Additive manufacturing is the driver for industry 4.0

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AM has gone from a valuable tool for prototyping new products into a sustainable, cost-effective mainstream manufacturing process, challenging traditional solutions like casting, forging and machining with an entirely new process that is already opening up new possibilities for manufacturers in the demanding aerospace, energy, automotive and medical sectors, amongst others. During these challenges, we meet new requirements from the market: new materials and AM applications development, standardization and serial production topics as first steps in Industry 4.0. In today's digitalization-driven era, manufacturing companies are exposed to many advanced technology developments such as big data, automation, robotics and additive manufacturing. Oerlikon regard AM as a central factor and physical arm of Industry 4.0. With many years of experience in advanced materials and surface engineering, Oerlikon thoroughly understand the needs of partners and enjoy trusted relationships with many of the world's largest industrial leaders. Engineering expertise in materials processing is another key competence for Oerlikon; that is, in the design and development of high-performance industrial components and processing systems. All major aero engine manufacturers and over half of the world's largest automotive brands trust Oerlikon’s technologies.

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Worldwide trends in robotic development. Industry 4.0 concept implementation

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The report focuses on the following actual issues:

- Robotics Worldwide market overview. Points of grow. Main applications.
- Collaborative robots in modern production. Mobile robots.
- Industry 4.0 : on the way to production digitalization. Principles and new opportunities.
- Self-learning machines and systems. Data collection, analysis and use.