
World-Class Global Communities: How Today's Technology Opens New Business Horizons

Gartner CIO Leadership Forum

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February 28 - March 1, 2011

Raffles

Dubai, UAE

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According to economic research firm IHS Global Insight, the world's economy is expected to grow at the reasonably healthy pace of 3.6% during 2010. As in the case of 2010, the fastest rates of growth in 2011 are expected to take place in emerging and developing nations, led by China with 8.6% growth expected and India at 8.1%. On the slow side of the growth spectrum will be Europe, which is expected to only grow 1.7% in 2011. Mid-2010 concerns about sovereign debt and sustained high unemployment rates were among the key reasons the aggregate market capitalization of more than 45,000 companies traded on 52 exchanges around the world fell more than \$7.5 trillion between May and July 2010. Because there are few signs that these same prevailing concerns will dramatically improve during 2011, in July 2010, we recommended to clients that they prepare a contingency 2011 budget that assumes the arrival of a second recession.

In its July 2010 World Economic Outlook Report, the International Monetary Fund (IMF) took a slightly more optimistic view about the prospects for near-term economic growth, and projected that, in 2011, the world economy would expand at a rate of 4.3% over 2010 levels. The IMF also concluded the fastest rate of growth would occur in Asia, but was slightly less optimistic about European growth and called for only a 1.3% increase in GDP growth for that region in 2011.

New Global Realities

"Simply put, there are no alternatives but to become 'more digital' with whatever assets are available."

Digital economy rankings, 2010
Economist Intelligence Unit

Source: http://commons.wikimedia.org/wiki/File:OceanaGold_mining_truck_Macraes_NZ.jpg

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The turbulent global economic conditions of the past few years have forced us all to understand the true reality of economic globalization. Strategic planning, both at a micro-economic level as well as a business level, requires an appreciation of increasing levels of indirection. For example, retail spending in Australia is linked to the mining boom, which is linked to growth in China, which is linked to demand for manufactured goods in the developed Western economies, which has been impacted by central bank decisions to deal with the risks to the stability of the euro as a result of profligate government spending in many Western economies. Everything is now interrelated and influenced by events on the other side of the world or just around the corner.

This year, our Top Predicts reflect this global outlook and the increasing impact of external influences, and highlights the increasingly visible linkage between technology-related decisions and investments and the outcomes, both economic and societal. The results, risks and opportunities that arise from IT investment decisions are becoming ever more visible, demonstrable and transparent. That means that, as CIOs and business and IT leaders, it is no longer enough to manage internal aspects of your business, you must learn how to plan for and respond to a growing range of external threats and find the opportunities that lie within them.



Technology underpins the processes that drive the daily functions of businesses, governments and economies, as well as our personal lives. But as technology becomes increasingly mission-critical, it raises the prospect of that same technology being used to attack, disrupt or destabilize the infrastructure of the nation states in which we live. IT as a weapon could have increasingly catastrophic results. In a recent interview (<http://video.ft.com/v/704659749001/Pentagon-official-US-must-do-more-to-fight-internet-attacks>), U.S. Deputy Secretary of Defense, William Lynn, described cyberspace as "the fifth domain of warfare" (alongside land, sea, air and space), and indicated that the U.S. needed to improve its ability to defend critical infrastructure, including power grids, transportation networks, financial systems and intellectual property from cyberattacks.

Attacks can be very narrow in their scope (such as the Stuxnet virus, which specifically targeted embedded control systems in nuclear processing facilities), generic "denial of service" attacks (such as those against the communications services in Myanmar in advance of elections) or more multimodal attacks on multiple installations and services, such as those directed at Estonia and Lithuania in 2007 and 2008.

In some cases, the source of the attack may be internal system failures and human error (such as stock prices falling to zero on the U.S. stock exchange in 2Q10), but these vulnerabilities will have been noted and could be targeted in future. Sophisticated, multimodal attacks are very difficult to counter. Most recently, the Wikileaks episode has demonstrated the disruption that just using the Internet to circulate information can cause. In all cases, after the initial disruption, we will see a lingering impact as systems are restored and initiatives, regulations and responses are enacted that will cause further issues. For example, the Wikileaks incident is likely to reduce the sharing of information among U.S. government security agencies, a policy put in place following the 9/11 attacks to improve the antiterrorism effectiveness of those same agencies.

Top Predicts 2011

By 2015, a G20 nation's critical infrastructure will be disrupted and damaged by online sabotage.

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In our first prediction, we highlight the significant role of technology in critical infrastructure, and suggest that, by 2015, a directed cyberattack against a G20 nation will be a reality. This is not futuristic or speculative — we have already seen numerous examples of what could be done.

Events at this level may seem "out of scope" for business leaders and CIOs, but to do nothing would be complacent. This is a natural opportunity to examine various scenarios in which normal operations would be disrupted, and adopting or adapting practices and technologies that would minimize the impact of external, hostile actions. For governments, disaster response plans need to be extended to encompass potential cyberwarfare attacks, and work with regional and global allies to coordinate their responses.

At a less dramatic level, those same plans will also aid the response to significant internal system failures, or significant external events (such as the Icelandic volcanic eruption in early 2010), natural disasters (tsunami, typhoons, earthquakes and so on) or even extreme weather conditions (such as the extended period of heavy snow which severely disrupted Northern Europe in December 2010).

Top Predicts 2011

By 2015, a G20 nation's critical infrastructure will be disrupted and damaged by online sabotage.

- ✓ Explore disruptive scenarios to determine impact and actions.
- ✓ Service providers should consider specialized offerings.
- ✓ Governments must take cyberwarfare more seriously.

Gartner

Recommendations:

- CIOs and IT organizations should consider scenarios in which normal operations could be disrupted and adopt/adapt practices and technologies that enable them to deal with potential disruption from hostile, external actions as well as internal system failures.
- Technology and service providers should model this scale of attack and architect specialized systems for select clients.
- Governments should prepare disaster response plans to more effectively mount a response to cyberwarfare, and work with allied nations to coordinate responses.
- Citizens could mitigate some risk by spreading assets to different regions, although obviously a large-scale disruption can block access to other regions.

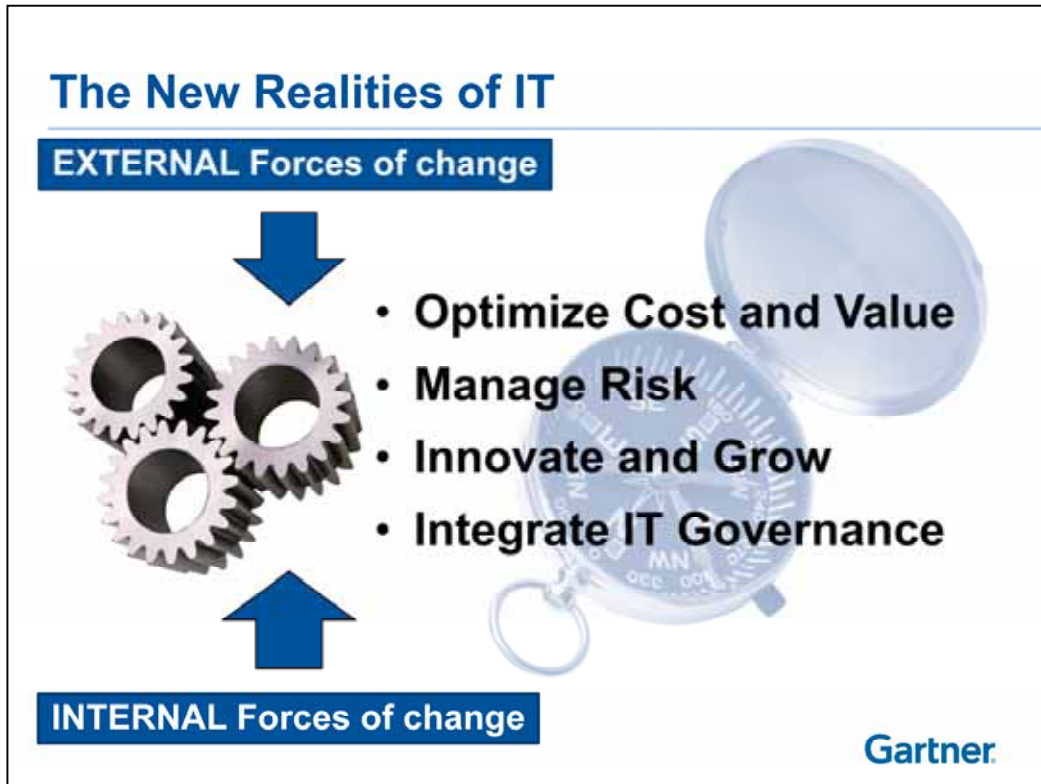
Related Research:

["IT/OT Convergence and Implications" G00206362](#)

["Enterprises Must Do More to Fight Cyberattacks Like Mariposa" G00205859](#)

["U.S. Cyberspace Office Must Resolve Coordination Challenges to Aid Agency, Defense and Industry CIOs" G00206438](#)

["Don't Think Targeted Attacks Like Stuxnet Can't Hit You" G00207166](#)




The new realities of IT are driven by disruptions on two separate levels:

External to the Enterprise: Emergence from the "great recession" will require changes in every business, industry and geography through 2014. Even when an organization is not directly affected, the actions of peers and competitors and the interrelated nature of the global economy will demand a significant response.

Internal to the Enterprise: As organizations emerge from the recessionary period they will see a blurring of internal boundaries as services, relationships and processes change. Most importantly, outdated distinctions between IT and the "business" must finally be eradicated as business leaders and the organization finally accept that IT is an integral part of the business.

In this new environment, enterprises must balance and integrate four imperatives: innovate and grow the business, optimize cost and value, manage risk, and a more integrated approach to IT governance. In most organizations, past IT practices have been characterized by fractured management, decision making and execution — such practices cannot sustain the complexities of the post-recession business environment. Among the new realities is that IT decisions can no longer stand alone; IT governance must be integrated into "business change governance" that explicitly goes beyond issues of IT supply and demand.

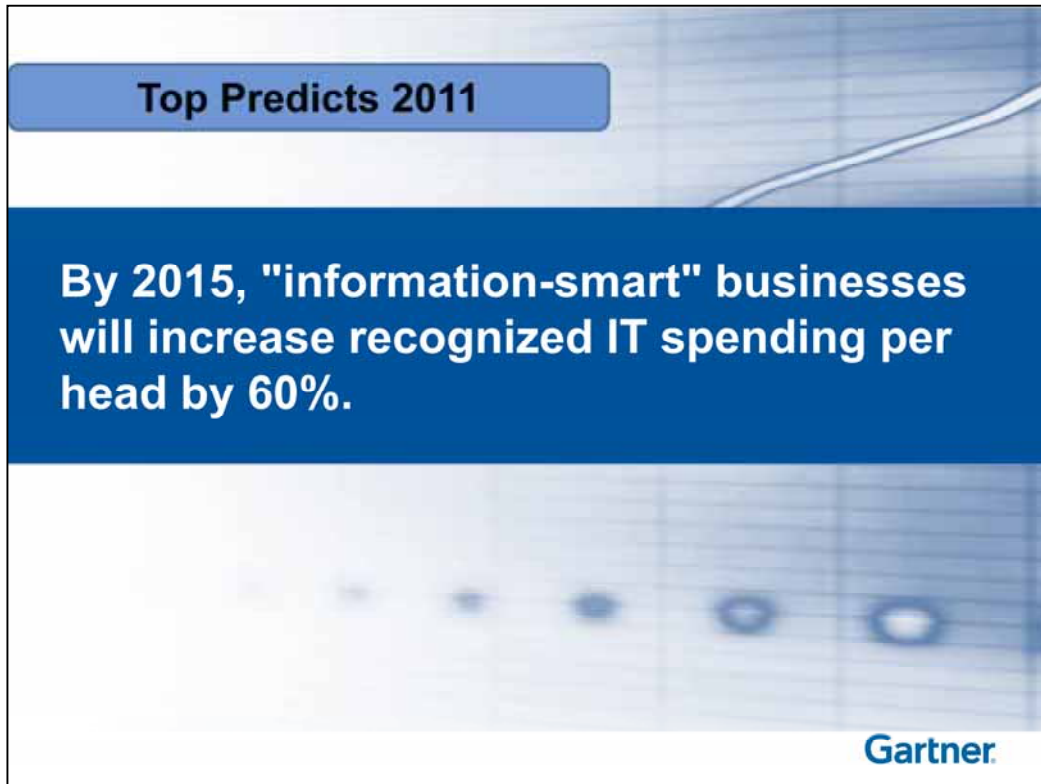
Optimize Cost and Value



Old Realities	New Realities
On-time and on-budget represent success.	Delivery of business outcomes is the measure of success.
Investment decisions based on ROI	Investment decisions based on managing costs and enabling innovation
Annual budget increment	Rolling forecast of what is actually needed

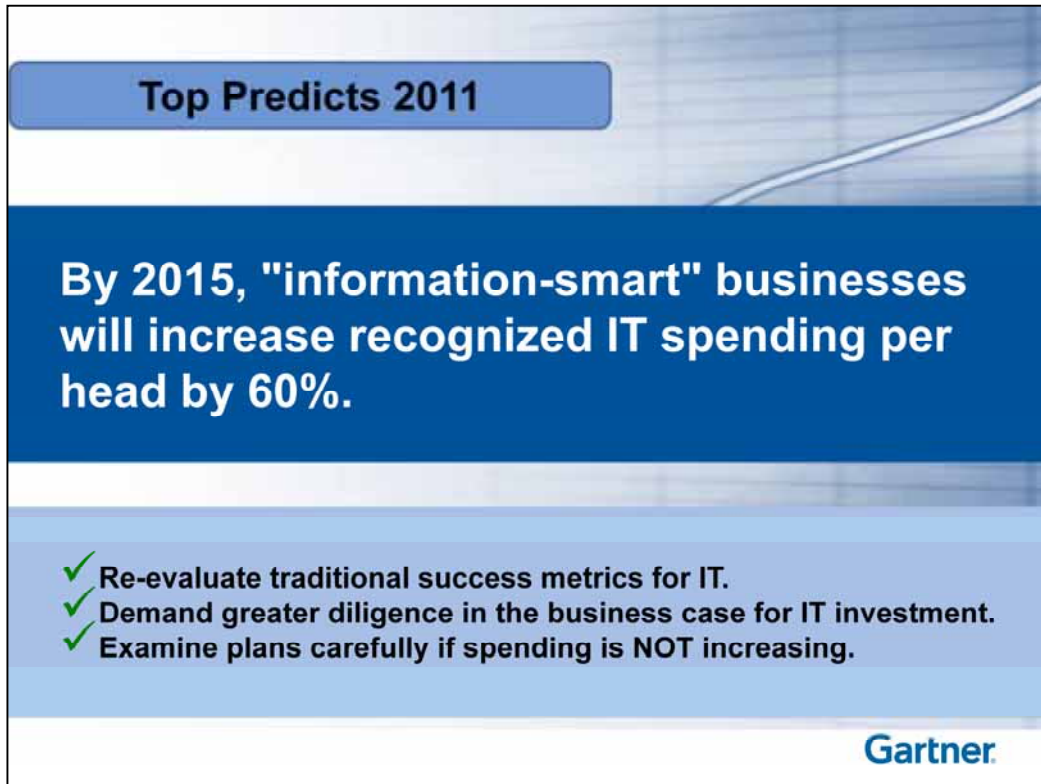
Gartner

Most IT organizations are out of heavy cost-cutting mode, but the focus on cost management remains. In the past, cost optimization was about saving money; now it's about investing in a smart way and managing risks downward. At the same time, IT organizations are being asked to deliver increased value to the enterprise in the form of greater agility, new capabilities and business-differentiating innovation. New categories of value, such as social value, now carry weight in IT investment decisions. Optimizing these emerging views of costs and value requires a continued focus on efficiency, as well as the exploration of new processes and delivery models that can help the IT organization deliver more value to the enterprise. The slide summarizes the changes in cost and value optimization under the new realities of IT investment.



Traditional IT financial performance metrics have shifted 180 degrees due to the recession, and IT investment contribution to business success must now be proven. As IT spending per employee organically increases in these market conditions, enterprise leaders and stakeholders must change their way of thinking that "lower is better" for this metric. Between 2003 and 2010 Gartner surveys show the average for "IT spending per enterprise employee" in the typical enterprise increased 52% to \$12,900 (includes centrally known IT operating expenses and capital spending). In low-friction, information-accelerated industries (financial services, healthcare, telecoms and professional services), the increase was 63% to \$17,900. We expect this trend to continue to reach spending of \$28,500 by 2015. IT consolidation, centralization, optimization and cost transparency programs related to the recent economic downturn have made IT spending more visible than in the past, increasing the "recognized" IT spending per employee now and in the future.

Continuation of enterprise staff reduction and freezes — as evidenced by continuing high unemployment rates (double-digit in most countries) — will drive IT spending per employee higher as the "jobless recovery" continues and higher IT capital spending returns to enterprises before increases in hiring. Many of the largest enterprises are just now reducing their staffing levels to meet long-term goals for enterprise optimizations, and new investment will be required to reach strategic optimization goals. Best-practice organizations will see higher IT spending per employee as a key performance indicator of enterprise health because it indicates the need for fewer enterprise staff due to current and future investments that enable automation, capital-labor substitution and industrialization of IT-enabled business processes.



Top Predicts 2011

By 2015, "information-smart" businesses will increase recognized IT spending per head by 60%.

- ✓ Re-evaluate traditional success metrics for IT.
- ✓ Demand greater diligence in the business case for IT investment.
- ✓ Examine plans carefully if spending is NOT increasing.

Gartner

Recommendations:

- Enterprises should re-evaluate the traditional "success" metrics for the IT organization to drive the right behaviors regarding enterprise productivity improvement and investment priorities. IT spending per employee should be evaluated as the primary success factor for the largest projects and for the entire IT investment portfolio, while IT spending as a percentage of revenue should be flat, declining marginally and seen as incidental to a better IT planning and budgeting process.
- Senior IT leaders should demand a higher level of due diligence in the business case for new IT investments, starting with expansion of the business case template to include quantifiable productivity improvements, enterprise goal alignment, multiyear cost estimates and funding commitments. Both IT and business leaders should be cosponsors, accountable for success and harvesting post-project productivity improvement.
- Make the fundamental question in all IT and business planning sessions this year: "Is IT spending per employee going to increase by 60% by 2015?"

Related Research:

"IT Metrics: IT Cost Transparency Action Plan, Definition and Performance Metrics to Start the Journey" G00206227

"IT Metrics: Office of the CIO Staffing Report, 2010" G00206534

"Chargeback Methods That Will Change IT Competitiveness and Effectiveness" G00201011

"IT Cost Optimization Round 2: Strategic Shifts and Doing Less With Less" G00205937

"Return to Growth: Moving IT to an Offensive Posture for Better Business Alignment" G00172257

A slide titled "Top Predicts 2011" with a blue background and white text. The main prediction is "By 2015, tools and automation will eliminate 25% of labor hours associated with IT services." The slide features a faint background image of a server rack and a flowchart with arrows. The Gartner logo is in the bottom right corner.

Top Predicts 2011

By 2015, tools and automation will eliminate 25% of labor hours associated with IT services.

Gartner

As the IT service industry matures, it will increasingly mirror other industries, such as manufacturing, in transforming from a craftsmanship model to a more industrialized model. Tools and automation are part of this transition. External service providers (ESPs) such as IBM and CSC have seen savings of as much as 30% on the cost of developing complex designs in an IT project through the use of visualization tools. ESPs such as Capgemini have seen leaps in productivity in the data center as a result of adopting standard processes and automation — for example, increasing the number of servers per administrator from approximately 30 to more than 100 in one year. ESPs with the financial and intellectual capital to invest in tools and automation will create a competitive advantage for themselves through the ability to lower overall costs, as well as decrease the time to deliver solutions. ESPs will sell tools and automation as products; thus, their advantage will be that they can control more of the entire stack and plan new components accordingly.

This trend does not necessarily mean thousands of IT jobs will disappear — tools and automation improve productivity and reduce the cost to serve, which means they have the potential to lower the cost of IT services, enabling more companies to afford the services of ESPs and invest savings into more IT projects. IT service firms need to invest in developing or adopting tools and automation to stay ahead in this market or risk being irrelevant. Those that lack the intellectual or financial capital to do so will be relegated to commodity staff augmentation status.

Top Predicts 2011

By 2015, tools and automation will eliminate 25% of labor hours associated with IT services.

- ✓ **Seek to leverage automation and tools embedded in services.**
- ✓ **Pay for outcomes rather than inputs.**
- ✓ **Focus on hiring the right skillsets and/or adequate training.**

Gartner

Recommendations:

- IT buyers should look for ESPs that embed their services with a wide array of tools and automation to reduce the time and effort involved. Their use of tools and methods should be globally consistent, and their people and contractors should be uniformly trained to use them. With rising automation, you may no longer be able to insist on the use of specific tools (the ones you use) as you might today. Instead, you will need to, together with the service provider, work to achieve good integration with your own internal processes.
- Pay for outcomes rather than labor hours.
- Ensure there is sufficient training and change management for end users. Automation often involves self-service by end users. Adequate training and change management is required to enable successful adoption.
- IT service firms need to leverage automation tools offered by software vendors, as well as develop their own tools.
- IT service providers should refocus their attention and skill sets on value-added services. This means hiring the right people with the right skills, or training existing professionals for higher-value-added work, while automating as much as possible.

Related Research:

"The Future of IT Services: Five Threats to the Industry, and What External Service Providers Need to Do" G00205604

"The Future of IT Services: Positive Impacts on Service Providers' Opportunities" G00205753

"Digitized Content Is Changing How Consulting Services Are Delivered" G00205734

"Emerging Service Analysis: Online Advisory Services" G00174220

Managing Risk

Old Realities	New Realities
All risk is bad and must be eliminated.	Risk is acceptable, but must be managed.
Managing risk is a separate responsibility.	Risk accountability lies with the business unit creating the risk.
Risk assessment is a one-time exercise.	Risk management is an ongoing element of governance.
Organizations have little visibility of risks, and this is acceptable.	Risk decisions are more complex, and continuous monitoring is critical.
Risk decisions are shrouded in secrecy.	Risk must be measured, and decisions are transparent and defensible.

Gartner

The line between IT risk and business risk is disappearing. Risk management increasingly plays a central role in business decision making, but many organizations' commitment to operating this way exceeds their ability to execute on it. Organizations must act now to formalize their risk programs and facilitate a risk-aware culture. The slide provides a summary of the cultural and process changes in risk management resulting from the new realities of IT investment.

The graphic features a blue header with the text "Top Predicts 2011". Below this is a dark blue box containing the prediction: "By 2015, most external assessments of enterprise value and viability will include explicit analysis of IT assets and capabilities." The background of the graphic shows a bar chart with several blue bars of varying heights. A green circular stamp with the word "APPROVED" is overlaid on the chart. The Gartner logo is in the bottom right corner.

During the due diligence for mergers and acquisitions, IT assets and costs are normally examined as part of estimating integration timing and cost, and synergy opportunities. Other assessments of company and government agency value, strategic position and viability, such as valuation for the purpose of equity or debt issuance, do not commonly include substantive analyses of IT capabilities. Increasing digitization of business processes, products and channels, integration of IT and operational technologies (OT), and the criticality of IT to competitive differentiation make it more essential for all analyses to include an examination of IT assets and capabilities. The broadening contribution of IT beyond process improvement to product innovation, business model innovation and management innovation mean that analyses must go beyond IT cost and business efficiencies to include IT's current and potential contribution to top-line growth, differentiation and business agility.

IT is having and will continue to have an increasing impact on business performance, competitive advantage, risk management and transparency, and enterprise ability to merge, acquire and partner. Methodologies for external assessment of IT assets, capabilities and contribution need to broaden to reflect the stronger, broader and more diffused contribution of IT to business viability and success. As this trend becomes more widespread, an increasing number of enterprises that believe they have superior IT capabilities will proactively ensure this becomes part of their brand image and reputation. Communications skills need to be built related to IT capabilities and IT organizations. CIOs need to be ready to communicate to new classes of stakeholders and in new ways.

Top Predicts 2011

By 2015, most external assessments of enterprise value and viability will include explicit analysis of IT assets and capabilities.

- ✓ **Maintain the right information and relationships to support inquiries.**
- ✓ **Clearly articulate and proactively communicate IT's contribution.**
- ✓ **Examine IT assets and capability.**

Gartner

Recommendations:

- CIOs should ensure they have the information and communications evidence to answer external stakeholders' questions about IT costs, IT-related risk and IT's contribution to business success, and maintain the right relationships within the enterprise, in areas such as finance, corporate relations, PR and legal, to make such communications routine and minimally disruptive. This will likely include increased engagement of members of your finance organization.
- CIOs should also work to improve all business executives' ability to articulate the contribution of IT to business success and build their your skills and knowledge, and those of their planned successors, in corporate finance, business strategy and communications.
- CEOs, CFOs and business leaders should ensure that their CIO is proactively producing powerful, transparent communications that address IT assets, capabilities and contributions to business value and business success.
- Financial analysts and other external assessors of company value and viability should ensure they are looking at IT assets and capabilities, not just in the context of cost and risk, but contributions to all forms of business value, including efficiency, effectiveness and growth, business integrity and agility.

• **Related Research:**

"The Real Business of IT," Richard Hunter and George Westerman, Harvard Business School Press, October 2009

"Building a Powerful Alliance with your CFO" G00160834

"The Seven Levers of Growth" G00149704

"Plan for a Second Recession, Now" G00205244

"CFO Advisory: Setting IT Investment Levels; Finance and Economics" G00174900

Top Predicts 2011

By 2015, 80% of enterprises using external cloud services will demand independent certification that providers can restore operations and data.

OK

Gartner

Cloud services are highly exposed to attack and require a relatively high level of security functionality to protect customer data from other customers, privileged users and Internet attackers. Many cloud service providers are making extreme and undocumented claims about the superiority of their fault-tolerant mechanisms, claiming that traditional disaster recovery mechanisms, such as offline backups, are no longer needed. It is difficult or impossible for existing, let alone prospective, cloud service customers to adequately evaluate a service provider's ability to recover from a data loss event or a disaster (man-made or natural) at one of their data centers. Risk assessments performed by neutral third parties are the most efficient way to leverage the work of qualified risk examiners across a repeatable business model, but "certification" programs that fully address the unique aspects of the cloud service market are not yet available.

Although many organizations have significant concerns about the confidentiality of their data when stored within a multitenanted cloud service, in many cases, the greater risk is one of data loss through an unrecoverable technical failure, a clumsy user error or a deliberate attack against a prominent cloud vendor. Some providers make no provision for it, claiming that their fault-tolerant mechanisms make offline backups unnecessary. Cloud service products cannot meet their full potential until buyers are able to quickly and reliably determine if an available product meets their requirements for security controls, regulatory compliance, business continuity and data recovery. However, a number of practical issues must be addressed before a program can be widely considered suitable for the cloud services model. The market is held back by buyers that lack a mature understanding of the relative importance, or classification, of their data and processes. Underestimating information sensitivity can lead to purchasing an inappropriately unreliable service, while overestimation can result in an organization avoiding what would otherwise be a useful service type, or paying too much for unnecessary levels of robustness.

Top Predicts 2011

By 2015, 80% of enterprises using external cloud services will demand independent certification that providers can restore operations and data.

- ✓ **Classify data to determine real risk control requirements.**
- ✓ **Demand specific information from your provider to assess risk.**
- ✓ **Treat risk transparency as a competitive advantage.**

Gartner

The graphic features a blue header with the title 'Top Predicts 2011'. Below it is a dark blue banner with white text stating the prediction. Underneath is a light blue banner with three green checkmarks and bold text. The Gartner logo is in the bottom right corner. The background has a faint pattern of binary code and a red circular stamp.

Recommendations:

- Security, BCM and IT DRM professionals should support business decision makers by providing them with practical data classification models that allow them to quickly and reliably determine their risk control needs.
- If the intended application involves sensitive information or processes, demand specific and comprehensive information about provider technology and control process to make a defensible assessment of the likelihood of the provider to experience and recover from an incident.
- Base procurement questionnaires on international standards, such as ISO/IEC 27002, and the BITS Standardized Information Gathering Questionnaire and the Agreed Upon Procedures (<http://sharedassessments.org>; both of which are undergoing modifications to better address cloud-computing services).
- Suppliers should offer their customers a choice of online and offline options for backing up their data, and provide evidence that they would be able to restore it to a functioning system, even after a widespread failure.
- Treat risk transparency as a competitive advantage. If you do have a SAS 70 evaluation, make it useful for buyers by providing them with the list of evaluated controls, but never position the existence of a SAS 70 assessment as being "proof" of anything. While it may be necessary for your company to undergo a SAS 70 evaluation to meet customer demands, it is not a "certification," nor does it include specific requirements for security or recovery.

Related Research:

"Will Your Data Rain When the Cloud Bursts?" G00206825

"SAS 70 Is Not Proof of Security, Continuity or Privacy Compliance" G00201110

"Analyzing the Risk Dimensions of Cloud and SaaS Computing" G00174873

"Survey Results: Assessment Practices for Cloud, SaaS and Partner Risks" G00175916


"Develop a Framework for SaaS Application Business Continuity Risk Mitigation" G00170285

"Analyzing the Risk Dimensions of Cloud and SaaS Computing" G00174873

"Case Study: ETS Shares Best Practices for BS 25999-2 Business Continuity Management Certification" G00169687

Delivering Growth and Innovation via IT

Old Realities	New Realities
Innovation and growth are about new products, services and markets.	Innovation is about growing the business and creating new forms of value.
Innovation is a closed, internal process.	Innovation is open and collaborative.
Innovation is about focusing our "best people" and experts.	Innovation is encouraged throughout the organization.
IT innovation is about selecting the right new technologies.	IT innovation is about managing emerging trends for the business.
Innovation is about R&D.	Innovation is about leadership.



Business growth and progressive change are perennial goals of every organization. While day-to-day management enables incremental growth and progress, innovation is aimed at organic growth — new products and services, step changes in efficiency or effectiveness of processes and services, and new ways of working. Innovation requires an attitudinal change and thinking on the part of IT leaders — from responders and followers, to entrepreneurs and leaders. In short, innovation must address not just growth, but also transformational change in how organizations drive productivity, reduce costs and spend differently.

Top Predicts 2011

By 2015, new revenue created by IT will determine annual compensation for most new Global 2000 CIOs.

Gartner

Although operating at lowest possible costs remains an imperative, enterprise executives understand that, without revenue growth from increased customer demand, returning to a sustained period of economic recovery will be impossible. As economies recover or expand worldwide, the greatest business contribution CIOs will deliver to their enterprises will be to foster revenue growth. Gartner's analysis revealed that four IT-enabled initiatives — context-aware computing, Pattern-Based Strategies, social networks and the channeling of IT staff innovation toward enterprise product development — can potentially deliver the most favorable effects to an income statement and increase enterprise revenue. Owing to the revenue-generating potential of those four IT-enabled initiatives by mid-decade, CIOs who are already skilled at generating revenue via IT will be enticed to join companies with an incentive compensation plan based on how much revenue the CIOs' efforts yield, and CIOs heedful of the revenue-generating potential of IT will offer to place the entire incentive portion of their total compensation at risk, in return for being rewarded based on how much new revenue their guidance, vision, creativity and leadership creates.

Investing in skills around social sciences, such as sociology, anthropology and economics, will help businesses and governments understand and explain human behaviors, with an emphasis on how people react to one another in different cultural settings. Improved analytic skills will help staffs uncover trends and opportunities, and avoid missing critically meaningful shifts in customer sentiments and preferences, while reining in techniques, such as critical thinking — a disciplined and methodical approach to analyzing information and reaching conclusions — will be key to revealing new revenue sources

Top Predicts 2011

By 2015, new revenue created by IT will determine annual compensation for most new Global 2000 CIOs.

- ✓ **Identify your 20 largest revenue-generating products or services.**
- ✓ **Build business cases to exploit IT to drive incremental growth.**
- ✓ **Devote 50% of R&D and training toward social sciences.**

Gartner

Recommendations:

- Identify your enterprise's 20 largest revenue-generating products or services.
- Master your knowledge of the channels by which each of the top 20 products is sold.
- Build individual cases, specifying how context offerings, pattern recognition and social networks will sell in a way that will lead customers to buy.
- Devote 50% of the R&D and training budgets toward funding social science education for staff. Examples include sociology, anthropology, cognitive psychology and ethnomethodology.

Related Research:

"Introducing Pattern-Based Strategy" G00168553

"Context-Aware Computing: A Looming Disruption" G00170550

"The Business Impact of Social Computing, 2008" G00161342

A graphic with a blue header bar containing the text "Top Predicts 2011". Below the header is a dark blue rectangular area with white text that reads "By 2015, 20% of non-IT Global 500 companies will be cloud service providers." The background of the graphic is a blurred image of a city skyline. The Gartner logo is in the bottom right corner.

Top Predicts 2011

By 2015, 20% of non-IT Global 500 companies will be cloud service providers.

Gartner

The current focal point of cloud computing is on the delivery of IT-related capabilities from IT-related providers, for things related to what the IT department is responsible for managing. Over time, we believe businesses will better understand that cloud computing is a means to deliver "IT-enabled capabilities," not just "IT capabilities." As this thinking evolves, the focus of cloud computing will shift toward exploiting it as a service delivery mechanism for the provision of non-IT capabilities. In this context, cloud computing enables these services to be delivered from organizations that are not traditionally seen as IT companies, nor have any intention of ever being seen in this way. For example, large retail organizations have begun to recognize that supply-chain competencies do not need to be commercialized solely through their stores, either physical or online. As discrete capabilities, they have their own revenue potential. Gartner has highlighted several trends that are fueling the business mandate behind this, such as the "hyperdigitization" of many industries such, as financial services, education, communications and media, government, and industry-specific intermediaries (i.e., travel and insurance).

The move by non-IT organizations to provide non-IT capabilities via the cloud will further expand the role of IT decision making outside the IT organization. As non-IT players externalize core competencies via the cloud, they will be interjected into value chain systems and competing directly with IT organizations that have traditionally served in this capacity. Consider the provision of IT-enabled business process capability. Traditionally, this is left to the business application vendor, with the IT department acting as the conduit between the vendor and the organization. In a cloud-enabled world, logistics IT-enabled capabilities will be supplied directly by logistics companies, or supply-chain IT-enabled capabilities from organizations with supply chain competencies. Cloud computing radically reduces the barriers for non-IT companies to provide IT-related capabilities.

Top Predicts 2011

By 2015, 20% of non-IT Global 500 companies will be cloud service providers.

- ✓ Understand IT's role in expanding the business possibilities.
- ✓ Help business units externalize competencies through the cloud.
- ✓ Consider partnerships to extend reach and capability.

Gartner

Recommendations:

- Understand that the IT department's role is not simply one of provisioning cloud services, but rather one of enabling the organization as a whole to become a cloud service provider in its own right.
- Begin recrafting business analyst roles. These people should no longer just be the conduit for the business into the IT organization, but should also be a conduit to help them externalize digitized core competencies to external stakeholders via the cloud.
- Technology and service providers should begin broadening partner programs to embrace organizations normally considered end users, and reconsider intellectual-property-related contract clauses that can create unnecessary tension and disputes with end users.

Related Research:

"Hyperdigitization Creates Major Opportunity for IT Services Providers" G00206030

"The Collective Imperative: Thriving in Chaotic, Out of Control and 'Normal' Markets" G00170823

"First 100 Days: Enterprise Information Management Initiatives" G00172864

Top Predicts 2011

By 2013, 80% of businesses will support a workforce using tablets.

Gartner

Fueled by the dramatic early growth of Apple iPads, media tablets are poised to grow dramatically (from 19 million units in 2010 to 208 million in 2014). Almost every major PC and smartphone manufacturer has launched or is planning to introduce a media tablet offering. Given that media tablets are based on low-cost mini-notebook technology (flash memory), they should be much less expensive than the PC tablets that were the primary choices until 2010. During the next year, we expect prices as low as \$250, and possibly lower when subsidized by various mobile operators.

Top Predicts 2011

By 2013, 80% of businesses will support a workforce using tablets.

- ✓ Provide tablets to key staff to understand potential uses.
- ✓ Leverage secure client utilities to provide zero footprint access.
- ✓ Design user experience around mobile devices to force simplicity.

Gartner

Recommendations:

- Prepare for the fact that many employees have already purchased iPads and are likely to use them on enterprise networks.
- Provide iPads (and consider newer media tablets as they come to market) to IT staff and key users to understand which applications and uses the iPad can — and cannot — support.
- Leverage the use of secure access client utilities like Citrix Receiver and Wyse PocketCloud to provide "zero footprint" access to centralized enterprise applications and data.
- Continue to offer traditional tablet PCs to standing and walking workers using forms and requiring extensive pen input.
- Focus long-term application strategies on Web-centric, cross-platform, cross-vendor tools such as HTML5 (Web-centric models are replacing client/server models), and design user experiences for mobile devices first to force simplicity and improved user experience on all platforms.

Related Research:

"iPads: Not Notebook Replacements but Still Useful for Business" G00206554

~~"CEO Advisory: Seize the iPad Opportunity Now" G00206555~~

Top Predicts 2011

By 2014, 90% of organizations will support corporate applications on personal devices.

Gartner

IT organizations are seeing growing demand by employees who want to use personal consumer devices, such as iPhones, iPads and Android smartphones, to connect with corporate e-mail, applications and data. A recent U.S.-focused Gartner survey of CIOs indicated that 85% of the respondents have users who demand access for the iPhone, iPod Touch and iPad, and 74% of the respondents already support these devices as personal assets. IT organizations are increasingly dealing with hybrid deployments that include personal and corporate devices connecting to corporate applications. A few organizations have moved completely to personal devices. Some organizations have also moved data contracts to personal liability to reduce mobility costs. The biggest challenge for IT organizations is to control the corporate footprint of personal devices and their access to corporate servers. Often, mobile consumer devices are not equipped with the security and management capabilities that can enforce IT policies. This situation is very different than that of past corporate BlackBerry deployments, over which IT organizations had full control.

When building client computing strategies, organizations realize that they cannot stop the influx of personal devices and are looking to the post-consumerization era, seeking ways to stop managing the devices used by workers. Hosted virtual desktops or server-based computing accessed through a secure access client provide an easy path to supporting notebooks, and even personal iPads, without compromising current desktop software approaches.

Top Predicts 2011

By 2014, 90% of organizations will support corporate applications on personal devices.

- ✓ Objectively assess the demand and evaluate potential benefits.
- ✓ Evaluate the risks, then develop and implement policies.
- ✓ Consider the impact on enterprise architectures and applications.

Gartner

Recommendations:

- Estimate the size and nature of internal demand for personal devices, including user demographics and the range of device types. Consider requirements across multiple client platforms, from smartphones to media tablets and notebooks/PCs.
- Evaluate the potential benefits in terms of cost savings and user satisfaction, and for supporting corporate applications on personal devices.
- Evaluate the risks, then develop and implement a set of IT policies to minimize them. Choose the best approach and tools to implement these policies, and control your corporate applications on personal devices.
- Evaluate the impact of personal devices on enterprise application architectures and delivery models to identify a common approach.
- Pursue a cross-platform application development strategy to minimize efforts for internal application developments.

Related Research:

"How to Support Corporate E-Mail and Other Applications on Personal Devices" G00206584

"SWOT: Android, Mobile Devices, Worldwide" G00172788


"Forecast: Mobile Communications Devices by Open Operating System, Worldwide, 2007-2014" G00205329

"Use Managed Diversity to Support Endpoint Devices" G00175781

"Creating New Policies for Employee-Owned PCs and Notebooks" G00206795

Top Predicts 2011

By 2015, companies will generate 50% of Web sales via their social presence and mobile applications.



Gartner

Smartphones and more-affordable 3G services have made accessing social media on the go more user-friendly and are increasing the popularity of social media overall. A Gartner consumer survey revealed that, while the adoption of social media activity via the PC has almost doubled, from 32% in 2007 to 53% in 2009, the adoption of social activity via mobile phones has tripled, from 8% in 2007 to 24% in 2009 (see "User Survey Analysis: Social Media Adoption Trends" G00201475). Web-capable mobile phones and smartphones are untethering customers from laptop or PC-based shopping experiences, and by 2013, the combined installed base of smartphones and browser-equipped enhanced phones will exceed 1.82 billion units. From 2013 onward, this combined installed base will be greater than the installed base for PCs. Companies will be challenged to keep pace with customers expectations for new capabilities. This fast-paced evolution will be driven by constant innovation from the mobile and social vendor community as it creates functions as a way to retain users. Enterprises' websites will be at the center of their customer experiences as activities such as product search, evaluations, promotions and collaborative shopping from mobile devices and social communities drive leads and transactions to their websites. In the social space, organizations will need to participate in many communities (such as Facebook, QQ and Twitter) and communication types (such as fan pages, status updates, tweets and other SMS-type communication). This will drive enterprises to add staff with these skills into their organization.

The mobile device has the most potential of any channel to provide "in context" offers to customers because of its access to identity (e.g., calendar), environmental (e.g., GPS location), process (e.g., wish list) and community (e.g., Facebook friends) information about the mobile device user

Top Predicts 2011

By 2015, companies will generate 50% of Web sales via their social presence and mobile applications.

- ✓ **Make mobile trials a priority, but make no assumptions about needs.**
- ✓ **Use analysis tools to identify key influencers.**
- ✓ **Move toward context-aware promotions to leverage information.**

Gartner

Recommendations:

- Get going with mobile trials, but don't assume that you know what mobile customers want and need. Start small, then build.
- Ensure you have a mobile strategy that is customer-driven, not technology-driven. Improve the stickiness of your mobile application, and regularly enhance these applications with new features or upgrade the application consistently.
- Use analysis tools, such as social graphs, to monitor your market and organization, to find key influencers, and to determine how to engage with customers.
- Ensure that you choose capabilities based on their returns, not just their "coolness" — but be sure to experiment a little.
- Ensure that you update your budgets to include mobile and social sales initiatives.
- Ensure that all community initiatives have a clear purpose (e.g., to drive leads or get users to register for event-based sales or theme sales, such as ecofriendly products) before starting.
- Move to a context-aware promotions model that leverages information about the mobile and social user.
- Monitor traffic coming from mobile and social channels to ensure that it is not experiencing delays or lost connections.

Related Research:

- "User Survey Analysis: Evolution of Consumer Internet Preferences" G00200473
- "User Survey Analysis: Social Media Adoption Trends" G00201475
- "Context-Aware Computing and E-Commerce" G00200943
- "How Mobile E-Commerce Should Be Using Context, but Isn't" G00171203
- "Top Eight Ways Context Will Make Your M-Commerce Applications Stickier" G00200392
- "Equinox Uses a Context-Aware iPhone Application for CRM" G00174688



Top Predicts 2011

By 2015, 10% of your online "friends" will not be human.

Gartner

The Web continues to evolve in the social dimension. Almost every website is becoming a social site, and every social site is evolving toward a social platform. Most efforts at social engagement are handled manually (with paid staff or volunteers), in a manner that is hard to scale. But there is an emerging "engagement gap" in the way that enterprises and organizations approach the social Web, a gap that will be partially filled by the arrival of automated software agents — "social bots" — that will help address the need for larger-scale social interaction between organizational entities and broad communities of users. Social media strategy involves several steps: establishing a presence, listening to the conversation, speaking (articulating a message) and, ultimately, interacting in a two-way, fully engaged manner. Thus far, many organizations have established a presence and are mostly projecting messages through Twitter feeds and Facebook updates that are often only an incremental step up from RSS feeds. In 2010, large organizations embarked on systematizing the act of listening — monitoring social media conversations in blogs, social sites, forums and more. Vendors like Attensity, Radian6 and Visible Technologies are making inroads into the enterprise sector. However, the act of engagement — projecting a message through social channels, not in a broadcast style, but in an interactive manner suited to the characteristics of the social medium — has yet to be systematized and automated. By 2015, efforts to systematize and automate social engagement will result in the rise of social bots — automated software agents that can handle, to varying degrees, interaction with communities of users in a manner personalized to each individual.

A major inhibiting factor is that the largest social site, Facebook, has a core design goal that friends on Facebook are real people and not fake personas (and, therefore, created Facebook fan pages to serve the needs of corporate entities). It is possible that Facebook may relax its approach over time, or alternatively that the quantity of "casual connections" on services such as Twitter will result in greater numbers of connections to meet the prediction forecast of one-tenth of online friends. As the Web becomes increasingly social, the job of marketers will shift from one-way broadcast or projection of a market message to two-way, personalized interaction with individual users.

Top Predicts 2011

By 2015, 10% of your online "friends" will not be human.

- ✓ **Build a strategy to overcome the "engagement gap."**
- ✓ **Consider hybrid approaches to facilitate engagement.**
- ✓ **Move from "automated listening" to "automated engagement."**

Gartner

Recommendations:

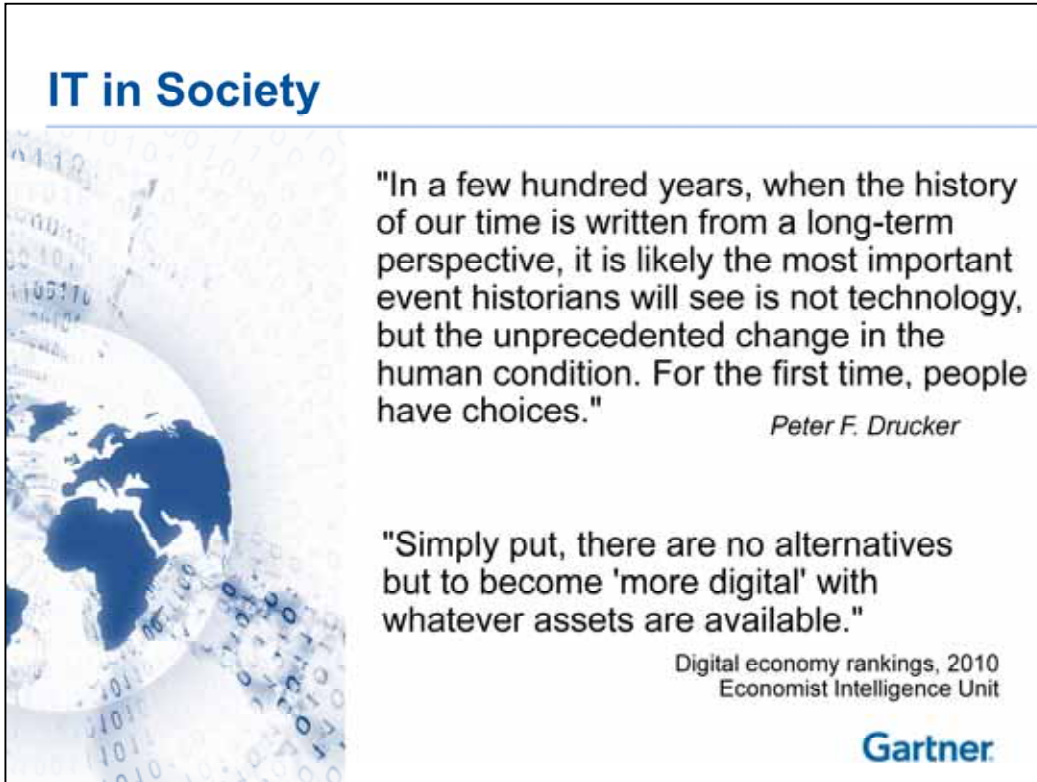
- Organizations and enterprises that address large constituencies or audiences should anticipate an "engagement gap" in large-scale use of social media, and should formulate a strategy to address that gap.
- Social media strategists and community facilitators should analyze tools for automating (fully or partially) certain aspects of social engagement, and weigh these tools (including their attendant imperfections) against lost opportunities by not using them. A hybrid approach that combines automated assistance with human talent and skill may be the best approach. Regardless of approach, strategists and policymakers should favor a policy of full disclosure and transparency regarding the use of these technologies.
- Vendors of sentiment analysis tools should consider supplementing their tools for automated listening with tools for automated engagement.

Related Research:

"Recommendation Technologies: Navigating a Fragmented Media Universe" G00171147

"Facebook and the Emerging Social Platform Wars" G00152268

"Social Data: Interoperability Leads Portability" G00152304

The graphic features a blue globe on the left side, partially obscured by a semi-transparent grid of binary code (0s and 1s). The text is arranged to the right of the globe. The title 'IT in Society' is at the top left in a bold blue font. Below it are two quotes in black text, followed by the source information and the Gartner logo in blue.

IT in Society

"In a few hundred years, when the history of our time is written from a long-term perspective, it is likely the most important event historians will see is not technology, but the unprecedented change in the human condition. For the first time, people have choices."
Peter F. Drucker

"Simply put, there are no alternatives but to become 'more digital' with whatever assets are available."
Digital economy rankings, 2010
Economist Intelligence Unit

Gartner

"Innovative digital practices and applications are arguably being conceived and put in practice in the emerging world faster than the developed world. Simply put, there are no alternatives but to become 'more digital' with whatever assets are available. Mobile data tools and services are one area where the emerging world equals or outpaces the developed world in usage habits; the use of ICT as a platform for building capacity in education services is another ... The Digital Economy Rankings demonstrate that there are many ways to harness the power of the Internet to improve economic prospects and the lives of people."

(From "Digital economy rankings 2010, Beyond e-readiness" published by the Economist Intelligence Unit in cooperation with the IBM Institute for Business Value.)

Recommended Reading

- **"Predicts 2011: IT Opens Up to New Demands and New Outcomes"** G00209551
- **"Gartner's Top Predictions for IT Organizations and Users, 2011 and Beyond: IT's Growing Transparency"** G00208367
- **"The New Realities of IT"** G00205392

For more information, stop by Gartner Solution Central or e-mail us at solutioncentral@gartner.com.

