CA Clarity™ PPM

Functional Overview of the CA Clarity
Project and Portfolio Management System

Introduction
CA Clarity™ PPM

CA Clarity Project Portfolio Manager is an integrated suite of modules that allows your organization to seamlessly manage its services, projects, products, people and financials. It gives your executives a real-time view into their organization's investments, initiatives and resources, and empowers your managers to deliver controlled and predictable execution of projects and programs. Built on top of the core project and portfolio management functionality are solution-specific modules that support the critical processes of IT Governance, New Product Development and Enterprise Program Management.

Created in a Web services architecture, CA Clarity PPM is comprised of a set of modules, each of which is described in detail within this functional overview. The system's modular structure allows for phased implementations that can be as small as 50 users focused on project portfolio management or as extensive as 100,000 users employing all aspects of CA Clarity PPM.

CA Clarity PPM provides the visibility, control, automation and reporting to support today's most critical business processes, including ITG, NPD, RCM and EPM.

ITG
IT Governance

NPD
New Product Development

CA Clarity™ PPM

RCM
Risk and Controls Management

EPM
Enterprise Program Management

CA Clarity™ Project Portfolio Manager

Select the Right Investments with In-Depth Project Portfolio Planning and Analysis

The CA Clarity Project Portfolio Manager module gives you all the tools you need to align your project investments with your corporate goals, bringing you the highest return on the use of your resources. It provides you with the structured environment you need to establish portfolio criteria, develop plans and what-if scenarios and communicate strategic decisions to your stakeholders.

After implementing your portfolio decisions, CA Clarity Project Portfolio Manager provides you with extensive performance analysis and scorecard features to show you the true costs and benefits of your strategic projects, giving you the insight you need to continually improve investment performance and decision making.

As CA Clarity Project Portfolio Manager is an integral component of the complete CA Clarity suite, you can access performance information in real-time, as well as drill to the details and answer the really important questions: Are my resources aligned with my strategic initiatives? Are we succeeding financially? Are we actually achieving the benefits we targeted in the selection process? And, are my stakeholders completely engaged in the process?

The ability to establish sophisticated evaluation and selection criteria, create and optimize planning scenarios, communicate decisions and monitor progress in a seamless, integrated system makes CA Clarity Project Portfolio Manager your most critical tool for managing organizational investments, resource capacity, demand and commitments.

Set Up More Effective Decision Making

How do you decide whether or not to invest your resources in a new idea? On what do you base your decision to launch a new product? If your company is like most others, decisions are often made based on subjective criteria, squeaky wheels and force of will. The result: your investment decisions often may not align with your overall business strategy, stretching your already scarce resources and taking time and effort away from investments you should be focusing on. Using CA Clarity Project Portfolio Manager, you can put into place an exacting set of structured processes that drive the best decisions for allocating your limited resources.

Four Phases to Portfolio Success

In order to successfully implement effective processes for managing your portfolio, you need a set of tools for:

- Project portfolio modeling
- Taking inventory of investments
- Planning and analysis
- Performance assessment

CA Clarity Project Portfolio Manager provides you with the robust features, content and configurability you need to execute on all four phases of portfolio management.

Model the Portfolio with Your Criteria

Since all downstream decisions rely on how well your potential investments rank against specific criteria, the first thing you need to do is define the criteria that best applies to your organization. You'll get the metrics you need to do this right out-of-the box, including true benefit, and true cost capture, resource capacity, demand, alignment to goal rating, milestone schedules and risk profiling.

The extensive configuration capabilities in CA Clarity Studio allow you to adapt the standard evaluation criteria in this module or easily add your own. With point-and-click configuration, it's easy to create, prioritize and evaluate investments against your own metrics, such as return-on-investment and break-even analyses, cost avoidance or revenue enhancement goals, quality statistics, business value assessments and many more.

Easily Create the Project Portfolio Inventory

The second phase of project portfolio management consists of taking inventory of the current and proposed investments and evaluating them against the selected criteria. CA Clarity Project Portfolio Manager allows you to get up and running quickly, providing you with an easy-to-use interface for entering existing projects, programs and more.

You can enter items through the user interface or easily import them in batch or real time from external systems using the CA Clarity XML Open Gateway. Either way, you immediately experience the benefits of portfolio management. With a detailed inventory, you will have significant benefits from this step alone: having identified the de facto project portfolio, gross misalignments, "accidental" investments and sacred cows become immediately apparent.

Within CA Clarity Project Portfolio Manager, you can create multiple portfolios, each consisting of different sets of investments. You can also group portfolios together in parent-child relationships, allowing individual departments or companies to maintain their own portfolios while providing overall visibility at the executive level. The interlinked portfolios provide support for top-down planning and bottom-up reporting.

Develop a Project Portfolio Plan Through Analysis and What-If Scenarios

CA Clarity Project Portfolio Manager provides you with a complete set of tools and reports for creating the budgets, analyses and what-if scenario planning that comprise the third phase of project portfolio management.

With clear strategic goals and budget allocations, your portfolio managers can evaluate potential and ongoing investments by sorting and prioritizing them against key portfolio criteria. They can look at the results, look at the available budget and simply choose the highest ranked investments you can afford. Ad hoc portfolio changes can be modeled with the scenario builder. Investments can be selected, rescheduled, postponed or put on hold—and the impact on the cost/benefit, alignment and balance of the portfolio will be analyzed in the context of these changes. The final, optimized portfolio can turn out to be any combination of required investments, high-scoring new initiatives and subjective, ad-hoc selections that provide a good benefit/risk balance.

Optimize on the Efficient Frontier

When your investment choices grow, you need a systematic method of determining just how many investments are optimal for your portfolio. CA Clarity Project Portfolio Manager removes the guesswork from creating a series of investment scenarios. Simply specify a set of constraints, including your resource role capacity, and the system automatically evaluates all potential combinations to find the Efficient Frontier, an optimized set of portfolio choices that will provide you with the highest return for the lowest cost. The Efficient Frontier provides you with a starting point for making decisions about your investment portfolio.

From the Efficient Frontier display, you can drill into any selected scenario to review the associated investments, as well as compare sets of investments side-by-side for faster decision making. Constraints such as budget, resource capacity and time, as well as dependencies between projects, are taken into account to ensure that the proposed sets of portfolio scenarios are not only optimal but also achievable.
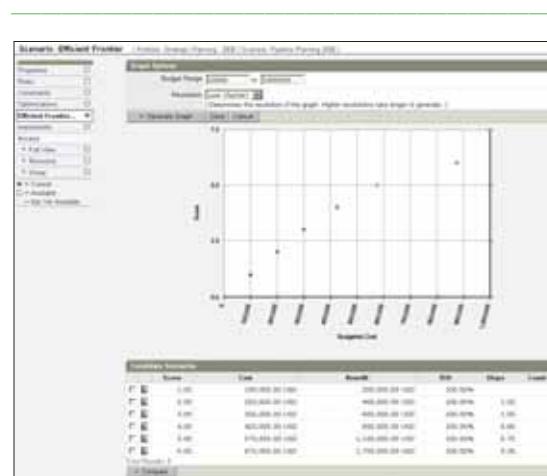
Communicate, Execute and Assess

Once you choose your optimal investment portfolio, it's time to implement it. This includes communicating your decisions to department, resource and project managers so detailed plans can be put into place.

This fourth phase of portfolio management is conceptually simple, but it is often one of the most complicated steps to execute. Ongoing efforts that are slated for cancellation should be scaled down methodically, while your newly funded investments need to be initiated in compliance with defined processes. Your resources and momentum need to shift.

Thanks to seamless integration between CA Clarity Project Portfolio Manager and all other CA Clarity modules, you can rest assured that your decisions will be efficiently communicated, your initiatives well executed and performance effectively tracked. For example, a new development project must be professionally managed at the detail level, including project and resource planning, task scheduling, deliverable tracking and project cost accounting. CA Clarity Project Portfolio Manager gives you unparalleled control over all of these variables.

Develop Best Practices to Improve Project Portfolio Performance

Your portfolio is never static. Budget and revenue requirements change, market conditions dictate new priorities and initiatives fail to deliver predicted results and resource constraints impact timelines. That means your strategic investment portfolio needs to be re-evaluated and reprioritized, often on short notice and without the luxury of long planning cycles.

Trying to do this with manual report consolidation, spreadsheets and standalone portfolio analysis tools won't get you the results you are looking for. The complete integration of portfolio execution and assessment functionality within CA Clarity lets you understand, in real time, how your decisions affect portfolio performance. It enables you to develop and deploy best practices for the next round of portfolio planning. You can adjust and reprioritize selection criteria, weigh new ideas against existing investments and communicate new decisions, all within days or weeks rather than quarters or years.

Key Features of CA Clarity™ Portfolio Manager

| Features	Benefits
Portfolio Modeling and Analysis	
Create portfolio types	Define project and product portfolio types for use during the planning phase.
Standard evaluation metrics	Minimizes your portfolio definition efforts by providing you with standard metrics for evaluating investments, including NPV, ROI, risk, break-even, role capacity and demand, planned cost and planned benefit.
Unlimited custom fields and criteria	The point-and-click interface allows you to tailor your portfolio inventory and analysis criteria by adding new fields, rearranging forms, creating new pages and adding custom formulas. All configurations are automatically carried forward to new releases.
Parent-child portfolio structure	Allows your portfolios to be grouped in hierarchies that reflect the structure of your business or your decision-making process.
Top-down and bottom-up budgeting	Combines the ease of early-stage budgeting through top-down allocation with the accuracy of true cost and true benefit analysis for portfolio performance assessment.
Process control of investments	Connects your project portfolio decisions to investment lifecycle processes by allowing you to define gates at which approval is required for subsequent phases. For example, a new product becomes part of the portfolio when it moves from the requirements phase to the design phase.
What-If Scenarios and Selection	
Portfolio what-if scenarios	Allows you to optimize potential investment decisions without making changes to the plan of record. Allows you to include or exclude investments, change start and end dates, adjust budgets, re-evaluate priorities and filter and sort by any user-defined criteria.
Automatic scenario generation	Saves you analysis time by automatically creating investment scenarios based on your own selected criteria. The scenarios include an optimized set of portfolio investments from which you can conduct additional analyses.
Scenario workflows	Provides process automation for the distribution, evaluation and approval of scenarios, including support for simple or complex workflow patterns built into the CA Clarity Process Manager module.
Scenario-based resource capacity planning	Allows you to see the impact on your resources of specific investment decisions by evaluating portfolio scenarios in the Capacity Planning feature of the CA Clarity Resource Manager module.
Automatic portfolio content creation	Saves time by letting you define the contents of a portfolio parametrically--for example, including all assets located in Europe with a book value greater than $100k. Alternatively, you can assemble portfolios manually by choosing particular investments.
Dynamic portfolio content refresh	Simplifies portfolio maintenance by allowing you to automatically reassemble your portfolio based on specified criteria. Project portfolio managers decide when and how the portfolio is updated.
System-supported scenario notifications	Ensures the complete and timely communication of critical portfolio decisions by making it easy to systematically notify all department, resource and project managers.
Project Portfolio Optimization	
Efficient Frontier creation	Provides you with advanced decision support by automatically generating a series of optimal portfolios based on a range of investments and a set of user-defined constraints. Each point on the Efficient Frontier graph represents a portfolio scenario that produces the highest return for the given set of criteria.
Portfolio dependencies	Produces more realistic portfolio scenarios by taking into account dependencies among investments. For example, if project A is dependent on projects B and C, then the scenario generation process only includes project A in scenarios that also support both projects B and C.
Scenario comparison	Speeds decision making by providing you with comparisons of portfolio scenarios to identify differences in content, cost, benefit and ROI.
Drill-down graphics	Connects strategic portfolio scenarios to their underlying investments by letting you click from an Efficient Frontier graph point to a detailed listing for an explanation of the portfolio contents in the scenario.
Portfolio Performance Assessment	
Portfolio scorecards	Drives better decisions by providing you with real-time portfolio performance information in a set of personalized portlets.
Standard portlets	Simplifies deployment by providing standard portfolio assessment views out of the box, including: • Investment details • Balance bubble chart • Cost/benefit summary • Timeline Gantt view • Financial roll-ups • Life cycle stage funnel • Budgeted cost review • Risk vs. reward quadrants • ROI vs. alignment quadrants • Benefits by goal
Configurable stoplights	Allows you to define thresholds for any standard or user-defined metrics such as alignment, budget, risk and status to focus attention on under-performing investments.
Exception filtering	Improves your reaction time by highlighting investments that fail to meet your pre-defined performance criteria. For example, a project portfolio manager can use filters to show only applications that are expensive to maintain, underutilized and within six months of retirement.
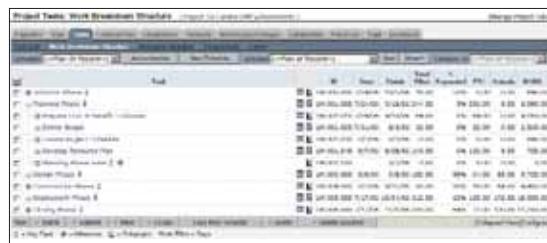
CA Clarity™ Project Manager
Execute Projects with Control and Predictability

Projects are the delivery vehicle for transforming ideas into business value within any organization. A poorly planned or badly estimated project can have an adverse effect on your results, deliverables, costs, credibility with customers and employee morale. The CA Clarity Project Manager module provides you with a rich set of tools for project planning, estimating, budgeting, resource allocation and time capture. Our goal is to ensure that your company benefits from corporate best practices, where methodologies are adhered to, optimal plans are produced, communication barriers are eliminated and projects are executed with precision.

Create Simple or Complex Project Plans

CA Clarity Project Manager easily supports any level of project planning, from the most basic to the most sophisticated. With just a few mouse clicks, your project managers can create simple plans for collaboration and the tracking of key tasks and milestones, or detailed plans for capturing all of the information in a complex project. Collaboration is a basic element in every plan, including threaded discussions and document management, as well as time tracking at the project or task level. Plans can also include key tasks, Work Breakdown Structure (WBS) hierarchies, estimates, dependencies, and deliverables and staff assignments. All project resource and cost accounting activities are fully integrated, allowing for seamless management throughout the project life cycle.

## Build Plans from Best Practice Methodologies and Templates
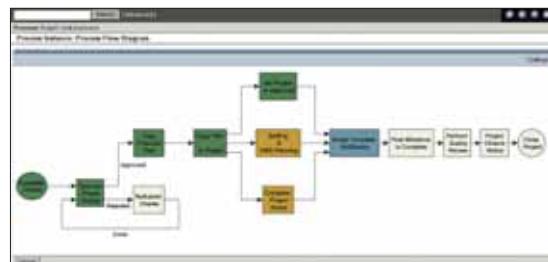
Rather than starting from scratch, your project managers can build their plans from pre-defined methodologies and templates included in the CA Clarity application. Answers to project profile questions automatically generates key tasks and milestones or a complete WBS, including deliverables and recommendations culled from your own best practice methods.

Project templates go a long way in expediting the project creation process, and they make it easy to reuse previous work. The templates leverage the extensive workflow capabilities of CA Clarity, giving your project managers a way to model your organization's own development process within the application. As review gates are passed, workflow automatically copies the next set of tasks, documents, roles, budgets and fields from the template into the project, creating all of the underlying items necessary to complete the current phase.

The workflow capabilities of CA Clarity can also automate many project management tasks, including timesheet notifications and approvals budget and forecast updates, action item assignments and resource allocations, as well as document routing and approval. Using the graphical workflow status indicator, your project managers can easily track where an item is in the process, removing bottlenecks and reducing project cycle time for speedier completion.

Schedule and Staff Your Projects Quickly and Effectively

CA Clarity Project Manager makes it easy to schedule key tasks and milestones, manage project and resource calendars, and group multiple subprojects into programs for schedule roll-up, all within the web-native CA Clarity environment. Users can leverage the CA Clarity Resource-Constrained Scheduling (RCS) algorithm within their web browsers to schedule project plans based on available resources rather than on task duration, providing a more realistic plan in less time. Users can also create tentative schedules, make changes and publish the schedule to the plan of record without having to download or maintain software.

For advanced scheduling and baselining, CA Clarity Project Manager integrates seamlessly with both Open Workbench and Microsoft Project, making it easy to launch the preferred scheduling tool from within CA Clarity.

Resource management tools help your project managers quickly find qualified, available people on your staff anywhere around the globe. Once a project is created in CA Clarity Project Manager, team members can be assembled quickly by searching for resources by name or role. The CA Clarity Resource Manager module also supports advanced searching by skill set and resource pool and the evaluation of overall resource capacity and demand.

Track and Analyze Time and Costs

CA Clarity Project Manager lets you easily track and analyze costs for the work people do and determine the estimated time to completion. Timesheets allow team members to record their time and resource usage on the projects and incidents to which they are assigned. Once a timesheet is submitted, managers with time approval rights can review it for accuracy and completeness before approving it. Robust reporting capabilities provide accurate information on the time spent by all resources on all work performed.

Figure D

Track time in the browser, anywhere in the world, without plug-ins, applets or ActiveX downloads.

Manage Risks, Issues and Change Requests

Even the best project plans are often derailed by unexpected risks and unresolved issues. CA Clarity Project Manager gives team members better control over project results by allowing them to systematically manage risks, issues and change requests. Using PMBOK-compliant terminology and processes, risks are captured, evaluated and scored, allowing your managers to focus mainly on those with the highest impact and probability. User-defined thresholds allow roll-up of critical risks to management dashboards for visibility and mitigation. Project managers can easily convert risks into issues, and issues into change requests, while maintaining history and interdependencies. With all of the associated impact information in one location, project team members can understand context, analyze trends, seek out root causes and aggressively minimize overall project risk.

Improve Budgeting and Forecasting

The budgeting and forecasting feature in CA Clarity Project Manager provides all the necessary tools for accurate planning, tracking and analysis of the financial performance of your key corporate initiatives. Your project managers can create budgets and update forecasts at the summary or detail level, including labor, expenses, materials and equipment categories. As the project progresses, forecasts are updated with aggregated accruals and estimates to complete, giving managers a real-time view into the rate of project completion for financial analysis and chargeback allocations. Project managers can see not only that they are on plan, but also on budget, driving fiscal responsibility to the level where it has the most impact.

Configure and Personalize

CA Clarity Project Manager can be easily adapted to the unique needs of your organization. Using the CA Clarity PowerMods functionality in CA Clarity™ Studio, administrators can add custom fields and forms that are automatically distributed to CA Clarity Project Manager, Open Workbench and Microsoft Project. Using the System Partitions feature in CA Clarity, each division or group can create their own virtual instance with unique fields, forms and processes, allowing local control while still maintaining overall project governance.

Going a step further, your project managers can configure and deploy personalized dashboards for each project, picking and choosing from among standard and user-defined portlets available from CA Clarity Studio. The combination of CA Clairty PowerMods, CA Clarity System Partitions and personalized project dashboards gives users the flexibility and creative control to configure CA Clarity Project Manager so that it captures and reflects the information and processes that are unique to your organization.

Effectively Manage Programs

When you need to manage large programs with a related series of projects, CA Clarity Project Manager allows you to create and manage at the program level, providing top-down budgeting and forecasting as well as bottom-up risk, status, cost and schedule reporting for subprojects. Users can drill directly into the subproject details to manage more effectively and drive program success.

Figure E

Manage programs with top-down planning and bottom-up actuals.

Seamlessly Access Core Services for Collaboration, Reporting and Integration

The collaboration functionality in CA Clarity™ Core allows your project teams to communicate effectively, share knowledge, manage documents and resolve issues. Project managers can easily create collaborative environments so teams can find the information they're looking for in one location, instead of searching through thousands of emails and countless individual computers.

Through CA Clarity Project Manager, you also have direct access to the CA Clarity Core business intelligence services. The data mart in CA Clarity provides the foundation for reporting and analytics. Standard and custom reports, as well as portlets and dashboards, provide powerful insight into project data, giving your team members, managers and executive sponsors the critical information they need to assess the status of their initiatives.

CA Clarity Project Manager uses the enterprise Organizational Breakdown Structure (OBS) service to provide data security, as

well as information organization and classification. This allows managers to define their own hierarchical structures, such as by division, geography or resource pool and then organize and provide access to information accordingly. Data is automatically rolled up according to the structure your managers choose, providing each level of your organization with key metrics for better decision making.

To let you easily exchange project information with your other systems, CA Clarity Project Manager is seamlessly connected with the CA Clarity XOG service, which includes published, open-standards-based interfaces to facilitate enterprise application integration. Using CA Clarity XOG APIs, critical project execution information, such as task status, time tracking,

resource availability and documents can be easily exchanged with your financial, human resources, cost accounting, ERP and other applications to reduce costs, improve reporting, eliminate double entry and reduce cycle time.

Execute with Precision

CA Clarity Project Manager makes it easy for your company to create reliable project plans and accurate estimates, find and assign the best resources, leverage organizational knowledge and best practices, empower teams through collaboration, and deliver meaningful reporting and analysis. The result is that your managers can deliver controlled and predictable execution of projects and programs, ensuring that the initiatives that drive your business are delivered on time and on budget.

Key Features of CA Clarity™ Project Manager

Features	Benefits
Project Management	
Basic project planning	Provides simple project planning and collaboration when capturing effort is more important than detailed tracking of costs and schedules, such as for new initiatives, pre-funded projects and new opportunities.
Detailed project planning	Provides full project management functionality for complex projects where your users need to capture and control costs, perform detailed resource scheduling, manage tasks against a timeline and track and complete deliverables.
Best practices methodologies	Automatically builds project plans--including key tasks, milestones, role assignments and forms--based on your project managers' answers to project profile questions. This allows you to build best practice plans for consistent use throughout your organization.
Project templates	Allows you to easily create best practice project libraries, ensuring all of your employees follow the appropriate procedures and use the correct templates. A process template can contain a phased WBS with tasks and activities, a project schedule, a budget and forecast, resources and roles, assignments and documents. When a new project is created, or when a gate is passed into a new phase, the appropriate project data is immediately made available to everyone on the team.
WBS creation and resource assignments in the browser	Allows your project managers to build simple project plans, manage complex project tasks and make task assignments, all within the CA Clarity Project Manager browser-based environment. This eliminates the need to launch separate desktop project management applications such as Microsoft Project.
Multiple project baselines	Gives your project managers the ability to compare forecasted tasks and effort with current requirements and original budgets. They can then modify their approach to the project midstream, making the strategic decisions necessary to come in on time and on budget.
Custom fields and pages creation	Allows you to configure the system so that it captures and reflects information and processes unique to your business needs. CA Clarity™ Studio makes it easy for your users to create custom fields and pages within CA Clarity Project Manager, and to arrange and label both standard and custom fields in the way that makes sense to your organization.
Task guidelines	Makes best practices information about how to complete a task available to those actually doing the work, ensuring that your organization's know-how is accessible and timely.
Integration with Open Workbench and Microsoft Project	Allows you to manage complex projects online or offline using either Open Workbench, the open source desktop scheduler, or Microsoft Project. The CA Clarity Schedule Connect module provides the link.
Scheduling in the Browser	Via the browser, your users can also create schedules, make changes and publish the schedule to the plan of record, without having to download or maintain client software.
Time Tracking	
Timesheets	Provides your managers with complete access to all of the work your people are doing and all the costs associated with that work. Users create timesheets that are automatically linked to their assignments where they not only record the time spent working on tasks and incidents but also designate billing charges and attach explanatory notes.
No client software or downloads	Reduces your deployment and maintenance costs by eliminating the need to maintain software on user desktops. For your team members, all time tracking and project management features are accessed through a web browser, without the need to install plug-ins, ActiveX controls or applets.
Auto-populating timesheets	Employees entering daily time can automatically populate their timesheets based on information submitted in the previous week. When people are assigned new work, these tasks and incidents automatically appear on the timesheet for tracking.
Timesheet approval	Provides oversight to ensure timesheets are accurate and complete before being submitted to billing. Timesheets are fully enabled for workflows in the process engine, allowing your organization to set up simple or complex approval routing plans, including split approvals.
Offline timesheets	Allows your mobile knowledge workers to track and review their time while disconnected from the network. Offline timesheets, managed in Microsoft Excel, are synchronized and submitted when the user reconnects to CA Clarity. Offline timesheets are available in all languages supported by CA Clarity.

Key Features of CA Clarity™ Project Manager (continued)

Features	Benefits
Risk, Issue and Change Management	
PMBOK-compliant risk scoring	Automatically calculates risk scores based on probability, impact and category weighting, ensuring that risk scoring is consistent across all of your initiatives.
Risk sorting, filtering and thresholds	Allows your users to quickly identify high-impact risks that need immediate attention, ensuring that team members focus risk mitigation strategies in the most important areas.
Risk, issue, task and action item associations	Provides context and patterns for identifying the root causes of risks and issues by maintaining associations and links between related items.
Audit trail	Ensures that the complete history of risks, issues and changes is captured for review and future learning.
Portfolio risk assessment	Improves decision making around current and future projects by rolling risk scores up to the project portfolio in the CA Clarity Project Portfolio Manager module.
Risk issue change progression	Improves your company's efficiency and reduces manual effort by automatically converting risks into issues at the command of your project managers. Similarly, issues can be converted into change requests, preserving the history of analysis and action.
Budgeting and Forecasting	
Project budgets and forecasts	Facilitates the prudent financial management of your initiatives by linking labor, expense, material and equipment costs directly to the projects in which they are incurred.
Budget and forecast revisions	Allows multiple revisions over the project life cycle to be baselined, tracked and compared. This not only provides you with control of the project financial metrics, but also ensures that pitfalls and overruns that happened in the past can be avoided in the future.
Budget and forecast approvals	Enforces review and approval processes in project accounting by requiring that budget adjustments be approved by the appropriate financial managers.
Automatic financial plan creation	Reduces your project administration efforts by enabling your project managers to easily create and update financial plans from their detailed project plans. Based on task resources, their rates and their estimates-to-complete, you can create an accurate time-phased financial plan with minimal effort.
Program Management	
Project roll-up into programs	Provides top-down planning and bottom-up aggregation by enabling projects to be grouped into programs.
Program and project level planning	Allows your users to budget costs and benefits at the program level without completing detailed project plans. As projects are executed, high level estimates are replaced with project level specifics.
Program dashboard	Enables your executives to see at a glance whether the overall project portfolio is on track in terms of budget, issues, schedule, milestones and risk profile and to drill down into any initiative that is having problems.
Program drill-down	Allows you to easily assess risk and ROI, actual spending versus budget, forecast cost expenditure and expected benefit delivery through a simple drill-down from the program level to subproject details.
Benefit realization graph	Lets you compare top-down program benefit estimates with bottom-up project accruals to ensure that your deliverables match expectations and to improve future planning.
Reporting	
Numerous standard portlets	Allows your project managers to personalize their project dashboards with pre-defined portlets, such as Project Risks, Project Team, Labor Effort and Project Issues.
Numerous standard reports	Includes readily accessible reports for every user to answer key questions about their work and business. A sampling of standard reports includes: • Budget/Forecast Analysis • Key Tasks and Milestone Status • Project Analysis and Profitability • Resource Assignments • Resource Bench • Timesheet Detail
Stoplights	Connects business data to graphical stoplights, providing users with a visual alert based on a project or program's risk, status, issues, budget or other user-configurable benchmarks.
Role-based reporting	Provides your users with one-click access to every report relevant to them. While the volume of information about a project may be large, users view only a percentage of the content.
Export to Microsoft Excel or PDF	Provides you with additional analysis and easy distribution of reports by enabling report downloads to Microsoft Excel and PDF files.
Application Integration	
Published XML APIs	Allows your IT resources or a third party systems integrator to easily access the key information and processes in CA Clarity Project Manager without writing time-consuming database procedures and custom application code.
Access to the key objects in CA Clarity Project Manager	Creates additional value by linking the key objects in CA Clarity Project Manager with those in your other enterprise applications, including financial, billing and HR systems. A sampling of available gateway objects includes projects, roles, resources, users, GL accounts and periods, invoices and credit memos, timesheets and organizational units.

CA Clarity™ Resource Manager
Maximize the Return from Your People

The CA Clarity Resource Manager module is designed to bring you optimal results from your most valuable asset—your staff. In order to speed up time-to-market, you must quickly find the right employees to solve complex problems. With a limited number of skilled professionals available, you need to find a way to staff your teams with the best people from different regions to assure that all requirements are truly met.

Deploying skilled professionals on the right teams is one way to make sure you retain those people who can contribute to the growth of your organization. CA Clarity Resource Manager provides you with the tools you need to understand the skill sets of individuals and to track their development, experience and interest, as well as to manage the entire spectrum of resource requisitioning, searching and staff assignments. Whether your organization uses a formal or informal requisition process to staff projects and other IT work, CA Clarity Resource Manager gives you the flexibility you need to work the way you want.

CA Clarity Resource Manager includes four major components: Resource Finder, Capacity Planning, Resource Requisitioning and Skills Management.

Match Your People to Your Project
Resource Finder enhances the staffing process by allowing you to quickly search for and select resources, then drill down to specific information about each person, including skills, current resource allocations and individual calendars. You can also view graphical displays that identify under- and over-utilized staff, making it easy to find available, qualified people across your entire global organization.
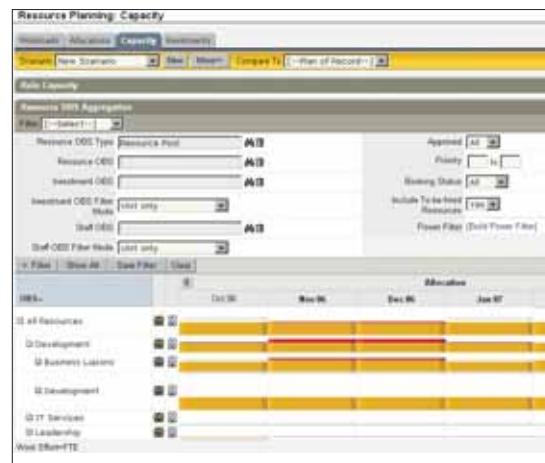
Balance Your Resource Capacity and Project Demand
The Capacity Planning feature in CA Clarity Resource Manager gives you insight into your organization's portfolio, showing you how overall work (demand) compares with overall resource availability (capacity). You can view aggregated summaries by organizational breakdown structure (OBS) hierarchies such as geography, departments, project type and resource roles. Strategic planners can conduct what-if analyses on projects by changing project attributes to simulate different project scenarios. For example, you can exclude lower priority projects that are not yet approved or shift project dates and

resource allocations, to see how demand requirements change. Maximizing your resources through capacity planning reduces your costs while delivering successful programs.

Manage Resource Requests and Staffing
Resource Requisitioning allows you to efficiently gather the resources you need, both from the demand side and the supply side of the requisition process. It provides you with an efficient and orderly mechanism for communicating your resource requirements to resource managers. In addition, it provides resource managers with the tools they need to quickly find people to meet your needs and to communicate with you during the entire process. Companies with in-depth supply and demand processes can quickly and easily request, locate and deploy people with the right skills from both internal and external sources.

Identify and Track Key Skills and Experience
With continual employee training and development, and employee turnover, your company must confront the challenge of tracking, categorizing and organizing employee skills. The Skills Management tool lets you quickly identify the optimal resources available for each project. CA Clarity brings you a method for understanding the skill sets of individuals, allowing you to track their development, experience and interest levels.

Key Features of CA Clarity™ Resource Manager

Features	Benefits
Resource Finder	
Powerful resource search	Enhances your ability to staff projects quickly by searching for resources by name, role, availability, skills and resource pool and OBS unit, while optionally specifying minimum percentage match for availability and skills, the proficiency required for each skill and the interest level of individuals.
Resource histogram views	Ensures only the most appropriate resources are booked by providing you with a visual indication of staffing allocations over user-defined time periods.
Resource dashboard	Improves your staffing decisions by aggregating critical information into a real-time resource dashboard that includes five standard portlets and the ability to add additional user-defined views.
Full text search	Increases your ability to find the right people by allowing you to search documents attached to resources, including resumes and bios.
External resource search	Lets you manage daily interactions with external partners by staffing resources and tracking time and expense.
Saved searches	Speeds repeat searches containing complex criteria and parameters by saving them to a personal search list.
Resource Finder	
Budget and forecast approvals	Enforces review and approval processes in project accounting by requiring that budget adjustments be approved by the appropriate financial managers.
Organizational Breakdown Structure	Allows you to find people by geography, business unit or other organizational structures, ensuring work requirements are matched to people in specific organizational units.
Resource booking options	Based on system options, you can manage resource allocations for hard booked (committed) and soft booked (planned) time for each of your staffing requirements. Lets you un-book a resource that has been hard booked to a given project, either as a complete or partial unbooking. Also supports additional booking when you need a resource beyond the original booking terms.
Resource assignment transfer	Lets you transfer assignments when a role or resource is replaced by another, and the original role or resource has no allocation remaining.
Capacity Planning	
Capacity planning views	Focuses on critical areas by highlighting your capacity and demand overloads within specific organizational units, projects or roles. You can specify your own thresholds for when a resource is under- or over-allocated.
What-if scenarios	What-if scenarios are fully integrated throughout the CA Clarity system. They maximizes your usage of existing resources by allowing what-if analyses for investment and project positions, start dates, priorities and staffing requirements.
Saved scenarios	Saves you time by saving valuable what-if scenarios for future reuse.
Compare scenarios	Provides you with insightful analyses of one scenario against another to assist in decision making during the pipeline planning process. Lets you see tabular and graphical comparisons of scenario data.
Portfolio scenarios	Provides a seamless link with CA Clarity IT Portfolio Manager and CA Clarity Project Portfolio Manager to make it easy for you to evaluate the impact on resource demand from specific investment scenarios.
Demand vs. people analysis	Gives you the ability to view your usage of existing resources by letting you compare current project demand against available people in your organization.
Demand vs. roles analysis	Allows you to plan future resource needs by comparing forecasted project demand against roles required to staff them.
Skill/gap analysis	Identifies which roles and skills are in high demand and assesses any resource/skill gaps within your organization. Helps you justify hiring new people with needed skills and/or developing training plans to expand the expertise of your current employees.
Capacity analysis by allocation or assignment	Identifies your under- or over-utilized resources by letting you compare the capacity of the resources allocated to projects versus their actual assignments to project tasks.
Multiple roles on the same project	The import/export to CA Clarity Open Workbench and MS Project allows multiple roles on the same project, which represents these as individual resources with different names. This makes it possible for you to allocate the same role to the same project more than once; each representing a unique staffing requirement.

Key Features of CA Clarity™ Resource Manager (continued)

Features	Benefits
Resource Requisitioning for Projects	
Internal resource requisitions	Effectively routes your resource requests to the appropriate managers. Provides you with the ability to specify precise skills, time allocation and dates needed along with weighting factors for these criteria.
External resource requisitions	Extends your company's reach into additional resources by giving you access to external vendors, including contractors, partners and suppliers.
Resource shortlists	Provides you with a list of possible candidates from which the project manager can select the desired staff.
Requisition creation	Creates a requisition for a single staffing requirement, which allows you to handle staffing needs on a case by case basis. This also facilitates more targeted routing and assignment of the requisition.
Process-based requisitions	Allows you to define simple or complex workflows for resource requisitions, including multiple assignment and review steps, along with escalations and notifications.
Routing and status notifications	Lets you route a requisition to a specific resource manager. Keeps you both updated on the status of your request, including staffing changes and resource approval, through automatic updates sent out each time the requisition status changes.
Requisition approval options	Determine whether your project managers must approve their booked resources and whether the system option can be overridden at the individual project level.
Skills Management	
Categorize, organize and assign skills	Helps your company to keep track of information about your employees' capabilities and interests by allowing the assignment of one or more skills and interests to each individual. Including interest levels is key to retaining top talent and allows you to focus your valuable resources in areas that provide challenge and personal growth.
Parent/child skills hierarchy	Allows you to group skills by organizational hierarchy and resource pools, creating parent skills, such as software engineering, and child skills, such as Java programming. The hierarchy is unlimited in depth and is completely searchable.
Individual skills inventory	Ensures that skills are current and valuable employees are retained by allowing you to align the skills, experience and certifications of individual employees to your corporate initiatives. Having people with the right skill sets translates into completing your projects without delay.
Skills self-reporting	Distributes the reporting of skills and interests to employees themselves, ensuring that your company's skills inventory is maintained without significant overhead.
Searching based on skills hierarchy	Allows you to search for skills based on parent or child skill codes and to extend it by including a document search on keywords in resumes, bios or experience profiles, helping to find resources with newly identified skills that may not yet be categorized by your organization.

CA Clarity™ Demand Manager
Gain Total Visibility Into Your IT Supply and Demand

CA Clarity Demand Manager creates the critical connection you need between your IT organization's service and project functions. You get a single view through which all demand can be evaluated and managed, with total visibility into how you are using your resources. Because project and pre-planned work comprise only a portion of overall IT effort, it's impossible to achieve effective IT governance, portfolio planning and financial management without seeing exactly how much and what type of service work is tapping into your resources.

Improve Your Allocation of Resources
Demand on your organization takes many forms, including project requests, service requests, incidents, ideas for new products and services, strategic initiatives and the casual requests for support that consume so much of your resources.
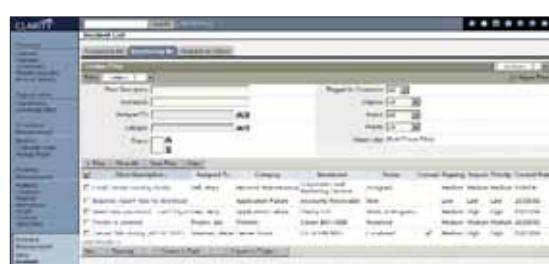
CA Clarity Demand Manager makes it easy for you to capture, classify, evaluate, approve and/or dispose of all the sources of this demand, so you can prioritize work and allocate resources to the highest-value opportunities.

Demand can be captured in one of two ways: through easily configured CA Clarity forms that allow your users to submit ideas and project requests and through integration with your other systems that are already being used to capture help desk tickets, incidents and service requests. Integration is achieved either through CA Clarity XOG, CA Clarity Service Connect pre-built integrations to popular IT Service Management (ITSM) systems or out-of-the-box integration with CA Service Desk.

Regardless of the demand source, CA Clarity Demand Manager provides you with the functionality and dashboards you need to prioritize and manage all requests. It is fully integrated with the CA Clarity Process Manager module, allowing you to create workflows that automate time-consuming manual steps, provide automatic notification and escalation, reduce cycle time and ensure compliance with best practice processes.

Figure A
_____

Manage status, assignment, costing and disposition of incidents and other service requests.

Systematically Collect and Evaluate Ideas
Idea management, a key feature of CA Clarity Demand Manager, provides you with an enterprise-wide solution for capturing, cataloging, evaluating and approving product or technology ideas, project requests and early-stage initiatives. Users across your organization can enter ideas using forms and fields that capture the right information, then route these ideas to the appropriate reviewers for evaluation and disposition. Once ideas are approved, users can automatically convert

them into the appropriate project, asset, application or product record. At that point, portfolio planning, resource allocation and time and cost tracking will begin immediately.

Effectively Manage Unplanned Work
Organizations are often adept at identifying and managing project work, from creating successful project plans to tracking time and status until completion. Unexpected work, however, is hard to manage at the same level of detail. Typically, requests get prioritized without your having visibility into the overall impact of the work on your organization. The result: unplanned work often consumes more resources than you originally estimated.

Figure B
_____

Get visibility into all demand to optimize resource utilization and improve planning and scheduling.

CA Clarity Demand Manager allows your organization to control unplanned work. After capturing incidents and service requests from the IT help desk, it evaluates them for impact, urgency and priority. Requests meeting specific criteria can be converted into new projects or tasks and then managed with CA Clarity project, resource and financial management tools. CA Clarity also captures costs related to this unplanned work, allowing IT to chargeback work to the businesses making the requests.

Understand and Manage the Cost of Demand
Although help desk and other ITSM applications are designed to track unplanned work, they typically provide insufficient information on the true cost of that work. CA Clarity Demand Manager taps into comprehensive financial management tools within CA Clarity to provide detailed cost analyses of incidents and other unplanned work.

Using sophisticated resource rate matrices within CA Clarity, CA Clarity Demand Manager automatically calculates how much you are spending on work performed for incidents and other requests based on the resources assigned in your ITSM application or in CA Clarity Demand Manager.

CA Clarity Demand Manager links your service-related costs—as well as the number of incidents or requests—to the appropriate IT investments, such as applications, assets, products and services. Evaluating the quantity and cost of incidents with other demands over time provides you with critical information about the health of these investments and allows your organization to more reliably predict resource needs and budgets.

The cost and incident information provided by CA Clarity Demand Manager rolls up to applications and assets, allowing your portfolio managers to make better decisions about IT investments, including which to enhance, maintain, consolidate or retire.

As a key component of CA Clarity, CA Clarity Demand Manager provides the interface to the service side of IT, allowing you to capture and manage all demand, gain visibility into the total utilization of your resources and understand the overall impact of unplanned work on your IT portfolio.

Figure C

Track the costs of incidents to gain visibility into application and asset total cost of ownership.

Key Features of CA Clarity™ Demand Manager

Features	Benefits
Incident Management	
Configurable incident forms	Provides an easily deployed user interface for entry of incidents and other demand requests across your enterprise, consolidating all demand into a single system. Forms are fully configurable through CA Clarity Studio PowerMods™ tools.
Multiple incident entry points	Allows incidents to be entered directly into the CA Clarity Demand Manager module or automatically imported from ITSM or other external systems through CA Clarity Service Connect or CA Clarity XML Open Gateway (XOG).
Life cycle incident management	Manages the full incident life cycle, from submission to categorization, assignment, escalation, closure, costing and analysis.
Comprehensive incident analytics	Provides you with access to the most important views for demand analysis through standard portlets, such as Investment Incident Costs, Investment Incident Detail, Personal Incident Assignments and Team Incident Assignments.
Resource rate matrices	Provides detailed costing of incident work by connecting to the Project Financial Manager module. Costs are automatically calculated based on the rates in effect for the resources allocated.
Incident start-finish dates and ETCs	Allows incidents and other unplanned work to be scheduled like tasks in project work, providing assigned resources with a complete view of their work queue, including when tasks are scheduled and expected duration.
Project and task conversion	Allows you to convert escalated incidents into new projects or tasks on existing projects. You gain the means to track significant work with a project schedule, resource assignments, milestone tracking and cost accounting.
Process automation and workflow	Reduces manual effort by linking incident actions to processes built into the CA Clarity™ Process Manager module. For example, you can assign resources to an incident and associate incidents with portfolio investments.
Application and asset association	Automatically rolls up quantities and costs of service work into portfolio investments, including applications, assets and products, to allow total cost of ownership analysis of your portfolio.
Complete audit trail	Allows your authorized users to track all changes to an incident record, including who made the change, when it was made and the value both before and after the change.
Idea Management	
Centralized idea management	Provides you with enterprise-wide solution for collecting, routing, evaluating and approving new ideas that may lead to portfolio investments. The forms and processes are fully configurable to support the collection of ideas such as project requests and new product concepts.
Configurable idea forms	Allows your administrators to create, arrange and display fields and forms in the way best suited to collecting ideas in your company.
Review and approval workflow	Reduces time-to-decision by automating the process of routing, evaluating and approving new ideas.
Idea-to-investment conversion	Eliminates manual re-entry of information by allowing you to directly convert approved ideas into any supported investment type, including project, product, asset or application.
Resource Visibility	
Planned vs. unplanned work view	Lets your resource managers view both planned and unplanned work assignments so they can adjust project allocations and reduce project impacts.
Demand trending view	Provides you with historical views into efforts put into unplanned work, allowing you to make more accurate predictions about the future.
Team utilization view	Provides your resource managers with a consolidated view of the planned and unplanned work their teams will be responsible for. This allows them to balance workloads, use resources to the fullest and make sure that their most valuable people are working on the most important initiatives.
Integration	
Service Connect pre-built connectors	Simplifies integrations between CA Clarity Demand Manager and IT Service Management systems through out-of-the-box connectors.
CA Clarity XOG APIs	Provides the means to exchange incident information with other systems through published XML interfaces.

CA Clarity™ Project Financial Manager

Streamline Your Project Chargeback, Billing and Financial Reporting Processes

The CA Clarity Project Financial Manager module brings you a complete solution for managing the costs and revenues associated with your strategic projects. Not only can you report on both internal and external costs across the span of your projects, but you can also increase cash flow and effectively manage your budgets through real-time control of billing, invoicing and chargeback allocations.

CA Clarity Project Financial Manager gives you the tools you need to accurately capture expenditures, access historic information and generate a wide range of financial reports. It allows you to manage costs so your budgets are spent wisely.

Whether your project transactions originate from the general ledger, accounts payable, CA Clarity timesheets or other time and expense entry vehicles, CA Clarity Project Financial Manager can capture, cost and account for them. Sophisticated categorization tools allow you to separate capitalized expenditures from expenses for appropriate financial reporting and compliance with SOP 98-1. The chargeback functionality allows transactions from your internally funded projects to be mapped to and allocated across different business units and departments, providing equitable distribution of project costs.

To deliver on these key requirements, CA Clarity Project Financial Manager includes:

- Core project accounting tools
- Chargeback allocations
- Cost and rate management
- Billing and invoicing
- Reporting

Chargeback Allocations

Your company probably uses technical teams, such as IT staff, for development projects that benefit many different business units. That team and all of the costs they incur, including resource salaries, are allocated on a percentage basis to the funding organizations. CA Clarity Project Financial Manager supports these chargeback allocations as a percentage split at the overall project level or at the individual task level, allowing your managers to appropriately allocate costs to funding departments.

Billing and Invoicing

CA Clarity Project Financial Manager captures your project transactions as work-in-progress (WIP), supporting your ability to create and send invoices to customers for work performed. This includes billing by fixed price or time-and-materials, as well as issuing credit memos and re-billing all in multiple currencies. Using CA Clarity Project Financial Manager for billing and invoicing also provides you with the transaction-level control documentation you need for significant accounts under Section 404 of the Sarbanes-Oxley Act.

Cost and Rate Management

You can use CA Clarity Project Financial Manager to maintain multiple rate matrices that establish billing and cost rates for labor, expenses, materials and equipment. You can do this in multiple currencies and can even apply applicable mark-ups at the time expenditures are incurred. These costs, along with administrative charges, are then aligned with your budgets and posted to the powerful billing engine within CA Clarity Project Financial Manager. Rate matrices accept forward-moving rate changes without changing historical data, providing you with an accurate accounting of project costs by resource, period, year and organization.

Figure A

Allocate costs of internally-funded projects to appropriate business units.

Figure B

Generate pro-forma invoices to show detailed project costs.

Reporting

CA Clarity Project Financial Manager generates custom management and operational reports, providing you with insight into where your money is being spent. Accurate financial reporting, including revenue forecasts, work-in-process analysis and transactional analysis information, allows you to quickly identify potential cost over-runs and other financial issues.

With access to financial information, cost allocation, time and expense capture and accurate billing, CA Clarity Project Financial Manager helps you to streamline your financial management processes and improve your operations.

Key Features of CA Clarity™ Project Financial Manager

Features	Benefits
Time capture	Integrates seamlessly with the time tracking tools in CA Clarity Project Manager, allowing users to enter time and route time sheets for approval. This information goes to CA Clarity Project Manager for tracking against your budget and to CA Clarity Project Financial Manager for billing and invoicing.
Complete audit trail	Captures and retains all of your transactions in a given financial period, including reversals. An audit trail—including the point of entry (time entry, accounts payable, expense reporting), the data entered, the period incurred and the transaction it applies to—is retained in history.
Complete reporting	Includes standard reports that let you access the most important and relevant data extracted from your financial transactions, including: • Revenue Forecast • Project Billing Transactions Inquiry • Customer Invoice • Resource Billing Transactions Inquiry • GL Allocations • WIP Aging By Customer • Invoice Register • WIP Summary Register • Unbilled Transactions
Multi-currency support	Allows you to define, process, invoice and analyze financial transactions in multiple currencies to support your global operations. You can invoice clients in their respective currencies, track projects in local currencies and manage financial transactions in their home currency.
CA Clarity XOG	Includes open-standards integration to your accounting and billing systems for expense, material, labor and equipment transactions; chargeback allocations; invoices and bills.
Chargeback Allocations	
GL allocations	Enables you to account for the costs of internally-funded programs by allocating them on a percentage basis to funding departments.
Project- and task-level allocations	Lets you apportion costs at the overall project level or at a detailed task-by-task level.
Allocation reversals	Allows your project accounting managers to reverse any past chargeback allocations, either partially or in full. They can then be resubmitted with updated allocations.
Selectable GL posting periods	Allows you to allocate chargebacks to any selected fiscal period or to split an allocation over multiple periods.
Cost and Rate Management	
Multiple rate matrices	Lets you define costs and billing rates, allowing for different rate rules by project, client, internal organization and more.
Mark-up assignments	Simplifies billing rate definitions by allowing CA Clarity Project Financial Manager to mark up costs by a specified percentage.
Billing and Invoicing	
Demand billing—time and materials billing	Makes it easy to generate invoices on time-and-material work, choosing the clients and projects to bill. The demand billing worksheet gives you a simple spreadsheet-like form to review billing transactions, write off and adjust billing items, partial bill and drill into invoice history, contract information and advance billings.
Advance billing—fixed price and retainer billing	Gives you the option of billing your clients before they incur any project charges. This allows you to follow contract billing schedules.
Batch billing	Automates the entire billing/invoicing process if you perform high volume billing. Using batch billing, you can generate a list of clients or projects, make billing decisions, approve bills and print invoices in one single automated step, all driven by user-defined batch cycles set up to run at weekly, bi-weekly or monthly intervals.
Invoice consolidation	Allows you to establish master -sub project hierarchies to consolidate invoices for your customers and to prepare those invoices in a customer's single billing currency. This reduces your billing paperwork and improves payment accuracy.
Pro forma invoice review	Allows you to review and approve billing decisions prior to creating and distributing final invoices.
Invoice detail	Reduces billing questions by providing full project details on each invoice, including summary, amounts owed by transaction class and amounts owed by transaction details.

CA Clarity™ IT Portfolio Manager
Analyze, Select and Manage Your Portfolio of IT Services.

IT organizations are under increasing pressure to become better business partners, improve service quality and attain greater efficiency, all without increasing cost. In addition, IT executives must respond to inquiries that are more business focused, than technology focused, such as: What value are you providing my business? How are you tracking Total Cost of Ownership (TCO)? Why should I buy this IT service internally?

In response, IT organizations are re-engineering their processes to deliver more business-oriented IT services. IT services are a unique combination of people, processes, technology and assets that provide specific business value. Yet, the business customer often has no interest in the "how" of service delivery, only in the results. As such, an IT services portfolio must describe services in business value terms, specifying what the services are, how they are packaged and what value they deliver.

The CA Clarity IT Portfolio Manager module enables IT organizations to create a unique suite of business-oriented IT services, leveraging assets, applications, ideas, projects, support activities and other related services. Where other tools fall short, CA Clarity IT Portfolio Manager gives you the ability to make fact-based portfolio trade-off decisions to best utilize limited resources, such as budgets and people. The module provides a structured environment for establishing portfolio criteria, inventorying assets, developing plans and what-if scenarios and communicating strategic decisions to stakeholders. This leads to improved collaborative decision making and increases the business value of IT investments.

CA Clarity IT Portfolio Manager provides all the capabilities found in CA Project Portfolio Manager, plus a unique set of functionality designed to support broader IT service portfolios, including a sophisticated IT service hierarchy that supports assets, applications, ideas, projects, people, budgets and other related services.

Visibility through an IT Services Portfolio
The CA Clarity IT Portfolio Manager module helps executives analyze their IT service portfolio. This increased visibility enables IT and the business units to engage in business terms versus technology terms.

The CA Clarity IT Portfolio Manager includes an integrated scorecard to drive service portfolio planning and analysis. Using the IT Portfolio Manager, IT executives can answer questions such as: What does it cost to deliver an IT service? Have the right resources been allocated to deliver this service? Are the physical assets required to run this service allocated correctly across the multiple business units subscribing to the service? Should we outsource this service and shift valuable resources to more strategic initiatives? And, most importantly, what is the TCO of this service?

CA Clarity IT Portfolio Manager provides a new level of visibility for IT services.

Defining IT Services
Using CA Clarity IT Portfolio Manager, IT organizations can define a set of services that include all related applications, assets, infrastructure, projects, labor and support costs. These services can include budgeting, staffing, time capture and chargeback capabilities to manage investment relationships, aggregate costs and budgets and accumulate transactions to provide TCO. A service portfolio can be a roll-up of individual projects, asset or application portfolios. This allows IT organizations to start with either a project, asset or application portfolio and move up to service portfolio management as the organization matures to the next level.

Figure B

CA Clarity IT Portfolio Manager, users can build a service hierarchy of related investments.

CA Clarity IT Portfolio Manager offers a variety of unique dashboards and portal views into IT services status, metrics and financials. These views are designed to provide improved collaborative decision-making and increase the business value of IT investments. A set of dashboards can be created in the CA Clarity Business Relationship Manager (BRM) module to support departments within an organization that use a given set of services. These departments can subscribe to services through the subscription capability found in CA Clarity IT Portfolio Manager.

15

For example, a department's business relationship manager or IT liaison may subscribe to the Customer Relationship Management (CRM) and financial reporting services. The dashboard would include a roll-up of information from both services and drilldowns for service-specific information. Each department dashboard includes a set of standard metrics: customer satisfaction; SLA violations; SLA threshold; number of incidents and a set of user-defined KPIs.

Cost Roll-up. IT managers can create a "bill of materials" to describe all of the components that make up an IT service offered to the customer. A services hierarchy allows for unlimited levels of child investments including assets, applications, ideas, projects, support activities and other related services. For example, an IT service, such as point of sale is comprised of assets, including servers and network infrastructure; software applications; projects, such as the roll out of an upgrade; and potentially related services, such as credit card authorization. With the cost roll-up, IT managers can track the cost of child investments for a service, and costs aggregate to parent investments, enabling tracking of the TCO for a given service.
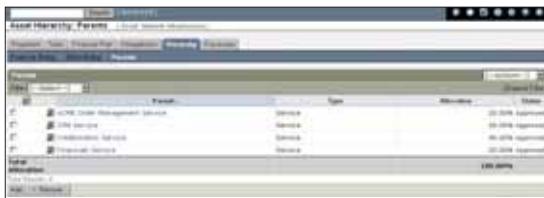
Effort Roll-up. In addition to tracking services costs, CA Clarity IT Portfolio Manager offers an effort roll-up that tracks the aggregate work that comprises the service, providing visibility into resources as an investment type.

Allocate IT Service Investments
Many times an investment is shared across several IT services. This might include an asset, such as a shared server, or an application, such as a CRM system. CA Clarity IT Portfolio Manager provides percentage-based investment allocations for both financial costs and resource labor associated to an investment. For example, a CRM service may be shared by sales and marketing, thus the service would be allocated 50% to sales and marketing respectively. Allocations can also be made for child investments. Network infrastructure that supports the above mentioned CRM system may also be shared with other services. In this case, 20% of the network infrastructure would be allocated to a CRM service, 40% to collaboration service, 20% to Financials and 20% to order entry.

Figure C

Easily define percentage-based investment allocations for both financial costs and resources associated to an investment.

Four Phases to IT Portfolio Success
Successfully implementing an IT service portfolio requires functionality to support four key phases:

- IT service portfolio modeling
- Investment inventorying
- Service portfolio planning and analysis
- Performance assessment

CA Clarity IT Portfolio Manager provides robust features, content and configurability to empower organizations to execute on all four phases of IT portfolio management.

Model the Portfolio with Your Criteria
The first phase of IT portfolio management is defining the investment evaluation criteria applicable to the organization, since all downstream decisions rely on how well potential investments rank against these criteria. CA Clarity IT Portfolio Manager provides key metrics, including true benefit and true cost capture, resource capacity and demand, alignment to goal rating, milestone schedules and risk profiling, as examples.

Using the extensive configuration capabilities in CA Clarity, you can adapt the standard evaluation criteria in CA Clarity Project Portfolio Manager or easily add your own. With point-and-click configuration, it is straightforward to create, prioritize and evaluate investments against the organization's own metrics such as return-on-investment and break-even analyses, cost avoidance or revenue enhancement goals, quality statistics, business value assessments and numerous other quantitative and qualitative business-case measures.

Easily Create the IT Portfolio Inventory
The second phase of project portfolio management consists of inventorying the current and proposed investments that comprise an IT service — assets, applications, projects, ideas and products — to be evaluated against the selected criteria. Whether or not a detailed inventory exists, CA Clarity IT Portfolio Manager allows you to get up and running quickly, providing an easy-to-use interface for building the IT service hierarchy from existing projects, applications, assets and more.

You can enter investments through the user interface, or easily import them in batch or real-time from external systems using the CA Clarity™ XML Open Gateway or CA Clarity™ Web services. For example, you can import asset data and related projected costs from the CA Asset Portfolio Management application. A variety of filter criteria are available, including asset type, class, sub-class, status, active flag and cost type. The application then presents this detailed asset information in the CA Clarity™ IT Portfolio Manager module as an asset portfolio.

Whether you select integration to external systems of record or simple import, you can experience the benefit of portfolio management even with just a simple inventory of the investments for which decisions are required in the current planning cycle. With a detailed inventory, you will enjoy significant benefits from this step alone: having identified the de facto portfolio, gross misalignment, "accidental" investments and sacred cows become immediately apparent.

Within CA Clarity IT Portfolio Manager, you can create multiple IT service portfolios, each consisting of one or more types of investments. Furthermore, you can group portfolios of IT services together in parent-child relationships, allowing individual departments or organizations to maintain their own service portfolios while providing overall visibility to the company's investments at the executive level. The interlinked portfolios provide support for top-down planning and bottom-up reporting.

Develop an IT Portfolio Plan through Analysis and What-If Scenarios

CA Clarity IT Portfolio Manager provides a complete set of tools and reports to enable the budgeting, analysis and what-if scenario planning in the third phase of portfolio management.

With clear strategic goals and well communicated budget allocations, IT portfolio managers proceed to evaluate potential and ongoing investments by sorting and prioritizing them against key portfolio criteria. The resulting ranking is compared to the available budget and a line may simply be drawn: the highest ranking investments that can be afforded are selected. Or possible ad hoc changes to the portfolio may be modeled with CA Clarity IT Portfolio Manager's scenario builder. You can also compare scenarios side-by-side to aid in decision making. Investments may be selected, rescheduled, postponed or delayed—and the impact on the cost/benefit, alignment and balance of the portfolio analyzed in the context of these decisions. The final, optimized portfolio may be any combination of required investments, high-scoring new initiatives, and subjective, ad hoc selections that provide balance in benefit and risk.

Optimize on the Efficient Frontier

When the number of investment choices grows, you need a systematic method to determine the optimal set of investments. CA Clarity IT Portfolio Manager provides optimization capabilities to remove the guesswork from creating a series of investment scenarios. You specify a set of constraints including resource role capacity, and the system evaluates all potential combinations to find the Efficient Frontier, an optimized set of portfolio choices that provide the highest return for the lowest cost. The Efficient Frontier provides you with a starting point to evaluate and make decisions about your portfolio of investments.

From the Efficient Frontier display in CA Clarity, you can drill into any selected scenario to review the associated investments, as well as compare sets of investments side-by-side for faster decision-making. Constraints such as budget, resource capacity, risk and time, as well as dependencies between IT service investments, are taken into account to ensure that the proposed set of portfolio scenarios are not only optimal but also achievable.

Figure D

Evaluate an unlimited set of optimal investment scenarios along the Efficient Frontier

Communicate, Execute and Assess

Having determined which investments to fund in each IT service portfolio, you are ready to implement. This consists of communicating decisions to department, resource, project and IT relationship managers so detailed plans can be put in place. This fourth phase of portfolio management is conceptually simple, but is often one of the most complicated steps in practice. Ongoing efforts that are to be canceled need to be ramped-down rationally, while newly funded investments need to be initiated in compliance with defined processes. Organizational resources and momentum must shift.

With seamless integration between CA Clarity IT Portfolio Manager and the other CA Clarity modules, you ensure that decisions are well communicated, initiatives are well executed and performance is well tracked. Consider, for example, a new IT service resulting from a portfolio planning cycle. The service must be professionally managed at the detail level, including project and resource planning, task scheduling, deliverable tracking and project cost accounting.

The Project, Resource and Project Financial Manager modules in CA Clarity enable exceptional execution at this level, along with consolidated status tracking and exception reporting at the management level. Ongoing assessment of portfolio performance is an integral part of delivering the business value committed in the portfolio plan.

Develop Best Practices to Improve IT Portfolio Performance
Your portfolio is never at a steady state. Budget and revenue requirements change, market conditions dictate new priorities, initiatives fail to deliver predicted results and resource constraints impact timelines. As a result, the portfolio of strategic investments must be reevaluated and reprioritized, often on short notice and without the luxury of long planning cycles.

Trying to manage the portfolio with manual report consolidation, spreadsheets and standalone portfolio analysis tools falls short. The complete integration of portfolio execution and assessment functionality within CA Clarity empowers you to understand in real time how decisions affect portfolio performance, and enables you to develop and deploy best practices for the next round of portfolio planning. Selection criteria are adjusted and reprioritized, new ideas are weighed against existing investments and new decisions are effectively communicated, all within days or weeks rather than months.

Integration with Systems of Record
Managing IT services requires integration with existing IT management systems. CA Clarity IT Portfolio Manager supports integration with leading infrastructure and people management systems-of-record, including CA Asset Portfolio Management, CA Service Desk, BMC® Remedy™ Help Desk and CA Harvest Change Manager.
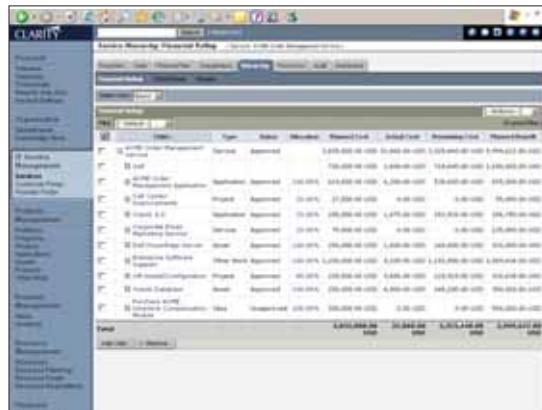
CA Asset Portfolio Management. CA Clarity IT Portfolio Manager provides visibility into asset information to balance the IT portfolio, enabling better decisions and lower overall asset costs. IT asset portfolio management provides visibility of assets that are in production. Coupled with portfolio management, the IT organization has a holistic view of resource requirements across production and new resource requirements. By integrating asset management with CA Clarity IT Portfolio Manager, IT organizations can synchronize aggregated asset lists, including financial information. This asset information can then be mapped to one or several IT services via investment allocations, and tracked alongside projects and resources.

CA Clarity uses Web services connectors to import asset data and related projected costs from CA Asset Portfolio Management. CA Clarity users can select from a full or incremental import of assets. A variety of filter criteria are available, including asset type, class, sub-class, status, active flag and cost type. CA Clarity then presents this detailed asset information in the CA Clarity IT Portfolio Manager module as an asset portfolio. Since many times project decisions can have a significant impact on the long-term cost of assets, CA Clarity enables you to optimize portfolios taking both projects and related assets into consideration.

Figure E

Import asset data and related projected costs from CA Asset Portfolio Management.

CA Service Desk. By integrating service management and CA Clarity, IT organizations can capture time, resource utilization and cost for all incidents. This integrated demand management approach allows you to track incidents within a consolidated services dashboard, thus supporting your organization's need to maintain Service Level Agreements (SLAs) around the delivery of projects. CA Clarity IT Portfolio Manager also provides integration with BMC® Remedy™ Help Desk through the CA Clarity Service Connect module.

Key Features of CA Clarity™ IT Portfolio Manager

Features	Benefits
IT Service Definition	
IT Service hierarchy	Allows IT organizations to establish a hierarchy of IT services based on business needs. IT services may include any combination of investments.
Service portfolio hierarchy	Allows portfolios to be grouped in hierarchies that reflect the structure of the business or of the decision making process.
Cost roll-up	Tracks the cost of child investments for a service, and costs aggregate to parent investments, enabling tracking of the TCO for a given service.
Effort roll-up	Tracks the aggregate work that comprises the service, providing visibility into resources as an investment type.
IT Service investment allocations	Provides the ability to share an investment across several IT services for more accurate chargebacks to the business.
Departments	Allows creation of a departmental hierarchy that facilitates the capture of department-level work, budgets, cost recovery, portfolio and capacity planning, service descriptions and delivery.
Service subscriptions	Enables business units to subscribe to IT services via their department. Customer departments can subscribe to services delivered by their IT department.
Portfolio Modeling and Analysis	
Multiple portfolio types (services, projects, applications, assets, products)	Enables users to track any combination of investments to make fact-based portfolio trade-off decisions to best utilize limited resources, such as budgets and people.
Standard evaluation metrics	Minimizes portfolio definition effort by providing standard metrics for evaluating investments, including NPV, ROI, risk and break-even analysis.
Unlimited custom fields and criteria	Offers through point and click PowerMods the ability to tailor the portfolio inventory and analysis criteria by adding new fields, rearranging forms, creating new pages and adding custom formulas. All PowerMods configurations are automatically carried forward to new releases unlike traditional customizations.
Top-down and bottom-up budgeting	Combines the ease of early stage budgeting through top-down allocation with the accuracy of true cost and true benefit analysis for strategic portfolio performance assessment.
Process control of investments	Connects project portfolio decisions to investment life cycle processes by enabling organizations to define gates at which approval is required for subsequent phases. For example, a new product is evaluated as part of the overall portfolio when moving from the requirements phase to the design phase.
What-If Scenarios and Selection	
Portfolio what-if scenarios	Provides the ability to optimize potential investment decisions without making changes to the plan of record. Allows portfolio managers to include or exclude investments, change start and end dates, adjust budgets, re-evaluate priorities, and filter and sort by any user-defined criteria.
Automatic scenario generation	Saves analysis time by automatically creating investment scenarios based on user-selected criteria. The automatic scenarios return an optimized set of portfolio investments from which users can conduct additional analysis.
Scenario workflows	Provides process automation for the distribution, evaluation and approval of scenarios, including support for simple or complex workflow patterns built in the CA Clarity Process Manager module.
Scenario-based resource capacity planning	Allows organizations to determine the resource implications of investment decisions by evaluating portfolio scenarios in the Capacity Planning feature of the CA Clarity Resource Manager module.
Automatic portfolio content creation	Saves time by enabling portfolio managers to define the contents of a portfolio parametrically, for example including all IT services located in Europe with a book value greater than $500K. Alternatively, managers can assemble portfolios manually by choosing particular investments.
Dynamic portfolio content refresh	Simplifies portfolio maintenance by providing users the ability to automatically reassemble the portfolio based on specified criteria. Portfolio managers decide when and how the portfolio is updated.
System-supported scenario notifications	Ensures complete and timely communication of critical portfolio decisions by enabling portfolio managers to systematically notify all department, resource and project managers of changes when a scenario is implemented.

Key Features of CA Clarity™ IT Portfolio Manager (continued)

Features	Benefits
IT Portfolio Optimization	
Efficient Frontier creation	Provides portfolio managers with advanced decision support capabilities by automatically generating a series of optimal portfolios based on a range of investments and a set of user-defined constraints. Each point on the Efficient Frontier graph represents a portfolio scenario that produces the highest return for the given investment.
Portfolio dependencies	Produces more realistic portfolio scenarios by taking into account dependencies among investments. For example, if service A is dependent on components in service B and C, then CA Clarity IT Portfolio Manager only includes service A in scenarios that also support both services B and C.
Scenario comparison	Speeds decision making by providing comparisons of portfolio scenarios to identify differences in content, cost, benefit and ROI.
Drill-down graphics	Connects strategic portfolio scenarios directly to their underlying investments by allowing project portfolio managers to click from an Efficient Frontier graph point to a detailed listing and explanation of the portfolio contents in the scenario.
Performance Assessment	
Portfolio scorecards	Drives better decisions by providing real-time portfolio performance information in a set of personalized portlets.
Standard portlets	Simplifies deployment by providing standard portfolio assessment views out-of-the-box, including: • Investment details • Balance bubble chart • Cost/benefit summary • Timeline Gantt view • Financial roll-ups • Life cycle stage funnel • Budgeted cost review • Risk vs. reward quadrants • ROI vs. alignment quadrants • Benefits by goal
Configurable stoplights	Allows organizations to define thresholds for any standard or user-defined metrics such as alignment, budget, risk and status to focus attention on under-performing investments.
Exception filtering	Improves reaction time by highlighting investments that fail to meet user-defined performance criteria. For example, a portfolio manager can use filters to show only applications that are expensive to maintain, underutilized and within 6 months of retirement.
Integrations	
Project portfolio management	Offers seamless integration with CA Clarity Project Portfolio Manager, providing dashboard visibility into project status and resources allocated to a project-based investment for a given IT service.
Help Desk (CA Service Desk or BMC Remedy)	Provides the ability to capture time, resource utilization and cost for all incidents related to an IT service.

CA Clarity™ IT Financial Manager

Get Complete Transparency of all Service Costs

Today, IT Finance uses multiple systems to track the total cost associated with IT services. As a result, IT struggles to centrally manage service costs and allocate the aggregated amounts to each customer in a timely, accurate and efficient manner. Meanwhile, managing to budget and accurately tracking and billing the business for services and strategic initiatives has become a critical component of IT governance. The solution? CA Clarity IT Financial Manager. CA Clarity offers you a single system-of-record that maps IT costs to services consumed, dynamically analyzes the impact of budget changes, provides detailed invoices for IT services and provides an audit mechanism for all IT cost changes. For improved ongoing IT service planning, CA Clarity IT Financial Manager also offers capabilities to track and monitor total cost of ownership (TCO) and report all costs and charges through recovery statements.

Comprehensive Budgeting and Forecasting

CA Clarity IT Financial Manager brings you all of the capabilities found in CA Clarity Project Financial Manager, plus a unique set of tools designed to support broader IT financial management. CA Clarity IT Financial Manager allows comprehensive financial planning for all IT investments, whether they are related to individual services, shared services or simply applications or assets. The capability is realized by using the hierarchy of investments involved in providing the service, including assets, projects and applications, and as a result, it enables granular total cost and effort tracking and measurement of providing each service in support of bottoms-up budgeting and forecasting, as well as total cost drill-down analysis at the IT portfolio level. In support of what-if analysis, CA Clarity IT Financial Manager also allows you to create multiple financial plan scenarios and connect them to portfolio scenarios.

Chargebacks for Increased Cost Visibility

The chargeback capabilities in CA Clarity IT Financial Manager enable you to issue chargebacks for IT service costs to specific business units who subscribe to the respective service. This capability provides visibility to all relevant stakeholders

regarding what it actually costs to deliver IT services to the business, thereby creating a stronger partnership between you and your customer in optimizing future IT expenditures. The chargebacks are presented to business units with a unified and detailed invoice for all work performed and include a comprehensive breakdown of all project/service costs, including both labor and non-labor costs. Furthermore, CA Clarity IT Financial Manager offers the ability to leverage previously collected costs to project the total life cycle cost of a service, thereby increasing visibility to long-term service cost of delivery.

Invoicing and Cost Recovery Statements for Business and IT Financial Management and Review

CA Clarity IT Financial Manager allows you to provide a single invoice to the business which details all services delivered by your IT organization. Department representatives can view a list of their invoices and drill down to see the detailed invoice itself, including a pro-forma version of the current period invoice. The invoice is presented in aggregate by service or other top-level investment, and business users can drill down to view the detailed charges for a given investment. They can also view a page showing all the detailed chargeback transactions that relate to specific service costs listed on the invoice, and then approve or reject invoices. If changes to the invoice are required, you can process reversals and adjustments of charges.

You also benefit from these improved analysis and review capabilities. CA Clarity IT Financial Manager provides you with detailed cost recovery statements for all IT services delivered to the business. The recovery statements compare the incurred costs with those that have been charged back (billed) to the business and may be generated for all IT expenditures, by IT departments and by IT service. The ability to compare cost and associated chargebacks enables you to gain insight into costs per service and therefore plan future service provisioning more effectively. This also ensures that you have better visibility into the true costs of delivering various services to your customers.

Key Features of CA Clarity™ IT Financial Manager

Features	Benefits
Financial Planning for All Investments	
Budgets and forecasts can be established for IT services, assets and shared services	All IT investments can have budgets and forecasts. Budgets and costs can also be aggregated through the top levels of the hierarchy for high-level cost review and assessment.
Define detailed forecasts using cost plans	Supports multiple cost plans to represent different scenarios, enabling business and IT to either plan for unpredictable costs, or select a specific service plan to ensure cost management goals are met.
What-if analysis planning	Provides IT with a mechanism to determine potential impact on planning utilizing various what-if scenarios.
Time capture	Integrates seamlessly with the time tracking functionality in the CA Clarity Project Manager module of CA Clarity, allowing users to enter time and route time sheets for manager approval. This information is passed through to the CA Clarity Project Manager to track against budget and to the CA Clarity Project Financial Manager for billing and invoicing.
Complete audit trail	Captures and retains all transactions in a financial period, including reversals. An audit trail of all transactions—including the point of entry (time entry, accounts payable, expense reporting), the data entered, the period incurred and the transaction it applies to—is retained in history.
Complete reporting	Includes standard reports to access the most important and relevant data extracted from financial transactions, including: • Revenue Forecast • Project Billing Transactions Inquiry • Customer Invoice • Resource Billing Transactions Inquiry • GL Allocations • WIP Aging By Customer • Invoice Register • WIP Summary Register • Unbilled Transactions
Multi-currency support	Allows enterprises to define, process, invoice and analyze financial transactions in multiple currencies to support global operations. The multi-currency functionality in CA Clarity allows organizations to invoice clients in their respective currencies, track projects in local currencies and manage financial transactions in their home currency.
CA Clarity XOG	Includes open-standards integration to accounting and billing systems for expense, material, labor and equipment transactions, chargeback allocations invoices and bills.
Chargeback Allocations	
Chargebacks	Provides the ability to chargeback IT costs per service to business units who subscribe to a particular service. Chargebacks may be issued by detailed investments using percentage-based rules.
Chargeback rules	Defines a system of rules used to generate chargebacks, debit transactions and accounting credits.
Single invoice	Offers a customer invoice preview and line item drill down and may be viewed as charges accumulate. Business users can also view a page showing all detailed chargeback transactions that underlie any of the amounts displayed on the invoice. Invoice approvals may be delegated to others defined in the parent-child hierarchy.
Recovery statements	Allows IT to see a detailed Cost Recovery Statement contrasting incurred costs with charged back costs for services provided to a given customer.
Allocation of costs that are not specific to any particular investment	Provides the capability to allocate certain costs to 'overhead' and chargeback accordingly.
Allocation reversals	Allows accounting managers to reverse any past chargeback allocations, either partially or in full. Reversed chargeback allocation can then be resubmitted with updated allocations.
Selectable GL posting periods	Provides the flexibility to allocate chargebacks to any selected fiscal period or to split an allocation over multiple periods.
Cost and Rate Management	
Multiple rate matrices	Provides flexibility in defining costs and billing rates, allowing different rate rules by investment, department, project, client and so forth.
Mark-up assignments	Simplifies billing rate definition by allowing IT Financial Managers to mark-up costs by a specified percentage.
Billing and Invoicing	
Demand billing—time and materials billing	Provides the capability to generate invoices on time-and-material work, choosing the clients and projects to bill. The demand billing worksheet provides users with a simple spreadsheet-like form to review billing transactions, write off and adjust billing items, partial bill and drill into invoice history, contract information and advance billings.
Advance billing—fixed price and retainer billing	Gives organizations the option of billing clients prior to incurring any charges to the project, providing the flexibility to pre-bill clients per contract, allowing companies to adhere to contract billing schedules.
Batch billing	Automates the entire billing/invoicing process for companies with a need for high-volume billing. Using batch billing, organizations can generate a list of investments, departments, or projects, make billing decisions, approve bills and print invoices in one single automated step, all driven by user-defined batch cycles set up to run at weekly, bi-weekly or monthly intervals.
Invoice consolidation	Allows financial managers to establish master-sub project hierarchies to consolidate invoices for the customer and to prepare those invoices in a customer's single billing currency. A single, consolidated invoice reduces billing paperwork and improves payment accuracy.
Pro forma invoice review	Allows financial managers to review and approve billing decisions prior to creating the final invoice to correct errors before final invoice distribution.

CA Clarity™ Business Relationship Manager
Provide Business Intelligence on the Cost, Status and Performance of IT Services

Business Relationship Managers (BRMs) help bridge the divide between your IT organization and the operating executives who depend on it to accomplish their business goals. Whether you call them BRMs, account managers or relationship managers, they provide a much-needed contact point for service level administration, services marketing, customer satisfaction and ongoing customer communications, while at the same time articulating the needs of the business back to IT. BRMs are most effective when they can easily and succinctly communicate the status of current and prospective IT services to the business.

Today, most BRMs struggle to track a myriad of data. Information flows in from a variety of sources, including your service desk, project and portfolio management, change management and asset management, systems, and form documents ranging from spreadsheets to text files.

CA Clarity Business Relationship Manager makes it easy for your relationship managers to bring this disparate information together in a personal portal for each of their executive-level business customers. These portals display services, monitor performance and costs, forecast demand and track the IT service consumption of each business unit. The result:

- Your IT services are aligned with your business needs.
- Demand on IT services is reduced.
- Your business relationship managers can explain and support the value of IT.
- It's easy to check the status of current and future initiatives.

Show Business Units the True Value of IT Services
CA Clarity Business Relationship Manager provides you with a broad, business-centric view across multiple services or departments via a Customer Portal. The Customer Department Dashboards provide more detailed information on the status of IT services, metrics and financials, information needed for good collaborative decision-making and to help increase the business value of your IT investments. Departments can subscribe to these services through the CA Clarity™ IT Portfolio Manager.

For example, the business relationship manager for any department in your company business can subscribe to the CRM and financial reporting services. Their dashboard would include a roll-up of information from both services and drill-downs for service-specific information. Each dashboard includes a set of standard metrics: customer satisfaction, service level agreement (SLA) violations, SLA threshold, number of incidents and a set of KPIs.

The Customer Portal displays all of the IT services delivered and costs charged to any given business unit. It includes several views: The "Delivery" view focuses on service metrics, including scorecards, KPIs and issue escalation stoplights and the "Charges" view shows service costs and invoices.

Customer Department Dashboard
It's easy to create a set of dashboards to support departments that use a given set of services, which they can subscribe to through CA Clarity IT Portfolio Manager. For example, the BRM for the sales department may subscribe to the CRM and financial reporting services. Their dashboard would include a roll-up of information from both services and drilldowns for service-specific information.

Improve the Delivery of IT Services
The Provider Portal, the internal IT view of similar information, gives your IT managers a unique tool for continually improving IT service delivery. It includes a roll-up of IT services, complete with status details, for each individual business unit or department that is using those services.
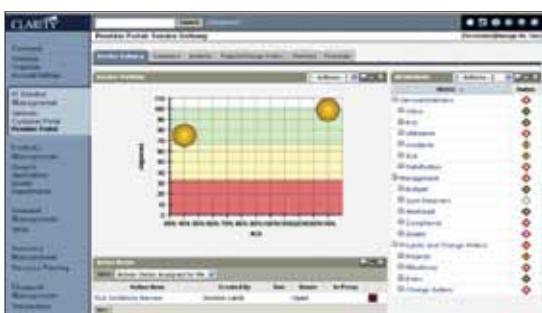
The Provider Portal also includes metrics, customer detail, resource information, financials and third-party integrated service request information. Stoplights are there to notify your IT managers of any areas that need immediate attention.

Figure C

View a detailed roll-up of all IT services offered across multiple customer departments.

View a roll-up of IT services from a provider perspective for continual monitoring of metrics.

Similar to the customer dashboard, CA Clarity Business Relationship Manager includes an IT provider dashboard that supports the continual monitoring of metrics between IT and your business units. It displays high-level status information and analyses of the services provided by individual IT departments.

Finally, service-specific dashboards are available to your IT managers to track detailed information regarding a single service. This includes budget vs. actual, key metrics from multiple external systems, change requests, incidents and subscription information.

Key Features of CA Clarity™ Business Relationship Manager

Features	Benefits
Customer portal	Provides your IT relationship manager with information about customer services, including customer satisfaction, SLA and cost information.
Customer department dashboard	Provides an overview of the services an individual business unit subscribes to.
Provider portal	Helps your IT managers understand the services being delivered to business customers. Includes tracking of customer satisfaction, SLAs, costs, budgets, business alignment and resource utilization.
Provider department dashboard	Provides high-level status information and analyses of services provided by individual IT departments.
Individual service dashboard	Offers KPIs and metrics on the status of an individual service.
Departments	Allows you to create a departmental hierarchy in the CA Clarity IT Portfolio Manager that lets you capture department-level work, budgets, cost recovery, portfolio and capacity planning, service descriptions and deliveries.
Service subscriptions	Lets your business units subscribe to IT services via the CA Clarity IT Portfolio Manager.

CA Clarity™ Risk and Controls Manager
Provides a Global Repository for Managing Enterprise Wide Risk and Controls

With today's rapidly increasing number of industry regulations (PCI, SOX, HIPAA, Basel II, State Identity Theft and GLBA, just to name a few), your enterprise needs to pay more attention than ever to the issue of risk and controls management. The solution? CA Clarity Risk and Controls Manager.

CA Clarity Risk and Controls Manager provides you with a global repository that easily maps your internal policies, procedures and SLAs, as well as external regulatory requirements for existing or new risks and controls. It allows you to greatly improve the overall quality of your controls and increase your capacity for continuously monitoring, managing and reporting on them. By providing you with a dashboard view of your risks and controls, the solution streamlines your compliance process, replacing the typical unsustainable mix of multiple systems and ad-hoc spreadsheets, charts and documents.

Maintain a Global Repository

CA Clarity Risk and Controls Manager features a global repository that provides you with a foundation for continuously optimizing your processes for identifying risks and controls. It not only stores risk and control information, but also delegates appropriate assets to risks. It includes detailed information such as test plans, testing results/evidence and the remediation required to resolve any issues associated with your controls. The repository also links control information with regulations, your internal policies and procedures and best practices.

Optimize Controls with Built-In Industry-Standard Frameworks

CA Clarity Risk and Controls Manager includes the control and regulatory mappings provided by the Unified Compliance Framework (UCF), along with industry standard frameworks such as CobiT, COSO, NIST, and ISO17799:2005 to allow your organization to report on risk and controls from several different perspectives. With this capability you can easily identify which efforts support compliance-related activities and rapidly integrate future business and regulatory requirements into an enterprise-wide view of controls. CA Clarity Risk and Controls Manager eliminates the need for you to procure additional point solutions.

Continuous Monitoring and Reporting

CA Clarity Risk and Controls Manager includes all of the tools you need to monitor and report policy and compliance violations across your enterprise, with the dashboard giving your managers the visibility they need to streamline the decision making process.

Managers can report on testing results, remediation plans, risks associated by controls, controls associated with specific regulations and other critical aspects of governance, risk and compliance. As your company determines its risk indicators and the information associated with controls, CA Clarity Risk and Controls Manager provides visibility into these metrics.

Manage Resources Associated with Controls

With an aggregated, summarized view of your human and financial resources that are allocated to controls implementation, testing, remediation and risk assessment, you can better manage the staff and project costs of dealing with risks and controls.

Available as a CA Clarity Solution Pack

CA Clarity Risk and Controls Manager is delivered as a solution pack, combining the CA Clarity PPM system, professional support from CA Technology Services and comprehensive out-of-the-box content. This content includes CA best practices dashboards, templates and workflows, as well as CobiT and the Unified Compliance Framework (UCF). CA is also leveraging its partners to help bring the solution to market and customize it to meet individual companies' needs.

Key Features of CA Clarity™ Risk and Controls Manager

Features	Benefits
Import existing controls	Define project and product portfolio types for use during the planning phase.
Create role-based views	Allows users to lock down access to control information.
Auditable, flexible and configurable workflow capabilities	Facilitates the tracking and alerting of changes you make to controls.
Capture, score and prioritize risk-based on specific risk management methodologies	Offers a highly configurable environment that can be tailored to almost any risk methodology. A powerful workflow engine automates Risk Management Assessments across your organization.
Map risks to existing organizational controls	Builds risk associations that provide context as to why these controls need to be managed.
Map risks and controls to regulations	Using pre-defined mappings of controls to external regulations and standard industry frameworks, your organization can easily produce reports that associate your own controls to these standards.
Define, measure and report against corporate policies, procedures, standards, and guidelines, as well as business requirements such as a Service Level Agreement	Translate Policy requirements into control activities and monitor for policy violations across your enterprise. Also manage your strategic business relationships through the creation and monitoring of Service Level Agreements or other contractual arrangements.
Create a best practice repository and map these practices to existing controls	Track and measures your performance against these best practices to support continuous improvements within your organization.
Document control	Built-in access control and document management features ensure the integrity of testing work-papers, while the check-in/check-out system built into the platform can help you track who has been accessing what and when.
Manage all aspects of internal and external audits to the resource and document level	Fully automates many aspects of a corporate audit function.
Includes and utilizes industry standard control frameworks	Supports COSO, CobiT and NIST standards.
Powerful reporting capabilities	Provides the "spreadsheet view", as well as a variety of advanced reporting capabilities. Graphs and views are interactive, and they support drilling down to the information that is relevant to a particular role within your organization.

CA Clarity™ Studio

Configuration—Not Customization—Delivers Application Extensibility

The CA Clarity Studio module allows you to tailor CA Clarity to your own business needs and to develop and deploy local configurations and personalized user interfaces. You can use it to create a work environment in which information is delivered, and actions are taken, in ways that are meaningful to your users.
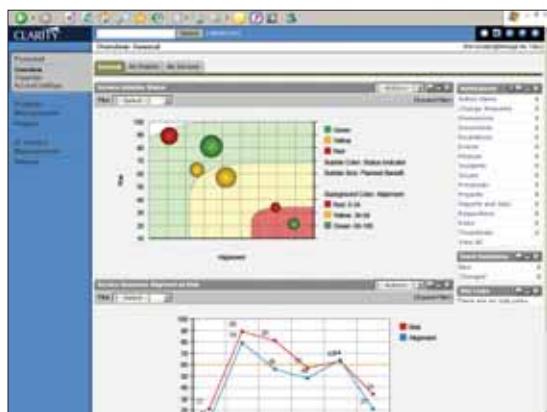
To increase productivity, your organization needs a single system for consistency and control. At the same time, your departments, business units, partners and employees who are sharing the system each have their own unique requirements. CA Clarity Studio takes care of both. The point-and-click configuration allows you to create and deploy portals, dashboards, menus and business objects that adapt the software to your business processes—not the other way around.

CA Clarity Studio brings you many benefits, including:

- The availability of real-time information through role-based dashboards for users at all levels.
- A reduced need for training and faster new user adoption due to tailored menus, pages and views that use familiar language and processes.
- The ability to easily tailor business objects, such as portfolios, projects, resources and ideas, without programming or customization.
- A way to facilitate local management along with global governance by using System Partitions™ to support multiple local configurations in a single application instance.
- Increased productivity because users can personalize their work environment, adding and customizing dashboards with portlets, views and graphs that help them to understand and execute their work better.

Create Portlets and Dashboards

CA Clarity Studio allows your power users and administrators to assemble and publish dashboard pages to users across your enterprise. Each page is comprised of a set of portlets—small windows of information presented as graphs, tables or web page snippets—that appear automatically on the desktops of CA Clarity users with the appropriate access privileges.

Users can then personalize their dashboard pages by choosing which portlets to show or hide and where to show them on the page. Examples of dashboard pages include:

- An executive dashboard that brings together high-level analytics concerning your organization's portfolio, including views into project schedules and risks, alignment of programs to your corporate goals, ROI graphs and resource utilization.
- A portfolio scorecard with color-coded status indicators for performance, quality, cost and schedule.
- A program metrics dashboard that summarizes status, cost and variances for a selected set of high-priority initiatives.
- A program management office portal with announcements, success stories, links to articles on new methodologies and a list of active projects.
- A demand management dashboard to capture project requests, service requests, incidents, ideas for new products and services, strategic initiatives and requests for support.

CA Clarity Studio portlets access their information from within the CA Clarity environment, other databases within your enterprise and external sources available in HTML, such as business news and network status information. Your administrators can create new portlets based on business objects or queries. Users can populate their portlets with graphs, tables, workflows, best practices, documents and forms—all updated and available in real time without the need to execute and review reports.

A portlet's presentation is easily manipulated using point-and-click configuration settings available to both administrators and end users, allowing them to:

- Show information in a bar, bubble, column, funnel, line, pie and scatter graphs.
- Use Gantt graph and progress bars to visually communicate schedules, progress and phase-gate status for items such as project tasks, program durations and asset and application life cycles.
- Leverage out-of-the box histograms for tracking resource utilization.
- Build scorecards by segmenting continuous data into groups and applying status icons such as red-yellow-green stoplights, approved-unapproved checkmarks and leading-steady-trailing performance indicators.
- Create simple or complex filters that allow users to view just the information that is important to them.
- Provide real-time drill-down links from portlet contents to business objects such as portfolio investments, resources, projects and ideas.

Personalize the CA Clarity Environment

The power of CA Clarity Studio extends beyond creating powerful dashboards with custom portlets. You can easily configure and extend the user interface and navigation to improve productivity, reduce training and support costs, and provide real-time personalized content. Using the point-and-click browser interface, your administrators can:

- Add new dashboard pages to the system and choose what information gets displayed, who has access to it and how they can act upon it.
- Personalize the main menu navigation by organizing and labeling menu items to match your company's terminology and processes, and do so in multiple languages.
- Apply a distinctive design to the CA Clarity user interface to align it with the look and feel of your other applications.
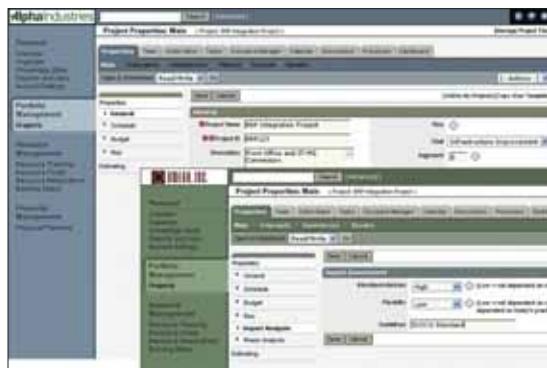
Support the Distributed Organization through System Partitions

Many businesses find that centralization is necessary to achieve alignment with business objectives, enforce corporate standards and regulatory compliance and control costs. Now it's possible to achieve all that without constraining the autonomy of your departments, business units, partners and employees. System Partitions are an architectural breakthrough that allows organizations to achieve the full benefits of both a centralized and a decentralized application environment.

System Partitions support the local management of fields, forms, processes, methodologies and branding. At the same time, all data resides in a single system, allowing for transparency, process sharing, and global governance and oversight. System Partitions allow multiple local configurations with delegated administration. Users have their own system partition with access to view data. Each partition can be configured to have a unique look –and feel for user interfaces, layouts, numbering schemes, business processes and more.

System Partitions present the user interface and portlet appropriate to each group in a distributed organization.
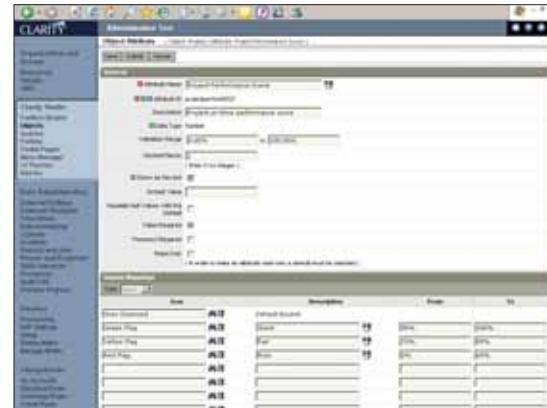

Tailor CA Clarity to Your Own Business Needs

CA Clarity Studio makes it easy to configure and extend business objects such as portfolios, applications, assets, resources, projects and ideas, making it extremely simple to tailor the application to your unique business requirements across your entire organization.

Users can add additional business objects to the system as top-level or sub-objects; configure these with user-defined fields, forms, processes and portlets; and associate these objects with projects, tasks, resources, portfolios or other standard objects. You can also define and lay out forms with a mix of standard and user-defined fields, specify validation rules and default values, create list views with filters and sorts and establish hyperlinks between objects.

Figure C

Easily add, edit, rearrange and workflow-enable user-defined fields in CA Clarity Studio.

Your user-defined fields and objects are distributed to all CA Clarity interfaces, including the user interface, Open Workbench, Microsoft Project and the CA Clarity XOG for application integration. CA Clarity XOG fully supports all user-defined objects that are process, portlet, dashboard, security or power-filter enabled.

Any field or object you create is immediately available in the process engine, allowing workflow designers to provide input and output from your organization's key processes, through a simple point-and-click web interface. Best of all, configurations are automatically and seamlessly carried forward to future versions of CA Clarity.

Typically, this level of customization requires IT resources or costly consultants. With CA Clarity Studio, your users are empowered to build and manage their own CA Clarity personalization with a set of intuitive and easy-to-use tools, minimizing the impact on your valuable IT resources.

Key Features of CA Clarity™ Studio

Features	Benefits
Portlet and Dashboard Creation	
Point-and-click portlet construction	Delivers powerful end-user portlets that display graphs, tables and live HTML content without the need to design, run and distribute traditional reports. CA Clarity users can build their own custom dashboards by selecting from a set of standard and company-specific portlets, allowing them to access and drill into the information critical to their success from a single, consolidated view.
Standard portlets	Lets users quickly build personalized dashboards using 40 standard portlets including Action Items, My Projects and Timesheets to Approve.
Custom portlets	Gives administrators the ability to create portlets based on business objects or queries.
Configurable actions	Enables admin users to place a button or list actions associated with a custom object to specific portlets, giving end users easier access to frequently used functions.
Multiple graph types	Displays graphical information in the most appropriate format by providing bar, bubble, column, funnel, line, pie and scatter graphs, all rendered in PNG or SVG (Scalable Vector Graphics) format.
Drill-down graphs	Enables users to quickly and easily access the underlying data displayed in graphs by allowing your administrators to define links between graph data and objects such as projects, resources, portfolios etc.
Editable grid portlets	Allows fast, direct editing of information in grid-based portlets such as the percent allocation of multiple resources on a project or the assignment of a group of incidents to be worked.
Hierarchical grids	Lets users configure the views for hierarchical grids, including drill-down capabilities.
Multiple data displays	Simplifies information delivery by displaying quantitative data in easy-to-understand visual indicators such as Gantt graph bars, phase progress indicators, histograms and colored stoplight icons.
Selectable filters	Allows a portlet to serve multiple functions by enabling users to filter data on any number of pre-defined, configurable parameters.
Filter portlets	Lets users configure a toolbar or section filter by creating a specific portlet that filters content across all other portlets on a given page. Additionally, the attributes values on the filter portlet can be configured to repeat itself across multiple pages.
Parameterized lookups	Provides the ability to filter an attribute's list of values within a dynamic query lookup based upon values of other object attributes. For example, when a value is selected for a country attribute, a parameterized lookup can be configured for a state attribute so it only displays the states belonging to a selected country.
Precision Security™	Reduces administration costs by providing real-time information portlets with built-in organizational breakdown structure security. Once privileges for viewing information are assigned through a configurable, flexible hierarchy, your users see only the information for which they have access. Portlets automatically generate graphs and tables based on the privileges of the current user.
Configuration security	Enables admin users to define whether a portlet can have its view configured by end users.
Export to Microsoft Excel	Supports further analysis of real-time information by exporting grid-based portlets to Microsoft Excel, with all formatting intact, in a single click.
Oracle and SQL Server database connections	Consolidates critical information into unified portlet views by tapping into non-CA Clarity data sources across your enterprise, such as project accounting and finance systems.
Configuration	
Configuration, not customization	Empowers your business users to tailor CA Clarity through the creation and configuration of user-defined fields without the need for programming, scripting or customization.
System partitions	Supports distributed and diverse organizations by allowing local configurations within a single global instance of CA Clarity. Each partition can be configured with its own fields, forms, processes and branding.
Configuration functionality	Allows easy tailoring of the business objects in CA Clarity, such as Portfolios, Projects, Resources and Ideas, to include the fields, filters, links, rules and layout critical to your company's processes.
User-defined object creation	Allows your users to further configure CA Clarity without the need for expensive customization. Business users can add additional business objects to the system; configure these with user-defined fields, forms, processes and portlets; and associate these objects with projects, tasks, resources, portfolios or other standard objects. Users can modify and delete these objects and fields as business requirements change.

Key Features of CA Clarity™ Studio (continued)

Features	Benefits
Configuration	
Calculated attributes	Enables users to define an attribute where its value is determined from other values on the object. Many functions (e.g., Sum, Multiply, Average) are provided to make it easy to configure how the attribute value is determined, based on your business needs.
Auto-numbering	Allows admin users to configure an attribute with auto-numbering, which generates the value for an attribute based on a user-configured scheme. The auto-numbering can be configured on partition for increased flexibility.
Indicator images	Increases display flexibility by allowing users to configure images displayed for specific Studio attributes.
Document attachments	Enables complete knowledge recording and sharing by supporting document attachments in any standard or user-defined business object.
Centralized user-defined field control	Simplifies administration by centralizing the management of all user-defined fields within CA Clarity Studio. User-defined fields are automatically deployed to the user interface, the process engine, Open Workbench, Microsoft Project and the CA Clarity XOG.
Future-proof modifications	Makes upgrades to future versions of CA Clarity seamless, since configurations are automatically carried forward.
Point-and-click custom portlets	Enables your organization to easily collect, aggregate, analyze and display important information by using a combination of configurations and portlets. Through a point-and-click user interface, administrators can create user-defined fields, deploy them in forms on specific pages and build portlets to graphically communicate the information collected.
User Interface Personalization	
User interface customization	Provides a consistent user interface across your applications by allowing you to configure CA Clarity to display colors, logos, menus and pages with your corporate look and feel.
New dashboard page development	Easily extends CA Clarity capabilities by creating new pages that organize and display information in useful ways, such as a Project Management Office news page, an Executive Dashboard and a Program Issues Tracking work space.
Menu manager	Reduces training and support costs by organizing the CA Clarity menu navigation to match your company's terms and processes.
Infrastructure	
Complete import/export support	Facilitates the development, testing and distribution of portlets, configurations and UI changes by allowing each to be exported and imported through the CA Clarity XOG. CA Clarity XOG fully supports partition models, objects, queries, portlets, portlet pages and menus.

CA Clarity™ Process Manager
Automate Your Business Processes to Save Time and Money

CA Clarity Process Manager gives you a holistic way to optimize and standardize your business processes across your entire organization. Because it lets you manage all the characteristics inherent in each process your business processes become more automated, adaptable, cohesive, collaborative and reusable. The result: your company experiences increased business agility and lower process costs, as well as greater innovation and growth.

Remove Bottlenecks and Reduce Cycle Time

CA Clarity Process Manager adapts itself to your company's unique business processes, linking a knowledge-based approach with structured workflows. Workflow improves the quality of your processes, increases compliance and promotes consistency. It also decreases your time-to-completion and boosts customer satisfaction. Because CA Clarity monitors and measures performance against a number of KPIs, your company benefits greatly from continuous process improvement.

CA Clarity Process Manager also minimizes wasted time on assignment hand-offs and increases overall productivity by allowing your IT managers to track where each item is in the process and take immediate action as unexpected problems crop up. New ideas can be automatically routed to reviewers and approvers through a pre-defined path.

Alerts are automatically sent to anyone who needs to take action, eliminating the need for endless reminder emails and phone calls. Workflow notifications can include:

- Events, such as approvals and rejections
- To-dos, such as new assignments and action items
- Notes to fully explain follow-up actions
- Time submission and approval
- New documents added to the system

Workflow supports role-based assignments, so you can automate the selection of appropriate workers to perform action items or receive notifications.

Achieve Real-Time, End-to-End Business Processing

Attaining maximum efficiency for your organization requires a combination of good, solid planning as well as the ability to respond quickly to changes and to integrate successfully with third party applications. The CA Clarity Process Manager support for event-driven processes gives you the flexibility and agility you need to respond as quickly as necessary. For example, when a milestone is achieved or a phase is completed, a CA Clarity workflow can instantly start the review process to speed project delivery. Real-time job scheduling allows easy inter-application integration so users can share and update data as needed for process completion.

Create Powerful Workflows to Automate Your Business Processes

CA Clarity Process Manager provides you with graphical workflows so you can visually control and track the flow of ideas, documents, resources, time sheets, forms and investment proposals.
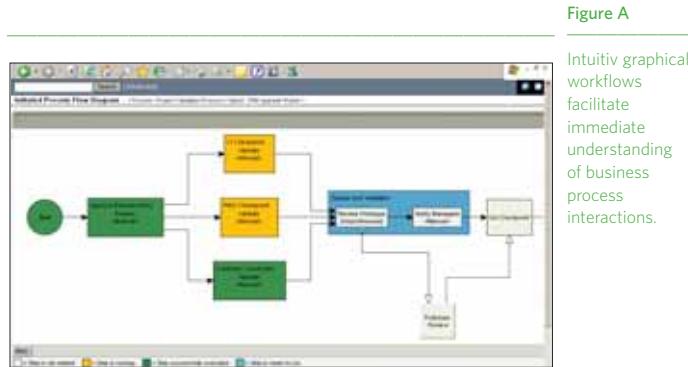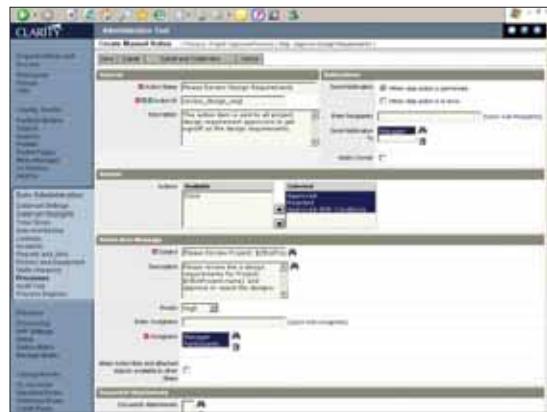
Your process designers can easily create workflows and make them available to all users throughout your enterprise. These workflows can take actions on all objects in the system. For example, project templates can use workflows to automate the creation of projects and to ensure that processes follow the right procedures, such as what work specific people can do and how and when they can do it. Organizational breakdown structures can drive these templates, which mean that different departments or business units can follow their own unique business processes.

CA Clarity Process Manager offers the following out-of-the-box processes to get your workflow designers up and running:

- Document Approval
- Time Sheet Approval
- Idea Approval
- New Product Development

Not only is CA Clarity Process Manager easy to use, it's also powerful, providing nine control flow patterns to meet the requirements of your most complex and multi-faceted processes. The process engine can access any field added through the PowerMods™ tool CA Clarity Studio, providing complete visibility into all workflow data.

CA Clarity Process Manager also supports phase-gate methodologies, ensuring that best practices are adhered to throughout your organization. This enables a gate review at the end of each project phase and allows your review committees to specify the conditions for exiting from the gate. As each gate is passed, the workflow can be configured to automatically copy the next set of tasks, documents, roles, budgets and forms from the template into the project, creating all of the underlying information necessary to complete the current phase.

Leverage Open Process Standards
CA Clarity Process Manager supports Business Process Management Language (BPML), an industry-standard, comprehensive means of specifying the processes of an enterprise. To facilitate exchanging process information with other systems, CA Clarity Process Manager is seamlessly connected with the CA Clarity XOG service, which includes published, open-standards-based interfaces that allow you to import and export processes and load standard or third party processes.

Key Features of CA Clarity™ Process Manager

Features	Benefits
Business Process Management Features	
Graphical workflow	Visually controls and tracks the flow of investments such as projects, applications, assets, products, ideas, documents and more. Using the graphical workflow status indicator, users can easily track where an item is in the process to remove bottlenecks and reduce cycle time.
Workflow-driven project creation	Provides a good way to adhere to best practice processes by embedding workflows within your project templates. When projects are created, the workflow automatically copies in the appropriate information, such as tasks, roles, documents and forms.
Standard out-of-the-box processes	Allows your process designers to get up and running quickly by using out-of-the-box process templates for timesheet approval, idea approval, document approval and new product development.
Powerful process configurability	Enables your customers to create workflows that address their unique and complex business needs. They can configure (not code) rules that use data from multiple objects. Steps within a workflow can be configured to have multiple actions that lock or set fields, send action items, run a job, call a third party application or call another CA Clarity process.
Process Validation	Checks and gives guidance to your process designers in detecting workflow errors and definition time, reducing the time it takes to create and maintain workflows and reducing the chances of costly production errors.
Phase-gate process support	Facilitates a gate review at the end of each project phase and allows your review committee to specify the conditions for exiting from the gate. As each gate is passed, the workflow can be configured to automatically copy the next set of tasks, documents, roles, budgets and forms from the template into the project, creating all of the underlying information necessary to complete the current phase.
Event-driven business processes	Enables the rapid assembly, deployment and management of event-driven business processes for efficient operational response. Workflows can be started manually or automatically.
Real-time job scheduling	Improves your operational efficiencies by supporting end-to-end business processing to address the integration requirements of your entire business process. Real-time job scheduling can integrate with existing jobs or run new jobs to evoke stored procedures or Java programs.
Configurable forms	Allows any form to be configured and incorporated into a workflow to achieve the highest possible level of business process automation.
Access to fields added through PowerMods™	Gives CA Clarity Process Manager complete visibility into all relevant workflow data.
Automatic routing	Decreases the time to completion by automatically routing information to reviewers and approvers through a pre-defined path, informing people of what is required of them.
Automated notifications	Eliminates the need to send endless reminder emails and spend unnecessary time on the phone by automatically notifying users about new or changed events, action items, document posts, timesheet submittal and approvals.
Action item escalation	Resolves overdue action items using reassignment rules. Escalations can be configured at a process or step level.
Role-based assignments	Automates the selection of appropriate workers to perform action items or receive notifications.
Inclusion of nine control flow patterns	Enables flexible workflow activity execution with support for Sequence, Parallel Split, Synchronization, Exclusive Choice, Simple Merge, Advanced Branching and Synchronization, Multichoice, Synchronizing Merge, Multithreaded and First In Line control flows.
Standards	
CA Clarity XOG	Exchanges process information with your other systems through published, open-standards-based interfaces to facilitate importing and exporting processes and loading standard or third party processes.
BPML support	Adheres to an industry-standard, comprehensive means of specifying the processes of your enterprise.
Performance, Security and Monitoring	
Monitoring and measurement of KPIs	Provides you with the benefit of continuous process improvement and the ability to monitor the health of your process engine infrastructure.

CA Clarity™ Connect

Seamlessly Connect CA Clarity with the Enterprise

CA Clarity Connect is a family of standard integrations to applications that supplement the functionality of the CA Clarity system, including the CA Clarity Schedule Connect module, which provides integration with Open Workbench and Microsoft Project, and the CA Clarity Service Connect module, which provides connectors for ITSM applications such as CA Service Desk and BMC Remedy Help Desk.

CA Clarity Schedule Connect
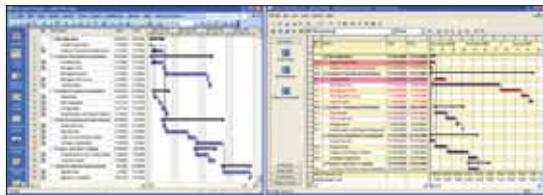
Although CA Clarity provides extensive project management functionality through its web interface, often project managers want to harness the power of their desktop computers for detailed planning and scheduling. CA Clarity fully supports this through CA Clarity Schedule Connect, the client-server connection to Open Workbench and Microsoft Project.

CA Clarity Schedule Connect provides you with the industry's most comprehensive and efficient connection between desktop and server. Bidirectional integration between CA Clarity and both Open Workbench and Microsoft Project means that users simply check out a project from the repository, edit it locally, then save it back without the need for time-consuming file conversion steps. Changes made in CA Clarity and on the desktop are automatically synchronized, so users are always working with the most up-to-date information.

Furthermore, users spread across the country or across the globe need fast access to their project information. Rather than using transaction-heavy RPC protocols, CA Clarity Schedule Connect communicates via standard HTTP, just like the connection to the user's web browser. As a result, bandwidth is reduced, no additional firewall ports need to be opened, and proxy servers and SSL are fully supported with no additional configuration.

CA Clarity Service Connect

CA Clarity Service Connect supports the CA Clarity Demand Manager module by providing a series of pre-built connectors to ITSM applications, significantly reducing the cost and effort required to connect the service and project functions within IT.

Through CA Clarity Service Connect integrations with ITSM applications, CA Clarity Demand Manager provides you with a consolidated view of incoming demand and resource usage, giving you with a holistic view of the utilization of your organization's most critical assets—your staff.

CA Clarity Service Connect provides interfaces to ITSM applications to schedule queries of selected incidents, validate data, handle errors and provide reporting to ensure the right information is transferred at the right time.

In addition, CA Clarity Service Connect provides complete mapping functionality that exposes the data fields of both the CA Clarity and ITSM applications to the interface designer, allowing for simple and error-free creation of translation tables. CA Clarity Service Connect makes joining the service and project worlds of IT effortless.

Figure D

CA Clarity Service Connect provides standard connectors for integrating help desk applications with the CA Clarity™ Demand Manager module.

Figure A

CA Clarity Schedule Connect provides seamless bidirectional integration with both Microsoft Project and Open Workbench.

Key Features of CA Clarity™ Service Connect

- Connect seamlessly to IT Service Management (ITSM) applications such as CA Service Desk and BMC Remedy Help Desk.
- Create and schedule queries to extract incidents selected by priority, category or other qualifiers.
- Use mapping functionality to easily create translation tables between CA Clarity and help desk fields.
- Create data validation and error handling rules to ensure quality.
- Create unidirectional interfaces to obtain closed incident tickets for costing and analysis.
- Create bidirectional interfaces to access open incident records, to assign resources, to disposition tickets, to promote unplanned work to project tasks and to forecast demand.

Key Features of CA Clarity™ Schedule Connect

- Connect seamlessly to both Open Workbench or Microsoft Project. Communicate from client to server with low-bandwidth, easy-to-maintain HTTP drivers.
- Support proxy servers, secure connections and WANs.
- Share a common resource pool whether working in the browser or on the desktop.
- Make changes in Open Workbench and Microsoft Project that automatically update all CA Clarity functions, such as time posting, capacity planning, project cost accounting and portfolio management.
- Create, view and change project dependencies without opening all linked

CA Clarity™ Core
Take Advantage of Seamless Collaboration, Easy Document Management, Rich Portal Functionality and Powerful Reporting

The CA Clarity modules contain a set of core services that empower your users to effectively collaborate, manage documents, build personalized dashboards and create and analyze business information.
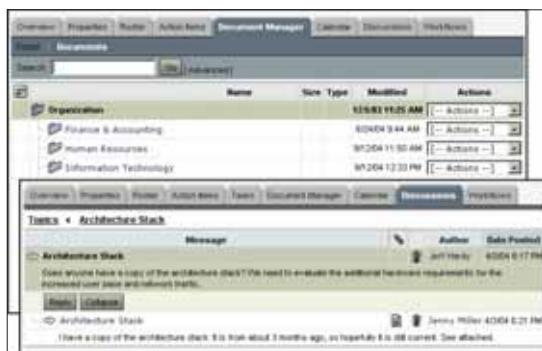
Provide a Collaborative Environment
CA Clarity Core services allow your global teams to work together on any type of business initiative. Users can:

- Resolve issues—Team members can establish discussion threads to post questions and answers, share documents and make decisions.
- Manage project events and action items—Users share a calendar containing project-specific events, milestones and to-dos.
- Tap into existing knowledge—The global Knowledge Store, a common repository for documents and information, provides a perfect location for your company forms, templates, best practices and reports.

Securely Store, Access and Manage Documents
CA Clarity Core services allows your users to easily store and share documents. Administrators can use the Precision Security™ features to secure documents not only by user, group or role, but also by organizational breakdown structure , ensuring that everyone in your enterprise has access to the documents they need and nothing more. With document management, users can:

- Control document versions—Users can track who checked out documents and when, track the history of a document and access and manage prior versions of documents.
- Use powerful search functionality—It's easy to conduct searches on both structured and unstructured data within documents. Precision Security ensures that the search returns only information the user is authorized to view.
- Route documents with workflow—The CA Clarity Process Manager module works in conjunction with the CA Clarity Core document management functionality to route documents for review and approval using standard or customized workflows. This functionality helps your team members worldwide make informed decisions faster, eliminating time-consuming meetings and email exchanges.

Use Portlets and Dashboards
CA Clarity provides you with a rich set of portal functions that allow users to create their own custom dashboards. Each dashboard is comprised of a set of portlets—small windows of information presented as graphs, tables or web page snippets—that are built and deployed by CA Clarity Studio power users.

The portlets get their information from the CA Clarity environment, other databases in your enterprise and external sources available in HTML format, such as business news and network status information. Precision Security is automatically applied, ensuring that your users see only the data for which they are authorized.

You can configure portlets to deliver business intelligence in meaningful ways. Using extensive filtering, sorting and charting features, you can create insightful reports on key metrics such as cost, benefit, budget, status, risk, time, duration, availability and alignment.

Raise Business Intelligence
Gathering and interpreting your company's portfolio, project, resource and financial data to arrive at meaningful conclusions can be a painful process, especially if yours is a global business. CA Clarity simplifies it by providing you a more structured way to view and understand that data.

A fully integrated reporting engine contains deep data visualization and analysis capabilities. Standard reports are seamlessly embedded throughout the entire software solution and are readily accessible for every user to answer key questions about their work and business. With reporting and analytics, your users can:

- Drill down from reports—Simply follow links to navigate to any relevant section or page within a report or to a completely different report.
- Receive role-based results—What's important to a project manager may not be relevant to upper management. That's why the role-based personalization function gives users one-click access to every report relevant to them.

Behind the comprehensive reporting and analytics service is the CA Clarity data mart, which provides your company with an easy way to create summary and detailed data reports. The data mart helps authors create multidimensional reports based on logical data and presented in terms that are familiar to business users.

The CA Clarity collaboration, document management, personalized portal and reporting services provide your company with a foundation for effectively capturing, communicating, analyzing and leveraging its intellectual assets, to making it more efficient, effective and competitive.

Key Features of CA Clarity™ Core

Features	Benefits
Collaboration	
Virtual team workspace	Allows your teams to work together on any type of business initiative, from the review and approval of a document to the delivery of a complex project with geographically dispersed participants. Users can share and route information, provide feedback and approval and resolve issues in a single, secure environment.
Centralized knowledge store	Increases efficiency by leveraging your organization's intellectual assets, which are captured and centralized in one location.
Discussion forums	Allows your team members to resolve issues and facilitate decision making through online discussion threads.
Calendar, events and action items	Helps users organize their daily work with personal and project calendars, event listings, milestone tracking and action items.
Document Management	
Robust document management	Eliminates multiple stores of key information by providing a central, structured document repository. Organize documents in folders and subfolders, share them with appropriate individuals by setting permissions, track versions and route documents for review and approval.
Sophisticated full text content search	Empowers users to find the right information quickly by tapping into your organization's existing knowledge base. Users can search through the Clarity database for both structured and unstructured information within documents, calendar events, action items and discussions.
Workflow enabled	Automates routing and approval by exposing documents to the CA Clarity Process Manager, so administrators can create simple or complex workflows to be deployed throughout your enterprise.
Portals	
User-configured dashboards	Gives users the power to view information in the most useful ways by providing a selection of portlets that can be assembled into personal dashboards.
Portlet tailoring	Gives users the ability to easily create any business view of portlet information required to support decision making. Users can set filters, re-sort information, add or remove columns, change graph types and otherwise tailor portlets to meet their needs.
Portlet printing	Allows users to easily distribute information by printing portlet content as standard reports.
Reporting and Metrics	
Clarity data mart	Abstracts Clarity data into a familiar and logical presentation for creating reports, either within the CA Clarity system or via third party reporting and analysis tools.
Numerous standard reports	Provides readily accessible reports that answer key questions about work and business, including: • Budget/Forecast Analysis • Resource Assignments • Key Tasks and Milestone Status • Resource Bench • Project Analysis and Profitability • Timesheet Detail
Currency conversion	Provides a single master currency for reporting and analysis. Multicurrency transactions are appropriately converted to the home currency when the data mart is populated.
Organizational Breakdown Structure	Allows you to configure roll-ups and summary levels based on your organization's units, locations, divisions, programs or any other criteria you choose.
Stoplights	Connects your business data to red, yellow and green stoplights, providing a visual alert based on a project or program's risk, status, issues, budget or other user-configurable key process indicators.
On-demand report generation	Makes it easy to extract relevant and up-to-the-minute data to produce reports on demand.
Drill-down reporting	Provides links for navigating to business reports, specific sections or pages within the same or different report, or to new reports.
Role-based reporting	Gives users one-click access to reports that are relevant to them. Users see only what they need.
Export to Microsoft Excel	Provides a simple way to conduct additional analysis by downloading report content directly to Microsoft Excel.
Free report distribution	Creates a low-cost way to disseminate information. Reports can be printed or exported to PDF files and distributed across your enterprise without additional license or user fees.

CA Clarity™ G2000 Architecture

Let Your Strategic Vision, not Technical Constraints, Drive Project and Portfolio Management

The CA Clarity G2000 Architecture brings you the scalability, configurability, third party application interfaces, global availability, Precision Security functionality and multi platform support that guarantee your Project and Portfolio Management implementation will be driven by your business goals and objectives rather than technology constraints.
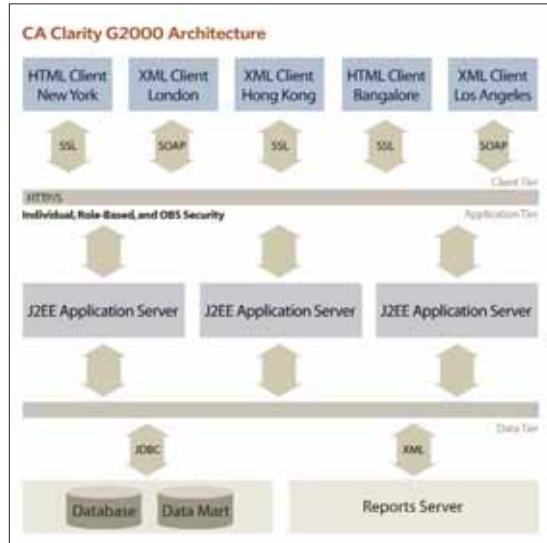
Scale Economically from a Few Hundred to Tens of Thousands of Users

CA Clarity is based around a three-tiered architecture that you can scale to virtually any number of users. Because it was built from the ground up to fully embrace J2EE, CA Clarity provides you with the standards-based services you need to deliver scalable and reliable deployments and Web services. J2EE-compliant deployments allow for portability across heterogeneous platforms and interoperability with other J2EE-compliant applications.

- The client tier eliminates desktop maintenance headaches, as its ultra-thin web client doesn't require desktop software installations or downloads, java applets or ActiveX controls.
- The application tier serves as a gateway between the client and data tiers. Its underlying J2EE application server controls Web, integration, business logic and persistence services and provides common application functions such as caching, security, globalization, configuration and workflow.
- The data tier contains both a transactional and a business intelligence repository. The integrated data mart facilitates rapid reporting without negatively impacting the performance of day-to-day system use.

CA Clarity can be deployed in a clustered configuration, which will bring you the highest possible levels of performance and availability. It supports horizontal scaling by replicating services, such as the application server, onto multiple services in a cluster. The result is massive application scalability, as well as fault tolerance and fast failover. In addition, database clustering offers full redundancy and failover capabilities that increase uptime and further limit the potential for lost data.
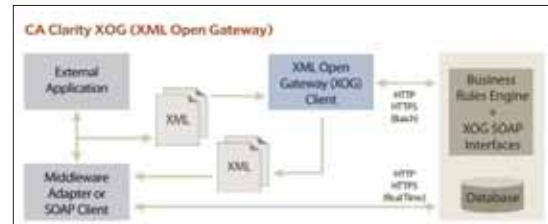
Substantially Reduce the Cost and Complexity of Integration

Your company can easily combine CA Clarity with your legacy applications—including IT Service Management, ERP, CRM and Microsoft Office tools such as Excel—using the CA Clarity XOG service, a comprehensive set of eXtensible Markup Language (XML) and Java-based APIs. CA Clarity XOG also supports Enterprise Application Integration products through infrastructure middleware and it preserves data integrity through the enforcement of business rules. To ensure consistency and reliability, information exchange through integration APIs accesses the same business logic as when a user manually enters data.

CA Clarity XOG APIs adhere to open industry standards such as SOAP-enabled Web services, JDBC and JMS. Because the APIs are XML-based, even major system updates will have minimal impact on your integration. In addition, the APIs allow for both real-time and batch invocations to define when information is transferred.

Implement a Solution that Breaks Down All Location Barriers

CA Clarity allows all of your users to access the same information no matter where they are located, so that everyone can always be on the same page. It is also a simultaneously multilingual application, with Unicode support for double-byte languages to allow users around the world to work on the same installation in their native language. The locale function enables users in different time zones to receive all events and notifications in their local time. And CA Clarity supports multicurrency for your cost, benefit, expense, rate, billing, invoicing and chargeback transactions.

Because today's mobile workers who use low-bandwidth leased lines, PDAs or notebook computers are challenged by network bandwidth issues, CA Clarity compresses HTML content, which uses an average of seven times less network bandwidth than uncompressed HTML.

Achieve Precision Security

To protect your company's sensitive project, product, financial and personnel information, CA Clarity includes Precision Security functionality. You can deploy it so that all communication from server to browser is sent via a SSL-encrypted connection. It can be integrated with an existing LDAP directory–such as Microsoft Active Directory, Novell eDirectory or Sun ONE Directory Server--for authentication and authorization, making the implementation process even more efficient. To support single sign-on, your organization can deploy eTrust® SiteMinder® along with CA Clarity.

Rather than relying solely on individual user information to grant or deny access, CA Clarity offers much more powerful and flexible security administration based on roles, groups and OBS. Roles and groups define the rights a user has to perform actions and the OBS determines what the user can see and act upon. The combination of these two security models makes security management far less tedious and time-consuming as users change jobs or move around in your organization. Additionally, OBS-based Precision Security allows you to construct virtual walls between business units that share a common system, but that still need to operate independently.

Centralize without Sacrificing Localization and Personalization

CA Clarity Studio allows you to easily tailor business objects, such as portfolios, projects, resources and ideas, without programming or customization. Your system administrators can accomplish a wide array of configurations, including adding user-defined fields and objects and rearranging pages and forms, all through a point-and-click web interface. In addition, the CA Clarity system supports multiple local configurations in a single instance through System Partitions. System Partitions support the local management of fields, forms, processes, methodologies and branding even as they enable the global governance and oversight of a single system.

Choose the Best Platform

CA Clarity runs on industry-leading operating systems (AIX, HP-UX, Red Hat Linux, SYSE Linux, Solaris and Windows), relational databases (Microsoft SQL Server and Oracle) and application servers (BEA WebLogic and IBM WebSphere), allowing you to select the platform that will be the most cost-effective and efficient for your installation. This feature also allows you to take advantage of resources that you have already selected as your corporate standards.

Key Features of CA Clarity™ G2000 Architecture

Features	Benefits
Massive Scalability	
Three-tier architecture	Offers higher performance because each tier can focus exclusively on its assigned task and the middle tier can scale to virtually any level of users by adding inexpensive resources.
Full J2EE compliance	Allows for portability across heterogeneous platforms and interoperability with other J2EE-compliant applications.
Ultra-thin web client	Eliminates desktop maintenance headaches resulting from client software installs and downloads of Java applets and ActiveX controls.
Integrated data mart facility	Facilitates rapid access to the business data you need for reporting without negatively impacting the performance of your day-to-day system use.
Centralized cluster management	Provides an intuitive, web-based console so you can easily configure and manage clusters within multiple sites.
Multiserver horizontal scaling	Replicates services onto multiple services within a cluster to achieve enterprise scale, fault tolerance and fast failover.
Database clustering	Offers full redundancy and failover to prevent data loss and downtime.
Rapid Integration	
CA Clarity XOG XML and Java-based APIs	Facilitates CA Clarity integration with your entire information ecosystem, including legacy systems, enterprise applications such as IT Service Management, ERP and CRM, business intelligence applications such as Actuate, desktop software such as Microsoft Excel and EAI middleware. Major updates do not impact integration.
Real-time and batch integration	Allows you to define what information is transferred to each interfacing application and when it is done.
Pre-defined formats and mechanisms for inter-system integration	Speeds the import and export process with a complete set of objects representing project, resource, financial and other data while enforcing product business rules to preserve integrity.
Adherence to open industry standards	Lowers your costs and the time required to integrate applications with support for XML, SOAP, JDBC and JMS.
Global Availability	
Multilingual application with Unicode support for double byte languages	Allows your global users to work on the same installation and experience the application in their native language.
Support for 100+ locales	Lets your global users set default work hours, days, weeks and start day to accommodate work schedule variations across countries.
Support for multiple currencies	Gives your global users the flexibility to enter currency items in the actual incurred transactional currency and report, bill or account for them in other currencies.
User-defined language	Automatically sets the language for the user interface, error messages, email/alert notifications, lookup values and online help. Additionally, formats for data, times and numbers are validated and formatted according to the location settings.
HTML compression of all content between the server and the browser	Uses an average of seven times less network bandwidth by compressing HTML, providing broadband performance on a narrowband network.
Configuration and Extensibility	
Configuration of business objects	Allows easy tailoring of business objects, such as portfolios, projects, resources and ideas, without programming or customization.
System Partitions	Allows the creation of logical views of data objects to allow local configurations without sacrificing global governance.
User-defined objects	Allows you to further configure CA Clarity without the need for expensive customization.
Precision Security	
SSL ready	Protects all communication from server to browser.
LDAP integration	Expedites implementations and supports single sign-on through integration with directories such as Microsoft Active Directory, Novell eDirectory and Sun ONE Directory Server.
Web single sign-on support	Helps you administer and enforce user access to web applications through support of eTrust SiteMinder.
Role-based and OBS security	Makes change management a far less tedious and time-consuming process as users change roles or move around the organization. OBS security allows you to construct virtual walls between business units that share a common system but still need to operate independently.

CA, one of the world's largest information technology (IT) management software companies, unifies and simplifies the management of enterprise-wide IT for greater business results. Our vision, tools and expertise help customers manage risk, improve service, manage costs and align their IT investments with their business needs.

CA Headquarters
One CA Plaza, Islandia, NY 11749

visit us online: ca.com/clarity
email us: clarity@ca.com

Quality System

Quality
Endorsed
Company

ISO 9001
Lic. 2443

ca™ Transforming IT Management