COHESIVE solutions

IBM

Maximo Scheduler and Spatial

…a powerful combination

September 1, 2016

Agenda

- **Introductions**
- **What is Maximo Spatial Asset Management?**
- **What is Maximo Asset Management Scheduler?**
- **Use case 1**: How these integrated solutions add value?
- **Use case 2**: How these integrated solutions add value?

Introduction

- **Lacey Radabaugh**
  - Sales Engineer – Energy and Utilites

- **Mike Beasley**
  - Vice President – Utilities

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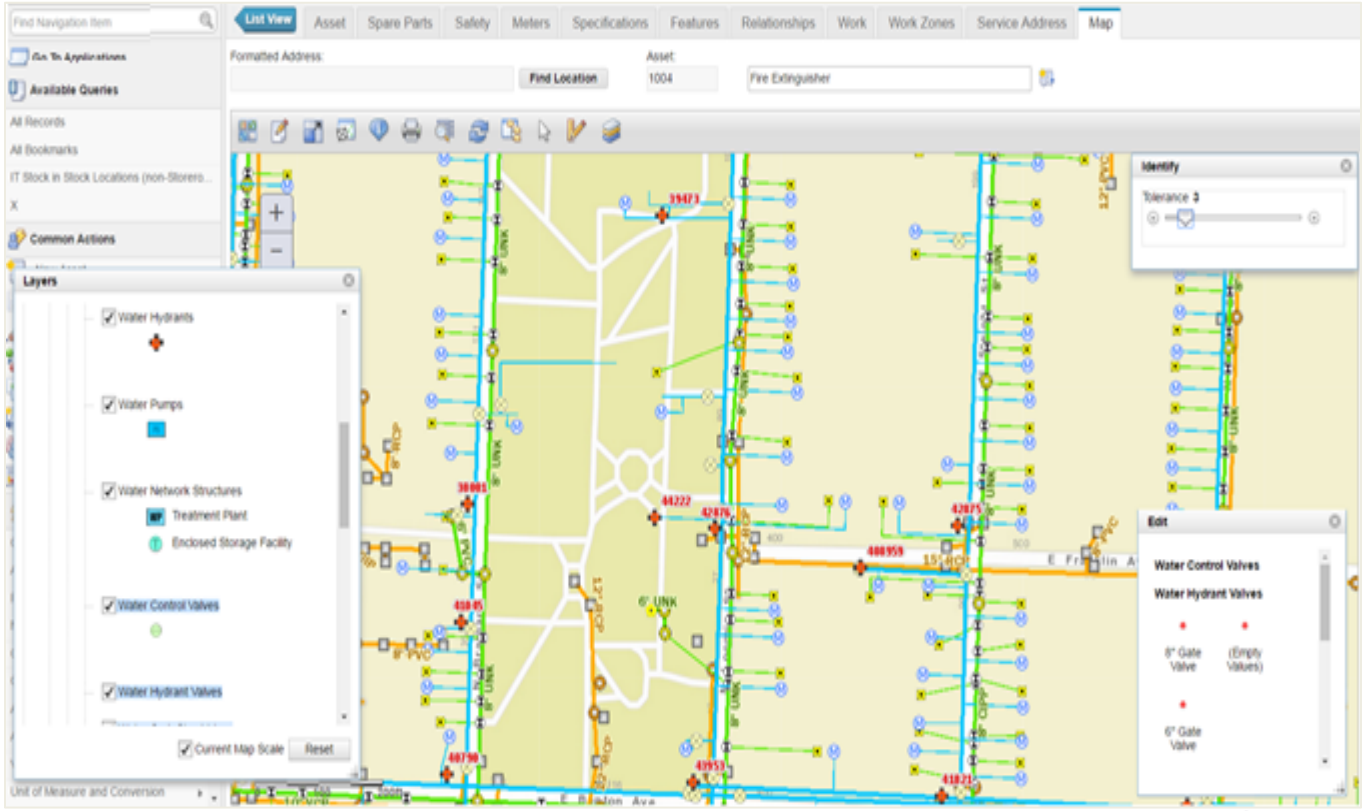
What is Maximo Spatial Asset Management

- Provides a GIS solution that allows users to ‘visualize, question, analyze, and interpret data to understand relationships, patterns, and trends.’
- Allows users to look at data in a way that is quickly understood and easily shared on a map.
- Creates a level of awareness and insight that tabular systems without graphics cannot provide.



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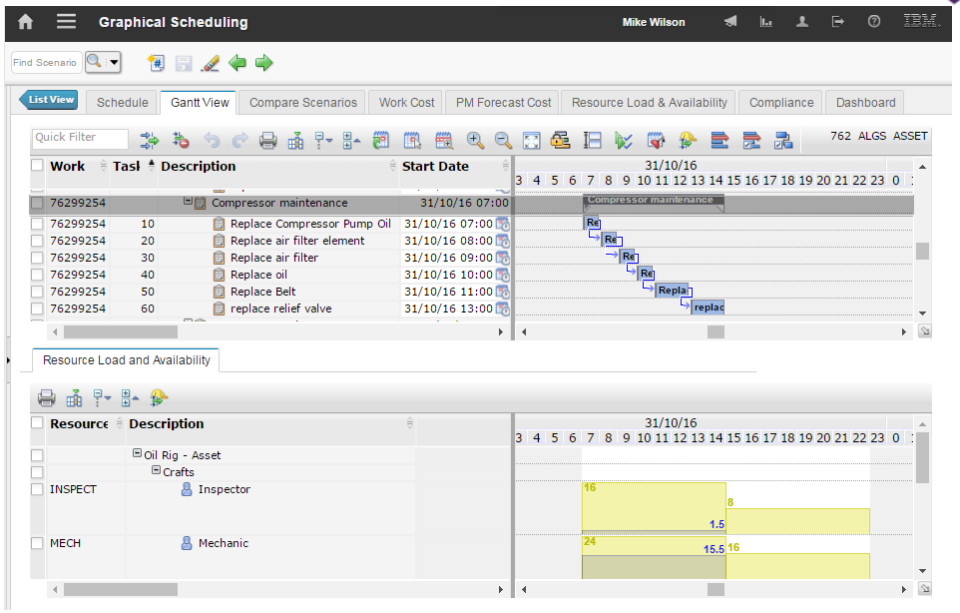
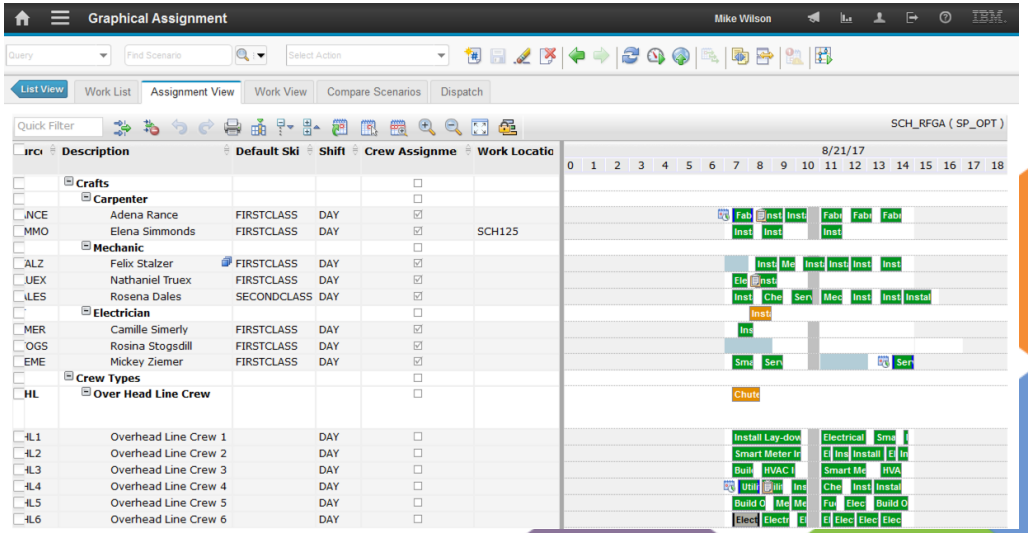
What is Maximo Asset Management Scheduler

- Maximo Asset Management Scheduler is an end-to-end work management tool that accommodates many roles in the work management lifecycle
  - Planners and schedulers can view work orders and PMs graphically on a Gantt chart, compare the required resources against those available, and adjust accordingly
  - Supervisors can manage work order assignments graphically and drag and drop to assign to labor and crews
  - Dispatchers can use maps to graphically monitor field technicians, work in progress, and status
  - Field technicians can receive work and provide real time status updates to the dispatcher
- Optimization models help gain significant efficiencies by automating work management tasks





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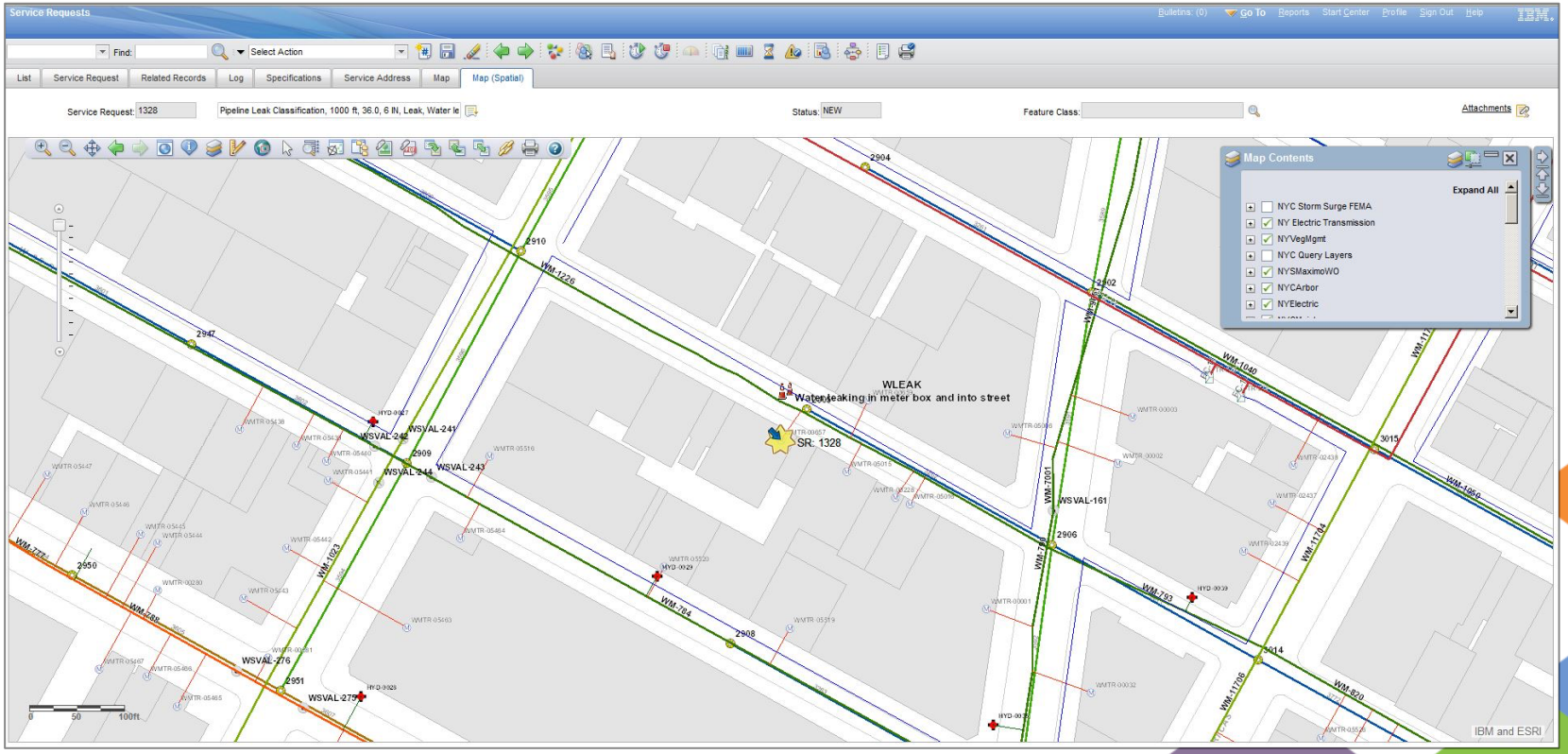
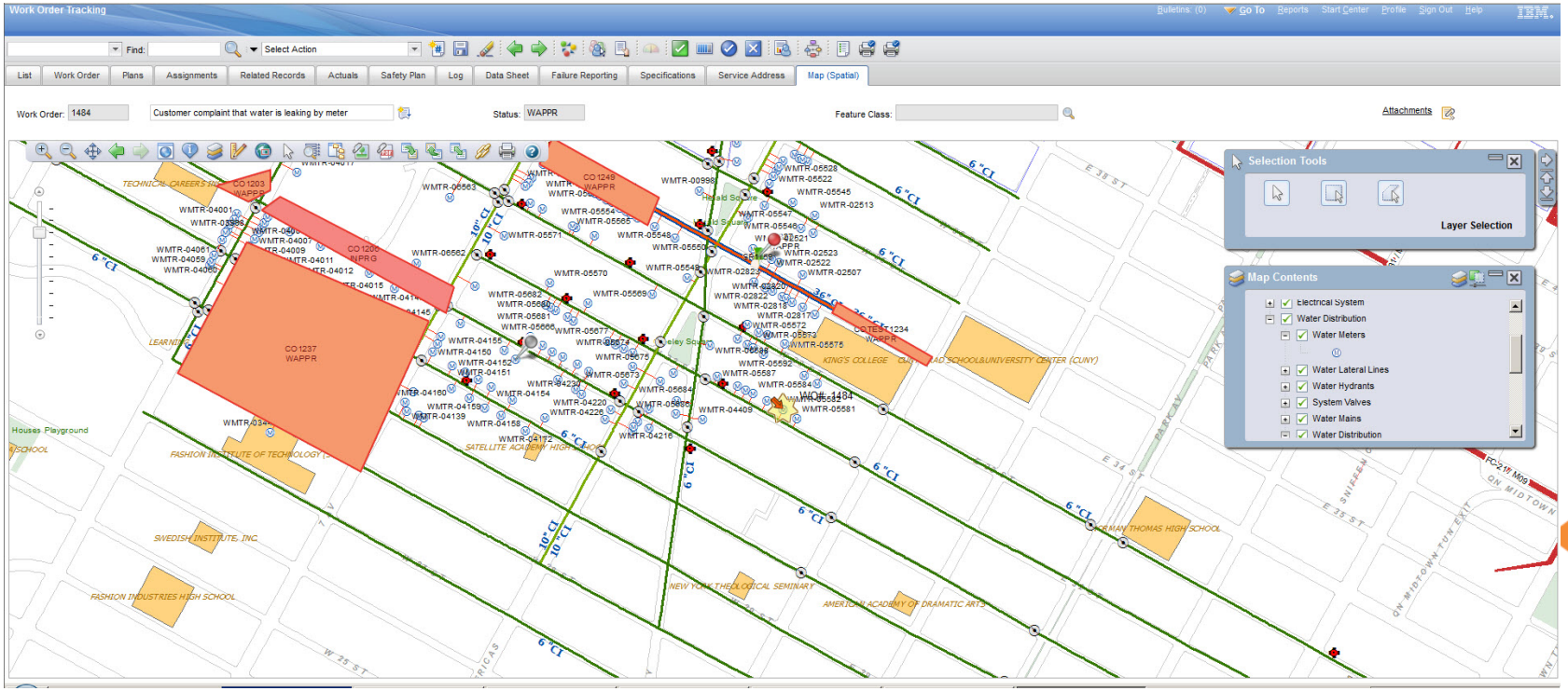
Use case 1: service request initiated based on customer complaint

- A service request is initiated based on a customer calling and indicating there is water leaking around their meter
- Map position of service request can be determined from the customer premise location or meter asset
- Map feature for service request can automatically be created
- Location of work can be visualized in a map and nearby features including other services requests, work orders, assets and locations can be visualized



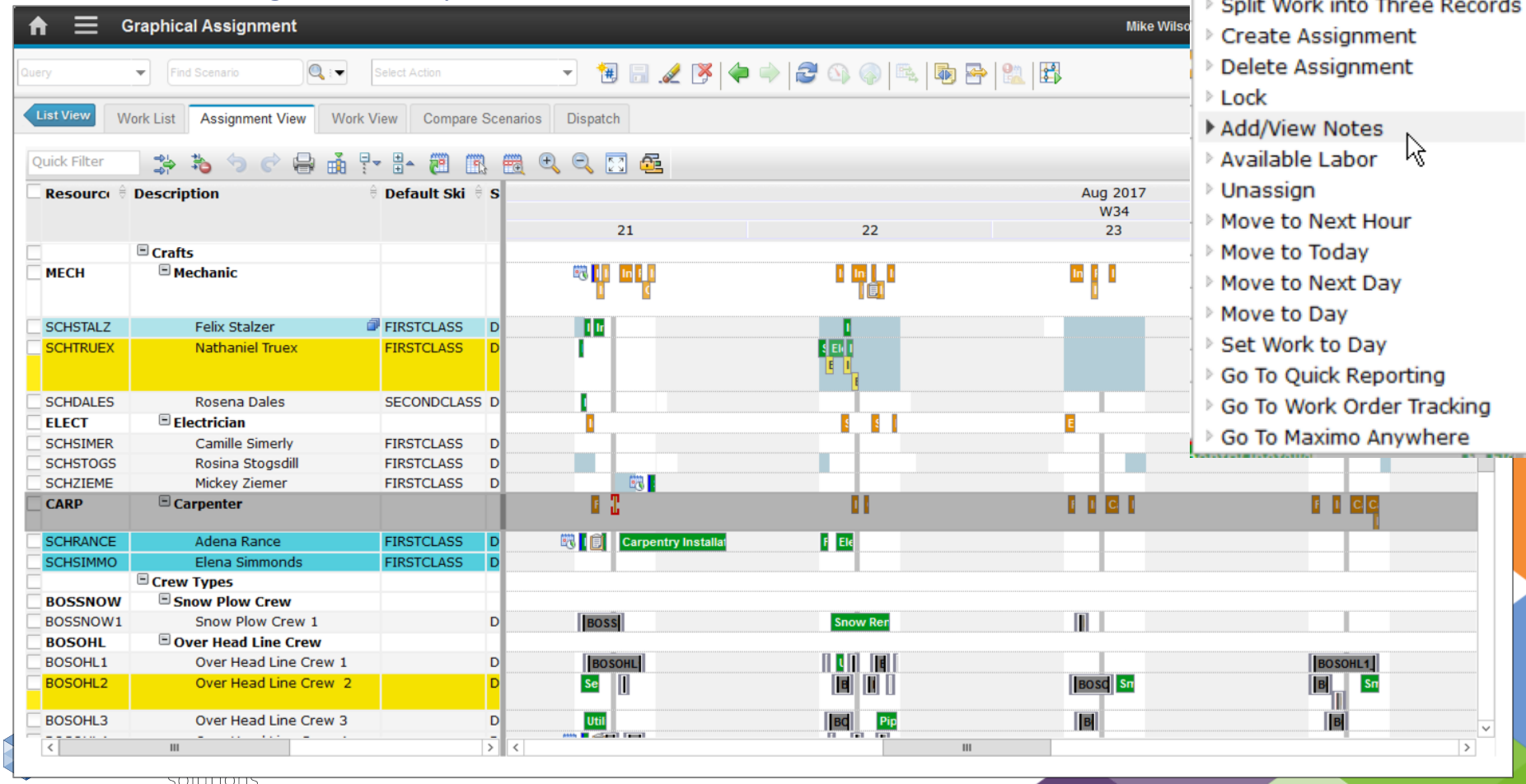
Work order created from service request

- A work order is created from the service request
- Map position of the work order can be determined from related information
- Map feature for work order can automatically be created



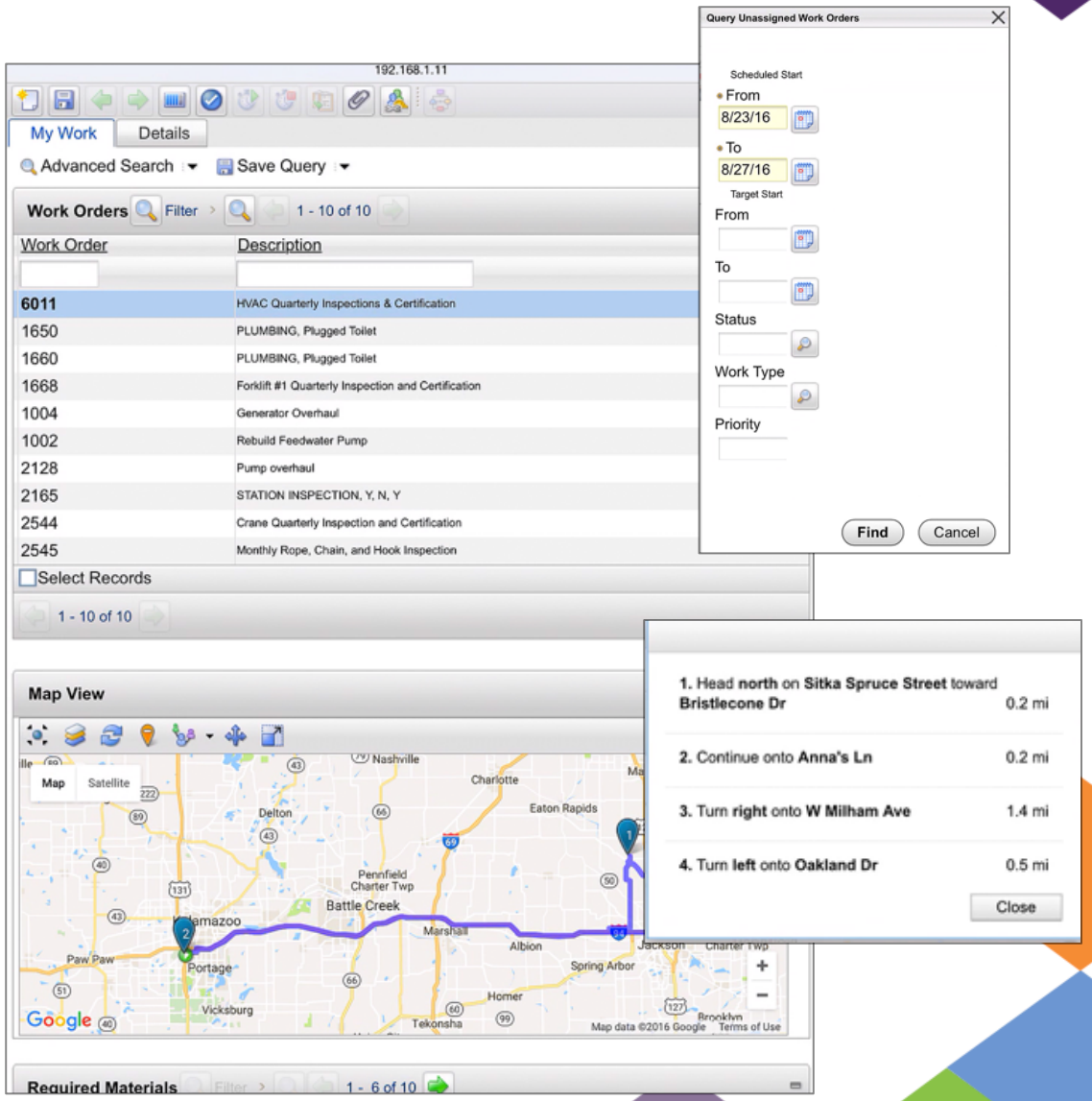
Work order is assigned

- The supervisor is notified of the work order by the dispatcher
- The supervisor utilizes the Graphical Assignment application to view availability of technicians and assign the work through a graphical drag and drop view
- Once assigned, the supervisor locks the work and enters notes



Work order is executed

- Tailored Everyplace applications allow technicians to see a summarized view of their required materials and tools
- Visualize their daily route of work orders, get turn by turn directions, see other labor and crews nearby and unassigned work nearby
- Start and stop a work order through a single tap, create labor and tool transactions, capture log notes, meter readings, failure codes and more



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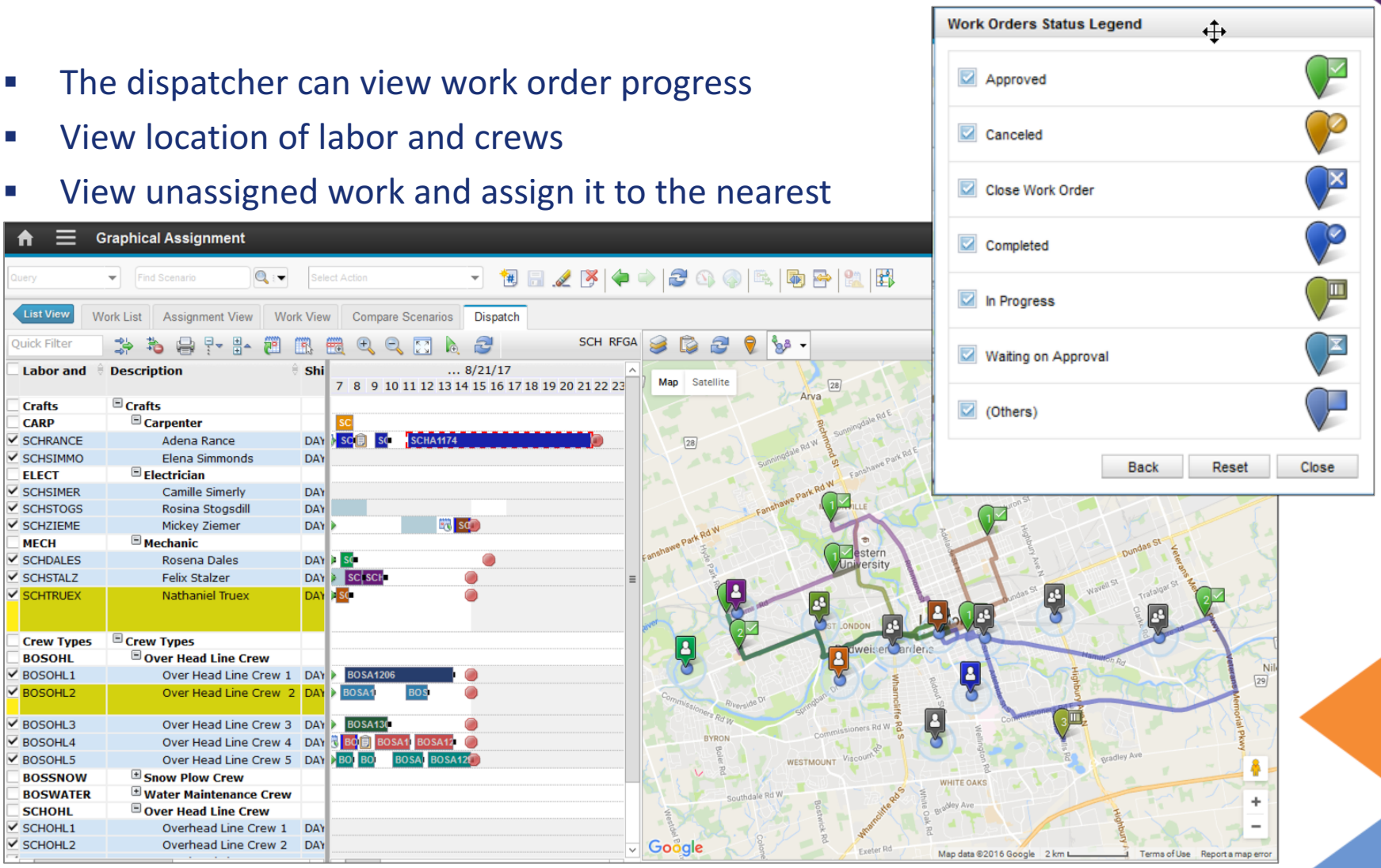
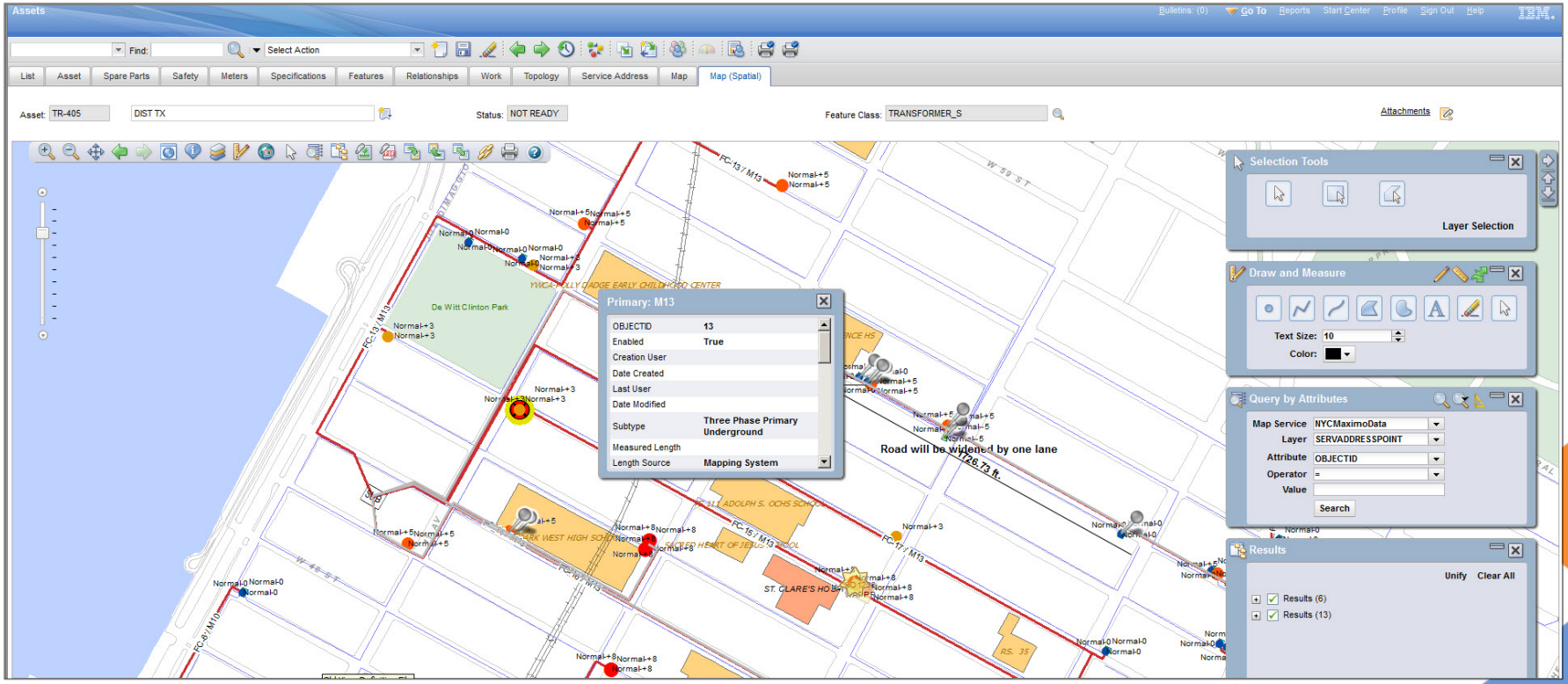
Progress of work is monitored

- The dispatcher can view work order progress
- View location of labor and crews
- View unassigned work and assign it to the nearest



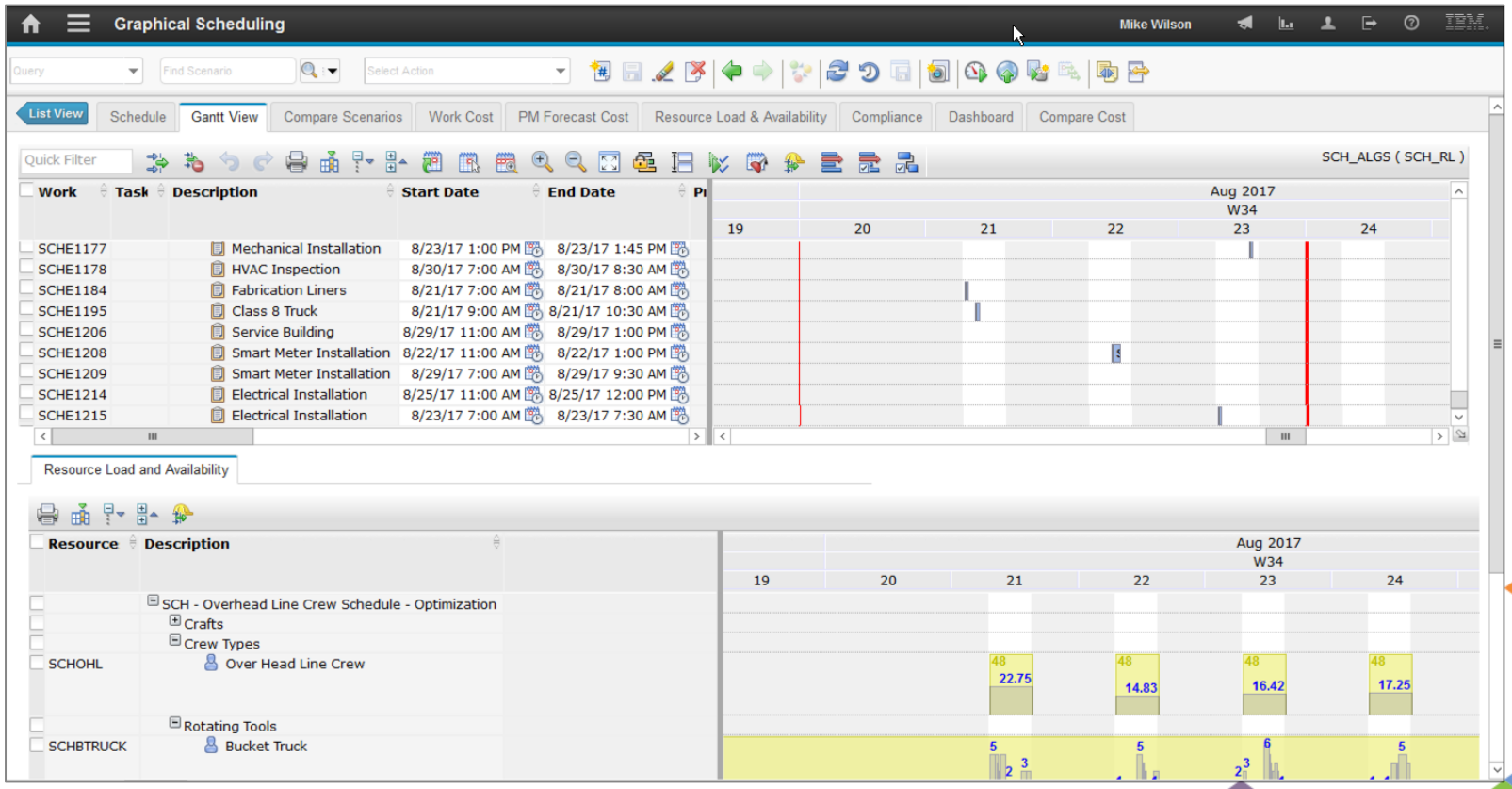
Use case 2: work is initiated to relocate overhead lines

- Due to a road widening initiative, overhead lines must be moved on 50 feet to the right
- From within the map view in the Assets application, all assets along the corridor of road are identified and a work package is created from a single Select Action



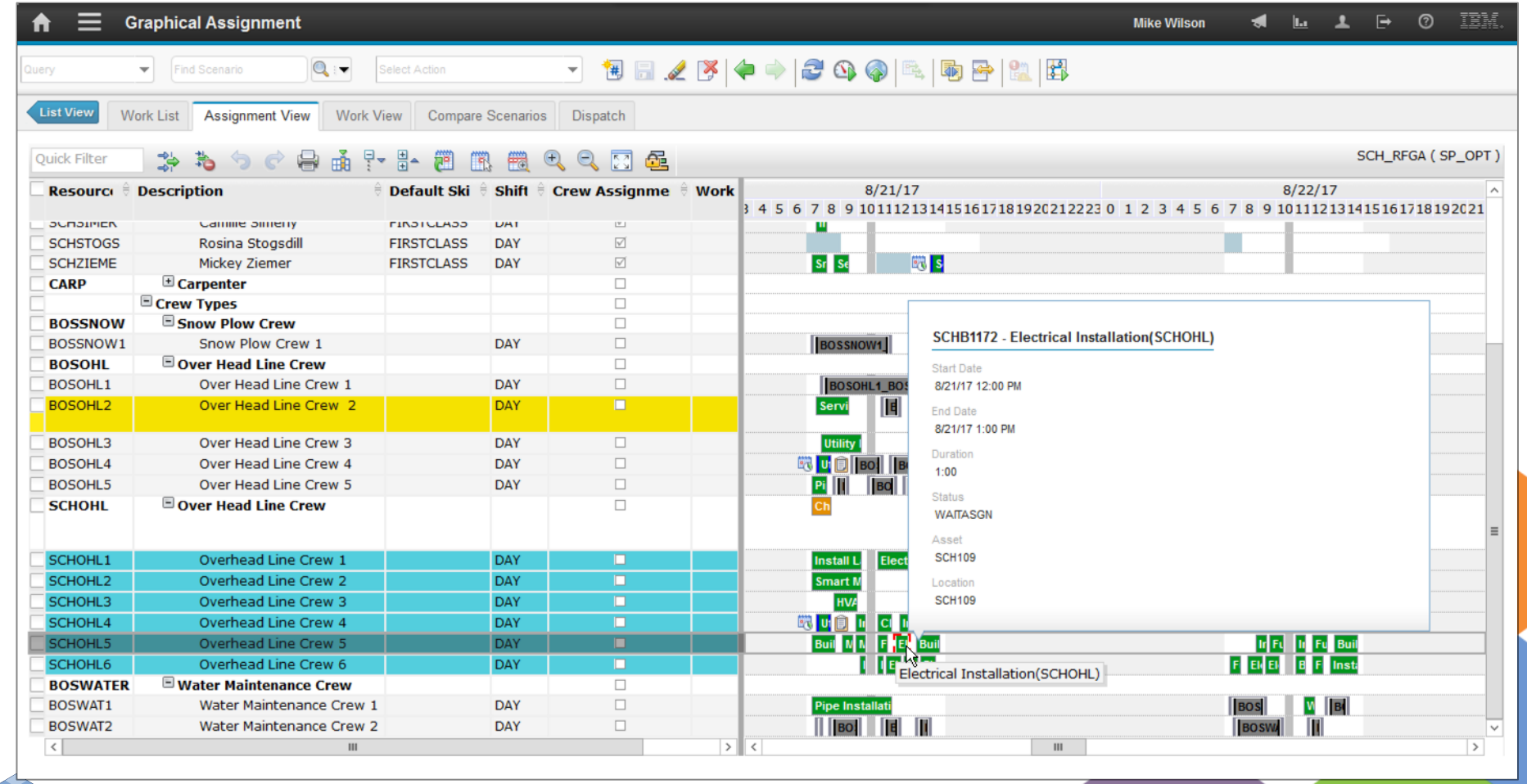
Work is scheduled

- After the work is designed, work is scheduled in the Graphical Scheduling application
- Resource load and availability and other resource availability including assets, locations, items and tools can be taken into consideration when scheduling work
- Date constraint windows and task dependencies can be adhered to



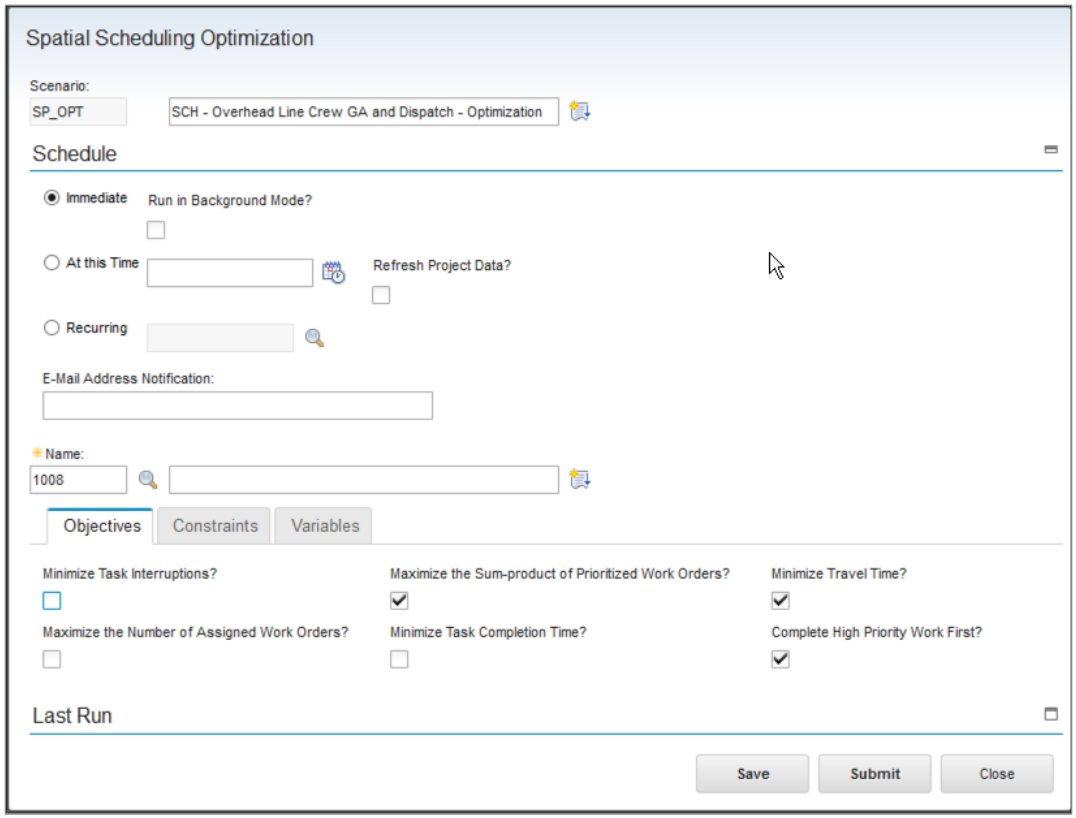
Work is assigned

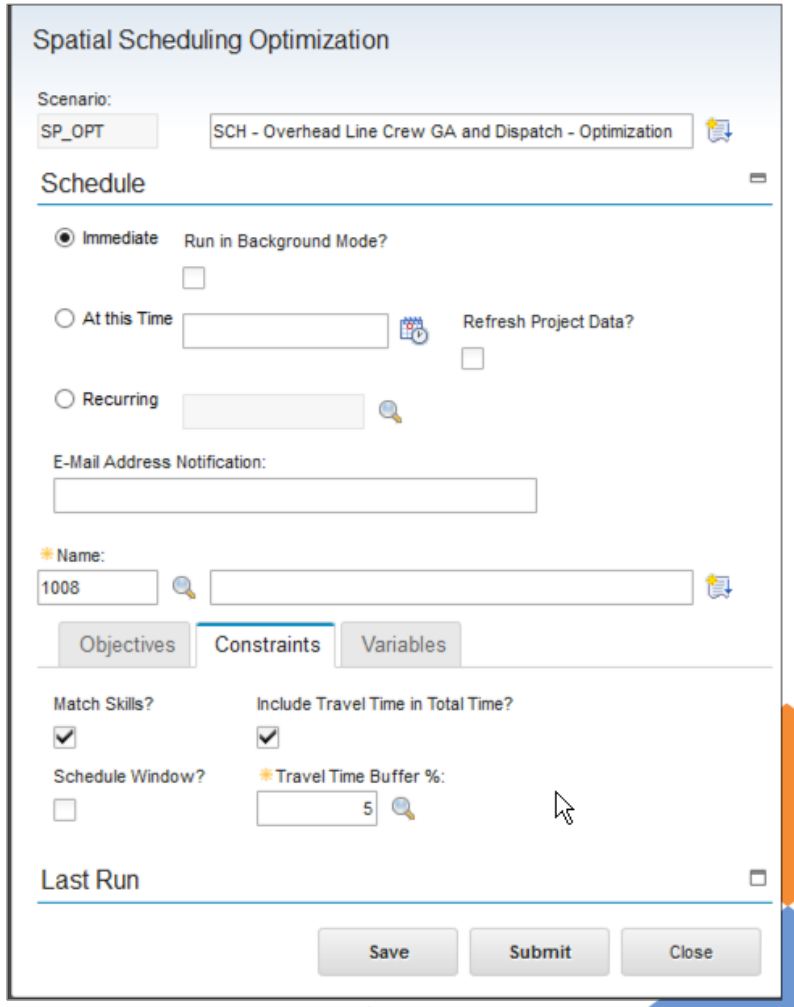
- Work can be assigned to crews within the Graphical Assignment application



Assignment of work may be optimized

- The assignment of work can be optimized by a spatial scheduling optimization model





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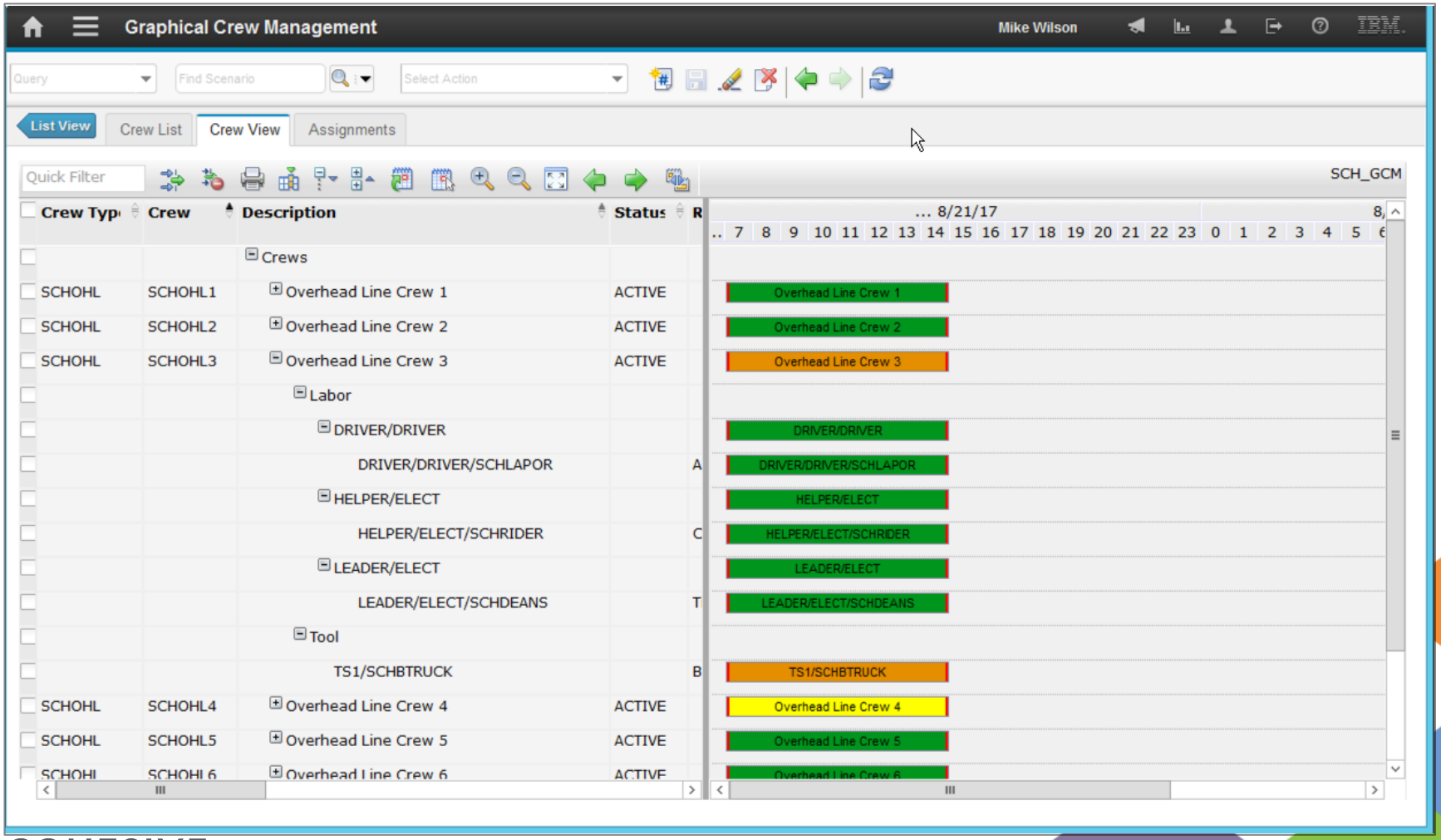
Daily shuffle of crews is managed

- Supervisor builds and manages crews graphically – day by day or a weekly look ahead



Introducing – Scheduler Plus!

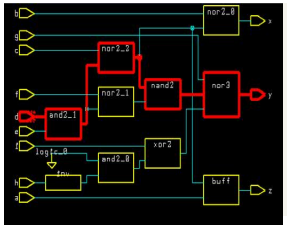
Advanced work management solution, built on top of Maximo Scheduler

Weather integration

- Incorporate weather data into planning/scheduling and dispatching
- Weather alerts / notifications

Appointment scheduling

- Make customer appointments within a schedule window
- Customer notifications – cancel / reschedule



Managing large projects

- Dependencies across work orders and tasks
- Highlight critical path, backward pass, % complete

Dynamic dispatching

- Auto refresh, re-optimization based on real-time progress
- Incorporate real-time traffic conditions

Back-up

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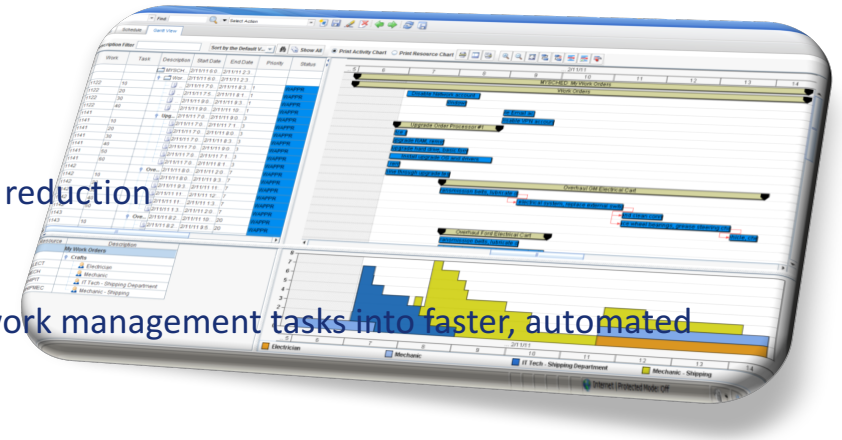
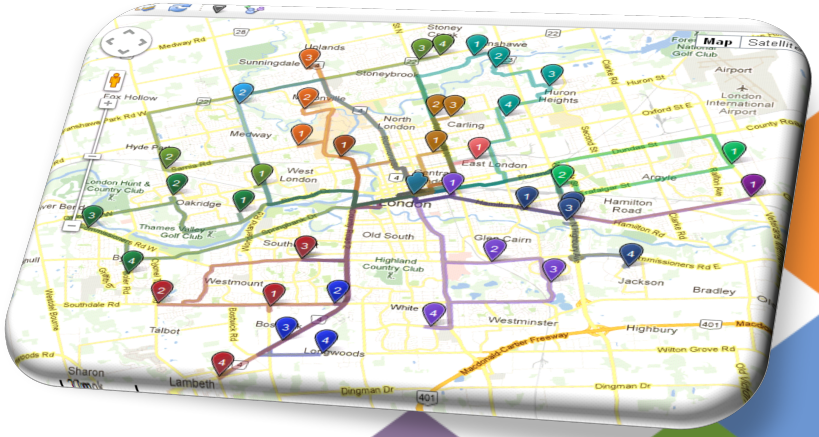
Why do clients chose Maximo Scheduler?

- Embedded in Maximo
  - No third-party product integrations required
    - Save time and capital
  - Work without leaving Maximo
    - Right-click actions provide further efficiencies
  - Company mandate (or personal preference) on tool reduction
- Optimization
  - Transform laborious, manual and time consuming work management tasks into faster, automated processes with meaningful results
  - Included with the Scheduler license
  - Option to build custom models
- Other important factors
  - Asset / Location availability
  - SQL query builder
  - Low cost = quick ROI





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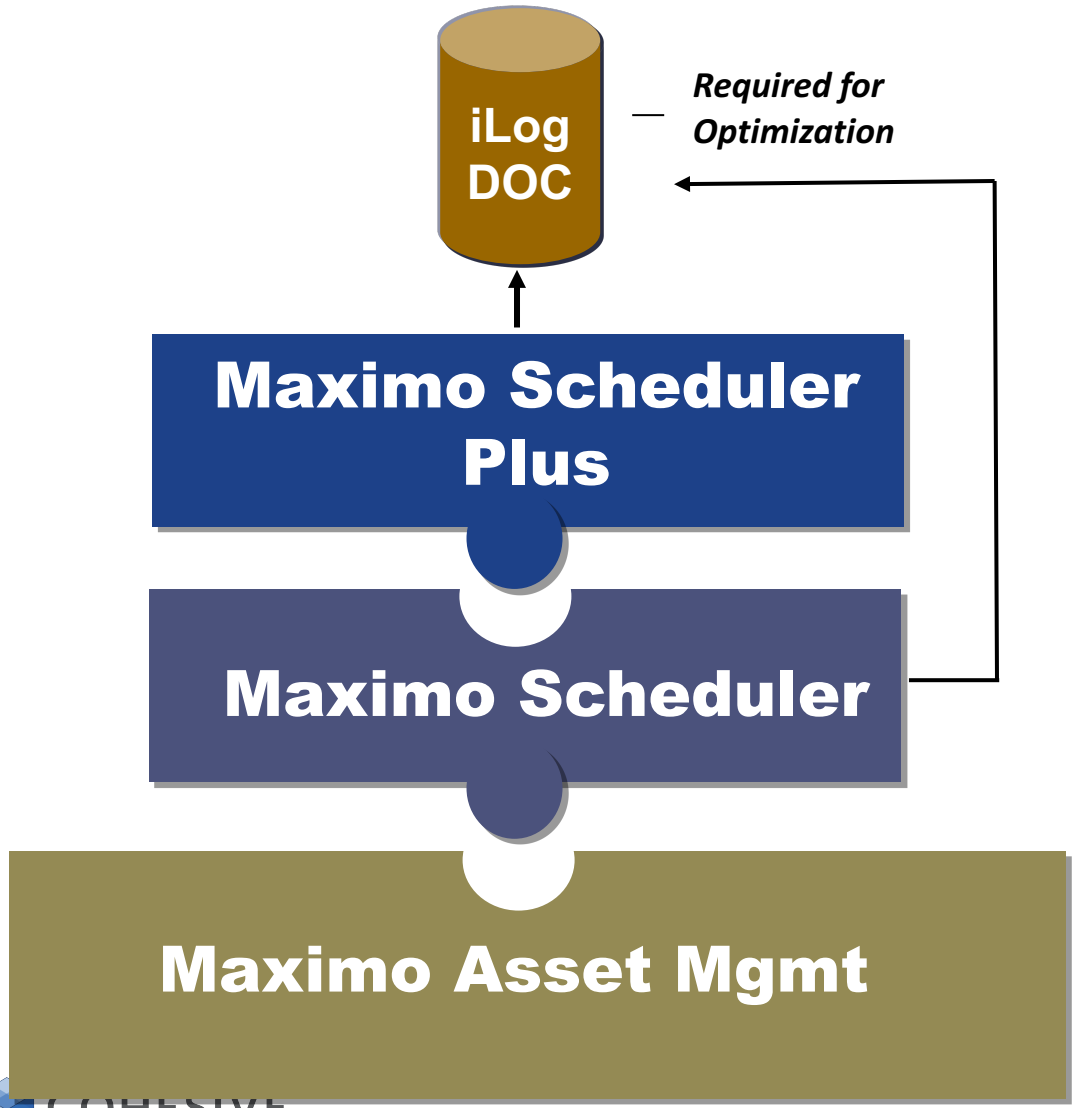
About Cohesive Solutions

- Cohesive Solutions operates out of Kennesaw, Georgia (*metro Atlanta*). Cohesive provides business process transformation and consulting services which enables organizations to achieve higher ROI from their assets and the information technology that manages and maintains those assets. Cohesive's professionals have been serving clients since 1990.

- For more information visit www.cohesivesolutions.com or contact Mike Beasley at mbeasley@cohesivesolutions.com or (678) 601-5478.

Scheduler Plus – also embedded in Maximo



- Advanced scheduling solution
- Add-on product to Maximo Scheduler, code embedded in core Maximo therefore still a single install
- On-prem and via SaaS
- Requires a separate license purchase
- Includes the optimization models

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Scheduler Plus | Scheduler

Maximo Scheduler and Scheduler Plus – Roadmap

Weather
- Configurable weather views
- Weather alerts / notifications

Appointment Scheduling
- Make customer appointments within a schedule window, see tech availability, incorporate weather
- Customer notifications - cancel, reschedule

Network dependencies (Phase 1)
- Link across WOs and tasks
- Pert chart

Weather impact on Assets
- Weather overlay on maintenance/operational windows

Weather impact on Job Plans
- Adding weather requirements to conditional job plans
- Variable length condition (ex: weather impacted)
- Go or No Go criteria
- Applying conditional job plan tasks to existing WOs

Network dependencies (Phase 2)
- Backward pass
- Highlight critical path
- Introduce % complete

Dynamic Dispatching
- Auto refresh for improved tracking of progress
- Re-optimization based on real-time progress, including emergent work
- Real-time road conditions and traffic
- Continuous weather updates and weather event notifications
- Everyplace template updates - weather

Weather based assignments
- Manual clearing of decks
- Optimization – reschedule planned and emergency

Enhanced resource availability
- WO outside schedule, shifts/breaks

Performance
- Support high volume operations

Qualifications at WO & Task Level
- Manual and Optimization

Weekly and Monthly planning buckets

Performance

PM display
- Constraint window
- Compare PM scenarios
- Emergency template (ex. Weather event activity)

Performance

Release 1
H2 2016

Release 2
H1 2017

Release 3
H1 2017

4 Role Based Applications

1) Graphical Scheduling

2) Graphical Assignment

3) Graphical Assignment – Repair Facilities

4) Graphical Crew Management

Also includes the Everyplace mobile templates to support the Field Technicians and the Supervisor

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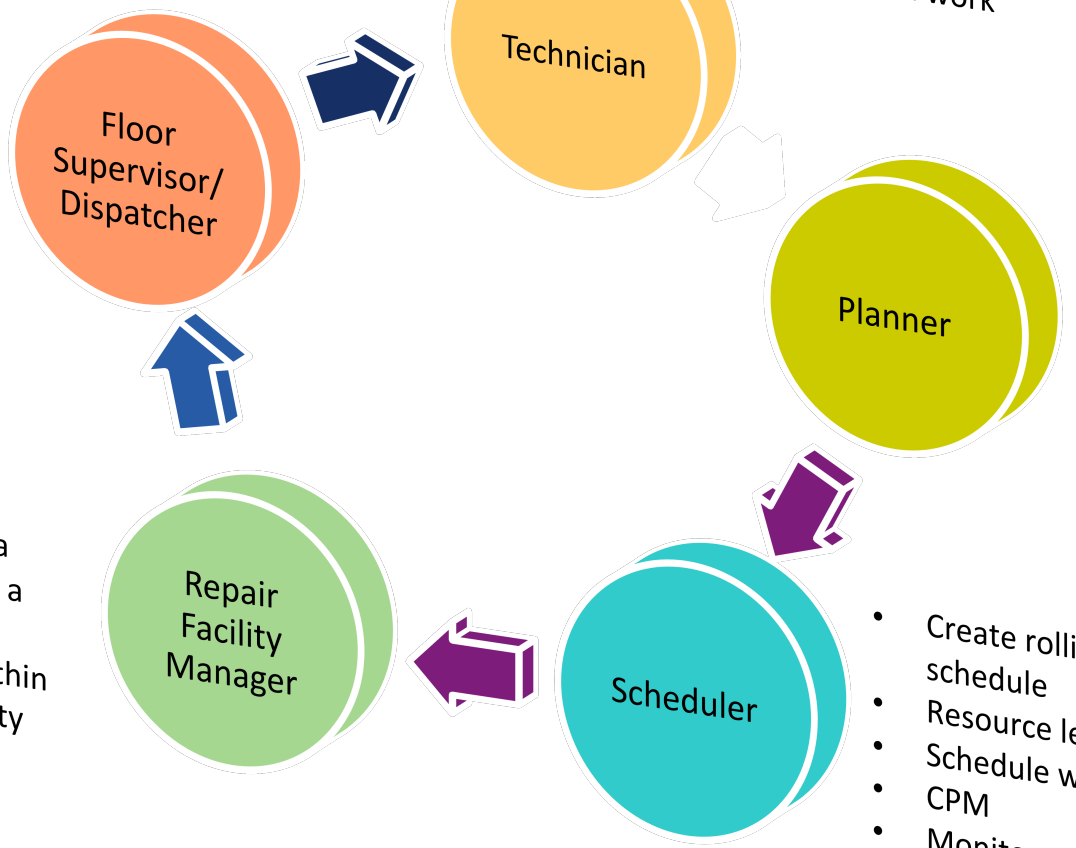
Roles We Accommodate in Managing Work



- Assign scheduled work
- Monitor and assign emergencies
- Build daily crews
- View and adjust crew work in the field

- Receives, completes and reports on work

- Model work steps in Job Plans and Routes
- Define PM frequencies
- Forecast long term work and cost
- Use historical data to adjust the plan

- Create rolling work schedule
- Resource level
- Schedule windows
- CPM
- Monitor schedule compliance

- Assign WOs of a mobile asset to a facility
- Assign work within the repair facility

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