Workplace of the future – The impact of digitalization and automation on modern work processes

- Digitalization is leading to a transition in industrial work across Germany and Europe
- Volkswagen is training its employees for new tasks
- Humans and robots learn to work hand in hand

Wolfsburg, November 16, 2017 – Industry 4.0 is based on digital and networked systems. But contrary to common fears, production will not simply be switched over from humans to robots. At Volkswagen, it is understood that automation and digitization will not lead to deserted factories. What will indeed change are the numerous individual tasks. To successfully carry out this transition together with its employees, the Volkswagen Group is preparing its workforce with intensive training for digitalization, electric drive systems, and mobility services.

Volkswagen is a driver of employment in Europe. The company operates manufacturing facilities in 20 European countries and builds twelve different brands of vehicles in seven European countries. More than 620,000 Volkswagen Group employees worldwide – including nearly half a million Europeans – value their secure, well-paid jobs. The company assumes social responsibility for these workers by preparing them for Industry 4.0. Because this transition can only work if employees are directly involved. Implementing new technologies is one thing. Inspiring people and convincing them of the benefits is another.

Training for new tasks

Automotive manufacturers see the future in Industry 4.0, because this will enable them to improve their competitive edge with new technologies. Better processes and lower costs increase operational efficiency. At the same time, digitalization is changing many job profiles and requiring employees to adapt to new conditions. While new tasks and jobs are created in future-oriented fields, positions are being eliminated in other areas. Wherever new jobs are created, Volkswagen plans to fill them mainly with current employees, who will receive special training for their new
positions. Employees whose jobs are eliminated will be assigned to new, productive workplaces. This major change is accompanied by unique challenges. Training junior staff also plays an important role, since specialized skills can provide long-term protection against unemployment. With this in mind, the Volkswagen Group has introduced dual vocational training at 25 sites in Europe. The company has also launched the StartUp Europe trainee programme and other plans to subsequently offer permanent employment.

According to Ralph Linde, Head of the Volkswagen Group Academy: "We believe that Industry 4.0 will not necessarily result in fewer jobs. But it will increase the training requirements. In the age of digital production, motivated, and above all well-trained employees, are the key to success. At the same time, digitalization – especially in the factories – will create a better working environment. Monotonous and physically strenuous tasks can be performed by robots, and this will make things much easier for the workers."

**Robots and humans working hand in hand**

But what will factory work be like for Volkswagen employees in the future? Innovations like human-robot coworking will change job profiles for factory workers. Humans will be able to focus more on added value, individual precision, and quality. In the past, robots and humans were separated by safety barriers. In the future, they will be able to work together simultaneously on a single component. This is made possible by new safety sensors and other devices on the machines. The robots react to human workers and anticipate what the person expects. They take evasive action and slows down when someone approaches it to avoid any potential danger. Volkswagen is currently developing this technology in its think tanks. The focus in the Wolfsburg Smart Production Lab is on the digitalized factory of the future. New software is being developed in cooperation with experts from the German Research Centre for Artificial Intelligence in Bremen and can be transferred to different industrial robots and application areas.

Volkswagen is implementing digitalization to work on further developments. Along these lines, the company is creating new approaches and building its innovative strength in different think tanks and joint ventures with external professionals. The company is already a major IT employer with around 12,000 people working in this field and an IT budget of nearly €5 billion. In six IT labs and 31 centres of excellence worldwide, Volkswagen experts are working together with partner companies, start-ups, universities, and research institutes on the company’s vision of the future. It is sustainably expanding its knowledge in the fields of artificial intelligence, big data, virtual reality, smart production, and connectivity. Additional momentum is provided by highly-qualified young professionals including robotics specialists, level designers, design-thinking experts, and artificial intelligence researchers.
Ralph Linde explains: "We are currently in the middle of a transition phase at Volkswagen. We're ready for Industry 4.0 and our employees are already well-prepared."