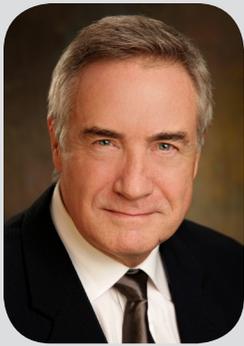


# WORLD TECH M&A REPORT 2019



**CORUM**  
MERGERS & ACQUISITIONS  
[www.corumgroup.com](http://www.corumgroup.com)



We've reached an age where distance, size and technology have few limits, fueling a record pace in tech M&A. A major private equity firm recently told us that they never imagined that they would go to the other side of the world to

make an acquisition for a platform company, but they did! Even the smallest niche companies are getting interest—with small company specialist Constellation the leading strategic buyer. Even seemingly mundane applications are being acquired—Corum added Blue Collar software as a Top Ten Disruptive Trend.

Private Equity continues to dominate deal volume due to bolt-ons to their platform technology companies, with Vista Equity leading the financial buyers. And they still have trillions to invest.

“Do you have a succession plan?” is too often met with blank stares in our educational conferences around the world, including China. A recent Chicago Tribune headline states the painful truth: “Your children don't want to take over your business.” Thus, more baby boomers globally will take their companies to market this year than ever before.

Thank you to all our strategic buyer contributors this year, including Salesforce and IBM. If you haven't heard the broadcast, the Private Equity panel was the best ever. Special thanks to Vista Equity, Riverside Company and Alpine Investors. To view these webcasts please visit [corumgroup.com](http://corumgroup.com).

Bruce Milne  
Conference Chair

# CORUM

MERGERS & ACQUISITIONS

Data for this report was compiled by Corum Group, the world's leading seller of privately held software, Internet, IT and related companies. For further information, please contact Elon Gasper, EVP, Research at +1 425 455 8281 or [clong@corumgroup.com](mailto:clong@corumgroup.com).

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## LUMINARY PANEL

Our thanks to our luminary panelists who took part in “Forecast 2019: Global Tech M&A.” For more of their thoughts on the technology landscape, view the original webcasts at [corumgroup.com](http://corumgroup.com).



“When we try to go forward from where we are now, instead of working backwards from the future, we fall into traps of incremental improvement, and of doing an old thing better until after it's become the wrong thing entirely.”

**PETER COFFEE, SALESFORCE**



“Technologies are tools, not an end goal. The end goal is to use the tools to solve the problems and add value to others. Technology trends reflect the market demand and supply for such tools. What drives market demand, though, are real-world problems.”

**HENRY HU, IBM**



“Designing for a global market is challenging. One approach is to use a spotted cow strategy: design for the cow, which is the global market, and then put spots on the cow where your design is changed to deal with certain countries like China or others.”

**REESE JONES, SINGULARITY UNIVERSITY**

## PRIVATE EQUITY PANEL

“Regardless of what industry you're in, if you're not thinking about evolving your business through both digital and business transformation, there's a risk of being left behind.”



**RENE YANG STEWART**  
**VISTA EQUITY**



Vista Equity Partners

“We absolutely do not require profitability. We certainly want to see a very clear path to it, but we are willing to buy companies with great customer retention in enterprise SaaS below break-even.”



**JEREMY HOLLAND**  
**THE RIVERSIDE COMPANY**



Riverside

“Historically, the private equity firms investing in the tech world were looking at bigger companies. As more competitors come in, more and more firms are going after smaller businesses.”



**MATT PICCIANO**  
**ALPINE INVESTORS**

## Q4 DROP KNOCKS DOWN RECORD HIGHS

Most major indices reached new highs in 2018, only to be thrown off those record levels into annual losses as interest rate, trade and other macroeconomic worries compounded. Over the year, US tech climbed the most, then lost the most, still booking a net gain. Overseas markets generally took the largest losses, with China showing its slowest growth in decades. Looking ahead, the landscape looks more like the '80s or '90s than the long-lasting impacts of the Financial Crisis or Dot-com Crash, giving those with long memories an edge.

## SMART MONEY TAKING ADVANTAGE

The M&A window remains open, and “smart money” is taking advantage of it. The Corum Index shows increases across all Market and Pipeline metrics, most notably megadeals, with a record number of billion-dollar sellers. VCs are selling more, too, for the first time in six years. At Corum, we’re also seeing increasing divestiture action from the corporate side.

Even with the volatility of public markets and the global political situation, the realities of large buyer cash stockpiles and disruptive technological trends remain, making 2019 a good time to sell—for the right kinds of companies. Many company owners face timing and succession issues that will make this window not just a good window, but the only one.

## 2018 PUBLIC MARKETS

### DAILY PERCENTAGE CHANGE



## CORUM INDEX

		2017	2018	
<b>Market</b>	Transactions	3441	3651	↑
	Megadeals	49	88	↑
	Largest Deal	\$23B	\$34B	↑
<b>Pipeline</b>	Private Equity Deals	398	496	↑
	VC-Backed Exits	543	608	↑
<b>Attributes</b>	Cross-border Deals	39%	38%	↓
	Startup Acquisitions	12%	14%	↑
	Average Life of Target	16 yrs	17 yrs	↑

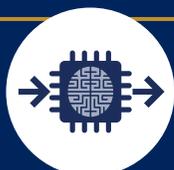
## CORUM TOP TEN DISRUPTIVE TECHNOLOGY TRENDS 2019

Technology companies considering an exit cannot ignore the disruptive technologies changing lives and transforming markets. Even the largest firms must adapt to these trends or fall behind. No company has the foresight to always lead the innovation curve, so the most successful acquire the pioneering companies with the expertise to

help them continue that disruptive success.

Each year, Corum composes a list of the key trends driving tech M&A, drawn from transactions in every sector, spanning hundreds of events, global reports and information from thousands of buyer conversations. 2019 has produced a particularly instructive set, described below.

FUNDAMENTAL



### AI ENABLEMENT

DATA AND FEEDBACK TURN ALGORITHMS INTO ACTION



### PLATFORM EFFECTS

BUILDING CRITICAL MASS ACROSS SECTORS & TOOLSETS



### COMPOSITE COMMERCE

A NEW GENERATION OF ONLINE/OFFLINE CONVERGENCE



### IOT SOFTWARE

REAL-WORLD TOOLS PUTTING PROMISE INTO PRACTICE



### DATA SCIENCE MONETIZATION

MAXIMIZING RETURN WITH REAL-TIME ANALYTICS

FUNCTIONAL



### FOCUSED IT SERVICES

DIFFERENTIATION DRIVING VALUE IN A FORMERLY SLEEPY SECTOR



### HEALTHTECH CONTINUUM

CONNECTIVE TECH COORDINATING SYSTEMS & CARE



### REGTECH SYSTEMS

HELPING HIT MOVING COMPLIANCE TARGETS



### SMART LOGISTICS

MOVING THINGS & PEOPLE AT A HIGHER LEVEL OF EFFICIENCY



### BLUE COLLAR SOFTWARE

TRADITIONAL WORKERS WITH CUTTING-EDGE TECH

STABILITY AMONG TOP STRATEGIC ACQUIRERS AS NON-TECH BUYERS ADVANCE

The top strategic acquirer leaderboard stayed remarkably stable, led again by Constellation Software. Its 38 tech acquisitions are the most any strategic acquirer has done in over a decade. Accenture reprised its role as runner up, as well. Most of these top acquirers reflected secular trends that should resist public market gyrations.

Leaders fell into a few clusters. Consolidators, including Constellation, WiseTech, J2 Global and newcomer Keywords, are rolling up small to mid-sized tech firms as a core component of their growth strategy. Constellation, for example, added firms across its sprawling structure of subsidiaries, in markets ranging from e-commerce to automotive, healthcare and real estate.

The services titans, buying up tech and talent, were led by Accenture, then Dentsu, Deloitte and WPP. Accenture's deals fell into four groups: product design, integration/consulting, digital marketing and analytics.

Tech giants continue pulling back, now down to only three: Alphabet, Alibaba, and Microsoft, where six gaming deals

pushed them into third place overall.

The most notable new entrant was Walmart, its ten deals including the largest e-commerce acquisition ever, India's Flipkart for \$16B. Walmart was one of dozens of large, traditional companies active in the tech M&A market in 2018, many for the first time—but not the last.

Overall, the list of top strategic acquirers was the least volatile in years, with changes led by Walmart and Siemens doubling their count and Hexagon close behind. Atos and Verisk both pulled back after one year on the list.

TOP STRATEGIC ACQUIRERS: 2018



	2017	2018	Change	
Siemens	6	14	133%	↑
Walmart	5	10	100%	↑
Hexagon	6	11	83%	↑
Microsoft	12	18	50%	↑
WiseTech	12	15	25%	↑
WPP	12	10	17%	↓
Apple	13	9	31%	↓
J2 Global	18	12	33%	↓
Atos	12	4	67%	↓
Verisk Analytics	11	3	73%	↓

PRIVATE EQUITY LEADERS STABLE AMID HIGH DEAL VOLUME AND FIERCE COMPETITION

Private Equity deals are generally divided into platforms, which are new acquisitions that can stand alone initially, and bolt-ons, acquired to be combined with those platform companies.

Platform deal volume over the last five years has more than doubled, from slightly over 200 in 2014 to nearly 500 last year, with a 25% surge just in 2018.

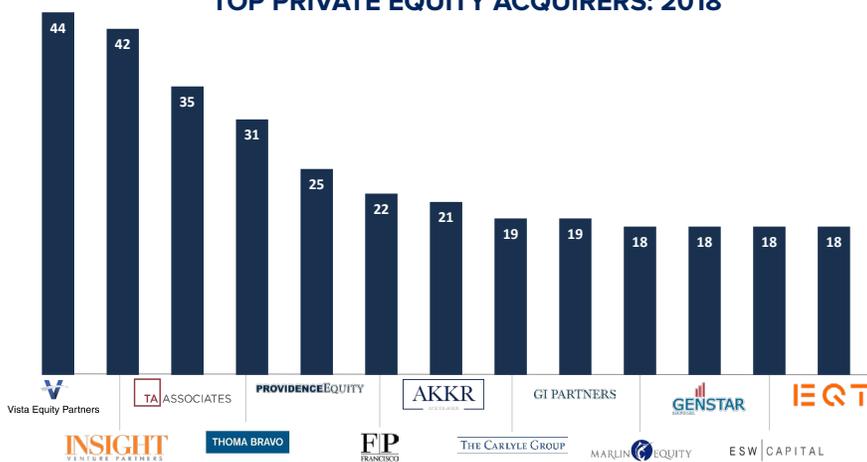
Despite this continued increase, and heavy competition among private equity firms for both types of acquisition targets, the top buyers remained remarkably stable last year, even as the median deal count for these buyers increased by 31%.

The top four in particular remained stable. Vista set the pace for its fourth straight year, with Insight a close second; TA Associates and Thoma Bravo held their positions, too. All four have ranked among the top six since 2015.

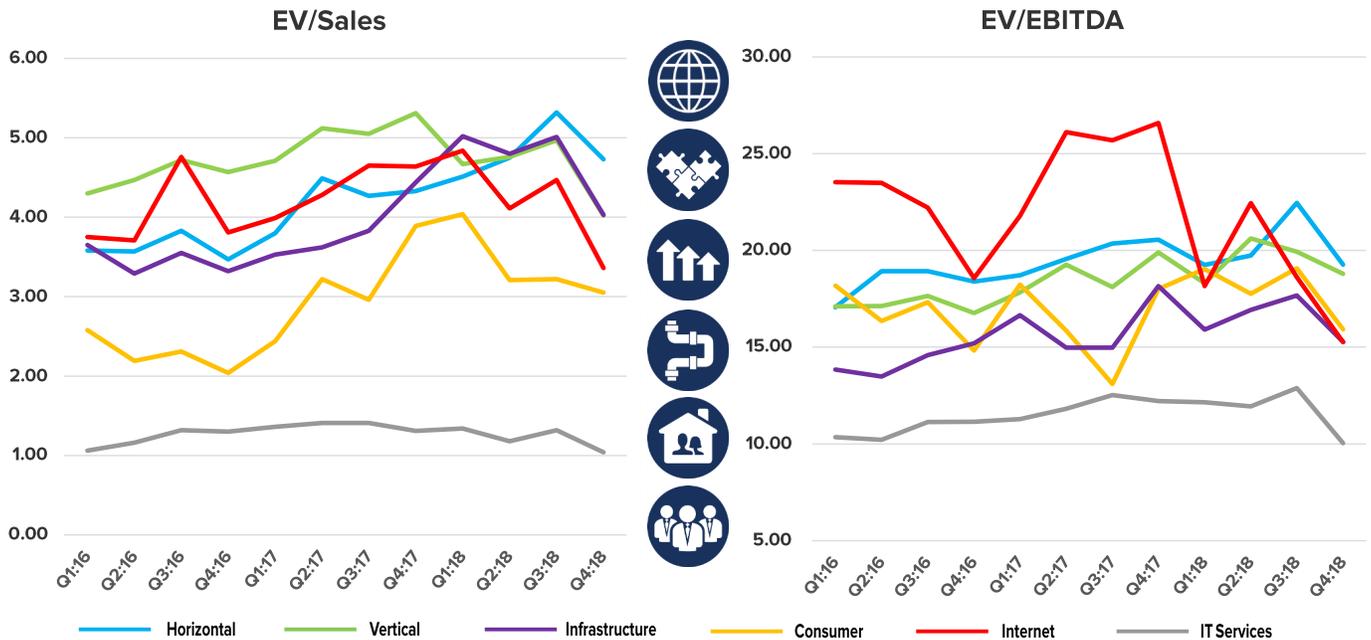
Mid-tier changes include the rise of Providence Equity from eighth to fifth place, bumping Francisco down a spot, and Accel-KKR reappearing on this list after an absence in 2017.

Making debuts were GI Partners, with several real estate related tech bolt-ons, and ESW Capital, a family office-backed firm focused on long-term holds. There are hundreds more private equity firms doing deals at a less blistering pace, as well.

TOP PRIVATE EQUITY ACQUIRERS: 2018



# MARKET VALUATIONS



Three-year value trends in our six markets show sales multiples for Horizontal Software rose and held their lead. At the bottom of both charts, IT Services reverted to its traditional valuation levels of 1x revenue and 10x EBITDA, in line with our prediction midway through the year.

The five other EBITDA multiples narrowed into a four-point range between 15x and 20x. At year end, Horizontal led again, with Internet valuations having returned to the pack. Overall, the market seems to have itself returned to a more standard view of the relevance of profits.

## M&A TIMING & SUCCESSION PLANNING

Do you have a succession plan? Few tech company owners do. Unlike many industries, technology companies are rarely passed on to the next generation. For many, the best succession plan is to find a merger partner. But today's strong tech M&A environment won't last forever, so Baby Boomer entrepreneurs in particular should consider taking advantage of the current strong valuations and open M&A window.

## PRIMARY RESEARCH



**ELON GASPER**  
EVP, RESEARCH



**AMBER STONER**  
DIR. OF RESEARCH



**YASMIN KHODAMORADI**  
DIR. OF CLIENT SERVICES



**AMANDA TALLMAN**  
SR. ANALYST



**BECKY HILL**  
SR. ANALYST



**ARTEM MAMAIEV**  
SR. ANALYST



**LIUDMILA REVIKINA**  
SR. ANALYST



**ALEXANDER BETS**  
SR. ANALYST



**ANNA LEBEDIEVA**  
ANALYST

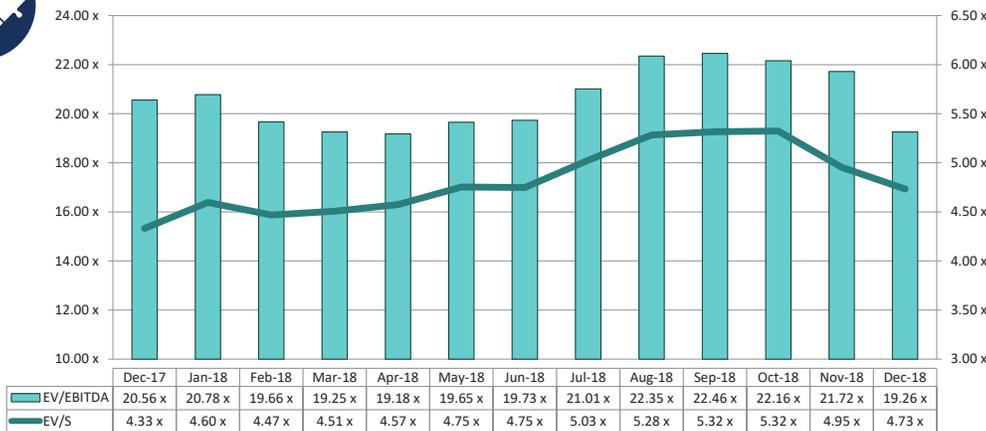


**DARIA TELUSHKO**  
ANALYST



EV/EBITDA

EV/S



SCM	
EV/S	5.01 x
EV/EBITDA	23.73 x

AspenTech / Descartes

Payments	
EV/S	5.16 x
EV/EBITDA	23.22 x

PayPal / Worldpay

Other	
EV/S	3.32 x
EV/EBITDA	15.26 x

OpenText / Trimble

Business Intelligence	
EV/S	3.78 x
EV/EBITDA	19.14 x

MicroStrategy / NICE

Marketing	
EV/S	4.36 x
EV/EBITDA	23.06 x

Axciom / Alliance Data

ERP	
EV/S	4.30 x
EV/EBITDA	16.91 x

Oracle / SAP

Human Resources	
EV/S	6.70 x
EV/EBITDA	35.93 x

ADP / Workday, Inc.

Valuations in the Horizontal sector rose until dipping in November; however, sales multiples remain higher than the beginning of the year, while EBITDA multiples took a slight hit from January 2018 numbers. Most subsector valuation multiples dropped in line with the market downturn, though the SCM and Payments subsectors saw a net increase over the year.

Within SCM we saw activity in Smart Logistics, where Spanish customs solutions provider Taric was picked up for over 5x revenue by top acquirer WiseTech, which also paid nearly \$30M for Trinium Technologies, a provider of intermodal trucking management systems. Transportation management SaaS company Cloud Logistics was bought by E2Open to complement its transportation forecasting solutions.



High demand for advanced analytics and BI tools drove deals as well, with data science firm Angoss acquired for \$24.5M at over 2x sales by predictive analytics company Datawatch, which was itself bought by Altair Engineering for \$176M at 4x revenue.

M&A in conversational AI was notable for the number of cross-border transactions. Sellers ranged from Chile-based conversational AI CRM firm Intelligens to Singapore virtual assistant developer FlexAnswer.

We also saw consolidation in the expense management space. K1-backed Certify made two acquisitions in 2018, starting with

real-time expense tracking & reporting company Abacus, and then Corum client Captio, as it challenges SAP-owned Concur.



SAP itself did a pair of megadeals, paying \$2.4B, almost 10x revenue, for CallidusCloud to boost its CRM cloud offerings, then luring survey and engagement innovator Qualtrics off the IPO market for \$8B, a hefty 21x revenue.

We saw a streak of deals in the workforce management space, highlighting its diverse aspects from hiring to employee retention. TextRecruit, an AI-powered communications platform for employers, was acquired by recruitment software provider iCIMS; Rallyteam, which leverages machine learning to match employees with in-house opportunities, was picked up by Workday to build on its earlier SkipFlag purchase; and staff hiring tools developer WorkPop was acquired by Cornerstone OnDemand to complement its recruiting solution.



In Payments, PayPal made two major acquisitions, spending \$2.2B for Sweden's digital payments firm iZettle to strengthen its presence in Europe and Latin America, and shelling out \$400M at 4.4x revenue for payout platform Hyperwallet to fill out its suite of payment solutions for ecommerce platforms

and marketplaces. PayPal was not the only player, though, as payment processing firm Forte was bought for \$85M by billing solutions provider CSG to advance its monetization capabilities.



“

*Right now the question is not ‘what’s the best plan?’ but ‘what’s the most resilient strategy that accommodates the widest range of possible plans?’*

”

*Peter Coffee, Salesforce*



## AI ENABLEMENT

In 2018, AI enablement became mainstream – facial recognition, medical diagnosis, autonomous vehicles, AI-based recruiting, translation, even “deepfakes,” and more. However, some spectacular pioneering application failures remind us that “No matter how good your models are, they are only as good as your data.”

With AI creating new opportunities in every sector, it’s no surprise high levels of AIM&A continued. Noteworthy deals include Google acquiring AIMatter, Microsoft acquiring Semantic Machines and Maluuba, Apple acquiring Silk Labs and Realface, and Facebook acquiring Ozlo. Themes include novel AI development frameworks, small footprint delivery platforms, computer vision and, increasingly,

natural language processing.

Today, non-tech companies increasingly understand that to compete against data-driven competitors, they must become better at leveraging their data, so it’s no surprise we are seeing more M&A activity from them as they try to bridge the technical competence gap.

Expect to see more activity as buyers target companies with novel AI technologies, AI-enabled vertical solutions or unique datasets to fuel machine learning algorithms that help address the four “P”s of AI: *Prediction, Production, Personalization* and *Promotion*.



**IVAN RUZIC, PH.D.**  
SR. VICE PRESIDENT



## PLATFORM EFFECTS

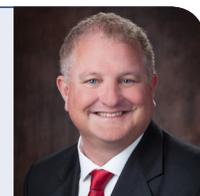
In our 2018 report, Salesforce’s Peter Coffee noted that “everything is a platform,” from currencies to stores to restaurants, and we’re seeing this play out in tech M&A.

Salesforce itself is a product of the first wave of this Platform Effect, alongside other tech giants and massive horizontal platforms. Today, multiple Platform Effects are consolidating a variety of solutions and verticals, as buyers seek to become the “digital home” of their customers—and their data—across lifecycles and use cases.

A recent high-profile example is Adobe’s transformation into a vertically integrated marketing platform, capped by its acquisition of Marketo for nearly \$5B. In smaller markets,

this is exemplified by platforms like the “Brands” family—Property, Therapy and Ministry Brands, all doing significant consolidation backed by blue chip private equity firms.

At Corum, we saw Platform Effects drive deals, both by PE-backed companies—like Certify acquiring Captio for its expense-management platform and Erwin buying Analytix DS for its data management platform—and by strategic buyers, with Agilent acquiring Genohm to extend its “digital lab” platform for genomics.



**MARC O'BRIEN**  
VICE PRESIDENT



## DATA SCIENCE MONETIZATION

Increased concerns around consumer privacy have changed the landscape, but firms able to navigate those issues while still implementing data science proactively remain in high demand.

We’ve discussed how this trend—creating and enhancing monetization opportunities rather than simply reducing costs and improving efficiency—first emerged in the gaming sector, where Asian firms were the pioneers, optimizing free-to-play models by monitoring player behavior.

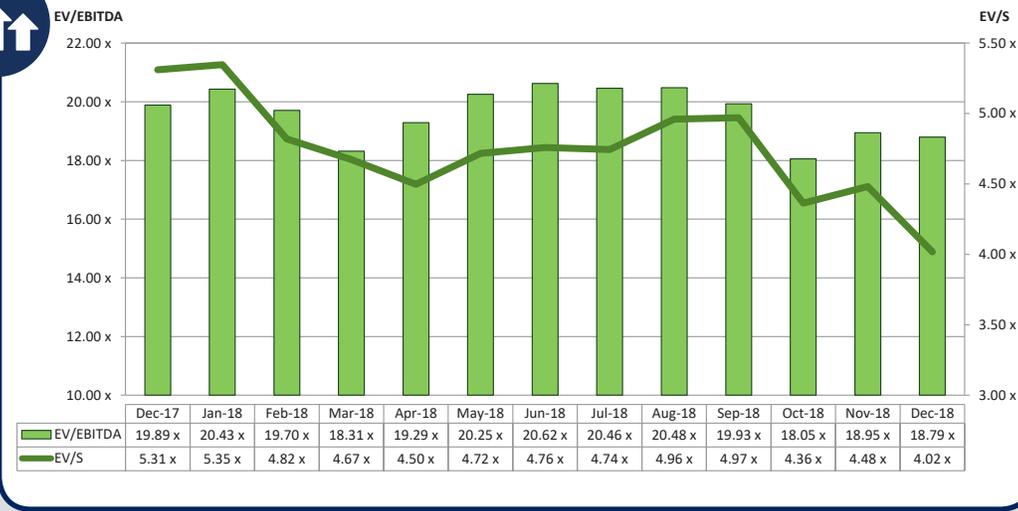
But it’s not just gaming. Gurobi Optimization, acquired by Thompson Street Capital, provides complex data analysis tools for pricing optimization for the enterprise generally, but narrow sectors have also been fertile ground.

In agtech, fertilizer giant Nutrien paid \$63M for weather analytics firm Agrible, to help farmers maximize crop production. In pharma, supply-chain analytics firm IntegriChain bolted on pricing software maker MCT to turn data into actionable government pricing insights for drug manufacturers. And in entertainment, Warner Music acquired Sodatone, using streaming, social & live performance data to find the “superstars of tomorrow.”

Companies that provide data science monetization tools to customers, or that monetize their own data well, continue to be in high demand.



**JIM PERKINS**  
EXECUTIVE VP



Energy & Environment	
EV/S	1.98 x
EV/EBITDA	11.77 x

Itron, Inc. / Schlumberger Ltd.

Real Estate	
EV/S	4.02 x
EV/EBITDA	19.93 x

CoreLogic / Zillow

Automotive	
EV/S	3.87 x
EV/EBITDA	19.09 x

CDK Global / BitAuto

A/E/C	
EV/S	7.75 x
EV/EBITDA	26.42 x

Autodesk / Synopsys

Government	
EV/S	1.78 x
EV/EBITDA	12.09 x

Raytheon / Tyler Tech.

Healthcare	
EV/S	3.24 x
EV/EBITDA	26.44 x

Cerner / Allscripts

Financial Services	
EV/S	5.85 x
EV/EBITDA	18.93 x

Broadridge / Fiserv

Vertical Other	
EV/S	2.85 x
EV/EBITDA	13.58 x

Amadeus / Sabre

Valuations in the Vertical sector were on a rollercoaster last year, with sales multiples ending 25% lower than the beginning of the year. Financial Services and A/E/C were the value leaders, maintaining gains while other sectors dipped with the greater market.

The Blue Collar Software trend, encompassing the digitization of traditionally underserved industries like construction, energy, and agriculture, drove multiple acquisitions last year.

In the A/E/C vertical, Trimble acquired Corum client Stabiplan, then construction management firm e-Builder for \$485M and over 9x revenue, while Fortive spent \$775M for pricing data and procurement software maker Gordian Group.



In another Corum deal, ExakTime, which specializes in workforce management solutions for construction and field services, was purchased by Providence Equity, while Autodesk spent \$275M on bidding management SaaS provider BuildingConnected.

Trends in Blue Collar Software also drove deals in agtech, particularly with non-traditional buyers. For instance, the digital farming unit of Bayer was bought for over \$2B by chemicals manufacturer BASF to enhance their biotech and digital farming activities. Agronomic data management startup Agrible was picked up for \$63M by Canadian fertilizer giant

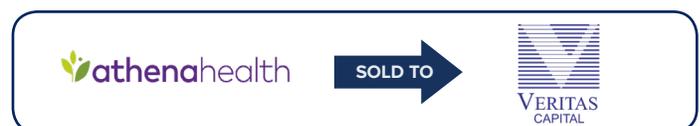
Nutrien in its first-ever software acquisition, and AgSync, which helps farms manage their mobile assets, was acquired by precision agriculture company Raven.

In educational technology, much of the resurgence in M&A activity can be attributed to high demand for successful applications of artificial intelligence, such as Chegg's acquisition of AI-enabled writing feedback provider WriteLab or Oracle's acquisition of AI financial aid management SaaS Vocado.



The Healthcare space saw significant consolidation in the past year, driven in part by saturation in the EHR market and a shift toward patient-centric models, consistent with the Healthtech Continuum trend. For example, Allscripts paid \$100M for former unicorn Practice Fusion and sold Netsmart for \$525M to a private equity consortium led by TA Associates, and post-acute EHR specialist MatrixCare sold for \$750M to respiratory device maker ResMed.

In the biggest healthtech deal of the year, Veritas Capital acquired leading SaaS provider Athenahealth for \$5.7B, combining it with Virence, the value-based care division of GE Healthcare, which Veritas bought for \$1B earlier in 2018.



M&A also continued in the patient engagement and value-based care sectors, both key components of the Healthtech Continuum. In particular, patient messaging companies like HealthGrid, MessageBeam, and WellPass were in demand.



“ If you want to grow your business for the long term, how can you build a compelling ‘economic moat’ for your company? Speed of developing new solutions can be a moat. If it takes too long on your own, maybe partner with a technology and service provider. ”

Henry Hu, IBM

## HEALTHTECH CONTINUUM



One of the most important aspects of these disruptive trends is the interplay between them. The evolution of AI Enablement, Data Science Monetization, and Platform Effects, are critical to M&A activity across the Healthtech Continuum.

Providers are gathering more patient information and data than ever before, using everything from wearables to patient education, and from preventative care to integrated treatment. Now they are deploying systems to leverage that data into a holistic view of the patient, reflecting a shift in emphasis towards satisfactory patient-centered outcomes, versus lowest-cost treatment plans for acute relief.

Traditional inpatient health systems need a unified view

of patients across the continuum of care, long after they’ve left their facilities, and can only accomplish this by integrating with distributed services in post-acute and palliative care settings.

This is also driving demand to empower patients to participate in their own care, with solutions like patient communication and education systems bridging the gap across virtualized care providers.

Healthtech providers driving continuity, consistent access to patient data and a holistic view of patient care will be M&A targets in high demand as providers try to keep pace with the changes and growth in this market.



STEVE JONES  
CORPORATE VP

## BLUE COLLAR SOFTWARE



We are seeing increased demand for companies building tech for workers outside corporate offices. Over 60 percent of workers fall into these “blue-collar” skilled labor industries, working in the field making, selling, moving, inspecting, maintaining and fixing stuff across multibillion-dollar industries such as construction, agriculture, transportation, hospitality, retail and many others.

Technological shifts underlying this trend include ubiquitous smartphones, better wireless connectivity and easily deployed and customizable cloud software, all enabling new workflows to empower a more productive workforce, such as quoting, billing, scheduling, navigation and more.

Recent Corum deals in the space include Tradetec for

timber industry logistics; ExakTime for time capture sold to Providence Equity; and Stabiplan, SaaS for mechanical, electrical and plumbing engineers, sold to Trimble.

Construction and energy have been early movers. Deals from Q4 2018 alone include the sale by GE of ServiceMax field service management to Silver Lake Partners, Thoma Bravo’s acquisition of PEC Safety for contractor management for \$225M and Autodesk’s purchase of PlanGrid for \$875M, the latter both at about 9x revenue.

This year, watch buyers like Trimble, Hexagon, Bentley, Deltek, Roper & Autodesk—not to mention Private Equity.



JEFF BROWN  
SR. VICE PRESIDENT

## SMART LOGISTICS



Customers today are more demanding: businesses can no longer afford to hold large inventories and consumers want their e-commerce shipments yesterday. This can only happen through massive application of new technology – Smart Logistics. A diverse set of global buyers is racing to acquire and apply this technology, competing in an \$8T industry climbing to \$15T by 2023.

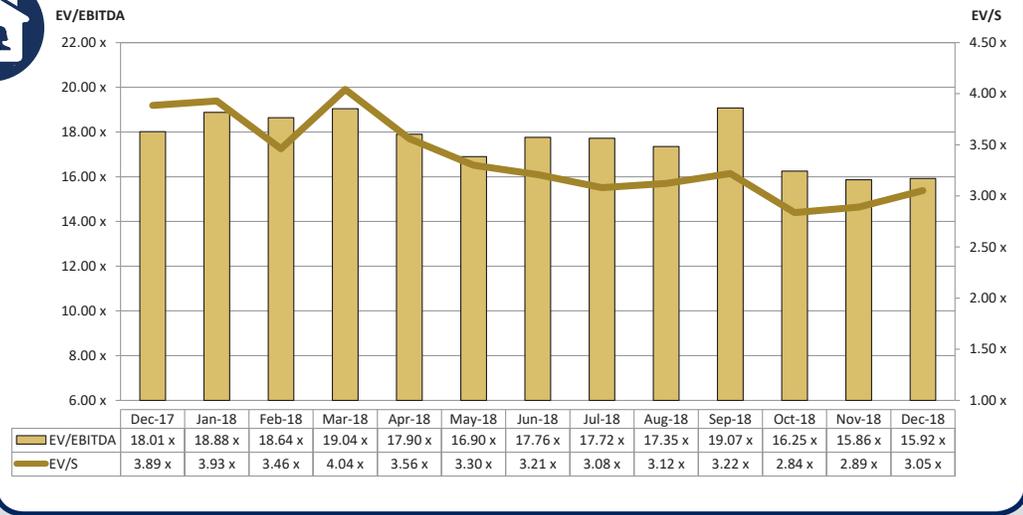
Smart Logistics includes data-driven software platforms that automate the management of shipping and storage, fleet management, supply chain management and more. Key data inputs come increasingly from connected IoT sensors. Given the massive volume of data that logistics represents, there’s significant need for robust analytics and

artificial intelligence.

Disclosed spending on SCM & logistics software acquisitions more than doubled in 2018, with the largest deal being the \$1B take-private of CommerceHub at a 10x revenue multiple. In addition to traditional SCM acquirers, in 2018 companies like JDA Software, Siemens, FedEx, Stamps.com, Truckstop.com and IBM all acquired smart logistics companies. IBM’s acquisition of former Corum client Oniqua is a good representative deal, bringing together smart logistics with IoT and predictive analytics in asset-intensive industries.



JON SCOTT  
MANAGING DIRECTOR  
CORUM GROUP INT’L



Casual Gaming	
EV/S	3.03 x
EV/EBITDA	21.29 x
Nintendo / Zynga	

Core Gaming	
EV/S	3.24 x
EV/EBITDA	11.98 x
Electronic Arts / Activision	

Other	
EV/S	2.48 x
EV/EBITDA	N/A
Netflix / GoPro	

Valuations in the Consumer sector trended downward through the last three quarters of 2018, outside of a momentary spike in September. Non-gaming consumer valuations did increase, but that subsector is producing no EBITDA of significance even among public companies.

As usual, the majority of Consumer deals were in the Gaming subsectors, particularly in Europe, where THQ made three gaming acquisitions: Germany's Koch Media for \$112M, Finnish Bugbear for \$1M, and Sweden's Coffee Stain for \$43M.



There were also a number of other global gaming deals, with Finnish mobile gaming company Small Giant Games acquired for \$560M by Zynga, and US-based mobile and VR developer Seismic Games picked up by Pokémon Go creator Niantic. In India, mobile games developer Nextwave Multimedia was purchased by gaming company Nazara Technologies, and in Hong Kong, games publisher Animoca Brands paid nearly \$5M for PixOwl.

Microsoft was the most active studio acquirer, pocketing seven gaming companies to expand its line of Xbox exclusives, including RPG specialist Obsidian Entertainment.



In the gambling world, Sky Betting was bought for \$4.7B by PokerStars owner Stars Group, claiming it creates the world's largest public online gaming company. Slovenian online gambling platform Oryx Gaming was acquired for \$8.7M by Breaking Data to leverage its Facebook audience assets into the

sports betting market. Swedish online casino Mr. Green was picked up for more than \$308M by UK bookmaker William Hill to strengthen its European presence.



In the entertainment space, digital channel provider RLJ Entertainment was acquired for \$274M by AMC Networks, a subsidiary of Chinese conglomerate Wanda Group, to extend its direct-to-consumer subscription services.

In ridesharing, Korean carpool startup, LUXI, was pocketed for more than \$23M by web giant Kakao, to complement its taxi-hailing service. Russian carpooling platform BeepCar was bought from Mail.ru by rival BlaBlaCar. And Brazil's ride-hailing app 99 was picked up by Chinese car-booking group Didi Chuxing to expand into Latin America, bringing Didi back into direct competition with Uber.

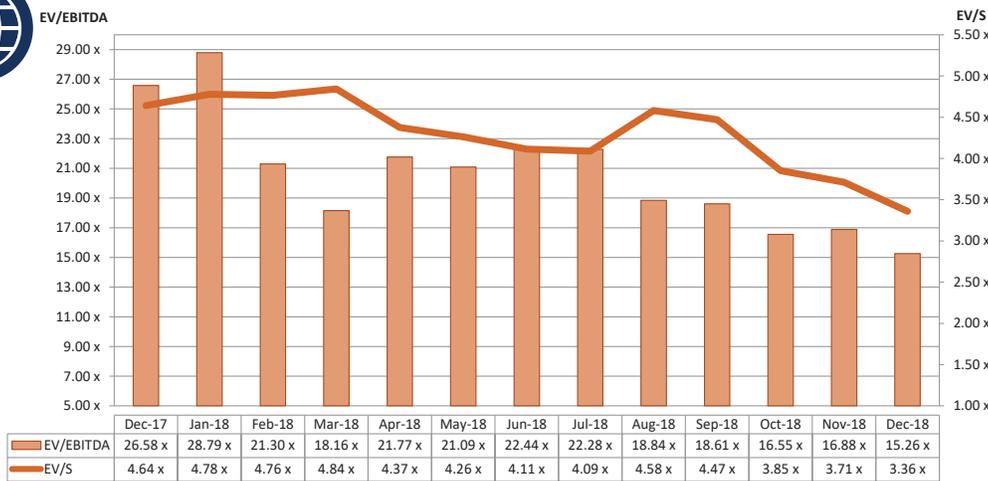


**COMPOSITE COMMERCE**

As online-offline behavior merges and traditional retailers adopt increasingly sophisticated technologies, the overarching megatrend of Composite Commerce is crystallizing globally, with a major impact on tech M&A in multiple sectors.

The big story is Walmart, with 10 tech acquisitions last year, including the largest ecommerce acquisition ever. Walmart is making acquisitions like a tech company, and you should expect more brick-and-mortar retailers to follow, as they are all becoming tech companies—even if they haven't realized it yet!

Major CPG players also entered the market, with P&G, Nestle, Kraft Heinz and Colgate Palmolive doing their



Diversified Internet	
EV/S	3.68 x
EV/EBITDA	15.79 x

Alphabet / Tencent

Ecommerce	
EV/S	0.55 x
EV/EBITDA	12.65 x

eBay / JD.com

Social Network	
EV/S	6.47 x
EV/EBITDA	11.82 x

Facebook / Mixi

Travel & Leisure	
EV/S	5.76 x
EV/EBITDA	19.22 x

Expedia / JustEat

After a jump in January, Internet market multiples steadily dropped in 2018 across nearly all subsectors, hitting their lowest point since 2016 at the end of the year. Still, deal flow continued, driven by the Composite Commerce trend and consistent consolidation in the Travel & Leisure subsector.

This includes food delivery deals, such as Berlin-based Delivery Hero selling its German business to Takeaway.com for more than a billion at almost 9x revenue, shifting its focus to emerging markets.

However, food delivery M&A seems to have been overtaken by meal kit delivery, where first movers like Hello Fresh, acquiring Chef's Plate and Green Chef, competed with grocery stores such as Kroger (spending \$200M for Home Chef) and Carrefour (acquiring France's Qui Toque). Elsewhere in the food tech space, AI startup Wellio was acquired by US food giant Kraft Heinz to help jumpstart its new digital hub.



first tech deals in 2018. Meanwhile, on the style and fashion side, Nordstrom, L'Oréal and Ulta Beauty each did two tech deals.

All consumer-facing businesses are coming to terms with the fact that getting the consumer's eye and wallet has become ferociously competitive and ever-smarter technology has become ever more necessary.

With sophisticated analytics connected to digital signage, websites, mobile devices and more with both product offers and direct payment options, the game for the consumer is now about how long you can stay attached to your money!



PETER PRINCE  
SR. VICE PRESIDENT

Traditional retailers went on a shopping spree, seeking new ways to connect with their audience. L'Oréal acquired South Korean clothing retailer Nanda and augmented reality developer Modiface. Ulta Beauty followed suit picking up two AI-driven companies, while Nordstrom rolled up texting tool developer MessageYes and digital selling platform BevyUp.



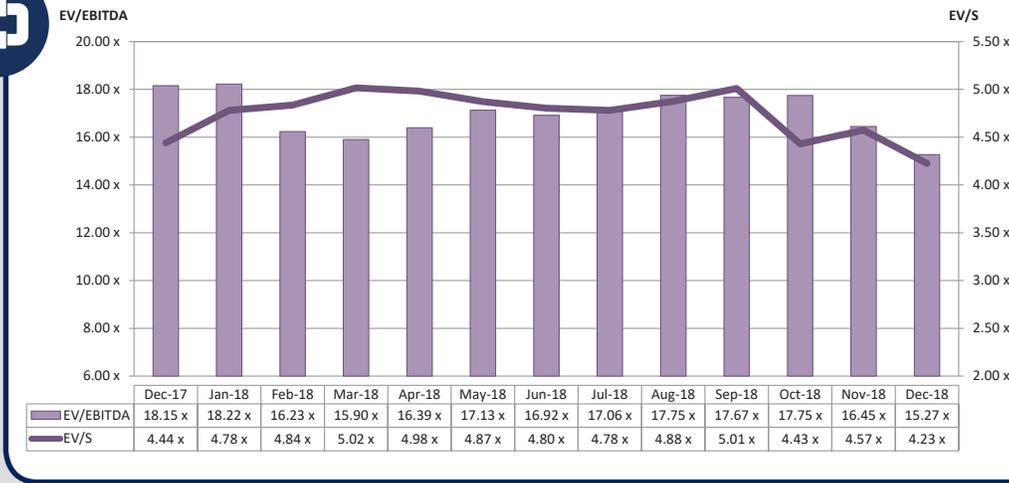
Growth in pet care technology unleashed a number of Composite Commerce deals, including two from Nestle, which acquired the Wamiz pet owner platform directly, and bought Tails.com through Purina.

Ticketing consolidation continued globally with acquisitions of traditional ticketing websites as well as crowd funding and blockchain technology.

Travel booking deal flow also remained steady with M&A happening around the world, and notable deals in the Middle East on both the buy and sell side.

The more traditional US players were active too, as Booking bought two companies, including tour and activities software provider FareHarbor for roughly \$25M. Just a day later, TripAdvisor also entered the local activities space with its acquisition of Iceland's Bokun.





Application Lifecycle	
EV/S	5.84 x
EV/EBITDA	11.17 x

Atlassian / Progress

IT Services Management	
EV/S	8.08 x
EV/EBITDA	32.30 x

Apptio / ServiceNow

Endpoint	
EV/S	3.60 x
EV/EBITDA	15.49 x

Citrix / VMware

Network Management	
EV/S	3.54 x
EV/EBITDA	12.53 x

Cisco / Juniper Networks

Storage & Hosting	
EV/S	2.83 x
EV/EBITDA	42.24 x

NetApp / Box

Security	
EV/S	5.89 x
EV/EBITDA	34.54 x

Palo Alto Networks / FireEye

Other	
EV/S	3.91 x
EV/EBITDA	11.17 x

mongoDB / Pivotal

Infrastructure sector multiples ended 2018 at 12-month lows after a steady year. However, most individual subsectors defied the changing market landscape, with Security particularly resistant to the turbulence.

Late in the year, AI-based cybersecurity firm Cylance was bought for \$1.4B at nearly 11x revenue, by pivoted smartphone pioneer BlackBerry.

Other security deals of note included phishing security training solutions provider Wombat Security, bought for \$225M, 5.6x revenue, by Proofpoint to shore up its threat intelligence suite; Israel's Vaultive, which develops solutions to protect privileged cloud accounts, acquired by CyberArk for \$19M, at 9.5x revenue, to expand its encryption portfolio; and Palo Alto Networks and Mimecast each made 2 acquisitions in the space.



Identity and access management companies were of particular interest among security deals last year with buyers including KPMG, Amdocs and others. Secure access software developer Bomgar was acquired by Francisco Partners, which then bolted on Avecto and BeyondTrust.



Employee identity protection firm InfoArmor was snapped up for \$525M, almost 9x revenue, by Allstate, in the largest

software acquisition by an insurance company in a decade.



Open source solutions drew buyer interest as well. CoreOS, creator of an operating system for containerized environments, was bought for \$250M, over 16x revenue, by Linux powerhouse Red Hat, and IBM announced the acquisition of Red Hat itself for \$34B, in the largest pure software acquisition ever.

The Regtech trend drove deals in business continuity. Continuity Logic, which develops disaster recovery and risk management SaaS, was acquired for \$7.5M by sales enablement platform Fision to enhance their data capture capabilities. Backup and recovery software provider Strategic BCP was bought by Australian risk management giant SAI Global to expand its integrated risk management portfolio. And Sungard sold its enterprise continuity software business, Assurance, to Resurgens Technology Partners.



In incident and application monitoring, Boston-based OpsGenie, provider of a platform to help DevOps and IT manage critical alerts and incidents, was bought for \$295M by Atlassian. Application monitoring SaaS provider Netsil was picked up for \$70M by virtualization specialist Nutanix to answer the growing demand for fixing misbehaving

containerized applications. This also influenced the acquisition of container-based application monitoring SaaS provider CoScale by ALM company New Relic, making its first deal in three years.



“ *The biggest market trend of the last couple of years is that almost all major industries are evolving in a meaningful way, thanks to software and technology. And this isn’t just a digital transformation, but also a business model transformation.* ”

*Rene Yang Stewart, Vista Equity Partners*

## IOT SOFTWARE



From fire hydrants to industrial equipment to home appliances, everything we touch is becoming connected. Innovation is accelerating as chips become miniaturized, voice enablement becomes ubiquitous and AI predicts behaviour based on data from connected devices.

There is no shortage of IoT M&A activity, with over 100 transactions last year. Notably, Cubic Corp. acquired a traffic intersection management company, Gridsmart, for \$89M and Merck acquired Antelliq from a Private Equity firm for 9x revenue—a \$2.4B transaction in the animal tracking sector. These deals provide good indications of the sorts of acquisitions we’ll see moving forward.

The big players have entered the IoT in full force and placed their bets early. The next wave of IoT software deals will be about carefully targeted vertical solutions, leveraging the data from billions of devices.

CEOs in this space will need to keep sprinting to maintain product-market-fit, as companies such as GE have begun exiting the market by divesting their Predix IoT platform, while giants such as Salesforce integrate and market their IoT platform with their CRM juggernaut.



DAVID LEVINE  
SR. VICE PRESIDENT

## REGTECH SYSTEMS



Market uncertainty reminds us that nothing is certain except death and taxes—and along with taxes, regulation, whether national, international, state, province, local or something even more complex. As technology becomes more necessary to navigate this labyrinthine but unavoidable landscape, the value of that technology increases, perhaps especially in uncertain times.

This is exemplified by BC Partners acquiring Oregon-based Navex Global for \$1.2B, a leading provider of governance, risk management and compliance software, itself originally formed in an M&A rollup including Corum client PolicyTech.

RegTech impacts diverse sectors, including legal tech, education, safety, law enforcement and financial regulation.

In just a couple representative examples, Coupa Software, a leader in corporate Business Spend management, extended into risk management by acquiring Hiperos, a division of Opus, and Campus Management acquired Education Partners in the edtech regulation space for financial aid verification and compliance.

We look forward to more activity in this space as other verticals continue to be transformed by the necessity of tighter and more effective compliance and governance solutions that can only be provided by acquiring highly specialized, innovative software companies.



DANIEL BERNSTEIN  
SR. VICE PRESIDENT

## FOCUSED IT SERVICES



Specialization has become the path to premium valuation in the services space. When accompanied by faster development and delivery, integration of core data principles, and platform work integrated with bigger and better analytics, a narrow focus accelerates actionable data, driving best practices and accomplishing client goals.

We are seeing expertise in blockchain and distributed ledger, robotic process automation, full-stack applications like node.js or TypeScript, open source platforms and frameworks, structured and unstructured data, business analytics, scalability and performance—and many other areas. These areas of expertise are seeing roll-ups and diversification

amongst the global services providers, who need to grow existing skillsets to attract and maintain client relationships.

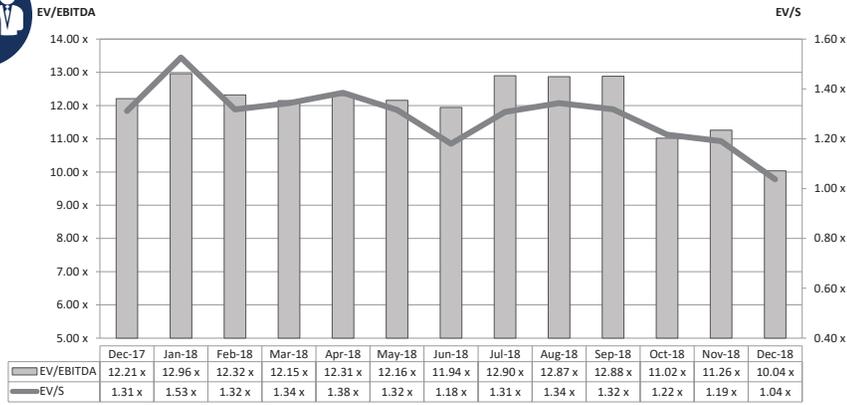
Demand also continues for integrators with focused expertise in complex ecosystems like Salesforce, Microsoft Dynamics, AWS, SAP and Oracle.

Additionally, services firms in key sectors like security, automotive and healthcare, plus firms that specialize in disruptive trends like AI, IoT and logistics, will each be aggressively pursued by an expanding universe of acquirers.



ROB GRIGGS  
SR. VICE PRESIDENT

DEVELOPED MARKETS



*We're going to need to remind ourselves that we are building for the future and avoid the trap of just renovating the past.*

*Peter Coffee, Salesforce*



Last fall, IT Services valuations in developed markets declined sharply after a three-year climb, with emerging markets following suit.

Acquisition leaders continue to be giants like Accenture, which racked up 23 companies across four key areas. Representatives of these are hardware engineering firm MindTribe in product design services; Oracle-based PrimeQ in integration & consulting; 3D-enabled content creator Mackevision in digital marketing; and Kogentix in AI-based analytics.

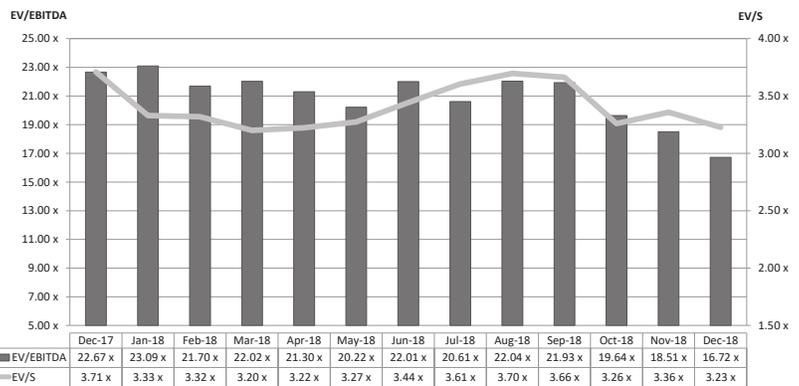
There were a number of acquisitions of custom development companies throughout the year and across the globe. In the UK, Northgate Public Services was acquired for nearly \$645M by Japan's NEC Corporation. NPS then went on to make two more acquisitions. Elsewhere, ERP and CRM developer Continuum was purchased for \$50M by EPAM, its largest deal ever.



Deals for Focused IT Services firms clustered around firms focused on software platforms, tech trends and specific subsectors. The most active platform ecosystems included Microsoft, with Cardinal Solutions acquired for \$79M by Insight Enterprises; Oracle, with Cedar Consulting, specializing in HR transformation services, acquired by Version 1; Salesforce, with CloudinIT out of New Zealand acquired by Deloitte; and AWS, with REAN Cloud purchased for \$120M and 3.4x sales by Hitachi Vantara.

Firms focused on one or more disruptive trends were in

EMERGING MARKETS



particularly high demand, with IoT and AI driving deals worldwide. AI-based systems developer Softweb Solutions was snapped up by embedded solutions distributor Avnet to add AI to its ecosystem and bolster IoT capabilities; IoT technical service provider Trusource Labs was acquired by Singapore's Everise to expand its help desk offerings and product experiences; and Boston-based IoT products designer Essential Design was nabbed by PA Consulting.



Among services firms focused on specific sectors there was significant interest across the automotive landscape, from car sales specialists, like Germany's Genius acquired by NTT Data out of Japan, to telematics and security, with Grupo Detector out of Spain acquired by Italy's Viasat, to autonomous vehicles, with AutonomouStuff acquired by Hexagon.



Executed professionally, done right, it leads to fortune. Unfortunately, most owners' efforts to sell end in failure due to lack of experience and knowledge. For the most important transaction of your life, it's imperative to get the necessary education. Corum is the leading tech M&A educator in the world—we share the experience gained in selling more firms than anyone else over the past 30 years. Our experts offer a number of live events designed to give you the knowledge you need to achieve what we call an Optimal Outcome—maximum price and best structure.

## MERGE BRIEFING

Thinking about selling in the next one to three years? The **Merge Briefing** is a 90-minute executive seminar that provides a current M&A market update (trends, valuations, etc.), as well as a brief overview of the Tech M&A process:

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This is the most attended tech M&A event ever, participants having done over \$2T in transaction value.



**World Financial Symposiums (WFS)** brings together experts, luminaries, newsmakers and global leaders in tech and finance for events across the globe. Corum is a Platinum Sponsor, one of many organizations that support the WFS.

Its primary conference, **Growth and Exit Strategies for Software & IT Companies**, is a full-day symposium held in New York, London and Silicon Valley, with half-day events in cities including Seattle, Atlanta, Sydney and Singapore.

The event educates owners and CEOs of software, IT and related technology companies on the key developments in today's technological and financial landscapes and helps them prepare their strategies for growth and eventual exits.

To register for a conference, visit [www.wfs.com](http://www.wfs.com).

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Berlin	Glasgow	Montreal	San Francisco
Bern	Grenoble	Munich	San Jose
Boise	Helsinki	Nantes	Seattle
Bordeaux	Hong Kong	Nashville	Singapore
Boston	Houston	New Orleans	St. Louis
Brisbane	Indianapolis	New York City	Stockholm
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Calgary	Karlsruhe	Orlando	Sydney
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## MARKET SPOTLIGHT

**Market Spotlights** are monthly webcasts sponsored by World Financial Symposiums, focusing on the opportunities for technology companies in specific sectors, topics and regions. Recent topics have included healthtech, logistics, agtech, regional tech M&A and more.

To learn more, visit [www.wfs.com](http://www.wfs.com).

## TECH M&A MONTHLY WEBCAST

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Join us on the second Thursday of every month at [www.corumgroup.com](http://www.corumgroup.com).

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**DV**  
DoubleVerify  
has acquired  
**leiki**

*Corum acted as exclusive M&A advisor to Leiki*

**CORUM**  
MERGERS & ACQUISITIONS

USA / FINLAND

**LINQ**  
has acquired  
**eSchoolView®**

*Corum acted as exclusive M&A advisor to eSchoolView*

**CORUM**  
MERGERS & ACQUISITIONS

USA / USA

**CORTEX**  
has acquired  
**Powervision Software Inc.**  
*e-volution of documents™*

*Corum acted as exclusive M&A advisor to Powervision Software*

**CORUM**  
MERGERS & ACQUISITIONS

CANADA / CANADA

**certify** ✓  
has acquired  
**Captio**

*Corum acted as exclusive M&A advisor to Captio*

**CORUM**  
MERGERS & ACQUISITIONS

USA / SPAIN

**Agilent Technologies**  
has acquired  
**Genohm**

*Corum acted as exclusive M&A advisor to Genohm*

**CORUM**  
MERGERS & ACQUISITIONS

USA / SWITZERLAND

**PROVIDENCE STRATEGIC GROWTH**  
has acquired  
**ExakTime**

*Corum acted as exclusive M&A advisor to ExakTime*

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USA / USA

**RUBICON**  
technology partners  
has acquired  
**QSR International**

*Corum acted as exclusive M&A advisor to QSR International*

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USA / AUSTRALIA

**erwin**  
the data governance company  
has acquired  
**AnalytiX DS**

*Corum acted as advisor to AnalytiX DS*

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**MAGNITUDE™**  
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*Corum acted as exclusive M&A advisor to Every Angle*

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