Logistics Information System

Outstanding Features

- Powerful, online support aids your business planning and forecasting.
- Fast, objective decision support analysis is based on pre-defined LIS performance measures.
- A flexible information system helps you make future modifications to suit your information and reporting requirements
- Integrated, interactive graphics help make the most of your data.

Overview

Traditional reporting, which produces periodic (weekly or monthly) printed statistics and lists, no longer satisfies the needs of management and executives. By the time a manager receives a paper report, the data is old. What executives want instead is exception reporting, which provides immediate notification, independent of reporting periods. This is the information you need to react quickly, so you can optimize the performance of your enterprise. Ideally, critical performance measures trigger reporting, and that is how R/3's Logistics Information System (LIS) works.

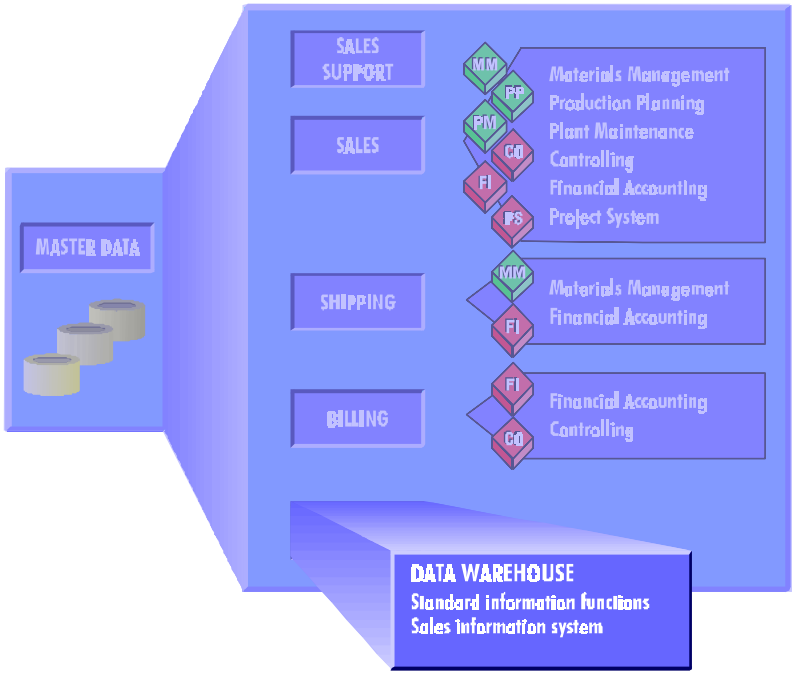

Fig. 11-1: Sales Information System

Because of the way in which it functions, R/3 by its very nature becomes a vast repository of valuable information about your organization. LIS collects and evaluates data from all R/3 logistics applications, including Sales and Distribution. LIS provides uniform logical structure and a common user interface (including graphics) for application areas such as sales and distribution, purchasing, inventory management, warehousing, plant maintenance, manufacturing and quality management. The Sales Information System (SIS) is a component of LIS.

The Sales Information System (SIS) component of LIS is an effective tool for supervising the performance of sales and distribution operations. The most important performance measures and reports are already pre-defined. You can use them without further tailoring once R/3 SD is implemented. With the help of LIS and SIS, you can spot market development and economic trends in their early stages. You can take action early, either to get the maximum advantage from change, or to avoid potential problems.

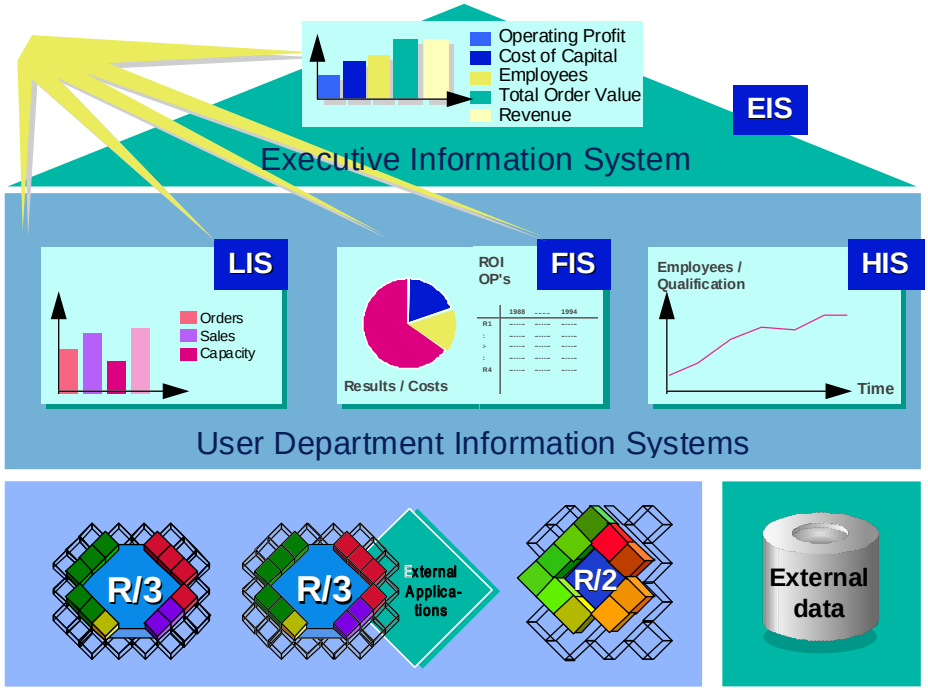

Fig. 11-2: Open Information Warehouse

LIS maintains its own database for several reasons. For example, a dedicated database leads to better system response during online analysis. You can select operational data for historical comparisons. The layout of the LIS database is dependent on the decisions of the user.

When you tailor the system, you determine which performance measures and ratios the system calculates and stores. The system automatically records required data from online transactions. You prevent recording of unnecessary data by defining restrictive selection criteria. For example, you can specify that the system records only orders from large customers.

The LIS Database

Information Structures

The system stores selected data from online business transactions using *information structures* in the LIS database. You define an information structure through specification of *reporting objects*, *reporting periods* and allocation of *performance measures*. The system contains more than 30 reporting objects, such as business area, plant, sales region, supplier, customer, workstation and product. Reporting periods can be daily, weekly, monthly or user defined.

The information structure “work center” is a typical example:

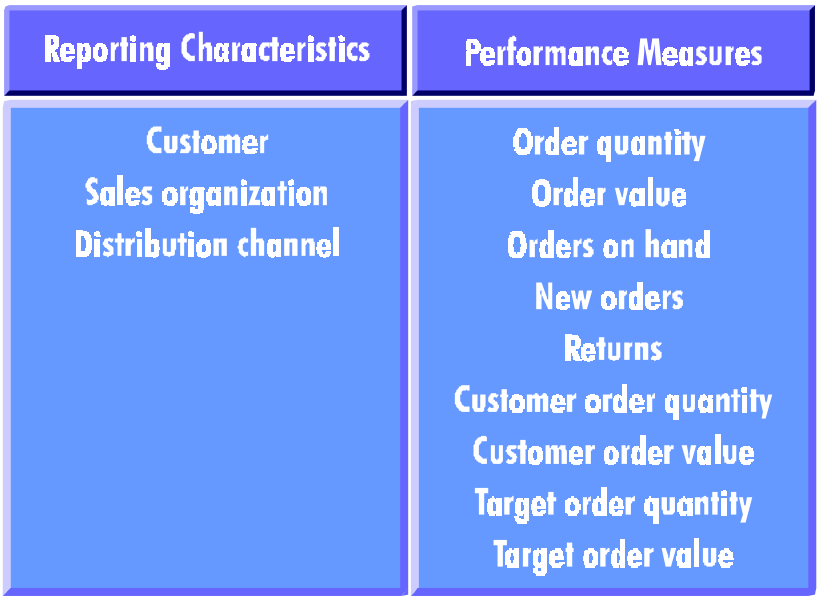

Fig. 11-3: Work Center Information Structure

Pre-Defined Performance Measures

LIS comes with more than 250 ratios and performance measures. Predefined performance measures include value of incoming sales orders, value of returned products, purchase order values and inventory turnover.

User-Defined Performance Measures

You can define your individual performance measures. To calculate performance measures, you have access to all data that R/3 uses in online business transactions. You can also calculate performance measures using mathematical formulae. For example, you can multiply or divide one performance measure by another.

Database Updates

Events in the online transaction system trigger updates of the LIS database. For example, a sales order confirmation leads to an update of sales information structures such as order value and order quantity.

R/3 business transactions can update the LIS database online in a background task. Alternatively, the system can copy data online, but update performance measures only asynchronously during periods of low system load. You can select the update process for each information structure.

LIS Standard Reporting

The objectives of LIS standard reporting are to display performance measures at a selected roll up level, to analyze and compare performance measures, to navigate through the information and to drill-down to the original operational data where required. LIS standard reporting is based entirely on the pre-defined standard information structures and performance measures of the LIS database. But when you use LIS standard reporting you do not have to follow pre-defined paths. You can interactively select information and control the way you work.

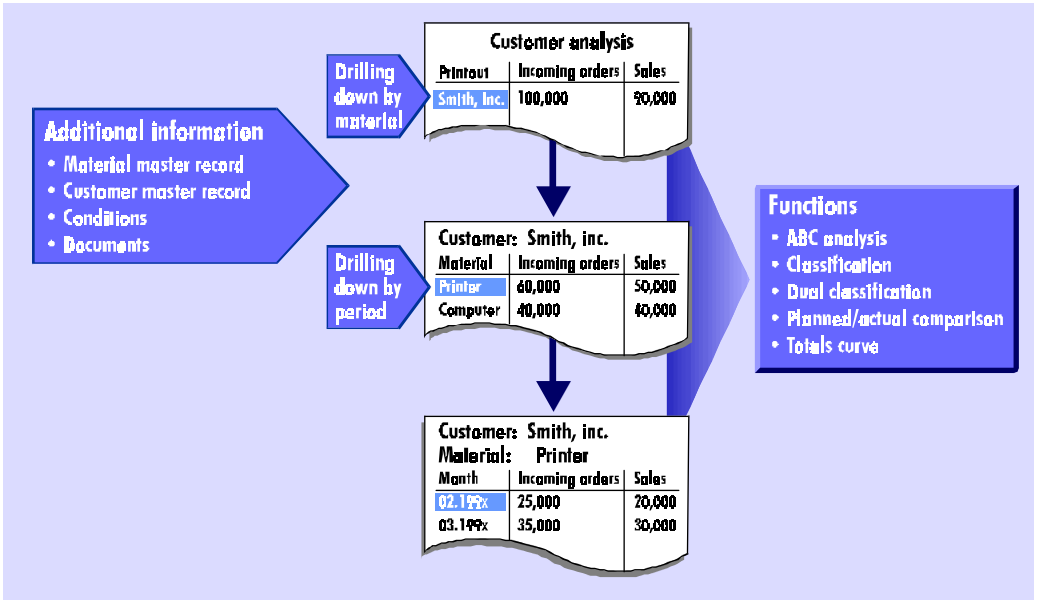

Fig. 11-4: Standard Analysis

LIS standard reporting offers you many alternatives for filtering exceptions from your data. These features include:

- ❑ interactive selection of measures
- ❑ histograms
- ❑ ranking and Pareto charts
- ❑ correlation analysis
- ❑ plan-actual comparisons
- ❑ sorting
- ❑ two-dimensional ranking
- ❑ flexible drill-down

For example, with Pareto charts you can find the ranked products which account for 80% of sales. If you rank your customers in two dimensions based on the business volume they create and the number of incoming orders, you quickly find the critical customers with low turnover and many small orders. Once you know the critical objects, you drill-down to the detailed data and analyze problem areas.

LIS comes with a large number of ready-to-use reports and evaluations, including:

- sales reports with performance measures such as incoming orders, delivered quantities and invoice values
- inventory reports with performance measures such as inventory value, turnover, range of coverage and dead stock
- purchasing reports with performance measures such as total order value at a supplier and on-time delivery performance

Presentation Graphics

You can use various graphics tools to present report data. Besides standard business charting tools, LIS offers *Gantt charts* and *input/output diagrams*, which are particularly suited to displaying scheduling situations.

Flexible Analysis

Flexible analysis generates company-specific reports. It includes the following features:

- flexible layout and text specification with the report writer
- definition of multi-level reporting object hierarchies
- selection of any R/3 SD System operational data
- definition of company-specific performance measures
- combination of performance measures from different structures
- optional graphics presentation.

To create customized reports, you specify reporting objects and reporting periods and then select either standard or user-defined performance measures. You choose from several different report layout types and modify the detailed layout parameters as needed.

First you generate a comprehensive report, and then you modify and format it with the report writer.

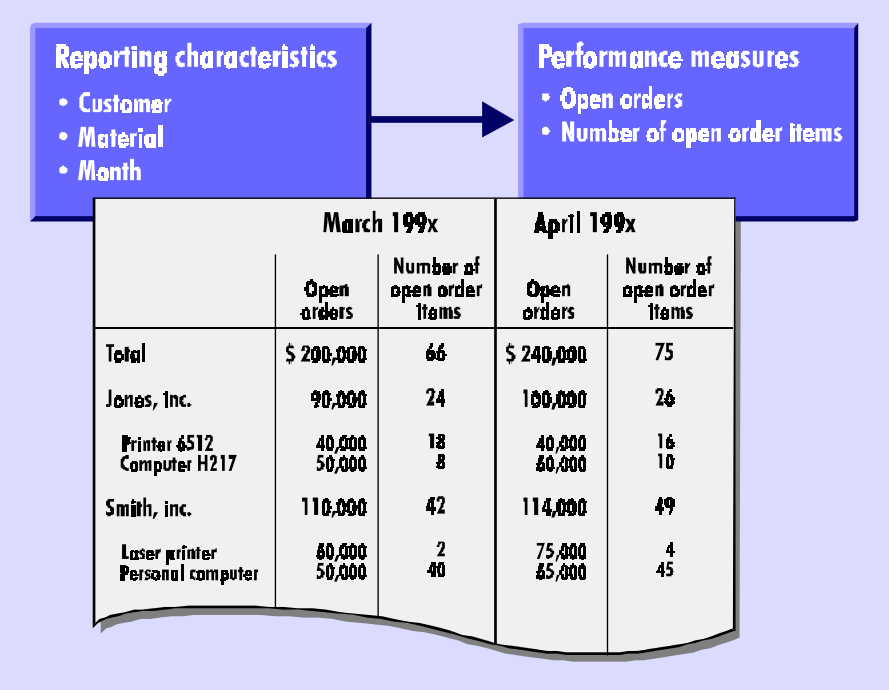

Fig. 11-5: Creating a Custom Report

Early Warning System

You can define warning levels for critical performance measures. You define whether a warning-level is a threshold value or a trend value. If it is a threshold value, then the system issues a warning when the performance measure moves below or above the warning-level. If the warning-level is a trend value, then the system computes the trend of the performance measure based on a stochastic trend model. R/3 issues a warning if the measure reaches a critical trend value.

You can use the Early Warning System just to display or print the warnings. For example, use them to provide a color change in the presentation of a performance measure in a standard report. Or you can generate reports which only display performance measures that reach warning levels. You can even run periodic or event-driven reports automatically in background - and receive warnings from the system via electronic mail.

Planning Functions in LIS

Planning functions in the Logistics Information System have two objectives:

- to plan target values for performance measures
- to plan operational target data such as sales quantities

In LIS you have access to R/3's comprehensive stochastic modeling and forecasting capabilities. Use historical values of operational data or performance measures and let the system calculate a stochastic model and generate forecasts. You can also enter planned values into the system manually or import them from an external system.

Planning target values for performance measures is an important detail in building a meaningful logistics controlling system. You can plan target values for stock levels, for inventory turnover and for manufacturing lead times. Use them as a reference for actual data evaluation. In this context you can also calculate warning-levels for the above-mentioned Early Warning System.

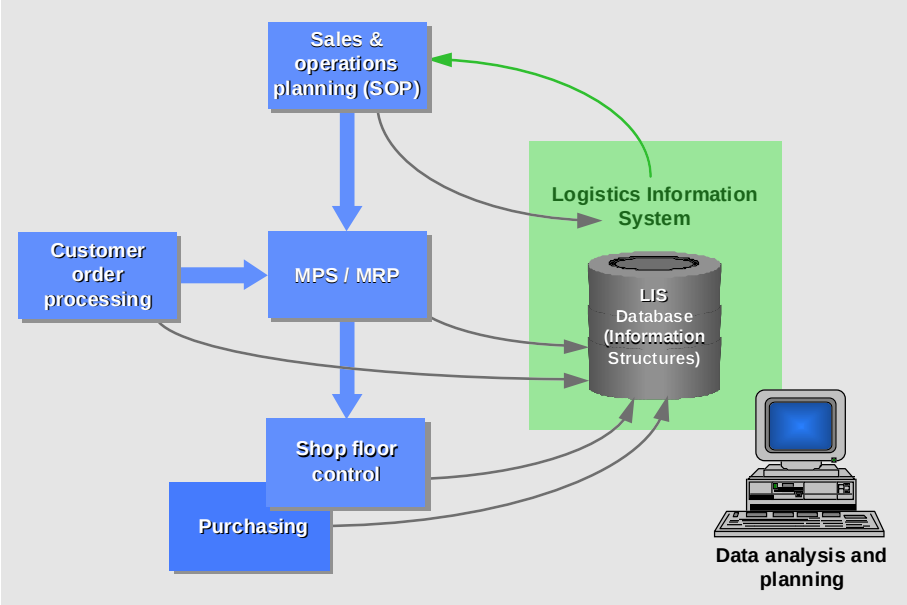

Fig. 11-6: Integration of Information Analysis and Operations Planning

R/3 fully integrates LIS planning functions with Sales and Operations Planning (SOP). R/3 makes all information from your actual operations available in LIS. Compare actual data with current planning, generate forecasts and improve plans for the future. From the actual operations of your enterprise you create the necessary feedback to simplify future business operations planning.

If you use the full potential of SAP's integrated logistics applications, you will build a closed-loop system for sales information. Such a system feeds your daily decision making processes the accurate, real-time information you require.

next chapter