“Catalog Thinking”
Re-mapping Your Workflow

Viewing company workflow systemically and applying online catalog concepts to system design will drive development of better-integrated, more adaptable workflow solutions.

Workflow Catalogs
Impacting workflow design

Companies have generally designed workflow productivity applications based on the current needs of individual workgroups to manage the specific functional needs of a workflow process.

This approach to application design has resulted in significant limitations and in many cases reduced productivity as workers are forced to develop manual reporting interfaces to diverse systems that are using the same or related sets of data.

Thinking systemically and using the experience of companies that created online catalog businesses can help managers develop a more holistic view of how to create generic systems that can adapt to ever changing workplace requirements.

The Next Stage of Competitive Advantage.

Knowledge worker productivity is becoming a critical issue for managers whether they know it or not, and it can be viewed as “the next stage of competitive advantage”. McKinsey notes in their studies[1] that knowledge workers are some of the most highly paid employees and they are the workers for whom managers often spend the least in improving productivity.

One of the difficulties for today’s managers is that few are trained in the emerging art, or science, of workflow process optimization as it applies to knowledge workers. Further, few companies have taken a strategic view of how such processes should be managed across the enterprise.

The causes of this lack of attention are several: difficulty understanding how to measure productivity, failure to undertake the necessary workflow effectiveness studies and resistance from workers themselves who are comfortable with current, manual workflow processes.

Managers who take the bull by the horns and confront those issues generally end up identifying a limited number of functions or functional areas that need "systems". Usually these functions involve management of sequential tasks that can generally be categorized as specialized project management. Examples include functions like marketing campaign governance, applicant processing, software development, store hardware upgrades, compliance tracking and so forth.

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[1] Jacques Bughin, Michael Chui, and James Manyika, “Clouds, big data, and smart assets: Ten tech-enabled business trends to watch”, *The McKinsey Quarterly*, Aug. 2010.

Where can workflow solutions have an impact?

McKinsey has defined some of the ways that companies can evaluate how workflow solutions can bring sustained rather than temporary advantage[2].

McKinsey studies have shown that companies have generally implemented business automation solutions either for "**transformational**" processes such as manufacturing processes for converting cotton into finished clothing, or for "**interactive**" processes such as tracking finished goods through the logistics chain or to support decision-making such as product reorder mixes.

Their studies have shown that implementation of advanced transformational solutions in one company can rapidly be duplicated in competitor companies, thereby reducing the competitive advantage of such changes. As companies move further into development of custom interactive processes, however, particularly to support unique decision-making expertise, it becomes more difficult for other companies to replicate the advantages enjoyed by their competitors.

The bottom line benefits.

Competitive advantage can be improved by having decision-makers who make better decisions through the implementation of better designed and better-focused support systems that bring overall benefits such as improved team and management alignment on key issues and goals, a better data-based foundation for decisions as well as leveraging knowledge worker time and information.

Good decision support solutions can enable decision makers to make better decisions faster. They can also enable these same highly paid knowledge workers to make **more** good decisions with the same number of people, and to enable workflow collaboration much more easily than in the past. Management gets better decisions, faster, using fewer experienced people; and far superior management team alignment on key goals and decisions. Viewed another way, such systems offer both higher quality and better productivity with the same sized team.

Today's new online platforms offer entirely new paradigms in workflow software application development, enabling creation of sophisticated, collaborative workflow management solutions in a fraction of the time and at a fraction of the cost of older methods.

Accordingly, today's managers can implement concepts such as "exception-based" management for decision support in their everyday lives where such management techniques were confined to the manufacturing floor with expensive custom solutions not too long ago.

[2.] Bradford Johnson, James Manyika and Lareina Yee, "The Next Revolution in Interactions", *The McKinsey Quarterly*, Nov. 2005.

To maximize advantage, however, managers must rethink how they develop their support systems to avoid getting stuck in “silos”.

“Silo Thinking” comes naturally.

Most people undertake change when they are in pain. Pain in the business management world generally comes from the realization that current systems and processes are dysfunctional, antiquated or otherwise non-competitive.

In trying to heal the pain, most managers begin with an attempt to identify the business functions that are causing the pain. Following on that they then undertake to develop systems to fix that specific functional pain. In doing so they may increase productivity in one limited area of the business but fail to give the company an opportunity to leverage the new systems across the enterprise.

The origins of this “silo” approach to thinking, ironically, are to be found in the growth of large business conglomerates and the increase in emphasis on “cross-selling” of products. Many such companies successfully identified the problems and solutions in their strategic thinking and market positioning but most continue to fail at applying the same “cure” to their internal workflow management processes.

Examples abound:

- A sales team creates a new prospect tracking CRM system with a database of prospects that will need to be re-entered into other applications when the prospect becomes a customer.
- The business implements a membership management system that doesn’t integrate with the same customer data in the CRM or financial systems.
- Teams responsible for developing governance approval processes and systems in various departments develop systems without looking at common corporate processes; and thereby burden people in the audit and approval chain with having to learn and support multiple solutions.
- IT project teams develop systems to manage specific functional units without looking at data elements that may be common across the IT department and the company at large.

Some large companies have tried to reduce these problems by creating a “Chief Information Officer” role, but all too often that person views the job solely as the administrator of information technology rather than including coordinator of information workflow process in the job description. Companies might consider creating a new position of “Chief Workflow Officer” to ensure that this increasingly important element in corporate competitive advantage is “managed” rather than “watched”.

“Catalog Thinking”.

Increasingly companies should look at development of workflow systems as a core element of their strategic advantage; and thus plan these systems across the enterprise in the same way they develop

strategic plans encompassing the issues, constituents and resources of multiple business units. They need to think about their systems as part of a generic environment looking at the commonality in required data across the company. We call this "**Catalog Thinking**".

The heart of "Catalog Thinking".

At the heart of "Catalog Thinking" is the understanding that the essence of the process is to identify the core data elements that are most general and "generic" to the business. The next step is to put those elements into a database and attach a number of identifiers to them so that they can be categorized in ways that will enable different constituent user groups to access sub-sets of the data for their own niche purposes.

So for example, many companies maintain separate databases for sales prospects, customers, employees, suppliers, community partners, investors, channel partners and so forth. Individual groups within the business developed these databases often without collaboration with other groups.

In some cases customer databases are maintained for individual product groups or divisions based on the then current organization chart when the databases were established. And so as the business grows and the industry changes and the company looks for ways to optimize the business by involving channel partners, customers, suppliers and employees in collaborative systems, they find that their database structure doesn't support the now current organizational structure.

By putting all organizations and contacts within a single database and implementing a robust series of category functions users will find that they have a single contact catalog rather than a separate customer database, a separate partner database, a separate investor database and so forth. This is an example of "Catalog Thinking".

Another way of viewing this is that you will create a series of "generic" mini catalogs for the business, e.g. organizations and contacts that are combined into one or more solutions that can then have additional functionality to enable collaboration and workflow activities.

The origins of "Catalog Thinking".

Prior to the advent of the Internet we saw a number of companies confronting the fact that their business model required that they look at information flow across the business. This trend accelerated with the advent of the Internet as companies found that they had to adapt their systems as their business models were forced to adapt to rapid changes in how products and services were delivered.

While many of the larger companies had sophisticated systems for managing their specific business functions, many others were late to understand how their systems, and especially their management thinking, had to adapt to rapid change and realignment.

Overhaul of Banking – 1970's style.

One of the early examples of this was in the banking sector during the 1970's. During the decade, in part due to regulatory changes, large banks began to realize that they had opportunities to sell multiple products to the same customer base using their existing sales force.

In the first iteration of this process, banks trained mortgage sales representatives, for example, to introduce their mortgage customers to other banking services such as deposits, checking and business services. They began to understand that they were, as companies, marketing a "catalog" of products and services. In the second iteration they then separated the sales and operations elements of products and gradually began to recruit centralized direct and telephone sales representatives to sell **all** bank products across a single customer base.

While these banks understood that they needed to "cross-sell" products, they often failed to anticipate the need for entirely new systems to manage sales and servicing of a catalog of products by a single team that accessed all product and customer data across the enterprise. Instead, many banks tried to maintain separate product support applications. It has only been recently that they have begun to understand the significant productivity gains that they can realize by implementing systems that have a "catalog" of people in a "catalog" of departments selling and servicing a "catalog" of products.

Retailers change their thinking.

During the 1980's the general merchandise retail industry realized that it was imperative that retailers find more efficient ways to reduce the time required for manufacturing products and for replenishing items at point of sale.

The industry identified a series of technologies that would become part of the "quick response" supply chain. What was apparent early in the discussions was that the industry would have to move to identifying merchandise at a more granular level using the UPC barcode as the item identifier, and the consequence of that is a large department store would have to change systems that supported perhaps 350,000 items at one level of detail to many millions at the UPC level.

What also became apparent was that the industry would have to create a centralized database "catalog" to hold the industry's data and to serve as the neck of the funnel for moving item identifying data from point-of-sale all the way back to the raw material suppliers when items were purchased by consumers.

What the industry was forced to realize was that the single UPC data point was to become the central, common identifier for all merchandise in the pipeline. Prior to advent of the UPC code, each retailer used its own proprietary item identifier. Since retailers were forced to upgrade most of their internal tracking and decision-support systems they moved to adopt “Catalog Thinking”. Even those retailers, such as many fashion apparel manufacturers, that maintained at the time that they would never use the UPC code eventually found that change was inevitable.

In designing systems today, managers should look for these “neck of the funnel” common datasets.

Amazon and the dot.com era.

The growth of the Internet and the web in the mid-1990’s offered a series of case studies in how the ultimately successful companies survived in part by adopting “Catalog Thinking”, and how many others that did not survive were driven initially by “silo thinking”.

We all remember Pets.com, eToys.com, Boo.com and WebVan. All these companies did not survive the Internet era. While they all had a number of strategic, management, operational and business model problems, they also all were founded with the idea that they could target a niche of the retail market and convert it to an online version of traditional catalog retailing, avoiding the problems of “Bricks and Mortar” retailing. Accordingly they developed systems specifically designed to support sales to a narrow slice of the consumer products market.

Amazon is one of the survivors, and is a company that realized that they were a “catalog” business and not just an online bookseller. When Amazon started, they were emulating a number of the companies that ultimately failed. They were focused on selling books, they had developed an online catalog that was focused on books and book categorization and they had logistics systems designed for supporting sale of books.

As they grew, it became apparent that focusing the entire business on just books was a very high-risk proposition. Accordingly, they underwent systems changes to re-architect their systems to ensure that they would be able to support virtually any type of merchandise. As they grew, therefore, they were able to leverage their initial book-buying customer base and sell them other merchandise such as music. Since then they have expanded to a very wide variety of merchandise.

Non-profits are not immune.

A leading non-profit organization has departments handling donors, employees, volunteer recruitment and relations, 3 program departments that use volunteers and Board member relations. They also had other departments handling specific functions such as food service, facilities management, vehicle fleet scheduling and maintenance and so forth. Any person involved with the organization could be involved with six or more of these departments.

Over time each department used the IT group to find function-specific software when available or they built a custom Access application for each department as the organization expanded.

As you would imagine, when the organization attempted to communicate with constituents of various types or tried to manage cross-departmental projects, having to access information in these numerous databases created significant management and relationship problems.

A major donor who was a board member and who participated as a volunteer in a couple of programs might well be put on a standard list for donor solicitation without the donor relations team recognizing the significant other relationships the person had with the organization.

These “high value” constituents were not being identified and separately cultivated due to the existence of such disparate systems.

The proposed solution to this problem for the organization was to do a “data and process audit”. This type of audit would identify the key data used in workflow processes by the various departments. They could then map that information to identify where there are multiple departments that had developed redundant data or where data existed that could or should be used by other departments.

This would result in a data “catalog” for the organization that could be used in development of an entirely new system design that would hold multi-use data in commonly accessible databases and truly function-specific data in individual department or workgroup database applications.

Governance process at a leading national bank.

To use another example, a major national bank has established governance approval processes for different divisions, departments and functions that are used to ensure that business proposals, marketing campaigns and such are moving through the required types and levels of approvals. Each of these processes has similar types of functions: meeting management, initiative setup, approval requests, approval dispositions, and in many cases has the same people or groups responsible for providing approvals or other forms of support.

The bank has developed a variety of different systems to support the workflow processes. Many of these rely on excel spreadsheets and on manual email communication methods. Many of these Divisions or Departments are managed through parallel chains of authority.

The opportunity for the bank at this point is to bring together all the groups that are doing functionally similar things and determine first, whether there are common data types or data sets across the functions, and second, whether there are similar processes that are using distinct data sets. In either case there are opportunities for significant productivity gains. In the first case “Catalog Thinking” would provide cross-team leverage and in the second case using essentially the same

system for multiple groups would offer significant leverage of the support teams.

Recommendations for change

There are a few things companies can do to help address these types of workflow process problems. While many major companies have addressed some of these issues with respect to corporate-wide systems, we continue to see companies that are smaller, or workgroups within large companies, that continue to have these issues.

Some alternatives

1. Treat the issue of knowledge worker productivity as a strategic imperative across the company. Ensure that manager goals, performance evaluations and compensation reflect this strategic priority and affirmatively require, and track, management teamwork across departments and divisions.
2. Use basic strategic planning concepts to manage new workflow system design processes. Rather than simply identifying data and functional requirements and creating applications to handle the needs of the teams, go through, at a minimum, some of the basic strategy formulation steps as follows:
   a. Start by first identifying and prioritizing key "strategic" issues for the workflow processes/functions (this will help uncover cross-enterprise or cross-functional needs).
   b. Establish a clear "mission statement" for the project.
   c. Determine the project "constituents" and identify their needs in terms of data, process functions, inter or intra team/ department collaboration, reporting, automated notifications and reminders, workflow approval and review requirements and so forth.
   d. In the course of this work the team should identify "neck of the funnel" datasets that can be utilized across the company to leverage and improve management decision-making.
3. Consider appointing a "Chief Workflow Officer" for large companies or have a lower-level manager, possibly reporting to the CFO, handle the responsibilities in smaller companies.
4. Establish a program of Data/workflow audits. Go into departments and map the workflow processes and data that is used and map it to the groups using it. Determine redundancy across the company and use the results of the audits to design new systems using the concept of "Catalog Thinking" to create catalogs of data that can be reused across the enterprise.

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