Louisiana Department of Public Safety & Corrections and Mi-Case – Modernizing Sentence Calculations

Tuesday, June 20th

Presenters

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- **Melanie Gueho-Director of Data and Research at Louisiana Dept. of Public Safety & Corrections**
- **Thomas Rumeau-Senior Business Systems Analyst at Mi-Case**

Project Approach

- The Challenge:
  - Louisiana designing new system, CIPRS
  - Migrate data from legacy system to CIPRS
  - Sentence Calculations is a complex and important module
  - Pressure from many stakeholders to deliver quickly and accurately

- The Solution:
  - Partner with Mi-Case, which has a proven track record of building software in the corrections industry, and an expertise in Sentence Calculations
  - Construct a single API to communicate between CIPRS and the Mi-Case Sentence Calculations system

Sentence Calculation Implementation Team Approach

Initiation
- Kick Off
- Planning
- Establish Environments

Analysis
- Analyze Sentence Legislation
- Analyze Data Structures in Existing OMS
- Design Rules and Reports

Configuration
- Create Base Sentencing Rules
- Configure Rules Engine
- Develop Reports
- Modify OMS
- System and Integration Testing

Validation
- Document Rules
- Develop Training Material
- Execute and Support User Acceptance Testing

Deploy
- Cutover Planning and Execution
- Training
- Support Planning

Support
- Warranty
- Transition to Maintenance and Operations

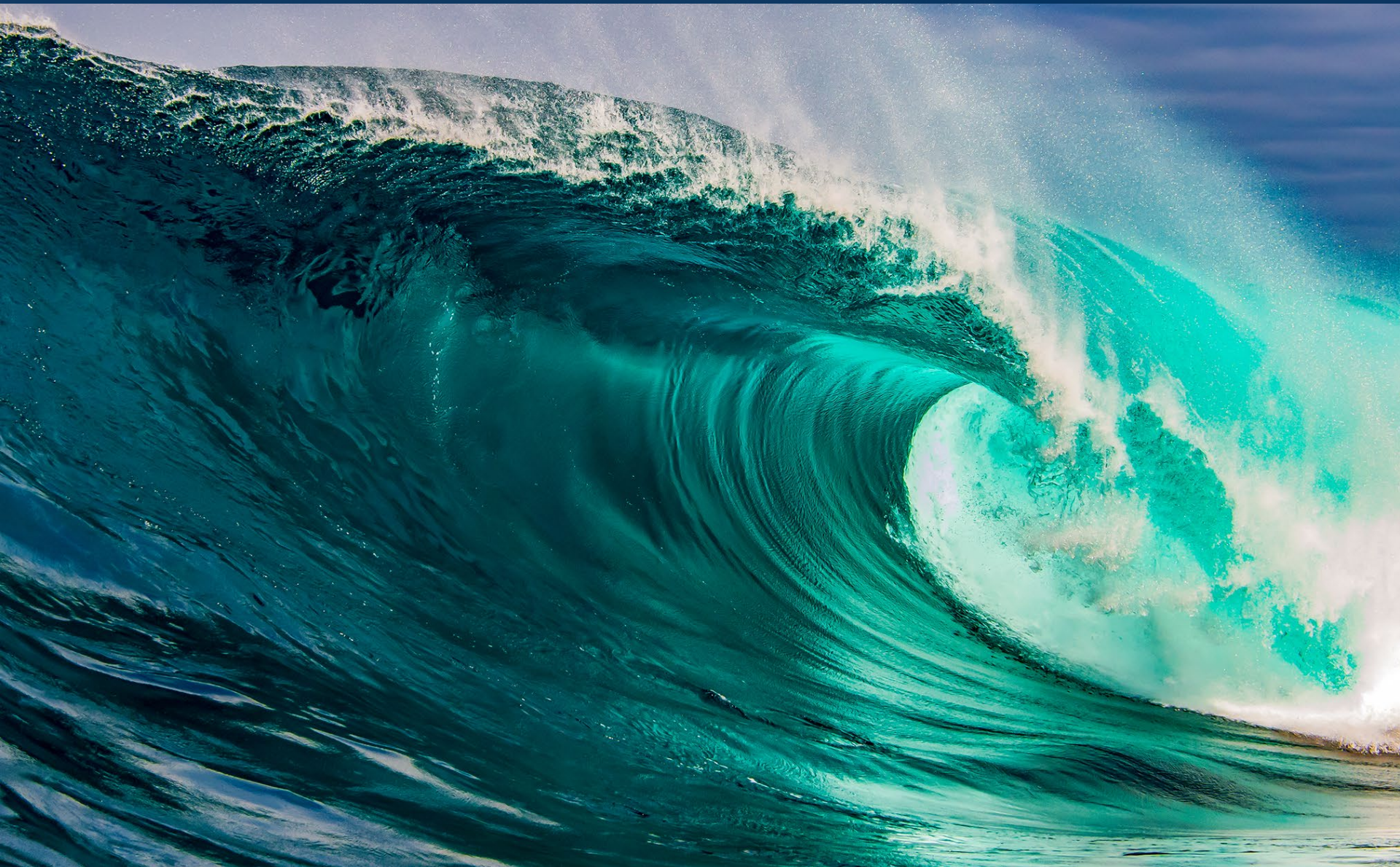**Project Governance (Project Management, Risks/Issues, Change Management, etc.)**

Iterative Cycles (Sprints)

Integration Planning & Execution

Data Migration Planning & Execution

Sentence Calculation Analysis Process

Sentence Calculations Analysis

Project Approach:

The Challenge:
- Sentence Calculations includes:
  - Complicated calculations (e.g., Adjusted Diminution of Sentence)
  - Complex rules (e.g., Consecutive Sentences)
  - Interface with other functionalities (e.g., Forfeiture, Education)
- LA DPS&C via CIPRS:
  - Builds the front-end user interface
  - Provides essential data to Mi-Case
  - Displays results to end-users
- Mi-Case:
  - Designs sentence calculations engine
 - Provides calculations results to CIPRS

Module Section	User Story	Development
Jail Credits	Complete	Complete
Full term Date	Complete	Complete
Original Diminution of Sentence	In Progress 75-100%	In Progress 75-100%
CTRP	Complete	Complete
Adj Diminution of Sentence	In Progress 75-100%	In Progress 75-100%
Parole Eligible Date	Complete	Complete
Escape	In Progress 75-100%	In Progress 75-100%
Parole Violation	Complete	Complete
Earned Compliance Credits (ECC)	Complete	Complete
Parole Rate	Complete	Complete
TWPED	Complete	Complete
Projected Release Date	Complete	In Progress 25-50%

- Break calculations into sections
- Create user stories for each section
- Start with the easier calculations and build to the more complex ones
  - Jail Credits
  - Full Term Date
  - Original Diminution of Sentence
  - Adjusted Diminution of Sentence
  - Impact of Credits and Forfeiture
  - Impact of Escape
- Track user story creation and development

Module Workflow: Calculate Parole Rate
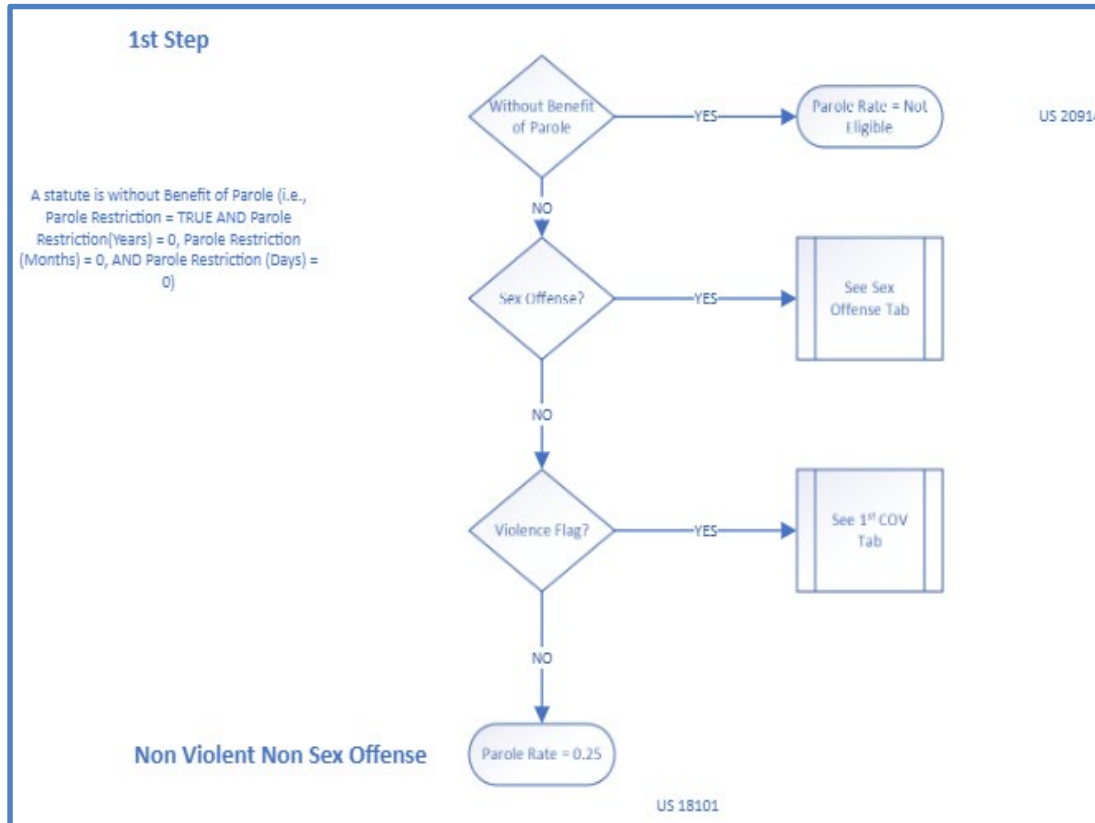
- Create workflow to understand complicated processes
- Benefits:
  - Quick visual for users and development team to follow the different use cases
  - Documentation available for quick understanding when problems arise

Simple Calculations Example: Jail Credits

Example	CIPRS Data/Time Comp Calculated	1	2	3
Arrested Date (1)	CIPRS Data	3/30/2021	3/30/2021	3/30/2021
Bonded Date (1)	CIPRS Data			
Arrested Date (2)	CIPRS Data			
Bonded Date (2)	CIPRS Data			
Arrested Date (3)	CIPRS Data			
Bonded Date (3)	CIPRS Data			
Remanded Date	CIPRS Data			
Sentence Date	CIPRS Data	10/8/2021	10/8/2021	10/8/2021
Sentence Start Date	CIPRS Data	10/8/2021	10/8/2021	10/8/2021
Consecutive	CIPRS Data	No	Yes	Yes
Jail Credits Still Allowed?	CIPRS Data	No	No	Yes
Jail Credits	Time Computation Calculated	192	0	192

- Denote which data values come from CIPRS vs Mi-Case
- Calculate Jail Credits based on Arrest Date, Bond Date and Sentence Date
- Benefits of using excel:
  - LA DPS&C SME's to confirm results
  - Development team to understand the formulas

More Advanced Calculations Example: Adjusted Diminution of Sentence

A/ 3 offenses. Offenses 2 and 3 are consecutive to offense 1.

Field	CIPRS Data/Time Comp Calculate	1	2	3
Docket Number	CIPRS Data	1	1	1
Sentence Start Date	CIPRS Data	6/15/2020	6/15/2020	6/15/2020
Full Term Balance (Days)	Time Comp Calculated	1461	1257	3084
Consecutive	CIPRS Data	No	Yes	Yes
Consecutive To	CIPRS Data	N/A	1	1
Jail Credits (Days)	Time Comp Calculated	136	136	136
Award Credits (Days)	CIPRS Data	10	10	10
Diminution Rate	CIPRS Data	0.85	0.35	0.75
Balance Owed (Days)	Time Comp Calculated	1315	1111	2938
Full Term Date	Time Comp Calculated	1/21/2024	2/5/2027	2/6/2032
Supervision Completion Date	Time Comp Calculated	11/29/2029	2/5/2027	2/6/2032

	CTRP			
	Program Completion End Date (CIPRS)	Number of Days (CIPRS)	Program Description (CIPRS)	CTRP Really Applied (Time Comp Calculated)

Field	CIPRS Data/Time Comp Calculate	1	2	3		Program Completion End Date (CIPRS)	Number of Days (CIPRS)	Program Description (CIPRS)	CTRP Really Applied (Time Comp Calculated)
Must Serve Balance	Time Comp Calculated	1097	300	2170					
Original Diminution of Sentence Date	Time Comp Calculated	6/17/2023	4/12/2024	5/25/2029		3/3/2021	175	Bachelor Degree	175
CTRP (Total)	Time Comp Calculated	205	30	30		4/3/2022	30	Carpentry	30
Disaster Credit (Total)	Time Comp Calculated	0	0	0		4/4/2023	30	Barber Class	30
Forfeiture Total	Time Comp Calculated	0	0	0					
Restoration Total	Time Comp Calculated	0	0	0					
Remaining Eligible Number of Days	Time Comp Calculated	423	841	799			Total Certified Treatment (For Comparison Purposes Only)	235	
Adjusted Must Serve Balance	Time Comp Calculated	892	270	2140			Max Amount allowed (For References Only)	360	
Adjusted Diminution of Sentence Date	Time Comp Calculated	11/24/2022	8/21/2023	10/2/2028					
Supervision Balance Owed	Time Comp Calculated	423	0	799					

User Story Example: Jail Credits

USER STORY 6626

6626 Jail Credits Calculation - with only 1 Arrest Date and Sentence Date

Thomas Rumeau | 4 comments | LADPSC Approved ✕ | Mi-Case Approved ✕ | Ready for UAT ✕ +

| State | ● Closed | Area | Louisiana-TimeComp\...\Jail Credits |
| Reason | 🔒 Acceptance tests pass | Iteration | Louisiana-TimeComp\Sprint 7 |

Description

As a *Time Computation user*
I want the system to calculate jail credits - the number of days an inmate was imprisoned before sentencing, when there is only 1 arrest date and the sentence start date.
So those credits can be used to determine the offender's release dates.

Acceptance Criteria

1. If the data only includes 1 Arrest Date and 1 Sentence Start Date, but not the Remanded Date and a Bond Date, then the calculation is as follows:
   a. Jail Credits = Sentence Date - Arrest Date
      i. See 1st Example in the table below
2. Mi-Case calculates Jail Credits for each sentence unless the sentence is **consecutive**.
   a. If the sentence is consecutive, then jail credits are "0".
      i. See 2nd example in the table below
   b. However, this rule can be overwritten. In that situation, the Time Computation engine should then calculate Jail Credits for that consecutive sentence.
      i. See 3rd example in the table below
3. Examples:
   a. 1 inmate with 3 different offenses.

Example	CIPRS Data/Time Comp Calculated	1	2	3
Arrested Date (1)	CIPRS Data	3/30/2021	3/30/2021	3/30/2021
Bonded Date (1)	CIPRS Data			
Arrested Date (2)	CIPRS Data			
Bonded Date (2)	CIPRS Data			
Arrested Date (3)	CIPRS Data			
Bonded Date (3)	CIPRS Data			
Remanded Date	CIPRS Data			
Sentence Date	CIPRS Data	10/8/2021	10/8/2021	10/8/2021
Sentence Start Date	CIPRS Data	10/8/2021	10/8/2021	10/8/2021

Prototypes

Click to add Prototypes

Discussion

- User Story represents a small unit of work.

- Includes:
  - What needs to be done?
  - Why is that needed?
  - Acceptance Criteria
  - Examples

- Benefits:
  - More defined business rules using specific data value terms
  - Development Team and Business SME's focuses on small pieces of functionality
  - Allow development to be released more frequently

Configuration and Validation Process

The Challenge

Integrate with OMS Modernization

Sentencing solution must integrate with an in-progress OMS modernization effort, CIPRS

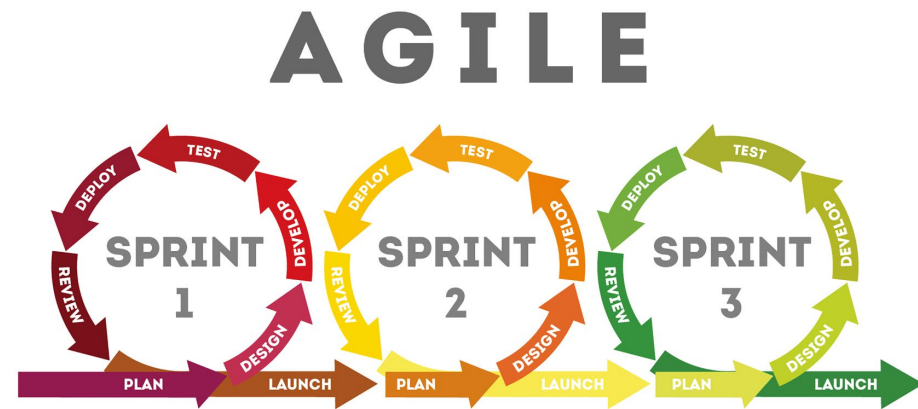**API Driven**

Sentencing solution must be fully API driven

**Standalone Engine**

Sentencing solution must operate as a standalone engine

- Sentence Calculations API Building Steps:
  - 2 Weeks Sprint
  - Analyze and prioritize user stories and bugs
  - Design and develop API data points
  - Document and define API schema
  - Partner between LA OTS and Mi-Case developers
  - Perform API internal testing for different user stories

- Deploy updated Sentence Calculations API version

- Perform UAT testing to validate:
  - communication between CIPRS and Mi-CASE
  - results for different release dates scenarios

- Provide feedback from UAT to update latest Sentence Calculations API version
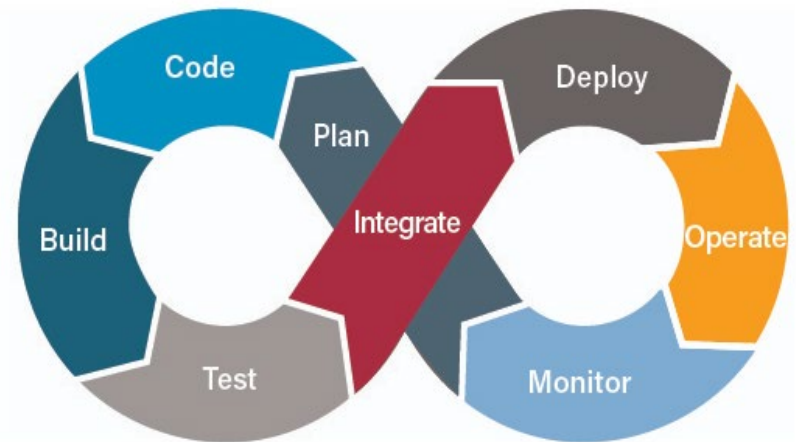
Schema Example


```
TimeComputationJSONschemaRequestFile.json
161            format : YYYY-MM-DD
162        }
163    },
164    "offenses": {
165        "type": "array",
166        "properties": {
167            "offenseMasterId": {
168                "type": "number-required",
169                "description": "Inmate's offense/sentence unique identifier from CIPRS DB"
170            },
171            "offenseNumber": {
172                "type": "integer",
173                "description": "Offense number "
174            },
175            "sentenceDate": {
176                "type": "date",
177                "description": "offense sentence date",
178                "format": "YYYY-MM-DD"
179            },
180            "sentenceStartDate": {
181                "type": "date",
182                "description": "Sentence start date ",
183                "format": "YYYY-MM-DD"
184            },
185            "statuteCode": {
186                "type": "string",
187                "description": "statute code "
188            },
```

- Document different data points

- Provide type, description, format, whether that's required or not

- Documentation used both by Mi-Case and LA OTS teams

The Solution

Fully API driven

Integrates with existing systems to provide a seamless experience

Configurable and scalable

Can be configured to meet the needs of any organization

Receives a structured JSON feed of Inmate Data

Provides up-to-date information on inmates

Lightweight and fast

Provides quick response times for users

Calculates all Release Dates and Credits

Automatically calculates release dates and credits for inmates

Fully automates all state statutes and departmental policy

Ensures compliance with all relevant laws and regulations

Invisible to end-users

No user interface required for the system to work
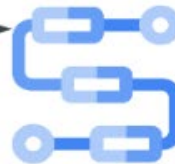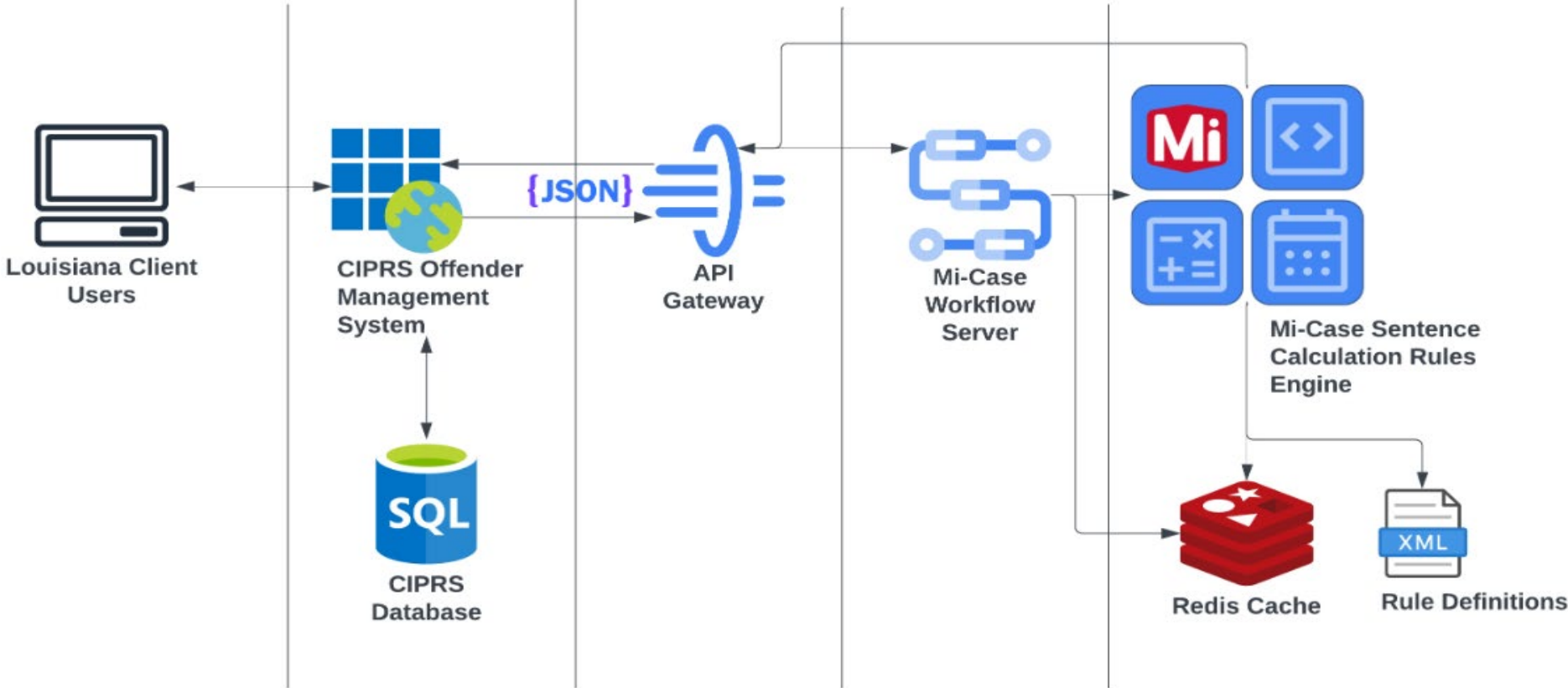
The Benefits

Cost-Efficient & Lower Risk

Modular Design

Accelerated Implementation

Modernized Architecture

Next Step

Next Steps

- Complete UAT

- Create additional stories for Bugs found in UAT

- Resolve Bugs

- Deploy UAT updates to sentence calculations version

- Sentence Calculations expected to be in production by end of 2023

DEMO

Thank You!