

Using data as a hidden asset



How companies can ride the data wave

In this era of pervasive networks, proliferation of sensors and devices, and increasingly information-intensive applications the amount of global data more than *doubles* every two years. With waves of data rushing over virtually every sector of the economy, organizations need a new game-plan to create value from data (see Figure 1). Even data-savvy organizations find this massive surge outpaces their ability to extract the full potential of their data.

While most companies struggle to harness energy from this tidal wave, a select few have crafted strategies to surf the swell. These leading companies see data as the new currency for building competitive advantage. They invest in new, innovative ways to aggregate and use the data that they own or that surrounds their company's customers and ecosystem. In the process, they strengthen their core business and find new avenues for adjacent growth. Their experiences point to ways in which today's data opens up new opportunities for growth for all sectors of the economy.

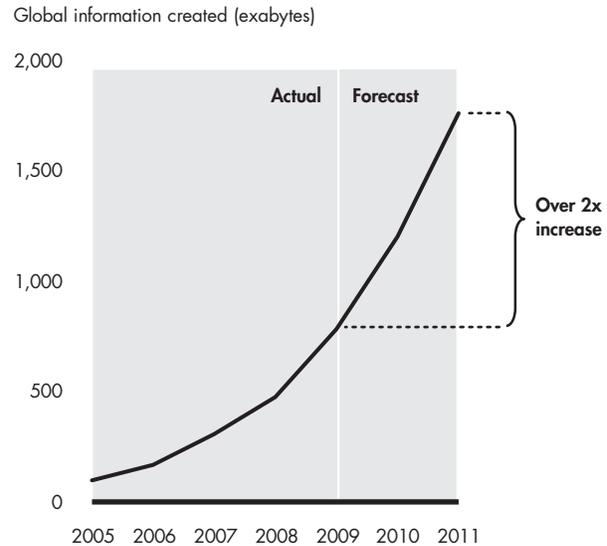
Data as a source of innovation: Why now more than ever?

New tools and capabilities harness data more effectively than ever before. Data and information now help make products and services more intelligent—which lets companies deliver more value.

The growth in the business-intelligence tools market is outpacing the growth in the entire software market (see Figure 2). Organizations now have access to many more powerful new tools. Database technology, both hardware and software, now operates at an order of magnitude faster than just a short while ago. Capabilities to analyze new data types, like video images or gene sequences, are steadily becoming mainstream applications. Today, the ability to process and glean insights from data exists at a much greater depth and scale than projected a few years ago.

Kaiser Permanente, for example, is taking advantage of such capabilities. The company made a multi-billion

Figure 1: The amount of data in the world is growing at an accelerating rate



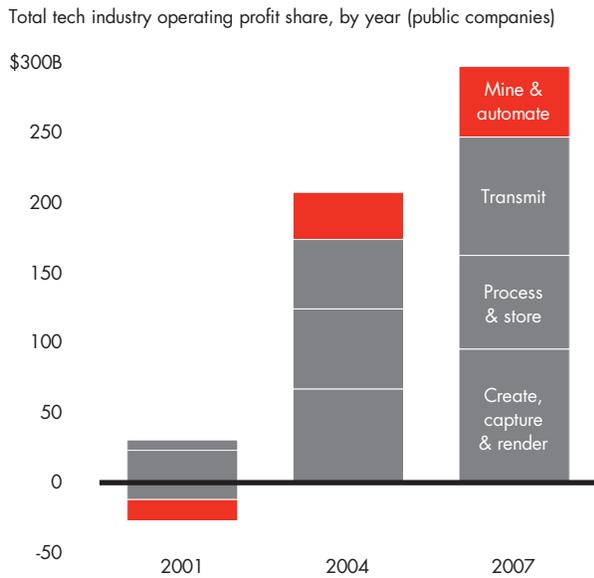
Source: IDC, CapitalIQ, annual reports

dollar investment to build its HealthConnect® health information system. The system securely connects 8.6 million people to their healthcare teams, stores their personal information and provides the latest medical knowledge. In an industry known for chronic high costs and quality issues, the system allows Kaiser to not just identify and rollout best practices but it also gives the healthcare company a data-driven edge in providing lower-cost and higher-quality care.

If companies don't lean into the data opportunity, they risk losing ground to the competition. The medical equipment divisions of companies such as Philips and GE Healthcare compete increasingly on the data and analytics generated and enabled by their equipment. They sell MRI equipment but also help customers with the speed and quality of their data assets through their electronic picture archiving and communication systems. These IT solutions allow health care providers to archive, store and display images speedily and offer superior diagnostic services to patients.

The burgeoning variety of data-gathering devices and the masses of new data create a fertile ground for innovation across industries—both for new applications as

Figure 2: In the technology sector, profits are shifting to companies that automate and mine data



Source: IDC, CapitalIQ, annual reports

well as unique businesses models. For example, CarMD uses a device-data combination to offer consumers a third-party service that monitors their vehicle’s health. The company’s hand-held tester plugs into a consumer’s car to extract data from the on-board computer. The company then charges consumers a membership fee to upload the information onto CarMD’s online database to diagnose issues, get a repair estimate, and even find a qualified mechanic.

A fluid resource, data now moves across physical and organizational boundaries. New and unforeseen combinations of data can create new opportunities for companies across industries.

At least one recent estimate projects that in the next 10 years, over 50 billion devices will connect to the Internet, many wirelessly¹. Most of these will not be cell phones or PCs but a wide variety of devices such as appliances, capital equipment, sensors and medical devices. The broad scope of these devices and the data they generate and share will bring about fundamental change across industries.

For example, Boeing’s use of data and devices could transform the company from an aircraft manufacturer to an aero-health service provider. To reduce its airline

customer’s total cost of ownership, Boeing offers customers a data-based Airplane Health Management service. Performance data can be wirelessly transmitted from each Boeing aircraft directly to the fleet operator for real-time fault management, performance monitoring and customized alerts. The data service allows Boeing customers to make fix-or-fly decisions quickly, which in turn, helps the airline improve maintenance efficiency and reduce servicing costs.

Or, consider the shift to “e-homes.” It’s easy to imagine a future where phones, PCs, lights, thermostats, air conditioners, security cameras, even draperies are all data-enabled and accessible from anywhere. Many new applications that save costs or enhance the customer experience in the home are emerging as intelligent data from disparate home devices are merged. Microsoft Hohm and Google PowerMeter plan to help consumers monitor their energy use, Cisco plans to provide intelligent home area network infrastructure. Emerging companies like GridPoint, EcoFactor, Control4 and Comverge now provide software that help consumers manage e-homes. Consumer electronics companies like Whirlpool are honing new skills in the installation, maintenance and repair of web-enabled appliances, while utility companies like Duke Energy and Direct Energy are exploring options for serving e-homes. A surfeit of data creates new services opportunities and pitches new competitors against old incumbents.

Some companies believe so strongly in the power of their data that they are willing to share their assets to make them stronger: these companies open up their data to others in the hope that it becomes a platform for all to use. In an unprecedented move, GlaxoSmithKline went public with the structures behind 13,500 chemical compounds that may inhibit the malaria parasite. GSK hopes that by sharing information and working together, scientists will come up with a drug to fight the disease, faster than the company could on its own. Going even further, start up companies like BlueKai and eXelate are even creating data marketplaces where companies can sell and buy data.

How to harness the power of data assets

How can a company develop a strategy that unleashes the power of its hidden assets—and propel growth? A good starting point is to ask the following questions:

What data exists within and around the company's processes and customer experience?

To uncover its hidden assets, a company can start by creating an inventory of all the data that it generates from its business. Too often companies, even Internet companies, store petabytes of data that they never use or analyze, and, in the process, they overlook opportunities to capture valuable data created in their core processes. Once the inventory of internal data assets is complete, the company can next consider sources of accessible, valuable data outside the enterprise.

In the darkest days of the residential mortgage crisis in the US, Experian Capital Markets, a credit bureau, spotted an opportunity to data-mine its existing assets and target a new customer segment: bond buyers on the secondary mortgage market. The company already provided detailed information on home loan applicants to investors in residential, mortgage-backed investments—when the securities were first created. After the housing collapse, the company began offering equally detailed information on borrowers to investors buying the securities on the secondary market. Experian realized that in a shaky housing market, bond buyers would welcome data that let them track the credit-worthiness of borrowers every month and gave them early warning of defaults.

Zillow.com created a new service and business model that provides publicly available mapping of individual home values across the US by combining existing data sources such as transactional history from public records and listings from real estate brokerages with new data from Microsoft-based maps. Its media-based business model continues to expand with nearly 12 million visitors per month and an increasing array of services as Zillow mines the data on visitor actions and continuously builds its data assets.

What is unique about the data and are there ways to use it to create more value for customers?

Data in and of itself is not valuable, unless it can be turned into a feature, product or service that creates value for customers. When performing a data review, companies need to critically assess where data truly adds value for their customers. More specifically, they should ask: Where can new data and information provide a meaningfully

lower-cost or better product or service? Is there a customer pain point or unmet need that can be solved through data-enabled improvements of their experience?

From advertising to logistics, companies across industries are applying global positioning systems (GPS) data to their business to develop innovative new services for customers. Star Navigation Systems recently launched a novel application for aircraft safety and monitoring. The company provides commercial airlines an in-flight data monitoring service that acts as a counterpart to an aircraft's "black-box." The Star Navigation service collects data from sensors and systems on board and passes the information to the pilot and ground controllers in real-time, defined intervals, via satellite. Now Star Navigation's Flight Tracker offers airlines the ability to use GPS tracking software to get a constant stream of accurate data on an aircraft's exact altitude, longitude, latitude, heading, airspeed and operations. The system allows airline executives to manage and track their fleet in real time, from the office—and even communicate with an aircraft en-route via two-way text messages. In the worst case, if a catastrophic event happens, the airline can also access flight data and location right up to the last minute—critical information that is lost when aircraft crash in inaccessible locations.

What is required to mobilize around the new data opportunities?

In order to use data to generate growth, an organization needs to build new muscles. In many cases, data and information businesses require different business models. Sometimes, they can even require the redefinition of existing customer relationships. Companies therefore often need different organizational and operational capabilities for data and information businesses, compared with their core product or service.

A few years ago, Yahoo realized that while its data was increasingly strategic, the company was not able to tap its full potential. The issue: The data resided in multiple stove-piped sub-organizations within Yahoo in different formats. To solve the problem, Yahoo created the new position of chief data officer and set up a team to centralize data strategy and analytics, and invested aggressively in people and technology like machine-learning. The change not only aligned taxonomy and policy across the business, it also pushed Yahoo to adopt an agenda

that offered more value to its customers, both consumers and advertisers, through data and insight. The transition wasn't quick, however: Yahoo continues on a multi-year journey to capture the full potential of its data assets.

In order to make that journey, companies often require new talent. The data surge is creating a tremendous need for people who understand data and how to collect, analyze and synthesize data on a large scale. Despite a moribund job-market, statisticians, data architects, and database analysts and administrators remain in high demand. In fields like healthcare informatics and statistics, new graduate programs have been created and grown dramatically in the US. As data gains importance, enterprises will be stretched to build their capabilities and find the right talent.

Lastly, the pursuit of data-led growth requires thoughtful understanding and protection of customer and partner interests in the area of privacy. Increasing consumer and regulator scrutiny is being applied to privacy. Each company should carefully consider the relationship, brand, contractual and legal risks of any customer or partner data it uses. A company's core business can suffer significant negative impact if the company violates customer or partner trust. Companies that take a misstep on privacy issues will suffer the consequences: They may suddenly face stormy customer relationships or brand concerns if they press ahead in sensitive areas. Facebook quickly had to address its privacy policy when consumers raised a furor over the expanding use of their data.

However, companies can manage and overcome privacy concerns too. For example, to comply with regulatory constraints the electronic medical records systems of leading health-plans protect the patient's identity from all except those permitted to see it. At the same time, these systems allow payers to use data in aggregate to derive insights and identify opportunities to improve performance. Many internet companies also aggregate data to make it anonymous and develop insights that do not violate individual privacy. A privacy strategy is an essential part of any plan for data-enabled growth. When properly conceived, it can actually help create data-led products and services that add tremendous value to the customer experience without destroying customer value.

Data at the core of future growth

Finding valuable data with the potential to generate growth is just the starting point. For most organizations, taking advantage of hidden data assets can be challenging. Data-led growth requires a company to invest in a concerted mobilization—across strategy, operations, customer relationships and fundamental organizational capabilities—before the company can realize data's full potential. As companies begin to harness data assets to enhance their customer experience and offer greater value, they get better at spotting new opportunities. The tsunami of data will continue unabated. The faster companies fashion more valuable propositions for their customers with data that matters, the more likely they will be to catch the data wave and grow.

¹ www.ericsson.com

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