

***Datastream***<sup>®</sup>

> **System  
Overview**

***Datastream*** **7i**<sup>™</sup>

Version 7.9

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Datastream 7i Version 7.9 System Overview

# INTRODUCTION

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Datastream 7i, a fully Web-architected asset performance management system, provides unparalleled capability for cost-effective, asset-intensive, and performance-oriented maintenance operations. Configurable and customizable, Datastream 7i is designed to enhance workflow and increase productivity. Datastream 7i also contributes directly to your company's profitability by helping ensure that physical assets are maintained properly and efficiently.

Datastream offers its customers two primary user interface choices for accessing Datastream 7i: the rich, scalable interface based on the proven Oracle Forms platform with browser plug-in, and Datastream 7i Extended, which provides users with an intuitive and versatile HTML interface for easily accessing the information and functionality that best targets user-specific roles. Because every enterprise comprises a combination of users, Datastream 7i gives customers the choice of how the system is accessed. The Datastream 7i interface, utilizing the Oracle Form plug-in, offers a richer user interface with unprecedented interactivity and greatly improved download speeds that significantly enhances productivity. For users who need full access to functionality, this is an ideal option. The Datastream 7i Extended approach delivers an easy-to-use and easy-to-configure zero-footprint HTML interface.

For a current list of hardware, software, and operating system requirements for Datastream 7i, refer to Datastream's Web site at <http://www.datastream.net>.

Datastream 7i offers the very best in flexible, powerful, and proven technology.



## Flexible

Datastream 7i is the industry's first fully Web-architected asset management system. Users access Datastream 7i through a standard Internet browser from anywhere and at any time, which minimizes network traffic and eliminates expensive hardware purchases. And because Datastream 7i is built on open Internet standards such as Java and XML, it is easy to integrate with other enterprise systems.

Datastream 7i is available in English, French, Dutch, German, Spanish (Latin American), Portuguese (Brazilian), Italian, Japanese (Oracle only), and Chinese (Oracle only).

## Powerful

Datastream 7i offers a suite of powerful features, which includes:

- A suite of asset management features—from asset hierarchy management, to audit trails, to preventive maintenance, and more
- The ability to view and manage assets across multiple organizations and in multiple languages and currencies
- Powerful advanced modules—such as the Work module, the Equipment module, the Materials module, and the Projects module—to allow users to implement a solution that is specific to their organization's requirements
- Simple, GUI-based system administration that minimizes the strain on IT resources
- Rich analysis and reporting capabilities to help users extract valuable business insight from asset data collected through Datastream 7i
- A completely secure environment built upon reliable and field-proven technology

## Proven

Datastream 7i boasts the largest install base of any enterprise asset management application in its class. By combining a Web architecture with broad asset performance management functionality, customers can benefit from unprecedented visibility into their operations enterprise-wide and facilitate the implementation of best practices.

# OVERVIEW OF BASIC MODULES AND FEATURES

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Administration	The administration module provides system administration functions, such as security, system-wide defaults, and the content of functions and forms.
Asset Management	The asset management module identifies, tracks, locates, and analyzes the performance of physical assets. Define assets as pieces of equipment, and then associate documents, permits, and other information with the equipment. Track asset depreciation to maintain and monitor asset depreciation data for assets, systems, and positions. Datastream 7i allows unlimited complexity in asset structure to provide unmatched flexibility for efficient asset management.
Work Management	The work management module controls work order processes for routine, response, and periodic preventive maintenance. The work management module also stores material and task lists for easy reference and retrieval.
Materials Management	The materials management module streamlines parts and materials management by monitoring inventory online. After setting up the materials management module, use the work management module to allocate materials to work orders and automatically generate pick lists for materials.
Purchasing Management	The purchasing management module allows you to control purchase order and invoice-matching processes for stocked materials, direct materials, hired labor, and services. You can also calculate the cost of services using either fixed prices or time and materials.
Budget Management	The budget management module automates budget setup and the subsequent capture, monitoring, control, and analysis of expenditures associated with maintenance work. Use the budget management module to link the financial structure of the enterprise, its organizational structure, and the physical asset hierarchies.
Inspection Management	The inspection management module manages condition-based maintenance by defining inspection points belonging to one or more assets. Execute inspection work orders ad hoc or triggered by time frequency and/or meters (calendar- or meter-based inspection). Or, you can generate inspection work orders based on previous inspection results (condition-based inspections).
Project Management	The project management module groups work orders and executes them as a coherent whole with specific resource, cost, and time objectives. The project management module allows large projects to be divided into two or more manageable subprojects and then assigns individual work order activities to each step.
Data Collection	The data collection module tracks the movement of goods for asset and maintenance management. Functionality includes equipment audit capability, which enables you to audit assets in the field and update Datastream 7i with the audit results.
Microsoft Project Interface	The Microsoft Project Interface facilitates work order scheduling and resource assignment by allowing you to schedule work and resources in MS Project and then update the Datastream 7i database with the information.
Multi-organization Security/Multi-currency	With the Datastream 7i multi-organization security (MOS) and multi-currency features, you can create multiple secured databases (organizations) while maintaining one physical database. Assign users to one or more organizations and then assign different roles, security levels, and approval limits for each organization. Users can view and influence “common” data (information accessible by all users regardless of organization) and the data of the organizations of which they are members.  The Datastream 7i multiple currency feature, used only in conjunction with MOS, allows each organization to use a different base currency.
Export Datastream 7i Records	Export records to a tab-delimited file to extract information from the Datastream 7i database. The tab-delimited file can be viewed using Microsoft Excel or any program that opens .TXT files.

## Asset Management Services

The asset management services feature is designed for maintenance organizations that operate as a business unit, i.e., your organization charges customers for maintenance work that you perform for them. Define time, material, and labor costs in specific pricing schedules with asset management services. Then, apply pricing schedules to customer contracts to calculate work order costs and generate invoice vouchers and reports.

## Datastream 7i Messenger

Datastream 7i Messenger is a unique feature that notifies you of changes in the Datastream 7i database. Set up Datastream 7i Messenger to send e-mail messages to specified e-mail recipients whenever a record is inserted, updated, or deleted from the database. Datastream 7i Messenger can be used on UNIX and Windows operating systems.

# ADMINISTRATION

The administration module is the foundation of Datastream 7i. Your system administrator utilizes the administration module to configure Datastream 7i to suit the specific needs of your company. The system administrator can define and maintain virtually all aspects of the system such as user access, system-wide defaults, and the content and format of functions and forms.

**Install Parameter: \$BTRACE** Trace flag

Install Parameter	Description	Value	Fixed	Module
\$BTRACE	Trace flag		<input type="checkbox"/>	
\$CATPD	See Datastream 7i Integration Guide, chapter System Administration Guide.	DIREX CATE		
\$CATPS	See Datastream 7i Integration Guide, chapter System Administration Guide.	STOR CATE		
\$COPYID	See Datastream 7i Integration Guide, chapter System Administration Guide.	COPY		
\$FNDUSER	See Datastream 7i Integration Guide, chapter System Administration Guide.	DEFA		
\$INVVAUTH	See Datastream 7i Integration Guide, chapter System Administration Guide.	RS IN TRAN AUTH		
\$INVORG	See Datastream 7i Integration Guide, chapter System Administration Guide.	INVER		
\$INVUSR	See Datastream 7i Integration Guide, chapter System Administration Guide.	INVER		
\$LTRCDIR	Local trace directory			
\$ORGCODE	See Datastream 7i Integration Guide, chapter System Administration Guide.	PURC		
\$PDLINE	See Datastream 7i Integration Guide, chapter System Administration Guide.	1		
\$PDLNTH	See Datastream 7i Integration Guide, chapter System Administration Guide.	RS		

**Screen AEDEF** Analytics Variable Definition

Screen	Description	Class	Class Org.	Form Type	System Entity	Parent	Last Value	Q1
*GDSC1	*GDSC1 Description	WEB	*	Master Functions				
AEDEF	Analytics Variable Definition	WEBC	*	Master Functions				
AESEC	Analytics Security	WEBC	*					
AEVAR	Analytics Variable Value	WEBC	*					
BEADRS	Addresses	WEBC	*					
BEAUDC	Audit Setup	WEBC	*					
BEAUDF	Comments and Custom Fields Audit Setup	WEBC	*					
BEAUTH	Status Authorizations	WEBC	*					
BEBTXT	Text for Screens	WEBC	*					
BECLAS	Classes	WEBC	*					
BECLPE	Closing Periods	WEBC	*					
BECMTH	Comments Audit Trail	WEBC	*					
BECOMM	Comments	WEBC	*					
BECONN	Connector Service	WEBC	*					
BECSTC	Cost Codes	WEBC	*					
BECSTF	Associate Custom Fields	WEBC	*					

**User Group: R5** MAIN USER GROUP OF R5

- Work
  - Setup
  - Reports
  - Projects
  - Service Request Setup
  - WO Planning
    - Generate/Release WOs
    - Information Requests
    - Service Requests
    - Work Order Quick Close
    - Work Orders
    - WO Schedules
- Materials
  - Equipment
- Purchasing
- Operations
- Administration

**Available Screens**

- Analytics Variable Setup
- Approval Lists
- Aspects
- Assets
- Assets for PO
- Associate Custom Fields
- Audit Setup
- Blanket Orders
- Categories
- Claims
- Classes
- Close Service Request

## MODULE FEATURES

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System Administration and Configuration	<p>The system administrator can manage, configure, and control access to Datastream 7i to meet the needs of your organization. Extensively configure Datastream 7i at the system, module, or function level to meet industry or operational requirements. As business processes and environments evolve, Datastream 7i allows you to redefine established configurations to suit the changing needs of your organization. Specifically, the administrator can define and maintain the following administration module functions:</p> <ul style="list-style-type: none"><li>▪ User access, identity, and organization</li><li>▪ User groups with common requirements</li><li>▪ User group functions (security) and actions (financial limits, status changes)</li><li>▪ Sequenced status codes for each user group (work orders and purchase orders) and the allowable transitions between them</li><li>▪ System-wide default settings such as language, currency, and unit of measure</li><li>▪ Personnel filters on lists of values for various functions</li><li>▪ Access to and characteristics of devices, such as printers</li><li>▪ Navigation</li><li>▪ Screens, reports, icons, messages, codes, descriptions, buttons, colors, and abbreviations</li><li>▪ Help text and error messages</li></ul>
User Interface Organization	<p>Datastream 7i functions in the Microsoft Desktop environment and uses a Microsoft compatible graphical user interface, which also supports standard Internet browsers and the Java Applet Viewer. A single Datastream 7i instance may use a combination of these applications in accordance with IT infrastructure and policy.</p>
Multimedia File Attachments	<p>Datastream 7i supports a full range of multimedia formats. You can attach Word files, spreadsheets, graphic images, or audio and video clips to Datastream 7i records, such as work orders. Datastream 7i can display multimedia documents at any time.</p>
Reports Capability	<p>The extensive reporting capability of Datastream 7i provides an easy way to use and tailor Datastream 7i reports to meet your specific needs. Define new reports or launch reports from other applications, such as Oracle Reports, Microsoft Access, Crystal Reports, or Oracle Discoverer.</p>
Integration	<p>Datastream 7i supports OLE 2 integration with several PC Packages, such as Microsoft Excel.</p>
Navigation	<p>Configure system navigation to the particular authorities, permissions, and needs of an individual user or user group. Configured menus and toolbars provide a simplified system view suited to the requirements of operation teams.</p>
Help	<p>Datastream 7i provides online help throughout the system. User manuals are also available in Adobe Acrobat Portable Document Format (.PDF), directly from the Datastream 7i Help menu, or from the installation CD.</p>
Workload Inbox and Balanced Scorecard	<p>The workload inbox displays a user-specific list of pending actions or activities, such as requisitions awaiting approval. The user can call functions to complete the activities directly from the inbox. You can assign inbox entries to specific user groups or to all users, providing a customized listing for each user.</p> <p>The balanced scorecard displays key performance indicators (KPIs), user-defined parameters that measure productivity or efficiency, and scores on the home page. With the user-defined scorecard, users can view the status of their specific work environment using an easy-to-read graphical interface, which allows them to monitor performance.</p>

# ASSET MANAGEMENT

The Datastream 7i asset management module provides the most efficient and effective method for managing your physical assets. Each organization establishes its own unique structure and configuration for physical assets. For example, assets can be centrally located or widely distributed; they can be fixed, moveable, or even mobile; they can be moved to new locations, replaced, swapped, and removed for repairs. Additionally, assets can be mechanical, electrical, or civil. A large enterprise may have thousands of individually numbered assets performing one function in a process of many functions. Therefore, proper asset management is essential for the production of quality goods and services.

Datastream 7i allows you to record, maintain, structure, and standardize physical asset information. The asset management module holds the identity, configuration, and structure of physical assets as well as their complete technical and commercial configurations. You can track each asset's current position (either by location or functional position) and its past locations and maintenance history. Assign bin locations and lot numbers for assets kept in stores (parts tracked by asset) to track and record details of asset transactions, such as receiving, issues, returns, and transfers. This information is easily integrated with additional details from other applications. Indicate whether equipment is subject to the United States Food and Drug Administration (FDA) Current Good Manufacturing Practices (cGMP) standards to configure Datastream 7i to create electronic records and/or require signatures for any work performed on cGMP equipment. You can also track asset depreciation using one of the following depreciation methodologies: straight line depreciation, sum of years digits, double declining balance, and units of output (Datastream 7i Forms only).

The asset management module provides comprehensive analysis functions, key performance indicators (KPIs), and cost history capabilities. Cost and history roll-ups are displayed in a multitude of views, allowing you to examine asset performance and maintenance costs.

The image displays two overlapping screenshots of the Datastream 7i software interface. The top navigation bar includes tabs for Work, Materials, Equipment, Purchasing, Operations, and Administration. The left screenshot shows the 'Asset: TRUCK-HT1' form, which includes fields for Equipment Details (Class, Category, Commission Date, Equipment Value, Assigned To, Meter Unit, Production, Safety, Out of Service, cGMP), Tracking Details (Manufacturer, Model, Serial Number, Revision), and Part Association (Part, Bin, Store, Lot). The right screenshot shows the 'Warranty: VEH-WARRANTY' form, which includes fields for Warranty Details (Manufacturer, Supplier, Start Date, Expiration Date, Duration, Renewal Threshold), Document Details (File, File Type), and Cost Coverage (Labor %, Hired Labor %, Services %, Stock Items %, Direct Purchases %, Tools %). Both screenshots also show a 'Supplier: HERTRICH' and 'Manufacturer: FORD' for the warranty record.



# MODULE FEATURES

## Asset Depreciation

The asset management module allows you to track asset depreciation and calculate an asset's depreciation expense based on an accounting period (fiscal year) and the useful life of the asset. Datastream 7i provides the following asset depreciation methods:

- Straight line depreciation, which is based on the principle that an equal portion of the cost of the asset is allocated to each period of use
- Sum of years digits depreciation, which is an accelerated depreciation method where the largest cost of an asset is allocated in its early years
- Double declining balance depreciation which is an accelerated method of depreciation in which double the straight line depreciation expense is allocated in each period of the asset's life
- Units of output depreciation in which the cost allocated to each period is based on each period's usage (Datastream 7i Forms only)

The screenshot displays the 'Asset Management' software interface. At the top, there is a navigation bar with tabs for 'Work', 'Materials', 'Equipment', 'Purchasing', 'Operations', and 'Administration'. Below this, the user is logged in as 'Asset COOL' for a 'Cooling Unit'. The interface shows a table of depreciation methods and a detailed view for the 'Straight line' method.

Depreciation Method	Original Value	Est. Useful Life	UOM	Residual Value	Depreciation Type
Straight line	15,000.00	10 Years		3,000.00	All depreciation types

[Add Depreciation Type](#) | [Delete Depreciation Type](#) | [View Depreciation Details](#)

**Depreciation Type Details**

Depreciation Method:       Depreciation (To Date):   
Original Value:       Book Value (To Date):   
Est. Useful Life:         
Residual Value:

## Asset Structure

The asset management module gives you the flexibility to establish your physical assets according to your own asset structure. Datastream 7i provides the following asset structure options:

- Asset identifiers
- Hierarchical structure
- Unlimited number of asset parent/child relationships
- Grouping of assets by system location, such as a process line or electrical circuit
- Choice of functional position (one or more physical assets per position) or tag numbers (one physical asset per functional position)
- Indicators to configure cost roll-up

Organization: \*  
Department: DEPT  
Status: Installed

System: EVISCERATION Eviscertation System

Un-Link | Toggle Cost Rollup | Show Parents | Display as Focal Point | Go to Selection | Create WO

Add Parent

S-EVISCERATION(\*)

- P-ASSEMBLY1(\*)
  - A-MOTOR1(\*)
  - A-CROSSCUT(\*)
  - A-BELT1(\*)
  - A-VENTCUTTER(\*)

Dataspy:

Unlinked Equipment [v] Edit

Filter

--No Filter-- [v] Run

Type	Code	Organization
A	AMDAST1	*
A	AMDAST2	*
A	AMDAST7	*
A	APMDAST1	*
A	APMDAST2	*
A	APMDAST7	*
A	CFMD-ASSET1	CFMD-ORG1
A	CFMD-ASSET2	CFMD-ORG1
A	CFMD-ASSET3	CFMD-ORG1
A	CWOAST1	CWOORG1
A	CWOAST10	CWOORG1
A	CWOAST12	CWOORG1
A	CWOAST13	CWOORG1

**Descriptive and History Information**

Datastream 7i provides extensive asset information.

Include the following details on each asset record:

- Profile (name/description) and technical details (rating, voltage, capacity)
- Design and as-built specifications
- Multimedia documentation and physical location
- Relation to other assets, including grouping by class and category
- Meter type, inspection notes, and free-form comments
- VMRS class and manufacturer/supplier for vehicles

Track asset history via the following options:

- Requirements and action codes
- Material and labor costs of maintenance work
- Potential warranty claims tracking
- Mean-time between failure (MTBF) information and fault-trend analysis
- Location and status changes
- Relationship to other asset structure changes
- Relationship to other asset structure additions

**Warranties and Warranty Claims**

Many suppliers provide a warranty on new equipment for a specific period of time. Datastream 7i tracks asset warranties and processes warranty claims. For example, after defining warranty documents, you can associate warranties with equipment or parts. Then, update warranties as needed. If a part or piece of equipment breaks down or needs repair while under warranty, Datastream 7i makes it easy for you to process a claim. Create warranties based upon either calendar periods or equipment usage, or you can create warranties that are based upon both. For example, you can create a five-year, 50,000-mile warranty for an automobile in your fleet. If you are using dual warranty expiration criteria, Datastream 7i automatically terminates a warranty whenever one of the expiration conditions is reached.

You can also associate VMRS codes with warranty documents to enable Datastream 7i to determine a warranty’s applicability to work orders and work order activities created for VMRS equipment.

**Key Performance Indicators**

Datastream 7i has over 20 predefined KPIs that derive information from within the asset, work, materials, purchasing, and project management modules.

System administrators can build new performance indicators or modify existing ones provided that the necessary transaction data is contained within the Datastream 7i database. An IT staff with knowledge of the Datastream 7i database structure and coding conventions and experience with the SQL programming language will find this process to be simple and straightforward.

Each indicator uses a SQL script that extracts, summarizes, and formats the required data into a new table that can then be appropriately displayed. The scripts supplied with the module can serve as templates.

**Linear Assets**

The linear asset capabilities allow you to define an asset in terms of its linear characteristics—like length, unit of measure, and geographic reference. You can write work orders against any portion or point on that asset by specifying from and to points. There are virtually unlimited numbers of potential work sites on any linear asset. These assets can then be dynamically segmented to analyze work order costs over desired segments of the asset.

The key resides in the costing side of asset performance management. You can generate costing information that looks at maintenance costs only from point A to point B. The system will then retrieve the costs for all work orders whose portions or points reside in the specified segment. If a work item resides only partly in the specified segment, the system will automatically allocate the costs for that segment only.

Linear asset functionality does not require GIS, although it does include several important GIS interface features. The most significant addition to GIS operations is the ability to specify a segment of a linear asset and execute a search in GIS based on the segment and not the entire asset. This greatly simplifies operations by narrowing the scope of such GIS searches.

# WORK MANAGEMENT

The work management module helps you manage, plan, and monitor work and the resources necessary to complete work. With this module, define initial work information such as supervisors, permits, qualifications, trades, employees, shifts, tasks, tools, material lists, and VMRS codes.

You may create standard work orders, and then apply the information from standard work orders to regular work orders. Next, create regular work orders to repair broken equipment, modify equipment to meet safety and environmental standards, perform work orders during a normal workday, and record information concerning equipment problems. You may also add activities to the work order, schedule labor, associate qualifications with work order activities, book labor and vendor hours, associate parts, enter meter readings, create child work orders, add permits, and request tools as necessary. View the status of work orders and view work order information such as work order cost and service request details. Close the work order after the work is complete.

The work management module also enables you to create preventive maintenance (PM) work orders to generate periodic work orders for specified frequencies or meter readings. Preventive maintenance work orders apply to single pieces of equipment or to systems that include several pieces of equipment.

Manage your work order schedules with this module. You may view current work order schedules, calculate labor availability, and view labor utilization. You may schedule unscheduled or backlogged work orders or reschedule work orders as necessary. Additionally, you can view work order comments, change the work order status, and freeze or unfreeze activity schedules. You may also balance the workload with the work management module. The work management module interacts heavily with other modules to provide comprehensive work management.

The screenshot displays two overlapping windows from a software application. The top window is titled "Work Order: 10019 Change Oil in Company Vehicles" and shows various fields for work order details. The bottom window is titled "WO Load Balancing" and shows a calendar grid for scheduling work orders across different dates in 2004.

**Work Order: 10019 Change Oil in Company Vehicles**

Organization: ORG1  
Status: Released  
Equipment: VEHICLES

Work Order: 10019 Change Oil in Company Vehicles  
Equipment: VEHICLES Company Vehicles  
Type: Breakdown Status: Released  
Department: \* Safety:   
Warranty:

**Work Order Details**

Location: GRV-HDQ Standard WO: STWO1  
Class: \* Priority: All work order priori  
Problem Code: PA1 Cost Code: COSTCODE1  
Criticality: Target Value: 500.00 USD  
PM Code:

**Activity**

Trade: \* Estimated Hours: 1  
Task: TASK Hours Remaining: 1  
Material List: People Required: 1

**WO Load Balancing**

Parameters Preview Balance Load

Work Order	Description	09-26-2004	10-03-2004	10-10-2004	10-17-2004	10-24-2004
34271	Replace Drive Motor on Line 1	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
34482	Replace Belts on Line 1	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS

Update Activity | Save Session | Close Session and Update Work Orders | Cancel Session

Department	Trade	09-26-2004	10-03-2004	10-10-2004	10-17-2004	10-24-2004
PRX	EL	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
PRX	ME	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS
		SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS	SMTWTFSS

## MODULE FEATURES

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Work Order Generation	<p>In the work management module, work requests are manually generated by request or automatically generated by the system (planned work orders or work orders based on repairable spare inventory levels). After appropriate screening and authorization, requests become approved work orders and are dispatched for action. A standard work order library simplifies initiation of frequently performed work orders.</p> <p>With the work management module, you can perform the following tasks:</p> <ul style="list-style-type: none"><li>▪ Schedule nonroutine maintenance for asset breakdowns, capital work, and asset relocation. Datastream 7i allows you to enter work order detail information even after the work is completed.</li><li>▪ Generate standing work orders for routine or lubrication work</li><li>▪ Set up routine, preventive maintenance based on fixed calendar dates, meter readings, fixed or changing frequencies depending on thresholds, and dormant periods</li><li>▪ Track claims and warranties at activity and work order level</li><li>▪ Easily initiate frequently performed work orders</li><li>▪ Generate repair work orders for repairable spare parts</li></ul>
Work Organization	<p>The work management module provides maximum flexibility by allowing you to plan and organize work orders according to your needs. You can divide work orders into a series of steps, break down complex work orders into child work orders, and design work orders according to specific information. If you have recurring work orders with child work orders, you can create standard work order templates, attach standard work orders as child work orders, and specify the sequence of the child work orders. Any time you generate a work order from the template, Datastream 7i generates all associated child work orders.</p> <p>Work orders may include the following:</p> <ul style="list-style-type: none"><li>▪ Resource requirements (labor, materials, tools)</li><li>▪ Contractor labor and equipment, such as safety requirements</li><li>▪ Required permits, Material Safety Data Sheets, and instruction lists</li><li>▪ Required technical documents</li><li>▪ Drawings, CAD diagrams, P&amp;ID diagrams, etc.</li></ul>
Work Scheduling	<p>Schedule work orders by initiating jobs relating to specific criteria, such as labor requirements and availability, parts requirements and availability, workshop requirements, dormant periods, employee qualifications, and priorities and opportunities.</p>
Work Completion	<p>Enter detailed information after completing a work order. Enter labor hours and costs, material costs, work completed (problem code), actions taken to complete the work order (action code), free-form comments, and meter readings.</p>
Human Resources Management	<p>Manage human resources by tracking labor resources by trade, accounting for holidays, and analyzing nonproductive hours or downtime.</p>
Purchase Order Tracking	<p>Datastream 7i makes it easy for users who create work orders and direct purchase requisitions for job activities to find the status of required purchasing parts. Datastream has added a purchase orders tab to the work order screen. This tab displays the PO and lines for all requisitioned items directly associated with the work order. This feature provides valuable information that can be used for planning job execution with more accuracy based on pending availability of critical materials.</p>

# MATERIALS MANAGEMENT

The materials management module is designed to maintain inventory and monitor materials movement. Part requisitions from work orders drive the flow of materials to the required location with minimal disruption. This module enables materials managers to determine the correct stocking policies to provide an acceptable service level of parts and supplies to meet anticipated demand from maintenance. Materials managers are then able to simultaneously minimize the working capital invested in the stocked parts and supplies. Materials management also automates storage room management, purchase requisitioning, goods receipt, parts repair, and record-keeping functions.

The maintenance of physical assets usually requires parts and materials. If these resources are not available, work will be disrupted and delayed, impacting the ability of physical assets to perform their intended functions. Stocks of frequently-used and critical spare parts are kept in stores (storage locations). In many organizations, multiple stores are used so that an organization can delegate responsibility for parts to the appropriate employee and keep parts in close proximity to where they will be used. Nonstocked materials are purchased directly from suppliers only when they are required. Repairable spares functionality aids in tracking repairs, either by suppliers or by company employees, to spare parts.

Materials management personnel are concerned with ensuring that the right parts and materials are available at the time and location they are needed. Consequently, management must accurately forecast probable demand for maintenance items and then determine the parts to stock, their location, the number of items to store, as well as the reorder details. The materials management module greatly contributes to maximizing maintenance efficiency and minimizing operational and capital costs.

Datastream 7i allows authorized users to rename any part—temporary or permanent—in the system. Upon change of ID, Datastream 7i applies the alteration throughout the system while maintaining history of usage or cost and associating the new part nomenclature with applicable records.

**Issue/Return Parts**

Issue To / Return From

Transaction Type: Issue

WD - Activity: E0019 - 1 Change Oil in Company Vehicles

Project - Budget:

Equipment: VEHICLES Company Vehicles

Cost Code: COSTCODE1 costcode1

Issue From / Return To

Store:

Material List:

Pick Ticket:

Department:

Date:

**Transaction Details**

Part	Description	Part Org.	Track by Asset	Bin	Lot
OIL-FILTER	Oil Filters	*	<input type="checkbox"/>	*	*

Material List | Pick Ticket | Held Items | Reserved Items | [Add Part](#)

Part: OIL-FILTER Oil Filters

Bin: \* Transaction Qty.: 30

Lot: \* Available Qty.: 50

Asset ID:

[Add to List](#) [Remove from List](#)

**Requisition: 10004** Paint for Greenville Warehouse

Organization: ORG1

Class: WHS-GRN

Status: Unfinished

**Requisition Details**

Status: Unfinished

Supplier: HERTRICH

Store: STORE1

Class: WHS-GRN

Requested By: LEONHARTTK

Date Requested: 01/30/2004

Delivery Address: WAREHOUSE-GRN

Cost Code: COSTCODE1

Work Order - Activity: E0019 - 1

Project - Budget:

Entered By: R5

Printed:

**Approval**

Default Approver: DERRICK

Approved By:

Date Approved:

**Custom Fields**

**Requisition Totals**

Part Lines:	2	Total Part Value:	2,400.00	USD
Requisition Lines:	2	Total Req. Value:	2,400.00	USD

## MODULE FEATURES

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Materials Organization	<p>Use the materials management module to track and control reservations, requisitions, allocations, issues, receipts, and repairs for all parts and materials needed for work orders.</p> <p>With the materials management module, you can perform the following tasks:</p> <ul style="list-style-type: none"><li>▪ Record inventory and manage stock levels</li><li>▪ Create purchase requisitions</li><li>▪ Organize important information such as goods receipts, repairable spares, and supplier information</li><li>▪ Track material demand and usage cost information</li></ul> <p>Create master files for better materials organization. Store part catalog info, including part descriptions and codes, units of measure, pricing details, preferred supplier, alternative parts and compatibility rating, stock details, and repair details.</p>
Stock Replenishment	<p>Datastream 7i provides three stock replenishment methods: min/max, reorder level, and on-demand. Set the stock replenishment method for parts in stock as necessary to specify the manner in which stock parts are reordered when you generate requisitions and/or purchase orders.</p>
Stores Issues and Returns	<p>The materials management module makes it easy to issue and return parts. Coordinate issues and returns according to physical assets, work orders, repairable spares, pick lists, or scrap, decommissioned, or retired materials. With enhanced pick list functionality, you can issue materials against a pick list more than once (partial issues) and return materials against the list. Pick lists can also be subject to approval so items can only be issued after the list has been approved. Easily re-allocate unused direct materials to other work orders. Datastream 7i first issues the requested parts from the warehouse and then re-allocates any remaining parts from the work order.</p>
Recording Physical Inventory Count	<p>Record physical inventory to identify discrepancies between expected on-hand inventory and physical inventory count. Create physical inventory lists according to part, store, location, or class. You can also incorporate cyclical counting, stock matching, adjustments, and stock evaluations.</p>
Goods Receipt and Return	<p>Organize receipt of goods by recording from/to details, purchase order matching, lot (batch) numbers, and approval codes.</p> <p>When returning goods, record purchase order/RMA matching, store-to-store details, and store-to-supplier details.</p> <p>With on-dock receipt, you can inspect goods for quality immediately upon arrival and then receive them against a purchase order on the loading dock instead of waiting until they reach the storeroom. You can then receive individual parts into stores or transfer them directly to the warehouse that requested them. You can also immediately return any faulty goods.</p>
Repairable Spares	<p>Identify and track parts that can be repaired and then reused. Create requisitions, quotations, purchase orders, and work orders for repairing broken parts by suppliers or by your employees. Automatically generate requisitions for repairable spares based on stock levels and reorder method. Track details about repairable spares, such as location, core value, and the number that could not be repaired.</p>
Material Analysis	<p>Perform ABC analysis to group materials according to the number of issues or quantity on hand to help determine which materials to manage closely. Perform Economic Order Quantity (EOQ) Analysis to determine the most efficient order quantity for inventory items. EOQ is based on past average demand, and it can minimize order costs, holding costs, and item cost for each item. You can also evaluate suppliers' performance for purchase orders, services, or receipt of goods.</p>

# PURCHASING MANAGEMENT

The purchasing management module automates and controls workflow and implements both procedural and approval processes for purchasing expenditures. Datastream 7i purchasing manages every aspect of the purchasing cycle, including requisition creation, approval, supplier selection, purchase order placement, and goods receipt through invoice matching.

Work performed on physical assets often requires the purchase of materials or services. Stocked materials are bought when materials management determines that an item needs to be replenished, while nonstocked items are purchased based on need. The Datastream 7i purchasing management module helps to ensure that the organization selects qualified suppliers and obtains the best price and delivery terms for required materials and services. Datastream 7i also helps to ensure that goods are delivered on schedule, that quality standards are maintained, and that suppliers are paid correctly. Datastream 7i purchasing also retains historical data about suppliers' track records, enabling purchasing personnel to select the best suppliers for particular requirements, negotiate favorable terms, and limit financial exposure to individual suppliers.

The image displays three screenshots of the Datastream 7i purchasing management interface. The leftmost screenshot shows the 'Quotations' form with fields for Quotation (10001), Organization, Status (Unfinished), Class, Store (ATL), Originator (JJ), Supplier (CS SUPPLY), Currency (USD), Exchange rate (1), Language (EN), Buyer (OSCAR), Authorization, Delivery address (ATLANTA), Lead time, and Date received. The middle screenshot shows the 'Purchase Order: 10002' form for 'Materials for Greenville Warehouse Expansion' with fields for Status (Unfinished), Store (STORE1), Originator (WILLSJ), Due Date (01/30/2004), Supplier (HERTRICH), Currency (USD), Exchange Rate (1), Language (EN), and Order Date (01/30/2004). The rightmost screenshot shows the 'Blanket Order: 10002' form for 'Parts for Ventilation System -- Greenville Headquarter' with fields for Status (Unfinished), Store (GRV-HOMEDEPOT), Date Created (09/16/2004), Buyer (TAYLORC), Start Date (09/27/2004), End Date (10/25/2004), Supplier (HOMEDEPOT), Currency (USD), Exchange Rate (1), and Release Details (Released Value, Remaining Value, Number Released, Last PO Number, Last PO Date).



## MODULE FEATURES

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Purchase Requisition Generation	With the purchasing management module, you can create purchase requisitions manually or automatically when inventory drops below minimum stock levels. Generate requisitions to receive approval or to transfer requisitions to purchase order processing.
Requests for Quotations	<p>Quotations are requests to suppliers for prices on parts and services.</p> <p>With the purchase management module, you can perform the following tasks:</p> <ul style="list-style-type: none"><li>▪ Create Requests for Quotations (RFQs) and quotation updates</li><li>▪ Track RFQ status</li><li>▪ Select and evaluate suppliers</li><li>▪ Create purchase orders</li></ul>
Purchase Order Creation	<p>Create purchase orders for immediate needs from purchase requisitions, from a low-stock items record, or from RFQs.</p> <p>The purchasing management module supports the following elements:</p> <ul style="list-style-type: none"><li>▪ Service catalog for frequently used requirements</li><li>▪ Blanket order capabilities and full header information and line items for materials and services</li><li>▪ Connection of line items to physical assets</li><li>▪ Contract clause library and status tracking</li><li>▪ Revision of existing purchase orders</li><li>▪ Approval and dispatch to supplier</li><li>▪ Ability to include multiple currencies on a purchase order</li></ul>
Invoice Vouchers	Datastream 7i invoicing allows you to create vouchers for invoices received from suppliers. After receipt of materials and services, Datastream 7i invoicing matches the received goods against purchase orders taking into consideration specified ranges of tolerance set for extra charges or discounts and invoiced quantities. You can also record invoice vouchers for credit and/or debit notes for which your inventory and cost will be reduced, e.g., returns. The invoicing process also includes non-purchase order vouchers to record invoices for items or services received without associated purchase orders.
Contracts	Create and supervise standard contracts to include a contract clause library, purchase order and item discounts, applicable dates, shipment and payment conditions, and contract value.

# BUDGET MANAGEMENT

The budget management module automates the budget establishment process and the subsequent capture, supervision, control, and analysis of the expenditures associated with maintenance work. Datastream 7i budgeting links the financial structure of your enterprise with its organizational structure and the physical asset hierarchies. Budget management allows you to set up budget account codes and align them with corporate policies and business objectives. The budget management module allows you to calculate a variety of financial and performance indicators.

The analysis of expenditures serves as input to critical performance indicators that managers often use to judge the operation's performance and to determine improvement opportunities.

**Budget codes and details**

Budget	ATLANTA	PERI	SEP	42000
Year	FISCAL	LOC	GARAGE	25000
Current	5000	MRC	OPS	15000
Calculated	10000	OBJ	DEL-TRUCK-01	5000

Level	WO type	Budget group	Budget	Copy
A	*		10000	
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## MODULE FEATURES

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### Budget Organization

In any organization, it is important to plan, monitor, control, and analyze the costs associated with asset management and maintenance. Most management teams use budget management to anticipate and manage costs associated with a fiscal year or period. Budgets can be divided into a number of different hierarchies, including expenditure types, organizational departments, equipment structures, and periods. The expenditure connected with maintenance work is often projected and tracked through these subgroups. The amount of detail used in planning and tracking maintenance work is determined by the analysis and reporting requirements of each individual organization.

The budget management module helps you establish budgets and capture all costs related to maintenance expenditures for specific, user-defined time periods. Datastream 7i budgeting enables the creation of hierarchical budget account codes by maintenance entity (e.g., cost type, department, and asset). Actual, planned, and estimated costs can be captured at any level by time period, enabling the efficient monitoring and control of expenditures. Budget management maintains the details of all work orders and purchase orders by budget account codes, allowing analysis of all current and planned expenditures.

With the budget management module, you can perform the following tasks:

- Establish user-defined reporting periods
- Create a budget structure based on cost type, department, equipment, work order location, period, work order type, cost code, and project
- Set individual budget amounts for each item or group in the budget
- Group budget items together for ease of reporting

### Expenditure Identification

Datastream 7i provides the following budget analysis options to help you identify your budget position:

- Compare between budgeted, estimated, committed, and actual costs
- Analyze budget based on period, year to date, or current trends
- Examine detailed expenditures, such as booked hours and materials ordered

# INSPECTION MANAGEMENT

The inspection management module coordinates with the work management and asset management modules to give you more control over planned PM functions within your organization. Datastream 7i inspection management simplifies the formation of inspection routes, the specific measurement points on each asset, the aspects to be measured, and the collation of results. Inspections then link with the asset management and work management modules for the listing and creation of work orders.

As physical assets become more complex and resources become scarcer, new types of maintenance work are required to ensure that these assets continue to perform their intended function. Inspection, sometimes called detective maintenance, verifies the efficient performance of a physical asset's individual functions, especially those functions that cannot be observed during normal operation (e.g., motor vibration or oil viscosity). Predictive maintenance uses condition-monitoring techniques to measure certain inspection aspects of an asset (e.g., oil viscosity or wall thickness), which give insight into its physical condition and health. Inspections and predictive maintenance are important ways to ensure that assets meet safety, quality, environmental integrity, and performance requirements. At a typical site, the multitude of physical assets and the variety of possible failure modes and condition-monitoring techniques provide a significant challenge to the efficient implementation of an inspection management program.

The inspection management module supports the use of repairable spares by offering an inspection route template capability that matches currently installed assets with the specific inspection criteria for their asset category and class (e.g., pump, motor, etc.). This capability uses the asset structure to select the currently installed assets that match the asset category and class of the template. Datastream 7i then dynamically creates the inspection route.

The top screenshot displays the configuration page for 'Aspect AP15 Wall Thickness'. The interface includes a navigation bar with tabs for Work, Materials, Equipment, Purchasing, Operations, and Administration. Below the navigation bar, the title 'Aspect AP15 Wall Thickness' is shown, along with a 'Class: INASPCL1' field. The page has tabs for List View, Record View, Comments, Prompts, and Add Tab. The main content area shows 'Aspect: AP15 Wall Thickness' and 'Aspect Details' with a 'Time Dependency' dropdown set to 'Linearly decreasing' and an 'Out of Service' checkbox. A 'Class: INASPCL1' field is also visible.

The bottom screenshot displays the 'Point Type TYP1 Walls' list view. It features a navigation bar with the same tabs as the top screenshot. The title is 'Point Type TYP1 Walls'. Below the title, there are tabs for List View, Record View, Comments, and Add Tab. A 'Datasp' dropdown is set to 'All Point Types', and the 'Records' count is '4 of 4 (1237)'. A filter dropdown is set to '--No Filter--'. Below this is a table with the following data:

Point Type	Description	Class
TYP1	Walls	
TYP2	Pipes	
TYP3	Air inside	
TYP4	Safety equipment	

## MODULE FEATURES

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### Inspection Planning and Organization

The inspection management module records data on a physical asset's current condition and helps forecast its future condition. This module creates inspection routes, identifies measurement points, defines inspection aspects, and records results. Datastream 7i automatically analyzes the tabulated inspection results and then generates a work order covering the appropriate corrective action if an inspection generates a result outside the critical values. Additionally, if inspection results show a trend towards a breach of the tolerance limits prior to the next scheduled inspection, an intermediate inspection will be automatically recommended. Datastream 7i also forecasts the date when the tolerance and critical values are likely to be reached.

With the inspection management module, you can perform the following tasks:

- Schedule calendar or meter-based inspections
- Schedule inspections based on certain conditions
- Create inspection route templates for asset categories and classes
- Copy inspection points from one piece of equipment to another
- Coordinate inspection routes according to route codes, route description, and asset selection based on asset structure
- Include all types of equipment on inspection routes
- Incorporate ad hoc inspection capability
- Monitor assets in the field for user-defined measurements that require constant, repetitive logging
- Associate custom attributes, documents, and text with inspection results
- Calculate the percentage of remaining life and the retirement date of equipment

### Risk-based Inspection

Risk-based inspection (RBI) helps you determine the next inspection date of a piece of equipment using percent of remaining life, potential risk of problems, and how critical the equipment is to operations. With RBI, older and more critical equipment items are inspected at increasingly frequent intervals, decreasing the likelihood of unforeseen equipment failure.

### Inspection Point Scheduling

Schedule inspection points according to the following parameters:

- Condition requirement, such as safety measures and accuracy
- Grouping of similar points to facilitate data entry
- Aspect definition, such as wall thickness, temperature, pressure, and viscosity
- Time-based dependence of aspects (increasing, decreasing, irregular)

### Inspection Point Classification and Results

Classify inspection points to execute more detailed inspections. For example, inspection points can include minimum and maximum values, nominal values, tolerances, default actions for out-of-measurement boundaries, preventive maintenance actions when a minimum and maximum value is recorded, and detailed instructions.

Inspections can include validation of data input; regression analysis of the last two measurements; regression analysis of all results since last discontinuity; worst-case scenario created from valid, invalid, or discontinuity results; and ad hoc routes based on results (condition-based inspection).

# PROJECT MANAGEMENT

The Datastream 7i project management module automates the administration of the complete project process from initial budget and time-scale planning to completion of the final work order. Additionally, the project management module facilitates comparison of actual status and progress of work, resource usage, and costs against a project plan. It handles both actual and committed resources and costs.

A project consists of a group of work orders that are executed as a coherent whole with specific resource, cost, and time objectives. Projects can be simple or complex. Simple projects have just a few work orders that can be completed within one day; complex projects can include diverse, multifaceted work that takes months to complete and requires the coordination of thousands of work orders and resources. Use projects for shutdown or turnaround maintenance; for maintenance campaigns in which work orders on a particular unit or line are executed at one time; and for engineering or capital work. Projects often combine maintenance tasks with physical asset additions and modifications. Project work makes extensive use of resources, such as labor, parts, contractors, tools, equipment, and workshops.

The interface consists of two overlapping windows. The top window shows the 'Project' details for 'PAINT WAREHOUSE' (Paint Greenville Warehouse) under Organization 'ORG1'. The status is 'Awaiting approval'. The 'Project Details' section includes fields for Coordinator (WILLSJ), Status (Approved), Parent Project (DPC-PROJ1), Date Approved, Estimated Start Date (03/08/2004), Actual Start Date (03/08/2004), Estimated End Date (03/15/2004), Actual End Date (03/16/2004), Shutdown, Class, Shutdown WOs (0), and Project WOs (0). The 'Budget Details' section includes Current Budget (4,000), Labor (1,200), Budget Date (02/13/2004), Hired Labor (0), Budget Approved, Materials (2,500), Estimate to Complete (0), and Direct Purchases (0).

The bottom window shows the 'Costs' tab for the same project. It displays a table of cost types with columns for Estimated, Planned, On Order, Invoice Differences, Actual, Total Cost, and Fre. The data is as follows:

Cost Type	Estimated	Planned	On Order	Invoice Differences	Actual	Total Cost	Fre
Direct Purchases	0	0	0	0	0	0	0
Hired Labor	0	0	0	0	0	0	0
Labor	1,200	0	0	0	0	0	0
Services	0	0	0	0	0	0	0
Stock Items	2,500	0	0	0	0	0	0
Tool cost	0	0	0	0	0	0	0

## MODULE FEATURES

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Project Planning and Organization	<p>The project management module offers a multitude of planning and organization options. Record all pertinent information on any current, completed, or future projects, and divide projects into an unlimited number of subprojects. You can also include any number of work orders and purchase orders to each project. Then, assign budgets to each project and work order using materials and other resources that can be reserved and requisitioned against them. Datastream 7i tracks the progress and status of projects and work orders in relationship to budgets and plans.</p> <p>With the project management module, you can perform the following tasks:</p> <ul style="list-style-type: none"><li>▪ Organize project, subproject, and work order structure with unlimited complexity</li><li>▪ Estimate labor costs</li><li>▪ Reserve and requisition materials, tools, equipment, and other resources</li><li>▪ Create a master work order template</li><li>▪ Generate purchase orders based on projects</li><li>▪ Plan for shutdown</li></ul>
Project Budgeting	<p>Each project has its own budget as well as its own work, resource, cost, and time plans; however, changes in requirements often impact the initial plans for a project. Within each work project, each task has an individual schedule that can be affected by the schedule of other work orders. Consequently, the careful monitoring and control of project work and each individual task helps control the difference between actual and committed costs. At the same time, the details of the work as well as the costs and resources associated with it must be accurately recorded to maintain a complete record of asset history.</p> <p>The project management module helps you maintain project budget codes, estimate project budgets, and record budget changes and revisions.</p>
Scheduling and Execution	<p>Schedule and execute projects utilizing full work management features via project work orders. Schedule and execute work, track resource status and expenditures, monitor work completion, and allocate human resources.</p>

# DATA COLLECTION

The data collection module enables you to track the movement of assets. Data collection also supports and simplifies equipment audit and physical inventory functions. You can perform data collection completely within Datastream 7i, or you can use a barcode scanner to transfer information.

Application programming interfaces (APIs) provide links between Datastream 7i and external applications. Specifically, APIs import and export Datastream 7i information to and from Oracle Applications, such as your customer's purchasing system, to better integrate your supply chain via electronic commerce. Datastream 7i utilizes a variety of interfaces such as the Open Company Interface, which imports company information from Oracle Financials to Datastream 7i, and the Open Purchase Order Interface, which exports approved purchase orders created from Datastream 7i requisitions. APIs are a feature of the Oracle Financials Integration module of Datastream's Business Application Integration Module (BAIM) that merges Datastream 7i and Oracle Financials to provide a single integrated solution to financial and asset maintenance management. Datastream 7i provides 15 interface types for comprehensive asset tracking.

Use the following data collection features to track the movement of goods:

- **Equipment audit and physical inventory**—Scan information about assets in the field, and then compare to and reconcile them against the Datastream 7i database.
- **Workflows**—Set up asset-tracking barcode prompts in workflows that guide users through the data entry process.
- **Timesheets**—Automatically track employees' time in the field.
- **Date handling**—Enter date and time stamps with the data.
- **Application program interfaces (APIs)**—Import and verify field data through APIs.
- **Asset tracking reports**—Analyze asset tracking information in a variety of Datastream 7i reports. Create new reports in Datastream 7i or in other report applications as necessary.
- **Data import**—Easily import ASCII files from any external data collection device.

The image displays two screenshots of the Datastream 7i software interface. The left screenshot shows the 'Job Setup' screen, which includes a table of jobs and a 'Job Details' form. The right screenshot shows the 'Transaction Type: M201' screen, which displays a list of transaction records.

**Job Setup Table:**

Job Name	Description	Queue	Job Type	Active	Last Run
ADRV	Equipment audit driver		Procedure	<input type="checkbox"/>	
AETL	Analytics Only Load		Java	<input type="checkbox"/>	
BDRV	Driver for apis	1	Procedure	<input type="checkbox"/>	
BDRV	Driver for apis	2	Procedure	<input type="checkbox"/>	
BDRV	Driver for apis	0	Procedure	<input type="checkbox"/>	
BDRV	Driver for apis	3	Procedure	<input type="checkbox"/>	
DWTL	Data Warehouse Load		Java	<input type="checkbox"/>	
FDRV	Workflow driver		Procedure	<input type="checkbox"/>	

**Job Details Form:**

Job Name: BDRV Driver for apis  
 Queue: 1 Job Type: Procedure  
 Last Ran: Next Run:  
 Month: Hour:  
 Day of Month: Minute: 7/1  
 Day of Week: Active:

**Transaction Type: M201 Table:**

Transaction Type	Description	Line	Prompt Description	Prompt Sequence	Next Prompt	Archive Column
M201	?	10	USER ID	1	2	
M201	?	20	EQUIP #	2	3	
M201	?	25	EQUIP ORG	3	4	
M201	?	30	EQUIP PROFILE Y/N?	4	5	
M201	?	40	EQUIP PROFILE	5	6	
M201	?	50	DESCRIPTION	6	7	
M201	?	60	DEPARTMENT	7	8	
M201	?	70	PART #	8	9	
M201	?	75	PART ORG	9	2	
M201	?	100	EQUIP TYPE			
M201	?	110	EQUIP ORG			
M201	?	200	USER ID			
M201	?	210	EQUIP #			
M201	?	220	PROFILE #			
M201	?	230	EQUIP STATUS			
M201	?	300	SKIP GROUP			
M201	?	400	OBJ TYPE			
M201	?	410	EQUIP ORG			
M201	?	420	PART ORG			
M201	?	430	EQUIP STATUS			



# MICROSOFT PROJECT INTERFACE

Datastream 7i incorporates the two-way integration of Microsoft (MS) Project with Datastream 7i Extended. The Datastream 7i MS Project Interface facilitates work order scheduling and resource assignment by allowing you to schedule work and resources in MS Project and then update the Datastream 7i database with the information.

Create scheduling projects in Datastream 7i to identify work orders and resources to export to MS Project. Import Datastream 7i data from within MS Project and then update schedule, resource, and duration information for work order activities. Export information back to Datastream 7i to update dates, estimated hours, and activity schedules.

## Select Supplier Resources

Suppliers will become Resources in the current project.

---

### Active Selection Criteria

Show only suppliers that have the following attributes:  
Class: SUPCLAS1 (AH-ORG2)

Display Results

### Import Scheduling Session

Use the list below to select the scheduling session you want to import.

Scheduling Session:  
(Select a scheduling session)

Import Cancel

### Export Scheduling Session

To export the current scheduling session (10000), click the Export Session button.

**Note:** Exporting the session will update the Datastream 7i work order activities with the data from each task and resource in the current project, and then the current scheduling session will be closed.

Export Session Cancel

### Cancel Scheduling Session

To cancel the current scheduling session (10000), click the Cancel Session button.

**Note:** Cancelling the session will not delete tasks and resources from the current project, but you will be unable to export the updated tasks back to Datastream 7i.

Cancel Session Close

# OVERVIEW OF ADVANCED MODULES AND FEATURES

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Calibration Management	The calibration management module tracks calibration data for equipment categories, assets, systems, and positions. Define test point data and associate test point sets with work orders and preventative maintenance (PM) work orders. Create PM work orders to generate regularly scheduled jobs for equipment requiring calibration. Create regular calibration work orders as necessary. Datastream 7i assigns statuses to calibration work orders based on the test point measurement results. A calibration does not pass until all test points on the work order pass.
Requestor	Requestor allows you to easily increase the number of users submitting work requests and purchase requests without significantly increasing your financial investment. With Requestor, you can authorize employees to enter and approve work requests and enter and view the status of purchase requests over the Web. Requestor effectively extends basic Datastream 7i functionality from room-to-room or site-to-site and lowers the total cost of ownership. Additionally, Requestor includes e-mail notification following a change in work or purchase order status, keeping employees up-to-date and in control of essential work.
Geographic Information System (GIS) Interface	GIS is a Web-based solution that leverages ESRI ArcIMS, the leading Geographic Information System (GIS) mapping software. With the intuitive, flexible interface of Datastream 7i combined with seamless GIS integration, organizations can pinpoint assets and access critical information prior to servicing, streamline workflow on widely-dispersed equipment, and create a consolidated, easy-to-access view of asset location and history, resulting in increased workforce efficiency and lower costs. Plus, you can manage assets in Datastream 7i directly through the GIS interface.
Datastream 7i Analytics	Datastream 7i Analytics provides a single point of view that incorporates data from any number of disparate sources to help businesses collect asset data using Datastream 7i, analyze the data and model “what if” scenarios to predict future performance, and make better-informed business decisions to optimize asset performance and improve overall productivity.
Data Warehouse	The data warehouse is a set of summary tables embedded within the Datastream 7i database used for extracting report information for Datastream 7i Analytics. The data warehouse enables you to combine databases across your entire enterprise.
Databridge	The Databridge exchange works seamlessly both in a client/server environment and over the Web to provide XML-based data integration. Providing application programming interfaces (APIs) to Datastream products, Databridge allows you to link to external applications easily. For customers wanting to integrate their Datastream product with applications such as Oracle, PeopleSoft, SAP and a wide variety of other applications, Databridge provides a standard integration solution.
Datastream 7i Buy	Datastream 7i Buy drives purchasing efficiencies and best practices through web-based procurement. This helps companies complete the business automation process and address the highly specific needs of purchasing industrial parts and services. By utilizing Datastream 7i Buy for procurement, you can plan work, track parts usage, manage stock levels, and replenish stock via the Internet.
Datastream 7i Mobile	Datastream 7i Mobile is a robust, mobile version of Datastream 7i that functions with or without network connectivity. This enables workers to roam between connected and disconnected environments without having to worry about losing application performance. It also means they can access, capture, and manage information directly from the job site, resulting in higher productivity and more effective decision-making.
Datastream 7i Barcoding	Datastream 7i Barcoding allows you to design and print labels for assets, providing increased mobility and system functionality. Labeling assets streamlines the tracking and relocating of assets, warranty activation and updating, work registration, and other functions. Companies can also assign a barcode to employees to enable them to log their actions quickly, label standard jobs to provide quick access to job activities, or label spare-parts bins for more accurate and efficient storeroom management.

Datastream 7i Advanced Reporting	Datastream 7i includes pre-defined reports, but many organizations require the ability to build customer reports. Datastream 7i Advanced Reporting provides that ability. It is a completely Web-based enterprise reporting solution that helps you maximize the data gathered by Datastream 7i. Datastream 7i Advanced Reporting is a complete solution, combining the power of Datastream 7i with the flexibility of Cognos ReportNet. Datastream has partnered with Cognos to integrate this award-winning enterprise reporting solution and provide you the ability to create fully-customized reports that best meet specific asset management needs.
Fleet	The fleet module includes Vehicle Maintenance Reporting System (VMRS) codes and additional custom fields that are tailored to fleet management. Focusing on the transportation industry's greatest opportunities for productivity and cost-per-mile savings, the fleet module enables transportation companies to process warranty claims, manage tires and fuel, and improve vehicle performance through preventive maintenance efficiently. In addition, the fleet module includes the capability to track fleet vehicle issues, returns, and assignments so that usage, maintenance labor, and parts cost can be billed to customers.
Vehicle Maintenance Reporting System (VMRS)™ Compliance	Datastream 7i fully supports the American Trucking Association's Vehicle Maintenance Reporting System (VMRS). With optional VMRS, all Code Key values are included in the Datastream 7i database. These values can be easily associated with work orders, preventive maintenance schedules, vehicle records, and repair records.
Electronic Records and Signatures	<p>Datastream 7i allows you to create electronic records, or "snapshots," of events that occur in the database as well as require a signature for the event. A snapshot preserves the entire record, including all related information from other database tables, to provide historical information related to the progress of your operation. Datastream 7i also provides the ability to print and export snapshots to external formats such as Adobe Acrobat Portable Document Format (.PDF).</p> <p>Through PM version control and audit capability, you can track insertions, updates, or deletions of every attribute for almost every Datastream 7i table as well as all comments per entity. You can view all audited records and then purge audited information when that information is no longer needed. You can also print a list of audited records as well as a list of records that have been changed through the back end.</p>

# CALIBRATION MANAGEMENT

The Datastream 7i calibration management module maintains calibration data to ensure the accuracy of your equipment. The calibration management module coordinates the asset management module with the work management module. Create and edit calibration information in the asset management module and then create calibration work orders and enter the actual calibration data in the Work Management module.

Datastream 7i enables you to define calibration data by equipment and equipment category. After defining the equipment test point data, create PMs to enable you to generate regularly scheduled jobs for equipment requiring calibration. You can also create regular calibration work orders as necessary.

The calibration management module also includes a number of reports related to calibration data and analysis.

The screenshots illustrate the calibration management workflow in Datastream 7i. The top-left window shows the 'Asset PG' calibration details form, which includes fields for Instrument Type (Standard applied to), Test Point UOM (64), Device Tolerance (10 - 2), Alert Tolerance (15), Precision (2), and P&ID Drawing. The middle window displays a table of test points for 'Asset PG' with columns for Set, Sequence, Test point, Test Point UOM, Output, Output UOM, Device Tol. From, and Device Tol. To. The bottom-right window shows the 'Work Order: 10001' calibration details form, which includes fields for Calibration Status (Incomplete), Precision (2), Alert Tolerance (15), S.O.P., Increment (2), Last Calibrated, Effective Date, and Calibration Interval. It also features a table of test point details and 'As Found'/'As Left' comparison fields.

Set	Sequence	Test point	Test Point UOM	Output	Output UOM	Device Tol. From	Device Tol. To
*	0	12	64			10	
*	1	18	64			10	
*	2	22	64			10	
*	3	15	64				
*	4	8	64				

Sequence	Test Point	Test Point UOM	AF Standard	AF Standard UOM	AF Output	AF Output UOM
0	12	64	12	64		
1	18	64	18	64		

# REQUESTOR

Requestor allows companies to easily increase the number of users submitting work requests and purchase requests without significantly increasing their financial investment. With Requestor, companies can authorize employees to enter and approve work requests and enter and view the status of purchase requests over the Web. Requestor effectively extends basic Datastream 7i functionality from room-to-room or site-to-site and lowers the total cost of ownership.

Requestor is sold only as a supplemental set of seats in conjunction with the purchase of Datastream 7i. Requestor allows users to:

- Log in via Datastream 7i accounts and security
- View the status of work requests and purchase requests
- Enter work requests and purchase requests

Requestor is available for both Datastream 7i and Datastream 7i Extended. The images displayed below represent Requestor for Datastream 7i Extended.

The image displays two screenshots of the Requestor web application interface. The left screenshot shows the 'View Work Requests' page, and the right screenshot shows the 'View Requisitions' page.

**View Work Requests**

Dataspys: My Work Requests    Record: 1 of 5    --No Filter--

Work Request	Description	Status	Eq
10008	Cabinet door has broken hinge	Work request	OF
10009	Truck 222 New Tires	Work request	T2
10010	Paint wall outside water tower	Work request	A3
10011	Fix oil leak on line 4	Released	LIT
10012	Replace Track on Line 4	Released	LIT

**View Requisitions**

Dataspys: My Requisitions    Record: 1 of 12    --No Filter--

Requisition	Description	Status	Requested By	Preferred Approver	Store Room
10089956	Parts for Heater Repair	Submitted	Rudy Ruettiger	Randy Quaid	Gvilleship-0
10089955	New HVAC for Greenville	Submitted	James Simpson	Rudy Ruettiger	Gvilleship-0
10089954	New Lights in HR	Submitted	James Simpson	Rudy Ruettiger	Gville-HR
10089945	New Carpeting in Admin	Submitted	James Simpson	Rudy Ruettiger	Gville-ADM
10089952	Heater Filament Parts	Closed	Rudy Ruettiger	Terrel Davis	Arvaship
10089951	Air Condenser Overhaul	Rejected	Rudy Ruettiger	Rupert Murdoch	Pickens-wa
10089950	Replace Line 2 in Pickens	Closed	Rudy Ruettiger	Mike Shanahan	Pickens-me
10089946	Phone Line Cut on West Lawn	Rejected	Delta O'neal	Rudy Ruettiger	Holly-wood
10089945	New Flooring	Rejected	Delta O'neal	Rudy Ruettiger	Pickens-me
10089944	Repair of Piping Structure	Submitted	James Simpson	Rudy Ruettiger	Pickens-me
10089942	Broken Condenser	Submitted	Trent Difer	Rudy Ruettiger	Pickens-Ma
10089941	New Cold Fusion Server Machine	Rejected	Paul Angell	Rudy Ruettiger	Pickens-Ma

# GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

Geographical Information Systems are important to companies with equipment spread over a large area such as local governments/schools, oil and gas companies, utilities, etc. Geographical Information Systems are widely used to show equipment spatially via maps. These maps provide a better understanding of the location of the equipment, directions to the equipment, work history of the equipment, and the surrounding area of the equipment in question. Integrate Datastream 7i Extended with Environmental Systems Research Institute's (ESRI) Geographical Information Systems package so that you have the advantages of a Geographical Information System paired with those of Datastream 7i Extended.

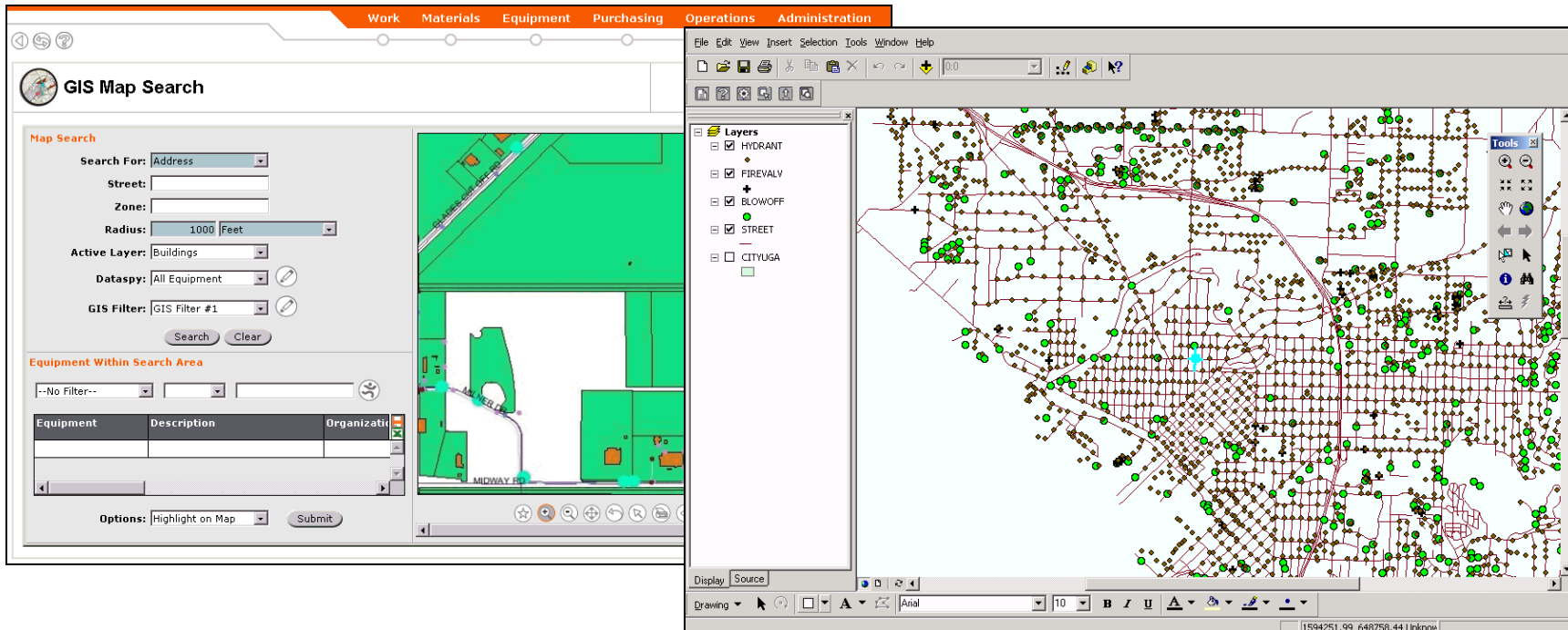
With Datastream 7i Extended's GIS module maintenance and operations personnel can:

- Locate equipment on a map
- Print maps with work orders
- View work orders geographically via a map
- View Datastream 7i Analytics data for a piece of equipment based on its geographic location
- Schedule work orders based on geographic location
- Create work routes for equipment based on geographic location

With Datastream 7i Extended's GIS module GIS personnel can:

- Link map features with Datastream 7i equipment
- Create maps featuring work orders
- View maps featuring work order history
- Synchronize maps with Datastream 7i data

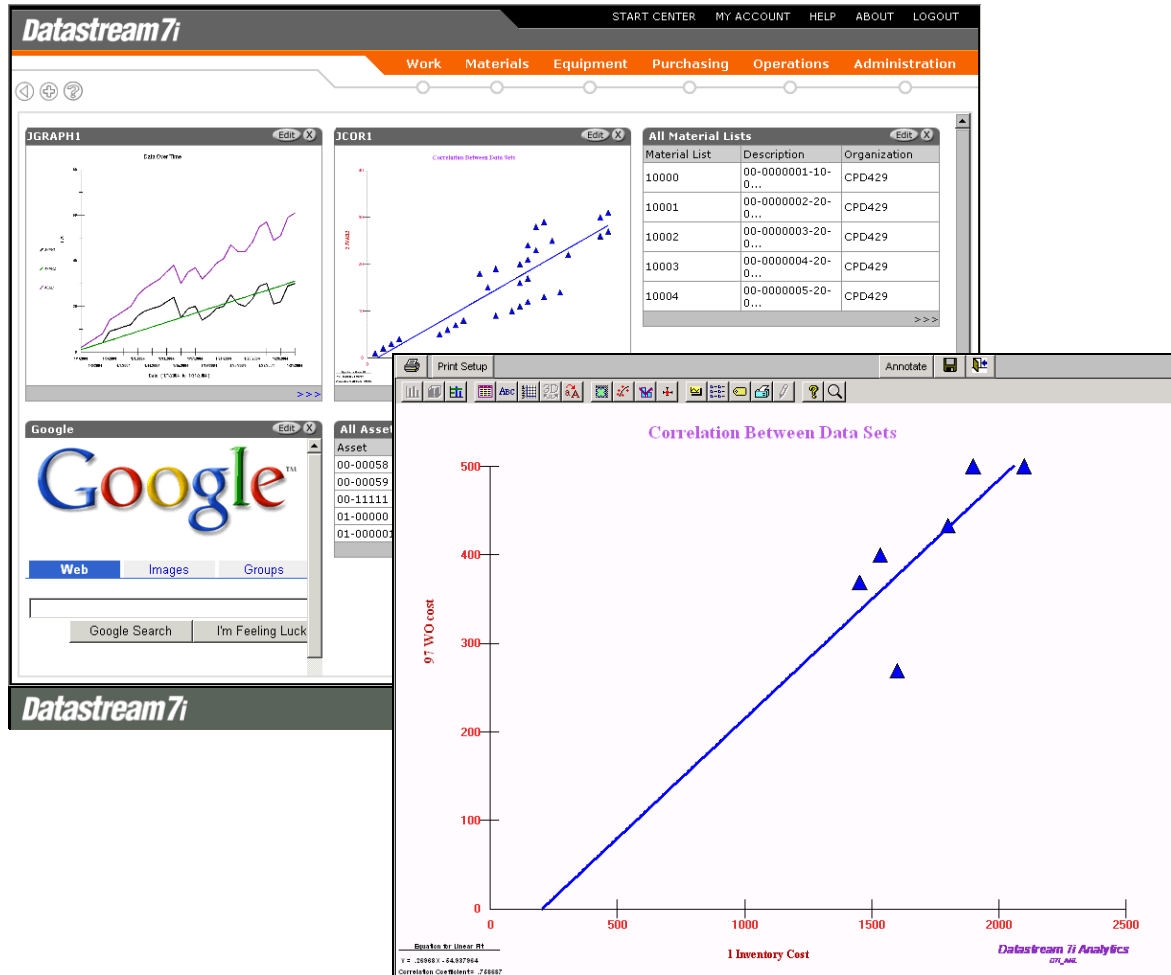
You can pre-map asset attributes and assign an information owner in Datastream 7i or ESRI. When the systems are synchronized, they initiate data flows to update the associated information fields. This greatly reduces the time required to enter new equipment and to maintain accurate information for assets in the two separate systems. The GIS system can also analyze geo-spatial data against tabular equipment work data provided by Datastream 7i. This means that you can enter both GIS and Datastream 7i search criteria on a single screen and execute the search to disclose a list of equipment and highlight the equipment on the associated GIS map. For example, you insert a query about all PM work orders scheduled for equipment in a specified area for a six month period. Datastream 7i displays the resulting list of equipment and work orders and shows the affected equipment on the standard GIS map display. The system can also store the query results as a new layer in GIS so that the query results are available for GIS analysis. This means that you could choose to highlight a map with different colors based on the GIS the equipment with 1-5, 6-10, and >11 work orders awaiting action.



# DATASTREAM 7i ANALYTICS

Datastream 7i Analytics is a strategic data management module designed to provide key analytical capabilities using data collected in Datastream 7i transactions. Representing a key component of Datastream's Asset Performance Management offering, it provides in-depth, flexible reporting and graphing capabilities to help users analyze key metrics, forecast performance issues, and take preventive measures for optimum performance. With Datastream 7i Analytics you can:

- Synchronize data with Datastream 7i
- Create user-defined variables that fit your operation
- Specify date range for targeted analysis and forecasting



# DATA WAREHOUSE

The data warehouse is a set of summary tables embedded within the Datastream 7i Extended database used for extracting report information for Datastream 7i Analytics. The data warehouse enables you to combine databases across your entire enterprise.

An Extract, Transform, and Load (ETL) process extracts the reporting data from the Datastream 7i production tables and loads it into the data warehouse based on parameters set during configuration. The ETL process includes data marts, two of which are a stores daily snapshot (SDS) and a parts daily snapshot (PDS). The SDS data mart captures daily summaries of the value of your inventory by store, organization, and part class. The PDS data mart enables you to capture daily summaries of the value of your inventory by part by selecting to save inventory history at the part level.

The data warehouse also includes administration functions that enable you to specify and save parameters for running data loads and data purges, and also enables you to view log messages and errors that are recorded during the execution of data warehouse process.

The image displays two screenshots of the Data Warehouse administration interface. The left screenshot shows the 'Data Warehouse Run Parameters' window, which includes a navigation bar with tabs for Work, Materials, Equipment, Purchasing, Operations, and Administration. Below the navigation bar, there are several controls: 'Execute Load Procedure' (checked), 'Load Type' (Incremental), 'Load from Date' (08/01/2004), 'Purge Old Data' (unchecked), and 'Purge to Date' (empty).

The right screenshot shows the 'Data Warehouse Run Log 10000' window, also with the same navigation bar. It features a 'List View' tab and a table with the following columns: Sequence Number, Operation, Step, Target Object, Start Time, End Time, Elapsed Time, and Records. The table contains 12 rows of data, all starting on 09/22/2004 at 00:55. The 'Records' column shows 0 for most rows, except for row 12, which shows 1237 records.

Sequence Number	Operation	Step	Target Object	Start Time	End Time	Elapsed Time	Records
1	Inicialización	Obtener parámetros de ejecución	NO SE APLICA	09/22/2004 00:55	09/22/2004 00:55	00:00:00	
2	Carga incremental	Cargar dimensiones	RSDWDATES	09/22/2004 00:55	09/22/2004 00:55	00:00:08	
3	Carga incremental	Cargar dimensiones	RSDWORGANIZATIONS	09/22/2004 00:55	09/22/2004 00:55	00:00:04	
4	Carga incremental	Cargar dimensiones	RSDWMRCS	09/22/2004 00:55	09/22/2004 00:55	00:00:01	
5	Carga incremental	Cargar dimensiones	RSDWPERSONNEL	09/22/2004 00:55	09/22/2004 00:55	00:00:00	
6	Carga incremental	Cargar dimensiones	RSDWTRADES	09/22/2004 00:55	09/22/2004 00:55	00:00:00	
7	Carga incremental	Cargar dimensiones	RSDWOCCUPATIONTYPES	09/22/2004 00:55	09/22/2004 00:55	00:00:00	
8	Carga incremental	Cargar dimensiones	RSDWOBJECTS	09/22/2004 00:55	09/22/2004 00:55	00:00:02	
9	Carga incremental	Cargar dimensiones	RSDWORKORDERS	09/22/2004 00:55	09/22/2004 00:55	00:00:01	
10	Carga incremental	Cargar dimensiones	RSDWSERVICEREQUESTS	09/22/2004 00:55	09/22/2004 00:55	00:00:00	
11	Carga incremental	Cargar dimensiones	RSDWPURCHASEORDERS	09/22/2004 00:55	09/22/2004 00:55	00:00:00	
12	Carga incremental	Cargar dimensiones	RSDWSTORES	09/22/2004 00:55	09/22/2004 00:55	00:00:00	1237



# DATABRIDGE

Databridge enables you to integrate Datastream 7i with other software systems that you use to manage your business processes, such as Oracle Financials, SAP, or PeopleSoft. The Databridge system architecture provides the framework through which you exchange, update, and share information between Datastream 7i and external software systems.

The Databridge system architecture consists of event tables, drivers, import/export triggers, code, XML (Extensible Markup Language) documents, and Integration Server. To implement Databridge, you must synchronize your shared data and map the data between the XML documents, Datastream 7i, and external software applications. XML is a programming language used to identify structures in a document. For Databridge, a document is a logical grouping of data that is sent to and from Datastream 7i to facilitate data exchanging between systems.

Databridge uses XML as part of the integration process. For outbound transactions, Databridge converts Datastream 7i data into XML documents. The reverse is true for inbound transactions; Databridge converts the XML document into Datastream 7i data.

Before implementing Databridge, you must consider the business transactions you want to integrate and understand the integration concepts for synchronizing data between Datastream 7i and external software applications.

After completing the Databridge installation and synchronizing the data between the systems you wish to integrate, you can easily administer and manage Databridge functions such as: setting up the system; setting up scheduled processes; viewing XML documents (e.g., requisitions and purchase orders); tracking and viewing status of integration transactions; managing scheduled tasks; modifying and viewing system status; managing drivers; viewing events; creating journal entries; defining general ledger processes; and defining general ledger references.

The image displays three overlapping screenshots of the Databridge web application interface, each with a navigation bar at the top containing 'Work', 'Materials', 'Equipment', 'Purchasing', 'Operations', and 'Administration'.

- GL References:** Shows a 'Reference Details' form with fields for 'GL Process Definition' (PC0123), 'Status' (NEW), 'Scheduling Group Value' (TRL\_RTYPE), 'Journal Entry Category' (112), and 'Journal Entry Source' (8977).
- Databridge Setup:** Shows configuration fields for 'System Setup' (Partner ID, Delivery Maximum Retries), 'Partner Contact' (First Name: Henry, Last Name: Gonzalez), and 'Delivery Method to Partner Server' (Protocol: http, Partner Host: 10.1.210.000, Partner Port: 5555).
- Databridge System Status:** Shows the status of the Databridge Server (Active as of 4-17-2003) and Partner Server (Active as of 4-17-2003). It also displays statistics: Number of Transactions Processed (153), Number of Transactions Pending (6), and Number of Transactions in Error (23). A 'Refresh Status' button is visible at the bottom.

# DATASTREAM 7i BUY

Datastream's e-commerce solution, Datastream 7i Buy, enables you to search for and order indirect supplies electronically from within Datastream 7i. Datastream 7i Buy uses the Internet Explorer Web browser to display catalog information in Datastream 7i.

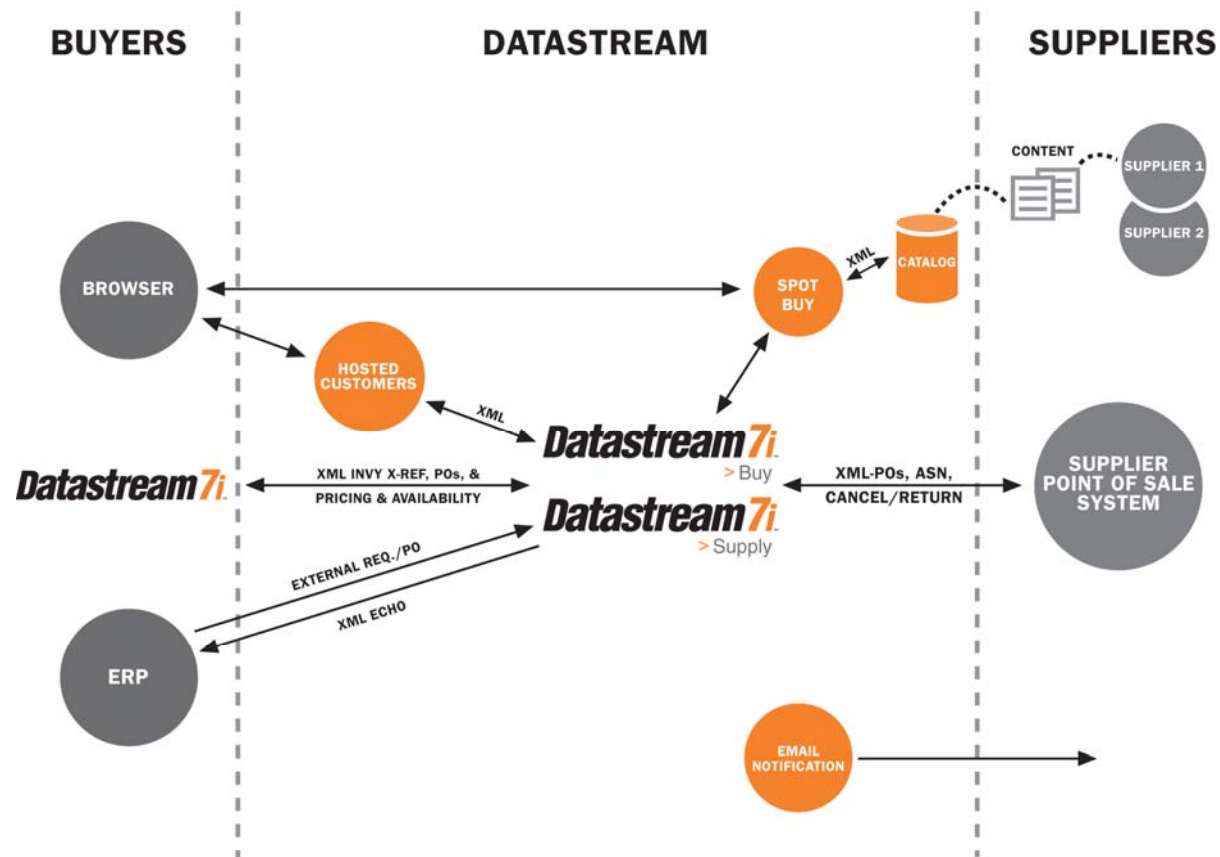
Datastream 7i Buy consists of a series of components that communicate through an XML-based messaging interface.

The client component is the Datastream software product. Within Datastream 7i, you can search a remote catalog of indirect supplies for a select group of suppliers and send electronic orders to these suppliers. Other features include automatic import of items into purchasing, client-specific pricing (if desired), and the ability to track your electronic orders. All client communications travel through Datastream 7i Buy's central server (broker), which processes the requests and returns the appropriate information.

The broker component acts as a communication center. The broker receives and, for quality assurance purposes, logs all client requests and orders, processes the requests, and then directs the requests to appropriate supplier catalogs. Finally, after receiving information from the supplier, the broker transmits the information back to the client.

Suppliers provide access to their catalogs and to the electronic ordering system. The interface allows arbitrary searches for items and returns item information such as descriptions, supplier part number, prices, and lead times.

The following diagram illustrates the flow of communication between Datastream 7i Buy and Datastream 7i:

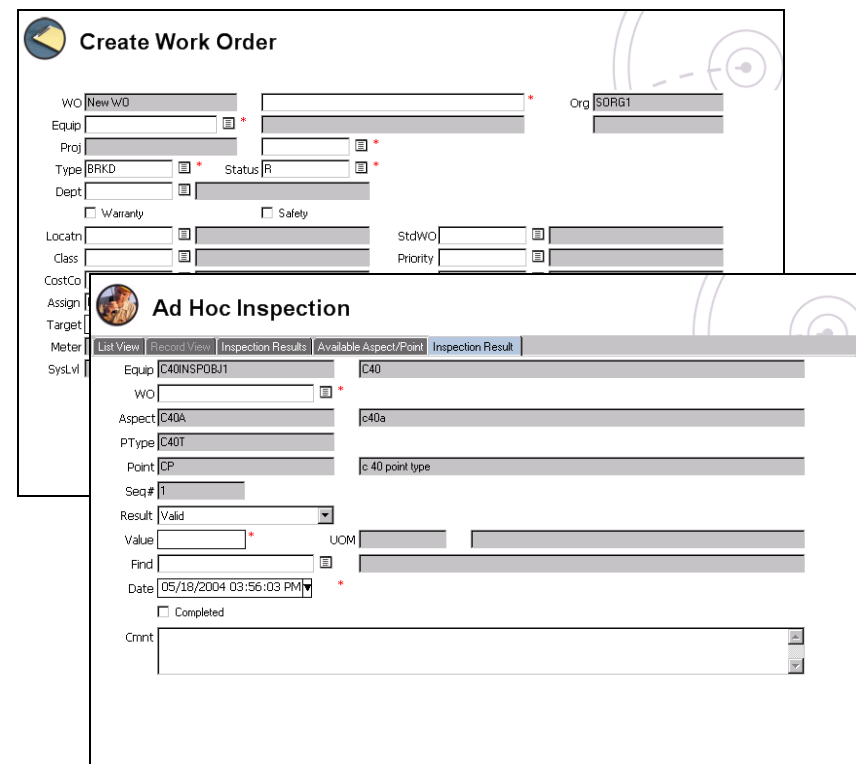
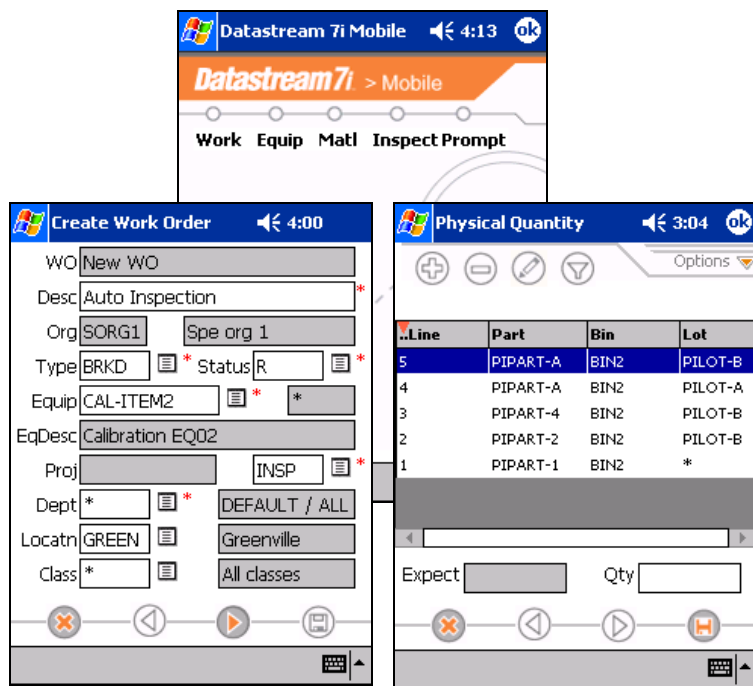


# DATASTREAM 7i MOBILE

Datastream 7i Mobile extends the functionality of Datastream 7i to handheld devices, laptop computers, and tablet PCs by providing remote access to the Datastream 7i database. Datastream 7i Mobile is available for handheld PCs (HPCs) operating on one-quarter VGA display systems. Datastream 7i Mobile Full VGA is available for laptop computers and tablet PCs operating on full-VGA graphics display systems.

Using a mobile device, such as an HPC or tablet PC, you can view, add, update, and delete information and update the Datastream 7i database without having to work from a fixed terminal. Datastream 7i Mobile enables your maintenance personnel to remain in the field or on the floor while maintaining their access to the information and Datastream 7i functionality that they need to do their jobs on their mobile device. This technology provides them greater mobility and allows them to spend more time maintaining equipment, looking for problems, performing maintenance, and verifying performance rather than entering information into the system at a workstation.

Datastream 7i Mobile utilizes Web Services as the integration platform by which data can easily be transferred to and from a handheld device and stored within the Datastream 7i database. Datastream 7i Mobile runs on the Pocket 2002/2003 operating system and supports both Oracle 9i and SQL Server 2000 databases. Datastream 7i Mobile includes new features like the ability to view attachments such as CAD drawings, MSDS safety sheets, and maps.



## DATASTREAM 7i MOBILE FEATURES

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Work Orders	<p>Datastream 7i Mobile enables users to download work orders from the Datastream 7i database to review and record performance data in the handheld device. Work orders are assigned to an individual user, which enables users to download a personalized listing of jobs to complete. Datastream 7i Mobile work functionality enables you to perform the following actions:</p> <ul style="list-style-type: none"><li>▪ Create work requests and work orders</li><li>▪ View work order information, including task instructions, labor hours, parts, permits, attachments, and equipment details</li><li>▪ Add or update work order activities and activity hours</li><li>▪ Add, view, issue, and/or return work order activity required parts</li><li>▪ Enter comments and custom fields</li><li>▪ Update and close work orders</li><li>▪ Start, stop, and reset work order activities</li><li>▪ Distribute work based on assigning it at the header or activity level</li></ul>
Equipment	<p>Datastream 7i Mobile users can enter meter values into the system for all assigned equipment. Additionally, Datastream 7i Mobile automatically provides the appropriate unit of measure and meter name for each reading, ensuring accurate data collection and increased efficiency.</p> <p>Datastream 7i Mobile equipment functionality enables you to perform the following actions:</p> <ul style="list-style-type: none"><li>▪ Enter meter readings</li><li>▪ Replace meters</li><li>▪ View equipment information, including details, custom fields, comments, event history, meter reading history, and attachments</li></ul>
Materials	<p>Datastream 7i Mobile interacts with barcode reading devices to facilitate the collection of current physical inventory information. Using a barcode reader, users can easily collect and record asset management data, including location, installation dates, warranty activation, and status changes. Using barcodes increases the accuracy of data recording and increases productivity and efficiency by enabling you to scan barcodes rather than manually entering data. Barcode scanning also creates more consistent data entry when recording inventory counts, which improves system searches, asset performance analysis, and data overviews.</p> <p>Datastream 7i Mobile materials functionality enables you to perform the following actions:</p> <ul style="list-style-type: none"><li>▪ Enter and view stocktake physical quantities</li><li>▪ Issue and return parts</li></ul>
Inspections	<p>Datastream 7i Mobile also increases the efficiency of collecting inspection results for route or ad-hoc based inspections. Datastream 7i Mobile automatically provides a list of inspection points to follow to ensure a thorough examination of equipment, processes, plans, and/or other items needing review. After completing an inspection, users may enter inspection results into Datastream 7i Mobile's inspection result entry lines, which can be associated with existing work orders or added manually.</p> <p>Additionally, Datastream 7i Mobile receives a set of operational instructions for data entry from the Datastream 7i database, as well as information relating to selected operations, such as an inspection. Datastream 7i Mobile also updates the entire system each time a user transmits entered or modified data to the Datastream 7i database. The process of transmitting data from the handheld device to the Datastream 7i database triggers a return transmission to Datastream 7i Mobile that updates previously loaded data, creating a true two-way, near real-time information exchange between Datastream 7i and Datastream 7i Mobile.</p>

Datastream 7i Mobile inspections functionality enables you to perform the following actions:

- Add equipment for inspection
- Enter and update ad hoc and route inspection results

Advanced

Datastream 7i Mobile provides a great deal of advanced functionality to aid users in compliance to regulatory constraints, requirements for specific data entry points, visibility of attachments, and a great deal of customer-based configuration. These features include:

- 21 CFR 11 (electronic signature)—Companies can conduct further validation on their business process as it impacts the execution of work orders as changes to work order status captures the required, and regulated, electronic signature.
- Calibrations Data Entry—Datastream 7i Mobile serves as the input for calibration details for work orders with calibration elements.
- Data Collection Prompts—Datastream 7i Mobile provides the ability for user-created prompts to be ported out to handheld devices. These user-created prompts provide a more thorough solution for organizations requiring a mobile solution to fit their data collection needs in business processes.
- Screen Configuration—Datastream 7i Mobile administrators can configure the layout of certain detail screens, “hide” certain fields, and specify default values.
- Synchronization Profile—Datastream 7i Mobile provides the ability to define what data is to be synchronized to the handheld device. This flexibility provides the ability to control the costs of operating in a wide area wireless environment.
- Attachment Viewing—This connected luxury provides users with the ability to view attachments to equipment or work orders that contain graphical detail regarding the task at hand.

# DATASTREAM 7i BARCODING

Datastream 7i Barcoding enables you to configure and print barcode labels to identify almost any item, from equipment to employee badges. Datastream 7i Barcoding also enables you to greatly reduce data entry time and improve the accuracy of many processes and activities associated with asset management by using barcode labels to identify items. You can then use barcode scanners to collect and transfer item information to and from Datastream 7i to better manage, identify, and track information within your organization. Barcode labeling can greatly increase the speed, accuracy, and efficiency of issues and returns, and dramatically reduce the number of part shortages.

With Datastream 7i Barcoding you can:

- Configure the data to display on barcode labels
- Specify the page layout of barcode labels by selecting the unit of measure and label format
- Establish server and proxy settings to use when downloading data
- Design labels by specifying the label details, such as the fonts to use, the fields to display, and the barcode height
- Preview barcode labels before printing them

The image displays two screenshots of the Datastream 7i Barcoding software interface, showing the configuration and design stages.

**Left Screenshot (Configure Tab):**

- Label Configuration: New2004092310385058
- Data Source: Equipment
- Unit of Measure:  English (inch),  Metric (cm)
- Print Type:  Single Sheet,  Continuous
- Page Margin: Top: 0.5, Left: 0.94
- Spacing: Horiz: 0, Vert: 0
- Label Dimension: Height: 1, Width: 2.63
- Number: Across: 1, Down: 4
- Label Format list: Custom, 2160 Mini - Address, 2162 Mini - Address, 2163 Mini - Shipping, 2180 Mini - File Folder, 2181 Mini - File Folder, 2186 Mini - Diskette, 2660 Mini - Address, 2662 Mini - Address, 2663 Mini - Shipping, 5095 - Name Tag, 5096 - Diskette, 5097 - Diskette, 5160 - Address, 5161 - Address, 5162 - Address, 5163 - Shipping, 5164 - Shipping, 5165 - Full Sheet, 5196 - Diskette, 5197 - Diskette, 5198 - Audio Tape, 5199F - Video Face, 5199S - Video Spine

**Right Screenshot (Label Designer Tab):**

- Label Configuration: New2004092310385058
- Data Source: Equipment
- Label/Text Property: Symbology: Code 128, Barcode Height: 0.3, Text Font: Arial, Number of Duplicates: 0
- Label Dimension: Height: 1, Width: 2.63
- Barcode Position: X: 1.2, Y: 0.35
- Fields Table:

Field	Barcode	Text	Value	Font Size
Equipment Number	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8
Organization	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8
Location	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8

Field Properties: Select Location >> Print Field,  Display Barcode,  Display Value,  Display Label, Font Size: 8

Preview: Equipment Number Location: XX123456789012, Organization: XX123456789012

# REPORTS

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## Administration

Report Name	Description
Audit Log	Prints a list of audited records
List of Dual Conversions	Prints a list of conversions to Euro currency
Document List	Prints a list of document attachments
List of Equipment Details	Prints a list of equipment details
Function List	Prints a list of Datastream 7i functions
List of Electronic Records	Prints a list of electronic record snapshots
Electronic Records	Prints an electronic record
List of Tampered Records	Prints a list of records that have been changed through the back end
List of Datastream 7i Codes	Prints a list of user codes
User Per Group	Prints a list of users in each user group
Access Violations	Prints a list of unsuccessful login attempts

## Assets

Report Name	Description
List of Classes	Displays a list of classes
List of Equipment	Displays a list of equipment
Work Order Cost Summary	Includes itemized and total cost information (labor, materials, services, and tool costs) by equipment for open and closed work orders
Meter History	Displays meter information and meter readings by piece of equipment
List of Equipment Details	Prints a list of equipment details
List of Categories Per Class	Prints a list of equipment categories per class
Equipment Depreciation Report	Prints a report of the total equipment depreciation expense and book value through the end date
Equipment Hierarchies	Prints a list of equipment hierarchies
Equipment History	Prints a report detailing the date and reason work was performed on an equipment or equipment type

<b>Report Name</b>	<b>Description</b>
Table of Equipment With Custom Attributes	Prints a table of the technical details of equipment
Cost of Work Orders Per Equipment	Prints a list of work order costs per equipment
Work order costing by WO type, cost code, or department	Prints a list of work order cost, by work order type, cost code, or department
Work Order Costing by Equipment	Prints a list of work order costs by equipment
Work Order Costing of Equipment Per Location	Prints a list of equipment cost per location
Fault Trend Analysis	Prints a report showing how often a piece of equipment failed and why
Mean Time Between Failures Per Equipment	Prints a report showing why a piece of equipment needed work and the time lag between failures

## Materials

<b>Report Name</b>	<b>Description</b>
Goods Received Note	Displays a goods received note
Goods Return Note	Displays for each supplier, the supplier address and the list of goods returned. Displays all the approved return transactions grouped by the supplier and sorted by the order number
Stock Issues History by Part	Displays part, stock values grouped by store, part sorted by store, part, and part organization
List of Outstanding Requisitions Items	Includes outstanding line items for requisitions where <b>Status</b> is not <b>Cancelled</b>
Print Pick Ticket	Displays a list of parts required to perform work on work orders or equipment. The system only prints approved pick tickets.
List of Stock	Displays stock quantity, reorder level, reserved quantity, and quantity on order grouped by store and sorted by store, part, and part organization
Print Purchase Requisition	Select the originator, requisition type, requisition number, status and/or buyer to print a specific requisition. Otherwise, the report includes all requisitions. Includes option to convert totals to Euro currency.
Stock Transactions	Lists all approved inventory transactions for a specified period of time
Stock Value Listing by Part Type	Provides an overview listing all parts in a store and all bin locations for that part. The report is grouped primarily by store and secondarily by part. The report has two display modes for listing either stock parts or for repair parts. Quantities and values are calculated for each location and totaled for each part.
Physical Inventory Discrepancy	Displays stocktake, lines, parts, and quantities grouped by store, part, and part organization
Print Physical Inventory List	Displays a list of parts with stocktake quantities
Consignment Activity	Prints a list of consignment activity



<b>Report Name</b>	<b>Description</b>
List of Dual Conversions	Prints a Euro conversion history report
Parts Currently Reserved/Allocated	Prints a list of parts currently reserved or allocated
Print Goods Return Note	Prints a goods return note
Average Monthly Usage Analysis	Prints a report showing average monthly usage
Monthly Usage Trend Report	Prints a report showing monthly usage trends
Stock Issues History by Part	Prints a report showing stock issues history—by part
Stock Issues History by Part Type	Prints a report showing stock issues history—by part type
List of Returns	Prints a report showing comprehensive information, per purchase order, about approved returns to suppliers
Repairable Spares Assignment Details	Prints a report showing all parts in bins assigned to external repair requisition lines or internal repair events

## Purchasing

<b>Report</b>	<b>Description</b>
Print Purchase Order	Includes a purchase order header and both part and service line items. Includes an option to show dual currency totals. By default, the report selects the current revision of purchase orders with a status of “Ready for printing” or “Approved” and those that do not have “Printed” selected. Print purchase orders that do not have a status of “Ready for Printing” or “Approved,” or those that already have “Printed” selected by specifying a purchase order number on the parameter form.
List of Contract Classes	Prints a list of different contract classes
List of Contract Clauses	Prints a list of available contract clauses
List of Existing Contracts	Prints an overview of current contracts
List of Purchases Under Contract	Prints a list of (open) purchase order lines
Print Contract	Prints a copy of the contract
List of Debit Discounts	Prints a list of the debit discounts to expect
Request Discount Based On Purchases	Prints a request to a supplier for the discount based on the purchase orders in the contract period
List of Invoices	Prints a report showing supplier invoice information
Purchase Orders Awaiting Invoicing	Prints a list of purchase orders for goods that have been received but not yet invoiced. The report includes the related requisition and purchase order numbers, the part or service ordered, the outstanding quantity, the unit of measure for the items, and the order price per unit for goods or services.
Purchase History Per Item/Supplier	Prints a report with all parts and work orders associated with a given supplier
Purchase History Per Order/Supplier	Prints a report with all purchase orders for a given supplier

<b>Report</b>	<b>Description</b>
Approved Orders Awaiting Delivery	Prints a list of purchase orders that have been issued to suppliers but for which goods have not yet been received. The report includes the supplier, the date the purchase order was created, the related requisition, and the purchase order numbers.
List of Quotations	Prints a list of quotations
Print Purchase Order Revision	Prints a copy of a certain revision number of a purchase order
Request For Quotation	Prints quotations to send to suppliers
Purchase Requisition	Prints a copy of a purchase requisition
List Of Blanket Orders	Prints a list of approved blanket orders and blanket order lines

## Calibration Management

<b>Report Name</b>	<b>Description</b>
Calibration Analysis	Displays a list of completed calibration work orders by department that have resulted in the specified minimum number of consecutive or non-consecutive calibration statuses of pass or fail
Calibration Due Report	Displays a list of all open calibration work orders containing test points for which the planned completion date is less than or equal to the <b>Due By</b> date.
Calibration Equipment	Displays a list of all equipment that requires calibration and has been configured for calibration. The report includes all equipment that is defined as a loop, instrument, or standard if any one of these requires calibration. Standards are either parts tracked by asset or parts tracked by lot. The system only prints part standards that are tracked by asset, because you do not have to associate a piece of equipment with parts tracked by lot.
Calibration History	Displays a list of calibration work order results for calibration work orders for which the completion date falls within the specified start and end date. The results shown for each work order will be related to test points having the greatest deviation from the standard.
Calibration Record Report	Displays a calibration record that includes calibration header information, such as the work order and equipment. The body of the report is printed in a tabular format that includes the loop instruments, test points, standards used, potential standards, work order comments and custom fields, and any equipment custom fields for the calibration work order.
Calibration Reverse Traceability	Displays a list of calibration work orders, including all test points on the work order, for which a selected standard has been used to calibrate a piece of equipment. The completion date of the work orders must fall within the specified start and end date.

## Data Collection

<b>Report Name</b>	<b>Description</b>
Equipment Audit Lines	Prints equipment audit line information for the batch and line status you specified
Equipment Catalog	Prints equipment information and barcodes for equipment
Profile Catalog	Prints profile information and barcodes for profiles

## Work

<b>Report Name</b>	<b>Description</b>
Print Work Order	Includes work order details, task listing, diagnostics, repair details, and related equipment information
Permits for Work Orders	Displays copies of work permits for a particular event
Daily Hours Worked Per Employee	Displays what type of work (normal, overtime, and holiday) a specific employee performed over a given period and the number of hours
Labor Required Per Day or Trade	Displays a list of labor required for a particular day
List of All PM Schedules	Displays a listing of preventive maintenance schedules
Long Term Work Order List	Displays a list of work orders due over a longer period of time—six months, for example
Qualification Expiration Report	Displays a list of qualification expirations and expiration dates for an employee based on the date range entered. Select to generate the report for a single employee or a group of employees.
Qualification Requirement Report	Displays a list of qualifications that are required for an employee to perform a trade or task for which they are not currently qualified. Select to generate the report for a single trade or task, or for a group of trades or tasks.
Scheduled Activities	Displays information for scheduled activities
Shift Employee	Displays a list of employees on a shift grouped by department
List of Permit Issues	Displays which permits were issued for what events
Exceptions Created for a Group of Employees	Creates availability exception records for groups of employees
Short Term Work Order List (Activities)	Prints a list of work orders due within the near future, displaying their activities, starting and ending dates, and estimated labor hours
List of Work Orders Bypassed due to Nesting	Prints a list of PM work orders that were not performed because they were superseded by another PM work order
Work Order Cost List	Prints the costs of a work order
Actual Labor Hours Against Estimated	Prints a list displaying how much time was spent, per trade, on work during a specified time period versus the original estimate
Hours Needed For Task	Prints a listing of work order tasks along with their estimated hours

<b>Report Name</b>	<b>Description</b>
Short Term Work Order List (WOs)	Displays a list of work orders due within a short period of time—a week, for example
Material Requirements Analysis	Prints a list of stock materials needed to complete a specific work order
Equipment Availability Request	Prints a report requesting availability of equipment for maintenance
Out of Tolerance PM Report	Prints details of all PMs where the Complete by Date is less than the system date (i.e., out of permitted tolerance)
List of All PM Schedules	Prints a list of periodic preventive maintenance schedules
List of Structure of Problem Codes	Prints a list displaying the parent/child relationship of system problem codes
Schedule Activities	Lists information for a scheduled activity
Scheduled/Actual Detail	Lists details of scheduled activities
Scheduled Attainment Report	Prints a summary of scheduled activities
VMRS Activities	Prints a list displaying activity details for VMRS work orders

## **Asset Management Services**

<b>Report Name</b>	<b>Description</b>
Print Customer Contract	Prints the customer contract
Print Invoice	Prints invoices

## **Budgeting**

<b>Report Name</b>	<b>Description</b>
Budget Analysis	Prints an overview of the budgets
Budget Consistency Control	Tracks budget inconsistencies; prints data for all structure levels
Detail Budget Positions	Prints and displays totals for each budget detail
List of Budget Codes	Prints and displays the existing budget structures; prints a complete list of budget codes in the system
List of Budgets (Lower Level)	Prints budget details for a particular budget
List of Budgets (Top Level)	Prints an overview of the actual amounts for a budget period

## Inspections

<b>Report Name</b>	<b>Description</b>
Inspection Route Report	Displays the inspection sequences, aspects, conditions, and methods to examine during a specific route inspection. Use this report to register the results of an inspection for later data entry.
List of Inspection Results	Displays the results of an inspection for a particular piece of equipment
List of Points to be Inspected	Displays the inspection sequences, aspects, conditions, and methods to examine during a specific route inspection. Use this report to register the results of an inspection for later data entry.
Status of Inspection Points	Displays a list of inspection points and their statuses
Approval of Inspection	Compiles and prints a report, including any comments associated with the inspection results and projecting when an equipment will exceed safety values, the next inspection date, the last two readings, and all valid measurements taken since the most recent discontinuity
Approval of Inspection Points	Compiles and prints a report, including any comments associated with the inspection results and projecting when an equipment will exceed safety values, the next inspection date, the last two readings, and all valid measurements taken since the most recent discontinuity
Create Result-Based Route	Generates a new inspection route based on inspection findings. This report extracts only those inspection points that have reached their specific limits. When executed, Datastream 7i automatically generates a new inspection route.

## Projects

<b>Report Name</b>	<b>Description</b>
List of Work Orders For Project	Prints a list of work orders created for a project; information includes the project number, subsequent work order numbers, status, target dates, hours worked to date, and remaining hours
Orders For Project	Prints a summarized list of purchase orders created to procure materials and external services; information includes the project number, subsequent purchase order numbers, ordered and due dates, the total PO value, and the to-date received amount
Project Cost Breakdown	Prints an overview of cost per project per budget
Project Cost Summary	Prints a summary of estimated, planned, ordered, actual, and total cost per project

# OVERVIEW OF DATASTREAM 7i ARCHITECTURE

