



► **Manage the Present and Shape the Future**

How to boost your innovation power as automotive supplier in the era of electrification, digitalization, and connectivity

Why should innovation be on the supplier CEO agenda?

Strategic challenges for the automotive-supplier industry

Digitalization has lowered or even torn down competitive barriers. Digital transformation is re-shaping all industries around the globe, leading to customer-centric business models. Demographic changes and shifts in consumer behaviors are challenging existing business. Disruptive technologies such as artificial intelligence, blockchain, mixed reality, and additive manufacturing are dramatically changing the competitive landscape.

Disruption is considered unavoidable in the automotive-supplier industry as well. Besides disruptive digital revolution, automotive suppliers are expected to face further macro trends such as green mobility, customization, and mobility sharing. In the era of electrification, digitalization, and connectivity, automotive suppliers are facing more strategic challenges than ever before.



German insolvency experts estimate that the existence of every tenth automotive supplier is threatened by electric vehicles.¹

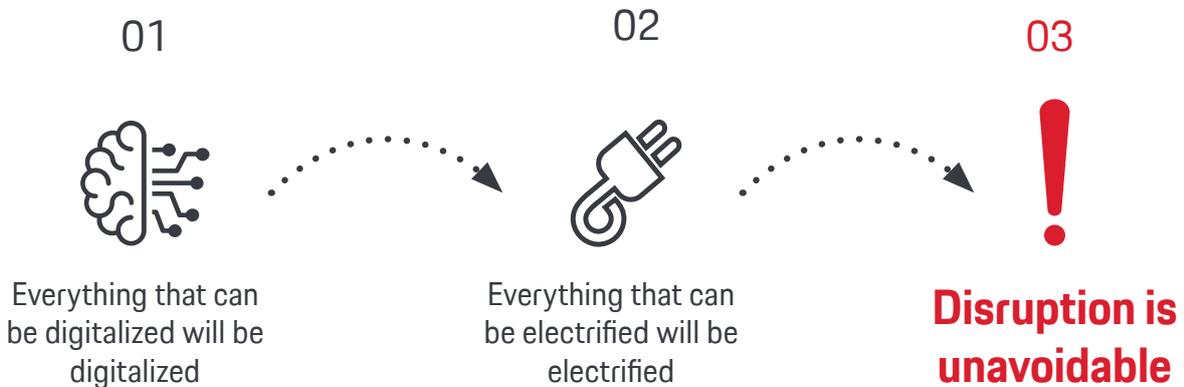
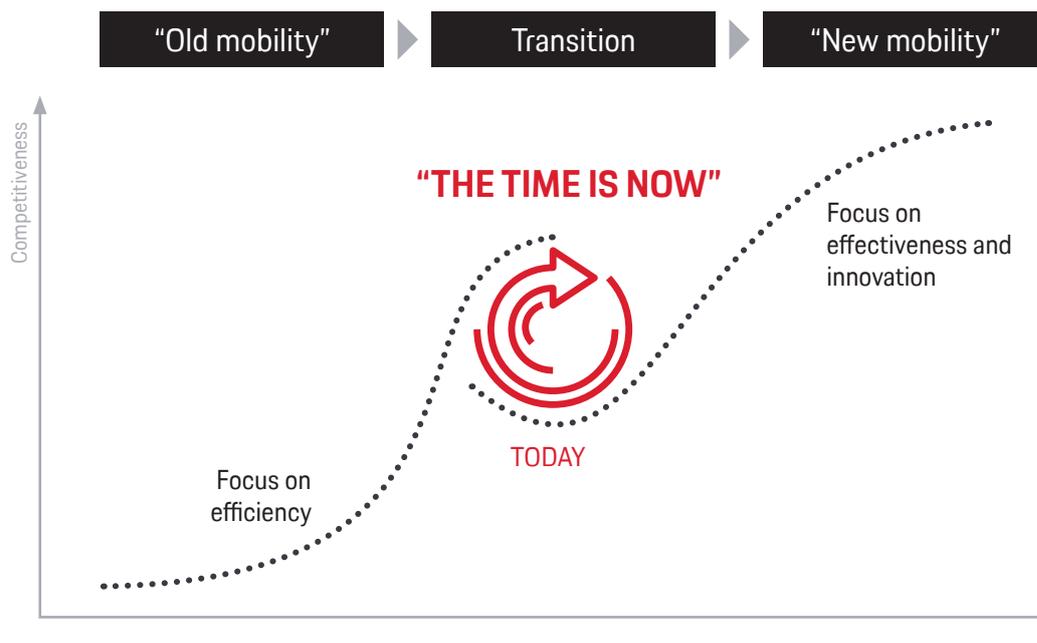


Fig.1 Three simple statements about future challenges

¹ WirtschaftsWoche 5, "Das Letzte Duell" January 25, 2019



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Fig.2 Transition from "old" to "new" mobility

To survive in the transformation, secure competitive advantage, and generate long-term growth, it is no longer sufficient to simply focus on exploiting existing business and trigger efficiency. Effectiveness precedes efficiency; automotive suppliers must constantly find new sources of revenue streams and growth.

Innovation is the answer

In October 2005 Delphi Automotive filed for bankruptcy and subsequently went through a painful, four-year restructuring process, transforming itself by means of lean transition, globalization, and focusing on profitable niches. In May 2017 Delphi Automotive spun off its Powertrain Systems business as Delphi Technologies and renamed its core business in vehicle electronics to Aptiv. Since then, Aptiv has been building its business in vehicle electronics, connected solutions, and autonomous driving. Together with its acquired startups Ottomatika, Control-Tec, Movimento and Nutonomy, Aptiv is focusing on innovative solutions for future mobility. In 2017

Aptiv achieved 5 percent growth in sales and 7 percent in operating income.

An MIT Sloan study, based on data from 154 companies, confirms that there is a positive correlation between companies' commitment to innovation (measured by ideation rate) and their financial results. Innovative ideas drive growth, and companies that generate plenty of innovative ideas tend to be more profitable. KfW, a large German bank, also suggests that innovation increases companies' performance. This KfW study confirms that revenue of innovative SMEs (small and medium-sized enterprises) have grown on average 3.9 percent more over the past two years than that of SMEs without innovation.

As the largest automotive supplier, Bosch continuously secures its competitive advantage and future growth via innovation. From high-voltage magneto ignition system in 1902 to Jetronic electronic gasoline-injection system in 1967, from ABS in 1978 to ESP in 1995, Bosch has led the field of innovation with its exceptional technologies and products. In

85%

of the C-level executives in the Porsche Consulting survey agree or strongly agree that **innovation is a central strategic advantage for business models and revenue streams.**

7%

of the C-level executives in the Porsche Consulting survey confirm that **at least half of the revenues come from new products and services**

70%

of all participating suppliers in the Porsche Consulting survey **generate less than 25% of the total revenues from innovative products and services**

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Fig.3 Porsche Consulting survey: central strategic advantage and share of revenue from innovation

an environment full of disruptions, however, even top players need to keep pace with innovation. Bosch is working on various fields of future innovation. It founded the Bosch Center for Artificial Intelligence in early 2017, aiming to achieve a leading position in AI and enable the transformation toward an AI-driven IoT company. Its innovation in connectivity is also paying off. In 2018 Bosch sold 52 million web-enabled products, an increase of 37 percent compared to the previous year.

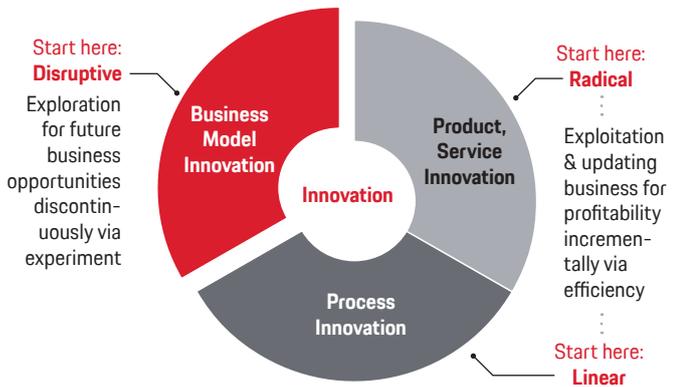
For the automotive supplier industry, innovation is one of the top priorities on the CEO agenda and the answer to coping with the complexity and uncertainties in this era of disruptions. Innovation is the answer for those who need to turn around their business and who want to remain the best in class.

Top supplier voices: Porsche Consulting survey

To better understand the innovation landscape in the automotive supplier industry, Porsche Consulting conducted an online survey with participation of 43 C-level executives of global automotive suppliers across all segments. In this survey from November 2018, more than 85 percent agreed or strongly agreed that innovation is a central strategic advantage for business models and revenue streams. By contrast, only 7 percent confirmed that at least half of their revenue comes from new products and services. Almost 70 percent of all participating suppliers generate less than 25 percent of total revenue from innovative products and services. Hesitating to innovate in the automotive supplier industry is negligent. Automotive suppliers need to start the transformation—now.

Where to start with innovations

Before generating more revenue by innovation, it is first crucial to determine where to start with your innovations.



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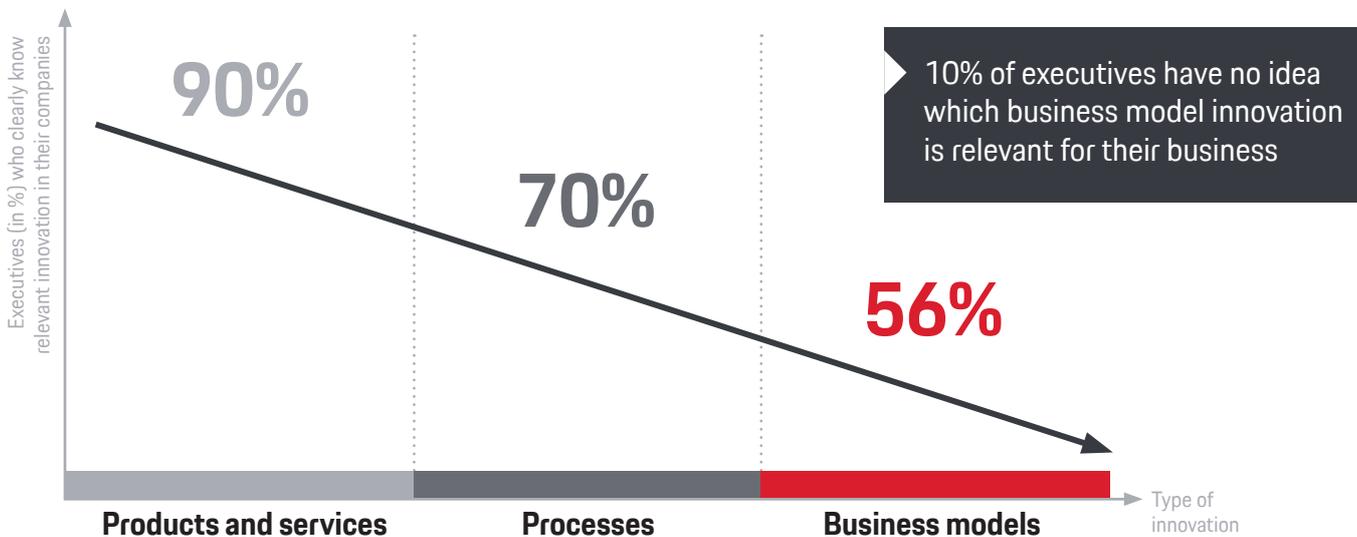
Fig.4 Innovation types and levels²

Innovation per definition is the generation, acceptance, internal or external implementation, and introduction of a new product, service, process, or business model. Until now, most successful automotive suppliers have relied on their core competences in product engineering and process expertise. Hence, the majority of innovations within the automotive supplier industry are either linear or radical, strongly focusing on products and processes.

However, the biggest threats often do not come from well-known competitors with better products but from unknown entrants with disruptive business models. Game-breakers use new business models to target overlooked segments or even create new markets enabled by novel technologies or methods. In the entire mobility ecosystem, mobility platform providers such as Uber, Didi Chuxing, and Moovit are gaining more attention and reshaping the supplier pyramid. By contrast, a supplier's hardware product innovation is more likely to be relegated to the sidelines.

While 90 percent of the executives surveyed by Porsche Consulting clearly know which product innovation is applicable to their company, only 70 percent know about relevant process innovations. More critically, only half of them are aware of the business models suited to their companies, whereas 10 percent of executives have no idea which business model innovation is relevant for their organization.

Automotive suppliers therefore need a clear understanding of where their business is today and where to innovate tomorrow. They should focus not only on products and processes but also on relevant services and business models.



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Fig.5 Porsche Consulting survey: relevant innovation in products, processes, and business models

² Based on HBR "What 40 Years of Research Reveals About the Difference Between Disruptive and Radical Innovation", April 2018

What does a successful innovation-management system embrace?

Porsche Consulting provides automotive suppliers with a holistic yet pragmatic framework to establish a successful innovation system—a system across all dimensions that shapes the strategic vision and ensures the smart implementation.

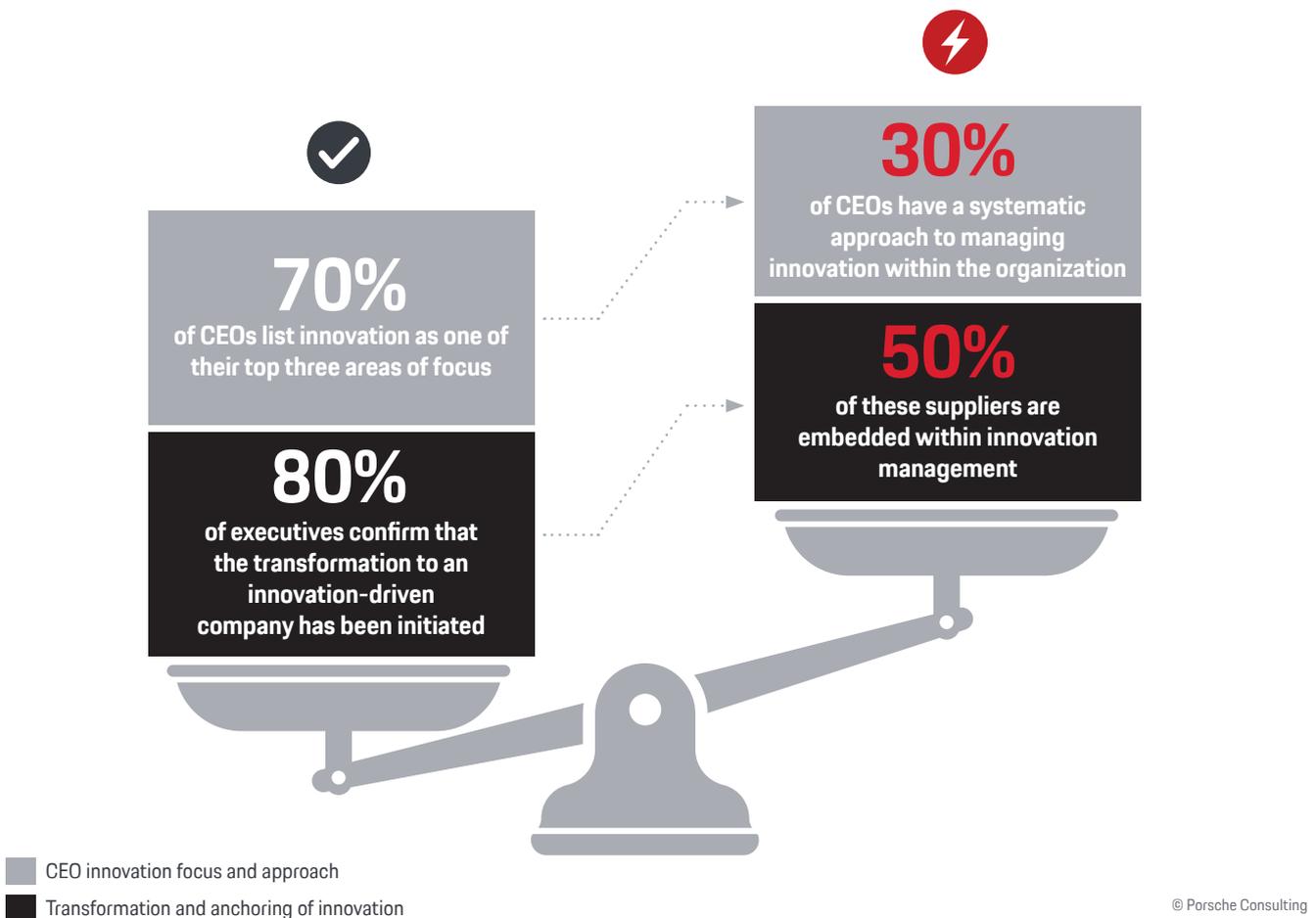
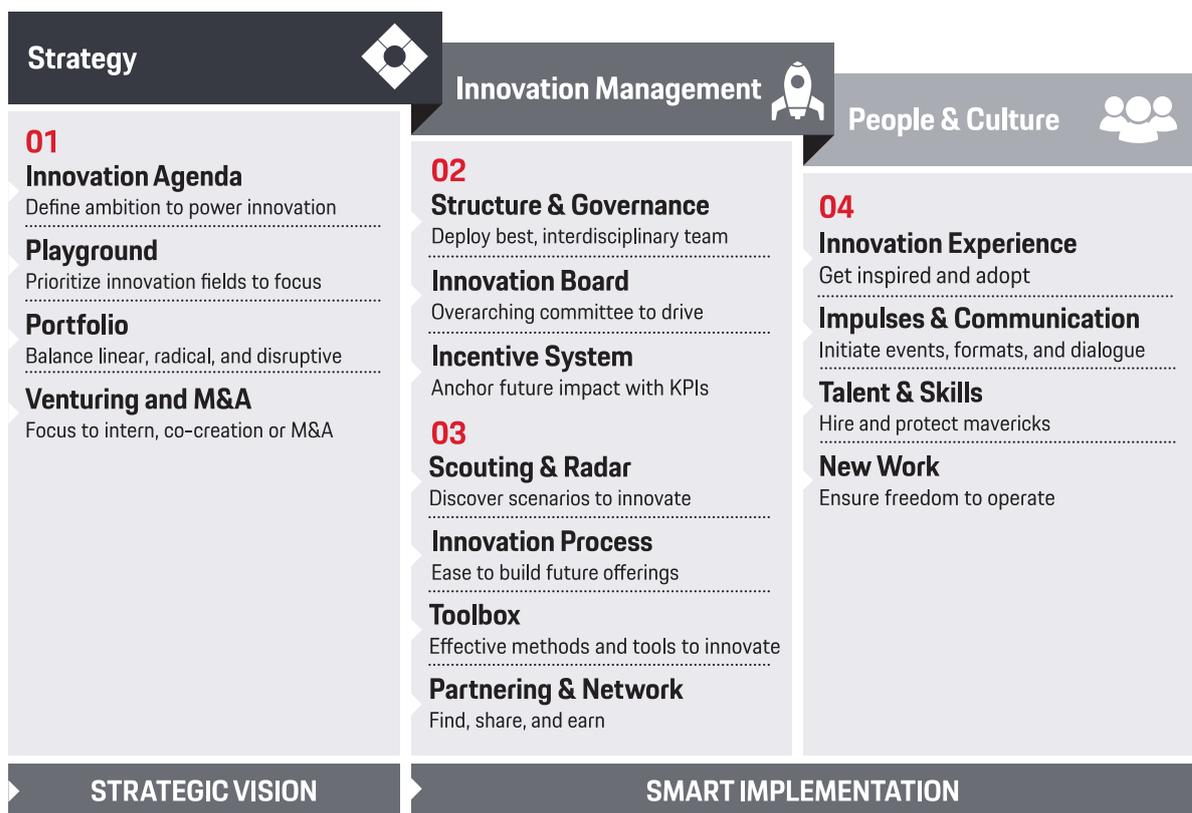


Fig.6 Porsche Consulting survey: innovation focus and approach, transformation and anchoring of innovation management

While more than 70 percent of CEOs list innovation as one of their top three areas of focus, only 30 percent of them have a systematic approach to managing innovation within the organization. According to the Porsche Consulting survey, almost 80 percent of executives confirm that the transformation toward an innovation-driven company has been initiated. In contrast, only approximately half of these suppliers have embedded structured innovation management throughout the company.

things automotive suppliers can learn from them. A company needs much more than that, however. Whereas an idea might fail, the company's entire innovation system needs to be managed to continuously convert a certain number of ideas for launch on the market and sustainably drive growth. A successful innovation therefore requires a holistic innovation system across all dimensions—from strategic vision to smart implementation, from organization and process to people and culture.

Most startups and entrepreneurs rely on a single, brilliant idea and attempt to build the business around it. There are many



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Fig.7 Porsche Consulting Innovation-Driven Organization Framework

01 STRATEGY:

Define innovation as a central part of your corporate strategy

"A vision without a strategy remains an illusion" (Lee Bolman). Defining innovation as a central part of the corporate strategy provides clear strategic goals and guidance toward innovativeness for the entire organization.

First, derive innovation strategy from the corporate strategy and integrate it into the company's vision, mission, and strategic goals. At Bosch, for instance, innovation is a central part of the mission statement and key strength alongside "Bosch culture," "outstanding quality," and "global presence." Then align other sub-strategies—such as business unit strategy, product strategy, and functional strategy—with innovation strategy. Most important, innovation strategy should encompass innovation agenda and roadmap, strategic innovation fields and portfolio, and strategic direction and boundaries for open innovation, venturing, and M&A.

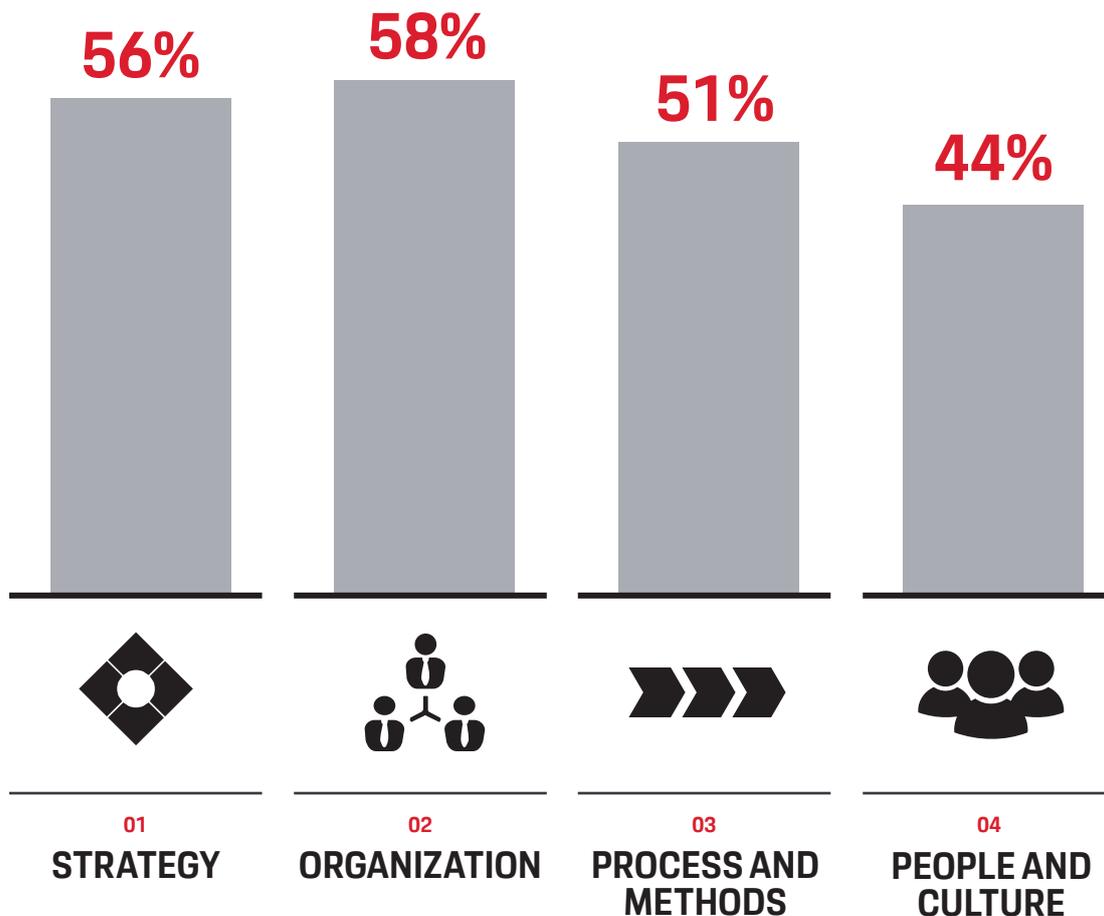
02 ORGANIZATION:

Build an innovation-driven organization

To execute the innovation strategy and generate sustainable growth, automotive suppliers need to embed innovation in the organization alongside strategy. Set up an innovation unit

consisting of teams with interdisciplinary functions and expertise. Innovation is mostly a result of both technology push and market pull. Hence, teams need to understand what customers want and involve them in developing the ideas.

Although an innovation-driven organization tends to work with more freedom, governance is still necessary to guide innovation activities. An individual governance model should be defined and established according to the company's size and structure. For most suppliers, Porsche Consulting recommends a governance structure of maximum three levels to ensure strategic alignment and speedy decision-making. On the top level, an innovation strategy board consisting of C-level executives and strategic advisors should only focus on providing strategic direction, boundaries, and recommendations to the organization, while avoiding operational intervention. An innovation steering committee on the other side—usually comprising a head of innovation, project sponsors, and product owners—steers innovation projects on a regular base at the gates and aligns the overarching project prioritization and resource allocation. The majority of innovation executions and decisions, however, should be decentralized to the innovation teams to create more autonomy and speed.



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Fig.8 Porsche Consulting survey: percentage of innovation management embedded in company's four main dimensions

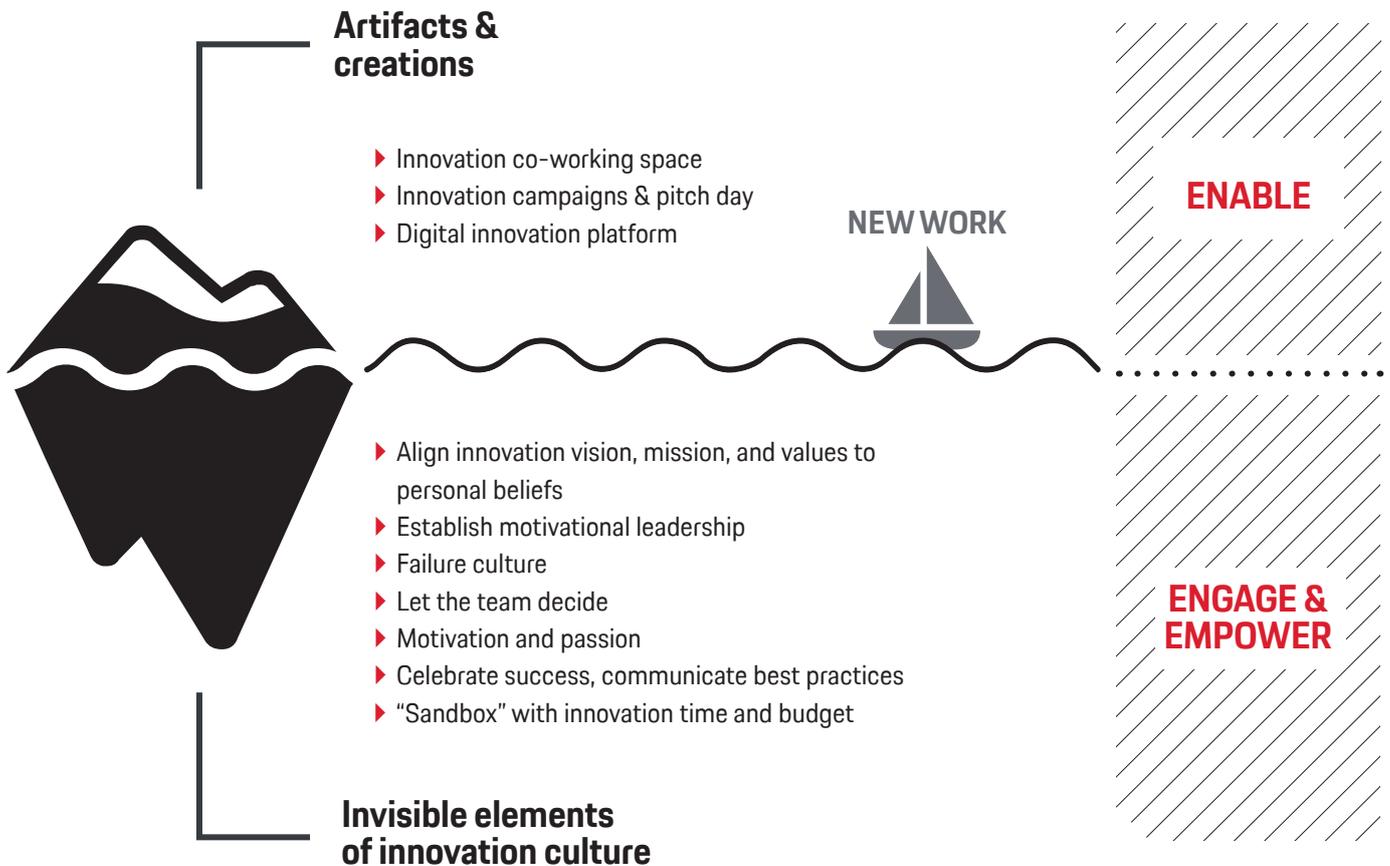
03 PROCESS AND METHODS:

Set up innovation funnel with systematic process

Betting on one brilliant idea is as easy as lighting a straw fire. Managing innovation is much more than that and requires a systematic approach to continuously and sustainably bring various ideas to the market. Automotive suppliers should therefore establish an innovation funnel with systematic process.

Based on the strategic fields of innovation, various ideas are generated internally or together with external partners. These ideas can be either initiative ideas from individuals or systematic ideas generated by teams using creativity methods (e.g., lead user method and trend scouting). Once generated, these ideas will be front-loaded into the funnel for pre-study and quick evaluation based on key criteria such as customer-value proposition, market potential, and technological feasibility. The core activity of innovation is the idea development process including concept study and prototyping. A predefined

innovation process with clear milestones and gates as well as roles and responsibilities helps the innovation steering committee and teams work efficiently and transparently. Once ideas reach a certain level of maturity, decisions for the next step will be made based on business case studies. Ideas with promising potential will be further developed and launched by the relevant business units or even by new spin-offs. Ideas with little potential will be stored in the idea database. Furthermore, ideas with promising potential but lacking strategic fit can be commercialized to external parties through out-bound innovation.



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Fig.9 Visible and invisible elements of innovation culture based on Edward T. Hall's cultural iceberg model³

04 PEOPLE AND CULTURE:

Foster an innovative culture with people-centricity

Whereas almost 60 percent of executives surveyed by Porsche Consulting agree that innovation management is already embedded in company strategy and organization, only 44 percent confirm its being anchored in company culture and people's mindset. Without the right people and culture, the best strategy will fail. "A company's culture is the foundation for future innovation," as Brian Chesky, cofounder and CEO of Airbnb pointed out.

In order to anchor innovation in the culture, management needs to tackle both visible and invisible cultural elements. Visible artifacts and creations are the tip of the cultural iceberg and serve as the perfect enablers for establishing an in-

novative atmosphere. Create an innovation co-working space to encourage more communication, sharing, and collaboration. Set up a digital innovation platform to better collect ideas and follow up on the innovation activities.

Most elements that shape the culture are invisible, however, such as employees' values, beliefs, and fundamental assumptions. Management therefore needs to align strategic vision, mission, and values with the entire organization. Moreover, it should focus on engaging, empowering, and motivating the organization instead of micromanaging. Ultimately, automotive suppliers need to set up an innovation management system and create new ways of working with people-centricity to foster a culture of innovation.

³ Source: Beyond Culture (1976) by Edward T. Hall

How to manage the present and shape the future

A journey of a thousand miles begins with a single step. Automotive suppliers should master the transformation step by step to fully embed innovation management.

Based on the innovation management framework, Porsche Consulting harnessed its practical experience with clients to develop a CEO master plan that ensures successful implementation and sustainable execution. Throughout all steps, Porsche Consulting highlights ten key success fac-

tors (in bold below) that guarantee automotive suppliers will become true innovators. Regardless of company size, segment, and maturity of the innovation management, CEOs should consider these success factors to manage the present and shape the future.

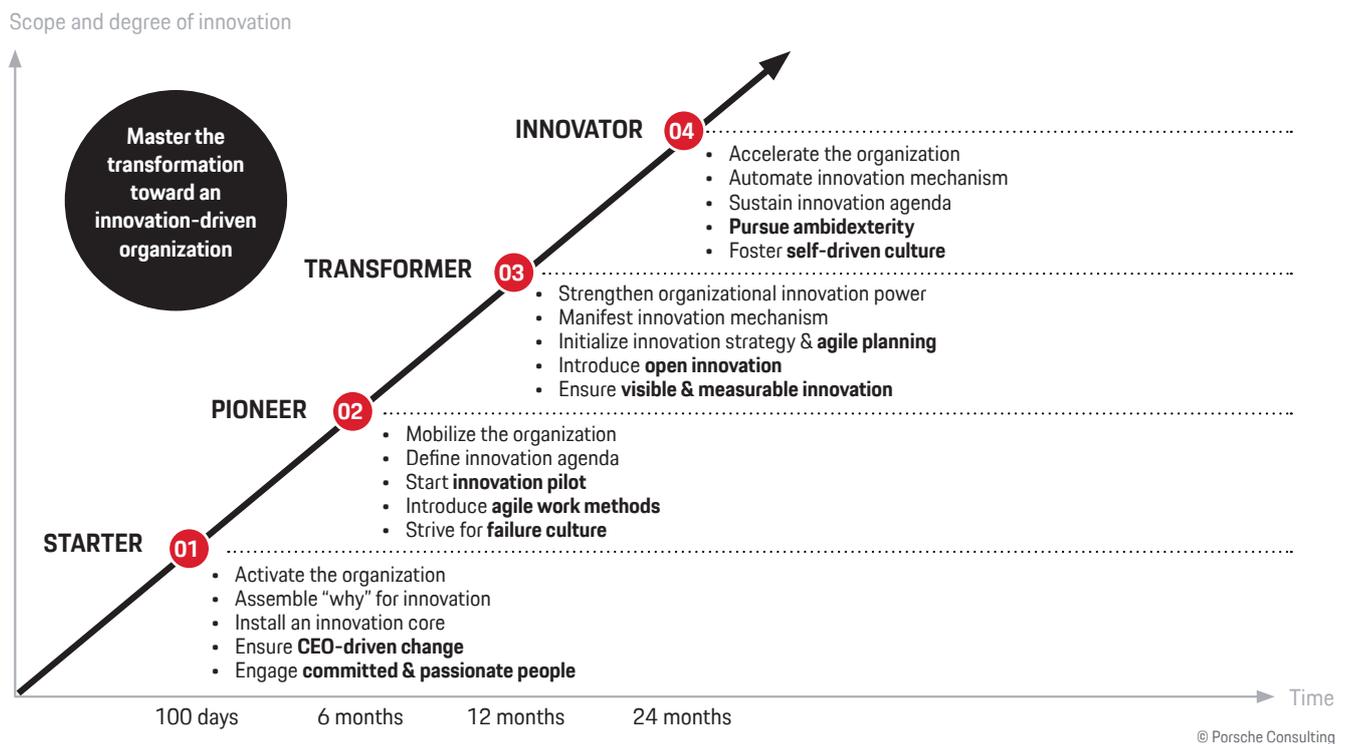


Fig.10 CEO master plan of transformation toward an innovation-driven organization

01 STARTER:

Activate the organization and ensure CEO-driven change

The most crucial aspect of the first step in transformation is to activate the organization and ensure stakeholder buy-in. Hence, assemble reasons for innovation within the first 100 days. Create purpose, define vision and goals, and communicate through motivating stories and best practices. Let employees understand why you should innovate before conveying what and how to innovate. Furthermore, install an innovation core to demonstrate your determination to innovate. Release dedicated resources, set up a small innovation unit, and nominate a head of innovation. Let them start to scout innovation chances.

► CEO-driven change

Managers are often mistaken in thinking innovation is the responsibility of R&D only. In such cases, CEOs tend to delegate the innovation transformation to the R&D department. However, successful innovation requires change and involvement across all organizational units and levels. CEOs need to take the role of transformation leader and actively drive the change to innovation. In the early stage of the transformation in particular, CEOs need to invest more time, roll up their sleeves, and take action. Continue to communicate your expectations and motivate the organization with a personal approach.

► Committed and passionate people

Committed and passionate people are a company's most precious resource and real competitive advantage. Passionate

people are also the most important ingredient of innovative culture. According to Brian Chesky, Airbnb cofounder and CEO, "culture is simply a shared way of doing something with a passion." Let yourself be surrounded with committed and passionate people along the innovation journey. Engage them and turn them into an active, driving force for transformation.

02 PIONEER:

Focus on innovation pilots and introduce agile working methods

Next, start to mobilize your organization and keep up the momentum. Formulate innovation agenda and provide the organization with a clear and ambitious roadmap. Furthermore, define your innovation fields based on your core competences and market trends within and beyond the automotive industry. But do not limit your playgrounds and stick to your existing core competences. Dare to build or acquire new competences if necessary.

► Innovation pilot

Based on the innovation agenda and fields, choose up to three pilot projects to start with. Make sure that these pilot projects are not entirely beyond your existing competences. Otherwise, failure of all pilot projects will most likely discourage the organization and leave behind "scorched earth." For innovation pilots, establish an agile unit with a handful of interdisciplinary people and delegate 100 percent end-to-end responsibility to them. Nevertheless, it is crucial to avoid the "ivory tower"

effect for the rest of the organization. Hence, make innovation visible to all by performing innovation marketplaces and pitch events, selecting the best ideas, and integrating the mavericks. In the startup scene, entrepreneurs pitch their ideas to potential partners and investors, hoping for a breakthrough. Likewise, Porsche Consulting has advised a few companies to install pitch events. This allows employees to pitch their ideas directly to the board, have the opportunity to win budget funding, and participate in the idea development.

► Agile working methods

Innovation process is the way to reach innovation goals. It guides ideas from the fuzzy front end to the market in a systematic and effective way. When the process becomes over-engineered, however, idea development slows down, becomes rigid, and eventually fails to be successful. Hence, keep the innovation process fast and agile. First, set up small agile teams and let them stay focused. For each agile team, appoint one idea/product owner to lead the idea development and focus on the product features and business potential. In addition, teams need an agile master to guide them along the processes and methods.

You will never get everything right at the beginning. The key to moving from an idea to an innovative product is experimentation, and most of the time, failure. Carry out the development in an iterative and explorative approach and apply the lean

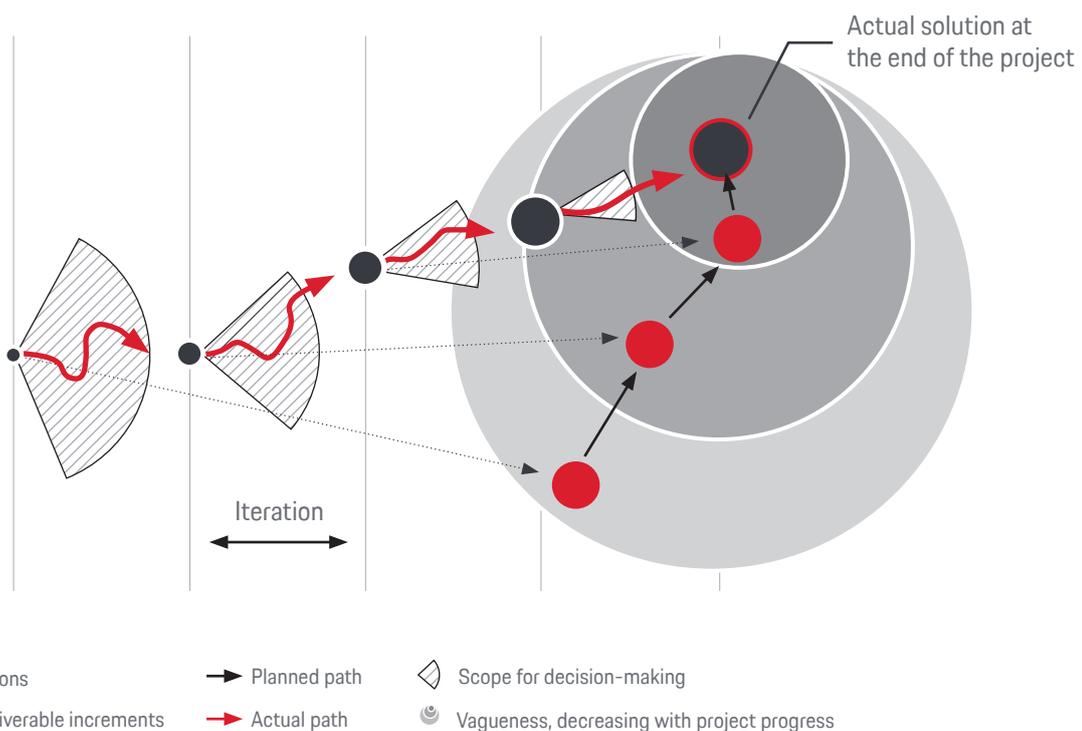


Fig.11 Iterative and explorative approach⁴

⁴ Source: Hieber, D. M. 2017. Bosch Innovation Management.

startup method. Build a minimal viable product (MVP) with limited features to measure your hypothesis for the business case. In this way, you are able to collect important data and feedback from customers and users. Use this information to pivot your concept and narrow your scope for solutions. These steps should be done over a very short period but repeatedly, until you get it all right. Similar to the philosophy of traditional lean management, lean startup methods aim to leverage limited resources and find the solutions in a most efficient and effective way.

In addition, setting up a toolbox with methods and tools such as business model lean canvas, value proposition canvas, and customer journey helps teams innovate more agilely and effectively.

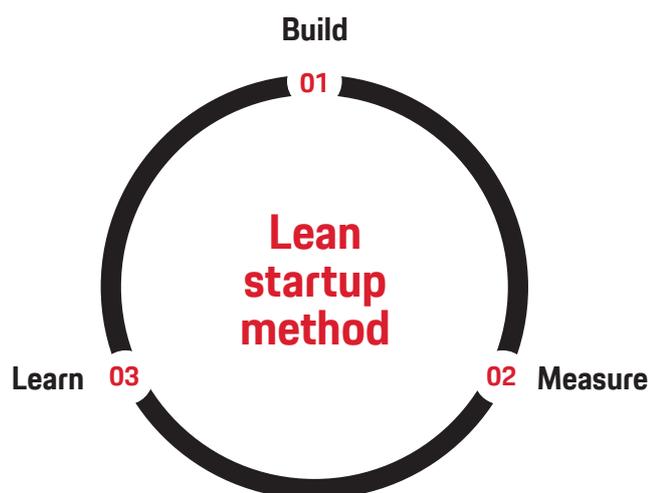


Fig.12 Lean startup: build, measure, and learn⁵

► **Failure culture**

Children learn how to walk after falling down a thousand times; the same applies for innovation. And yet, in the environment of high-quality requirements, organizations in the automotive industry have become very cautious or even reluctant to make mistakes. Hence, executives should install a “failure is an option” culture for innovation and encourage teams to believe that mistake is a magic step toward success.

Instead of laying blame or finding fault, managers and innovation teams should focus on learning through mistakes. If you find that an idea does not really work, fail fast and dismiss it before you waste more time and resources. Nevertheless, organizations must distinguish between good and bad mistakes. Good mistakes occur with uncertainties and are only made once. Bad mistakes are repeated errors that should be avoided.

03 TRANSFORMER:

Install agile strategic planning and manifest innovation mechanism

For the second half-year of the transformation, the priority lies in strengthening the organizational capabilities and manifesting the innovation mechanism. On the strategic side, initialize the innovation strategy and install agile strategic planning. On the operational side, introduce open innovation and roll out the innovation process beyond the small innovation unit. Moreover, manifest the mechanism using innovation governance, KPIs, and metrics.

► **Agile planning**

Planning strategy, budget, or resources has long been an essential part of the business. Strategic planning has helped executives identify strategic objectives and make future business foreseeable. Today’s rapidly changing technologies and disruptions make planning seem pointless, however. Why do the planning when it is going to be outdated by external factors anyway?

And while planning is still essential for business and innovation, it should be done in a much less rigid, slow, and bureaucratic manner. Macro-trends and disruptive technologies are reshaping the automotive industry and adding complexities for suppliers. Scenario-based strategic planning can thus help suppliers better cope with uncertainties and act with more flexibility and confidence. The key lies in frequently updating the scenarios using predefined scenario indicators and metrics. To make planning fast and effective, suppliers need to establish agile strategic planning by adopting two fundamental changes: First, decentralize decision-making to self-organizing teams and let them create a quarterly business plan with key innovation objectives and targets. Collect these bottom-up inputs and ensure alignment only between

⁵ Source: Ries, Eric. 2011. Lean Startup.

these business plans and the company's overarching innovation goals. Second, integrate expert judgement beyond numbers and data. Balance hard and soft data, and do not kill human intuition for innovation.

▶ **Open innovation**

In an era of rising complexity, increasing uncertainties, and rapid technology upgrades, no company has the privilege to innovate behind closed doors and hope to bring groundbreaking products and business models to market on its own. Those who renounce open innovation renounce innovation. Therefore, suppliers need to build strategic partnerships and networks with customers, suppliers, research institutes, startups, and even competitors and cross-industry companies. Signal your openness and generate ideas in workshops with partners and via crowdsourcing. Carry out innovation development together with experts, partners, and customers. Continental, for example, has launched the startup program Co-pace based on a three-part holistic approach to support both employees and external startups and strengthen its own innovation. Moreover, suppliers should define a clear strategy on venturing and M&A based on their corporate and innovation strategies. Elring Klinger, a German automotive supplier that initially focused on cylinder-head gaskets, acquired interest in hofer powertrain Engineering Group and hofer powertrain Products GmbH in October 2016, thereby setting a progressive course for e-mobility and hybrid technologies.

▶ **Visible and measurable innovation**

The purpose of being innovative is to create profitability and ensure growth for the company. Hence, innovation needs to be measurable and visible. Metrics and KPIs are important levers to steer the overarching innovation activities. There are no right or wrong answers. Each supplier should define

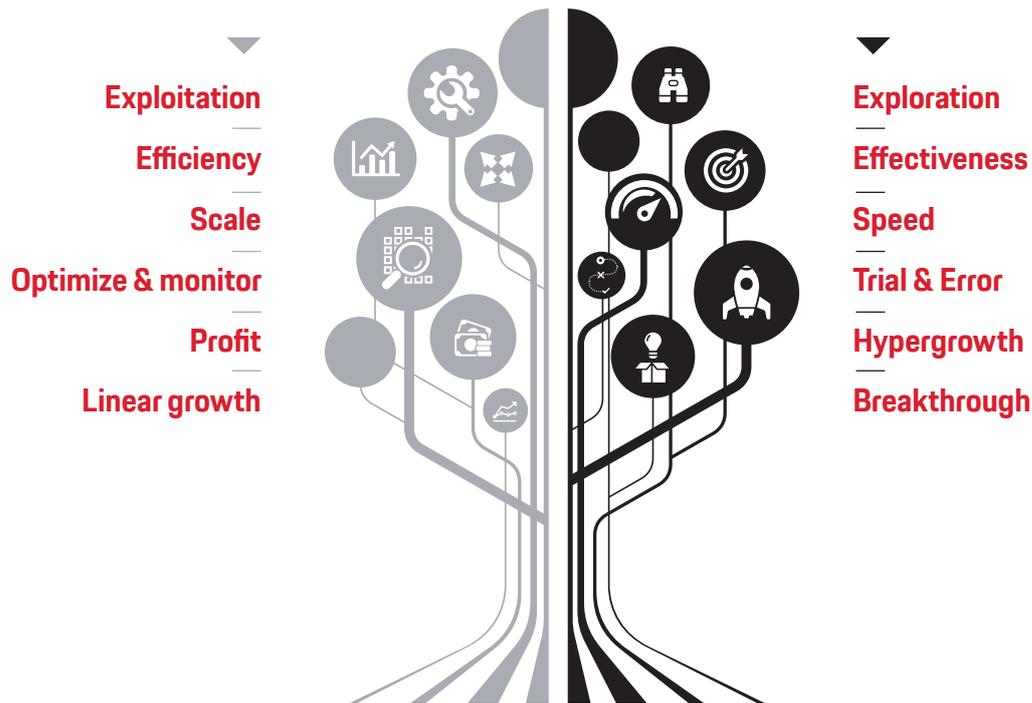
individual metrics and KPIs based on its own business and strategic goals. Together with Porsche Consulting, one global leading NVH (noise, vibration, and harshness) and lightweight automotive supplier set up two innovation scorecards with different KPIs for existing product lines and the innovation center.

Automotive suppliers can adopt widespread metrics such as innovation vitality index, innovation return on investment, ideation rate, and leadership metrics. Innovation vitality index is the percentage of revenue generated from new products launched in the past three years. Ideation rate measures the idea-to-market conversion rate and indicates the effectiveness of the innovation process. Leadership metrics, on the other hand, calculate the percentage of managers' time invested in strategic innovation activities, which reveals the leadership commitment to innovation. No matter which innovation metrics and KPIs you choose, in the end, integrate them into managers' balanced scorecards and use them as a guidance tool to motivate the entire organization.

04 INNOVATOR:

Foster self-driven innovation culture and pursue ambidexterity

During the transformation's second year, automotive suppliers should first imbue all business areas with innovation strategy and sustain the innovation agenda. Next, pursue ambidexterity to balance existing business and innovation. Furthermore, structure and automate the innovation mechanism by developing high-speed innovation processes and completing them with a comprehensive toolbox. Last but not least, accelerate the organization and foster a self-driven innovation culture by rotating between the innovation unit and existing business as well as presenting innovation awards.



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Fig.13 Ambidextrous organization that balances exploitation and exploration

► Pursue ambidexterity

The automotive supplier industry is facing both high competition and cost pressure on existing business as well as threats from disruptive technologies and business models. Although it is undoubtedly crucial that companies assign their best teams to bringing great ideas to the market, many of them still fail in innovation. The issue often lies in the lack of organizational focus and balance. An organization is overwhelmed by operating daily business while simultaneously developing new ideas. To stay competitive in existing fields and find new sources for future growth, suppliers need to establish organizational ambidexterity and strike a balance between exploiting efficiency and exploring innovation. Besides organizational structure, it is also essential to pursue ambidexterity in strategy deployment, controlling, and culture.

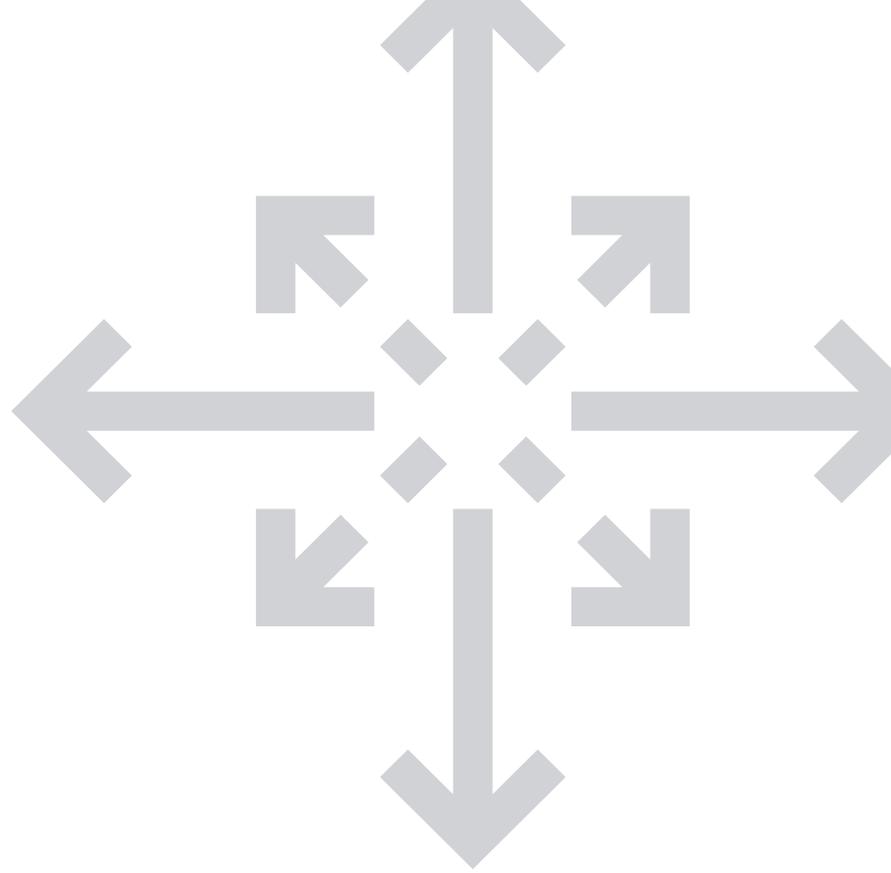
To power the innovation, first isolate efficiency from innovation. The organization of innovation needs to have a strong freedom and independence from the existing business. For example, Porsche Consulting supported a German automotive supplier in establishing a holistic innovation management system. Together with its parent company, this supplier is also setting up an innovation center that will focus on future innovations and technologies within and beyond the automotive industry.

Although numerous companies have set up innovation labs in recent decades to create ambidexterity, many of them have

failed. The main reason is that these innovation labs were invisible and fully detached from the existing business units. Although it is necessary to separate innovation units from daily business to reinforce creativity, companies still need to ensure bridging innovation to business units. Together with Porsche Consulting, the German supplier has set up a “clutch” between its innovation center and existing product lines. Product lines can thus get involved in the innovation process either by funding projects as sponsors or by assigning people to join the innovation team for a certain period of time. This bridge ensures the strategic fit of innovation, on the one hand, and minimizes the risks of launch failure later in the product lines, on the other.

► Self-driven innovation culture

Passion, freedom, and autonomy distinguish an innovator from a follower. Executives should therefore strive to build a lively, self-driven culture. The crucial part here is creating the right incentives. Whereas monetary incentives set up a basis for performance, intrinsic (nonmonetary) incentives are key factors that influence fundamental motivation and result in high performance. Establish new work with people-centricity and decode organizational behaviors. Let teams organize themselves and build a “sandbox” with budget and time for ideas to encourage people to innovate. Manage talents and hire people with passion and a commitment to building something big.



Conclusion

The automotive supplier industry has to identify new ways to cope with strategic challenges: A way to manage the present but also shape the future. A way to survive in the short and medium term but also to secure long-term competitive advantages and growth.

To be the best in class in efficiency and adopt lean solutions in production, supply chain, and indirect processes are surely necessary, but certainly not sufficient to guarantee long-term success. Similarly, a mere increase in R&D expenditure and innovation can be risky for suppliers that also have to cope with challenges in the short and medium term.

Porsche Consulting is therefore helping an increasing number of business partners to cope with business ambidexterity. Set up an ambidextrous organization with the ability to both exploit and explore; the ability to compete with mature technologies and in markets where efficiency, control, and incremental improvement are priorities; more importantly, the ability to compete with disruptive technologies and in new markets where flexibility, autonomy and experimentation are essential.

Success in an era of electrification, digitalization, and connectivity is ultimately achieved by establishing overarching innovation management, fostering a lively and self-driven innovation culture, and boosting innovation power.

Appendix

References

- Aptiv. 2018. "Annual Report 2017." Accessed February 25, 2019.
https://www.aptiv.com/docs/default-source/annual-reports/aptiv_annual_report_2017_hi-res.pdf.
- Bosch. 2015. "Examples of Outstanding Bosch Innovations." October 9, 2015.
<https://www.bosch-presse.de/pressportal/de/en/examples-of-outstanding-bosch-innovations-43049.html>.
- Bosch. 2019. "Bosch Center for Artificial Intelligence." Accessed February 25, 2019.
<https://www.bosch-ai.com/en/home/home.html>.
- Bosch. 2019. "We are Bosch." Accessed February 25, 2019.
<http://wearebosch.com/index.en.html>.
- Bosch. 2019. "Bosch: Sales and Result Once Again on Record Level in 2018." January 30, 2019.
<https://www.bosch-presse.de/pressportal/de/en/bosch-sales-and-result-once-again-on-record-level-in-2018-182080.html>.
- Bosch. 2019. "Fields of Innovation." Accessed February 25, 2019.
<https://www.bosch.com/research/fields-of-innovation/>.
- Continental. 2017. "Startups: Continental Launches Extensive Program to Support Young Entrepreneurs." October 30, 2017.
<https://www.continental-corporation.com/en/press/press-releases/startup-101542>.
- Cornell, Joseph. 2017. "Delphi Automotive Splits into Two." *Forbes*. December 6, 2017.
<https://www.forbes.com/sites/joecornell/2017/12/06/delphi-automotive-splits-into-two/#58e94b704257>.
- Di Fiore, Alessandro. 2018. "Planning Doesn't Have to Be the Enemy of Agile." *Harvard Business Review*. September 13, 2018.
<https://hbr.org/2018/09/planning-doesnt-have-to-be-the-enemy-of-agile>.
- Elring Klinger. 2016. "Elring Klinger Sets Progressive Course for Mobility of the Future." October 27, 2016.
<https://www.elringklinger.de/en/investor-relations/releases/ad-hoc-releases/27-10-2016>.
- Hieber, D. M. 2017. *Bosch Innovation Management*. Troisdorf.
- Hopp, Christian, David Antons, Jermain Kaminski, and Torsten Oliver Salge. 2018. "What 40 Years of Research Reveals About the Difference Between Disruptive and Radical Innovation." *Harvard Business Review*. April 9, 2018.
<https://hbr.org/2018/04/what-40-years-of-research-reveals-about-the-difference-between-disruptive-and-radical-innovation>.
- KfW Research. 2018. "Innovationen." Accessed February 25, 2019.
<https://www.kfw.de/KfW-Konzern/KfW-Research/Innovationen.html>.
- Krogh, Henning. 2019. "Porsche-Consultant Federico Magno im Interview." *Automobilwoche*. January 15, 2019.
<https://www.automobilwoche.de/article/20190115/BCONLINE/190119956/porsche-consultant-federico-magno-im-interview-fuer-die-zulieferer-geht-es-um-die-blanke-existenz>.
- Minor, Dylan, Paul Brook, and Josh Bernoff. 2017. "Are Innovative Companies More Profitable?" *MIT Sloan Management Review*. December 28, 2017.
<https://sloanreview.mit.edu/article/are-innovative-companies-more-profitable/>.
- Poston, Bill. 2014. "Innovation Measures #7: Innovation Vitality Index." *The Chief Innovation Officer*. November 13, 2014.
<http://thechiefinnovationofficer.com/latest-thoughts/2014/11/11/innovation-measures-7-innovation-vitality-ind>.
- Ries, Eric. 2011. *Lean Startup*. New York: Crown Publishing Group.
- Sedgwick, David. 2012. "How Delphi Automotive Beat the Odds in Vast Corporate Turnaround." *Crain's Detroit Business*. August 6, 2012.
<https://www.crainsdetroit.com/article/20120806/FREE/120809919/how-delphi-automotive-beat-the-odds-in-vast-corporate-turnaround>.
- N MEASURES #7 – INNOVATION VITALITY INDEX. Retrieved from
<http://thechiefinnovationofficer.com/latest-thoughts/2014/11/11/innovation-measures-7-innovation-vitality-ind>

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