Mobile Apps for Inspection, Maintenance & SGR

LA Metro's Journey with CONNIXT Mobile App Technology

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About LA Metro

- 9th Largest Transit Agency in the US
- 1.1 Million riders annually (prior to COVID)
- Average Daily Weekday Boarding's = 344,176 (prior to COVID)
- Bus Service Area = 1,433 square miles ; Rail Length = 105 miles
- # of Buses = 2,200 ; # of Railcars over 400
- Over 13,000 Bus Stops ; # of Rail Stations – 93
- Active Projects to be completed by 2028 – 28

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Why mobile apps for maintenance/SGR?

- Maintenance processes paper-based
  - Not Green
  - Cause delays with the transfer of information to Fleet Management System
  - Error prone
- Data standardization / Lack of consistency (Who? What? When? Where?)
- Interpretation issues – each employee can look at the same item and come to a different conclusion and write-up
- No handy reference material or integrated photo capabilities

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Why mobile apps for maintenance/SGR?

- Better accuracy for trend analysis
- Scalability issues – especially when changes need to be made to the fleet, processes and procedures, etc.
- Need to carry reference materials - manuals, drawings, procedures
- Reporting requires accessing multiple systems, dockets and files

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Ask yourself - What do you want from this technology?

Between 38% to 57% of time spent on zero-value added activities like WO management, chasing paper and parts ordering.

Source: The Service Council, 2015

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- Data accuracy/real time
- Eliminate time spent on data re-entry
- Regulator compliance benefits
- Easy access and flexibility
- Increase productivity (Top/Down)

This process is a "Great Leap Forward" so Develop a Partnership with your Supplier

CONNIXT

Mobile Apps & Maintenance Activities

- Pre-built
- Workflows
- Configurable
- Reporting

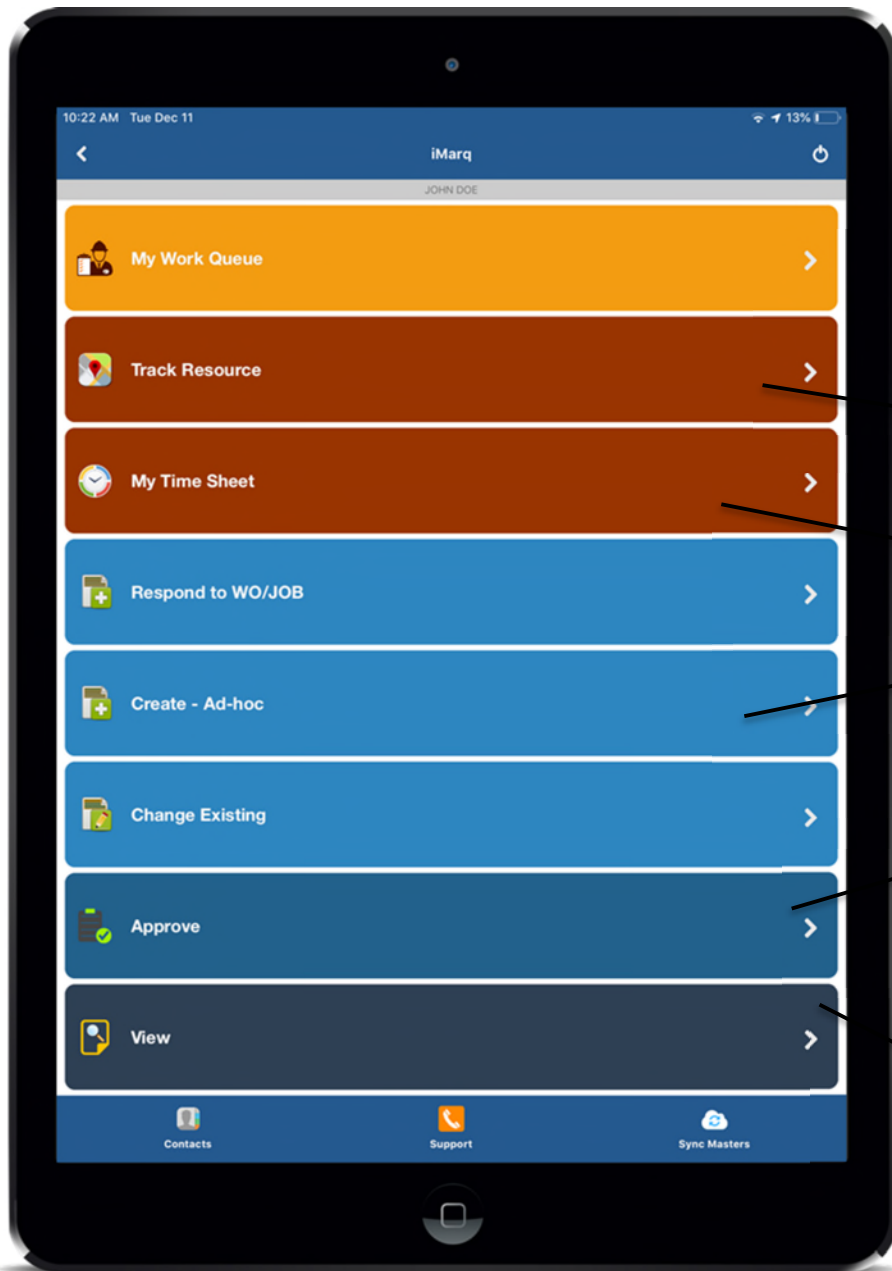**iMarq** - mobile app suite for the Transit Industry from Connixt

Digitize inspections, maintenance, SGR & reporting for workshop, field and facilities

Your forms the way you use them, integrated with your back-end systems

Cloud-based – No additional hardware or software

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iMarq™ - Mobile App

- **Any device, anywhere**
  - Android/iOS; Tablets & Smartphones
  - Wi-Fi/LTE/Offline

- **Configurable**
  - Inspections, forms, checklists, Work Orders, Incident Reports
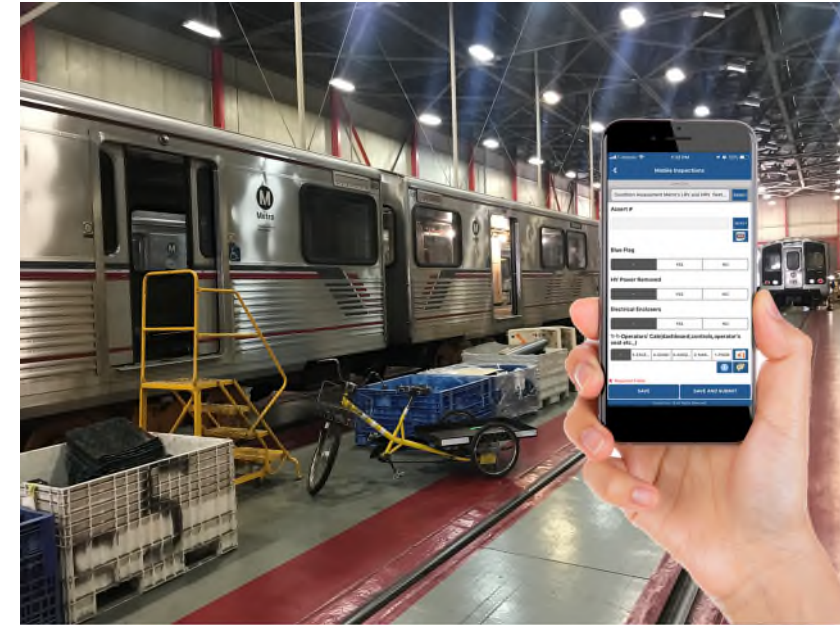 - Job-on/job-off
  - SGR, inventory, condition assessment

- **User-friendly, easy training**

- **Integrates with back-end system(s)**
- **Can operate stand-alone**
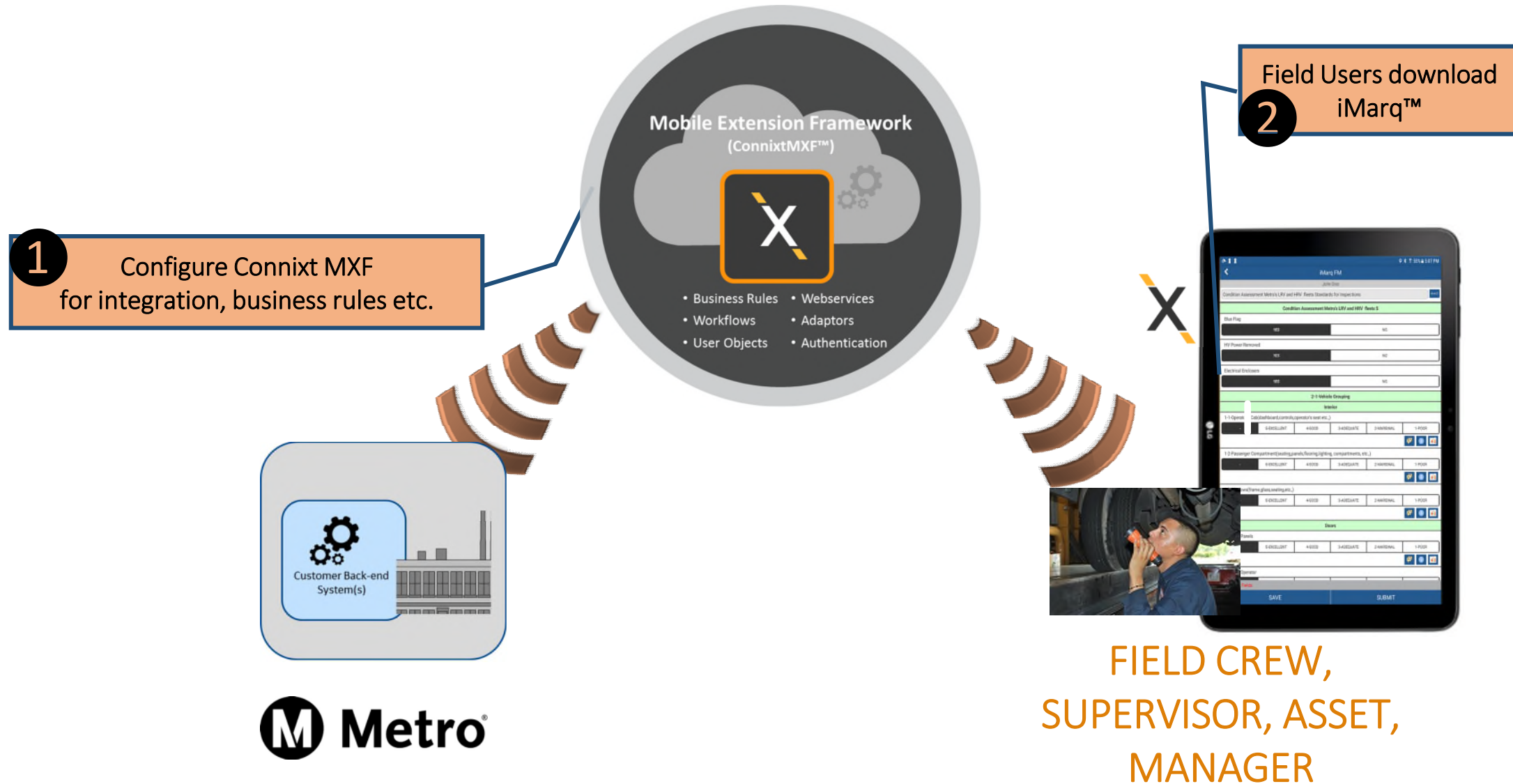- **Rapid deployment**

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Mobile @ Metro – Connixt iMarq

- Flexibility
  - App configured with Metro's own forms
  - Works with any smartphone, tablet, iOS, Android
- Scalability
  - Can grow to meet current and future needs @ Metro
    - E.g. SGR, Facilities, FRA certification etc.
  - Integrates with current and future CMMS/EAM system
- Usability
  - User friendly native apps – increases usability, minimizes change management and training
  - Uses common features like photos, speech-to-text etc.
- Availability
  - Speed to deployment

How iMarq works – 2 Steps to get there

Mobile Extension Framework (ConnixtMXF™)

- Business Rules
- Workflows
- User Objects
- Webservices
- Adaptors
- Authentication

2 Field Users download iMarq™

1 Configure Connixt MXF for integration, business rules etc.

Customer Back-end System(s)

M Metro

FIELD CREW, SUPERVISOR, ASSET, MANAGER

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Mobile @ Metro today

Currently being used for:

- Track Inspections
- Bus & Rail Quality Assurance
- Bus and Rail Preventative Maintenance
- Wayside Preventative Maintenance
- Facilities Maintenance
- General Services
- FRA Vehicle Certification

- Annotated photos/drawings, speech-to-text
- Inspections PDF with photos & signature
- Automated corrective WOs
- Auto-create & close WOs for repairs
- Reference material & instructions
- Assignment, approvals and workflows
- Job-on/job-off
- Automated, formatted mandatory reports
- Configurable, easy to change forms

Mobile Bus Inspection App - Availability

- Bus Inspection App is utilized in condition of maintenance Inspection:
  - For Bus Maintenance Preventive Maintenance Program for Buses
  - For Electronic Maintenance Preventive Maintenance Program for Revenue, Communication, and Recoding equipment on Buses
  - At 10 Divisions and our Central Maintenance Facility
  - Available to 70+ Bus Inspection Mechanics
  - Available to 70+ Electronic Communication Technicians

Mobile Bus Inspection App -Use

- Electronic Forms are available for the following Preventive Maintenance programs and equipment :
  - General Bus Inspection for Buses.
  - ATMS + DVR Inspection for Communication and Recording equipment on Buses.
  - Farebox Inspection for Revenue Equipment on Buses.

- Application is available:

  - Android operating devices
  - Samsung Galaxy S6
  - Samsung Galaxy S7

Mobile Bus Inspection App - Functionality

Bus Inspection Forms via the app:

- Provide a complete list of inspection points for evaluation and capturing findings.

- Allow findings to be populated to the applicable Repair Work Orders for the application of corrective measure.

- Facilitate generating new Inspection Work Orders to maintain intervals.

- Create and capture Inspection Report records for WO and CHP activities.

Mobile Bus Inspection App – Potential Improvements & Next Steps
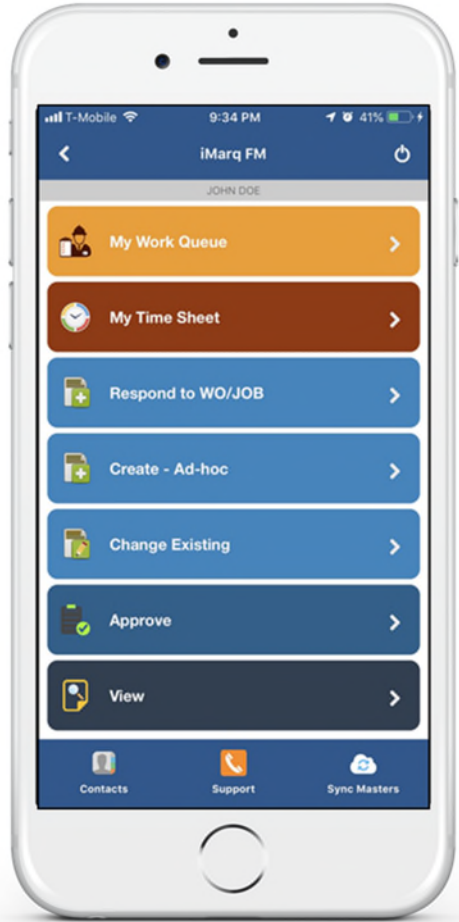
Bus Inspection App

- Extend use for Inspection WO Findings/Repairs via tablet for fieldworker access and view.
- Note Capturing for Inspection Repair WO.

Yard/Pit list App

- Provide visibility of Buses held for corrective measures.
- Reporting to provide context to Bus activities.

Questions