DOYENSYS
VALUE INNOVATION

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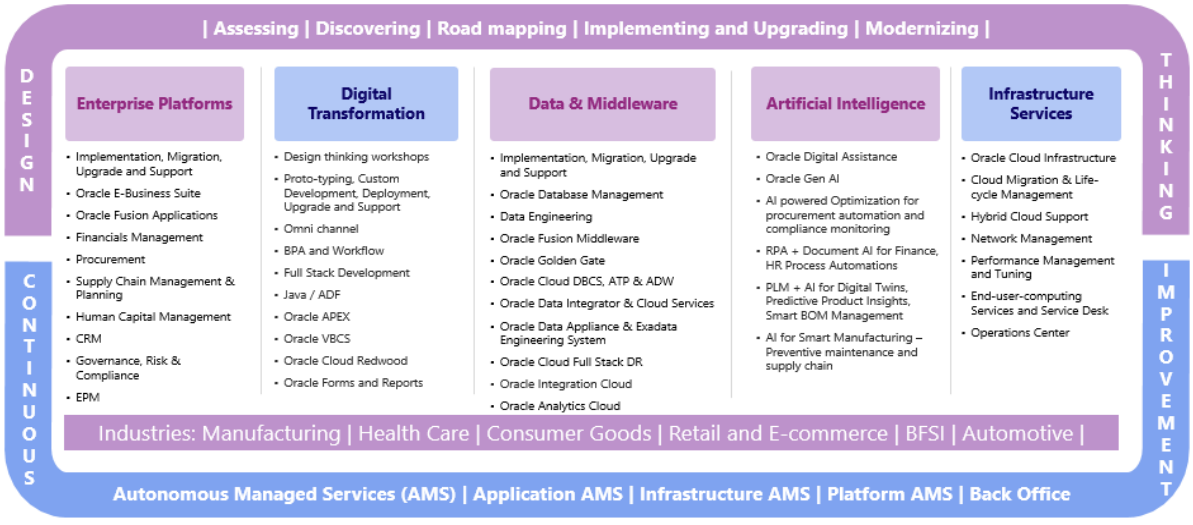
Modernizing Cloud ERP Applications with Redwood

Transforming Fusion Applications for the Future

ABOUT DOYENSYS

DOYENSYS VALUE INNOVATION PILLARS



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1. Redwood - Why a new application platform

Building applications in the enterprise world is a whole different game. It often demands broader technical knowledge, the ability to juggle multiple systems, and the responsibility of developing and maintaining a growing portfolio of applications. Ironically, even as expectations rise, enterprise developers are often left with limited resources—or not quite the right mix of tools and talent to get the job done effectively.

Recognizing this challenge, Oracle has set out to change the playing field. The company is building a modern, end-to-end application development platform tailored specifically for enterprise developers and their extended teams. The goal? To empower them to meet today's high expectations—especially the need to deliver consumer-grade user experiences within enterprise environments.

Oracle's new platform reflects a strong commitment to the future of enterprise apps. It's built using modern technologies, frameworks, and development practices, all focused on making the applications not just powerful, but intuitive and enjoyable to use.

A key part of this transformation is Redwood—Oracle's unified design system. Redwood provides a consistent and elegant look-and-feel across all applications. It includes tools, components, templates, and design patterns that help developers build applications faster while ensuring visual and functional consistency. At the same time, Redwood is flexible, allowing for customization to create differentiated user experiences when needed.

With this platform, Oracle isn't just modernizing its own applications—it's redefining how enterprise apps should be built.

Why Redwood Is More Than Just a New Look

Redwood isn't just a facelift for Oracle applications—it's a comprehensive, future-ready platform designed to transform how enterprise apps are built, customized, and experienced. It offers a richer, more productive foundation for creating solutions that are not only powerful, but also cost-effective. And that opens up a world of new possibilities for Oracle customers and partners alike.

With Redwood, Oracle is setting a new benchmark—not just for itself, but for the entire enterprise software industry. This is not just a redesign or a branding refresh. Redwood is a

rethinking of what enterprise user experience (UX) should be in the age of AI, automation, and user-centric design.

Redwood is more Than a Pretty Interface

At its core, Redwood brings together essential building blocks for modern app development:

- Low-code development tools
- Intelligent search
- Conversational experiences
- Machine learning–powered recommendations
- Data visualizations
- Built-in telemetry and health monitoring
- Full accessibility support

These capabilities aren't isolated features—they're deeply embedded into the platform, shaping every app built on Redwood.

A Platform for the Future

Oracle Redwood isn’t just modern—it’s *modern with purpose*. It’s built for speed, scale, intelligence, and elegance. And more importantly, it’s built for *you*—the developers, partners, and customers shaping the next generation of enterprise solutions.

This is your opportunity to build apps the way modern users expect—without compromise.

Visual Builder: The Heart of Redwood Development

All Redwood app development, whether by Oracle or customers, happens through **Oracle Visual Builder**—a powerful low-code development environment. It's the same tool Oracle uses internally, and it's available to customers for creating new apps or customizing existing ones.

With Visual Builder, Redwood delivers:

1. **Fast, Beautiful App Creation**
   Visual Builder brings together all the power of Redwood's design system and components to simplify the process of building modern, polished enterprise experiences.
2. **Smart Search and Conversational UI**
   Find what you need and complete tasks with a conversational interface—using natural language or even your voice. Redwood apps feel intuitive and personal.
3. **Introducing Ask Oracle**
   "Ask Oracle" is the new home experience in Redwood. Think of it as your intelligent launchpad: search-driven, context-aware, and AI-powered. No need to remember menu paths or terminology—it learns how you work and guides you accordingly.
4. **Intelligent Recommendations**
   Built-in machine learning understands your business patterns and provides proactive suggestions and guidance that adapt and improve over time.
5. **Insightful Data Visualizations**
   Redwood offers best-in-class data visualization capabilities, helping users see their data in meaningful ways, uncover trends, and drive better decisions.
6. **Built-in Telemetry and App Health Monitoring**
   Every Redwood app automatically emits compliant telemetry across all layers, offering real-time insights into usage, performance, and reliability.
7. **Data-Driven Decision Making**
   With automatic insights into self-service usage, service quality, and app performance, everyone—from developers to business users—can make informed, data-backed decisions.

The Building Blocks of Redwood

Oracle Redwood offers a rich library of pre-defined components and design patterns that serve as the foundation for building modern enterprise applications. Let's take a closer look at some of its essential elements:

1. **Page Templates**

   Page templates define the overall structure of a page—what goes where and how it looks. Developers use these templates to ensure consistency across applications, maintaining a cohesive Redwood design without having to reinvent the wheel for every screen.

2. **Collections**

   Collections are versatile components used to display related sets of data—whether in lists, tables, or data grids. They come with built-in toolbars and are highly customizable, making it easy to present and interact with complex datasets in a clean and functional layout.

3. **Controls & Navigation**

   Redwood provides intuitive controls and navigation components that help users perform actions, move through the application, and access relevant information. These components are designed for clarity and ease of use, enhancing the overall user experience.

4. **Analytics & Visualizations**

   To bring data to life, Redwood includes a powerful set of analytics components. From charts to dashboards, these tools help developers craft compelling data stories that drive insights and decision-making through clear, modern visualizations.

5. **Form Inputs & Controls**

   When building forms, Redwood offers a comprehensive suite of input components—text fields, dropdowns, radio buttons, labels, and contextual help. These are designed with accessibility and usability in mind, ensuring a smooth data entry experience.

6. **Layouts**

Structural components like drawers, dialogs, cards, panels, and tab bars help developers organize and present content in a modular, user-friendly way. These layout elements form the scaffolding of Redwood applications, promoting both consistency and flexibility.

- **Is Redwood Only for Fusion Apps? Not at All.**

While Redwood is the design system behind Oracle Fusion Applications, its use isn't limited to them. Developers can use **Oracle Visual Builder** to create standalone, custom applications—completely independent of the Fusion ecosystem.

These custom apps can:

- Connect to Oracle SaaS data through REST APIs
- Integrate with third-party services or data sources via REST
- Access customer-defined tables and data through custom APIs
- Be used by users outside the Oracle SaaS environment

Even better, these apps can adopt the Redwood theme—matching the same colors, fonts, and visual styles used in Fusion Applications. This means developers can build modern, consistent experiences whether inside or outside the Fusion world.

Redwood Page Template

Oracle Redwood provides a variety of **page templates** that help developers create modern, consistent, and responsive enterprise applications. These templates are part of the Redwood UX framework and are available within Oracle **Visual Builder** and **Fusion Design System** to accelerate development and ensure a seamless user experience.

- **Types of Oracle Redwood Page Templates**

Here are the most commonly used Redwood templates and their use cases:

1. Start Page Template

- **Use:** Landing pages, dashboards, or welcome screens.
- **Features:** Highlights key content at the top, often includes cards or sections summarizing application features or metrics.
- **Best For:** Applications where users need a high-level overview before diving into tasks.

2. List Page Template

- **Use:** Displaying tabular or grid-based data from collections.
- **Features:** Search/filter bar, toolbar for actions (create, delete), data table or list layout.
- **Best For:** Any module that presents records—like Customers, Orders, Invoices, or Employees.

3. Details Page Template

- **Use:** Viewing or editing a single record.
- **Features:** Form layout, header with record title or ID, action buttons.
- **Best For:** Drill-down from list pages to display record-specific details or editing interfaces.

4. Create / Edit Page Template

- **Use:** Data entry or editing flows.
- **Features:** Form components like input fields, dropdowns, tabs; often used with validation and step indicators.
- **Best For:** Creating new records or updating existing ones—used in combination with list and details pages.

5. Tabbed Page Template

- **Use:** Organizing related content in sections.
- **Features:** Tab navigation at the top; each tab reveals a different aspect of the object (e.g., Profile, Transactions, Settings).
- **Best For:** Complex entities with multiple aspects or categories of data.

6. Master-Detail Template

- **Use:** Viewing parent-child relationships in data.
- **Features:** Side-by-side or stacked layout showing master data and related detail records.
- **Best For:** Modules like Sales Orders (header and lines), Projects and Tasks, or Account and Contacts.

7. Dashboard Template

- **Use:** Visualizing KPIs, charts, and summaries.
- **Features:** Tiles, cards, charts, and summary visuals; supports drill-down into detail views.
- **Best For:** Business leaders or operational users needing a high-level overview with the ability to explore data.

Here’s a practical guide to help you choose the right template:

Step	What to Consider	Template Choice
1. Define the user's goal	Are they browsing, editing, reviewing, or analysing data?	Choose List, Create/Edit, or Dashboard accordingly
2. Understand data structure	Is it a single entity or a master-detail relationship?	Choose Detail or Master-Detail
3. Content complexity	Does the data span multiple categories or sections?	Use Tabbed Pages
4. Need for visualization	Are KPIs and charts the priority?	Use Dashboard Template
5. Navigation style	Do users move between entities, or stay within one?	Use Page Flow + Tabs or Start Page

Redwood Design System Overview

1. Understand the Problem

- What the user is trying to achieve (user goals)
- What kind of data the app will display and interact with (data structure)

This involves stakeholder interviews, user research, and data modelling to ground the design in real business and user needs.

2. Articulate the Vision

- Outline user workflows and navigation paths
- Use flow diagrams or storyboards to illustrate how users move through the application

clarify how users will accomplish their tasks and how the system should respond. This becomes the blueprint for page layout and component choices.

3. Identify Redwood Page Templates to Use

- These templates align with Redwood's UX standards
- They save time and ensure design consistency

Selecting the right template here is crucial to achieving both functionality and Redwood's elegant visual style.

4. Add Detail and Refine the Design

- Add visual hierarchy, component placement, and UI interactions
- Consider inputs, buttons, tables, navigation, etc.
- Align all elements with Redwood component guidelines

This is where wireframes evolve into detailed design mock-ups, often using tools like Figma (aligned with Redwood Design Kit).

5. Specify Design for Development

- Finalizing component selection
- Annotating designs with behaviours, validations, and responsiveness
- Using Redwood-compatible tools like Oracle Visual Builder to accelerate implementation

The goal is to hand off a complete and precise design that developers can use to build pixel-perfect, accessible apps.

6. Monitor Engagement in the Real World

- Use analytics, user feedback, and usability studies to monitor how it's being used
- Identify pain points or areas for improvement

This ensures that the app stays relevant and continues to meet evolving user expectations.

Redwood Reference App (RRA):

Oracle Redwood Reference App (RRA) is a practical, real-world example application designed to demonstrate how Oracle's Redwood Design System and UX patterns can be applied effectively in enterprise app development. It acts as a template and learning tool for developers, UX designers, consultants, and partners who want to build modern, consistent, and user-friendly applications using Redwood principles.

Purpose:
The RRA showcases how to design and build Redwood-styled applications using Oracle Visual Builder and Redwood Design System components. It helps users understand how to implement Redwood UX patterns in real business scenarios.

Target Audience:
Developers, UX designers, implementation consultants, Oracle partners, and customers who want to accelerate building Redwood-compliant applications.

Technology Stack:
Built using Oracle Visual Builder Studio, Redwood Web Components, and adheres to Redwood Design Guidelines.

Benefits:

- Promotes consistency in UX/UI across applications.
- Serves as an educational and reference tool for building Fusion Extensions or custom SaaS applications.
- Demonstrates best practices in applying Redwood components and templates.
- Helps reduce development time by providing reusable patterns and UI components.

Patterns Used in the RRA

1. Welcome Page – Orders needing attention

- **Purpose:** Acts as a launch point showing the most critical actions or statuses.
- **Example:** Lists all draft orders that need user review or action.
- **User Benefit:** Improves productivity by highlighting what needs attention right away.

2. Smart Filter and Search – Search and manage orders

- **Purpose:** Enables users to **filter and search** based on fields like date, customer, status, etc.
- **Actions Supported:** Create, view, edit, delete orders.
- **User Benefit:** Helps users quickly navigate large datasets with precision.

3. Simple Create and Edit – Order management

- **Purpose:** Streamlined forms that allow creating or updating orders.
- **Key Feature:** Clean layout using Redwood form components and progressive disclosure.
- **User Benefit:** Reduces user effort through a guided, focused layout.

4. Vertical Foldout – View product & supplier details

- **Purpose:** Allows drill-down into:
  - Product specifications
  - Supplier contacts
  - Order histories
- **Design:** Uses **accordion/foldout UI** vertically embedded on the page.
- **User Benefit:** Keeps related data in context without overwhelming the main screen.

5. Guided Process – Training and task tracking

- **Purpose:** Step-by-step UI for completing training or business processes.
- **Design Feature:** To-do checklist with state management (e.g., "Mark as Complete").
- **User Benefit:** Ensures users don't skip steps, and tracks completion of mandatory workflows.

Cloud ERP extension with Redwood VBCS

1. Configure Existing Pages

Modify Oracle-delivered pages by:

- Showing, hiding, or adding fields/sections.
- Embedding new content in dynamic containers.
- Accessed via *Edit Page in Visual Builder Studio* under Settings.

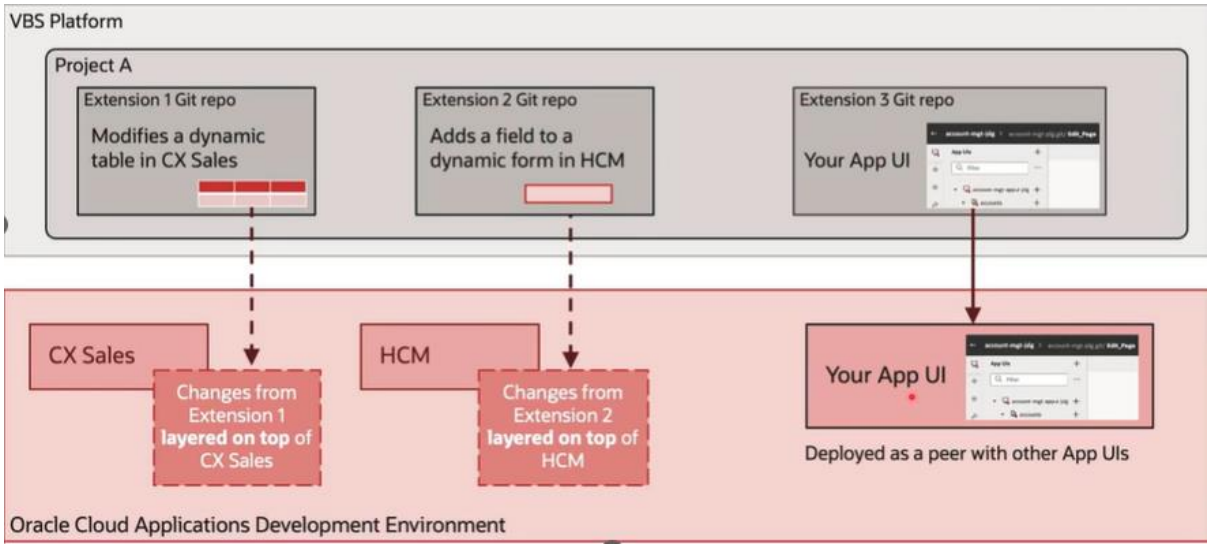
2. Create Bespoke App UIs

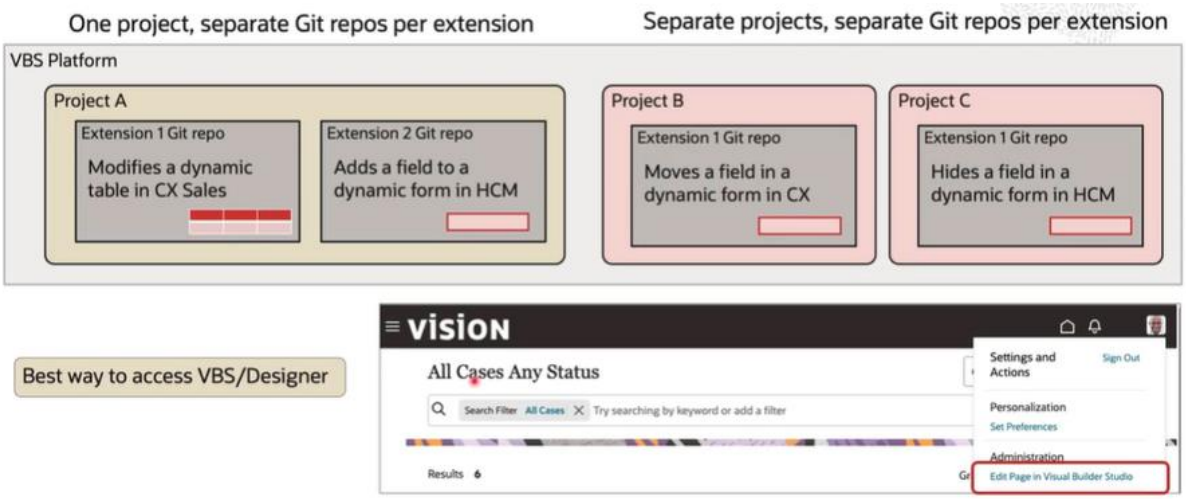
- Build custom pages within Oracle Cloud Applications.
- Fully integrated with Fusion Apps menus and navigation.
- Used for internal-facing extensions.

3. Create Bespoke Visual Apps (Web Apps)

- Build external apps or mashups using FA data, external sources, or customer-specific needs.
- Hosted in VB Runtime or standalone VB instance.
- Designed for external users, outside Fusion Apps.

Example of Extension Configurations





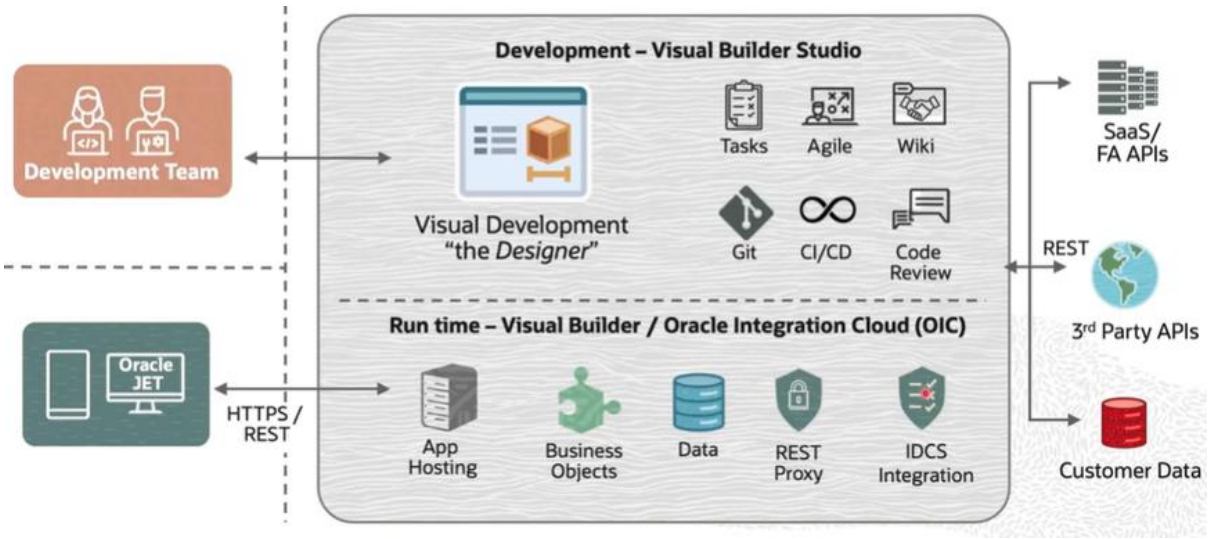
- **Customize Existing Page use cases include:**
  - › Show/hide content
  - › Modify order of items
  - › Conditionally control UI
  - › Create or modify calculated fields
  - › Add new content to dynamic components

- **Create New Pages Use cases**
  - Create your own pages.
  - Leverage Redwood templates.
  - Leverage Oracle Cloud Apps data.
  - Access Oracle Cloud Apps ecosystem.
  - Leverage single sign-on.
- **The Extension Life Cycle: Create a Bespoke App UI**
  - Create New App UI
  - Customize App UI
  - Add new services
  - Extend/override action chains
  - Add dependencies
  - Create reusable extensions

- **Steps:**
    - Open project
    - Choose workspace name
    - Choose Git repo name
    - Search for app to extend
    - Unified app is added as dependency
- **Workflow:**

  Commit → Push → Merge/Publish

VBS Support for External Bespoke Mash-Up Visual Applications



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THANK YOU