

The **MODERN** Way to Modernize IBM i: As a Service. On Your Terms.

Part 3: Reimagine Your UI

April 24, 2025

Housekeeping



Slides & session recording will be e-mailed to you



Ask questions



Share your thoughts

Today's Speakers



Marcel Sarrasin

GM, Modernization
Fresche Solutions



Greg Patterson

IBM I Modernization Specialist
Fresche Solutions



Modernization as a Service: Webinar Series Recap





Agenda

- **The Modern Way: Modernization as a Service**
- **Applications Reimagined**
- **Client Journey Examples**
- **AI-Powered Modernization**
- **Q & A**

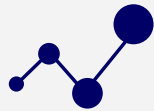
The Modern Way:

Modernization as a Service

Why Modernize?



Modernization Approaches: What's Changed



Evolution in
business approach
to IT projects

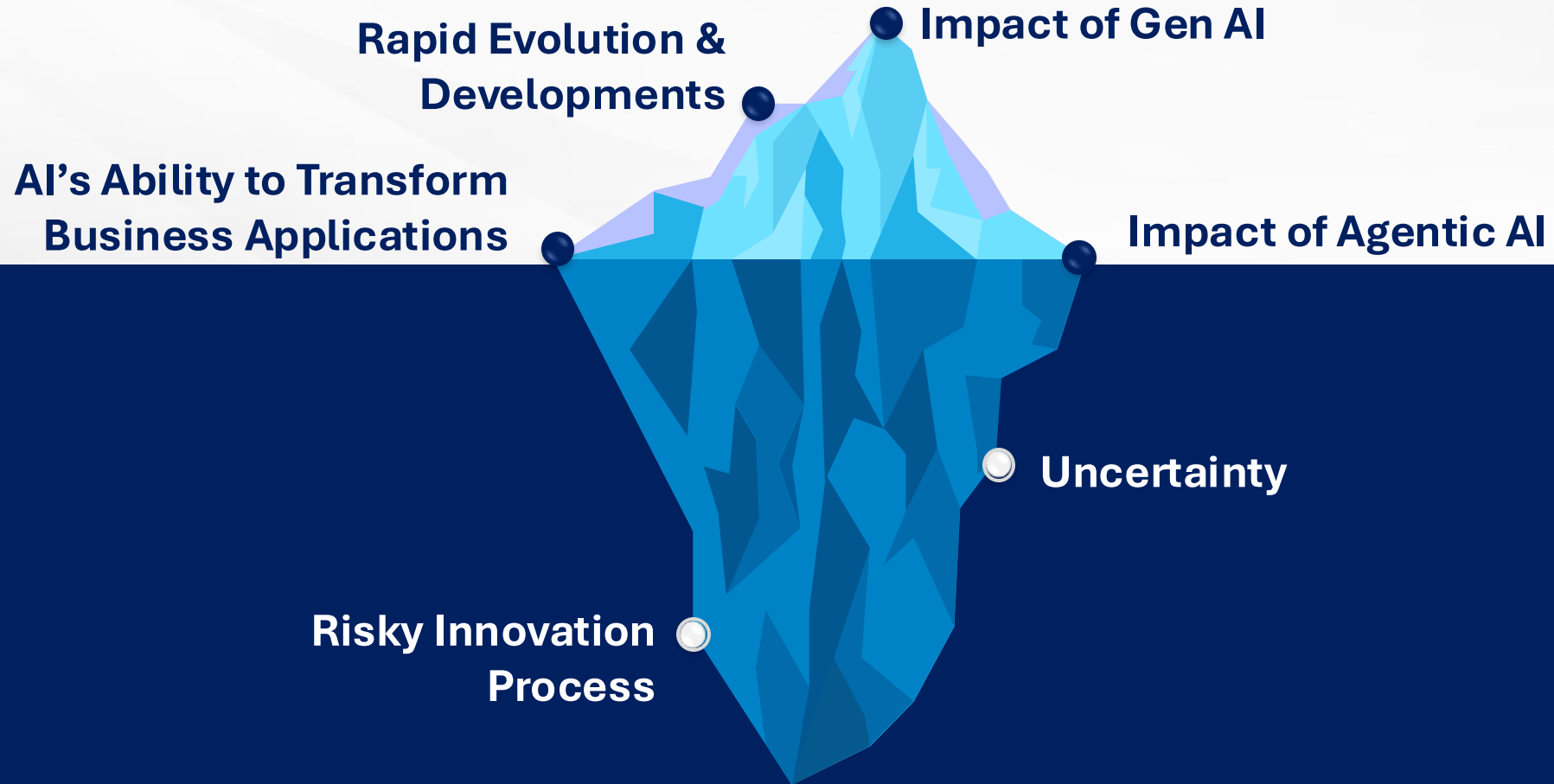


No appetite for
large projects



More
reimagine

Impact of AI



What is Modernization As a Service

- ✓ **UI Modernization**
- ✓ **Reimagine Applications**
- ✓ **Application Transformation**
- ✓ **Database Transformation**



Subscription Model

Scale up or down



Outcome Driven Results

Value-based Milestones

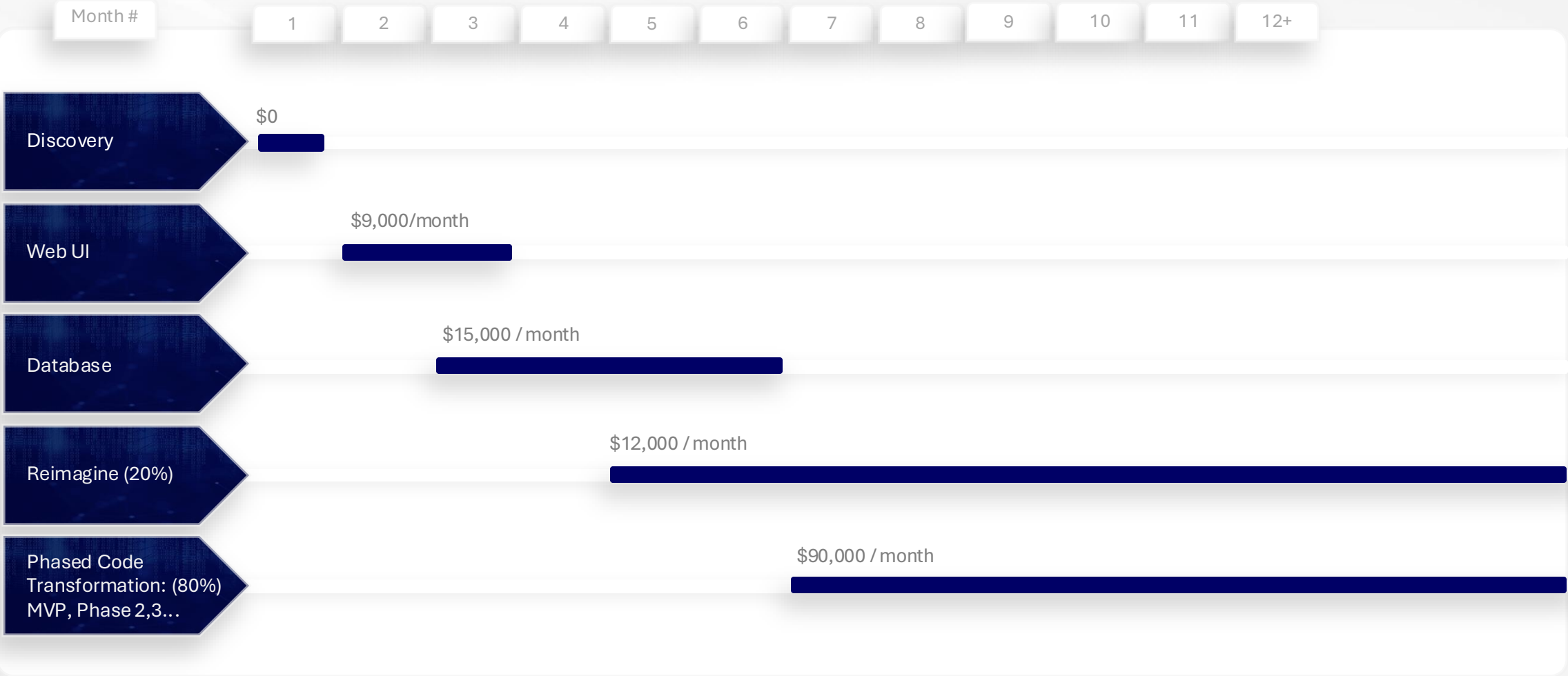


AI-Powered

Tools and Processes



IBM i Application Modernization as a Service



Hybrid Approach



**Code
Transformation**

Reimagine

Decision Criteria

- How much do you want to improve a process
- Do you have the source code
- Cost factors
- Most modern architecture

Poll:

What are your primary reasons for modernizing your IBM i applications?



Address RPG developer shortage



Improve scalability and flexibility



Enhance the user experience



Reduce technical debt and reliance on legacy code



Integrate with modern technologies and systems

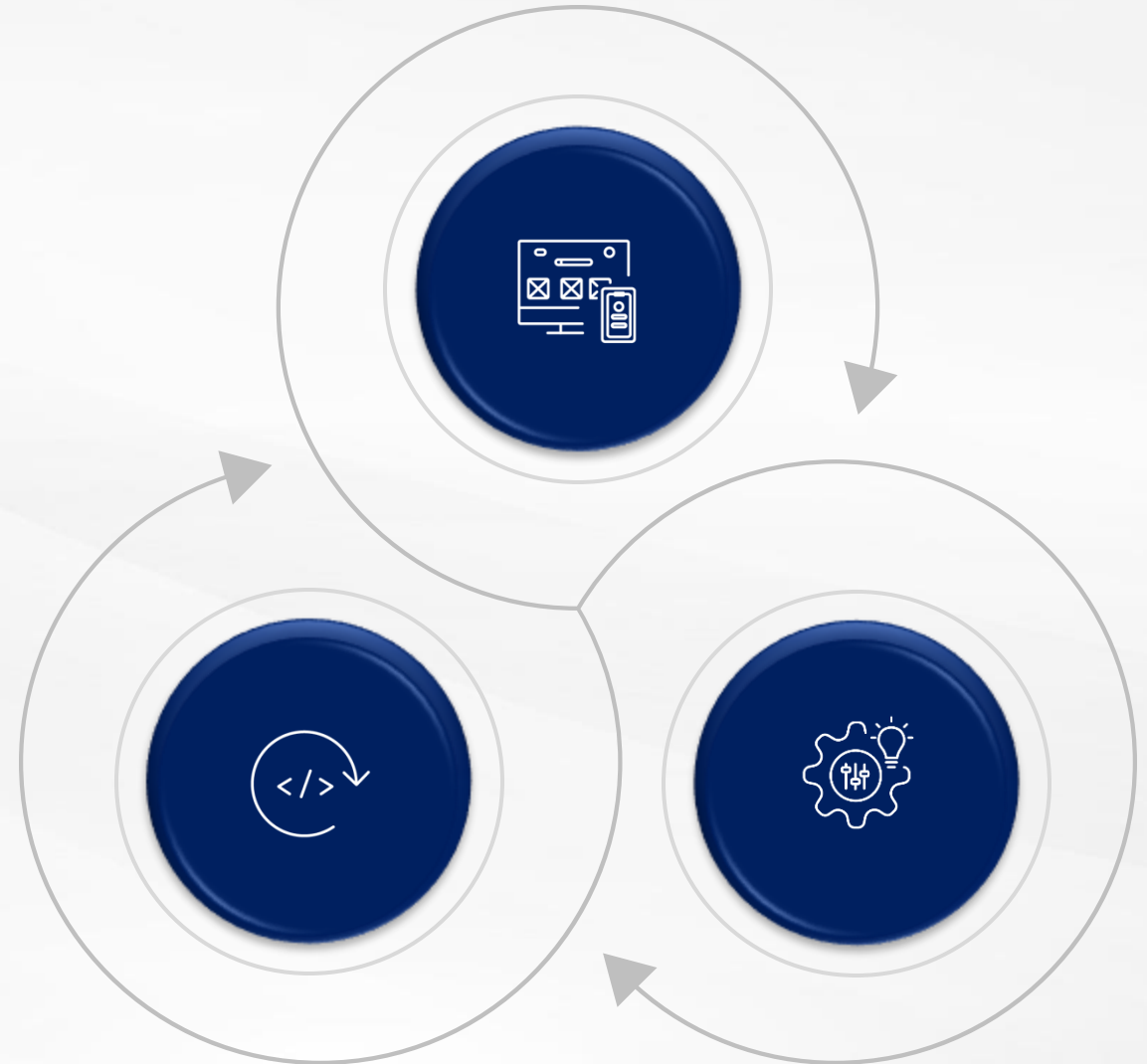
Flexible Modernization:

Modernization Tailored to Every Customer

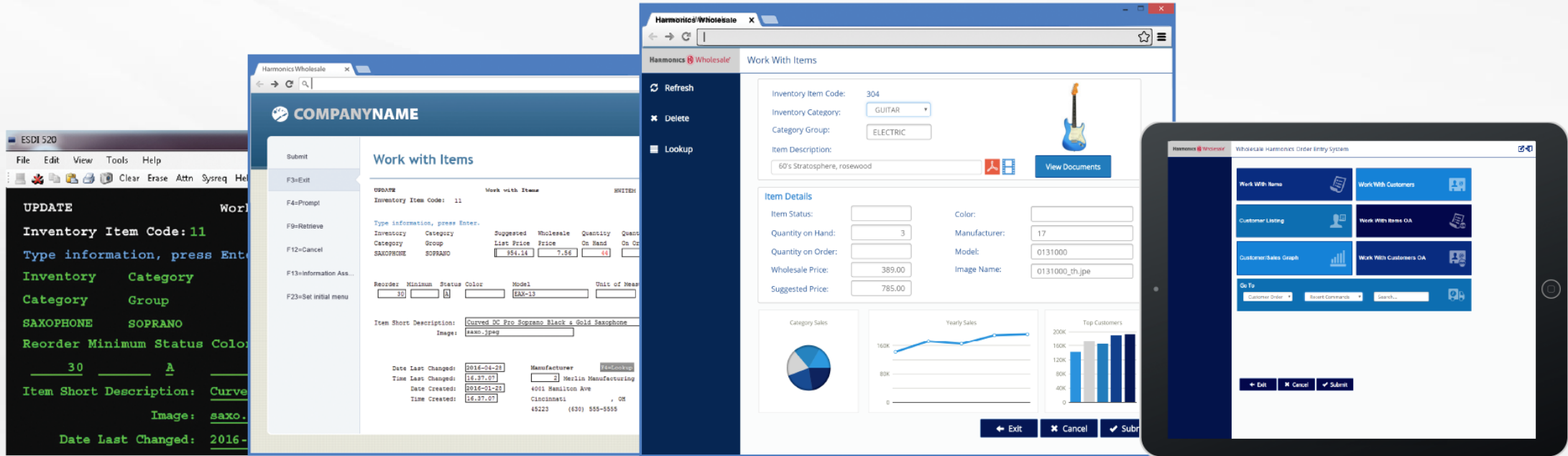
Modernization as a Service: Flexible Approaches

- ✓ **UI Modernization**
Reface UI, no changes to source.
- ✓ **Extend**
New functionality for ERP
- ✓ **Reimagine**
Fresh start, big vision.

Any type of application, any industry



UI Modernization



Visual and Functional Improvements

```

10/08/24                               Demo Sy
13:32:41                               Customer
Customer #: 781                         Registrant #: 4116
Alt Customer#:                          Wholesale Customer?: Yes Snap
COD?: Yes                               Dormant Customer?: Y   Other Benefits
Alert Code: 110                         Eligible Pending Home Assessmt
Name: ERMC                               Income
Address: 6148 LEE HIGHWAY                Identity
                                           Tanf
City: CHATTANOGA                        State: AL
Country: UNITED STATES                  County:
Phone #: 555-123-4538 Fax #: 601-445-0680 Home
Email: @RPT
Site Id: 8
Internal Rep: EDUSER                    ED Demo User
Last Name: ERMC                         Customer Opted out
Tax Exempt: Yes

Invoice Discount %: .00 # of Days until Discount Expires:
Notes: DO NOT SALE
sent email to advise customer of stuff
Vendor #829 was assigned to task #26 for prop
Vendor #829 was assigned to assessment for p

F3=Exit F5=Refresh                      F9=Sales F12=Cancel
MA A
    
```

FRESCHÉ SOLUTIONS Demo System - Customer Master Maintenance Info | Help | Sign Out

Application Status

Identity Verification |
 Address Verification |
 Income Verification |
 Home Ownership |
 Existing Benefits

Customer

First Name: ALAMEDA COUNTY WATER DISTRICT | Last Name: DIST
 Customer #: 2005 | SSN/Tax ID: | State: CA | 606 - Vendor Blocked from Auto-Pay
 Analyst: EDUSER | QA/QC Analyst: DEMOUSER
 WholeSale Customer: No | Dormant Customer: Yes | Cash on Demand: No | Marketing Emails: No

Contact Information

Email: RALPH@EDAPTIT.INFO | Phone: 2288758154 | Fax: 6014450880
 Address: 43885 S. GRIMMER ST | City: CARLSBAD | State: CALIFORNIA
 Address 2: | Zip Code: 94538 | Country: United States
 Contact Date:

Resources Hub

Home | Application | Properties | Assessments | Projects | Checklist | Documents | Questionnaire

Tax Information

SSN/Tax ID: | Tax Exempt: No | Exemption Type: | Special Tax %: .00

Discount Information

Invoice discount %: .00 | # of Days until Discount Expires: |
 # of Days before Due:

Account Information

Credit Limit: \$.00 | Credit Balance: \$2,861.00 | Gross Sale: \$.00 | Gross Profit: \$.00
 First Sale: | Last Sale: | Pricing Tier: 3 | Catalogue Sent:

STMT Summary: | Route: | Delivery Sequence: | Return count:

MaaS Journey: UI + Net New

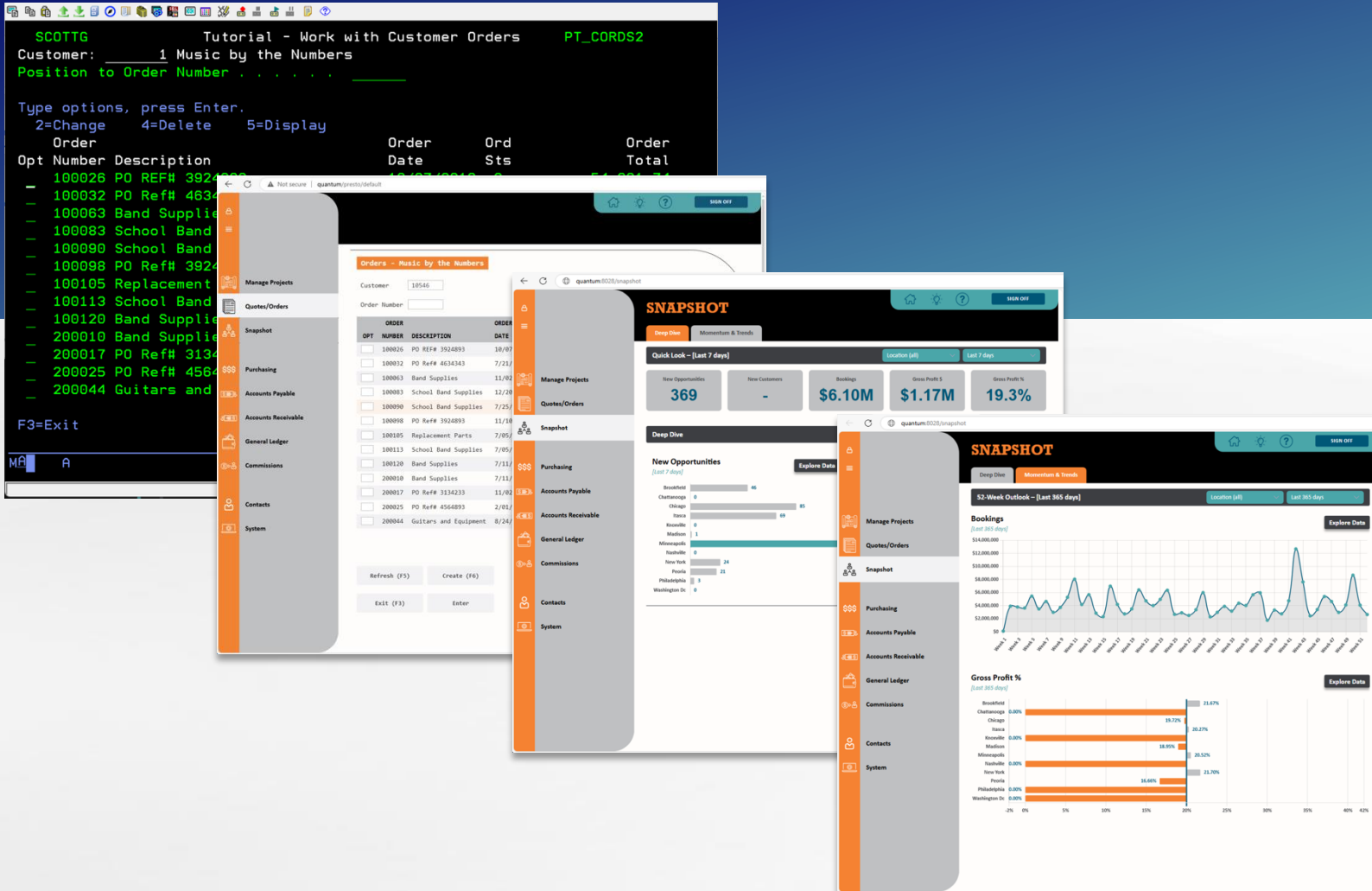
Pain Points

- **Disconnected.** Users had to log into multiple systems to complete everyday tasks
- **Stalled.** Legacy green screens limited visibility and hindered progress

Goals

- **Unify.** Enable seamless access across web-enabled screens and portal with single sign-on (SSO)
- **Quick Wins.** Deliver an MVP portal that shows progress and sets the stage for growth
- **Scale.** Create a flexible foundation to add new features and replace modules over time

MaaS Journey: UI + Net New



New Tech Stack

- Vue.js
- PRIMEVUE
- PHP
- Laravel
- Presto (Refacing Tool)

MaaS Journey: UI + Net New



Extend



MaaS Journey: Extend



Pain Points

- **Limited.** Customers do business in person, Counter Staff enter payments
- **Inefficient.** All payment done by users and prone to error
- **Outdated.** Collecting payments was limited

Goals

- **Extend.** Use existing RPG programs but give them a modern platform
- **Improve.** Create new workflows so users can process and review their own accounts – self serve
- **Modernize** Integrate third party payment service to accept modern payment types

MaaS Journey: Extend



```
5/10/22 13:49:31 Utility Billing-Open Accounts Receivable UB1070
Customer No: 301-1204-04 SCHILCOTE
Customer Name: KHAN AHMAD H RES CDE: 0
Address of Account: 785 5TH AVE SUITE C-2B NO FAMILIES 1
Ward/Prec 1 1 Deposit Code Amount .00
Pay Method Acct Type Beg Date 11292021 AMOUNT DUE
Owners Name: AHMAD H KHAN 90.45
Special Instruct
Type options, pr
2=Change 4=Del
Opt Due Date C
5-25-2022 2
5-25-2022 2
5-25-2022 4
5-25-2022 5
5-25-2022 7
F3=Exit F5=Refr
```

Account Overview

800 S 4TH ST OWNER, CHAMBERSBURG, PA 17201-2942

Last Bill Issuance Date: May 13th, 2024 [View Previous Bill](#)

Balance

\$402.95

Payment due: Jun 27th, 2024 ⚠

Payable after due date: \$413.02
Meter read date: May 31st, 2024
Next meter read date: Jul 2nd, 2024

[View Bill](#) [Pay Bill](#)

Last Payment: \$832.46
May 22nd, 2024

Customer Search Misc Receipts/Tickets Drawers Customer Events Drawer Access Manager

Alex Spalvieri
No Drawer Selected
[Select a Drawer Now](#)

Employee / Customer Search / Customer Billing History

Customer Number: 481-0175-08 BIG DOG INVESTMENTS LP

[Details](#) [Billing History](#) [Transactions](#) [Meter Readings](#)

800 S 4TH ST OWNER, CHAMBERSBURG, PA 17201-2942

Bills

Next Bill Date:

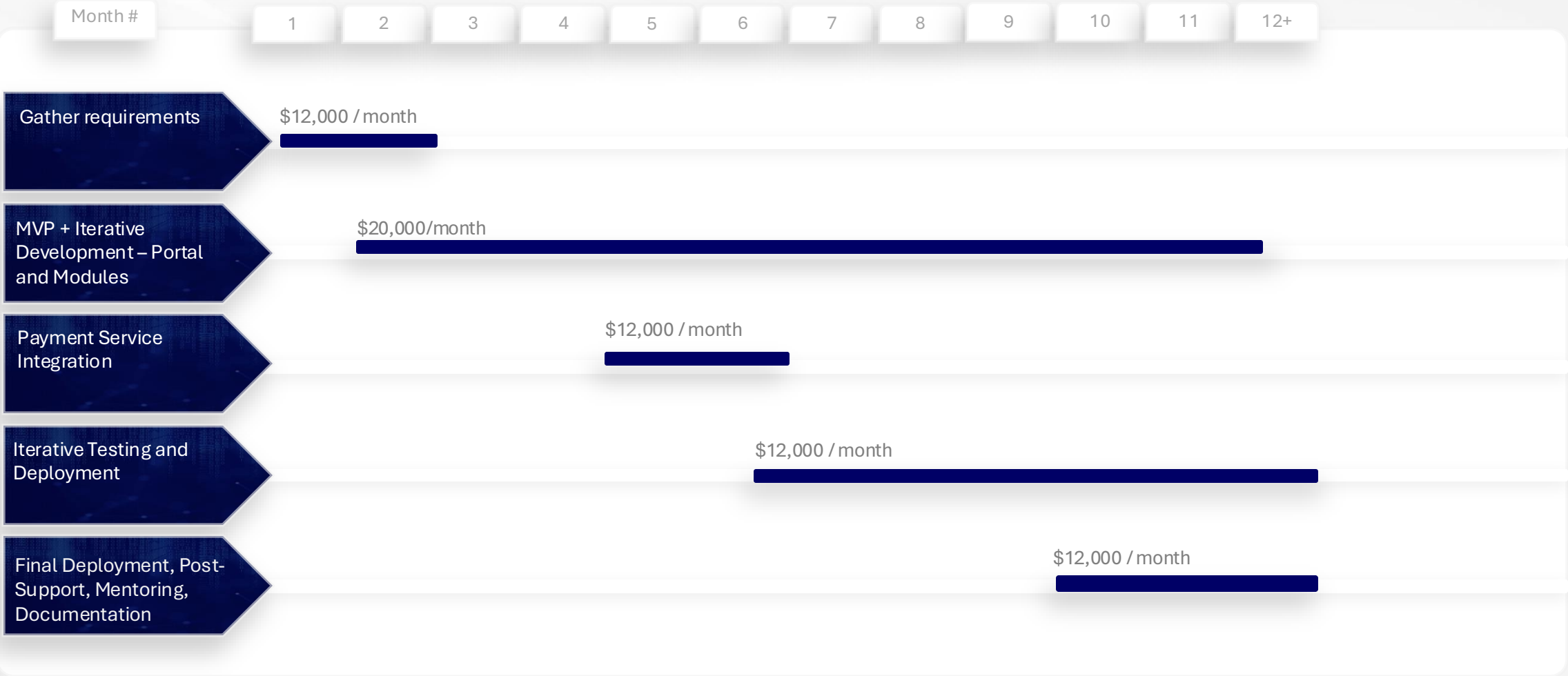
Date Issued	Service From	Service To	Amount	Due By	Download Bill
06-12-2024	05-02-2024	05-31-2024	\$402.95	06-27-2024 ⚠	PDF
05-13-2024	04-02-2024	05-02-2024	\$832.46	05-28-2024	PDF
04-15-2024	03-01-2024	04-02-2024	\$411.95	04-30-2024	PDF
03-13-2024	02-02-2024	03-01-2024	\$428.50	03-28-2024	PDF
02-14-2024	01-03-2024	02-02-2024	\$413.70	02-29-2024	PDF
01-12-2024	12-04-2023	01-03-2024	\$415.70	01-29-2024	PDF
12-12-2023	11-02-2023	12-04-2023	\$761.11	12-27-2023	PDF
11-13-2023	10-03-2023	11-02-2023	\$383.49	11-28-2023	PDF
10-12-2023	09-05-2023	10-03-2023	\$644.10	10-27-2023	PDF

Items per page: 10

New Tech Stack

- Vue.js
- CoreUI
- PHP
- Laravel
- PHP IBM i ToolKit
- Third Party Payment Provider

MaaS Journey: Extend



Reimagine



MaaS Journey: Reimagine

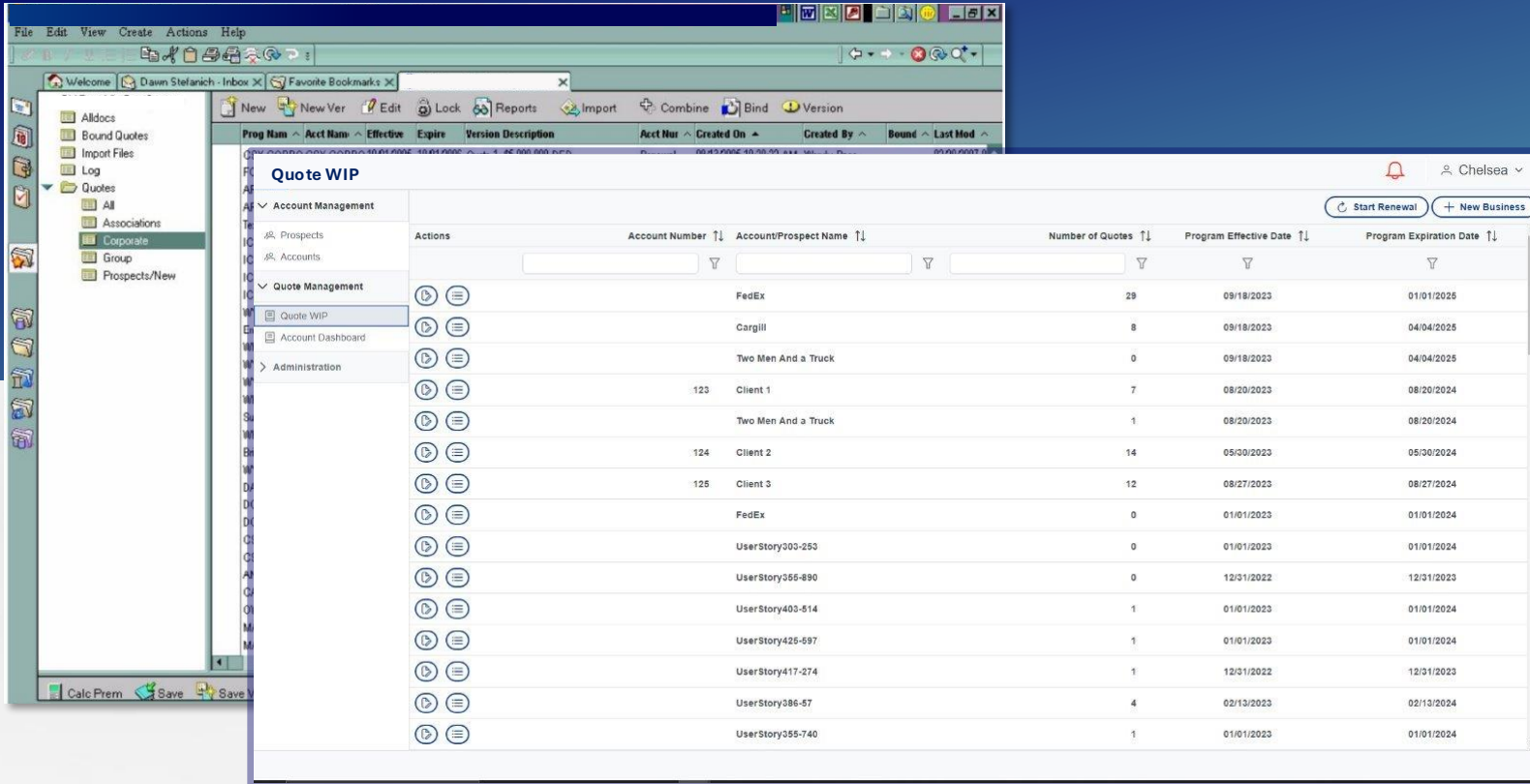
Pain Points

- **Expensive** legacy technology (Lotus Notes)
- **Development Constraints.** Only had access to ½ a developer
- **Outdated.** UI, Workflows, Data and Reports no longer met the needs of the business

Goals

- **Modern.** Move to modern technology and cloud and completely retire old application.
- **Improve.** End user productivity, limit data entry errors and duplicate data
- **Merge and Combine** other systems into new platform to simplify workflows and data

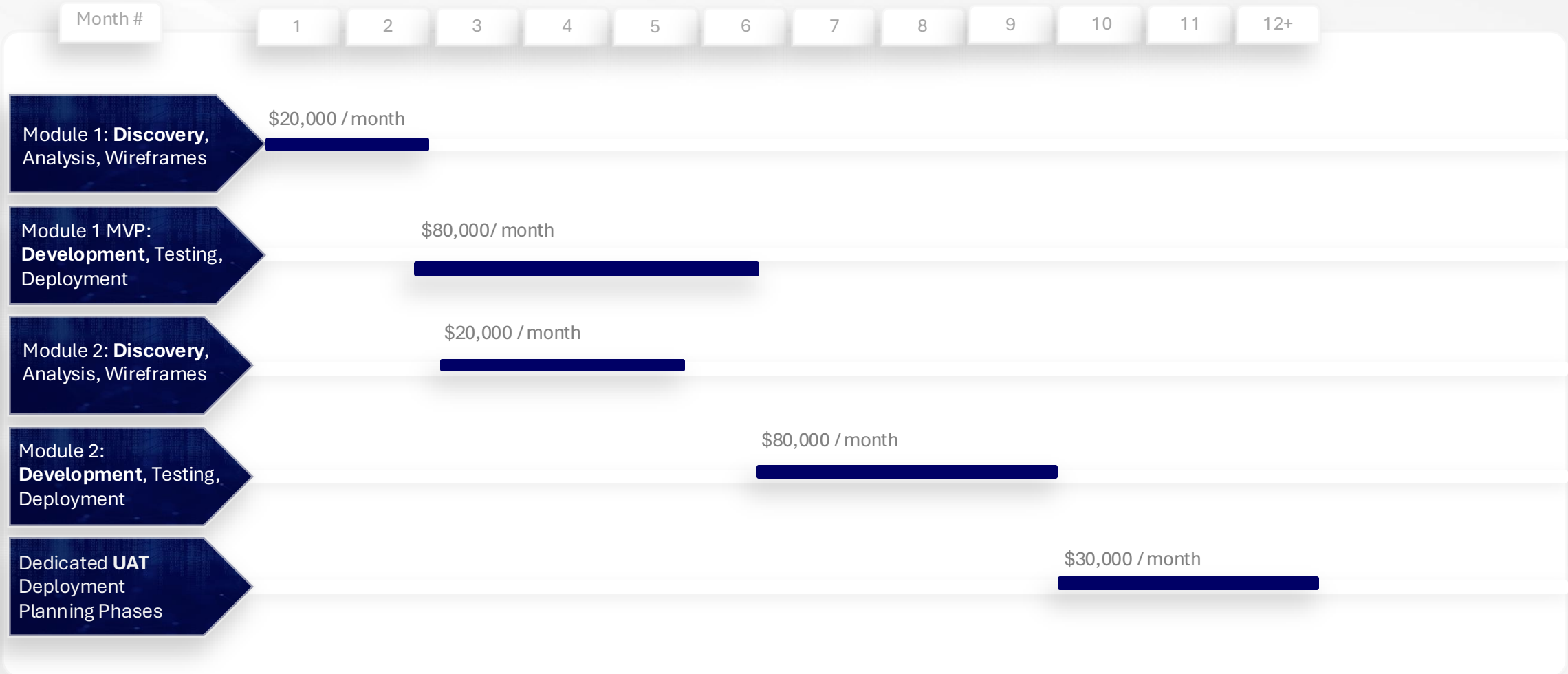
MaaS Journey: Reimagine



New Tech Stack

- Java - Spring Boot
- Angular
- Linux – via Azure Cloud
- MySQL
- Kubernetes / OpenShift
- Docker
- Microservices

MaaS Journey: Reimagine



Poll:

Which programming languages are you most interested in using in the future?



Java



PHP



Python



RPG



Other


AI-Powered Modernization

Planning and Requirements Gathering



ChatGPT
Team notes
X-Analysis
Mural

UI/UX Design and Prototyping




ChatGPT
Uizard
MiroAI

Coding and Development




X-Analysis
ChatGPT
Cline
GitHub
Co-Pilot
Postman AI

Testing and QA




ChatGPT
Cline
Cypress with AI plug-ins

Deployment and CI/CD



ChatGPT
Cline

AI for Application Understanding



Repository: ALPHA_NLP App Area: N/A

provide detailed explanation of wwcusts

Based on the program description, WWCUSTS in the ALPHA_NLP repository is a customer management program that serves as a key component in the system's customer data handling functionality.

Here's a detailed explanation of WWCUSTS:

Purpose and Functionality

WWCUSTS is designed to manage customer information within the system. It likely handles:

- Customer record creation, retrieval, updating, and deletion (CRUD operations)
- Customer data validation and business rule enforcement
- Customer information display and reporting
- Integration with other business processes that require customer data

Technical Characteristics

- Written in RPG (Report Program Generator), a programming language commonly used in IBM i environments
- Likely interfaces with customer data files/tables
- May include subfile processing for displaying multiple customer records
- Contains business logic for customer data validation and processing

Chat

Type your message...

X-Analysis Assistant can make mistakes. Check important info.

Repositories x </> WWCUSTS x

```
93 C*****
94 C* Delete subfile
95 C          IF          SFLRRN = 0
96 C          SETON              74
97 C          SETOFF             717281
98 C          WRITE          ZZCT01          99
99 C          SETOFF             74
100 C* Write subfile
101 C          MOVE          *ZEROS          SFLRRN
102 C          XWBCCD          SETLL          CUSTS
103 C          ENDIF
104 C*
105 C          MOVE          *ZEROS          SFLCTR
106 C          *IN81          DOWEQ          '0'          B-----01
107 C          SFLCTR          ANDLT          12
108 C          READ(N)          CUSTS          81
109 C          *IN81          IFEQ          '0'          B-----01
110 C          ADD          1          SFLRRN          |
111 C          ADD          1          SFLCTR          |
112 C          IF          SFLCTR = 1
113 C          Z-ADD          SFLRRN          SHWREC
114 C          ENDIF
115 C          MOVE          *BLANKS          DSSEL
116 C          WRITE          ZZSF01          99
117 C          ENDIF
118 C          ENDDO
119 C
120 C          SFLRRN          IFGT          0
121 C          SETON              71
122 C          ENDIF
123 C          SETON              72
124 C
125 C          ENDSR
126 C*****
127
128 C*****
129 C          CMDKEY          BEGSR
130 C*****
131 C* Subroutine: Action command keys
132 C*****
```

AI for Application Understanding



Repository: ALPHA_NLP App Area: N/A

Line 106-118:

- This is a DO loop that continues until either indicator 81 is turned on (indicating end-of-file) or SFLCTR reaches 12 (maximum records to display)
- Line 108 reads the next record from CUSTS file; if end-of-file is reached, indicator 81 is set on
- Lines 109-117 process each record read from CUSTS:
 - Increment SFLRRN and SFLCTR by 1
 - If this is the first record (SFLCTR = 1), store its position in SHWREC (likely used for positioning the cursor)
 - Clear the DSSEL field (likely a selection field for each record)
 - Write the record to the subfile format ZZSF01

Line 119:

- Blank line for readability

Line 120-122:

- Checks if any records were loaded into the subfile (SFLRRN > 0)
- If records were loaded, indicator 71 is turned on (likely used to display the subfile)

Line 123:

- Sets indicator 72 on (likely used to enable subfile display mode)

Line 124:

- Blank line for readability

Line 125:

Type your message...

Chat



X-Analysis Assistant can make mistakes. Check important info.

Repositories x WWCUSTS x

```
88 C*****
89 C SFLWRT BEGSR
90 C*****
91 C Subroutine: Write data to subfile
92 C*****
93 C Delete subfile
94 C*****
95 C IF SFLRRN = 0
96 C SETON
97 C SETOFF
98 C WRITE ZZCT01
99 C SETOFF 74
100 C Write subfile
101 C MOVE +ZEROS SFLRRN
102 C XWBCCD SETLL CUSTS
103 C ENDF
104 C*****
105 C MOVE +ZEROS SFLCTR
106 C *IN81 DOWEQ '0' B-----01
107 C SFLCTR ANDLT 12
108 C READ(N) CUSTS 81
109 C *IN81 IFEQ '0' B-----01
110 C ADD 1 SFLRRN
111 C ADD 1 SFLCTR
112 C IF SFLCTR = 1
113 C Z-ADD SFLRRN SHWREC
114 C ENDF
115 C MOVE +BLANKS DSSEL
116 C WRITE ZZSF01 99
117 C ENDF E-----01
118 C ENDDO E-----01
119
120 C SFLRRN IFGT 0 71
121 C SETON 71
122 C ENDF E-----01
123 C SETON 72
124
125 C ENDSR
126 C*****
127
```

Explain
Copy

AI for Application Understanding

Repository: ALPHA_NLP App Area: N/A

what does move do

MOVE is an RPG operation code used for data movement operations. Here's an explanation of what MOVE does:

****MOVE Operation:****

- **Basic Function:**** MOVE transfers data from a source field to a target field.
- **Right Justification:**** Unlike MOVEAL, the MOVE operation right-justifies the data in the target field. This means:
 - If the source is shorter than the target, blanks (or zeros for numeric fields) are padded on the left
 - If the source is longer than the target, the leftmost characters are truncated
- **Syntax:**** In fixed-format RPG, it typically appears as:
...
MOVE source target
...
In free-format RPG:
...
MOVE(P) source target;
...

Type your message...

X-Analysis Assistant can make mistakes. Check important info.

Repositories x WWCUSTS x

```
93 C*****
94 C* Delete subfile
95 C          IF          SFLRRN = 0
96 C          SETON
97 C          SETOFF          74
98 C          WRITE        ZZCT01          99
99 C          SETOFF          74
100 C* Write subfile
101 C          MOVE        +ZEROS          SFLRRN
102 C          XWBCCD      SETLL          CUSTS
103 C          ENDIF
104 C*
105 C          MOVE        +ZEROS          SFLCTR
106 C          *IN81      DOWEQ          '0'          B-----01
107 C          SFLCTR      ANDLT          12
108 C          READ(N)    CUSTS          81
109 C          *IN81      IFEQ          '0'          B-----01
110 C          ADD        1          SFLRRN          |
111 C          ADD        1          SFLCTR          |
112 C          IF          SFLCTR = 1
113 C          Z-ADD      SFLRRN          SHWREC
114 C          ENDIF
115 C          MOVE        +BLANKS          DSSEL          |
116 C          WRITE        ZZSF01          99
117 C          ENDIF
118 C          ENDDO
119
120 C          SFLRRN      IFGT          0
121 C          SETON
122 C          SETOFF          71
123 C          SETON
124 C          SETOFF          72
125 C          ENDSR
126 C*****
127
128 C*****
129 C          CMDKEY      BEGSR
130 C*****
131 C* Subroutine: Action command keys
132 C*****
```

Microsoft Word

Why Fresche Services



About Fresche

IT & IBM i experts with proven solutions to manage and modernize business-critical systems for results.



IT Advisory



AI-Powered
Modernization



Cloud



Analytics



Security



Managed
Services

AI-Powered Application Intelligence: Smarter Modernization Starts Here

RAY EVERHART
Product Manager,
Product Mngement



JOHN CLARK
Chief Technology
Officer

REGISTER NOW



THURSDAY
May 15, 2025



TIME
11am PT / 2pm ET

Q & A

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