# Think Beyond





WOOLPERT STRATEGIC CONSULTING

### We Cover the State



6 locations across Texas

Founded in Dayton in 1911

### We Cover the World



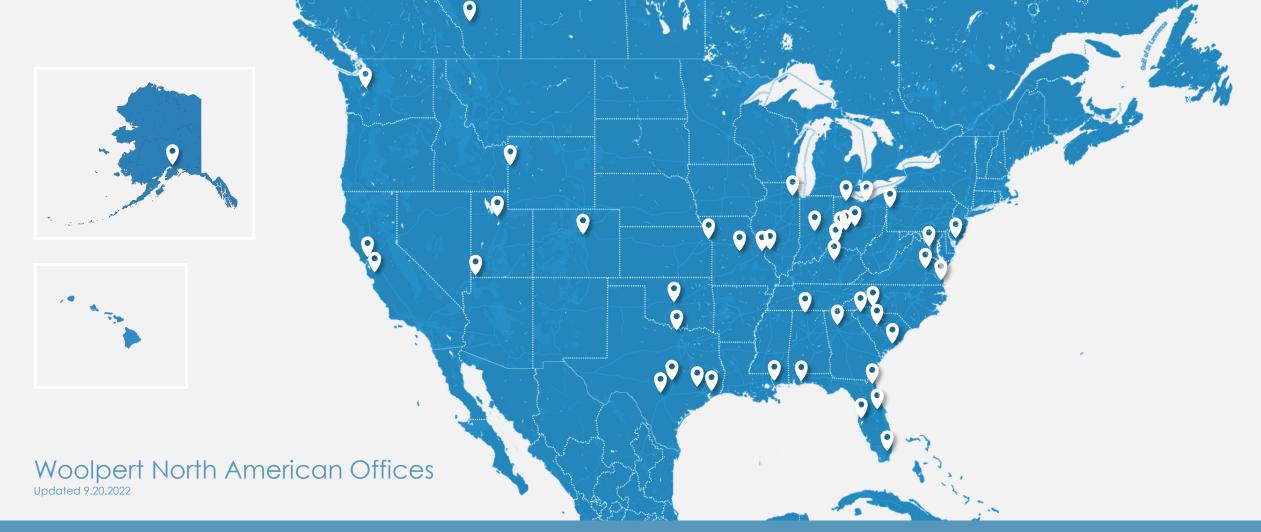
60+ offices worldwide

Including Australia, Canada, Malaysia, New Zealand, Singapore, South Africa, UAE

### We Have the Experts



### 1,900+ global employees



Athens, AL Atlanta, GA Austin, TX Bay St. Louis, MS Charlotte, NC Chicago, IL Cincinnati, OHDenver, COCleveland, OHEgg Harbor TowColumbia, SCFairfax, VAColumbus, OHFairview HeightCypress, TXFort Worth, TXDayton, OHGreenville, SC

Denver, COHouston, TXEgg Harbor Township, NJIndianapolis, INFairfax, VAJackson Hole, WYFairview Heights, ILJacksonville, FLFort Worth, TXJefferson City, MOGreenville, SCKansas City, MO

La Porte, TX Lexington, KY Miami, FL N. Charleston, SC Oklahoma City, OK Orlando, FL Pensacola, FL Pittsburgh, PA Portland, OR Port Orchard, WA Provo, UT Richmond, VA Salt Lake City, UT San Antonio, TX San Jose, CA San Rafael, CA Springfield, OH St. George, UT

St. Louis, MO St. Petersburg, FL Toledo, OH Virginia Beach, VA Wasilla, AK Calgary, Canada

Map data provided for informational and communication purposes only

# Strategic Consulting Services



\*Folio performance

Technology & Interest

**STRATEGIC** 

CONSULTING

Advisory Technology

Services

Ion Support





- **Trimble Partner** ۲
- **Cityworks Platinum Partner**
- **Esri Gold Partner** ۲
- Cityworks Partner 25+ years 2nd Partner ۲
- 400+ Cityworks Implementations ۲
- **30+ Cityworks PLL Implementations** ۲
- **40+ Treatment Plant Implementations** ۲
- Trimble e-Builder Silver Partner  $\bullet$

The Cityworks–Woolpert business partner relationship spans 25 years, during which time Woolpert has established themselves as our most accomplished business partner. Woolpert's Cityworks implementation professionals consistently perform at a high level in the implementation and support of our products.

> Mr. Brian L. Haslam Founder and former President – Citvworks

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Technology & Interest

**STRATEGIC** 

CONSULTING

Advisory Technology

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Ion Support





- **Software Implementation** ۲
- Solutions Architecture
- **Business Process/Workflow Development** ۲
- IAM/ISO 55000 Based Asset Management Consulting ۲
- **Integrations Development** ۲
- **GIS Development and Consulting** ۲
- **Reporting and Data Analytics Consulting**
- Configuration and Upgrade Support ۲

We had momentum from the beginning Woolpert's confidence and visionary aspect of what they were trying to do really stood out.

Ana

Jerry Philpot Manager, IT and Technical Support Systems -City of Augusta, Georgia



# Trimble connects between the digital and physical worlds



#### An Asset Lifecycle Management (ALM) Solution

Software for Enterprise Asset Management (EAM) and Digital Project Delivery (DPD) and



**Common Data Environment** — Our platform connects these technologies & workflows together via a Common Data Environment (CDE)

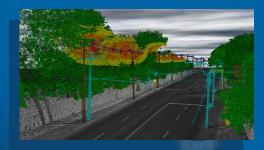




Positioning, Sensing & Control, Field Data



Sensing, inspecting, measuring & dynamically maintaining assets



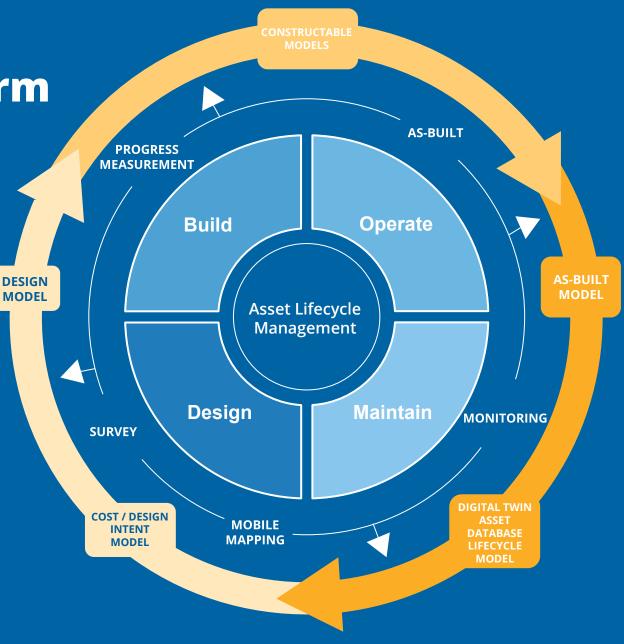
#### **Stewarding Investments**

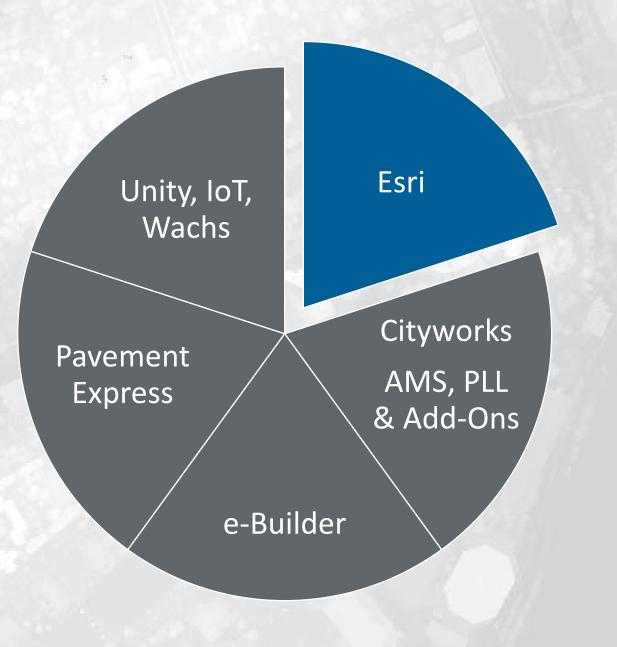
Risk Management, State Investment Program (STIP), Capital Improvement Program (CIP), Operations & Maintenance (O&M), Safety, Sustainability, and Job Creation

# **Trimble's Asset Platform**

- Connects <u>systems of record</u> from design through operations by being <u>open and interoperable</u>
- From the start, every asset gets a digital id
- **Digital delivery** process is used throughout each phase
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- Physical world reality is captured and informs a <u>common data</u> <u>environment</u>









### CITYWORKS | FIELD MAPS





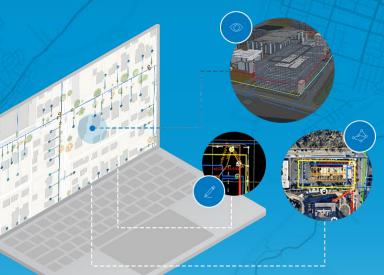
- Best in breed mapping system
- World class data collection solution
- Revolutionary location tracking technology
  - World class tasking and work management
- $\Diamond$
- State of the art navigation capabilities

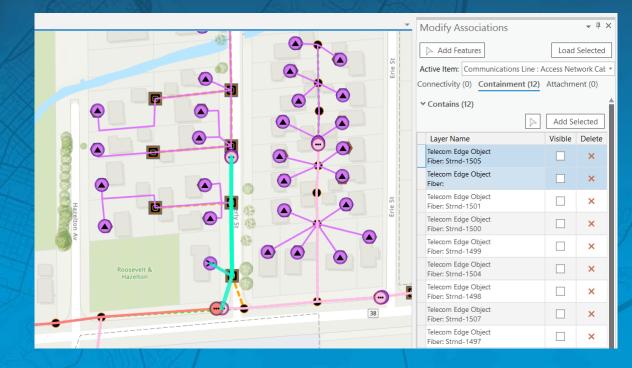
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Sign In with ArcGIS Online
Sign In with ArcGIS Enterprise
Skip

### CITYWORKS | UTILITY NETWORK

• Utility Network Support in Cityworks

 Enhancements to support querying and asset searches across the UN

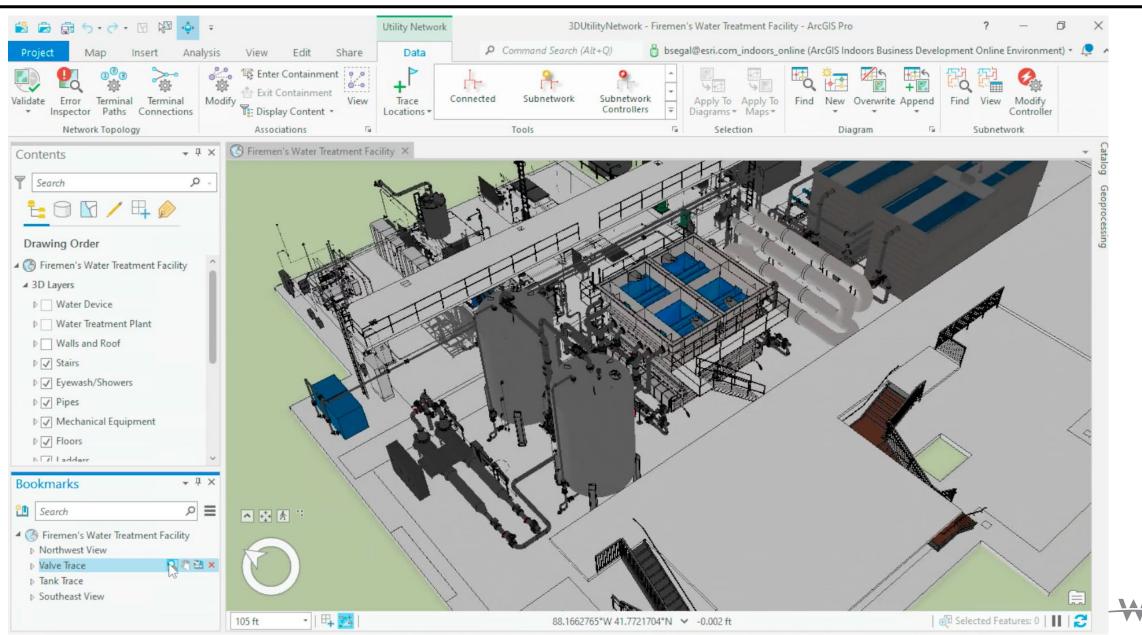




- Cityworks *live* with Utility Network at San Juan Water District
  - Water distribution
  - Water treatment

### **3D** Plants





### 3D Plants

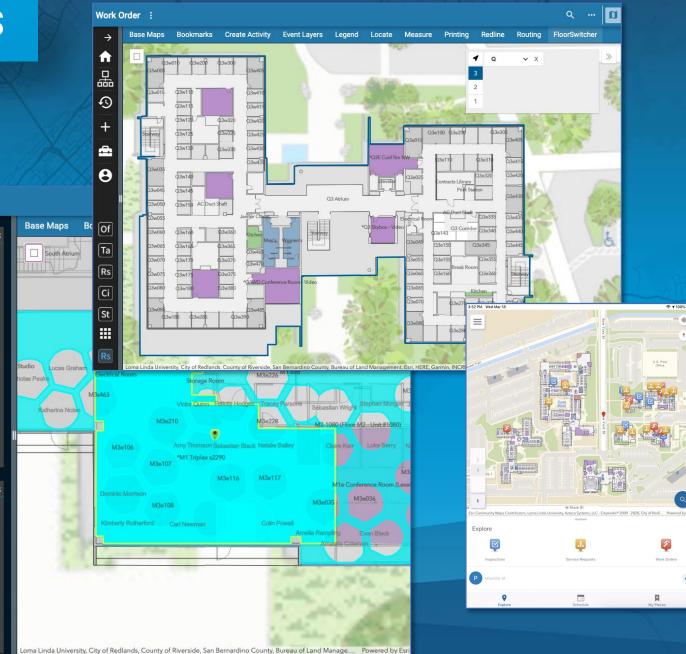
WOOLPERT STRATEGIC CONSULTING

Home ▽ Firemen's Water Treatment Facility ③

Filter to Waste Valve 2 Q X ínì Asset ID: 185102 Asset Type: MOV 50 모 Asset Description: Filter to Waste Valve -0-2  $\Leftrightarrow$ Installation Date: 06/09/2020 €→ Luuu Treatment Process: 05 - Water 巴 C? Biofiltration ₽₀ € ZOOM TO 5 De Trans :3 ASA NGA USGS FEMA I Esri Community Maps Contributors. City of Naperville. County of DuPage. © O SafeGraph GeoTechnologies Inc METI/NASA USGS EPA NPS U ... Powered by E

New Scene 🗢 📃 Benjamin 🗢

### CITYWORKS | ARCGIS INDOORS



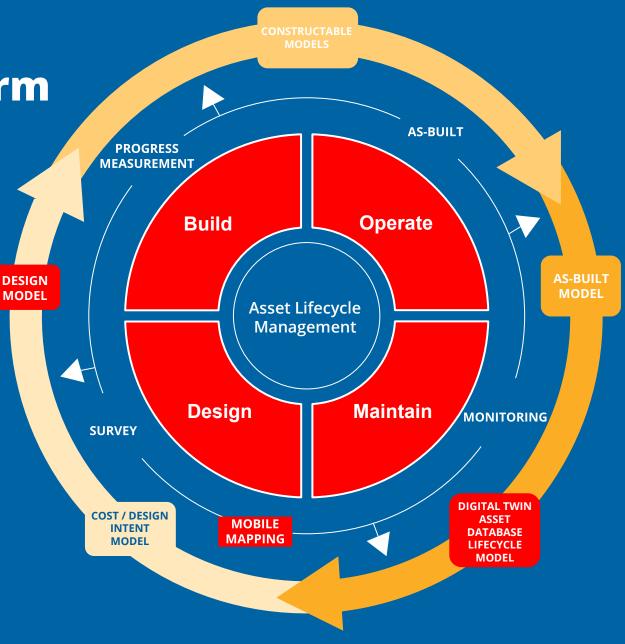
#### Work Order 🚦

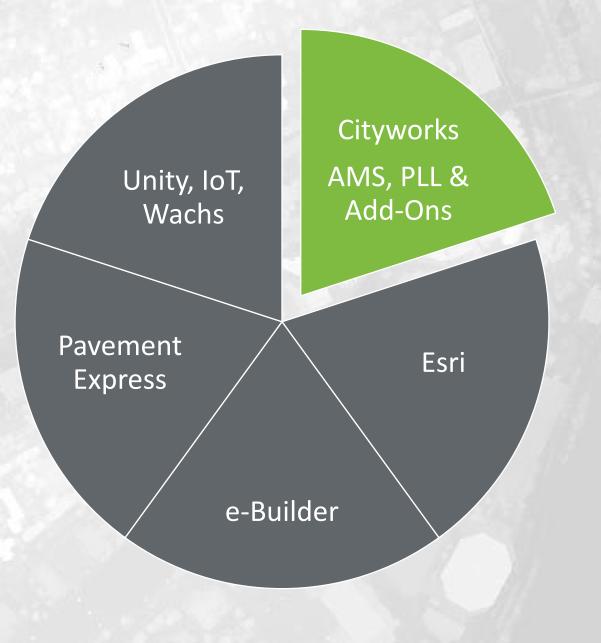
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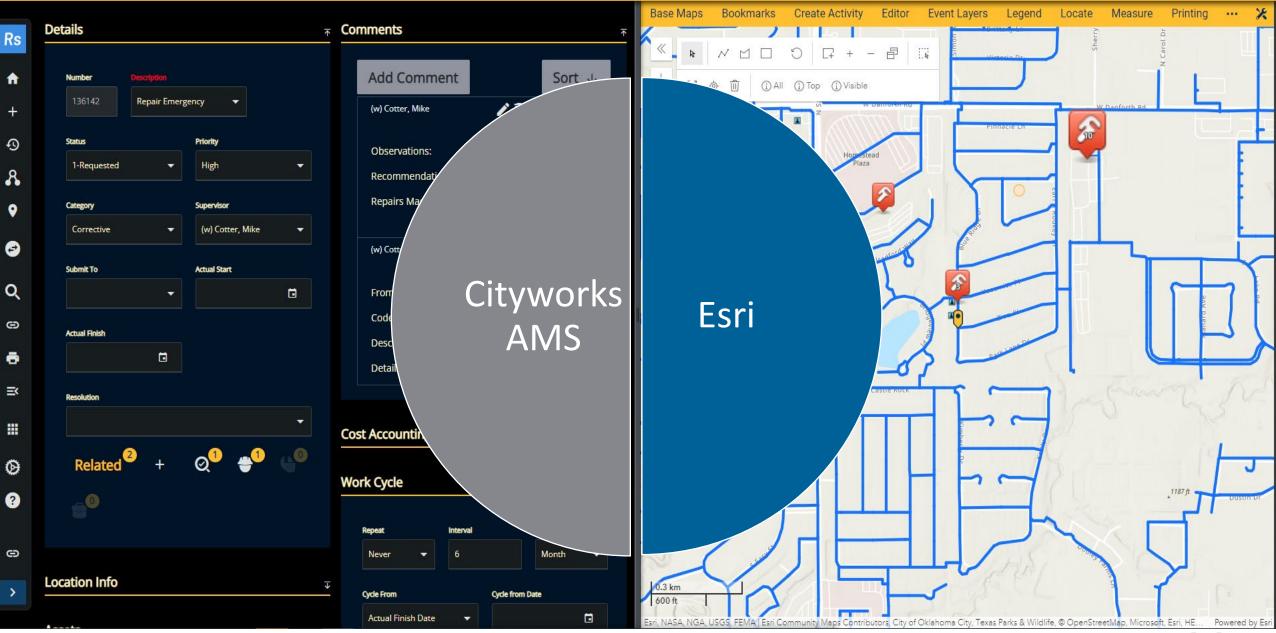
Cityworks platform enables customers to deliver on the promise of creating a smarter and more resilient, sustainable, and safe community.





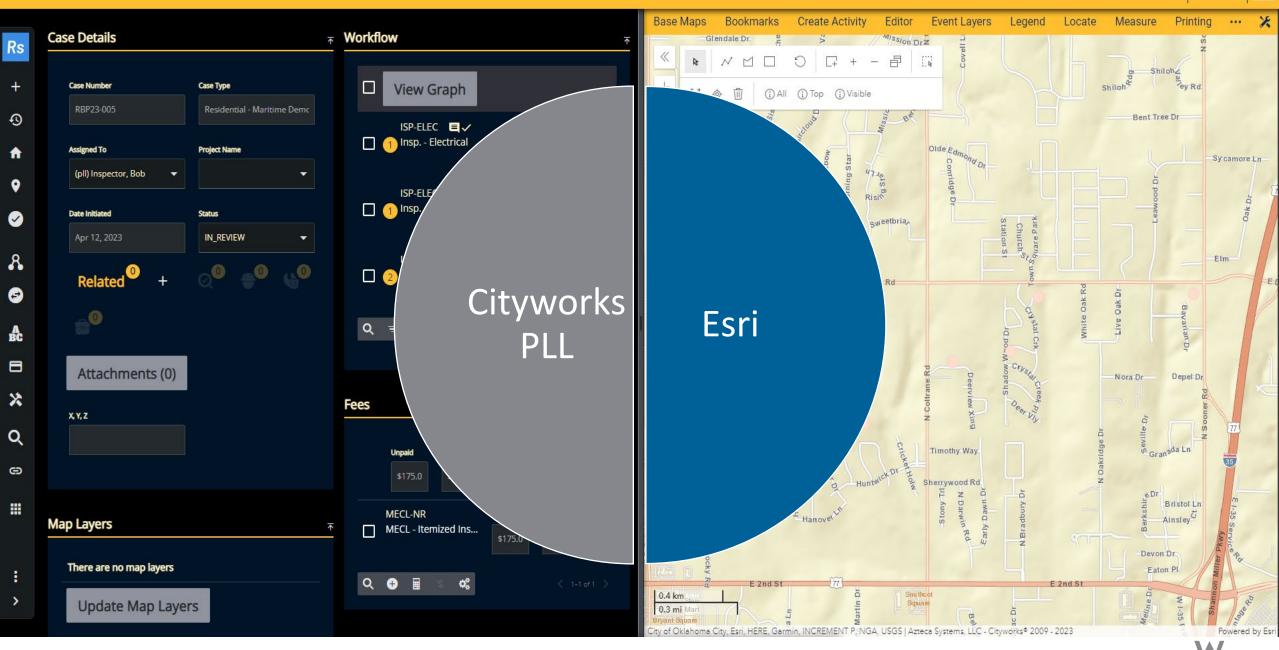
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#### Case Summary :

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**Cityworks AMS** 



**Cityworks PLL** 



Respond



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Analytics

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### Public Access (PLL)



### **Operational Insights**

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#### Performance Budgeting

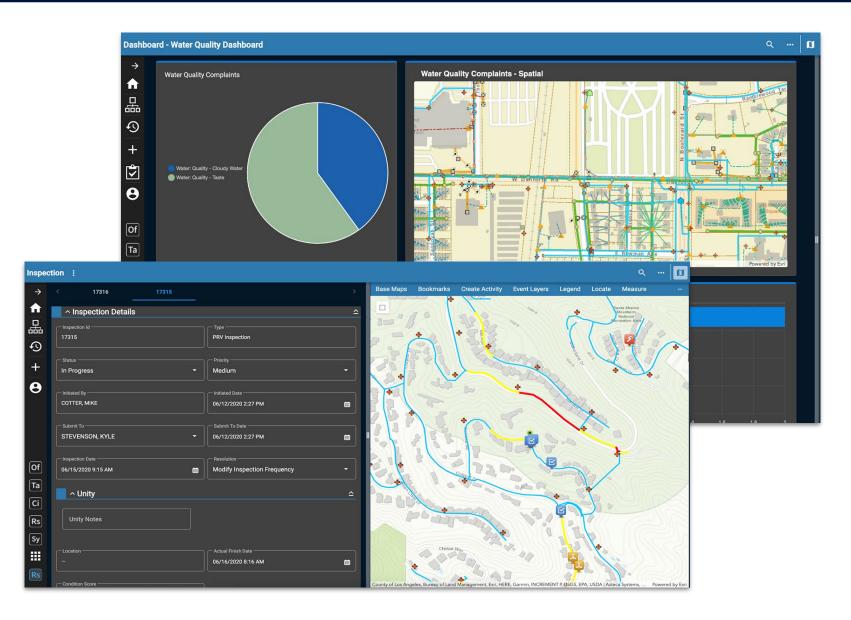


Pavement Management

### **Cityworks Respond**

provides tools to manage customer inquiries, work orders and inspections with a dynamic map providing context of infrastructure and related activities.

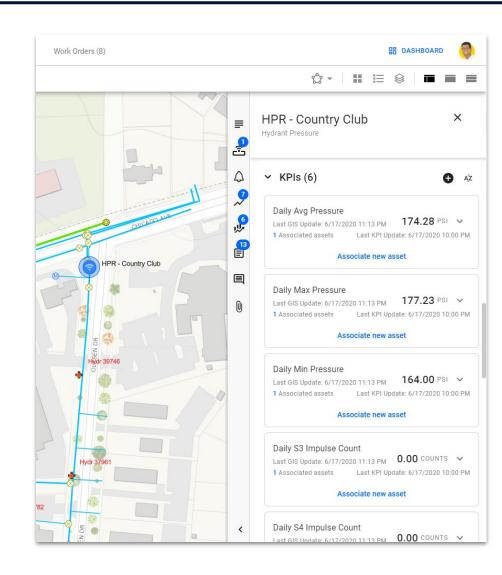
This enables detailed tracking of applied resources (equipment, labor and material), project association, attachments and condition assessment.

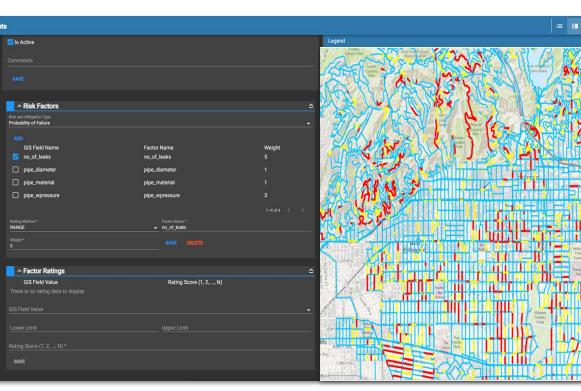




### **Risk Strategy**







 $\mathbf{\overline{2}}$ 

**Cityworks Operational Insights** provides built-in analytics and tools to calculate probability of failure, consequence of failure, and business risk exposure.

Factors such as asset age, material, historic inspection and repair activities, and key performance indicators (KPIs) captured via the Telog sensors and stored in the GIS can prioritize asset repair activities, perform more expansive monitoring, and enrich analysis with asset replacement cost data to support capital improvement planning.

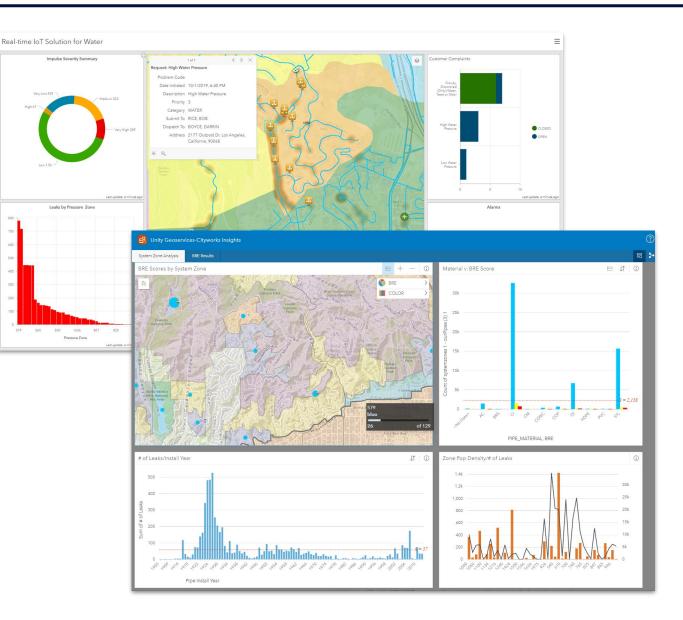




### **Operations Dashboard for ArcGIS**

enables a dynamic and real-time view of data from all three platforms - Unity, Cityworks and Esri. This gives users immediate insight to key metrics.

**ArcGIS Insights** delivers spatial analytics and visualization of historic trends. Users can filter between data from Unity, Cityworks or Esri to identify root causes and the association between variables such as pipe age, material, risk prioritization and historic leak concentrations.





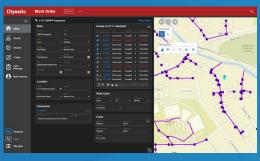
# **Open Platforms + APIs + Webhooks**



### **Cityworks**

#mycityworks

### Take your Esri investment to the next level with the Trimble O&PS suite of products



#### Cityworks Respond with ArcGIS API for JavaScript 4.x



# Cityworks

2:42 PM

September 17, 2018 V 2.42 PM

spection Date

Day or Night

nspector Name btamashasky

area of Inspection

Pavement Are

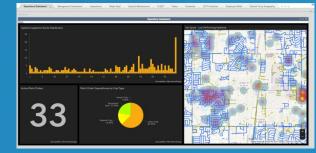
Cityworks with

ArcGiS Survey123

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Pavement Area:





Cityworks with ArcGIS Dashboards





Cityworks with

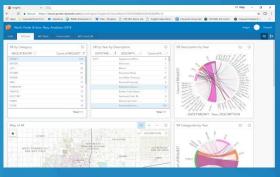
Reporter

Citizen Problem

Welcome bac Billy Lang



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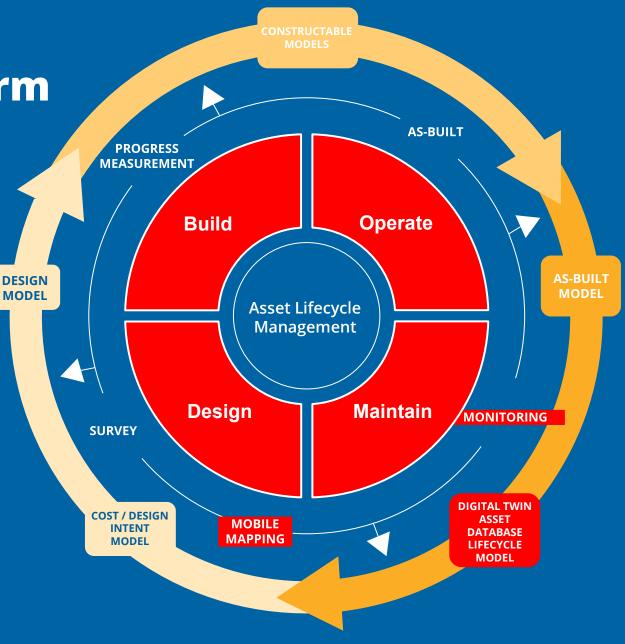
#### Cityworks Analytics with ArcGIS Insights

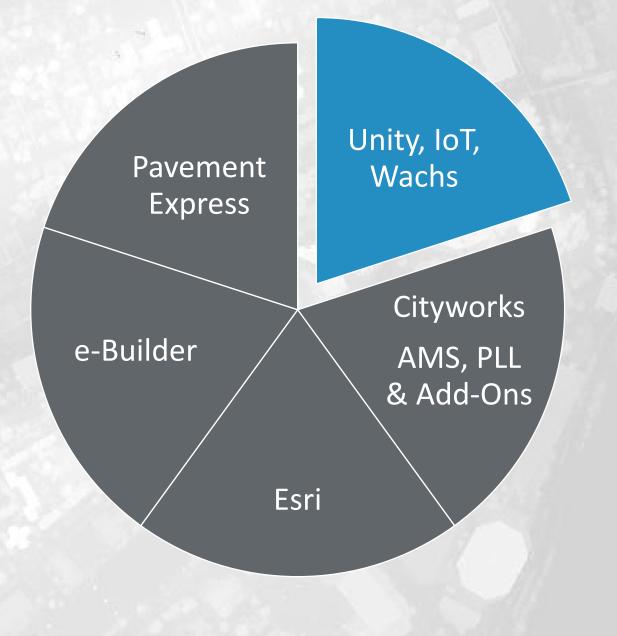


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- 14/



- Aging water infrastructure is a global challenge.
- Many utilities don't have visibility into asset performance.
- Utilities don't have access to real time performance data to identify root cause of problems causing chronic repairs, or to identify future infrastructure damage and service disruptions.
- There isn't access to the tools to help them identify high risk assets for prioritizing asset repairs and capital planning projects.
- Utilities follow reactive asset management practices, perform reactive repairs causing higher repair costs, disruption of service and poor customer service.
- Utilities that have some asset performance monitoring tools, are using them siloed from GIS and EAM, and not realizing the full value of the tools or a fully integrated solution.







### Real-time IoT and Intelligent Asset Management Platform



Trimble Telog Remote Monitoring A Broad Range of Rugged, Battery Powered, Wireless Recorders and Sensors



Trimble Unity RM Real-time Asset Performance and Alarming. IoT KPIs for Insights and Analysis



**Cityworks**<sup>®</sup> AMS Asset Management and Event Response

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Operational **Cityworks**<sup>®</sup> Insights **Risk Strategy and Repair Prioritization** 

Integrated view of asset data from GIS, real-time asset performance from IoT sensors, and condition and work activities.



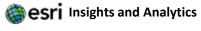
**KPIs** 

Make informed decisions, prioritize maintenance and capital improvement projects, and streamline event response.

Asset Condition

Performance

KPIs



Location-aware Data Visualizations and Analytics





### - Applications across the cycle

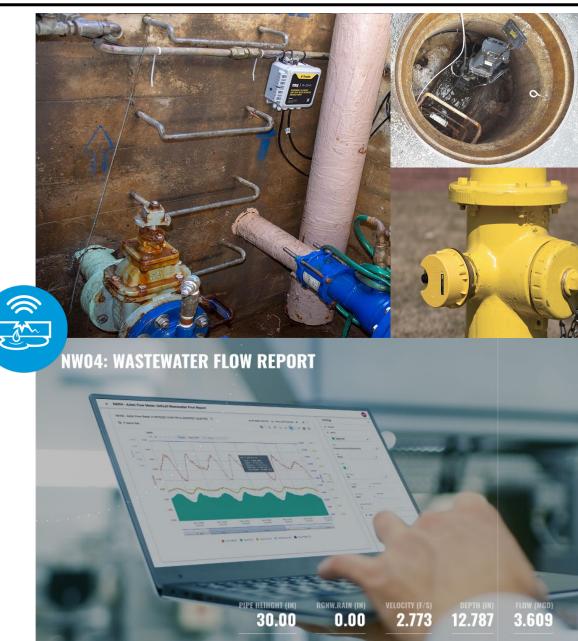
- NRW, Pressure Mgt, Water Quality
- Sewer Overflows, Level, Liftstations

### Full situational awareness

- Accurate, timely, reliable data
- Near real time alarms for anomalies

### - Easy & cost effective to install

- Rugged wireless, battery operated devices
- Low cost of ownership
  - Up to 5 years battery life

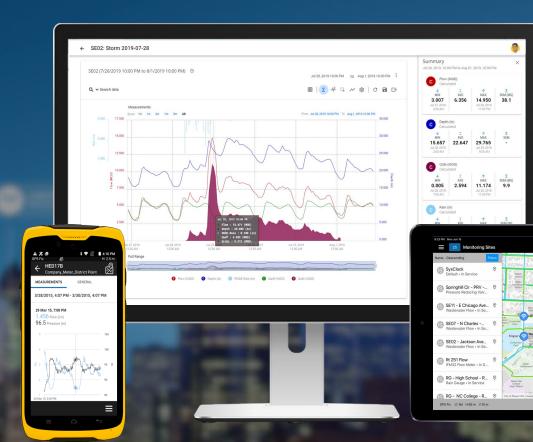






### Trimble Unity™ Remote Monitoring Real-time Asset Performance and Alarming

- GIS Centric
- Cloud and Mobile Software
- Integrates with Telog IoT Products
- Offers Real-time Situational Awareness
- Proactive Event Response
- **Regulatory Compliance**

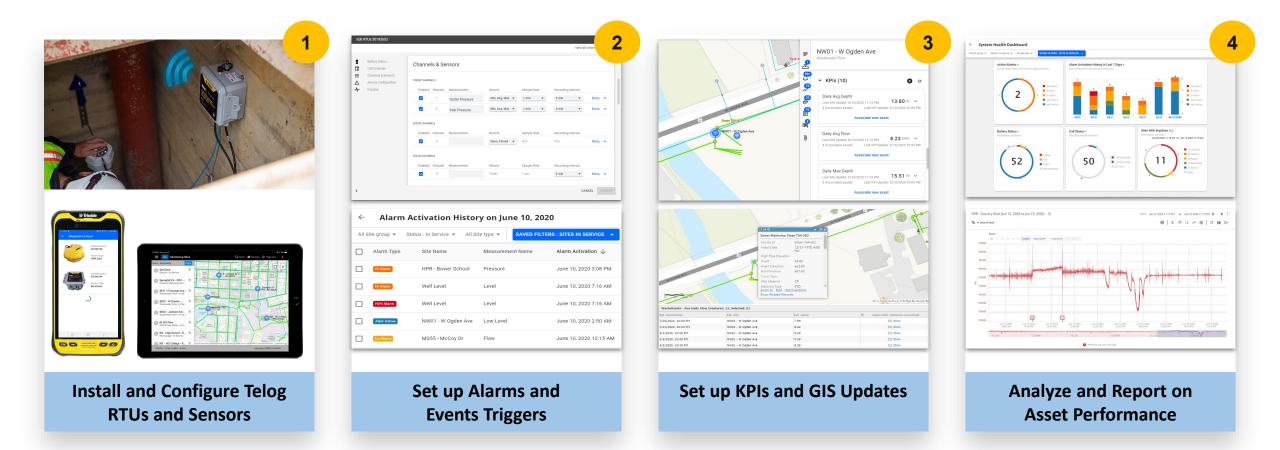


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Trimble Unity

### Simple Steps to Gain Asset Performance Visibility

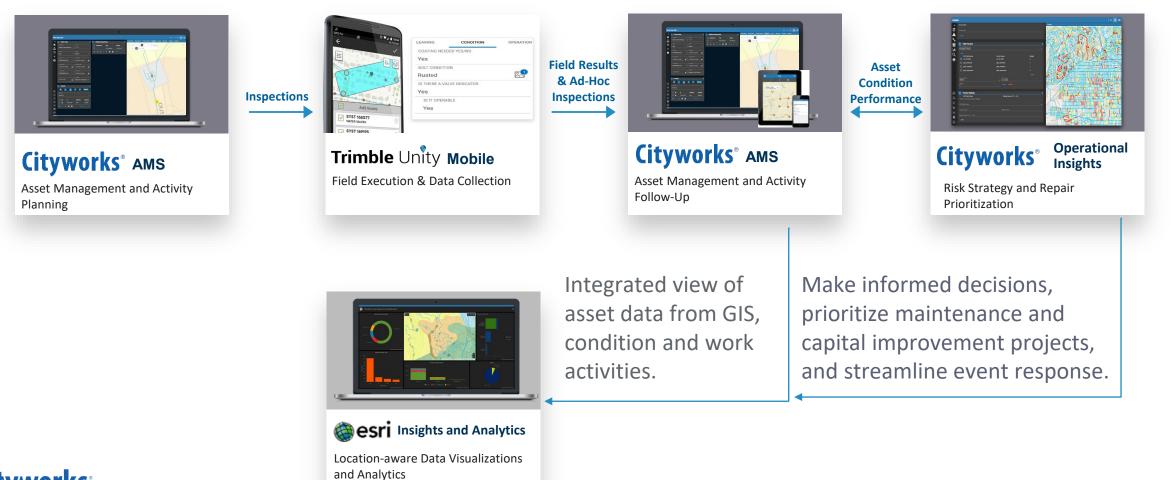




Cityworks ATRIMBLE COMPANY

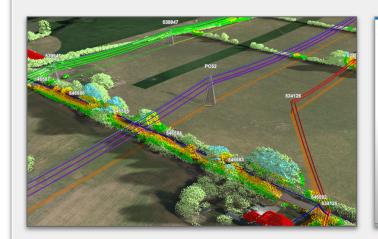


# Offering premium mobile capabilities to streamline water field operations, data collection, and analytics.

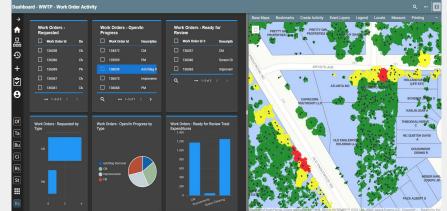




### **Trimble Vegetation Manager**







#### **LiDAR Analyzer**

Integrate LiDAR, 3D line models & GIS data for a highly accurate vegetation hazard inventory.

Citywo

#### **Program Optimizer**

Visualise network & vegetation information to design optimized work programs - targeting costs, risks or both.

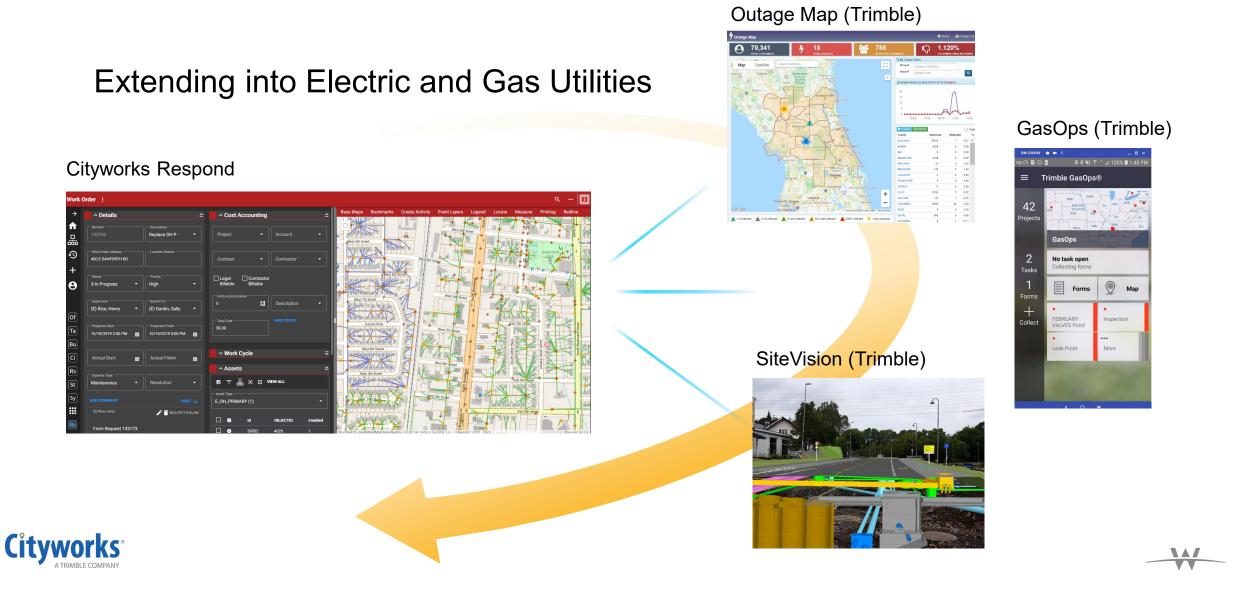
#### **Operational Manager**

Execute projects for staff & contractors in office and field - **get visibility and drive performance.** 



Built to operate seamlessly with ArcGIS





# Cityworks for Emergency Management

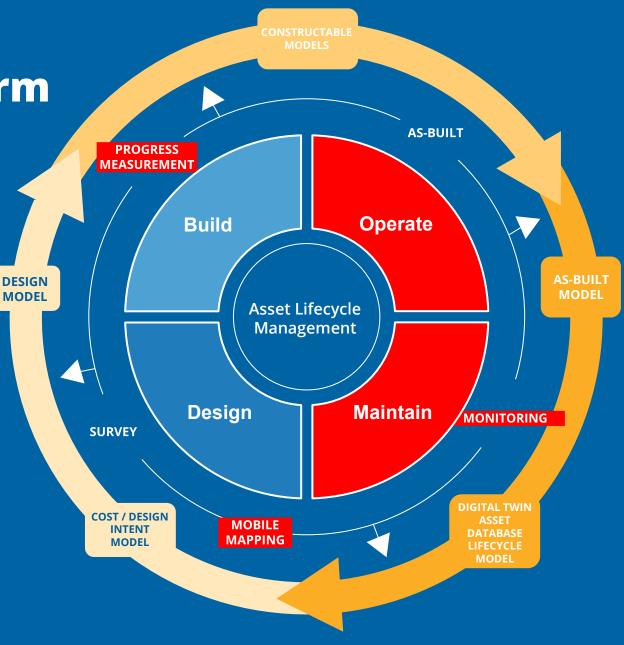


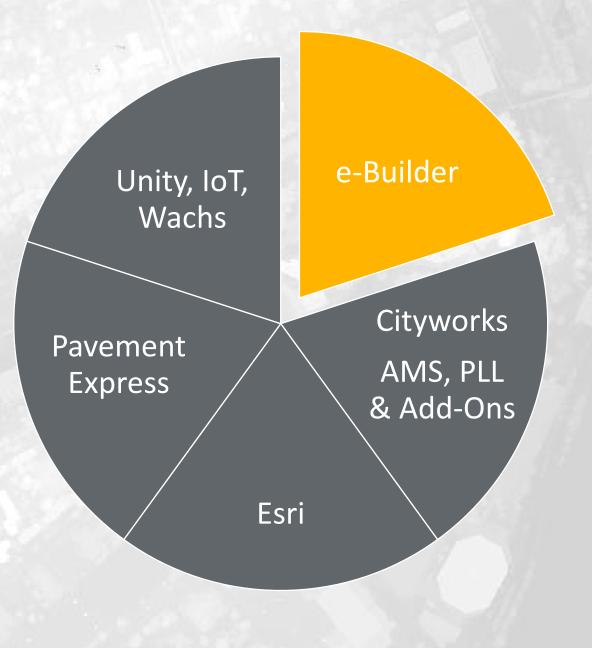


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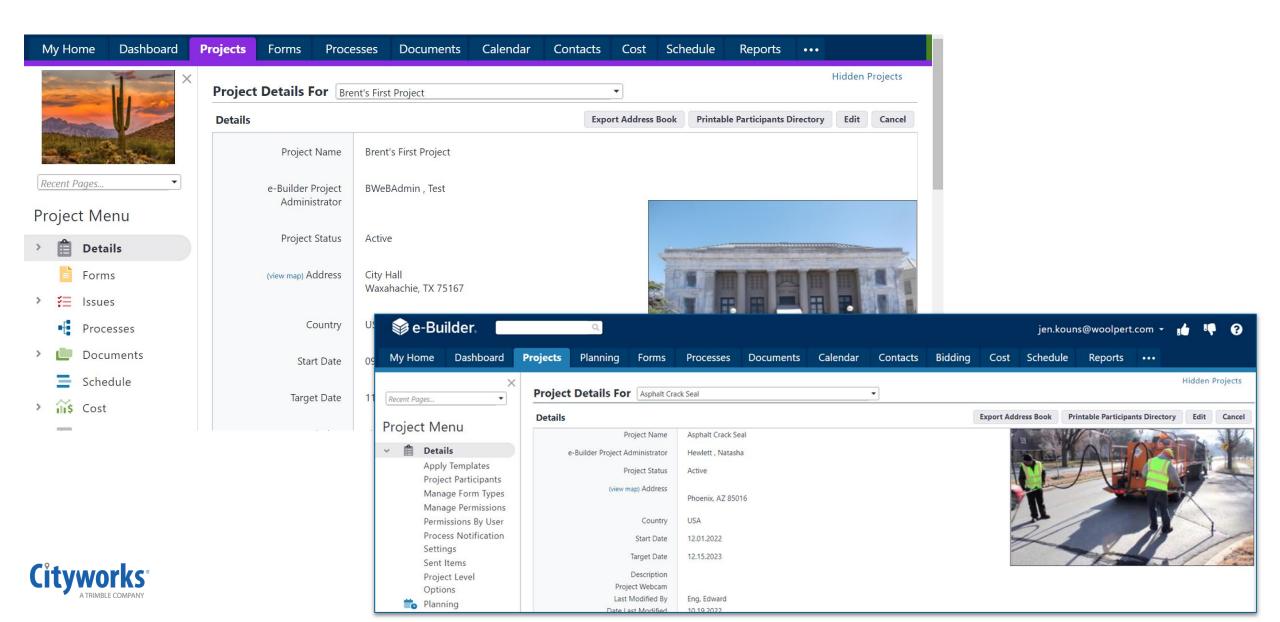




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### e-Builder





### e-Builder

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Project Menu	01- 110	Pre-Planning	0.00	0.00	0.00	(125,000.00)	(125,000.00)	(75,000.00)
Forms	01- 120	Planning	0.00	0.00	0.00	(157,000.00)	(142,000.00)	0.00
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# e-Builder + Cityworks

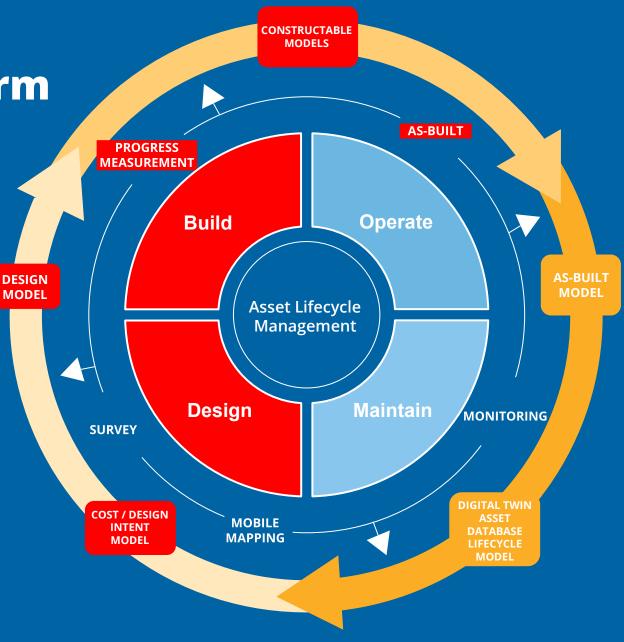
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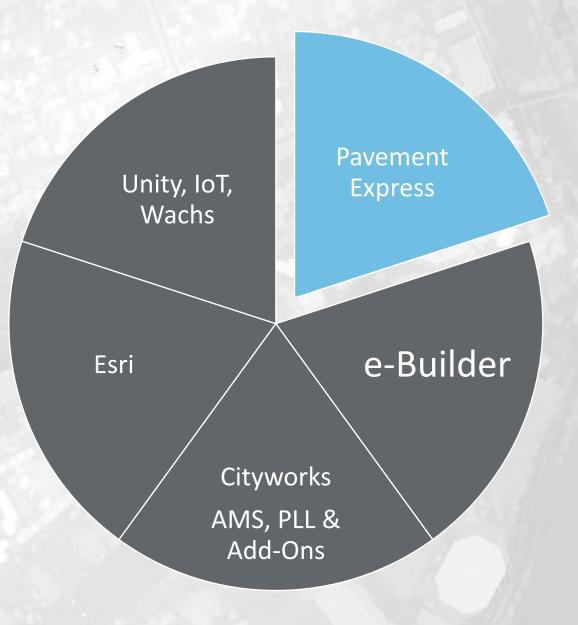


# **Trimble's Asset Platform**

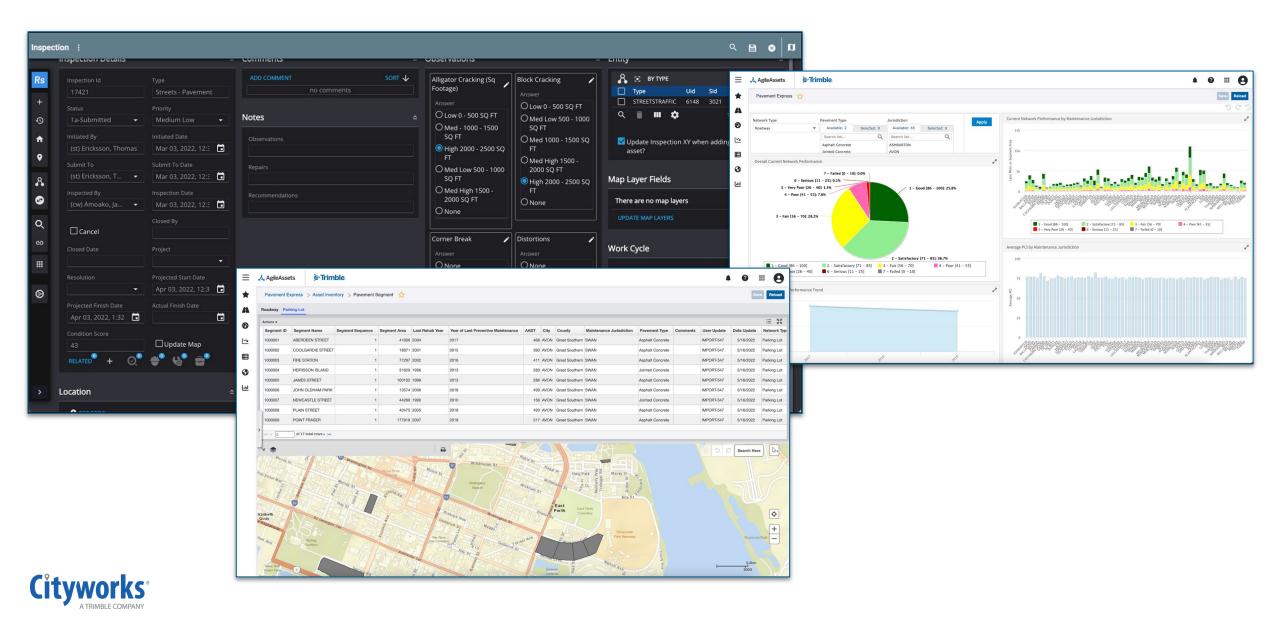
- Connects <u>systems of record</u> from design through operations by being <u>open and interoperable</u>
- From the start, every asset gets a digital id
- **Digital delivery** process is used throughout each phase
- This builds & maintains digital twin
- Physical world reality is captured and informs a <u>common data</u> <u>environment</u>







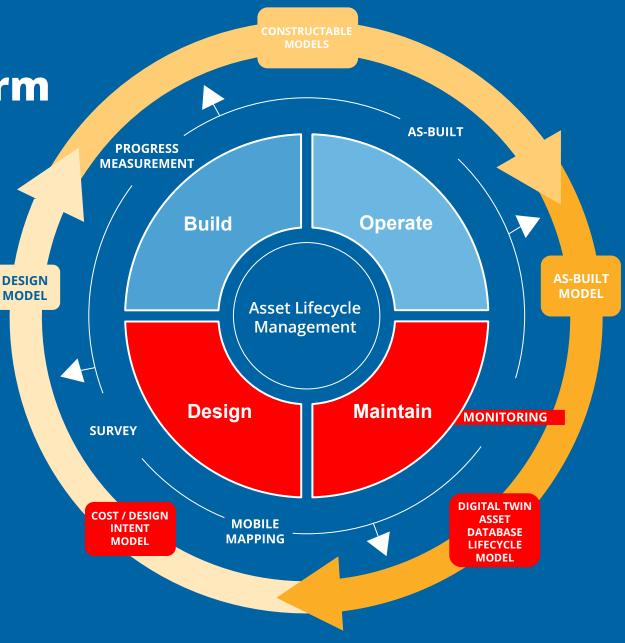
### AgileAssets + Cityworks



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# WHY WOOLPERT?

Internationally recognized asset management thought leaders



An **award-winning**, full-service team with the right qualifications



A team trained in ISO certification and best practices



Proven infrastructure and organizational management domain expertise

Successful track record of implementing and integrating technologies

# Experience

### Woolpert's Cityworks Expertise



**Over 400** successful enterprise-class Cityworks implementations around the world



Woolpert is the only implementation partner to have a **Specialty Designation** 



Woolpert senior staff **Participate Directly** in the ISO 55000 Committee

