An Australian State Government uses Maximo for Facility Evaluations and Assessments

September 20, 2023
4:10pm Session

Join Fujitsu Consulting from Australia (on behalf of the client) and the FieldFLEX Mobile team to learn about their creative use of Maximo and mobility tools for Facility Condition Assessment. The group utilizes a unique toolset, including Maximo and FieldFLEX Mobile, to conduct a variety of facility assessments throughout the State, ranging from Rolling Facility Evaluations to Bushfire Attack Level Assessments and more.

FUJITSU

FIELDFLEX

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Notice to Viewer

This presentation is being delivered prior to the Client's formal go-live date at the end of September 2023. As such, the client has requested their specific organization details be withheld from the presentation. All content relating to the Client's specific solution is confidential unless otherwise stated. Other content relating to the Client, other companies and their respective products or services may be subject to copyright and trademark laws.

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Background

The Client

This Government Organization manages lands and buildings across 1,500+ sites in their State and is responsible for one of the largest asset portfolios in the country.

Portfolio Statistics

- 1,500+ sites
- 38,000+ buildings
- Approximate value of lands and buildings portfolio: AU $20 billion
- 137 new sites and existing site upgrades planned between 2023 to 2026
- Current portfolio funding under the Planned Maintenance Program includes new initiatives: Rolling Facilities Evaluations, Shelter-in-Place Assessments, Bushfire Preparedness Program, Essential Safety Measures and Asbestos Register

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Challenge

Mandate

In 2016 the State Government released an Asset Management and Accountability Framework, which mandates state-funded or public sector organizations to manage & maintain the State's sizeable portfolio of assets efficiently and effectively, including meeting their own business obligations with respect to regulatory, financial, reporting and compliance.

The Client's challenge at a high-level

1. Adopt an Asset Management philosophy (ISO-55000)
2. Support the delivery of services and better outcomes by ensuring fit for purpose land and building assets, grounds and facilities
3. Acquire and adopt the best available tools to simplify, improve and enhance the ability to manage the portfolio of land and building assets through the full asset lifecycle
4. Partner for success: create a cohesive team of experts and innovators to deliver a well-maintained and cost-effective asset management platform
5. Begin to identify types and volume of assets within the Portfolio of Properties

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Glossary of Terms

AIMS – Asset Information Management System (Maximo)

RFE – Rolling Facilities Evaluations (a.k.a. Facilities Condition Assessments)

BAL – Bushfire Attack Level Assessment (measures how exposed a building could be to ember attack, radiant heat, and direct flames)

SIP – Shelter-in-Place Assessment (review of a site's nominated buildings and recommends works and maintenance to provide ember and bushfire resistance)

ESM – Essential Safety Measures Assessment

Asbestos Register – inventory of asbestos containing materials

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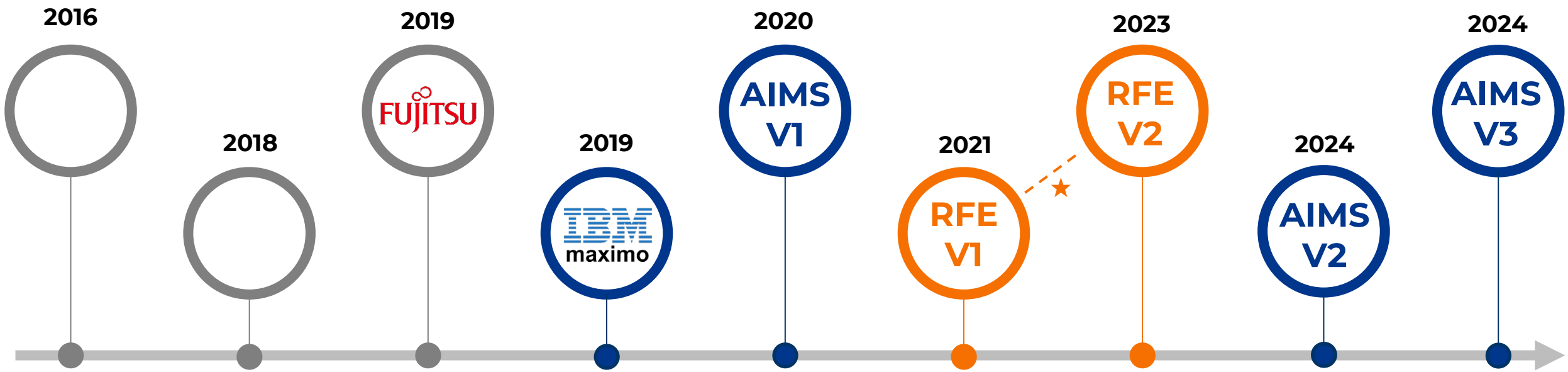
FCA for Maximo

Asset Information Management System (AIMS) Timeline



State Government releases Asset Management and Accountability Framework

State Gov't Department (Client) issues tender to procure services and technology to enable an asset lifecycle management program

Fujitsu Australia awarded contract to develop Asset Management program, including information management system for assets

Fujitsu begins implementation of IBM Maximo as the Asset Information Management Systems (**AIMS**)

Fujitsu releases **AIMS** into production, gathering of asset information begins

Fujitsu designs and develops a Maximo extension for Rolling Facilities Evaluations (**RFE**, i.e. Facility Condition Assessments)

RFE Version 2 released, including **mobility** for **RFE**, Shelter-in-Place Assessments (**SIP**) and Bushfire Attack Level Assessments (**BAL**)

AIMS Version 2 released, including mobility for Essential Safety Measures (**ESM**) and **Asbestos Register** (planned)

AIMS Version 3 anticipated to include mobility rollout for work order management

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Unique Challenges with Rolling Facilities Evaluations: RFE V2

Rolling Facilities Evaluations V1 (RFE V1) introduced facility condition capabilities to the Client's Maximo (AIMS). This provided a single source of truth for the assets, their condition and any defects which would need to be considered for future capital or operating budgets.

Rolling Facilities Evaluations V2 (RFE V2) introduced mobility to the asset management system (AIMS). The Client faced many constraints while performing their Rolling Facilities Evaluations (RFEs), which factored into criteria for a mobile solution going forward:

- The existing solution used in RFE was controlled by the supplier
- The existing solution did not integrate with Maximo
- Data collected using supplier's solution had to be manually uploaded to Maximo, delaying availability of any condition data
- Data collected using supplier's solution was limited in scope, i.e. background and hierarchy data not available in supplier's solution
- The Client's vision for the future was limited by the supplier's RFE solution: i.e. the technology could not expand to other areas of the organization or be used for other functions, such as work order management

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Mobile Requirements for Rolling Facilities Evaluations V2

The Client and Fujitsu considered other mobile products, but found none on the market that would accommodate offline, data scalability and configuration flexibility. The Client required a RFE mobile solution to meet the following requirements:

- Support large data sets – data acquisition could easily top 5M records per month
- Work fully offline, including any custom AIMS (Maximo) tables and fields, and sync with Maximo automatically when online
- Data synchronization had to be fast despite the high volume of records on the device
- Be user-friendly and flexible, accounting for rapid technology changes as business conditions change (extensible and customizable)
- Directly integrate with Maximo
- Provide fine-grained filtering to control what users see and do on their devices
- Had the ability to scale horizontally, in other words, include additional non-RFE functionality for other workgroups
- Had the ability for multiple suppliers performing RFE work to use the mobile app (supplier agnostic)

Fujitsu went to the market in 2022 to find an enterprise mobile platform which could address the Client's needs and adapt easily to their requirements. Fujitsu selected FieldFLEX as their mobile partner and introduced the mobile platform to the Client.

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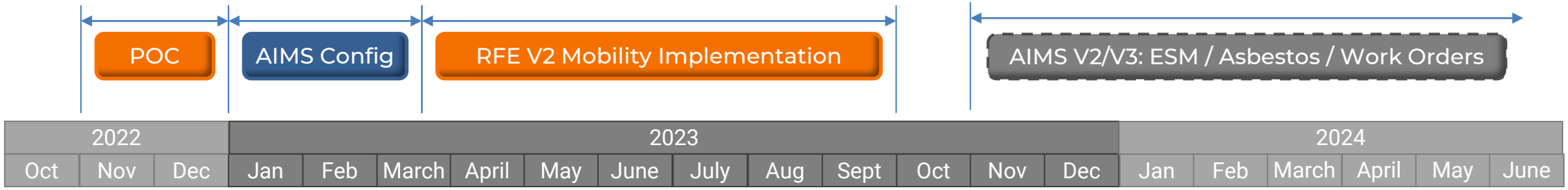
Mobile Implementation Timeline

- Rapid 2-month Mobile Proof of Concept (POC) including development, deployment & Client acceptance
- Additional configuration of AIMS (Maximo) to accommodate RFE V2 Mobility
- Rapid 6-month Mobile RFE V2 Mobility Implementation & Production roll-out



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Mobility Proof of Concept

Fujitsu and FieldFLEX developed and provided the Client with a Proof of Concept (POC) version of the RFE Mobile app prior to executing full project

Scope:

- 1 site with 5 users
- Limited functionality to prove that data was being synched to AIMS (Maximo) properly

POC Acceptance Criteria

- Must be able to work offline
- Android and iOS compatible
- Data must flow seamlessly between AIMS (Maximo) and FieldFLEX
- Must have ability to attach images anywhere in the mobile app when taken during assessment

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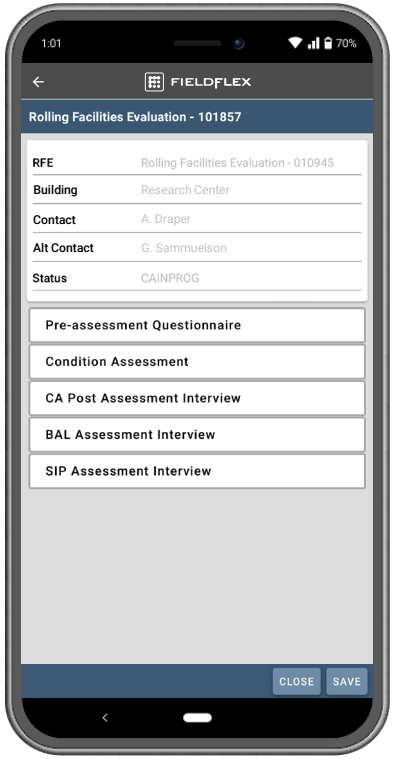
Final RFE V2 Mobility Solution

The final RFE Mobility solution considered improvements for time management by eliminating manual data entry activities, data quality by enforcing business rules within the mobile app, and data timeliness by integrating directly with Maximo thus making field-collected data available immediately.



The solution provided:

- A fully integrated mobile platform with their Asset Inventory Management System (AIMS) – Maximo
- Ability to capture all information in one mobile app
    - Create new asset records
    - Use hierarchal mapping for site/building, etc
    - Update and add elements to an asset
    - Record defects
    - Prioritize defects
    - Conduct BAL Assessments
    - Conduct SIP Assessments
- Ability to work offline with no data loss
- Ability to handle big data, up to 750,000+ records on the device

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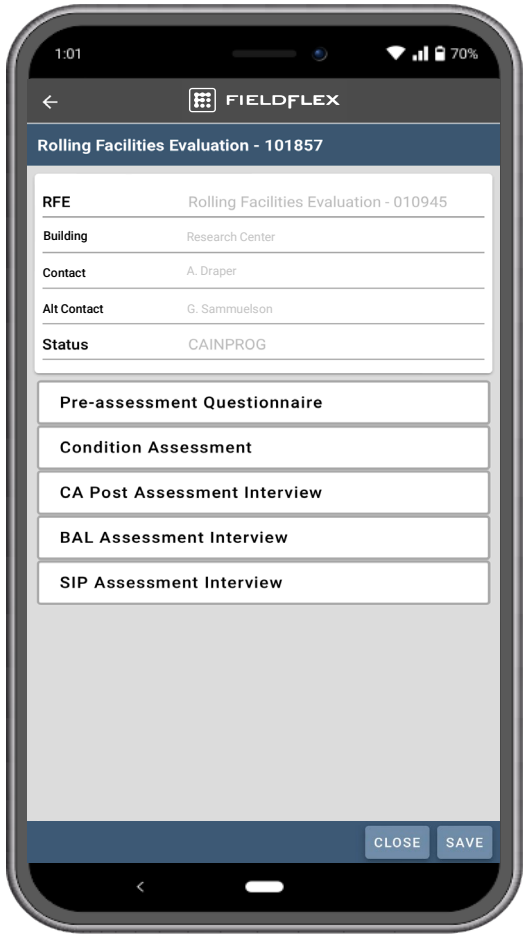
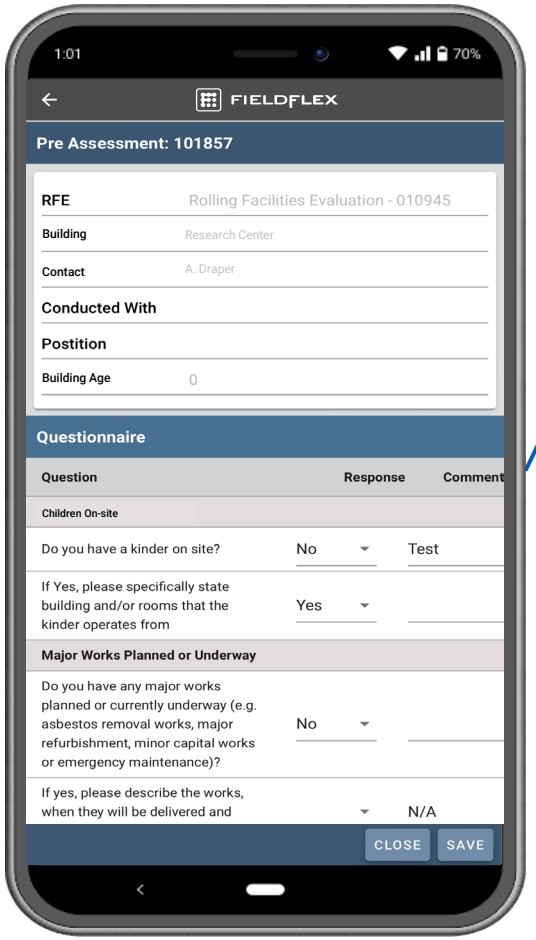
Pre-Assessment Questionnaire

Start Page

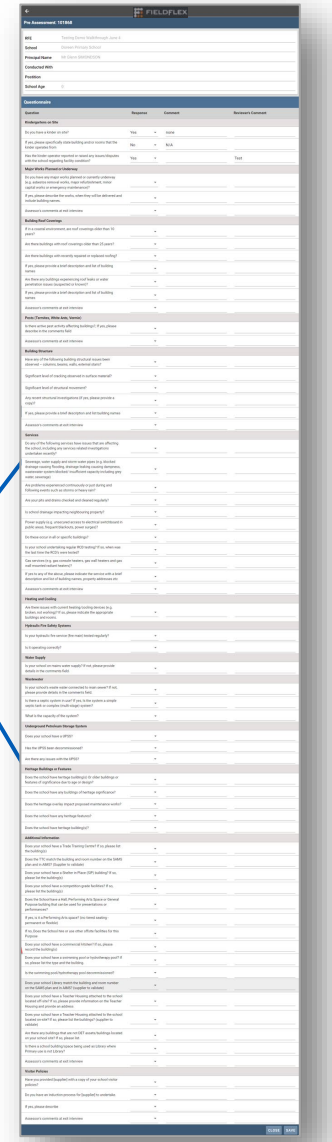
Home Page



Begin Questionnaire



40 Questions
11 Categories



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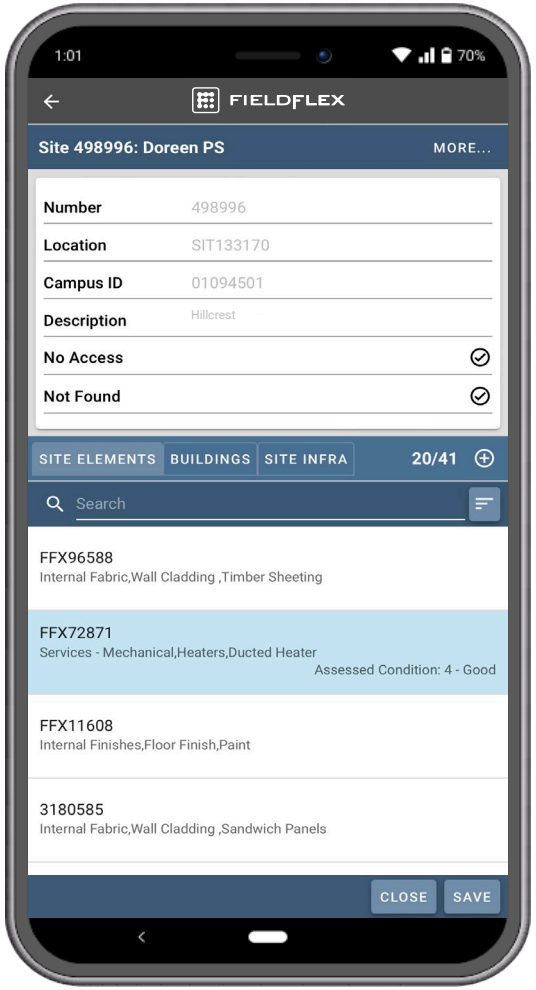
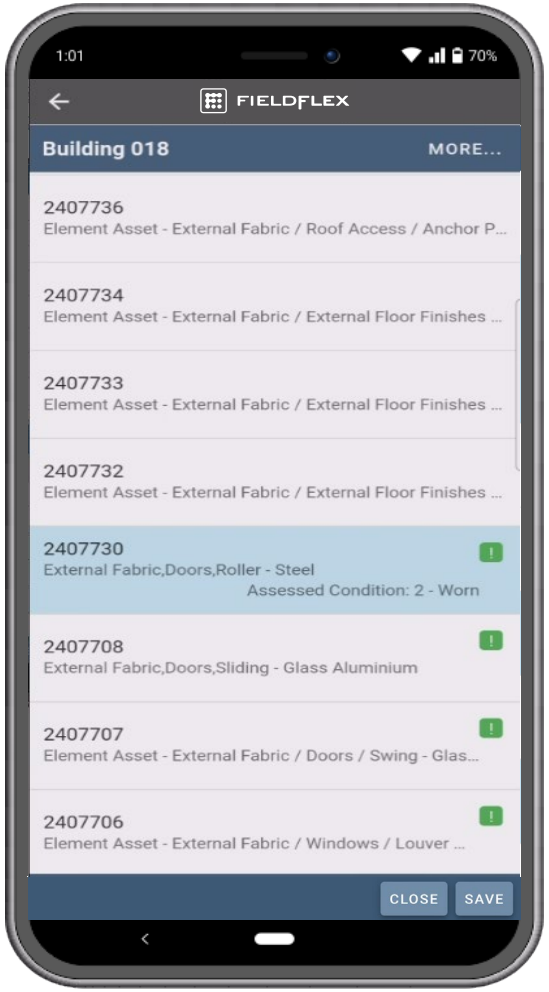
Condition Assessment

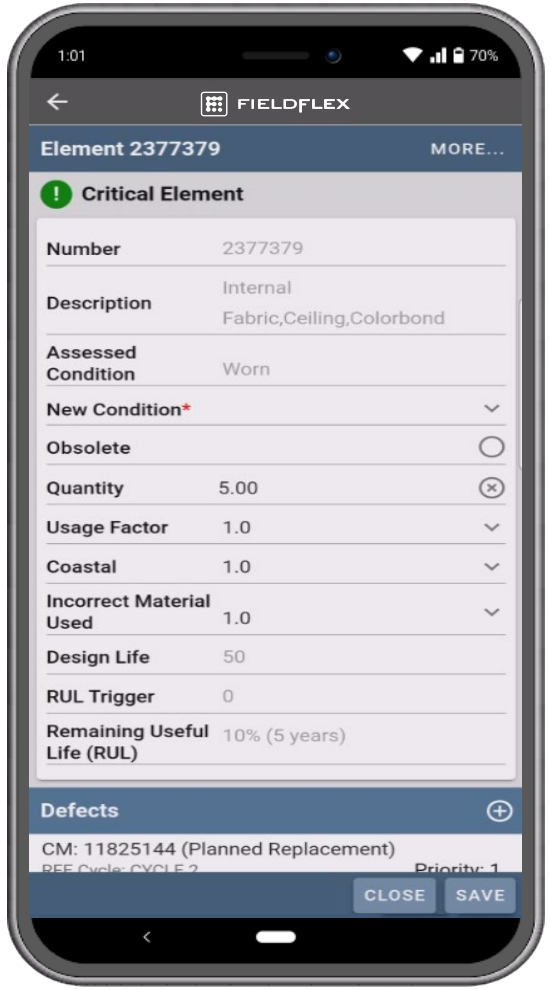
Manage Site



Choose Element



Element Detail



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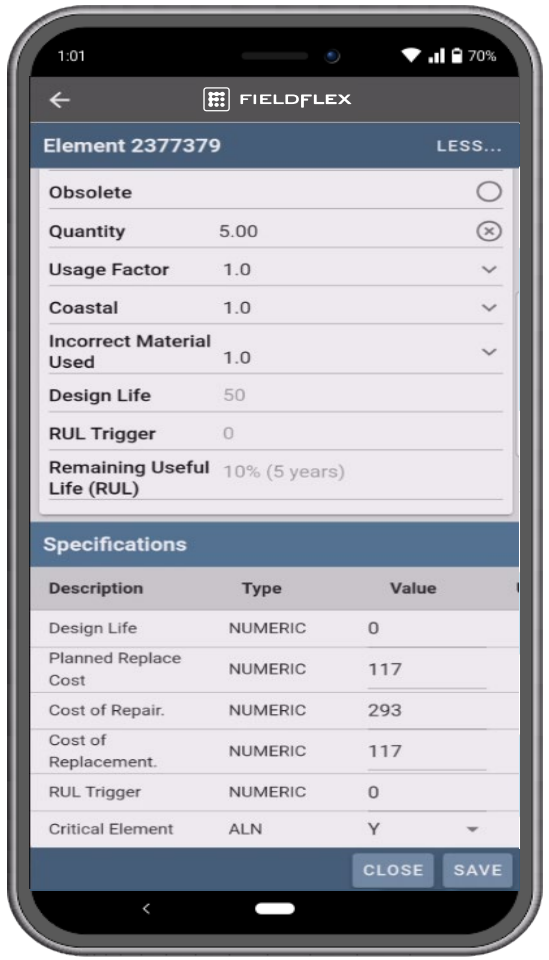
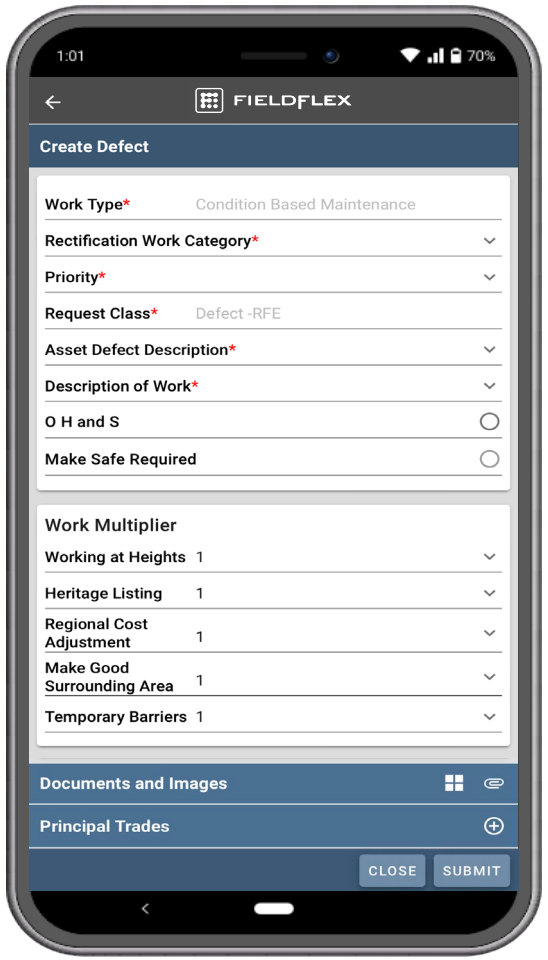
FCA for Maximo

Condition Assessment

Element Specs

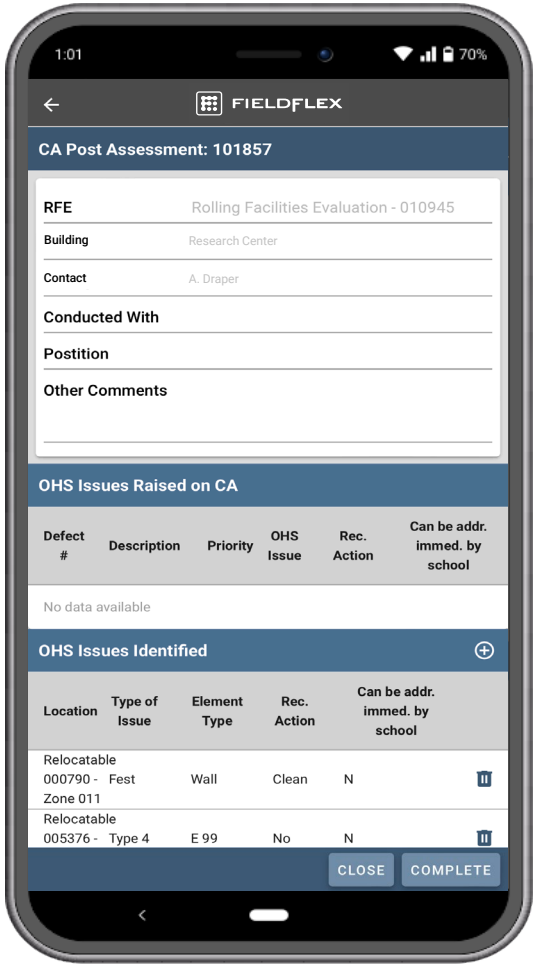


Add Defect



CA Post Assessment

Choose Site



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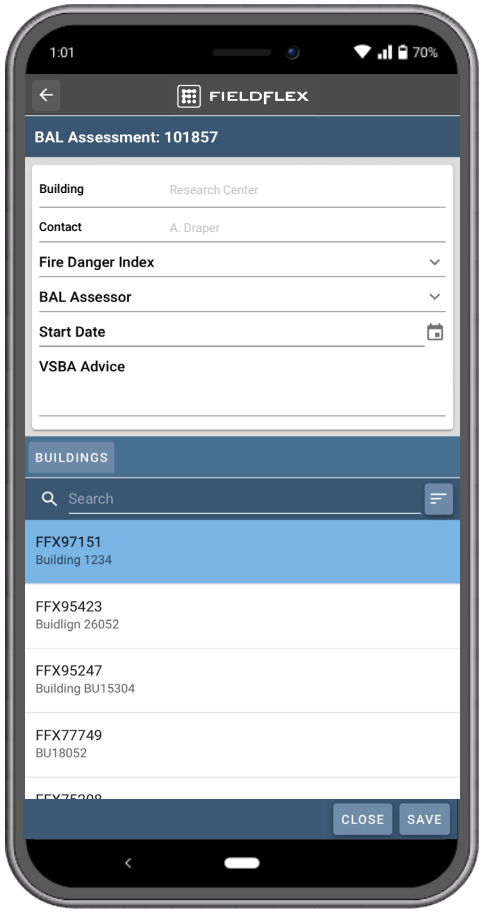
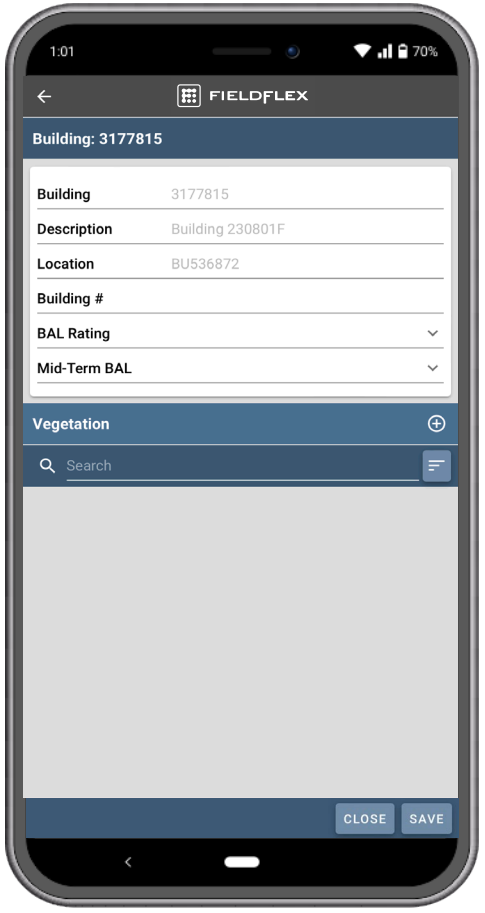
FCA for Maximo

BAL Assessment

Choose Building

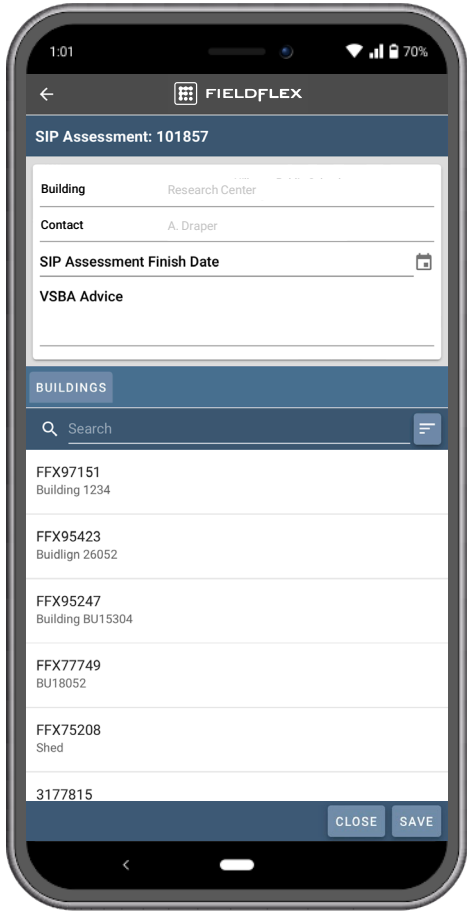


Start Assessment

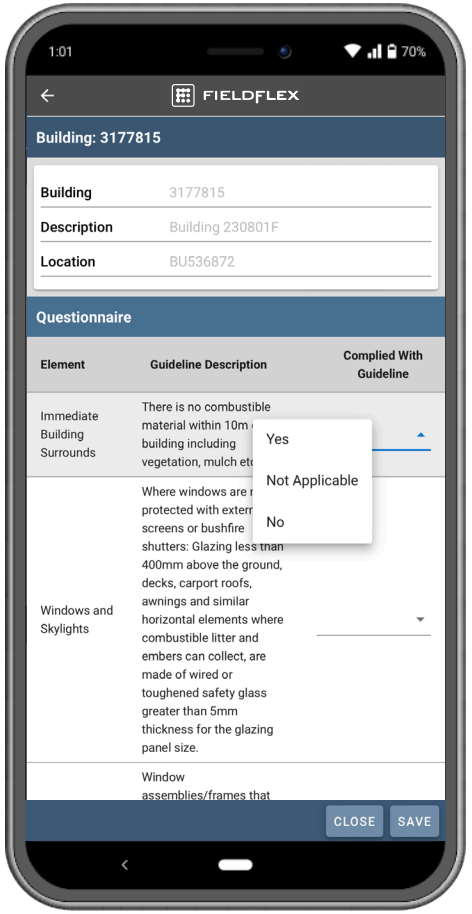


SIP Assessment

Choose Building



Start Assessment



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What makes AIMS and RFE in Maximo Unique?

Uniqueness of the RFE Mobility solution in Maximo:

- Leveraged AIMS customizations in Maximo that were specific to RFE
- AIMS and RFE apps are elegant in their simplicity
- All functionality works the same whether online or offline
- Data volumes are forecast to grow to around 5 million new records collected per month
- Solution offers placeholders for other external data sources to be integrated into the mobile app

Comparison of traditional/manual evaluations vs new RFE Mobility process:

- Time savings: Export of facilities background data prior to evaluations beginning no longer required
- Time savings: Import of facilities condition data after the evaluations beginning no longer required
- Data quality: Availability of background data inside lookup lists or business rules in a mobile form ensure data is collected correctly
- Data availability: All reporting now available in AIMS versus off-line reports from supplier
- Data availability: All data collected in the field are immediately available in AIMS

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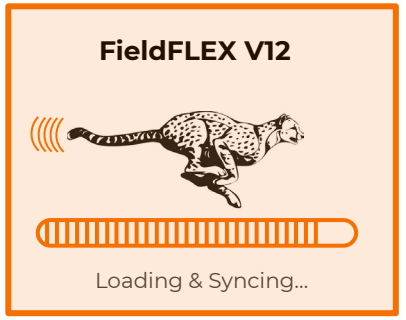
Performance Stats and Usage Forecast

Handling Big Data

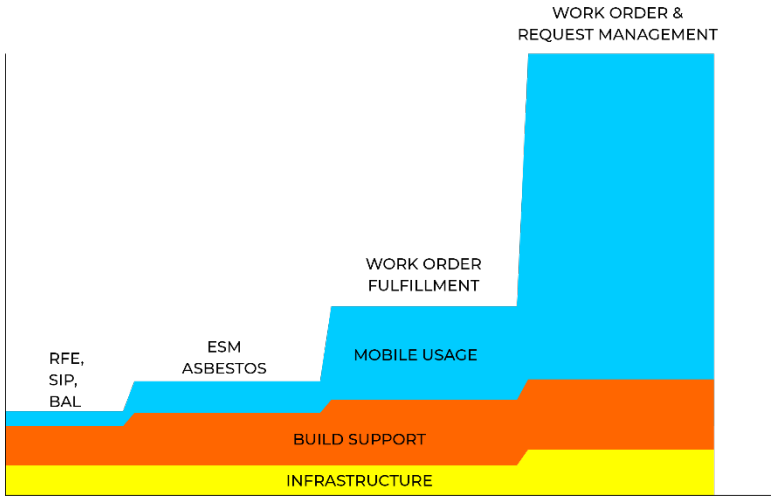
- Each mobile user could add up to 2,000 new records per day
- 165,000 records synced to device in 10 seconds on a new install *
- All production data sent to/from device, including document and image attachments
- 16 custom Maximo tables (AIMS)
- 293 custom fields (AIMS)
- Custom Maximo-side logic and workflows

** Based on FieldFLEX's performance benchmark of 1 million records in a minute or less*



Usage Forecast

- RFE/BAL/SIP
- ESM/Asbestos
- Work Management (Field Workers)
- Work Management (Administration)



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Lessons Learned & Next Steps

Lessons Learned:

- Time Zone coordination – need to have at least 2-3 hours of overlap during business hours
- Keep the Client happy, but informed - fluid requirements affect timelines
- Involve the users in the design throughout
- Infrastructure requirements for UAT environments should be close to production
- UAT cycles should be spaced further apart to allow for defect resolution to be completed for interconnected issues
- Data volumes & file sizes need to be considered early as these can affect performance

Next Steps:

- Add functionality for Essential Safety Measures (ESM)
- Add functionality for Asbestos Register
- Add ability to perform work management tasks (Work Orders)
- Add ability for site administrators to submit and manage Service Requests and Work Orders
- Add ability for other personnel to submit Service Requests

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Thank You For Attending!

At this time we'll open it up to any questions you may have

Please contact us with any questions

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Forward-Looking Statements & Information Disclosure

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