Next Generation Mobility

Megatrends transforming the global transportation industry & investment opportunities

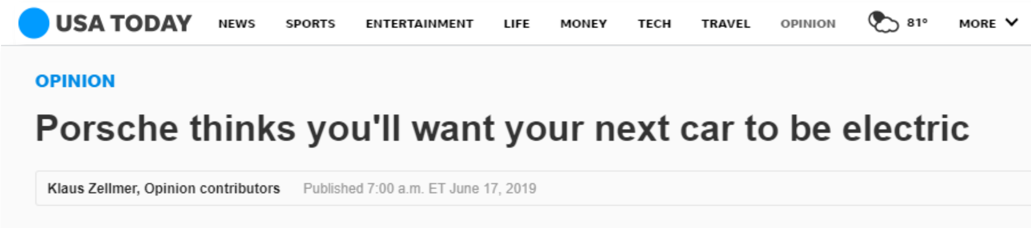
What is Next Generation Mobility?

The $4.2 trillion global transportation industry today is poised for disruption

1900

FUTURE

The Future of Mobility is Here and Now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OPINION

Porsche thinks you'll want your next car to be electric

Klaus Zellmer, Opinion contributors Published 7:00 a.m. ET June 17, 2019


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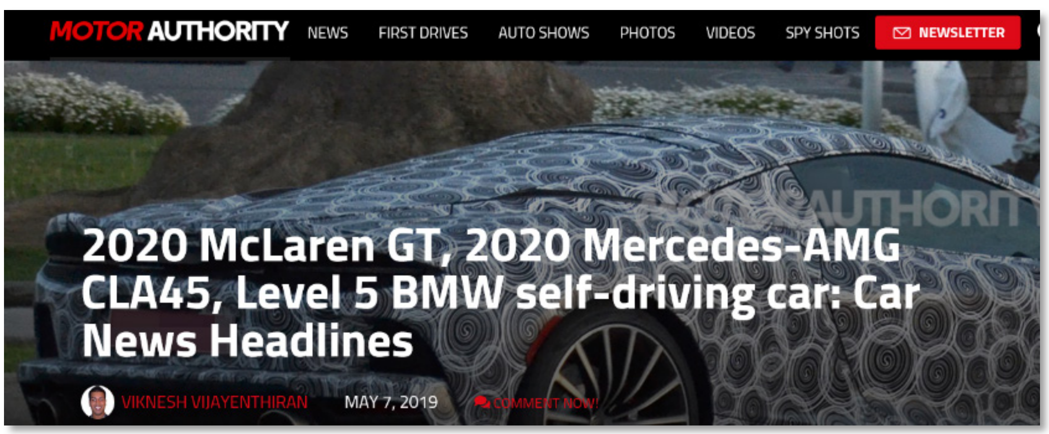
Self-driving cars could provide £62bn boost to UK economy by 2030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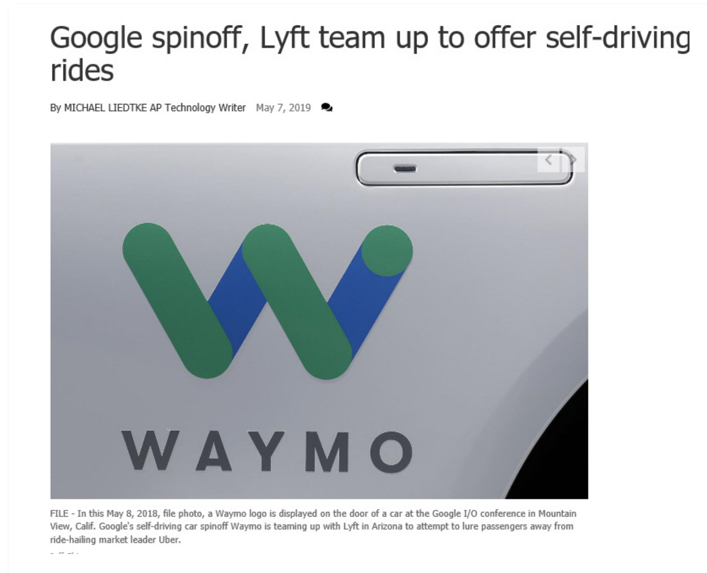

Google spinoff, Lyft team up to offer self-driving rides

By MICHAEL LIEDTKE AP Technology Writer May 7, 2019

FILE - In this May 8, 2018, file photo, a Waymo logo is displayed on the door of a car at the Google I/O conference in Mountain View, Calif. Google's self-driving car spinoff Waymo is teaming up with Lyft in Arizona to attempt to lure passengers away from ride-hailing market leader Uber.

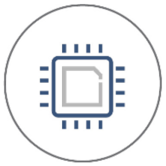

Volvo to start shipping self-driving cars to Uber next year

Deal 'back on track' despite delays to testing after fatal accident, says carmaker

Source: USA Today, Associated Press, The Guardian, Motor Authority, Financial Times.

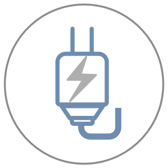
3 Megatrends are Transforming Global Transportation

Evolving technology innovations lead to long-horizon opportunities in Next Generation Mobility



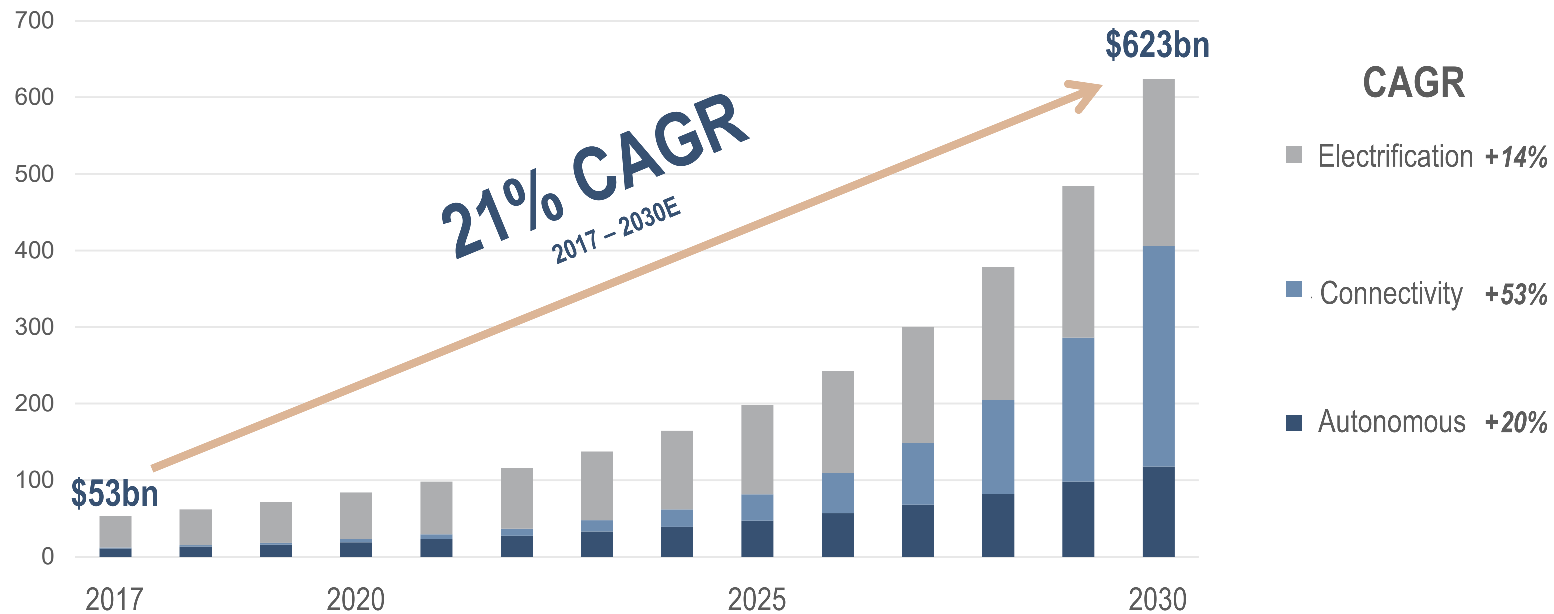
AUTONOMOUS

CONNECTIVITY



ELECTRIFICATION

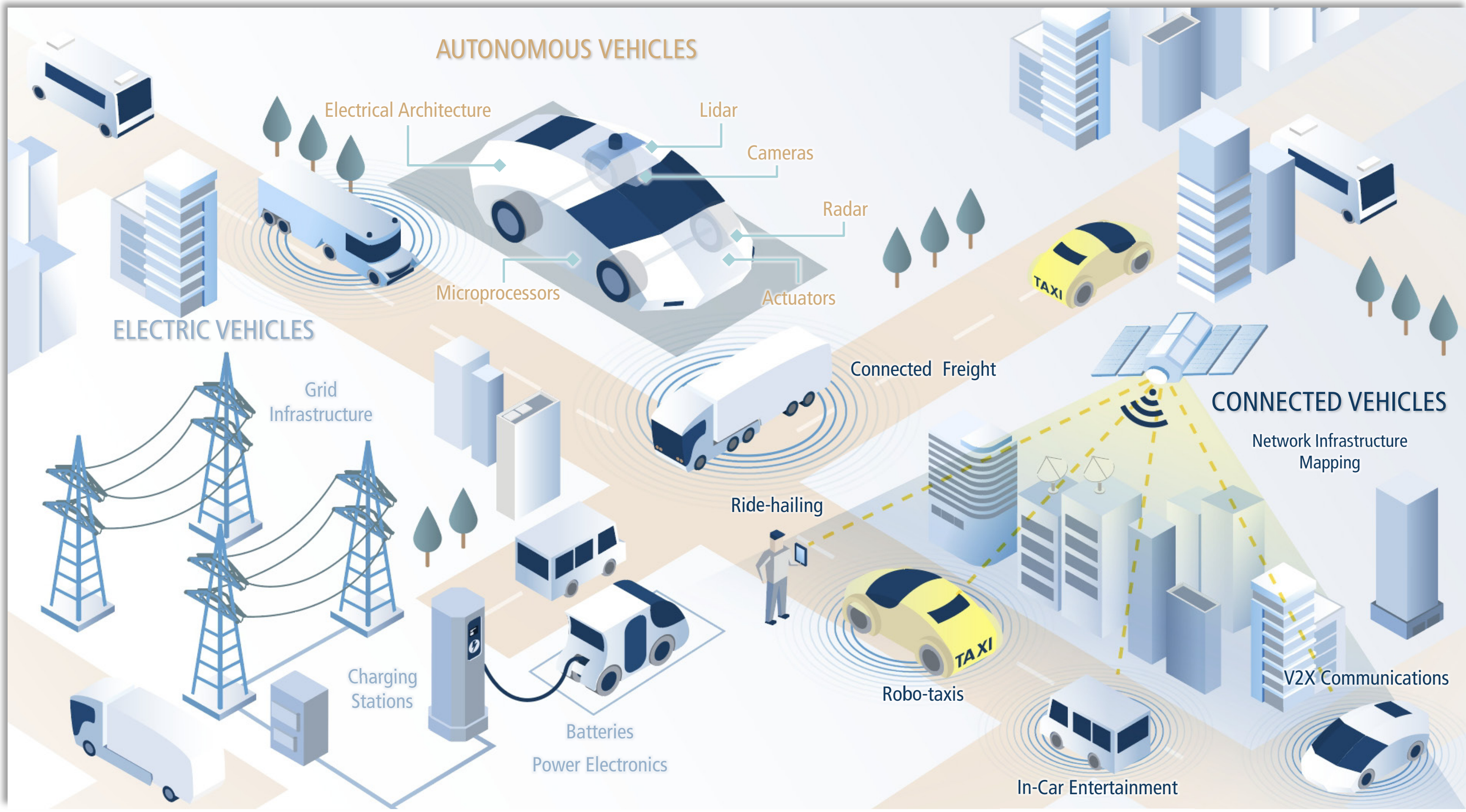
Total Market Opportunities (US$ bn)



Source: Neuberger Berman estimates Google / Waymo.

Where is the Investment Opportunity?

The evolution of transportation and the broader mobility ecosystem offer vast long-term opportunities



Source: Neuberger Berman.

Neuberger Berman Next Generation Mobility Fund

Investment Framework

Seeking growth opportunities in the long-term secular trend of Next Generation Mobility

Focused strategy: Targeting key enablers or beneficiaries with sustainable leadership of Autonomous, Electric, Connected vehicles

Bottom-up: Forward-looking portfolio based on bottom-up stock selection & strict portfolio construction guidelines, including ESG analysis

Research & discipline: Leveraging our sector experts in identifying winners & avoiding hypes, with disciplined approach in valuations

Visibility & predictability: Exploiting short-termism by focusing on visible & predictable long-term secular trends

Key Investment Buckets

Autonomous Vehicles

Radar
LIDAR
Actuators
Vision Sensors
Domain Controls

Electric Vehicles

Batteries
Electric Motors
Power Electronics
Electric Architecture
Charging Infrastructure

Connected Vehicles

Connected Services
Fleet Management
In-Car Entertainment
Networking
Cloud Computing

This material is intended as a broad overview of the portfolio managers' style, philosophy and investment process and is subject to change without notice. Portfolio managers' views may differ from those of other portfolio managers as well as the views of Neuberger Berman.

Portfolio Construction

Broad guidelines to help exploit this long term secular trend

Number of Stocks

Typically:

40-60

Current # of holdings: 45

Position Size

1-6%

Regional Guidelines

50%-70% North America
20%-30% Europe
10%-30% Asia
Max. 50% in EM

Sector Weight Guidelines

25-50% Technology
10-40% Consumer Discretionary
20-40% Other

Weighted Average PER

25.0x

Weighted Average Market Cap

$81,796m

Weighted Median | $24,001 m

Weighted Average 3 Year EPS Growth

26.3%

Reference Benchmark

MSCI ACWI (USD Net Total Return)

NOTE: Guidelines are generally as of time of purchase.
Data is as of November 29, 2019. Representative portfolio information (characteristics, holdings, weightings, etc.) is subject to change without notice. See Additional Disclosures at the end of this piece, which are an important part of this presentation.

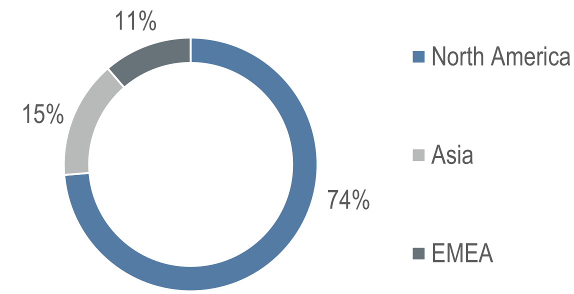
Next Generation Mobility: Portfolio Overview

Capitalizing on the long-term disruptive theme of next generation mobility

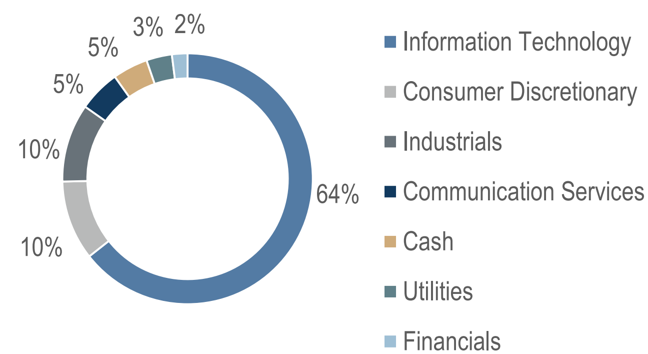
Top 10 Holdings

Ticker	Company	Country	Mkt cap (US$mn)	Business Description	Buckets AV	EV	CV	% of Total AUM
ASML	ASML Holding NV ADR	Netherlands	113,970	Semi Equipment	x	x	x	4.07
KEYS	Keysight Technologies, Inc.	US	20,068	Testing Equipment	x		x	3.16
ANSS	ANSYS, Inc.	US	21,436	Software	x	x		3.12
ALTR	Altair Engineering Inc. Class A	US	2,380	Software	x	x		3.10
ADI	Analog Devices, Inc.	US	41,600	Semiconductors	x	x	x	3.02
TMUS	T-Mobile US, Inc.	US	67,204	Communications			x	3.01
NXPI	NXP Semiconductors NV	Netherlands	32,302	Semiconductors	x	x	x	2.99
ON	ON Semiconductor Corporation	US	8,806	Semiconductors	x	x	x	2.91
AMBA	Ambarella, Inc.	US	1,808	Semiconductors	x	x		2.89
QRVO	Qorvo, Inc.	US	12,119	Semiconductors	x		x	2.88
							Aggregate of top 10 holdings =	**31.16%**

Regional Country Allocation (%)



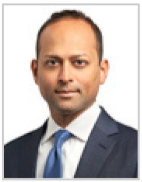
Sector Allocation (%)



Source: Neuberger Berman, FactSet, as of November 29, 2019.

Investment Team

Experienced sector experts with global coverage

	ROLE	EXPERIENCE	SECTOR FOCUS	LOCATION
 **Hari Ramanan**	Lead PM Managing Director CIO, Research Funds	Valarc Holdings, Eminence Capital, Basso Capital, Advent International, Lehman Brothers Private Equity Division Knox College, BA Mathematics & Economics 19 Years of Industry Experience **17 yrs experience as PM of Global Equity**	Cross-Sector Generalist	New York
 **Yan Taw (YT) Boon**	Co-PM Managing Director, Director of Research - Asia	Credit Suisse, Huawei, Broadcom, Cadence, ARM University of Edinburgh, MSc University of Southampton, BEng 15 Years of Industry Experience **Former Chip Designer; Implemented Mobileye's FIRST Autonomous prototype chip in 2004**	Technology	Hong Kong
 **Michael Barr**	Co-PM Managing Director, Senior Research Analyst	Prudential Equity Group, LLC University of Virginia, BA Economics 19 yrs of industry experience	Automotive, Industrials	New York
 **John J. Hirt**	Senior Vice President, Thematic Research Analyst	Citi, Perry Capital University of Wisconsin, MBA University of Wisconsin-La Crosse, BS Finance & Economics 10 Years of Industry Experience	Automotive, Industrials	New York

Portfolio oversight by Tim Creedon (Global Director of Research) & David Levine (Portfolio Risk)
Fully supported 40 professionals in Neuberger Berman Global Equity Research Department

Proven Thematic Strategies

Given the group's breadth and depth of research coverage, we believe we are uniquely positioned to offer disruptive theme investing solutions

Global Thematic Investment Portfolios	AUM/AUA[2]	Inception Date
Autonomous Vehicle[1]	~US$800M	Jun 2017
Next Generation Connectivity[1]	~US$3,600M	Dec 2017
Global FinTech[1]	~US$50M[3]	Nov 2017
Next Generation Mobility Fund[2]	~US$39M	Aug 2018

Total AUM > US$4.4B

[1] Portfolios that have been implemented with clients. Source: Neuberger Berman. Unless stated otherwise, information as of 30 September, 2019.
[2] Source: Neuberger Berman. As at 30 November, 2019.
[3] Global FinTech thematic investment portfolio incorporates a $0.3M seed fund and approximately $50M in assets under advisement for the Strategy.

Neuberger Berman Next Generation Mobility Fund

Investment Manager	Neuberger Berman Europe Limited
Sub – Investment Manager	Neuberger Berman Investment Advisers LLC
Inception Date	August 21, 2018
Structure	UCITS
Investment Objective & Strategy	The fund seeks to achieve long term capital appreciation through investment in a portfolio of global equity holdings, focusing on companies that are disrupting the global transportation sector by providing solutions to drive the proliferation of autonomous, electric and connected vehicles as well as companies that are well positioned to benefit from the shift to Next Generation Mobility.
Reference benchmark	MSCI AC World Index (ACWI)
Liquidity	Daily
Management Fees	Class X USD Acc: 1.55%
Maximum TER	Class X USD Acc: 1.85%
Fund Codes	USD X Accumulating Class ISIN: IE00BGQVSN72 Bloomberg: NBNGUXA ID HKD X Accumulating Class ISIN: IE00BGV7KG77 Bloomberg: NBNGHXA ID GBP X Accumulating Class ISIN: IE00BGQVXZ48 Bloomberg: NBNGGXA ID AUD X Accumulating Class ISIN: IE00BGV7KH84 Bloomberg: NBNGAXA ID SGD X Accumulating Class ISIN: IE00BGV7KJ09 Bloomberg: NBNGSXA ID EUR X Accumulating Class ISIN: IE00BGQVT674 Bloomberg: NBNGEXA ID
Base Currency	USD

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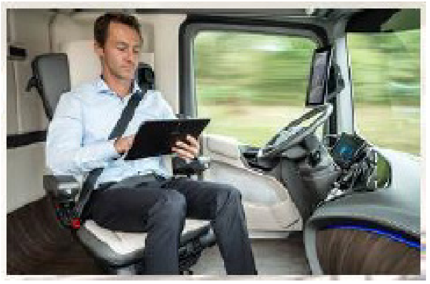
This does not constitute an offer or a solicitation with respect to the purchase or sale of any security. Characteristic of the fund mentioned in this document may be subject to change.

Autonomous Vehicles: Technology Roadmap

Hands Off, Eyes Off and Mind Off driving could be achieved in the next decade

2017 (Early Stage)	2020 (Ramp-Up Stage)	2025 (Proliferation Stage)	2030 (Maturing Stage)
			
Hands Off	Eyes Off	Mind Off	Driver Off

*Source: Neuberger Berman estimates, SAE International " Automated Driving" Levels of driving automation are defined in new SAE international standard J3016 and Osram, June 2018. For illustrative purposes only. This material is intended as a broad overview of the portfolio managers' style, philosophy and investment process and is subject to change without notice. Portfolio managers' views may differ from those of other portfolio managers as well as the views of Neuberger Berman.

Autonomous Vehicles: Better Active Safety Features Leads to Fewer Accidents

Semi-autonomous technology can deliver greater safety benefits

1.25M

Road Traffic Deaths Annually

Safety

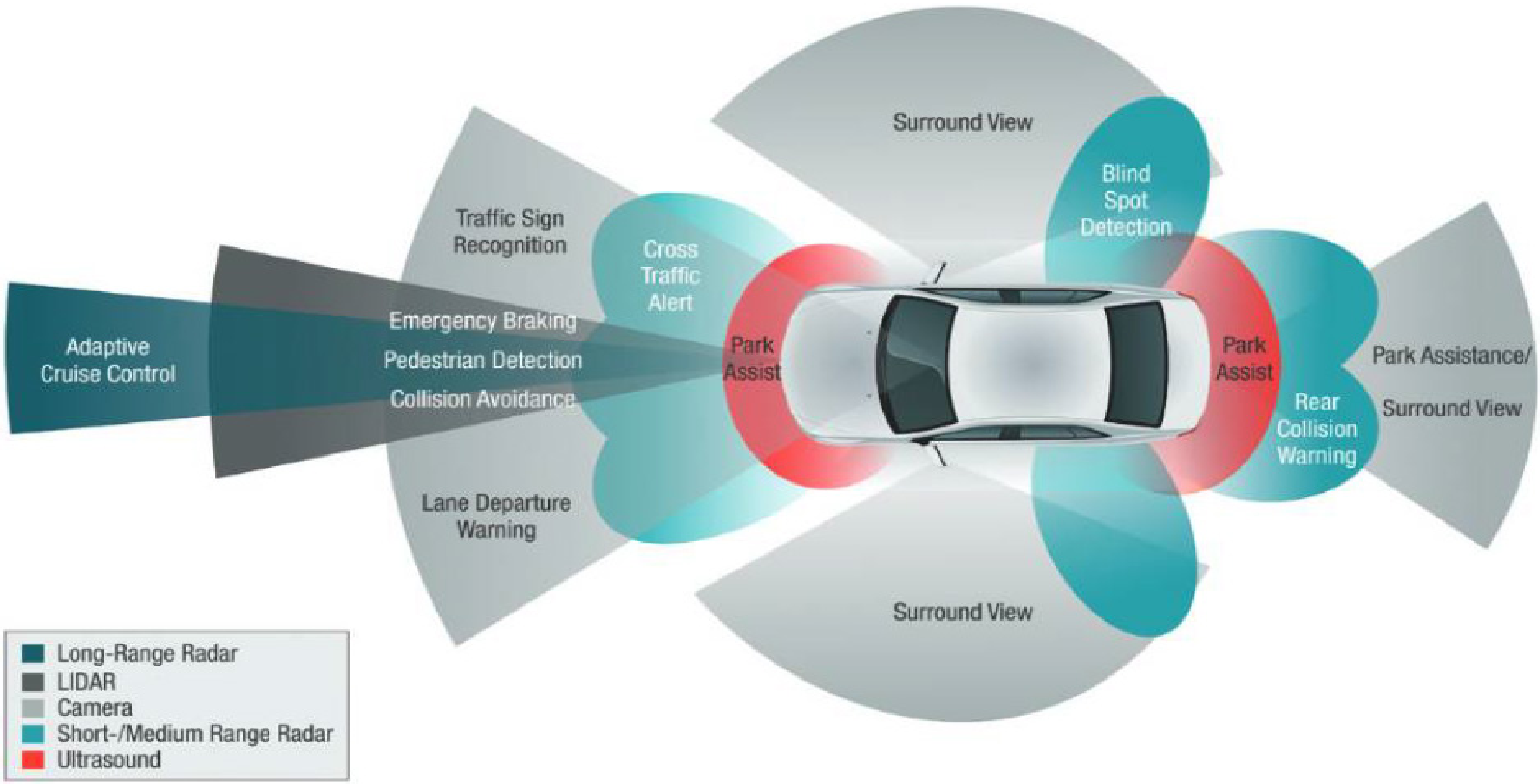
87%

Fewer Accidents

Source: Aptiv.

Autonomous Vehicles: Increasing Sensor Content

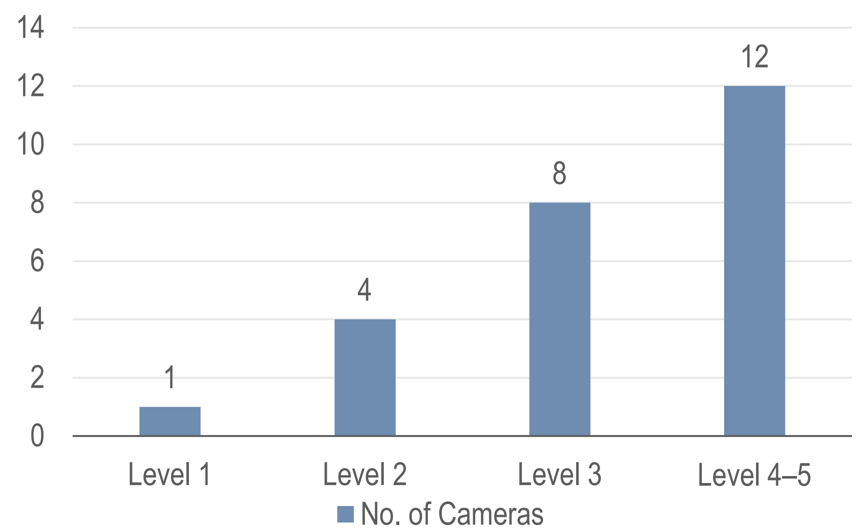
Autonomous vehicles will be increasingly equipped with ADAS technologies enabled by smart sensors and powerful microprocessors

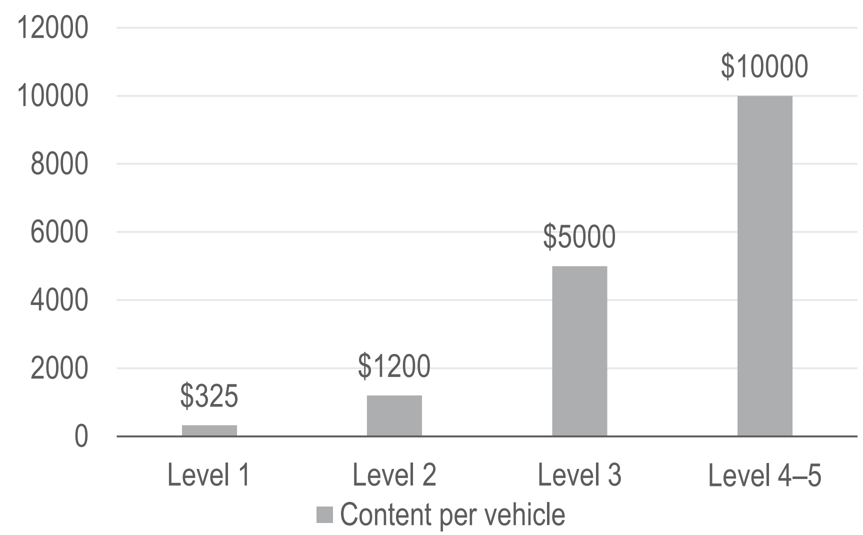


Source: SAE International "Automated Driving" Levels of driving automation are defined in new SAE international standard J3016.

Autonomous Vehicles: Content Growth Opportunities

Content per vehicle will grow as the autonomy level increases





KEY ENABLERS

舜宇光学科技(集团)有限公司 SUNNY OPTICAL TECHNOLOGY(GROUP)CO.,LTD

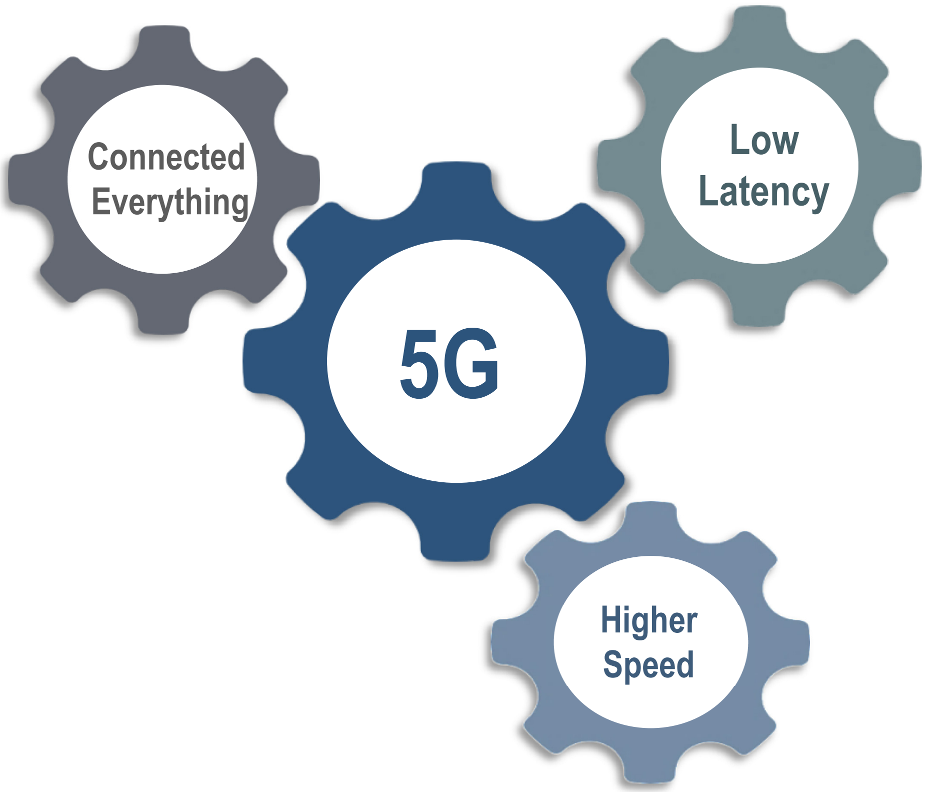
ON Semiconductor®

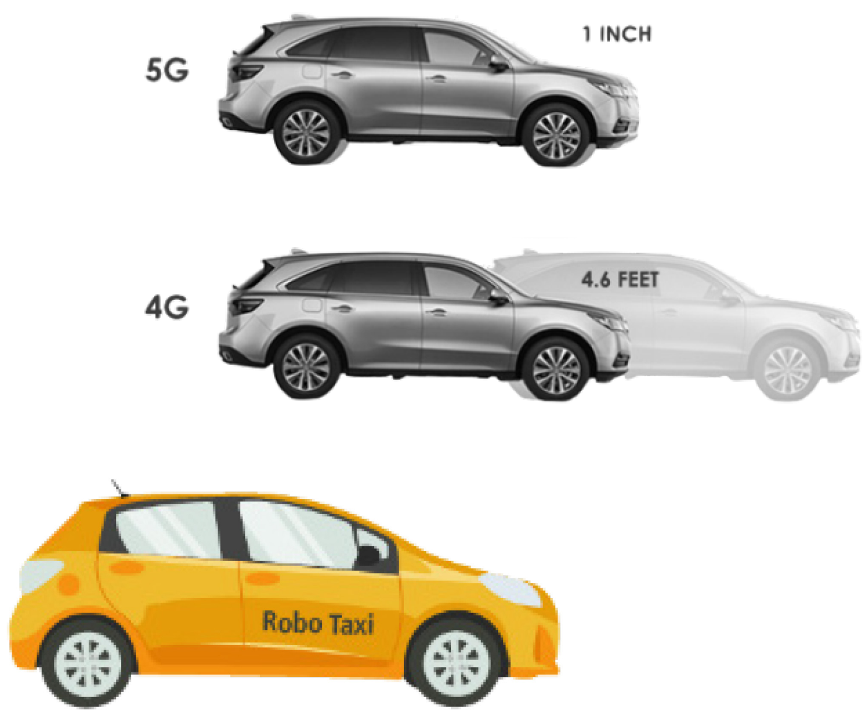
APTIV

Source: Aptiv.
As of June 4, 2019

Connectivity: 5G is Critical for Robo-taxis

EU will adopt 5G standard for connected cars as 5G can enable faster response time

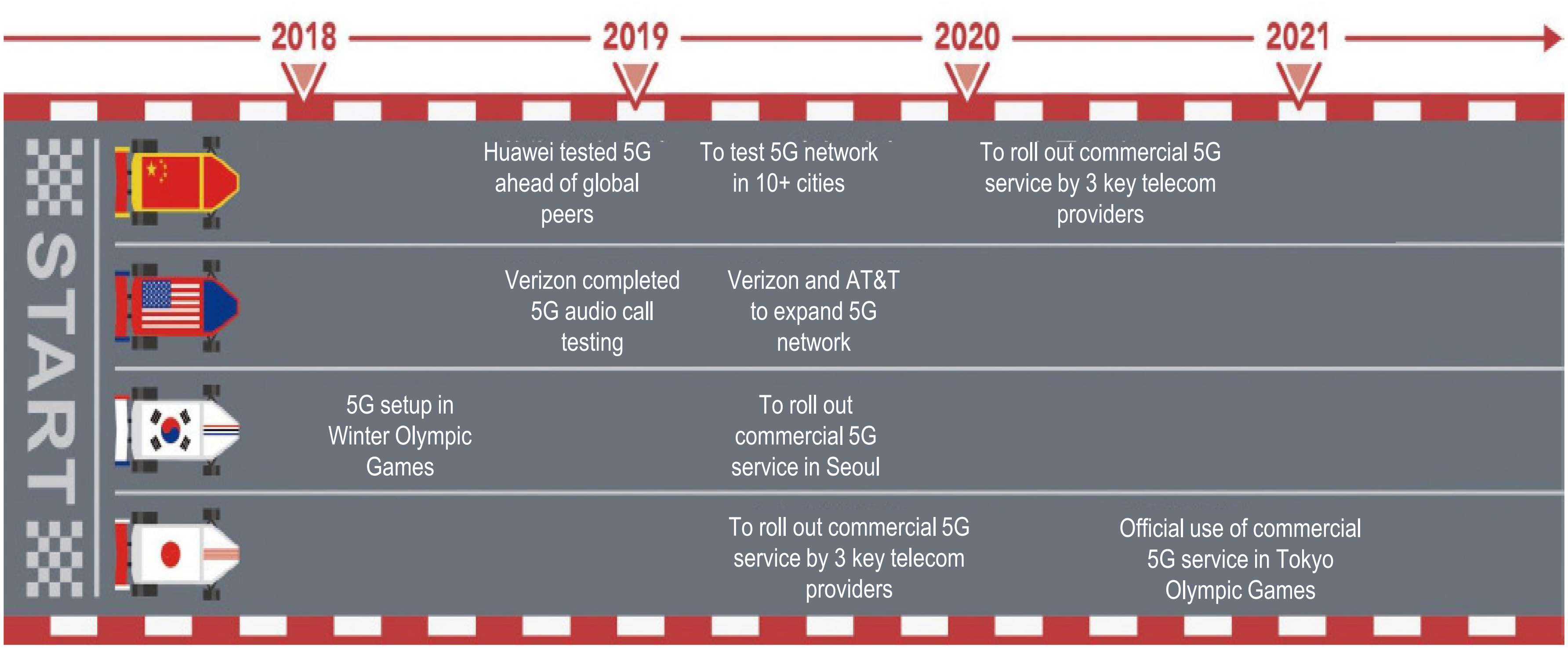




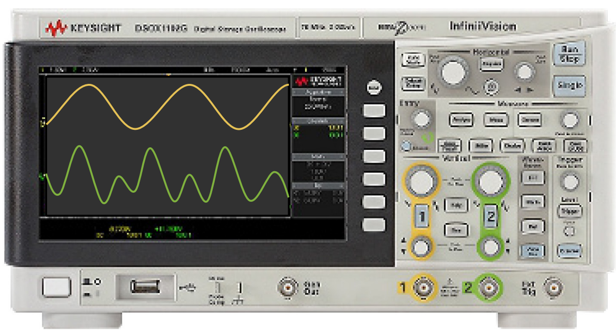
Source: Best Buy, CTIA

Connectivity: The Global 5G Race has just Started and is Accelerating

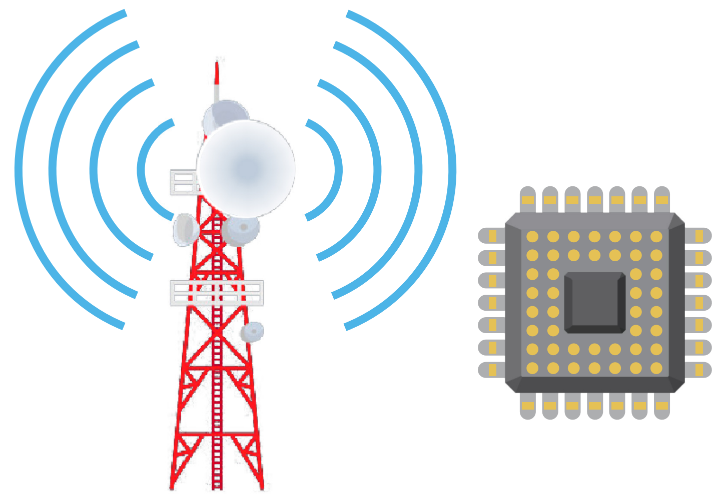
5G is a key asset and major nations are competing to roll out 5G infrastructure and services



Connectivity: Key Beneficiaries



KEYSIGHT
TECHNOLOGIES



XILINX

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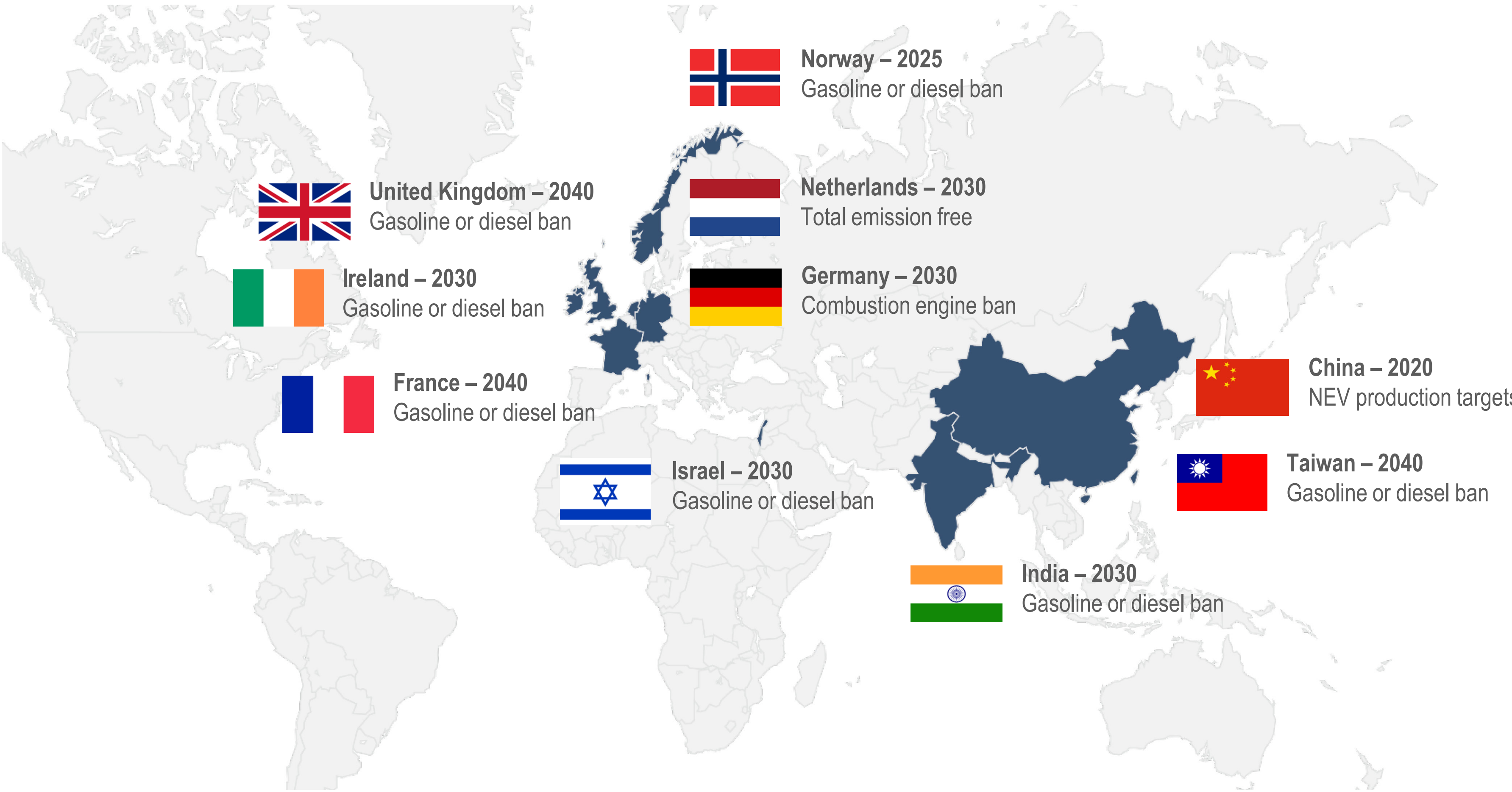
Electrification: Stricter Emission Regulations is Driving Aggressive EV Push



Source: Bank of America, Company Reports.

Automakers' Vehicle Electrification Plans

25 EV models by **2025**

80 new EV models by **2025**

12 new pure EV models by **2022**

70% of sale to China to be EV by **2025**

20 new pure EV models by **2023**

1.5M annual HEV sales

Cumulative 15M by **2020**

Up to 31 electrified models by **2020**

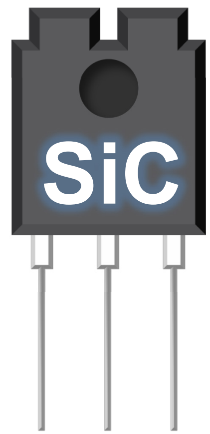
Every Volvo launched starting in **2019** will be electrified

1M cars produced annually by **2020**

Source: Company reports.

Electrification: Key Technology Enablers

Silicon Carbide power management chip is a key technology that will enable more efficient electric vehicles



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Summary

1 **The Opportunity**

Global mobility transportation industry is poised for a long-horizon disruption with inflection points driven by development of autonomous technologies, electrification & improving connectivity

2 **The Challenge**

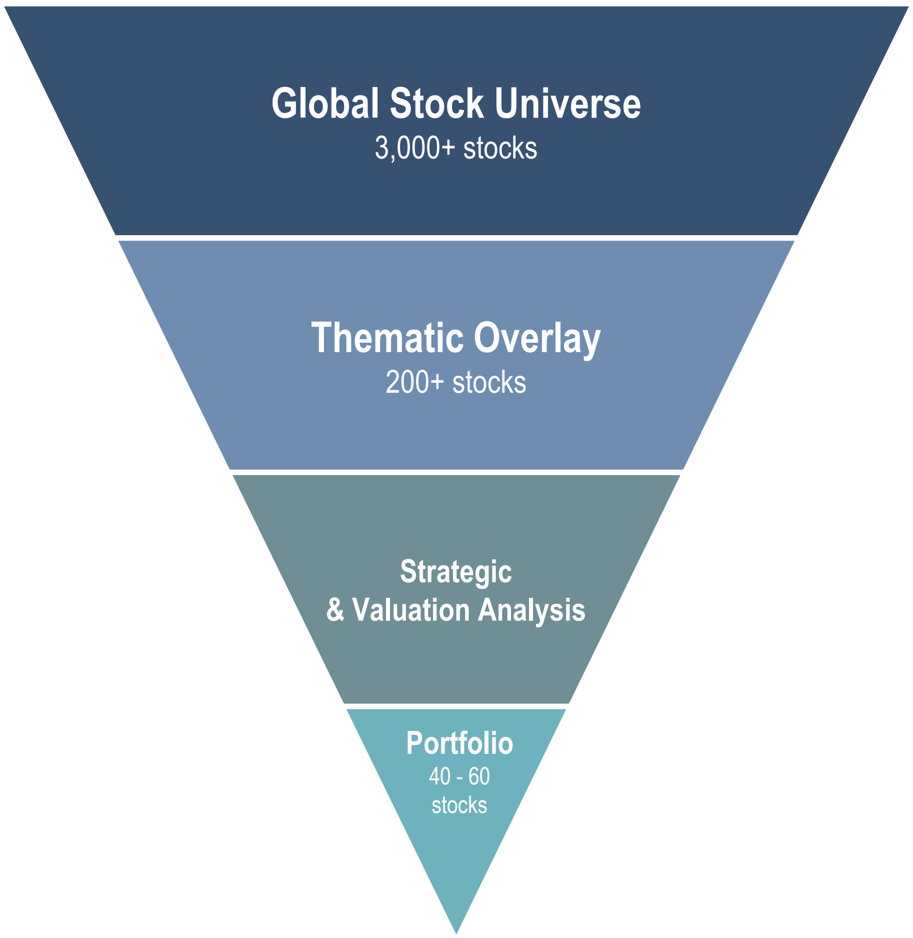
To benefit from this broad spectrum of opportunities requires specialized expertise and deep resources

3 **Insight**

- Seeking growth opportunities in the long-term secular trend of Next Generation Mobility
- Focusing on technology enablers & beneficiaries of Autonomous, Electric, and Connected vehicles
- Leveraging Neuberger Berman's breadth & depth of global research capabilities

Investment Process

A disciplined approach that seeks to translate disruptive themes into a compelling portfolio strategy.



Benchmark Agnostic
Forward-looking portfolio based on strict construction guidelines and a benchmark agnostic approach.

Disciplined and Rigorous
Leveraging our sector experts in identifying winners and avoiding hype with disciplined approach in valuations.

ESG criteria
Process applies ESG criteria using a proprietary specific approach to analysing data and third party sources.

Risk Management
Continuous risk assessment at portfolio level. Centralised firm resources monitor compliance with fund investment guidelines and review operating processes.

Thematic Portfolios: Portfolio Construction Process

A disciplined approach seeking to translate disruptive themes into a compelling portfolio strategy

Screening

- Screen for names that are thematically relevant based on quantitative & qualitative approach
- Exclude names that do not fit on liquidity, market cap or other factors
- Look for leadership attributes including sales growth, design wins, product portfolio, technology, market share, margins, returns, business model

Qualitative Analysis

- In-depth analysis of company/business model & competitive edge / moat
- Cross check analysis with industry peers, customers, suppliers
- Evaluate historical financials & operating data, market position, ESG metrics, management quality
- Model financials and construct upside / downside cases

Portfolio Construction/ Valuation Discipline

- Position sizing based on relative conviction & upside/downside potential, while seeking to create diversification across regions & sectors
- Determine catalysts that lead to investment actions
- Recognize entry/exit points are key to investment returns
- Seek to invest in companies with potential to generate 50%-100% appreciation over 3-5 years

Risk Management

- Evaluate if stocks move in excess of predetermined percentages, on a daily, weekly, monthly basis
- Monthly & quarterly review of performance metrics and risk factors
- Engage with companies to mitigate risks and improve ESG and financial outcomes

Thematic Portfolio

This material is intended as a broad overview of the portfolio managers' style, philosophy and process and is subject to change without notice. Portfolio managers' views may differ from those of other portfolio managers as well as the views of Neuberger Berman.

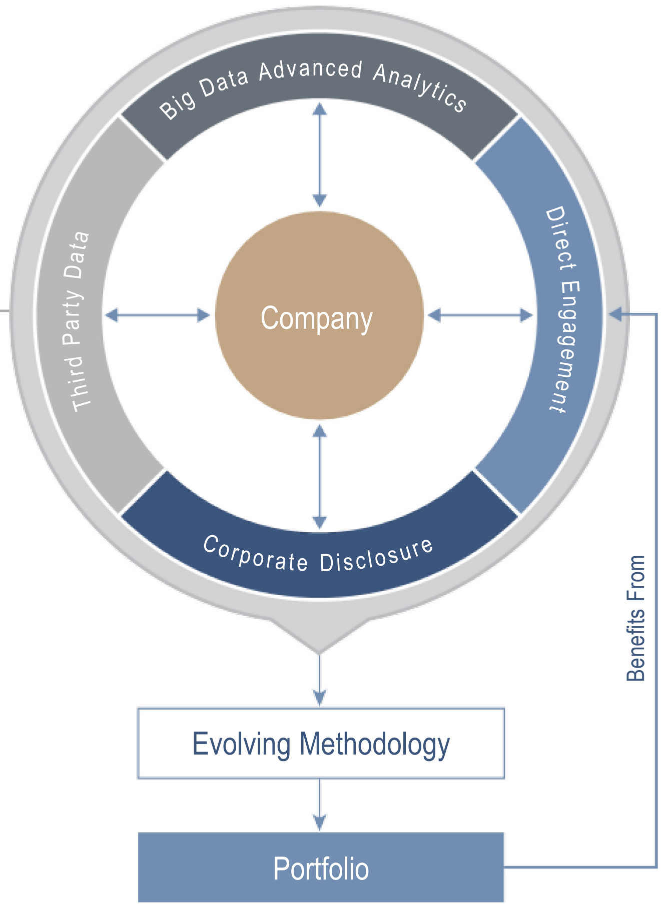
Active ESG is a Valuable Iterative Approach

Continuous Improvement and Active Engagement

Multiple Inputs ⊕ Feedback Loops ⊕ Evolving Methodology

Broad Range of Sources

Combines company-reported and third-party research (e.g., MSCI, Sustainalytics, TruCost. Bloomberg, Zicklin Index, FAIRR, FINRA, NHTSA) used to measure performance against these factors, understanding the relative strengths of reported performance/targets/policies



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Monthly and weekly Distributing Classes will distribute out of income and may also pay out of capital which will be eroded; investors in these classes should be aware that the payment out of capital may have different tax implications from distributions of income and should seek tax advice. In respect of the C, C1, C2, E and B share classes a contingent deferred sales charge may be payable to the Investment Manager in line with the provisions of the Fund's prospectus.

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