



November 2017

Electric  
Vehicles



Ecosystem  
Intelligence



Mobility-as-  
-a-Service



Autonomy  
Solutions



Data &  
Analytics



## 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 senior bankers and investment professionals who are sector experts and understand our clients' industry 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 55 professionals working seamlessly on our clients' behalf in New York, Zurich and San Francisco and through a strategic partnership in Japan. Our team of experienced bankers and investment professionals provides conflict-free advice and thoughtful, innovative solutions, and we do so with an intensely focused effort that does not stop until our clients achieve success.

### Business Developments

#### GCA's Take:

- > Fleet management is becoming more important as companies begin crafting plans for shared autonomous fleets (e.g. Waymo, Uber)

#### GCA's Take:

- > Because Waymo represents itself as the first to roll out full Level 4 autonomy, other companies that are developing AV technology will feel even more pressure to come to market even quicker with their own self-driving solutions

- > **Baidu** began public road tests of autonomous cars in China; operating in a legal grey area as Beijing works to roll out national regulations (11/23, [FT](#))
- > **Didi Chuxing** will form a joint venture to build its own charging network for EVs to serve the public and vehicles on its platform (11/2, [TechCrunch](#))
- > **General Motors** announced during an investor presentation that it will field a self-driving ride-hailing service by 2019 (11/30, [TechCrunch](#))
- > **Jaguar Land Rover** started testing driverless cars on British roads that are simultaneously being used by the general public (11/17, [Telegraph](#))
- > **Lyft** was granted a permit by the California Department of Motor Vehicles to test self-driving cars on California's public roads (11/22, [Axios](#))
- > **Renault** developed technology that enables self-driving cars to avoid obstacles in emergency situations at up to the same speeds as professional test drivers (11/7, [TechCrunch](#))
- > **STRATIM** launched a platform designed for highly distributed urban fleets, including on-demand car sharing and riding services, urban commute providers and autonomous vehicles (11/15, [Globe Newswire](#))
- > **Tencent Holdings** developed its own autonomous driving system, leveraging its mapping and AI technology to compete (11/7, [Bloomberg](#))
- > **Tesla** unveiled a new all-electric truck that has a range of 500 miles at highway speed and can go 0 to 60 mph in 5 seconds (11/17, [TechCrunch](#))
- > **Toyota** will introduce electric vehicles in China and India from 2020 as it accelerates a push into battery-powered autos (11/17, [Bloomberg](#))
- > **Volkswagen** will invest more than €34bn into electric and self-driving cars over the next five years (11/17, [FT](#))
- > **Volkswagen** is also investing €10bn to develop new-energy vehicles in China by 2025 with JV partner Anhui Jianghuai Automobile Group (11/16, [FT](#))
- > **Waymo** is providing ride-hailing services to its employees at full Level 4 autonomy, allowing its vehicles to share public roads in Phoenix, AZ, with no one in the driver's seat to take control (11/7, [TechCrunch](#))
- > **Waymo** officially completed more than 4 million self-driving miles on public roads through its fleet of vehicles (11/28, [Medium](#))

### Regulatory Developments

#### GCA's Take:

- > Local governments are also realizing the need for well-developed electric vehicle infrastructure in order to spur mass EV adoption

- > The **U.S. NHTSA** said it is looking for input on how it can remove "unnecessary regulatory barriers" to self-driving cars (11/1, [link](#))
- > The **U.S. House** introduced a bill to provide smart technology grants for transportation projects; offering communities up to \$100 million a year for five years for smart transportation projects (11/2, [link](#))
- > **House Republicans** proposed ending a \$7,500 credit for purchasers of electric vehicles (11/2, [link](#)). However, **Senate Republicans** decided to keep the tax credit in tact in their version of the tax bill (11/10, [link](#))
- > The **Atlanta City Council** unanimously passed regulations that require builders to install electric infrastructure that will support EV chargers in each new residential and commercial structure (11/22, [Smart Cities Dive](#))
- > The **European Union** is poised to propose a 30% cut in carbon-dioxide emissions from cars and vans in the decade through 2030 (11/8, [link](#))
- > **China** is considering a resumption of new permits to make electric vehicles as early as the first half of 2018 (11/14, [link](#))
- > The **UK** will increase the tax paid by those driving new diesel cars that do not meet the latest emissions standards (11/22, [Reuters](#))

### Selected Capital Raises

#### GCA's Take:

- > Funding to companies like TuSimple, which is also backed by Nvidia and had completed an earlier round in August this year, demonstrates the massive potential of autonomous driving in trucks

- > **Graphcore**, a designer of semiconductors for machine learning applications like autonomous driving, raised \$50 million from investors including the U.S. venture capital firm Sequoia Capital (11/13, [BNEF](#))
- > **Less**, a French ride-sharing service for commuters and other short distance rides, raised \$19 million from Index Ventures (11/15, [TechCrunch](#))
- > **Lyft** is seeking to raise up to \$500 million in additional funding, on top of the \$1 billion it raised in a round led by CaptialG last month (11/22, [Axios](#))
- > **Mojio**, a Vancouver-based connected car cloud platform company, raised \$30 million CAD in a round led by Kensington Capital Partners (11/30, [NewsWire](#))
- > **NIO**, a Chinese electric-car startup, raised more than \$1 billion in a new round of financing from investors led by Tencent Holdings (11/8, [BNEF](#))
- > **Optibus**, an Israeli real-time public transport planning company, raised \$12 million in a financing round led by Pitango Venture Capital (11/8, [Globes](#))
- > **Optimus Ride**, an MIT spinoff developing self-driving technology, closed an \$18 million Series A funding led by Greycroft Partners (11/2, [PR Newswire](#))
- > **TuSimple**, a Chinese autonomous truck driving technology firm, raised \$55 million in a series C round led by Fuhe Capital (11/21, [China Money Network](#))
- > **Uber** received a bid from SoftBank, Dragoneer and General Atlantic to acquire existing shares at a 30% discount to Uber's last valuation (11/13, [Bloomberg](#))

### Selected Mergers & Acquisitions

- > **Continental AG** acquired **Argus Cyber Security**, whose technology guards connected cars against hacking, for approximately \$400 million (11/3, [NYT](#))
- > **Here Technologies** acquired **Advanced Telematic Systems**, a Berlin-based developer of secure over-the-air (OTA) technology (11/28, [TechCrunch](#))
- > **Yunmanman** acquired **Huochebang**, a provider of Uber-like truck services that pairs cargo shippers with truck drivers (11/7, [Bloomberg](#))

### Selected Partnerships

#### GCA's Take:

- > Large incumbents in adjacent industries like oil and gas are also realizing the disruptive impact of electric vehicles and the new age of mobility

- > **EON SE** teamed up with Danish charging provider **Clever** to build a network of fast-charging stations along European highways (11/10, [BNEF](#))
- > **Ford**, **Volkswagen**, **BMW** and **Daimler** will start building EV fast-charging stations along EU highways this year through JV entity Ionity (11/3, [BNEF](#))
- > **Frigidaire** and **Ryder** partnered with autonomous trucking company **Embark** to deliver smart fridges from Texas to California (11/13, [Engadget](#))
- > **Fujitsu** and **HERE Technologies** plan to link their respective technologies for customers developing advanced mobility services and AVs (11/7, [Fujitsu](#))
- > **Google** and **Volkswagen** are collaborating on how to apply quantum computing to solving fundamental car-related problems (11/8, [TechCrunch](#))
- > **Renault** announced its Chinese joint-venture with **Dongfeng**, and confirmed that 3 new electric vehicles will join its lineup by 2022 (11/1, [Electrek](#))
- > **Shell** is partnering with **Ionity** to provide EV chargers at 80 of Shell's biggest roadside filling stations across 10 European nations (11/26, [FT](#))
- > **Uber** entered into an agreement with **Volvo** to purchase 24,000 of its XC90 SUVs between 2019 and 2021 to form a fleet of AVs (11/20, [TechCrunch](#))
- > **Uber** will partner with automaker **Mahindra and Mahindra** to pilot electric vehicles on its platform in India (11/24, [Reuters](#))
- > **Waymo** enlisted **AutoNation** to maintain and repair the growing number of driverless vehicles Waymo is testing around the country (11/2, [NYT](#))
- > **West Sacramento, CA** and **Arlington, TX** partnered with ride-share business **Via** to provide an on-demand public transit option (11/14, [Smart Cities Dive](#))

### Capital Raises

Date	Company	Invested (\$mm)	Investors	Company Description
11/30	Mojio	\$23.0	Kensington Capital Partners, Trend Forward Capital, innogy Ventures, Amazon Alexa Fund, BDC IT Venture Fund, Deutsche Telekom Capital Partners, Relay Ventures	Provider of a cloud-based connected car platform intended to offer secure connected car services. The company's open connected car platform features auto-scaling and self-healing, processes and cleanses data as it passes through the platform, and acts as a security gateway ensuring only authorized applications have access to the data
11/21	TuSimple	\$55.0	Composite Capital Partners, Fuhe Capital, Sina, Zhiping Capital, Trinity Investments	Developer of an autonomous driving technology designed to create commercially viable autonomous truck driving platform. The company's autonomous driving technology uses computer vision, algorithms, mapping and artificial intelligence for object recognition and driver assistance
11/21	HopSkipDrive	\$7.4	Student Transportation, FirstMark Capital, Upfront Ventures, Skyview Capital, Halogen Ventures	Provider of a web-based platform designed to offer ride sharing service for children. The company's web-based platform lets parents pre-schedule pick-up times for their kids with trusted, vetted drivers to shuttle them between school or activities
11/21	Divergent 3D	\$65.0	O Luxe Holdings, Shanghai Alliance Investment, Altran Technologies, Horizons Ventures	Developer of a 3D printing technology designed to build cars. The company's 3D printing platform incorporates 3D printed joints connecting carbon fiber structural materials that results in an industrial strength chassis
11/20	Shouqi Limousine & Chauffeur	\$105.0	NIO Capital, Baidu, Silk Road Huachuang Beijing	App-based ride booking service with a fleet of authorized vehicles; originally formed by state-owned automobile enterprises Shouqi Group and taxi company Xianglong Taxi Co
11/15	Less	\$19.0	Index Ventures, Daphni	Developer of a ride-sharing application created to match drivers with potential in-route riders. The company's carpooling mobile app connects non-professional drivers with commuters looking for a short distance ride within the drivers already setup route
11/12	Graphcore	\$50.0	Sequoia Capital, Amadeus Capital Partners, Robert Bosch Venture Capital, C4 Ventures, Dell Technologies Capital, Pitango Venture Capital, Samsung Strategy and Innovation Center	Developer of a new generation computer processor designed to accelerate machine intelligence learning, with applications in autonomous driving
11/8	NIO	\$1,000.0	Tencent, CITIC Capital Partners, Lone Pine Capital, Baillie Gifford	Engages in the research, development and production of smart, high-performance, premium electric vehicles that offer an artificially intelligent engine coupled with an intuitive human interface that provides verbal and visual connections both within the vehicle and with the outside world
11/7	Optibus	\$12.0	Pitango Venture Capital, Verizon Ventures, Ronald Cohen	Developer and provider of a public transportation scheduling and operations technology tool. The company offers a SaaS based public transit optimization software for fleet management.
11/2	Optimus Ride	\$18.0	Emerson Collective, Fraser McCombs Capital, Greycroft Partners, Joichi Ito	Developer of self driving technologies designed to enable safe, sustainable and equitable mobility services. The company develops self driving technologies are fully autonomous driving technologies that include electric vehicles and mobility-on-demand systems

### Mergers & Acquisitions

Date	Target	Acquiror	EV			Target Description
			(\$mm)	Revenue	EBITDA	
11/28	Advanced Telematic Systems	HERE Technologies	n.a.	n.a.	n.a.	Developer of open standards-based software products intended to simplify software updating technology for the automotive industry
11/27	Huochebang	Yunmanman	n.a.	n.a.	n.a.	Provider of an online truck logistics platform created to connect cargo shippers with truck drivers in China
11/6	Perbix	Telsa	\$10.5	n.a.	n.a.	Designer and manufacturer of factory automation equipment
11/3	Argus Cyber Security	Continental	\$400.0	n.a.	n.a.	Provider of automotive cyber security services designed to offer advanced connectivity features while protecting vehicles from being hacked

# Advanced Mobility Market Update

## Trading Comparables

Company	Price as of 11/30/2017	Market Cap	Firm Value	EV / Revenue		EV/EBITDA		P/E	
				2017E	2018E	2017E	2018E	2017E	2018E
<b>Automotive Companies</b>									
Toyota	¥ 7044.0	\$205,627	\$341,118	1.3x	1.3x	11.8x	11.3x	11.0x	10.4x
Volkswagen	€ 173.95	103,928	261,992	0.9x	0.9x	6.7x	6.2x	7.4x	6.7x
Daimler	€ 69.52	89,459	207,683	1.0x	1.0x	8.9x	8.7x	7.6x	7.7x
BMW	€ 84.68	65,609	167,781	1.4x	1.3x	9.6x	9.5x	7.6x	7.7x
Ford	\$ 12.52	49,894	161,047	1.1x	1.1x	14.1x	13.3x	6.9x	8.0x
General Motors	\$ 43.09	62,228	132,949	0.9x	0.9x	7.5x	8.2x	6.8x	7.4x
Nissan	¥ 1088.0	40,885	106,052	1.0x	0.9x	9.9x	9.2x	7.2x	7.0x
Honda	¥ 3744.0	60,233	105,401	0.8x	0.7x	8.9x	8.1x	10.5x	9.7x
Hyundai	₩ 164500.0	38,677	85,756	0.9x	0.9x	10.9x	10.0x	10.0x	8.0x
Renault	€ 85.38	30,250	70,209	1.0x	0.9x	9.1x	8.7x	5.5x	5.4x
SAIC Motor	¥ 30.88	54,823	65,131	0.5x	0.4x	13.9x	11.4x	10.1x	9.1x
Tesla	\$ 308.85	51,687	61,205	3.1x	2.2x	NM	30.0x	NM	NM
Fiat Chrysler	€ 14.42	33,556	41,955	0.3x	0.3x	2.6x	2.5x	6.5x	5.6x
BYD	HK\$ 69.25	25,981	36,668	1.8x	1.5x	16.0x	12.7x	35.7x	24.0x
Geely	HK\$ 27.20	32,098	29,374	1.7x	1.4x	14.8x	11.4x	21.7x	15.9x
Tata Motors	₹ 404.65	20,429	26,139	0.5x	0.5x	4.8x	3.7x	15.4x	10.2x
Suzuki	¥ 6040.0	26,564	25,306	0.7x	0.7x	5.6x	5.1x	14.0x	12.7x
Guangzhou Automobile	HK\$ 19.60	24,544	22,845	1.7x	1.6x	22.5x	18.0x	10.3x	8.5x
Subaru	¥ 3669.0	25,191	16,988	0.5x	0.5x	3.7x	3.4x	11.9x	9.5x
Peugeot	€ 17.38	18,659	12,427	0.1x	0.1x	1.7x	1.6x	7.7x	7.2x
Dongfeng Motor	HK\$ 9.82	10,811	11,322	0.6x	0.6x	26.5x	25.1x	5.3x	5.0x
KIA	₩ 33650.0	12,423	10,508	0.2x	0.2x	4.2x	2.9x	10.2x	5.9x
Mazda	¥ 1503.0	8,404	8,107	0.3x	0.3x	3.7x	3.6x	8.3x	7.4x
Mitsubishi	¥ 785.0	10,481	6,225	0.3x	0.3x	4.9x	3.8x	NM	12.0x
FAW Car Group	¥ 10.60	2,674	2,692	0.5x	0.5x	11.7x	9.9x	39.6x	27.2x
<b>Mean</b>				<b>0.9x</b>	<b>0.8x</b>	<b>9.7x</b>	<b>9.5x</b>	<b>12.0x</b>	<b>9.9x</b>
<b>Median</b>				<b>0.9x</b>	<b>0.9x</b>	<b>9.0x</b>	<b>8.7x</b>	<b>10.0x</b>	<b>8.0x</b>
<b>Truck Companies</b>									
Daimler	€ 69.52	\$89,459	\$207,683	1.0x	1.0x	8.9x	8.7x	7.6x	7.7x
Volvo	₩ 159.20	40,434	52,623	1.3x	1.2x	10.1x	9.5x	15.8x	14.6x
PACCAR	\$ 70.33	24,265	29,567	1.5x	1.5x	9.6x	8.7x	16.8x	15.1x
MAN SE	€ 94.36	16,596	19,504	1.1x	1.0x	15.5x	12.5x	51.8x	31.3x
Isuzu	¥ 1771.0	13,370	14,322	0.8x	0.7x	7.1x	6.5x	13.2x	11.9x
Navistar	\$ 40.71	4,063	8,233	0.9x	0.9x	15.7x	10.5x	NM	18.5x
<b>Mean</b>				<b>1.1x</b>	<b>1.1x</b>	<b>11.1x</b>	<b>9.4x</b>	<b>21.1x</b>	<b>16.5x</b>
<b>Median</b>				<b>1.1x</b>	<b>1.0x</b>	<b>9.9x</b>	<b>9.1x</b>	<b>15.8x</b>	<b>14.8x</b>
<b>Tier 1 Suppliers</b>									
Continental	€ 223.75	\$52,382	\$56,947	1.0x	1.0x	7.1x	6.5x	14.1x	12.7x
Denso	¥ 6305.0	44,520	43,729	0.9x	0.9x	7.5x	7.0x	16.8x	15.4x
Bridgestone	¥ 5095.0	37,122	36,167	1.1x	1.0x	6.3x	5.9x	13.2x	12.2x
Delphi	\$ 104.67	27,129	31,049	1.7x	1.6x	10.2x	9.7x	15.4x	14.5x
Michelin	€ 121.85	26,291	29,240	1.1x	1.1x	5.9x	5.5x	13.2x	11.8x
Magna	C\$ 72.37	19,871	23,094	0.6x	0.5x	5.8x	5.6x	9.6x	8.7x
Valeo	€ 60.99	17,359	19,075	0.8x	0.7x	6.8x	5.9x	14.4x	12.7x
Goodyear	\$ 32.37	7,917	13,679	0.9x	0.9x	6.4x	5.6x	11.2x	8.7x
Lear	\$ 180.89	12,100	13,073	0.6x	0.6x	6.1x	5.9x	10.7x	10.0x
Autoliv	\$ 127.92	11,027	11,825	1.1x	1.0x	9.2x	8.3x	20.4x	17.9x
Faurecia	€ 64.28	10,433	11,213	0.5x	0.5x	5.1x	4.7x	14.5x	12.9x
Visteon	\$ 131.69	4,038	3,812	1.2x	1.1x	10.4x	9.5x	21.1x	18.8x
ATS Automation Tooling Systems	C\$ 16.04	1,152	1,146	1.3x	1.3x	11.6x	11.0x	24.7x	21.2x
Stoneridge	\$ 22.82	652	737	0.9x	0.8x	7.6x	7.2x	15.0x	14.8x
<b>Mean</b>				<b>1.0x</b>	<b>0.9x</b>	<b>7.6x</b>	<b>7.0x</b>	<b>15.3x</b>	<b>13.7x</b>
<b>Median</b>				<b>1.0x</b>	<b>0.9x</b>	<b>6.9x</b>	<b>6.2x</b>	<b>14.5x</b>	<b>12.8x</b>
<b>Autonomous Driving Chip Makers</b>									
Intel	\$ 44.84	\$205,686	\$220,692	3.5x	3.3x	8.3x	8.0x	13.8x	13.8x
Nvidia	\$ 200.71	119,031	114,726	10.6x	9.1x	34.6x	29.2x	49.8x	43.3x
Qualcomm	\$ 66.34	98,061	82,646	3.6x	3.4x	9.7x	11.6x	16.3x	18.7x
Advanced Micro Devices	\$ 10.89	10,449	10,994	1.9x	1.7x	32.9x	19.3x	NM	30.6x
<b>Mean</b>				<b>4.9x</b>	<b>4.4x</b>	<b>21.4x</b>	<b>17.0x</b>	<b>26.6x</b>	<b>26.6x</b>
<b>Median</b>				<b>3.5x</b>	<b>3.4x</b>	<b>21.3x</b>	<b>15.5x</b>	<b>16.3x</b>	<b>24.6x</b>

# Advanced Mobility Market Update

## Trading Comparables (cont.)

Company	Price as of 11/30/2017	Market Cap	Firm Value	EV / Revenue		EV/EBITDA		P/E	
				2017E	2018E	2017E	2018E	2017E	2018E
<b>Intelligent Transport</b>									
Roper Technologies	\$ 267.21	\$26,806	\$31,534	6.4x	6.0x	19.6x	18.1x	28.7x	26.3x
FLIR Systems	\$ 46.58	6,409	6,392	3.3x	3.2x	16.1x	14.0x	25.1x	22.0x
LS Corp	W 66700.0	1,971	5,576	0.6x	0.6x	7.3x	7.2x	8.5x	9.1x
Gosuncn Technology Group	Y 12.63	2,150	2,094	5.0x	3.9x	NM	NM	33.4x	25.8x
Beijing E-Hualu IT	Y 25.01	1,393	1,851	2.9x	NM	27.9x	21.5x	51.0x	39.1x
Cubic Corporation	\$ 61.95	1,653	1,839	1.2x	NM	17.4x	14.1x	NM	35.8x
Vaisala	€ 44.0	956	869	2.0x	2.0x	14.5x	13.3x	25.2x	21.6x
INIT Innovation in Traffic Systems	€ 17.80	215	254	1.6x	1.5x	18.9x	12.7x	44.6x	23.7x
Iteris, Inc	\$ 6.41	204	188	1.7x	1.4x	NM	50.3x	NM	NM
Image Sensing Systems <sup>(1)</sup>	\$ 3.30	17	14	NM	NM	NM	NM	NM	NM
<b>Mean</b>				<b>2.7x</b>	<b>2.7x</b>	<b>17.4x</b>	<b>18.9x</b>	<b>32.6x</b>	<b>26.5x</b>
<b>Median</b>				<b>2.0x</b>	<b>2.0x</b>	<b>17.4x</b>	<b>14.1x</b>	<b>31.0x</b>	<b>25.8x</b>
<b>ITS / Smart Tolling</b>									
Atlantia	€ 27.91	\$27,432	\$46,641	6.3x	6.1x	10.8x	10.3x	20.1x	18.6x
Abertis Infraestructuras	€ 18.76	22,260	44,475	6.4x	6.3x	10.3x	9.7x	19.6x	17.5x
Ferrovial	€ 18.50	16,563	22,834	1.6x	1.6x	20.3x	20.7x	32.9x	32.8x
Autostrada	€ 23.96	2,833	6,089	2.6x	2.4x	7.0x	6.5x	15.3x	12.7x
Conduent	\$ 15.26	3,166	4,877	0.8x	0.8x	7.3x	6.7x	19.3x	15.6x
Kapsch TrafficCom	€ 49.24	748	768	0.9x	0.9x	8.6x	7.8x	15.5x	14.1x
Cross Harbour <sup>(1)</sup>	HK\$ 12.60	596	168	NM	NM	NM	NM	NM	NM
Q-Free	NOK 7.95	85	110	0.9x	0.9x	9.5x	6.8x	NM	15.7x
<b>Mean</b>				<b>2.8x</b>	<b>2.7x</b>	<b>10.6x</b>	<b>9.8x</b>	<b>20.4x</b>	<b>18.1x</b>
<b>Median</b>				<b>1.6x</b>	<b>1.6x</b>	<b>9.5x</b>	<b>7.8x</b>	<b>19.5x</b>	<b>15.7x</b>
<b>Telematics</b>									
TomTom	€ 9.07	\$2,522	\$2,402	2.3x	2.3x	13.9x	11.4x	37.6x	27.6x
Orbcomm	\$ 10.76	790	1,000	3.6x	3.3x	21.1x	15.4x	NM	NM
CalAmp	\$ 22.85	799	818	2.1x	2.0x	15.3x	13.2x	19.9x	17.4x
Ituran	\$ 35.60	732	704	2.8x	2.6x	10.3x	9.1x	17.4x	16.6x
Cartrack <sup>(1)</sup>	R 19.45	385	396	NM	NM	NM	NM	NM	NM
Mix Telematics	R 6.18	275	255	2.0x	1.8x	8.4x	7.3x	28.3x	22.4x
Quartix	£ 3.60	232	225	6.8x	NM	24.6x	21.4x	30.5x	26.9x
Inseeqo	\$ 1.84	106	216	1.0x	0.9x	NM	9.3x	NM	50.2x
Quarterhill (fka Wi-LAN)	C\$ 2.19	196	167	1.6x	1.4x	2.7x	8.3x	3.3x	11.7x
TeleNav	\$ 5.50	228	133	0.6x	0.4x	NM	NM	NM	NM
Kerlink	€ 19.55	119	105	2.4x	1.7x	NM	NM	NM	NM
<b>Mean</b>				<b>2.5x</b>	<b>1.8x</b>	<b>13.8x</b>	<b>11.9x</b>	<b>22.8x</b>	<b>24.7x</b>
<b>Median</b>				<b>2.2x</b>	<b>1.8x</b>	<b>13.9x</b>	<b>10.4x</b>	<b>24.1x</b>	<b>22.4x</b>
<b>Logistics</b>									
UPS	\$ 121.45	\$106,777	\$121,256	1.8x	1.7x	11.4x	10.6x	20.2x	18.7x
FedEx	\$ 231.46	64,101	75,754	1.2x	1.1x	8.7x	7.7x	18.7x	16.5x
Deutsche Post	€ 39.89	58,629	63,251	0.8x	0.8x	10.2x	9.5x	17.5x	16.3x
Fortive	\$ 74.65	25,799	28,564	4.0x	3.7x	18.5x	16.4x	26.2x	23.3x
J.B. Hunt	\$ 111.14	12,095	13,172	1.7x	1.5x	12.6x	10.9x	29.9x	24.9x
Penske	\$ 48.36	4,259	10,104	0.5x	0.5x	13.4x	12.8x	11.2x	10.5x
Descartes Systems	\$ 27.75	2,052	2,074	7.8x	7.0x	25.8x	22.0x	78.4x	57.7x
<b>Mean</b>				<b>2.5x</b>	<b>2.3x</b>	<b>14.4x</b>	<b>12.9x</b>	<b>28.9x</b>	<b>24.0x</b>
<b>Median</b>				<b>1.7x</b>	<b>1.5x</b>	<b>12.6x</b>	<b>10.9x</b>	<b>20.2x</b>	<b>18.7x</b>
<b>Communications / Infrastructure</b>									
AT&T	\$ 36.38	\$228,838	\$344,258	2.1x	2.2x	6.6x	6.5x	12.5x	12.4x
Verizon	\$ 50.89	210,989	325,602	2.6x	2.5x	7.2x	7.0x	13.5x	13.2x
Cisco Systems	\$ 37.30	186,473	150,808	3.1x	3.0x	8.8x	9.0x	15.4x	14.8x
T-Mobile	\$ 61.07	50,118	80,285	1.9x	1.8x	7.4x	6.8x	24.6x	22.2x
Sprint	\$ 5.99	23,767	55,733	1.7x	1.6x	5.1x	4.7x	NM	NM
Hitachi	¥ 834.20	35,828	51,018	0.6x	0.6x	5.5x	5.1x	13.0x	11.0x
Toshiba	¥ 276.0	10,679	16,676	0.4x	0.5x	2.8x	6.0x	1.9x	3.0x
Xerox	\$ 29.66	7,464	11,929	1.2x	1.3x	7.0x	6.7x	8.7x	8.4x
<b>Mean</b>				<b>1.7x</b>	<b>1.7x</b>	<b>6.3x</b>	<b>6.5x</b>	<b>12.8x</b>	<b>12.1x</b>
<b>Median</b>				<b>1.8x</b>	<b>1.7x</b>	<b>6.8x</b>	<b>6.6x</b>	<b>13.0x</b>	<b>12.4x</b>
<b>Aggregate Mean</b>				<b>1.8x</b>	<b>1.6x</b>	<b>11.1x</b>	<b>10.5x</b>	<b>18.8x</b>	<b>16.8x</b>
<b>Aggregate Median</b>				<b>1.2x</b>	<b>1.1x</b>	<b>9.3x</b>	<b>9.0x</b>	<b>15.3x</b>	<b>14.6x</b>

Source: FactSet, SEC filings and third party providers. Values in U.S. Dollars. Share prices shown in local currencies.

(1) Limited equity research coverage.



# Global Experts in Sustainable Technology & Infrastructure



## INVESTMENT BANKING

### Mergers & Acquisitions

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

\$12bn

### 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

## ASSET MANAGEMENT

### Public Equity

- GCA Sustainable Growth Fund
- GCA Emerging Markets Sustainable Growth Fund

\$590mm

## Highly Experienced Partners Supported by 55 Professionals

### Jeff McDermott



Managing Partner  
Partner  
New York  
+1 212 946 3940  
[jeff@greentechcapital.com](mailto:jeff@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

### Duncan Williams



Partner  
San Francisco  
+1 415 697 1560  
[duncan@greentechcapital.com](mailto:duncan@greentechcapital.com)

- > 20+ years of experience
- > >40 completed transactions
- > Advanced transportation
- > Industrial IoT & software
- > Environmental services
- > Advanced building products

### Derek Bentley



Partner  
New York  
+1 212 946 3948  
[dbentley@greentechcapital.com](mailto:dbentley@greentechcapital.com)

- > 15+ years of experience
- > >35 completed transactions
- > Renewable energy assets
- > Distributed generation Water

### PJ Deschenes



Partner  
New York  
+1 212 946 3362  
[pjdeschenes@greentechcapital.com](mailto:pjdeschenes@greentechcapital.com)

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

### Michael Horwitz



Partner  
San Francisco  
+1 415 697 1561  
[mhorwitz@greentechcapital.com](mailto:mhorwitz@greentechcapital.com)

- > 20+ years of experience
- > >30 completed transactions
- > Energy software and services
- > Energy efficiency
- > Renewable energy
- > Smart grid

### Karen Mozes Laton



Partner & Head of Marketing  
New York  
+1 212 946 3375  
[kareen@gcainvest.com](mailto:kareen@gcainvest.com)

- > 20+ years of experience
- > Chief Operating Officer of GCA Investment Management

### Jim Long



Partner  
Zürich  
+41 79 510 3920  
[jim@greentechcapital.com](mailto:jim@greentechcapital.com)

- > 25+ years of experience
- > >75 completed transactions
- > Energy companies
- > Utilities

### Steve Megyery



Partner  
New York  
+1 212 946 3949  
[steve@greentechcapital.com](mailto:steve@greentechcapital.com)

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

### Damien Sauer



Partner  
Zürich  
+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 & COO  
New York  
+1 212 946 3950  
[robert@greentechcapital.com](mailto:robert@greentechcapital.com)

- > 25+ years of experience
- > Chief Operating Officer of GCA
- > Chief Compliance Officer

### David Smith



Partner & Portfolio Manager  
New York  
+1 212 946 2231  
[david@gcainvest.com](mailto:david@gcainvest.com)

- > 20+ years of experience
- > Chief Investment Officer
- > Portfolio Manager of GCA Sustainable Growth Long-Only Fund

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