

## Compatibility of Elysys BI product

Elysys BI (Business Intelligence) provides advanced business analysis capabilities for investment management activities. This module is compatible with **Microsoft Power BI, Elysys SFO, Elysys MFO, Elysys AM** and other **compatible third-party database tool**.

## The Limitations of SQL Databases for Business Analysis

Microsoft Dynamics NAV and the Elysys add-ons use Microsoft SQL server databases technology to store data in a transactional SQL Server database. The normal structure of transactional SQL databases is based on a number of relationally connected tables. **This table-based structure is ideal for:**

- entry and collection of data in the system
- assignment of security and other rights from the standpoint of the application

**Nonetheless, transactional databases are not suited for reporting and BI purposes. This limitation is due to:**

- the difficulty of linking data from diverse tables and visualising them in a format that is consistent across different types

- the continuous altering of a database through transaction entry and update (any snapshot of information that is captured during these processes can cause issues, such as locked fields or inconsistencies in the reported output)

***Because of the limitations of SQL databases, an alternative solution to visual business analysis tools is needed.***

## Elysys BI: Underlying Technology

Elysys BI was developed to supplement the capabilities of SQL Server databases with visual business analysis features. The Elysys BI product incorporates two main applications:

- **Microsoft SQL Server analysis and integration services**
- **Jet Enterprise automation tool.** This **Time Xtender** based automation tool is a partner product developed exclusively for Microsoft Dynamics NAV to enable:
  - **quick and efficient design of data warehouses from Dynamics NAV databases**
  - **processing of information updates from the transactional database**
  - **implementation of processes per predefined scheduling rules**

## Elysys BI: Front End Visualisation Capabilities

Jet Essentials enables the following visualisation capabilities:

- reading of data warehouse files
- producing easily customisable reports
- combining Excel spreadsheets with Pivot Tables to generate powerful visualisations of data
- drilling down, slicing and dicing of the OLAP cubes provided in SQL Server

## Elysys BI - Functionality

### Comprehensive raw information

#### Elysys BI provides:

- a comprehensive data warehouse with all the historical information included in the Elysys modules
- the Microsoft Dynamics NAV core product modules with accompanied OLAP cubes for producing highly complex visualisation of underlying data

#### Note:

Data in the warehouse will reflect information imported during the most recent synchronisation. Synchronisation is done at least once every 24 hours (overnight) and at most every 4-5 hours. While the frequency of synchronisation is limited due to processing time, it can be overcome by investing in more complex and efficient server architecture.

### Performance - TWR

**Best practice** recommends basing the calculation of return on investments (ROI) and portfolios on daily cash adjusted returns. The results are then compounded geometrically to provide time-weighted returns (TWR).

**Elysys BI implements the GIPS recommended practice** for calculating the TWR investment performance within a portfolio which is then used to calculate the Portfolio TWR.

This technology enables Elysys BI to provide **powerful visualisation and analysis** of dynamic portfolio and investment performance across asset classes, currencies (including a predefined Global Currency, to consolidate across entities with diverse base currencies), industry sector and many other dimensions.

### Forward Moves

Going forward Elysys will be expanding the functionality of the Elysys BI product to include:

- IRR calculations, e.g. for Private Equity
- other performance estimation ratios, e.g. Value at Risk and Sharpe Ratio

