

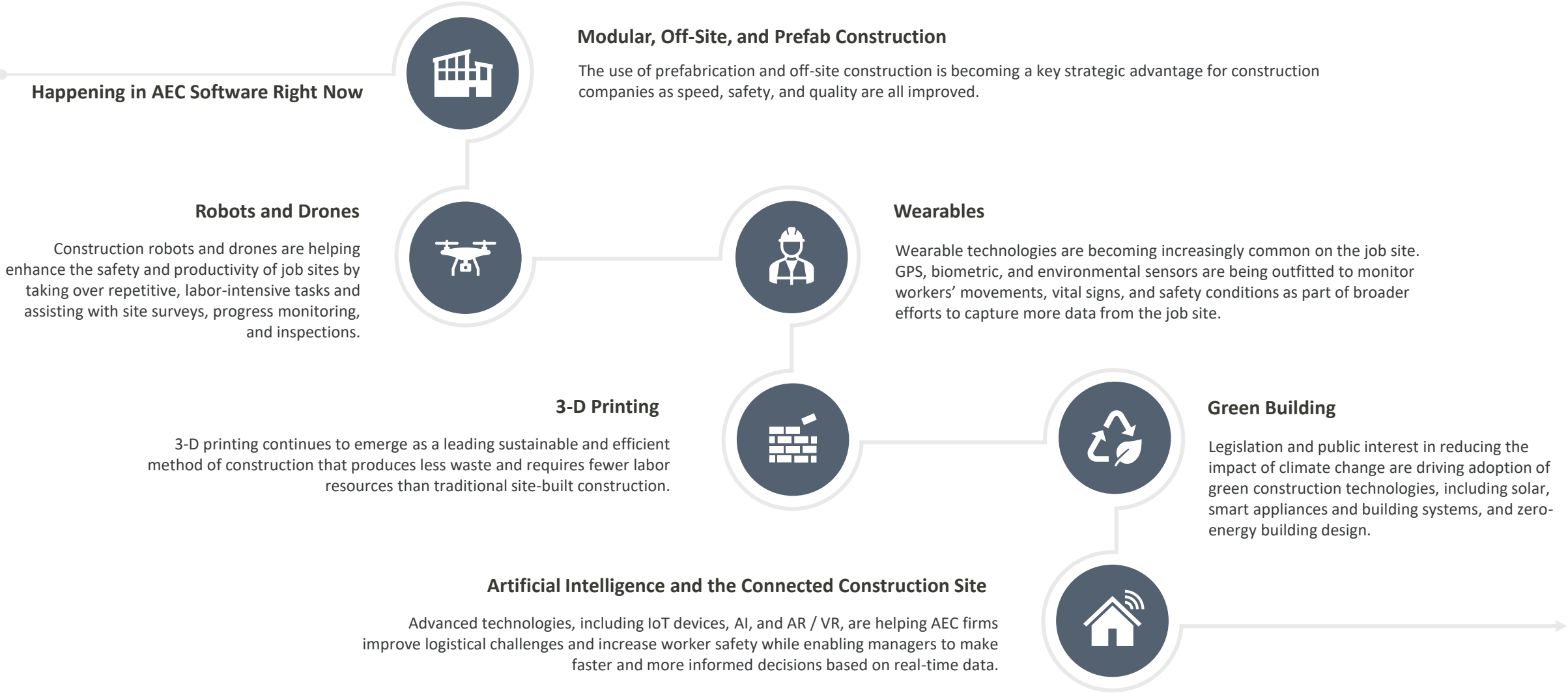


Architecture, Engineering, and Construction Software Sector Update

Harris Williams | Q3 2022

Key Trends in the AEC Software Market

The construction industry continues to embrace new technology and digital transformation efforts to improve safety, efficiency, and profitability.



Perspectives on AEC Software Landscape



What We're Reading

Why Construction Stocks Are Like Honey for the Bear Market

Construction Dive – June 15, 2022

As investors begin to fear a downturn in the public markets, construction stocks are beginning to gain attention as spaces of refuge in a tumultuous market. Due to significant backlogs resulting from shutdowns related to the COVID-19 pandemic, as well as the added tailwind of significant infrastructure spending, construction companies have avoided significant losses and are set to succeed against the broader market.

Read the full article [here](#).

Digital Technology Is Construction's Route Out of Crisis

Engineering News-Record – June 2, 2022

The construction industry is constantly contending with macroeconomic headwinds such as inflation that put downward pressure on margins for contractors. Many in the industry see comprehensive construction technology, including sprawling management platforms which track each aspect of the building life cycle, as critical to achieving operational efficiencies that keep projects economically viable.

Read the full article [here](#).

The IIJA Sets Aside \$100M for Contech. When Will It Arrive?

Construction Dive – May 18, 2022

With the introduction of the new \$1.2 trillion Infrastructure Investment and Jobs Act (IIJA), the construction industry is bracing for an influx of up to \$100 million dedicated to construction technology. The IIJA's Contech funding is geared toward improving federal, state, and local cost savings, safety improvements, and more through investment in "advanced digital construction management systems" of the future.

Read the full article [here](#).

Investors Discuss How Labor Shortage Is Shaking up the Construction Tech Stack

Tech Crunch – May 18, 2022

Coming out of the shifts in the labor market caused by the COVID-19 pandemic, construction managers are shifting their approach toward hiring for job sites based on the innovative new technologies available to them on the market. With fewer workers permitted onto sites, managers are leveraging the visibility that construction technology provides to maintain efficiency and transparency throughout the life cycle of their projects.

Read the full article [here](#).

Recent Harris Williams Publications

- **Industrial Technology Smart City & Mobile Tech | Q1 2022**



[Link to Read](#)

- **Sector Update: Real Estate & Property Tech | Q3 2022**



[Link to Read](#)

- **Sector Update: Engineering & Construction | Q3 2022**



[Link to Read](#)

Select Recent AEC Software Transactions

Service Titan's pending acquisition of Schedule Engine



Announced: June 28, 2022

- Provider of an online appointment scheduling and visit management platform for home services.
- The acquisition of Schedule Engine will bolster ServiceTitan's existing suite of technology solutions through the addition of scheduling capabilities that allow customers to offer online scheduling solutions directly to consumers.

Bregal Sagemount's acquisition of Solo



Closed: April 30, 2022

- Provider of sales conversion, quoting, and back-office software for roofing and solar installers.
- The investment from Bregal Sagemount will provide Solo with capital to invest in growing its technology platform as well as find growth both domestically and internationally.

Foundation Software's acquisition of Harness Software



Closed: June 6, 2022

- Developer of safety management software for specialty contractors to manage, track, and administer their jobsite safety programs.
- This acquisition will further expand Foundation's construction management platform, offering their customers a dedicated safety solution that is integrated into the existing software platform.

Stanley Black & Decker's acquisition of M-Suite



Closed: May 13, 2022

- Provider of cloud-based construction management software to connect building information modeling (BIM), fabrication, and field construction teams in the construction industry.
- This investment will allow Stanley Black & Decker to expand their current partnership with M-Suite and enhance their current technology solutions.

Sogelink's acquisition of Locatiqs



Closed: April 26, 2022

- Provider of geographic information system and field service management software and data solutions for infrastructure construction projects.
- The combination of Sogelink and LOCATIQS will create a leader in the European market for construction and geotechnical software for engineers and builders.

Bentley Systems' acquisition of Adina

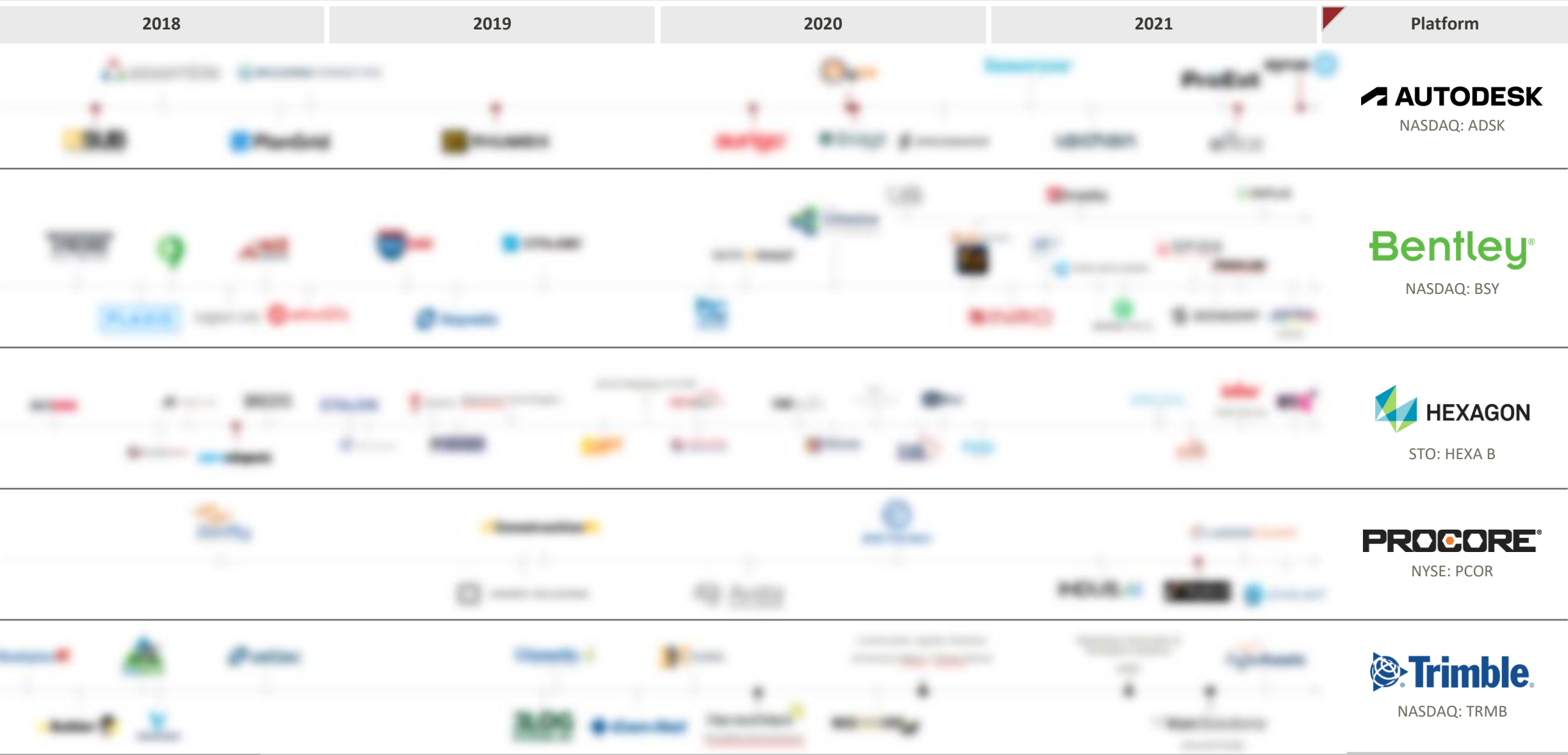


Closed: April 7, 2022

- Provider of finite element analysis software for a diverse range of engineering fields.
- This investment will enhance Bentley's current CAD offerings, bringing users a broad range of simulation capabilities for raw materials and modern structural designs.

Select Public Company AEC Software Acquisition Activity

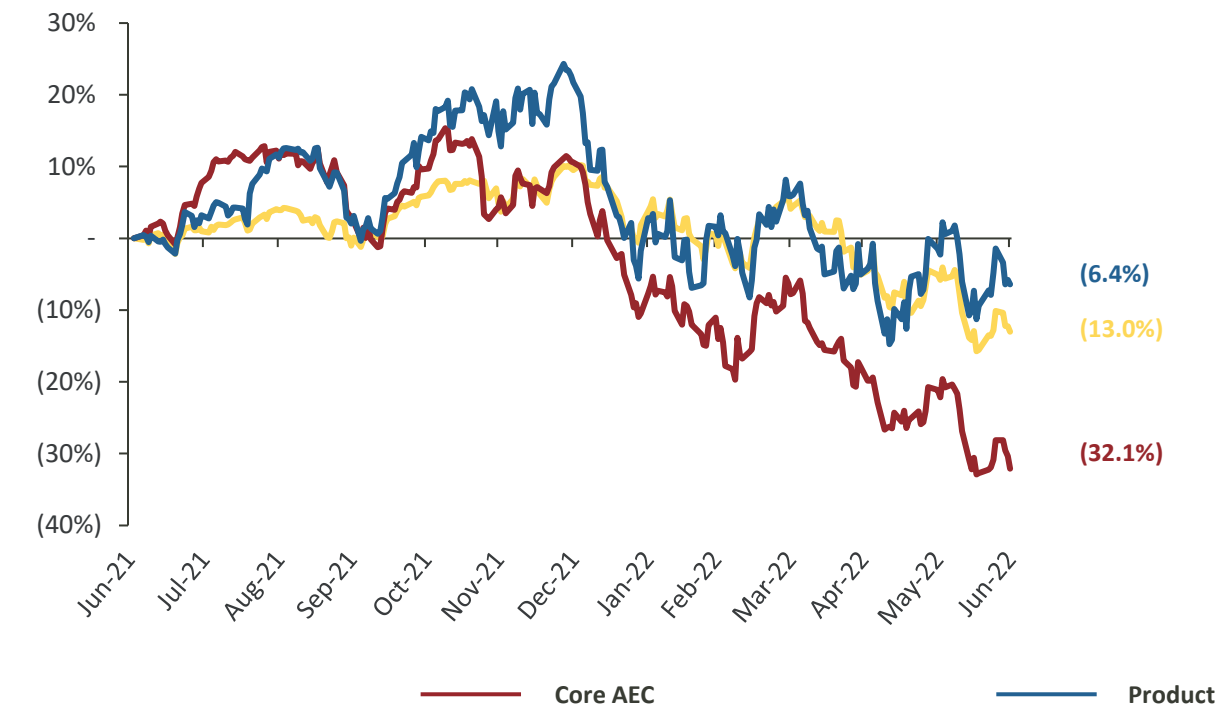
To view full consolidators list, please contact:
hwtech_AEC/RE@harriswilliams.com



AEC Sector Public Company Trended Stock Performance

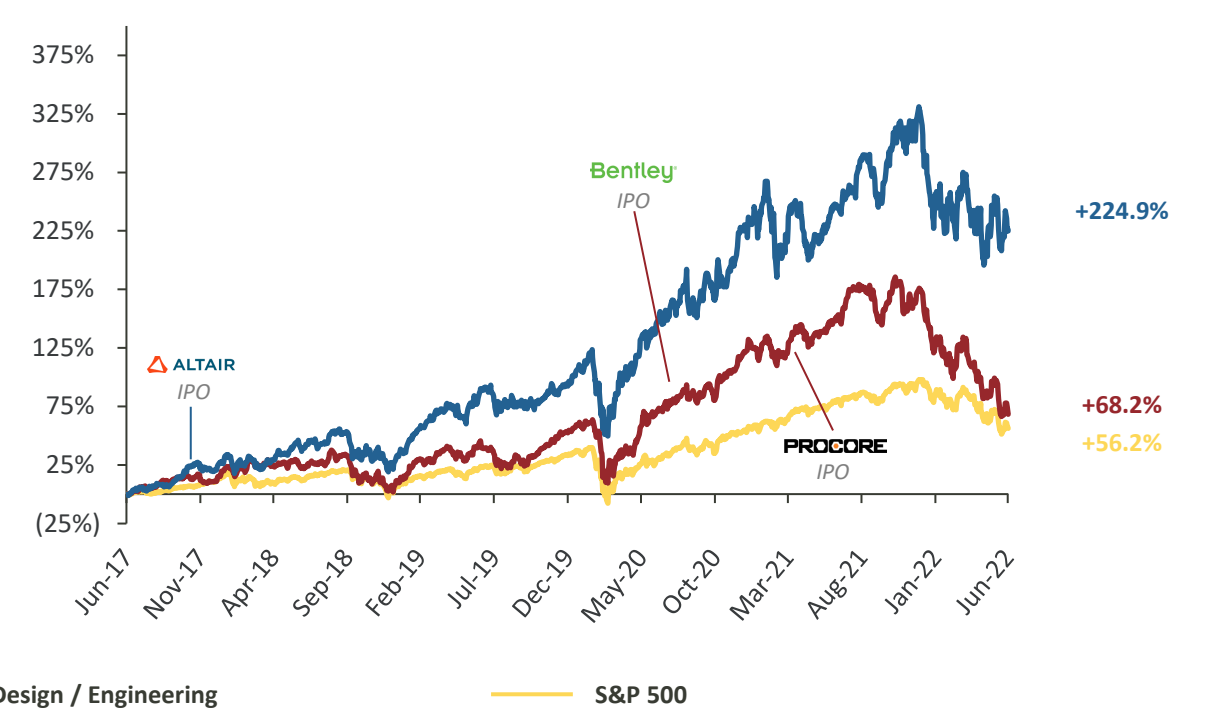
Public Company Stock Performance – Last 12 Months

Indexed stock price performance for the period July 2021 – June 2022



Public Company Stock Performance – 5 Years

Indexed stock price performance for the period July 2017 – June 2022



Core AEC

AUTODESK

NEMETSCHEK GROUP

Bentley

PROCORE

DASSAULT SYSTEMES

Schneider Electric

HEXAGON

Trimble

Product Engineering / Design

ALTAIR

ptc

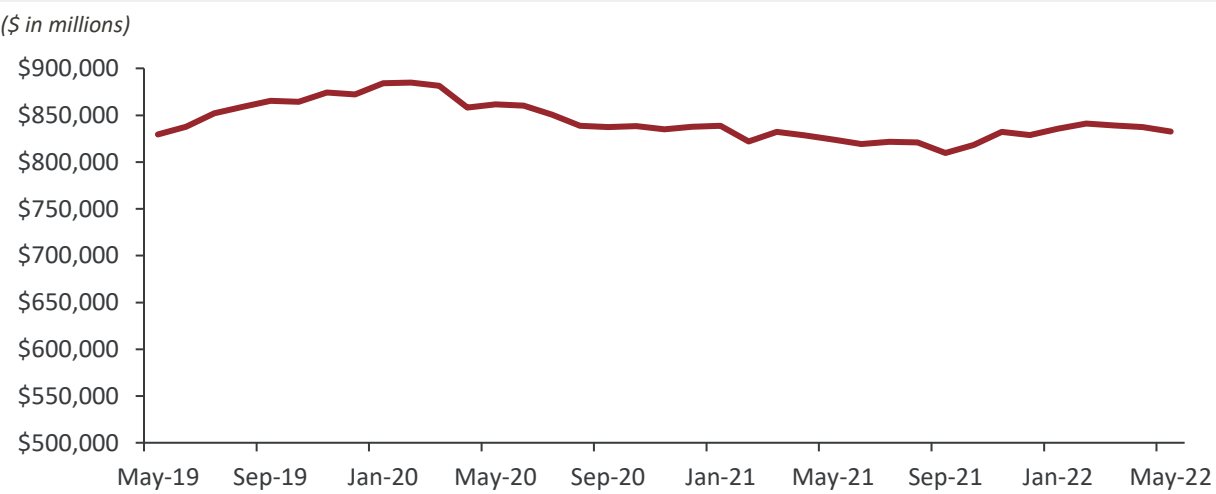
ANSYS

SYNOPSYS

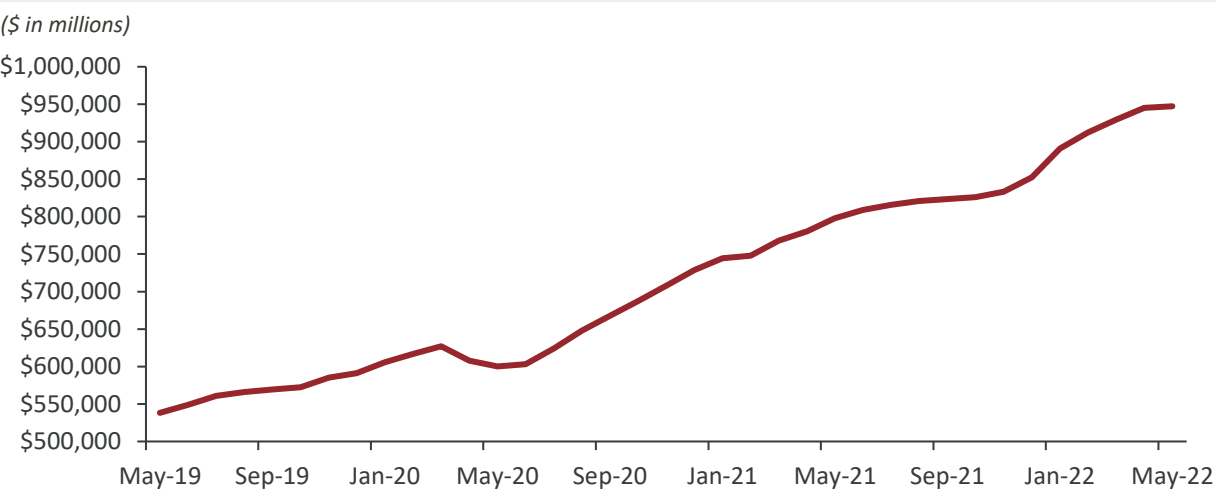
cadence

Overall Construction Macro-Economic Environment

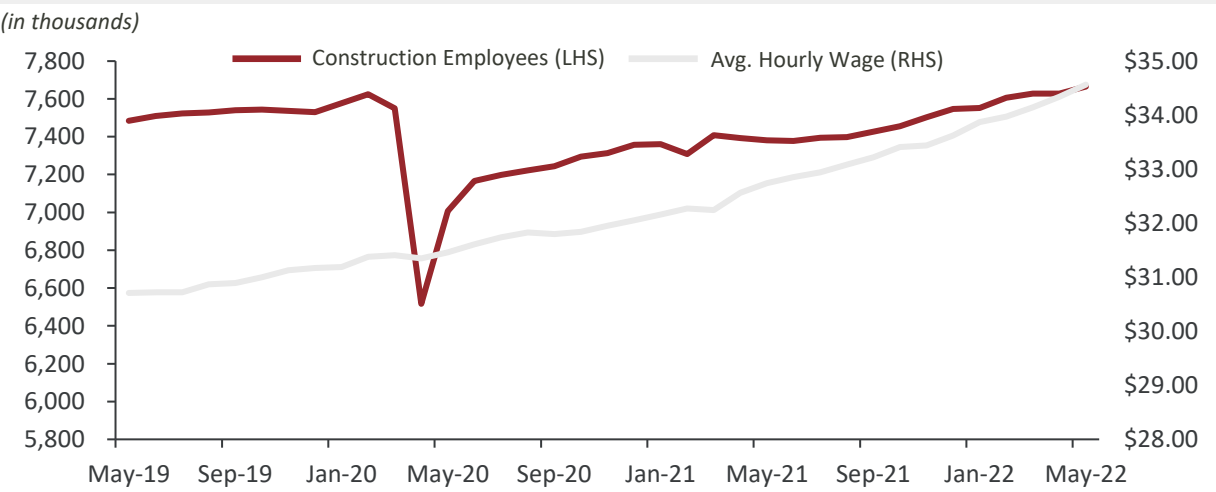
Value of Construction Put in Place – Non-Residential ⁽¹⁾



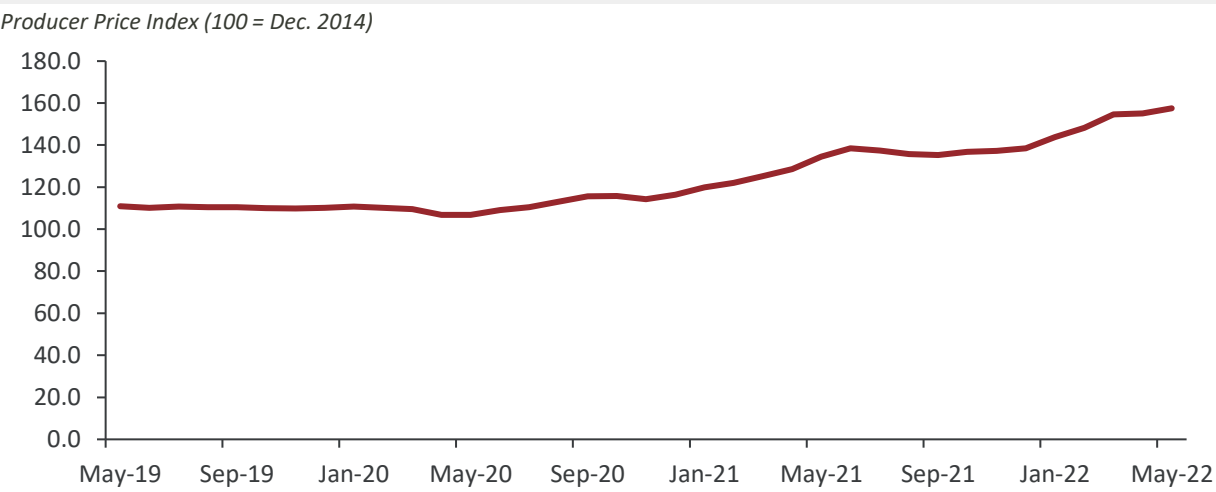
Value of Construction Put in Place – Residential ⁽¹⁾



Construction Employment ⁽¹⁾



Net Inputs to New Construction ⁽²⁾

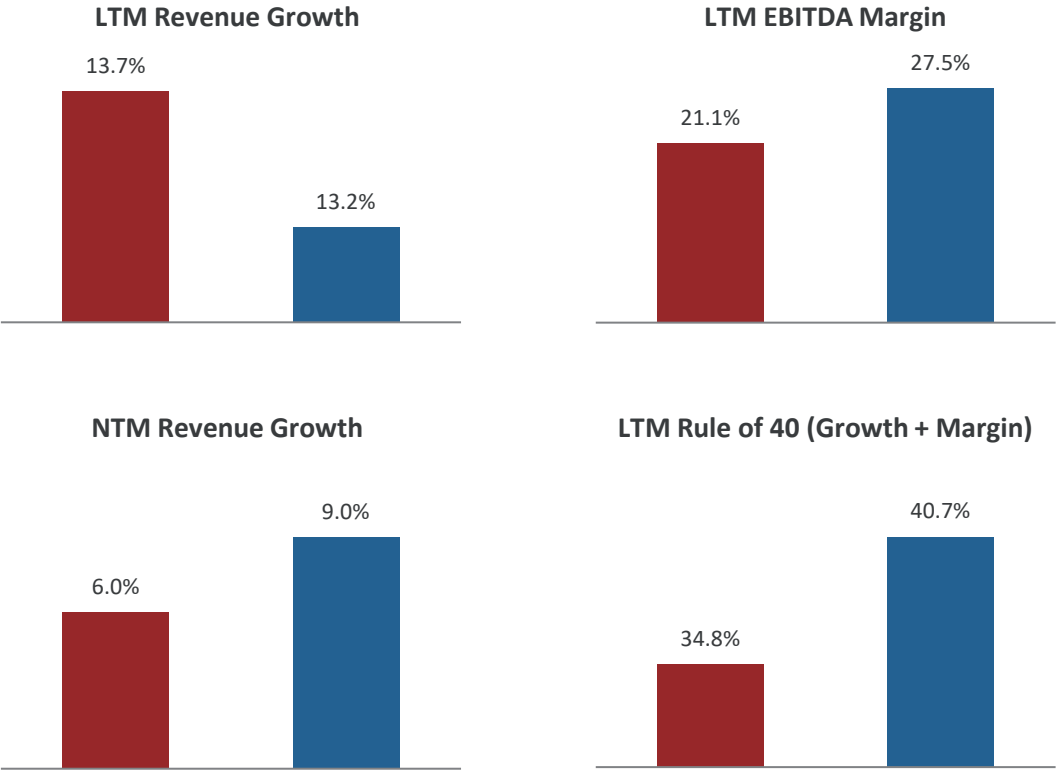


(1) Source: Federal Reserve Bank of St. Louis – Economic Research Division

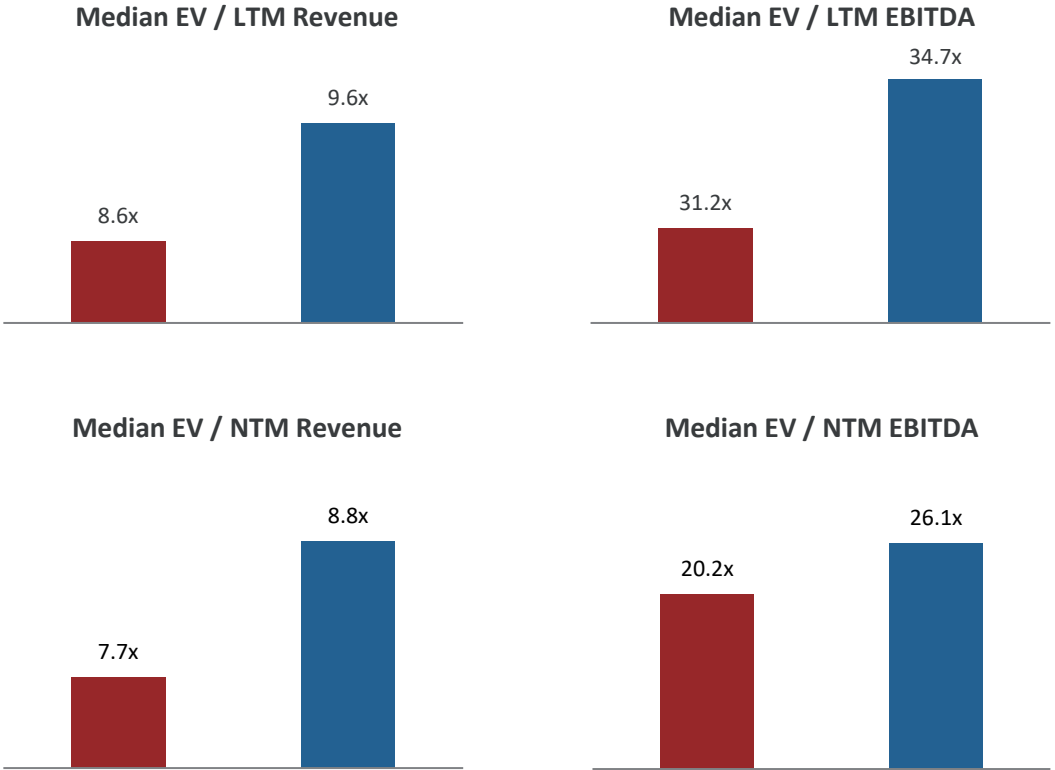
(2) Source: U.S. Dept. of Labor – BLS PPI Index for net inputs to new construction, excluding capital investment, labor, and imports (WPUIP231000)

AEC Public Company Operating and Valuation Metrics

Public Company – Operating Metrics¹



Public Company – Valuation Metrics¹



Core AEC

AUTODESK

Bentley

DASSAULT SYSTEMES

HEXAGON

NEMETSCHKEK GROUP

PROCORE

Schneider Electric

Trimble

Product Engineering / Design

ALTAIR

Ansys

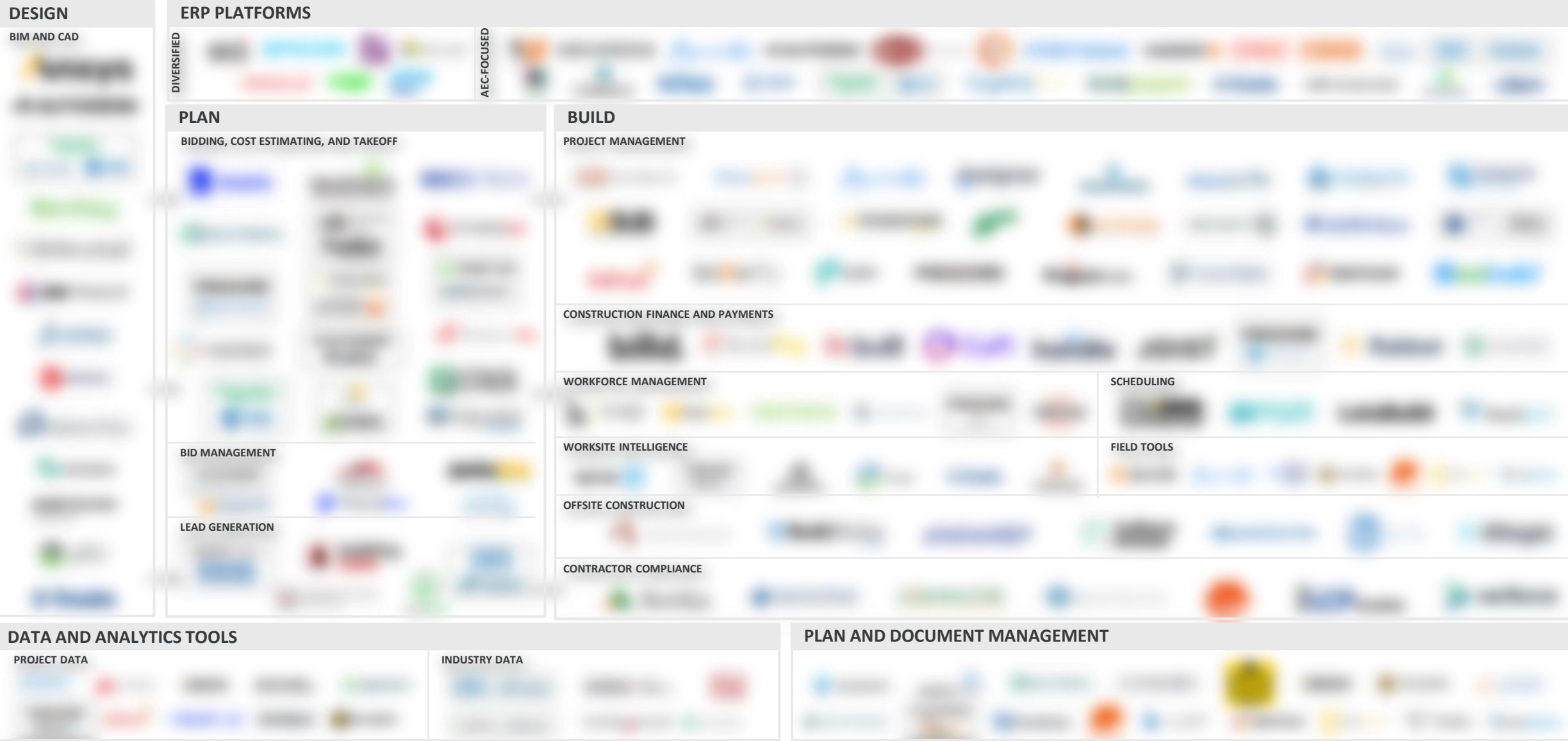
cā dence

ptc

SYNOPSYS

AEC Market Landscape

To view full market map, please contact:
hwtech_AEC/RE@harriswilliams.com



Harris Williams: At a Glance



- **30 years** and thousands of deals closed
- **70%** of revenue from repeat clients
- **100%** of revenue is from M&A advisory
- **8** offices across the U.S. and Europe
- **10** industry groups with deep sector expertise

The Harris Williams Technology Group

Technology Coverage Areas

- Application Software
- Infrastructure & Security Software
- IT & Managed Services

Sector Coverage Areas

- Architecture, Engineering, & Construction
- Education
- Human Capital Management
- Pharma
- Compliance
- Government & Public Sector
- Industrial
- Legal
- Real Estate & Property Tech
- eCommerce & Retail
- Healthcare
- Office of the CFO
- Supply Chain & Logistics

Thematic Focus Areas

- SaaS/Cloud
- Integrated Payments
- Digital Transformation
- AI/Machine Learning

Harris Williams Technology Group Contacts

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











































































































Julien Oussadon
Managing Director
joussadon@harriswilliams.com
+44 20 7518 8909

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

Ryan Costa
Director
rcosta@harriswilliams.com
(617) 654-2120

Thierry Monjauze
Head of Technology Group
Managing Director
tmonjauze@harriswilliams.com
+44 20 7518 8901









Harris Williams Technology Group Transaction Experience

 has received a significant investment from  	 a portfolio company of  has received a strategic investment from 	 has made an investment in 	 a subsidiary of  a division of  has been acquired by 	 a portfolio company of  has received a significant growth investment from 	 has acquired  a business division of 	 has recapitalized 	 has acquired 	 a portfolio company of  has been acquired by 	 a portfolio company of  has been acquired by 
 a portfolio company of  has been acquired by 	 a portfolio company of  has been acquired by 	 a portfolio company of  has been acquired by 	 has acquired  a portfolio company of  	 a portfolio company of  has been acquired by  	 a portfolio company of  has received a significant investment from 	 has been acquired by 	 has acquired 	 a portfolio company of  has been acquired by 	 the artisans of erp software has been acquired by  a portfolio company of  and funds managed by 
 a portfolio company of  has been acquired by 	 a portfolio company of  has been acquired by 	 a portfolio company of  has been acquired by 	 CAPITAL PARTNERS LLC has invested in 	 has acquired 	 has acquired 	 has acquired  a portfolio company of 	 has been acquired by 	 a portfolio company of  has been acquired by 	 has made a significant investment in 
 a portfolio company of  has been acquired by 	 has acquired 	 has invested in 	 a portfolio company of  has been acquired by 	 has been acquired by 	 a portfolio company of  has received an investment from 	 a portfolio company of  has been acquired by 	 a portfolio company of  has acquired 	 has joined  to invest in 	 a portfolio company of  has been acquired by  a portfolio company of 

Harris Williams Capabilities and Locations



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	Aerospace, Defense & Government Services		Business Services		Building Products & Materials		Consumer		Energy, Power & Infrastructure
	Healthcare & Life Sciences		Industrials		Specialty Distribution		Technology		Transportation & Logistics

Office Locations			
United States			
Boston One International Place Suite 2620 Boston, Massachusetts 02110 Phone: +1 (617) 482-7501	Minneapolis 222 South 9th Street Suite 3350 Minneapolis, Minnesota 55402 Phone: +1 (612) 359-2700	San Francisco One Market Plaza, Steuart Tower 11th Floor San Francisco, California 94105 Phone: +1 (415) 288-4260	Europe
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			London 25 Savile Row 4th Floor London, England W1S 2ER Phone: +44 020 7518 8900

Sources and Disclosures

Sources

1. S&P Capital IQ
2. Pitchbook
3. <https://www.constructiondive.com/news/commercial-construction-bear-market-good-stocks/625516/>
4. <https://www.enr.com/articles/54218-digital-technology-is-constructions-route-out-of-crisis>
5. <https://www.constructiondive.com/news/iiija-infrastructure-act-100m-contech-funding-construction/624007/>
6. <https://techcrunch.com/2022/05/18/investors-discuss-how-labor-shortage-is-shaking-up-the-construction-tech-stack/>

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Appendix

Recent Sector M&A Transactions Detail

Closed Date	Target	Acquirer	Business Description	Enterprise Value (\$M)	Implied EV / Revenue	Implied EV / EBITDA
Pending	Ignite Ventures, LLC	ServiceTitan, Inc.	Ignite Ventures, LLC provides a software solution for online booking and live services.	NA	NA	NA
07/13/22	BuildingLink.com LLC	Bregal Sagemount	BuildingLink.com LLC provides Web-based software and hardware.	NA	NA	NA
06/27/22	Solid Solutions Group	TriMech (Sentinal Capital Partners)	Solid Solutions Group is a provider of 3-D CAD software and services in the United Kingdom and Ireland.	NA	NA	NA
06/13/22	Concept Engineering	Altair (publ)	Concept Engineering is a provider of electronic system visualization software.	NA	NA	NA
06/06/22	Harness Software	Foundation Software (Thoma Bravo)	Harness Software is a provider of construction safety software for specialty contractors.	NA	NA	NA
05/26/22	Vero Solutions	Hexagon AB (publ)	Vero Solutions is a distributor of Hexagon's VISI CAD CAM software for the mold and die industry.	NA	NA	NA
05/24/22	PlanMan	Admicom (publ)	PlanMan is a provider of scheduling and project management software for the construction industry in Finland and Sweden.	NA	NA	NA
05/23/22	MB CAD	Visiativ	MB CAD is an independent distributor and consulting and training services provider for SOLIDWORKS and 3DEXPERIENCE software.	NA	NA	NA
05/13/22	MSUITE	Stanley Black & Decker	MSUITE is a provider of a cloud-based suite of management software tools that connect construction teams.	NA	NA	NA
05/01/22	United Solutions	Aktion Associates	United Solutions is a Massachusetts-based Sage CRE software reseller.	NA	NA	NA
04/30/22	Solo	Bregal Sagemount	Solo is a provider of sales conversion software that specializes in creating proposals for both roofing and solar services.	NA	NA	NA
04/30/22	MINDS Inc.	Astec Industries	MINDS, Inc. provides automation and information technology systems to the road construction industry in North America and France.	\$19.3	NA	NA
04/28/22	Pro4all	Main Capital Partners	Pro4All is a Dutch provider of software solutions for all stakeholders in the construction process.	NA	NA	NA
04/25/22	LOCATIQS	Sogelink (Keensight Capital)	LOCATIQS is a provider of software and consulting solutions for the GIS and field service management ("FSM") markets.	NA	NA	NA
Pending	SEMA	VIA Equity; Bregal Unternehmerkapital	SEMA is a leading German provider of CAD/CAM software to the timber construction industry.	NA	NA	NA
04/27/22	Applied Software Technology	GRAITEC (Apax)	Applied Software Technology, Inc. offers solutions and services for Autodesk products.	NA	NA	NA
04/26/22	Splash Modular	Slate Technologies	Splash Modular is a provider of software for the Industrialized Construction and Design for Manufacturing and Assembly (DFMA) markets.	NA	NA	NA
04/26/22	Focus Software	Sogelink (Keensight Capital)	Focus Software is a leading Norwegian provider of BIM software.	NA	NA	NA
04/21/22	LUCY Industrial Management Solutions (IMS)	Prometheus Group	LUCY is a provider of software solutions that optimizes the execution of capital-intensive projects.	NA	NA	NA
04/11/22	DC-Software Doster & Christmann	FRILO Software (Nemetschek)	DC-Software Doster & Christmann is a developer of digital foundation engineering solutions for the construction industry.	NA	NA	NA

Public Market Operational and Valuation Metrics⁽¹⁾

\$ in Thousands

Company	Market Capitalization	Enterprise Value	% of 52-Week High	LTM Gross Margin	LTM EBITDA Margin	Enterprise Value/			
						LTM Revenue	NTM Revenue	LTM EBITDA	NTM EBITDA
Core AEC									
Schneider Electric S.E.	\$65,516,209	\$79,081,545	63.2%	41.0%	18.6%	2.4x	2.4x	12.9x	11.8x
Dassault Systèmes SE	48,118,357	48,837,753	61.8%	83.9%	27.1%	8.8x	8.5x	32.4x	22.7x
Autodesk, Inc.	37,362,129	38,830,129	49.9%	91.5%	19.7%	8.5x	7.5x	43.2x	20.2x
Hexagon AB	27,946,420	30,602,830	69.8%	64.5%	31.8%	6.1x	5.7x	19.2x	14.1x
Trimble Inc.	14,565,796	15,630,096	60.3%	57.9%	21.1%	4.1x	4.0x	19.7x	15.6x
Bentley Systems, Inc.	10,377,821	12,176,649	46.3%	78.1%	17.8%	12.0x	10.5x	NM	31.4x
Nemetschek SE	6,973,949	6,971,619	49.7%	54.4%	28.1%	8.8x	8.5x	31.2x	26.1x
Procore Technologies, Inc.	6,153,245	5,657,103	41.7%	80.2%	NM	10.1x	7.9x	NM	NM
Core AEC Median	\$21,256,108	\$23,116,463	55.1%	71.3%	21.1%	8.6x	7.7x	25.5x	20.2x
Product Design / Engineering									
Synopsys, Inc.	\$46,457,065	\$45,463,441	80.4%	81.2%	27.5%	9.6x	8.8x	34.7x	26.1x
Cadence Design Systems, Inc.	41,372,123	40,585,163	77.9%	89.8%	32.8%	12.9x	11.8x	39.2x	28.7x
ANSYS, Inc.	20,815,866	21,048,278	57.8%	90.0%	33.5%	10.7x	10.1x	31.9x	23.1x
PTC Inc.	12,439,221	13,602,056	69.2%	79.6%	27.3%	7.2x	6.6x	26.5x	17.4x
Altair Engineering Inc.	4,187,916	4,037,320	63.3%	76.4%	8.0%	7.5x	6.8x	NM	37.9x
Product Design / Engineering Median	\$20,815,866	\$21,048,278	69.2%	81.2%	27.5%	9.6x	8.8x	33.3x	26.1x
Comp Set Median	\$20,815,866	\$21,048,278	61.8%	79.6%	27.2%	8.8x	7.9x	31.6x	22.9x

Public Market Operational and Valuation Metrics⁽¹⁾

\$ in Thousands									
Company	Market Capitalization	Enterprise Value	% of 52-Week High	LTM Gross Margin	LTM EBITDA Margin	LTM Revenue	NTM Revenue	LTM EBITDA	NTM EBITDA
Residential									
D.R. Horton, Inc.	\$26,229,774	\$30,722,874	67.5%	28.7%	21.8%	1.0x	0.8x	4.6x	3.9x
Lennar Corp.	23,651,833	28,431,128	69.1%	29.8%	21.4%	1.0x	0.8x	4.8x	3.9x
NVR, Inc.	14,688,652	14,154,744	74.7%	25.6%	20.6%	1.5x	1.4x	7.4x	6.9x
PulteGroup, Inc.	9,956,562	11,311,637	65.6%	27.7%	19.3%	0.8x	0.7x	4.1x	3.1x
Residential Median	\$19,170,243	\$21,292,936	68.3%	28.2%	21.0%	1.0x	0.8x	4.7x	3.9x
Engineering, Procurement, and Construction									
Jacobs Engineering Group Inc.	\$17,726,124	\$21,151,867	92.1%	24.1%	9.9%	1.5x	1.4x	15.2x	14.6x
WSP Global Inc.	15,690,080	17,158,760	88.3%	20.9%	9.3%	2.1x	2.6x	22.6x	15.2x
Skanska AB	10,833,166	12,985,653	96.0%	6.3%	6.4%	1.0x	0.9x	15.3x	14.1x
Skanska AB (publ)	9,334,915	9,666,005	81.5%	10.5%	6.1%	0.6x	0.7x	10.1x	8.6x
KBR, Inc.	7,638,120	9,354,120	97.6%	11.0%	6.9%	1.2x	1.4x	17.8x	14.4x
HOCHTIEF Aktiengesellschaft	4,631,189	5,883,001	75.1%	24.4%	2.7%	0.2x	0.3x	9.0x	4.9x
SNC-Lavalin Group Inc.	4,232,560	5,616,134	78.7%	5.8%	4.7%	0.9x	1.0x	19.9x	10.4x
John Wood Group PLC	1,440,052	3,294,252	55.2%	11.9%	4.5%	0.5x	0.5x	11.5x	5.6x
EP&C Median	\$8,486,517	\$9,510,062	84.9%	11.4%	6.3%	1.0x	1.0x	15.3x	12.2x
European Public - Private Partnerships									
Vinci SA	\$58,281,179	\$85,714,364	89.6%	13.6%	13.9%	1.5x	1.5x	10.8x	8.8x
Ferrovial SA	19,519,137	27,623,311	86.0%	83.1%	7.9%	3.6x	3.9x	45.5x	37.7x
Atlantia SpA	17,191,486	59,317,681	98.9%	58.5%	60.4%	8.2x	8.8x	13.6x	13.9x
Bouygues SA	13,350,196	20,261,993	85.0%	55.6%	10.0%	0.5x	0.5x	4.8x	5.0x
Eiffage SA	9,908,972	23,261,639	93.6%	83.4%	14.7%	1.1x	1.2x	7.3x	6.8x
Euro Median	\$17,191,486	\$27,623,311	89.6%	58.5%	13.9%	1.5x	1.5x	10.8x	8.8x
Construction Median	\$10,394,864	\$12,148,645	76.9%	22.5%	8.1%	1.0x	0.9x	10.8x	7.8x