

Technology Institute

PwC Global 100 Software Leaders

The growing importance of apps
and services

100
Global
Software Leaders



Introduction

As the world goes increasingly digital, we are witnessing the beginning of the end of traditional technology markets as we know them. Driven by new consumption models, tech companies can no longer afford to focus on only one segment such as software or hardware or services. As a result, software companies are transforming from delivering complex products to 'easier to use' applications which can be deployed 'on premise' or offered as a service in the cloud. As devices become more price competitive, hardware companies are moving into delivering more value added software and/or services to increase their competitive advantage. What's more, companies that heretofore had little to do with technology are digitising their products and services with software to deliver more value to customers.

These trends have been building over the last several years, but are now accelerating. Not to be ignored

are the changing demographics of the Global 100 Software Leaders as resources and markets start to expand throughout the globe. And the effects are starting to show up in PwC's latest ranking of the 100 largest global software companies. Based on data from IDC*, the list ranks companies by total software revenue and by the percentage of total software revenue from SaaS (see tables on pages 2-5 and 8). As expected, Microsoft, IBM, Oracle and SAP continue to dominate the list in terms of total software revenues.

However, the PwC Global 100 Software Leaders recorded only a 5 percent increase in revenues, reaching US\$255 billion in 2012. In contrast to the overall growth, SaaS revenues in the Global 100 increased by 60 percent to US\$20 billion during the year. For more information on how the list was compiled, see the Methodology section on page 16.



* IDC Worldwide SaaS and Cloud Software 2013-2017 Forecast and 2012 Vendor Shares, December 2012, IDC #245084

Source: IDC Worldwide SaaS and Cloud Software 2013-2017 Forecast and 2012 Vendor Shares, December 2012, IDC #245084

Global 100 Software Leaders

Rank	Company	Country HQ	2012 software revenue (US\$M)	2012 total revenue (US\$M)	Software revenue as % of total	SaaS revenue (US\$M)	SaaS revenue as % of software
1	Microsoft	United States	\$58,432.71	\$72,930.00	80.1%	\$1,463.00	2.5%
2	IBM	United States	\$28,846.32	\$104,507.00	27.6%	\$742.50	2.6%
3	Oracle	United States	\$27,710.27	\$37,341.00	74.2%	\$972.00	3.5%
4	SAP	Germany	\$16,616.79	\$21,282.00	78.1%	\$1,117.00	6.7%
5	Ericsson*	Sweden	\$8,048.60	\$34,993.93	23.0%	\$0.00	0.0%
6	Symantec	United States	\$6,417.74	\$6,839.00	93.8%	\$595.00	9.3%
7	HP	United States	\$5,512.50	\$119,239.00	4.6%	\$94.00	1.7%
8	EMC (excluding VMware)	United States	\$5,128.82	\$17,118.00	30.0%	\$80.00	1.6%
9	Adobe	United States	\$4,334.77	\$4,405.00	98.4%	\$661.00	15.2%
10	CA Technologies	United States	\$4,304.41	\$4,680.00	92.0%	\$80.00	1.9%
11	VMware (a subsidiary of EMC)	United States	\$4,239.82	\$4,605.00	92.1%	\$30.00	0.7%
12	Fujitsu	Japan	\$3,130.97	\$55,366.00	5.7%	\$438.00	14.0%
13	Salesforce.com	United States	\$2,805.61	\$2,982.70	94.1%	\$2,766.00	98.6%
14	SAS	United States	\$2,662.30	\$2,870.00	92.8%	\$123.41	4.6%
15	Hitachi	Japan	\$2,528.23	\$116,580.00	2.2%	\$119.69	4.7%
16	Intuit	United States	\$2,464.75	\$4,170.00	59.1%	\$1,213.00	49.2%
17	Infor	United States	\$2,464.40	\$2,659.03	92.7%	\$27.00	1.1%
18	Siemens	Germany	\$2,441.15	\$100,610.05	2.4%	\$150.00	6.1%
19	Dassault Systèmes	France	\$2,368.98	\$2,606.94	90.9%	\$150.00	6.3%
20	Autodesk	United States	\$2,263.01	\$2,307.37	98.1%	\$88.00	3.9%
21	Citrix	United States	\$2,088.55	\$2,586.12	80.8%	\$511.00	24.5%
22	Cisco	United States	\$1,997.79	\$47,061.67	4.2%	\$800.00	40.0%
23	BMC	United States	\$1,972.72	\$2,198.00	89.8%	\$23.30	1.2%
24	NEC	Japan	\$1,942.16	\$38,484.11	5.0%	\$77.31	4.0%
25	Sage	United Kingdom	\$1,751.81	\$2,151.05	81.4%	\$40.00	2.3%

*Sourced from publicly available information rather than IDC estimates.

Global 100 Software Leaders, continued

Rank	Company	Country HQ	2012 software revenue (US\$M)	2012 total revenue (US\$M)	Software revenue as % of total	SaaS revenue (US\$M)	SaaS revenue as % of software
26	Intel	United States	\$1,674.53	\$53,341.00	3.1%	\$106.40	6.4%
27	Synopsys	United States	\$1,646.45	\$1,789.12	92.0%	\$20.00	1.2%
28	Apple	United States	\$1,600.75	\$164,687.00	1.0%	\$2.00	0.1%
29	Wolters Kluwer	Netherlands	\$1,435.25	\$4,629.84	31.0%	\$25.36	1.8%
30	SunGard	United States	\$1,393.39	\$4,263.00	32.7%	\$50.00	3.6%
31	McKesson	United States	\$1,332.06	\$3,348.00	39.8%	\$75.00	5.6%
32	ADP	United States	\$1,257.51	\$10,945.00	11.5%	\$1,194.63	95.0%
33	NetApp	United States	\$1,250.90	\$6,296.87	19.9%	\$0.00	0.0%
34	Hexagon	Sweden	\$1,205.62	\$3,059.44	39.4%	\$0.00	0.0%
35	Cadence Design Systems	United States	\$1,174.55	\$1,326.42	88.5%	\$12.00	1.0%
36	Attachmate Group	United States	\$1,174.43	\$1,260.03	93.2%	\$0.00	0.0%
37	Trend Micro	Japan	\$1,170.62	\$1,175.71	99.6%	\$132.78	11.3%
38	ESRI	United States	\$1,168.33	\$1,476.41	79.1%	\$137.00	11.7%
39	Teradata	United States	\$1,153.78	\$2,665.00	43.3%	\$50.00	4.3%
40	Red Hat	United States	\$1,115.54	\$1,294.94	86.1%	\$0.00	0.0%
41	Nuance Communications Inc.	United States	\$1,018.47	\$1,753.13	58.1%	\$10.00	1.0%
42	PTC	United States	\$960.17	\$1,256.00	76.4%	\$0.00	0.0%
43	DATEV	Germany	\$957.02	\$998.55	95.8%	\$441.40	46.1%
44	OpenText	Canada	\$943.65	\$1,276.40	73.9%	\$30.00	3.2%
45	Software AG	Germany	\$915.26	\$1,333.46	68.6%	\$0.00	0.0%
46	Avaya Inc.	United States	\$894.23	\$5,024.00	17.8%	\$10.00	1.1%
47	Mentor Graphics	United States	\$877.13	\$1,085.10	80.8%	\$0.00	0.0%
48	Cerner	United States	\$854.12	\$2,665.44	32.0%	\$230.00	26.9%
49	TIBCO	United States	\$780.36	\$1,032.00	75.6%	\$33.00	4.2%
50	Compuware	United States	\$776.01	\$969.11	80.1%	\$241.00	31.1%

Global 100 Software Leaders, continued

Rank	Company	Country HQ	2012 software revenue (US\$M)	2012 total revenue (US\$M)	Software revenue as % of total	SaaS revenue (US\$M)	SaaS revenue as % of software
51	ANSYS	United States	\$756.26	\$798.02	94.8%	\$0.00	0.0%
52	Google	United States	\$755.18	\$50,175.00	1.5%	\$684.00	90.6%
53	Informatica	United States	\$688.31	\$812.00	84.8%	\$19.00	2.8%
54	Kaspersky Lab	Russia	\$627.80	\$750.00	83.7%	\$43.18	6.9%
55	Kronos Inc.	United States	\$596.10	\$923.30	64.6%	\$1.85	0.3%
56	Constellation Software Inc.	Canada	\$582.70	\$891.23	65.4%	\$30.00	5.1%
57	TOTVS	Brazil	\$579.68	\$722.96	80.2%	\$20.00	3.5%
58	Fidelity National	United States	\$578.10	\$5,807.60	10.0%	\$20.00	3.5%
59	NCR	United States	\$575.25	\$5,730.00	10.0%	\$116.78	20.3%
60	Wincor Nixdorf	Germany	\$568.16	\$3,088.49	18.4%	\$0.00	0.0%
61	FICO (formerly Fair Isaac)	United States	\$567.48	\$716.09	79.2%	\$204.80	36.1%
62	MICROS Systems	United States	\$565.11	\$1,204.94	46.9%	\$10.00	1.8%
63	Misys	United Kingdom	\$561.63	\$682.49	82.3%	\$100.00	17.8%
64	Dell	United States	\$561.62	\$57,512.33	1.0%	\$100.00	17.8%
65	Fiserv	United States	\$560.47	\$4,482.00	12.5%	\$60.00	10.7%
66	SWIFT	Belgium	\$542.36	\$767.11	70.7%	\$0.00	0.0%
67	Medical Information Technology (MEDITECH)	United States	\$534.55	\$597.83	89.4%	\$0.00	0.0%
68	Verint Systems	United States	\$527.82	\$828.60	63.7%	\$60.59	11.5%
69	NICE Systems	Israel	\$501.04	\$879.01	57.0%	\$38.00	7.6%
70	Bentley Systems	United States	\$494.71	\$550.00	89.9%	\$70.00	14.1%
71	Neusoft	China	\$473.57	\$1,101.32	43.0%	\$23.70	5.0%
72	JDA Software	United States	\$469.94	\$689.13	68.2%	\$20.00	4.3%
73	Acision	United Kingdom	\$465.95	\$698.93	66.7%	\$14.80	3.2%
74	Amazon.com	United States	\$460.94	\$61,093.00	0.8%	\$461.00	100.0%
75	Genesys Telecommunications Laboratories	United States	\$459.99	\$620.00	74.2%	\$13.27	2.9%

Global 100 Software Leaders, continued

Rank	Company	Country HQ	2012 software revenue (US\$M)	2012 total revenue (US\$M)	Software revenue as % of total	SaaS revenue (US\$M)	SaaS revenue as % of software
76	Visma	Norway	\$448.69	\$987.12	45.5%	\$18.00	4.0%
77	Concur Technologies	United States	\$448.37	\$462.24	97.0%	\$448.37	100.0%
78	GXS	United States	\$439.51	\$487.52	90.2%	\$368.00	83.7%
79	Northgate Information Solutions	United Kingdom	\$435.93	\$1,556.00	28.0%	\$155.60	35.7%
80	CommVault	United States	\$433.98	\$471.59	92.0%	\$165.95	38.2%
81	Pitney Bowes Software	United States	\$424.50	\$4,904.02	8.7%	\$46.80	11.0%
82	Blackboard	United States	\$423.26	\$530.00	79.9%	\$407.17	96.2%
83	MicroStrategy	United States	\$412.51	\$594.61	69.4%	\$16.10	3.9%
84	Unit4	Netherlands	\$412.10	\$603.69	68.3%	\$73.85	17.9%
85	athenahealth	United States	\$408.50	\$422.27	96.7%	\$270.00	66.1%
86	Micro Focus	United Kingdom	\$407.44	\$421.77	96.6%	\$11.00	2.7%
87	Allscripts	United States	\$404.43	\$1,446.33	28.0%	\$95.00	23.5%
88	InterSystems Corp.	United States	\$402.98	\$457.37	88.1%	\$0.00	0.0%
89	Unisys	United States	\$401.06	\$3,706.40	10.8%	\$180.69	45.1%
90	CompuGroup Medical	Germany	\$394.71	\$579.53	68.1%	\$51.33	13.0%
91	Progress Software	United States	\$388.05	\$426.00	91.1%	\$0.00	0.0%
92	Sophos	United Kingdom	\$384.78	\$410.00	93.8%	\$0.00	0.0%
93	Invensys*	United Kingdom	\$381.45	\$2,773.50	13.8%	\$10.00	2.6%
94	Qualcomm	United States	\$375.60	\$20,458.00	1.8%	\$11.27	3.0%
95	Aspect Software	United States	\$375.35	\$442.71	84.8%	\$5.00	1.3%
96	QlikTech	United States	\$359.19	\$388.50	92.5%	\$0.00	0.0%
97	ACI Worldwide	United States	\$358.34	\$666.58	53.8%	\$18.60	5.2%
98	Amdocs	Israel	\$356.58	\$3,266.25	10.9%	\$0.00	0.0%
99	Yonyou	China	\$347.88	\$666.20	52.2%	\$3.48	1.0%
100	ABB Ltd.	Switzerland	\$335.82	\$39,336.00	0.9%	\$0.00	0.0%
Total			\$255,221.02	\$1,378,109.56		\$19,628.97	

* Acquired by Schneider Electric in January 2014

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As products of all kinds are being commoditised, companies are looking to the value of software to propel them into new markets.”

Mark McCaffrey
PwC Global Software Leader

A pure SaaS company—Salesforce—continues to move up the list and is now #13. Several hardware companies are showing up on the list for the first time—Dell appeared this year at #64, for example. Before long, we may see even more non-traditional entrants. Clothing companies, for example, that deliver health and fitness information by analysing and reporting information from sensors woven into their garments. Or utilities that deliver valuable energy use data to their business customers.

“We are seeing new players entering the Global 100 Software Leaders,” says Mark McCaffrey, Global Software Leader at PwC. “As products of all kinds are being commoditised, companies are looking to the value of software to propel them into new markets.”

With the boundaries between software, hardware and services becoming less clear, tech markets are entering a somewhat chaotic time. The turmoil will confuse and perhaps overwhelm some companies comfortably ensconced in their traditional markets and unwilling to change. But those that are fast, flexible, wise in picking their market slice and able to adopt the appropriate business model could see revenue streams and profits from businesses they never imagined.

First, as traditional software companies reinvent themselves to provide SaaS, and more companies of all stripes move into software, the latter is becoming a huge

market for the former. Software companies are going to be in a prime position to meet the needs of non-tech companies that want valuable capabilities embedded into their products. While many industrial companies such as appliance and heavy equipment manufacturers have long relied on embedded software to differentiate their products, it seems almost every manufacturer of consumer products now is relying on software and online services for more than just marketing.

Second, as enterprises purchase technology in different ways, opportunities for companies to team up in new and potentially lucrative ways will arise. Increasingly, no one vendor will be able to deliver the entire solution. Instead, a series of vendors—hardware, software, reseller, service provider—will supply different components of the value chain.

The transitions will be tricky and the execution won't be easy. These transitions will require many companies to fundamentally change their business models. Long-standing assumptions and attitudes about how to develop, market, sell and distribute products will be upended. And the old labels for companies—hardware, software, service provider, even clothing maker—will be challenged as never before.

Each time PwC ranks the Global 100, we see more signs of the changes shaking up the software industry, and the tech industry as a whole. First, SaaS companies appeared on

the list. Then, their revenues started to increase. Now they are steadily climbing their way up the list (see SaaS table on page 8). In addition to the rise of Salesforce.com, Google moved up six positions, from #58 to #52. Concur Technologies jumped 18 places, from #95 to #77.

Hardware companies have moved up, too—Hitachi moved from #20 to #15—and more are appearing on the list for the first time. Both NCR and Dell, for example, are new entrants (NCR at #59 and Dell at #64). Even semiconductor company Qualcomm made the list this year, at #94, with an estimated US\$376 million in software revenues in 2012.

Meanwhile, more software vendors are embracing hardware. Microsoft—already into hardware with its Xbox, Surface tablet and keyboard businesses—bought cell phone maker Nokia’s devices and services unit this year, adding more fuel to its effort to reposition itself as a devices and services company. Google purchased cell phone pioneer Motorola Mobility, introduced a tablet and in late 2013 started shipping Google Chromecast, a USB plug-in device that streams the Internet to TVs.

Service companies are also on the move. ADP—the payroll processing vendor—jumped from #64 in 2011 to #32 in 2012. And how do we define Amazon? It provides services, develops software, designs and sells hardware and streams media, and appears on our list for the first time this year, debuting at #74.

With all the digitisation going on in the media world, the lack of traditional ‘legacy’ publishers on the list is notable. An exception is Wolters Kluwer, a publisher of specialised information in the legal, tax, finance and healthcare professions. The European company ranked #46 in 2011, but shot up to #29 on the 2012 list. Indeed, its annual report notes that by 2012 74 percent of its revenues came from online, software and related services, up from half in 2004.

In fact, all of this convergence has disrupted the development of the Global 100 Software Leaders list. As the complex methodology section notes, defining what constitutes services versus software versus software as a service gets trickier each year.

“What does it even mean to be a software company today? Nobody really knows.”

Pierre Marty
PwC European Software Leader

“The question is, what does it even mean to be a software company today?” asks Pierre Marty, European Software Leader for PwC. “Nobody really knows.”

Although traditional software vendors still earn the lion’s share of their revenue from licenses, enterprises are changing their buying habits. IDC estimates that by 2016 about 25 percent of new business software purchases will be service-enabled software; SaaS delivery will constitute about 14.2 percent of all software spending and 18 percent of all applications spending. IDC’s 21.3 percent compound annual growth rate forecast for SaaS reflects the strength of the new business model. Meanwhile, the traditional licensing model is expected to grow 4 percent, IDC predicts. Furthermore, PwC estimates that the traditional IT services market grew 2 percent from 2011 to 2012. Hardware revenues declined by 0.5%, according to PwC. * Declines or slow growth in most traditional IT-related markets will lead to even more intense competition in the future.

It’s ‘intra-industry warfare’ as companies encroach on each other’s total available markets (TAMs), says Tom Archer, US Technology Industry

**Qualcomm joins
Global 100
Software Leaders**





US\$376 million

Source: IDC 2012

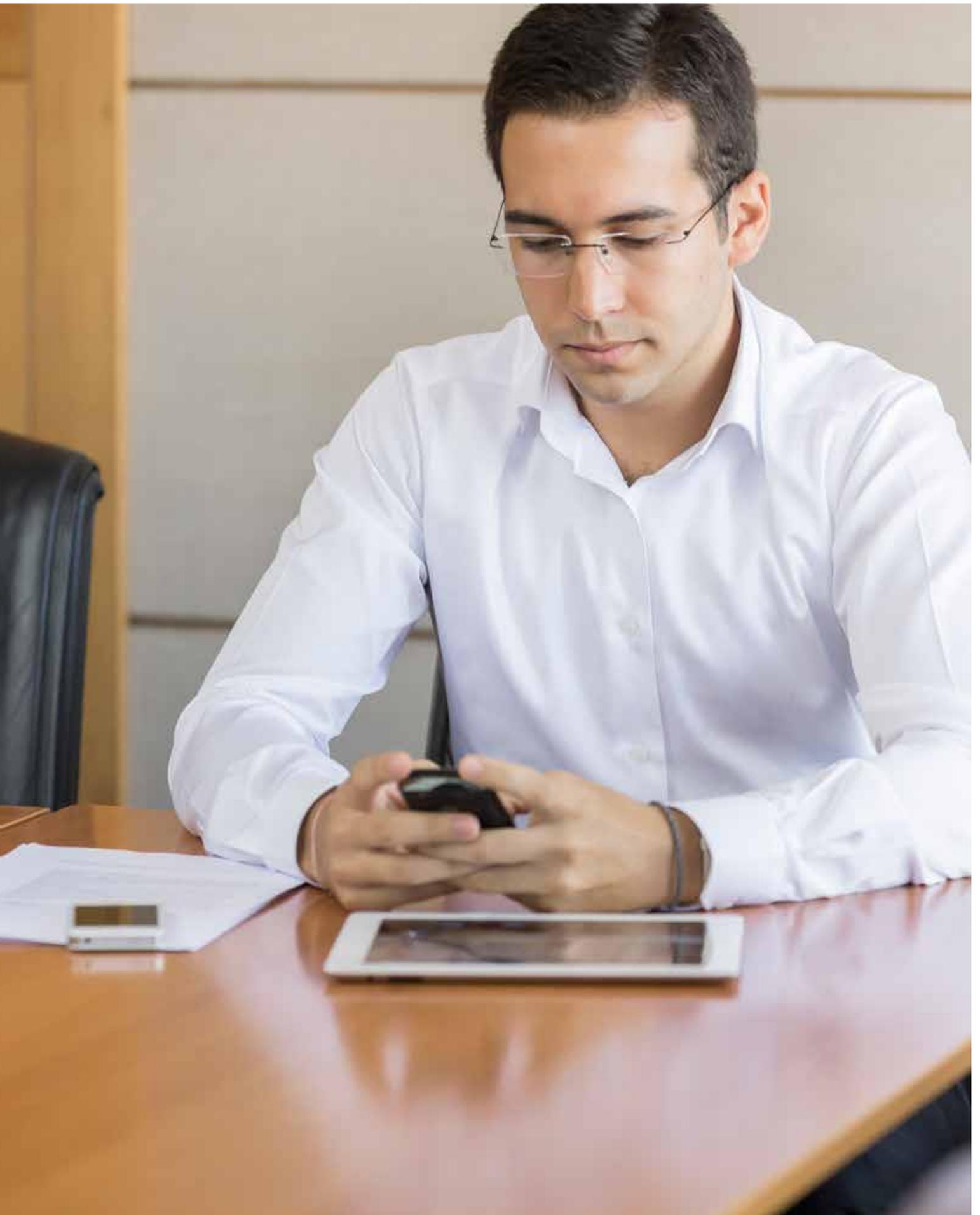
*Based on 2013 data by Thomson Financial

Top 20 SaaS vendors as percentage of revenue

2012 % SaaS rank	2011 % SaaS rank	Company	SaaS revenues as % of software revenue
1		Amazon.com	100.0%
2	5	Concur Technologies	100.0%
3	2	Salesforce.com	98.6%
4	1	Blackboard	96.2%
5		ADP	95.0%
6	4	Google	90.6%
7	3	GXS	83.7%
8		athenahealth	66.1%
9		Intuit	49.2%
10	10	DATEV	46.1%
11	8	Unisys	45.1%
12	9	Cisco	40.0%
13		CommVault	38.2%
14		FICO	36.1%
15		Northgate Information Solutions	35.7%
16		Compuware	31.1%
17		Cerner	26.9%
18		Citrix	24.5%
19		Allscripts	23.5%
20		NCR	20.3%

Top 20 in SaaS revenues

2012 % SaaS rank	Company	SaaS revenues (US\$M)
1	Salesforce.com	\$2,766.00
2	Microsoft	\$1,463.00
3	Intuit	\$1,213.00
4	ADP	\$1,194.63
5	SAP	\$1,117.00
6	Oracle	\$972.00
7	Cisco	\$800.00
8	IBM	\$742.50
9	Google	\$684.00
10	Adobe	\$661.00
11	Symantec	\$595.00
12	Citrix	\$511.00
13	Amazon.com	\$461.00
14	Concur Technologies	\$448.37
15	DATEV	\$441.40
16	Fujitsu	\$438.00
17	Blackboard	\$407.17
18	GXS	\$368.00
19	athenahealth	\$270.00
20	Compuware	\$241.00



Leader for PwC. “There used to be pretty discrete TAMs,” he says, “like the server market, the storage market, the networking market, the enterprise software market, the application market and the device market.” Not anymore.

Meanwhile, companies outside the tech industry are accelerating their efforts to digitise their products and services. “You see more and more traditional businesses acquiring software companies or investing in software,” says Marty. In the United States, for example, athletic clothing company Under Armour recently bought app company MapMyFitness. Under Armour will be selling more than just undergarments—it will be selling a wearable digital fitness and

training system. In Europe, electrical equipment manufacturer Schneider Electric SA acquired automation software vendor Invensys Plc of the United Kingdom (#93 on our list) to help it expand into smart home and smart grid markets, according to Marty. Schneider will be selling more than power equipment; it will be selling data on how and when electricity is used.

But these mainstream companies don’t want to just purchase a software or hardware product that they will have to integrate into their product as well as continually upgrade, maintain and support. To digitise their offering in the most efficient way possible, they need a software partner that will provide

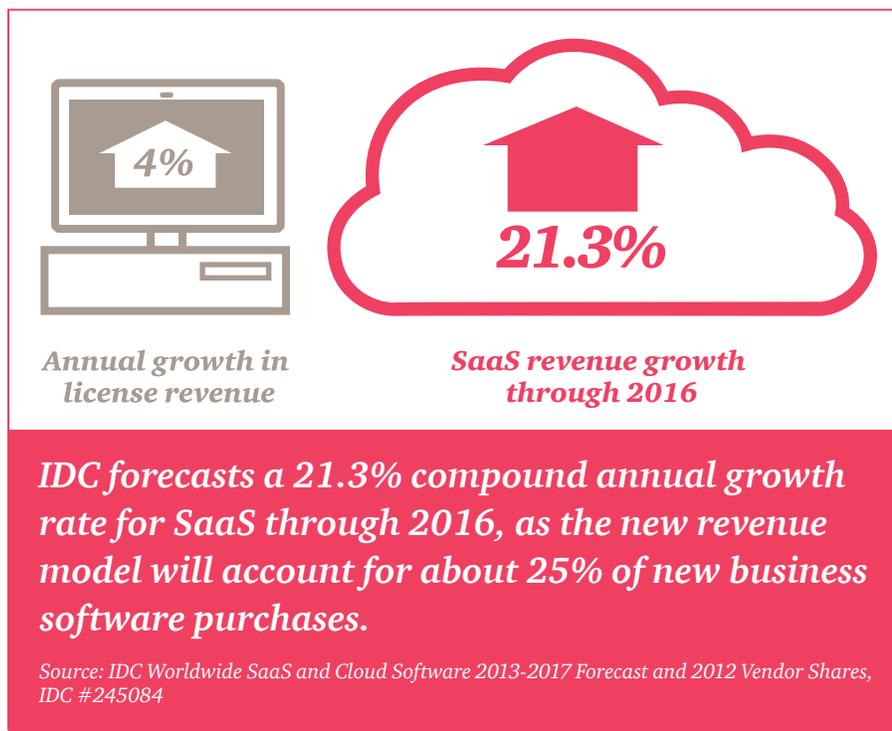
the service using the hardware as a delivery vehicle, sometimes as a loss-leader. Essentially, mainstream manufacturers want tech companies to partner and provide them with a capability that they can consume rather than products they must buy through a series of transactions.

“A company like Nike, which is adding a digital element to its products, needs to purchase technology differently,” explains Archer. “Such companies are turning to hardware and software vendors, saying, ‘We now need capability X delivered through an ecosystem. Can you provide us with capability X?’” So to remain relevant and continue to deliver value, technology companies need to become part of a digital ecosystem. They need to be able to deliver, for example, a complete fitness training system based on data from sensors in undergarments.

“These two trends—the merging of TAMs and the desire to buy differently—are fundamentally changing the economic models of companies,” adds Archer. “As a result, companies need to continue to adapt how they bring their products to market.”

These two trends also mean that tech companies’ existing sales and distribution models are changing, to enable the formation of these digital ecosystems. Infrastructure, software, services and device companies can supply different components of the value chain within an ecosystem. Vendors are starting to partner to reach different

Continues on page 13



The SaaS business model conundrum

When it comes to counting SaaS revenue for the Global 100 Software Leaders list, PwC takes great care to use a very specific definition provided by IDC.

SaaS revenue comes from a utility computing environment in which unrelated customers share a common application and infrastructure managed by an independent software vendor or a third-party service provider that typically owns the code or intellectual property. The model provides access to and consumption of software and application functionality built specifically for network delivery and accessed by users over the Internet. SaaS revenues do not include software deployed internally by the customer or any packaged software for which a license fee and a maintenance fee are paid.

The myriad ‘as a service’ (APPaaS, PaaS, IaaS) offerings—including business application services, databases, software development tools, high-level storage services (backup and archiving), testing as a service, and security as a service—are all included in the category of SaaS. A few hardware-oriented elements of IT cloud services are not included in the SaaS figures: bulk storage solutions, network services, and cloud servers.

In the marketplace, however, companies don’t draw such intricately detailed distinctions between hosted software, subscription-based software or true

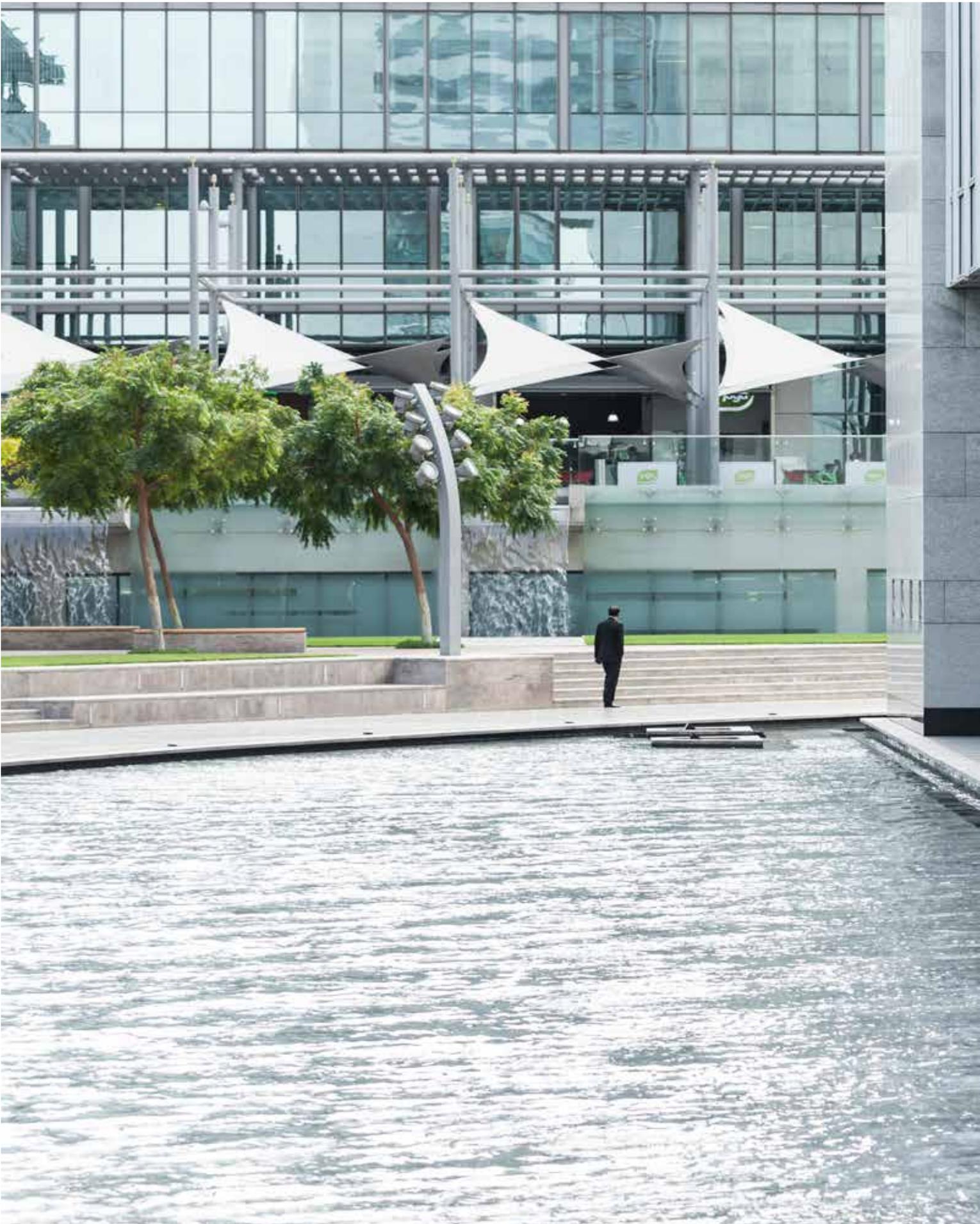
SaaS, says Mark McCaffrey, PwC Global Software Leader. “To the market, it’s all SaaS. And if you call it SaaS, Wall Street will typically give your company a higher multiple. It may not be all pure SaaS,” he says.

It’s crucial, however, that the companies themselves understand that each approach has a different path to profitability, with different resources and different macroeconomic factors. SaaS, IaaS and PaaS each have different macroeconomic factors that impact how the company should run that business. A company might come to market with something it broadly calls SaaS, when in reality one

business unit is doing SaaS and the other is doing PaaS. But each model functions differently. With SaaS, prices typically don’t go down but vendors keep offering premium features that add value and cost extra. With PaaS, however, prices do usually drop over time as more customers come onto the platform.

Most companies today don’t seem to be taking that into consideration. McCaffrey routinely asks companies about the differing factors of each model and whether management has built those into its profitability model. “I’ve yet to have anyone answer yes and tell me what they’ve done about it,” he says.





types or sizes of companies, such as SMBs, or businesses in different parts of the world, such as emerging markets. API-based services make it easier for vendors to combine software components to produce a particular type of service for a given market. Software companies such as Oracle and SAP, for example, are working with telecom providers in Asia to deliver industry-specific software using their infrastructure, explains Greg Unsworth, Asia Pacific Technology Industry Leader for PwC. The arrangement gives these players the ability to address a part of the market it couldn't reach with its more traditional model, he notes.

The concept of offering digital capabilities in a way they can be best consumed can open new markets all over the world. Emerging nations, in particular, “offer the opportunity to change the way you produce and deliver products into the market,” says Archer. Delivering financial services in less-developed African countries requires delivering them via mobile apps, for example, because the distribution platform in that part of the world is wireless networks with mobile phones as the end devices.

Indeed, the biggest challenge for high tech vendors may be to first broaden their thinking to include a wide variety of choices, then prioritise their efforts in the right areas. Companies will be faced with choosing what function they want to play in and in which markets. A provider of platforms? Software as a service? Data analysis? Data security

and trusted transactions? Will you take that service and expand into the financial services market? Or perhaps you want to be part of the value chain for healthcare. Will your service be branded, or perhaps you will provide a white-label product that a health insurance company or major medical group can market as its own. Companies could view the possibilities in the form of a matrix, with markets on the vertical axis and various types of service (SaaS, PaaS, IaaS) across the top. The execution will be complicated, because each of these different roles requires a different operating model, a fact that few companies seem to appreciate. (See sidebar “The SaaS business model conundrum,” on page 11.)

The business model transitions are likely to be rocky. As hardware companies move into software and software companies start building hardware, they can encounter a “cultural earthquake,” contends Patrick Pugh, US Software and Internet Advisory Leader at PwC. The two cultures are diametrically opposed. Hardware manufacturing requires precision, repeatability and high reliability within an environment of low margins due to commoditisation. The development and shipping of software is typically more fluid and in an environment of much higher margins. If there's a problem with a software product, it's a bug and you push out a patch to fix it. But a mistake in hardware can result in a major and costly product recall.

“Two trends—the merging of markets and the desire to buy differently—are fundamentally changing the economic models of companies.”

Tom Archer
PwC US Technology Industry Leader

“

SaaS is helping traditional software companies access markets they couldn't reach with their existing sales and distribution model.”

Greg Unsworth
*PwC Asia Pacific Technology
Industry Leader*

Even without having to adjust to the world of hardware, traditional software companies will have to change most of their internal processes to adjust to the fact that software today needs to be available as a mobile application. (And this is on top of learning how to sell their software as a service, too.) Developing software for the mobile market is very different from traditional software R&D. Rather than rolling out a version of software, and then rolling out Version 2.0 with fixes and enhancements a year later, mobile software is upgraded on the fly.

Furthermore, traditional software companies are accustomed to building software for servers or desktops first, but now should they be developing for mobile devices before they develop for PCs? But which mobile platform? Should they develop for smartphones? Tablets? iOS? Android? Windows Phone? At this point, notes Pugh, the most successful companies are being very deliberate in focusing on a limited number of tablet/smartphone platforms.

Another major change to software company business models is occurring in R&D. Ideas for improvements to the software don't come from engineers working in the lab for months, they come directly from customers rating the app or buzzing about it on social media. This is a big and challenging adjustment for companies that aren't exactly in touch with their end customers. “Look at your typical multinational corporation, where R&D is in China, customer support is in India and neither is in the same part of the world as their customers,” says McCaffrey.

Recent moves in executive management hint at some of the changes afoot. Traditional software players are hiring executives experienced in SaaS. Large, established technology companies are bringing in new CEOs from outside their niches.

As the industry moves through this chaos, it will be easy for a software company, or any company for that matter, to lose its bearings. “The world of the pure play is over,” says Pugh. “Every company is in transition.” To keep on the path to value, keep your eye on three things:

If you provide software, make sure your existing software is available as a service. That needn’t replace your licensed software business, but you should offer customers the choice.

Make sure your product or service is available as a capability, in a form that your target market can consume.

As traditional markets disintegrate and new ones are created, make sure to secure a role in the new digital ecosystems.

As companies across all markets go digital, it will create a tremendous growth channel for companies that are in the right position. We expect to see those companies continue to rise—or appear for the first time—on the Global 100 Software Leaders list over the next three years. Those that fail to find their bearings will

drop off the list. Who those will be, no one can predict. But one thing we are fairly sure of, we’re in for some big surprises.

“

The world of the pure play is over. Every company is in transition.”

Patrick Pugh

*PwC US Software and Internet
Advisory Leader*

Methodology

The PwC Global 100 Software Leaders list is based on corporate financial statements (GAAP-based where applicable), other public sources and estimates for privately held companies, as compiled for PwC by the Global Software Business Strategies Group at IDC.

Due to variances in fiscal years, the results were ‘calendarised’ for 2012, the most recent year for which complete data was available.

Currencies were converted to US dollars using the average historical inter-bank rate for 2012 as the rate of exchange. The historical rates used can be found at www.oanda.com. The table reports the company’s total revenue and revenue from software.

Software revenue includes fees from licenses, maintenance, subscriptions and other software services, including software as a service (SaaS). Total revenue also includes software plus hardware, nonrecurring IT service fees, business process services and other sources.

Consumer gaming companies—Electronic Arts, Activision Blizzard and Nintendo, for example—are not included in this study.

SaaS revenue refers to all revenue derived from the SaaS delivery model, a utility computing environment in which unrelated customers share a common application and infrastructure managed by an independent software vendor or a third-party service provider that typically owns the code or intellectual property. The model provides access to and consumption of software and application functionality built specifically for network delivery and accessed by users over the Internet.

The myriad ‘as a service’ (APPaaS, PaaS, IaaS) offerings—including business application services, databases, software development tools, high-level storage services (backup and archiving), testing as a service, and security as a service—are all included in the category of SaaS.

SaaS revenues do not include software deployed internally by the customer or any packaged software for which a license fee and

a maintenance fee are paid. As noted previously, a few hardware-oriented elements of IT cloud services that contain software, such as bulk storage solutions, network services and cloud servers, are not included in the SaaS figures.

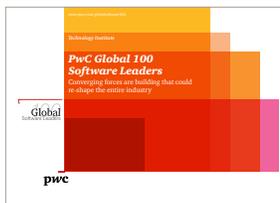
For more on these definitions see: IDC’s Worldwide IT Cloud Services Taxonomy, 2012

In the table on pages 2-5, the Country HQ column refers to the operating headquarters in the country where the main corporate decisions are made. This may differ from jurisdictions listed for tax or financial reasons in corporate documents.



Of further interest

For more information about PwC research on software industry operational challenges and best practices, please visit the following web pages:



Global 100 Software Leaders – 2013 Report
www.pwc.com/globalsoftware100



The new digital ecosystem: Nine trends rewriting the rules of business
www.pwc.com/us/en/technology/publications/new-digital-ecosystem.jhtml



Experience radar 2013: Lessons from the US enterprise software industry
www.pwc.com/us/en/advisory/customer-impact/publications/lessons-from-the-u.s.-enterprise-software-industry.jhtml



Technology Forecast – The future of enterprise apps: Moving beyond workflows to mindflows
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PwC can help

PwC can help you meet the challenges of a changing software industry. Please contact any of our technology industry partners listed below to learn more about our experience and insights.



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The Technology Institute is PwC's global research network that studies the business of technology and the technology of business with the purpose of creating thought leadership that offers both fact-based analysis and experience-based perspectives. Technology Institute insights and viewpoints originate from active collaboration between our professionals across the globe and their first-hand experiences working in and with the technology industry. For more information please contact Raman Chitkara, Global Technology Industry Leader at raman.chitkara@us.pwc.com.

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