

eccenca Strengthens Crisis Resilience of German Economy

eccenca knowledge graph platform is foundational technology for federal projects to increase supply chain resilience.

LEIPZIG, GERMANY, June 29, 2021 /EINPresswire.com/ -- eccenca provides the fundamental data management technology for two innovative, pioneering projects to increase the resilience of the German economy in crisis situations. The CoyPu and



ResKriVer projects, which are part of the third funding call "Artificial Intelligence as a Driver for Economically Relevant Ecosystems", aim to optimize supply chain processes in pandemic and other crisis situations. The German Federal Ministry for Economic Affairs and Energy (BMWi) had launched the 80-million-euro funding call in response to information and supply bottlenecks

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To make reliable, accurate predictions about the behavior of supply chains in crises, you need vast amounts of data, contextual knowledge and a userfriendly interface to enable decision-making." Dr. Sebastian Tramp during the current Covid-19 pandemic.

The funding priorities are economic, health and sociopolitical aspects of crisis management. As the BMWi states in its call, in crisis situations, time-saving is often crucial. Artificial Intelligence (AI) is a key building block for this. The effectiveness and usability of AI applications, though, is always dependent on high-quality, comprehensible, verified data from a wide variety of sources. However, these are usually highly distributed, heterogeneous, and located in proprietary siloed systems.

"To make reliable, accurate predictions about the behavior of supply chains in crises, you need three things," confirms Dr. Sebastian Tramp, CTO at eccenca. "First, a vast amount of data covering all perspectives and influencing factors. Second, contextual and logical knowledge to make the data interpretable and the AI processes explainable. And third, a user-friendly and context-specific visualization of both the results and the background knowledge. Especially the latter is essential for decision makers in crisis situations. On the one hand, they must be able to

trust and understand the forecasts. On the other hand, they must be enabled to make quick decisions. The projects should meet both of these requirements. Our Knowledge Graph platform provides the technological foundation for these capabilities."

Ability To Act Proactively in Crisis Situations

The CoyPu project (Cognitive Economy Intelligence Platform for the Resilience of Economic Ecosystems) aims to develop configurable dashboards that provide decision-makers in politics and business with reliable, up-to-date decision-making resources and recommendations for managing crises. Within this framework, a platform is being developed for the integration, structuring, networking, <u>analysis</u> and evaluation of heterogeneous data from economic supply networks as well as the industry environment and social context.

Use cases include optimization of demand forecasting, more resilient production through AI and simulation-based risk mitigation, as well as forecasting and proactive response to crisis impacts across supply chains. Twenty-two organizations are participating in the project, including Siemens, Infineon and the Leibniz Information Center for Technology and Natural Sciences (TIB). The project is led by the Leipzig Institute for Applied Computer Science e.V. (InfAI).

The ResKriVer project (Communication and Information Platform for Resilient Crisis-Relevant Supply Networks) focuses on preventive crisis management of the supply of critical services and products. Thus, the 12 participating organizations include the Berlin Fire Department, Charité Universitätsmedizin Berlin, and German broadcaster rbb, among others. The Fraunhofer Institute for Open Communication Systems (FOKUS) is leading the project. In the ResKriVer project, a digital platform is being implemented that uses AI applications to collect, create and communicate crisis-relevant information for supply chains. In particular, it aims to forecast the impact of bottlenecks in the supply chains of companies and the public sector (i.e. medical institutions, emergency services, etc.).

Use cases include the identification of substitute products or producers, early detection of supply bottlenecks, optimized resource allocation and communication of the effects of crisis situations. For this purpose, all goods, services and processes along the supply chain are to be documented and contextually linked in a <u>digital supply chain twin</u> using knowledge graphs. For the first time, this will create a knowledge-based data platform that can be used to document and analyze the dependencies in economic and communication networks of crisis-relevant goods.

The enterprise-ready, tried-and-tested semantic knowledge graph platform <u>eccenca Corporate</u> <u>Memory</u> forms the technological foundation in both projects to integrate the different data sources, to link context and domain knowledge with data and thus to enable explainable AI.

For more information on the knowledge graph platform, visit eccenca Corporate Memory.

Jens Pacholsky eccenca GmbH +49 341 97531960 jens.pacholsky@eccenca.com Visit us on social media: Facebook Twitter LinkedIn

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