

## Press release

### Artificial intelligence and digital networking accelerate innovations in microelectronics

*Villach – April 7, 2022* – The results of the European research project "iDev40" will link development directly with production, implement microchip innovations more quickly, and further develop the skills and job profiles of skilled workers. By using "digital twins," development times can be shortened from three months to one week across all locations.

How can innovations in microelectronics be implemented more efficiently, more reliably, and more quickly across different sites, and how can people and their skills be brought along for the jobs of the future? This question was addressed by the European project "iDev40" (Integrated Development 4.0) led by Infineon Austria.

Sabine Herlitschka, CEO of Infineon Technologies Austria AG: "The "iDev40" project has made it possible that now, at the end of the project, methods and tools are available to connect the microelectronics value chain digitally end-to-end. These are groundbreaking results that contribute significantly to our competitiveness and innovative strength on the global market. 39 of the best European partners from science and industry have successfully collaborated for the benefit of the entire European electronics industry. At the same time, employees are being qualified for the new tasks of the future and new job profiles are being created. Europe needs exactly projects like these to further advance its technological sovereignty internationally through comprehensive digitalization in methods, know-how and training."

#### From three months to one week: faster development and production

A core objective of the project partners was to intelligently network highly complex and creative development processes with manufacturing in order to shorten the innovation process and also actively involve employees\* in the process. To this end, the first step was to link all possible development scenarios from a wide variety of sources and locations in order to then create a learning and automated system using deep learning algorithms and artificial intelligence. Data security was comprehensively considered.

The result: the **"Enhanced Experiment Management System"**. This is a customized software program that uses mathematical simulation models to digitally represent real development processes and flexibly make adjustments in production. What was previously only feasible through extensive and costly trials and tests is now implemented through a "digital twin". This significantly reduces costs and development time. A one-week simulation run can thus replace a real production run of three

months. In addition, the software can be used across several production sites - for example in Austria, Germany or Malaysia. In addition, suppliers are also included in this system. A patent has been filed.

Link to the [Demo-Video](#)

Josef Moser from Infineon Austria and "iDev40" overall project manager: "We can now start innovation processes at any time and from anywhere. The reduced development time and faster production ramp-up enable a significantly improved 'time-to-market'. We involved the users in the development process from the very beginning and also developed adequate training methods."

### **"Skills for future" - strengthening digital skills**

The European project also made an important contribution to including socio-organizational success factors in the digitization process. The team identified the requirements for smart collaboration between sites and in distributed teams. For example, new job profiles including the necessary competencies were defined for the "Remote Operation Center", the central control center of Infineon's new, fully automated production in Villach, and adequate training methods were developed. In the process, the team also used apps or social bots. These so-called "digital help agents" can communicate synchronously with users, shorten the training period for new employees\* and support them in their knowledge growth. Users receive the right information at the right time. The results are an important contribution to strengthening competencies as well as the digital corporate culture and further developing the workplaces of the future.

### **39 partners from six countries**

The "iDev40" project ran for three years and involved 39 partners, including research institutions, SMEs and international companies, from a total of six countries. The project budget of 47 million euros was co-financed by investments from industry, grants from the individual participating countries and the ECSEL Joint Undertaking (Electronic Components and Systems for European Leadership) program.

Project website with all partners: [www.idev40.eu](http://www.idev40.eu)

All videos about the project: [www.youtube.com/idev40](http://www.youtube.com/idev40)

## **About Infineon Austria**

Infineon Technologies Austria AG is a group subsidiary of Infineon Technologies AG, a world-leading provider of semiconductor solutions that make life easier, safer and greener. Microelectronics from Infineon reduce the energy consumption of consumer electronics, domestic appliances and industrial facilities. They make a major contribution to the convenience, security and sustainability of vehicles, and enable secure transactions in the Internet of Things.

Infineon Austria pools competencies for research and development, production as well as global business responsibility. The head office is in Villach, with further branches in Graz, Klagenfurt, Linz and Vienna. With 4,820 employees from 73 countries (including 2,100 in research and development), in the financial year 2021 (ending in September) the company achieved a turnover of € 3.9 billion. With a research expenditure of 516 million euros, Infineon Austria is one of the strongest research company in Austria.

For more information please refer to [www.infineon.com/austria](http://www.infineon.com/austria)  
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