

**ECOFIN FINSUITE**  
DATA MANAGEMENT  
PLATFORM

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# ECOFIN FINSUITE DATA MANAGEMENT PLATFORM

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# FINSUITE DATA MANAGEMENT PLATFORM

## OVERVIEW

FINSUITE Data Management Platform is a proven, flexible solutions toolbox for managing market data, reference data, corporate actions data and other financial and investment data, as well as providing various services.

The platform consists of

- Internationally used data models,
- Software components,
- Fully implemented data warehouses and
- Data enhancement functionalities.

These components can be used to implement various types of business solutions in banking and insurance, especially for asset and risk management, e.g. Asset Liability Management and corporate actions processing. The focus is on high quality and short project times, even for complex projects.

ECOFIN provides comprehensive data enhancement software and ASP services, covering fair values, sensitivities, implied input values and risk measures for options, futures, bonds, warrants, structured products, indices etc.

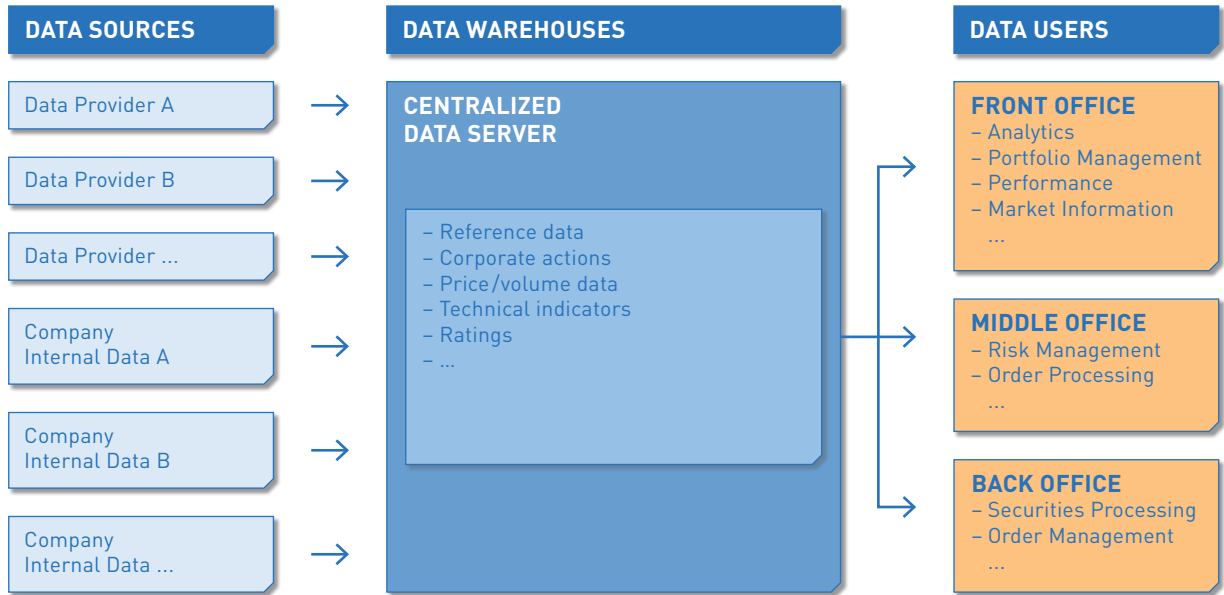
FINSUITE Data Management Platform is scalable to business size, volume of data processed (number of feeds, volume of data per instrument and number of instruments) and the functionality provided. Typically, solutions cover departments (e.g. risk management, research), subsidiaries or entire firms.

# BENEFITS TO CUSTOMERS

The FINSUITE Data Management Platform is based on a fully modular concept. It offers a variety of solutions, from fully-fledged off-the-shelve Data Warehouses to customized software solutions designed jointly by the customer and ECOFIN.

Tailor-made solutions meet the customer's requirements, thereby using well proven software and service elements of the FINSUITE Data Management Platform. This approach reduces project risk considerably and keeps costs and project duration at a reasonable and foreseeable level. The modularity of the concepts ensures the extensibility of the projects.

ECOFIN has a long experience in combining the skills of software engineering and of financial analysis. Therefore, ECOFIN is able to provide support in all stages of financial data management projects: from strategic advice to full implementation.



# DATA MODELS

## CHARACTERISTICS

ECOFIN data models are:

- Clearly defined in scope,
- Comprehensive and flexible,
- Based on an in-depth analysis of the constituent factors of the respective domain elements,
- Stable, even if the domain elements are highly unstable.

Each data model comes with comprehensive documentation that explains components, their interdependencies and use. XML versions are available in all cases.

Such data models are an ideal basis for implementing reference databases.

## FINANCIAL INSTRUMENTS DATA MODEL (FIDM)

FIDM describes reference data and corporate actions data for all types of financial instruments, even those not yet invented. It consists of six packages:

- Instrument reference data,
- Instrument cash flow data,
- Relevant parties reference data,
- Corporate actions,
- Trading and pricing,
- Countries and regions.

The model comprises some 3,000 non-redundant definitions.

## MIDDLE OFFICE DATA MODEL (MODM)

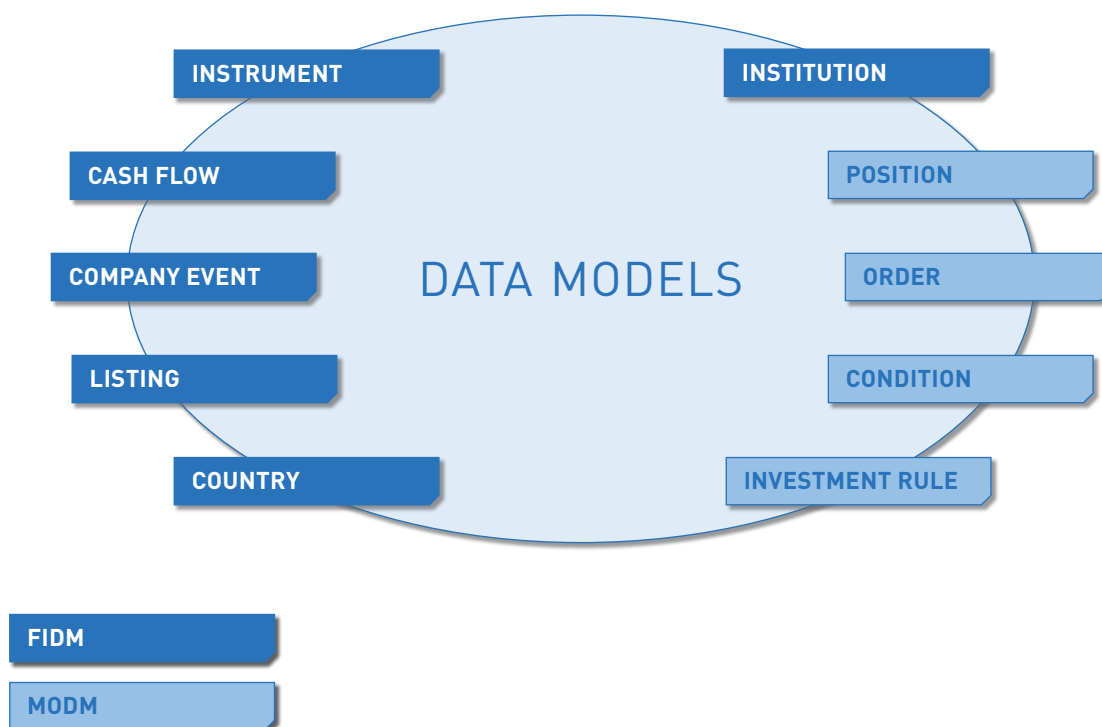
MODM describes holdings and transactions in financial instruments and other relevant assets. It is compatible with FIDM. It consists of four packages:

- Positions,
- Transactions,
- Conditions,
- Investment rules.

The model consists of some 2,300 non-redundant definitions.

## OTHER DOMAIN AREAS

Data models in other domain areas are available on request.



# FINSUITE DATA WAREHOUSES

FINSUITE Data Warehouses are fully-fledged solutions, providing a wide range of applications, especially in research and risk and portfolio management, with financial information from different sources. All combinations of data sources and data users are possible.

## DATA WAREHOUSE SOLUTIONS FOR THE FOLLOWING DATA VENDORS EXIST:

- Bloomberg Data License,
- Reuters DataScope,
- Thomson Financial Datastream,
- Telekurs VDF,
- Wertpapier-Mitteilungen vf1,
- Global Insight.

FINSUITE Data Warehouse solutions enable data from these sources to be used immediately, reliably and cost-effectively. Internal company data and data from other data providers can also be included easily, of course.

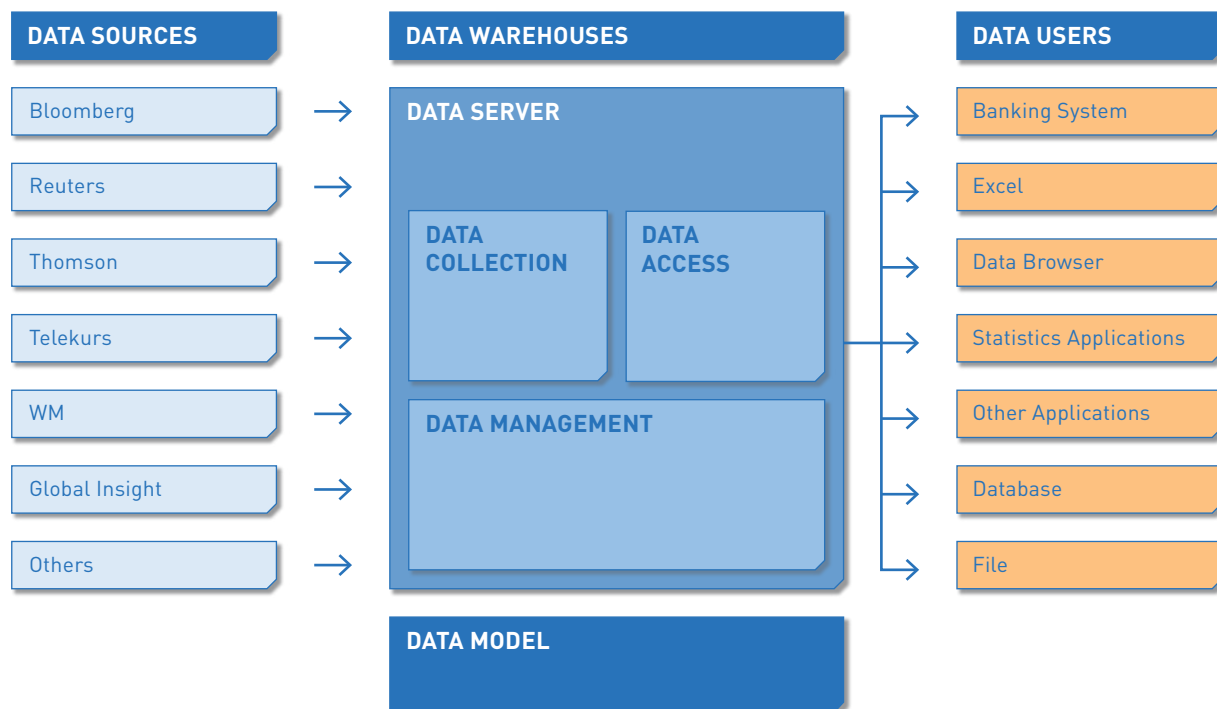
## FINSUITE DATA WAREHOUSES PROVIDE RICH FUNCTIONALITY IN THREE MAIN AREAS:

- Data Collection,
- Data Management,
- Data Access.

The Data Collection subsystem offers automatic and reliable data download, automatic quality monitoring and data enrichment functionalities. Subscribing to selected instruments or to whole data segments is supported. Furthermore, data feeds can comfortably be monitored and controlled from a web-based management console.

Managing different types of financial information is possible: reference/master data, corporate actions, adjustment factors, unadjusted and adjusted price/volume series, technical indicators, risk measures or broker recommendations. Adjusted price/volume series are automatically maintained by the system and corrections are also automatically applied.





## DATA CAN BE ACCESSED IN MANY DIFFERENT WAYS:

- Various APIs seamlessly integrate the system with major programming environments (C++, Java, Perl, VBA, others) and with leading statistics or computation programs (S-Plus, Mathematica, others).
- A comfortable data extraction tool provides all types of applications with data files.
- A web-based data browser offers casual viewers direct access to the data warehouse using a standard Internet browser.
- An Excel add-in comfortably feeds Microsoft Excel spreadsheets for financial and quantitative analysis.
- FINSUITE Data Warehouses can be configured to generate highly flexible charts compliant with the individual corporate design.

# SOFTWARE COMPONENTS

## OVERVIEW

FINSUITE Data Management Platform components provide a sound foundation for all types of applications that involve data management tasks, e.g. in financial research and in risk management. The components comprise:

- Database implementation tools,
- Data collection tools,
- Data management tools,
- Data access tools,
- Application tools.

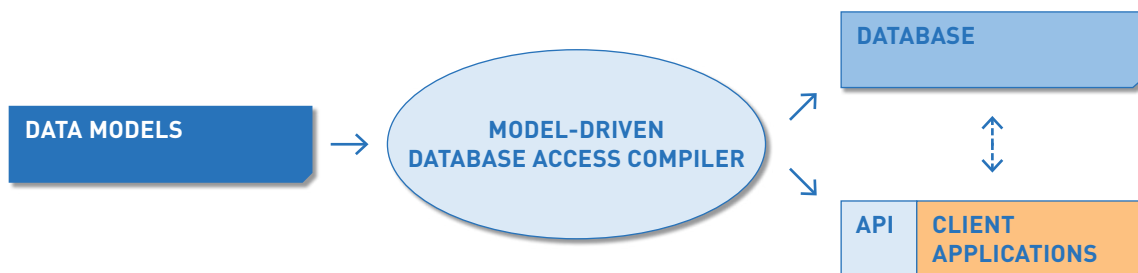
## DATABASE IMPLEMENTATION TOOLS: MODEL-DRIVEN DATABASE ACCESS

FINSUITE's database implementation tools adopt a fully generic approach to implement a relational database from any object-oriented data model or – of course – relational data model.

All tables and programming interfaces are generated, enabling direct access to all database items from different languages like C++ or Java, thus saving users from creating SQL statements. The software also creates generic user interfaces which provide immediate access to all classes of the underlying data model.

Programmer interfaces (APIs) and user interfaces are generated from a single representation of the database model. This concept allows even large databases to be implemented in a short period of time, thus saving costs and time to market.

FINSUITE Model-Driven Database Access is also suitable for implementing large reference databases and for implementing applications.

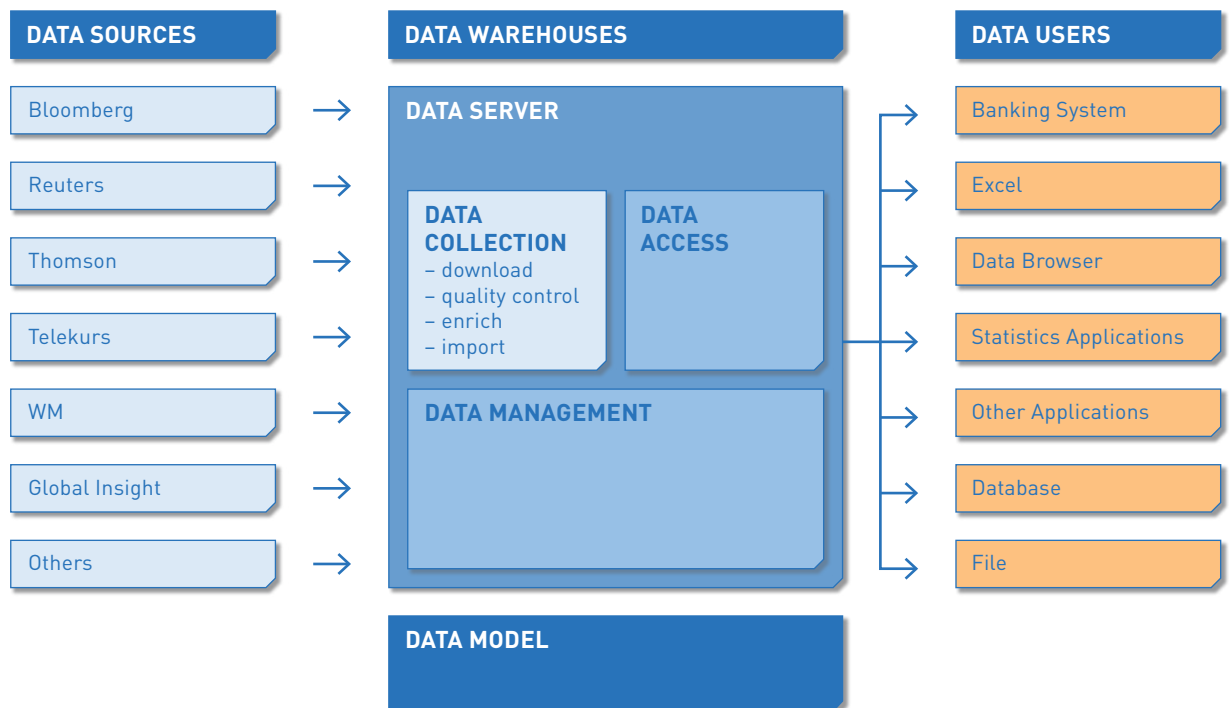


## FINSUITE DATA COLLECTION TOOLS

FINSUITE Data Collection Tools are stable and robust and support different data sources (data vendors, files from applications). They enable critical data to be provided promptly, with high data quality.

The tools offer automatic and reliable data download as well as automatic quality monitoring and data enrichment. The subscription of selected instruments or the subscription of whole data segments is supported.

A steering and monitoring process controls different sub-processes. Quality control checks are applied at every step of the process. Error messages are created if the data does not comply with the defined rules. Starting, stopping and monitoring the status of the loading process is done by an easy-to-use web-based console application.



## FINSUITE DATA MANAGEMENT TOOLS

FINSUITE Data Management Tools enable large volumes of financial data to be held efficiently, with high performance data retrieval.

Many different types of financial information can be stored: reference/master data, corporate actions, adjustment factors, unadjusted and adjusted price/volume series, technical indicators, risk measures, or broker recommendations. Adjusted price/volume series are automatically maintained by the system. Corrections are applied automatically.

These tools save software engineers spending time on tedious database implementation and cumbersome performance tuning. Everything is ready to manage large volumes of financial information and to service large numbers of users.

## FINSUITE DATA ACCESS TOOLS

Data in the database can be accessed via a variety of interfaces. The interfaces available are as follows, depending on the type of database and data involved:

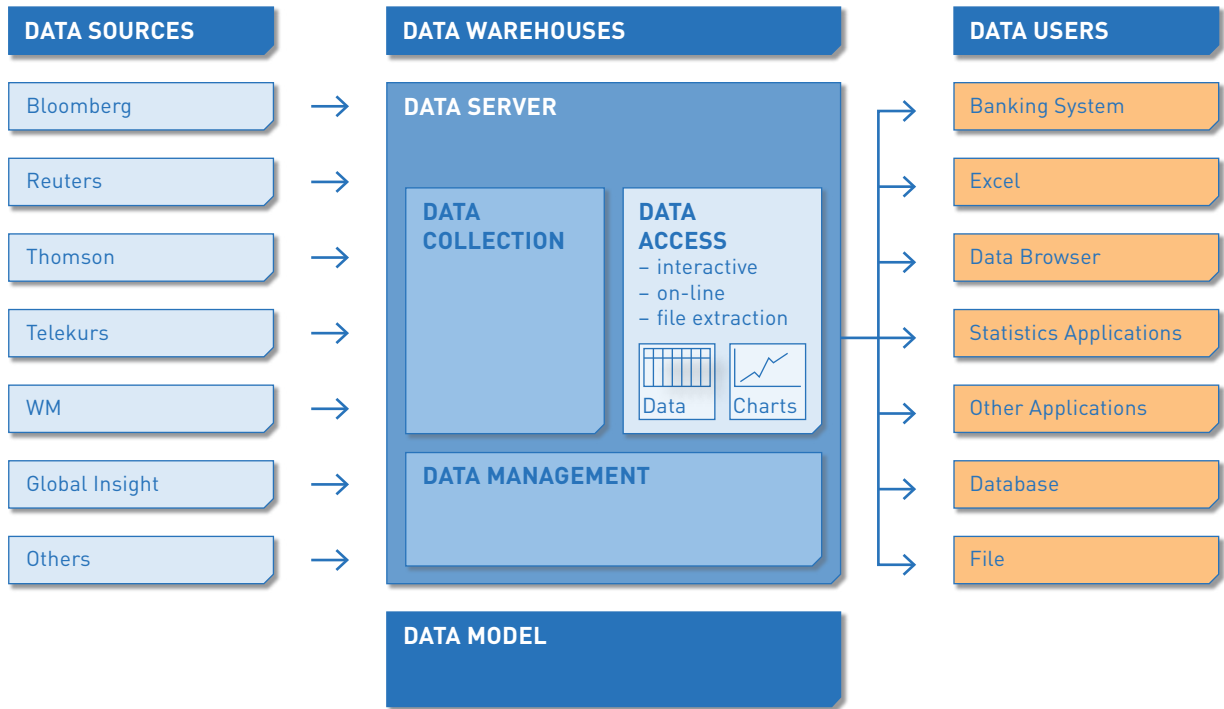
- Web browser,
- MS Excel,
- Mathematical and statistical software (Mathematica, S-Plus, Matlab, SAS, others),
- Programmer interfaces (C++, Java, Perl, COM, http/XML, Unix Shell, C#),
- File export.

# FINSUITE APPLICATION TOOLS

FINSUITE Data Management Platform offers a wide range of applications:

- Data enrichment, such as valuation of and calculation of characteristic figures for financial instruments,
- Risk management tools, e.g. ALM simulation and optimization,
- Reconciling and monitoring of information from different sources,
- Comparing and selecting investment funds,
- Automatic equity and bond selection based on asset allocations,
- Charting engine for the generation of corporate design compliant financial charts,
- Etc.

These components all benefit from ECOFIN’s know-how in finance and economics and 20 years’ experience in software development.



## FINSUITE SERVICES

ECOFIN supports its customers with a broad range of additional services:

- Data consulting,
- Software development,
- Implementation consulting,
- Running data warehouses, either as application service provider (ASP) with the software installed at ECOFIN or remotely with the software installed in the client's premises.

FINSUITE clients can rely on the high quality of the software and on the high quality of the services provided.

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