

Weekend

| Robotik* Innovationsranking 2019 | |
|-------------------------------------|-----------------------------------|
| Rang | Unternehmen |
| 1 | Fanuc |
| 2 | Baidu |
| 3 | Midea |
| 4 | Alphabet |
| 5 | Rockwell Automation |
| 6 | LG Electronics |
| 7 | Canon |
| 8 | Samsung |
| 9 | Yaskawa Electric |
| 10 | Microsoft |
| 11 | ABB |
| 12 | Apple |
| 13 | Xiaomi |
| 14 | Epson |
| 15 | GM |
| 16 | Boeing |
| 17 | Siemens |
| 18 | Emerson Electric |
| 19 | Qualcomm |
| 20 | Amazon |
| 21 | Toyota Motor |
| 22 | VW Group |
| 23 | Panasonic |
| 24 | Honeywell |
| 25 | CloudMinds |
| 26 | Tencent |
| 27 | Endress+Hauser |
| 28 | Mitsubishi Electric |
| 29 | Stratasys |
| 30 | Sony |
| 31 | Gree Electrical Appliances |
| 32 | Ocado |
| 33 | Guangzhou CVTE |
| 34 | Denso |
| 35 | iRobot |
| 36 | Shenzhen Gowild Intelligent Tech. |
| 37 | Siasun Robot & Automation |
| 38 | Estun Automation Technology |
| 39 | Faro Technologies |
| 40 | Rokid |
| 41 | FCA |
| 42 | Softbank |
| 43 | Alibaba |
| 44 | Honda Motor |
| 45 | DMG Mori Seiki |
| 46 | Illinois Tool Works |
| 47 | Bosch |
| 48 | Shenzhen Qianhai Yyd Robot |
| 49 | JD.com |
| 50 | Desktop Metal |

Top spot in robotics: Fanuc's Japanese human machine

The future of Fanuc is green. Traditionally, the automatic production machines at Japan's largest industrial robot manufacturer are painted bright yellow. But Fanuc's trade fair stands are increasingly being augmented by a new generation of robots in neon green, which specialise in cooperating with humans.

The collaborative robots reflect Fanuc's new focus on smart systems for networked factories, which analyse data using artificial intelligence (AI), automatically increasing the efficiency of the production process. These innovations have helped their creators shoot up the ranks in Patentsight's Innovation Ranking. Since 2015, Fanuc has climbed from 61st to 19th place, earning the company the title of most innovative company in the field of robotics. The verdict of the patent experts: "Fanuc is an interesting company that is active at the right interface."

While other industrial robotics companies specialise in specific areas, Fanuc covers the entire range from arms, grippers and servos, through human-machine interaction technologies, control software and sensor technology, to simulation, fault diagnosis and self-maintenance. The company's activities in the field of AI, which is key in complete robot factories, are particularly noteworthy.

Fanuc secured the services of Japan's most prominent AI start-up Preferred Networks, in which the car manufacturer Toyota is also involved.

The founders of the start-up company have made it their business to introduce AI to their own products as well as to the machines of other manufacturers through close collaboration. The first joint successes with Fanuc are in preventive maintenance for machine tools and product monitoring by the machines themselves. The machines are designed to raise the alarm when a component is about to wear out or a part they have produced is defective.

But the company is also very much aware of the growing weight of data and the changes brought about by the new 5G data networks, according to Graeme McDonald, analyst at Citigroup Global Markets Japan. "And they are open to cooperation with external partners." This is because in the interconnected world, Fanuc, with a turnover of some four billion US dollars, is too small to hold its own against new contenders like Amazon or Alphabet.

As part of its new partner strategy, Fanuc initially supported the open platform Field. In September, the group announced its intention to develop a cloud service for machine tools in cooperation with Fujitsu and NTT Communications. Together, they want to turn the so-called "Digital Utility Cloud" into the new industry standard.

"Whether the alliance will make a significant impact is hard to say at present," says analyst McDonald. "This partnership may help in Japan, but I am not sure how it will be of benefit elsewhere." Martin Kölling

