

Top 20 Automotive Trailblazers: The Value Chain Disruptors

Engineering Services

Market Report – October 2017: Complimentary Abstract / Table of Contents

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Custom research capabilities

- Benchmarking | Pricing, delivery model, skill portfolio
- Peer analysis | Scope, sourcing models, locations
- Locations | Cost, skills, sustainability, portfolio – plus a tracking tool
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- Other | Market intelligence, service provider capabilities, technologies, contract assessment

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Table of contents

Topic	Page no.
Introduction and overview	5
Section I: Automotive landscape and digital ecosystem	8
• Automotive industry landscape	9
• Digital ecosystem in automotive space	10
• Digital themes and initiatives	11
• Future of mobility and evolving business models	15
• Key agenda themes for automotive incumbents	17
Section II: Automotive startups: role and engagement models	19
• Benefits of partnering with startups	20
• Benefits of partnership for startups	22
• Engagement models of startups with ecosystem players	24
Section III: Automotive startups: key players driving disruption	28
• Digital disruption in automotive value chain	29
• Assessment of potential 120 startups	31
• Shortlisted automotive startups	33
• Shortlisted automotive startups – Power-driven solution providers	35
• Shortlisted automotive startups – Connectivity enablers	41
• Shortlisted automotive startups – Autonomous driving enablers	47
• Shortlisted automotive startups – Analytical solution providers	53
Section IV: Appendix	59
• Glossary of key terms	60
• Engineering services research calendar	62
• References	63

Background of the research

Background of the research

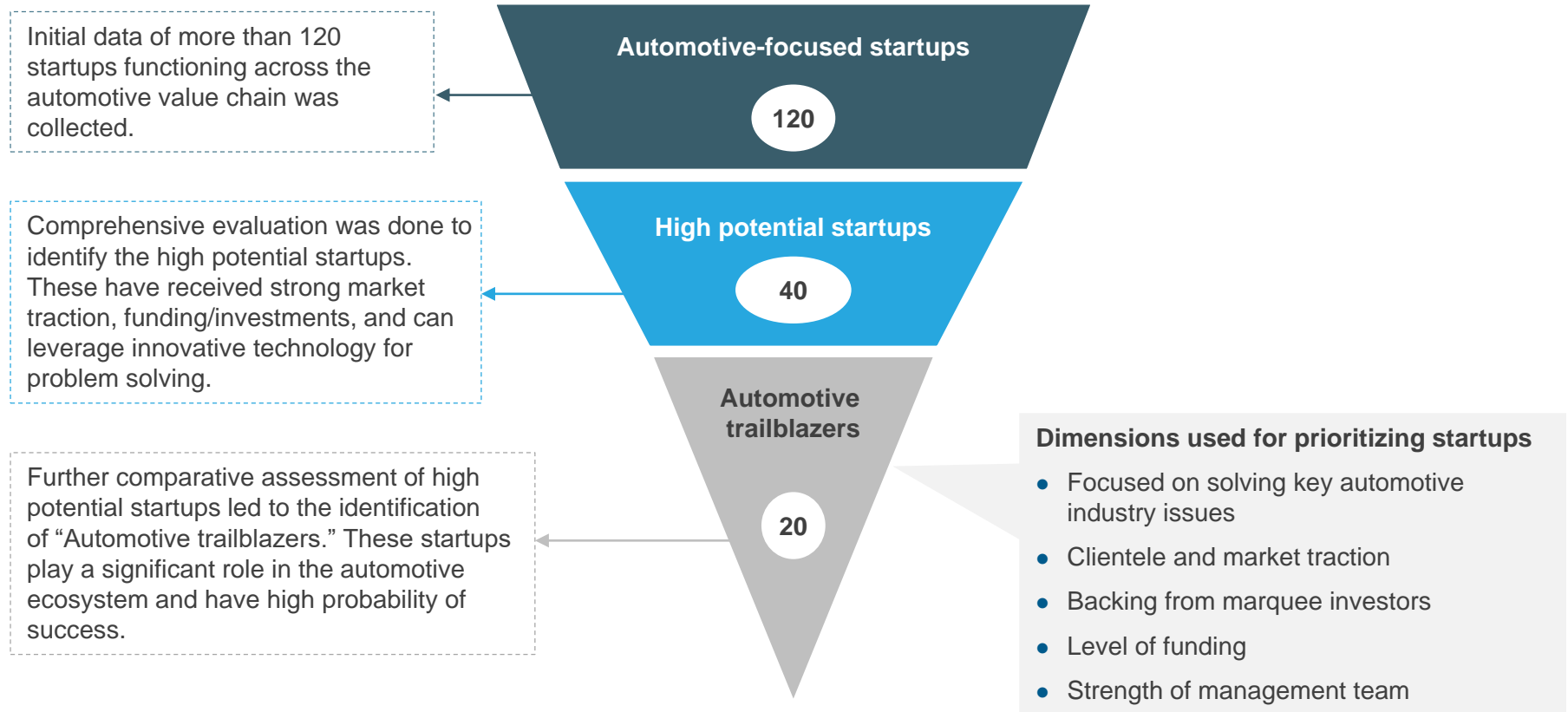
- In 2016, automotive industry investments in innovation areas were about US\$19.6 billion. Growing digitalization and technology advancements are expected to increase the investments to US\$82.1 billion by 2020. The automotive industry is poised to change more in the next 5 to 10 years than it did in the last 50 years. Vehicles are set to become increasingly intelligent, inter-connected, and instrumented
- The rapid pace of digitalization is transforming the hardware-driven automotive sector to a software and solutions-focused industry, augmented by consumers' evolving expectations of digital lifestyle and demands for new and innovative services. Automobiles will soon be able to communicate and collaborate with other things such as traffic lights, other vehicles, parking bays, etc. thus becoming a part of a global system of systems
- The digital disruption is not a one-time event, it is rather a journey in which auto manufacturers, service providers, technology majors, and parts suppliers are gearing up for the rising market demand and making large scale investments in resources, partners, solutions, and products. However, this disruption results in ecosystem complexities leading to gaps in the envisaged value and realized returns
- Over the past few years, multiple startups have thrived, filling these innovation gaps. They are addressing key adoption challenges such as data integration & security, vehicle efficiency, process automation, preventive maintenance, analysis of data collected, and so on
- In this research, Everest Group presents an assessment of how digitalization along with Internet of Things (IoT), technology partnerships, software capabilities, and customized solutions will be the way forward for the global automotive industry. We also take a deep dive into the next-generation digital automotive startups across the product design, production, marketing, and after-sales functions. Each startup profile provides a comprehensive picture of its technology capabilities, achieved market growth, and the perceived investors' confidence
- The assessment is based on Everest Group's rich expertise and database knowledge of the automotive industry and secondary research & analysis

Scope of this report

- **Services:** Automotive Engineering Services
- **Geography:** Global
- **Companies:** Digital Automotive startups

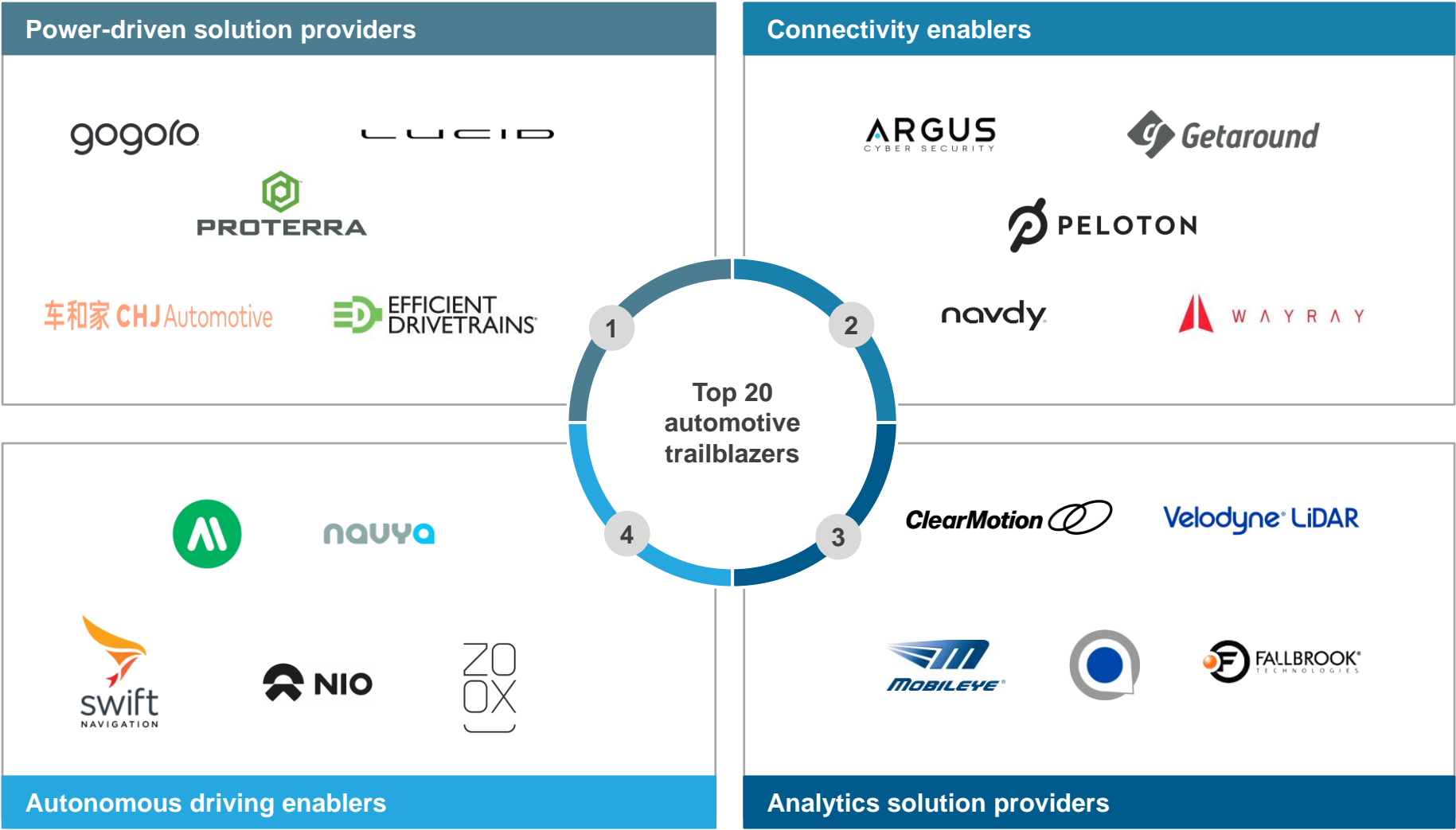
Research Methodology

Everest Group analyzed 120 startups functioning across the automotive ecosystem on five key dimensions to shortlist the “top 20 automotive trailblazers”



Source: Everest Group (2017)

After detailed assessment, following 20 startups emerged as the “hot” startups addressing key growth issues and bring digital disruption in the automotive industry



Summary of key messages

Industry stakeholders recognize that startups are quickly disrupting the “Value Chain” and therefore, must be leveraged to drive value



Startups – on a high growth trajectory

- Year 2016 witnessed an uptick in funding and investments (Total investment of >US\$19 billion with ~35% in the past four years)
- With the increasing market significance, they are poised to be competitors to larger established automotive engineering providers



Addressing key digital adoption issues

- Offering innovative solutions that enable value realization from IoT investments, startups are solving the gaps in digital adoption
- Primary adoption challenges targeted by startups are:
 - Autonomous driving technology enablement
 - Connectivity enabling
 - Electrification provision
 - Big data analysis



Establishing their significance across the ecosystem

- Funding for digital automotive startups is flowing in not only from VC, but automakers, technology players, solution providers, and system integrators
- Access to innovative technology is the primary motivation apart from quick time-to-market and talent pool



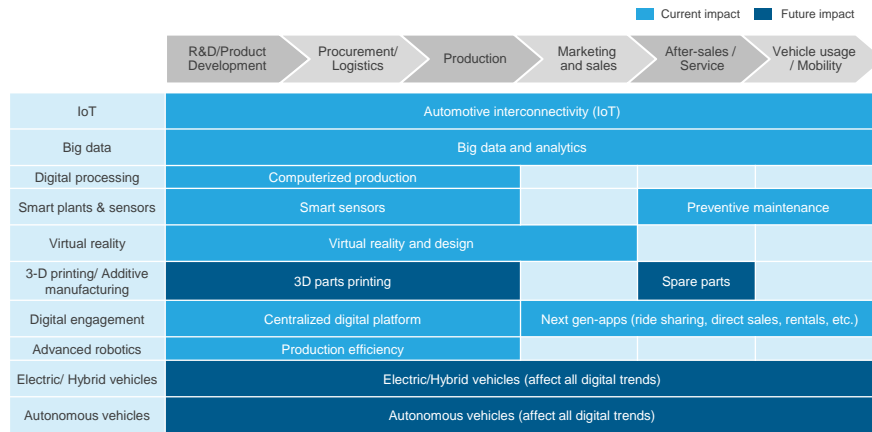
Investment is not the only way to access innovation by startups

- Automotive players across the value chain are engaging with startups by means of acquisition, partnership, funding, and/or mentoring and one cannot afford to ignore them anymore
- Majority of the automotive players are leveraging startups primarily to expand their capabilities across the digital disruptive stack

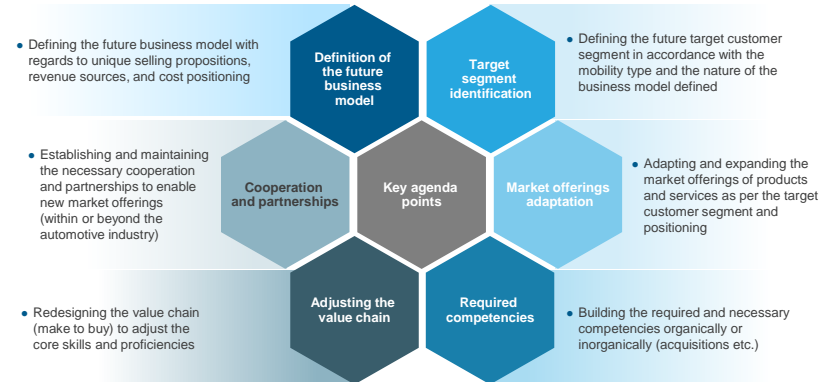
Source: Everest Group (2017)

This study offers detailed assessment and profiles of 20 automotive startups; below are four charts to illustrate the depth of the report

Focus of Automotive startups

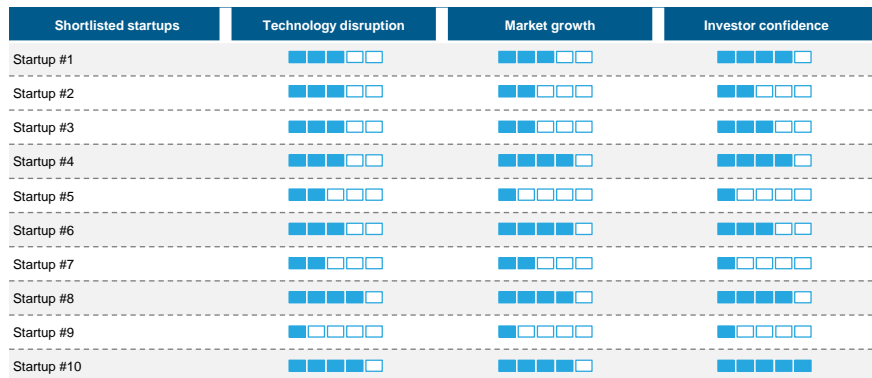


Key agenda points for automotive industry



Shortlisted 20 Automotive startups

Power-driven solution providers | Evaluation of shortlisted startups



Sample profile of Automotive startups

<p>Company overview</p> <p>Formerly known as Aleva, Lucid Motors began by developing batteries and electric drivetrains. It aims to create an experience that is personalized and liberating, erasing the constraints of modern transportation. Its cars will be capable of long-range driving and exhilarating acceleration. It has filed more than 100 patents till date</p>	<p>Capability assessment</p> <p>Technology innovation ★★★★★</p> <p>Market growth ★★★★★</p> <p>Investor confidence ★★★★★</p>
<p>Fact sheet</p> <p>Year of incorporation 2007</p> <p>Key executives</p> <ul style="list-style-type: none"> Sam Weng, Founder, COO Peter Rawlinson, CTO Derek Jankins, VP, Design Henry Li, VP, Business Development Doreen Allen, Director, Sales <p>Headquarters Menlo Park, California</p> <p>Number of employees ~500</p> <p>Key investors</p> <ul style="list-style-type: none"> Jia Yueting (LeEco) Tsing Capital Mitsui & Co. Global Investment Venrock 	<p>Technology innovation</p> <p>Lucid Motors produces game-changing ways to power the future right from programming embedded software onto microchips to analyzing structural integrity. Its products are:</p> <ul style="list-style-type: none"> Equipped with a semi-autonomous highway driving system Capable of accelerating from zero to 100km/h (about 62mph) in under three seconds Designed to make driving feel like a full-service experience, with information and controls provided when and where they are needed Integrated with virtual assistant services, including applications such as Siri and Alexa, to provide smart solutions, in a package ideally suited for use while driving with a minimum of distractions
<p>Investor confidence – Estimated total funding of US\$131 million</p> <p>Dec 2009 Venture US\$7 million</p> <p>Jan 2011 Venture US\$24 million</p> <p>May 2014 Venture US\$100 million</p>	<p>Market growth</p> <ul style="list-style-type: none"> Lucid Motors has established strategic partnerships with LG Chem and Samsung SDI for supply of next-generation battery technology developed as part of Lucid's powertrain supply business, or variants of the sedan with specific performance requirements The differing performance attributes available from the two cell suppliers provide Lucid with maximum flexibility to select the best cell for each of the applications Lucid Motors has partnered with Mobileye for the supply of camera, radar, and lidar sensors, which will enable the functions of its self-driving vehicle

Source: Everest Group 2017

Research Calendar – Engineering Services

Published
 Planned
 Current release

Flagship engineering services reports Release date

The Evolving Demand Paradigm in the Engineering and Research and Development (ER&D) Services Industry	October 2016
Top 20 Automotive Trailblazers: The Value Chain Disruptors	October 2017
Startups in Software Product Engineering – The DevOps enablers	Q4 2017
Software Product Engineering Services – Service Provider Landscape with PEAK Matrix™ Assessment 2017	Q4 2017
Automotive Engineering Services – Service Provider Landscape with PEAK Matrix™ Assessment 2017	Q4 2017

Thematic engineering services reports

Innovation Beyond Borders – Global Talent Hotspots for Engineering Services and Research & Development (ER&D)	August 2016
In Pursuit of Product Excellence: Quality Management in the Engineering Services Industry	May 2017
Identifying the Right Partners for Quality Management in the Engineering Services Industry – Service Provider Landscape	May 2017
Designing Products in the age of Human-Machine Nexus for the Global Connected Ecosystem	June 2017
Talent Landscape in the GIC Automotive Engineering Market in India	July 2017

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Additional research references

The following documents are recommended for additional insight into the topic covered in this report. The recommended documents either provide additional details on the topic or complementary content that may be of interest

- 1. Designing Products in the age of Human-Machine Nexus for the Global Connected Ecosystem**
([EGR-2017-15-R-2231](#)); 2017. This report explores the ecosystem-centered design thinking approach, and delves into its constituents, the underlying principles, and the impact on businesses. It also covers some of the current and prospective examples for ecosystem-based design thinking, and discusses the challenges that enterprises need to overcome for successfully implementing this approach.
- 2. In Pursuit of Product Excellence: Quality Management in the Engineering Services Industry**
([EGR-2017-0-R-2181](#)); 2017. This report provides a detailed analysis of quality management activities in the engineering services industry. It covers market landscape of quality management services and focuses on the central idea of how digital technology themes are reshaping the way enterprises look at their product quality management efforts in the engineering services industry.
- 3. The Evolving Demand Paradigm in the Engineering and Research and Development (ER&D) Services Industry**
([EGR-2016-0-R-1977](#)); 2016. This report provides an overview of the ER&D services industry. It covers demand trends in the ER&D services industry across different industry verticals and global sourcing trends across major ER&D segments

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