


Embedded Real-time Business Intelligence.  
Discover the Treasures.



Make Applications More Valuable  
with Embedded Real-time Business Intelligence





**You can enhance your transactional applications with features that put the power of real-time business intelligence (BI) directly into the hands of end users. Give your users at every level of the enterprise the up-to-the-moment information they need to make better operational decisions.**

**It's easy with InterSystems DeepSee™.**

## **Introducing InterSystems DeepSee™**

InterSystems DeepSee is innovative software that enables you to embed real-time business intelligence capabilities into your existing and future transactional applications. With DeepSee, you can enhance your applications with interactive dashboards that display critical information gleaned from current operational data. These dashboards are embedded in the applications that users work with every day, so they are easy for them to access.

**With DeepSee, business intelligence is:**

- **Fast** – Utilizing InterSystems' breakthrough transactional bit indexing map technology that provides excellent retrieval performance for complex queries plus top-tier update performance for high-volume transaction processing, information is accessible in real time.
- **Easy** – Using DeepSee, application developers rapidly build interactive dashboards containing graphs, charts, filters, images, links, etc.
- **Cost-effective** – DeepSee removes the costly requirement to create and maintain a data warehouse because, unlike traditional BI, it accesses your current transactional data.

## A New Way to Think About Business Intelligence

To many computer users, business intelligence software conjures up visions of expert analysts using specialized applications to “slice-and-dice” historical information held in data warehouses. If asked, users would say that BI has little impact on how they perform their day-to-day functions.

Embedded real-time business intelligence is different. That’s because it’s focused on providing every user with useful, timely information related to making operational decisions. Applications with embedded real-time business intelligence help users answer the question “What is happening right now... and how can I use this information to make better decisions?”

Here are a few examples of the benefits of embedded real-time BI:

**Healthcare** – A laboratory testing device fails and starts giving erroneous results for a certain blood test. With embedded BI capabilities, the lab technician can quickly spot the change in device output. They can immediately alert the appropriate caregivers to the incorrect results, and retest the affected samples using a different device.

**Retail** – Call center agents rely on operational BI to deliver real-time information on previous orders and buying patterns as they are speaking with customers. As a result, agents can cross-sell by recommending complementary products as well as predict when a reorder will be necessary, and, in some cases, even track their own sales performance.

**Financial Services** – Managers can monitor every branch office to compare the results of local marketing campaigns at any point during the customer service process. Depending on the information delivered by operational BI, decisions can be made in real time to implement campaigns that are proving successful in other locations – a promotion for a high interest bearing account, for example – and to immediately cut off promotions that aren't working effectively in certain locations.

Your users want the benefits of embedded real-time business intelligence. Make your applications more valuable by giving users what they want – with InterSystems DeepSee.





## Four Steps to Embedded BI with DeepSee

Just how does a software developer use DeepSee to give end users the power of embedded business intelligence? The process can be broken down into four basic tasks:

### Step 1: Determine Key Performance Indicators

Better than anyone, your users know how to do their jobs. And they can tell you what knowledge they need to be able to do their jobs better. Through discussions with end users, you can figure out what key performance indicators they want to be able to analyze in real time. A key performance indicator might be a particular bit of raw data that is collected by your application, or it might be a measurement that is calculated from several pieces of raw data that may come from disparate solutions. The best way to determine meaningful, useful performance indicators is to talk to your users.

### Step 2: Define a data model

Your data model is a definition of how to organize the raw data that aggregates into various key performance indicators. If a performance indicator must be calculated from raw data, the data model will define how that is done. The data model is also where you can give data, dimensions, and key performance indicators' names that will be intuitive and meaningful for end users.

The dimensions of a data model determine how many ways a performance can be analyzed, and thus what raw data needs to be included in your model. In order to speed analysis time, some of those dimensions may have indices defined within your model. DeepSee works with transactional data, so information will be organized and indexed by your data model in real time.

The task of defining a data model is accomplished using the DeepSee Architect.

### Step 2a (if necessary): Incorporate "foreign" data

If any of the raw data needed in your data model comes from applications or repositories that are not powered InterSystems' technology, that data must be incorporated by using Ensemble and the DeepSee Connector. The Connector provides a "snapshot" of the external data, which may be transformed (through the use of configurable business rules) to fit into your data model. The snapshot can be a one-time import, or occur on a scheduled basis. Incremental updates are supported.

### Step 3: Build components

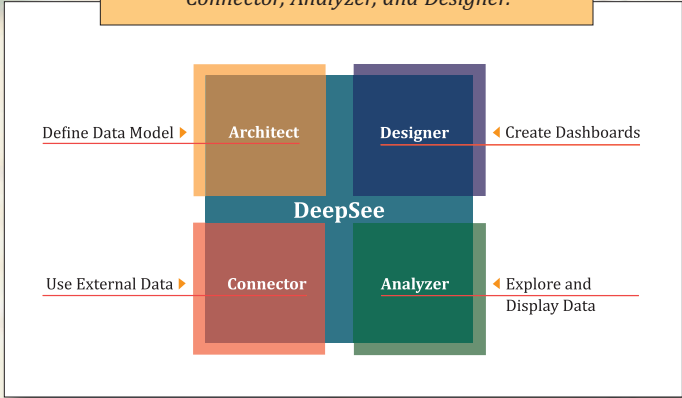
The DeepSee Analyzer enables point-and-click or drag-and-drop creation of pivot tables, graphs, and charts that use data models defined by the DeepSee Architect. These components are dynamic, allowing users to drill all the way down to the underlying detail data.

### Step 4: Design a dashboard

With the DeepSee Designer, you will create dashboards that include the graphs, charts, and pivot tables you built with the DeepSee Analyzer, as well as links, combo-boxes, lists, and other user interface components. Dashboards can be tailored to specific topics, functions, or individuals. You can control how much flexibility users have when exploring data – for example, pre-defined filters can exclude sensitive data from users who have no need to see it.

The dashboards you create with the Designer are Web pages that can easily be embedded within the user interface of your application. Users do not have to be data analysis experts to reap the benefits of real-time business intelligence. They merely need a working knowledge of your application.

**Under the Surface**  
The main components of DeepSee are Architect, Connector, Analyzer, and Designer.



Work with InterSystems.  
Not separate systems.

InterSystems Corporation

World Headquarters

One Memorial Drive

Cambridge, MA 02142-1356

Tel: +1.617.621.0600

Fax: +1.617.494.1631

[InterSystems.com](http://InterSystems.com)

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