Data Economics FAQ for Executives

What is Data Economics, and why is it relevant to my business?

Data Economics is the scientific discipline of how digital data can serve as both a *means to express value* as well as a *medium of economic exchange*. Data Economics provides a framework for understanding, expressing, and optimizing the economic value of enterprise and customer data. Data Economic frameworks enable companies to evaluate opportunities to further increase the value of enterprise-generated data and can also facilitate business exchange in areas such as contracting with partners.

How will an improved understanding of Data Economics change my business?

Understanding Data Economics will help your company identify and optimize the value of your data, and will help you implement business models that can improve the economic return on your data without compromising data ownership, fidelity, safety, or privacy. It can help you understand how to generate more valuable, higher quality data, and how to incentivize your customers or partners to participate in generating the same. Data Economics can not only contribute directly to data-related revenue streams, but it can also help you understand the valuation of your products and lines of business.

Can you give me some examples of how real world companies are implementing Data Economics projects?

- Fortune 100 Pharmaceutical company using Data Economics science and a software implementation of a Data Economics platform to model, implement, and analyze an outcomes-based contract between their company and a health care insurer (payer)

- Consumer health and wellness app company using Data Economics to better understand the value of their customer and enterprise data as part of corporate valuation prior to a fundraise and M&A event

- Global agriculture and food NGO using Data Economics to develop frameworks for new economic incentives for small farmers and connect large, multinational corporate textile purchasers to have end-to-end supply chain traceability linked with incentives and payments

- Corporations contributing data in a safe, transparent, and auditable manner into Data Economic Networks designed to analyze the impact of climate change and initiatives to address climate change, and giving credit back to the organizations that enable these initiatives and to organizations enabling analyses via data contributions International metals and recycling firms using Data Economics to trace metals and industrial inputs and align supply chains with financing and insurance mechanisms backed by data.

Is Data Economics related to blockchains and distributed ledger technologies?

Data Economics is a science that contemplates the use of digital data as instruments for measuring and transacting value. This involves the development of the theoretical framework for an expansion of traditional economics to contemplate "price expressed through units of data", as well as practical, real-world applications and implementations of Data Economic Networks.

The Lydion Technology is such a specific methodology, developed by The Data Economics Company and its partners, to implement scalable Data Economic Solutions via Data Economic Networks to address high-impact real-world opportunities and challenges. To form such Data Economic Networks (or DENETs), the Lydion Core Technology uses a proprietary data structure and related architecture called Workchains (or W-Chains) to implement *Data Asset Vaults* for specific types of outcomes being represented as Data Assets within these Networks. While related to traditional blockchains in their ability to represent and communicate unique quanta of data across decentralized networks, Workchains are simply a transformed representation of existing datasets and datastreams that package up Outcomes as Data Assets, which are then stored in traditional SQL databases.

Thus, while related to blockchain technology, Workchains are very much geared towards enabling Data Economic Solutions using existing datasets, wherever those datasets may be (as opposed to "putting your data on a 3rd party blockchain".) Note, however, that Workchains are merely a specific, optimized data structure for designing Data Assets - parallel implementations of the Lydion Methodology may very well use other data structures to perform the tasks Workchains perform. In addition, while the default implementation of Lydion Core stores Workchains and Data Assets in a relational (SQL) database, it can just as easily interface with other storage solutions, including traditional blockchains.

There is a more interesting connection between Data Economics as a discipline and the potential to actualize and implement many of the types of solutions that technologists and business leaders proposed could be solved with the first generation of blockchain and ledger technologies, but in real-world implementation were hindered by implementation costs, transaction costs, data privacy and protection concerns, or financial regulatory barriers. Data Economics allows us to zoom out and see a bigger picture of what blockchains and distributed ledgers are trying to achieve, in many cases: mechanisms to use data to describe and express value, ways to protect and preserve the fidelity of data while allowing it to be transacted by others, and methods to implement agreed-upon business rules (consensus) across a distributed group of participants in a network.

LYDION

What types of business leaders are engaging around Data Economics, and who are my internal experts?

We see many projects leveraging Data Economics that are led or initiated by Chief Data Officers or sometimes Chief Digital Officers. Sometimes, we see projects emerging from corporate innovation groups, or teams tasked with solving a particularly challenging data or economic problem within their organization, particularly when it involves leveraging data from multiple stakeholders or external partners to achieve an economic or financial result.

Where can I go to learn more about Data Economics as a science and the related business opportunities?

The Data Economics Company has developed a number of resources to help companies and individuals be "Data Economics Ready" and take advantage of the business opportunities emerging through Data Economic frameworks. We invite you to contact us to learn more at **contact@lydion.com**.