

INDUSTRY UPDATE

Aerospace & Defense Market Monitor





AEROSPACE AND DEFENSE MARKET INSIGHTS

Industry Headwinds Force Supply Chain to Face Declining Aircraft Orders and Build Rates

- The commercial aircraft industry has faced significant challenges over the past two years resulting from the grounding of the 737MAX and the reduction in air traffic demand caused by the COVID-19 pandemic.
- Commercial air travel continues to undergo a slow recovery with passenger traffic not expected to return to 2019 levels for an estimated 2-3 years.¹
- In particular, the pandemic has significantly dampened the demand for long-haul, international air travel and shorter domestic routes are expected to lead the recovery.
- Consequently, the weakened demand for air travel has directly impacted airline demand for new aircraft and ongoing MRO services creating ripple effects through the commercial aircraft supply chain.
- The impact on demand was demonstrated in OEMs new aircraft orders for 2020, where Airbus and Boeing recorded gross new orders of only 383 and 184 aircrafts, respectively. In comparison, over the past ten years, Airbus and Boeing have averaged ~1,200 and ~1,000 gross new orders per year, respectively.^{2,3}
- In response, suppliers are looking to diversify their customer and aircraft platform exposure, as well as expand their capabilities to increase their value proposition to OEMs.

Well Positioned Commercial Suppliers Poised to Capitalize on Expected Recovery

- As air travel recovers over the coming years, commercial aircraft suppliers with long-term agreements ("LTAs") can expect to benefit organically from the anticipated ramp in build rates on the 737MAX.
- Suppliers that have weathered the COVID-19 pandemic and 737MAX grounding are expected to benefit on new LTA opportunities as their struggling counterparts may not be able to bid as competitively on new programs and part packages.
- Further, healthy A&D companies are well positioned to pursue acquisitions of companies that have become financially challenged over the past year, presenting opportunities to gain new customers and LTAs as well as expand service offerings and capabilities to increase competitive positioning.
- In efforts to maintain a strong supply chain, Boeing has been selectively offering to extend LTAs but often with a negotiated discount, providing longer-term revenue visibility and access to the anticipated build-rate ramp.
- A bright spot in commercial aerospace was the recertification of the Boeing 737MAX in November, which has led to an uptick in new orders for the aircraft. Production of the 737MAX resumed in May of 2020 at a low production rate with a targeted gradual increase to 31 aircraft per month by the beginning of 2022.³

Commercial Aircraft Build Rate Forecasts

Airbus Build Rates (2)			Boeing Build Rates (3)		
Platform	Current	Future	Platform	Current	Future
A320	40/mo	43/mo Q3 '21 45/mo Q4 '21	737	Low rates	31/mo by early 2022
A350	5/mo	5/mo	787	10/mo	5/mo in March 2021
A220	4/mo	5/mo by Q2 '21	777 & 777X	5/mo	2/mo in 2021
A330	2/mo	2/mo	767	3/mo	N/A
			747	0.5/mo	Retiring 2022



AEROSPACE AND DEFENSE MARKET INSIGHTS (cont.)

Diversification at the Forefront of M&A Strategy

- Diversification has been a key strategy for A&D companies as suppliers seek to lessen their overall exposure to commercial aerospace which has been dramatically impacted by the reduction in air travel resulting from the COVID-19 pandemic.
- The M&A market is expected to see acquisitions by traditionally commercial focused aerospace suppliers of companies with greater defense exposure or ultimately look outside of A&D altogether and acquire companies operating in alternative supply chains including the medical, industrial, life sciences, and semiconductor industries, among others.
- Within the A&D industry, the diversification of OEM customer bases continues to be a focal point for suppliers in order to gain broader platform exposure and decrease customer concentration risk; M&A can provide expedited access to new OEMs by acquiring established relationships and contracts.
- As a recent example of these trends, in October Consolidate Machine & Tool (“CMTH”), a portfolio company of White Wolf Capital, announced the acquisition of Delva Tool & Machine, bringing Delva’s blue-chip customer base in the defense industry to CMTH (further discussed on page 3).

Active M&A Market for Defense and Space Technologies

- Defense and space technology has proven to be an attractive segment for M&A for both strategic and financial investors through 2020 and so far in early 2021. Investors have been pursuing acquisitions to gain access to proprietary technologies, expand product portfolios, and further diversify end-market exposure.
- The defense industry benefited from strong budget growth under the Trump administration and global defense spending is expected to grow 2.8% in 2021,⁴ providing favorable dynamics for continued M&A activity in the segment.
- Recent acquisitions by major defense OEMs include Raytheon Technologies’ acquisition of the satellite and spacecraft component manufacturer, Blue Canyon Technologies; Lockheed Martin’s acquisition of Aerojet Rocketdyne, a manufacturer of rocket and missile propulsion systems; and Teledyne Technologies’ acquisition of FLIR Systems, a provider of sensory technologies for defense and industrial applications (further discussed on page 3).
- On the financial investor side AE Industrial Partners has been active with its acquisitions of Oakman Aerospace and LoadPath, while KPS Capital Partners acquired AM General.
- Further consolidation is expected through the value chain as companies look to increase their value proposition to customers and create competitive barriers with intellectual property and sole-source positions.

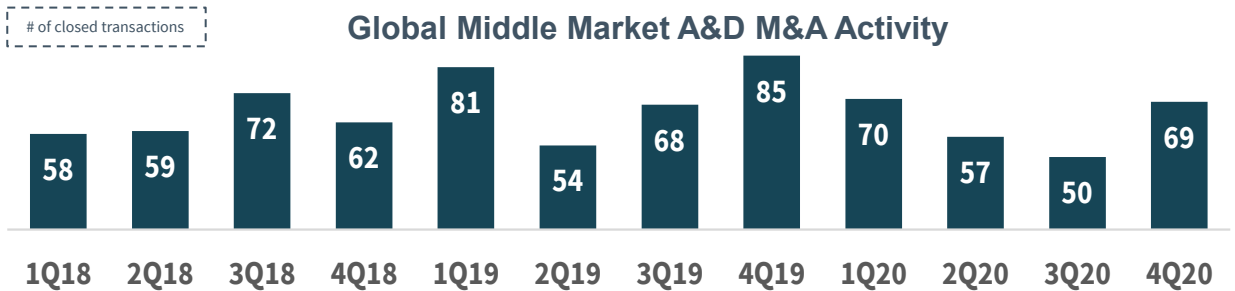
Meridian’s Perspective on M&A Trends

- Expected reduction in valuation multiples for suppliers with substantial OEM or platform concentration. Companies with concentration will see valuation multiples return to the historical norm while well diversified companies will be more strongly valued.
- Consolidation will begin to accelerate in the second half of 2021 as companies seek to best position themselves to benefit from the expected recovery.
- Vertical integration will prove increasingly valuable. Suppliers that can expand their in-house capabilities including processing and assembly, will be viewed as a more valuable supplier by OEMs and a more valuable asset by investors.
- Downside risk on purchase order release rates compared to the forecasted build rates given the level of parked aircraft, excess inventory in supply chain, and ongoing aircraft order demand.

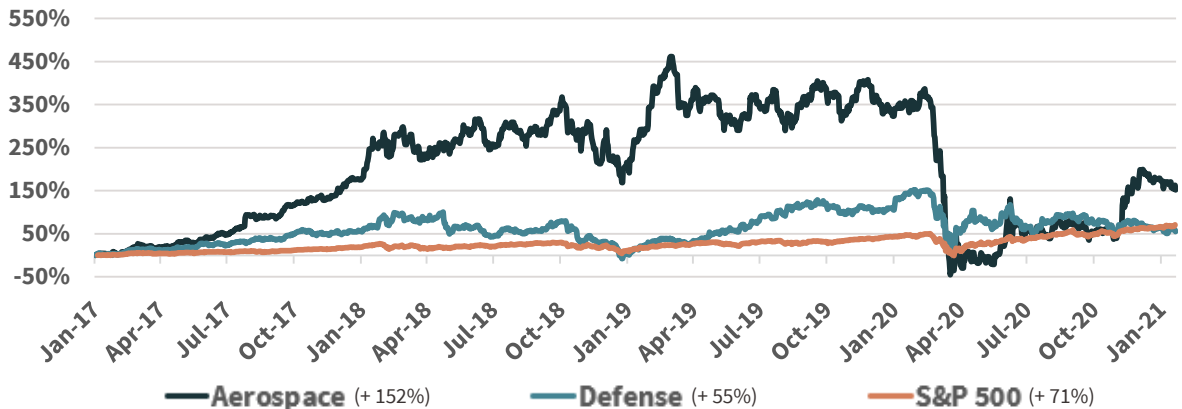


AEROSPACE & DEFENSE M&A ACTIVITY

M&A Activity and Market Trends



Sector Index Performance⁽¹⁾



Recent Transaction Spotlights



October 2020

Description: Consolidated Machine & Tool Holdings (“CMTH”) has acquired Delva Tool & Machine Corp., a provider of machining, fabrication, and assembly services for the A&D industry.

Rationale: The acquisition of Delva provides CMTH with its blue-chip, defense customer base, expanded manufacturing capabilities, and incremental capacity.



December 2020

Description: Seattle-based, Jet Parts Engineering (“JPE”) acquired AEROSPARES, a designer and manufacturer of proprietary aftermarket aircraft components.

Rationale: The acquisition represents JPEs second strategic acquisition and expands JPEs catalogue of Parts Manufacturing Approvals (“PMA”) and portfolio of proprietary component repair services.



January 2021

Description: Teledyne Technologies has entered into a definitive agreement to acquire Oregon-based FLIR Systems, Inc.

Rationale: The acquisition provides the combined entity with a complementary portfolio of imaging sensor technologies across a broad range of applications and end-markets.

(1) Individual components of Aerospace and Defense Indices can be found on Slide 4. Indices weighted by Market Capitalization.

Source: Pitchbook, Meridian research & company press releases



PUBLICLY-TRADED AEROSPACE & DEFENSE COMPANIES

Aerospace

(\$US in millions, except per share amounts)

Company Name	Market Cap	Enterprise Value	LTM		EV/LTM		LTM Margin EBITDA	52-Week Change
			Revenue	EBITDA	Revenue	EBITDA		
Boeing Co.	\$114,042	\$152,276	\$60,765	(\$4,197)	2.5x	-	-	(38)%
Airbus S.A.S.	\$78,962	\$84,751	\$60,970	(\$2,021)	1.4x	-	-	(34)%
Safran Group SA	\$53,282	\$57,639	\$23,981	\$1,934	2.4x	29.8x	8.1%	(24)%
TransDigm Group, Inc.	\$31,045	\$46,341	\$5,103	\$2,052	9.1x	22.6x	40.2%	(11)%
HEICO Corporation	\$15,236	\$15,835	\$1,787	\$467	8.9x	33.9x	26.1%	(5)%
MTU Aero Engines AG	\$12,410	\$13,176	\$4,904	\$916	2.7x	14.4x	18.7%	(24)%
Textron Inc.	\$10,377	\$11,938	\$12,019	\$841	1.0x	14.2x	7.0%	(11)%
Hexcel Corporation	\$3,719	\$4,542	\$1,771	\$273	2.6x	16.7x	15.4%	(40)%
Spirit AeroSystems Holdings, Inc.	\$3,672	\$5,270	\$4,488	(\$421)	1.2x	-	-	(47)%
Kaman Corporation	\$1,425	\$1,574	\$837	\$31	1.9x	51.3x	3.7%	(20)%
Bombardier, Inc.	\$1,256	\$12,750	\$14,831	(\$823)	0.9x	-	-	(57)%
Empresa Brasileira De Aeronautica S.A.	\$1,196	\$3,175	\$4,432	(\$211)	0.7x	-	-	(62)%
Triumph Group, Inc.	\$618	\$2,199	\$2,375	(\$146)	0.9x	-	-	(47)%
Ducommun Inc	\$593	\$884	\$658	\$71	1.3x	12.5x	10.8%	30 %
Senior plc	\$541	\$836	\$1,183	(\$69)	0.7x	-	-	(41)%
Median		\$11,938	\$4,488	\$31	1.4x	19.6x	13.1%	(34)%
Mean		\$27,546	\$13,340	(\$87)	2.5x	24.4x	16.2%	(29)%

Defense

(\$US in millions, except per share amounts)

Company Name	Market Cap	EV	LTM		EV/LTM		LTM Margin EBITDA	52-Week Change
			Rev	EBITDA	Rev	EBITDA		
Raytheon Technologies Corporation	\$101,693	\$127,951	\$83,559	\$8,606	1.5x	14.9x	10.3%	(30)%
Lockheed Martin Corporation	\$90,762	\$99,794	\$65,398	\$10,116	1.5x	9.9x	15.5%	(25)%
Northrop-Grumman Corporation	\$48,733	\$59,430	\$36,799	\$5,588	1.6x	10.6x	15.2%	(19)%
General Dynamics Corporation	\$42,304	\$52,478	\$38,217	\$5,081	1.4x	10.3x	13.3%	(18)%
L3 Harris Technologies, Inc.	\$36,467	\$42,843	\$18,334	\$2,673	2.3x	16.0x	14.6%	(22)%
BAE Systems Plc	\$20,703	\$25,336	\$23,685	\$3,110	1.1x	8.1x	13.1%	(24)%
Thales SA	\$19,251	\$23,910	\$19,865	\$1,641	1.2x	14.6x	8.3%	(17)%
Elbit Systems Ltd.	\$5,740	\$6,778	\$4,606	\$446	1.5x	15.2x	9.7%	(15)%
Kratos Defense & Security Solutions Inc	\$3,316	\$3,301	\$726	\$66	4.5x	50.0x	9.1%	43 %
Moog Inc.	\$2,408	\$3,278	\$2,814	\$113	1.2x	29.1x	4.0%	(19)%
Median		\$42,843	\$23,685	\$3,110	1.5x	14.6x	13.1%	(19)%
Mean		\$49,091	\$32,354	\$4,147	1.9x	16.6x	12.1%	(14)%



SHIELDS MANUFACTURING ACQUIRED BY PRECINMAC PRECISION MACHINING

Meridian Capital LLC (“Meridian”), a Seattle-based middle market corporate finance and M&A advisory firm is pleased to announce the successful acquisition of one of its clients, Shields Manufacturing, Inc. (“Shields” or the “Company”) by Precinmac Precision Machining (“Precinmac”), a portfolio company of Pine Island Capital Partners, LLC, Bain Capital Credit, LP, and Compass Partners Capital.

Founded in 1991 and located in Tualatin, Oregon, Shields serves the semiconductor, life sciences and aerospace markets providing precision CNC machined components and complex assemblies. The Company specializes in complex mechanical and optical assemblies with extensive metal and plastic machining capabilities.

Shields Manufacturing



World Class Standards, American Made Quality

- Acquired by -



Bill and Ruthie Shields, co-owners of Shields, shared, “Meridian acted as a committed and thoughtful advisor throughout the entire transaction, helping Shields and its shareholders reach an outstanding outcome in a challenging environment. We’re excited for Shields to join the Precinmac family with a strong alignment on culture and capabilities that the combination brings to Shields’ customers.”

Eric Wisnefsky CEO of Precinmac said, “We are excited to grow our presence in the West Coast by adding Shields into our highly diversified portfolio. This acquisition is part of a multi-faceted strategy to expand our business through acquisition in all sectors. We are well-positioned to continue our growth trajectory as we strengthen our supply chain and continuously deliver quality parts on-time to our customers in critical industries.”

Brian Murphy, President and Managing Director at Meridian stated, “It was an honor to work with Bill, Ruthie, and the entire Shields team. Over three decades, Shields established itself as one of the leading precision component suppliers to the semiconductor industry. The combination with Precinmac provides Shields with additional capabilities and resources to continue expanding its offerings to current customers and into new markets.”



NOTABLE TRANSACTIONS: AEROSPACE

<u>Announced Date</u>	<u>Acquirer/Investor</u>	<u>Target</u>	<u>Target Description</u>
Jan-21	AE Industrial Partners, Redwire	Oakman Aerospace	Develops space technologies.
Jan-21	TransDigm Group	Cobham Aerospace Connectivity	Manufactures communication and navigation systems
Jan-21	The Jordan Company	Innoflight	Manufactures cryptographic and avionics systems.
Dec-20	Hanwha Chemical	Cimarron Composites	Manufactures high-pressure hydrogen tanks.
Dec-20	J.F. Lehman & Company	CTS Engines	Provides engine maintenance and repair services.
Dec-20	American Industrial Partners	Orizon Aerostructures	Manufactures subassemblies aviation products.
Dec-20	Abrams Capital Management, Loar Group	Safe Flight Instrument	Manufactures aviation safety and flight performance products.
Dec-20	AerSale	Monocle Acquisition	Blank check company focused on aerospace and defense.
Dec-20	Jet Parts Engineering, Vance Street Capital	AeroSpares	Supplies commercial aerospace parts and engineered repairs.
Dec-20	Precinmac Precision Machining, Pine Island Capital, Bain Capital, Compass Partners Capital	Shields Manufacturing	Manufacturer of precision CNC machined components & assemblies.
Dec-20	Alpine 4 Automotive Technologies	Impossible Aerospace	Manufactures high-performance electric aircrafts.
Dec-20	FLIR Systems	Altavian	Manufactures unmanned aircraft systems.
Dec-20	FL Technics	Wright International Aircraft Maintenance Services	Provides aircraft maintenance services.
Nov-20	Bpifrance, Sabena Technics, Sagard, TowerBrook Capital Partners	Aeromecanic	Provides repair and maintenance services.
Oct-20	ACE Management	Aries Alliance	Manufactures aircraft and auxiliary parts.
Oct-20	DCM	Electro-Kut	Manufactures components and alloy materials.
Oct-20	Honeywell	Ballard Unmanned Systems	Provides unmanned vehicle fuel cell solutions.





NOTABLE TRANSACTIONS: AEROSPACE (cont.)

Announced Date	Acquirer/Investor	Target	Target Description
Oct-20	AE Industrial Partners, Broadtree Partners	Seanair Machine	Manufactures precision machined parts.
Oct-20	Honeywell	Rocky Research	Manufactures thermal management products.
Oct-20	Inflexion Private Equity Partners, Shimtech Industries	California Screw Products	Manufactures high-strength fasteners.
Oct-20	Consolidated Machine & Tool Holdings, White Wolf Capital	Delva Tool and Machine	Provides engineering and assembly services.
Sep-20	Inflexion Private Equity Partners, Shimtech Industries	Fastener Innovation Technology	Manufactures and designs threaded fasteners.
Sep-20	AEVEX Aerospace, CoVant, Madison Dearborn Partners	Geodetics	Provides navigation and artificial intelligence technologies.
Sep-20	Applied Composites Engineering	Alliance Spacesystems	Manufactures and designs composite structures.
Aug-20	Main Street Capital Holdings, Quality Products & Machine	Gray Manufacturing Technologies	Manufactures machined products.
Aug-20	Berks Group	IDC Precision	Manufactures precision component parts.
Aug-20	Consolidated Machine & Tool Holdings, White Wolf Capital	Specialty CNC	Provides contract machining and assembly services.
Aug-20	Arlington Capital Partners	Triumph Group	Provides engine composite fabrications.
Jul-20	CORE Industrial Partners	Incodema3D	Provides metal 3D printing services.
Jul-20	Arch Global Precision, The Jordan Company	Cling's Aerospace	Manufactures axis precision machined parts.
Jun-20	Gardner Standard	Shadin	Manufactures and designs aviation equipment and parts.
Jun-20	Mitsubishi Heavy Industries	Bombardier	Operates regional jet program.
Jun-20	AE Industrial Partners, Redwire	Deep Space Systems	Develops engineering solutions.
May-20	Gallant Capital	Aerostar Group	Manufactures precision machined components.
Mar-20	HAECO	Jet Engine Solutions	Provides engine maintenance and repair services.
Mar-20	AE Industrial Partners	Redwire	Develops small satellite and cubesat components.



NOTABLE TRANSACTIONS: DEFENSE

<u>Announced Date</u>	<u>Acquirer/Investor</u>	<u>Target</u>	<u>Target Description</u>
Jan-21	HarbourVest, Hermetic Solutions Group, Manulife Investment Management, Windjammer Capital	Cristek	Manufactures specialty connector products.
Jan-21	Teledyne Technologies	FLIR Systems	Designs and develops detection technology.
Dec-20	Commerce West Bank (Debt & Growth Financing)	Pacific Consolidated Industries	Manufactures gaseous and cryogenic oxygen and nitrogen generators.
Dec-20	Elbit Systems	Spartan	Manufactures electromechanical devices.
Dec-20	Lockheed Martin	Aerojet Rocketdyne Holdings	Manufactures launch systems and space applications.
Dec-20	Raytheon Technologies	Blue Canyon Technologies	Manufactures spacecraft and components.
Dec-20	Moog	Genesys Aerosystems	Provides military autopilot systems and components.
Dec-20	Charger Investment Partners	Advanced Composite Products and Technology	Manufactures engineered composite structures.
Dec-20	AE Industrial Partners, Redwire	LoadPath	Designs and develops deployable structures and thermal products.
Nov-20	Lockheed Martin	i3	Develops hypersonic missiles.
Nov-20	Kratos Defense & Security Solutions	5-D Systems	Provides military and engineering services.
Oct-20	Ironwood Capital	Micro Precision Group	Manufactures maritime components for submarines.
Oct-20	AE Industrial Partners, Redwire	Roccor	Designs and manufactures military deployable structures.
Oct-20	General Atomics	Guidestar Optical Systems	Provides optical and imaging solutions.
Oct-20	KPS Capital Partners	AM General	Manufactures light tactical vehicles for defense.
Sep-20	DC Capital Partners	Digital Force Technologies	Manufactures engineering and development products for special operations forces.
Aug-20	CACI International	Ascent Vision Technologies	Develops imaging systems and software.
Jul-20	BAE Systems	Collins Aerospace	Provides military global positioning systems.
May-20	Leidos	L3Harris (Airport security and automation)	Provides airport security and automation services.
May-20	BAE Systems	Raytheon	Manufactures airborne tactical radios.
Apr-20	Saab	Atmos Sistemas	Manufactures radar and defense equipment.
Apr-20	Elbit Systems	Ashot Ashkelon	Produces heavy metal products and combat vehicle systems.



AEROSPACE & DEFENSE SECTOR

MERIDIAN CAPITAL SECTOR COVERAGE

- Aerostructure & Interior Components
- Automation, Tooling & Engineering
- Defense Technology
- Ground Support Equipment
- MRO Services & Components
- Precision Machining, Fabrication & Sub-Assemblies
- Security Solutions & Services
- UAVs

MERIDIAN CAPITAL TRANSACTION EXPERIENCE

<p>Pacific Consolidated Industries</p>  <p>- Debt Financing & Growth Capital -</p> 	<p>Shields Manufacturing</p>  <p>- Acquired by -</p> 	<p>MTM Robotics</p>  <p>- Acquired by -</p> 	<p>Berg Companies</p>  <p>- Acquired by -</p> 	<p>Blast Deflectors</p>  <p>- Acquired by -</p> 
<p>Wipro</p>  <p>- Buy-side Advisory Services -</p>	<p>Apollo Video Technology</p>  <p>- Acquired by -</p> 	<p>J&M Machine</p>  <p>- Acquired by -</p> 	<p>Mold Rite</p>  <p>- Acquired by -</p> <p>Sound Rite Plastics, Ltd.</p>	<p>HR Givon</p>  <p>- Acquired by -</p> 
<p>Imaginetics, Inc.</p>  <p>- Acquired by -</p> 	<p>Procesos Termicos</p>  <p>- Acquired by -</p> 	<p>VIOX Corporation</p>  <p>- Acquired by -</p> 	<p>Dynamic Ceramic</p>  <p>- Acquired by -</p> 	<p>Airline Services Holdings</p>  <p>- Management Buyout Backed by -</p> 
<p>Superior Tube and Fine Tubes</p>  <p>- Acquired by -</p> 	<p>Western Pneumatic Tube</p>  <p>- Acquired by -</p> 	<p>Mobile Tool Management</p>  <p>- Investment by -</p> 	<p>JL Manufacturing</p>  <p>- Acquired by -</p> 	<p>Pacific Aerospace & Electronics</p>  <p>- Financial and Buy-side Advisory Services -</p>





MERIDIAN CAPITAL

INVESTMENT BANKERS

Meridian Capital has been helping middle market business owners achieve their M&A and corporate finance goals since 1995.



INDUSTRY EXPERIENCE

Meridian's aerospace and defense practice provides comprehensive access to top industry-wide strategic and financial sponsor relationships, deep sector expertise, and proven transaction experience to help maximize shareholder value.

TRANSACTION EXPERTISE

- Mergers & Acquisitions
- Growth Capital
- Strategic Advisory

TAILORED PROCESSES

- High-Touch Approach
- Multidisciplinary Deal Team
- End-to-End Services

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About Meridian Capital

Meridian Capital (www.meridianllc.com), a Seattle-based M&A advisory firm, has served as a trusted advisor to business owners on complex corporate finance, M&A, and strategic challenges for over 20 years. The firm differentiates itself through its deep industry insights, highly customized service approach, and end-to-end commitment to execution.

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