

Oracle Siebel CRM Statement of Direction

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PURPOSE

This document provides an overview of features and enhancements that are planned for delivery in upcoming Oracle Siebel CRM Monthly Updates over a two-year period.

Its intended purpose is to help you assess the business benefits and for planning the implementation of the product features described. The new features and enhancements defined by this document are planned for delivery in upcoming Siebel CRM Monthly Updates. It is our intention to provide a quarterly view of upcoming innovations from this Statement of Direction that will be delivered on My Oracle Support.

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This document is for informational purposes only and is intended solely to assist you in planning for the implementation and upgrade of the product features described. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described in this document remains at the sole discretion of Oracle.

Due to the nature of the product architecture, it may not be possible to safely include all features described in this document without risking significant destabilization of the code.

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STRATEGY

Oracle's Siebel CRM

Siebel CRM is a key component of Oracle's CX applications product suite, with a rich product roadmap focused on Autonomous CRM, Business Agility, Customer Experience and Industry Innovation. Our goal is to ensure the Siebel CRM application continues to provide an intuitive user experience, extensible across all devices, to deliver evolving end-to-end solutions that support all our industry applications. Our focus on business agility simplifies application development, deployment, patching, and automated testing. We also provide our customers with the choice to deploy the application on premise or on cloud platforms with seamless operation.

It is vitally important that your strategic CRM system can meet the demands of modern customer experience (CX) and business process automation in the Experience Economy. Being able to deliver CX across a variety of channels, as well as being a robust, scalable, integrated platform to back-end processes will support the next generation of machine-to-machine interactions which is beginning to drive process automation.

CRM is moving into an era of mass data explosion with 5G networks, social media, distributed ("edge") computing, and intelligent process automation. Where intelligent devices, the "Internet of Things" (IoT) and real-time, omni-channel data signals will automate processes that already exist within your Siebel CRM system. These processes, refined over many years may also be deeply integrated within other systems. Achieving process automation excellence will reduce costs and deliver CX gains. Additionally, future developments in machine learning unified with process automation and predictive analytics will improve productivity and efficiency while offering new business insights.

Our broader strategy sees the Siebel CRM application as a platform to integrate with Oracle's CX applications and other Oracle Cloud solutions. This will deliver competitive advantages without the business disruption that is often the outcome when looking to completely transition to new technologies or applications from multiple vendors.

SIEBEL CRM AS A DIGITAL EXPERIENCE PLATFORM

Oracle delivers the most complete suite of customer experience solutions in the industry, enabling companies to differentiate themselves across all channels, touchpoints, and interactions. The Oracle CX Suite solutions are complementary to Siebel CRM; they augment Siebel CRM with best-of-breed capabilities across all real-time micro-moments of the customer lifecycle.

However, in many industries, providing an amazing customer experience across all channels is also not enough. It is not only a front office requirement, but a need to provide a connected experience from front to back office. Applications, assets, people, and policies managed in back office systems must be interconnected so data and experience can be integrated across the organization.

For example, there is not much point having a great real-time buying experience, if you cannot see inventory at that moment or cannot schedule delivery reliably and instantly.

Siebel CRM is a mission-critical application for many organizations and our goal is to ensure that it continues to play a pivotal role linking front and back office, across all industries. Part of Oracle's best of breed "Gold Standard" solutions that provide organizations with the ultimate digital experience platform for both cloud-optimized and hybrid on-premise deployment.

ORACLE'S SUPPORT VALUE PROPOSITION

Oracle's Siebel CRM is a sophisticated, highly scalable, and reliable solution for large enterprises across diverse industries. Siebel CRM continues to thrive with a strong future and long-term innovation roadmap. Only Oracle can provide the product support and development expertise your business-critical Siebel CRM deployment demands. As such, it is important not to underestimate the value of continued Oracle Support for your business-critical Siebel CRM implementation.

Key benefits:

- Take advantage of new Updates packed with new features, enhancements and cumulative bug fixes
- Security patches, fixes, and configuration-specific update recommendations
- Lifetime support, 24/7 access to Oracle Software experts
- Technical resources, alerts, and proactive support tools
- Software support across the complete stack

If you are looking to get the most out of your Siebel CRM support investment, a great place to start is with the "Get Proactive!" page on My Oracle Support, Document ID <u>432.1</u>.

Further, if you have any queries about Siebel CRM such as long-term roadmap, new releases, patches, enhancements, or licensing, then please do not hesitate to contact the team now on +1 (888) 545-4577. Alternate regional contact numbers are available: <u>Oracle Global Support Contacts</u>.

ORACLE'S COMMITMENT TO SIEBEL CRM INNOVATION

"Applications Unlimited" is Oracle's commitment to continue enhancing our current application product lines, including Oracle Siebel CRM.

Oracle has stated a long-term commitment to invest in Siebel CRM innovation. Oracle will provide incremental enhancements to Siebel CRM through cumulative Updates that will include functional and product module additions, as well as feature enhancements based on customer feedback. Customers that have adopted either the Siebel CRM 8.1.1 or 8.2.2 code line (or a point release thereof) can leverage Siebel CRM Monthly Updates.

ORACLE'S SIEBEL CRM SUPPORT TIMELINES FOR RELEASES IN PREMIER SUPPORT

The current Siebel CRM support timelines and go-forward strategy are described in the following table:

Siebel CRM Support Matrix

CODELINE	LATEST RELEASE				SUSTAINING SUPPORT ENDS
CRM 8.1/8.2	2022 (22.4)	April 2022	December 2033	Not Applicable	Indefinite

For more information regarding older releases and the support extension for Siebel CRM versions with the base code line 8.1/8.2, see the Lifetime Support Policy for Oracle Applications on My Oracle Support.

Special attention should also be given to the <u>Oracle Siebel CRM Error Correction Policy</u> (Doc ID 1313941.1) which outlines for releases the specific patches that are available within the Premier Support timeline.

INNOVATION THEMES

Siebel CRM innovation follows core themes that provide a cohesive product roadmap:

CORE PLATFORM

Autonomous CRM - One of the core strengths of the Siebel CRM solution is the flexible and highly scalable platform. An important part of the Siebel CRM roadmap is to continue to innovate adding more value through agility, integration and automation features.

Test Automation – One of the key components with any DevOps cycle is to adequately test the application to ensure any defects or abnormal behavior is discovered so it can be rectified before release. Whether it's making internal updates to your Siebel CRM deployment, or applying a Monthly Update, the ability to automate functional and regression testing can see a dramatic improvement in quality and reduction in TCO.

Process Automation – The single Siebel CRM data model, business services and integration architecture provide a rich platform for automating existing business processes. Our goal is to enable customers to make use of existing customer data and business processes for intelligent automation. This requires the ability to capture usage data, perform analysis and use the insights to guide manual and automated user journeys. Usage data will also provision the creation of task maps to help occasional and novice users navigate through the Siebel CRM application. For microservices and IoT driven processes, it is necessary to enable the independent execution of business processes in Siebel CRM that can execute without User Interface context.

Artificial Intelligence - Enabling Siebel CRM data and processes to leverage new technologies such as artificial intelligence and machine learning is a crucial part of our autonomous CRM vision. Applications such as Chatbots and Digital Assistants that can interact with data in Siebel CRM to provide new interactive experiences. Providing business insights with intuitive dashboards that provide descriptive analytics to the end user and utilizing application-definition metadata to minimize or eliminate the cost of building such dashboards. Adding support for the Oracle Autonomous Database and Advanced Analytics with the Siebel CRM application will also make use of machine learning functionality.

Agility – The Siebel CRM application is now easier than ever to maintain and update. Our continued focus on agility enables enterprises to adapt to business challenges quicker than ever and our goal is to continue to reduce application downtime by providing the capability to make all manner of updates to the application in real-time.

Developers – Siebel CRM now provides a modern developer experience to configure, manage, and deploy the application, at the same time enabling parallel, collaborative, and distributed team development. A built in, simple to use Test Automation Suite provides automated, lights-out testing, saving lots of time and money.

Cloud Optimized Architecture - Siebel CRM allows your business to take a flexible approach to cloud adoption, with cloud solutions for a variety of business requirements. Siebel CRM provides the following cloud capabilities:

- Siebel CRM can be hosted on premise and also in public, private, or partner clouds for employee, partner, and/or customer facing applications. This allows for optimization of deployment preferences and protection of the most valuable asset: customer data.
- Hosting Siebel CRM on cloud infrastructure can dramatically reduce the Total Cost of Ownership (TCO). Customers
 have realized 35% lower TCO than on-premise hardware with Oracle Cloud Infrastructure. Without hardware costs,
 organizations shift from capital expenditure to an operating expenditure platform model. Cloud infrastructure
 provides more performance and dynamic elasticity to meet scale on demand.
- Other benefits included no single point of failure and agility: migrate in weeks, deploy in hours, not days.
- A recent <u>announcement</u> between Oracle Cloud and Microsoft Azure ensures the best of both worlds with seamless interoperability for customers.
- Siebel CRM on-premise or hosted deployments can integrate with Oracle cloud applications via a number of available integration accelerators and standard interfaces provided with the Oracle Integration Cloud Service.
- For sophisticated customers and partners Siebel CRM provides multitenant database support with the Oracle 12c and 19c databases.

With Siebel CRM, you can confidently take your investment to the next level and host your application in the most suitable cloud deployment model for your enterprise. Siebel CRM can easily integrate with Oracle CX Suite, and other Oracle cloud solutions to create a complete enterprise technology stack serving both the front and back office. An industry platform to enable your organization to deliver memorable customer experiences at scale.

CUSTOMER EXPERIENCE

Open UI – The Siebel CRM Open UI framework provides the flexibility to design and deploy the application to be specific to your business and customer needs. The ability to deploy the application across a broad variety of browsers and devices on an open and flexible technology stack saves money and reduces the total cost of ownership (TCO). Open UI provides the ability to deliver employee facing applications and customer portals securely over the Internet.

Mobile – Siebel Mobile enables your application to be used on any mobile device and to be accessible from anywhere. The application automatically recognizes and adapts according to the device. Siebel CRM is enabled for the new generation of mobile usage.

CX Applications – As a platform for connecting front and back office, supporting omni-channel customer experience solutions, it is our goal to make connecting CX applications to Siebel CRM and the back office integrated systems as seamless as possible. The Siebel CRM platform also has best of breed solutions for Loyalty and Customer Master to ensure customer profiling, advocacy, and data integrity are retained across the entire eco-system.

INDUSTRY INNOVATION

Complete Solutions – Siebel CRM Industry solutions are focused on improving customer experience and satisfaction by providing solutions with deep process specialization, industry user interfaces and modern mobile offerings. Siebel CRM's rich industry solutions continue to be extended to leverage best-of-breed cloud services.

Policy Automation - Oracle Intelligent Advisor (OIA) delivers consistent and auditable advice across channels and business processes by capturing rules in natural language applications. Not only can integrating OIA provide business rule simplicity, there is no need for extensive Siebel CRM customizations.

Industry and Platform APIs – Providing an open API integration approach enables the Siebel CRM platform to embrace entirely new business models and technologies across Industry solutions. As Industry CX becomes increasingly data and customer-centric, APIs allow for much greater versatility, innovation and openness.

Limited Availability Features

Occasionally, new features and functionality will be made available in Siebel CRM Monthly Updates with a "Limited Availablity" status. This was introduced into the Monthly Updates delivery process and is designed to release software to selected customers before being more widely distributed to our entire customer base. Some key components of this program are:

- Early access to GA-quality software for customers who need new features immediately and are willing to provide feedback to the Siebel CRM Product Management team.
- Ability to deploy new, fully-supported features to production environments with the confidence that Oracle Support are available to help. For instructions on enabling "Limited Availability" features contact your Oracle Support representative.

CORE PLATFORM

WEB TOOLS & WORKSPACES

As Web Tools continues to evolve, all functionality currently in Siebel Tools will be provided in Web Tools. The following features are planned for delivery:

- Migration Cleanup
- Workspaces for Tasks enables Workspaces for Tasks (TBUI), improving the capabilities introduced by Workspaces to perform parallel development.
- Task Editor in Web Tools enables the editing of Tasks (TBUI) using Web Tools, furthering the capabilities available in the Web Tools application.
- Seed data in Workspaces
- Web Tools Wizards
- Manifest Workspace enablement
- Schema Workspace enablement
- Eliminate Siebel Tools dependencies
- Migration of a developer workspace (for CI/CD testing purposes).
 - This includes the ability to migrate in-memory Runtime Repository (preview data) to another instance as an incremental Runtime Repository (RR). This is useful, for example, when migrating a Developer Workspace Runtime Repository via a CI/CD process to a Test environment (includes REST support)
- Improve Performance for Multi-Language Deployment. Key benefits include:
 - o Improved migration speed
 - Improved runtime performance by separating the user interface language definition from the rest of the object definition
- Ability for customers to modify strings, such as labels or captions, for NEO objects. This is particularly useful for adding custom strings for unshipped languages on NEO objects.
- Repository Object Validation
- Developers can validate repository objects by examining them using a set of rules to ensure Oracle-recommended configuration best practices.
- Bookmarks in Web Tools allow developers to quickly return to objects they have previously been working on. This
 will reduce development time.

ADMINISTRATIVE DATA MODIFICATIONS

Framework enhancements for Workspace-enabling custom administrative data tables.

- Customer-specified administrative data objects (e.g., Data Maps)
- Rollback for Workspace-enabled administrative data (such as LOVs and other customer-enabled administrative data entities)

CONTINUOUS INTEGRATION, CONTINUOUS DELIVERY

New features planned to improve the CI/CD capabilities of Siebel CRM include:

- Support for development, testing, integration, and deployment of (OpenUI) web artifacts such as JavaScript or CSS files, within the context of Workspaces, to facilitate a uniform developer experience across all Siebel development artifacts, which include both repository and web artefacts.
- Ability to author and test web file changes in a Developer Workspace
- Ability to integrate web file changes to an Integration Workspace
- Ability to automate deployment of web files to a Production environment.

CLOUD-OPTIMIZED ARCHITECTURE

As cloud computing adoption has increased across IT and many organizations seek the right mix of on-premise and managed cloud services for applications and workloads, a new classification of applications has emerged: "cloud native".

SIEBEL COMPONENT SERVICES

The goal for "Siebel Component Services" is to adhere to all the key parts of the <u>CNCF Cloud Native Trail Map</u>. How these concepts would apply to the Siebel CRM application:

Containerization

Oracle has been providing Containers images for each atomic node of a Siebel CRM deployment for a while now. Hence, we have images for the Application Interface (AI), Gateway, Siebel Server and Database. In a cloud native world as well, Docker images are used but work in different ways, resulting in a very different execution time topology.

- Deploys Components as Kubernetes Services with each MTServer as a Pod
- Scales each Service automatically based on workload
- Load Balances Pods per Service for both external and internal-component requests
- Gateway and present Siebel Server infrastructure will no longer play any role in the orchestration of Components

Service meshes & Orchestration

Service meshes facilitate communication between services by handling common concerns of distributed services such as service discovery, health checking, routing, and load balancing. More important for our discussion, service meshes sit on top of an orchestration system that deploys and manages the lifecycle of the Containers in the form of individual pods for each instance of a service. The most common orchestration system is Kubernetes.

Some of our leading customers have already made great strides in deploying our Siebel Containers in a Kubernetes clusters to achieve highly increased efficiency in their deployment processes. However, the full potential of Kubernetes is realized when each individual service can be submitted to Kubernetes for management of its workloads and lifecycle, which includes deployment, recovery on failure, scaling in and out dynamically depending on workload etc. This is what allows services to be deployed at mass scale in the cloud.

This benefit can only be achieved once the Siebel CRM components can be freed up for full orchestration by Kubernetes, instead of the proprietary infrastructure that includes the Siebel Gateway and the Siebel Server infrastructure.

Streaming & Messaging

Siebel Event Pub Sub Framework is a new infrastructure for Event Driven communication between Siebel Components and external event driven systems. An adapter based architecture that can be extended to other messaging products, presently working with Kafka.

Near Zero Downtime - Rolling/Canary Updates

During updates, each Service should be uninterrupted while Pods for a given Services are gradually rolled over from one version to another.

CI/CD

Improvements that facilitate fully automated CI/CD pipelines for Oracle Siebel CRM product development. Benefits will pass on to customers for their pipelines as well.

Networking, Policy, and Security

SCS Security provides specific improvements to facilitate Siebel CRM security features aligning to cloud native topologies.

BUSINESS BENEFITS OF A CLOUD OPTIMIZED ARCHITECTURE

Business Agility / Time to Market

- Continuous Delivery facilitated by CI/CD automation. Cl automation is achieved via features introduced since 2017 while CD automation is facilitated by Containerization, orchestration and Deployment Automation Tooling.
- Greater stability of deployed features due to guaranteed equality of the entire stack with already validated lower environments due to immutable infrastructure practices facilitated by Containerization and orchestration
- Low risk, fail fast rolling/canary update or rollback of new features enabled by localizing changes to a small set of Pods/Users via orchestration, Containerization and observability
- Near Zero Downtime of each service possible through orchestration of Pod updates or repaves.

Low Cost

 Optimal operating expense due to each service independently and dynamically scaling in and out depending on load, due to Containerization and observability, thus using the optimal compute at any given point.

Scale & Resilience

- Virtually unlimited scaling through a combination of on-demand compute (in the case of cloud deployment) and dynamic scaling allowed by orchestration and observability
- Automatic recovery from any failures of Service instances, by the orchestration platform

Ease of Management

- Immutability of a deployment due to Containerization guarantees less manual troubleshooting
- Automation of measures such as recovery, scaling etc. provided by observability and orchestration infrastructure

Vendor Neutral

- Siebel CRM components co-exist with other microservices, writing automation for deployment or operation of the overall topology not requiring Siebel CRM specific skills
- Siebel CRM components can be deployed on any orchestration platform such as any cloud-based PaaS using Kubernetes or an on-premise PaaS such as OpenShift (which, in turn, uses Kubernetes)

Improved User Experiences

- API complete backend allowing for building cutting edge experiences with any best of breed tooling (though OpenUI also remains there)
- Synergy with other microservices via REST API or Reactive Event Based Messaging

The illustration below indicates both the proposed Siebel CRM cloud optimized architecture aligned with CNCF standards, and the expected business benefits of each component in the architecture.

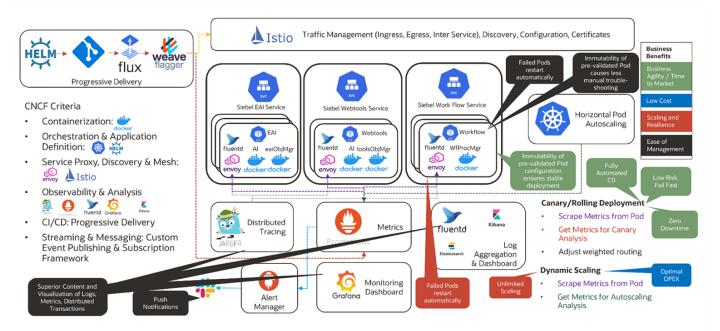


Image 1: Business benefits with a cloud-optimized infrastructure built around independent Siebel CRM components. Note components and 3rd party may be subject to change.

LEVERAGE SIEBEL CRM ROI DURING YOUR DIGITAL TRANSFORMATION JOURNEY

Whether you are integrating Siebel CRM with SaaS solutions, moving Siebel CRM to the cloud (Private or Public), a cloud optimized architecture will provide more adaptability:

- Platforms underlying the technical side of a digital transformation strategy are inherently cloud native.
- Participating Applications / Services are expected to play well in a cloud native context.
- If using Siebel CRM alongside other old or planned digital assets to drive fast paced generation of value is part of your goal, then a cloud optimized architecture will provide a solid foundation.

The evolution of the Siebel CRM architecture to embrace cloud native technologies empowers organizations to build and run scalable applications in modern, dynamic environments such as public, private, and hybrid clouds. The advantages are not just for customers deploying Siebel CRM on cloud infrastructure, but become inherent to all modes of deployment.

CLOUD MANAGER

The Siebel Cloud Manager (SCM) for Oracle Cloud Infrastructure (OCI) is an automation tool that will simplify a "lift and shift" of their existing Siebel Enterprises from On Premise hardware to OCI. Additionally, once they have migrated into OCI with Siebel CRM, the SCM will continue to be enhanced with features that will enable them to easily manage their Siebel Enterprises once they are in their OCI Tenancy.

The initial feature set of SCM includes:

- Siebel Cloud Manager tool set which can be retrieved from the Oracle Cloud Marketplace and deployed directly into a customers OCI tenancy
- "Lift" tool which enables the automated packaging of the necessary Siebel CRM "artifacts". This is required for the migration to the customers OCI Tenancy.
- This tool will be retrieved from the instance within the OCI tenancy/compartment where the customer deployed SCM.
- A customer will have migrated these Siebel CRM artifacts to the Object Storage within their OCI tenancy.
- The lift tool can be targeted at either a Siebel Enterprise deployed with either Windows or Linux

- "Shift" tool which enables the deployment of Siebel CRM "artifacts". These will have been migrated to the OCI object storage within a customers tenancy to stand up the Container based Siebel CRM environment that was migrated from On Premise hardware.
- The Siebel Enterprise deployed will be on a Linux environment with an Autonomous Database. This tool leverages
 Kubernetes, and Ansible automation for deployment via automation.
- Additionally the SCM allows for the deployment of a base Siebel CRM environment for any industry with either a "Sample" or out of the box database. This environment will also be a Linux based deployment using Containers.

Future updates on a periodic basis will include features:

- Database types of "bring your own license" (BYOL) and Database as a Service (DBCS)
- GUI menu driven front end
- Manual Scaling
- Auto Scaling
- Update deployment
- Rollback of an Update
- Scalability/Performance
- Microservice Enablement

AI SERVICES

Artificial Intelligence is all around us. Businesses have been using AI to boost the decision-making process. AI assists businesses with finding new customers and keeping the loyal ones happy. Siebel CRM data can be used to deliver more predictive and personalized customer experiences in all areas of the business.

Companies today need AI to accelerate innovation, assess business conditions, and deliver new customer experiences. However, they frequently run into implementation issues ranging from a scarcity of data science expertise, difficulties in training models on relevant business data to getting their platform to work in a live environment or breaking down data silos. As a result, companies expend valuable time and resources, when they need AI that is consistent, responsive, and capable of working in their business applications and operational environments to deliver actionable results.

Oracle's Al services solves this issue by providing pre-trained models. Siebel's Integration with OCI Al Services would provide immediate value to customers across a broad range of use cases. It would give developers the ability to easily consume already-built ML models and extend apps and solutions, without needing to be machine-learning experts. The integration will offer solutions in following Al service areas:

- Language
- Speech
- Vision
- Forecasting
- Anomaly Detection

REST API ENHANCEMENTS

Features will be delivered to enhance the Siebel CRM REST API:

- Automation of CRUD APIs Automatic exposure of Business Objects as REST resources, without the detailed explicit configuration of Integration Objects.
- Support for Hierarchical Business Components as REST resources
- Ability to version RESTful APIs
- Event based REST Outbound Notifications, including flows for Quote/Account/Order/Asset
- Expand Query Param to expand child resources in GET response for parent Resource
- Workflow Invocation through REST, currently Workflows can be invoked through Business Services.
 - This feature provides a simple RESTful interface to run Siebel Workflows via inbound API calls allowing applications that integrate with Siebel CRM to increase the scope and interactivity of the integration.
 - Using HTTP calls that provide the Workflow name in the URL along with various input properties in the HTTP body it is now possible to invoke complex operations defined in Siebel Workflow Processes.

TEST AUTOMATION

The Test Automation framework is to be further enhanced, improving usability and agility with the following new features.

ENHANCED TEST AUTOMATION LOG REPORTING WITH JSON

Detailed Siebel Test Automation result reports are to be extended from the existing html format to include the JSON format. The key benefit with JSON format is that the results can be easily consumed by other tools, for example in CI/CD pipelines, test management tools, etc.

In addition, a new Report.html built using the JSON format will also be provided, with significant enhancements over the existing Master Suite report. Improvements include the layout, consolidated snapshot, and detailed failure analysis.

PLATFORM & CERTIFICATION UPDATES

Oracle indicates on My Oracle Support, when platform certifications are superseded by more recent Siebel CRM Monthly Updates.

New certification updates planned for Siebel CRM include:

- Third party version updates
- 64-bit architecture
- Open API (REST) 3.0
- Extensible Object framework

CUSTOMER EXPERIENCE

The following features that relate to improving customer experience are planned for delivery.

USER EXPERIENCE

The following Open UI framework features will be added to improve usability:

- Improved UI responsiveness via simultaneous loading of components within a single view
- UI parallel applet loading:
 - o Load disparate applets in a view (dashboard) in parallel.
 - o Load parent / child applets in a view without dependency in parallel.
 - Lazy loading of applets so user can see information quickly
- "Right Click and Open" capability for navigation links
- Improvement in UX for the editing of hierarchies, including those that involve multiple Object styles, across functional areas
- (Multi) Hierarchy Editing UI support for multi-hierarchy control (for example, depicting households, contacts, and entities associated with the contact), showing vertical and horizontal scroll bars.
- Support for Open UI rendering enhancements using third party rendering frameworks (VUE, React or Angular)

SIEBEL MOBILE

The Siebel Mobile Framework is being enhanced to provide a more consistent user experience whether working online or offline and to ensure the minimum number of gestures (clicks, taps, and so on) is required to complete a task. The key abilities provided in the enhanced framework are:

- Native Container replacement Oracle's strategic direction is to move from the Mobile Application Framework
 (MAF) to a new mobile platform based on Oracle Java Extension Tool (OJET) which is a modular JavaScript
 development toolkit helping developers to build engaging user interfaces. It is an open source platform based on
 industry standards and will also help to provide the Container mobile application for Siebel Mobile.
- **Redwood UX** A new Redwood UX is being designed for the Container mobile application which will align with the Redwood UX available for Siebel CRM on Smartphone.

SIEBEL REMOTE DEPLOYMENT

Siebel Remote deployment architecture is being enhanced to ensure changes can be deployed in the production without upgrade kits.

• **Docking Enablement for Siebel Remote** – simplified administration of Siebel Remote clients, ensuring repository changes are routed to Siebel Remote clients. This is to be performed via a docking mechanism after an incremental migration and without using Siebel Anywhere kits.

DATA VISUALIZATION

Studies have shown that the human mind typically processes Images faster than text, and it is much more meaningful to translate data that is traditionally displayed in forms and spreadsheets into easily understandable visuals to see the "big picture" or convey the intelligence.

DASHBOARDS

Dashboards provide a summary of the most important information for users. They cater to various user roles, channels, or organizations and can be tailored to accommodate the differences between various industries. In addition to prebuilt dashboards, our intention is to provide various visual elements needed to create these dashboards as quickly and efficiently as possible.

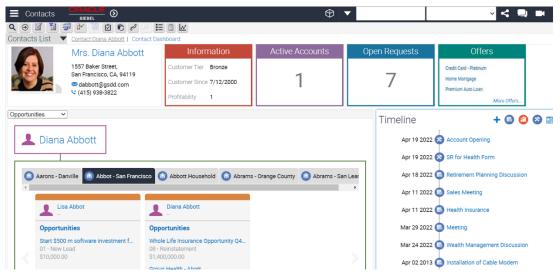


Image 2: Sample FINS Dashboard

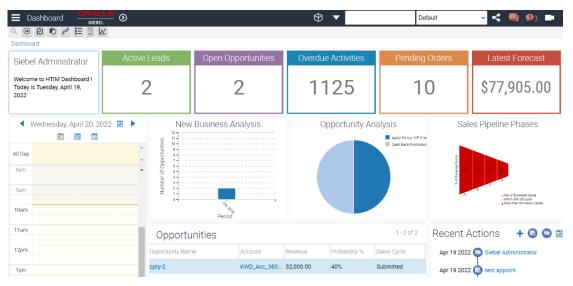


Image 3: Sample HTIM Dashboard

VISUAL COMPONENTS

To accelerate the development of dashboards, a new set of visual components have been identified and will be introduced in the product:

- Infolets: Infolets provide an ability to display single value fields (such as Number, Text, Date) which can be drilled
 down to the relevant view.
- **Timeline**: Timeline view provides an ordered snapshot of interactions, based on the entities configured. Events from multiple entities such as Opportunities, Activities, Service Requests, etc. and can be configured by customers.
- Hierarchy Control: Display the data for four-level hierarchy components, such as Contact → Household →
 Household Contacts → Opportunities.

GENERATING VALUE FROM DATA

Siebel CRM continues to be the core system with massive transactional data volumes. We are focusing on the ways of deriving value out of this data through various initiatives.

ORACLE ANALYTICS CLOUD FOR DATA ANALYSIS

Oracle Analytics Cloud (OAC) is a scalable and secure public cloud service that provides a full set of capabilities to explore and perform collaborative analytics for your enterprise. Simple yet powerful, Oracle Analytics Cloud makes it easy for you to capitalize on cloud analytics, today and in the future. Integrating Oracle Analytics Cloud with Siebel CRM will introduce the following capabilities:

- Analytics, including self service analytics
- Business scenario modeling and visual analyses
- Enterprise Reporting

ORACLE UNITY FOR CUSTOMER DATA PLATFORM

Siebel CRM continues to be the reservoir of customer profile and transactional data for some of the largest organizations in the world. By integrating with Oracle Unity Customer Data Platform, customers can combine existing CRM data with data from other sources to create an enhanced, dynamic, real-time view of each customer.

The pre-built integration enables Siebel CRM customers to identify data entities and export data to the Oracle Unity platform. The integration supports initial and incremental load of data with the ability to define the frequency of data synchronization. We also intend to provide real-time sync between Siebel and Unity.

At the root of successful personalized experiences is customer data that can be dissected in multiple ways and offers a peek into different user segments. Oracle Unity opens up new capabilities to connect data from multiple sources and use it for segmentation. The Oracle Unity integration allows greater segmentation of customer profiles for marketing campaigns and will allow for Customer 360-degree analysis, Intelligent Attributes and Analytics in the future. We plan to offer these capabilities for Siebel CRM customers as well.

You can access more Oracle Unity information here.

KNOWLEDGE MANAGEMENT

Oracle Knowledge Management offers unparalleled capabilities for content authoring and search that helps finding answers quickly, provides information in an efficient and consistent way across channels. Siebel CRM integration with Oracle Knowledge will enhance the Service Management capabilities by giving easy access to knowledge for Call Center agents, Case Workers or Technicians to do their job. While the knowledge repository of articles, guides, and so on. are being created and managed in Oracle Knowledge with keywords, the integration will enable searching them for a Service Request. This integration will support a multi-lingual knowledgebase.

DIGITAL ASSISTANTS

As businesses move towards more digital models, Digital Assistants are going to play a big part in this journey. With Oracle's Digital Assistant (ODA) integrated with Siebel CRM, our customers can transform the whole Service Experience. They can reduce their operating costs in supporting users via agents or business development teams and drive efficiency and productivity.

With this integration, we will offer an approach for integrating ODA with Siebel CRM. We will also release a sample skill that will reduce the time to adoption of ODA with Siebel CRM. This integration will be expanded by introducing industry specifc skills that are ready to consume.

LOYALTY

PROMOTION RULE-BASED REJECTION OF LOYALTY TRANSACTIONS

This feature enables loyalty transactions to be rejected if certain conditions are met instead of taking that transaction forward. The transaction rejection functionality has been added into the promotion engine to reduce need for external validations. This will allow loyalty administrators to define promotion rules that would reject potentially fraudulent or nonrealistic transactions upfront before processing other rules.

FLEXIBLE TRANSACTION PROCESSING

Users can configure to process transactions either as per transaction date or processing date.

EVENT-BASED REWARD TRIGGERS FOR LOYALTY MEMBERS

A good loyalty program recognizes events in their member's life or journey with the brand by rewarding members at specific milestones. Siebel Loyalty now facilitates the automatic creation of transactions for the members who meet certain triggers like birthday, anniversary, referral complete, specific redemption etc. These transactions are then processed to reward members.

This new functionality allows Loyalty Administrators and Program Managers to enhance their loyalty programs with the ability to create and process transactions for members non activity and to reward members on special occasions.

ABILITY TO DEFINE EFFECTIVE DATES FOR LOYALTY POINTS

As loyalty points are accrued, they are often required to be effective after a set period of time following the initial transaction. This new feature allows Loyalty Administrators or Program Managers to set different point effective dates at promotion level. Point allocation can be set to become effective after a specified gap from the date of transaction processing.

ENHANCING SIEBEL LOYALTY WITH ORACLE CROWD TWIST

Oracle CrowdTwist helps in building relationships with customers beyond the point of transaction. This integration of CrowdTwist with Siebel Loyalty provides a complete, modern loyalty solution. It enhances the transactional loyalty solution that Siebel Loyalty provides with engagement and behavioral loyalty solution from CrowdTwist.

The integration between Siebel Loyalty and CrowdTwist leverages Oracle Integration Cloud (OIC) to support new engagement activities like survey, polls, quizzes, social connections, code redemption, automatic rewards, etc. It also adds new redemption options like sweepstakes, digital downloads and coupon codes for Siebel loyalty customers.

INTEGRATION WITH PAYMENT GATEWAYS FOR TOKEN BASED PAYMENTS FOR SIEBEL LOYALTY

Integration with payment gateways for token-based payments is planned for Siebel Loyalty to avoid storing credit card information in Siebel database. Existing functionality around payments will continue to be supported through this approach.

REST API FOR DELETION OF A LOYALTY MEMBER

This new REST API will help customers to address Global Data Protection Regulation (GDPR) compliance requirements. It will allow customers to delete member data along with member associated data for transactions, accrual items, membership cards, activities, vouchers, and service requests.

LOYALTY LIGHTWEIGHT BUSINESS COMPONENTS TO IMPROVE REST API RESPONSE TIMES

New light weight business components are planned to get quicker response for REST API calls done on loyalty member and transaction objects. These light weight business components will exclude the calculated fields and the not so common fields.

LIVE EXPERIENCE

Historically, Siebel has offered strong capabilities for Computer Telephony Integration (CTI) using communications panel and APIs for server-to-server integration for 3rd party call handling. Live Experience is changing the game by providing video calling, audio calling and routing mechanisms with 1st party call handling.

The goal is to productize an integration between Siebel and Live Experience Cloud product for modern customer engagement for video calling, using an application on mobile device or browser-based screen-sharing capabilities.

The Integration would provide the following functionality:

- Support audio and more importantly video calling
- Integrate with existing Communications Panel to keep Live Experience and Siebel data in sync
- Allow agent to dock / undock and have a full screen Live Experience panel
- Integration of Live Experience Events with Siebel Activities
- User Authentication

SIEBEL UNIVERSAL CUSTOMER MASTER (UCM)

Siebel UCM is to be enhanced with the following features:

- Siebel UCM will allow publishing to multiple middle-ware systems in hybrid mode. In this architecture, the endpoints can be either a middle-ware system or a specific edge system in contrast to today's approach which provides either a middle-ware OR an edge system.
- The integration with Oracle Enterprise Data Quality (EDQ) will be enhanced to retrieve the rule names for matching.
- Siebel UCM Workflows will be exposed via Inbound REST APIs.
- Siebel UCM will support Kafka based, event driven architecture.

INDUSTRY INNOVATION

Industry-specific innovations planned for delivery are described below.

DIGITAL EXPERIENCE INDUSTRY SOLUTIONS (SIEBEL AS A SERVICE)

Technological advances such as 5G, IoT, voice devices, digital assistants, self-service channels, and so on will demand more data, traffic, and throughput to a Siebel CRM deployment. Therefore, a more highly scalable architecture is necessary to meet the expected demand. Within certain industries, we are also seeing a trend towards the need for "Gold Standard" industry solutions that blend new applications and technologies with existing mission-critical, deep, end-to-end business processes.

As an example, communications organizations use the deep Telco specific capabilities along with the extensibility framework to build customer or country specific requirements. These customizations and functionality need to be exposed and consumed by other applications and channels.

"Siebel as a Service" introduces the concept of highly scalable Siebel CRM services and microservices that provide the ability to enable existing customized application processes, across all variants of industry application, horizontal business-process and platform technology, to be exposed, serving the needs of Customer Experience (CX) applications and channels.

Siebel CRM microservices will play an integral part of Oracle's Industry solutions platform infrastructure and will dramatically change the flexibility of the Siebel CRM application.

Oracle's next-generation industry solutions are both cloud-optimized and hybrid, offering on-premise interoperability. Users will embrace the Oracle Redwood UX, leverage intelligence from CX Unity across the Oracle CX Suite and be able to re-use their existing customized Siebel CRM services into the industry stack.

The realization of Siebel CRM microservices has been part of a journey:

- In 2016, we made it possible to run Siebel CRM on Cloud Infrastructure (laaS)
- In 2017-18, we provisioned running Siebel CRM as Docker Containers with Kubernetes, which can run on Cloud (laaS) as well as on-premise.
- The next step is to take the work completed so far with Containers and enable more micro Container-based services on a cloud-optimized architecture.

To understand microservices further in the context of the Siebel CRM application, consider a Siebel Application Server running as a single Container that will contain many Object Managers and other processes. The Container could be quite large. By comparison, "Siebel as a Service" would see each Object Manager and Application Interface running as its own Container with a smaller footprint. If further granularity is desired, then functionality defined in Siebel CRM Business Services, and Workflows should be exposed via the REST API using the EAI Object Manager. Since the EAI Object Manager does not have UI context, these Containers will be even smaller. These Restful API services result in lean, accessible Siebel CRM microservices, all being orchestrated by a Kubernetes engine providing a high performance and scalable, elastic architecture. This architecture would be available for both cloud and on-premise deployment.

DIGITAL EXPERIENCE FOR COMMUNICATIONS (DX4C)

Communication Service Providers are embracing digital technologies to increase business and service agility to rapidly innovate, launch and monetize new services to deliver omni-channel consistent digital experiences to consumers and enterprises. The first step towards a more modular "Siebel as a Service" approach is visible with the latest Oracle Digital Experience Industry solutions.

For <u>Oracle Digital Experience for Communications</u>, the following Telco specific business processes are planned for delivery in Siebel CRM:

- Buying Experience functionality to support:
 - Device Management support installment, leasing and bring your own device
 - REST APIs for bulk ordering
 - Family plans
 - o Quote Management enhancements for industry standards
 - Event based outbound flows for Quote, Account, Order, and Asset
- Launch Experience functionality to support:
 - o One-time migration of a Product Catalog and related entities
 - Publishing of LaunchX definitions to Siebel CRM using Product and Pricing Administration REST APIs

- Migration and synchronization of Attribute Definitions and Values, Smart Part Number, Product class, Parent-child relationship
- Product launch inbound microservices
- Product catalog microservices with pagination, attribute-based images for products and new refresh cache APIs
- Microservices for buying experience for omni-channel experience
- Product configurator web service API enhancements for ABO flow
- Bundle promotion microservices for get promotion definition, new, edit, modify, ApplyPromotion, upgrade and disconnect
- Shopping cart to order to asset and agreement creation microservices
- MACD microservices
- Event based outbound flows for Quote, Account, Order, and Asset
- Order validation and cancel Order Microservices

PARALLEL CONFIGURATION OF MULTIPLE CUSTOMIZABLE PRODUCTS

Siebel Customer Order Management allows call center agents, partners and even end users to configure customizable products. Parallel Configuration enhances the product configuration user experience with a rich user interface making it easy for users to work with multiple customizable products.

Users can load multiple customizable products, switch back and forth when configuring multiple, highly complex products and during an order capture process, check the pricing impact of all of the customizable products during configuration.

Since the operations are done in-memory, the loading and unloading time of customizable products is reduced. This effectively improves the call-handling time and provides a streamlined user experience for self-service users.

This feature will also support bundle promotions and asset-based ordering flows. For optimization of CPU and memory resources, remote product configurator will be required in the topology.

ORACLE INTELLIGENT ADVISOR

Oracle Intelligent Advisor (OIA) enables organizations to build interactive interviews based on business requirements, complex policy, and legislation. The Siebel CRM integration with OIA is based on an embedded-interview approach providing a flexible and easily integrated solution.

This integration enables outcome driven interviews and business rules as defined in OIA Interviews and Rulebase. These rules can be tied to Siebel CRM business processes and data. This new integration framework offers easy configuration and integration using the "Div based layout". A simplified integration from Siebel CRM will result in lower cost of integration and easier upgrades to future OIA versions.

Industry specific use cases involving the need for step-by-step data capture to derive decisions or outcomes can be designed using the enhanced framework. The existing sample sample use cases, across two industries will be using the new embedded integration approach:

- Public Sector Eligibility Assessment and Apply for Benefits
- Financial Services Need Analysis and Application Capture

In addition to the functionality supported in the existing integration approach, this new embedded interview approach of integration would also support:

- Decision Support
- Store interview as an attachment in Siebel CRM
- Print an application
- Dynamic fetching of LOVs, picklist data from Siebel

ENHANCED FIELD SERVICE WITH INTEGRATED ORACLE FIELD SERVICE CLOUD

Companies are shifting to Service-based business models and have recognized Service as a profit center. This brings an increasing focus on improving Customer service. In this area, Oracle Field Service (OFS) offers intuitive, Al-powered tools for routing, scheduling, and managing field service technicians.

By integrating Siebel Field Service with OFS the best-in-class appointment booking and scheduling features become available. It will be possible to deliver efficient and on-time service experiences—every time. The integration will support use cases like Appointment Booking, Skill based assignment, Technician updates and Real-time data synchronization.

Oracle Field Service Cloud Integration will include:

- Data mapping
- Scheduling of Siebel activities in OFS
- End to end use cases for Administrators and Call Center Agents

APPOINTMENT BOOKING APIS FOR SIEBEL SCHEDULER

This feature enables customers to leverage Siebel Scheduler for providing an appointment booking solution on any customer/employee facing channel. To meet the needs of modern customer experience, it is required to allow customers to book appointments anytime, anywhere. These APIs will enable self-service capability by integrating front-end applications with Siebel Scheduler.

As part of this feature, API's will enable the following capabilities:

- Find a list of Resources in a service region
- Check available timeslots and resource names for an activity
- Book an appointment
- Cancel an Appointment
- Prebuilt User Experiences for Industries

GEOCODE SUPPORT

Many CRM use cases requires location to be associated for a better service and customer experience. This requires the capturing and stamping of Geocodes. The Siebel CRM data model will be extended to manage Geocodes and support relevant use cases.

ORACLE ERP CLOUD INTEGRATION

Increasingly, customers are looking for a seamless and robust Order to Cash business process. Leveraging the best front-office with the best back-office applications, a tightly integrated solution can offer a streamlined, end-to-end Order to Cash business process. This enables a faster time to market for new products and a faster time to revenue.

With this in mind, Siebel CRM will be integrated to Oracle ERP Cloud that will reduce time-to-market for the end to end solution. A quote or order created in Siebel CRM will generate an order in Oracle ERP Cloud. The integrated Order to Cash flow will support master data flows (customer account data sync) and transactional flows (Credit check, Payments, Quotes and Orders).

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