Software Leadership for the Next Decade

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To thrive in the next decade, software vendors must deal with the emerging maturity of the information technology marketplace. Prospects and existing customers alike are buying differently. Purchasing takes place both inside and outside traditional IT departments; it is conducted globally, but with localized needs for language and regulatory compliance; it reflects an increased priority placed on business issues rather than technology ones; and senior executives show a growing focus on operating expense replacing capital expense. To succeed in this changing market, software firms will need several key attributes:

- **Scale**, effectively used to reach prospects where they are;
- A comprehensive, integrated **portfolio** of software assets;
- A focus on **industry and business processes** to anchor and leverage that portfolio;
- A strong **services organization** integrated with the product teams; and
- A **partner ecosystem** for delivery through direct and indirect channels, to large and small customers.

Many of today's largest vendors have gaps in one or more of these areas that will keep them from top tier success unless addressed. The IBM Corporation is an example of a vendor that has assembled these components throughout the past decade and, with effective execution, is well positioned to leverage them to sustain its leadership.

Other elements will play a role, as they always do. The visibility and value of information technology in every business have raised the profiles of its leading suppliers, and changed the way those firms position themselves as corporate citizens. Delivering value to shareholders and customers informs all corporate decisions, of course, but there is a growing realization that for the largest vendors, the notion of value extends beyond the immediate transaction. For the vendors who define the industry, it has become apparent that "doing well by doing good" has immediate benefits. Those firms that can position themselves in the context of geopolitical macroeconomic initiatives will more easily secure business from governmental entities. The most obvious manifestation is in the explosive interest in green technologies, but other initiatives – taking a role in driving healthcare infrastructure, for example – also provide opportunities for leadership. Geopolitical leadership is not our topic in this paper, but no IT leader can afford to ignore it – its absence will be a negative. The largest enterprises follow this lead; they participate in the same trends, and often partner with the same governments.

Size Matters – The Effective Use of Scale

The largest vendors have a key advantage: reach in a global economy means the ability to project support, sales, and innovation everywhere. Having more products, more salespeople, more marketing money – these things are obvious advantages in generating revenue. But keeping it flowing, and becoming a strategic partner, requires that software vendors have other skills as well. The world's largest IT consumers have sizable IT staffs, and despite cloud computing, software-as-a-service, and outsourcing's rise to prominence, most of them will continue to do so. They will experiment with leading edge products, including offerings from smaller players, in search of competitive advantage. But when their mission-critical needs are on the table, they will look for proven, reliable firms with the scale to advise, service and support them around the world, and the proven practices in place to assure performance to agreed service levels.

For software companies, helping customers use their resources effectively is a key opportunity. Enterprise customers demand platforms that can accommodate multiple software environments, manage and assure them, and allow them to interoperate. Even a seemingly simple requirement like desktop provisioning can have a huge impact, says Patty Medhurst, Manager of Distributed Labs and Host Facilities for the Royal Bank of Canada(RBC). Her organization manages and tests all the software and hardware changes that go to branches, call center environments and other parts of the financial institution like investments or insurance:

"Automating the [assurance] process with one desktop, we've seen 100 minute savings - and in our environment there are 120 desktops. We also rebuild desktops five times a release, and there's at least eight releases a year, so the savings is in the thousands of hours."

Other vendors may provide some components of the portfolio, from development tools, databases, and application servers all the way to packaged applications, but having one strategic partner whose scope not only covers all this but extends all the way to managing the software assets is clearly a key desired attribute in leadership, and in RBC's case IBM's business service management tools have played a key role: "This is truly a joint partnership with IBM: they were the experts in the tool and we were the experts in the environment," says Medhurst. Strategic partnership requires vendors to make effective use of scale to deliver better, faster, and with greater agility.

Learning is part of the equation at this level of scale: vendors must take responsibility for customer support and market development to succeed in the enterprise. Inattention – or outsourcing, as sometimes occurs – will not only cut off a customer connection needed for relationship maintenance, it will shut off an important flow of ideas, making IP development for developing business-oriented offerings harder. Having dedicated services offerings is thus an important part of the scale issue.

The objective for any business is straightforward: keep growing. Capture ever more customer logos, share of wallet, and partners. Growth is an even more complex challenge for larger firms; organic growth in explosive new markets often seems too slow. Growth by acquisition brings revenue, but creates staff and technology integration challenges and more complexity for Marketing and Sales to deal with. Add to that the difficulties of the economy, the magnitude of the investment the biggest customers make – and how easy it is for them to shave a few points off their spending - and it is easy to stumble. This leads us to consider another key point: the power of building and managing the portfolio.

The Software Portfolio as Foundation

Many combinations of software are described as "platforms." The notion is that the parts can be assembled, integrated with user-created parts, and applied to the solution of specific problems in many different ways, customized to each use and each user. In modern, service-oriented architectures (SOA), the creation, deployment and management of these components can involve many vendors, and this can pose problems of ownership as well as technical fit. Customers benefit substantially when suppliers have the breadth, integration, and management tools to be a single source where possible, or a "prime contractor" where legacy components are in place and must be reused.

IBM has aggressively built out its software portfolio over the past decade. Its focus on innovation has led to its continuing leadership in patent development – for instance, IBM registered more than 300 patents for SOA technologies, and 227 for information management in 2009. In addition, IBM has acquired over 100 software firms and progressively integrated them into a portfolio designed to interoperate and embrace other products using industry standards. It has invested over US \$1B in Linux and open source projects, contributing IP to over 150 open source projects to advance the state of the art in freely available code. The portfolio is thus an evolving foundation for firms to build their own software architecture and vision upon.

Customers use the pieces of this portfolio in many ways. The elements of a set of applications for Allianz Group's life insurance division included a database, a set of tools for administration and log analysis, and related utilities designed to manage continual improvement and upgrade of future systems. For Reinhard Lenk, Department Manager, IBM's breadth made the difference:

"Since we receive the database system and tools all from one vendor, we expect smooth and rapid support for new DB2 versions. This increases our reliability, efficiency and ability to act."

More heterogeneity is inevitable, but assurance across the stack will fall to a lead strategic software partner. IBM's software assets extend beyond database and other information management technology into an industry-leading suite of products and services for

business analytics, leveraging and integrating predictive mathematics from its research organization - the largest mathematics group outside of academia - with its leading business intelligence tools. It is finding ways to connect those to its sensor-based middleware and business process management and combine all of the above with collaboration technologies to build seamless business connections inside and outside the firewall.

As IBM began its 99th year in business, powerful first quarter results demonstrated that the breadth of the portfolio was continuing to drive software revenue. The synergies across the product portfolio continue to grow as acquired offerings are integrated. One example likely to deliver substantial upside in the year ahead is business analytics, where Cognos offerings and the newly acquired SPSS products become available in beta versions on System z. The industry as a whole is "moving analysis closer to the data," and much of the world's critical transactional data resides on the still-vibrant (and about to be refreshed) z platform.

Industry and Business Process Culture Leverages Services Assets

In the latter part of the 20th century, monolithic software applications targeted at enterprise resource planning (ERP), customer relationship management (CRM) and similarly large-grained notions were installed at great expense. Many of these projects failed; others "succeeded" but never delivered on their inflated promises. It became evident that finer-grained business process, and industry specificity, was a better path. This "microverticalization" requires intellectual property (IP) about business processes and the industry they live in. Software companies need to continually develop it, "harden it" for reuse, and become expert at the process of monetizing it.

Constructing new offerings in a micro-vertical world will be too expensive if the whole stack is new every time. A market such as software to support the process of creating and tracking applications for funding pharmaceutical research might realistically have no more than a few hundred potential customers. The economics of building for that market dictate that most of the stack must be reused software – e.g., database, application server, rules engine, analytic tools – with the "secret sauce" being the IP assets described above, reified and delivered in software that leverages these components. A further advantage comes when the customer already has some of these components and the incremental costs of the new solution are thus reduced.

Businesses expect their strategic providers to offer these solutions to specific business problems (read: business processes and their effective execution and management) within the context of their environment (read: industry, regulatory and commercial partner requirements.) IT may have advisory, even veto, power – but the value proposition that will reach these buyers is a business one, not a technical one. That go-to-market motion, and its fulfillment, depends on a services organization. The opportunities are identified and

targeted there, the delivery is its responsibility, and its impact on revenue drives cultural values within a large organization. IBM made the move to a sizable services presence in the 1990s, and it has become a major contributor to the firm's revenue. Clearly, IBM has made a transition whose impact is still being felt as cross-business offerings like Business Analytics and Optimization, combining Services and Research with software and hardware, project a holistic offering leveraging the entire portfolio into carefully targeted markets.

Partners Deliver: The Key to Solutions Focus and Market Coverage

In a market dominated by a few large software platform vendors — IBM, Oracle, Microsoft, and SAP in particular — channel partners, independent software vendors (ISVs) and systems integrators (SIs) help to develop innovative products, reach new and emerging markets, and craft new business models to compete and grow. The large vendors must offer technical and marketing support, in return receiving value added to their base offerings and additional sales pull-through in markets that are harder to reach with their direct sales model: multiple geographies, industries, and smaller prospect firms. The ever expanding size and scope of these software platforms — OS, middleware, database, development tools, management tools, business applications, business components, analytics, and more — demands growing investment into global partner programs to make them effective, and competitive.

IBM's PartnerWorld program is one of the most mature, with the global scope of a firm that has been a leading enterprise computing supplier for decades. Software now generates more revenue for IBM than hardware, and its complex product portfolio benefits can be daunting to navigate. Accordingly it offers an array of services beyond technical partnership and development training and support — including lead generation and fulfillment, deal registration, marketing programs, financing, and sales training — to drive success for its partners.

Financing and packaging support extends the power of smaller firms to "punch above their weight" by smoothing out the revenue flows in jointly offered solutions: IBM can package its own and other partners' products as part of a larger deal to be delivered over time, but passes on revenue to the partners up front. It can also, IBM attract partners to consider IBM systems and software by offering financial incentives like those IBM Global Financing recently made available to Sun resellers. Finally, global partner programs are all the more powerful when they have a strong focus on fostering collaboration with and among partners. Increasing use of social media, with search front ends and assistance in building business models jointly and with each other has been a recent focus.

Software Leadership is a Continuing Journey

Complacency is the enemy of large organizations; the tasks ahead are no less difficult than those already accomplished. Size demands strong effective leadership, and IBM has demonstrated its rigorous focus on developing its executive team with a steady cadence of reassignments that teach new skills. Executives move across software divisions, to and

from hardware and Services, often. Leaders of acquired companies not only remain, but move into the culture and become part of the growing skills exchange. The result: leadership is seen internally and outside the firm as "IBM executives," not "software" or "hardware" or "services" leaders.

The complexity and size of the portfolio has its own challenges, and IBM has responded with a continuous effort to describe and execute transparent roadmaps for integration. A recent example is the Smart Analytics System, a workload-optimized bundle of hardware, software and services targeting the business analytics space – it appeared first on the POWER platform and within a year became available on z and x systems, with appropriate bundles of software on each.

Services depth and breadth across industries and geographies sets IBM apart among the software leaders. It is where the IP culture manifests itself most directly – expertise, templates and experience from the field contribute enormously to the realization and evolution of IBM's vision of a business solutions focus. Finally, projecting that into the marketplace through partners adds a dimension of continuous change that helps the ongoing renewal process, and while IBM listens to its partners it is likely to stay on course in sustaining that dynamic.

IBM has assembled the elements described in this paper: scale, a broad portfolio, a focus on business process innovation, a strong services arm, and partnership skills to launch a steady and continuing growth pattern. Software has been a key revenue driver at IBM for many years, and the firm's robust financial performance has been anchored by software's contributions. IBM maintains one of the industry's most effective communications engines to convey its vision as well as its execution strategy and tactics. It has formalized customer-driven development and input from stakeholders and industry observers as key steps in its processes, and this visibility will stand it in good stead as it seeks to sustain and grow its leadership in a changing information-based economy.