# Rise of Digital Twins to Democratize User & Industrial Data

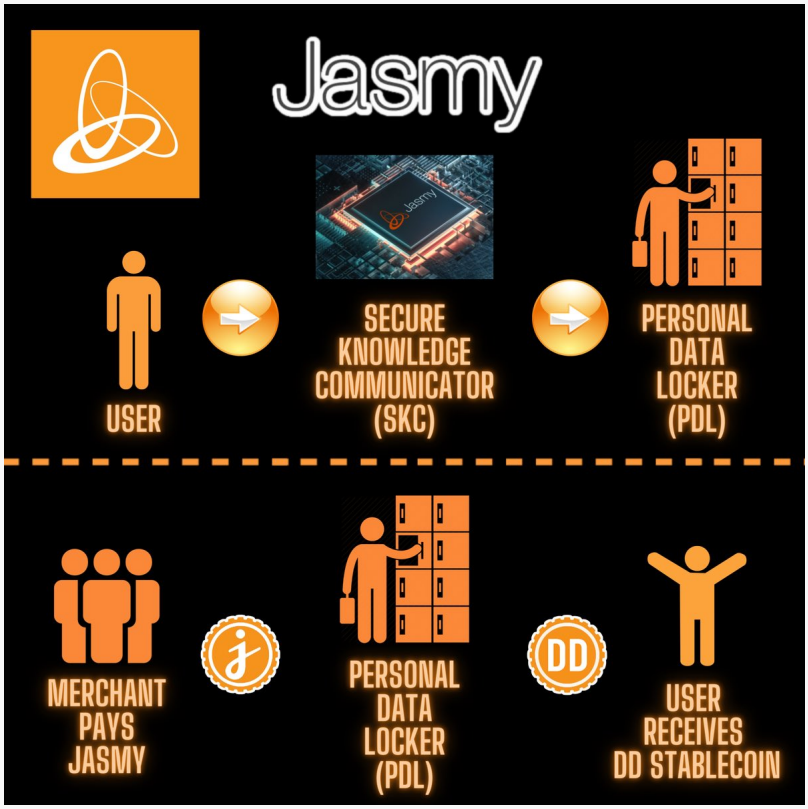
*Data democracy to gain momentum with digital twins integrated into the metaverse and Web3, filling gaps in existing IT systems and boosting data integrity.*


MIAMI, FL, UNITED STATES, May 22, 2023 /EINPresswire.com/ -- While people have heard about digital twins and the rise of digital twin technology in the Metaverse, there is an increasing realization that this trend might affect all forms of contemporary IT data systems, including how corporates and businesses manage their organizational data and interact with the data of their targeted audiences. Digital twins are more than just another topic of debate for people trying to predict what will shape the future of the world in 2023 and beyond.

The global digital twin market size was valued at around $8.6 billion, and it is projected to grow up to US $137 billion by 2030

Digital transformation was always about enabling more accuracy in data collection, and warehousing, adding layers of security to it, and making it more actionable. However, the existing IT models have fallen short of this promise. Businesses across all industry verticals continue to function in some form of disconnected data environments even as they become more digitized. Corporations continue to own tons of siloed data, but all such information is not easily shared or made available for different departments or domains—data becomes redundant and less effective. The arrival of a digital twin promises to solve many such problems. The technology uses the concept of developing an informational model that is perceptive and interactive. Such a model ensures that vital information about all business locations and assets

is groomed for more sharing, analysis, and decision-making without the need for personnel. This includes the highest level of critical business data and generic information about the more standard aspects of a business, like the building plan or maintenance schedule of an industrial facility. In essence, it means overcoming the pitfalls of digitalization and creating better productivity and asset performance. This tech is bound to use AI, cloud computing, and augmented reality [AR] in some form.




Hiroshi Harada, Jasmy CFO speaking at Web 3.0 Summit

We cannot talk about data democratization without mentioning the digital twin model. Today, data is the big currency, the global asset that not just big companies, but even consumers should own. The retail ecosystem, all types of financial transactions, and the way people access the web, all point towards more data generation, data much more than what would have been imagined by research firms. Data democratization is the next step in this increasingly data-fueled transformation. It is about creating ownership across the data's lifecycle and ensuring that raw data is transformed into actionable information.

Kamal Rupareliya, Director of Products - Intuz, says that the digital twin in IoT (Internet of things) and the metaverse are the next big step in technological evolution as these two technologies continue to shorten the gap between the human and the digital world...

Legacy and modern data systems aren't always fully optimized to ensure that the real data owner knows about how the personal data is being harvested or illicitly manipulated. The arrival of tokenized economies, such as those seen in cryptocurrency, offers a solution for it, using blockchain and artificial intelligence to turn consumers into data owners, making them

responsible for how their personal data is accessed or shared. The Shanghai Urban Operations and Management Center created a digital twin of the city that has nearly 26 million inhabitants, using digital assets for road traffic, apartments, waste-collection facilities and refuse disposal systems.

In a review study, researchers collected academic publications that contain digital twin as a keyword for the years 2017 to 2022, and the maximum 'digital twin' use cases were found for urban spaces and smart cities

While resident data scientists within an organization are mandated to use all types of manufacturing, industrial, operational, administrative, and marketing data, the same does not hold true for financial transaction-controlling agencies that don't disclose how personal user data is taken advantage of, often putting the consumer at a clear disadvantage—this problem is evident across Web 3 and even social media platforms where user interests and browsing behaviors are watched, recorded, and converted into monetized trends by invasive marketing agencies. Data democratization, seen in crypto platforms like Jasmy, is giving back control to people, saving them from being brutally targeted. Blockchain, IoT, AI, and now the arrival of the digital twin are all enablers in this technology shift that can no longer be averted. Consumers will benefit from more control over their financial and personal details along with more meaningful advertising programs whereas organizations will be able to build more efficient data models that will translate into effective information that helps to stay ahead of the curve overcoming roadblocks like disparate data, unavailable data, outdated records, and overall, low data literacy standards.

National Highways UK plans to use a virtual twin of the UK road network and intelligent road materials as part of a digital strategy. According to the government agency, this will reduce the need for time-consuming and costly on-site inspections.

Even as digitization continues to grow, the industry perspective about it might be changing as unfortunately, more businesses are realizing that mining for and owning more data does not always mean more informed decisions. Real profitability stems from getting faster access to clear decision-making. For an automobile parts manufacturer, this might mean quickly identifying any challenges associated with changing the design of an industrial part and proactively diagnosing the possible reasons for failures. Digital twins can help, providing more room for simulations & experimentation and helping engineers & designers get a better look into possible failures and find a way to avoid them. This is just one application of digital twins, and the tech is not limited to optimizing business models. It can help to work to identify and overcome any redundancy found in real-world devices and systems. Digital twin prototyping trends underway point towards more twins being created for systems, processes, and products. Digital twins will take away the dependency on advocating and increasing data-sharing ethics. The twin tech provides organizations, governments, and policymakers with a novel idea that helps them test any change by creating a digital copy of all types of real-world assets.

A digital twin is fed real-time data that is abundant in the metaverse. It is further enabled by sensors, making the virtual twin of anything a more accurate copy, helping it better imitate the responses and actions. This is why digital twins can help to eliminate failures and wastages. As the metaverse integrates digital twins, industries will be able to unlock a huge potential for better prediction, resource management, and quality control. For individuals, digital twin technology can raise the performance standards for data tracking and monitoring. As the combination of these technologies is further boosted by blockchain and machine learning, a more connected digital world will take shape.

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