



## Open Innovation: Bosch honors best start-up collaboration

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### Open Bosch Award for Code Intelligence and Hesai Photonics Technology

- ▶ Open Bosch Award values the importance of open innovation
- ▶ Bosch CDO and CTO Dr. Michael Bolle: "Collaboration increases the likelihood of success"
- ▶ Several hundred partnerships between start-ups and Bosch in 2019

Berlin, Germany – The Bosch Group recognizes [Code Intelligence GmbH \(Code Intelligence\)](#) and [Hesai Photonics Technology Co., Ltd. \(Hesai\)](#) with the "Open Bosch Award" for best start-up collaboration. This marks the first time the supplier of technology and services honors outstanding performance in open innovation between Bosch and start-ups. Code Intelligence, a start-up based in Bonn, Germany, provides automated security-testing solutions for software. Hesai is a Shanghai-based start-up that designs and manufactures sensor technology that allows automated vehicles to see their surroundings in 3D with high resolution. "Partnerships are vital in a connected world," emphasizes Dr. Michael Bolle, chief digital and technology officer at Bosch. "With the Open Bosch Award, we honor the best start-up collaboration worldwide."

Studies show that open innovation approaches boost efficiency in innovation processes by 60 to 90 percent. That is why partnerships are the key success factor in the ongoing digital transformation as the recent BCG study "The most Innovative Companies 2018" underlines. Currently, Bosch is running several hundred start-up collaborations across all business areas, the majority of these focusing on the mobility sector.

For the Open Bosch Award, the main criteria are mutual benefit for all parties involved, best practice character in terms of set-up, approach and commitment, as well as outcome in means of measurable impact. The awards ceremony took place at the Bosch Connected World in Berlin.

### **Partnerships increase likelihood of success**

The ability to rapidly and continuously innovate is a core competency of Bosch. In a technology-fueled world with accelerating innovation cycles, Bosch is fusing ideas and competencies beyond company borders to best serve its customers. Start-ups play an important role as they are also often first-movers, taking high risks and being equipped with significant resources. At the same time, leading start-ups can benefit from Bosch assets and competencies, e.g. industrialization, market access or branding.

The combination of a start-up and the industrial power of Bosch results in a benefit for all parties involved: customer, start-up and Bosch. A partnership can create new challenges as well: “Sometimes start-ups pivot and sometimes Bosch innovation projects change their direction. However, we realize that a great collaboration significantly increases the likelihood for success for everyone involved,” says Bolle.

### **Code Intelligence: Preventing cyber attacks**

One of the awardees is Code Intelligence, a German start-up based in Bonn in combination with a team from Bosch Corporate Research. Code Intelligence demonstrated its expertise by developing a scalable approach to automate security tests for connected products based on coverage-based fuzzing. The close collaboration enabled the team to produce tangible results within a very short time frame of only two months.

“Such software security testing approaches have uncovered vulnerabilities in open source projects. The connectivity based products of the future need such measures and Bosch’s embracement of them is an example of how we proactively ensure security in our products,” explains Rakshith Amarnath, project leader at Bosch Corporate Research. Dr. Henning Perl, CTO of Code Intelligence, points out the benefits. “Through the cooperation we gained valuable insights on industrial requirements and received a unique entry point into the automotive and the connected industry divisions of Bosch.” The team continues to cooperate on automating software-security tests.

### **Hesai Photonics Technology: Realizing Automated Driving**

Another awardee is Hesai together with a team from Bosch in the field of automated driving. In 2017, Hesai successfully participated in the [Bosch AI in Auto accelerator in China](#), which helped to deepen the relationship and align interests. From the very beginning, both parties shared a common vision. “We constantly scan the market for solutions that serve best our efforts of making automated driving a reality. In this case, we now also use Hesai’s technology in our development vehicles to approach this challenge”, states Jumana Al-Sibai, Executive Vice President at Bosch Chassis Systems Control. “We are very

fortunate to have the privilege of working with the world's largest automotive supplier at an early stage and we have benefited tremendously from Bosch's valuable insights", adds David Li, the CEO and co-founder of Hesai.

### **About the award**

The Open Bosch Award values the importance of open innovation through close collaboration between start-ups and Bosch. The award is organized by [Robert Bosch Venture Capital GmbH \(RBVC\)](#). RBVC invests in start-ups and also connects them to the Bosch group. To support early engagement RBVC established a venture client unit called "Open Bosch" that systematically enables partnerships.

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About the Bosch Group:

*The Bosch Group is a leading global supplier of technology and services. It employs roughly 410,000 associates worldwide (as of December 31, 2018). The company generated sales of 78.5 billion euros in 2018. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected manufacturing. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 460 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At nearly 130 locations across the globe, Bosch employs some 68,700 associates in research and development.*

*The company was set up in Stuttgart in 1886 by Robert Bosch (1861-1942) as "Workshop for Precision Mechanics and Electrical Engineering." The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant upfront investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.*

Additional information is available online at [www.bosch.com](http://www.bosch.com), [www.iot.bosch.com](http://www.iot.bosch.com), [www.bosch-press.com](http://www.bosch-press.com), [www.twitter.com/BoschPress](https://www.twitter.com/BoschPress).

About Robert Bosch Venture Capital GmbH:

*Robert Bosch Venture Capital GmbH (RBVC) is the corporate venture capital company of the Bosch Group, a leading global supplier of technology and services. RBVC invests worldwide in innovative start-up companies at all stages of their development. Its investment activities focus on technology companies working in areas of business of current and future relevance for*

Bosch, above all, automation and electrification, energy efficiency, enabling technologies, and healthcare systems. RBVC also invests in services and business models that are relevant to the above-mentioned areas of business.

Further information is available at [www.rbvc.com](http://www.rbvc.com)

About Code Intelligence GmbH:

*Code Intelligence is a developer of an application security testing technology intended for automated vulnerability detection of software. The company's state-of-the-art technology automatically automates a large number of software attacks by pseudorandomly changing inputs under real operating conditions, enabling companies to strengthen the security and reliability of their software.*

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Further information is available at [www.code-intelligence.com](http://www.code-intelligence.com)

About Hesai Photonics Technology Co., Ltd.:

*Hesai specializes in designing and manufacturing laser sensors for different industries, including LiDARs (3D scanners for self-driving vehicles and robots) and natural gas leak sensors for the energy industry. Hesai was founded in 2013 in Silicon Valley and is now headquartered in Shanghai, with 500+ employees and 2 manufacturing centers.*

*Hesai builds both mechanical and solid-state LiDARs and has served pioneering autonomous driving companies worldwide. The company's latest solid-state LiDAR, with its extended range, enhanced resolution, and proprietary interference rejection technology, offers market-leading performance for autonomous driving applications.*

Further information is available at [www.hesaitech.com](http://www.hesaitech.com)