



December 2019

Electric  
Vehicles



Mobility-as-  
a-Service



Autonomous  
Infrastructure



Data &  
Analytics



Trucking &  
Logistics



## About Greentech Capital Advisors

Our mission is to empower companies and investors who are creating a more efficient and sustainable global infrastructure. We are purpose-built to ensure that our clients achieve success. We have deeply experienced bankers who are sector experts and understand our clients' industries and needs. We reach a vast global network of buyers, growth companies, asset owners and investors, and thereby provide clients with more ways to succeed through a deeper relationship network. We have directly relevant transaction experience which enables us to find creative structures and solutions to close transactions. We are an expert team of 75 professionals working seamlessly on our clients' behalf in New York, Zurich and San Francisco.

### Selected Business Developments

#### Greentech's Take:

- > Centralized car sharing programs are struggling to achieve profitability while decentralized systems, such as Turo and Getaround, continue to grow

- > **Audi** launched a ridesharing service in South Germany called BITS ([TechCrunch](#))
- > Audi outlined a €37bn investment roadmap through 2024, including €12bn dedicated to development of EV capabilities ([CleanTechnica](#))
- > **BlueIndy**, an Indianapolis-based car sharing subsidiary of Bollore Group, announced it is ceasing North American operations due to unprofitability ([Automotive News](#))
- > **FreeNow**, a ride-hailing operator owned by Daimler and BMW, announced expected revenue of \$2.7bn in 2019 and profitability in half its cities ([Automotive News](#))
- > **Hyundai** announced plans to spend \$17bn through 2025 on EV and AV solutions, backed by \$23bn of operating cost savings over the next three years ([Bloomberg](#))
- > **Lucid Motors**, a developer of EVs, broke ground on a \$700mm factory in Arizona with production expected to begin in late 2020 ([TechCrunch](#))
- > **Lyft** announced an experimental car-rental service in Los Angeles and San Francisco, offering unlimited miles as an incentive for early testers ([Reuters](#))
- > **Panasonic** and **BYD** EV battery sales declined in October by 38% and 66%, respectively, as demand weakened in the U.S. and China ([Bloomberg](#))
- > **ShareNow**, a car sharing service owned by Daimler and BMW, announced its exit from the North American market, blaming industry volatility ([TechCrunch](#))
- > **Sidewalk Labs**, a developer of smart city solutions and subsidiary of Alphabet, developed a design tool for cities able to generate millions of comprehensive planning scenarios using complex data sets ([Smart Cities Dive](#))
- > **Tesla** secured \$1.4bn in financing from Chinese banks to help fund the ongoing construction of its Shanghai plant and establish Chinese operations ([TechCrunch](#))
- > **Uber** founder and former CEO Travis Kalanick resigned from Uber's board of directors to focus on new business and philanthropic endeavors ([TechCrunch](#))
- > Uber voluntarily published its first safety report, outlining the sexual assaults, murders and fatal crashes that happened on its platform in 2019 ([NY Times](#))
- > **Volkswagen** raised its cumulative EV production forecasts to 1mm vehicles by 2023, and 1.5mm by 2025 ([Engadget](#))

### Selected Regulatory Developments

#### Greentech's Take:

- > Autonomous delivery vehicles are being deployed across urban centers faster than robotaxis, benefiting from their smaller size, lower speeds and non-human loads

- > A **California** judge refused to make Uber and Lyft reclassify drivers as employees, after the AB-5 legislation narrowed the legal definition of contractors ([Bloomberg](#))
- > California approved the commercial use of light-duty autonomous delivery vehicles on public roads without a safety driver ([Smart Cities Dive](#))
- > **China's** Ministry of Industry and Information Technology announced an exemption of Tesla vehicles from a 10% purchase tax in the country ([Reuters](#))
- > China raised its 2025 sales target for EVs to 25% as the government tries to spur an industry that is showing signs of weakening demand ([Reuters](#))
- > **Eastern U.S. states** and the **District of Columbia** released a draft plan to curb emissions from gasoline and diesel up to 25% over the next decade ([Union Leader](#))
- > The **European Union** approved subsidies of \$3.5bn toward battery production across seven EU member states ([AP](#))
- > The **FAA** issued proposed rules for the remote identification of drones as a way to more safely integrate drones into the U.S. transportation system ([TechCrunch](#))
- > A **German** court banned Uber from forwarding ride requests to rental car companies, effectively outlawing its business model in the country ([TechCrunch](#))
- > The **New York MTA** deployed its first all-electric bus and announced plans to spend \$1.1bn on a fleet of 500 electric buses through 2024 ([Smart Cities Dive](#))
- > **Paris** mayor Anne Hidalgo announced proposals to make e-commerce firms, like Amazon, pay for carbon emissions and traffic congestion ([CityLab](#))

### Selected Capital Raises

#### Greentech's Take:

- > Across the globe, used car marketplaces continue to raise huge financing rounds as technology disrupts this established industry

- > **Apex.AI**, a B2B developer of an operating system designed for AVs, raised an undisclosed sum from Volvo, Toyota and Airbus Ventures ([TechCrunch](#))
- > **Arbe**, a developer of imaging radar chipset solutions for AVs, raised a \$32mm round led by China Everbright, with participation from AI Alliance ([Press Release](#))
- > **CarDekho**, a provider of online car marketplace software and services, raised a \$70mm round led by Ping An, with participation from Sequoia ([Tech in Asia](#))
- > **Carsome**, a used car trading platform, raised a \$50mm round from MUFG Innovation, Daiwa PI Partners, Endeavor Catalyst and Ondine Capital ([TechCrunch](#))
- > **May Mobility**, a developer of autonomous shuttle services, raised a \$50mm round led by Toyota, with participation from LG Technology Ventures ([TechCrunch](#))
- > **Neuron Mobility**, a developer of a shared e-scooters platform, raised a \$19mm round led by GSR Ventures and Square Peg Capital ([TechCrunch](#))
- > **Outsight**, a developer of smart sensing technology, raised a \$20mm round led by Demeter Partners, SPDG and BNP Paribas ([Press Release](#))
- > **Passport**, a developer of a parking and transportation management platform, raised a \$65mm round from H.I.G., Rho Ventures and ThornTree ([Crunchbase](#))
- > **Rivian**, a developer of electric trucks, raised a \$1.3bn round led by T. Rowe Price, with participation from Amazon, BlackRock and Ford ([Press Release](#))
- > **Shadowfax**, a provider of an on-demand, hyperlocal delivery platform, raised a \$60mm round led by Flipkart, with participation from Qualcomm ([TechCrunch](#))
- > **StradVision**, a developer of camera technology for AVs and ADAS systems, raised a \$27mm round led by Posco Capital ([Press Release](#))
- > **Vroom**, a developer of a used car marketplace platform, raised a \$254mm round led by Durable Capital, with participation from T. Rowe Price ([Press Release](#))

### Selected Mergers & Acquisitions

- > **Delivery Hero**, a provider of food delivery solutions, acquired **Woowa Brothers**, a South Korean provider of last-mile food delivery solutions, for \$4bn ([Bloomberg](#))
- > **Isuzu Motors**, a Japanese auto manufacturer, acquired **UD Trucks**, Volvo's Japan-based truck unit, for \$2.3bn ([Financial Times](#))
- > **J.D. Power**, a provider of car rating services, acquired **Trilogy Automotive**, a SaaS-based enterprise lead management platform, for an undisclosed sum ([Press Release](#))
- > **LS Power**, an operator of energy and transmission infrastructure, acquired **EVgo**, an owner-operator of EV charging infrastructure, for an undisclosed sum ([Press Release](#))
- > **Mitsubishi**, Japan's largest trading house, and **NTT**, Japan's largest telecommunications company, acquired a 30% stake in **HERE Technologies**, a developer of cloud-based 3D mapping technology for AVs ([Press Release](#))
- > **Waymo**, a developer of AV solutions, acquired **Latent Logic**, a developer of driver simulation technology, for an undisclosed amount ([Press Release](#))

### Selected Partnerships

#### Greentech's Take:

- > OEMs are increasingly vertically integrating into battery production as they shift production from ICE vehicles to BEVs and re-tool production facilities

- > **BlackBerry** and **MARELLI Electronics China**, a global Tier 1 automotive supplier, announced a strategic collaboration to integrate BlackBerry's in-car QNX Platform for Digital Cockpits in MARELLI's automotive systems for Chinese OEMs ([Press Release](#))
- > **Bosch** and **Mercedes-Benz** announced an app-based, robotaxi service in San Jose, inviting select passengers to test their service along a fixed route ([The Verge](#))
- > **GM** announced the formation of a \$2.3bn JV with **LG Chem**, a producer of chemical products, to mass produce battery cells for GM EVs in a new battery manufacturing plant in Ohio with an annual capacity of over 30 gigawatt hours ([CNBC](#))
- > **NVIDIA**, a developer of graphics computing technology, announced a partnership with **DiDi Chuxing**, a Chinese mobile transportation platform, in which DiDi will use NVIDIA hardware and software to develop its Level 4 AVs ([Press Release](#))
- > **Quanergy**, a developer of LiDAR solutions, announced it was selected as a LiDAR partner by **Geely Automotive**, a Chinese OEM, to help develop and commercialize smart city solutions and AV systems ([Green Car Congress](#))

### Capital Raises

Date	Company	Amount Raised (\$mm)	Disclosed Investors	Company Description
12/4	May Mobility	\$50	Toyota Motor, Toyota AI Ventures, SPARX Group, Millennium Technology Value Partners, LG Technology Ventures, Cyrus Capital Partners, 1843 Capital, BMW i Ventures, Cyberkinetics Neurotechnology Systems	Developer of autonomous shuttle systems
12/5	Skyports	\$7	Deutsche Bahn Digital Ventures, Groupe ADP, Levitate Capital	Provider of urban air mobility infrastructure and drone delivery operator
12/5	Apex.AI	ND	Volvo Group Venture Capital, Toyota AI Ventures, InMotion Ventures, Hella Ventures, Airbus Ventures	B2B developer of an operating system designed for AVs
12/5	CarDekho	\$70	Ping An Insurance, AI Global, Hillhouse Capital Group, Sequoia Capital India	Provider of online car marketplace software and services
12/5	Shadowfax	\$60	Flipkart, Eight Roads Ventures, Nokia Growth Partners, Qualcomm Ventures, Mirae Asset Naver Fund, IFC	Provider of an on-demand hyperlocal delivery platform
12/6	Vroom	\$254	Durable Capital Partners, T. Rowe Price, L Catterton	Developer of a used car marketplace platform
12/9	Neuron Mobility	\$19	GSR Ventures, Square Peg Capital, Enterprise Singapore, SeedPlus	Developer of a shared e-scooters platform
12/10	Carsome	\$50	MUFG Innovation Partners, Daiwa PI Partners, Convergence Ventures, Endeavor Catalyst, Gobi Ventures, Ondine Capital	Developer of a used car trading platform
12/10	Passport	\$65	H.I.G. Growth Partners, Rho Ventures, ThornTree Capital Partners	Developer of a parking and transportation management platform
12/11	Outsight	\$20	Demeter Partners, SPDG, BNP Paribas (via its Energy Transition Capital unit)	Developer of smart sensing technology
12/13	Bluespace.ai	\$4	Fusion Fund, YouTube Co-Founder Steve Chen, UMC, the Taiwanese semiconductor foundry, Kakao Ventures, GDP Ventures, Atinum, Wasabi Ventures, Blue Ivy Ventures, Plug n Play, SLV Capital	Developer of AV technology for mass transit
12/16	Arbe	\$32	China Everbright, CVC investors Catalyst CEL, BAIC Capital, AI Alliance (Hyundai, Hanwha, SKT), MissionBlue Capital, Canaan Partners Israel, iAngels, 360 Capital Partners, O.G. Tech Ventures, OurCrowd	Developer of imaging radar chipset solutions for AVs
12/18	Seoul Robotics	\$5	KB Investment, Access Ventures, Artesian Capital Management, KDB Capital	Developer of software solutions for LiDAR sensor systems
12/19	Glovo	\$166	Mubadala Investment Company, Black River Ventures, Drake Enterprises, Idinvest Partners, Lakestars	Provider of an on-demand hyperlocal delivery platform
12/19	Snackpass	\$21	Andreessen Horowitz, First Round, General Catalyst, Ycombinator, Inspired Capital	Developer of a mobile food ordering app
12/19	StradVision	\$27	Posco Capital, IDG Capital, Industrial Bank of Korea, Lighthouse Combined Investment, LSS Private Equity, Mirae Asset Venture Investment, Neoplux, Timefolio Asset Management	Developer of camera technology for AVs and ADAS systems
12/23	Rivian	\$1,300	T. Rowe Price, Amazon, BlackRock, Ford	Developer of electric trucks

### M&A

Date	Target	Acquiror	EV (\$mm)	EV / Revenue	EBITDA	Target Description
12/4	SCROOSER	Kumpan Electric	ND	ND	ND	Berlin-based developer of electric scooters
12/13	Woowa Brothers	Delivery Hero	\$4,000	8.0x <sup>(1)</sup>	ND	South Korean provider of food delivery solutions
12/13	Latent Logic	Waymo	ND	ND	ND	Developer of driver simulation technology
12/18	UD Trucks	Isuzu Motors	\$2,300	ND	20.0x <sup>(2)</sup>	Volvo's Japan-based truck unit
12/20	HERE Technologies	Mitsubishi, Nippon Telegraph and Telephone	ND <sup>(3)</sup>	ND	ND	Developer of 3D mapping technology for AVs
12/20	Trilogy Automotive	J.D. Power	ND	ND	ND	SaaS-based enterprise lead management platform

Source: PitchBook, Public Disclosures.

(1) Credit Suisse equity research.

(2) J.P. Morgan equity research.

(3) Acquired 30% stake.

# Advanced Transportation Market Update

## Trading Comparables

Company	Price as of 12/31/19	Market Cap (\$mm)	Firm Value (\$mm)	EV/Revenue		EV/EBITDA		P / E	
				2019E	2020E	2019E	2020E	2019E	2020E
<b>Automotive Companies</b>									
Toyota	¥ 7714.00	\$197,976	\$305,548	1.1x	1.1x	9.0x	9.1x	10.0x	9.2x
Volkswagen	€ 173.25	\$97,489	\$286,969	1.0x	1.0x	7.1x	7.0x	6.2x	6.1x
Daimler	€ 49.37	\$59,286	\$211,779	1.1x	1.1x	14.0x	12.2x	9.9x	9.6x
BMW	€ 73.14	\$54,032	\$170,756	1.5x	1.5x	11.7x	10.9x	9.2x	7.7x
Ford	\$ 9.30	\$37,265	\$155,350	1.0x	1.0x	13.9x	12.7x	7.4x	7.1x
General Motors	\$ 36.60	\$52,777	\$133,627	1.0x	0.9x	10.6x	8.5x	7.6x	5.7x
Honda	¥ 3099.00	\$50,177	\$90,624	0.6x	0.6x	7.0x	8.1x	8.9x	8.2x
Tesla	\$ 418.33	\$76,973	\$87,480	3.6x	3.1x	31.8x	23.5x	NM	NM
Hyundai	₩ 120500.00	\$27,407	\$80,149	0.9x	0.9x	12.6x	10.4x	9.8x	7.1x
Nissan	¥ 636.10	\$22,904	\$73,844	0.7x	0.7x	11.2x	12.7x	14.7x	11.3x
Renault	€ 42.18	\$12,929	\$58,500	0.9x	0.9x	9.0x	8.7x	6.0x	5.1x
SAIC Motor	¥ 23.85	\$40,003	\$57,778	0.5x	0.5x	13.7x	11.0x	9.7x	8.6x
BYD	HK\$ 38.85	\$13,603	\$23,483	1.3x	1.2x	10.8x	10.1x	NM	41.0x
Fiat Chrysler	€ 13.19	\$23,215	\$21,835	0.2x	0.2x	1.8x	1.5x	5.0x	4.7x
Suzuki	¥ 4567.00	\$19,390	\$19,523	0.6x	0.6x	5.2x	5.0x	13.0x	12.9x
Tata Motors	RS 185.10	\$8,872	\$16,896	0.4x	0.4x	3.9x	3.5x	NM	14.2x
Geely	HK\$ 15.24	\$17,854	\$16,340	1.2x	1.0x	9.0x	7.5x	14.1x	12.0x
Peugeot	€ 21.30	\$22,490	\$15,205	0.2x	0.2x	1.7x	1.5x	5.9x	5.5x
Subaru	¥ 2713.50	\$19,146	\$13,509	0.4x	0.4x	4.4x	3.7x	11.9x	9.4x
KIA	₩ 44300.00	\$15,358	\$13,470	0.3x	0.3x	3.8x	3.5x	8.7x	7.6x
Dongfeng Motor	HK\$ 7.33	\$8,105	\$12,216	0.9x	0.9x	44.4x	45.1x	4.1x	3.9x
Guangzhou Automobile	HK\$ 9.70	\$12,966	\$10,345	1.2x	1.1x	40.6x	28.0x	11.4x	9.3x
NIO	\$ 4.02	\$4,127	\$5,376	4.8x	3.0x	NM	NM	NM	NM
Mazda	¥ 938.00	\$5,438	\$4,371	0.1x	0.1x	3.0x	3.1x	11.6x	12.3x
Mitsubishi	¥ 458.00	\$6,272	\$3,832	0.2x	0.2x	3.4x	3.3x	16.8x	20.1x
FAW Car Group	¥ 9.97	\$2,329	\$2,655	0.8x	0.8x	45.3x	44.0x	NM	NM
<b>Mean</b>				<b>1.0x</b>	<b>0.9x</b>	<b>13.2x</b>	<b>11.8x</b>	<b>9.6x</b>	<b>10.4x</b>
<b>Median</b>				<b>0.9x</b>	<b>0.9x</b>	<b>9.0x</b>	<b>8.7x</b>	<b>9.7x</b>	<b>8.6x</b>
<b>Truck Companies</b>									
Daimler	€ 49.37	\$59,286	\$211,779	1.1x	1.1x	14.0x	12.2x	9.9x	9.6x
Volvo	KR 156.90	\$34,074	\$46,874	1.0x	1.1x	6.9x	8.6x	9.4x	12.6x
PACCAR	\$ 79.10	\$27,464	\$33,585	1.4x	1.7x	11.2x	13.3x	11.5x	14.4x
Traton SE	€ 23.92	\$13,422	\$22,323	0.7x	0.8x	7.0x	7.4x	8.4x	9.7x
MAN SE	€ 43.20	\$7,130	\$10,355	0.7x	0.6x	6.4x	5.9x	NM	NM
Isuzu	¥ 1299.00	\$8,816	\$10,228	0.5x	0.5x	4.9x	4.9x	9.8x	9.5x
Navistar	\$ 28.94	\$2,882	\$6,541	0.6x	0.7x	7.2x	8.9x	12.8x	11.2x
<b>Mean</b>				<b>0.9x</b>	<b>0.9x</b>	<b>8.2x</b>	<b>8.7x</b>	<b>10.3x</b>	<b>11.1x</b>
<b>Median</b>				<b>0.7x</b>	<b>0.8x</b>	<b>7.0x</b>	<b>8.6x</b>	<b>9.8x</b>	<b>10.4x</b>
<b>Tier 1 Suppliers</b>									
Denso	¥ 4966.00	\$35,409	\$33,666	0.7x	0.7x	5.7x	5.3x	14.7x	13.4x
Continental	€ 115.26	\$25,877	\$32,584	0.7x	0.6x	4.9x	4.8x	11.0x	10.2x
Michelin	€ 109.10	\$22,105	\$30,029	1.1x	1.1x	5.8x	5.6x	10.2x	9.6x
Bridgestone	¥ 4070.00	\$26,898	\$29,149	0.9x	0.9x	5.7x	5.5x	10.6x	11.3x
Aptiv	\$ 94.97	\$24,354	\$29,002	2.0x	1.9x	12.9x	11.4x	20.4x	17.4x
Magna	C\$ 71.20	\$17,059	\$21,782	0.5x	0.5x	5.6x	5.4x	9.0x	8.1x
Valeo	€ 31.41	\$8,424	\$11,914	0.5x	0.5x	4.4x	4.1x	19.3x	13.5x
Goodyear	\$ 15.56	\$3,640	\$10,429	0.7x	0.7x	6.2x	5.3x	10.6x	6.6x
BorgWarner	\$ 43.38	\$8,949	\$10,316	1.0x	1.0x	6.4x	6.2x	11.0x	10.7x
Lear	\$ 137.20	\$8,414	\$10,255	0.5x	0.5x	5.7x	5.4x	10.1x	9.1x
Faurecia	€ 48.03	\$7,417	\$10,183	0.5x	0.5x	4.1x	3.8x	10.2x	8.8x
Delphi	\$ 12.83	\$1,115	\$2,764	0.6x	0.7x	5.2x	5.3x	5.6x	6.2x
Visteon	\$ 86.59	\$2,433	\$2,652	0.9x	0.8x	11.1x	9.2x	28.9x	17.7x
ATS Automation Tooling Systems	C\$ 21.43	\$1,527	\$1,688	1.6x	1.5x	11.5x	10.1x	25.0x	18.8x
Veoneer	\$ 15.62	\$1,740	\$1,093	0.6x	0.5x	NM	NM	NM	NM
Stoneridge	\$ 29.32	\$815	\$893	1.1x	1.1x	10.3x	9.5x	19.5x	17.8x
<b>Mean</b>				<b>0.9x</b>	<b>0.9x</b>	<b>7.0x</b>	<b>6.5x</b>	<b>14.4x</b>	<b>11.9x</b>
<b>Median</b>				<b>0.7x</b>	<b>0.7x</b>	<b>5.7x</b>	<b>5.4x</b>	<b>11.0x</b>	<b>10.7x</b>
<b>Mobility-as-a-Service</b>									
Uber	\$ 29.74	\$50,558	\$46,440	3.3x	2.5x	NM	NM	NM	NM
Lyft	\$ 43.02	\$12,682	\$10,011	2.8x	2.2x	NM	NM	NM	NM
<b>Mean</b>				<b>3.0x</b>	<b>2.3x</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
<b>Median</b>				<b>3.0x</b>	<b>2.3x</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

Source: FactSet, SEC filings and third party providers. Values in U.S. Dollars. Share prices shown in local currencies. Multiples above 50.0x not shown.

# Advanced Transportation Market Update

## Trading Comparables (cont.)

Company	Price as of 12/31/19	Market Cap (\$mm)	Firm Value (\$mm)	EV/Revenue		EV/EBITDA		P / E	
				2019E	2020E	2019E	2020E	2019E	2020E
<b>Autonomous Driving Chip Makers</b>									
Intel	\$ 59.85	\$265,315	\$282,936	4.0x	3.9x	8.8x	8.4x	13.0x	12.7x
Nvidia	\$ 235.30	\$145,415	\$138,194	12.7x	11.0x	34.6x	27.8x	41.7x	32.9x
Qualcomm	\$ 88.23	\$106,847	\$110,177	4.7x	4.8x	12.5x	14.7x	23.6x	19.0x
Advanced Micro Devices	\$ 45.86	\$51,226	\$51,123	7.6x	5.9x	NM	31.1x	NM	42.7x
<b>Mean</b>				<b>7.3x</b>	<b>6.4x</b>	<b>18.6x</b>	<b>20.5x</b>	<b>26.1x</b>	<b>26.8x</b>
<b>Median</b>				<b>6.1x</b>	<b>5.4x</b>	<b>12.5x</b>	<b>21.3x</b>	<b>23.6x</b>	<b>25.9x</b>
<b>Intelligent Transport</b>									
Roper Technologies	\$ 354.23	\$37,265	\$43,426	8.1x	7.5x	22.7x	20.6x	27.2x	26.0x
FLIR Systems	\$ 52.07	\$7,084	\$7,574	4.0x	3.8x	15.3x	13.9x	22.6x	20.5x
LS Corp	W 47800.00	\$1,148	\$4,838	0.6x	0.5x	8.2x	7.8x	7.8x	6.3x
Verra	\$ 13.99	\$2,290	\$3,020	6.8x	6.1x	12.7x	11.6x	20.9x	17.5x
Conduent	\$ 6.20	\$1,300	\$2,924	0.7x	0.7x	5.9x	6.4x	9.9x	10.4x
Cubic Corporation	\$ 63.57	\$1,982	\$2,302	1.5x	1.4x	15.1x	12.3x	30.1x	17.8x
Vaisala	€ 31.75	\$1,288	\$1,286	2.9x	2.7x	18.6x	17.0x	35.3x	32.0x
Kapsch TrafficCom	€ 28.70	\$419	\$484	0.6x	0.6x	6.7x	6.4x	15.1x	18.4x
INIT Innovation in Traffic Systems	€ 23.10	\$260	\$277	1.6x	1.4x	18.2x	16.3x	NM	NM
Iteris	\$ 4.99	\$202	\$187	1.7x	1.5x	NM	NM	NM	NM
Q-Free	NOK 6.80	\$69	\$95	0.8x	0.8x	9.5x	6.0x	NM	14.5x
Image Sensing Systems <sup>(1)</sup>	\$ 4.54	\$24	\$19	1.3x	1.3x	7.0x	7.0x	NM	NM
<b>Mean</b>				<b>2.5x</b>	<b>2.4x</b>	<b>12.7x</b>	<b>11.4x</b>	<b>21.1x</b>	<b>18.1x</b>
<b>Median</b>				<b>1.5x</b>	<b>1.4x</b>	<b>12.3x</b>	<b>9.7x</b>	<b>30.1x</b>	<b>18.1x</b>
<b>ITS / Smart Tolling</b>									
Atlantia	€ 20.79	\$19,089	\$65,148	5.0x	5.0x	7.8x	7.8x	11.5x	11.0x
Ferrovial	€ 26.97	\$22,078	\$28,727	4.4x	4.4x	NM	44.4x	NM	49.0x
Autostrada	€ 26.96	\$2,786	\$4,703	2.0x	1.8x	5.4x	4.7x	13.4x	12.0x
<b>Mean</b>				<b>3.8x</b>	<b>3.8x</b>	<b>6.6x</b>	<b>19.0x</b>	<b>12.5x</b>	<b>24.0x</b>
<b>Median</b>				<b>3.2x</b>	<b>3.1x</b>	<b>7.8x</b>	<b>8.7x</b>	<b>13.4x</b>	<b>15.0x</b>
<b>Telematics</b>									
Element Fleet	C\$ 11.09	\$3,853	\$13,464	17.7x	16.9x	41.2x	39.2x	13.0x	10.7x
Descartes Systems	\$ 42.72	\$3,646	\$3,640	11.3x	10.2x	30.4x	26.5x	NM	NM
TomTom	€ 9.42	\$1,388	\$986	1.3x	1.3x	14.0x	21.4x	NM	NM
Inseego	\$ 7.33	\$583	\$717	3.3x	2.7x	NM	24.6x	NM	NM
Ituran	\$ 25.13	\$529	\$576	2.1x	2.2x	8.0x	8.8x	15.0x	14.2x
Orbcomm	\$ 4.21	\$336	\$551	2.0x	1.9x	8.7x	7.7x	NM	NM
CalAmp	\$ 9.58	\$324	\$459	1.2x	1.2x	11.1x	9.6x	17.6x	14.0x
MiX Telematics	R 7.20	\$293	\$282	1.9x	1.7x	6.1x	5.6x	17.7x	15.0x
Quartix	£ 3.58	\$227	\$221	6.6x	6.5x	24.5x	23.8x	31.1x	29.1x
TeleNav	\$ 4.86	\$232	\$119	0.5x	0.5x	NM	NM	NM	NM
Quarterhill (fka Wi-LAN)	C\$ 1.67	\$153	\$88	0.7x	0.8x	2.8x	4.6x	5.6x	32.2x
<b>Mean</b>				<b>4.4x</b>	<b>4.2x</b>	<b>16.3x</b>	<b>17.2x</b>	<b>16.7x</b>	<b>19.2x</b>
<b>Median</b>				<b>2.0x</b>	<b>1.9x</b>	<b>11.1x</b>	<b>15.5x</b>	<b>16.3x</b>	<b>14.6x</b>
<b>Logistics</b>									
UPS	\$ 117.06	\$101,842	\$123,784	1.7x	1.6x	11.8x	11.0x	15.6x	14.5x
FedEX	\$ 151.21	\$39,617	\$70,803	1.0x	1.0x	9.4x	9.3x	21.0x	12.9x
Deutsche Post	€ 34.01	\$47,678	\$64,779	0.9x	0.9x	7.5x	6.7x	16.0x	13.6x
XPO Logistics	\$ 79.70	\$8,129	\$15,407	0.9x	0.9x	9.2x	8.6x	20.1x	17.8x
J.B. Hunt	\$ 116.78	\$12,576	\$13,916	1.5x	1.4x	10.6x	10.0x	21.6x	19.6x
Werner	\$ 36.39	\$2,533	\$2,887	1.2x	1.2x	6.2x	6.1x	15.6x	16.2x
<b>Mean</b>				<b>1.2x</b>	<b>1.2x</b>	<b>9.1x</b>	<b>8.6x</b>	<b>18.3x</b>	<b>15.8x</b>
<b>Median</b>				<b>1.1x</b>	<b>1.1x</b>	<b>9.3x</b>	<b>8.9x</b>	<b>18.0x</b>	<b>15.3x</b>
<b>Communications / Infrastructure</b>									
AT&T	\$ 39.08	\$287,472	\$482,962	2.7x	2.7x	8.1x	8.1x	10.9x	10.8x
Verizon	\$ 61.40	\$254,196	\$382,262	2.9x	2.9x	8.0x	7.8x	12.7x	12.4x
Cisco Systems	\$ 47.96	\$204,933	\$194,178	3.8x	3.8x	11.2x	10.4x	16.7x	14.5x
T-Mobile	\$ 78.42	\$67,652	\$108,956	2.4x	2.3x	8.2x	7.8x	19.6x	16.1x
Sprint	\$ 5.21	\$21,351	\$61,946	1.9x	1.9x	5.3x	5.5x	NM	NM
Hitachi	¥ 4626.00	\$41,158	\$49,677	0.6x	0.6x	5.2x	4.8x	13.0x	9.8x
Xerox	\$ 36.87	\$8,519	\$12,790	1.4x	1.5x	8.1x	8.0x	9.1x	8.9x
Toshiba	¥ 3705.00	\$16,813	\$11,471	0.4x	0.4x	6.2x	4.9x	NM	36.6x
<b>Mean</b>				<b>2.0x</b>	<b>2.0x</b>	<b>7.5x</b>	<b>7.2x</b>	<b>13.7x</b>	<b>15.6x</b>
<b>Median</b>				<b>2.2x</b>	<b>2.1x</b>	<b>8.0x</b>	<b>7.8x</b>	<b>12.8x</b>	<b>12.4x</b>

Source: FactSet, SEC filings and third party providers. Values in U.S. Dollars. Share prices shown in local currencies. Multiples above 50.0x not shown.

(1) Denotes limited equity research coverage.

# Global Experts in Sustainable Technology and Infrastructure

San Francisco      New York      Zürich

## Mergers & Acquisitions

- Corporate sales
- Acquisitions
- Minority investments
- Joint ventures
- Fairness opinions

**\$22bn**

## Asset Transactions

- Acquisitions
- Divestitures
- Passive equity
- Development capital formation

Operating **20GW** | Development **50GW**

## Capital Raising

- Equity private placements
- Debt private placements
- Project finance advisory
- Co-managed public offerings

**\$4bn**

## Strategic Advisory

- Strategic consulting
- IPO preparation
- Financial restructuring
- Specialized opinions
- Independent capital markets advice

**>20 assignments**

Note: As of December 31, 2019.

## Highly Experienced Partners Supported by 65 Professionals

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[greentechcapital.com](http://greentechcapital.com)

- > 30+ years of experience
- > >150 completed transactions
- > Founder and head of advisory business
- > Large industrials and energy companies
- > Broad coverage of senior leaders

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- > 20+ years of experience
- > >35 completed transactions
- > Renewable energy assets
- > Energy storage
- > Distributed generation
- > Water

**Laurent Dallet**  
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- > 15+ years of experience
- > >30 completed transactions
- > Renewable energy assets
- > Distributed energy production
- > Energy efficiency and services

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- > 15+ years of experience
- > >30 completed transactions
- > Renewable energy assets
- > Power infrastructure services
- > Renewable energy value chain
- > Environmental services

**Michael Horwitz**  
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- > 20+ years of experience
- > >40 completed transactions
- > Energy efficiency and services
- > Energy storage
- > Renewable energy
- > Smart grid
- > Blockchain

**Olav Junttila**  
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San Francisco  
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- > 20+ years of experience
- > >30 completed transactions
- > Energy software and services
- > Energy efficiency
- > Renewable energy
- > Utilities

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- > 25+ years of experience
- > >20 completed transactions
- > Advanced transportation
- > Edge computing
- > Semi-conductors
- > Industrial sensors

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- > 15+ years of experience
- > >30 completed transactions
- > Head of Private Placements
- > Cleantech
- > Power infrastructure

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[fnicklaus@greentechcapital.com](mailto:fnicklaus@greentechcapital.com)

- > 15+ years of experience
- > >25 completed transactions
- > Renewable energy assets
- > Power infrastructure services
- > Renewable energy value chain

**Diego Pignatelli**  
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Zürich  
+41 44 578 3941  
[diego@greentechcapital.com](mailto:diego@greentechcapital.com)

- > 30+ years of experience
- > >60 completed transactions
- > European coverage
- > Industrials and energy companies
- > Utilities

**Damien Sauer**  
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+41 44 578 3914  
[damien@greentechcapital.com](mailto:damien@greentechcapital.com)

- > 20+ years of experience
- > >50 completed transactions
- > Energy efficiency
- > Power infrastructure
- > Renewable energy value chain
- > Smart grid

**Rob Schultz**  
Partner  
New York  
+1 212 946 3950  
[robert@greentechcapital.com](mailto:robert@greentechcapital.com)

- > 25+ years of experience
- > Chief Operating Officer, Chief Legal Officer, and Chief Compliance Officer

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- > 25+ years of experience
- > >40 completed transactions
- > Sustainable Food & AgTech
- > Advanced transportation
- > Industrial IoT & software
- > Environmental services
- > Water



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