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## Press Release

April 29, 2020

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### **Artificial Intelligence: Bilfinger to become a DFKI shareholder**

- **Bilfinger Digital Next joins DFKI shareholder group**
- **Close cooperation in the development of AI methods planned**
- **Bilfinger already using AI in solutions such as PIDGraph in the process industry**

Bilfinger, through its subsidiary [Bilfinger Digital Next](#), is joining the group of shareholders of the [German Research Center for Artificial Intelligence](#) (DFKI). The DFKI is Germany's leading industry-focused research institute in the field of innovative software technologies incorporating artificial intelligence (AI) and is considered one of the most important "Centers of Excellence" in the international scientific community. The purpose of the stake is to develop innovative solutions based on AI for the process industry. Bilfinger is the first industrial services provider in the DFKI shareholder group, which also includes companies like Google, Microsoft and SAP.

Franz Braun, CEO of Bilfinger Digital Next: "Artificial intelligence technologies give companies in the process industry groundbreaking new opportunities to manage and maintain their plants with a greater degree of efficiency and effectiveness. Plant operators can generate substantial competitive advantages using AI. We want to demonstrate these possibilities to our customers and support them with future-oriented solutions based on the broad range of advantages delivered by artificial intelligence".

Prof. Dr. Antonio Krüger, CEO and Chairman of the DFKI Management Board: "We are pleased to be taking the next step towards a lasting partnership on the basis of the success we have enjoyed in our joint project work to date. Bilfinger's commitment attests to our cooperation and underscores the industrial relevance of the work DFKI researchers are doing. DFKI's circle of shareholders will be strengthened by the addition of an ambitious industrial services provider, with whom we plan to continue implementing the results of AI research into products and solutions for the process industry".

Bilfinger has been collaborating successfully with the DFKI for some time on the development of digital solutions for the process industry. Joint developments that have been launched on the market include [PIDGraph](#), a software for the digitalization of plant documentation. Through the application of AI methods, the software is able to digitalize piping and instrument flow diagrams



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(P&I diagrams) that are only available in paper or PDF formats. The symbols, texts and lines of the diagrams are converted into a digital format with the help of neural networks trained to recognize patterns. The software records the corrections made by the user and thus continuously improves itself. The digital formats created by PIDGraph can be processed by any modern engineering and asset management system, thereby forming the basis for creating "digital twins" of industrial plants, for example. The digitalization of P&I diagrams is not only significantly cheaper with PIDGraph, but also much faster than conventional methods.

"The AI algorithms recognize the complex elements in the plant diagrams, analyze them, assign them semantically, making them readable for the computer. PIDGraph shows how mature AI methods can comprehend complex corporate knowledge and make it available for digital use," says Prof. Dr. Andreas Dengel, who started the cooperation with Bilfinger and leads the research area Smart Data & Knowledge Services at the DFKI.



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Image 1: PIDGraph is an exemplary AI solution from the DFKI that Bilfinger offers to its customers: AI algorithms allow analog corporate knowledge to be read by a computer.



Image 2: Industrial plants consist of many elements. PIDGraph recognizes these from the plant plans and transfers them to the digital world.



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## About Bilfinger

Bilfinger is a leading international industrial services provider. The Group enhances the efficiency of assets, ensures a high level of availability and reduces maintenance costs. The portfolio covers the entire value chain from consulting, engineering, manufacturing, assembly, maintenance and plant expansion to turnarounds and also includes environmental technologies and digital applications.

The company delivers its services in two service lines: Engineering & Maintenance and Technologies. Bilfinger is primarily active in Europe, North America and the Middle East. Process industry customers come from sectors that include chemicals & petrochemicals, energy & utilities, oil & gas, pharma & biopharma, metallurgy and cement. With its 34,000 employees, Bilfinger upholds the highest standards of safety and quality and generated revenues of €4.327 billion in financial year 2019.

You can find additional information, photographs and videos at       

## About the DFKI

The German Research Center for Artificial Intelligence GmbH (DFKI) was founded in 1988 as a non-profit public-private partnership (PPP). It has locations in Kaiserslautern, Saarbrücken and Bremen, a project office in Berlin, a laboratory in Lower Saxony and branch offices in St. Wendel and Trier. DFKI is Germany's leading business-oriented research institution in the area of innovative software technologies based on artificial intelligence methods. DFKI is one of the scientific community's most important "Centers of Excellence".