Every company is confronted with growing complexity. Relationships with competitors, customers, and suppliers are becoming more complicated and involved. Internally, many companies have complex processes, diverse business units, matrix structures, and a diverse employee base. How is it then that some can deal with complexity better than others, and thereby outperform the competition?

Managing and using product, customer, operational, and management information effectively are key factors in determining how well a company deals with complexity. Our research concludes that those companies that outperform others have developed mature information management capabilities. Effective information management requires a company to encourage proactive information behaviors and values among all employees about using and sharing what they know with others, develop information-processing practices linked to business strategies and external market realities, and invest in IT for management and innovation support, not just for running processes and operations. High-performing companies have systematically developed these information capabilities (IC) over time.

Once a company has achieved a mature level of information management, it can use information about customers, products, operations, and performance to optimize other business capabilities. With the right quality and quantity of information, knowing how to use it appropriately, and operating more efficiently and effectively than the competition, these companies successfully sense, manage, and proactively react to any complex situation that confronts them internally and externally.

Companies with immature information capabilities find it difficult to deal with complexity and achieve good results. Without the right information, they do not know how to react appropriately to internal or external events. They require more resources and time to get things done and are therefore less efficient and effective. The difference in how companies are able to deal with complexity is directly related to how well they manage and use information, people knowledge, and the information systems.

Since information capabilities can significantly impact all other business capabilities, they are most influential in saving resources and leveraging value in other business capabilities. We call this the IC Optimization Effect (see Figure 1).

The IC Optimization Effect

With today’s digital capability to access information anywhere, anytime, many companies have started to substitute good information management for the movement of people, paper, and products across geographical
areas, time zones, markets, and organizational boundaries. They have replaced physical processes with electronic ones and the need for rigid organizational structures with more flexible virtual networks of people.

The real power of information capabilities lies in their unique ability to better manage other business capabilities. Some companies investing in information capabilities can directly impact the productivity and performance of other business capabilities, such as people, process, and organizational structure.

The IC Optimization Effect happens when a company uses information capabilities to eliminate inefficiencies and achieve cost savings as well as add value. There are five key areas where optimizing the use of information in a business can provide cost and value advantages.

### Organizational structure

Information capabilities can play an integral role in eliminating redundancy or unnecessary layers in an organizational structure. By streamlining processes, minimizing management layers, facilitating communication, and improving monitoring, IC can help create more agile and flexible organizational structures.

IC can allow greater decentralization of decision authority by decreasing the cost of knowledge and information transmission and sharing. This allows companies like BBVA to take better advantage of local customer and product information to cross-sell and serve customers across branches and digital channels while maintaining overall corporate control. It can also reduce the burden of “information overload” on central decision makers and facilitate the decision-making process. Companies no longer need to operate in a vertical hierarchal structure and save time and money by reducing headcount and response times.

IC can also enhance an organizational structure and make it more effective. By freeing up the structural boundaries, the need for vertical integration decreases because a company can form more virtual networks and communities that leverage different perspectives and encourage innovation. Companies like 3M and P&G encourage the sharing and development of ideas between different groups and management functions thus enhancing innovation, creativity, and product development.

Dell, one of the world’s most efficient users of information, has a flat structure that is organized functionally and by customer segments so that each customer segment has its own product engineering, marketing, sales, and service team. This allows it to focus on and support each customer segment’s unique needs. It also allows the company to share both successes and failures openly within the organization, since their functional areas communicate across the customer segments instead of acting as silos hoarding information.
Within companies like HILTI, which depend on thousands of customer contacts by Hilti “people” globally each day, high integrity, openness and sharing are an important part of the culture. The company openly communicates its performance with all employees. The company culture expects people to address any performance issues with a fast and direct response.

**Processes**

Processes include manufacturing products, processing orders, delivering products, customer servicing, and creating new products, as well as back-office processes, such as accounts payable and receivable, payroll, expense reporting, and recruiting. Companies are continually looking at ways to make their processes more efficient and ultimately more effective.

IC can reduce costs by streamlining processes and replacing physical processes with electronic ones. It can also boost operational effectiveness by coordinating similar tasks across functions and disparate channels so that everyone in a company is working together towards a common goal—such as serving the customer.

Direct banks like HSBC’s first direct have improved customer-facing business processes by using IC effectively. By selling and serving customers online, first direct educates customers in managing their own accounts and transactions while maintaining cost effective call center support services, allowing it to save millions of dollars and create value with customers at the same time.

**People**

Companies can also optimize people resources by investing in information capabilities. With the right people, technology, and processes, companies can reduce the number of people needed to achieve the same desired business results. In addition, IC make information processing less costly by creating common “social conventions” and standardizing ways of collecting and communicating information. This allows for more efficient management of projects and control of functional tasks. Global companies like CEMEX share a common language and information for understanding and controlling operations, and they have developed processes for best practice innovation by all operational managers in the company.

Using people efficiently is just one part of the equation. IC can also enhance people’s jobs by increasing communication, coordination, and access to information and knowledge. By providing tools for continuous on-line training, a company can improve people’s performance and their understanding of the business, which helps create a shared culture where people work together, learn from mistakes, and leverage the expertise of fellow employees.

**External relationships**

External relationships with customers, partners, suppliers, joint ventures, and/or alliances have increasingly become important in creating a competitive advantage by pooling knowledge and expertise inside and outside the company and by being able to reach global markets. IC can play an integral part in improving communication and coordination between a company and its external partners. It can lower supplier coordination costs by forging close and transparent relationships for retailers like Wal-Mart and TESCO. For instance, suppliers can be alerted to real-time changes in demand and be given the opportunity to reduce or increase production. This can help decrease the costs related to overproduction or underproduction. Forming a close supplier relationship is critical in the retail world where out-of-stock occurrences can severely damage margins and profits.

TESCO’s virtual integration of the entire supply chain has created operational efficiencies for itself as well as its suppliers. The company’s systems are linked to its suppliers’ planning and execution activities, enabling them to gather real-time information about inventory levels at various points in the supply chain. The suppliers are also expected to share information such as capacity outlooks, new technology, and new innovations in products and processes. In return, TESCO provides direct signals of customer demand to suppliers and shares current and projected market shifts and sourcing strategies.
IC can also play a key role with the customer relationship. Companies with mature IC, are able to collect and analyze customer data efficiently and quickly. These companies can act on that information effectively by providing customers with tailored products or services – thus creating value and brand loyalty. Companies that can provide a more personalized interaction with customers generally have higher customer satisfaction and retention rates.

Financial management
Companies that effectively manage information are most often the ones that evaluate investment risks, achieve optimal returns, leverage their global wealth, and manage the balance sheet better than the competition. By making operations more efficient, companies can liberate liquidity that has been tied up in inefficient resources and use it to create value and invest in new opportunities.

Two areas of financial management that IC can impact include cash and risk management. Companies are starting to understand the importance of cash management to the bottom line. Many companies like HP have closely reviewed their payment periods, timing of supplier payments, inventory levels, reconciliation processes, and management of receivables and payables, all in an effort to improve their cash flow. The more efficient they are at collecting cash or at avoiding excess inventory, the more cash they can generate. One example is consignment inventory – when a company does not pay a supplier for its inventory until it sells it and is able to free up cash that had previously been tied up in inventory management. Companies with the right cash flow information can focus on how to make their cash management more efficient and ultimately increase their bottom lines.

IC can also help companies minimize the financial risks involved in operating today’s complex global business world, including credit, market, and operational risks. It is important for companies to determine the appropriate level of risk within their organization and then to evaluate projects or clients across the organization on a risk versus reward basis, not just as an individual client or project risk.

The differences in how companies react to complexity are directly related to how mature they are at managing information. CEOs like Jamie Dimon of JPMorgan Chase understand the value of information, and they have focused on developing and maturing their IC – people, information, and IT. Their investment in IC has allowed them to leverage the IC Optimization Effect and to operate their businesses efficiently and effectively. As a result, they are able to deal with complexity and outperform the competition in difficult markets.