Peregrine

AssetCenter Concepts and Implementation

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AssetCenter

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Concepts and Implementation

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1 Introduction

CHAPTER

What is in this guide?

This guide presents portfolio management in general, as well how AssetCenter can help you implement it in your organization.

Who is this guide for?

This guide is for anyone needing an overall idea of what AssetCenter does: IS manager, Organizational manager, Project director and managers (setup, training, project planning/tracking, Quality Assurance, etc.), Integration project managers, administrators, general users. On the other hand, those users who will work with only one specific part of AssetCenter can refer directly to the documentation relating to their specific module.

How do I use this guide?

This guide serves as a general introduction to AssetCenter, and, as such, we recommend that you read at least the general information contained here before going on to the detailed guides, which cover more specific and in-depth information.

CHAPTER 2 Portfolio management with AssetCenter

Portfolio and life cycle

What is the portfolio?

The portfolio - your portfolio - is the reason for AssetCenter's existance. Typically, it is made up of physical and logical means that your company must manage in order to run its business.

The portfolio can be made up of various items:

- Land or land-based assets: grounds, access, roads, etc.
- Building assets: buildings, heating/ air conditioner, elevators, cables, security equipment, access control, etc.
- Professional equipment: heavy equipment, machines, robots, tools, specialized material, etc.
- Vehicles: delivery trucks, company cars, etc.
- IT assets: computers, peripheral devices, network equipment, autoswitches, telephones, software, application server providers (ASP), rented lines, databases, etc.

- Supplies: office supplies, accessories, bulk goods, raw materials, etc.
- Etc.

The portfolio managed by AssetCenter is composed of whatever it is that your company needs to manage. It is this need that defines what goes into that portfolio.

- AssetCenter manages not only the items that your company possess, but also those that it rents. It is often this area of management that is the most important.
- The external items used by your company obviously require a minimum of tracking. This, in and of itself, could justify the use of AssetCenter. Yet, if both the renter and the borrower companies used AssetCenter, the productivity and the transparence of their relationship would become more evident and thus benefit both parties.
- AssetCenter also provides the ability to track assets that your company doesn't necessarily use, but for which it provides services (support, maintenance, financing, etc;).

The life cycle

The life cycle of portfolio items is the set of events that occur from the moment they enter into the portfolio until the moment retire from it. The life cycle can be extremely different depending on the portfolio item:

- The item's unit value can be very modest, or on the contrary, it can be quite considerable, necessitating specific decision-making (investments, financing, replacements, etc.) and management (identification, depreciation, etc.) procedures.
- The duration of the life itself depends on the nature of the item: It can last just days, or it can span several decades.
- Each item encounters different events in its life cycle: After the initial request and then acquisition (purchase, rental, etc.), the items can be implemented, used, in need of specific supports, in need of repairs, modified, revised, revitalized, moved, inventoried, etc. until it is

finally resold, returned to the renter or leaser, given away or consumed.

- Certain practices linked to the portfolio necessitate a specific kind of management: leasing, warranty, maintenance, etc.

This complex web of various management needs can all be efficiently managed with AssetCenter. The combination of a powerful data model and unique functionalities makes this the perfect appliction to help you run your business.

Contributions to portfolio management

The life cycle of portfolio items comes into contact with nearly all aspects of your company. Lacking the dedicated functionalities, the classic management system will only track assets from one seemingly unrelated task to another, never making the connection that they are, in fact, inter-related. This method forces you to work with very limited information. To compensate, you need to perform costly inventories, reconciliations or data-entries in order to take account of what you really possess.

AssetCenter, on the other hand, offers a coherent approach to the life cycle, where all the information relating to each portfolio item, no matter what its origin, is organized in a rational and easily accessible manner.

Operational management

AssetCenter puts operational management back in the center ring where it belongs: A rational management of daily operations provides the most reliable and abundant source of information on your portfolio, covering the entire spectrum of portfolio-item life cycles.

- Requests: Managing requests involves numerous actors in a complex process: Expressing a need, justifying that need and gaining approval, configuring the solution, seeking technical validation, searching for that item in stock or in the portfolio, looking for substitutions, etc.

Lacking any real portfolio management, these many and varied steps are usually processed as separate entities and without any coherence: One step is processed by an IT application; another by paper; yet another using a spreadsheet, in a notebook, buried under a pile of papers, by verbal agreement, etc. How can one guarantee the global pertinence of decision-making? Furthermore, how can one analyze or improve this process?

AssetCenter provides the solution by covering the entire set of request procedures in a coherent manner, and taking account of each company's specific organization. AssetCenter notably enables you to organize your approval procedures, technical qualifications, stock searching and equipment substitutions.

- Provisions: When a request cannot be satisfied using available items, the company must seek provisions. Just like request management, operational management of provisions is made up of several elementary functions: searching through company catalogs, configuring solutions, obtaining estimates, making financial choices (purchase/lease), gaining budgetary validations, placing an order, receiving the order, getting a receipt.

  AssetCenter covers the entire span of these functions, and it enables you to more specifically account for the technical or financial notions of coherence that are not accounted for in the more classic provision chains.
- Storage: Besides its classic stock management functions, (reservations, inventory, replenishment of inventory, etc.), AssetCenter comes with powerful portfolio-management functions such as individual or collective asset tagging, automated inventories, precise cost allocations, detailed estimates, etc.
- Moves, adds and changes: Portfolio management cannot truly exist unless you take into account the multitude of daily actions that constantly impact portfolio items: removals from and returns to stock; relocations; borrowings; technical rehabilitations; assemblies; etc. With AssetCenter, these actions can not only be tracked, but can be coordinated, generating a double benefit: increased efficiency, and an accurate vision of your portfolio from one day to the next.

This ability to track would not be possible, however, without the productivity and the means to customize the AssetCenter user interface: Where an ERP or a maintenance-management software application would normally generate information-acquisition costs too high to permit you to track your thousands of daily changes, AssetCenter offers an efficient and economical solution.

- Retirements: AssetCenter also enables you to manage an item's retirement from the portfolio, whether its a normal retirement (end of natural life-cycle, resale, end of lease, etc.) or exceptional (accidental destruction, loss, theft, etc.). Retirement must be managed with particular care for those assets that are leased or leased-to-buy: Signaling the automatic renewal of the contract then returning the assets in the conditions and at the time established by the contract, and not without having recovered the asset from the company (equipment extensions, IT data, etc.).

Using this comprehensive set of AssetCenter functions, you can implement cooperative procedures that are both transparent and rigorous, while increasing the scope, the quality and the availability of information.

Improving security

Since it contains the description of your company's infrastructure, AssetCenter naturally subscribes to an active policy of security.

- Preservation of infrastructure: The purpose of AssetCenter's wide range of functions is to maintain a current view of your company's infrastructures using the appropriate tags and labels, inventories, assignments and clear responsibilities. This goes hand in hand with the organized and daily asset tracking procedures and rigorous, preventative maintenance (controls, saves, etc.). It thus becomes easy to avoid negligence, prevent malevolence, and rapidly detect any anomaly.
- Access control: Whether you use keys or badges to control the access of people, of user accounts or even of mail boxes, AssetCenter enables you to track and control the access to any location or company data.

- Respecting security procedures: From the organization of preventative actions (fire extinguishers, automatic saves, etc.) to the application of predefined emergency procedures, AssetCenter enables you to implement and control your company's security strategies. Its capacity to integrate with different alarm and help systems make AssetCenter the ideal foundation of an active system of security management.

Legal management

The legal aspects linked to infrastructure are important and cannot be separated from the operational management of the portfolio:

- Acquisition contracts: Whether you have master leases or leases-to-buy, AssetCenter covers the entire set of tracking functionalities (description, domain of application, fees, renewals, terminations, etc.) and control functionalities (taxes, rent calculations, etc.).
- License contracts: Along with using numerous software products comes the responsibility of managing their complex license contracts. With so many, it is impossible to keep track of all of them manually. Thanks to its specific functions and its integration with the market's top, automatic inventory tools, AssetCenter enables you to track these contracts and make sure they are adhered to in your company.
- Service contracts: AssetCenter also enables you to track service contracts (maintenance, ASP, cleaning, etc.), and to calculate the associated fees. You thus have the capability of verifying the quality of services you receive by accounting for the parameters of the contract in AssetCenter: calendars, locations, types of requests and incidents, etc.
- Regulatory provisions: Several regulatory provisions (security, pollution, etc.) are linked to a company's infrastructures. Their application and control are largely facilitated by using AssetCenter.

Accounting management

Accounting obligations generate large inventory and book-keeping efforts that, when applied to a real portfolio management system, become both less expensive and more advantageous.

- Fixed assets: AssetCenter is the natural compliment to any accounting tool in the effort to manage a company's fixed assets: The portfolio is well-defined, including the assets that are difficult to inventory (computers, cell phones, mobile equipment, constructions, renovations, etc.). Moreover, asset-management information provides precious data to help you correct asset estimations (accelerated depreciation, revaluation) whenever this is necessary. With AssetCente, you can guarantee more accurate accounts for the company itself and for its third parties.
- Taxes: Most countries collect taxes based on fixed assets. When a company lacks a sufficient method of asset tracking, their assets often appear in the books years after they have already been destroyed, lost or retired. This generates unjustified tax expenses for the company that it could have avoided with more accurate tracking.
- Insurance contracts are another case where the exactitude of the inventory and the estimation is essential: A company that can justify in detail the assets that it insures is in a better position to negotiate good conditions from its insurer, while avoiding the possibility of paying for imaginary assets.

Management and project management control

Portfolio management culminates in the functions relating to planning and control.

- Cost accounting: AssetCenter's wide-ranging and powerful cost-accounting functions enable you not only to generate chargebacks (or internal billing), but also to generate inter-company billing and even client billing. Expense or chargeback lines can be generated either regularly (contract fees, monthly consumptions, etc.) or after an event (purchase, helpdesk, work order, reassignment,

etc.). They can also take into account as many parameters as necessary (contract perimeters, uniform prices, work order duration, contractor salaries, locations, detachable pieces, markups, etc.).

AssetCenter's capability to track and precisely allocate even the smallest expense enables you determine your total cost of ownership (TCO) for each portfolio item. This takes into account not only the cost of acquisition, but all the costs associated with that asset: training, maintenance, insurance, updates, support, relocation, etc.

- Budget accounting: AssetCenter contains powerful, multi-company, budget-tracking functions that enable you to establish and track detailed budgets. Each budget can have its own expense-category nomenclature and timelines (semesters, trimesters, etc.). AssetCenter can thus adapt to the needs of each type of activity to which the budget center applies.
- Supplier management: The richness of information (volumes, prices, quality of service, estimates, etc.) and the analytic possibilities that portfolio management allows puts AssetCenter users in an advantageous position when they need to negotiate discounts, retroactive discounts or the terms of contracts that associate it with the suppliers. The added value gained from this kind of situation itself justifies the implementation of portfolio management.
- Proactive portfolio management: Thanks to its functional depth, AssetCenter enables you to go further into the analysis and control of the costs linked to your portfolio, which you wouldn't normally be able to do with traditional accounting tools.

  Strategic decisions such as whether to purchase or lease-to-purchase an item, whether to externalize or internalize helpdesk support, whether to restore or replace equipment, what kind of technical certification is needed for a product, what kind of relations to keep with a supplier, what level of billing/chargebacks to set for services, etc. can now be made with complete knowledge of all aspects of the situation.

  In the same light, implementing budgets becomes considerably easier: Nothing is more simple that evaluating the costs it would require to update your computer portfolio with Windows XP, for example, by

taking into account all the elements: cost of license, hardware extensions, machine replacements, software updates, training, outside contracting, time consumed, etc.

IT-system portfolio management

AssetCenter easily adapts to the IT system of any company:

Application domain

The domain covered by AssetCenter in the IT system depends on the type of activity and the willingness of the company.

- Infrastructure management: AssetCenter is first and foremost used for general infrastructure management of company or a part there within (IT portfolio management, for example). AssetCenter thus fits into the framework of a company's IT system by complimenting the administrative system and production management, which are sometimes based on an ERP type software (SAP, etc.).

  Certain functions, such as tracking budgets, placing orders or recording invoices, can be processed either in AssetCenter or in other parts of your company's IT system.
- Provision chain: Some companies choose to use AssetCenter's procurement cycle with the catalog in order to offer users a powerful solution to managing all their purchases: equipments, consumables, services and raw materials.
- Production management: In sectors where the activity is based on implementing or maintaining the infrastructures available to their clients (buildings, facilities management, outsourcing general services, etc.), AssetCenter covers the entirety of production and billing management.

Level of management

Different portfolio items don't always require the same attention, and a company's management efforts must be concentrated on the most important gains. We need to take into account the:

- Size of the portfolio: The more assets you have, the more accurate your management must be. Thus, a computer consulting agency can focus its energy on managing its IT portfolio, while a taxi company focuses on its fleet of cars, and a real-estate agency on its properties.
- Complexity of assets: The management of complex and evolving configurations (IT hardware, autoswitches, etc.) necessitates in particular the appropriate solutions, starting with its purchase and following it through inventories and evolutions. The more this complexity thickens, the more the functionalities of AssetCenter become important.
- Complexity of management: For example, even when they are relatively few, assets that are concerned by leasing and lease-to-buy contracts might require computerized portfolio management. This is to avoid costly errors (loss, non-authorized relocation, automatic prolonging of contract, etc.) and also to be able to manage the often complex bills sent out by financing companies. The more these procedures become complex, the more AssetCenter portfolio management becomes indispensable.

Supplementary solutions

AssetCenter is tightly integrated with a vast set of solutions sold by Peregrine Systems and which are considered benchmark products in their respective domains:

- Specialized portfolio management: telecommunications, vehicles, general services, etc.
- Inventory: bar codes, computer, network.
- System administration: remote control, etc.
- Knowledge base
- Helpdesk management

- Application integration
- Framework
- Etc.

Your sales engineer can further explain these supplementary offers in detail.

Integration

AssetCenter contains powerful tools of integration with the rest of the information system: import, export, workflow, APIs and Peregrine integration products. Plus, packaged solutions already exist with certain principal products on the market today (SAP, etc.).

Depending on the domain covered by AssetCenter, the other applications in place and the willingness of the company, the points of integration could vary, including (from the most general to the most specific):

- Referential objects (cost centers, supplies, employees, etc.)
- Bills to pay
- Fixed assets
- Cost accounting
- Invoices
- Budgets
- Orders
- Receptions
- Production management
- Etc.

It might be profitable to have an AssetCenter consultant come in and help you establish and prioritize the necessary integration points, then implement them.

CHAPTER 3

Functional architecture

This section describes the general principles that build the foundation of AssetCenter.

Organization of the application

AssetCenter modules

AssetCenter is composed of several modules that each share a common referential base, which describes the portfolio in a detailed manner. This referential base has:

- Numerous nomenclatures describing the assets: companies, organizational hierarchy, locations, stocks, etc.
- Portfolio item models, organized hierarchically and characterized by their nature (equipment, computer, software installation, consumable, etc.).

- The portfolio items themselves, which are linked to and based upon models, plus information about their assignments and interconnections.
- Operational information: requests, reservations, absences, etc.

The AssetCenter modules also share powerful, generic functions:

- AQL, a meta-SQL that is independent of the database engine and which uses a data dictionary. This is much more powerful than the DDL in an effort to offer you a compact and powerful syntax.
- Control and restrictions of data access.
- Data import from an ODBC or text source.
- Wizards that lead the user step-by-step through a task.
- Customizable scripts: integrity rules, default values, automated actions, integrity checks, triggers, etc.
- Workflows that enable you to automate the management process.
- History of changes, which can be defined for each field and according to the criteria defined by the client.
- Management of attached documents.
- Etc.

Different AssetCenter modules are constructed on this common base, certain of them sharing common functions:

- Portfolio: This module has a complete set of functions dedicated to managing information technology: software management, interconnection management, IT and telephony data of electronic equipment, integration with the optional remote control module, constitution and calendars of work groups, work order management, continuous new broadcasts, etc. The Portfolio module fits within the framework of Peregrine solutions concerning IT management: machine inventories, network topology, remote control, telecommunication management, etc.
- Procurement: Starting with requests, this module enables you to manage estimates, orders, receptions, returns and supplier invoices. It is based on a complete catalog management system (multi-supplier/multi-client catalogs, dates of validity, client

certification, configuration management, requests and standard orders, conversion units, discount calculations, alternatives, options, etc.), as well as integration functions with external catalogs (classifications, etc.).

Moreover, it includes a complete stock management system, with the automatic reservation of received items for the requester and the re-ording of stock items according to customizable stock levels.

- Contracts: This module enables you to manage any kind of contract: leasing, maintenance, insurance, services (ASP, etc.) master leases, etc. It also enables you to describe the contracts (parties concerned, purpose, conditions, domain of application (assets and employees), etc.) and to attach events to it (work orders, helpdesk tickets, orders, etc.), as well as costs. Alarms help you to manage contract renewals and terminations.

  The specific functions linked to managing certain types of contracts are also present: managing contract extensions, repurchases and returns for lease-to-buy contracts, managing user accounts for online services (ASP), etc.

  Finally, aligned with the financials module, this module enables you to calculate fees according to the most varied of formulas. These calculations can be used either by the supplier to generate its invoice or by the client to keep track of the invoices it receives.
- Financials: This module helps manage expense lines along with their monetary conversions and taxes. It enables you to calculate fixed assets and includes complete systems of chargebacks and budget tracking.

  The Financials module is also necessary as a compliment to the Contract module for calculating contract fees.
- Cable and Circuit: This very specialized module enables you to closely manage (all the way to the pair level if necessary) the cables and circuits of a building, its patches and connections to assets.

  Moreover, it enables you to manage teams (groups) and their calendars, as well as work orders and information broadcasts.

- Administration: This last module regroups the AssetCenter setup tools.

External tools

Powerful external tools help to complete AssetCenter's many modules.

- AmSrv drives a certain number of background tasks that are indispensable to AssetCenter's functioning: workflows, synchronizations, complex calculations, data purges, external-interface administrations (cf infra Connect.It!), automatic disconnections, diverse alarms, etc. Furthermore, AmSrv controls the AssetCenter license.
- AmDba enables you to manage the databases and how they are set up: connection, initialization, tests, addition of tables, fields and links in the database, customization of screens, migration, etc. Its high-performance, graphical interface, which lets you easily browse the database structure (tables, fields, default values, integrity rules, etc.) makes it an effective tool for learning and analysis.

Integration tools

AssetCenter contains a wide range of tools that facilitate its integration with external applications:

- Connect-It enables you to easily create integration scenarios between AssetCenter and a wide variety of other external applications, then test, implement and administer them.
- A simple and high-performing export tool whose user-friendly interface enables you to construct queries and produce text files, as well as SQL views in the database. You can then use them to produce control panels and reports.
- APIs that enable you to integrate AssetCenter with external applications that are written in different languages while respecting the security and integrity rules in place.

- An ODBC driver that lets you access AssetCenter databases in read-only mode via layers of security of the integrity and presentation, and totally independent of the database.
- DDE support, as client and server

Custom management

AssetCenter offers great flexibility in the modes of management that you can apply to portfolio items. The user thus has a homogenous view of the portfolio and an appropriate level of management in each case. Not only can you efficiently cover the life cycle of heavy equipment that can last several decades, but you can effectively track a batch of office chairs or even a simple box of printer paper.

One portfolio, many modes of management

AssetCenter expands the view of its repository through the integrated use of three management modes:

- Individualized management: This management mode enables close tracking of important, individually identified assets. It closely resembles the way in which assets were managed in previous versions of AssetCenter.
- Batch-based management: This mode offers a middle-ground between individualized management and undifferentiated management. In this management mode, items are batched together and share a common identity: They are undifferentiated within the batch but differentiated against items outside of the batch, similar or not.
- Undifferentiated management: This mode extends the classic management of supplies. In this mode, only the model is known; objects are fully interchangeable.

For management reasons (operations, maintenance, security, accounting, etc.) certain kinds of objects require a minimum level of tracking (at least batch-based or individualized). It is possible to specify this need at the nature level of the model corresponding to the product.

At the other end of the spectrum, AssetCenter also enables the management of not only discrete objects, but fractional quantities of loose or bulk material.

Implementation

The implementation of these three management modes is based on two relational tables:

- A Portfolio items table, which records items of a given model in a given context (location, user, cost center, etc.).
- An Assets table, which contains the detailed information on individualized assets or batches. Records in this table have unique asset tags.

The physical organization of the information depends on the management mode:

- An individual asset is represented by two linked records in both of these tables. The quantity given in the portfolio-item record is the unit.
- A batch is represented by a record in the Assets table, shared by one or more portfolio-item records, which contain information on the quantities.
- Undifferentiated items are represented by "asset orphan" records in the Repository items table.

The user interface presents an integrated view of both tables, thus abstracting the underlying complexity.

Applications

This model enables batch-based management, in which several physical items share the same identification. This functionality considerably extends the areas in which AssetCenter can be applied, by covering:

- The wide-ranging assets of small value in the enterprise, which have been too costly to manage until now: telephones, furniture, etc.

- Perishable supplies, for which the batch can be assigned an expiration date.
- Supplies requiring technical tracking.
- Supplies requiring LIFO or FIFO stock-management calculations.
- Etc.

The most interesting point of this new design is that the different management modes in AssetCenter are now fully integrated: Assets, batches and supplies can now be presented in a consistent view, either as the assignment of resources, or as records of assets, when the information is available. In particular, there is no difference in the implementation of a batch of a single item and that of an individualized asset.

This integration makes it possible to adopt different management modes for identical assets if necessary. For example, a computer keyboard whose serial number is stipulated by a leasing agreement can be tracked individually, whereas other computer keyboards are undifferentiated.

This consistency has also made it possible to regroup multiple tables in a unified structure:

- Assets
- Accessories
- Software installations
- Consumables and consumptions

It is thus possible to inventory and represent the entire portfolio, from heavy plant equipment to simple reams of paper, with an appropriate level of management for each item. An asset can even be consistently described with a set of items making up its configuration (add-ons, software installations, etc.).

This "genericness" also frees customers from having to make difficult and irreversible decisions when creating repository items: The only difference between assets, batches and supplies is in the way they are identified and tracked. Only the minimum management level required by the model needs to be specified. It is even possible to make these requirements later on. For example, when certain technological assets drop in price, a less strict tracking method can be adopted: The generic

tracking model makes it possible to switch between the three management modes with ease.

The user interface

AssetCenter offers its users a unique interface enabling them unequivocal flexibility and productivity, and which can be adapted to each user's specialization and level of training.

The navigation bar

Besides the menus, AssetCenter provides a customizable navigation bar. It enables you to hierarchically organize functions (access to screens, data, wizards, reports, etc.) that are the most useful to you.

The native interface

AssetCenter's native, graphical interface enables users to navigate fluidly and coherently through the data in the database to which they have access. It's based on a database browser that contains two non-exclusive and synchronized modes: list and detail.

The list mode enables you to display the records of a relational table and offers the user great flexibility in configuring parameters:

- Display tables in list or tree structure.
- Choice of displayed fields, no matter what the current table columns, the table columns linked to the current table or the calculated fields.
- Sort on several columns.
- Filtering records by field value or on whatever other condition expressed in AQL.
- Multiselection
- Etc.

All these modifications can be made on the fly, according to your needs. Plus, a function that lets you progressively load tables enables you to browse through these tables irrespective of their size.

This detail mode enables you to display and update the data in one or many records.

The functionalities and presentation of the detail modes are the same for any table (selection lists, zoom to linked objects, etc.). This consistency minimizes the need to resituate yourself in each table.

Just like with the list mode, the user disposes of numerous options to change how a detail is displayed: order of the tabs, navigation possibilities, etc.

Wizards

The AssetCenter wizards are the natural compliment to the EasyView interface. They enable you to define the sequence of screens that guide the user through a given task. They are especially useful when:

- You want to group into one, single user transaction a complex task that will simultaneously impact several database objects.
- You want to help users perform an obscure task.
- You want to limit users to only one method of performing a task.

Parameterization

The parameterization of AssetCenter is remarkable in that it can be implemented and tested from the application itself: A simple right-click on a field, for example, enables you to immediately make it mandatory. You can then test its behavior and the result before saving the changes, which then applies to all users. Only certain, important modifications require that you use the external AmDba tool.

Thanks to its immense parameterization possibilities, AssetCenter also adapts itself to the specific needs of any company.

Customizing the database

The external AmDba tool enables you to add new tables to AssetCenter.

AssetCenter also lets you add supplementary fields and links to the tables in its database, which can then be used by the entire application: specific detail pages, list views, reports, APIs, etc. You can add three types of supplementary fields:

- Columns, which can be added to relational tables using AmDba. You can modify its properties: type, length, functional type (monetary, percentage, duration, etc.), destination (for foreign keys), etc.
- Feature fields, which can be defined. They offer a lighter solution, which is particulary recommended for the implementation of columns containing little information. These fields and links are implemented in rows (one record per value) in the dedicated tables. Contrary to columns, they can be instantly added to a database while it's being used. Yet, it has a few functional limitations (no monetary conversion, certain limits on links, etc.).
- Calculated fields, which are defined as the result of an AQL formula or a Basic calculation program. They are not stored in the database and can only be used in read-only.

Customizing the user interface

AmDba enables you to customize the AssetCenter native interface by defining detail screens that are different for each user that customizes them. Using Basic scripts, you can automatically display or mask tabs, fields and command buttons according to the context, thus improving the efficiency and interactiveness of the obtained interface.

Furthermore, the wizards can also be configured in AssetCenter based on a powerful model using a declarative structure and a Basic code.

Finally, a certain number of existing external solutions (Get-It, APIs, etc.) enable you to define screens and Web platforms from outside of the application.

Integrity rules

One of most original features of AssetCenter is that it offers to define integrity rules at the level of the fields, records and links. There are

numerous types of rules, and each one offers a unique ability to customize. We can define:

- A relevance rule, which can make a field or link relevant (and thus usable and displayable) or not, according to the context. For example, the user link is not relevant for an asset in stock.
- Constraints on fields, which makes a field or a link mandatory. For example, a link towards a stock can be made mandatory for an asset in stock.
- Constraints on the record, which imposes a consistency rule for a record's validity. For example, an asset retired from the portfolio can only have a "non applicable" value for its status.
- Integrity constraints between records. For example, an asset cannot be deleted as long as it has existing expense lines.
- Default values, which apply to fields and links and are used when creating or duplicating a record.
- Access-limitation rules, which make a field or a link read-only in the native interface.
- The automatic generation of histories can apply to certain fields and certain conditions. When it is triggered, the history automatically saves the date, hour and author of a modification as well as the previous value of a field or link.

All these rules can be defined easily and by taking into account the context data by using the combination of Basic scripts and AQL queries.

Keep in mind that the synchronous workflows further extend the possibilities of rule definitions and integrity automatisms.

Actions

AssetCenter's automatic actions enable you to define:

- Complex transactions that involve several records or necessitate large calculations.
- The launching of wizards.
- The automatic dispatch of e-mails.
- The generation of reports.

- The launching of external applications.
- The generation of DDE orders.

If you use AmDba, you can link actions to contextual buttons defined by the user in the native screens.

Workflows

AssetCenter contains a comprehensive workflow engine that simultaneously supports two types of functions:

- Asynchronous workflows, which can be used in particular to define complex procedures with multiple users. Users have a list of tasks to perform, which is fed by the relevant workflow activities. Users can start a wizard from this list that can be used to perform (or notify completion of) this task.
- Asynchronous workflows are executed immediately within one single database transaction.

You have unlimited possibilities when it comes to using AssetCenter's workflow engine.

- Asynchronous workflows can be used to accelerate and increase the dependability of your company's processes (e.g. the purchase-order authorization cycle).
- Synchronous workflows can be used to implement complex integrity rules. For example, you can automatically propagate the modification of the cost center's location to all its sub-locations.
- Workflows can be used to automatically generate all kinds of procedures (calculations, reporting editing, launching external applications, etc.) at regular intervals. These same workflows can inspect the database, trigger alarms, purge obsolete data, launch automatic inventories, etc.

Workflows can be triggered either by modifications (creation, update or deletion of a record) in the database, or at regular intervals.

Reports

AssetCenter includes several tools enabling you to calculate statistics and generate graphical and table reports.

- Using calculated fields, you can calculate complex statistics for any object in the database. This is done through the use of Basic scripts and SQL syntax. These fields can then be inserted into lists and details (in read-only).
- The tree-structure of a list, as well as the fact it can be configured, enables you to easily create interactive screens. You can also copy these lists manually and paste them into charts or tables of other applications.
- Wizards can be configured to regularly display graphics and statistics defined by the user.
- An internal form-generator creates simple reports in just instants. Numerous standard forms are provided with AssetCenter.
- The Crystal Reports (runtime) generator is completely integrated with AssetCenter and enables you to execute numerous, standard reports. Users possessing a Crystal Reports license can also create their own reports and execute them with AssetCenter.
- Finally, the OBDC driver provided with AssetCenter enables you to use practically all the report and table generators on the market, in particular, those using Cognos and BusinessObjects.

Security

AssetCenter's security model is one of the most extensive on the market. Each user is assigned a profile that is defined based on three points:

- User rights: They define the information to which the user has access according to the nature of that information. For example, you could assign HR managers access to employees' social security numbers but hide this information from Office managers.
- Access restrictions: They define the information to which users have access according to whom that information belongs. For example,

you could assign the users of the Colby factory access to the records of other employees on that site but not give them access to the records of users at the Swiss site. Any condition can be used to filter the information accessible to users and user groups.

- Functional rights: They define the functions that each user can perform on data. For example, only authorized personnel can place an order.

CHAPTER 4 Successfully implementing your AssetCenter project

Too many possibilities of parameterization and application domains exist to be able to truly present a universal and detailed methodology of implementing AssetCenter. Nevertheless, we have gathered a certain number of general rules that we follow in no matter what the case:

Organization

We can't insist enough on the importance of involving in the AssetCenter project all the departments and functions of your company impacted by its implementation. Here are just a few examples at the operations level:

- IT management
- General departments
- Procurement department
- Maintenance department
- Transportation department

- Etc.

And at the functional level:

- Accounting
- Management control
- Legal services
- Etc.

An project initialization meeting will help you determine the specifics of the project's organization by defining:

- The departments and employees to keep informed of the content and advancement of the project.
- The steering committee, in charge of directing the project. This group is composed of the decision makers that represent each part of the company impacted by the project. They define the general objectives of the project, its perimeter and its deadlines. Finally, they ensure that all steps are carried through.
- The project team, in charge of directing the project. This team is under the direction of the project director, who is responsible for the implementation of the project's steps: analysis, parameterization, training, migration and deployment. This person also coordinates the transversal functions necessary for the project: tracking, management, outsourcing, etc. Finally, the director reports to the steering committee on the advancement of the work and lets the committee make decisions that exceed his competence.

Implementing a structured IT application such as AssetCenter is an ambitious project, to say the least, and one where the help of seasoned experts is absolutely necessary. This is why Peregrine and its partners provide specialized and experienced consultants who can either come in at various points in the project or can stay aboard throughout the implementation of all project steps (organization, analysis, parameterization, training, etc.)

Project perimeter

You need to first define the scope of the project before you can implement it. This detail involves the collaboration of both the steering committee and the project team. You might find it useful to define several successive phases of implementation, covering an expanding scope.

Portfolio scope

The scope of the portfolio defines what kinds of assets and supplies will be inventoried and tracked: This is, after all, the fundamental question in the project of portfolio management. These different types of management methods in AssetCenter (cf. "Custom management") enable you to efficiently manage even the smallest costs in all functional domains (IT hardware, telephony, vehicles, buildings, machinery, etc.). Plus, you don't have to limit yourself on the peripheral details (lease or maintenance contracts, unit values, etc.).

Functional scope

The functional scope defines the services that you want to implement into your portfolio management. These could include:

- Modifications to the portfolio (implementations, reassignments, modifications, etc.).
- The catalog and purchases
- Cost accounting
- Budget tracking
- Lease-to-own contract management
- Maintenance management
- Billing
- Etc.

You just need to add to this list the functions that can be fulfilled by the products integrated with AssetCenter. For example:

- Automatic inventory
- Helpdesk management
- Marketplace
- Specific and additional management of certain assets: buildings, vehicles, etc.
- Etc.

In order to be complete, the functional scope must define the points of integration with other IT applications (accounting, production management, etc.).

Planning

Once the organization is in place and you have defined the project's objectives, you can finally start planning. This step must take into account all the aspects of the project, and most notably the:

- Definition of responsibilities and portfolio-management tasks.
- Analyzing: defining standard procedures, screens, reports, etc.
- Validation by users.
- Elaboration of tests.
- Parameterization: integrity rules, user profiles, screens, filters, wizards, workflows, reports, etc.
- Technical choices: operating system, database engine, etc.
- The dimensioning and installation of servers and the network.
- The organization of exploitation.
- The specification, development and installation of interfaces with the information system.
- Integration tests
- The preparation and migration of data.
- The documentation and training of users.
- The organization of support.
- The installation of client workstations.
- A possible test project.

- Its launch.
- A possible audit of utilization.
- Etc.

Without forgetting a certain number of transversal tasks:

- Training of the project team.
- Project tracking.
- Managing of outsourcing.
- Quality assurance.
- Communication
- Technical documentation
- Activity output
- Etc.

You will find it useful to divide the project into several large steps. For example:

- Initial steps (defining the project, putting together teams, etc.).
- Analysis
- Parameterization
- Integration
- Deployment

The completion of each one of these steps gives you the perfect occasion to report the project's advancement to the project team and the steering committee.

Some advice

After having read the general information, you should now keep in mind these few specific points:

Communication

It is important to mobilize all parties to the implementation effort if the project is going to work, and this usually impacts numerous

functions of your company. Communication, especially concerning future AssetCenter users, is thus a serious subject that needs to flow in both directions: The versatility and flexibility of AssetCenter, by enabling you to account for the specific needs of each user group, helps in obtaining the precious cooperation of each one.

Training the users

AssetCenter allows for various modes of functioning that can either be totally guided or extremely interactive. Depending on the profile of each user and the predefinition of the procedures that they must execute, everyone's training needs will be different.

We can also define, in the same organization, roles that are very limited and assisted (which are well adapted for occasional or little-trained users), as well as those that are very versatile and can take advantage of the power behind AssetCenter's user interface (which necessitates strong training).

Migrating data

You simply cannot ignore the importance nor the amount of work that is needed to recover the data existing in earlier systems. It isn't rare to find that this data, usually scattered among numerous applications, doesn't always comply with AssetCenter's guarantees of integrity. This thus necessitates a data audit and update, which usually take an enormous amount of time.

Furthermore, data migration itself, especially if it concerns important information needing to be quickly processed to avoid operational interruptions, must be tested with great care.

It's thus never too soon to start thinking about how to organize your project.