

Technology Group

Architecture, Engineering, and Construction
Software Sector Review | Q4 2020



HW AEC Software Introduction

HARRIS WILLIAMS ("HW")

- **25+** years and more than 1,000 closed transactions
- **350+** professionals across eight office globally
- **170+** closed transactions in the last 24 months
- **10** industry groups

FOCUSED ADVISORY SERVICES

- Mergers and Acquisitions (M&A)
- Capital Raises
- Corporate Divestitures

CONSISTENT RECOGNITION FOR QUALITY



HW TECHNOLOGY GROUP

- 35+ professionals across Boston, San Francisco, and London

KEY THEMES

- ✓ SaaS / Cloud
- ✓ Data & Analytics
- ✓ Digital Transformation
- ✓ A.I. / Machine Learning

HORIZONTAL FOCUS AREAS

- Application Software
- Cloud Managed Services and Hosting Solutions
- Compliance Solutions
- CRM and Marketing Automation
- Human Capital Management
- Infrastructure and Security Software
- IT and Tech-Enabled Services
- Marketing, Research, and Insights Services

VERTICAL FOCUS AREAS

- **Architecture, Engineering, and Construction Software**
- Education Technology and Services
- Energy Technology
- Facilities and Real Estate Software
- Financial Technology and Payments
- Government Technology
- Healthcare IT
- Industrial and Supply Chain Technology
- Internet and eCommerce
- Retail Technology

HW ARCHITECTURE, ENGINEERING, AND CONSTRUCTION TEAM

TECHNOLOGY GROUP

Tyler Dewing

tdewing@harriswilliams.com

Office: +1 617-654-2133

Julien Oussadon

joussadon@harriswilliams.com

Office: +44 20 7518 8909

Thierry Monjauze

tmonjauze@harriswilliams.com

Office: +44 20 7518 8901

Ryan Costa

rcosta@harriswilliams.com

Office: (617) 654-2120

Priyanka Naithani

pnaithani@harriswilliams.com

Office: (617) 654-2115

Michael Hogan

mhogan@harriswilliams.com

Office: (804) 915-0104

Tim Webb

twebb@harriswilliams.com

Office: (804) 915-0128

Graham Rives

grives@harriswilliams.com

Office: (804) 887-6055

SELECT HW
AEC
EXPERIENCE



has acquired



made a strategic
investment in



has been acquired by



has been acquired by



has been acquired by



has been acquired by



has been acquired by



Architecture, Engineering, and Construction Software Focus Areas

DESIGN



Solutions to aid in the design and modeling of buildings and infrastructure

Building Information Modeling

Computer-Aided Design

Select Market Participants



Key Trends

Increased mandatory and voluntary adoption of 5D BIM across key project constituents

Integration of building life cycle considerations, notably maintenance, operations, and energy usage, into the design stage, resulting in increased complexity and demand for technology innovation

PLAN



Solutions designed for builders to forecast and manage time, materials, and costs before work begins

Bidding

Cost Estimating

Takeoff

Select Market Participants



Key Trends

Incorporation of real-time material and cost data into the project planning stage to give owners and contractors greater clarity into project costs and timelines

Integration of third-party estimation and take-off tools into larger project management suites to create more seamless transitions between construction phases

BUILD



Solutions that manage the construction process

Project Management

Inventory and Supply Chain

Workforce Management

Select Market Participants



Key Trends

Expansion of project management suites through addition of native tools or integration of third-party point solutions to create comprehensive platforms

Adoption of collaboration tools, resulting in increased connectivity between the field and the office, directly resulting in fewer cost overruns and more on-time project completions

What We're Reading

January 6, 2021

CONSTRUCTION APP USAGE INCREASES DESPITE CONTINUED LACK OF INTEGRATION

Construction Dive

The average number of apps a construction worker uses on the job continues to grow according to a new report from JBKnowledge. Smartphones remain the most utilized mobile device on construction sites as the number of apps that the workers leverage increases. The most used apps include Procore for daily reporting, Bluebeam for viewing BIM files, and ToolWatch for tool tracking. However, a lack of integration and data sharing between those apps continues to be a problem with over half of workers forced to manually integrate data between applications.

Read the full article [here](#).

December 31, 2020

ACCELERATE INNOVATION AS THE PANDEMIC LINGERS, BUT KEEP YOUR FIRM'S ADOPTION RIGOR

Engineering News-Record

Construction and design professionals have an unfair reputation for being resistant to change. In an industry where clients are using the end product for the long term, mistakes are magnified and new technology must be fully validated as an improvement over the tried and true. However, COVID-19 has put an urgency on several issues and the industry needs to think more systematically about what technologies it pursues in order to accelerate efficiencies in a tighter market.

Read the full article [here](#).

December 9, 2020

PANDEMIC HAS ACCELERATED CONTECH ADOPTION

Construction Dive

The construction industry accelerated tech adoption by three years in 2020 over the historical annual rate according to commercial real estate services firm JLL's latest "State of Construction Tech" report. Accelerated adoption was most evident in several high-impact areas of Contech, including digital collaboration, scanning, safety, wearables, BIM, and CAD. JLL estimates that the foundational technologies that will form the basis of technology programs in the post-pandemic years will be BIM, CAD, AI, and digital collaboration.

Read the full article [here](#).

November 17, 2020

CONSTRUCTION TECH STARTUPS ARE POISED TO SHAKE UP A \$1.3-TRILLION INDUSTRY

Tech Crunch

The construction industry has historically had multiple barriers to technology adoption, primarily fragmentation and number of project stakeholders, limited in-house IT resources to manage multiple point solutions, and low institutional risk tolerance given potential liabilities for projects. Coming out of the COVID-19 pandemic, the need for technology solutions to increase labor productivity will be critical. As prior recessions have indicated that construction jobs tend to bounce back slower than construction volume, deploying new technologies will be critical to bridging the productivity gap over the next few years.

Read the full article [here](#).

October 30, 2020

RISE OF THE PLATFORM ERA: THE NEXT CHAPTER IN CONSTRUCTION TECHNOLOGY

McKinsey

Significant opportunities exist for strategic and financial investors across the construction technology ecosystem as the industry shifts toward integrated software platforms and away from multiple point-solutions. The pandemic-driven mandate for change and technological adoption in construction has provided additional urgency to preexisting productivity and data-visibility issues. Key potential paths for investors include focusing on distinctive point solutions or investments that help build or scale the adoption of Contech platforms.

Read the full article [here](#).

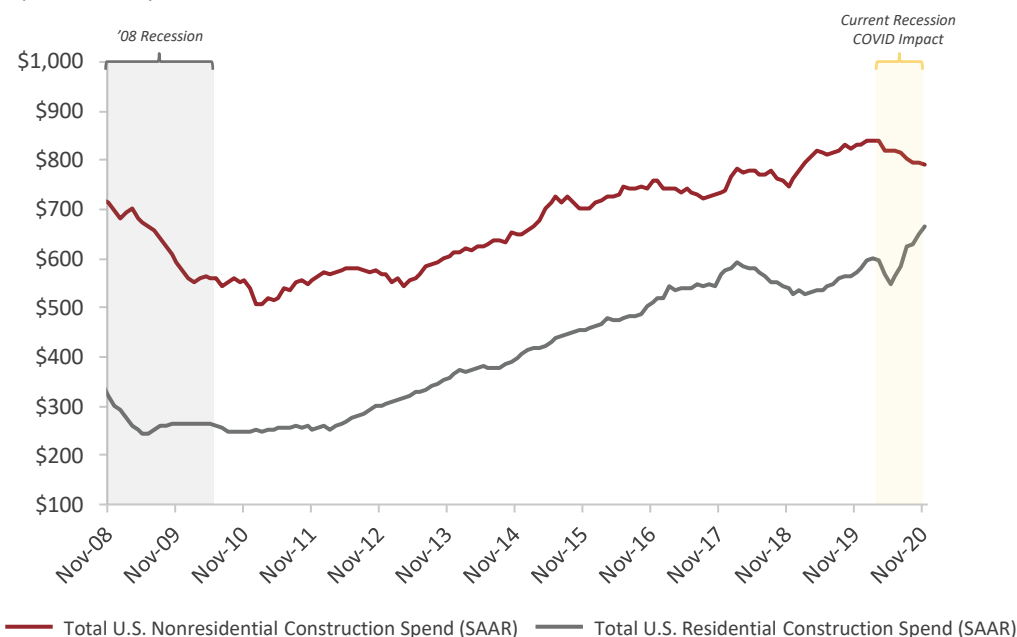
U.S. Construction Year-End Review^{1,2}

OVERALL CONSTRUCTION SPEND

- The value of construction put in place reached an all-time high in November, at a seasonally adjusted annual rate of \$1.46T or 3.8% above November 2019
- Construction spending through Nov. 2020 has been a tale of two industries, with private residential construction rising for six consecutive months, while private commercial construction declined for the fifth straight month
- Residential construction continues to be the largest contributor to construction activity, accounting for ~46% of total construction spend
- For single family homes, starts were up 11% over 2019

TOTAL U.S. NONRESIDENTIAL AND RESIDENTIAL SPEND

(\$ in billions)

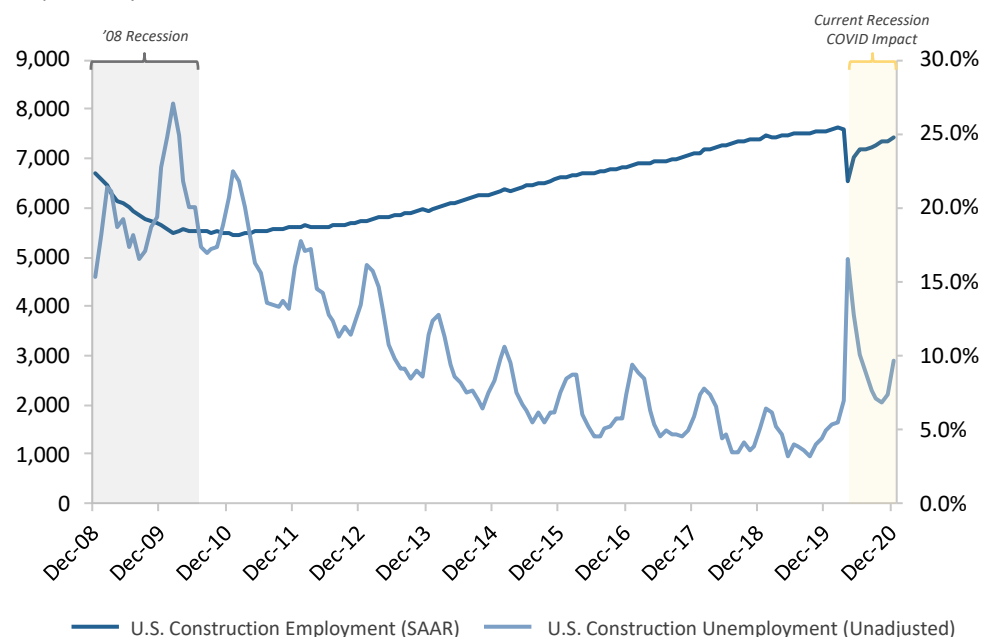


CONSTRUCTION EMPLOYMENT

- Construction employment in 2020 closed down 142k jobs compared to Dec. 2019
- Average weekly hours worked in 2020 were also down ~1% compared to 2019
- Unemployment in the construction industry increased due to the effects of COVID-19 in the early part of the year but has since risen to near pre-COVID levels as workers return to construction sites






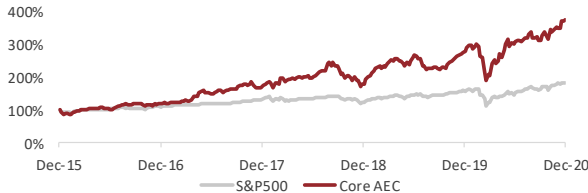





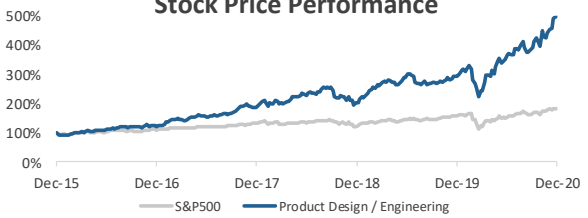


















U.S. CONSTRUCTION EMPLOYMENT

(in 000's)



Public Market Observations³

As of December 31, 2020

Core AEC	<div>Key Public Comps</div> <div><div>AUTODESK</div><div>Bentley</div><div>DASSAULT S4STEMES</div><div>Trimble</div><div>NEMETSCHKE GROUP</div></div>	<div>Stock Price Performance</div> <div></div>	<div>Trading Metrics (Median)</div> <div><table><tr><th>LTM Rev.</th><th>Enterprise Value / LTM EBITDA</th><th>2020E EBITDA</th></tr><tr><td>As of 12/31</td><td>12.5x</td><td>47.4x</td><td>36.4x</td></tr></table></div>	LTM Rev.	Enterprise Value / LTM EBITDA	2020E EBITDA	As of 12/31	12.5x	47.4x	36.4x								
	LTM Rev.	Enterprise Value / LTM EBITDA	2020E EBITDA															
As of 12/31	12.5x	47.4x	36.4x															
<div>Product Design / Engineering</div> <div><div>Key Public Comps</div><div><div>Altair</div><div>ANSYS</div><div>cadence</div><div>ptc</div><div>SYNOPSYS</div></div></div>	<div>Stock Price Performance</div> <div></div>	<div>Trading Metrics (Median)</div> <div><table><tr><th>LTM Rev.</th><th>Enterprise Value / LTM EBITDA</th><th>2020E EBITDA</th></tr><tr><td>As of 12/31</td><td>10.6x</td><td>48.7x</td><td>34.4x</td></tr></table></div>	LTM Rev.	Enterprise Value / LTM EBITDA	2020E EBITDA	As of 12/31	10.6x	48.7x	34.4x									
LTM Rev.	Enterprise Value / LTM EBITDA	2020E EBITDA																
As of 12/31	10.6x	48.7x	34.4x															
CONSTRUCTION - REFERENCE ONLY																		
Construction Engineering, Procurement, and Construction Pub.-Priv. Infrastructure	<div>Key Public Comps</div> <div><div>D-R-HORTON America's Builder</div><div>LENNAR</div><div>NVR</div><div>PulteGroup</div><div>AECOM</div><div>HOCHTIEF</div><div>Jacobs</div><div>John Wood Hot Water for Life</div><div>KBR</div><div>SKANSKA</div><div>SNC-LAVALIN</div><div>WSP</div><div>Atlantia</div><div>BOUYGUES</div><div>EIFFAGE</div><div>ferrovial</div><div>VINCI</div></div>	<div>Stock Price Performance</div> <div></div>	<div>Trading Metrics (Median)</div> <div><table><tr><th>LTM Rev.</th><th>Enterprise Value / LTM EBITDA</th><th>2020E EBITDA</th></tr><tr><td>As of 12/31</td><td>1.3x</td><td>8.7x</td><td>7.9x</td></tr><tr><td>As of 12/31</td><td>0.6x</td><td>12.6x</td><td>11.3x</td></tr><tr><td>As of 12/31</td><td>1.7x</td><td>11.0x</td><td>10.9x</td></tr></table></div>	LTM Rev.	Enterprise Value / LTM EBITDA	2020E EBITDA	As of 12/31	1.3x	8.7x	7.9x	As of 12/31	0.6x	12.6x	11.3x	As of 12/31	1.7x	11.0x	10.9x
	LTM Rev.	Enterprise Value / LTM EBITDA	2020E EBITDA															
	As of 12/31	1.3x	8.7x	7.9x														
As of 12/31	0.6x	12.6x	11.3x															
As of 12/31	1.7x	11.0x	10.9x															

Recent AEC Software Transactions^{3,4,5}

Closed: December 24, 2020



Bain Capital Tech Opportunities and HGGC's growth investment in Buildertrend

- › Buildertrend is a provider of cloud-based software for homebuilders, remodelers, and specialty contractors.
- › The Company's solutions enable residential construction contractors to improve customer communication and visibility by standardizing scheduling and workflows, facilitating payments, and managing purchase and change orders.
- › Bain Capital and HGGC's investment in Buildertrend will accelerate the Company's growth trajectory by supporting strategic acquisitions and expansion into adjacent offerings such as payments, data analytics, and contractor services.

Closed: December 1, 2020



EQT's acquisition of thinkproject

- › thinkproject is a cloud-based provider of construction intelligence solutions for the Architecture, Engineering, Construction market.
- › The Company's solutions help more than 250,000 users across 60 countries improve delivery times, reduce waste and energy consumption, and improve sustainability.
- › Going forward thinkproject will continue to expand its presence across Europe and Asia-Pacific, leveraging EQT's domain knowledge in the AEC market and digital and sustainability expertise

Announced: November 2, 2020



Command Alkon's acquisition of Trimble's Construction Logistics Business

- › Trimble's construction logistics business is a provider of telematics solutions for the concrete delivery market.
- › The Company's solutions enable ready-mix concrete and aggregate delivery managers to track, schedule, and communicate across their fleets.
- › The acquisition of Trimble's construction logistics business will add telematics capabilities and ready-mix / aggregate delivery customer relationships to Command Alkon's leading heavy construction fleet and workforce management solutions.

Closed: October 30, 2020



True Wind Capital's acquisition of AIA Contract Documents

- › AIA Contract Documents is a provider of customizable legal contracts for the AEC industry.
- › The Company has been the industry standard provider of AEC-specific legal documents for over 130 years.
- › Post-acquisition, True Wind will leverage its deep expertise in enterprise software and construction technology to accelerate growth and further product development to support key design and construction stakeholders.

Closed: October 27, 2020



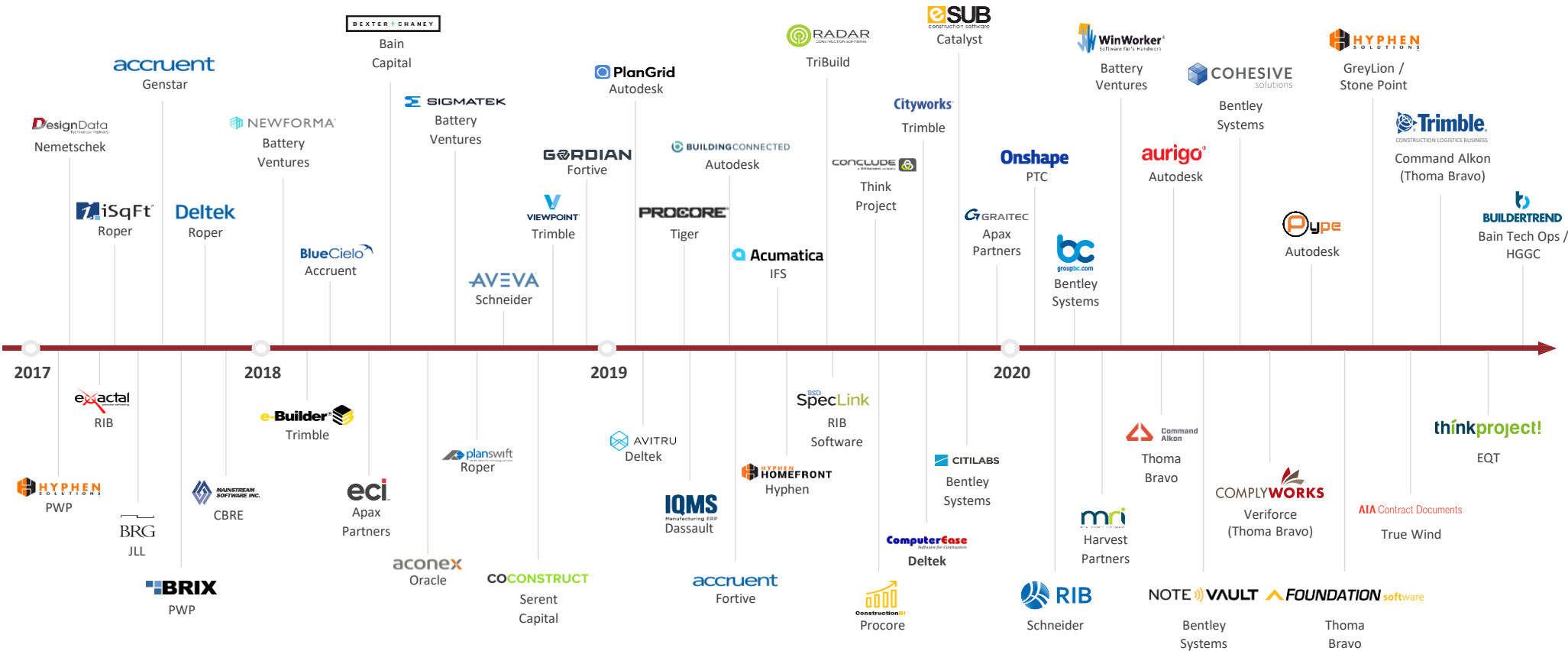
Stone Point Capital and GreyLion Capital's growth investment in Hyphen Solutions

- › Hyphen Solutions is a provider of cloud-based residential construction management software for enterprise homebuilders.
- › The Company's supply chain scheduling, procurement, and collaboration solutions deliver home builders and suppliers greater operational control, enhanced communication, and increased productivity across the value chain.
- › The new investment from Stone Point and continued support from GreyLion will enable Hyphen to accelerate sales across new products, notably Hyphen Wallet, and support expansion into new markets and geographies via organic and inorganic growth initiatives.

Large Market Opportunity Driving Significant M&A Activity

After decades of technological stagnation in the construction industry, rapid adoption of new technologies has driven strong M&A activity.

RECENT AEC TRANSACTIONS

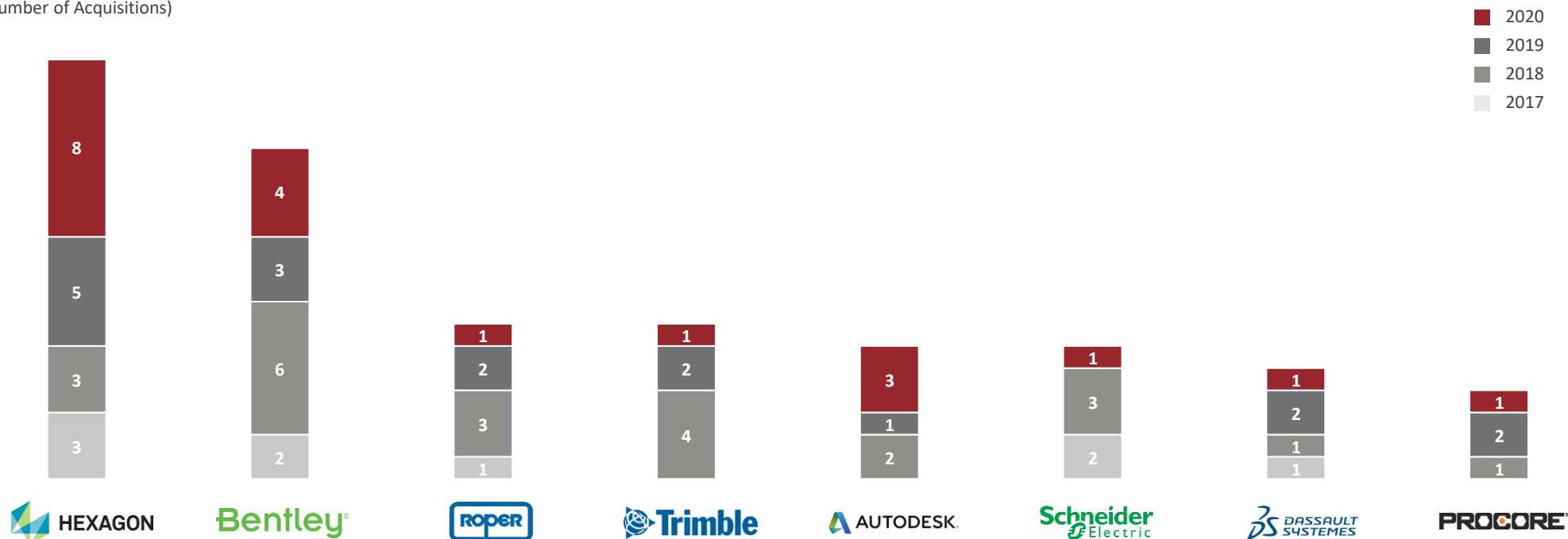


Most Active AEC Software Consolidators^{3,4,5}

AEC software vendors continue to consolidate the highly fragmented industry to establish platforms of scale.

NOTABLE INDUSTRY CONSOLIDATORS DEAL COUNT

(Number of Acquisitions)



SELECT DRIVERS OF CONSOLIDATION

- 01** Desire by strategics to create platforms to manage the entire construction life cycle – design, build, and operate
- 02** Pressure for detailed project information to be available and shared in real time across project stakeholders
- 03** Adoption and integration of field and mobile tools into the jobsite to enhance productivity, safety, and project economics
- 04** Rapidly increasing usage of 5D BIM by key project constituents

Note: Includes architecture, engineering, and construction sector control transactions made by parent or subsidiary.

M&A Transaction Activity^{3,4,5}

SELECT RECENT M&A TRANSACTIONS

Date Closed	Target	Acquirer	Business Description	Enterprise Value	LTM Multiples	
					Revenue	EBITDA
Pending	Assets of Procad USA	OmniDTS	Providers of customer account, maintenance, and PDM/PLM services	NA	NM	NM
Pending	NBS Enterprises	Byggfakta Group (Stirling Square / TA)	Provider of a cloud-based data and specification collaboration platform for contractors and manufacturers	NA	NM	NM
Pending	ECI Software Solutions	Leonard Green & Partners	Provider of a cloud-based industry-specific ERP software and services for small- and medium-sized businesses	NA	NM	NM
Pending	DP Technology	Hexagon	Provider of computer-aided manufacturing (CAM) software for a range of machine tool applications	NA	NM	NM
Pending	Cosential	Unanet (JMI Equity)	Providers of a information management software solutions for architecture, engineering, and construction firms	NA	NM	NM
12/24/2020	Buildertrend Solutions	Bain Capital; HGGC	Provider of cloud-based construction management software for homebuilders and remodelers	NA	NM	NM
12/23/2020	Ruckit	Command Alkon (Thoma Bravo)	Provider of a platform that enables users to collaborate digitally with contractors, material producers, carriers, and drivers	NA	NM	NM
12/21/2020	FieldLens	RedTeam Software (Jetty Cove)	Provider of mobile field management and documentation tool for the construction industry	NA	NM	NM
12/18/2020	OxBlue Corporation	Hexagon	Provider of real-time construction site visibility and monitoring	NA	NM	NM
12/14/2020	CodeCAD	Hexagon	Value-added reseller of Hexagon PPM software to the Canadian market	NA	NM	NM
12/12/2020	Eque2	WestBridge	Provider of a business management software for construction and contracting markets	\$62	NM	NM
12/10/2020	Easybuild	Access (HG / TA)	Provider of a construction ERP platform for contractors and home builders	NA	NM	NM
12/01/2020	think project!	EQT Partners; TA Associates Management	Provider of a SaaS multi-tenant platform created for cross-enterprise collaboration and information management	NA	NM	NM
11/23/2020	Spacemaker	Autodesk	Provider of a planning and data platform for early stage site selection and location planning	\$240	NM	NM
11/19/2020	Libra Systems	Command Alkon (Thoma Bravo)	Provider of an asset and resource management platform for construction material suppliers	NA	NM	NM
11/16/2020	Klarpris	Adelis Equity Partners	Provider of a purchasing and supplier management platform for construction industry	NA	NM	NM
11/12/2020	Sensors & Software	SPX Corporation	Provider of ground-penetrating radar instrumentation and software	NA	NM	NM
11/02/2020	Maestro Technologies	JDM Technology Group	Provider of construction accounting, job costing, and estimating software for contractors	NA	NM	NM
11/02/2020	Scanscot Technology AB	TechniaTranscat	Provider of structural analysis software for civil, structural, and mechanical engineering	NA	NM	NM













M&A Transaction Activity (cont'd)^{3,4,5}

SELECT RECENT M&A TRANSACTIONS

Date Closed	Target	Acquirer	Business Description	Enterprise Value	LTM Multiples	
					Revenue	EBITDA
10/30/2020	Contract Management Division of AIA	True Wind Capital Management	Provider of an online depository and market for customizable legal contracts for the AEC market	\$185	NM	NM
10/30/2020	Trimble (Construction Logistics Business)	Command Alkon (Thoma Bravo)	Provider of centralized fleet tracking and scheduling solutions for delivery managers	NA	NM	NM
10/27/2020	Esticom	Procore Technologies (ICONIQ)	Provider of cloud-based construction takeoff and estimating software	NA	NM	NM
10/27/2020	Bloc In Bloc	Geodesial (Keensight)	Provider of an application that supports building and civil engineering stakeholders in the digital transition	NA	NM	NM
10/27/2020	Hyphen Solutions	Stone Point Capital; GreyLion Capital	Provider of a cloud-based ERP platform for enterprise residential homebuilders	NA	NM	NM
10/14/2020	Epicor Software	Clayton, Dubilier & Rice	Provider of enterprise application software and services for the manufacturing, distribution, retail, and services sectors	\$4,700	NM	NM
10/02/2020	Bolt Software Technology	ECi Software Solutions (Apax)	Provider of residential construction scheduling software	NA	NM	NM
10/01/2020	Open Systems International	Emerson Electric	Provider of management solutions for production, transport, and delivery networks in the transportation, energy, and utility industries	\$1,600	9.6 x	NM
10/01/2020	Sigma Estimates	EG Software	Provider of construction cost estimation software	NA	NM	NM
09/22/2020	SEMS Technologies	CarteGraph Systems (Pamlico)	Provider of water and wastewater utility software for municipalities, public works, and utilities	NA	NM	NM
09/14/2020	MidStates VRS	Trimble	Provider of real-time kinematic quality corrections through cellular connections for agriculture, construction, and survey customers	NA	NM	NM
09/01/2020	Everwin	Harris Computer	Provider of business management software tools for industrial and construction service companies	NA	NM	NM
09/01/2020	ThermoGRID	ECi Software Solutions (Apax)	Provider of HVAC software for small businesses and contractors	NA	NM	NM
08/31/2020	Foundation Software	Thoma Bravo	Provider of construction accounting software and payroll services for small- to mid-sized specialty contractors	NA	NM	NM
08/25/2020	OSIsoft	AVEVA	Provider of enterprise infrastructure systems to manage assets, mitigate risks, and identify new market opportunities for various industries	\$5,020	10.3 x	NM
08/19/2020	Symbrio	Volaris Group	Provider of cloud-based purchasing and invoice management software for construction and installation industries	NA	NM	NM
08/18/2020	ComplyWorks	Veriforce (Thoma Bravo)	Provider of compliance management services for the entire compliance life cycle	NA	NM	NM
08/18/2020	PiSA Sales	BID Equity	Provider of CRM and price quote software solutions for construction and construction supply companies	NA	NM	NM
08/17/2020	Pype	Autodesk	Provider of accounting software solutions for general contractors in the construction industry	NA	NM	NM

Recent AEC Software Private Placements^{3,4,5}

SELECT PRIVATE PLACEMENTS

Date	Company	Round Type	Round Size (\$M)	Raised to Date	Investors	Description
12/11/2020	 Shayp Tackling water loss	Seed	\$1.9	\$1.9	S.R.I.B; Signa Innovations; Amavi Capital BV	Provider of water management software solutions
12/09/2020	 SMARTVID.IO	Series A	\$5.0	\$21.8	Sony Innovation Fund, Converge Venture Partners; Building Ventures	Provider of a cloud-based video management platform to reduce jobsite risk
12/04/2020	 VERSATILE [®]	Series A	\$20.0	\$28.5	Insight Partners	Provider of a crane-based data collection and analytics platform for jobsite performance
11/06/2020	 FALK BUILT [™]	Series A	\$15.2	\$27.1	RET Ventures	Provider of interior design and construction services for the construction industry
11/04/2020	 SOIL CONNECT	Seed	\$3.3	\$3.3	J.G. Petrucci; Great Oaks; CEMEX Ventures	Provider of an application for soil transport and management
11/02/2020	 BulldozAIR	Series A	\$4.0	\$4.9	Pro Btp Finance; Anaxago Capital	Provider of a software solution for field and office collaboration for the construction industry
10/30/2020	 AGORA	Series A	\$7.0	\$7.0	Tishman Speyer; Suffolk Construction Company	Provider of a materials management platform for modern construction companies
10/22/2020	 AIDASH	Series A	\$6.0	\$6.0	Benhamou Global Ventures; National Grid Partners	Provider of utility vegetation management, remote monitoring, and inspection of hazards along power lines software for the construction industry
10/20/2020	 planHub	Venture	\$41.0	\$41.0	Mainsail Partners	Provider of an online marketplace for project bidding
10/14/2020	 cove.tool	Series A	\$5.7	\$6.6	Knoll Ventures; Mucker Capital; Tech Square Labs	Provider of a building design platform to optimize building design for sustainability
10/12/2020	 DOCUMENT CRUNCH	Venture	NA	NA	HOLT Ventures	Provider of artificial intelligence powered document review software
10/02/2020	 AIFOR SITE	Venture	NA	NA	Kiilto Ventures	Provider of data-driven construction management services

Note: Financial information presented above represents reported capital raised only.

AEC Trading Comparables³

VALUATION AND OPERATING METRICS

As of December 31, 2020 (\$ in millions, excl. stock price)

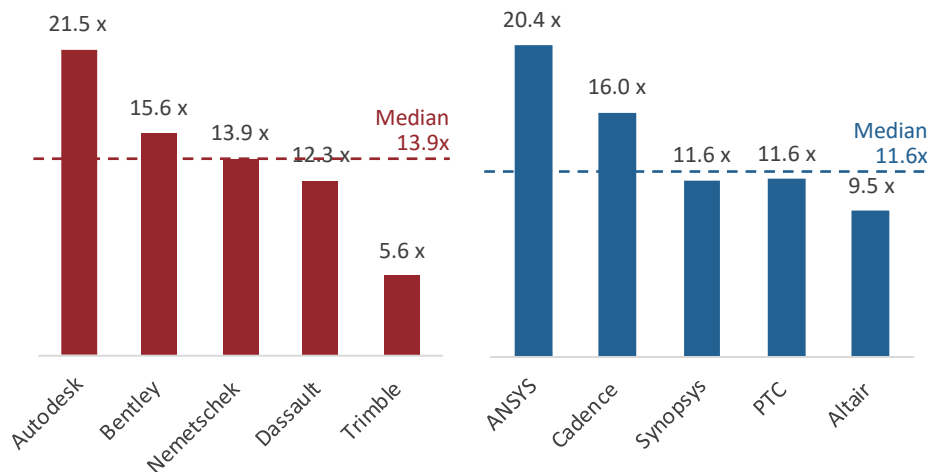
			Stock Performance		LTM				TEV / EBITDA	
			Current	% of	Revenue	% Growth	EBITDA	Margin	LTM	2020P
			Price	LTM High						
CORE AEC										
Autodesk, Inc.	\$67,141	\$67,624	\$305.34	99.4%	\$3,651	17.3%	\$691	18.9%	NM	NM
Dassault Systèmes SE	53,106	55,611	203.24	98.7%	5,186	22.6%	1,174	22.6%	47.4x	31.7x
Trimble Inc.	16,704	18,303	66.77	98.3%	3,142	(2.6%)	646	20.5%	28.4x	24.4x
Bentley Systems, Incorporated	11,002	11,502	40.51	98.4%	785	13.5%	216	27.6%	53.1x	44.3x
Nemetschek SE	8,534	8,669	73.88	81.2%	692	18.0%	155	22.4%	NM	41.1x
Core AEC Median	\$16,704	\$18,303	\$73.88	98.4%	\$3,142	17.3%	\$646	22.4%	47.4x	36.4x
PRODUCT DESIGN / ENGINEERING										
Synopsys, Inc.	\$39,672	\$39,105	\$259.24	99.3%	\$3,685	9.7%	\$815	22.1%	48.0x	31.4x
Cadence Design Systems, Inc.	38,055	37,445	136.43	99.7%	2,523	9.4%	719	28.5%	52.1x	37.0x
ANSYS, Inc.	31,245	30,945	363.80	98.4%	1,544	6.8%	507	32.8%	NM	43.7x
PTC Inc.	13,954	14,871	119.61	98.2%	1,458	16.1%	305	20.9%	48.7x	31.9x
Altair Engineering Inc.	4,285	4,291	58.18	97.0%	460	5.1%	29	6.3%	NM	NM
Product Design / Engineering Median	\$31,245	\$30,945	\$136.43	98.4%	\$1,544	9.4%	\$507	22.1%	48.7x	34.4x
AEC Software Median	\$20,129	\$20,905	\$94.68	90.0%	\$2,022	10.3%	\$572	22.1%	43.1x	29.8x
CONSTRUCTION - FOR REFERENCE ONLY										
Residential										
D.R. Horton, Inc.	\$25,130	\$26,785	\$68.92	84.9%	\$20,311	15.5%	\$3,019	14.9%	8.9x	7.9x
Lennar Corporation	23,840	27,196	76.23	87.8%	\$22,489	1.0%	3,190	14.2%	8.5x	8.0x
NVR, Inc.	15,179	14,233	4,079.86	90.1%	\$7,209	(3.0%)	1,076	14.9%	13.2x	13.0x
PulteGroup, Inc.	11,560	12,595	43.12	86.8%	\$10,861	6.5%	1,750	16.1%	7.2x	6.5x
Median	\$19,509	\$20,509	\$72.58	87.3%	\$15,586	3.8%	\$2,385	14.9%	8.7x	7.9x
Engineering, Procurement, and Construction										
Jacobs Engineering Group Inc.	14,163	15,601	108.96	98.0%	\$13,567	6.5%	1,047	7.7%	14.9x	14.7x
WSP Global Inc.	10,744	11,693	94.64	94.6%	\$6,536	(1.2%)	553	8.5%	21.1x	14.5x
Skanska AB (publ)	10,524	10,058	25.53	87.2%	\$18,801	7.0%	1,237	6.6%	8.1x	7.0x
AECOM	7,505	8,893	49.78	93.6%	\$13,240	(3.0%)	753	5.7%	11.8x	11.7x
HOCHTIEF Aktiengesellschaft	6,635	9,173	97.31	65.3%	\$29,366	6.7%	1,504	5.1%	6.1x	4.5x
KBR, Inc.	4,408	5,054	30.93	96.9%	\$5,753	4.3%	378	6.6%	13.4x	11.0x
SNC-Lavalin Group Inc.	2,994	3,939	17.05	63.2%	\$6,473	(11.1%)	265	4.1%	14.8x	12.5x
John Wood Group PLC	2,858	4,599	4.24	72.7%	\$9,187	(7.1%)	481	5.2%	9.6x	7.1x
Median	\$7,070	\$9,033	\$40.36	90.4%	\$11,213	1.5%	\$653	6.1%	12.6x	11.3x
European Public - Private Partnerships										
VINCI SA	55,938	87,371	99.52	75.8%	\$51,411	(2.5%)	6,876	13.4%	12.7x	12.9x
Ferrovial, S.A.	20,002	25,420	27.65	74.1%	\$7,494	67.8%	253	3.4%	NM	NM
Bouygues SA	15,671	23,481	41.16	81.4%	\$41,515	0.1%	3,607	8.7%	6.5x	6.6x
Atlantia SpA	14,724	66,184	18.00	63.3%	\$11,531	(11.8%)	4,915	42.6%	13.5x	12.9x
Eiffage SA	9,590	24,466	96.69	70.7%	\$19,083	(6.6%)	2,607	13.7%	9.4x	8.9x
Median	\$15,671	\$25,420	\$41.16	74.1%	\$19,083	(2.5%)	\$3,607	13.4%	11.0x	10.9x
Construction Median	\$11,560	\$14,233	\$49.78	84.9%	\$13,240	0.1%	\$1,237	8.5%	10.7x	9.9x

Public Comparables: Revenue Multiples³

CORE AEC AND PRODUCT DESIGN / ENGINEERING METRICS

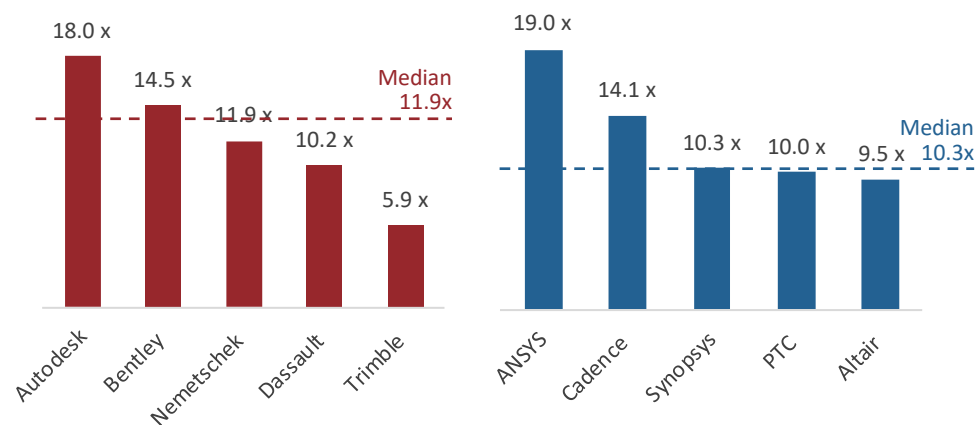
EV / CY2019 REVENUE MULTIPLES

■ Core AEC ■ Product Design / Engineering



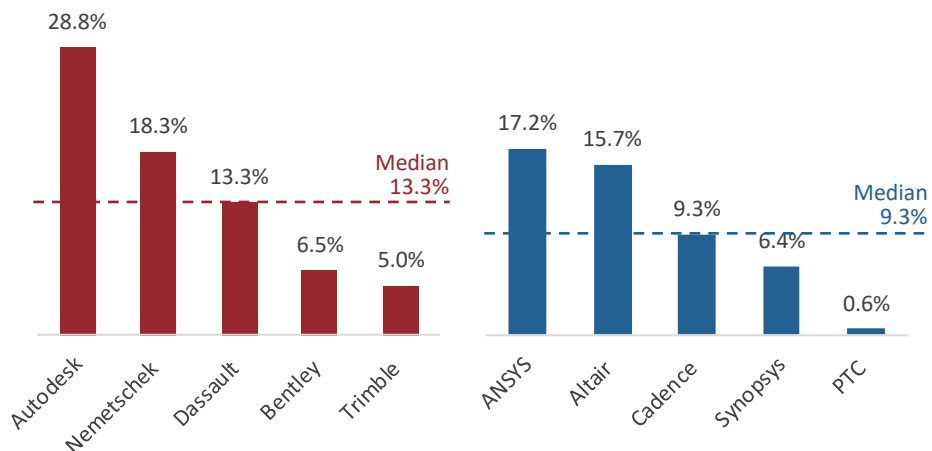
EV / CY2020E REVENUE MULTIPLES

■ Core AEC ■ Product Design / Engineering



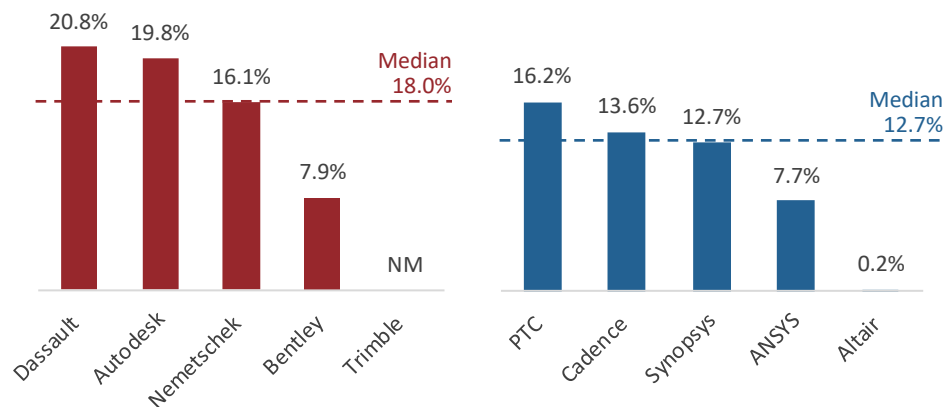
CY2019 REVENUE GROWTH RATES

■ Core AEC ■ Product Design / Engineering



CY2020E REVENUE GROWTH RATES

■ Core AEC ■ Product Design / Engineering

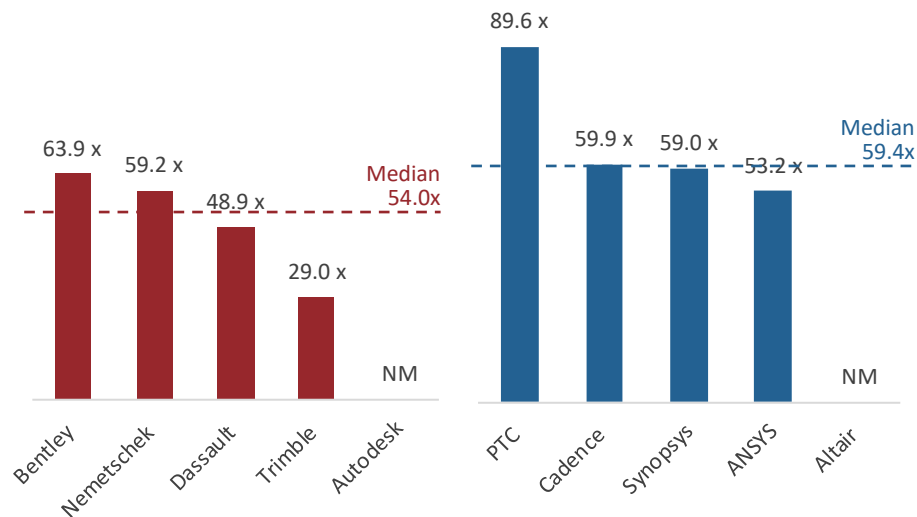


Public Comparables: EBITDA Multiples³

CORE AEC AND PRODUCT DESIGN / ENGINEERING METRICS

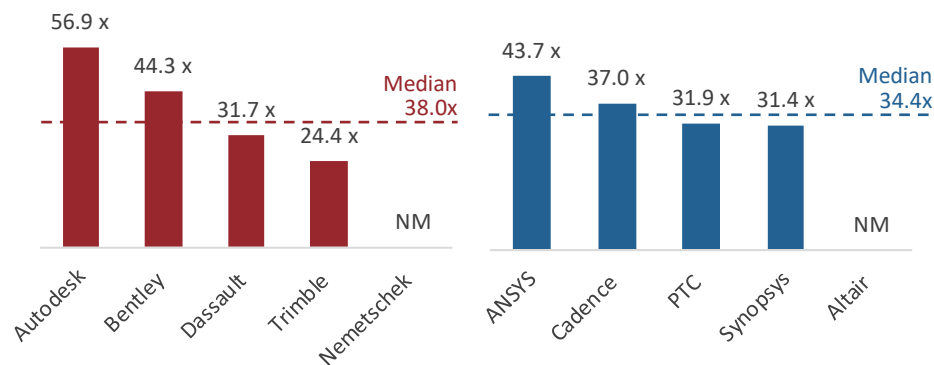
EV / CY2019 EBITDA MULTIPLES

■ Core AEC ■ Product Design / Engineering



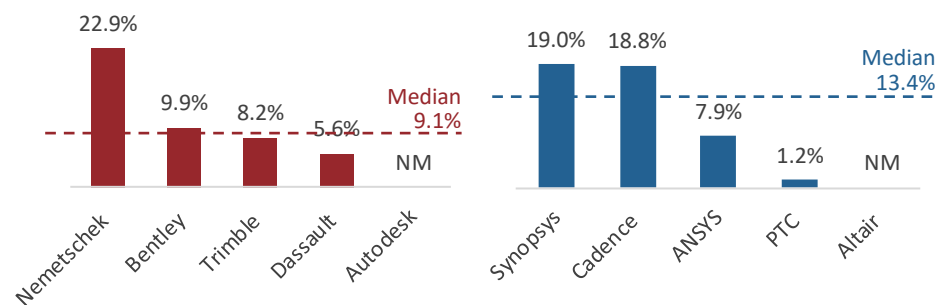
EV / CY2020E EBITDA MULTIPLES

■ Core AEC ■ Product Design / Engineering



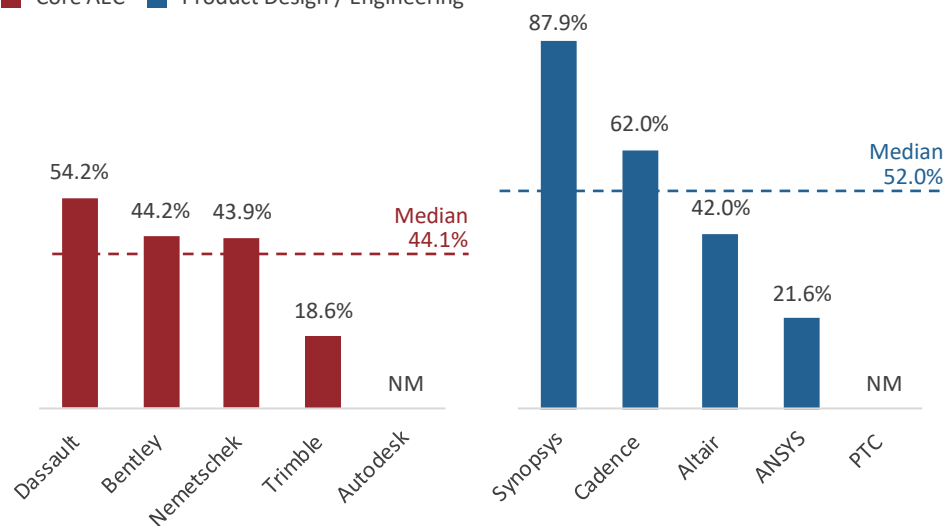
CY2019 EBITDA GROWTH RATES

■ Core AEC ■ Product Design / Engineering



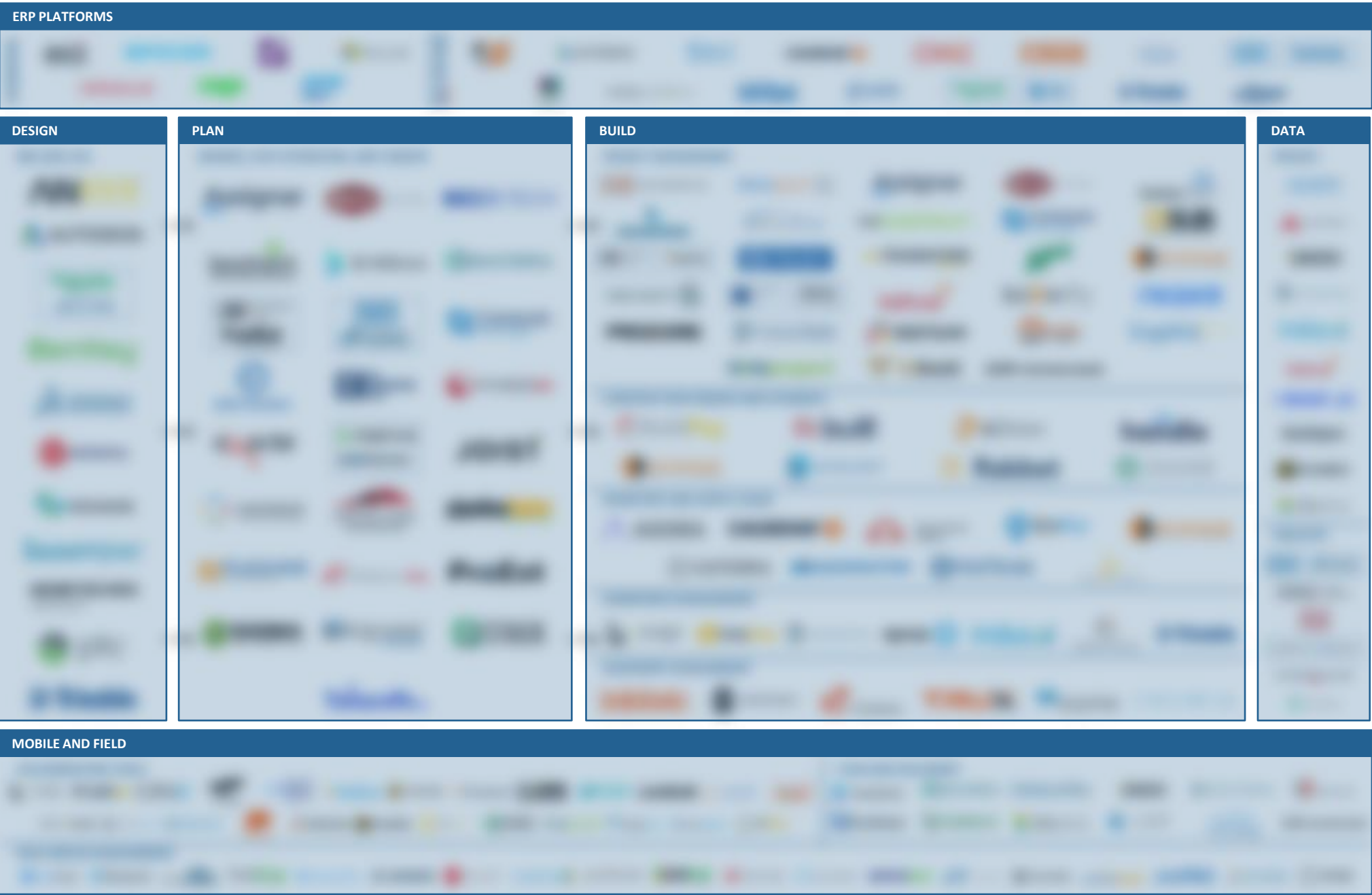
CY2020E EBITDA GROWTH RATES

■ Core AEC ■ Product Design / Engineering



AEC Software Landscape

TO VIEW FULL MARKET MAP PLEASE CONTACT:
HWTMT_AEC/RE@HARRISWILLIAMS.COM



Case Study: ComplyWorks

HW recently advised Veriforce, a portfolio company of Thoma Bravo, on its acquisition of ComplyWorks.



has acquired



TRANSACTION OVERVIEW

ComplyWorks is a premier provider of web-based solutions that cover the entire compliance life cycle from contractor management to workforce management, worksite management, and payment.

ComplyWorks' SaaS platform has global capabilities and local deployment to offer web-based governance, risk management, and compliance (GRC) services, helping employers and suppliers manage the compliance of their suppliers, sub-contractors, workforces, and worksites. Today, ComplyWorks has clients in over 120 countries.

Veriforce is a leader in delivering comprehensive, integrated supply chain risk management solutions that help bring workers home safely and optimize business performance. With the acquisition of ComplyWorks, the combined platform will serve 800 companies in 120 countries and engage with an estimated 50,000 contractors and millions of individuals.

RELEVANT SUB-SECTORS

COMPLIANCE

SAAS

ARCHITECTURE, ENGINEERING,
AND CONSTRUCTION SOFTWARE

HW DEAL CONTACTS

Erik Szyndlar
Managing Director
eszyndlar@harriswilliams.com
415-217-3418

Thierry Monjauze
Managing Director
tmonjauze@harriswilliams.com
+44 20 7518 8901

Priyanka Naithani
Director
pnaithani@harriswilliams.com
617-654-2115

Case Study: ComputerEase

HW recently advised ComputerEase on its sale to Deltek, a subsidiary of Roper Technologies.

ComputerEase

has been acquired by

Deltek

a subsidiary of



TRANSACTION OVERVIEW

ComputerEase is a leading provider of mission-critical construction accounting, project management, and payroll processing solutions that enable contractors to manage and gain real-time visibility into their companies' operations and financial performance – whether in the office or remotely in the field.

ComputerEase's fully integrated, cloud-based solution is purpose-built to meet the unique needs of diverse contractor trades and sizes, with complex and varying union, labor, and equipment requirements. Today, more than 6,000 contractors rely on ComputerEase to streamline their operations and increase profits.

Deltek is a leading global provider of enterprise software and information solutions for project-based businesses. More than 23,000 organizations and millions of users in over 80 countries around the world rely on Deltek for superior levels of project intelligence, management, and collaboration. The company's industry-focused expertise powers project success by helping firms achieve performance that maximizes productivity and revenue.

RELEVANT SUB-SECTORS

ERP / PROJECT MANAGEMENT

SAAS

ARCHITECTURE, ENGINEERING,
AND CONSTRUCTION SOFTWARE

HW DEAL CONTACTS

Tyler Dewing
Managing Director
tdewing@harriswilliams.com
617-654-2133

Priyanka Naithani
Director
pnaithani@harriswilliams.com
617-654-2115

Scott Reinig
Director
sreinig@harriswilliams.com
617-654-2113

Ryan Costa
Vice President
rcosta@harriswilliams.com
Office: (617) 654-2120

Case Study: IQMS Software

HW advised IQMS, a portfolio company of Technology Crossover Ventures and Banneker Partners, on its sale to Dassault Systemes.

IQMS

a portfolio company of

TCV

AND



has been acquired by



TRANSACTION OVERVIEW

IQMS is a leading provider of fully integrated software solutions that manage, optimize, and automate production operations and back-office workflows for manufacturers across diverse end markets, globally.

Through its comprehensive manufacturing execution system (MES) and enterprise resource planning (ERP) software platform, IQMS' solutions provide manufacturers with a comprehensive end-to-end suite that provides real-time visibility and actionable insights throughout the manufacturing life cycle.

IQMS serves over 1,000 long-standing customers across diverse end markets, including automotive, medical, packaging, consumer goods, electronics, and aerospace and defense in a growing \$35 billion global market.

Dassault Systemes will help IQMS expand its customer base by leveraging the presence in the mid-market space established through Dassault's SOLIDWORKS applications, which are delivered and supported by the company's Professional Solutions global partner channel.

RELEVANT SUB-SECTORS

MANUFACTURING & OPERATIONS

MANUFACTURING ERP SOFTWARE

INDUSTRIAL IOT

HW DEAL CONTACTS

Tyler Dewing
Managing Director
tdewing@harriswilliams.com
617-654-2133

Thierry Monjauze
Managing Director
tmonjauze@harriswilliams.com
+44 20 7518 8901

Erik Szyndlar
Managing Director
eszyndlar@harriswilliams.com
415-217-3418

Andy Leed
Director
aleed@harriswilliams.com
415-217-3420

Harris Williams Capabilities and Locations

Harris Williams has a broad range of industry expertise, which creates powerful opportunities. Our clients benefit from our deep-sector experience, integrated industry intelligence, and collaboration across the firm, and our commitment to learning what makes them unique. For more information, visit our website at www.harriswilliams.com/industries.



Harris Williams Office Locations

United States

Boston

One International Place
Suite 2620
Boston, Massachusetts 02110
Phone: +1 (617) 482-7501

Cleveland

1900 East 9th Street
20th Floor
Cleveland, Ohio 44114
Phone: +1 (216) 689-2400

Minneapolis

222 South 9th Street
Suite 3350
Minneapolis, Minnesota 55402
Phone: +1 (612) 359-2700

Richmond (Headquarters)

1001 Haxall Point
9th Floor
Richmond, Virginia 23219
Phone: +1 (804) 648-0072

San Francisco

575 Market Street
31st Floor
San Francisco, California 94105
Phone: +1 (415) 288-4260

Washington, D.C.

800 17th St. NW
2nd Floor
Washington, D.C. 20006
Phone: +1 (202) 207-2300

Europe

Frankfurt

Bockenheimer Landstrasse 33-35
60325 Frankfurt
Germany
Phone: +49 069 3650638 00

London

25 Savile Row
4th Floor
London W1S 2ER, England
Phone: +44 (0) 20 7518 8900

Sources & Disclosures

Sources

1. FRED
2. Associated General Contractors of America (ACG)
3. CapIQ
4. PitchBook
5. MergerMarket
6. NAHB/Wells Fargo Housing Market Index (HMI)

Disclosures

Investment banking services are provided by Harris Williams LLC (“Harris Williams”). Harris Williams is a registered broker-dealer and member of FINRA and SIPC. Harris Williams & Co. Ltd is a private limited company incorporated under English law with its registered office at 8th Floor, 20 Farringdon Street, London EC4A 4AB, UK, registered with the Registrar of Companies for England and Wales, registration number 07078852. Harris Williams & Co. Ltd is authorized and regulated by the Financial Conduct Authority. Harris Williams & Co. Corporate Finance Advisors GmbH is registered in the commercial register of the local court of Frankfurt am Main, Germany, under HRB 107540. The registered address is Bockenheimer Landstrasse 33-35, 60325 Frankfurt am Main, Germany (email address: hwgermany@harriswilliams.com). Geschäftsführers/Directors: Jeffery H. Perkins, Paul Poggi, VAT No. DE321666994. Harris Williams is a trade name under which Harris Williams LLC, Harris Williams & Co. Ltd and Harris Williams & Co. Corporate Finance Advisors GmbH conduct business.

The information and views contained in this content have been prepared in part by Harris Williams. Harris Williams is a subsidiary of PNC Bank, National Association (“PNC”), and this content also contains information and views provided by PNC. This content does not purport to be comprehensive or to contain all the information that a recipient may need in order to evaluate any investment or potential transaction. This content is not a research report, as such term is defined by applicable law and regulations and is provided for informational purposes only. Any and all information, including estimates, projections and other forward-looking statements, presented in this document may involve various assumptions and significant elements of subjective judgment and analysis that may or may not be correct. Harris Williams has not independently verified, and neither Harris Williams nor any other person will independently verify, any of the information, estimates, projections or forward-looking statements contained herein or the assumptions on which they are based. The information contained in this document is made as of the date hereof unless stated otherwise. Harris Williams does not expect to update or otherwise revise this document nor provide any additional information, nor correct any inaccuracies herein which may become apparent.

This content is intended for institutional use only and should not be relied upon by retail investors or members of the general public. The information contained herein is believed by Harris Williams to be reliable but Harris Williams makes no representation or warranty as to the accuracy or completeness of such information, and information contained herein that is based on material prepared by others may involve significant elements of subjective judgment and analysis which may or may not be correct. Opinions, estimates and projections contained herein constitute Harris Williams’ judgment and are subject to change without notice.

This content is not to be construed as investment advice an offer to buy or sell or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular transaction, nor shall this content form the basis of any contract. It does not constitute and should not be construed as an endorsement or recommendation of any entities’ products or services.

No part of this material may be copied or duplicated in any form or by any means, or redistributed, without Harris Williams’ prior written consent.