

QUARTERLY VIEW**POINT**:

For the Quarter Ended December 31, 2016 and the Latest Twelve Months

QUARTERLY VIEW**POINT**:

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Market Leader for Mid-Market Technology M&A:

This Quarterly ViewPoint covers trends, public valuation multiples and relevant M&A activity for the software and services sectors. To illustrate general capital market and M&A trends within these sectors, DecisionPoint has selected a group of representative public comparables and transactions. This data is provided for informational purposes only. All data represents publicly available information.

DecisionPoint is a unique leader in M&A advisory services for middle-market technology companies and their venture capital investors in the software, services, and healthcare IT sectors.





































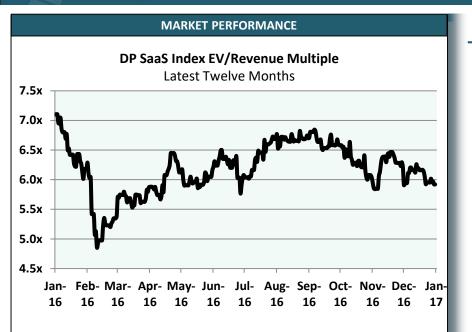




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Software: Software as a Service (SaaS)

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY



VALUATION METRICS

Company	Stock Price 12/31/16	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
salesforce.com, inc.	\$68.46	\$46,490.8	\$47,805.7	6.0x	89.5x
Workday, Inc.	\$66.09	\$13,284.1	\$11,897.8	8.2x	NM
Red Hat, Inc.	\$69.70	\$12,517.8	\$11,963.1	5.1x	30.2x
ServiceNow, Inc.	\$74.34	\$12,341.3	\$12,033.7	9.3x	NM
The Ultimate Software	\$182.35	\$5,288.3	\$5,187.9	7.0x	80.3x
athenahealth, Inc.	\$105.17	\$4,150.0	\$4,311.0	4.1x	48.5x
Medidata Solutions, Inc.	\$49.67	\$2,860.9	\$2,790.7	6.4x	49.7x
Ellie Mae, Inc.	\$83.68	\$2,808.7	\$2,422.1	7.4x	35.5x
RealPage, Inc.	\$30.00	\$2,414.1	\$2,468.0	4.6x	32.9x
Cornerstone OnDemand,	\$42.31	\$2,377.3	\$2,376.1	5.8x	NM
Ebix, Inc.	\$57.05	\$1,849.3	\$2,013.2	7.0x	18.7x
Evertz Technologies	\$12.57	\$947.5	\$851.7	3.0x	11.2x
LivePerson, Inc.	\$7.55	\$437.7	\$386.3	1.7x	23.0x
Trakm8 Holdings PLC	\$1.28	\$41.7	\$47.1	1.4x	11.3x
Median:	\$61.57	\$2,834.8	\$2,629.4	5.9x	32.9x

SECTOR HIGHLIGHTS

- The median SaaS index was trading at 5.9x revenue (based on Enterprise Value) at the closing of Q4.
- As SaaS providers continue to favor cloud offerings, on premise enterprise solutions look less attractive when factoring in its downgraded priority and associated costs.
- According to Computerworld's Forecast 2017 survey, the "as a service" trend continues to gain traction, with 33% of survey respondents reporting that their organizations are planning to increase spending on software-as-a-service (SaaS) offerings next year, putting SaaS at No. 5 on the list of respondents' most important technology projects.
- According to 451 Research's M&A KnowledgeBase, there have been 14 software
 acquisitions valued at \$1bn or more, four more than last year and two more than
 the previous record. Among this year's big prints, six were SaaS targets, compared
 with just one for all of last year.
- PE firms displayed an appetite for SaaS in 2016 almost one out of three \$1bn software transactions this year involved a PE shop buying a SaaS vendor. More striking was their willingness to pay premium multiples for growth companies, some of which didn't even put up any cash flow.

Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2016-12-20	Nielsen Holdings	Gracenote	560.0
2016-12-19	Guidewire Software	ISCS	160.0
2016-11-29	SintecMedia	Operative Media	190.0
2016-11-15	GE Digital	Bit Stew Systems	153.0
2016-11-14	Playtech	Consolidated Financial Holdings AS	43.4
2016-11-10	Acasta Enterprises	Stellwagen Group	270.0
2016-11-10	Adobe Systems	TubeMogul	540.0
2016-11-08	Callidus Software	Datahug	13.0
2016-10-31	Roper Technologies	ConstructConnect	632.0
2016-10-21	LDiscovery	Kroll Ontrack	410.0
2016-10-20	Proofpoint	FireLayers	55.0
2016-10-04	Akamai Technologies	Soha Systems	60.0



Software: Internet Software and Services

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY

DP Internet Software & Services Index EV/Revenue Multiple Latest Twelve Months 3.5x 3.3x 2.9x 2.7x Jan- Feb- Mar- Apr- May- Jun- Jul- Aug- Sep- Oct- Nov- Dec- Jan16 16 16 16 16 16 16 16 16 16 16 17

VALUATION METRICS

Company	Stock Price 12/31/16	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Alphabet Inc.	\$792.45	\$546,188.7	\$459,951.5	5.4x	16.3x
Amazon.com, Inc.	\$749.87	\$356,313.1	\$356,954.1	2.8x	32.8x
Facebook, Inc.	\$115.05	\$331,593.7	\$305,453.7	12.4x	23.7x
The Priceline Group Inc.	\$1,466.06	\$72,342.7	\$75,309.6	7.2x	18.8x
Netflix, Inc.	\$123.80	\$53,128.8	\$54,159.5	6.6x	NM
Yahoo! Inc.	\$38.67	\$36,896.0	\$31,611.4	6.4x	NM
eBay Inc.	\$29.69	\$33,191.2	\$34,177.2	3.8x	11.3x
Expedia, Inc.	\$113.28	\$16,995.4	\$19,960.3	2.4x	19.6x
IAC/InterActiveCorp	\$64.79	\$5,137.2	\$5,548.3	1.7x	14.2x
Pandora Media, Inc.	\$13.04	\$3,042.7	\$3,122.4	2.4x	NM
Cimpress N.V.	\$91.61	\$2,899.5	\$3,734.6	2.0x	17.6x
Groupon, Inc.	\$3.32	\$1,904.2	\$1,445.5	0.5x	NM
WebMD Health Corp.	\$49.57	\$1,819.2	\$1,824.7	2.6x	10.3x
RealNetworks Inc.	\$4.86	\$179.7	\$98.9	0.8x	NM
Median:	\$78.20	\$25,093.3	\$25,785.8	2.7x	17.6x

SECTOR HIGHLIGHTS

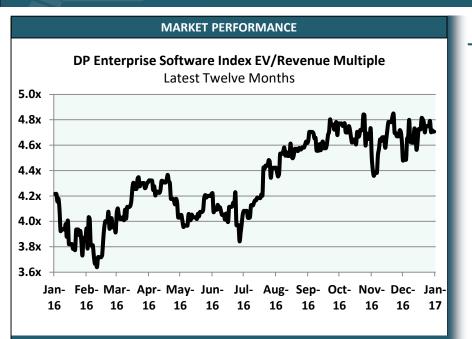
- The median Internet Software & Services index was trading at 2.7x revenue (based on Enterprise Value) at the closing of Q4.
- Although total deal volume decreased over 2015, the internet software & services sector's total deal amount in 2016 climbed to record numbers, growing from \$72m in 2015 to \$82m in 2016. Deal Flow drivers included brick & mortar expansion into the eCommerce market and continued market consolidation.
- Since acquiring online coupon service competitor LivingSocial in October, Groupon shares have dropped 40%, fueled primarily by trepidation towards LivingSocial's rapid revenue decline. The deal highlights the struggles of the online coupon service sector in recent years, forcing Groupon to reposition its business strategy.
- Cyber security issues continue to hamper the technology sector, with IoT suffering
 from DDoS attacks throughout October. In addition, Yahoo announced another
 breach of 1 billion accounts in December, with Verizon now reportedly seeking a
 \$1 billion discount on the announcement purchase price. Cyber security in 2017 is
 expected to become a key component of due diligence, with corporate acquirers
 utilizing extensive resources to help identify potential breaches.
- After undergoing extensive scrutiny over fake news stories, Facebook has introduced partnerships with fact-check organizations to help patrol news articles. The scandal represents a generational shift, where millennials are increasingly receiving news through social media sources such as YouTube and Facebook, with traditional news outlets attempting to enter the space through M&A.

Announced		-	Enterprise
Date	Acquirer Name	Target Name	Value (\$m)
2016-12-15	Just Eat	hungryhouse.com [Delivery Hero]	253.7
2016-11-23	Bed Bath & Beyond	PersonalizationMall.com	190.0
2016-11-23	Ctrip.com International	Skyscanner	1,734.1
2016-11-18	DraftKings	FanDuel	
2016-11-16	LendingTree	Iron Horse Holdings [dba	85.0
2010-11-10	Lendingrice	CompareCards]	85.0
2016-11-07	Bain Capital/Bow Street	Blue Nile	456.0
2016-10-26	Groupon	LivingSocial	
2016-10-24	TD Ameritrade	Scottrade Financial Services	4.0
2016-10-21	Ziff Davis Media Inc. [j2 Global]	Everyday Health	465.3
2016-10-19	Ocean Management Holdings	Qunar Cayman Islands	4,033.6
2016-10-14	Cinven/Permira/Mid Europa	Grupa Allegro [Naspers]	3,253.0
2016-10-14	Morningstar	PitchBook Data [fka Dealbook Data]	180.0



Software: Enterprise Software

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY



VALUATION METRICS

Company	Stock Price 12/31/16	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Microsoft Corporation	\$62.14	\$483,160.3	\$422,303.3	4.9x	15.7x
IBM	\$165.99	\$157,832.3	\$190,496.3	2.4x	10.9x
Oracle Corporation	\$38.45	\$157,735.4	\$154,239.4	4.1x	10.6x
SAP SE	\$87.25	\$104,543.0	\$107,347.9	4.7x	17.6x
Dassault Systèmes SE	\$76.42	\$19,377.0	\$17,813.0	5.7x	20.7x
Autodesk, Inc.	\$74.01	\$16,471.4	\$15,992.4	7.3x	NM
Constellation Software Inc.	\$454.22	\$9,625.7	\$9,665.9	4.8x	19.9x
Amdocs Limited	\$58.25	\$8,550.3	\$7,654.6	2.1x	11.0x
Ansys, Inc.	\$92.49	\$8,003.2	\$7,164.9	7.4x	16.0x
PTC Inc.	\$46.27	\$5,349.0	\$5,810.5	5.1x	NM
Tyler Technologies, Inc.	\$142.77	\$5,229.3	\$5,216.2	7.2x	35.4x
NICE Ltd.	\$68.23	\$4,133.8	\$3,462.4	3.7x	15.3x
Manhattan Associates, Inc.	\$53.03	\$3,775.2	\$3,664.3	6.1x	18.6x
Blackbaud, Inc.	\$64.00	\$2,974.9	\$3,334.1	4.7x	28.8x
Verint Systems Inc.	\$35.25	\$2,209.5	\$2,662.1	2.5x	25.6x
Stratasys Ltd.	\$16.54	\$870.0	\$632.9	0.9x	14.0x
QAD Inc.	\$30.40	\$577.7	\$441.4	1.6x	NM
Median:	\$64.00	\$8,003.2	\$7,164.9	4.7x	16.8x

SECTOR HIGHLIGHTS

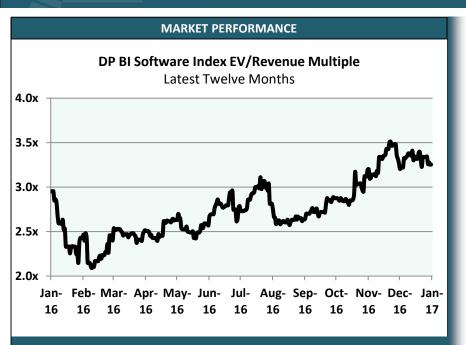
- The median Enterprise Software index was trading at 4.7x revenue (based on Enterprise Value) at the closing of Q4.
- Forrester revealed that 44 percent of North American and European enterprise infrastructure technology decision-makers indicate that their firms are building private clouds, with an additional 25 percent planning to implement them in the next 12 months.
- Debt played a part in helping enterprise software giants ink this year's largest software deals. The rising cost of debt in the final months of 2016 could well indicate a lighter year for big-ticket software transactions going into 2017.
- Synchronoss shed a large portion of its legacy telecom business and made an \$902.35m acquisition of collaboration software provider Intralinks in an effort to evolve more fully into an enterprise software vendor.
- This year, we have seen a number of high-profile companies backtrack on their earlier efforts to use M&A to become enterprise software vendors. Dell, Hewlett-Packard and Lexmark, among others, have all unwound or are trying to unwind billions of dollars of deals they did over the past decade to step from their original business into the enterprise software arena.
- As in most industries, progress in enterprise social software has been largely driven by startups or small vendors that are nimble and less encumbered by legacy client bases. In recent months, that status quo has reversed; vendors like Microsoft, IBM, Cisco, Google and Facebook have zeroed in on big opportunity in this space, and are hoping to take the lead in what 451 Research is terming workforce digitalization.

Announced			Enterprise
Date	Acquirer Name	Target Name	Value (\$m)
2016-12-19	Automated System Holdings	Grid Dynamics International	118.0
2016-12-12	Model N	Revitas	60.0
2016-12-07	Vista Equity Partners	SunGard	850.0
2016-12-06	Roper Technologies	Deltek	2,800.0
2016-12-06	Synchronoss Technologies	IntraLinks Holdings	902.4
2016-11-30	Syncsort	Trillium Software	112.0
2016-11-14	Siemens Industry	Mentor Graphics Corporation	4,281.3
2016-10-31	Nobelium Tech Corp	VIZIYA Corp	34.0
2016-10-28	Enghouse Systems	Presence Technology SL	13.0
2016-10-27	Aspen Technology	Mtelligence Corporation	37.4
2016-10-25	GIMV NV	MEGA International S.A.	69.7



Software: Business Intelligence Software

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY



VALUATION METRICS

Company	Stock Price 12/31/16	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Tableau Software, Inc.	\$42.15	\$3,207.3	\$2,342.7	3.0x	NM
Pegasystems Inc.	\$36.00	\$2,747.8	\$2,618.1	3.5x	29.4x
MicroStrategy Inc.	\$197.40	\$2,256.5	\$1,677.6	3.3x	13.2x
PROS Holdings, Inc.	\$21.52	\$656.9	\$631.4	4.1x	NM
Datawatch Corporation	\$5.50	\$65.6	\$37.5	1.2x	NM
Median:	\$36.00	\$2,256.5	\$1,677.6	3.3x	21.3x

SECTOR HIGHLIGHTS

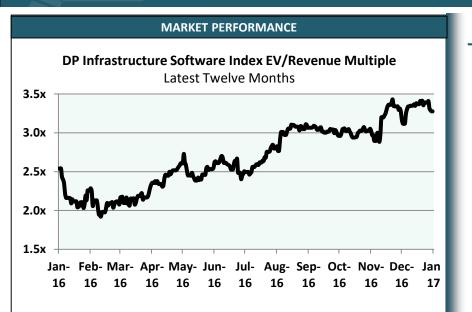
- The median Business Intelligence Software index was trading at 3.3x revenue (based on Enterprise Value) at the closing of Q4.
- 451Research projects 2017 to have a greater focus on machine learning and deep learning in order to automate much of the complexity of predictive analytics.
 Engines such as Apache Spark are expected to help drive this transition, seamlessly integrating with Hadoop and other big data platforms.
- Despite a slight decrease in total M&A activity over 2015 (90 total deals), 2016 (86 total deals) continued the BI sector trend of huge exits, with 8 announced deals over \$500m. High BI M&A activity is expected to continue into 2017, with large application vendors buying predictive and other forms of advanced analytics.
- Amazon Web Services officially released its Quicksite business intelligence tool on November 15th. The tool, which allows users to connect data in existing repositories, query it, and chart it out at a low cost, is predicted to position Amazon as a serious competitor in the BI space.
- SAP is undergoing a large-scale unification of its BI portfolio, with the goal to provide users with an all-encompassing approach. The changes include increased integration of its Lumira data visualization tool, utilization of SAP Business Objects in its BOC SaaS offering, and a foray into machine learning.

Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2016-12-16	Practo Technologies Private Limited	Enlightiks	13.9
2016-12-15	LiquidHub	Annik	
2016-12-06	FreshLime	Dasheroo	
2016-12-02	Software AG	Zementis	65.0
2016-11-07	The Riverside Company	Competitive Edge Software [aka Report Exec]	
2016-11-01	Strategic Insight [Genstar Capital]	BrightScope	
2016-10-27	NetScout Systems	Avvasi (certain assets)	4.6
2016-10-25	Larsen & Toubro Infotech [aka L & T Infotech]	AugmentIQ Data Sciences	
2016-10-24	Verisk Analytics [fka Insurance Services Office]	Analyze Re	
2016-10-10	Envestnet	Wheelhouse Analytics	
2016-10-06	ION Investment Group	Reval	
2016-10-04	salesforce.com	Krux	768.0



Software: Infrastructure Software

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY



VALUATION METRICS

Company	Stock Price 12/31/16	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Symantec Corporation	\$23.89	\$14,893.5	\$16,450.5	4.5x	17.5x
Check Point Software	\$84.46	\$14,772.2	\$13,542.0	7.9x	15.7x
Citrix Systems, Inc.	\$89.31	\$13,929.3	\$13,605.1	4.0x	13.6x
Red Hat, Inc.	\$69.70	\$12,517.8	\$11,963.1	5.1x	30.2x
F5 Networks, Inc.	\$144.72	\$9,453.1	\$8,570.7	4.3x	14.2x
Trend Micro Incorporated	\$35.59	\$4,879.9	\$3,791.3	3.5x	11.1x
Commvault Systems, Inc.	\$51.40	\$2,328.1	\$1,888.4	3.0x	NM
Progress Software	\$31.93	\$1,551.6	\$1,455.7	3.6x	14.2x
Radware Ltd.	\$14.58	\$638.0	\$431.0	2.2x	NM
VASCO Data Security	\$13.65	\$542.7	\$401.1	2.1x	28.6x
Magic Software	\$6.67	\$295.7	\$265.1	1.4x	8.1x
Guidance Software, Inc.	\$7.08	\$228.0	\$220.9	2.0x	NM
Allot Communications	\$4.79	\$161.6	\$50.7	0.5x	NM
BSQUARE Corporation	\$5.85	\$72.8	\$41.3	0.4x	20.2x
Median:	\$27.91	\$1,939.8	\$1,672.1	3.3x	15.0x

SECTOR HIGHLIGHTS

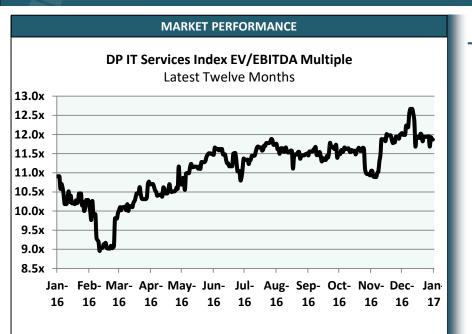
- The median Infrastructure Software index was trading at 3.3x revenue (based on Enterprise Value) at the closing of Q4.
- According to Statista, the market for cloud computing, specifically infrastructure Software as a Service (SaaS), is set to grow to \$11.6 billion by 2020.
- Total M&A spending on infrastructure management jumped 57% to \$15.2bn.
- Shuffling ownership, rather than a reach for strategic technologies, drove acquisitions of infrastructure management technologies to new highs in 2016. In 2017, the rising spending on cloud – both SaaS and IaaS – will ignite dealmaking, while take-privates and divestitures decline.
- Two large transactions in this space Hewlett Packard Enterprise's \$8.8bn sale of its software business to Micro Focus and Francisco Partners' purchase of Dell's software unit (which we estimate had a multibillion-dollar price tag) were both divestitures that were bought for their ability to generate cash, not growth.
- While there could continue to be some profit-driven consolidation, private equity looks to be less of an influential player in this category as debt became more expensive in the waning months of 2016 and many of the largest firms have already executed sizeable take-privates in this category in recent years.

Announced Date	Acquirer Name	Target Name	Enterprise Value (\$m)
2016-12-19	Vmware	PLUMgrid	-
2016-12-16	ARM Holdings	Allinea Software	-
2016-12-01	Juniper Networks	AppFormix	-
2016-12-01	CA Technologies	Automic Software	636.5
2016-11-30	SUSE	HPE (OpenStack laaS and Cloud Foundry PaaS assets)	-
2016-11-29	Rogue Wave Software	Akana	25.0
2016-11-21	Oracle Corporation	Dyn	-
2016-11-14	Playtech	Consolidated Financial Holdings AS	43.4
2016-10-31	Cloud Equity Group	ComfortHost	-
2016-10-12	CITIC Telecom International Holdings Limited	Acclivis Technologies and Solutions	52.5



Services: IT Services

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY



VALUATION METRICS

Company	Stock Price 12/31/16	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Accenture plc	\$117.13	\$64,191.5	\$60,756.3	1.8x	10.7x
Cap Gemini S.A.	\$84.61	\$14,148.9	\$16,696.2	1.3x	10.2x
NTT Data Corporation	\$48.39	\$13,574.5	\$14,246.8	1.0x	6.3x
Atos SE	\$105.83	\$10,881.6	\$10,914.5	0.9x	7.1x
Booz Allen Hamilton	\$36.07	\$5,392.2	\$6,648.1	1.2x	12.8x
CACI International Inc.	\$124.30	\$3,030.2	\$4,396.3	1.1x	12.8x
Sopra Steria Group	\$113.85	\$2,262.5	\$3,058.0	0.8x	10.0x
ManTech International	\$42.25	\$1,628.4	\$1,557.5	1.0x	12.5x
ICF International Inc.	\$55.20	\$1,046.5	\$1,318.0	1.1x	12.0x
Perficient Inc.	\$17.49	\$630.6	\$648.4	1.3x	11.9x
The Hackett Group, Inc.	\$17.66	\$504.3	\$502.5	2.0x	13.9x
NCI, Inc.	\$13.95	\$188.8	\$188.6	0.6x	6.5x
Edgewater Technology	\$7.50	\$92.8	\$85.7	0.7x	12.7x
Ciber, Inc.	\$0.63	\$51.6	\$85.2	0.1x	NM
Median:	\$45.32	\$1,945.4	\$2,307.7	1.1x	11.9x

SECTOR HIGHLIGHTS

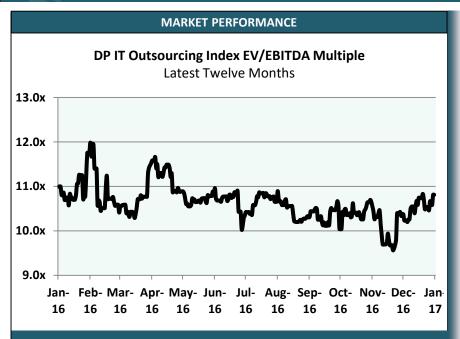
- The median IT Services index was trading at 11.9x EBITDA (based on Enterprise Value) at the closing of Q4.
- The global Green IT services market is expected to grow at the CAGR of 5.84% to reach \$7.12 billion by 2020. The desire of corporate IT sectors to save money and increase efficiency is driving the market, with many firms seeking out managed IT service companies for assistance with system and process design, eco-innovation planning, and project management services.
- The IT service sector is undergoing a shift, with businesses increasingly relying on outside experts to help them harness the benefits of mobility, the cloud and other game-changing technologies. Business are increasingly moving away from legacy IT services, instead valuing cloud SaaS, big data, and mobility.
- Legacy system integration firm Wipro acquired Indianapolis-based Appirio in order to expand into SaaS services. Appirio, an early entrant into the SaaS integration and services market, will bring expertise and pre-integrated service offerings, helping Wipro adapt to the changing market. Legacy systems integrators Infosys and IBM have also been eager to enter into the SaaS services market, with IBM acquiring BlueWolf Group in early 2016.
- India's \$150 billion IT Services industry has been buffeted by a halting of discretionary IT spending by customers, with year-end growth of 9% in 2016 compared to projections of 12%. Slow growth is expected to continue into the first half of 2017, with fears that US policy may limit India's ability to export IT services.

Announced			Enterprise
Date	Acquirer Name	Target Name	Value (\$m)
2016-12-23	Daisy Group [MBO]	Alternative Networks	184.3
2016-11-30	AVI-SPL [H.I.G. Capital]	Anderson AV	
2016-11-29	Indra Sistemas	Tecnocom	338.1
2016-11-22	L-3 Communications	MacDonald Humfrey (Automation)	254.0
2016-11-09	Accenture	Nashco Consulting	
2016-11-07	Insight Enterprises	Datalink Corporation	234.6
2016-11-04	CGI Group	Collaborative Consulting	
2016-10-20	Wipro	Appirio	500.0
2016-10-19	Quess Corp. [fka IKYA Group]	Comtel Solutions	
2016-10-11	DigitalGlobe	The Radiant Group [Aston Capital]	140.0
2016-10-05	Accenture	Defense Point Security	
2016-10-05	TriCore Solutions	Database Specialists	



Services: IT Outsourcing

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY



VALUATION METRICS

Company		ock Price 31/2016	Market Cap.	interprise /alue (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Company	12/	31/2010	сар.	 raiue (LV)	Revenue	LDITUA
Tata Consultancy Services	\$	34.83	\$68,632.05	\$ 63,944.28	3.8x	13.8x
Automatic Data	\$	102.78	\$46,371.58	\$ 45,561.68	3.8x	17.2x
Infosys Limited	\$	14.88	\$34,011.32	\$ 29,022.66	3.0x	10.8x
Cognizant Technology	\$	56.03	\$33,993.40	\$ 30,031.40	2.3x	11.3x
Wipro Ltd.	\$	6.98	\$17,146.93	\$ 14,405.45	1.8x	9.1x
CGI Group Inc.	\$	47.97	\$14,400.66	\$ 15,413.58	1.9x	11.4x
Computer Sciences Corporation	\$	59.42	\$ 8,367.24	\$ 10,900.24	1.5x	11.8x
DST Systems Inc.	\$	107.15	\$ 3,427.73	\$ 3,696.93	1.3x	8.1x
Syntel, Inc.	\$	19.79	\$ 1,664.36	\$ 2,055.28	2.1x	7.4x
CSG Systems International	\$	48.40	\$ 1,562.35	\$ 1,701.61	2.2x	10.1x
Unisys Corporation	\$	14.95	\$ 748.75	\$ 745.45	0.3x	3.8x
Median:	\$	47.97	\$14,400.66	\$ 14,405.45	2.1x	10.8x

SECTOR HIGHLIGHTS

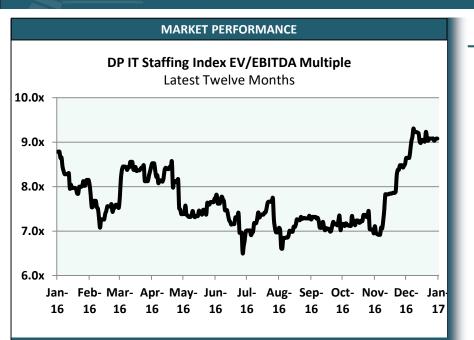
- The median IT Outsourcing index was trading at 10.8x EBITDA (based on Enterprise Value) at the closing of Q4.
- The key challenge for all IT outsourcing, systems integrators and digital transformation consultants is to convince customers of the need for outside strategists, development and platform services as the IoT industry matures.
- By 2020, healthcare providers will more than double their spending on technology services, which represents an opportunity of over US\$9 billion dollars for the healthcare IT outsourcing (ITO) market, according to Everest Group, a consulting and research firm focused on strategic IT, business services and sourcing.
- In October, IBM and its customer Bank of Tokyo announced that they would begin
 piloting blockchain technology to automate business transactions between each
 other. The joint experiment is one of the first projects built on the open-source
 Hyperledger Project (the Linux Foundation-led blockchain platform) to explore
 contract management, the companies said. It's also an early example of the
 benefits of using an existing IT outsourcing engagement to experiment with
 blockchain technology.
- The new administration coming to power in the U.S. could affect trade agreements, regulations, tax policies, visas and immigration--ultimately impacting the outsourcing industry, which continues to rely on the benefits of global labor trade. Brexit only adds to industry anxiety in the U.K. and Europe.

Announced			Enterprise
Date	Acquirer Name	Target Name	Value (\$m)
2016-12-15	SS&C Technologies	Conifer Financial Services	88.5
2016-12-14	GIC Special Investments; Golden Gate Private Equity	NeuStar	2,870.5
2016-12-12	H.I.G. Capital	Lionbridge Technologies	360.0
2016-12-06	Sequential Technology International	Synchronoss Technologies (Activation Business)	146.0
2016-12-05	Uber Technologies	Geometric Intelligence	
2016-12-01	Information Services Group	Alsbridge	74.0
2016-11-29	Booz Allen Hamilton	eGov Holdings	250.0
2016-11-10	NPC Group	Moneris Solutions	425.0
2016-10-12	The Bosch Group	ITK Engineering AG	-
2016-10-03	Cognizant Technology Solutions	Frontica Business Solutions AS	128.2
2016-10-03	MetaBank	EPS Financial (assets)	42.5



Services: IT Staffing

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY



VALUATION METRICS

Company	Stock Price 12/31/16	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Robert Half International	\$48.78	\$6,187.5	\$5,896.1	1.1x	9.3x
ManpowerGroup Inc.	\$88.87	\$5,959.5	\$6,412.9	0.3x	7.9x
On Assignment, Inc.	\$44.16	\$2,337.7	\$2,979.4	1.2x	11.6x
Kforce Inc.	\$23.10	\$594.7	\$698.8	0.5x	9.1x
CDI Corp.	\$7.40	\$138.1	\$142.9	0.2x	NM
RCM Technologies, Inc.	\$6.36	\$76.9	\$87.7	0.5x	11.4x
Computer Task Group, Incorporated	\$4.21	\$68.2	\$58.9	0.2x	6.4x
Hudson Global, Inc	\$1.36	\$43.8	\$34.7	0.1x	NM
Mastech Digital, Inc.	\$6.81	\$30.4	\$45.8	0.3x	6.2x
Median:	\$7.40	\$138.1	\$142.9	0.3x	9.1x

SECTOR HIGHLIGHTS

- The median IT Staffing index was trading at 9.1x EBITDA (based on Enterprise Value) at the closing of Q4.
- As IT becomes more like a broker of services, the role of IT is changing within, and staffing (who can bridge the old world and the new) will be a significant issue, both in acquisition of new talent and retention of the existing workforce.
- Datacenter staffing at large enterprises is flat to down likely because of consolidation initiatives and off-premises cloud usage resulting in fewer sites. However, this is less the case among large, datacenter-dependent organizations such as telcos or tech firms where the facility is a strategic asset.
- According to the Robert Half Technology IT Hiring Forecast, just 16 percent of U.S. chief information officers (CIOs) said they planned to expand their technology teams in the first half of 2017, down from 21 percent in a similar survey for the second half of 2016. The biannual survey is based on interviews with more than 2,500 CIOs from 25 major U.S. markets who were asked to provide a six-month hiring outlook.
- Sixty-one percent of CIOs in the Robert Half survey said it's "somewhat challenging" or "very challenging" to find skilled IT professionals today. They cited the following skills as being in greatest demand within their organizations:

Database management (44 percent)

Desktop support (42 percent)

Network administration (42 percent)

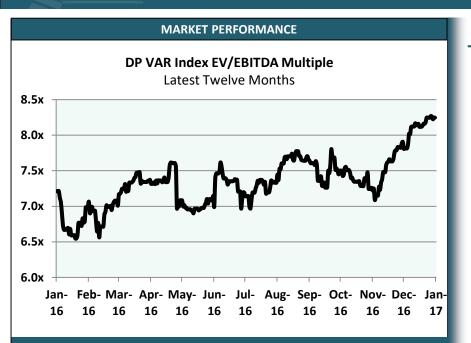
Cybersecurity (41 percent)

Announced			Enterprise
Date	Acquirer Name	Target Name	Value (\$m)
2016-12-22	Halo Group	Sonoma Consulting	-
2016-12-19	Engage2Excel	Decision Toolbox	-
2016-12-07	Vaco	GreyThorn	-
2016-11-16	Revel Consulting	Two Shea Consulting (assets)	-
2016-11-03	Consulting Solutions International	The Nuss Group	-
2016-10-12	Preferred Systems Solutions	Synaptic Solutions	-
2016-10-06	Morgan Stanley Private Equity	24 Seven	-



Services: Value Added Resellers

HIGHLIGHTS, VALUATION METRICS, AND RECENT M&A ACTIVITY



VALUATION METRICS

Company	Stock Price 12/31/16	Market Cap.	Enterprise Value (EV)	EV/ LTM Revenue	EV / LTM EBITDA
Arrow Electronics, Inc.	\$71.30	\$6,387.5	\$8,840.2	0.4x	8.1x
Tech Data Corporation	\$84.68	\$2,982.5	\$2,656.4	0.1x	7.3x
Insight Enterprises, Inc.	\$40.44	\$1,434.7	\$1,638.7	0.3x	9.0x
ALSO Holding AG	\$88.50	\$1,134.7	\$1,381.9	0.2x	8.2x
ePlus inc.	\$115.20	\$815.7	\$975.1	0.8x	10.4x
PC Connection, Inc.	\$28.09	\$746.1	\$679.2	0.3x	7.4x
PCM, Inc.	\$22.50	\$266.6	\$414.3	0.2x	9.8x
Median:	\$71.30	\$1,134.7	\$1,381.9	0.3x	8.2x

SECTOR HIGHLIGHTS

- The median VAR index was trading at 8.2x EBITDA (based on Enterprise Value) at the closing of Q4.
- Technavio forecasts the Global CAE market for VARs to grow at a CAGR of more than 11% during the period 2016-2020. The computer-aided engineering market growth is fueled by high R&D expenses associated with buying new CAE software, where VARs help bridge the gap between suppliers and customers, eliminating the complexity companies often face when evaluating the best use-case supplier.
- Distributors are projected to continue diversification in 2017, developing services in areas such as training, continuing to expand integration capabilities aimed at easier cloud provisioning, and expanding into mobile device opportunities. These initiatives reflect distributors' desire to increase margins by cultivating a range of services in addition to their traditional role in product fulfillment.
- As wireless infrastructure develops, the spend is increasingly becoming dictated by vertical industry needs, with spending increases primarily stemming from the retail and healthcare verticals. VARGuy projects distributors to provide solutions that take into account these needs, including wireless solutions that incorporate IOT-embedded capabilities, along with mobile solutions and deep analytics.
- Google analysts predict services will make up 60 percent of all value-added reseller business by 2020. Currently, services make up about 35 percent of all VAR business, with products providing the other 65 percent. However, increased competitive pressure is pushing VARs away from a CAPEX model, with buyers increasingly wanting to buy on an OPEX model.

Announced			Enterprise
Date	Acquirer Name	Target Name	Value (\$m)
2016-12-13	Solar Communications	Denwa Limited	
2016-11-21	iRobot Corporation	Sales On Demand	15.0
2016-11-14	Exertis [DCC]	Medium	10.3
2016-11-08	Procurri [DeClout]	EAF Supply Chain Holdings	1.9
2016-11-01	Accenture	Realworld OO Systems	
2016-10-21	Esprinet	Itway	
2016-10-14	Exertis [DCC]	Hammer Consolidated Holdings	47.0
2016-10-12	Loffler Companies Inc.	Copier Business Solutions	
2016-10-05	TPT Global Tech Inc.	K Telecom and Wireless	
2016-10-04	Denovo Ventures LLC	CD Group	



Our team of professionals brings a unique combination of technological, financial, and operational experience to our clients and their transactions. With backgrounds and deal experience spanning Wall Street investment banks, multi-billion dollar corporations, and high growth start-ups, we have an exceptional understanding of how to successfully achieve our clients' strategic initiatives.



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