CIPAce™ Enterprise Software Platform and Solutions

CIPAce™ Enterprise Platform is a cloud-based, metadata-driven, low-code, and enterprise-grade software platform. As a comprehensive and versatile technology, it is highly

configurable, scalable, and adaptive, serving virtually all types and sizes of organizations in their needs for business process optimization and automation.

The platform offers powerful tools to automate business processes, create a personalized interface, and connect with third-party applications. Our

application systems can be customized and equipped with various web-based tools according to our customers' specific business needs without making source code changes. Our mobile platform allows users to utilize the features deployed in an application system on-the-qo and to customize user interface pages for mobile devices.

Budgeting Computerized Capital Program Maintenance & Project Management Management **CIPAce™ Public Bid** Contract **Enterprise Portal Solution** Management **Platform** Geospatial Right **Procure to Pay**

Enterprise Bid

Management

Capital

Planning &

Solutions for Different Industries

The CIPAce™ Platform serves as the common foundation for all business solutions offered by CIPPlanner Corporation. From public sector to private enterprises, from a traditional enterprise-hosted solution to software as a service (SaaS) deployment, the CIPAce™ Platform is the most comprehensive and configurable enterprise software product in the capital infrastructure solution marketplace. Coupled with our team's in-

depth domain expertise and insight into industry best practices, the platform has enabled us to design and develop numerous innovative yet practical life cycle management solutions that can be tailored to our customers' unique needs and business processes with expansive real-world applications.

About CIPPlanner

CIPPlanner's mission is to develop enterprise software solutions and a business service platform for public and private organizations to help optimize capital investments and maintain a strong infrastructure.

Management

CIPPlanner solutions seamlessly unite the management efforts and expertise from multiple disciplines and functions under a best practice enterprise management framework.

With more than US\$250 billion capital investment and tens of thousands of projects under management, CIPAce™ is at the rapid growth stage of its product life cycle since its debut in 2005. With more than 90% of its customers in the public sector, CIPAce™ enterprise platform servers state and local government, utilities, public transportation departments, airports, and other public organizations. CIPAce™ platform has also been serving private organizations of all sizes, from Fortune 500 companies to small and mid-size businesses.

Our solutions are equipped with powerful configuration tools and templates for managing all aspects of an infrastructure project throughout its life cycle, from planning and procurement to execution, closeout, and maintenance. These solutions have been adopted by a wide spectrum of customers, which include cities, counties, utilities, transportation agencies, as well as fortune 500 companies and multi-national corporations.

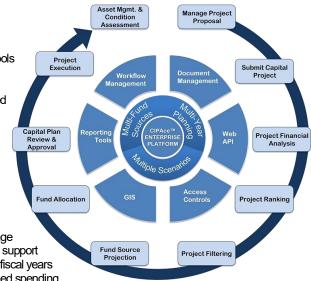
Capital Planning and Budgeting

of Way Project Coordination

The CIPAce™ Capital Planning and Budgeting Solution provides powerful tools for optimizing an organization's capital investment plans to fulfill the organization's strategic vision. Supported by our innovative and field-proven best practices, the solution features sophisticated template-driven financial modeling and projection with the capabilities for both upfront project capital budgeting financial analysis and ongoing cash flow projections.

In addition to a flexible and user-defined planning horizon, the solution's long-range planning has integrated spending curve support that enables cost distribution to multiple fiscal years based on pre-configured and user-defined spending

curves. Multiple Scenario Analysis can also be used to conduct hypothetical scenario analysis from the entire portfolio down to the individual project level. Additionally, the solution is equipped with comprehensive budget management tools for directing the life cycle of budget records from initiation and authorization to augmentation, transfers, and retirement.





Capital Program and Budget Management

Submit Capital Project Candidates

Financial & Impact Analysis

Capital Planning Appropriations

CIPAce™ Capital Program and Project Management is a comprehensive enterprise solution for management ing an infrastructure system's development and life cycle at both the individual project level and the entire program perspective. The solution provides a series of effective functions and features to help manage all aspects of capital project and management needs from strategic planning, prioritization, budgeting, fund allocation, and procurement to all elements and activities throughout project design,

construction and closeout processes, and post-construction phase, such as warranty monitoring and asset management. This tool helps organizations to streamline project and program management processes and to consolidate siloed business data and knowledge from various project phases into a central database.

> The solution can bring internal and external stakeholders from multiple disciplines and functional units under a unified enterprise management framework. It serves as a management hub that facilitates communication and collaboration among project stakeholders to effectively navigate demanding and time-consuming processes, such as bidding and RFPs; design/ construction submittals; RFIs, change requests, and change orders; meeting minutes, issue tracking, and document management; and so on. Designed according to industry best practices, the solution contains numerous preconfigured business templates and provides a solid yet adaptive foundation for business process standardization and optimization. With built-in and flexible configuration tools, our application systems can easily and consistently adapt

> > 2. Competitive Solicitation

3. Contract

to the rapidly changing business environment.

Though tailored to our customers' specific needs, our application systems also contain a powerful Report Engine that enables the design of customized graphic reports, promoting effec-

6. Contract Closure

5. Contract

tive and proactive management practices.

Contract Management

Capital Budget & Budget Request Management

The CIPAce™ Contract Management Solution is one of the most comprehensive contract management tools in today's market. It allows users to effectively manage all contract types throughout a project's life cycle from contract initiation and execution to contract monitoring and closeout. The solution can also manage compliance and reporting on small, disadvantaged, veteran, minority- and woman-owned businesses by tracking goals

> The solution provides functionalities for managing all critical data elements, such as bid data and contract award. line

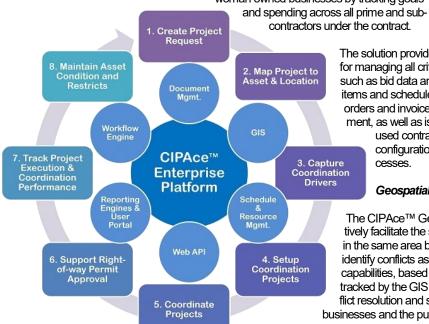
items and schedule of values, fund allocation and argumentation, purchase orders and invoices, resource/timesheets and schedule, change management, as well as issue tracking and document management. With commonly

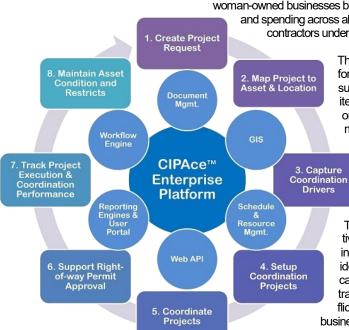
used contract templates available, the solution also comes with flexible configuration tools for creating customized contracts and workflow processes.

4. Contract Execution &

Geospatial Project Coordination

The CIPAce™ Geospatial Project Coordination Solution is designed to proactively facilitate the scheduling and coordination of interdependent projects within the same area based on geospatial data. The solution can automatically identify conflicts as well as coordination opportunities with the integrated GIS capabilities, based on project geospatial data, project schedule, and restrictions tracked by the GIS component. It is also equipped with powerful tools for conflict resolution and scheduling optimization to minimize disruptions to nearby businesses and the public during project execution.





Condit

PROCESS LAYER

COMMON **BUSINESS OBJECTS**

LAYER

CIPAce™

ENGINE PLATFORM

DBMS Audit Trail Engine

Workflow & Notification Engine

Document Mgt Engine Dashboard & Reports Engine Metadata & Dynamic Forms

Integration Adapters

WEB API

Schedules Funding Sources (Multiple)

Issues & Risks Templates (Best Practice

Construction

RFP/Bidding

Engineering & Design

· CONFIGURAT

endors Organizations

Resources

Invoices

LIFECYCLE



Why CIPPlanner?

- ♦ The most comprehensive capital planning, project and program management solution in the market place
- Powerful technology platform driven by workflows that can be configured to manage any business process lifecycles from beginning to end
- All technologies and solutions are 100% developed organically from the ground up — no need to worry about if all the modules will natively work together
- Create new or modify existing user interface or data elements with no custom programming required
- Proven solution implemented with clients across multiple industry sectors by seasoned consultants and engineers with strong business domain expertise

Asset Maintenance Management

The CIPAce™ Asset Maintenance Management Solution enables our customers to effectively and systematically manage their infrastructure maintenance information and optimize maintenance and replacement processes for a wide range of asset classes including equipment. Built on the commonly accepted Asset Management principles and practices, the solution helps asset managers capture individual infrastructure components as well as their subsequent maintenance information in a centralized database. As the values of such assets change along with time and usages, asset managers can utilize the data to develop maintenance and replacement plans based on practices such as amortization and depreciation. The solution can also help to effectively manage not only the day-to-day utilization and performance of such assets, but more importantly the subsequent maintenance and replacement of these assets.

MAINTENANCE STRUCTURE AND ORGANIZATION

SUPPORT TO MANAGEMENT

HUMAN RESOURCES

COST CONTROL

WORK MANAGEMENT

WORK MANAGEMENT

WORK MANAGEMENT

WORK MANAGEMENT

WORK MANAGEMENT

REQUESTS

MAINTENANCE
REQUESTS

MET OF THE SECONDARY MANAGEMENT

REQUESTS

MET OF THE SECONDARY MANAGEMENT

MANAGEMENT

MET OF THE SECONDARY MANAGEMENT

The CIPAce™ Asset Maintenance Management Solution empowers our customers with a new generation of cloud-based, highly mobile, and secure tools with the following key capabilities:

- Store, access and share asset information and documentation including images, manuals, and IoT sensor data.
- Manage work order—including field work and work order status, materials consumption, equipment usage, labor costs, and safety media.
- Classify and manage resources to effectively assign and complete tasks.
- Schedule and prioritize preventive maintenance based on equipment age and usage related data as well as triggering.
- ♦ Manage suppliers, materials, equipment, and inventory across storage areas and distribution centers.
- Provide effective reporting, analysis, and auditing functions.

The CIPAce™ Asset Maintenance Management Solution provides the following key benefits:

- Enhanced transparency for asset condition information and maintenance processes, including work order status and progress in real time.
- Automated workflow to replace manual tasks, such as ordering and keeping track of repair parts as well as work orders and resource utilization, to reduce human errors and improve oversight and productivity.
- Standardized and streamlined process to promote proactive coordination and collaboration of asset management related activities from preventive maintenance to planned replacement.
- Knowledge transfer by preserving asset related information, repair manuals and records, and maintenance procedures in a centralized database.
- Powerful configuration tools that enable customized fields, forms, data relationships, access control rules, dashboard, reports, workflows, and more.

Procure to Pay Life Cycle Management

The CIPAce™ Procure to Pay Life Cycle Management Solution is one of the integrated suites of infrastructure development solutions powered by the CIPAce™ cloud platform. Developed with a flexible, extensible, and interoperable system architecture, this solution can help organizations effectively manage

and automate key activities throughout the procurement life cycle. The solution can support all relevant activities, including intake requests, purchase order management, solicitation management, public bidding, vendor selection and award, contract execution, contract administration, change orders, electronic invoice processing, doseout process, and more.

cessing, doseout process, and more.

The solution is also equipped with powerful Project Financial Management features that keeps track of cost estimates, approved budgets, encumbrance, and actual expenditures by projects, funds, vendors, and any other breakdown statistics as needed. The solution comes with preconfigured industry standard forms, fields, and templates out-of-box as well as powerful configuration tools that can tailor features to customers' specific needs, including customized forms, fields, data relationships, tables, workflows, access controls, automatic alerts, and various types of templates.



Enterprise Bid Management

The CIPAce™ Enterprise Bid Management Solution promotes comprehensive and effective bid management throughout the process from bid package preparation and bid advertisement to bid response submission, bid evaluation, and bid award. Internal stakeholders can work collaboratively during the development of bid packages as well as the subsequent bid evaluation processes via automated workflows. Once approved, bid advertisement can be published

to solicit for bids, or a selected bidder can proceed to contract negotiations.

Our solutions are equipped with powerful configuration tools and templates for managing all aspects of an infrastructure project throughout its life cycle, from planning and procurement to execution, closeout, and maintenance. These solutions have been adopted by a wide spectrum of customers, which include cities, counties, utilities, transportation agencies, as well as fortune 500 companies and multi-national corporations.

The solution not only manages the entire process following the procurement life cycle, but also provides a full spectrum of features to support all bidding related activities and milestones. The solution comes with an optional public bid portal that is accessible by vendors and contains many user-friendly features to facilitate various steps along the bid process, including vendor registrations, bidding opportunity search, subscription for bid notifications, requests-for-clarification, Q&A or addendum publication, as well as electronic bid submission.

Bid submissions can be reviewed by evaluators using the Bid Ranking feature that can accommodate both single

and multi-phased ranking processes. This powerful and versatile solution has enabled numerous public agencies throughout the United States to streamline their complex and often cumbersome procurement processes with improved quality and efficiency as well as enhanced coordination and collaboration among departments and participants.

Award Solicitation Create Solicitation Vendor Bid 6 **Portal Evaluate CIPAce** Bids **Enterprise Bid** Document Workflow Management Review Management Solution Engine and **Publish** Reporting Control Engine Engine Manage Submissions Manage Open Bids

Full-Service Implementation and Project Management Services

In addition to providing our comprehensive solution platform, CIPPlanner also provide the following services to manages the solution implementation from beginning to end:

- ♦ Business process optimization
- System implementation and project management
- ♦ System integration
- ♦ Historical data migration
- ♦ Customized training solutions
- ♦ Post-go-live support and maintenance

Public Bid Portal

Advertising and managing product and service related procurement processes is often a very challenging undertaking for public agencies in the United States where such a process is strictly governed by federal, state, and local laws and regulations. The lack of coordinated and readily retrievable information throughout the process has been an overwhelming burden to procurement professionals and relevant stakeholders, especially as the quantity and scope of procurement for products and services increase within an agency.



The CIPAce™ Public Bid Portal Solution is a simple yet effective solution developed specifically to manage bid and addendum publishing, bid opportunity search, bid subscription, vendor questions and responses, as well as any bid related communications throughout a solicitation process. The solution not only manages the electronic publishing of solicitation packages, but also provides a full spectrum of features in the vendor bid portal to facilitate various steps from vendor registrations to electronic bid submission.

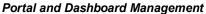


Flexible Modular Platform to Solve Specific Business Problems

CIPAce™ Enterprise Platform is a cloud-based, metadata-driven, low-code, and enterprisegrade software platform. As a comprehensive and versatile technology, it is highly configurable, scalable, and adaptive, serving virtually all types and sizes of organizations in their needs for business process optimization and automation.

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The CIPAce™ Portal and Dashboard Management functions enable users to configure their dashboard display within a single screen upon login according to their needs and preferences.

Notification

KPIs

This customization through a web-based designer with an intuitive graphic interface helps users stay informed of the status of all pending and/or upcoming tasks on a real-time basis, and thus enables users to

perform daily tasks

more efficiently and effectively.

Mobile Workflow and Notification ntegration Engine **CIPAce™ Enterprise Platform** User Interface Design Engine **Application** Audit Trai

Did You Know?

All of the solutions offered by CIPPlanner are configured directly within CIPAce™ Enterprise Software Platform without changing underlying codes - such is the power of CIPAce™ platform.

By utilizing our powerful Workflow Engine, Dynamic Form Module, and Metadata Management functionalities, CIPAce™ enables your organization to create lifecycle-oriented business process management solutions of any kind.

Users in management roles can utilize customizations, such as project overviews, to monitor key or underperforming projects that may need extra attention or guidance. Individual users or user groups can configure their dashboards to consolidate the data, graphic reports, and frequently accessed functionalities based on their needs and/or preferences. The Dashboard Management function can also provide a "health check" on performance measures at a glance using color-coded graphics

Action Items Customized Dashboard Management Data Display and buttons with drill-down capabilities.

Document Management

CIPAce™ provides a full-feature Document Management system that centralizes electronic storage and control of all business records and activities contained in a client's CIPAce™

application system. CIPAce™ can also integrate with third-partv document management systems to link CIPAce™ entities to external documents contained in third-party software.



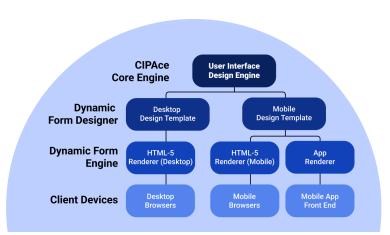
The Document Management system enables the following:

- Documents can be organized by categories, such as project, fund, contract, budget, purchase order, and invoice.
- Documents can be organized using customizable folders and tags.
- All documents are under version control and can be routed for electronic review and approval. All historical versions of the documents can be stored and managed under the Document module
- Full-text content search is available for all standard Microsoft Office.
- Online view and mark-up features can be used directly on all common files types, such as Microsoft Office documents, images, and CAD drawings.



User Interface Design Engine

CIPAce™ application system user interfaces are rendered using Dynamic Form and Metadata Management foundations. Interface elements and their descriptions are stored in the database and displayed accordingly. User interface descriptions can be changed at any time because they are not hard-coded into the system, enabling easy customization to most application system pages.



Some examples include the following:

- Rapid application customization allowing the adding and modifying of data elements without requiring programming.
- Rearrange interface design as needed using built-in graphic interface.
- Create brand-new data types and associated fields to facilitate new business processes.
- Define customized data relationships to facilitate reporting and enable data drill-down and roll-up.
- Change field labels when needed with SmartText Management to fit organizational terminology.
- All UI customizations are maintained in one database to make future system upgrades more seamless and effective.
- Create special UI behaviors by enabling script plugins as needed.

Trust CIPAce™ Solutions

CIPAce™ is at the rapid growth stage of its product life cycle. Numerous organizations from fortune 500 corporations, large government agencies with tens of thousands employees, mid size transportation management organizations to small utilities and private businesses trust CIPAce™ to manage their capital related management processes. A small sample of customers include:

- New York City Department of Transportation, Bridges Division
- ♦ Ada County Highway District
- City and County of San Francisco Budget Office
- ♦ San Francisco International Airport
- ♦ City of Baltimore, MD
- ♦ City of Buckeye, AZ
- ♦ City of Chula Vista, CA
- ♦ Fairfax County, CA
- ♦ Indianapolis Airport Authority
- ♦ City of Mesa, AZ
- City of Philadelphia Water Department
- ♦ San Antonio Water System, TX
- City of Wilmington, NC

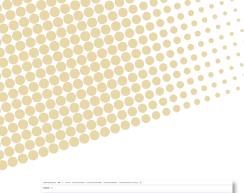
Application System Configurability

As the essential component of CIPAce™ Technology, CIPAce™ Core Engine functions like a bundle of system building blocks that can be assembled per customers' specific requirements, thereby offering abundant flexibility in the development of an application system tailored to a client's unique business needs. CIPAce™ Core Engine enables powerful configurability, scalability, and adaptability, as well as system security and integration capabilities, which are essential to serving today's ever-changing and fast-paced business environment.

The Core Engine capabilities for comprehensive configurability include the following:

Offers site-specific UI configurability without custom programming. System menus and screen forms can be configured to align with organization-specific terminology. Template Workflows can be customized to fit your unique business process-**API** Configuration for Third–Party es. System New data fields and new data containers can be easily created for any future expansions. Authentication Document Management Settings Flexible data access control (Including Third-Party Single Sign-Ons) driven by user roles, workflow steps, and/or other criteria. Data access can be controlled by modules, functions, **Administrative** Organization features, and/or down to a **Profile Settings** single data element. Management Access control rules can be modified or created anytime by utilizing Fiscal and Account native graphic-based interface.













Reporting Engine

The CIPAce™ Report Engine provides a wealth of standard and customizable reporting capabilities that allow users to access virtually every data element contained in the database of a given CIPAce™ application system. The Report Engine plays a pivotal role in enabling decision support, performance measurement, accountability, and transparency. It can create three different types of reports: Standard, Custom, and Analytic.

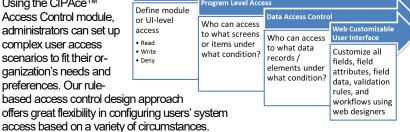
The CIPAce™ Standard Reports are readily available for use immediately upon an application system installation. The Standard Reports can be designed and modified according to user-specific needs, and the reports may be produced in a variety of file formats, such as Crystal Report, PDF, Word, and Excel. New reports can also be added to the report library to meet customers' dynamic business needs.

The CIPAce™ Custom Reports module is a web-based report design tool that empowers users to develop fully customizable reports. Users can query and extract data from the underlying database via a webbased query feature or SQL store procedure. Custom Reports may be saved and published to the main application and can be viewed online or subscribed to per a pre-defined schedule. Data sources may be formatted into a report-by-report generation tool, such as Crystal Report or Excel.

The CIPAce™ Analytic Reports module empowers users to cut across clusters of plain data to gain insight into the strategic and operational perspectives of capital programs and projects on a real-time basis. This module utilizes an intuitive web-based design interface to create a graphic representation of summary data and scorecards with drill-down capabilities.

Access Control

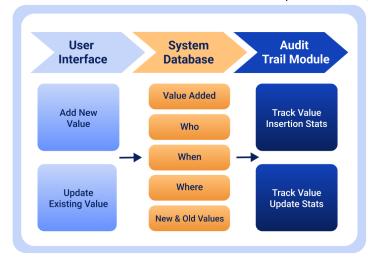
Using the CIPAce™ Access Control module, administrators can set up complex user access scenarios to fit their organization's needs and preferences. Our rule-



Access Control Rule Web Designe

Some examples include the following:

- Control user access module-wide or down to individual data elements.
- Limit access based on group affiliation, user role, user responsibility or discipline, and any other attributes as defined in an application system.
- Enable dynamic user access based on changing project circumstances, such as user role changes.
- Enable workflow-driven changes to data access depending on workflow steps.
- Enable external-user access (such as vendors or contractors portal) for submitting work products, correspondences, change requests, and/or payment requests.



Audit Trail

The CIPAce™ Audit Trail Engine keeps a timeline of changes made to business records and administrative activities contained in the system at both transaction and management levels. It captures the details of each transaction, such as changes made to data values, timestamps of the changes, and the user who made the change. The Audit Trail Engine also tracks any changes made to a project in terms of team composition, project details, and project scope. On the administrative side, it can monitor user behavior as well as any changes made to users and vendors, users' access permissions, etc. Thus, the Audit Trail Engine provides a complete log of changes and serves as a useful tool in project management.

We invest heavily in the CIPAce™ Audit Trail Engine, as it is integral to our cloud-based computing space. Its capabilities can crucially assist with compliance, litigation, troubleshooting, transaction integrity, intrusion detection, activity forensics, as well as analyses on system usage and operations.



Integration Framework

The CIPAce™ Integrated Framework enables user-defined integrations with any third-party software applications using the CIPAce™ Web Application Program Interface (API). The framework enables two-way integrations with many types of third-party systems and removes the complexities typically associated with data exchange across different systems and platforms.

GIS **Document CIPAce** Integration with Third-Party **Systems** Payroll Systems

550000

The CIPPlanner team actively engages with technology and industry partners, such as Microsoft, Oracle, Tyler Technologies, ESRI, and Laserfiche, to facilitate native data integration with leading financial, database, project management, and geographical information sys-

tems, as well as various third-party project design and construction management tools/products.

Mobile Application

The CIPAce™ Mobile Application was developed for users' productivity on-the-go. It is designed and optimized for a variety of touchscreen-enabled mobile devices that can be easily used in challenging environments, such as a noisy construction site with poor network connectivity.

Asset The CIPAceTM Mobile Application offers powerful integration to capture data seamlessly through mobile devices, including cell phones, tablets, iPads, and Cloud dashboard with the latest graphic reports and data analytics, allowing 24/7 access from wherever and whenever needed.

- Manage Key Tasks from the Field Includes inspection, field change, management processes, site walk, drawing review, and project close out processes
- Stores All Information into One Database Data availability and consistency provides solid management foundation when needing to access or change information on-the-go
- Integration with Other Solutions Capable of accessing data that is pulled from third-party systems, once system integration has been setup
- Maximize Visibility Powerful reporting capabilities support instant evaluation of contractor performance, enabling staff to act on potential issues before it is too late
- No Coding Software can be easily tailored to your organization's desired workflow processes, data tracking needs and naming conventions, without programming
- Quick & Easy Automation Data just needs to be entered once and can then be reused in all subsequent processes and accessed from different device types, such as a mobile device or tablet











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Contact Us Today

CIPAce™ offers versatile deployment options and a wide variety of solutions for different industries that's sure to fit your organization's needs. Contact our sales team today to request more product or solution information, or to schedule a demonstration.