



Demand forecasting in complex environments



Before! - Know before it happens!



Before! **advanced**
multiparadigm
forecasting
platform for your
decision support.

Objective decisions
based on forecasting.

Specialists in innovative projects.
Why take risks? Contact us.

What is Before!?

It's an advanced platform for forecasting. It's a system for predictive and what-if analysis, which determines the expected trend of variables on historical basis and whose prediction considers the effect of variables influencing the forecast itself. Before! is characterized by a high flexibility, modularity and computational efficiency. It's designed to quickly fit the business processes and lower operating costs. It's designed to minimize the involvement of specialists in the definition, setting and maintenance of predictive models.

When does Before! prove to be useful?

Before! is useful whenever it is necessary, suitable and convenient to know in advance the future trend of variables based on historical data. Before! becomes an essential tool when the number of data to be introduced is very high, as for example in the Large-Scale Organized Distribution (eg. retail). Further, Before! is useful whenever a what-if analysis is needed to evaluate the expected result of actions planned (analysis of promotions and prices' variation).

How is Before! used?

Before! can be effectively adopted as a forecasting operative tool of daily use. It can be used as a strategic tool for what-if analysis to evaluate the expected result of those actions which may influence to a certain extent future trends and performances. Before! is an advanced platform which can also be invoked as a service from other applications (IT systems).

Main Features

Ambiti di applicazione:

1. GDO
2. Logistics
3. Production
4. Utilities

Support to functions:

1. purchases
2. planning
3. marketing and sales

Peculiarity

1. automatic advanced function to manage automatically predictive models
2. combined use of the most innovative and efficient techniques in forecasting
3. advanced early-sales techniques
4. auto tracking of numeric performances
5. interception of anomalies with generation of warnings and alert
6. suitable structure to process massive amounts of data
7. task scheduling engine
8. services recall structure
9. auto determination of optimal levels of aggregation
10. what-if analysis feasibility
11. splitting of effects (eg. promotion up lift, etc)
12. advanced analysis of cause / effects correlations and clustering
- 13-geo-analysis.



What are the benefits with **Before!** ?

- Organizational: forecasting allows to make decisions in advance, to know the uncertainty margins and take them into account during the decision-making process. It also enables objective decisions.
- Levels of service : knowing in advance makes the level of service less uncertain; think for example, of the stock-out events.
- Economic: generally speaking , knowledge means power. Using the objective information about expected trends can allow to make most efficient decisions in terms of costs, for example for stocks of goods (limiting over-stocking) or for resource planning.

Areas

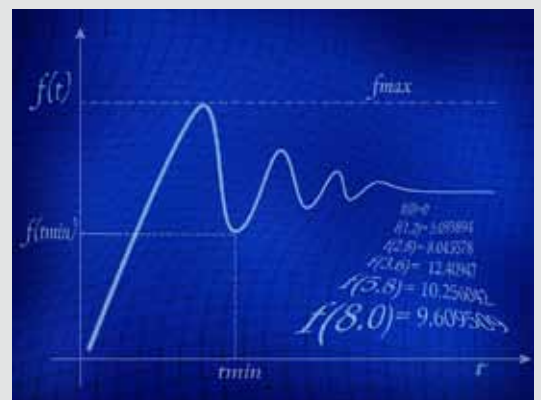
- planning of:
 - purchases
 - production
 - distribution and transport
 - resources
- points of sale supply
- emergency management
- definition of contracts for utilities

Combination with other products

- Best Shipping for distribution planning
- OPT PSL - planning and scheduling tools
- Arena Simulation and Simio to simulate the behaviour of the physical and organizational process related to flows or demands expected.



Before! the **advanced forecasting** platform to bring the future into the hands of your Company decision makers and your IT systems.



Technology

Before! is a Java-PURE application designed and implemented with a SOA approach. The system architecture allows its use as an optimization library within other applications. Before! can exploit the parallel computing on multiprocessor architectures with a 64-bit technology.

Database: ORACLE, MySQL, SQL Server, DB2. Integration in ERP.

Systems: Windows, Linux and IBM.

The library can also be set as a service and integrated into the most common application servers such as: JBOSS - Apache Tomcat - WebSphere.

ACT Solutions and their skilled partners are able to help you analyse your needs, when setting the systems, train and assist your staff with a full day coverage.



ACT Solutions in key-words:

- Simulation, Optimization, Forecasting and Control
- Algorithms and models
- Engineering and decisions sciences
- Advanced planning and scheduling techniques
- Management and optimization of fleets and transportation
- Optimization of warehouses
- Optimization of production
- Optimization of networks and supply chains
- Optimal location (plant, warehouse, points of sale, resources)
- Forecasting of demand
- Revenue and trade optimization

FAQ

Q: I must forecast individual references (thousands) on a network of points of sale (hundreds) – Is Before! the right tool?

A: Yes, it is. Before! has been designed to automatically apply different modelling paradigms to huge amounts of data (appropriate historical data must be consistent with the needed reliability of forecasting).

Q: Can we manage situations, as it happens in the fashion industry, in which certain items are in assortment only for limited periods?

A: Yes. Before! provides data processing and predictive techniques to get the maximum from the information available. In this case, the concepts of “early sales” is also applied. We must point out that, here more than in other situations, the methodological approach is essential, which has to involve the decision-making process in its whole. It is not just a matter of modelling, nor a simple application.

Q: Is Before! a demand planning tool, too?

A: Before! completes the predictive step useful for a demand planning, that is, a process generally involving more than one step. These steps differ depending on the context: manufacturing, logistics, sales and show different levels of complexity (see also Best Shipping and OPT PSL - Planning & Scheduling Libraries).