



AI-Based Exchange Platform for the Automotive Industry Helps Stabilize Disrupted Supply Chains

Passau, February 24, 2023 – Supply chain disruptions have become emblematic of our time, halting the global flow of goods and production processes. Many industries, automotive manufacturing for example, are being severely disrupted by the aftermath of the pandemic, geopolitical crises, and trade restrictions. One Data, the German AI specialist, has developed a solution to show companies they are not powerless in the face of these problems. Their platform “Wavetrade” enables the purchase, sale, and exchange of critical components, such as semiconductors and chips. The solution has been adopted by leading companies like HARMAN Automotive, and the first weeks since the platform’s December 2022 launch have demonstrated that its approach to supply chain resiliency is gaining traction, with successful matches and trades already being made. The platform employs data analytics and AI with an emphasis on sustainability.

Automotive supply chains have long been regarded as stable, with a vast network of hundreds of supplier companies working in tandem to bring the final product to retailers. The pandemic and the resulting „chip crisis“ have led to significant issues: specific semiconductors were either not produced in adequate quantities or disrupted shipping created transportation bottleneck. This made it difficult for the automotive industry to acquire the necessary chips. While this chip crisis has been partially resolved, supply chains remain inherently fragile. Potential trade restrictions in this sector suggest that new problems could arise at any moment.

Reducing uneven distribution

Many companies feel powerless in the face of supply chain disruptions. However, Dr. Stefan Roskos, Managing Director at Passau-based AI specialist One Data, suggests otherwise, stating that supply disruptions often stem from a lack of information. Companies are often uncertain whether the required chips are still available. Additionally, parts shortages are not just due to production capacity, but also arise from uneven chip distribution, with some companies holding too many in stock while others have too few. However, Roskos explains that data and artificial intelligence can address this situation. One Data has developed a highly effective virtual trading and exchange platform to facilitate this.

HARMAN Automotive, a leading supplier for networked infotainment systems in cars, is among the first to successfully adopt the One Data platform. HARMAN’s extensive experience in this high-tech sector involving large quantities of chips that meet the highest quality standards, requiring timely and reliable delivery, makes it an ideal partner for the platform. HARMAN recognizes the value of collaboration in these difficult times and has established task forces to engage with semiconductor manufacturers to increase supply, and to call on CEOs to initiate bilateral component swaps. Thomas Frei, the Vice President of Sales, Inventory and Operations Planning at HARMAN Automotive, acknowledges that these efforts involve significant manual effort, prompting HARMAN to seek out One Data’s data-based platform community as a more efficient, comprehensive, and secure solution for such exchanges.

Security for all involved

The solution, called „Wavetrade,“ allows company managers to publish the critical parts they need or can offer for exchange. The platform searches for excess stock in the warehouses of other companies and facilitates the sale or exchange of the needed components. The process begins with the anonymous publication of search queries and bids, disclosing contact information only when a sale or swap is imminent.

However, the platform’s operation is more complex than it appears, as chip names may differ across companies. To address this, One Data has developed an AI system that analyzes associated data sheets to identify the component, even if the name is slightly different. The platform also displays almost-matching components, but experts within the involved companies decide whether to use these alternatives in production.

The question of why companies have excess components in stock remains. According to Roskos, some companies were unable to maintain their production schedules due to the pandemic, resulting in an overstock of components. However, Wavetrade offers a solution by allowing companies to specify a time window for when they will need the dispensed quantity of components back from the buyer. The platform, which launched in December 2022, has already seen successful matches and trades, and has received approval from the Cartel Office.

Sustainability in focus

The fact that this solution enhances the sustainability of goods is also noteworthy. Semiconductors have a shelf life and cannot be stored indefinitely, making Wavetrade’s ability to avoid their potential disposal significant. What’s more, increasing cooperation between reputable companies ensures that they assist each other in obtaining high-quality chips from secure sources. „Overall, we are confident that we have created an effective tool with this solution that can help mitigate supply chain issues,“ concludes Roskos. „As more companies participate, the effectiveness will only increase. The finished solution is readily available to all automotive companies.“

For more information on Wavetrade click [here](#).

About One Data

One Data GmbH is a German software company and a leading name in the use of applied artificial intelligence (AI). Founded by Dr. Andreas Böhm in 2013, the company – with its 300+ employees in Passau, Munich, Frankfurt and Berlin – provides an AI-powered Data Product Builder designed specifically for innovative and collaborative data teams. This enables such teams to create and use comprehensive data products, establish a data-driven culture and unlock the full potential of data. The One Data team helps customers improve data quality through powerful AI analytics and implement new data architectures such as data mesh. Data Product Builder makes it quick and practical to implement data projects: data is transformed into identifiable, reliable, system-compatible and secure data products. As a result, data assets no longer remain inaccessible, incomprehensible information sequences reserved for experienced data experts alone. Instead, they become data products available to everyone in the company for application in use cases. The outcomes include more stable supply chains, more accurate forecasts, faster R&D processes and more efficient data teams.

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