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Global Software Leaders Key players & market trends





About



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The interviews

In addition to its quantitative findings, this report also includes insight from interviews with 23 software company executives. We thank all of them for their contributions

Adobe

Rob Tarkoff, Senior Vice President, General Manager of Digital Enterprise Solutions Group

Berger-Levrault

Pierre-Marie Lehucher, CEO

BMC Software

Bob Beauchamp, CEO

Cegid Group

Patrick Bertrand CEO

Citrix Systems, Inc.

Harry Labana, Vice President & CTO

Dassault Systèmes Bernard Charlès,

CEO

ESI group

Alain de Rouvray,

Infosy

S. Gopalakrishnan CEO

Kingdee

Duke Chen, CFO

Linedata

Anvaraly Jiva, CEC

Microsof

Jean Philippe Courtois, President, Microsoft International

Mimecast

Peter Bauer, CEO

MindTree

Krishnakumar

NetSuite

Jim McGeever, COO

Neusof

Liu Jiren CEO

Sage Group

David Clayton, Group Director of Strategy & Acquisition

SAP AG

Jim Hagemant Snabe, CEO

Software AG

Karl-Heinz Steibich CEO

Sybase

Dr. Raj Nathan, Executive Vice President of Technology Strateg

Symantec

James Beer, CFO

Temenos

Andreas Andreades CEO

VMware

Shekar Ayyar, Head of Strategy

Wipro

Sanjay Gupta, Senior Vice President

Welcome

As the technology industry shifts its focus away from the downturn to revenue growth, companies are turning their attention to how best to take advantage of the plethora of changes brought on by innovation and technology advances. Three developing trends are transforming not only the software industry, but the way the world at large accesses and leverages technology:

- Cloud computing The cloud has given rise to the fundamental change from software as a product to software as a service.
- Mobile devices The exploding popularity of smartphones and tablets demands that software have the flexibility to work on a variety of platforms and devices, in a variety of locations anytime, anywhere.
- The consumerisation of technology Enterprises are responding to workers who are increasingly tech-savvy, and who want synergy between the technology they use at work and in their personal lives. This development is blurring the traditional lines between the enterprise and consumer software markets.

These trends are causing software companies to rethink their business model, collaborate more closely than ever before, and focus even more sharply on what their customers want.

We are honoured to present this edition of *Global Software Leaders*, a unique initiative of PwC and leading software associations. This report not only provides a look at the world's leading software companies, but also offers a snapshot of the present state of the industry. More importantly, it highlights the thoughts and insights of leading executives on where they see the industry going and how best to meet the challenges ahead. We thank those who took the time to share their ideas with us. We believe open dialog benefits the industry as a whole.

Whether your company is focussed on the cloud, mobile applications, or networking, there's no doubt that the changes taking place offer both challenges and opportunities. We hope this report helps you respond effectively to market changes and helps you to plan your business strategies to succeed in the new tech reality.

Raman Chitkara Global Technology Industry Leader **Pierre Marty**European Software Lead Partner

Software associations

The software industry today is a \$250B market that drives many technological and societal innovations. The industry contributes to overall productivity and growth of the economy because of the high levels of competitiveness and innovation it brings to other industries, and the enabling role IT plays in changing the way other sectors do business every day.

Cloud computing, mobile devices, and the consumerisation of technology are transforming the software industry. It is a time of great change, great opportunity, and great challenge. Mobility, collaborative workspaces, social networks, and software-as-a-service are all becoming significant drivers of IT transformation and will require investment and commitment from leading companies to succeed. This transformation is promoting greater collaboration between the different IT stakeholders: software, hardware, IT services, and telcos. But R&D and innovation, sustainable development, and IP protection will still be crucial topics in this new world.

Companies, industry associations, and governmental bodies all need relevant analysis of market trends to adapt their strategies and roadmaps. As key software and IT associations, we are pleased to support PwC in providing a strong tool to analyse IT transformation all over the



Patrick Bertrand President, AFDEL France



Members of the European Software Alliance



John Higgins
Director General,
Intellect



J.B. Wood
President and CEO
TSIA
USA

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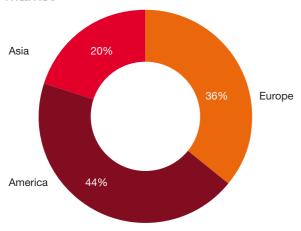
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Global Top 100

- Software includes application software, system software, tools, SaaS, and open source fees
- This ranking is based on licence and maintenance and support revenue
- OEM activity is included in the software vendor figures (Microsoft, etc.)
- Figures are Pierre Audoin Consultants estimates and have not been validated by the companies

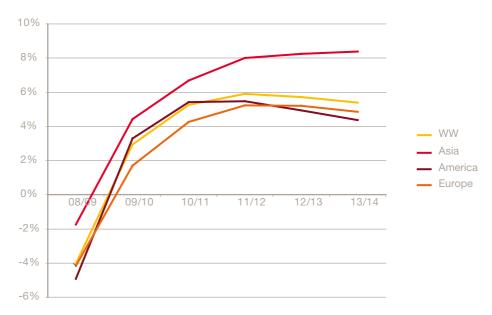
Global software market





* Licence, maintenance, and support Source: Pierre Audoin Consultants (PAC), 2009 figures

Growth in software product* in %



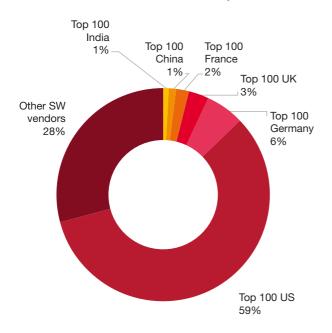
* Licence, maintenance, and support Source: Pierre Audoin Consultants (PAC)

Dank			Software	Total	Software
Rank	Company	Nat.	revenue (in m €)	revenue (in m €)	total
	Microsoft*	US	32 686	42 504	77%
2	IBM	US	14 429	68 660	21%
3	Oracle	US	13 854	16 758	83%
1	SAP	DE	8 111	10 672	76%
5	EMC (incl. VMware & RSA)	US	4 244	10 057	42%
3	Symantec	US	3 969	4 234	94%
7	HP	US	3 065	83 807	4%
3	CA	US	2 825	3 080	92%
)	Intuit	US	2 299	2 340	98%
0	Adobe	US	2 067	2 127	97%
1	Apple	US	1 529	26 965	6%
2	Fujitsu (incl. FSC as of Apr 09)	JP	1 505	35 653	4%
3	Sage	UK	1 477	1 644	90%
4	SAS	US	1 475	1 656	89%
5	BMC Software	US	1 261	1 352	93%
 6	Cisco Systems	US	1 261	26 551	5%
 7	NEC	JP	1 220	27 300	4%
 8	Hitachi	JP	1 162	68 330	2%
 9	Autodesk	US	1 140	1 222	93%
0	McAfee	US	1 120	1 382	81%
 1	Infor Global Solutions	US	1 103	1 586	70%
 2	Dassault Systèmes	FR	1 100	1 251	88%
- 3	Citrix Systems	US	930	1 157	80%
4	Salesforce.com	US	863	931	93%
5	Synopsys	US	780	995	78%
26	Sun Microsystems (acquired by Oracle as of Jan 2010)	US	754	8 327	9%
27	TrendMicro	JP	675	739	91%
: !8	SunGard	US	644	3 949	16%
9	Cerner	US	643	1 177	55%
0	McKesson Technology Solutions	US	641	2 210	29%
 1	Check Point Software	US	590	663	89%
2	NetApp	US	585	2 426	24%
 3	Software AG (incl. IDS Scheer as of Sep 09)	DE	581	847	69%
 4		UK	567	814	70%
 5	Misys	US			88%
6	Novell PTC	US	554 525	631	76%
 7	Sybase	US	506	839	60%
 8		US	499	576	
	Mentor Graphics				87%
9 	Quest Software	US	471	498	94%
0	Autonomy (incl. Intervoyer as of Ech (0)	US	466	17 573	3%
1 ວ	Autonomy (incl. Interwoven as of Feb 09)	UK	465	531	88%
2	Open Text	CA	462	571	81%
3	Condense Perion Systems	US	460	631	73%
4 	Cadence Design Systems	US	454	611	74%
5	Red Hat	US	453	531	85%
6	FIS (Fidelity National Information Services, incl. Metavante as of Oct 09)	US	449	2 958	15%
7	Ricoh (incl. IKON as of Oct 08)	JP	436	15 362	3%
8	Google	US	434	16 958	3%
.9	Sterling Commerce (acquired by IBM in May 10)	US	403	466	86%

Rank	Company		Software revenue	Total revenue	Software total
		Nat.	(in m €)	(in m €)	lotai
50	ESRI	US	401	556	72%
51	Xerox	US	401	10 884	4%
52	Nuance Communications	US	398	701	57%
53	Tibco Software	US	397	449	89%
54	Fiserv	US	365	2 923	12%
55	Comverse	US	364	606	60%
56	Kronos	US	363	496	73%
57	ADP	US	359	6 450	6%
58	Ansys	US	357	371	96%
59	Amdocs	US	335	2 113	16%
 60	Lawson	US	332	546	61%
 31	Progress Software	US	328	357	92%
 32	Informatica	US	314	359	87%
: 33	Intergraph	US	310	552	56%
64	NCR	US	304	3 307	9%
 35	***************************************	US	298	739	40%
	VeriSign				
6	Attachmate	US	285	337	85%
67	CSC	US	281	11 410	2%
8	Kaspersky Laboratory	RU	270	280	96%
 	Teradata	US	270	1 225	22%
70	TOTVS	BR	268	388	69%
71	Logica	UK	265	4 151	6%
72	Agfa HealthCare	BE	263	1 178	22%
'3	Acision	UK	260	342	76%
'4	Samsung SDS	KR	260	1 403	19%
75	Fair Issac (FICO)	US	255	465	55%
76	Pitney Bowes	US	248	3 993	6%
77	Unit 4 Agresso	NL	236	379	62%
78	Accenture	US	227	15 938	1%
79	Bentley	US	227	332	68%
30	The MathWorks	US	225	322	70%
31	NCS	SG	223	972	23%
32	Epic Systems	US	213	426	50%
33	MicroStrategy	US	211	271	78%
 34	Meditech	US	211	283	74%
 35	Constellation Software	US	211	314	67%
	ACI Worldwide	US	210	291	72%
 37	Websense	US	202	225	90%
 38	Wincor Nixdorf	DE	195	2 250	9%
39	Exact Software	NL	193	233	83%
90	F5 Networks	US	193	482	40%
91	JDA Software	US	192	277	69%
	Northrop Grumman Information Systems (NGIS)	US	190	6 174	3%
93	Micro Focus	UK	187	196	96%
94	Epicor (incl. Scala & NSB)	US	187	294	64%
95	Aspen Technology	US	185	227	82%
6	Neusoft	CN	183	437	42%
7	iSoft (IBA Health)	AU	180	291	62%
8	Fujisoft	JP	178	1 079	17%
9	Concur Technologies	US	177	183	97%
00	Jack Henry & Associates	US	176	542	32%

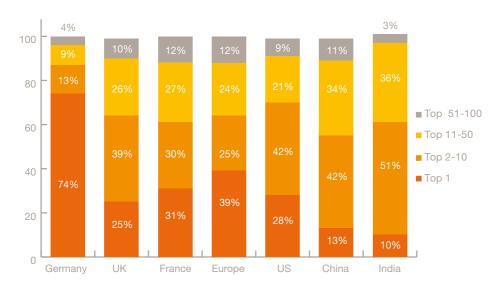
Key market figures

Share of the local software Top 100

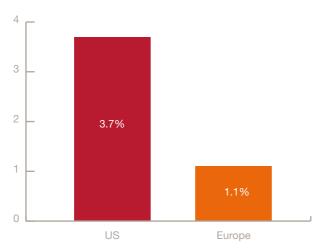


Source: Pierre Audoin Consultants (PAC), 2009 figures

Concentration of Top 100 software vendors by geography

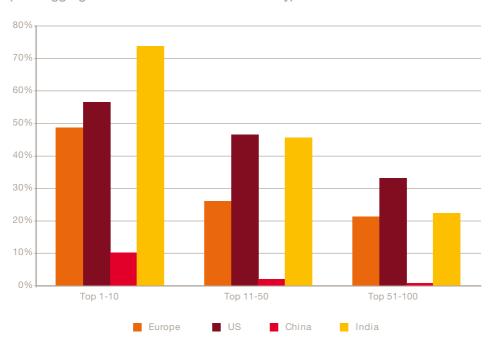


% of SaaS revenues in the Top 100



Source: Pierre Audoin Consultants (PAC), 2009 figures

International activity of the Top 100 software vendors (% of aggregate revenue outside home country)



Analysis & opinions







The global software industry: a time of transformation

The software industry is undergoing significant change as new technologies and customer behaviours emerge

The software industry faces mutually reinforcing forces — cloud computing, mobile computing, and the consumerisation of technology — that are reshaping software provider strategies in several areas: the design and deployment of software, the delivery channels for software, and the economics of software licencing.

The underlying direction these forces represent tracks toward heterogeneity of digital resources, in which people use multiple platforms. Users increasingly draw from software and other resources provisioned as services that they then orchestrate both in personal and business contexts. Digital resources are more flexible and malleable, and the behaviours of customers, employees, and partners are accordingly more personal and situational. This versatility drives each user to choose the resources that make sense for them.

That's a very different context than the drive to monolithic, carefully controlled environments that customers and software vendors made in the 1990s and 2000s. If the 1990s were when customers chose

pre-integrated all-in-one suites over the individual "best of breed" products, the 2010s will be when customers choose individual services and expect them to at least partially self-integrate.

This nascent trend is already reshaping software provider and customer strategies away from the traditional packaged/on-premise software model to a flexible, on-demand services model across a range of platforms: mobile, desktop, data centre, and cloud.

The recession is also credited with changing some basic IT customer expectations around focus and control, which have accelerated the rise of mobile and cloud computing in the enterprise segment.

How will software companies adapt to thrive in their industry? To explore this question, PwC asked the CEOs and senior executives of a number of key representative software providers around the world about how these key trends will impact their business over the next five years. We are happy to present herein the results of this joint analysis, which confirms that the industry is actively monitoring the new trends and adapting its strategy to a rapidly changing environment.

"The transformation to a true 'digital enterprise' will be the business challenge of the next decade. To achieve this, I see the implementation of a flexible, software-based process layer across company departments, suppliers, and partners as the key enabling technology. This transformation has already started and today we are radically changing the way our customers do business. We are opening a whole new world of business models and business opportunities to them."

Karl-Heinz Streibich, CEO, Software AG

"Going forward, we'll see complete self-service and agility — as a user you should have the quickest, shortest path to getting whatever you want. This shift has been coming in bits and pieces, but now they're coming together."

Shekar Ayyar, Head of Strategy, VMware

"The technology levers will be oriented towards nomadism: performance, collaborative working methods, and capacity to handle large volumes."

Patrick Bertrand, CEO, Cegid

"As collaborative innovation is moving towards social innovation, user perception and security will become strategic differentiators for online applications."

Bernard Charlès, CEO, Dassault Systèmes

"Enterprise software used to find its inspiration in military and intelligence, then enterprises would adopt. It's now coming from consumers, and the position that puts enterprises in is difficult."

Rob Tarkoff, SVP/GM of Digital Enterprise Solutions Group, Adobe Systems

"The cloud is one of the hottest topics concerning financial executives and CIOs right now. It's a dramatic change from three or four years ago, when they didn't view it as part of their application stack. But that's changed dramatically."

Jim McGeever, COO, NetSuite

"The adoption of 3D lifelike user experience will be democratised with cloud technology."

Bernard Charlès, CEO, Dassault Systèmes "In the near future, customers will subscribe to multiple combinations of cloud providers. We will be dealing with a more heterogeneous environment than we have now."

Bob Beauchamp, CEO of BMC Software

The implications of cloud computing

One of the most pervasive influences on the software industry is the emergence of cloud computing, which includes software as a service (SaaS), the rise of cloud-based platforms for both external "public cloud" services and for internal use in the data centre as "private clouds," and the notion of vendor-provided application/service "streams" on demand. "I don't think I've seen anything as fundamentally disruptive as cloud computing in a long time," says Bob Beauchamp, CEO of BMC Software.

Cloud computing integration will continue to intensify

Cloud computing — both public services provided over the Internet in the "public cloud" and private ones deployed within a company's own "private cloud" data centre — promises to make resources, from storage to full-blown applications, available as needed and paid for as consumed as an operational expense. The debate no longer concerns whether cloud computing is emerging, but rather what forms it will take, the changes in the value chain that will result, the pace at which it will expand, and whether it will coexist with other models.

For the last few years, it has been mainly the individual consumer and small businesses driving the use of cloud technologies. This "bottom-up" adoption has created an environment in which business and government are now expected to do the same.

As a result, software vendors are adapting their cloud computing strategies depending on their resources, the nature of their products, and the perceived expectations of their customers. Some vendors are convinced that cloud computing will become the dominant — if not exclusive — software delivery mode in the future. Others believe that this scenario is still some way off, or even out of reach until issues regarding security, guaranteed quality of service, localisation of critical data, and the need for personalised solutions have been resolved. All these issues, combined with the disruption that cloud computing involves, suggest that the pace of the transition may be more gradual than generally predicted.

With regards to the value chain, the challenge for software vendors will be to position their value proposition between those who would control the data centre, considering the industrial nature of this capital-intensive activity, and those who would try to reach new customers (through the use

of app stores, for example). Note, however, that many software vendors believe these value propositions are not threats to their models, but are instead tools they can use to better leverage their value proposition.

During this industry transformation phase, multiple models will coexist, service ranges will develop, and cloud offerings will slowly but surely differentiate themselves to meet the increasingly diverse needs of users.

SaaS will change software vendors' organisations as well as their pricing strategies

A broad consensus is emerging among software vendors regarding the major organisational changes triggered by switching service offerings over to SaaS.

Increasingly, the concept of separate sales channels - one for self-service SaaS applications used by smaller customers and one for on-premise deployment at larger customers — requires rethinking, as customers of all sizes look at SaaS offerings instead of or in addition to traditional offerings.

However a software provider handles the multiple business channels, it remains critical that the provider both retains its existing customer base and develops the organisation in a way that creates opportunities to gain new customers.

This strategy might be done through the coexistence of SaaS with traditional delivery modes. However, this is by no means straightforward because SaaS requires an internal transformation in terms of the marketing and sales approach, as well as

> "The next wave of SaaS will require robust application architectures and platforms that can provide end-to-end integration across entire business processes and that can handle very high volumes of transactions with superior availability."

Jim Hagemann Snabe, CEO, SAP

data centre management (internal and external). It also has a customer expectation of frequent updates that don't break existing integration points, unlike traditional on-premise software's pattern of a major change every few years.

The SaaS approach also entails changes in financial flows because of its subscription and pay-per-use pricing models. In the new cloud consumption models, licence and maintenance revenues that were paid upfront collapse into subscriptions that may be paid for monthly or on a transaction basis. Professional services fees to implement and integrate software could evaporate for providers that do not extend their services focus to cross-cloud-application integration, extending beyond the domain of their own applications.

Moreover, expectations of value-based pricing and related promises of pay-per-use consumption of software products will be increasingly featured into software providers' pricing strategies. This value pricing approach is sure to cause debate between customers and providers as to the actual value and its financial worth — bringing both a new conversation to navigate and a new financial model to work out.

This shift to SaaS began in earnest during the recent recession, which is credited with further changing IT customer expectations that have accelerated the rise of mobile and cloud computing.

"For established software companies, the biggest disruption would be moving to newer engagement models based on technologies like cloud computing while sustaining growth and margins."

S. Gopalakrishnan, CEO, Infosys Technologies

> "For value-based pricing, the war on how the added value will be shared has just begun. However, this business model is growing and will keep growing.'

Patrick Bertrand, CEO, Cegid

December 2010

Concerns over data security and privacy in the cloud will not be easily overcome

Opinions on data security and privacy in the cloud are vastly divergent. Logically, the more software vendors' applications manage sensitive customer information such as intellectual property and financial data, the greater the degree of scepticism. On the other hand, for highly standardised applications and software dealing with data or processes of lower perceived added value, the security concerns are considerably smaller.

Furthermore, many believe that the level of security provided by data centres is superior to what many small and medium-sized enterprises are capable of providing in-house. In this area as in others, one can expect ever-greater differentiation in the services (and therefore in the prices) that cloud players will be able to offer.

"Security is the big issue.
It may be overcome within
five years, but this is not
sure."

Andrea Andreades, CEO, Temenos

"Increasingly, customer willingness to use cloud technologies is on the rise, especially if it deals with data that is not confidential or at risk."

Dr. Raj Nathan, EVP of Technology Strategy, Sybase

"What's valuable in life is not the device but the information contained or consumed through and by that device. Portability, security, and ease of access to the information are an important theme that will increase over the next few years."

James Beer, CFO, Symantec

"We see three major classes of devices: small screen, medium screen, and large screens, such as smartphones, tablets, and PCs. People will want to consume on all three types of screens."

Harry Labana, VP & CTO, Citrix Systems, Inc.

Mobile computing will change software business strategy

The trend toward heterogeneity of digital resources is highlighted by the recent rise of mobile computing. "Mobile is an essential part of any business today and needs to be an essential part of any business strategy," says Jim McGeever, COO of NetSuite.

The fast adoption of mobile has implications for several aspects of the software business. One is that mobile computing is a perfect venue for cloud services, as they let mobile workers tap into services and information that even today's advanced smartphones aren't designed to carry with them.

Laptop and home-based users had already opened the door to accessing corporate resources over the Internet, and mobile usage ensures the door will stay wide open. This trend has implications both in desired software capabilities, centred around access to information in multiple locations, and in the security and management of the access.

A third implication of mobile computing is that the major mobile platform providers today are not the same companies that powered the client-server revolution of the 1990s. Their distinct approaches to

software design, development, deployment, and sales could influence the overall software market. Unlike PCs, smartphones and tablets have an array of sensors that provide customer and employee context such as location and motion, opening the potential for new types of applications, not just convenient portals to back-end systems.

Mobile's unique capabilities, its alwaysavailable context, and its nontraditional operating systems all have profound implications for how applications are designed, as software developers will not be able to assume users have a specific platform (as is largely the case with desktop PCs). People choose mobile devices because of their specific interface and capabilities, so they'll expect both new and legacy software to appear native when accessed through mobile devices, even when software lack a common logic and code base. Emerging Web technologies can reduce some of the development complexity, but software developers are now faced with a significant increase in platforms to support.

A clear sign of the growing importance of mobile in the software industry is the flurry of business moves and acquisitions to bring mobile technology into leading software companies' portfolios.

Technological expertise will remain essential but not the main value creation driver

While all software providers are aware of the importance of technology, this is often not where their primary added value resides, nor does technology guarantee their survival in the market — particularly for application software.

For many, value creation is driven rather by intimate knowledge of customer business processes, the quality of the solutions and the customer relationship, and the ability to develop products that can meet the evolving needs of users over time. Consoli-

dating this know-how is the primary development driver for many software vendors. The technology in itself and the control over material infrastructure are therefore often perceived as levers for this strategy.

Nonetheless, technologies enabling analytics, security, virtualisation, and social networking are regularly viewed as a strategic advantage. With regards to analytics, one objective takes the form of actionable near-term intelligence, meaning predictive systems that can better anticipate customer demand and behaviour.

"Digitalisation is a driver to transmit value. The value resides in the intellectual reasoning integrated in the software and in the use of knowledge."

Alain de Rouvray, CEO, ESI Group

"When you can tie your webcollected information about your customers and prospects to your internal purchasing and customer information databases, you are able to market to them and service them in completely unique ways.

It's the ultimate marriage of big data systems and the web in service of the external customer, not internal employees."

Rob Tarkoff, SVP/GM of Digital Enterprise Solutions Group, Adobe Systems "At the end of the day, it takes a lot of resources and investments to operate cloud services, serve and support millions of customers around the world, with the best possible SLA. Only a handful of companies in the world can afford such an investment and have the experience to provide developers and users support. It also takes a mix of software/hardware and telco skills to do so."

Jean-Philippe Courtois, President, Microsoft International "Nowadays, with the help of the Internet and networks, access to customers is easier than in the past. Customers can also discover you, but so do competitors. There is now more pressure in the marketplace."

Peter Bauer, CEO, Mimecast

"We see the emergence of social media as a way for doing marketing, branding, and getting the customer satisfaction and employee satisfaction pulse."

Sanjay Gupta, Sr. VP, Wipro

"The greatest use of social networking today is enabling us to understand our customers and develop solutions based on their needs."

David Clayton, Group Director of Strategy & Acquisition, Sage Group

Customer knowledge and user interaction will not slow down

New distribution modes based on the pooling of resources and software/hardware infrastructure will lead to more standardised service offerings, increasingly remote delivery modes, and the potential for a more anonymous sale process.

However, interaction with customers and users is taking on new forms, including user communities and social networks. Social networking is increasingly used as a marketing medium, an intelligence-gathering medium, and an internal collaboration enabler.

Also increasing is the use of tools for analysing users' behaviour, a change in traditional analytics focus that is proving to be a rich area of exploration for software providers, particularly around the concepts of predictive analysis, contextual analysis, and "Big Data" analysis of very large data sets pulled from multiple sources.

All these approaches are useful to maintain contact with users and adapt service offerings, always with the goal of meeting specific customer needs and developments as closely as possible. This is especially the case when the software is developed to answer a specific business issue.

Through social networking, cloud computing, e-commerce, and self-service, people — customers, employees, and business partners — are increasingly interacting with providers in digital channels. As this digital transformation takes deeper root, so too change both the expectations of customers and the opportunities that businesses and individuals have to engage, transact, and collaborate with each other.

Nevertheless, although delivery modes may be rerouted through cloud computing or app stores, for example, and customer interaction may be boosted by virtual communities, human interaction with customers is frequently a point of differentiation and will remain essential to the sale process as well as to the development of solutions adapted to users' needs. In this regard, for many software vendors, an app store is likely not the appropriate way to sell complex software, and even if it is used as a delivery mode, it remains debatable as to whether it becomes a route to creating customer relationships.

"Service is becoming more and more important in our offerings. We believe fundamentally our value is evidenced in the service that we provide, and that is also where the customer values us most."

Liu Jiren, CEO, Neusoft

"Service is both complementary and essential to SaaS."

Pierre-Marie Lehucher, CEO, Berger-Levrault

The service component of the offering will be a key differentiating factor

Software vendors tend to view themselves less as technology providers than as service providers or suppliers of services and content.

This view is not surprising when you consider the Technology Services Industry Association reports that, on average, enterprise software companies receive 70 percent of their revenues from services. These services revenues are mostly composed of traditional maintenance contract revenues and professional services revenues related to implementing and integrating software.

The services concept is obviously part and parcel of the definition of the cloud model, where users do not pay for the software but for the service it enables or for its output.

In this environment, mass customisation will become one of the main drivers of market performance and will require vendors to provide a rich supply of software modules. However, the notion of "services" often goes beyond merely providing access to online applications. Many observers believe that on-site service will continue to be a leading driver of differentiation and quality, and thus will help build lasting customer relationships.

This focus on services may benefit certain IT services firms that will use it as a way to expand their service offerings to software products.

Even in a "flat" world, local presence will remain crucial

It is a commonly held view that the world is increasingly flat and that the value of physical local presence — proximity — is diminishing.

This is generally a fair point in the context of making available physical resources and software for broadly standardised applications or usages. In particular, the new "flat" models provide easy access to customers and markets without necessarily having to build a local distribution infrastructure or network.

However, proximity is far more pertinent in the context of the storage and circulation of data deemed "sensitive," and where services and access to customers are at stake. In such situations, the consensus view is that physical location is key.

Where business processes get more complex, the customer relationship is generally essential to the sale, and therefore proximity plays a key role. This applies to the provisioning of services as well as to the precise analysis of customer needs in rolling out complex business solutions.

"Companies that did not have the ability to reach markets like India are now able to do that with the SaaS model."

Krishnakumar Natarajan, CEO, MindTree

"Lots of business decisions remain based on physical location. Proximity does matter." Jiva Anravaly, CEO, Linedata

Consolidation will continue, as new competitors emerge from start-ups and other industries

The software sector is continuing to concentrate around the key market leaders. This makes it hard for medium-sized companies to position themselves as market consolidators.

At the same time, a profusion of entrepreneur-led small businesses are continuing to drive innovation and to thrive, up to a point. The fast-paced development of software vendors with serious ambitions is also a feature of emerging markets, even though software revenues remain limited in comparison to the major companies, which are mainly US-based.

The recent recession also had an effect on the software industry, pausing spend and then creating opportunities for a wave of acquisitions and mergers. It also created a demand for more customer-facing and analytics-based software efforts within enterprises to maximise revenue as companies began to rebuild and grow again.

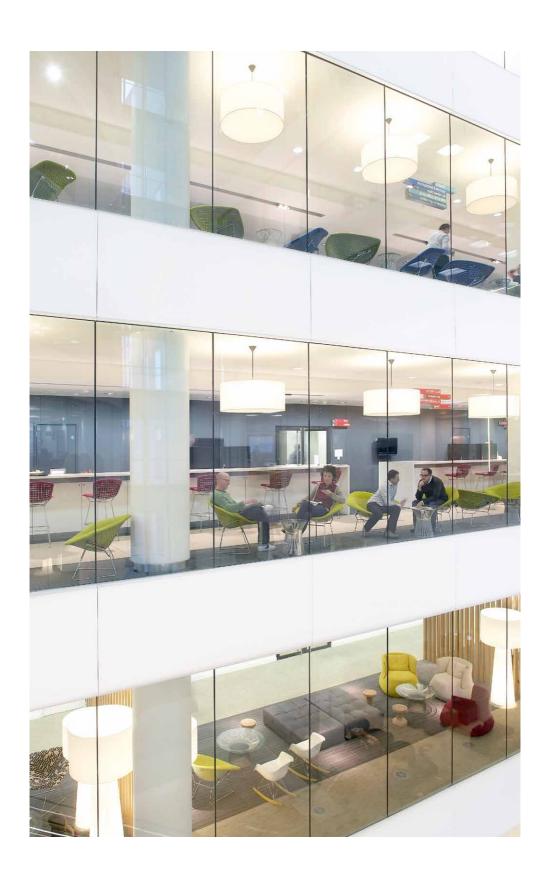
One consequence of the trend to heterogeneity in software and technology platforms is the acceptance of new and nontraditional providers. The software sector already faces competition, particularly from Internet players, whose multitudinous online service offerings are now well established. In addition, many industries, particularly in the telecommunications and aeronautics/defence sectors, also include software building in an ever-broader range of functionalities at each level of their product offerings.

Finally, convergence is taking place at a third level, with content providers developing their own software products.

The new landscape of heterogeneity and the increasing interest by nontraditional providers in the software sector might appear to threaten the established industry. However, the software industry has a strong track record of successfully adapting to change, so it will ultimately benefit and draw new strength from these changes — although for many companies, this will mean developing the means to provide services or content as well as software products.

"New competitors for software vendors will likely be from Internet service providers, e-commercers, and process management consulting firms."

Duke Chen, CFO, Kingdee



Gaming

Top worldwide gaming companies Ranked by worldwide revenues (partially PAC estimates)

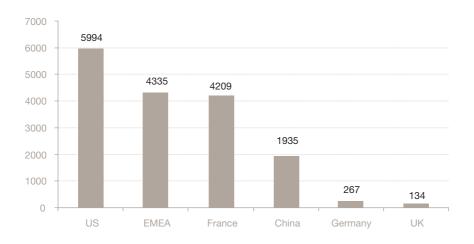
Rank	Nat.	Company	2009 revenue (m€)
1	JP	Nintendo	4 354
2	FR	Activision Blizzard	3 068
3	US	Electronic Arts	3 020
4	JP	Sony Computer Entertainment	1 372
5	US	Microsoft Game Studios	1 248
6	JP	Namco Bandai	1 069
7	JP	Sega	1 008
8	JP	Konami	955
9	FR	Ubisoft	871
10	JP	Capcom	705

Top EMEA gaming companies

Ranked by worldwide revenues (partially PAC estimates)

Rank	Nat.	Company	2009 revenue (m€)
1	FR	Activision Blizzard	3 068
2	FR	Ubisoft	871
3	ΙΤ	Digital Bros	176
4	FR	Gameloft	122
5	UK	Codemasters	118

Top 5 gaming revenue (in millions €)



As the explosion in mobile gaming in 2010 reminded us, games are software too. In fact, if the Global Software 100 list included gaming providers, three would be in the top ten (Nintendo, Activision Blizzard, and Electronic Arts) and 21 would be in the Top 100. (We separate game developers into their own list because their products are as likely to be embedded in a game cartridge for use on a console as to be delivered as a separate software application.) But game developers have nonetheless been affected by several of the same trends that are influencing the overall software industry's direction, namely the mobile and cloud phenomena

Gaming on smartphones has become so popular that games running on Apple's iOS platform alone accounted for more than a fifth of portable games sold by 2010,¹ a percentage that is likely to grow as tablet sales increase and mobile game hits such as Rovio's Angry Birds call more attention to mobile devices as gaming platforms, and as Electronic Arts and other game developers release more games for Apple's iOS and Google's Android mobile operating systems

Even more pronounced is the movement of gaming to the Internet, both as a platform on which games are played and as a mechanism to allow gamers to play together and to access additional resources such as themes and "powers."

One of the most popular games this past year has been Zynga's FarmVille, a game played only over the Internet on social networking sites such as Facebook or on smartphones, not on consoles or as locally installed PC games. In announcing its forthcoming Chrome OS cloud-based laptop, Google cited online games as a major driver of expected use.² Electronic Arts has invested in social gaming as well,³ most recently through a strategic partnership with

Facebook.⁴ And recently, for the first time, Activision Blizzard saw revenues from online games exceed those of retail game cartridges and CDs.⁵

The cloud is more familiar to game developers than to most business software providers, as multiuser games played over the Internet have been around since the first networked PCs.

What's changed recently is the phenomenon of games played solely over an Internet connection, whether on a social networking site or directly in a browser. Web browsers are getting more sophisticated in their ability to deliver the rich graphics associated with console and PC games through technologies such as the emerging HTML5 specification, making slick games more plausible in the online "cloud" context. "With [technologies such as] Google's Web Toolkit, we can supercharge classics like Poppit into state-of-the-art HTML5 games," said Electronic Arts COO John Schappert.⁶

Although better Web technology provides a new outlet for games, it isn't the driving force behind the success of games such as FarmVille, says Zynga CEO Mark Pincus; rather, it's the social nature of the games. There's a positive correlation between retention and the number of friends a user has on a game, he said at the Inside Social Apps 2010 conference. In the end, it's not the game that people are interested in after a while; it's their friends.⁷

Of course, the traditional game console has not been static. Microsoft's popular Kinect motion-detection add-on for its Xbox 360 is credited for boosting game sales, for example.⁸ But the trend across all consoles is Internet connectivity, which aligns those devices with the overall trend of connected gaming seen also in social networking sites and mobile devices.

8 http://seattletimes.nwsource.com

¹ http://news.cnet.com/8301-13579_3-10470102-37.html

 $^{2\} http://arstechnica.com/gadgets/guides/2010/12/google-demos-chrome-os-launches-pilot-program.ars$

³ http://venturebeat.com/2009/11/09/electronic-arts-buys-playfish-for-as-much-as-400-million/

⁴ http://mashable.com/2010/11/02/ea-facebook-deal/

⁵ http://venturebeat.com/2010/08/05/activision-blizzard-sees-online-revenues-exceed-retail-game-sales-for-first-time/

⁶ http://www.ea.com/news/pogo-drives-html5-innovation-on-google-chrome

⁷ http://www.insidesocialgames.com/2010/04/20/inside-social-apps-2010-mark-pincus-keynote-on-growing-the-social-gaming-industry/

National

Top 100 Europe	30
Top 100 China	32
Top 100 France	36
Top 100 Germany	40
Top 100 India	44
Top 100 UK	48
Top 100 US	52

- Software includes application software, system
- This ranking is based on licence and maintenance and support revenue
- OEM activity is included in the software vendor figures (Microsoft, etc.)
- Figures are Pierre Audoin Consultants estimate. and have not been validated by the companies

Methodology



Definitions

Top 100 software revenue	Software revenue includes: licence + maintenance & support + SaaS/ASP fees + open source fees PAC excluded consulting, training, and integration revenue This ranking also excludes gaming companies
Top 5 gaming	This top five includes software used in the private sphere (cultural, entertainment, gaming, graphics, etc.) and excludes the hardware

Local rankings

The rankings are based on the product (licence and maintenance) and subscription revenues earned by the local companies.

The company's nationality is determined by the location of the headquarters and/or by the nationality of the main shareholders.

Methodology

PAC estimated the revenues of software vendors, using PAC knowledge, database, methodology, and additional research.

Fiscal year: For companies whose fiscal year-end is not December 31, PAC has included as 2009 revenue the annual revenue when the year-end was prior to March 31, 2009. When the company's year-end was subsequent to March 31, 2009, PAC included as 2009 revenue the annual revenue of the previous fiscal year.

Exchange rate is an average based on the fiscal year of the company.

About PAC

Created in 1976, Pierre Audoin Consultants (PAC) has conducted several analyses of the worldwide software industry. Both central and country-level databases, which include the revenue breakdown of various players according to PAC's segmentation, are updated all year long through:

- surveys compiling more than 1,000 software suppliers and various companies with software activities (when it is needed, PAC relies on estimates according to worldwide/ region/country revenue);
- · market analysis and benchmarks.

PAC is a leading market research and strategic consulting firm for the software and IT services industry (SITSI). PAC's mission is to advise IT companies on achieving domestic and international growth objectives through the planning, development, implementation, and ongoing support of successful strategies.

Europe Top 100 software vendors — Ranked by software revenue (in million \in)

Rank	Company	Nat.	Software revenue worldwide	Total revenue worldwide	Software revenue Europe
1	SAP	DE	8 111	10 672	4 290
<u>2</u>	Sage	UK	1 410	1 644	771
 3	Dassault Systèmes	FR	1 100	1 251	495
4	Software AG (incl. IDS Scheer as of Sep 09)	DE	581	847	277
 5	Misys	UK	567	814	182
6	Autonomy (incl. Interwoven as of Feb 09)	UK	465	531	100
 7	Kaspersky Laboratory	RU	270	280	195
 8	Logica	UK	265	4 151	253
9	Agfa HealthCare	BE	263	1 178	131
10	Acision	UK	260	342	145
 11	Unit 4 Agresso	NL	236	379	222
:.: 12	Wincor Nixdorf	DE	195	2 250	170
: 13	Exact Software	NL	193	233	128
 14	•	UK	187	196	•••••
14 15	Micro Focus	CH	174	•••••	77
•••••	Temenos		•••••	266	113
16	Sophos	UK	171	184	105
17	CompuGroup	DE	166	293	121
18	Murex	FR	165	265	119
19	AVG Technologies	CZ 	161	179	48
20	Cegid	FR	161	249	161
21	AVEVA	UK	157	167	74
22	Océ	NL	155	2 648	88
23	Asseco	PL	150	703	150
24	VISMA	NO	140	386	140
25	Northgate IS	UK	138	766	133
26	Cegedim	FR	135	874	85
27	Axway (Sopra Group)	FR	135	182	40
28	Nemetschek	DE	126	136	103
29	Tieto	FI	123	1 706	120
30	SimCorp	DK	114	180	96
31	IFS	SE	114	245	79
32	Linedata Services	FR	113	145	84
33	CCH (Wolters Kluwer' Tax & Accounting Unit)	NL	112	450	51
 34	Centric	NL	111	954	96
 35	IRIS Software Group (former Computer Software	UK	110	141	108
 36	Group) GFI Informatique	FR	110	726	110
 37	F-Secure	FI	110	125	88
38 38		ES	110		55
 39	Telvent	SE	•	791 113	••••••
	QlikTech	•••••	101		50
40 	Sword		96	181	84
11 	Siemens PLM Software (former UGS)	DE	93	150	85
12	Avaloq	CH	90	115	84
43	Zucchetti	IT	89	233	88
14	KOFAX (former DICOM Group)	UK	86	217	51
45	Intec Telecom Systems	UK	82	192	32
16	Avanquest	FR	82	88	38
47	Reply Group	ΙΤ	82	340	82
18	Indra	ES	82	2 513	71
49	Capita	UK	76	3 013	76

Rank	Company	Nat.	Software revenue worldwide	Total revenue worldwide	Software revenue Europe
50	IBS AB	SE	75	171	63
51	Panda Security	ES	73	80	45
52	Affecto	FI	70	103	70
53	De La Rue	UK	68	633	15
54	Invensys Operations Management	UK	68	1 128	28
55	Engineering	IT	66	724	66
 56	BETA Systems Software	DE	66	 81	62
 57	SDL (incl. Idiom as of Feb 09)	UK	65	193	30
58	IECISA	ES	65	1 302	65
 59	10	RU	65	260	65
60	EDB Business Partner	NO	64	•••••	64
•••••			•	856	•••••
61	ERI Bancaire	CH	60	78	56
62	SSP	UK	58	77	53
63	Digia (former SysOpen Digia)	FI	57	120	55
64	Aldata	FI	56	68	35
65	Sophis	FR	56	65	34
66	Basware	FI	55	93	49
67	ESI Group	FR	54	75	26
68	Orc Software	SE	54	66	30
69	COA Solutions	UK	53	70	53
70	Berger-Levrault	FR	53	86	53
71	Retalix	IL	53	138	19
72	Sopra Group - "Solutions Applicatives"	FR	52	1 094	52
73	TeamSystem (incl. Nuovamacut as of Jan 09)	IT	51	120	51
74	Getronics	NL	50	2 097	50
	Fidessa	UK	49	267	25
76	msg systems (incl. COR AG as of Oct 08 and FJA as of Oct 09)	DE	49	315	49
77	Alcatel Genesys	FR	49	160	25
78	Lectra	FR	48	153	27
79	RM	UK	47	396	47
80	Dealogic	UK	47	67	16
81	Nero	DE	46	46	35
82	•	•••••	•	•••••	•••••
	Siemens IT Solutions and Services	DE	45	4 686	41
83	PTV Planung Transport Verkehr	DE	45	79 	37
84	Tekla	Fl	44	50	25
85	Lexware	DE	44	60	44
86	Civica (incl. Comino)	UK	43	167	34
87	Torex Retail	UK	43	245	34
88	ADDISON Group (incl. Wago-Curadata)	DE	43	50	43
89	Finnova	CH	43	53	43
90	Isagri	FR	42	67	42
91	Jet Infosystems	RU	42	125	42
92	BT Global Services	UK	42	9 605	33
93	Anite	UK	42	141	30
94	Vizrt	NO	41	61	21
95	Datev	DE	41	672	41
96	Computational Dynamics (CD-adapco)	UK	41	45	19
97	CliniSys (ECI Partners)	UK	40	51	40
98	P&I	DE	40	63	40
•••••	•	•••••	•	•	•
99	Infovista	FR	40	45	21
100	Xchanging	UK	39	841	36

China Top 100

- Software includes application software, system software, tools, SaaS, and open source fees
- This ranking is based on licence and maintenance and support revenue
- OEM activity is included in the software vendor figures (Microsoft, etc.)
- Figures are Pierre Audoin Consultants estimates and have not been validated by the companies

Increasing globalisation of the Chinese economy has created a growing need for software with the latest features and robust functionality. Software enterprises have great growth potential in China, but also face the challenges of operating in an environment that is developing fast.

Although the top 5 companies among the China Top 100 software vendors are the dominant players in China's fast developing software market (accounting for 40% of the Top 100's overall revenues), the market remains highly fragmented. Software vendors ranked 39 and below each had revenues of less than €10 million.

This fragmentation presents great opportunities for both new entrants and existing vendors in the software market. The Chinese economy's continued growth, with its ever-increasing domestic consumption, will continue to require products that are specifically designed for the Chinese market, providing ripe conditions for the emergence of new vendors with critical mass.

Although the Chinese software market remains small compared to that of the US or EU, it is expected to be dynamic and fast-changing in the years to come.

Alison Wong Technology Leader, PwC China

China Top 100 software vendors — Ranked by software revenue (in million \in)

		Software	Total	Software
Rank	Company	revenue worldwide	revenue worldwide	revenue China
1	Nouseft Corporation	222	450	222
· · · · · · · · · · · · · · · · · · · ·	Neusoft Corporation		•••••	•••••
•••••	Ufida Software	175	253	174
} 	Shanghai Baosight Software	102	246	100
ļ 	CDC Software	95	146	7
5	Kingdee International Software Group	78	108	78
	AsiaInfo-Linkage	68	266	68
7	CVIC Software Engineering	55	183	55
3	China National Software & Service	53	262	53
)	Beijing Teamsun Technology	50	362	49
0	Kingsoft	36	110	34
11	Longtop	35	125	35
12	Beijing Shiji Information Technology	33	44	31
3	Glodon Software	32	33	32
4	Beijing Rising Information Technology	32	43	32
 15	Hundsun Electronics	28	78	26
 16	Hangzhou NewGrand Software	26		26
 17	Shandong Inspur software	25	41	25
: 18	Boco Inter Telecom	20	100	19
19	*************************************		•••••	•••••
•••••	Qiming Information Technology	20	142	20
20	Nari Technology Development	19	192	18
21	Digwin Technology	17	36	17
22	Shenzhen Tianyuan Dic Information Technology	16	27	16
23	Sichuan Yinhai Software	16	32	16
24	ZTEsoft Technology	15	73	7
25	Hangzhou Chuangye Software	13	32	13
26	eAbax Software	13	19	13
27	Global InfoSoft	13	64	13
28	Shanghai Dyneinfo	13	42	13
29	NSFOCUS Information Technology	12	30	12
30	Dhc Software	12	167	12
 31	Nantian Electronics Information	12	91	12
 32	Beijing TRS Information Technology		 22	11
33	Beijing TRS Information Technology Beijing Tongfang Software	11	22	11
 34		11	49	10
	Wiscom System		•••••	
35	Beijing Thunisoft	10	36	10
36	Vanda Group		65	10
37	Join-Cheer Software	10	13	10
38	Ahead Software	10	64	10
39	eFuture Information Technology	9	13	9
10	Beijing Justep Software	8	12	8
11	Shanghai Boke Software	8	26	8
12	Beijing Ultrapower Software		78	8
13	Anhui USTC iFlytek	8	33	8
14	Shanghai Baison Software	7	11	7
 15	Primeton Technologies	7	9	7
 16	Computer And Technologies Holdings		43	7
 17	Tellhow Software		33	7
: 18			9	 6
	Jiangmin Technology		•••••	
19	eBuilds Technology		16	6
50	BenQ Guru Software	6	10	6

Rank	Company	Software revenue worldwide	Total revenue worldwide	Software revenue China
51	SuperMap Software	6	16	6
52	Dameng Database	6	8	6
53	Shenzhen MySoft	6	8	6
54	Zhuhai Master Service Software	6	9	6
55	Beijing Inca Tech	5	11	5
56	Beijing Smart Dot Software	5	22	5
57	Gillion Technologies	5	9	5
58	Serveyou Group	5	8	5
59	Zondy Cyber Group	5	16	5
60	Zhejiang Medilnfo	5	12	5
61	DS Ideal Software	5	6	5
62	FlexSystem	4	 8	4
63	Shenzhen Kingsun Science & Technology	4	7	4
64	Nanjing SinoSoft Technology	4	11	4
65	Brilliance Technology	4	43	4
66		4	5	4
	Beijing Jinhe Software	•••••	•••••	
67	Beijing Seeyou Software	4	7	4
68	Fujian Rongji Software	4	22	4
69	Datang Software Technology	4	27	4
70	China Standard Software	4	5	4
71	Changchun Jilin University Zhengyuan Information Technology	4	13	4
72	Sysnet Info-Tech	4	11	4
73	Yuanguang Software	4	33	4
74	Beijing Hejia Software Technology	4	5	4
75	Beijing TongTech	3	5	3
76	Shenzhen Infotech Technologies	3	8	3
 77	Beijing Tianjian Source Technology	3	16	3
 78	Chongqing ADTech	3	16	3
 79	Beijing Huilan InfoTech	3	6	3
80	Beijing Extech Information Technology	3	 11	3
81	Armitage Technologies Limited	2	5	3 3
82		3		3 3
•••••	Shanghai Kingstar Winning Software	•••••	•••••	
83	Beijing PKU-digicare	3	10	3
84	Hangzhou Zhengfang Software	3	6	3
85	Profits Software	3	5	3
86	Xiamen Changhang Software Technology	3	5	3
87	Shandong Shanda Huatian Software	3	9	3
88	Xi'an Huahai Medi Info	3	9	3
89	Sunyard System Engineering	2	64	2
90	Atlas Tiger Medical Information Systems	2	5	2
91	Multiable Company	2	3	2
92	Cityray Technology	2	3	2
93	Amarsoft Information Technology	2	11	2
94	Xiamen Haisheng Information Technology	2	11	2
95	KMCad	2	5	2
96	Jurassic Software	2	6	2
97	Beijing Lingtu Software	2	6	2
98	Integrated Electronic Systems Lab	2	33	2
99	Beijing Redflag CH2000 Software	2	2	2
		2	2	2

Source: Springboard Research (PAC Partner for Asia), 2009 figures

France Top 100

- Software includes application software, system software, tools, SaaS, and open source fees
- This ranking is based on licence and maintenance and support revenue
- OEM activity is included in the software vendor figures (Microsoft, etc.)
- Figures are Pierre Audoin Consultants estimates and have not been validated by the companies

Despite the fact that the software industry as a whole is characterised by its dynamism, its rapid technological advance, and its overriding need to continuously adapt to change, the French Top 100 has remained surprisingly stable over the last few years. Beyond the concentration of the main players, this stability is also seen in the ranking as well as in the revenue generated by the companies.

Unsurprisingly, sector concentration is the dominant characteristic of the French ranking, with Dassault Systèmes alone representing 31% of the revenues from the Top 100 software vendors overall, and the remainder of the top ten accounting for 61% of that total (versus respectively 32% and 62% the previous year). Overall, the Top 100 held up fairly well in the teeth of the economic crisis, despite the severe impact on IT investments in 2009: Total revenues edged back by just 1.4% compared with 2008.

Although concentrated around a few key players, the software market remains heavily fragmented, with 59 businesses in the Top 100 posting revenues of less than €15 million. The emergence of new players with critical mass therefore remains a priority, leveraging key country strengths that should act as catalysts for the software industry: a talented pool of educated engineers, favourable R&D tax credits, quality of infrastructure, and a vibrant community of innovative start-ups.

Pierre Marty

European Software Leader, PwC France

France Top 100 software vendors — Ranked by software revenue (in million \in)

Donl	Company	Software	Total	Software
Rank	Company	revenue worldwide	revenue worldwide	revenue France
	Dassault Systèmes	1 100	1 251	117
	Murex	165	265	10
•••••	Cegid	161	249	156
•••••	Cegedim	135	874	60
	Axway (Sopra Group)	135	182	51
• • • • • • • • • • • • • • • • • • • •	Linedata Services	113	145	55
	GFI Informatique	110	726	64
	Sword	96	181	5
•••••	Avanquest	82	88	4
 0	Sophis	56	65	14
 1	ESI Group	54	75	9
 2	Berger-Levrault	53	86	53
 3	Sopra Group (Solutions)	52	1 094	53 52
 4		49		13
 5	Alcatel Genesys Lectra	49	160 153	4
		•••••	•••••	
6 7	Isagri	42	67	39
7 	Infovista	40	45	7
8 	Generix Group	35	68	31
9	Sab Ingénierie	31	44	22
0	Agrostar	28	48	25
!1 	Meta4	27	47	8
	Pharmagest	27	82	26
	EBP	27	27	26
!4 	Hub Telecom	26	125	20
	Esker	23	27	8
	Cast	23	28	10
7 	DL Software	23	39	23
8	Fiducial Informatique	21	46	21
9	Emailvision	20	29	11
0	Softway Medical	20	28	20
1	Orsyp	19	33	14
2	groupe Sigma	19	48	19
3	Bodet	19	24	15
4	Astellia	19	26	4
5	Cegi	18	93	18
6	Lefebvre Software	18	31	18
7	Ever Team	18	26	8
8	Jvs Groupe	17	27	17
9	IGE + XAO	16	22	12
0	STS Group	16	25	16
1	4D	15	15	10
2	Planisware	15	24	6
3	Cylande	14	35	9
4	Horoquartz	14	31	13
5	Systar	13	18	8
6	Mega International	13	26	8
 7	Ordirope	13	15	12
8	PC Soft	13	19	10
	ITN	13	13	9

51 N 52 N 53 E 54 H 55 C 56 N 57 F 58 C 60 G 61 N 62 E 63 C 64 C 65 C 66 A 67 F 68 C	Melcome Real Time Metaware Medasys Efront tesoft Corys Tess Netasq Proginov Coheris Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive Arkoon	13 13 13 13 12 12 12 12 12 12 11 11 11 11 10	worldwide 16 21 22 20 20 34 15 16 21 23 16 16	12 8 10 6 10 7 8 12 12 3 6 6
52 N 53 E 54 III 55 C 56 N 57 F 58 C 60 G 61 N 62 E 63 D 64 C 65 C 66 A 67 F 68 D	Metaware Medasys Efront tesoft Corys Tess Netasq Proginov Coheris Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive	13 13 12 12 12 12 12 12 12 11 11 11	22 20 20 34 15 16 21 13 21 23	10 6 10 7 8 12 12 12 12 3 6
53 E 54 III 55 C 56 N 57 F 58 C 66 A 66 A 66 C 68 E 68 E 68	Efront tesoft Corys Tess Netasq Proginov Coheris Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive	13 12 12 12 12 12 12 12 12 11 11 11	20 20 34 15 16 21 13 21 23	6 10 7 8 12 12 12 3 6 6
54 III 55 C 56 N 57 F 58 C 59 H 60 C 61 M 62 E 63 C 64 C 65 C 66 A 67 F 68 C	tesoft Corys Tess Netasq Proginov Coheris Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive	12 12 12 12 12 12 12 12 11 11	20 34 15 16 21 13 21 23 16	10 7 8 12 12 12 3 6
54 III 55 C 56 N 57 F 58 C 59 H 60 G 61 N 62 E 63 E 64 C 65 C 66 A 67 F 68 E	Corys Tess Netasq Proginov Coheris Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive	12 12 12 12 12 12 12 11 11	34 15 16 21 13 21 23 16	7 8 12 12 12 12 3 6
56 N 57 F 58 C 59 H 60 C 61 M 62 E 63 C 64 C 65 C 66 A 67 F 68 C	Netasq Proginov Coheris Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive	12 12 12 12 12 12 11 11	15 16 21 13 21 23 16	8 12 12 12 12 3 6
56 N 57 F 58 C 59 H 60 G 61 N 62 E 63 D 64 C 65 C 66 A 67 F 68 D	Proginov Coheris Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive	12 12 12 12 12 11 11	16 21 13 21 23 16	12 12 12 3 6 6
58 C 59 F 60 C 61 N 62 E 63 C 64 C 65 C 66 A 67 F 68 C	Coheris Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Oodrive	12 12 12 11 11 11	21 13 21 23 16	12 12 3 6
58 C 59 F 60 C 61 M 62 E 63 C 64 C 65 C 66 A 67 F 68 C	Harvest Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive	12 12 12 11 11 11	13 21 23 16	12 3 6 6
59 F 60 G 61 N 62 E 63 C 65 C 66 A 67 F 68 C	Graitec Missler Exalead Dimo Gestion Ciril SA Dodrive	12 11 11 11	21 23 16	3 6 6
60 G 61 M 62 E 63 C 64 G 65 G 66 A 67 F 68 C	Missler Exalead Dimo Gestion Ciril SA Dodrive	11 11 11	23 16	6 6
61 M 62 E 63 C 64 C 65 C 66 A 67 F 68 C	Exalead Dimo Gestion Ciril SA Oodrive	11 11	16	6
62 E 63 C 64 C 65 C 66 A 67 F 68 C	Exalead Dimo Gestion Ciril SA Dodrive	11		
63 E 64 C 65 C 66 A 67 F 68 E	Ciril SA Oodrive	•••••	16	
65 C 66 A 67 F 68 D	Oodrive	10	• • • • • • • • • • • • • • • • • • • •	10
65 C 66 A 67 F 68 D			16	10
67 F 68 D	Arkoon	10	10	8
68 C		10	10	9
	Prologue Software	9	26	3
	Datafirst	9	13	6
69 V	VIF (Vignon informatique)	9	13	9
70 0	Genapi	9	24	9
71 S	Staff and Line	9	11	8
72 K	Klee group	9	32	8
73 V	Visiativ (formerly Axemble)	9	35	8
74 E	Esterel Technologies	9	12	3
	Divalto	8	10	8
	De Gamma	8	11	8
77 A	42iA	8	9	3
78 L	Linagora	8	16	8
79 S	Sidetrade	8	9	8
80 lı	rium	8	12	7
81 T	Techsia (Schlumberger)	8	10	0
82 S	Spring Technologies	8	14	6
83 T	Trusted Logic (Gemalto)	8	11	4
84	Groupe Cogeser	7	12	7
	Lascom	7	11	7
86 S	SIS	7	12	7
	Hardis	7	47	7
88 A	Arpson	7	10	7
89 0	Geoconcept	7	8	6
•••••	a-SIS	7	25	6
	Qualiac	7	12	7
92 (Opentrust	7	10	7
•••••	Sefas Innovation (Doc@Post)	. 7	10	0
•••••	ACA	6	13	6
•••••	Witbe	6	9	5
•••••	Sneda	6	12	6
•••••	N4	6	8	4
•••••	Systran	. 6	9	<u>'</u> 1
	Silverprod	6	7	6
	Fimasys	5,5	9,5	3

Source: Pierre Audoin Consultants (PAC), 2009 figures

Germany Top 100

- Software includes application software, system software, tools, SaaS, and open source fees
- This ranking is based on licence and maintenance and support revenue
- OEM activity is included in the software vendor figures (Microsoft, etc.)
- Figures are Pierre Audoin Consultants estimates and have not been validated by the companies

In terms of revenue split, the German software market is special, with its top player, SAP, accounting for 74% of the Top 100 vendors' combined revenues.

SAP is a strong global brand and is by far the biggest software vendor in Europe, accounting for 39% of the EMEA Top 100 combined revenues. It is also the first non-US vendor operating on a global scale.

Overall, the list of Germany's Top 100 software vendors has been stable, growing by 1,4% since 2008. It is characterised by the dominance of a few key players and by a number of important mid-market players. In fact, 68 of the Top 100 German software vendors have software revenues of between €10 million and €50 million.

Christof Menzies
Partner, PwC Germany

		Software	Total	Software
Rank	Company	revenue worldwide	revenue worldwide	revenue Germany
1	SAP	8 111	10 672	1 431
<u>2</u>	Software AG (incl. IDS Scheer as of 09/2009)	581	847	80
3	Wincor Nixdorf	195	2 250	70
4	CompuGroup	166	293	83
5	Nemetschek	126	136	50
6	Siemens PLM Software (former UGS)	93	150	80
7	Beta Systems Software	66	81	36
 8	Msg systems	49	315	49
 9	Nero	46	46	24
 10	Siemens IT Solutions and Services	45	4 686	16
11	•	45	79	13
•••••	PTV Planung Transport Verkehr Lexware	44	•••••	44
12	•	•••••	60	•••••
13	Addison Group (incl. Wago-Curadata)	43	50	43
14	Datev	41	672	41
15	P&I	40	63	31
16	Höft & Wessel	39	94	20
17	Materna	37	150	30
18	GAD	36	551	36
19	T-Systems	35	8 793	28
20	Magix	34	35	19
21	NEXUS	32	40	21
22	Mensch und Maschine Software	32	163	8
23	Integralis (former Articon-Integralis)	32	174	8
24	PSI	30	147	14
25	Seeburger	28	56	17
26	proALPHA	28	48	21
27	secunet	27	64	25
28	Schleupen	27	45	27
29	CAS Software	27	33	26
30	Cenit	26	86	9
31	Kordoba	25	105	25
	TechniData	25	60	12
3	Lufthansa Systems	22	605	12
	Aareon	21	153	16
 35	MedatiXX		51	
86	Interflex Datensysteme		59	16
 37	Buhl	20	67	10 18
•••••	•	19	40	10 17
38	EPLAN CSP System			•••••
39	CSB-System			11
	GFKL Systeme & Software			17
	Pharmatechnik		56	17
	ATOSS Software		29	15
13	Intershop	17	32	8
14	Wilken	16	36	15
15	RA-MICRO Software	16	21	16
16	Netviewer	16	16	12
17	AED Sicad	15	28	15
18	DPS Software	15	22	14
 19	Kratzer Automation	15	36	12

		Software	Total	Software	
Rank	Company	revenue worldwide	revenue worldwide	revenue Germany	
50	G Data	15	19	15	
 51	Freudenberg IT	15	76	12	
 52	IVU Traffic Technologies	14	37	7	
 53	Realtime Technology	14	34	5	
 54	Ceyoniq	14	18	13	
 55	GROUP Business Software (former GROUP	13	23	13	
	Zechnologies)				
56	INFORM	13	40	11	
57	Easy Software	13	22	10	
58	USU	13	34	12	
59	Werum	13	30	13	
60	GK Software (incl. SOLQUEST as of 05/2009)	12	23	12	
61	REALTECH	12	62	5	
62	Fiducia (incl. Orga)	12	684	12	
63	C1 Group	12	165	9	
64	RIB Software	12	26	10	
65	IBS AG	12	18	9	
66	Astaro	11	17	9	
67	SIV.AG	11	21	11	
68	CoreMedia	10	17	8	
69	Allgeier	10	223	10	
70	IDS (former SAG IDS)	10	34	8	
71	ARZ Haan	10	83	10	
72	Adesso	10	71	9	
73	Pironet NDH	10	61	8	
74	Scheidt & Bachmann	10	220	5	
75	SHD Group	10	39	10	
76	InVision Software	9	12	5	
77	Salt Solutions	9	21	9	
78	KUMAgroup	9	48	8	
79	Nextevolution	9	29	5	
80	Init	8	65	5	
81	BTC (incl. Pro Consult + hmmh)	8	125	8	
82	MPDV	8	16	7	
83	Ppi media	8	18	7	
84	Siemens Medical Solutions GSD	8	23	7	
85	CoCoNet	8	12	5	
86	Dampsoft	8	13	8	
 87	Infopark	 8	10	7	
 88	FIS Informationssysteme und Consulting	8	29	6	
 89	ISO Software Systeme	8	 19	7	
90	Cormeta	7	 19	7	
91	SEVEN PRINCIPLES (former Tecon Technologies)	7	66	7	
92	Ordat	7	12	7	
93	Oxaion	<u>.</u> 7	13		
94	Collax	6	7		
95	Finanz Informatik	6		6	
96	GiP mbH	6	8	6	
 97	MACH	6		6	
 98			•••••	•••••	
•••••	Cursor Software	6	8	5	
99	Die Software Peter Fitzon	6	9	5	
100	HSH Soft-und Hardware	6	7	6	

Source: Pierre Audoin Consultants (PAC), 2009 figures

India Top 100

- Software includes application software, system software, tools, SaaS, and open source fees
- This ranking is based on licence and maintenance and support revenue
- OEM activity is included in the software vendor figures (Microsoft, etc.)
- Figures are Pierre Audoin Consultants estimates and have not been validated by the companies

The Indian software industry is identified with software services that have set gold-standard benchmarks in delivery and process excellence. It has been one of the greatest success stories of modern India.

The focus on services has historically relegated the Indian software products industry to the background, with software products revenues accounting for less than 5% of the \$50 billion Indian software industry. The last decade, however, has seen the number of Indian product companies grow five-fold, from about 100 in 1999 to 525 today. Among the India Top 100 software vendors, most are small, with almost 80% of revenues coming from the top 20 companies.

Banking sector products from India have been the most visible in the international arena. i-flex (acquired by Oracle in 2005) was the most notable example with its core banking solution, Flexcube. Other core banking solutions being sold worldwide are Finacle (from Infosys) and BaNCS (from Tata Consultancy Services).

More recently, software product development in education and training, logistics, healthcare, cleantech, talent management, and mobile applications (including mobile stock trading) have been triggering what industry observers believe will be the next wave in India's software revolution.

Developing and commercialising software products has traditionally required significant investments in product development, branding, and marketing, all of which have been beyond the reach of smaller firms. Disruptive technologies like cloud computing, social networks, and the telecom revolution have reduced the cost of technology development and the cost of market reach.

For example, for mobile applications, a developer uses shared resources on a cloud to build applications, and leverages the marketing muscle of a telecom provider to sell them. Traditional software services companies are building out standard platforms for service delivery which could be sold as products in their own right.

With growth strategies led by innovation and intellectual property becoming more mainstream, we believe the Indian software product industry is well placed for the next phase of growth. The Indian software industry body, NASSCOM, expects revenues from this industry to be between US\$9,5 and \$12 billion by 2015.

Hari Rajagopalachari Technology Leader, PwC India

$India\ Top\ 100\ software\ vendors\ -\ {\sf Ranked\ by\ software\ revenue\ (in\ million\ {\it e})}$

	2	Software	Total	Software
Rank	Company	revenue worldwide	revenue worldwide	revenue India
	Tata Consultancy Services	140,1	4 459,3	19,3
 !	Infosys	137,4	3 139,3	24,6
	3i Infotech	117,3	366,6	52,8
••••••••••••••••••••••••••••••••••••••	Teledata	107,7	450,0	1,6
······	Persistant Systems	89,3	89,3	
· S	Geodesic	86,1	95,7	68,9
, , , ,		69,5	154,4	55,6
 }	Educomp			
•••••	Cranes	68,5	75,5	7,7
······	Rolta	68,3	227,6	37,6
0	Geometric Limited	60,8	76,0	24,3
1	Sonata Software (SITL)	56,3	206,9	56,3
2	Subex	55,7	68,8	14,6
3	Take Solutions Inc, Hyderabad	43,5	54,4	8,7
4	OnMobile	40,5	67,5	30,3
5	Polaris Software	40,2	200,9	7,8
6	Ramco Systems	26,1	26,1	12,8
7	Nucleus Software	25,8	43,3	4,1
8	KLG Systel	25,2	36,0	25,2
9	FT India	24,4	46,0	20,3
:0	CMS	23,2	154,4	23,2
21	IBS Software Services	22,1	55,2	17,7
2	Tally Solutions	19,1	22,4	18,9
23	Quick Heal	15,6	15,6	14,0
24	Vsoft Technologies	14,1	21,7	2,1
 25	Four-Soft	13,8	19,8	1,4
26	Infrasoft Technologies	10,1	14,4	3,5
 27	Lasersoft Infosystem	9,0	10,5	8,9
: 28	Elitecore Technologies		11,0	5,4
 !9	•	7,7		• • • • • • • • • • • • • • • • • • • •
	Seeinfobiz			
30 	K7 Computing		6,7	4,5
:1 	Excelsoft Technologies		12,6	0,6
2	Nelito Systems	6,0	10,1	6,0
3	Pathfinder Software	6,0	6,7	3,6
4	Accel Frontline	5,9	39,4	4,1
	Sify	5,5	110,7	5,4
6	Busy Infotech	5.2	7,4	4,7
7	Manthan Software Services	4.9	8,2	2,5
88	Advance Technologies	4,0	6,7	2,6
9	Magna Quest	4.0	6,7	2,0
0	Wings Infonet	4.0	4,5	2,8
1	Nucsoft	3,6	5,9	3,0
2	Godrej Infotech	3,2	7,1	0,6
3	ChainSys	3,0	7,4	1,2
4	Ontrack Systmes	2.2	4,4	
.: 5	Chenab Information Technologies	2,9	5,2	2,3
 16	Intense Technology	2,9	2,9	1,3
 7				
 .8	Nihilent Technologies	2,7	22,3	0,8
	Sanovi Technologies	2,6	3,4	2,2

Rank	Company	Software revenue	Total revenue	Software revenue
		worldwide	worldwide	India
0	Unistal Systems	2,4	3,0	0,6
1	Gamut Infosystems	2,4	3,0	2,3
2	Fusion Charts	2,3	2,8	2,3
3	Aptegra Solution	2,2	5,5	2,2
4	GoFrugal Technologies	2,1	2,7	2,1
55	Srishti Software	2,0	2,2	1,3
6	RDM India	1,9	3,7	0,6
7	Integra Micro Software Services	1,8	5,2	1,6
8	Suntec Business Solutions	1,8	3,0	0,5
9	Nippon Data Systems	1,8	3,0	1,6
0	Nextstep Infotech	1,8	3,0	1,6
31	Shawman Softwares	1,8	1,8	1,3
62	ACS Infotech	1,8	1,8	1,1
3	Compulink Systems India	1,7	2,4	0,8
64	Infosoft Consultants	1,7	4,8	1,7
35	Anadocs	1,6	2,7	1,0
66	Marg	1,6	2,7	1,6
 67	Eastern Software Systems	1,5	3,7	0,7
8	Wrench Solutions	1,5	2,1	0,6
 9	Dewsoft Solutions	1,4	2,5	0,8
'0	Hofinsoft Technologies	1,3	1,5	0,8
 71	Product Dossietr Solution	1,3	2,2	0,7
 72	Xalted Information Systems	1,3	2,4	0,8
 73	Bodhtree	1,3	3,2	0,8
 74	Phoenix IT Solutions , Vizag (A.P.)	1,2	1,8	1,1
 75	NMSWorks Software	1,2	1,8	1,2
76	Micropro	1,1	1,6	1,0
 77		• • • • • • • • • • • • • • • • • • • •	2,7	•••••
•••••	Sathguru Management Consultants	1,1		0,5
78 	Summit India	1,1	1,2	0,5
'9 	In-Solution Global	1,0	1,6	0,8
80	Pratham Software	0,9	1,5	0,9
31	Net Guru	0,9	3,5	0,9
	Cooptions Technologies	0,9	1,3	0,9
33	Technoforte	0,8	1,2	0,7
34	Mithi Software Technologies	0,8	1,3	0,8
35	Quantum Link Communication	0,8	2,2	0,8
86	Interface Business Solutions	0,7	1,0	0,7
37	Sapphire IT Solution	0,7	0,9	0,5
88	Excellon Software	0,7	0,9	0,7
89	Dynamic Vertical Software	0,7	1,1	0,5
0	Seabit Technologies	0,7	0,8	0,7
1	Paramatrix Technologies	0,6	0,7	0,6
2	Ginni Systems	0,6	0,7	0,6
3	Micro Pro, The Computer professionals	0,6	0,7	0,6
)4	Kalsofte	0,5	0,7	0,5
95	Valgen Infosystems	0,5	0,7	0,5
96	Orell	0,5	1,0	0,5
97	Infoton	0,5	0,6	0,5
 98	R. K. Softwares	0,5	0,6	0,5
 19	Soft World India	0,5	0,6	0,5
		0,5	0,7	-,-

Source: Springboard Research (PAC Partner for Asia), 2009 figures

UKTop 100

- Software includes application software, system software, tools, SaaS, and open source fees
- This ranking is based on licence and maintenance and support revenue
- OEM activity is included in the software vendor figures (Microsoft, etc.)
- Figures are Pierre Audoin Consultants estimates and have not been validated by the companies

Over the last two years, the UK software market has continued to have a strong presence in Europe, with half of the top 10 European vendors based in the UK. Sage has maintained its leading position in the sector in terms of revenues, and remains focussed on maintaining this position through its SaaS offering. UK companies continue to evolve, innovate, and adapt to market conditions, and companies such as Misys have shown real bravery in changing their focus and undertaking significant corporate transactions in the current environment.

In the past year, several former UK Top 100 software vendors have undergone significant changes: Vero Software was taken private by Battery Ventures; Portrait Software was acquired by US company Pitney Bowes; and Sophos was acquired by Apax Partners. With cashrich economies hungry for a foothold in Europe and many searching for intellectual property and industry know-how, the UK is likely to continue to attract overseas interest, facilitated by low interest rates, a weak pound, and some signs of economic recovery and stability.

The sector, however, remains dwarfed by global giants in the US, a country that has a long history of supporting the industry financially and cultivating a real entrepreneurial culture. Many countries have sought to re-create the Silicon Valley phenomenon but have failed. However, the UK will continue to drive innovation with the quality of talent at its disposal, and is already seeing a number of good-quality start-ups and mid-size consolidations driven by the resurgence of private equity interest.

Jass Sarai Technology Leader, PwC UK

UK Top 100 software vendors — Ranked by software revenue (in million £)

Rank	Company	Software revenue worldwide	Total revenue worldwide	Software revenue UK
1	Sage	1 234	1 439	196
2	Misys	482	692	18
3	Autonomy (incl. Interwoven as of Feb 09)	415	473	29
4	Logica	236	3 702	45
5	Acision	222	293	37
6	Micro Focus	158	165	14
7	Sophos	152	163	26
8	AVEVA	139	148	7
9	Northgate IS	116	646	90
10	IRIS Software Group (former Computer Software Group)	93	119	91
11	KOFAX (former DICOM Group)	74	186	6
12	Intec Telecom Systems	72	168	5
13	Capita	68	2 687	66
14	Invensys Operations Management	60	1 000	4
15	De La Rue	60	561	6
16	SDL (incl. Idiom as of Feb 09)	58	172	6
17	SSP	51	68	42
18	COA Solutions (Acq. by Advanced computer software in 2010)	47	62	45
19	Fidessa	44	239	22
20	Dealogic	42	59	 8
21	RM	41	347	40
22	Civica (incl. Comino)	38	146	30
23	BT Global Services	37	8 513	20
24	Torex Retail	37	210	21
25	Computational Dynamics (CD-adapco)	36	39	2
26	CliniSys (ECI Partners)	36	45	15
27	Anite	35	119	20
28	Xchanging	35	750	18
29	Psion Teklogics	33	170	2
30	EMIS - Egton Medical Information Systems	33	55	33
31	Alterian	32	38	14
32	Infonic (bought by LHC in Jan 09)	32	45	9
33	Bond International Software	27	33	18
34	Delcam	26	32	7
35	Kewill Systems	26	56	8
36	Aquila Group	26	37	24
37	IDOX	25	32	25
38	StatPro	24	32	4
39	NCC Group	21	47	17
40	SmartStream Technologies	19	33	6
41	ION Trading (Anvil)	18	25	8
42	Aerosystems International (BAE Systems)	18	35	16
43	Open International Group (Open GI)	18	30	18
44	CybIT Holdings	17	26	12
45	Access Technology Group	17	23	15
46	Microgen	16	29	6
47	The Innovation Group (TiG)	16	156	6
48	MidlandHR (Midland Software)	16	23	16
49	Alphameric	15	40	13

Rank	Company	Software revenue worldwide	Total revenue worldwide	Software revenue UK
50	Serco	15	3 970	14
 51	Clarity Commerce Solutions	14	19	7
 52	Donovan Data Systems	14	19	
•••••			•••••	•••••
53 	White Clarke Group	13	19	5
54 55	Velti Minorplanet Systems	13	58 17	2 5
56	Eleco (incl. Asta Development)	12	71	5
7	Mimecast	12	13	6
8	Sanderson	12	25	12
59	CHP consulting	12	20	7
60	Causeway Technologies (incl. Vixen Software as of Apr 09, Globallive as of May 09)	12	16	11
1	Lagan Technologies	12	17	3
62	Portrait Software	12	16	5
3	Allocate Software (former Manpower Software)	12	16	8
4	City Networks (acquired by Broadbridge in Jun 10)	12	15	8
5	CDL Group	11	19	11
6	Serif (Europe)	11	13	10
7	Target Group (incl. Harlosh)	11	22	10
8	ServicePower Technologies	 11	18	6
 9	ITRS Group	11	15	6
' '0	System C Healthcare	10	22	10
 '1		•••••	17	•••••
•••••	Clearswift	10		4
'2 	Vero Software (formerly VI Group)	10	13	4
'3	Ascribe (ASC Computer Software)	10	14	7
'4 	The Logic Group	10	17	9
⁷ 5	Aculab	9	13	3
76	Patsystems	9	22	2
'7 	Miles 33	9	11	8
'8	Craneware	9	14	1
'9	COINS - Construction Industry Solutions	9	14	8
80	Pilat Media	8	19	1
31	Digital Applications International (DAI)	8	13	6
32	Solarsoft (merger between XKO Group & CMS Software)	8	13	8
3	TRL	8	39	8
34	Tribal Group	8	242	8
5	SmartFOCUS Group	8	12	4
6	COR Financial Solutions	7	9	4
 37	Cezanne Software (former HRM Software)	7	8	1
 38	BullGuard	7	8	7
 19	Lombard Risk Management	7	9	3
00	FFastFill	7	14	5
 11	Microlise		16	7
` 12	STG - Strategic Thought Group		8	
 13		7	 23	•••••
	2ergo		•••••	6
)4)5	First Derivatives Orchard Information Systems	6	25 11	2 6
6	OLM Group	6	21	6
 97	IPL Information Processing	6	29	5
 98	PROACTIS	6	7	5
99	Workplace Systems	6	9	3
-		•••••	·······	

Source: Pierre Audoin Consultants (PAC), 2009 figures

US Top 100

- Software includes application software, system software, tools, SaaS, and open source fees
- This ranking is based on licence and maintenance and support revenue
- OEM activity is included in the software vendor figures (Microsoft, etc.)
- Figures are Pierre Audoin Consultants estimates and have not been validated by the companies

The software industry — led by the US headquartered firms that form the bulk of the market — is in the midst of several key shifts driven in large part by advances across the technology industry.

Enterprise software providers are increasingly making their wares available as services delivered in private cloud environments and even public cloud environments. They've also gone on an acquisition spree, buying up smaller companies to create stronger product portfolios that cover a greater portion of a customer's buying needs, with an eye to new markets. For example, SAP bought Sybase and Symantec bought both VeriSign's security business and PGP. And Oracle has been reshaping the software (and hardware) products it bought from Sun Microsystems, reinventing several established software communities such as Java's. At the same time, nonsoftware companies have been extending their portfolio offerings to include software and service by buying software companies. Intel, for example, purchased McAfee, and Hewlett-Packard purchased both ArcSight and Fortify Software.

A whole new industry has been formed around mobile applications, particularly around the Apple iOS and Google Android platforms, and although the providers are usually very small companies, the same was once true of today's desktop application leaders. In the consumer-facing world, the distinction between software providers and Web services is increas-

ingly blurry, as social hubs such as Facebook and Flickr also function as application platforms and as Google, Microsoft, and even Oracle have made versions of their productivity applications available over browsers.

The other major trend is digital transformation, the continued enhancement in user interactions through digital means, which can transform customer support, sales and marketing, collaboration, media consumption, and more. So it's no surprise that software providers are increasingly rethinking both the software they sell and the software they use themselves to tap this shift in behaviour by digital consumers.

What these trends all have in common is an increase in heterogeneity, which favours customer individuality but complicates the design and delivery of both software and services. That said, it also provides a market disruption that allows new companies and companies in other markets to emerge as significant providers; creates new opportunities for existing providers; and, yes, threatens others.

US software providers are hardly alone in shaping and being shaped by the shifts now underway. But they are clearly leading the charge.

Tom Archer US Software Leader, PwC US

US Top 100 software vendors — Ranked by software revenue (in million \$)

_	Company	Software	Total	Software
Rank	Company	revenue worldwide	revenue worldwide	revenue US
	Microsoft*	44 939	58 437	17 785
	IBM	20 123	95 758	7 477
· ••••••	Oracle (incl. BEA as of Apr 08)	19 223	23 252	8 388
•••••		•••••		•••••
	EMC (incl. VMware & RSA)	5 920	14 026	3 252
	Symantec	5 610	5 985	2 877
	HP (incl. EDS as of Sep 08)	4 190	114 552	1 443
, 	CA	3 993	4 353	2 167
	Intuit	3 127	3 183	3 003
)	Adobe	2 862	2 946	1 208
0	Apple	2 072	36 537	1 127
1	SAS	2 057	2 310	758
2	BMC Software	1 782	1 911	947
3	Cisco Systems	1 715	36 117	964
4	Autodesk	1 598	1 714	495
5	McAfee	1 562	1 927	813
6	Infor Global Solutions	1 530	2 200	665
7	Citrix Systems	1 298	1 614	653
 8	Salesforce.com	1 210	1 306	839
•••••	•	•••••	•••••	
9	Synopsys	1 066	1 360	510
0	Sun Microsystems (acquired by Oracle as of Jan 2010)	1 037	11 449	442
21	McKesson Technology Solutions	906	3 124	816
22	SunGard	898	5 508	627
23	Cerner	897	1 641	792
24	Check Point Software	823	924	341
25	NetApp	821	3 406	423
26	Novell	757	862	348
27	PTC	712	938	253
28	Sybase	706	1 171	315
29	Mentor Graphics	695	803	272
30	Quest Software	657	695	412
 31	Compuware		892	384
2	Amazon		24 509	340
3	Red Hat	639	748	354
•••••	*************************************	•••••		
	Cadence Design Systems FIS (Fidelity National Information Services, incl.	633	853	231
35	Metavante as of Oct 09)	626	4 126	540
36	Google	606	23 651	287
37	Sterling Commerce (acquired by IBM in May 10)	562	650	290
8	ESRI	560	776	386
	Xerox	559	15 179	295
	Tibco Software	550	621	235
 1	Nuance Communications	539	950	403
2	Comverse	510	850	138
•••••		•••••		
	Fiserv	509	4 077	470
	Ansys	498	517	166
5	ADP	494	8 867	400
6	Kronos	492	672	337
7	Lawson	460	757	270
8	Progress Software	455	494	191
9	Amdocs	454	2 863	265

Donk	0	Software	Total	Software
Rank	Company	revenue worldwide	revenue worldwide	revenue US
50	Informatica	438	501	270
 51	Intergraph	432	770	200
 52	NCR	424	4 612	170
 3	VeriSign	416	1 031	240
 54	Attachmate	397	470	300
55	CSC	397	16 128	190
6	Teradata	376	1 709	182
 57	Pitney Bowes	346	5 569	247
 58	Fair Issac (FICO)	346	631	235
 59	Bentley	315	460	123
 60		•••••	449	•••••
•••••	The MathWorks Accenture	314		126
31	• • • • • • • • • • • • • • • • • • • •	307	21 577	163
32	Epic Systems	297	594	238
63	MicroStrategy	295	378	171
64	Constellation Software	294	438	202
65	ACI Worldwide	293	406	123
66	Meditech	293	393	252
67	Websense	282	314	140
88	JDA Software	268	386	148
59 	Northrop Grumman Information Systems (NGIS)	265	8 611	255
70	F5 Networks	261	653	137
71	Epicor (incl. Scala & NSB)	261	410	178
72	Aspen Technology	255	312	80
73	Information Builders	242	285	185
74	Jack Henry & Associates	242	746	243
75	Concur Technologies	239	248	215
76	Advent Software	234	260	204
77	Wind River Systems pro forma (acquired by Intel in Jul 09)	232	296	126
 78	Blackboard	229	377	 188
 79	Ariba	222	339	132
30	TriZetto	220	490	220
30 31	•	220	912	126
32	MICROS Systems	215	2 718	
• • • • • • • • • • • • • • • • • • • •	Diebold	•••••		105
33	Lockheed Martin IS&GS	209	12 130	200
34	Eclipsys	208	519	195
35	General Dynamics IS&T	202	10 802	188
36	Serena Software	202	224	141
37	MSC Software (acquired by STG as of Oct 09)	192	213	48
38	Deltek	184	266	174
39	Tyler Technologies	184	290	184
90	Athenahealth	183	189	183
91	Mitchell International	175	245	175
92	Taleo	173	198	167
93	Convergys	167	2 827	122
94	Pegasystems	166	264	110
95	QAD	165	215	67
96	Harland Financial Solutions	162	279	160
97	Paychex	153	2 083	150
98	NetSuite	150	167	116
9	Unisys	148	4 598	63
•••••	The Ultimate Software Group	138	197	131

Source: Pierre Audoin Consultants (PAC), 2009 figures

Of further interest

Around the world, PwC produces a variety of thought leadership, industry journals, and white papers. Below you will find a small sample of related pieces available.

Simply go to www.pwc.com/globalsoftware100 to find links to the publications listed below. Other websites of interest include www.pwc.com/technology and www.pwc.com/us/cloud.

Technology Forecast

Published by PwC's Centre for Technology & Innovation, this journal features original research and interviews with leading technology executives on technology innovations and their potential impact on the business world. Recent issues featured themes such as mobile technology, cloud computing, and enterprise architecture.

A View on Cloud Computing

Cloud computing technology is still in the early-adopter phase for both providers and consumers. Some see it as merely a service provider trend and not really a new breakthrough concept. Others, however, see it as a complete shift in how the world will use and value information technology.

This white paper, written by Dr. David Jacobson, director of the Emerging Technologies practice at PwC Canada, clarifies the differences between cloud computing models such as software as a service (SaaS), platform as a service (PaaS), and infrastructure as a service (IaaS). It also discusses how some of Canada's software CEOs feel about the technology, using the results of The 2010 PwC Survey of Canadian Software Company CEOs.

Security Among the Clouds

Cloud computing promises significant cost savings, diminished IT complexity, and increased flexibility in managing IT and responding to market changes. However, chief information security officers must consider the risks associated with these new computing models, including the possibility of data loss and data leakage, downtime of service providers, regulatory constraints, and risk of intellectual property theft.

Software Revenue Recognition: A User-Friendly Guide to Navigating through the Many Complexities

PwC's recently updated software revenue recognition guide is now available in an interactive Web format and features online annotations, highlighting, bookmarking, in-context search results, and more. The content of the guide has been updated thoroughly to include the latest information and guidance available, and to comprehend the latest developments in the software industry.

Visit www.pwcrevrec.com.

How to Capture Value through Software R&D

This is the first article in a series of white papers written by PwC's US software industry practice to identify and discuss value leakage points across the software industry supply chain. The article's main objective is to identify the central role that R&D plays in software organisations and raise the issue of R&D transparency and governance within the organisation. It is PwC's view that through effective R&D value management, company leadership can enhance shareholder value. The article looks at opportunities to gain greater R&D efficiency and offers a framework based on a set of five dimensions: strategy, structure, process, people, and technology. In addition, the article highlights the way forward, including a suggested organisational assessment along three work streams: governance and change management, process assessment and accounting and tax considerations.

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PwC: PricewaterhouseCoopers provides industry-focused assurance, tax, and advisory services to enhance value for their clients. More than 163,000 people in 151 countries across the PwC network share their thinking, experience, and solutions to develop fresh perspectives and practical advice. See www.pwc.com for more information.

About our technology industry practice: PwC works with technology companies around the world to help them fulfill the promise of their great ideas. Whether it's driving innovation to meet the growing consumer opportunity of the global markets, or adopting new "digital" business models, our strong relationships and track record of delivering value have made us the trusted adviser or auditor to the majority of the Global Fortune 500 and Global Financial Times 500 technology companies.

There is an ever-present state of change and evolution in each of the technology sectors. The software industry is currently undergoing great change, from the structure of its business models to the delivery of products and services to customers. We've worked with software companies for many years, serving as auditor or business adviser to 85% of the largest software companies in the US and auditing more of them on the Fortune 500 list than any other accounting firm (38%). Given our significant client base and considerable resources, our technology professionals work from an exceptional base of experience. We're in touch with your industry – and ready to work with you.

For more information on how PwC's technology industry practice can help your company, or to get in touch with a technology industry partner in your area, please visit us at www.pwc.com/technology or contact one of the professionals listed on page 63 of this publication.

AFDEL



AFDEL is the French association of software vendors. With 230 companies as members, AFDEL represents the whole industry, from big firms (45% of Top 100 France revenue) to small and medium-sized enterprises (80% of members). France's software industry is crucial for economic growth but is too often discarded by public policies. AFDEL wants to bridge the gap. It also supports companies in their competition by sharing knowledge and best practices between members.

www.afdel.fr

THE EUROPEAN SOFTWARE ALLIANCE



The European Software Alliance is an alliance formed to represent the European software industry at the EU level. The purpose of the alliance is to:

- contribute to the development of the European software industry
- promote a favourable framework for the European software industry
- advocate the importance of the software industry for the European economy (sustainable growth, jobs, competitiveness)
- be a trusted interlocutor for EU institutions and other stakeholders on software-related subjects
- be a networking platform among all members, whatever their size, from large corporations to small and mediumsized enterprises, and national organisations

Current members of the Alliance are: 1C, Albany, Dassault Systèmes, Microsoft, Oracle, and SAP.



INTELLECT



Intellect is the leading trade association serving the UK technology industry, representing 750 small and medium-sized enterprises and multinational member companies and existing solely for their benefit.

Intellect was formed in May 2002 as a merger between many trade associations in the sector, some of them with roots dating back to the 1930s.

The creation of Intellect gives a single, powerful voice to the UK technology sector, which comprises the various sectors of information and communications technologies (ICT), electronics manufacturing and design, and consumer electronics (CE), including defence and space-related IT.

www.intellectuk.org

TSIA



The Technology Services Industry Association (TSIA) is the leading association dedicated to advancing the business of technology services. Technology services organisations large and small look to TSIA for world-class benchmarking and research, exceptional peer networking and learning opportunities, and high-profile certification and awards programmes.

TSIA keeps their business leaders informed and connected through a full range of programmes and services that tackle real-world service business challenges and provide real-world solutions.

TSIA corporate members represent the world's top technology companies as well as scores of innovative small and midsize businesses in four major markets: enterprise IT and telecom, consumer technologies and carriers, healthcare and healthcare IT, and industrial automation. TSIA brings the technology services industry together.

www.tsia.com

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For more information on how the professionals at PwC can help you meet the challenges of a changing software industry, please contact any of our partners listed below.

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