iN2
GROUP

invest2

Integrated Asset & Risk Management Solution

INvest2 profile

INvest2 system profile	**35+** installations	**15+** in country localizations	**20+** years of development
INvest2 client profiles	Investment and pension fund management	Custody banking	Investment banking
	Private wealth management	Treasury management	

INvest2 System Structure

BENCHMARKING

PORTFOLIO ANALYZER

CASH FLOW MANAGEMENT

CLIENT MANAGEMENT

PORTFOLIO OPTIMIZATION

ORDER MANAGEMENT

LIMIT MANAGEMENT

PORTFOLIO MANAGEMENT

WHAT IF AND STRESS TEST

MARKET RISK MANAGEMENT

PERFORMANCE ATTRIBUTION

INVESTMENT ACCOUNTING

ASSET AND RISK MANAGEMENT

FRONT OFFICE

- Order & cash flow management
- Asset allocation tools
- Pre-trade limits
- Portfolio overviews & custom breakdowns

MIDDLE OFFICE

- Risk and hedging management
- Performance management
- What-if and stress test simulations
- Limit management

BACK OFFICE

- Financial instruments administration
- Asset valuation configuration
- Client data management
- Investment accounting

SYSTEM INTEGRATION

- Trade platform connectivity
- Automatic data-feed routines
- Web-Sales platform
- Custom development

Front Office Modules

FEATURES AND APPLICATIONS

ORDER MANAGEMENT

ORDER MANAGEMENT
Automatized single and group orders generation process, embedded rebalancing procedures, advanced and numerous pre and post trade limits and compliance checks.

CASH FLOW MANAGEMENT

CASH FLOW MANAGEMENT
Detailed cash flow overview and analysis, with user defined account and/or currency breakdowns and cumulative views, for any given (historical, present or future) day.

PORTFOLIO ANALYZER

PORTFOLIO ANALYZER
Centralized portfolio overview and analysis, with user defined breakdowns, over 100 attributes, front, middle and office applications.

BENCHMARKING

BENCHMARKING
Portfolio performance analysis, nominal and relative (vs user defined benchmarks), supports a variety of risk adjusted return measures.

PORTFOLIO OPTIMIZATION

PORTFOLIO OPTIMIZATION
Based on Modern Portfolio Theory, enables portfolio optimization, with user defined risk and return measures and calculation methodologies, constraints and investment universe.

ORDER MANAGEMENT

Placing orders, controlling execution and browsing order history
Order Management enables you to place orders, choosing from a variety of parameters, ranging from execution strategy to expiration and price limit conditions. Once orders have been places, you can amend, divide or withdraw them, at your leisure. Excel import/export and order history browsing are standard features.
Generating multiple and joint orders with ease
In case you have to generate large number of orders, following a certain pattern, such as proportional buying/selling in response to large inflows/out-flows, you can execute within minutes by using our automatic calculation and order generation procedures. In addition, to support businesses with large number of funds/portfolios, the module includes joint/group order and subsequent user defined allocation functionality.
Automatic pre and post trade limits calculation
You can turn on pre-trade limit calculation to check the impact of orders about to be executed on your regulatory, investment and internal limits. In case of breaches, you can define override procedures, involving authorization from designated persons. Post-trade limit calculations serve to check if any breaches are caused by the difference between execution and market prices at the time of pre-trade limit checks.

CASH FLOW MANAGEMENT

Check cash availability before order placement
Cash Flow Management enables you to minimize operational trading risk, by running checks of your future cash flow schedule. You can minimize (or even avoid altogether) scenarios such as buying more than you can actually afford, buying when you'll soon have to sell in order to meet unrealized redemptions, or selling when you actually do not have to, because coupons or principal maturities are due.
High level of accuracy
To ensure accurate data, our module includes corporate actions and confirmed but still unrealized items, such as orders in progress, pending orders and subscriptions/redemptions and other unrealized liabilities and receivables – to be included or excluded from the calculation, according to your preferences.

PORTFOLIO ANALYZER

Information center with tailor-made overviews
Portfolio Analyzer enables you to gather, organize and display investment information in any one custom overview. Build and save your own portfolio structure breakdowns, based on asset class/region/sector/issuer/currency/etc. Vary between cumulative and individual portfolio/fund breakdowns, and analyze over 100 attributes, ranging from static instrument data to performance and risk indicators. Use our charting tools to visualize selected portfolio or sub-portfolio proportions, and generate structural or performance and risk reports.
Starting point of your investment decision making processes
By utilizing overviews of your choice, decision making becomes much easier. Gain insight ranging from portfolio structure and investment limits status to performance and risk indicators. Detect deviations from the desired portfolio structure, performance and risk indicator values. In case of deviations deemed significant, you can immediately act accordingly. Without the need for exiting Portfolio Analyzer and entering Order Management module, use a simple right-click on selected securities and place orders automatically.

BENCHMARKING

Define the benchmark
Benchmarking enables you to select or create your own benchmark, be it a combination of existing indices, securities, portfolios or funds. Easy to use benchmark builder functionality requires as little as selecting constituents and their respective weights, with automatic composite benchmark value and return calculations.
Measure relative return, relative risk and utilize liner regression outputs
Analyze your performance vs the benchmark. Measure relative return, asses risk profiles, and evaluate overall performance by using our risk-adjusted re-turn measures, such as Sharpe, Sortino, Treynor and Information ratios. Utilize our liner regression functionality and determine whether the correlation is high enough, and in turn whether alpha and beta are reliable estimates. For additional analysis, you can examine various statistical indicators, such as skewness, kurtosis and maximum drawdown.
Detect significant return/risk divergences
Our charting tools functionality enables early return/risk divergence detection. Comparing return and risk measures as functions of time can reveal significant deviations (i.e. while returns are on par, portfolio risk is increasing and benchmark risk remains unchanged), which can act as early warning signals. In addition, you can use our charting tools as a report generating functionality.

PORTFOLIO OPTIMIZATION

Active support and added value for asset allocation decision making process
Portfolio optimization module is the final stage of investment decision making process. It can be used as a 'fine-tuning' tool (optimizing weights on a predetermined portfolio), as well as robust and self-sufficient optimal portfolio builder (selecting securities out of the entire investment universe and determining their respective weights).
User defined concepts and parameters
Considering that the optimization process is completely automated, the user is allowed to define key components of the model used. The object of op-timization, according to the Modern Portfolio Theory, is return/risk ratio, better known as risk-adjusted return measure. Apart from the original Sharpe ratio (historical return/standard deviation), our module offers a wide range of possible user defined measures for both risk (VaR, CVaR, semi-deviation, etc...) and return (historical, user defined analytical forecast, etc...). In addition, you can generate the Efficient Frontier, enabling you to maximize return for any given level of risk, and inversely, minimize risk for any given level of return.
Easy synchronization with regulatory and user specific investment limits and restrictions
Expecting a number of constraints to the optimization process, our module comes with easy-to-use constraint builder functionality. Whether you want to limit your portfolio FX or region/sector exposure, define general asset class structure, limit individual security holdings, ensure certain level of diver-sification, we offer an easy way to include your own limit system into the optimization procedure.

Middle Office Modules

MARKET RISK MANAGEMENT
Market risk management center, Basel & UCITS compliant, focusing on VaR and CVaR as preferable risk measures. Includes 5 calculation methods, as well as risk type (equity, FX, and IR) segmentation, and back-testing.

LIMIT MANAGEMENT
Based on easy legal and investment limit setup, as well as on user defined internal limits, with flexible authorizations and notifications, enables client specific limit system creation and monitoring.

PERFORMANCE ATTRIBUTION
Enables both contribution and attribution portfolio performance breakdown and analysis, segmenting portfolio performance based on user defined top down/bottom up investment style.

WHAT-IF AND STRESS TEST
Enables user defined input as the basis for what-if analysis, either by defining hypothetical market conditions or changes in the existing portfolio structure (buy or sell).

MARKET RISK MANAGEMENT

Manage market risk levels
Market Risk enables you to explicitly include risk (client defined measure) into asset allocation decision making process. In order to calculate standard risk measures, such as VaR and CVaR, you can choose from a variety of methods, define your own assumptions (such as normal or non-normal return distributions), and set input parameters (such as the decay factor for EWMA/GARCH calculations). You can segment market risk according to type: Equity, FX and IR risk.
Ensure compliance with regulatory requirements
Automated procedure is the most efficient way to ensure regulatory compliance, and you will be able to do exactly that with our Market Risk module. Considering we have 5 different models (parametric, historical, Monte Carlo, BRW, Hull&White), two cash-flow mapping concepts (preservation of IR sensitivity or present value properties), and user defined calculation parameters, you can easily meet regulatory demands, and/or create your own tailor-made procedures.

LIMIT MANAGEMENT

Configure your legal and investment limits
Limit system enables you to easily configure, control and update all of your legal and investment limits. By using our authorization level functionality, you can set different authorization requirements for different limit breaches, thus minimizing operational risk.
Define your specific internal limits and build your own limit structure
In addition to legal and investment limits, you can easily build specific internal limits, by using our limit builder functionality and simply choosing from various parameters and operators, in order to create mathematical formulae for each limit. Once all three limit categories are up-and-running, in combination with our pre and post limit checks, you have a complete limit management system for monitoring and controlling all operational phases of the investment decision making process.

WHAT IF & STRESS TEST

Simulate market movements and analyze the impact on your portfolios
What If & Stress Test enables you to change the underlying factors that define instrument valuations, and consequently measure and analyze the effects. You can simulate benchmark movements and shocks, yield curve linear and non-linear shifts, zero-spread movements, and FX rates oscillations. The impact on your portfolio can be assessed globally, or by segmenting your portfolio based on asset class/region/sector/currency/etc. classification.
Simulate buy/sell orders and analyze the impact on your portfolios
Before placing orders, whether the reason is complete rebalancing, or simply adding a couple of new instruments, you can simulate the effect that the executions will have on your portfolio. Along with cash availability projections and pre-trade limit checks, analyze the impact on your portfolio structure, based on asset class/region/sector/currency/etc. classification, as well as the impact on key quantitative and risk parameters.

PERFORMANCE ATTRIBUTION

Manage your portfolio's return by managing contributing factors
Performance attribution module also includes contribution analysis, enabling you to define and measure contributing factors of your portfolio's return, from price, interest and FX rate changes, to expenses, fees and trading. Group them by your own accord: asset class, fees, region, sector, FX denomination, etc. Trading can be segmented into buy and hold (price difference for the starting position), market timing (aggregate value of additional buying and selling within the observed period) and trading floor (aggregate value of end-of-day and buy/sell price differences on daily basis) contributions.
Understand the reasons behind under/over-performance vs the benchmark
After quantitative analysis of your performance vs the benchmark, our module enables you to perform qualitative analysis - performance attribution - defining, measuring and understanding the reasons behind under/over-performance vs the benchmark. Segmenting relative return into allocation effect (portfolio vs benchmark position weight difference impact), selection effect (portfolio vs benchmark position return difference impact), and interaction effect (remaining amount of relative return), you will gain valuable insight.
Detect your decision making weaknesses and strengths
By alternating between methods, extracting FX exposure effects, top-down/bottom-up approaches and grouping methods, you can measure the effects of your investment making decisions. Monitor the performance of your trading desk, stock selection decisions, macro/micro allocation decisions, and manage them accordingly.

PERFORMANCE
ATTRIBUTION

WHAT IF AND
STRESS TEST

MARKET RISK
MANAGEMENT

LIMIT
MANAGEMENT

Back Office Modules

PORTFOLIO MANAGEMENT

CLIENT MANAGEMENT

INVESTMENT ACCOUNTING

PORTFOLIO MANAGEMENT (PMG)
Center point of INvest2 system - stores static and market data for financial instrument under management - from daily valuations and synchronization with the custodian, to portfolio breakdown and analysis. High level of flexibility is ensured in terms of fee calculations, authorization levels and automatic data feed imports from major data feed providers.

CLIENT MANAGEMENT
Enables client account management – keeping track of client holdings, activities, transfers, subscriptions, redemptions and consequential fees. E-mail, CRM and SMS functionalities ensure efficient communication with clients, while provisioning and web sales functionalities ensure efficient sales channels management.

INVESTMENT ACCOUNTING
Enables accounting management for numerous funds, independently of financial accounting for the fund management company itself. Provides balance sheets on a daily basis – values of all financial instruments are revalorized every day to give an up to date balance sheet. Supports regulatory and user defined financial reporting.

PORTFOLIO MANAGEMENT (PMG)

Instrument and portfolio valuation center

PMG enables you to import and store static and market data for all financial instruments under your management, serving as a center point of INvest2 system - from daily valuations and synchronization with the custodian, to portfolio breakdown and analysis. High level of flexibility is ensured in terms of user defined parameters, fee calculations and authorization levels.

Central financial instrument database of INvest2 system

Feeding other modules with data required for user defined analysis, ensuring data uniformity and across different analytical procedures of INvest2 system. Supports automatic data feed imports from major data feed providers.

CLIENT MANAGEMENT

Central client account database

Client management enables you to manage client accounts, keep track of their holdings, activities, transfers, subscriptions, redemptions and consequential fees. Personal information are centralized, and each person in the system can be given specific attributes and roles – a person can be natural, legal, craftsman, branch office, customer, client, shareholder, agent and representative, partner in financial transaction, bank etc. E-mail, CRM and SMS functionalities ensure efficient communication with clients, while provisioning and web sales functionalities ensure efficient sales channels management.

ACCOUNTING

Financial accounting and reporting

Accounting module enables financial accounting procedures, providing accounting management for numerous funds, independently of financial accounting for the fund management company itself. You can generate required portfolio value, or value of any single group of financial securities in any time period through a user defined financial report. Provides balance sheets on a daily basis – values of all financial instruments (profit/loss calculation, exchange rate differences, accrued interest, etc.) are revalorized every day to give you an up to date balance sheet.
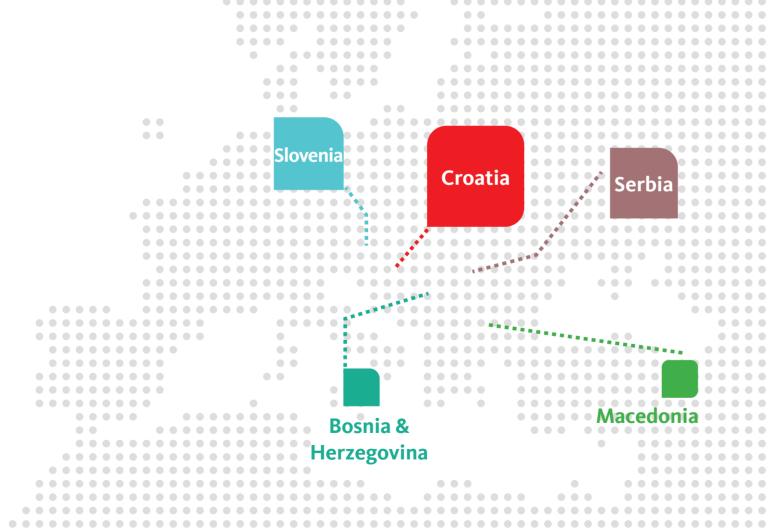
Key References

About us

IN2 Group Ltd is one of the leading ICT software development companies in the South East European market, servicing mostly large regional and international clients, from SME's to large corporations as well as the public sector, from public administration to health providers.

Headquartered in Zagreb, the Company capitalizes on **28+ years of experience**, utilizing the accumulated know-how of its FTE professionals in 5 countries, in order to ensure successful implementations and client satisfaction. **IN2 Group is part of the CSI Group** since 2018. **Constellation Software Inc.** is present in over 100 countries around the world, has 125.000 clients and operates in more than 100 different public and private sector verticals.

Slovenia

Croatia

Serbia

Bosnia & Herzegovina

Macedonia

28+
years

5+
companies

400+
clients

470+
projects

Portfolio of IN2 group competencies include:

- software development
- implementation of IN2 solutions
- solutions for new business areas
- application integration
- IT consulting
- implementation of standard business solutions
- system support

MANAGEMENT SYSTEM CERTIFICATION

DNV·GL

ISO 9001 ≡ ISO/IEC 27001