



July 2017

# The Lighthouse

Software

Online & Digital

Tech Enabled Business Services

# Pharus Observations

## Aviation Sector Technology Reaches a New High Altitude

Growing collaboration among market participants, particularly evident in the increasingly widespread adoption of IATA's New Distribution Capability (NDC) framework, underscores continued progress in moving from legacy systems to next-generation technologies. Large airlines have been increasingly willing to experiment technologically, moving away from antiquated systems that provide stagnant profits. Examples include digital recognition technology, virtual passports, automated border gates, and robotic kiosks. These trends have also been manifest in the mounting number of M&A transactions in the space. Throughout the first half of 2017, Pharus has observed increased consolidation within the aviation technology sector; this acquisitive environment has largely been fueled by the potential for adding new sources of revenue and reducing ticketing transaction costs, as well as the falling cost and growing sophistication of big data analytics in planning, operational, marketing, and other functions.

One of the most notable transactions of 2017 occurred on February 16, when **Vitruvian Partners** acquired **OAG**, a web-based provider of historical and future airline schedules, ticketing and general travel industry information. The transaction values OAG at \$215M. OAG's digital solutions provide unprecedented insights into airline performance. With its large customer base and extensive network of air travel data, the company has recently experienced unprecedented growth.

On August 3, **PROS** acquired **Vayant Travel Technologies**, a privately held flight-search technology vendor. The transaction values Vayant Travel Technologies at \$35M. The acquisition will augment PROS' artificial intelligence-based dynamic pricing and revenue management tools.

On July 5, **Luminate Capital Partners** invested in **Comply365**, a provider of enterprise content management solutions for the aviation sector. Comply365 provides a mission-critical, mobile-first content management software platform that provides pilots with access to the most up-to-date and compliant manuals and notifications electronically.

On July 3, **DigitalTown** acquired **Comencia**, a provider of global travel affiliate solutions. Comencia's technology software equips any publisher with the ability to turn their site into a travel search portal, enabling the effective monetization of traffic while maintaining brand integrity.

On April 24, **Gentrack Group** acquired **Blip Systems**, a provider of passenger flow, line prediction, and capacity forecasting software for the travel sector. The acquisition was aimed at augmenting Gentrack's product range and expanding its customer base worldwide.

On February 4, **Mercator** acquired **Accelya**, an airline services company aimed at managing costs. The combined business will provide accounting, audit, and other financial services, making it a competitor with the world's four largest travel tech companies, Amadeus, Sabre, Travelport, and TravelSky.



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If you would like to be included on (or removed from) the distribution list for *The Lighthouse*, please contact Peter Chae at [pchae@pharus.com](mailto:pchae@pharus.com).

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# I Capital market trends

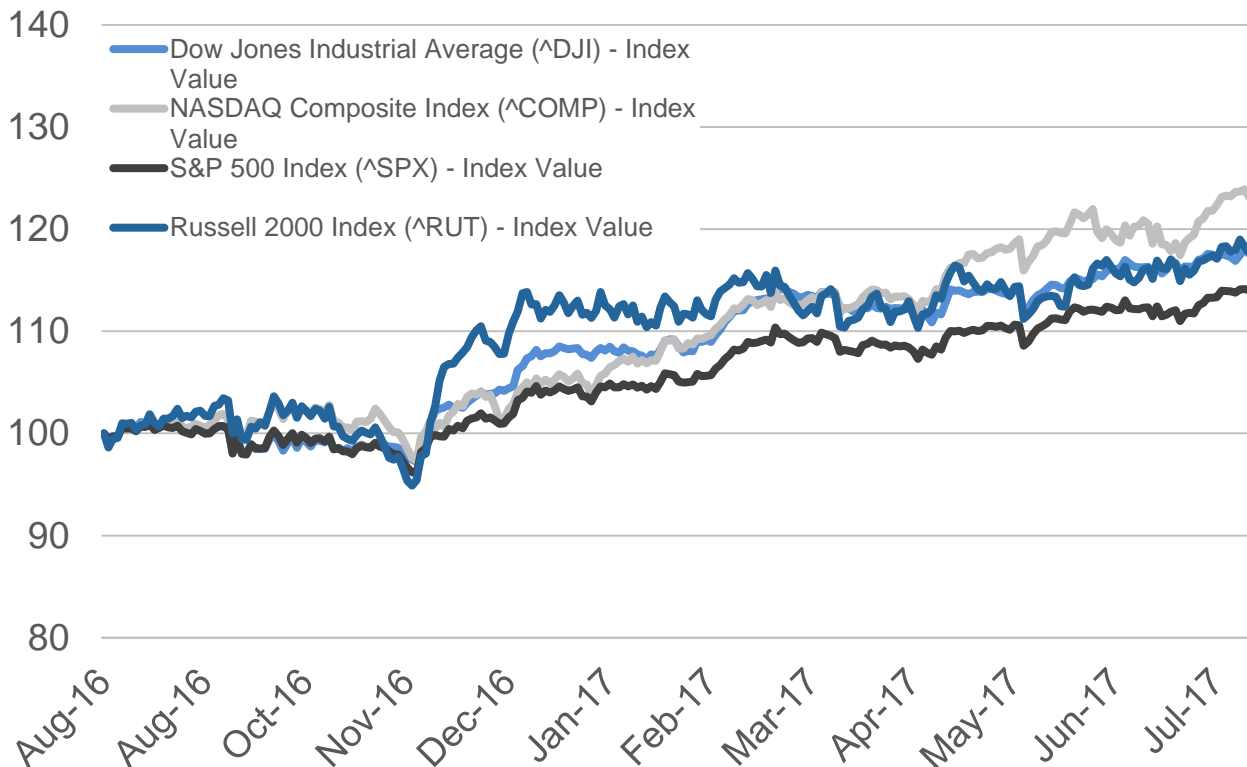


# Capital market trends



## Relative Performance of Major Indices

Through July 31, 2017 (Base = 100, 08/01/2016)



### Change %

Index	As of 31-July-17	1 Year	3 Months	1 Month
<b>Dow Jones</b>	21,891.12	18.8%	4.5%	2.5%
<b>Nasdaq</b>	6,348.12	23.0%	5.0%	3.4%
<b>S&amp;P 500</b>	2,470.30	13.6%	3.6%	1.9%
<b>Russell 2000</b>	1,425.14	16.8%	1.8%	0.7%



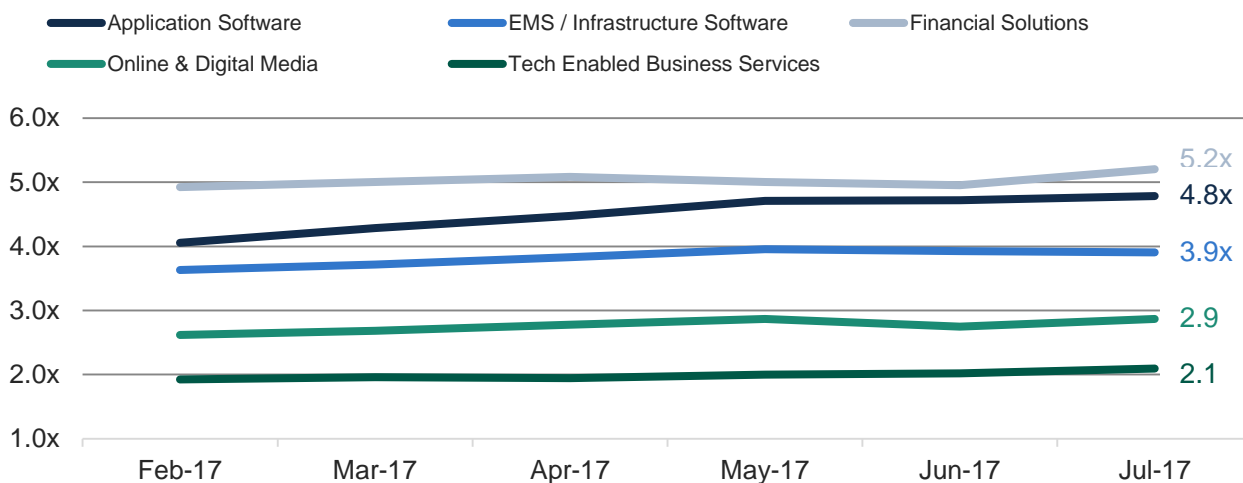
# Public market valuations



# Public market valuations



## Historical Median TEV / Revenue Multiples



	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17
<b>Application Software</b>						
Customer Relationship Management (CRM) & Customer Engagement	4.7x	4.9x	5.3x	6.2x	6.1x	6.0x
Accounting & Enterprise Resource Planning (ERP)	4.6x	4.5x	4.8x	4.9x	4.9x	4.7x
Supply Chain Management (SCM) & Logistics	4.9x	5.2x	4.6x	4.8x	5.1x	4.5x
HR & Workforce Management	5.2x	5.4x	5.4x	5.5x	5.6x	5.8x
Education Technology	2.1x	1.9x	1.9x	2.0x	2.0x	2.0x
Industrial & Automation Software	2.6x	2.6x	2.7x	2.6x	2.6x	2.6x
Business Intelligence & Data	4.0x	4.5x	4.5x	5.0x	5.0x	5.1x
Design & Engineering Software	4.9x	5.0x	5.1x	5.4x	5.1x	5.3x
<b>EMS / Infrastructure Software</b>						
Security Software	4.1x	4.0x	4.2x	4.7x	4.6x	4.0x
System and Network Management Software	3.2x	3.3x	3.1x	3.5x	3.7x	3.7x
Platform / OS	3.5x	3.7x	3.6x	3.7x	3.5x	3.5x
<b>Financial Solutions</b>						
Banking Solutions	5.2x	5.2x	5.4x	5.7x	5.6x	5.8x
Capital Market & Investment Solutions	5.9x	5.6x	5.7x	5.7x	5.9x	5.9x
Consumer Data & Analytics	5.1x	5.0x	5.1x	5.0x	5.2x	5.3x
Payment Processing	3.1x	3.2x	3.2x	3.3x	3.2x	3.2x
Insurance Solutions	7.4x	7.0x	7.1x	6.3x	6.2x	6.6x
<b>Online &amp; Digital Media</b>						
Digital Advertising & Marketing	1.2x	1.1x	1.2x	1.2x	1.1x	1.1x
Digital Media & Video	2.2x	2.3x	2.4x	2.7x	2.7x	2.7x
Digital Advertising Agencies & Service Providers	1.5x	1.5x	1.5x	1.6x	1.5x	1.5x
Online Retail & Marketplaces	3.0x	3.1x	3.0x	3.1x	2.7x	2.7x
Digital Gaming	2.8x	3.0x	3.2x	3.5x	3.5x	3.6x
Social Media	5.0x	6.3x	6.2x	6.2x	5.6x	6.1x
Digital Commerce Solutions	1.4x	1.4x	1.3x	1.3x	1.3x	1.3x
Other Digital Companies	2.8x	2.8x	2.9x	2.9x	3.1x	3.4x
<b>Tech Enabled Business Services</b>						
IT Services, Integration & Consulting	1.4x	1.4x	1.5x	1.5x	1.6x	1.6x
Business Process Management (BPM)	2.6x	2.5x	2.6x	2.7x	2.7x	2.6x
Data Center Hosting & Services	7.4x	7.7x	8.1x	8.4x	6.2x	6.3x
Call Center	0.8x	0.8x	0.9x	0.9x	0.9x	0.9x



# Public market valuations



## Current & Forward Market Multiples

	Median TEV/Revenue		Median TEV/EBITDA	
	LTM	NTM	LTM	NTM
<b>Application Software</b>				
Customer Relationship Management (CRM) & Customer Engagement	6.0x	5.0x	55.5x	31.2x
Accounting & Enterprise Resource Planning (ERP)	4.7x	4.5x	21.6x	15.4x
Supply Chain Management (SCM) & Logistics	4.5x	4.2x	24.0x	22.4x
HR & Workforce Management	5.8x	4.7x	21.5x	29.3x
Education Technology	2.0x	3.1x	13.1x	24.2x
Industrial & Automation Software	2.1x	1.9x	14.5x	11.4x
Business Intelligence & Data	5.1x	4.1x	15.8x	23.7x
Design & Engineering Software	5.3x	5.1x	21.7x	14.9x
<b>EMS / Infrastructure Software</b>				
Security Software	4.0x	3.8x	26.2x	18.0x
System and Network Management Software	3.7x	3.1x	12.8x	11.5x
Platform / OS	3.5x	4.2x	11.8x	11.5x
<b>Financial Solutions</b>				
Banking Solutions	5.7x	5.4x	17.2x	14.4x
Capital Market & Investment Solutions	5.9x	5.4x	17.1x	14.2x
Consumer Data & Analytics	5.3x	5.0x	16.4x	15.1x
Payment Processing	3.2x	3.2x	14.7x	13.1x
Insurance Solutions	6.6x	6.4x	17.9x	15.5x
<b>Online &amp; Digital Media</b>				
Digital Advertising & Marketing	1.1x	3.0x	22.8x	9.4x
Digital Media & Video	2.7x	2.6x	14.1x	12.2x
Digital Advertising Agencies & Service Providers	1.5x	1.3x	9.6x	9.2x
Online Retail & Marketplaces	2.7x	2.4x	25.3x	15.7x
Digital Gaming	3.6x	3.4x	15.9x	10.2x
Social Media	6.1x	4.9x	28.9x	14.3x
Digital Commerce Solutions	1.3x	1.2x	16.2x	10.9x
Other Digital Companies	3.4x	3.3x	15.3x	11.7x
<b>Tech Enabled Business Services</b>				
IT Services, Integration & Consulting	1.6x	1.4x	11.6x	10.3x
Business Process Management (BPM)	2.6x	2.3x	15.1x	12.6x
Data Center Hosting & Services	6.3x	5.0x	23.1x	16.2x
Call Center	0.9x	0.9x	8.2x	8.6x

Medians				
Application Software	4.8x	4.2x	18.8x	16.2x
EMS / Infrastructure Software	3.9x	3.4x	16.5x	14.8x
Financial Solutions	5.2x	5.1x	16.5x	14.8x
Online & Digital Media	2.9x	2.6x	17.8x	11.9x
Tech Enabled Business Services	2.1x	1.9x	12.3x	10.5x





# Public market valuations

## Application Software



		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
(\$ in millions)							
<b>Customer Relationship Management (CRM) &amp; Customer Engagement</b>							
Bazaarvoice	NasdaqGS:BV	\$337	\$396	1.7x	1.6x	NM	15.3x
Five9	NasdaqGM:FIVN	\$1,191	\$1,201	7.0x	5.6x	NM	75.7x
LivePerson	NasdaqGS:LPSN	\$744	\$798	3.4x	3.4x	91.2x	31.2x
MINDBODY	NasdaqGM:MB	\$994	\$1,202	6.2x	4.9x	NM	99.4x
NICE Systems	TASE:NICE	\$4,615	\$4,480	4.1x	3.3x	19.5x	12.5x
Pegasystems	NasdaqGS:PEGA	\$4,515	\$4,663	5.7x	5.1x	55.5x	33.8x
Salesforce.com	NYSE:CRM	\$63,905	\$64,590	7.2x	5.9x	NM	26.5x
SDL	LSE:SDL	\$666	\$694	1.9x	1.8x	16.3x	19.0x
Veeva	NYSE:VEEV	\$8,247	\$8,911	14.2x	11.8x	58.3x	38.0x
Zendesk	NYSE:ZEN	\$2,654	\$2,902	7.9x	5.5x	NM	NM
<b>Median</b>				<b>6.0x</b>	<b>5.0x</b>	<b>55.5x</b>	<b>31.2x</b>
<b>Accounting &amp; Enterprise Resource Planning (ERP)</b>							
BasWare	HLSE:BAS1V	\$699	\$679	4.0x	3.8x	NM	92.1x
Blackline	NasdaqGS:BL	\$1,891	\$1,992	14.0x	9.7x	NM	NM
Coupa Software	NasdaqGS:COUP	\$1,390	\$1,628	9.5x	7.5x	NM	NM
Intuit	NasdaqGS:INTU	\$34,063	\$35,156	6.7x	6.2x	21.6x	16.1x
Kingdee International	SEHK:268	\$1,113	\$1,207	4.2x	3.4x	31.1x	10.7x
Model N	NYSE:MODN	\$383	\$380	3.3x	2.6x	NM	90.8x
Oracle	NYSE:ORCL	\$198,762	\$206,545	5.3x	5.0x	13.5x	10.8x
QAD	NasdaqGS:QADA	\$438	\$577	1.5x	1.5x	43.4x	28.4x
Sage	LSE:SGE	\$10,043	\$9,597	4.4x	4.3x	15.5x	15.4x
SAP	DB:SAP	\$128,057	\$126,089	4.7x	4.5x	18.8x	13.0x
Upland Software	NasdaqGM:UPLD	\$538	\$500	6.9x	5.2x	62.8x	15.3x
<b>Median</b>				<b>4.7x</b>	<b>4.5x</b>	<b>21.6x</b>	<b>15.4x</b>
<b>Supply Chain Management (SCM) &amp; Logistics</b>							
Amber Road	NYSE:AMBR	\$262	\$254	3.5x	3.1x	NM	NM
Descartes Systems Group	TSX:DSG	\$1,841	\$1,901	8.0x	8.0x	24.0x	22.4x
Manhattan Associates	NasdaqGS:MANH	\$2,960	\$3,047	5.0x	4.9x	14.6x	13.8x
SPS Commerce	NasdaqGS:SPSC	\$837	\$995	4.1x	3.5x	36.5x	24.5x
<b>Median</b>				<b>4.5x</b>	<b>4.2x</b>	<b>24.0x</b>	<b>22.4x</b>



# Public market valuations



## Application Software (continued)

		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
(\$ in millions)							
<b>HR &amp; Workforce Management</b>							
Atlassian Corporation	NasdaqGS:TEAM	\$7,527	\$8,077	12.1x	9.1x	NM	35.0x
Benefit Focus	NasdaqGM:BNFT	\$1,161	\$1,110	4.8x	4.3x	NM	61.1x
Callidus	NasdaqGM:CALD	\$1,393	\$1,576	6.4x	5.2x	NM	36.7x
CastLight Health	NYSE:CSLT	\$458	\$561	4.3x	3.0x	NM	NM
Comerstone OnDemand	NasdaqGS:CSOD	\$2,241	\$2,290	5.1x	4.3x	NM	29.3x
Dice Holdings	NYSE:DHX	\$157	\$111	0.7x	0.7x	4.0x	3.6x
Paycom	NYSE:PAYC	\$4,104	\$4,165	11.4x	8.4x	51.7x	29.0x
Paylocity	NasdaqGS:PCTY	\$2,241	\$2,342	7.9x	6.1x	NM	31.2x
TriNet Group	NYSE:TNET	\$2,607	\$2,400	0.8x	0.7x	14.8x	11.4x
Ultimate Software	NasdaqGS:ULTI	\$6,633	\$6,708	8.1x	6.5x	NM	27.9x
Verint Systems	NasdaqGS:VRNT	\$2,903	\$2,485	2.7x	2.5x	28.2x	11.5x
Workday	NYSE:WDAY	\$19,562	\$21,137	11.5x	9.0x	NM	59.6x
<b>Median</b>				<b>5.8x</b>	<b>4.7x</b>	<b>21.5x</b>	<b>29.3x</b>
<b>Industrial &amp; Automation Software</b>							
3M	NYSE:MMM	\$128,559	\$120,052	4.2x	4.1x	15.0x	13.9x
ABB	SWX:ABBN	\$52,475	\$50,117	1.6x	1.5x	12.4x	9.7x
American Software	NasdaqGS:AMSW.A	\$203	\$288	1.9x	1.9x	19.7x	10.1x
Aspen Technology	NasdaqGS:AZPN	\$4,275	\$4,237	9.0x	8.7x	19.6x	18.0x
Dassault	ENXTPA:DSY	\$22,758	\$24,897	6.1x	5.7x	24.1x	17.0x
Emerson	NYSE:EMR	\$37,497	\$38,417	2.6x	2.2x	12.1x	10.0x
Fanuc Corporation	TSE:6954	\$32,767	\$39,592	6.3x	5.6x	NA	15.8x
General Electric	NYSE:GE	\$346,745	\$221,730	2.9x	2.6x	19.4x	16.3x
HollySys Automation Tech	NasdaqGS:HOLI	\$916	\$1,156	2.1x	1.7x	10.7x	8.6x
Honeywell	NYSE:HON	\$110,346	\$103,529	2.8x	2.7x	14.0x	12.3x
Johnson Controls	NYSE:JCI	\$51,203	\$36,317	1.1x	1.7x	10.4x	10.1x
KUKA	DB:KU2	\$5,356	\$5,363	1.5x	1.3x	19.2x	15.0x
Materialise NV	NasdaqGS:MTLS	\$705	\$720	5.5x	4.2x	89.9x	36.1x
Metso	HLSE:METSO	\$4,881	\$4,752	1.6x	1.4x	13.8x	10.4x
OMRON Corp	TSE:6645	\$9,496	\$10,663	1.3x	1.2x	9.5x	9.5x
Parametric Technology	NasdaqGS:PTC	\$6,777	\$6,376	5.9x	5.6x	72.9x	21.1x
Rockwell Automation	NYSE:ROK	\$20,490	\$21,262	3.3x	3.1x	16.8x	14.1x
Schneider Electric	ENXTPA:SU	\$49,694	\$43,721	1.7x	1.7x	11.0x	9.9x
Siemens	DB:SIE	\$131,955	\$109,196	1.4x	1.3x	10.7x	9.6x
YASKAWA Electric Corp	TSE:6506	\$7,154	\$7,137	1.9x	1.7x	14.9x	NA
Yokogawa Electric Corp.	TSE:6841	\$4,278	\$4,496	1.2x	1.2x	9.4x	8.6x
<b>Median</b>				<b>2.1x</b>	<b>1.9x</b>	<b>14.5x</b>	<b>11.4x</b>



# Public market valuations



## Application Software (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
<b>Education Technology</b>							
Blackbaud	NasdaqGS:BLKB	\$4,705	\$4,335	6.2x	5.7x	36.3x	24.2x
Cambium Learning Group	NasdaqCM:ABCD	\$307	\$227	2.0x	NA	10.9x	NA
Instructure	NYSE:INST	\$910	\$935	6.8x	5.2x	NM	NM
K12 Inc	NYSE:LRN	\$550	\$718	0.6x	0.6x	13.1x	4.4x
Rosetta Stone	NYSE:RST	\$193	\$230	1.0x	1.0x	NM	31.9x
<b>Median</b>				<b>2.0x</b>	<b>3.1x</b>	<b>13.1x</b>	<b>24.2x</b>
<b>Business Intelligence &amp; Data</b>							
Alteryx	NYSE:AYX	\$1,009	\$1,174	10.5x	6.9x	NM	NM
AppFolio	NasdaqGM:APPF	\$1,156	\$1,183	10.1x	7.3x	NM	42.2x
Apptio	NasdaqGM:APTI	\$594	\$705	3.5x	3.1x	NM	NM
Cloudera	NYSE:CLDR	\$2,698	\$2,262	9.5x	7.3x	NM	NM
Corelogic	NYSE:CLGX	\$5,393	\$3,840	2.8x	2.9x	13.3x	11.1x
CoStar Group	NasdaqGS:CSGP	\$8,784	\$9,044	9.8x	8.6x	39.9x	28.0x
Gridsum Holding	NasdaqGS:GSUM	\$211	\$224	3.3x	2.0x	NM	19.4x
Hortonworks	NasdaqGS:HDP	\$774	\$858	3.9x	2.8x	NM	48.5x
Inovalon Holdings	NASDAQ:INOV	\$1,580	\$1,854	3.6x	3.4x	19.4x	13.7x
MicroStrategy	NasdaqGS:MSTR	\$907	\$1,540	1.8x	1.8x	8.3x	11.8x
NantHealth	NasdaqGS:NH	\$588	\$521	5.7x	3.9x	NM	NM
New Relic	NYSE:NEWR	\$2,332	\$2,539	8.9x	6.3x	NM	NM
Open Text	NasdaqGS:OTEX	\$11,012	\$8,842	5.2x	4.1x	18.3x	11.3x
PROS Holdings	NYSE:PRO	\$912	\$906	5.9x	5.2x	NM	NM
Sabre	NasdaqGS:SABR	\$9,383	\$6,154	2.7x	2.6x	13.0x	8.7x
Splunk	NasdaqGS:SPLK	\$7,300	\$8,304	7.3x	5.8x	NM	49.6x
Tableau	NYSE:DATA	\$4,072	\$5,026	4.8x	4.4x	NM	57.2x
TrueCar	NasdaqGS:TRUE	\$1,673	\$1,758	5.7x	4.8x	NM	52.1x
Varonis Systems	NasdaqGS:VRNS	\$893	\$1,014	5.1x	4.1x	NM	NM
Workiva	NYSE:WK	\$767	\$811	4.1x	3.5x	NM	NM
Yext	NYSE:YEXT	\$1,037	\$1,171	7.7x	5.7x	NM	NM
<b>Median</b>				<b>5.1x</b>	<b>4.1x</b>	<b>15.8x</b>	<b>23.7x</b>



# Public market valuations

## Application Software (continued)



		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
<i>(\$ in millions)</i>							
<b>Design &amp; Engineering Software</b>							
Ansys	NasdaqGS:ANSS	\$10,210	\$11,077	10.0x	9.3x	22.4x	19.1x
Autodesk	NasdaqGS:ADSK	\$24,097	\$24,417	12.0x	11.3x	NM	NM
Aveva Group	LSE:AVV	\$1,500	\$1,672	5.3x	5.1x	21.8x	19.0x
Cadence Design Systems	NasdaqGS:CDNS	\$10,324	\$10,339	5.5x	5.2x	24.5x	16.9x
Hexagon	OM:HEXA B	\$20,342	\$17,763	5.2x	4.9x	20.7x	14.6x
Progress Software	NasdaqGS:PRGS	\$1,427	\$1,546	3.5x	3.6x	11.1x	8.9x
RIB Software AG	DB:RIB	\$619	\$792	5.2x	4.7x	14.5x	14.9x
Synopsys	NasdaqGS:SNPS	\$10,795	\$11,509	4.2x	4.0x	21.7x	14.9x
Twilio	NYSE:TWLO	\$2,351	\$2,639	7.7x	5.7x	NM	NM
<b>Median</b>				<b>5.3x</b>	<b>5.1x</b>	<b>21.7x</b>	<b>14.9x</b>



# Public market valuations



## EMS / Infrastructure Software

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
<b>Security Software</b>							
AVG Technologies	OTCPK:AVGT.F	\$1,464	\$1,342	3.4x	NA	11.7x	NA
Barracuda Networks	NYSE:CUDA	\$987	\$1,190	2.7x	2.6x	27.0x	13.7x
Check Point Software	NasdaqGS:CHKP	\$15,690	\$17,289	8.7x	8.1x	17.6x	14.8x
Cheetah Mobile	NYSE:CMCM	\$1,360	\$1,528	2.0x	1.7x	60.1x	21.2x
Cyber-Ark Software	NasdaqGS:CYBR	\$1,161	\$1,448	5.1x	4.2x	27.4x	20.3x
Everbridge	NasdaqGM:EVBG	\$619	\$659	7.5x	5.4x	NM	NM
FireEye	NasdaqGS:FEYE	\$2,486	\$2,610	3.5x	3.2x	NM	26.4x
Fortinet	NasdaqGS:FTNT	\$5,280	\$6,487	3.8x	3.3x	37.0x	15.8x
Gemalto	ENXTAM:GTO	\$4,628	\$4,543	1.3x	1.3x	7.2x	8.1x
Imperva	NasdaqGS:IMPV	\$1,188	\$1,507	4.0x	3.4x	NM	25.0x
Mimecast	NasdaqGS:MIME	\$1,472	\$1,581	7.9x	5.6x	NM	59.7x
MobileIron	NasdaqGS:MOBL	\$328	\$417	1.9x	1.7x	NM	NM
NetQin Mobile	NYSE:NQ	\$357	\$369	1.0x	NA	NM	NA
Okta	NasdaqGS:OKTA	\$1,867	\$2,092	10.3x	7.4x	NM	NM
Palo Alto Networks	NYSE:PANW	\$11,247	\$12,101	6.8x	5.6x	NM	23.0x
Proofpoint	NasdaqGM:PFPT	\$3,727	\$3,779	8.4x	6.5x	NM	51.2x
Qualys	NasdaqGS:QLYS	\$1,242	\$1,487	6.1x	5.1x	25.4x	15.8x
Rapid7	NasdaqGM:RPD	\$580	\$659	3.5x	2.7x	NM	NM
SecureWorks	NasdaqGS:SCWX	\$795	\$887	1.8x	1.7x	NM	NM
Symantec	NasdaqGS:SYMC	\$22,865	\$18,935	5.7x	4.4x	31.5x	9.4x
Trend Micro	TSE:4704	\$5,737	\$6,860	4.6x	4.1x	13.4x	12.0x
VASCO	NasdaqCM:VDSI	\$383	\$539	2.1x	1.9x	40.6x	25.2x
Zix	NasdaqGS:ZIXI	\$267	\$290	4.3x	3.8x	22.0x	13.4x
<b>Median</b>				<b>4.0x</b>	<b>3.8x</b>	<b>26.2x</b>	<b>18.0x</b>
<b>System and Network Management Software</b>							
A10 Networks	NYSE:ATEN	\$358	\$490	1.5x	1.5x	NM	73.4x
CA	NasdaqGS:CA	\$13,232	\$13,075	3.3x	3.1x	10.5x	8.3x
CommVault Systems	NasdaqGS:CVLT	\$2,230	\$2,711	3.4x	3.1x	NM	20.1x
Gigamon	NYSE:GIMO	\$1,229	\$1,487	4.0x	3.4x	NM	16.2x
Micro Focus	LSE:MCRO	\$8,198	\$6,761	5.8x	5.9x	14.8x	12.5x
Mulesoft	NYSE:MULE	\$2,544	\$2,800	10.8x	7.7x	NM	NM
Netscout Systems	NasdaqGS:NTCT	\$2,989	\$3,089	2.7x	2.5x	14.7x	9.3x
Nutanix	NasdaqGS:NTNX	\$2,869	\$3,219	4.2x	3.0x	NM	NM
Presidio	NasdaqGS:PSDO	\$2,150	\$1,239	0.8x	0.7x	10.6x	8.7x
ServiceNow	NYSE:NOW	\$18,211	\$18,763	11.2x	8.3x	NM	36.5x
Software AG	XTRA:SOW	\$3,311	\$3,328	3.2x	3.1x	10.9x	9.9x
Vmware	NYSE:VMW	\$30,752	\$37,864	4.3x	3.9x	16.6x	10.5x
<b>Median</b>				<b>3.7x</b>	<b>3.1x</b>	<b>12.8x</b>	<b>11.5x</b>



# Public market valuations

## EMS / Infrastructure Software (continued)



(\$ in millions)

		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
<b>Platform / OS</b>							
Citrix Systems	NasdaqGS:CTXS	\$11,981	\$11,938	3.5x	4.2x	11.8x	11.5x
Hewlett-Packard	NYSE:HPQ	\$32,752	\$32,152	0.7x	0.7x	7.6x	7.6x
IBM	NYSE:IBM	\$168,328	\$134,824	2.1x	2.2x	9.8x	8.4x
Microsoft Corp.	NasdaqGS:MSFT	\$517,376	\$560,372	5.8x	5.0x	16.5x	13.0x
Red Hat	NYSE:RHT	\$16,658	\$17,545	6.6x	5.7x	38.5x	21.0x
<b>Median</b>				<b>3.5x</b>	<b>4.2x</b>	<b>11.8x</b>	<b>11.5x</b>



# Public market valuations



## Financial Solutions

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
<b>Banking Solutions</b>							
Black Knight Financial Services	NYSE:BKFS	\$5,457	\$2,926	5.2x	4.9x	15.3x	10.1x
Bottomline Technologies	NasdaqGS:EPAY	\$1,193	\$1,153	3.5x	3.2x	40.8x	14.1x
Fidelity National	NYSE:FIS	\$39,068	\$30,156	4.2x	4.3x	16.4x	12.6x
Fiserv	NasdaqGS:FISV	\$31,621	\$27,291	5.7x	5.4x	17.9x	14.8x
Jack Henry & Associates	NasdaqGS:JKHY	\$8,341	\$8,334	5.9x	5.6x	16.5x	16.0x
Q2 Holdings	NYSE:QTWO	\$1,511	\$1,593	9.4x	6.9x	NM	NM
Temenos Group	SWX:TEMN	\$7,041	\$6,744	10.6x	9.4x	39.6x	26.4x
<b>Median</b>				<b>5.7x</b>	<b>5.4x</b>	<b>17.2x</b>	<b>14.4x</b>
<b>Capital Market &amp; Investment Solutions</b>							
Investnet	NYSE:ENV	\$1,957	\$1,711	3.2x	2.7x	39.5x	13.7x
FactSet Research Systems	NYSE:FDS	\$6,941	\$6,560	5.9x	5.2x	16.8x	15.6x
Fidessa Group	LSE:FDSA	\$1,054	\$1,148	2.3x	2.3x	12.5x	8.8x
IRESS Limited	ASX:IRE	\$1,868	\$1,744	6.0x	5.4x	22.7x	18.0x
Moody's	NYSE:MCO	\$26,874	\$25,141	7.0x	6.7x	14.5x	14.2x
Morningstar	NasdaqGS:MORN	\$3,402	\$3,512	4.0x	NA	15.0x	NA
MSCI	NYSE:MSCI	\$11,234	\$9,855	9.6x	8.5x	19.1x	16.1x
SimCorp A/S	CPSE:SIM	\$2,394	\$2,449	6.6x	5.8x	27.6x	20.8x
SS&C Technologies Holdings	NasdaqGS:SSNC	\$10,116	\$7,907	6.3x	5.9x	17.4x	13.7x
Thomson Reuters	TSX:TRI	\$40,249	\$32,720	3.4x	3.4x	15.0x	11.4x
<b>Median</b>				<b>5.9x</b>	<b>5.4x</b>	<b>17.1x</b>	<b>14.2x</b>
<b>Consumer Data &amp; Analytics</b>							
Equifax	NYSE:EFX	\$19,996	\$17,507	6.1x	5.7x	16.4x	15.1x
Experian	LSE:EXPN	\$21,626	\$18,235	4.7x	4.7x	13.5x	13.4x
Fair Isaac	NYSE:FICO	\$4,847	\$4,366	5.3x	5.0x	24.0x	17.8x
<b>Median</b>				<b>5.3x</b>	<b>5.0x</b>	<b>16.4x</b>	<b>15.1x</b>



# Public market valuations



## Financial Solutions (continued)

		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
(\$ in millions)							
<b>Payment Processing</b>							
ACI Worldwide	NasdaqGS:ACIW	\$3,342	\$2,739	3.2x	3.2x	19.3x	13.1x
Cielo	BOVESPA:CIEL3	\$25,824	\$22,618	6.7x	6.5x	15.1x	15.0x
Euronet Worldwide	NasdaqGS:EEFT	\$4,881	\$5,075	2.4x	2.1x	14.1x	11.3x
First Data Corporation	NYSE:FDC	\$38,256	\$17,149	4.9x	3.1x	12.7x	12.1x
Global Payments	NYSE:GPN	\$17,952	\$14,390	4.4x	4.9x	16.4x	14.8x
Monitise	AIM:MONI	\$52	\$86	0.6x	0.7x	NM	66.8x
Net 1 Ueps Technologies	NasdaqGS:UEPS	\$352	\$546	0.6x	0.5x	2.2x	2.3x
Square	NYSE:SQ	\$9,316	\$9,858	5.2x	8.7x	NM	53.7x
Total System Services	NYSE:TSS	\$14,401	\$11,679	3.1x	4.2x	14.7x	11.8x
<b>Median</b>				<b>3.2x</b>	<b>3.2x</b>	<b>14.7x</b>	<b>13.1x</b>
<b>Insurance Solutions</b>							
CorVel	NasdaqGS:CRVL	\$863	\$892	1.7x	NA	12.6x	NA
Ebix	NasdaqGS:EBIX	\$2,019	\$1,821	6.6x	5.2x	18.2x	15.4x
Guidewire Software	NYSE:GWRE	\$4,890	\$5,367	10.3x	8.7x	NM	40.0x
Sapiens International	NasdaqCM:SPNS	\$591	\$585	2.6x	2.1x	26.1x	13.7x
Verisk	NasdaqGS:VRSK	\$16,557	\$14,428	8.3x	7.7x	17.7x	15.6x
<b>Median</b>				<b>6.6x</b>	<b>6.4x</b>	<b>17.9x</b>	<b>15.5x</b>





# Public market valuations



## Online & Digital

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
<b>Digital Advertising &amp; Marketing</b>							
Baidu	NasdaqGS: BIDU	\$69,738	\$78,490	6.4x	4.9x	22.8x	20.4x
Criteo	NasdaqGS: CRTO	\$3,072	\$3,277	1.6x	2.9x	17.2x	9.4x
comScore	OTCPK: SCOR	\$1,606	\$1,720	4.4x	3.1x	43.2x	12.8x
Google	NasdaqGS: GOOGL	\$559,144	\$649,902	5.6x	4.8x	17.3x	11.8x
Hubspot	NYSE: HUBS	\$2,523	\$2,645	8.6x	6.1x	NM	NM
Marin Software	NYSE: MRIN	\$15	\$45	0.2x	NA	NM	NA
Perion Network	NasdaqGS: PERI	\$175	\$133	0.6x	0.6x	7.1x	4.9x
QuinStreet	NasdaqGS: QNST	\$135	\$177	0.5x	0.4x	NM	5.2x
Rocket Fuel	NasdaqGS: FUEL	\$145	\$122	0.3x	0.5x	NM	NM
SINA Corp	NasdaqGS: SINA	\$5,567	\$6,771	5.0x	3.4x	28.5x	9.5x
Tremor Video	NYSE: TRMR	\$78	\$105	0.4x	0.4x	NM	7.8x
The Rubicon Project	NYSE: RUBI	\$40	\$228	0.2x	0.2x	2.1x	2.1x
Yandex	NasdaqGS: YNDX	\$8,775	\$9,419	6.2x	5.2x	23.4x	15.2x
YuMe	NYSE: YUME	\$89	\$149	0.6x	NA	25.3x	NA
<b>Median</b>				<b>1.1x</b>	<b>3.0x</b>	<b>22.8x</b>	<b>9.4x</b>
<b>Digital Media &amp; Video</b>							
Adobe Systems	NasdaqGS: ADBE	\$69,236	\$72,279	10.6x	8.8x	32.3x	21.0x
Blucora	NasdaqGS: BCOR	\$1,301	\$1,006	2.6x	2.5x	14.1x	11.4x
Brightcove	NasdaqGS: BCOV	\$202	\$230	1.3x	1.3x	NM	NM
Digimarc	NasdaqGS: DMRC	\$270	\$338	12.0x	10.6x	NM	NM
IAC/Interactive	NasdaqGS: IAC	\$8,575	\$8,233	2.8x	2.6x	19.8x	12.9x
Leaf Group	NYSE: LFGR	\$110	\$152	1.0x	0.8x	NM	NM
Netflix	NasdaqGS: NFLX	\$81,103	\$78,432	8.0x	6.3x	NM	59.3x
Pandora Media	NYSE: P	\$2,467	\$2,170	1.7x	1.6x	NM	NM
RhythmOne	AIM: RTHM	\$181	\$233	1.2x	0.7x	NM	11.3x
Sonic Foundry	NasdaqCM: SOFO	\$22	\$16	0.6x	NA	NM	NA
TiVo	NasdaqGS: TIVO	\$3,077	\$2,374	4.2x	3.5x	13.5x	8.7x
VeriSign	NasdaqGS: VRSN	\$10,168	\$10,109	8.8x	8.6x	13.6x	12.2x
Xunlei Limited	NasdaqGS: XNET	-\$157	\$216	NM	NA	NM	NA
<b>Median</b>				<b>2.7x</b>	<b>2.6x</b>	<b>14.1x</b>	<b>12.2x</b>



# Public market valuations



## Online & Digital (continued)

		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
(\$ in millions)							
<b>Digital Advertising Agencies &amp; Service Providers</b>							
Dentsu	TSE:4324	\$11,550	\$13,166	1.5x	1.3x	7.0x	6.8x
Havas	ENXTPA:HAV	\$4,452	\$4,609	1.7x	1.6x	10.3x	9.7x
IPG	NYSE:IPG	\$9,933	\$8,499	1.3x	1.2x	9.1x	8.4x
M&C Saatchi	AIM:SAA	\$342	\$334	1.2x	1.2x	12.6x	9.2x
MDC Partners	NasdaqGS:MDCA	\$1,645	\$564	1.2x	1.1x	11.1x	7.8x
Omnicom	NYSE:OMC	\$21,968	\$18,170	1.4x	1.4x	9.5x	9.2x
Publicis	ENXTPA:PUB	\$19,386	\$17,023	1.7x	1.6x	9.6x	9.1x
Valtech	ENXTPA:LTE	\$321	\$332	1.6x	1.3x	25.5x	16.4x
WPP	LSE:WPP	\$31,960	\$25,932	1.7x	1.6x	9.4x	9.4x
<b>Median</b>				<b>1.5x</b>	<b>1.3x</b>	<b>9.6x</b>	<b>9.2x</b>
<b>Online Retail &amp; Marketplaces</b>							
1-800-Flowers.com	NasdaqGS:FLWS	\$696	\$643	0.6x	0.6x	9.2x	7.2x
Alibaba	NYSE:BABA	\$389,493	\$391,924	16.9x	11.2x	46.2x	25.6x
Amazon	NasdaqGS:AMZN	\$476,677	\$474,509	3.2x	2.6x	38.8x	22.9x
ASOS	AIM:ASC	\$6,120	\$6,323	2.7x	2.2x	55.7x	32.0x
Blue Apron	NYSE:APRN	\$1,538	\$1,253	1.8x	1.7x	NM	NM
boohoo.com	AIM:BOO	\$3,491	\$3,563	9.0x	5.3x	82.4x	52.7x
Carvana	NYSE:CVNA	\$502	\$293	1.1x	0.3x	NM	NM
Ebay	NasdaqGS:EBAY	\$40,691	\$38,242	4.4x	4.2x	14.1x	11.5x
Expedia	NasdaqGS:EXPE	\$24,762	\$23,727	2.6x	2.3x	20.7x	12.6x
Groupon	NasdaqGS:GRPN	\$1,645	\$2,111	0.5x	0.6x	53.7x	6.8x
Grubhub	NYSE:GRUB	\$3,615	\$3,977	6.7x	4.9x	29.1x	18.2x
Ocado Group	LSE:OCDO	\$2,648	\$2,370	1.4x	1.3x	26.0x	20.3x
Overstock	NasdaqGM:OSTK	\$319	\$400	0.2x	NA	NM	NA
Quotient Technology	NYSE:QUOT	\$874	\$1,048	3.1x	2.5x	NM	15.7x
Rakuten	TSE:4755	\$19,867	\$16,939	2.7x	2.3x	13.5x	12.0x
Shutterstock	NYSE:SSTK	\$1,206	\$1,457	2.4x	2.2x	18.7x	12.6x
Stamps.com	NasdaqGS:STMP	\$2,541	\$2,509	6.6x	5.1x	16.5x	10.2x
The Priceline Group	NasdaqGS:PCLN	\$102,600	\$99,685	9.3x	7.7x	24.6x	20.4x
The Trade Desk	NasdaqGM:TTD	\$2,175	\$2,256	9.6x	6.5x	37.0x	22.0x
TripAdvisor	NasdaqGS:TRIP	\$4,982	\$5,511	3.3x	3.0x	24.7x	15.5x
Wayfair	NYSE:W	\$6,379	\$6,614	1.8x	1.2x	NM	NM
Wowo	NASDAQ:JMU	\$173	\$175	2.3x	NA	NM	NA
<b>Median</b>				<b>2.7x</b>	<b>2.4x</b>	<b>25.3x</b>	<b>15.7x</b>



# Public market valuations



## Online & Digital (continued)

		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
(\$ in millions)							
<b>Digital Gaming</b>							
Activision	NasdaqGS:ATVI	\$47,706	\$46,561	6.9x	6.8x	21.1x	17.2x
Capcom	TSE:9697	\$1,236	\$1,356	1.6x	1.5x	6.5x	6.5x
Changyou.com	NasdaqGS:CYOU	\$1,370	\$2,159	2.6x	2.3x	8.0x	6.1x
Electronic Arts	NasdaqGS:EA	\$32,662	\$36,141	6.5x	6.2x	20.9x	17.6x
Gree	TSE:3632	\$1,082	\$1,801	1.9x	1.5x	18.7x	5.3x
Konami	TSE:9766	\$6,232	\$7,038	2.9x	2.6x	12.7x	10.2x
NetDragon WebSoft	SEHK:777	\$1,202	\$1,322	2.8x	2.2x	NM	NM
Net Entertainment	OM:NET B	\$2,290	\$2,310	11.9x	10.1x	29.8x	20.9x
Nintendo	TSE:7974	\$32,127	\$40,727	6.1x	3.9x	43.1x	22.5x
Playtech	LSE:PTEC	\$3,915	\$3,979	4.9x	3.8x	13.2x	9.2x
Square Enix	TSE:9684	\$2,901	\$3,994	1.2x	1.3x	8.5x	6.9x
Take-Two Interactive	NasdaqGS:TTWO	\$7,275	\$8,415	4.1x	3.4x	49.4x	14.7x
Ubisoft	ENXTPA:UBI	\$7,027	\$6,931	4.1x	3.5x	8.8x	7.4x
Zynga	NasdaqGS:ZNGA	\$2,385	\$3,105	3.2x	NA	NM	16.1x
<b>Median</b>				<b>3.6x</b>	<b>3.4x</b>	<b>15.9x</b>	<b>10.2x</b>
<b>Social Media</b>							
Facebook	NasdaqGS:FB	\$456,083	\$491,535	13.7x	10.2x	25.2x	16.7x
LINE	TSE:3938	\$7,153	\$8,132	5.2x	4.4x	43.7x	22.5x
Mail.ru Group	LSE:MAIL	\$5,678	\$5,833	7.7x	6.0x	25.3x	15.4x
Match Group	NasdaqGS: MTCH	\$5,492	\$4,745	4.4x	4.0x	14.9x	11.0x
MeetMe	NasdaqCM:MEET	\$275	\$349	3.3x	2.1x	10.4x	7.7x
Mixi	TSE:2121	\$3,162	\$4,377	1.7x	1.7x	3.8x	4.4x
Momo	NasdaqGS:MOMO	\$7,921	\$8,661	10.3x	6.4x	32.5x	19.1x
Renren	NYSE:RENN	\$519	\$479	7.1x	5.4x	NM	NM
Snap	NYSE:SNAP	\$12,890	\$16,117	25.0x	10.8x	NM	NM
Twitter	NYSE:TWTR	\$9,343	\$11,677	3.8x	3.8x	65.5x	13.2x
XING	XTRA:O1BC	\$1,559	\$1,643	8.6x	6.7x	34.5x	20.8x
Yelp	NYSE:YELP	\$2,136	\$2,621	2.8x	2.3x	65.4x	12.8x
<b>Median</b>				<b>6.1x</b>	<b>4.9x</b>	<b>28.9x</b>	<b>14.3x</b>



# Public market valuations

## Online & Digital (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
<b>Digital Commerce Solutions</b>							
Gk Software AG	DB:GKS	\$220	\$224	2.3x	2.1x	22.9x	15.7x
Intershop	XTRA:ISH2	\$51	\$62	1.2x	1.1x	78.5x	14.1x
NCR	NYSE:NCR	\$8,309	\$4,599	1.3x	1.2x	9.4x	6.9x
PFS Web	NasdaqCM:PFSW	\$185	\$147	0.7x	0.5x	11.4x	7.1x
Shopify	NYSE:SHOP	\$9,291	\$9,687	20.9x	12.0x	NM	NM
Wincor Nixdorf	XTRA:WIN	\$2,594	\$2,527	0.9x	0.8x	14.5x	9.6x
Worldline S.A	ENXTPA:WLN	\$5,025	\$5,362	2.9x	2.6x	17.8x	12.2x
<b>Median</b>				<b>1.3x</b>	<b>1.2x</b>	<b>16.2x</b>	<b>10.9x</b>
<b>Other Digital Companies</b>							
Akamai	NasdaqGS:AKAM	\$8,118	\$8,149	3.4x	3.2x	11.7x	8.7x
Bankrate	NYSE:RATE	\$1,349	\$1,236	2.9x	2.5x	13.7x	9.8x
Box	NYSE:BOX	\$2,444	\$2,548	5.7x	4.6x	NM	NM
Endurance International	NasdaqGS:EIGI	\$3,258	\$1,320	2.8x	2.8x	11.9x	10.0x
GoDaddy	NYSE:GDDY	\$5,032	\$4,524	2.6x	2.1x	24.3x	8.0x
Just Eat	LSE:JE	\$5,336	\$5,557	9.0x	7.2x	31.6x	21.6x
Limelight Networks	NasdaqGS:LLNW	\$313	\$374	1.8x	1.7x	44.8x	11.6x
Moneysupermarket.com	LSE:MONY	\$2,339	\$2,362	5.5x	5.3x	16.0x	13.9x
NetEase	NasdaqGS:NTES	\$35,804	\$40,858	5.6x	4.0x	16.5x	14.9x
Opera Software	OB:OPERA	\$491	\$594	0.9x	0.8x	14.6x	10.0x
Phoenix New Media	NYSE:FENG	\$147	\$193	0.7x	0.6x	34.8x	NM
Redfin Corporation	NasdaqGS:RDFN	\$2,562	\$1,919	9.0x	NA	NM	NA
Tencent Holdings	SEHK:700	\$375,886	\$377,306	15.3x	10.4x	38.5x	26.4x
United Internet	DB:UTDI	\$13,761	\$12,072	2.9x	2.7x	13.8x	11.8x
Web.com	NasdaqGS:WEB	\$1,664	\$1,016	2.2x	2.2x	11.8x	8.4x
WebMD Health	NasdaqGS:WBMD	\$2,474	\$2,463	3.5x	3.4x	13.6x	10.1x
Wix	NasdaqGS:WIX	\$2,621	\$2,805	7.4x	5.4x	NM	25.3x
Zhaopin	NYSE:ZPIN	\$712	\$1,059	2.7x	NA	14.1x	NA
Zillow	NasdaqGS:ZG	\$8,130	\$8,317	9.0x	6.9x	NM	30.5x
Zoopla Property Group	LSE:ZPG	\$2,357	\$2,081	8.2x	7.1x	25.1x	18.0x
<b>Median</b>				<b>3.4x</b>	<b>3.3x</b>	<b>15.3x</b>	<b>11.7x</b>



# Public market valuations



## Tech Enabled Business Services

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
<b>IT Services, Integration &amp; Consulting</b>							
Accenture	NYSE:ACN	\$76,961	\$79,609	2.3x	2.1x	13.3x	12.5x
Atos Origin	ENXTPA:ATO	\$16,181	\$15,951	1.1x	1.1x	8.4x	8.0x
Bechtle	XTRA:BC8	\$2,938	\$3,012	0.8x	0.7x	14.4x	12.4x
CACI International	NYSE:CACI	\$4,290	\$3,059	1.0x	1.0x	11.4x	11.2x
Cancom	XTRA:COK	\$1,081	\$1,073	0.9x	0.8x	13.2x	10.0x
Cap Gemini	ENXTPA:CAP	\$20,321	\$17,767	1.4x	1.3x	10.7x	9.7x
CGI Group	TSX:GIB.A	\$16,579	\$15,355	1.9x	1.9x	11.4x	10.3x
Cognizant Technology	NasdaqGS:CTSH	\$37,764	\$40,829	2.7x	2.4x	13.9x	12.0x
ComputaCenter	LSE:CCC	\$1,221	\$1,412	0.3x	0.3x	9.1x	7.7x
DXC Technology	NYSE:DXC	\$24,289	\$22,310	3.2x	1.0x	38.0x	5.5x
ePlus	NasdaqGS:PLUS	\$1,206	\$1,146	0.9x	0.8x	12.3x	11.8x
FDM Group	LSE:FDM	\$1,264	\$1,303	4.4x	4.2x	22.9x	22.0x
Fujitsu	TSE:6702	\$17,187	\$15,287	0.4x	0.5x	5.6x	4.8x
HCL Technologies	NSEI:HCLTECH	\$18,530	\$19,845	2.6x	2.3x	11.4x	10.5x
Infosys	NSEI:INFY	\$30,776	\$35,998	3.0x	2.7x	10.9x	10.4x
Luxoft Holdings	NYSE:LXFT	\$1,997	\$2,105	2.5x	2.1x	20.6x	12.4x
ManTech International	NasdaqGS:MANT	\$1,450	\$1,541	0.9x	0.9x	11.6x	11.4x
MAXIMUS	NYSE:MMS	\$3,937	\$3,913	1.6x	1.6x	10.2x	9.5x
NCC Group	LSE:NCC	\$765	\$707	2.4x	2.3x	18.2x	13.9x
Nomura Research Institute	TSE:4307	\$8,102	\$8,965	2.1x	1.9x	10.3x	9.3x
NSD	TSE:9759	\$600	\$808	1.2x	1.1x	8.2x	7.9x
OBIC	TSE:4684	\$4,677	\$5,547	8.2x	7.7x	15.8x	16.2x
Perficient	NasdaqGS:PRFT	\$700	\$673	1.5x	1.3x	14.9x	8.6x
SCSK Corporation	TSE:9719	\$4,619	\$4,383	1.5x	1.5x	12.4x	10.8x
Sopra Group	ENXTPA:SOP	\$4,213	\$3,455	0.9x	0.9x	10.4x	9.4x
Syntel	NasdaqGS:SYNT	\$1,942	\$1,631	2.1x	2.2x	7.8x	9.0x
Talend	NasdaqGM:TLND	\$996	\$1,091	8.6x	5.9x	NM	NM
Tata Consultancy Services	NSEI:TCS	\$69,444	\$74,294	3.8x	3.6x	14.0x	13.6x
The Hackett Group	NasdaqGS:HCKT	\$472	\$480	1.8x	1.6x	11.7x	9.2x
Tieto	HLSE:TIE1V	\$2,528	\$2,329	1.4x	1.4x	12.0x	10.1x
Unisys	NYSE:UIS	\$631	\$645	0.2x	0.2x	3.4x	1.8x
Virtusa	NasdaqGS:VRTU	\$1,027	\$970	1.2x	1.1x	22.8x	13.4x
Wipro	BSE:507685	\$18,304	\$21,782	2.1x	2.1x	10.8x	10.8x
Xerox	NYSE:XRX	\$12,005	\$7,795	1.1x	1.2x	7.6x	7.3x
<b>Median</b>				<b>1.6x</b>	<b>1.4x</b>	<b>11.6x</b>	<b>10.3x</b>



# Public market valuations



## Tech Enabled Business Services (continued)

		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
(\$ in millions)							
<b>Business Process Management (BPM)</b>							
Appian	APPN	\$1,208	\$1,166	8.9x	6.9x	NM	NM
Broadridge Financial Solutions	NYSE:BR	\$9,916	\$8,919	2.6x	2.3x	15.1x	12.6x
Cardtronics	NasdaqGS:CATM	\$2,384	\$1,428	1.8x	1.7x	8.0x	7.9x
Cass Information Systems	NasdaqGS:CASS	\$595	\$738	4.6x	NA	15.0x	NA
Computershare	ASX:CPU	\$7,485	\$6,133	3.3x	3.5x	15.6x	13.3x
CSG Systems International	NasdaqGS:CSGS	\$1,499	\$1,397	2.0x	1.9x	9.8x	8.3x
DST Systems	NYSE:DST	\$3,894	\$3,387	2.1x	1.8x	9.2x	8.9x
EVERTEC	NYSE:EVTC	\$1,891	\$1,295	4.8x	4.5x	12.1x	9.6x
Exlservice Holdings	NasdaqGS:EXLS	\$1,750	\$1,942	2.4x	2.2x	17.3x	12.7x
Genpact	NYSE:G	\$6,295	\$5,590	2.4x	2.3x	15.1x	12.8x
Tabula Rasa Healthcare	NasdaqGM:TRHC	\$267	\$269	2.6x	2.1x	59.6x	13.3x
Trans Cosmos	TSE:9715	\$871	\$995	0.4x	0.4x	11.5x	8.9x
Vantiv	NYSE:VNTV	\$13,698	\$10,327	3.7x	6.1x	15.9x	12.9x
WEX	NYSE:WEX	\$6,843	\$4,664	5.8x	5.4x	18.0x	13.4x
Wirecard	XTRA:WDI	\$8,571	\$9,421	6.5x	5.0x	23.2x	17.0x
WNS	NYSE:WNS	\$1,669	\$1,746	2.6x	2.3x	19.3x	11.0x
<b>Median</b>				<b>2.6x</b>	<b>2.3x</b>	<b>15.1x</b>	<b>12.6x</b>
<b>Data Center Hosting &amp; Services</b>							
Equinix	NasdaqGS:EQIX	\$39,375	\$35,117	10.6x	8.3x	25.5x	17.2x
Interxion Holding	NYSE:INXN	\$4,155	\$3,399	9.0x	7.0x	20.7x	15.2x
Pure Storage	NYSE:PSTG	\$1,983	\$2,519	2.6x	1.8x	NM	NM
Tintri	NasdaqGM:TNTR	\$492	\$208	3.7x	2.9x	NM	NM
<b>Median</b>				<b>6.3x</b>	<b>5.0x</b>	<b>23.1x</b>	<b>16.2x</b>
<b>Call Center</b>							
Convergys	NYSE:CVG	\$2,412	\$2,256	0.8x	0.9x	6.6x	6.9x
Sykes Enterprises	NasdaqGS:SYKE	\$1,410	\$1,430	0.9x	0.9x	8.2x	8.6x
TeleTech Holdings	NasdaqGS:TTEC	\$2,029	\$1,907	1.6x	1.4x	12.4x	10.2x
<b>Median</b>				<b>0.9x</b>	<b>0.9x</b>	<b>8.2x</b>	<b>8.6x</b>





 M&A  
transactions



# M&A transactions



## Application Software

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jul-17	Q3'2017	Linkury	Algomizer (TASE:ALMO)	\$11.0	0.6x
Jul-17	Q3'2017	Explicitly Grand Investments	Digital Zone Global	\$8.1	45.2x
Jul-17	Q3'2017	SM Mobile Communications	iRiver (KOSDAQ:A060570)	\$20.0	39.0x
Jul-17	Q3'2017	iBabs (60% Stake)	Euronext (ENXTPA:ENX)	\$57.1	8.6x
Jul-17	Q3'2017	TechJini Solutions (71.1% Stake)	Datamatics Global Services (BSE:532528)	\$8.5	1.6x
Jun-17	Q2'2017	Synchronoss (NasdaqGS:SNCR) (87.07% Stake)	Siris Capital Group	\$986.2	2.1x
Jun-17	Q2'2017	Atex Group	axélero S.p.A. (BIT:AXEL)	\$5.3	0.2x
Jun-17	Q2'2017	EnerNOC (NasdaqGS:ENOC)	Enel Green Power North America	\$293.6	0.7x
Jun-17	Q2'2017	ARI Network Services (NasdaqCM:ARIS)	True Wind Capital	\$138.2	2.7x
Jun-17	Q2'2017	Monitise (AIM:MONI)	Fiserv (Europe)	\$52.3	0.7x
Jun-17	Q2'2017	Kalibrate Technologies (AIM:KLBT)	Hanover Investors Management	\$35.2	1.1x
Jun-17	Q2'2017	PTV Planung Transport (97% Stake)	Porsche Zweite Beteiligung	\$348.1	3.1x
Jun-17	Q2'2017	Covisint (NasdaqGS:COVS)	Open Text (NasdaqGS:OTEX)	\$69.2	1.0x
Jun-17	Q2'2017	SK Planet, Benepia Business	M&Service	\$6.7	0.9x
May-17	Q2'2017	Genband US	Sonus Networks(NasdaqGS:SONS)	\$412.0	1.0x
May-17	Q2'2017	Jive Software (NasdaqGS:JIVE)	Wave Systems	\$334.4	1.6x
May-17	Q2'2017	Xactly (NYSE:XTLY)	Vista Equity Partners	\$535.9	5.6x
May-17	Q2'2017	iSystems	Asure Software (NasdaqCM:ASUR)	\$76.5	5.9x
Apr-17	Q2'2017	Sajan (NasdaqCM:SAJA)	AMPLEXOR	\$24.8	0.9x
Apr-17	Q2'2017	Macrologic (WSE:MCL)	Asseco Business Solutions (WSE:ABS)	\$27.4	2.0x
Apr-17	Q2'2017	Caldera	Dover (NYSE:DOV)	\$37.3	3.2x
Apr-17	Q2'2017	Telvent DTN	TBG	\$900.0	4.2x
Mar-17	Q1'2017	Ingresso Group	acresso Technology Group (AIM:ACSO)	\$36.6	0.7x
Mar-17	Q1'2017	Mobileye (NYSE:MBLY)	Intel (NasdaqGS:INTC)	\$15,003.7	41.9x
Mar-17	Q1'2017	Resterra	Origin (ISE:OIZ)	\$19.7	6.2x
Mar-17	Q1'2017	Tagetik Software	Wolters Kluwer Tax & Accounting	\$317.3	5.3x
Mar-17	Q1'2017	Ontology-Partners	EXFO (TSX:EXF)	\$7.6	1.9x
Feb-17	Q1'2017	Halogen Software (TSX:HGN)	Saba Software	\$174.9	2.4x
Feb-17	Q1'2017	Touchcorp (ASX:TCH)	Afterpay Holdings (ASX:AFY)	\$120.9	4.3x
Feb-17	Q1'2017	Cdnetworks (97.6% Stake)	Hong Kong Wangsu Science & Technology Company	\$142.2	1.5x





# M&A transactions



## Application Software (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Feb-17	Q1'2017	Xura Secure Communications	CLX Communications (OM:CLX)	\$17.0	0.6x
Feb-17	Q1'2017	StoneRiver	Sapiens International Corporation (NasdaqCM:SPNS)	\$102.0	1.3x
Feb-17	Q1'2017	Rubik Financial (ASX:RFL)	Temenos Group (SWX:TEMN)	\$59.4	1.9x
Feb-17	Q1'2017	Aon, Benefits Administration and HR BPO Platform	The Blackstone Group (NYSE:BX)	\$4,800.0	2.1x
Feb-17	Q1'2017	Comptel (HLSE:CTL1V)	Nokia Solutions and Networks	\$359.5	3.4x
Feb-17	Q1'2017	ClicksMob	ExciteAd Digital Marketing	\$5.1	0.3x
Feb-17	Q1'2017	NetDimensions (AIM:NETD)	Learning Technologies Group (AIM:LTG)	\$55.8	2.2x
Feb-17	Q1'2017	Mytos	Techstep (OB:TECH)	\$13.9	5.3x
Jan-17	Q1'2017	AppDynamics (NasdaqGS:APPD)	Cisco Systems (NasdaqGS:CSCO)	\$3,902.9	18.9x
Jan-17	Q1'2017	msg life (EXTRA:MSGL) (50.9% Stake)	msg systems	\$78.6	0.6x
Jan-17	Q1'2017	Avention	The Dun and Bradstreet Corp (NYSE:DNB)	\$150.0	2.5x
Dec-16	Q4'2016	Smart Technologies (52.09% stake)	Foxconn Singapore	\$247.4	0.7x
Dec-16	Q4'2016	6PM Holdings (MTSE:6PM)	IDOX (AIM:IDOX)	\$37.7	2.4x
Dec-16	Q4'2016	IPI Solutions	Ideagen (AIM:IDEA)	\$7.0	3.3x
Dec-16	Q4'2016	Sinch	CLX Communications(OM:CLX)	\$14.1	0.3x
Dec-16	Q4'2016	IntraLinks Holdings (NYSE:IL)	Synchronoss Technologies, Inc. (NasdaqGS:SNCR)	\$854.5	2.9x
Dec-16	Q4'2016	Radiate Media Holding Company	GTN Limited (ASX:GTN)	\$15.0	0.3x
Nov-16	Q4'2016	Agility Applications	HUB24 (ASX:HUB)	\$11.4	1.9x
Nov-16	Q4'2016	ANNOVA Systems	SciSys (AIM:SSY)	\$29.4	3.7x
Nov-16	Q4'2016	Mentor Graphics (NasdaqGS:MENT)	Siemens Industry	\$4,281.3	3.8x
Nov-16	Q4'2016	TubeMogul (NasdaqGS:TUBE)	Adobe Systems (NasdaqGS:ADBE)	\$542.2	2.6x
Oct-16	Q4'2016	ECM Systems (90% Stake)	Playtech (LSE:PTEC)	\$20.2	1.8x
Oct-16	Q4'2016	Pitchbook Data (80% Stake)	Morningstar (NasdaqGS:MORN)	\$225.0	7.2x
Oct-16	Q4'2016	C24 Technologies	Gresham Computing (LSE:GHT)	\$5.8	2.3x
Sep-16	Q3'2016	Financial Synergy	IRESS (ASX:IRE)	\$68.8	3.3x
Sep-16	Q3'2016	SAI Global (ASX:SAI)	Baring Private Equity Asia	\$931.0	2.1x
Sep-16	Q3'2016	Dell EMC, Enterprise Content Division	Open Text (NasdaqGS:OTEX)	\$1,620.0	2.7x
Sep-16	Q3'2016	Hewlett Packard Enterprise Company, Software Business	Micro Focus International (LSE:MCRO)	\$8,730.4	2.8x
Aug-16	Q3'2016	Interactive Intelligence Group (NasdaqGS:ININ)	Genesys Telecommunications Laboratories	\$1,394.3	3.4x



# M&A transactions

## Application Software (continued)



Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Aug-16	Q3'2016	Macro Kiosk Berhad (70.0% Stake)	GMO Payment Gateway (TSE:3769)	\$15.6	0.7x
Aug-16	Q3'2016	Oneclickretail.com	Ascential (LSE:ASCL)	\$225.0	45.9x
Aug-16	Q3'2016	QHR Corporation (TSXV:QHR)	Loblaw Companies (TSX:L)	\$11,981.0	5.1x
Aug-16	Q3'2016	Relay Software	Applied Systems	\$5.2	0.7x
Aug-16	Q3'2016	ByBox Holdings	LDC (Managers) Limited	\$137.3	1.4x
Aug-16	Q3'2016	ICRA Techno Analytics	Nihilent Technologies	\$10.3	0.9x
Aug-16	Q3'2016	Shanghai Huateng Software Systems	Chinasoft International Technology	\$51.3	0.3x
Aug-16	Q3'2016	Fleetmatics Group (NYSE:FLT)	Verizon Communications (NYSE:VZ)	\$2,183.5	7.0x



# M&A transactions

## EMS / Infrastructure Software



Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jul-17	Q3'2017	Guidance Software (NasdaqGM:GUID)	Open Text (NasdaqGS:OTEX)	\$223.9	2.1x
May-17	Q2'2017	China Realtime Database (60% Stake)	NARI Technology (SHSE:600406)	\$16.0	0.8x
May-17	Q2'2017	Plesk International (51% Stake)	Oakley Capital Inv. (AIM:OCL)	\$53.7	1.9x
May-17	Q2'2017	VIZIYA	Quarterhill (TSX:QTRH)	\$29.5	2.4x
May-17	Q2'2017	Nebula	Telia Company (OM:TELIA)	\$185.3	4.7x
Apr-17	Q2'2017	TeleSign Corporation	Belgacom International Carrier Services	\$230.0	2.3x
Apr-17	Q2'2017	SecurEnvoy	Shearwater Group (AIM:SWG)	\$25.7	6.2x
Feb-17	Q1'2017	LightCyber	Palo Alto Networks (NYSE:PANW)	\$105.0	10.5x
Feb-17	Q1'2017	Invincea	Sophos Group (LSE:SOPH)	\$120.0	12.2x
Jan-17	Q1'2017	Ixia (NasdaqGS:XXIA)	Keysight Technologies (NYSE:KEYS)	\$1,526.5	3.1x
Sep-16	Q3'2016	Infoblox (NYSE:BLOX)	Vista Equity Partners	\$1,254.3	3.5x
Aug-16	Q3'2016	PhenixID (69.9% Stake)	Clavister Holding (OM:CLAV)	\$11.5	10.4x



# M&A transactions



## Tech Enabled Services

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jul-17	Q3'2017	Somoto (TASE:SMTO)	-	\$74.6	1.3x
Jul-17	Q3'2017	PARX Werk	Persistent Systems	\$9.0	1.1x
Jul-17	Q3'2017	PlusServer	BC Partners	\$459.5	4.0x
Jul-17	Q3'2017	OnX Enterprise Solutions	Cincinnati Bell (NYSE:CBB)	\$199.0	0.3x
Jul-17	Q3'2017	Yg Zhihe Zhuoyuan (Beijing) Technology	Yg Gongchuang Intelligent Technology	\$6.5	0.4x
Jul-17	Q3'2017	Getronics International	Bottega	\$250.9	0.5x
Jul-17	Q3'2017	MDCL-Frontline Solutions	Tianjin Lanmo Innovative Cloud Network Technology	\$10.3	0.7x
Jul-17	Q3'2017	NCI (NasdaqGS:NCIT)	H.I.G. Capital	\$289.4	0.9x
Jun-17	Q2'2017	Clarity Consulting	Perficient (NasdaqGS:PRFT)	\$9.4	0.4x
Jun-17	Q2'2017	PT Packet Systems Indonesia (68.18% Stake)	P.T. Metrodata Electronics (JKSE:MTDL); Logicials Group	\$10.5	0.1x
Jun-17	Q2'2017	Rightside Group (NasdaqGS:NAME)	Donuts	\$134.6	2.3x
Jun-17	Q2'2017	Beijing Hangxing Yongzhi Technology	Zhongxin Information Development (SZSE:300469)	\$43.5	2.8x
May-17	Q2'2017	TSR (NasdaqCM:TSRI) (92.83% Stake)	Zeff Holding	\$5.9	0.1x
May-17	Q2'2017	Business & Decision (ENXTPA:BND) (67% Stake)	Orange (ENXTPA:ORA)	\$100.8	0.4x
May-17	Q2'2017	SMS Mgmt & Tech (ASX:SMX)	ASG Group	\$101.6	0.4x
May-17	Q2'2017	SCALES	NNIT (CPSE:NNIT)	\$26.1	1.5x
May-17	Q2'2017	Beijing Teevoo Bros Tech	Guangdong Songfa Ceramics (SHSE:603268)	\$65.5	18.5x
Apr-17	Q2'2017	IT2 Solutions	Zalaris (OB:ZAL)	\$20.9	1.0x
Apr-17	Q2'2017	Beijing Sinoage Technology	INESA Intelligent Tech (SHSE:900901)	\$31.7	42.2x
Apr-17	Q2'2017	Ciber, Assets in North America and India	Capgemini America	\$50.0	0.2x
Apr-17	Q2'2017	Zycron	BG Staffing	\$23.0	0.6x
Mar-17	Q1'2017	Keystone Logic Solutions	Zensar Technologies	\$20.4	1.6x
Mar-17	Q1'2017	Infracast	IMImobile (AIM:IMO)	\$21.0	1.6x
Mar-17	Q1'2017	FUSIONI	Trust Tech (TSE:2154)	\$8.7	0.7x
Mar-17	Q1'2017	Santa Monica Networks, Finnish and Estonian Operations	Elisa (HLSE:ELISA)	\$30.1	0.6x
Mar-17	Q1'2017	Ciber (NYSE:CBR)	AMERI Holdings(OTCPK:AMRH)	\$97.9	0.1x
Feb-17	Q1'2017	SMS Management & Technology (ASX:SMX)	DWS (ASX:DWS)	\$98.8	0.4x
Feb-17	Q1'2017	Advanced Design Corporation	Melco (TSE:6676)	\$9.3	2.9x
Feb-17	Q1'2017	Hostworks Group	Inabox (ASX:IAB)	\$5.4	0.3x



# M&A transactions



## Tech Enabled Services (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jan-17	Q1'2017	Harris Corp, Government IT Services Business	Veritas Capital	\$690.0	0.7x
Jan-17	Q1'2017	FPLAIN (54.4% Stake)	Fullcast Holdings (TSE:4848)	\$19.2	0.9x
Jan-17	Q1'2017	CynergisTek	Auxilio (OTCPK:AUXO.D)	\$34.2	2.3x
Jan-17	Q1'2017	CEB (NYSE:CEB)	Gartner (NYSE:IT)	\$3,311.9	3.5x
Jan-17	Q1'2017	teamix	ProAct IT Group (OM:PACT)	\$9.4	0.3x
Dec-16	Q4'2016	Bigdatapump	Affecto (HLSE:AFE1V)	\$6.7	3.6x
Dec-16	Q4'2016	Grid Dynamics International	Automated Systems Holdings (SEHK:771)	\$118.0	3.0x
Dec-16	Q4'2016	Conveyancing Alliance	ULS Technology (AIM:ULS)	\$16.6	3.0x
Dec-16	Q4'2016	STRATO	Warburg Pincus; United Internet (DB:UTDI)	\$623.9	4.7x
Dec-16	Q4'2016	NeuStar (NYSE:NSR)	GIC Special Investments; Golden Gate Private Equity	\$2,870.6	2.5x
Dec-16	Q4'2016	Lionbridge Technologies (NasdaqGS:LIOX)	H.I.G. Capital	\$435.3	0.8x
Dec-16	Q4'2016	Qware Technology Group (76% stake)	Hangzhou Zhenxiang Investment Management	\$25.6	0.2x
Nov-16	Q4'2016	Tecnocom Telecomunicaciones y Energia (BME:TEC)	Indra Sistemas (BMW:IDR)	\$358.7	0.8x
Nov-16	Q4'2016	Alternative Networks (AIM:AN.)	Daisy Intermediate Holdings	\$229.7	1.3x
Nov-16	Q4'2016	Integrio Technologies	Sysorex Government Services	\$6.0	0.2x
Nov-16	Q4'2016	Milstream Associates	PROACTIS Holdings (AIM:PHD)	\$20.7	3.4x
Nov-16	Q4'2016	ITC Secure Networking	C5 Capital	\$29.8	1.7x
Nov-16	Q4'2016	Datalink (NasdaqGS:DTLK)	Insight Enterprises (NasdaqGS:NSIT)	\$234.6	0.3x
Nov-16	Q4'2016	EarthLink Holdings (NasdaqGS:ELNK)	Windsteam Holdings (NasdaqGS:WIN)	\$1,056.5	1.1x
Oct-16	Q4'2016	Mediacontech (BIT:MCH) (79.45% Stake)	Europa Investimenti Special Situations	\$54.3	23.2x
Oct-16	Q4'2016	Appirio	Wipro (BSE:507685)	\$500.0	2.6x
Oct-16	Q4'2016	Comtel Solutions (64% Stake)	Quesscorp Holdings	\$31.0	0.5x
Oct-16	Q4'2016	Centerland	Beijing Taikong Panel Industry (SZSE:300344)	\$8.3	1.0x
Oct-16	Q4'2016	Nova Infraestructuras, Infraestructures and Manged	VINCI Energies Portugal	\$42.4	0.4x
Oct-16	Q4'2016	Barstride Group	SHIFT (TSE:3697)	\$7.7	0.4x
Oct-16	Q4'2016	Lumagate	Innofactor (HLSE:IFA1V)	\$11.7	1.2x
Oct-16	Q4'2016	Frontica Business Solutions	Cognizant Technology Solutions (NasdaqGS:CTSH)	\$128.4	0.7x
Sep-16	Q3'2016	ASG Group (ASX:ASZ)	Nomura Research Institute (TSE:4307)	\$262.6	1.8x
Sep-16	Q3'2016	Keysource	Styles&Wood Group (AIM:STY)	\$9.2	0.4x



# M&A transactions



## Tech Enabled Services (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Sep-16	Q3'2016	Octo Technology Société Anonyme (ENXTPA:ALOCT) (52.6% Stake)	Accenture (NYSE:ACN)	\$136.9	2.8x
Sep-15	Q3'2016	BigAir Group (ASX:BGL)	Superloop (ASX:SLC)	\$172.3	2.9x
Sep-15	Q3'2016	MicroDoc Computersysteme	Data Respons (OB:DAT)	\$11.8	0.8x
Aug-16	Q3'2016	Computer Measurement Technology	Comture (TSE:3844)	\$6.8	0.4x
Aug-16	Q3'2016	Rackspace Hosting (NYSE:RAX)	Inception Parent	\$4,404.7	2.1x
Aug-16	Q3'2016	Modrus	Nasstar (AIM:NASA)	\$17.0	2.2x
Aug-16	Q3'2016	Beijing Mmim Interactive Technologies	Chinasoft International Technology Services	\$15.8	1.1x
Aug-16	Q3'2016	Intecq (ASX:ITQ)	Tabcorp Holdings (ASX:TAH)	\$84.9	2.1x
Aug-16	Q3'2016	Liberata	Outsourcing UK	\$56.6	0.5x



# M&A transactions



## Online & Digital

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jul-17	Q3'2017	St. Hero' Network Technology Co. Ltd	Kingnet Network Co., Ltd. (SZSE:002517)	\$466.4	26.0x
Jul-17	Q3'2017	WebMD Health Corp. (NasdaqGS:WBMD)	Internet Brands, Inc.	\$3,740.4	5.3x
Jul-17	Q3'2017	Bankrate, Inc. (NYSE:RATE)	Red Ventures Holdco, LP	\$1,438.5	3.1x
Jul-17	Q3'2017	Accelyst Solutions Pvt. Ltd and Freecharge Payment Technologies	Axis Bank Limited (BSE:532215)	\$60.0	93.9x
Jul-17	Q3'2017	Rocket Fuel Inc. (NasdaqGS:FUEL)	Sizmek Inc.	\$149.9	0.3x
Jul-17	Q3'2017	Hainan Qiyao Interactive Entertainment Co., Ltd.	Shenzhen Taole Network Technoloav Co., Ltd.	\$31.3	16.6x
Jun-17	Q2'2017	Kongregate	Modern Times Group (OM:MTG B)	\$55.0	1.6x
May-17	Q2'2017	Space Ape (62% Stake)	Supercell	\$90.0	1.0x
May-17	Q2'2017	Grays eCommerce (ASX:GEG)	Eclipx Group (ASX:ECX)	\$132.2	1.3x
May-17	Q2'2017	Angie's List (NasdaqGS:ANGI)	HomeAdvisor	\$574.4	1.8x
May-17	Q2'2017	Global Sources (NasdaqGS:GSOL)	The Blackstone Group (NYSE:BX)	\$378.6	2.5x
May-17	Q2'2017	Changyou.com (NasdaqGS:CYOU)	-	\$1,417.2	2.8x
May-17	Q2'2017	NaturaBuy	NextStage (ENXTPA:NEXTS)	\$11.5	4.0x
May-17	Q2'2017	Postcode Anywhere	GB Group (AIM:GBG)	\$82.1	4.6x
May-17	Q2'2017	Shanghai Woshi Culture Communication	Hakim Unique Internet (SZSE:300300)	\$87.1	6.3x
May-17	Q2'2017	Get Educated International	2U South Africa	\$123.0	7.2x
May-17	Q2'2017	eRepublik Labs	Stillfront Group (OM:SF)	\$23.1	8.3x
Apr-17	Q2'2017	Arithmetic	Aeria (JASDAQ:3758)	\$8.1	0.6x
Apr-17	Q2'2017	IsCool Entertainment (ENXTPA:ALISC) (72.6% Stake)	Hachette Livre	\$8.6	1.3x
Apr-17	Q2'2017	migme (ASX:MIG)	Solaris Power Cells (OTCPK:SPCL)	\$19.6	1.2x
Apr-17	Q2'2017	RetailMeNot (NasdaqGS:SALE)	Harland Clarke Holdings	\$467.7	1.7x
Mar-17	Q1'2017	Incisive Media, Insight Division	Infopro Digital	\$151.0	3.0x
Mar-17	Q1'2017	Teads	Altice N.V. (ENXTAM:ATC)	\$308.2	1.5x
Mar-17	Q1'2017	Anime Consortium Japan (63.9% Stake)	BANDAI NAMCO (TSE:7832)	\$29.1	14.1x
Mar-17	Q1'2017	Beijing Smart Space Technology	6.cn	\$55.1	7.2x
Mar-17	Q1'2017	lfwe	MeetMe (NasdaqCM:MEET)	\$60.0	1.4x
Mar-17	Q1'2017	Hangzhou Joyreach Network Technology	Meisheng Cultural & Creative Corp (SZSE:002699)	\$161.3	4.0x
Feb-17	Q1'2017	Digital Publishing Initiatives Japan (70.52% Stake)	Media Do (TSE:3678)	\$99.3	0.8x
Feb-17	Q1'2017	SinnerSchrader (XTRA:SZZ) (63.78% Stake)	Accenture (NYSE:ACN)	\$101.1	1.8x



# M&A transactions



## Online & Digital (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Feb-17	Q1'2017	Company Webcast (52% Stake)	Euronext (ENXTPA:ENX)	\$7.5	2.0x
Feb-17	Q1'2017	3Minute	Gree (TSE:3632)	\$38.2	9.8x
Feb-17	Q1'2017	Social Point	Take-Two Invest Espana	\$280.3	3.1x
Jan-17	Q1'2017	Telegraaf Media (ENXTAM:TMG)	Talpa Holding	\$292.2	0.6x
Jan-17	Q1'2017	Hotcourses	IDP Education (ASX:IEL)	\$36.3	2.8x
Jan-17	Q1'2017	ShareASale.com	Digital Window	\$45.0	3.2x
Dec-16	Q4'2016	Minnano Wedding (TSE:3685) (54.42% stake)	-	\$42.9	3.0x
Dec-16	Q4'2016	Opera TV	Moore Frères & Company	\$114.3	3.6x
Dec-16	Q4'2016	Dhruva Interactive (90.5% stake)	Starbreeze (OM:STAR B)	\$10.2	2.2x
Dec-16	Q4'2016	Telegraaf Media (ENXTAM:TMG) (58.7% stake)	Mediahuis; N.V. Exploitatie Maatschappij Van Puijenbroek	\$258.0	0.5x
Dec-16	Q4'2016	Zhenbaotong (Shenzhen) Internet Technology (99.06% stake)	Beijing Kingee Culture Development (SZSE:002721)	\$101.7	0.4x
Nov-16	Q4'2016	Creston (LSE:CRE) (71.92% Stake)	RedWhiteBlue Champion	\$89.7	0.7x
Oct-16	Q4'2016	O-uccino (TSE:6084) (54.27% Stake)	-	\$7.9	0.6x
Oct-16	Q4'2016	Digital Globe Services (AIM:DGS) (53.58% Stake)	TRG Holdings	\$22.1	0.5x
Oct-16	Q4'2016	Everyday Health (NYSE:EVDY)	Ziff Davis	\$459.3	1.9x
Oct-16	Q4'2016	AbsoluteIT	AWF Madison Group (NZSE:AWF)	\$11.1	0.2x
Oct-16	Q4'2016	Consol Partners (65% Stake)	Empresaria Group (AIM:EMR)	\$14.6	0.5x
Oct-16	Q4'2016	Pixonix	Mail.Ru Group (LSE:MAIL)	\$30.0	4.1x
Sep-16	Q3'2016	YuMe (NYSE:YUME)	AVI Partners	\$116.8	0.7x
Sep-16	Q3'2016	Shanghai Jiguang Network Technology (90% Stake)	Zhongnan Red Culture Group (SZSE:002445)	\$111.4	13.8x
Sep-16	Q3'2016	Dot Property	Mitula Group (ASX:MUA)	\$8.9	6.9x
Aug-16	Q3'2016	Monster (NYSE:MWV)	Randstad North America	\$382.8	0.6x
Aug-16	Q3'2016	anydooR	Rozetta Corporation (TSE:6182)	\$13.2	2.4x





# IV Selected transactions



# Selected transactions



## Idean Enterprises OY Acquired By Capgemini

### Transaction Summary

- Pharus served as the exclusive financial advisor to Idean Enterprises Oy in its sale to Capgemini. Transaction terms were not disclosed.
- This transaction will reinforce Capgemini's user-centered and digital-first experience design and strategy services, particularly in North America, and extend its network of Digital studios. This transaction is geared to meet growing customer demand for the Group's end to end digital services.
- The shareholders of Idean retained Pharus due to our knowledge of the design and strategy services sector, as well as our M&A advisory experience with digital, innovation and cloud services businesses. We executed a comprehensive M&A process that involved identifying and approaching a broad set of strategic buyers, spearheading marketing activities, leading due-diligence, and negotiating transaction terms.

### Key Profiles

- Idean Enterprises, a fast-growing digital strategy and experience design consultancy focuses, primarily on digital user experience (UX), customer experience (CX), and digital strategy. Their client list extends from disruptive Bay Area start-ups, global tech leaders to prominent brands in automotive and consumer electronics, looking to reinvent themselves for the digital era. Clients include LG, Mercedes-Benz, Sony, Volkswagen, 23andMe, Airbus, Cole Haan, Ericsson, IBM, Intel, and Kesko.
- Capgemini provides consulting, technology, and outsourcing services. Its consulting services include strategy and transformation, finance and technology transformation, human resources consulting, supply chain management, solutions environment, and innovation. It serves manufacturing, retail, consumer products, distribution and transportation, aerospace and defense, and financial services industries across the world.



The undersigned acted as the exclusive financial advisor to Idean Enterprises Oy in connection with the transaction

**P H A R U S**  
2 0 1 7

### Risto Lähdesmäki, Chief Executive Officer of Idean, said about Pharus:

**"These guys just rock!** I could not be happier with having chosen Pharus as our investment banking advisor. Since I knew this would be once-in-a-lifetime deal for me and whole team, I wanted to set multiple records and Pharus accepted the challenge - and boy we set many. At every step Pharus added immense value and astutely guided us to the most optimal outcome for the shareholders and for everyone in Idean.

I'm very pleased with their experience, dedication, and diligence - working hard 24/7 as one team, we were able to get a complicated deal closed in a compressed time frame. Pharus was with us right from beginning to end to ensure a successful process. The way they guided me and the team with a human touch was just amazing - I truly felt they had our back all the time. **We could not have achieved these results without Pharus - a deal that worked like a dream for all the stakeholders."**

# Selected transactions

## Strategic Sale of SalonQuest LLC (D/B/A Aquage) to Conair Corporation

### Transaction Summary

- Pharus served as the exclusive financial advisor to SalonQuest LLC in their sale to Conair Corporation in an all cash transaction.
- Pharus was mandated by SalonQuest’s shareholders to execute a comprehensive process, that involved identifying and approaching a targeted set of strategic and financial buyers, spearheading marketing and due-diligence, and negotiating the terms of the transaction.
- Michael Goodman, Pharus’ co-founding partner, said, “It was a privilege for Pharus to work with Dennis Lubin, Luis Alvarez and the other professionals at SalonQuest to identify the perfect new owner for Aquage, one who can take the unique business they have built to the next level. Nothing gives us greater satisfaction than helping make the kind of great match this transaction represents between SalonQuest and its new owner, Conair.”
- Transaction terms were not disclosed.

### Key Profiles

- SalonQuest LLC (d/b/a Aquage), a privately-held maker of innovative salon hair care products based on marine botanicals. SalonQuest is headquartered in Chagrin Falls, OH.
- Conair Corporation develops, manufactures, and markets hair care, personal grooming, and bath and spa products. Conair is headquartered in Stamford, CT.



aquage

has been acquired by

**CONAIR**

The undersigned acted as the exclusive financial advisor to SalonQuest LLC (d/b/a Aquage) in connection with the transaction

PHARUS

2016

### Dennis Lubin, co-founder and CEO of SalonQuest, said,

“We could not have completed the transaction without the tireless efforts of the Pharus Advisors’ team. Their industry knowledge and experience, extensive relationships, and sage advice helped ensure we found a great home for our Company with Conair. Our company was at an inflection point, and we wanted to find a partner who could invest in the rapid growth of the innovative products and educational systems that we have developed. Thanks to Pharus, we have found just that partner in Conair.”

# Selected transactions

## Capgemini US Acquires Fahrenheit 212, a Leading Innovation and Design Consultancy

### Transaction Summary

- Pharus served as the exclusive financial advisor to Fahrenheit 212 LLC in its sale to Capgemini. Transaction terms were not disclosed.
- This transaction will augment the capabilities of Capgemini’s global strategy and transformation consulting organization, Capgemini Consulting, to provide new innovation, business transformation and digital customer experiences solutions. This bolt on acquisition fits into Capgemini’s digital innovation growth strategy.
- The shareholders of Fahrenheit 212 retained Pharus due to our knowledge of the innovation services sector, as well as our M&A advisory experience with digital and cloud services businesses. We executed a comprehensive M&A process that involved identifying and approaching a broad set of strategic and private equity buyers, spearheading marketing activities, leading due-diligence, and negotiating transaction terms.

### Key Profiles

- Fahrenheit 212, an innovation and design consultancy, focuses on defining innovation strategies and develops new products, services, and experiences that create sustainable, profitable growth for global clients such as The Coca-Cola Company, Marriott, and Citi.
- Capgemini provides consulting, technology, and outsourcing services. Its consulting services include strategy and transformation, finance and technology transformation, human resources consulting, supply chain management, solutions environment, and innovation. It serves manufacturing, retail, consumer products, distribution and transportation, aerospace and defense, and financial services industries across the world.

Fahrenheit**212**

has been acquired by



The undersigned acted as the exclusive financial advisor to Fahrenheit 212 LLC in connection with the transaction

**P H A R U S**  
FEBRUARY 2016



# Selected transactions

## SPS Commerce (NasdaqGS:SPSC) Acquires Toolbox Solutions, a Leading Provider of Retail Solutions in North America

### Transaction Summary

- Pharus served as the exclusive financial advisor to Toolbox Solutions, Inc. in their sale to SPS Commerce, Inc. (NasdaqGS:SPSC)
- The acquisition serves to strengthen SPS Commerce’s retail analytics portfolio, and further broadens their network of more than 60,000 organizations in 60 countries to include leading retailers and CPG suppliers in the North American convenience, grocery, and drug store segments.
- Pharus was mandated by Toolbox Solutions’ shareholders to execute a comprehensive process, that involved identifying and approaching a targeted set of strategic and financial buyers, spearheading marketing and due-diligence, and negotiating the terms of the transaction.
- SPS Commerce acquired all of the shares of ToolBox Solutions for approximately \$18.4 million in cash and \$4.5 million in stock which represents approximately 65,000 shares.

### Key Profiles

- ToolBox Solutions is a leading provider of point-of-sale analytics, retail and loyalty software solutions, and category management services to retailers and consumer packaged goods suppliers across the US and Canada. The company has established relationships with many leading retailers and CPG suppliers in the convenience, grocery and drug store segments. The employees will continue to be based in Toronto.
- SPS Commerce provides cloud-based supply chain management solutions worldwide through their platform which improves the way suppliers, retailers, distributors, and other customers manage and fulfill orders. The company is headquartered in Minneapolis.



has been acquired by



The undersigned acted as the exclusive financial advisor to Toolbox Solutions, Inc. in connection with the transaction

PHARUS

# Selected transactions



## Ziff Davis Acquires Offers.com, a Leader in the Digital Coupon and Deal Space

### Transaction Summary

- Pharus served as the exclusive financial advisor to Offers.com, LLC in their sale to Ziff Davis, LLC, a subsidiary of J2 Global (NasdaqGS:JCOM).
- The acquisition further expands Ziff Davis' portfolio of market leading digital properties, and strengthens their position in the growing online deals and offers segment.
- Pharus was mandated by Offers.com's shareholders to execute a comprehensive process, that involved identifying and approaching a targeted set of strategic and financial buyers, spearheading marketing and due-diligence, and negotiating the terms of the transaction.
- Transaction terms were not disclosed.
- Pharus had also served as the exclusive financial advisor to Offers.com in 2010, when it received \$7M in a round of funding from Susquehanna Growth Equity.

### Key Profiles

- Offers.com operates a leading online marketplace that connects millions of consumers with coupons, promo codes, deals, and discounts from thousands of leading merchants. Offers.com is headquartered in Austin, TX.
- Ziff Davis is a digital media company that engages in the digital publishing of content in gaming, technology, and men's lifestyle categories. It operates PCMag.com, IGN.com, and AskMen.com. Ziff Davis is headquartered in New York, NY.
- Ziff Davis is owned by J2 Global. J2 Global operates through two segments:
  - Business Cloud Services – Offers cloud services to sole proprietors, small to medium-sized businesses and enterprises, and government organizations; provides eFax, KeepItSafe, LiveDrive, eVoice and Onebox.
  - Digital Media – Operates a portfolio of Web properties, including PCMag.com, IGN.com, Speedtest.net, AskMen.com, and TechBargains.com.



**Offers.com**<sup>™</sup>

has been acquired by



The undersigned acted as the exclusive financial advisor to Offers.com, LLC in connection with the transaction

**P H A R U S**  
D E C E M B E R 2 0 1 5

# Selected transactions



has been acquired by

The undersigned acted as the exclusive financial advisor to Fahrenheit 212 LLC in connection with the transaction.

PHARUS  
February 2016

**Innovation Services**

has been acquired by

The undersigned acted as the financial advisor to Toolbox Solutions, Inc. in connection with the transaction.

PHARUS

**Retail Solutions**

has been acquired by

The undersigned acted as the exclusive financial advisor to Offers.com, LLC in connection with the transaction.

PHARUS  
December 2015

**Online Marketing**

CG CONTROL GROUP  
has merged with

to form

The undersigned acted as the exclusive financial advisor to Control Group, Inc. and its affiliates, in connection with the transactions.

Pharus Securities, LLC

**Digital Agency**

has been acquired by

The undersigned acted as the exclusive financial advisor to RoyaltyShare, Inc. in its sale to The Orchard Enterprises, Inc.

Pharus Securities  
November 2014

**Digital Revenue Management**

Received Series A financing of \$8 million from

The undersigned acted as the exclusive financial advisor to P97 Networks, Inc. in connection with the transaction.

Pharus Securities

**Fuel Payment & Coupon**

Completed a growth financing with

The undersigned acted as the exclusive financial advisor to Teachers Strategy Inc. in connection with the transaction.

Pharus Securities  
May 2014

**Education Technology**

has been acquired by

The undersigned acted as the exclusive financial advisor to AmberFin Ltd. in its sale to Dalet S.A. (ENWTPA.DLT)

Pharus Securities  
April 2014

**Broadcast Technology**

Remote DBA Business

has been acquired by

The undersigned acted as financial advisor to Bluewolf Inc. in the sale of its Remote DBA Business to General Corporation, Inc.

Pharus Advisors, LLC  
December 2012

**IT Services**

has been acquired by

Principals of the undersigned acted as financial advisors to SocialGuide, Inc. in its sale to Nielsen Holdings N.V. and M&M Inc. LLC a joint venture between Nielsen and McKinsey & Company, Inc.

Pharus Advisors, LLC  
November 2012

**Social TV Software**

has been acquired by

The undersigned acted as financial advisor to ExpertTune Inc. in its sale to Metso Corporation

Pharus Advisors, LLC  
November 2012

**Industrial Software**

has acquired

The undersigned acted as financial advisor to NetKey, Inc. in connection with this acquisition.

Pharus Advisors, LLC  
AUGUST 2007

**Retail Software**



# Pharus overview





# Pharus overview

## Introduction to Pharus

We are committed to providing clients a high level of attention, independent and objective advice, and creative solutions in challenging environments



**Founded  
in 2001**

### Global Reach / Cross-border Expertise

New York headquarters,  
with offices and affiliates  
in major technology  
hubs across the globe

### Extensive Advisory & Capital Market Capabilities

Mergers & Acquisitions  
Valuation &  
Fairness Opinions  
Corporate Advisory  
Private Placements  
Principal Investments  
Recapitalizations

### Industry Specialization & Experience

Digital Media &  
Advertising  
Broadcast & Media  
Technology  
Education Technology  
Tech-Enabled  
Business Services  
Industrial Technology  
Financial Technology

### Strong Network of Key Relationships

**90+**  
Successful  
Transactions  
Completed

**900+**  
Strategic Buyer  
Relationships

**1,100+**  
Venture Capital  
& Private Equity  
Relationships

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