



## Research Brief

# Megaforces in the Software Industry Causing Natural Selection

**Abstract:** *Software vendors have to be responsive to change, constantly preparing for natural selection as the IT industry struggles with market discontinuities. Technological and business megatrends are driving change in the market environment and in the business model.*

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### Key Issue

How is the competitive landscape for this market going to change?

### Recommendations

- Software vendors must understand what industry forces are most relevant to the business and monitor the changes to drive new strategies for current survival and future success.
  - Software vendors must take the imperative of reinvention seriously as their business migrates from product mode to service mode.
  - Software vendors must stay nimble to improve their capability and viability as the new services value chain unfolds.
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## Why Take a Fresh Look?

The global economic slowdown and customers' buying behavior changes caused drastic declines in many software vendors' license revenue in 2001. Gartner Dataquest believes this trend will continue through 2002. As software vendors continue to face tough short-term pressure, they are increasingly in survival mode, which puts their hallmark innovation capability at risk. Gartner Dataquest believes that innovation is a necessity, not an option, for software vendors, even in a hard time. Innovation must come from not only the technology aspect of the business but, most importantly, from the marketing and service side of the business. To continue to innovate, software vendors must take a fresh look into the megaforces that will change the market conditions and business models.

## Technology Megaforces

The technology megaforces are identified as follows:

- **Pervasive computing** — Although desktop computing will not become obsolete in the foreseeable future (because of its power, flexibility and general-purpose qualities), pervasive or ubiquitous computing on the global network of a variety of intelligent and portable non-PC devices (such as cellular phones and personal digital assistants [PDAs]) best represents software's future. Developing applications that enable and leverage pervasive computing means enormous opportunities and daunting challenges for software vendors. Success undoubtedly belongs to the most prepared.
- **Business activity monitoring (BAM)** — Enterprises must help speed up the information flow, continuously monitor business activities, react to events as they occur and offer new products and services based on instantly available information. Software vendors must develop highly sophisticated systems that can drive the lags and latencies out of the business processes. Only those that understand the imperative of BAM can develop software with such a capability.
- **Web services** — Many hurdles, such as standards, security, privacy and vendor readiness, could stop the vision of Web services from being fully materialized. However, few doubt that the benefits of Web services can be real and appealing if deployed correctly. Delivering software components via the Internet, which allows business functions or services to readily access each other, Web services offers a new level of efficiency, integration and collaboration. As a greatly modified battlefield for software vendors, Web services is creating opportunities and threats for established vendors (such as BEA, Hewlett-Packard, IBM, Microsoft, Oracle and Sun Microsystems) and startups.

- **IT utility** — The concept of IT utility (sourcing IT infrastructure, applications and business processes as services) is a revolutionary vision, promoted by large IT vendors, such as HP (computing on demand) and IBM (e-business on demand), and their large enterprise customers. As this model (available on demand and billed on usage) matures, it will become more attractive and accessible to small-and-midsize businesses (SMBs). The development of IT utility and the growth of outsourcing will significantly influence the software business. As more enterprises outsource its IT functions, less opportunity will exist for software vendors to sell directly to end-user organizations. Once software vendors sell their software as a utility-type service and target various service providers as buyers, they must change not only their positioning and value propositions but also pricing structure, revenue recognition methods, sales and marketing strategies, and customer support approaches.
- **Service dominance** — In the foreseeable future, packaged software revenue will remain the smallest of the four segments in the overall IT market (the other three are telecommunications, systems and peripherals, and IT services), but the software sector will grow faster than telecom, and systems and peripherals. Services represents the largest fast-growing segment, and service providers, especially those business solution aggregators, business process architects and business application integrators, will have closer relationships with end-user organizations and greater permission to play in their business value chains. Most of the software vendors face the challenge of accepting that their ultimate business is being aggregated as an ingredient or component in the value webs.

## Business Megaforces

The business megaforces are identified as follows:

- **Collaborative commerce** — Since its inception, the focus of software has been on improving individual productivity and departmental process efficiency within enterprises. The widespread adoption of the commercial Internet has driven the enterprise to shift the focus from intra-enterprise interaction to extra- or- interenterprise collaboration. The whole software industry faces the challenge of enabling this strategic business transformation. Software vendors must change their mindsets to embrace the concept of collaborative commerce, helping their customers and their own organizations to harness the full power of the Internet. This would include conducting all business activities (for example, plan, procure, R&D, manufacture, sell, market, and service) and interacting with all business stakeholders (for example, customers, suppliers, distributors, partners and investors) across a web of businesses.

- **Verticalization** — Most of the software was developed and marketed as standalone solutions for a horizontal IT function and business process, such as database, enterprise resource planning (ERP), customer relationship management (CRM) and supply chain management (SCM). They have also been expanding horizontally, from operating systems to databases to ERP (manufacturing, finance, human resources [HR]) to CRM (sales, marketing and customer service) to SCM (SCP and SCE), based on the notion of cross-selling. Although the approach has some merit and has achieved some success, customers have been demanding that the vendors understand their business (the specific industry, segment, enterprise and process). Software vendors that cannot deliver vertical relevance and value to their prospects and customers set themselves up for continued erosion of their value proposition.
- **Stock market values** — The stock market across the world has been rewarding the software vendors for their product-oriented business model: the higher their quarterly licenses revenue, the higher their stock price. The software vendors have tried their best to sell their software as a product in a monolithic suite and charge the customers big upfront license fees to please the investors quarter after quarter. Since the economic slowdown, customers have been resistant to buy and be billed the same way. Sooner or later, software investors and software vendors will realize that the high-unpredictability, high-volatility and high-vulnerability model may not work well in the future. There is some consensus that software will eventually be sold as a subscription service (similar to the concept of "IT utility" discussed earlier, or subscriptions to TV programs) on long-term renewable contracts.
- **Regulation** — Software vendors will continue to face regulatory issues: The protection of software vendors' intellectual property, to a large extent, depends on the government policy and regulations. Especially in the developing countries, software vendors hope that activity-harming innovation and limiting customer choice can be reduced by governmental forces. Software vendors must follow the right accounting practices defined and redefined by the governments as the product model migrates to the service model. Software vendors hoping to improve by themselves have to prepare for the government's future scrutiny into their product quality and reliability as well as their accounting practices.
- **Globalization** — Although many political, social and cultural hurdles exist in the process of globalization, the enterprise's need to optimize all business activities and results by utilizing business resources (such as natural, human and financial) at a global basis has never been more compelling. Many software vendors have realized significant savings and competitive advantages by moving their R&D offshore (to countries such as India and Ireland). Globalization has not only helped software vendors save costs in developed countries but has also opened new market opportunities (such as those in China). At the same time, they have to prepare for the new competition from those same developing countries.

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## Gartner Dataquest Perspective

Gartner Dataquest will continue to monitor the megaforges affecting the software industry. There will be periodic updates on the changes brought about by these megaforges. Software vendors' product-focused business models have not changed much in the past 20 years. Many of the past success formulas will not be applicable in the future. Gartner Dataquest believes that fundamental business assumptions and strategies have to change if software vendors expect to survive and thrive in the IT industry's natural selection.

This document has been published to the following Marketplace codes:

SOFT-WW-DP-0083

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