



## Infosys Leverages Grakn for Data Lineage & Metadata Management

### Industry

IT Services

### Use Case

Metadata Management

### Challenge

To model complex metadata that requires a hypergraph structure

### Solution

Storing integrated metadata in graph format in Grakn

### Result

An application that enables internal users of large organisations to find their required data with certification information

*Infosys is a global leader in next-generation digital services and consulting. They enable clients in 45 countries to navigate their digital transformation. With over three decades of experience in managing the systems and workings of global enterprises, they expertly steer their clients through their digital journey. Infosys does this by enabling the enterprise with an AI-powered core that helps prioritize the execution of change.*

*For Infosys's Data Governance Workbench, the team leveraged Grakn as a hyper-relational knowledge base to store integrated metadata in graph format. Prachi Kishore, Enterprise Architect, says: "this enables ontology-based search with NLP, which is continuously improved with AI."*

### Challenge

Infosys Data Café and Data Marketplace are Infosys solutions that are part of Data Governance Workbench. For this, Prachi and her team built a data model that requires the modelling of unlimited relationships and nodes in order to realistically depict the meta data of an organisation, including technical, business, and operational metadata. The complexity of the model is derived from the complex many to many relationships between datasets, entities and attributes.

To represent and query this type of meta data, Prachi recognised the challenges it faced when working with traditional database systems, for example relational or property graph databases. To address these challenges, her team chose to use Grakn.

“Grakn enables users to find their required data with certification information and cognitive linkages. The use of Grakn for such linkages enable users to discover unknown relationships and dark data.”

*Prachi Kishore Hunnargikar*  
*Enterprise Architect*  
*Infosys*

## Why Grakn

Prachi chose Grakn because its data model is based on hyper-relationships, which makes it possible to realistically depict the meta data of an organisation. As she explains: “This data model approach makes querying easier and gives compatibility with visualisation tools such as Tableau/QlikView and Linkurious. ”

They further chose Grakn because the data model ensures support for dynamic ontologies, where business terms and hierarchies may change over time and over contexts. Grakn’s built-in AI-functions enables Prachi and her team to orchestrate complex relationships easier, such as parent-child based meta data searches. It allows them to connect unconnected data, for example, how does the weather affect store sales if we bring together Zip-codes and Geo-codes?

## Benefits

Using Grakn enabled Prachi and her team to provide cognitive search via a portal to internal users of any organization who need different data sets for various purposes, like reporting, analytics, regulatory compliance etc.

As Prachi explains: “Grakn enables users (business users, stewards, IT users) to find their required data with certification information and cognitive linkages, i.e. what are the related data sets and the data set they are searching. The use of Grakn for such linkages enable users to discover unknown relationships and dark data (less frequently analyzed data sets together)”.

Finally, Grakn enables Infosys to build a data marketplace to find related data easily and manage its publication as well as the subscription, and helps in monetising the data assets better.

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Grakn is the knowledge graph to organise complex networks of data and making it queryable, by performing knowledge engineering. Rooted in Knowledge Representation and Automated Reasoning, Grakn provides the knowledge foundation for cognitive and AI systems, by providing an intelligent language for modelling, transactions and analytics. Being a distributed database, Grakn is designed to scale over a network of computers through partitioning and replication.

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