Northern Light

EXCLUSIVE CHECKLIST REPORT

Measuring KM Success: Key Metrics and Strategies

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The ROI of Information

By **Marydee Ojala,** Editor-in-Chief, *KMWorld*

Calculating Return on Investment (ROI) is a well-established business practice. It is a formula used to determine the feasibility of a new endeavor or significant changes to an established process. Essentially, ROI tells management that the organization's money will be well spent. It works well in environments where cost savings are easily measured. Installing a new widget-manufacturing machine that costs $1 million and saves $2 million in reduced labor costs and increased production of widgets falls into the category of a "no-brainer" decision. Determining the ROI in the knowledge management area is often a more nebulous process.

Information is an important asset within organizations. When looking at the value of KM, practitioners generally point to improved workforce efficiency, reduced costs, and better decision-making gained from access to correct information in a timely fashion. This, in turn, leads to a competitive advantage—or at least, that's the hope. Justifying the cost of purchasing external information and of performing primary research presents challenges. It's not the simple calculation of widget manufacturing. It's an ROI of the intangible rather than the tangible. Knowledge managers look at the return on information, not just the return on investment.

DETERMINING THE ROI FOR NEW TECHNOLOGIES

The uptick in integrating AI technologies into KM accelerated the interest in measuring ROI of KM. Management, particularly since ChatGPT arrived on the scene, wants to understand how investing in large language models (LLMs) and AI-powered chatbots will help the bottom line. They want evidence that they're not throwing money away on a technology that looks enticing but may not deliver results commensurate with the funding requests.

One selling point for Generative AI (GenAI) is that it can accelerate the quality of decisions, since it can surface information previously hidden. Better decisions follow from better data to support decisions. However, when it comes to decision-making, multiple inputs from not only KM practitioners but also others within the organization make it difficult to pinpoint which area was most valuable in contributing to the final decision. Every department that contributed information and opinions about the final decision wants to take credit. Attempting an ROI calculation ends up with anecdotes and squishy numbers. It is still worth doing, however.

There is also a distinction to be made between personal and enterprise-wide ROI. For personal workstations, researchers frequently save documents to their own computers and maintain individual alerts. Although it's efficient for use by one person, it's not scalable to an entire enterprise, which could have hundreds of users and thousands of user sessions.

For a business research KM system at enterprise scale, measuring the ROI contributes to the success of many units within the company, not only marketing research and competitive intelligence but also mergers and acquisitions, strategic planning, product development and marketing, and ultimately, the entire company. Thinking about metrics, about what positive impact KM can have on organizations, reinforces the value of knowledge management activities.

IMPACT OF GENERATIVE AI ON ROI

In the accompanying article, you'll see several ROI calculations around cutting research time, avoiding redundant purchases, reducing the number of intranet sites and portals, and lowering the overall cost of primary research. All this number crunching revolves around the recognition that information has value. However, that value cannot be translated into monetary terms, insights added to the decision making process, or competitive advantage without analysis, even if that analysis involves anecdotes and squishy numbers. Particularly in the case of secondary research, which carries a hefty price tag, if it didn't have value, why would organizations pay for that information?

What has escalated ROI calculations on information is the increased ability of generative AI to add value to both purchased information and information created in-house. GenAI has literally changed the equations surrounding justifying investments in KM. Innovative uses of GenAI that affect ROI happen every day. Creative knowledge managers look at what currently slows down processes and correlates the bottlenecks with existing knowledge. GenAI applied to existing knowledge can then be used to break through the bottlenecks and streamline the processes.

ROI OF PURCHASED INFORMATION

Some ROI calculations in the KM sphere don't rely on anecdotes and squishy numbers, but can be measured with a traditional ROI methodology. Consider the cost of purchasing external research. Although it is often less than the amount spent on primary research, it can be a significant chunk of money. The problem arises when multiple units within a large organization subscribe to the same sources of secondary research. If this redundancy can be avoided by placing the subscription materials on a main dashboard accessible to all departments that have previously subscribed separately, there is a measurable cost savings.

The challenge is to ensure that some sort of guardrails are put in place so that multiple subscriptions to the same material don't recur. With luck, the consolidation of subscriptions will condition knowledge workers to check the portal before forking over money for redundant subscriptions.

Centralizing subscriptions is not the only centralization activity that contributes to a robust ROI. Centralizing access to external and internal reports also saves time and money. Companies support multiple knowledge hubs, which can be confusing. It's important to give teams access to the relevant information. Suppose a company is considering entering a new market. External reports paint a rosy picture of the opportunities. The team lead on the task force charged with investigating the possibilities proposes a course of action based on information in the external report. "All systems go" is the gist of the decision.

What the team doesn't know is the existence of an internal report disputing some of the assumptions of the report. The company's own primary report, which includes surveying current customers, doesn't support the rosy picture presented in the external report. That report is in a knowledge hub siloed off from other sources to which the team has access. Worse, the report was

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saved to someone's individual workstation, existing in a shadow intranet. Ideally, both externally purchased and internally created reports should be automatically available so the team can reach a measured conclusion. They still could advise going ahead but with caveats or they could recommend not entering that specific market, at least not at this time.

MEASURING TIME

Time savings is the most common ROI measurement. For knowledge workers, the time saved in locating information and pulling out the salient points is key. This is greatly enhanced by newer AI technologies, which can scan huge amounts of data, identify the most relevant passages, and present them to the researcher for further analysis. Time saved is not the only ROI metric at play here.

When a process that used to take 10 hours is reduced to 2 hours with no loss in accuracy or in amount of information reviewed, the ROI calculation is obvious. As the old saying goes, "Time is money." Therefore, the 8 hours saved can be quantified by multiplying an hourly salary by 8. If the salary is $100 an hour, the savings for this one process is $800. Expand that by the number of times the process is executed and the money saved expands.

What happens when time is saved? Do knowledge workers move on to other repetitive tasks or free up time for thinking? In all probability, it's a bit of both. In the areas of market research and competitive intelligence, knowledge is essential. Conquering a market requires good, solid knowledge about the pros and cons of entering (or leaving) a market, the projected future trajectory of a market, and the major players in the market. Similarly, competitive intelligence professionals need to know about what current competitors are up to, identify incipient competitors, and take into account external factors that could affect the competitive landscape.

MEASURING OUTPUT

In the knowledge world, output can be difficult to measure. It's not like widget manufacturing. It's unclear whether a market researcher or a competitive intelligence professional producing more reports is analogous to a manufacturing scenario. With knowledge work, it's quality not quantity that counts.

Productivity is a key driver of ROI calculations for knowledge workers. Time savings is a component of productivity but the definition can be expanded. Simply put, when AI provides information 25% faster and of 40% higher quality, the productivity of knowledge workers soars.

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PREDICTING THE FUTURE

In the best of all possible worlds, AI would help knowledge workers foresee the future and bring insights that change that future, not just write more reports. Decades ago, when a very large multinational bank introduced the concept of ATMs, a then totally unknown although now ubiquitous banking advance, marketing sold top management on an ROI calculation that balanced the cost of installing the machines with a savings in decreased teller salaries and increased customer satisfaction. The thinking was that customers would enjoy using ATMs during hours banks weren't open, meaning no additional costs would be incurred by extending those hours. No one factored in the cost of the paper receipts that the machines delivered to customers. The meeting when the CEO demanded answers about why paper costs were soaring was not pretty.

Could an AI analysis have prevented this? Would GenAI have sent up warning signs? Would the ROI calculation be revised? Had it existed at the time in the form it is now, the answer to all those questions is probably yes. That doesn't mean ATMs wouldn't have happened. It does mean that the ROI calculation would have been more realistic—which is the hope that today's advances in AI technologies brings to KM. As we dream about what GenAI can contribute to KM and its more advantageous aspects to benefit our organizations, we hope that all those dreams will come to fruition. ▮

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Measuring KM Success: Calculating the ROI for a Business Research Knowledge Management System

By C. David Seuss, CEO, Northern Light

Some of the world's largest companies spend hundreds of millions of dollars annually on market research and competitive intelligence (CI) research—creating it, purchasing it, and analyzing it. With that magnitude of investment, it's not surprising that they often dedicate a KM system to managing it.

So how do these organizations assess the value and, more importantly, measure the hard dollar ROI of their KM systems for market research and CI?

In our experience working with many of the world's largest research-driven enterprises, typical metrics include:

- ✓ Cut research time
- ✓ Avoid redundant research purchases
- ✓ Reduce the number of intranet sites and portals
- ✓ Lower overall cost of primary research

Getting to numbers on some of these benefits can be tricky. Here are some examples of how companies do it.

REDUCE RESEARCH TIME

When a company licenses millions of dollars' worth of third-party industry research every year to help it better understand its customers, its markets, and its competitors, that's a lot of content for a business researcher to plow through. At one of America's largest telecommunications service providers, before they deployed a KM system, relevant market research wasn't being found, shared, disseminated, and, most importantly, used. Marketing professionals had subscriptions to many third-party research sources, but they had to visit each research supplier's website separately and conduct multiple searches, which was time consuming and painful. The company also tasked employees with digging up internal documents and reports as needed to forecast market conditions. But as a practical matter for employees, trying to remember "Didn't Mary Smith do that study last year?" was a hit-or-miss proposition at best. Discoveries made by one researcher weren't automatically available to any other. Information became siloed, and the market research process was slow, uncoordinated, and unacceptably costly.

Seeing a better option, the company switched to a single, enterprise-wide KM platform through which users could find all the company's market research and competitive intelligence, from both external and internal collections, using a common user interface. This enterprise-wide system delivered as promised, measurably reducing research time and producing significantly better search results. It also made information gleaned from internal and external sources available enterprise wide.

So, were the improvements worth the cost? The organization estimates it currently saves 1.5 hours per user session using its KM platform compared to the previous decentralized approach. Using $100 per hour as the value of professional time, it is easy to calculate the value of time-saving based on the 2,500 user sessions the company's employees perform monthly on the KM system. With a cost reduction of $150 per session, the company saves about $375,000 per month, or approximately $4.5 million per year.

GENAI AMPLIFIES TIME SAVINGS

As impressive as these time-savings numbers are, generative AI (GenAI) can make them even better. Technology analysts often mention knowledge management as one of the most practical early applications of generative AI in business. It's a natural fit because KM involves aggregating, managing, and mining vast amounts of text, and GenAI can be a boon to a user's productivity.

A study published in the Fall of 2023 by professors at the Harvard Business School (HBS) and Boston Consulting Group (BCG) using 758 BCG consultants performing competitive analysis assignments found that those consultants using generative AI produced work 25% faster with 40% higher quality than consultants not using GenAI.

While it is difficult to model the impact of higher quality analysis, it is possible to model the ROI impact of being 25% faster. But the first question is "faster than what?"

Let's hypothesize a business research project in which the user is looking for a list of partnerships that a competitor has announced during the past few months.

Without generative AI, the user executes a search query "[Competitor-A] strategic partnerships" and gets a search result of 20 documents. To have a comprehensive answer, the user must examine search snippet of one sentence from each document and decide if there is a strategic partnership identified in the document. Since snippets are not always the best sentence for the user's intention, it may be that some partnerships are identified in some of the documents but the snippets for those documents do not give a sufficient hint that the document is of interest. It is safe to say that some partnerships will be missed if the user doesn't download all 20 search results and scan each document for partnership information. Allow 1 minute per document for this process, or 20 minutes in total. Perhaps some of the partnerships were very interesting to dig into, so the analyst spends another 60 minutes reading the relevant source documents that the search process surfaced, for a total time expended on the project of 80 minutes.

Using generative AI, the user would execute a query, "What partnerships has [Competitor A] announced?" Twenty seconds later the user would have a list of the partnerships identified by the generative AI in the 20 documents on the search result. The

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list would likely be much more comprehensive than a manually compiled list since the full text of each document would have been consumed by the generative AI models in generating the result, improving the quality of the research. The list would be footnoted with links to contributing documents and could be copied and pasted into a report or email message. Summaries of each partnership would be provided by the generative AI application.

So, the first 20 minutes of the research project would be condensed into 20 seconds by the generative AI. Our hypothetical user will still spend another 60 minutes digging into the most important partnerships in the surfaced documents, for a total of 60 minutes on the assignment (ignoring the 20 seconds at the beginning for the generative AI to respond). Comparing this total to 80 minutes without generative AI, then the user will have completed his or her work 25% faster, which is comparable to the HBS/BCG result. Matching the HBS/BCG result gives us confidence in our hypothetical model of a typical business research project.

Ignoring the benefit of the higher quality of work done with generative AI, we can make a reasonable estimate that for business research questions, generative AI may save 20 minutes per user session.

For purposes of this ROI calculation, let's assume that 20% of user sessions use generative AI. This 20% will save the 20 minutes (1/3 hour) per user session described above. Accordingly, an ROI metric would be:

✓ Number of annual user sessions x .20 x 1/3-hour x $100 per hour = time saving from generative AI

To illustrate this calculation for an organization with 50,000 annual user sessions:

✓ 50,000 x .20 x 1/3 x 100 = $ 333,330 time savings per year

AVOID REDUNDANT RESEARCH PURCHASES

Large companies tend to spend lots of money—sometimes millions of dollars each year—purchasing licenses from syndicated research firms. When an organization is multi-national, its local and regional divisions, various brand groups, and dispersed functional departments often don't know what licenses other groups are buying, or at what price, which can result in costly redundancies and duplications.

A major Silicon Valley-based manufacturer of home and office computers and peripherals faced this exact problem. With offices and departments all over the world, the company long suffered from duplicated and underutilized information contracts. Then the computer giant began using a KM platform to consolidate its licensing information to make possible the enterprise-wide sharing of purchased market intelligence content. With 5,000 users and syndicated market research from 25 sources, the company estimated the system allowed it to save approximately $1.25 million per year through the avoidance of duplicated research purchases worldwide.

INTRANET SITE CONSOLIDATION REDUCES ADMIN/SUPPORT COSTS

Like many companies, a consumer electronics industry giant client once provided its sales, marketing, IT, and product management teams with their own intranet sites. It built and maintained 150 distinct internal websites worldwide, all of which contained a smattering of market research. However, by installing an enterprise KM platform for its market research, the company was able to reduce the number of intranet sites from 150 to just one. On the IT side alone, the company estimated this improvement saved $1.5 million per year in hardware, software, and, most significantly, IT systems administration.

PRIMARY MARKET RESEARCH COST REDUCTION

Research and development (R&D) receives high priority in the pharmaceutical industry. Over time, companies can spend literally billions of dollars developing a new drug. It is therefore critical that a pharmaceutical company has a keen sense of where the industry stands, including what drugs are being developed elsewhere, what research avenues are being pursued, and in what stage the development of a particular drug might be. In short, primary research is vital.

One large pharmaceutical company we know well uses its market research KM platform to perform such primary research prior to determining its annual R&D budget. Often, such research has already been performed but the reports are neither widely known nor easily findable since they are scattered on network folders and laptops or held in repositories, like Microsoft SharePoint, with ineffective search technology. With its robust purpose-built KM system, this company was able to consolidate its primary research into a single repository and make it available to authorized users throughout the organization. This strategy eliminated the need for duplicate primary research efforts, saving about 10% of its research budget by avoiding duplicate, unnecessary, or dead-end research projects. This amounted to $1 million per month, or $12 million per year, in savings.

IN BUSINESS RESEARCH, KM'S ROI IS COMPELLING

In this article, we've reviewed several of the dimensions associated with value delivery for KM systems in the market research and competitive intelligence domain. Over time, the hard dollar ROI will become clearer, especially for new technology like generative AI. But even with today's level of experience, it is clear that knowledge management systems deliver strong qualitative and quantitative benefits to large enterprises, especially when KM is optimized for particular strategic use cases, such as business research. ▮