

## C/SIDE

*C/SIDE is the Client/Server integrated development environment that provides customization tools for the development of customer-specific solutions or new functional areas in Navision® Attain*

### Key Benefits

- Implement and customize the relational database management system (RDBMS) easily and efficiently.
- Develop your solution, or add new functionality to suit your dynamic business needs.
- Manage the database with minimal time and expense.
- Work with current and consistent data.
- Find the data you need immediately using SIFT (Sum-Index Field Technology) functionality.
- Connect to other applications.
- Use the same application with your choice of the database running on either Navision Server or Microsoft SQL Server.



## Integrated Development Environment – C/SIDE®

The core of Navision Attain is C/SIDE, or the Client/Server Integrated Development Environment. C/SIDE is a 100% graphical environment that, like the application, has a graphical user interface. All the main components in the base technology of C/SIDE have been developed together, to create an integrated business solution that is simple to use and maintain at all levels – from the user interface right through to the operating system.

Since all its components are designed to function as a single unit, C/SIDE provides Navision Attain with powerful customization tools for development of customer-specific solutions or completely new areas of functionality. In comparison, solutions assembled from separate base technology products cannot provide the extensive customization possibilities you have with Navision Attain.

### 4GL Development System

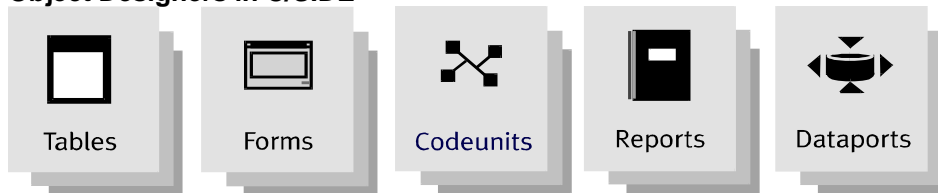
The development system of C/SIDE has an open object-oriented structure. The system is based on C/AL, a programming language developed specifically for C/SIDE and used to program the entire application code. It is a 4th-generation programming language that has a structured, object-oriented syntax similar to

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many of today's popular development tools. The application code is therefore clear and recognizable to programmers.

Access to this technical level of C/SIDE is optional. With it, programmers can maintain, change and add to the application code. Additionally, upgrading the application is made simple through advanced binary import/export of objects. Navision business partners, both Navision Solution Centers and Navision Service Partners, undergo extensive training to become certified to work with the application code and help you to unlock its potential for your business advantage.

#### Object Designers in C/SIDE



The same object can be used in many contexts and reused for the same task in various application procedures. This creates a consistent, simple interface that is easy to work with and helps to keep maintenance and implementation costs at a minimum.

Developers do not need to consider many details when they use the development system since standards are automatically incorporated with default values. This reduces the volume of code and makes it easy for developers to use the components and functions consistently for new purposes.

### Object Designers

The 4GL development system contains five object designers, which are the tools used to create the functionality of the application. There is a designer for each object type – tables, forms, codeunits, reports, and dataports. The entire application is made up of these interconnected building blocks of objects. And wizards can guide you step-by-step through the task of creating forms and reports that meet your business needs exactly.

### Open Connectivity

With the Dataport feature, data can be both imported into and exported out of Navision Attain in numerous text formats. With the C/ODBC (Open Database Connectivity) interface, other programs with ODBC options can retrieve and work with data from the Navision Attain database. For example, you can import data into your favorite spreadsheet, create mail

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merges in your word processing application or access data from Navision Attain through the Internet.

### **Automatic Data Collection**

With C/FRONT, external client applications written in C/C++ and Visual Basic can access both the Navision Attain database and the SQL Server database automatically. It enables you to keep track of data from other programs and update your own records accordingly. Data collection systems can thus easily be established. This could be useful, for example, for automatic bar code reading or EDI registration.

### **Extended Functionality**

Because C/SIDE is a fully open development environment, you have unlimited possibilities for extending the functionality of Navision Attain. With C/OCX and automation controls, you can include controls in Navision Attain that enable you to incorporate a wide range of components that meet Microsoft's ActiveX standards. Now, for example, you can have automated Microsoft Outlook access, from Navision Attain; you can integrate with other programs, such as Microsoft Word, to create new document templates in Navision Attain. By drawing on the functionality of other programs you can expand your business strategies with greater efficiency.

### **Multilanguage Functionality**

In order to help your business succeed in a global market, C/SIDE in Navision Attain supports multiple languages. Field names, report headings, and menus

can be viewed in the language of your choice, instantly. If you are working with Navision Attain in German, for example, you can send a report to a colleague in the UK who can automatically read the report captions in English. Online Help can also be accessed in the language of your choice.

### **Hyperlinks**

Hyperlink capabilities are integrated with C/SIDE. With hyperlinks, you have an immediate pathway into Navision Attain. You can send colleagues links to documents generated in the system, ensuring people receive information quickly and can access it easily.

If you require a fellow employee to view a budget report, for example, you can send them a link to the document without them having to search through the system for it.

With hyperlinks, the data will always be up-to-date. If you send the budget report, but the receiver views it a day or two later, any information that has been added in the meantime will automatically show up in hyperlink you have sent them.

### **Extensive Online Help**

Navision Attain has context-sensitive online Help in every part of the system. With multilanguage capabilities, you can choose what language the online

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Help will be in. In addition, the online Help is cross-referenced and linked so you can easily jump from one topic to another without wading through a hierarchy of information.

## **Database Options with Navision Attain**

### **Navision Server**

With Navision Server, the 4GL development system is fully integrated with the Relational Database Management System (RDBMS). The database is scalable to support growth and easily accommodates increased transaction volume and number of users.

Integration enables programming and defining of relations to be done at a single location in C/SIDE.

It ensures complete agreement between the application and database, and it reduces the risk of errors in the developer's work.

When a new field is created in an application table, it is created in the database at the same time based on relationships and capabilities specified in the object designer. No extra work is required to set up the field correctly in all areas of the solution.

These principles and tools are the reason that the volume of code in the entire solution can be kept to a minimum, making it easy to manage. Further modification and development can be done quickly, efficiently and with a minimal risk of programming errors. Put simply, the solution is very easy to maintain, modify and expand.

### **Version Management**

The database supports optimistic concurrency based on the version principle: All users can work simultaneously and each one can read the complete, up-to-date version of the data they require.

Two people can be working with the same data at the same time; one can modify and change it, without interfering with the other's work. The modified data will then be included in a new version of the database.

No one will be forced to wait while a report is printed before they can continue their work. For example, you receive the latest consistent version of the chart of accounts and the balances, which you need to print out.

You have a complete version of the data, and the balance sheet that you print will always balance. If another user posts new data to a general ledger account at the same time, this data will be recorded only in the next version of the database and will not affect the figures in your balance sheet printout. This principle also allows you to make a backup copy while the solution is in full operation.

### **Consistent Data**

With the Navision Server you will always have the consistent, up-to-date form of the data, the minute you

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start reading it. This comes with the version principle, with which modifications are always made in a free area of the database. Existing data therefore remains untouched.

In addition, only completed transactions are committed to the database. If a transaction is interrupted, it is rejected and no modifications are made.

All this ensures that your data is consistent. Specifically, the method of recording data ensures that an incomplete transaction can never occur, while the version principle means that you will always have a consistent snapshot of the complete database.

### **Data Security**

Information that is critical to your business must be secure. Security measures are built into Navision Attain at all levels. The database offers protection against loss of data and unauthorized access and is shielded from accidental or deliberate corruption of data. With Record Level security you can limit users' access to only that which is relevant data. A salesperson, for example would only see data for their own customers.

The security system in Navision Attain can be integrated with the Windows 2000 security system. Integration ensures highly secure processes and greater efficiency. For example, with this integration a user doesn't have to log on separately to Navision Attain, while still maintaining a high level of security.

### **SIFT™ – Sum-Index Field Technology**

SIFT is a powerful tool that has been specifically designed to provide unprecedented speed and performance in online analytical processing (OLAP). SIFT turns data into information and gives you instant access to the information you need. It simplifies applications by storing information only at the detailed transaction level. At the same time, SIFT provides summaries and totals without spinning through thousands and thousands of transactions.

In practice, this means that the statistics used in the application are always fully updated in the database. When you want to see or work with a statistic, it does not need to be generated from a large number of database entries. It can be produced immediately, fully updated, every time you open a window or filter a statistical field.

### **The Microsoft SQL Server Option for Navision Attain**

If you choose to run Navision Attain on Microsoft SQL Server, you still receive the benefit of integration with C/SIDE that you would get with the Navision Server.

The central benefit of running Navision Attain on SQL Server is the added connectivity it gives you. Microsoft products often set industry standards. The SQL Server is widely used in the mid-market and

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solutions are being developed to work with it. By choosing the SQL Server, you have the possibility to do business with a greater variety of partners.

SQL Server offers you additional ways to handle and organize data in Navision Attain. It provides extended OLAP functionality as well as the ability to build and analyze data warehouses of any size.

Automation of regular administrative processes is possible with SQL Server. For example, you can automate backup and restore procedures in such a way that won't interfere with the work process.

## Matching Your Business Needs

With Navision Attain you have an integrated business solution that fully meets your current business requirements, while being highly adaptable to fit your future needs.

Working with the base technology of Navision Attain, you can customize existing functions and create completely new functionality. You can adjust the smallest details to fit your requirements, gradually, as such needs arise. Navision Attain enables you to meet the changes of growth and new direction, simply and effectively.

## Contact Your Partner

To learn more about Navision Attain, contact your local solution center. They have the expertise necessary to meet your specific business needs.

Or, visit our Web site at [www.navision.com](http://www.navision.com)

## About Navision

Navision a/s is a leading global provider of cost-effective and adaptable integrated business solutions that help companies in their quest to grow. The company has more than 127,000 customers worldwide, a global network of more than 2,200 partners, and 1,065 employees in 26 countries. The Navision product line consists of Navision Axapta®, Navision Attain®/ Navision Financials®, and Navision XAL®. Navision a/s was created through the merger of Navision Software a/s and Damgaard A/S in December 2000. Its shares are listed on the Copenhagen Stock Exchange (CSE: NAVI). The company is headquartered in Vedbaek, Denmark. You can learn more about Navision a/s on the Internet at [www.navision.com](http://www.navision.com)

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