a knowledge management tool.

Perspective #1: Knowledge as a by-product

Nancy Hollen Black’s description of how her firm helped a client improve its accounts payable system is almost a pure example of the process approach (see “Knowledge Management Dividends from Workflow”). In her description of a project managed by KPMG for the Army Air Force Exchange Service, Black uses a hierarchy to describe relationships among the major stakeholders: process performers (project team members), process controller (project manager), and process owner (business unit executive).

According to Black, process



accurate performance measures for the accounts payable system resulting in reduced costs, increased throughput, and avoidance of Prompt Payment Act penalties. Better, more current information was a by-product.

generating, synergy-producing side.

Perspective #2: Information as a product

In process-oriented projects, information-producing activities are the focus rather than the information itself. The emphasis is on reducing costs rather than adding value. Authors of a recent article in the Sloan Management Review (see “Manage your information as product”) argue that the cost focus should be augmented by an information-as-product approach. Instead of viewing information simply as a by-product of data processing systems (the traditional IT orientation), it should also

Table B: Adapted from Wang et al., “Manage your information as a product.”

	Product	By-product
What is managed?	Information Information product life cycle	Hardware & software Systems life cycle
How is it managed?	Integrated, cross-functional approach Include information suppliers, creators, clients	Integrated, segmented processes Control of individual components Cost controls
Why manage it?	Deliver quality information products to clients	Implement quality hardware and software systems
What is success?	Quality information product delivered continuously over the product lifecycle	Systems works (no bugs) Low number of user questions/complaints
Who manages it?	Chief Information Officer Information Product Manager	Chief Information Officer IT director and database administrators

performers operate on two levels: what they need to know and what they need to tell. For example, they need to know the project status (what tasks are waiting to be performed) and they need to tell the project history (what was done, when it was done). Process controllers and process owners, however, have only one-dimensional communication responsibilities in her model.

For example, process controllers need to know performance measures (what has been done, how many, when, by whom) and process owners need to know process patterns (what are the trends in the process). They receive information from lower levels but there is no indication that they send information back down or share it across functions.

Benefits of the project were more current and

Reengineering or knowledge management?

Black’s project conforms closely to the process profile in Table A, which is very similar to business process reengineering. Knowledge management can be viewed as an evolution from the cost-saving, efficiency-driven end of continuum toward the revenue-

be viewed as a “product” (the product management model). These two models are contrasted in Table B.

The information-as-product perspective is closer to the middle of the “process-heroes” continuum. See Table C. It can be useful in making IT departments more responsive to internal users and occasionally evolves into

Table C: Product vs. process approaches. Adapted from Davenport et al., “Improving knowledge work processes.”

	Product Approach	Process Approach
Strategy	Add a new function to IT	Do work differently
Focus	Value to users/clients	Activities
Detail	Sub-Macro	Micro
Evaluation	Multi-yearly	Hourly/daily
Level	IT department	Large group
Participation	Cross-functional	Narrow
Commitment	Persuasion	Mandate
Analytic emphasis	Understanding existing environment	Designing new environment
Work done by	New insider leadership role, cross-functional team	Outsiders
Primary barrier	Fear of change	Fear of change

an independent profit center offering services to both internal and external clients. As information profit centers invest more in product development and reaching external clients, their knowledge management projects will probably move closer to the heroes end of the continuum.

Perspective #3: the project summary in professional services firms

Professional services firms -- management consultants, software contractors, ad agencies, legal and accounting firms -- are interesting hybrids. On the one hand their business is based on highly trained “heroes.” But without the knowledge embedded in their client management processes, their experts would be little more than hired guns. These companies need a combination of strategies:

- Find good people and give them some autonomy (“heroes” approach)
- Minimize costs and leverage know-how for use with other clients (“process” approach)

Thus, for many professional services firms, knowledge management efforts focus on the project summary -- a key by-product of the work per-

formed for each client. At minimum, it contains project contact information, a description of the work performed as well as a project budget, description of the roles and responsibilities of all parties involved, and related documents (e.g. specifications, deliverables, and schedules).

The project summary (or its equivalent) is a natural place to start for knowledge base publishers looking for ways to capture and apply “tacit knowledge.” Converting project summary information into a usable knowledge base typically involves several stages:

1. *Creating a searchable database* of project summaries for use in preparing proposals, staffing other projects, locating suppliers. A corollary of this step is standardizing categories and cleaning up the data.

2. *Expanding the type of information gathered.* Examples are “lessons learned” and insights gained. Usually this step includes a rating and classification system so that users can search the database not only by client name but also by a variety of other factors -- industry, business function, technology deployed, client satisfaction, profitability. At this stage, project teams

may receive training in how to capture and record additional information or knowledge base publishing staff may be assigned to help them.

3. *Linking the project summary database with other sources of information*, such as current news articles, executive bios, vendor/supplier information, and internal files (e.g. corporate “yellow pages” or “best practices” repositories).

4. *Creating new knowledge base “products,”* such as training courses for new hires, briefings for other project managers, or new products and services for clients.

Table D illustrates how the project summary can be expanded across four dimensions: the type of documents prepared, the categories used to classify them, the type of access available, and the links to related information. Most companies use the summary as a control mechanism. But as the summary is enhanced, it’s possible to leverage the know-how it contains for the benefit of the current client, other projects and other clients, as well as other industries and applications (subject to the limitations of nondisclosure agreements, of course).

Table D: Enhancing the project summary. Source Jean Graef, the Montague Institute

		<i>Minimize costs/control quality</i>		<i>Add to capital/increase revenues</i>	
	CONTROL	APPLY (to this client)	APPLY (to other clients & projects)	APPLY (to other industries & applications)	
Documents	Proposal Contract Project description	Presentations Project schedule Detailed specs Performance measurements Lessons learned	Training materials Annotations Case history Client executive bios	Multi-industry analysis Cross-functional analysis New product proposals Forecasts	
Categories	Costs	Person assigned Date due Task	Industry Application	New products New applications New business models	
Access	Project manager Finance	Project team	Other project teams Course developers	Authorized professional & managerial staff	
Links		Supplier database Resumes database Technical documents	Marketing Training Client services	External information sources Strategic planning	

Practical implementation issues

In spite of the obvious benefits, why aren't professional services firms making more progress in capturing knowledge through their project summaries? We have noticed several kinds of barriers:

- *Technical barriers* -- Database search programs are still too imprecise. They either leave out relevant documents or return too many irrelevant documents. Systems that require human beings to develop classification systems (a library card catalog is an example of such a system) work better but require an up front investment.

- *Communication barriers* -- CFO's and many project managers see the project summary as a reporting and control device (the "process" end of the continuum), while corporate Chief Knowledge Officers see it as a way of capturing and using know-how for revenue growth (the "heroes" end). Both approaches are valid, but they need to be reconciled and melded into a knowledge base publishing strategy that serves both short-term, cost-containment objectives as well as long-term, revenue-producing objectives.

- *Educational barriers* -- Enhancing project summaries as outlined above requires specialized skills -- researching, interviewing, writing, classifying, Web publishing -- that must either be imported or developed. For most companies, training in-house staff is preferable to importing specialists from outside. Project managers must learn to be "feature editors" that collect "stories" from team members, edit them according to a standard format, and submit them to the knowledge base "editor-in-chief."

- *Valuation barriers* -- What incentives and rewards should be offered to employees for both creating and sharing knowledge? How should a company package and price knowledge shared with clients? How should knowledge learned from clients be valued? How should we allocate resources and measure our progress in capturing and applying proprietary know-how?

Viewing knowledge base publish-

ing projects along a "process-heroes" continuum helps to clarify objectives and minimize barriers. Most important, it helps knowledge base publishers identify and apply the strengths of both approaches.

NOTES:

Black, Nancy Hollen, "Knowledge Management Dividends from Workflow," *1998 International Knowledge Management Executive Summit*, San Diego, June, 1998.

Davenport, Thomas H., Jarvenpaa, Sirkka L., Beers, Michael C., "Improving knowledge work processes," *Sloan Management Review*, Summer, 1996.

Wang, Richard Y., Yang, W. Lee, Pipino, Leo L., Strong, Diane M., "Manage your information as product," *Sloan Management Review*, Summer, 1998.

The Montague Institute Review is published by the Montague Institute and edited by Jean Graef.

© Copyright 1998 - 2015 Jean L. Graef. All rights reserved.