XT Database (XTDB)

UBPARTNER

The easy approach to analysing and reporting on XBRL data.

UBPartner's XT Database provides a simple, yet powerful and effective method for analysing and reporting on XBRL data. Based upon a standardised XBRL storage model, it has the advantage of enabling any XBRL document to be stored in a database without changing the underlying data model, whilst also providing a performant platform for cross document queries and Business Intelligence tools.

The XT Database delivers the speed, scalability, and security required by organizations looking to implement a full XBRL-based reporting system and can be deployed as an optional component of the XT Portal or implemented as a standalone product. It can also provide a robust platform for extracting data to other systems that deliver more detailed BI and advanced analysis, e.g., a Data Warehouse.

Efficient XBRL Data Storage

In the past, many organisations were forced to develop custom 'shredding' systems to load XBRL documents into an independent reporting database. Unfortunately, this approach loses much of the rich metadata associated with an XBRL filing and results in a huge maintenance cost to keep everything synchronised with the rapidly evolving taxonomies and XBRL standards.

Implementing a standardised XBRL data model provides a much more effective and efficient XBRL storage mechanism as it keeps the full semantics of the taxonomy yet provides the basis for a performant and scalable reporting system.

Smarter XBRL Storage

The XT Database uses a standardised XBRL data model, enabling new XT Taxonomy Packages to be registered and for XBRL instance documents to be stored without fuss, so that they can be readily analysed.

Furthermore, XTDB knows how to intelligently query the information that' has been loaded, as it supports queries based on fact values (e.g., show me who reported a value greater than x), on metadata (compare income statements over the last four periods), or on documents (render the XBRL submission for a given company).
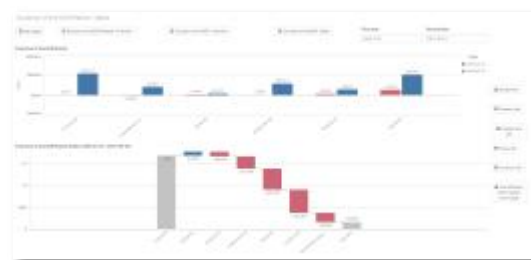
Risk analysis for ORSA reporting

XT Database can be used by:

∧ Regulators to analyse XBRL submissions.

∧ Group finance functions to compare and consolidate reports from subsidiaries.

∧ Companies to help produce other reports, e.g., ORSA dashboards in the insurance industry.

The Two Faces of the XT Database

The XT Database provides both a full view of the instance document and the related definitions via the associated Taxonomy and allows users to use standard SQL based tools, such as Qlik in the examples below, to prepare dashboards and custom analyses based upon XBRL data without any special database routines.

- ∧ The Base Tables provide a complete XBRL view of the facts in the XBRL documents.
- ∧ The Reporting Tables provide a filtered and 'flattened' view of the above that can be interrogated by standard SQL query tools.

Simple Dashboards produced without major effort

Reports of any type to meet the user's needs.

The XT Database model and metadata is enriched with application specific data, e.g., DPM codes, Table Linkbase definitions, etc., where available from the UBPartner XT Taxonomy Package. This makes it easier to establish and maintain extraction routines and other ETL processes, making it a robust platform that enables the XBRL data to be readily extracted into a format that can be more easily loaded into an independent Data Warehouse or custom reporting system.

Alternative XBRL Database Solutions

UBPartner has also researched native XBRL storage models, based on XML or JSON file storage. The arrival of the XBRL Open Information Model and, in particular, the xBRL-JSON specification suggests that in future there will be a move towards using 'semantic' databases and storing XBRL documents in a 'NoSQL' database. This is a more generalised approach to handling data stored in multiple formats and could unlock the powerful semantic relationships in XBRL. However, today the lack of tools to exploit such systems, costs of implementation, and lack of relevant skills means that they are only economic for large regulator-based systems.

Which approach is right for you?

Each approach to storing XBRL data has benefits and disadvantages, so there is no single solution to meet all the differing system and end-user requirements to analyse XBRL data; however,

UBPartner's knowledgeable consultants can help with advising on how to approach a specific set of XBRL data storage requirements.

Database
- Microsoft SQL Server. 2008 minimum
- Postgres

Hardware
- Processor: recommended at least 4 cores and 2GHz.
- RAM: minimum 4 GB.

Java 1.8 64-bit version minimum