
From Savings in Knowledge Management to Values in Innovation Management

GARTNER
IV GESITI
São Paulo — SP, Brasil

Waldir Arevalo

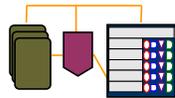
Organizational Maturity Includes Managing Intellectual Capital

More than one-half of the market value of the average global company is IC.



Human Capital

What we know — our core competencies



Structural Capital

Processes, IT systems, data, patents, others ...



Customer Capital

Relationships, knowledge of customers and markets

Can you absorb the risk of undermanaging one-half of your market value?



Source: Human, structural and customer capital terms adapted from "Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower," by Leif Edvinsson and Michael S. Malone.

The market value of organizations is increasingly determined by the value of their intellectual and knowledge capital. Intellectual capital (IC) can be decomposed into three types: *human*, *structural* and *customer* capital. This decomposition is described in "Intellectual Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower," by Leif Edvinsson and Michael S. Malone. Examples of IC include business or technology processes, knowledge and intelligence about customers and markets, digitized information resources (for example, transaction, customer and workplace data), and even key employees.

Despite the growing contribution of IC to market value, most companies don't manage IC effectively. This becomes a significant risk. IC is "new currency" in an information economy; that is, IC is the basis of many products and services. Examples of companies with IC-focused business models are Factiva (provides value-added information services) and Gartner (provides IT advisory services).

Knowledge management (KM) enables businesses to gain control of and leverage their IC. KM includes processes that enable:

- capturing, organizing and accessing digitized information
- creating new knowledge and IC, and managing innovation
- using or applying knowledge in business processes and decision making
- collaboration — enabling people to find each other, connect, exchange knowledge and work together

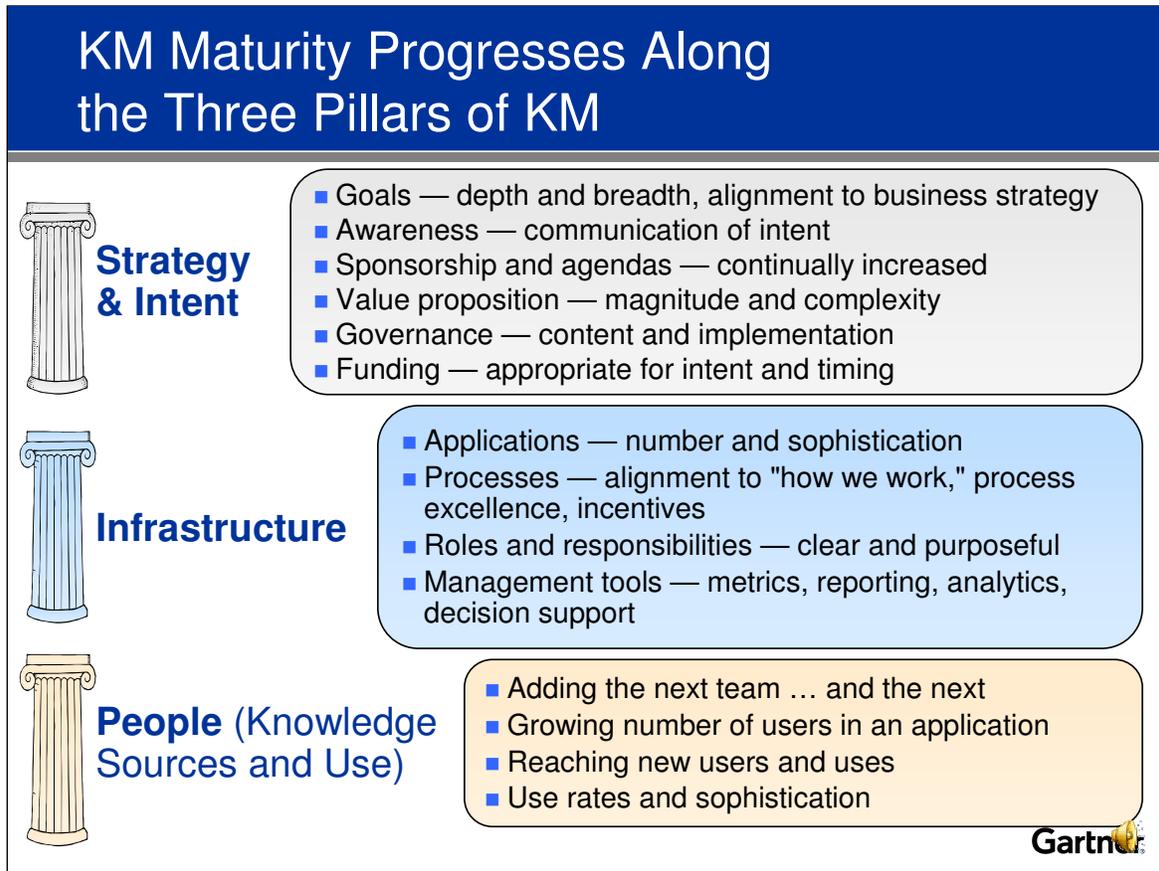
Client Issues

1. **What characteristics define the successive stages of KM maturity?**
2. **What actions and practices enable organizations to optimize their use of KM?**
3. **How will businesses drive continuous innovation?**

According to a study released 8 January 2004 by The Boston Consulting Group, more than 60 percent of global companies increased spending on product, system or process innovation in 2004. Through 2008, leading organizations will develop innovation management capabilities into a new core competency. Successful innovators will develop:

- market leadership capabilities to drive market direction
- fast follower capabilities to track, adopt and improve on the innovations of others

An innovation core competency is more than a skill set or a methodology. It is an organization's ability to discern trends or signals, add insight and business context, and make good, quick decisions on whether to act or react to this knowledge. A core competency in innovation will thrive when teams and individuals engage in innovative processes. A core competency in innovation develops slowly, but it can become a strong source of competitive advantage.



KM success is marked by strong attention to three pillars: intent, infrastructure and people. The characteristics of these pillars represent the foundations of KM maturity. Within each pillar are multiple maturity factors.

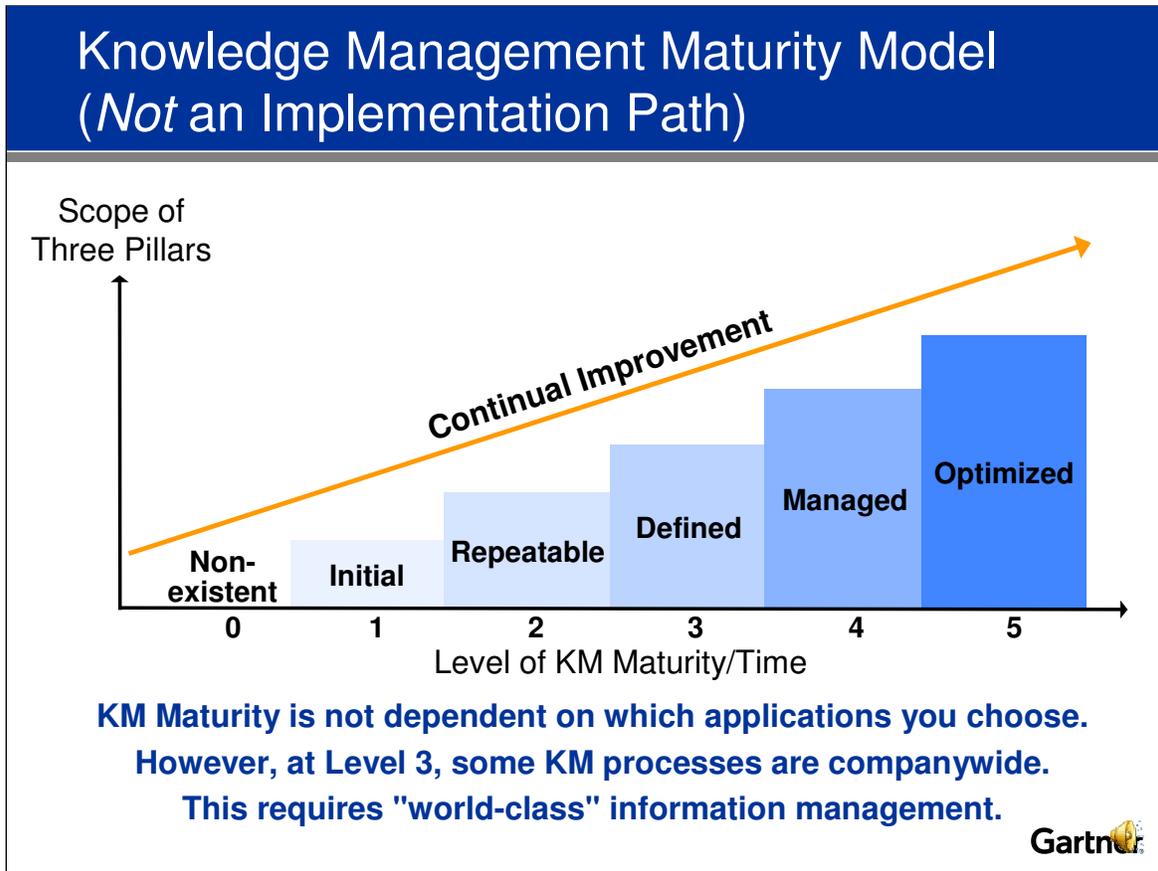
Intent: KM does not just happen. The organization must indicate its intent to undertake KM by setting clear objectives, and establishing governance, funding and other fundamental elements of a strategic initiative.

Infrastructure: KM requires human and technology infrastructure to succeed. With regard to KM maturity, four areas of infrastructure are relevant: applications, business processes, management tools and roles/responsibilities.

Knowledge Sources and Usage (the people pillar): KM is about getting people engaged in knowledge sharing and collaboration, and supporting them with knowledge resources. KM maturity depends on the extent to which knowledge is contributed and leveraged by the organization's employees, customers, business partners and competitors.

To judge your maturity, assess each factor to determine the extent of your progress. Compare the progress on individual factors to Gartner's maturity model.

Definition: Gartner's Knowledge Management Maturity Model describes the progressive levels of capability achieved by an organization's KM program.



Client Issue: What characteristics define the successive stages of KM maturity?

Our maturity model describes six levels of KM capability.

Level 0 — Nonexistent: KM is not on the radar screen of your organization. There are no recognizable KM processes in place nor strong awareness of the KM opportunity to be addressed.

Level 1 — Initial: The company has recognized an opportunity in KM. Some areas developed initial applications, but these are locally built and supported. There is no real organization around KM.

Level 2 — Repeatable: The approach to KM is becoming consistent for key applications. People in different parts of the organization are using similar approaches and, in some cases, sharing infrastructure.

Level 3 — Defined: The awareness of KM is high. It is well understood and the potential is appreciated. There is a growing use of consistent processes, technology and shared infrastructure. Centralized support is emerging.

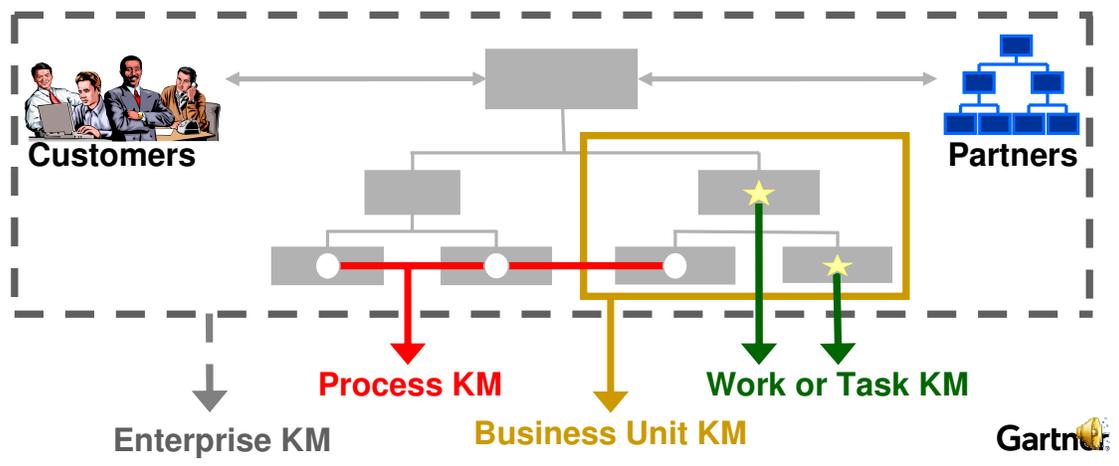
Level 4 — Managed: KM is planned and funded on a regular schedule. Business-unit planning for integration of KM is in place. Funding and business value is predictable. Reliable support is available.

Level 5 — Optimized: KM is integrated into the company's overall management practices. Creating and managing IC is a goal in key organization initiatives. Knowledge and IC are well-managed assets.

Strategy and KM Intent — One Size Does Not Fit All

Bottom Line: Select the right business strategy and target

**Choices: Distributed or Centralized
Local or Enterprisewide
General or Specific**



Client Issue: What characteristics define the successive stages of KM maturity?

When it comes to a KM strategy, one size does not fit all. Enterprise KM may seem to be the end state of a logical path, but many companies do not need enterprise KM — it may not be a good fit for the diversified, decentralized business units in a large organization.

Choose KM programs based on three criteria for the proposed program:

- Does it support the company's business strategy?
- Is it achievable (the program scope is within the company's ability to manage)?
- Will it meet specific, measurable business objectives?

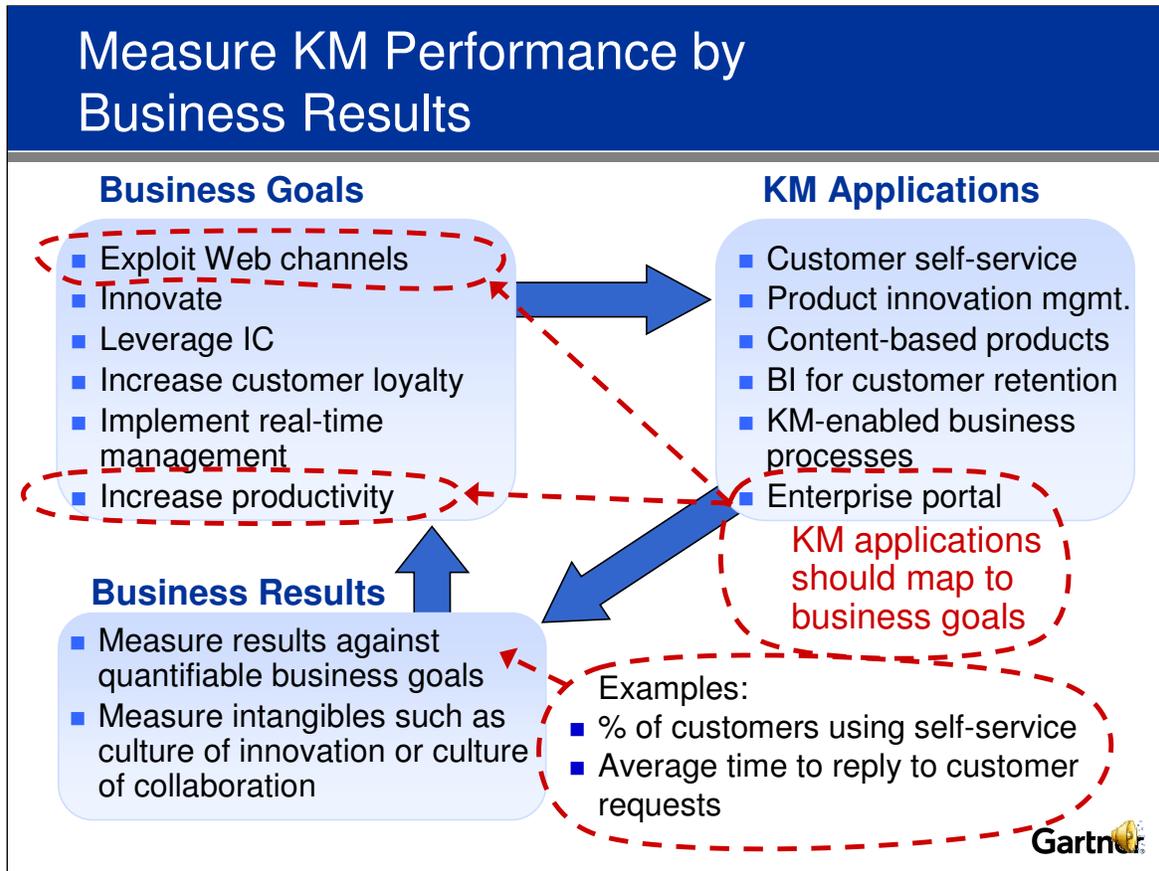
A simple classification scheme defines the levels of a KM program scope: Enterprise KM, Process KM, Business-unit KM and Work-task KM.

Enterprise KM includes every employee, as well as customers and business partners. Process KM includes the same range of participants, but for a single business process. Narrower programs, such as business-unit KM, support every person and process within a business unit. Work-task KM is implemented to support a task (such as customer service knowledge bases) or individual knowledge work. All levels include outside participants (such as contract employees, service provider employee, customers or other partners).

Action Item: Choose a KM program based on how well it supports the business and your ability to execute it.

Client Issue: What actions and practices enable organizations to optimize their use of KM?

Strategic Imperative: Establish business-focused objectives, metrics and measures to gauge the performance of KM programs.



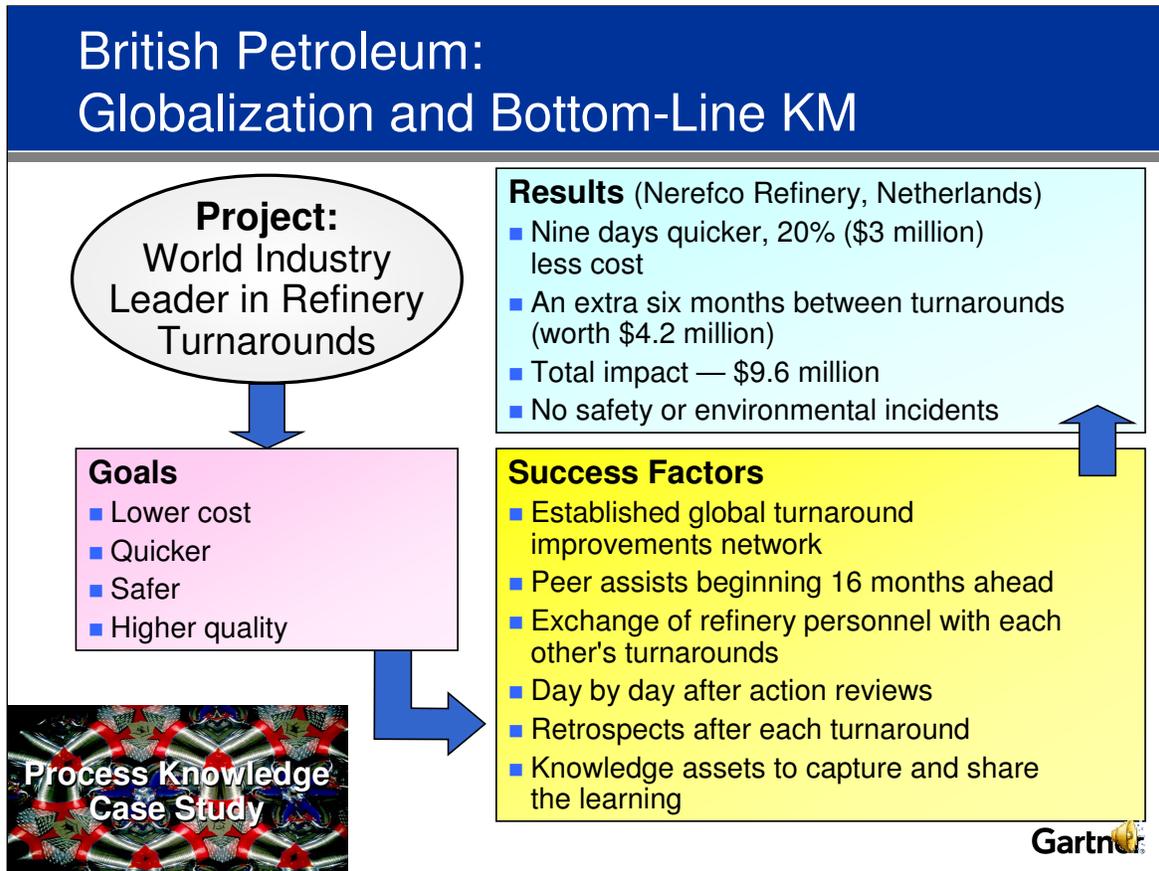
KM is not an end in itself, but the means to accomplish a business objective. Adoption of KM must contribute to achieving the business strategy and operational objectives.

An organization's business strategy typically includes a range of explicit objectives (such as exploiting Web channels, implementing real-time management and increasing productivity). There are also unstated, but implicit objectives (such as direct financial payback or operational excellence). KM leaders must map KM applications and plans directly to the business objectives they support. Any KM application that cannot be mapped to a business objective should be re-evaluated for its value and viability. Additionally, specific metrics and measures must be defined for their KM contribution to business objectives.

KM initiatives must support progress toward a culture of innovation or collaboration. Metrics and measures must also be defined to track progress against business objectives.

Action Item: Develop a business strategy and objectives framework to guide the selection of KM initiatives.

Strategic Planning Assumption: By 2007, organizations that want to be No. 1 or No. 2 in their markets will spend at least 1 percent of their revenue on KM. Organizations in knowledge-intensive industries will spend up to 5 percent (0.8 probability).



Client Issue: What actions and practices enable organizations to optimize their use of KM?

Many oil companies have had formal KM programs since the mid-1990s. In most cases, the programs are focused on the exploration and production function, because the "time to first oil" can be measured in millions of dollars per day. British Petroleum, which has a flat organization and 100 business units worldwide with independent project leaders, wanted to improve its competitive position globally. It set out to incorporate KM into most of its major business events. The objective was to improve business results by sharing learnings before, during and after the event, with new intellectual capital captured and shared through knowledge assets. One example from BP is refinery turnarounds.

Action Item: Consider the bottom-line savings and improved competitiveness associated with strong KM.

Case Study: Ford Motor Company has continually developed new processes that take advantage of its knowledge and technical capabilities.

Case Study — Ford Motor Company Leverages Knowledge for the Long Run

- 1995: Best-practices replication (BPR) initiated in 1995; moved to Internet in 1996; licensed to Shell in 1998 and more since then. Reported cumulative savings: more than \$500 million by 2000; more than \$2 billion by 2002.
- February 2000: PC purchase program for employees. Intended to reach more of the employee base (daily e-mails), build new skills and new processes (for example, e-mail when absent, check benefits).
- June 2001: Implemented Plumtree portal for 200,000 employees; implemented e-room for team collaboration. 2002 savings: \$50 million to 60 million in North America HR, \$2 million printing; expense reporting reduced 35%.
- Established Web publishing for dealer service bulletins (cut time by 69% and cost by \$1.5 million annually).
- Online library for employees since 1999 — Fatbrain (Barnes and Noble) hosts the site.
- September to December 2000: Web-based e-learning for suppliers

Many industry innovations and patents:
www.fordbetterideas.com/tc/home.html



Client Issue: What actions and practices enable organizations to optimize their use of KM?

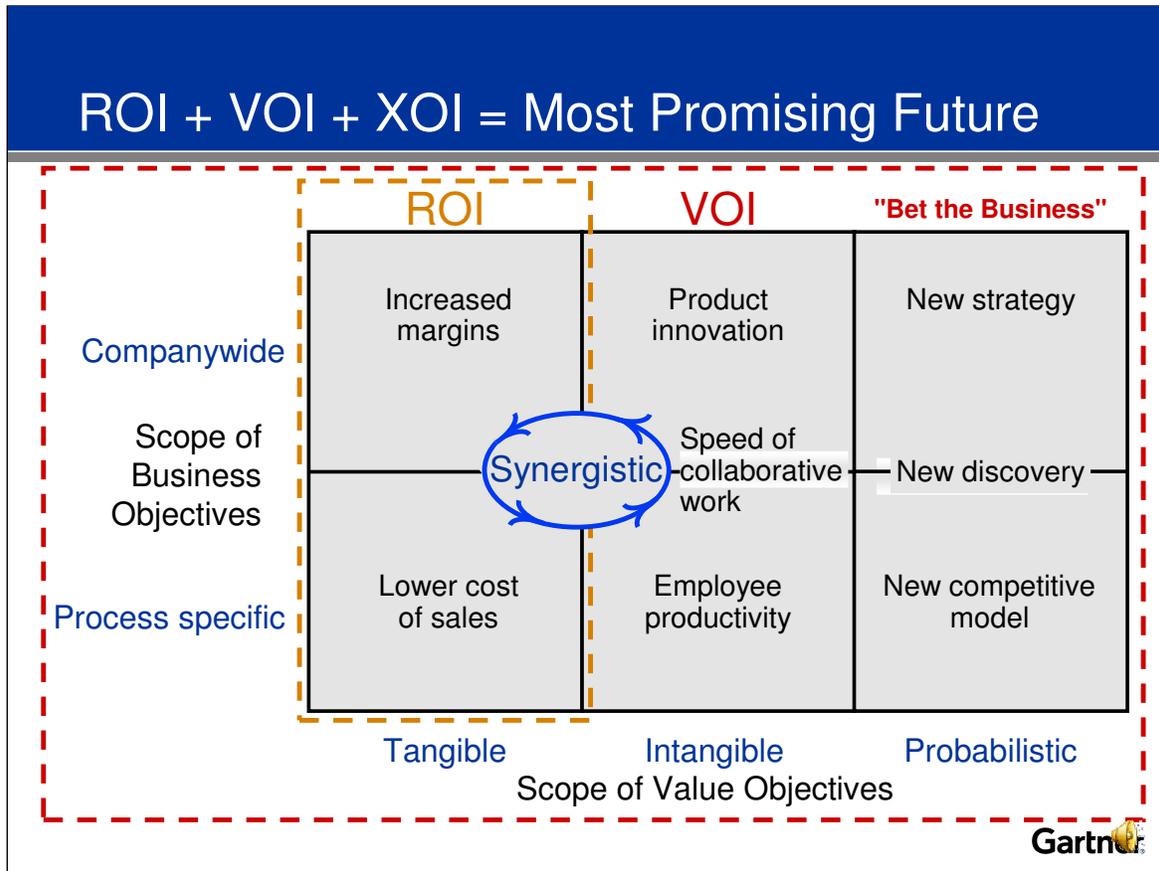
Ford Motor Company is known for its BPR KM program in its manufacturing organization. BPR has been described in case studies and covered in numerous publications. But managing IC and driving productivity is about more than one project. So, where did Ford go from here?

We reviewed published articles on Ford in the years following the introduction of BPR and found a range of projects that are information-based or that leverage KM-related technologies. The result is a range of high-value and innovative responses to business issues (such as cost reduction, partner training and workplace support).

Some lessons for companies that aspire to better manage their intellectual capital are:

- KM and IC management won't happen in a day or a year — these capabilities build up over a long period of time.
- Technology is not the most-critical factor in these programs, although it is an enabler of good ideas.
- Innovation and IC management must be built into the culture of the organization.

Strategic Planning Assumption: By 2007, organizations will rely on nonfinancial or synergistic measures as the primary factors in most IT investment decisions (0.8 probability).



Client Issue: What actions and practices enable organizations to optimize their use of KM?

Return for outcomes — probabilistic and binary vs. continuous.

IT investments take many forms and often require complex processes to articulate or evaluate the value created. IT investments require analysis of financial, nonfinancial and even, synergistic returns (synergy occurs when an initiative generates returns in combination with future initiatives — the original initiative may be foundational or complementary to the future initiative).

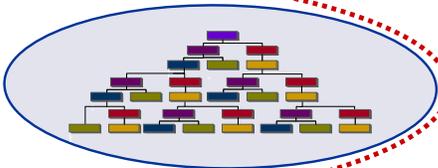
Developing the benefit analysis for IT investments has usually involved a quest for direct cost reductions, to the exclusion — or lack of — emphasis on other forms of organization value. IT investments have always produced a broad spectrum of value, but with the advent of highly networked processes and Internet-based business models, the return on investments (ROIs) may be improved by new value dimensions that operate alongside the traditional — and enduring — ones. These dimensions expand the view of value creation by blending emerging and traditional elements. This extended view provides organizations with new options for improving and clarifying the justification for IT investments by exploiting the full range of intangible and tangible value creation.

Action Items: Expand business justification approaches to consider traditional and emerging value categories that blend tangible and intangible forms of value. Expand analytical skills to evaluate the full range of value created through IT investments.

Client Issue: How will businesses drive continuous innovation?

Strategic Planning Assumption: By 2008, 25 percent of Global 1000 organizations will formalize innovation management (0.6 probability).

Business Innovation Is Not an Option ...The Option Is How You Manage It



Environmental Innovation	Enterprise Innovation
<ul style="list-style-type: none">■ Innovation within industries, markets or business domains■ External from the organization's perspective <p><i>Not optional — must respond to retain competitive parity</i></p>	<ul style="list-style-type: none">■ Innovation within organizations and their span of business control■ Internal from the organization's perspective <p><i>Your choice to pursue — critical to gain competitive advantage</i></p>

Innovation affects organizations along two fronts:

1. Environmental (external) innovation occurs in every industry or market segment and throughout the general business environment. Organizations are required to respond to and digest an ongoing spate of innovation from competitors, partners, regulators, new market entrants and contiguous markets or segments. They also must deal with innovation from the purveyors of technologies, business methods or services that support them. This environmental innovation occurs in cycles, with relatively long periods (three to five years) of rapid innovation followed by a similar cycle of digestion to regroup, adjust business processes, adapt skills and resources, apply lessons learned and so on.
2. Enterprise (internal) innovation is needed for organizations to meet their business objectives (such as remaining competitive, building or retaining market share, reducing costs, or increasing efficiency or effectiveness). The need to introduce new methods applies to processes, technologies, organizational structure, and management or leadership styles. Enterprise innovation also requires the involvement of all employees and may extend to the organization's most-trusted business partners and customers.

Action Item: Allocate resources to track and assess the impact of environmental innovation. Define and manage the organization's innovative processes.

Strategic Planning Assumption: Through 2007, the majority of innovation programs will focus on immediate business problems (0.6 probability).

Focus: Why Innovate? Why Now?

Persistent Business Needs

- Refine business model
- Speed product development
- Increase market share
- Increase agility and flexibility
- Understand customer needs

Key Business Trends

- Globalization
- Outsourcing
- Mobile workforce
- Brand management
- Performance management

Immediate Business Problems

- High-cost structure
- Product obsolescence
- IT performance
- Customer runoff
- Brand deterioration

Business Value Discipline

- Operational excellence
- Customer intimacy
- Product leadership
- Brand mastery

Open-ended innovation programs? Most don't last.



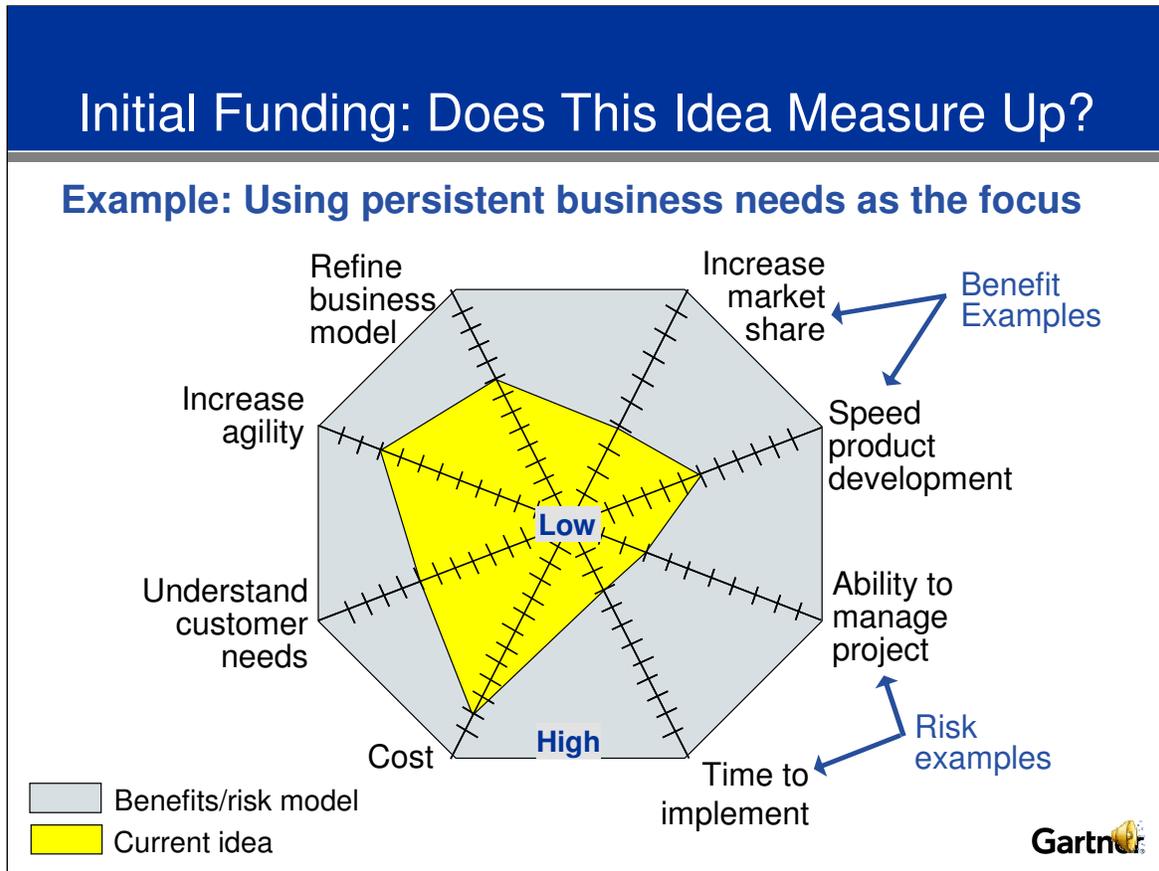
Client Issue: How will businesses drive continuous innovation?

Innovation programs need focus to succeed. In fact, we know of no open-ended innovation programs that have survived the test of time. There are four common choices for focusing an innovation program:

1. Persistent business objectives. These are strategic directives that organizations will never completely resolve, but progress against them can increase a company's competitive position. Even small gains on major objectives can positively impact many aspects of the business.
2. Key business trends. Key business trends face all players in the business environment and some trends will be highly relevant to your company. Bringing new business concepts into your organization can radically change established operations with new products, services or methods.
3. Immediate business problems. Most companies need to innovate to retain their current competitive position (retain their market share or customer penetration). Focus on immediate business problems with an innovation program.
4. Business value discipline. Most organizations favor one business-value discipline (such as customer intimacy or product leadership). Some organizations focus innovation by aligning it to their value discipline.

Action Item: Invest the time and resources to evaluate these options and select the appropriate focus for your innovation program.

Decision Framework: An idea-selection framework integrates expected benefits, risks and costs of innovation into a visual assessment tool. Each organization must customize the framework to reflect its assessment criteria and value standards.



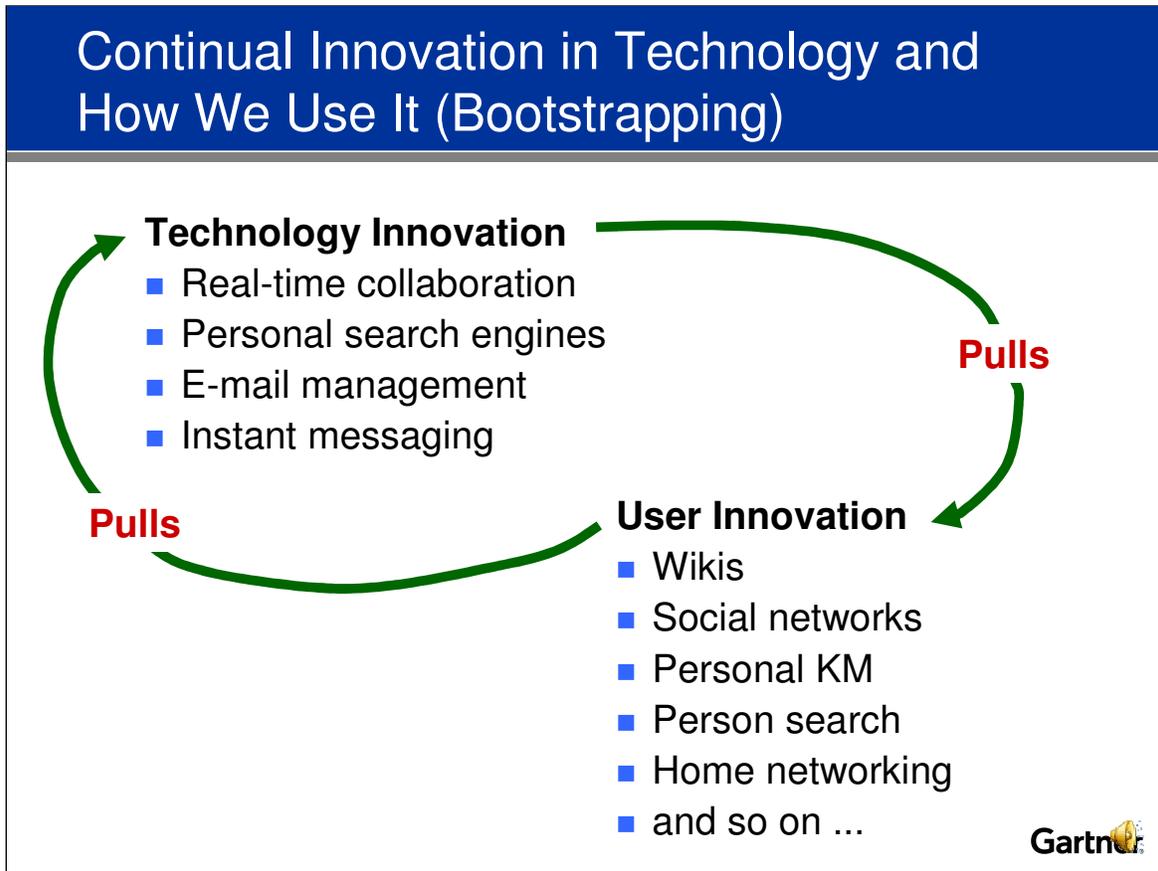
Client Issue: How will businesses drive continuous innovation?

Organizations lack direction for their innovation programs. When asked if they are seeing real results from innovation, they often cannot answer definitively. Organizations need a framework for selecting ideas for funding and development. This example uses a framework to integrate benefits and risks into a single view of the performance potential of an investment. This is preliminary analysis. Once selected, the idea will be subjected to more-rigorous market research and analysis early in the development process. Other frameworks include balanced scorecards and radar screens.

In this example, the focus for innovation is persistent business needs. The benefits are taken from the list on the focus pillar. The risk points, found in any project, are financial, technical, market and internal. Select the appropriate benefits and key metrics to structure your framework. You will then be able to profile each idea for its cost, benefits and risk, and map the ideas against the framework.

This visual representation shows how well an idea matches the enterprise's objectives. This process can remove some of the uncertainty, and can neutralize political issues and complexity surrounding an idea.

Tactical Guideline: Expect employees to find new uses for innovative technology that extend far beyond its intended purpose.



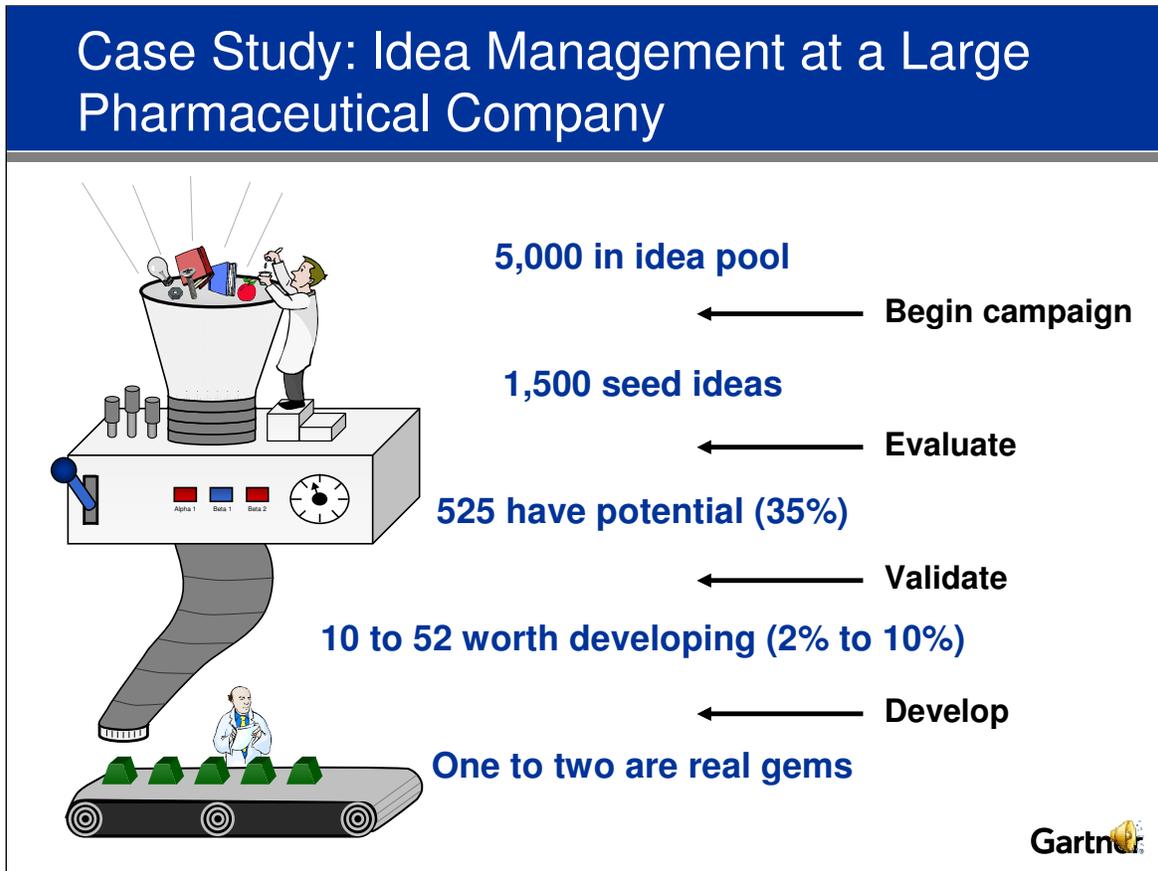
Client Issue: How will businesses drive continuous innovation?

When new, compelling technology is introduced, people find ways to use it that go beyond the intended purpose. These innovative uses create new requirements for the technology, and technology developers and vendors must respond by adding new functionality to better service emerging user requirements. This cycle of innovation (technology innovation drives user innovation which drives more technology innovation and so on) was coined "bootstrapping" by Dr. Douglas Engelbart (see www.bootstrap.org/index.html). It refers to the way users and technology alternately pull each other into improving the overall process.

Bootstrapping effects are omnipresent in the KM space. KM technologies are aimed at knowledge work and are designed to mimic the way people work — their human interaction, decision making and other processes. Knowledge workers are inclined to find useful technologies and push them to the limits.

During 2005 to 2010, technology innovation to support human work patterns will accelerate because of increasing demand to automate and supplement knowledge work. Expect more innovations in the way people work (some recent examples include wikis, home use of networking technology and personal search engines).

Case Study: A pharmaceutical company implemented a classic idea-generation program with successful results.



Client Issue: How will businesses drive continuous innovation?

This case study focuses on a pharmaceutical company with 28 product lines, four blockbuster drugs and more than \$1 billion in annual sales. In 2001, it initiated a successful internal innovation program focusing on idea generation. Critical success factors for their innovation program included:

- Leadership and organizational structure
- Focusing on idea generation events, including rewards and recognition, and internal marketing
- Selecting a review team to evaluate ideas
- Defining a path to implementation
- The importance of feedback
- Performance metrics

The company's experience is typical of others: only 2.5 percent of new ideas make it through all stages. You can calculate how many new ideas your company needs if you know how much revenue you need to generate or how much margin you need to recover, and the success rate of idea management programs discussed here.

Recommendations

- ✓ **Approach KM as a requisite business competence.**
- ✓ **Understand your KM adoption stage and the critical success factors.**
- ✓ **Select KM strategies that fit business needs.**
- ✓ **Select the right focus for your innovation program — open-ended or misaligned programs will not last.**
- ✓ **Build robust processes to ensure that people and ideas can get past the innovation hurdles.**
- ✓ **Start simply with technology — implement technology at the hurdle points before attempting full life cycle automation.**