PROJECT ARCEUS CUSTOM-READY SOLUTIONS (CR SOLUTIONS)

Agenda

- CR-Solutions Introduction
- Tool Introductions
  - Problem Statements
  - Solution Overviews
- Demos

This Is about Our Industry's Heart

Meter-to-Cash operations are the lifeblood of a distribution utility.
This group:

- Is the interaction point providing customers with access to service?

- Bills customers fairly and consistently for the cost of providing them that service

- Processes payments and manages collections to make sure that everyone pays their fair share

Details vary by utility type and class of customer—metered or fixed-priced service? Distributed generation? On-line or phone-and-mail interaction?

A small number of applications have been developed to enable a utility to deliver service and meet modern customers' expectations.

But, Doctor, Why Does It Hurt So Bad?

But why is implementing Meter to Cash applications so often and so hard? Too many projects go over budget, over schedule, and underdeliver on promises.

Common contributing factors:

- Inadequate understanding of requirements at the outset, with developed solutions having to iteratively change as the implications become clear

- Long project timelines: where the utility's business needs evolve before the baseline gets placed in service

- Need for excessive customizations to meet complex needs

And then, after the application is in service, it is time-consuming and costly to maintain when those customizations are inconsistent with the application's architecture.

It's not just meter-to-cash. Bent Flyvberg and Dan Gardner's research on 16,000 projects showed that only **0.5%** of projects deliver on all three of budget, schedule, and promise. **99.5% fail** to hit all three! But anyone with experience in our industry knows we are subject to that pain too often.
Flyvberg, Bent, and Dan Gardner. How Big Things Get Done (New York: Currency, 2023) P. 8.

CriticalRiver Rides to the Rescue!

CriticalRiver invested in our C2M Agility Suite to help our clients mitigate these risks for Oracle Energy & Water implementations and post-implementation maintenance.

Our solution set provides:

- High impact functionality, eliminating the need for custom development
- Design for performance and reliability by architects who helped build the base product
- Built-in compatibility with the future direction of the framework
- Avoidance or elimination of technical debt

Introduction

CriticalRiver's UtilityPRO™ augments Oracle C2M and CCS with pre-built functionality in response to the evolving expectations of users. Our tool offers a refined approach to making essential features readily available. It features:

- Efficiency Optimization

- Seamless Integration

- Performance Enhancement

- Security Reinforcement

- Eliminated Need for Customization

- User-Friendly Interface

CR Solution PROTM Features Now Available

Business Functionality

- Bill Analysis
- Activity Map
- Rapid Reports
- Mass Adjustment Approval Portal
- Suspense Payment Transfer Portal
- Customer Characteristics View
- Account Bill Verification Portal
- Net Energy Meter Portal
- Activity Map

IT Resource Efficiency

- Configurable Control Central Alerts
- Configurable Sync Request
- Configurable File Upload

Developer Tools

- SQL Executor

Bill Analysis

Problem Statement

• **Lack of Visual Intuitiveness:** The current interface of C2M does not provide a visually intuitive representation of the bill breakdown, making it challenging for users to easily understand the different components contributing to the total bill

• **Difficulty in Comprehension:** Users may face difficulties in comprehending the various charges, including consumption charges, fixed charges, adjustments, taxes, and regulatory charges, without a clear and visually informative representation

• **Impact on User Experience:** The absence of a visually intuitive bill breakdown may negatively impact the overall user experience, leading to potential frustration and inefficiency in navigating and understanding billing details

• **Limited Transparency:** Users may struggle to grasp how payments or payment cancellations affect the final bill amount due to the lack of a transparent and visually accessible representation

• **Communication Challenges:** Without a clear visual breakdown, communication regarding billing details between users, stakeholders, and customer support may be less effective, potentially leading to misunderstandings

Bill Analysis

Solution Overview

Introduced a user-friendly User Interface (UI) that visually represents the components of a utility bill in a pie chart format, facilitating easy identification of the factors contributing to the overall current bill amount.

Key Features

•Able to give a visualization of the current bill's breakdown
•Configurable components allow you to define a new group of partitions in the chart if necessary

Rapid Reports

Problem Statement

- **Manual Data Extraction Struggles:** Customer Service Representatives currently face manual and repetitive tasks when extracting specific lists, causing inefficiencies in their workflow.
- **Dependency on External Tools:** The need to use external applications for data extraction introduces complexity and risks, especially when these tools undergo maintenance or become inaccessible.
- **Quality and Productivity Concerns:** Manual processes increase the chances of errors, impacting data quality and diverting representatives' focus from more important tasks, affecting overall productivity.
- **Risk of Unavailability:** Relying on external tools means service interruptions during maintenance, limiting access to crucial information when needed.

Rapid Reports

Solution Overview

Introduced a template configuration in C2M, which enables users to effortlessly perform simple data retrieval with just a few clicks in the system. This allows users to easily navigate and promptly generate data lists, delivering them the necessary extracted information instantly.

Key Features

- Able to generate reports without having to use external applications.

- Able to configure parameters onto the reports to be used on template execution.

- Able to export the generated reports in a spreadsheet.

Activity Map

Problem Statement

• **Lack of Visual Tracking:** The current version of C2M does not provide a visualization feature, making it challenging for users to efficiently track ongoing or recently completed field activities. This absence hampers the overall visibility into the progress and status of various tasks.

• **Ineffective Field Operations Monitoring:** Without a dedicated visualization feature, there is a lack of effective monitoring for field operations, including repairs, inspections, and maintenance. This deficiency can lead to difficulties in coordinating and managing tasks conducted in the field.

• **Reduced Operational Efficiency:** The absence of a visual tracking component within C2M can result in reduced operational efficiency, as personnel may encounter challenges in quickly assessing the status and location of ongoing or completed activities. This limitation may impact the overall effectiveness of field-related operations.

Activity Map

Solution Overview

Introduced a tool that seamlessly integrates geospatial data using Google Maps, providing an intuitive visualization of activities. By utilizing this integration, the tool allows for straightforward and efficient tracking of these activities. Users can easily monitor and manage tasks efficiently, enhancing productivity and enabling better decision-making based on the geographic context.

Key Features

- Ability to utilize Google Map integration to visualize activities that require dispatch along with their key details

Mass Adjustment Approval

Problem Statement

• **Manual and Time-Consuming Approval Process:** The current approval process in Oracle C2M requires approvers to go through each adjustment individually for authorization, leading to a manual and time-consuming task

• **Inefficiency in Handling Multiple Adjustments:** When multiple adjustments (e.g., 10 adjustments) need approval, approvers are required to perform a separate approval for each adjustment, resulting in inefficiency and potential delays

• **Tedious Task for Approvers:** Navigating through each adjustment individually can be a tedious task for approvers, contributing to a less streamlined and more labor-intensive approval process

Mass Adjustment Approval

Solution Overview

Introduced a portal that will display all adjustments that will require authorization to freeze the adjustments. This will give the approvers a list on hand, allow them to decide which adjustments can be approved with one click, proceed with further approvals (based on the credit or debit amount hierarchy level), and freeze the adjustments once all approvers have authorized them.

Key Features

- Able to view the list of adjustments for approval for the currently logged-in user.
- Able to approve or reject multiple adjustments at once.
- Able to view recently approved adjustments.
- Able to view incoming adjustments for approval.

Suspense Payments Transfer Portal

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Problem Statement

• **Manual Handling of Invalid Payments:** The current business process in Oracle C2M requires Customer Service Representatives to manually transfer unallocated payments resulting from invalid accounts one transaction at a time. This manual approach introduces inefficiencies and increases the risk of errors.

• **Dependency on Payment Event Page:** The transfer of unallocated payments to the correct customer's account relies on the Payment Event page, leading to a time-consuming and potentially tedious process for Customer Service Representatives.

Suspense Payments Transfer Portal

Solution Overview

Introduced a user-friendly User Interface (UI) that will transfer multiple payments from the suspense account to the appropriate customer's account.

Key Features

- Able to view the suspense account's suspended payments.

- Able to transfer more than one suspended payment at a time.

- Able to view the recently transferred payments.

Customer Characteristics View

Problem Statement

- **Inefficiency in Updates:** The current process of adding or updating characteristics in C2M involves navigating between different entity pages (Account, Person, Service Agreement, Service Point, and Premise), leading to inefficiency in the update workflow.
- **Time-Consuming Navigation:** Users experience a significant amount of time and effort spent navigating from one entity page to another, especially when dealing with updates across multiple entities.
- **Impact on Productivity:** Cumbersome navigation and time-consuming updates can negatively impact user productivity, as users spend more time on administrative tasks rather than focusing on core responsibilities.
- **Need for Streamlined Workflow:** There is a need for a more streamlined workflow within the Characteristics Tab to reduce the effort required for updating or adding Characteristics across various entities.

Customer Characteristics View

Solution Overview

Introduced a portal that will consolidate all the characteristic types and values per entity. This will allow the user to update, add, or delete a certain characteristic type per entity on one page, and they may be able to view all the characteristic types of the whole V model entity. The updates performed in the Customer Characteristics View portal will also reflect in the Entity of the Characteristics Tab.

Key Features

- Ability to view the characteristics of the Full V Entity in a single Portal.

- Ability to update the characteristics of the Full V Entity in a single Portal.

Account Bill Verification Portal

Problem Statement

- **Manual Error Verification:** Customer Service Support manually extracts and analyzes billing errors, lacking a summarized view of accounts with billing issues for a specific period.
- **Lack of Centralized Overview:** There is no centralized or summarized view for Customer Service Support to quickly identify accounts with billing errors for specific billing periods.
- **Time-Consuming Verification:** The current verification process is time-consuming and tedious, requiring manual checks on individual accounts to identify and resolve billing errors.

Account Bill Verification Portal

Solution Overview

Introduced a user-friendly User Interface (UI) that will display the total count of accounts with completed, pending, and no bills. This will also provide a table list of accounts with bill errors during the billing process. It will have an option to view the accounts by the error encountered, making it easy for Customer Service Support to analyze and resolve it. This page will also reduce the dependency on the team, which provides a list of extracted bills with errors.

Key Features

- Ability to view how many accounts are expected to be billed in the bill cycle and how many were billed.

- Ability to identify the errors that occur on accounts that were not able to create a successful bill.

Net Energy Meter Portal

Problem Statement

- **Lack of Net Metering Portal:** The absence of a dedicated portal in C2M prevents Net Metering customers from accessing essential information about their energy generation and consumption, creating a transparency gap.
- **Missing Customer Insights:** The current system does not provide a platform for Net Metering customers to view detailed data on how much energy they have generated from renewable sources compared to their consumption from the utility firm.
- **Limited Transparency:** The absence of a net metering portal hinders the transparency of information, making it challenging for customers to track and understand the impact of their renewable energy devices on their overall energy usage.

Net Energy Meter Portal

Solution Overview

Introduced a new Net Metering Portal that'll provide Net Metering information for the users. This portal will show the available readings of the customer's generated energy and consumption for the given period. It will also calculate the dollar value of the customer's generated energy and consumption.

Key Features

- Ability to view the details of an account enrolled to Net Metering in a single Portal.

- Ability to view true-up details that occurred throughout the accounts Net Metering duration.

Configurable Control Central Alerts

Problem Statement

- **Complexity and Duplicity:** The existence of numerous algorithms for displaying alerts suggests a complex and potentially duplicated effort in creating and managing these algorithms.

- **Maintenance Challenges:** Managing a large number of algorithms for different use cases can pose challenges in terms of maintenance, updates, and troubleshooting.

- **Difficulty in Scalability:** As the number of use cases increases, the current approach may become difficult to scale efficiently, leading to potential maintenance issues.

- **Potential for Inconsistency:** The use of diverse algorithms may result in inconsistent messaging or formatting for alerts, making it challenging for users to interpret information consistently.

- **Limited Reusability:** Lack of a standardized approach may reduce the reusability of alert algorithms across different scenarios, leading to a less efficient development process.

Configurable Control Central Alerts

Solution Overview

Introduced a new set of configurations that will allow the user to set up their preferred inputs that will determine if an alert will be created or not. This set-up will then be leveraged by a single-control central alert, which will determine how many alerts are going to be shown in the currently loaded context.

Key Features

- Mitigates the need for multiple plug-in algorithms solely for Alert creation.
- Configurable Components to define what and when alerts are to be created.

Configurable Sync Request

Problem Statement

•**Implementation Complexity:** Dealing with a large number of algorithms for each Sync Request introduces implementation complexities, especially for implementers working with multiple third-party applications

•**Resource Intensiveness:** Creating new sets of algorithms, algorithm types, and script logic for each Sync Request consumes significant resources, both in terms of time and effort

•**Scalability Challenges:** The current process may face challenges in scaling efficiently as the number of sync requests and third-party applications increases

•**Maintenance Burden:** Managing a multitude of algorithms increases the maintenance burden, making it more challenging to update, troubleshoot, and ensure the accuracy of synchronization processes

Configurable Sync Request

Solution Overview

Created a flexible algorithm that implementers can use. This algorithm will utilize a configuration setup to determine whether a sync request should be created or not. This solution would also be able to cater for the creation of multiple sync requests based on the said configurations.

Key Features

- Mitigates the need for multiple plug-in algorithms solely for Sync Request Creation
- Configurable components to define what and how many sync request are to be created

Configurable File Upload

Problem Statement

• **Lack of Reusability**: The current approach relies on distinct File Upload Algorithms for each new File Upload Batch, resulting in a lack of reusability across multiple file upload scenarios within C2M.

• **Inefficiency in File Upload Processes:** The plug-in driven processes for file uploads, with specific processing logic for each batch, may lead to inefficiencies in handling different file upload scenarios.

• **Complexity in Management:** Managing dedicated File Upload Algorithms for each batch introduces complexity in maintenance, updates, and overall management of the batch functionality.

• **Resource Intensiveness:** The need for unique processing logic for each File Upload Batch consumes resources, making the system more resource-intensive and potentially slowing down batch processes.

• **Limited Adaptability:** The inability to efficiently apply dedicated File Upload Algorithms to multiple scenarios restricts the adaptability of the current batch functionality to diverse file upload requirements.

Configurable File Upload

Solution Overview

Introduced a unified and versatile File Upload Algorithm that capitalizes on a predefined configuration set derived from batch control parameters. These configurations will intricately outline the file processing procedure. This strategic enhancement will obviate the necessity for generating multiple custom-made File Upload Algorithms, culminating in the utilization of a singular, adaptable File Upload Algorithm across various file upload requirements.

Key Features

- Mitigates the need for creating new File Upload Algorithms for every new file upload structure requirement.
- Configurable components define how a certain file is going to be processed in the application.

SQL Executor

Problem Statement

- **Dependency on a separate application:** Users are required to open a separate application to access the database and retrieve the necessary identifier.

- **Inefficient identifier retrieval process:** The need to access a separate application creates an unnecessary step, especially when the user only requires a simple identifier search.

- **Database connectivity setup:** In certain versions of the application, users need to set up database connectivity before being able to use the application.

- **Disruption to workflow:** The process of moving out of C2MO to a separate application for identifier retrieval can disrupt the user's workflow.

SQL Executor

Solution Overview

Introduced a tool that is located inside the application to which users can navigate and execute a simple select statement for them to be provided with the data they need immediately.

Key Features

- Accessible inside the application without the need for an external setup
- No need to create new credentials for every new user since, as long as they have C2M access and are granted application security, they can use the tool.
- Dynamically creates the table result rows
- Mitigates the need to open an entirely different application to access C2M application data