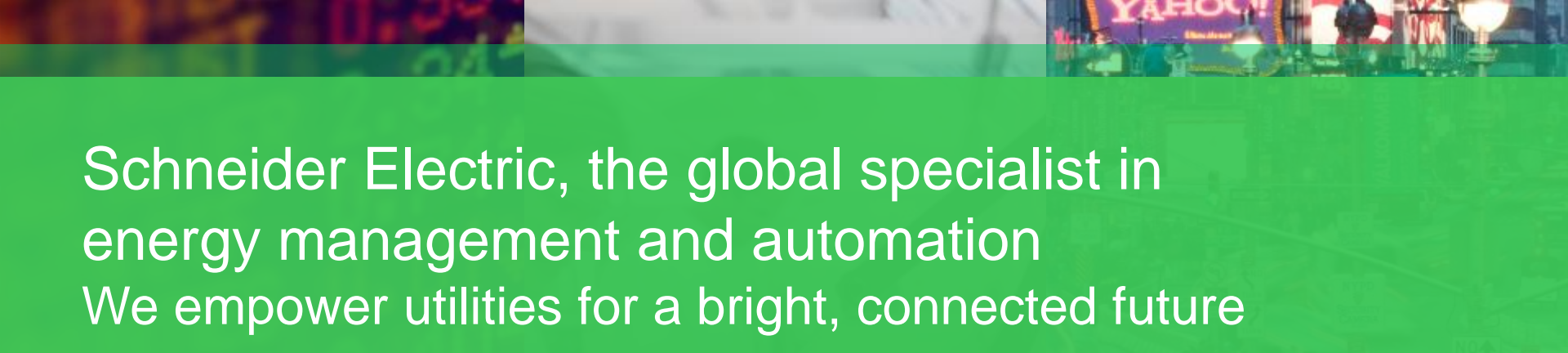




IT/OT Convergence In The New Network Model

Enabling operational excellence for the world's top utilities

Presented By: Thiago Carvalho
International Regional Manager



Schneider Electric, the global specialist in
energy management and automation
We empower utilities for a bright, connected future



~€27 bn

FY 2016 revenues



~20%

GIS Revenues devoted to R&D



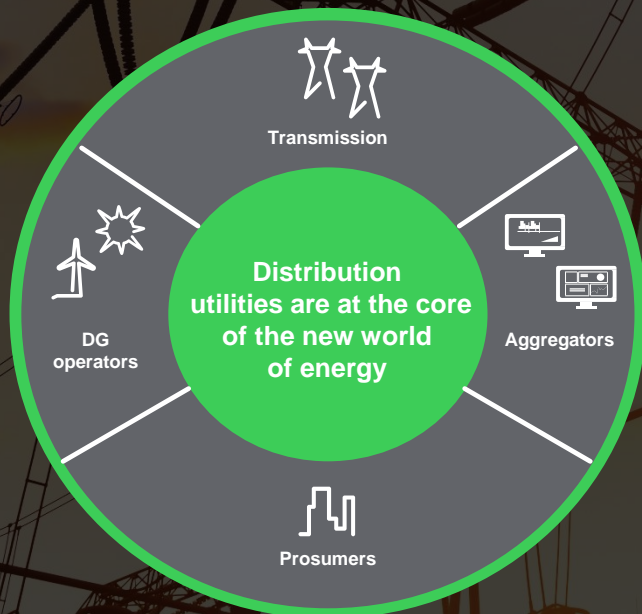
~160 K+

people in 100+ countries

Power industry is facing an unprecedented change

By 2025, the traditional centralized model will be complemented by a world of distributed energy

Distribution utilities are most impacted
by business uncertainty



New revenue model:

- Impact of self-consumption
- Redefined investment strategies, value- and risk-based

Cost increase:

- Network reinforcement costs driven by distributed renewables and soon EVs
- Complexity in network operations, need for more observability

Digitization:

- Data proliferation
- Security threats

EcoStruxure™ Architecture





Utilities Geospatial Business

History of our Business

1946

1946:
Miner & Miner Founded as a Professional Consulting Engineering Firm



1980s

1980:
Started in the AM/FM Industry

2000s

2010s



**ArcFM™
SOLUTION**

Confidential Property of Schneider Electric

Life Is On



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Confidential Property of Schneider Electric

2000s

2010s

Pioneered
Development of
Utility GIS
30 years ago
with Esri





Connected and engaged at the highest levels

Esri Partner Advisory Council member – business and strategy

Esri CTO Advisory Council member – technology and R&D



esri

Partner Network
Platinum

Life Is On

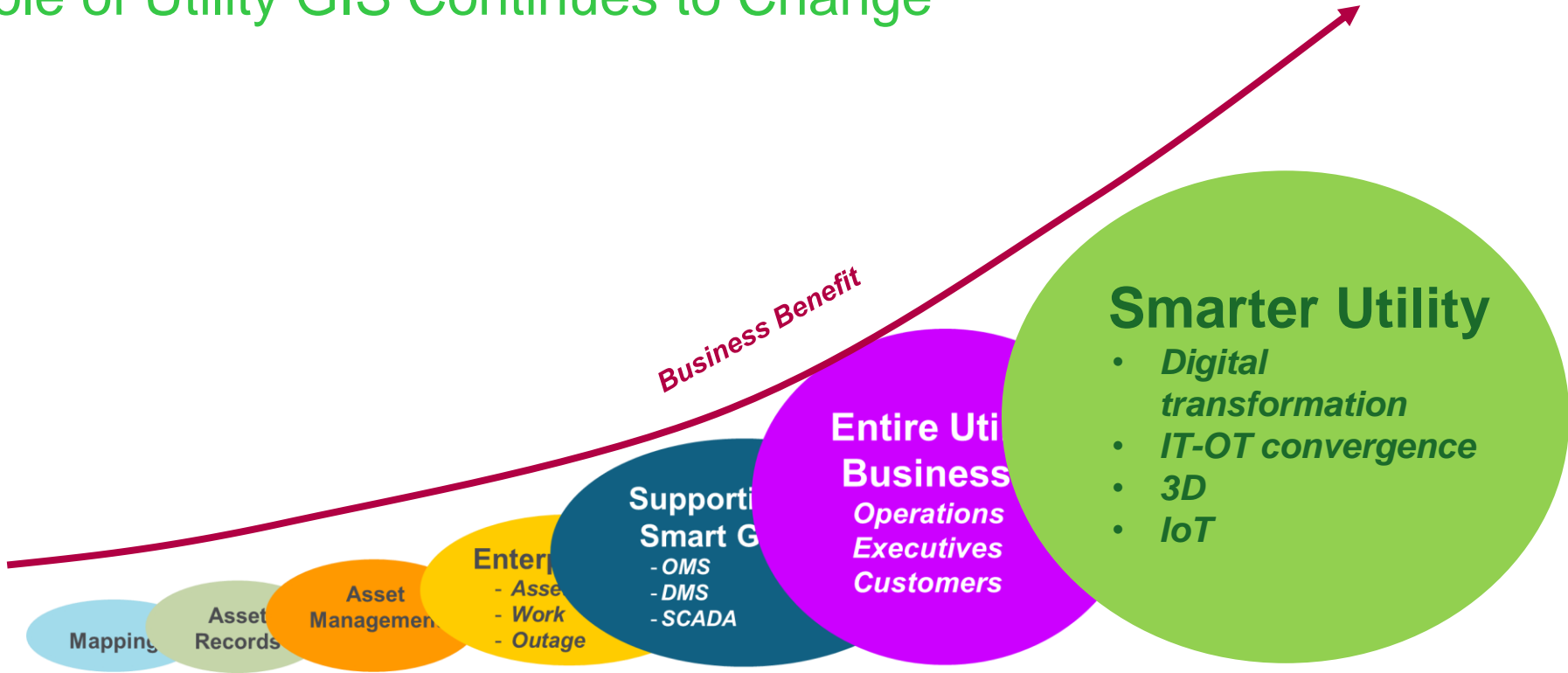


ArcFM is used at
>500 utilities worldwide
36 with > 1 million meters

3 of the 10
Largest
Utilities in
the World



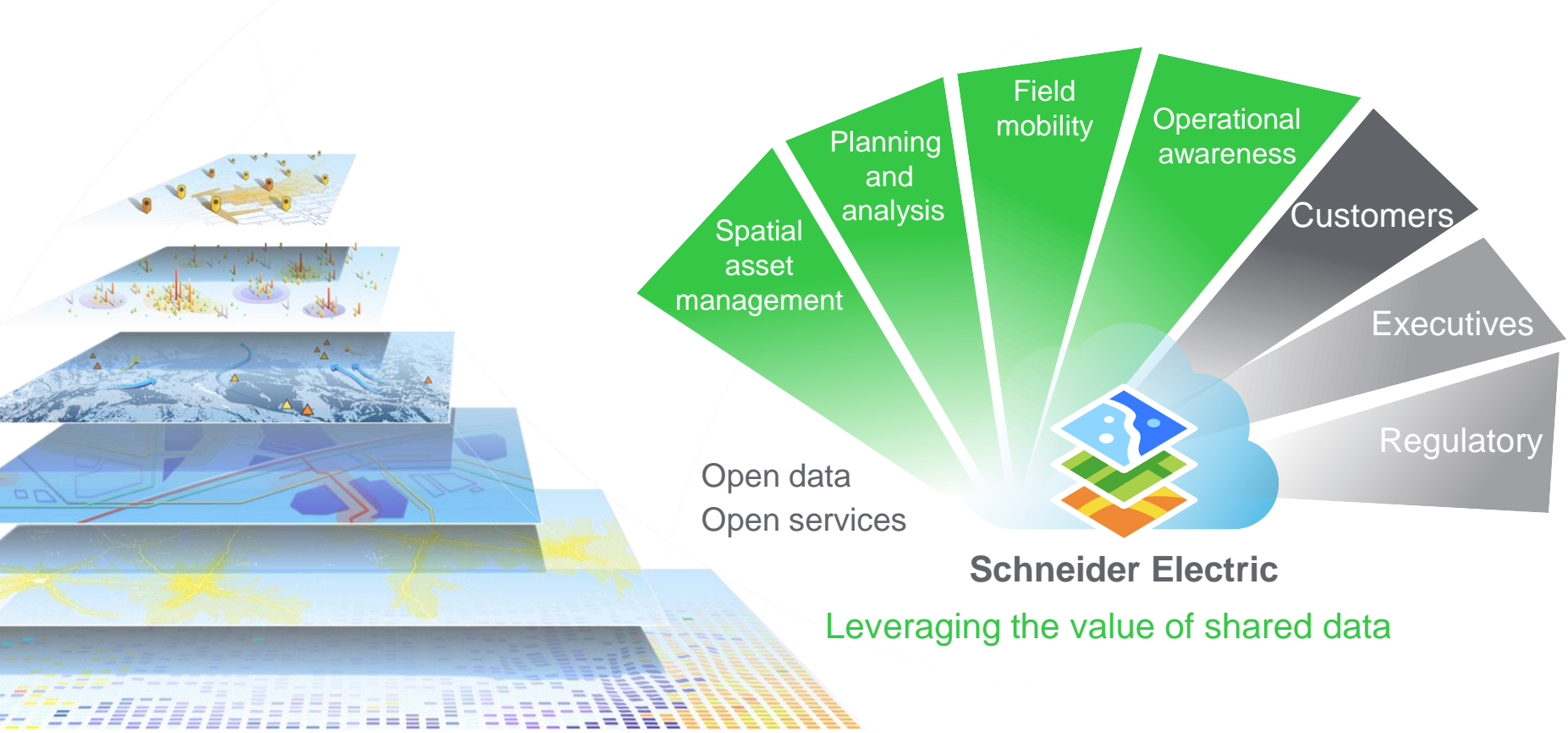
Role of Utility GIS Continues to Change





ArcFM Solution Offering

Schneider Electric Solutions for Utilities



ArcFM Solution 10.2.1 Series

Commitment to the Utility and Telecom releases

- Supported through 2021

Yearly updates of **ArcFM 10.2.1x**:

- Focused enhancements
- Stability and performance improvements
- Third party certifications
- UTUP

6th Generation **10.2.1**

10.2.1x Product Line Update

- 10.2.1 – February, 2014
- 10.2.1a – August, 2014
- 10.2.1b – June, 2015
- 10.2.1c – May, 2016
- 10.2.1d – May, 2017
- 10.2.1e – Summer 2018



>What happens after 10.2.1?

>Our Goals:

>Take advantage of ArcGIS Pro, Utility Network, Identity and Web-GIS

>Provide an upgrade path from 10.2.1x

>Collectively improve the design, construction, as-built process

>More flexibility with mobile technologies

Keeping your data accurate and timely



Focused Apps.
Unique to each **Role**.
Built for tasks in **Design, Construction, As-built**

ArcFM XI for ArcGIS Pro - Schneideville - Schneideville

PROJECT MAP INSERT ANALYSIS VIEW EDIT DATA ARCFM

Sign in Redlines Redlining

Downstream Upstream Downstream Protective Upstream Protective Electric Tracing

Pressure System Isolation Cathodic Protection Gas Tracing

Feeder Management

Component Info View Associations Add New Service QA/QC ArcFM Tasks Editing

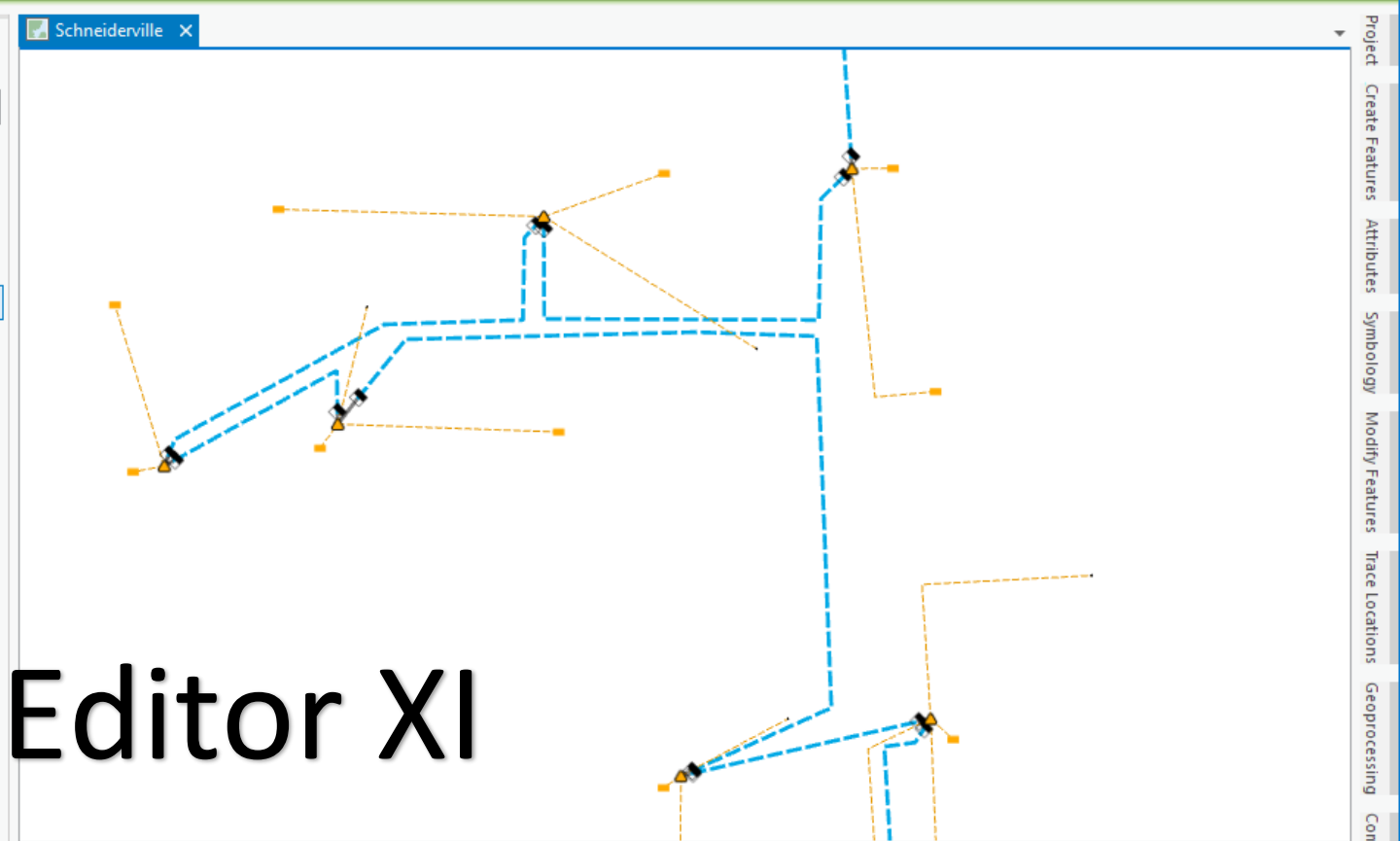
Manage Templates

Contents

Search

Drawing Order

- ▶ Schneideville
 - ▶ Utility Network
 - ▶ Device
 - ▶ Assembly
 - ▶ Junction
 - ▶ Line
 - ▶ Subnet Line
 - ▶ Structure Junction
 - ▶ Structure Line
 - ▶ Structure Boundary
- ▶ Standalone Tables
 - ▶ Subnetworks



ArcFM Editor XI

ESRVP41F4A

Service Point Information

- Phases: B
- Load kVA: 4
- Manufacturer:
- Model:

Energizing Information

- Feeder IDs: 541
- Energized Phases: B
- Loop: False
- Multifed: False

Upstream Devices

- Transformer: XFR14235
- Protective Devices: FUSE44641



Compatible Unit List

Compatible Units
8 CUs in Design

Conductors

2 AAC	2 AAC (Iris)	212.7 ft
General Cable 185Amp Overhead Aluminum (Iris)	2AWG Triplex 195A 1350 AL XLP (Clam)	84.3 ft
2AWG Triplex Clam	Aluminum OH Triplex Service Drop with Full-Size Neutral Messenger	249.1 ft
Aluminum OH Triplex Service Drop with Full-Size Neutral Messenger	2AWG Triplex 195A 1350 AL XLP (Clam)	83.4 ft
2AWG Triplex Clam	2AWG Triplex 195A 1350 AL XLP (Clam)	69.1 ft
Aluminum OH Triplex Service Drop with Full-Size Neutral Messenger	2AWG Triplex 195A 1350 AL XLP (Clam)	75.3 ft
2AWG Triplex Clam	2AWG Triplex 195A 1350 AL XLP (Clam)	52.5 ft
Aluminum OH Triplex Service Drop with Full-Size Neutral Messenger		

Poles

P-35-5	PW35-5
POLE WOOD CLASS 5 35ft	

Designer XI



Trace ✕ Clear

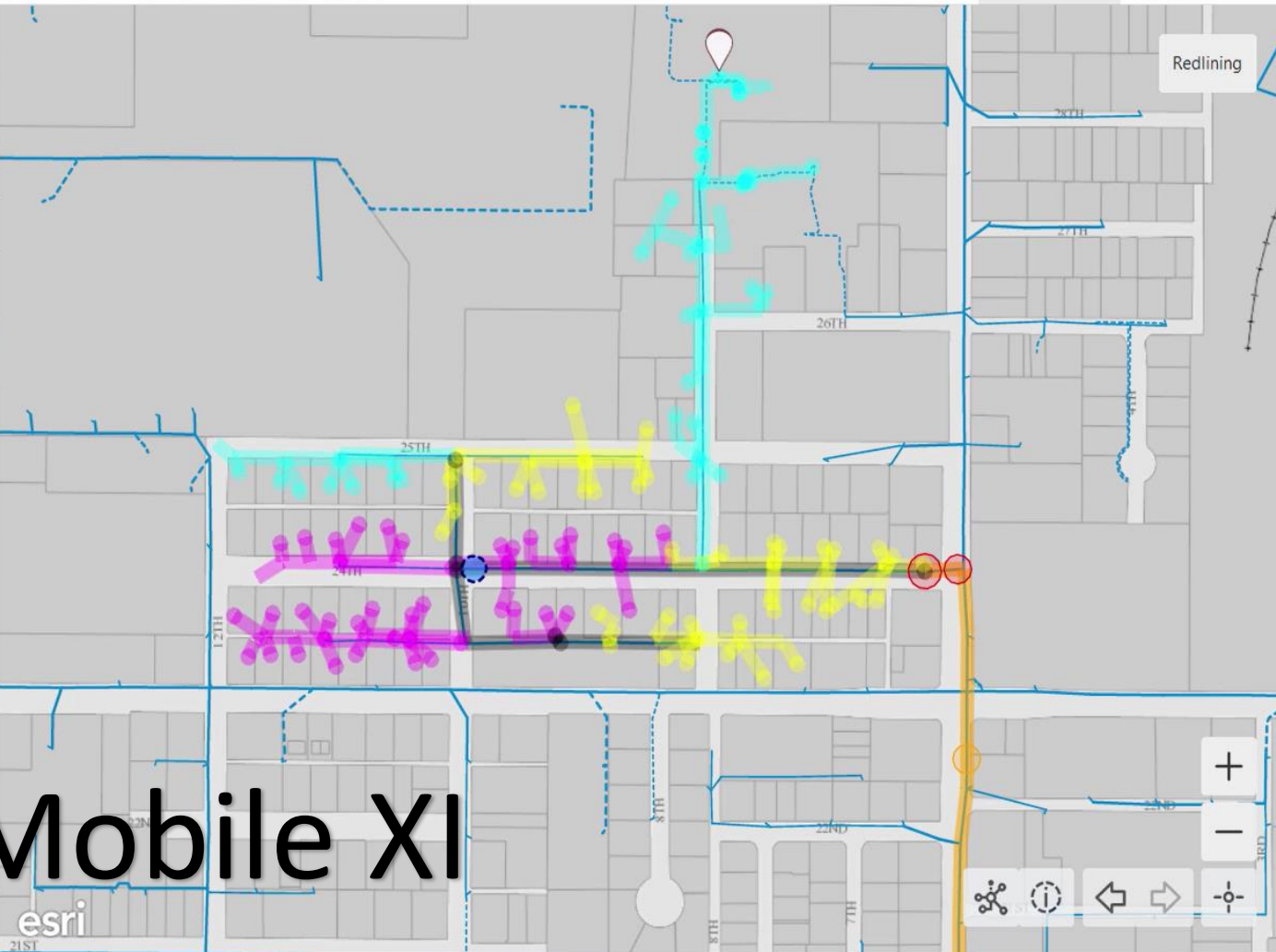
A B C i

95 Affected Customers

▶ Upstream Devices 30

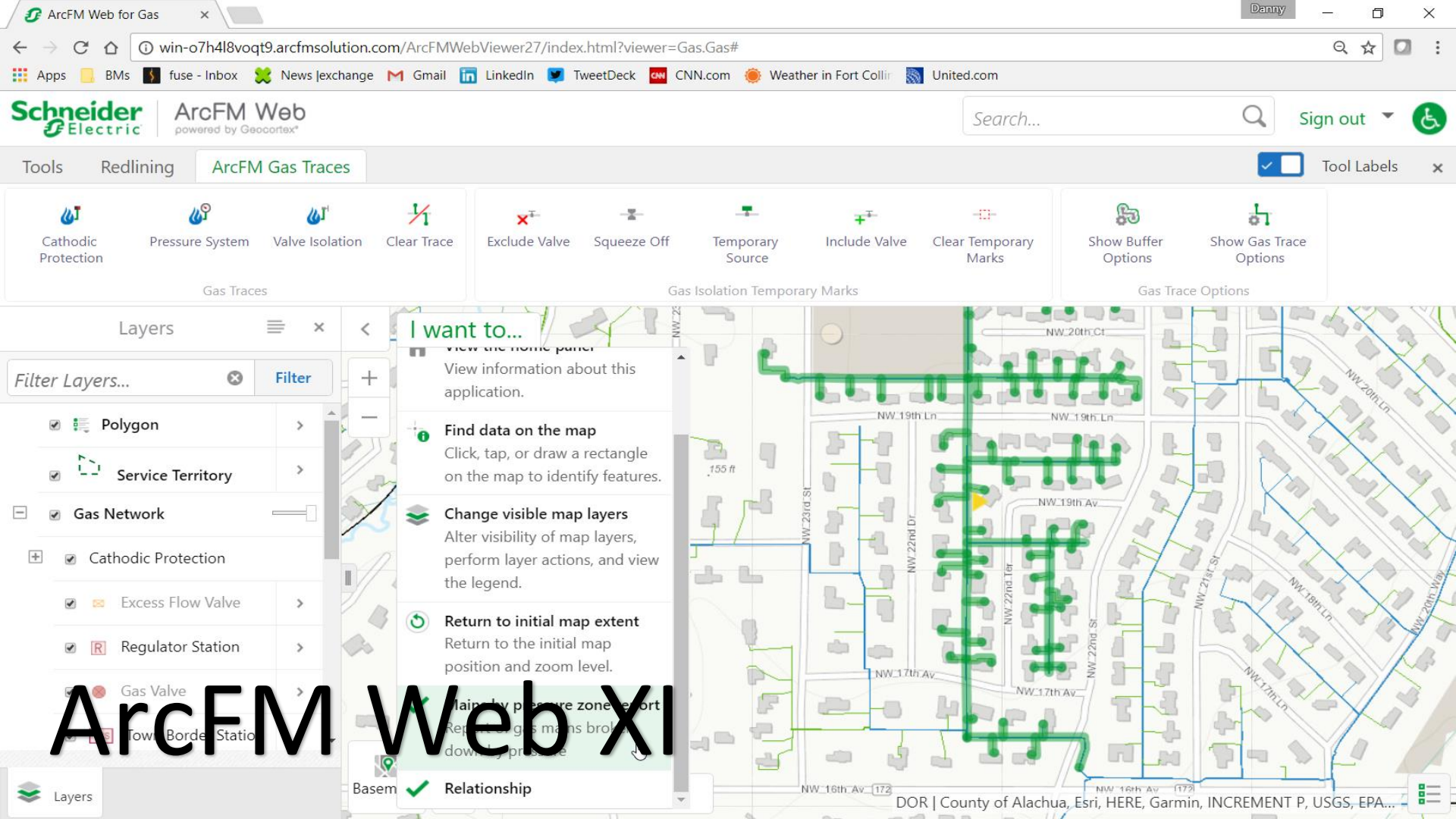
▼ Open Tie Devices 1

SW110629 View
Switch



ArcFM Mobile XI

▶ Transformers 21 esri



win-o7h4l8voqt9.arcfmsolution.com/ArcFMWebViewer27/index.html?viewer=Gas.Gas#

Schneider Electric ArcFM Web powered by Geocortex

Search... Sign out

Tools Redlining ArcFM Gas Traces

Cathodic Protection Pressure System Valve Isolation Clear Trace Exclude Valve Squeeze Off Temporary Source Include Valve Clear Temporary Marks Show Buffer Options Show Gas Trace Options

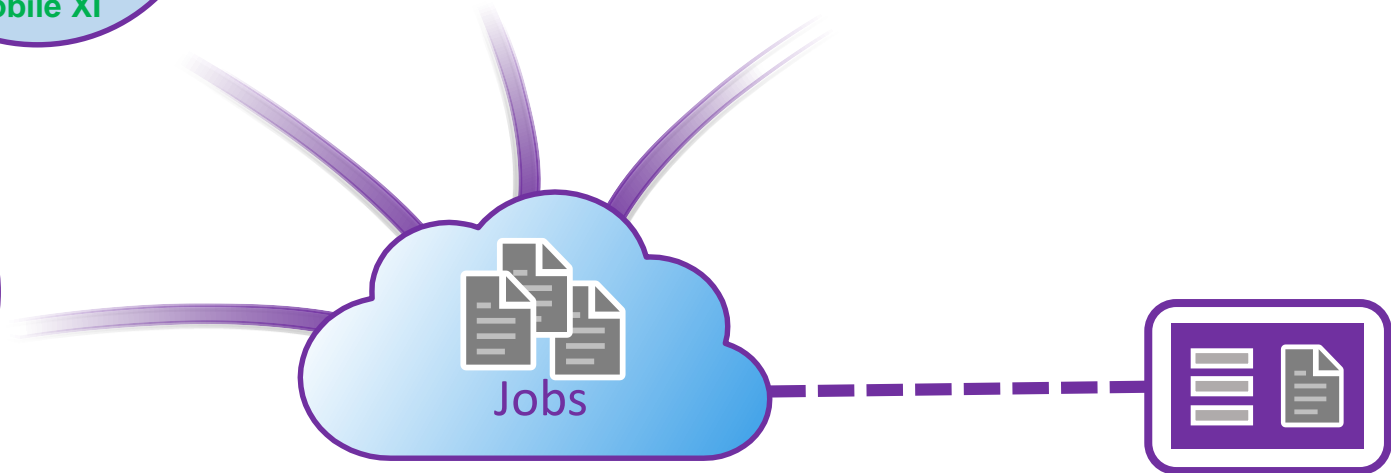
Layers Filter Layers... Filter

- Polygon
- Service Territory
- Gas Network
- Cathodic Protection
- Excess Flow Valve
- Regulator Station
- Gas Valve
- Town Border Station

I want to...

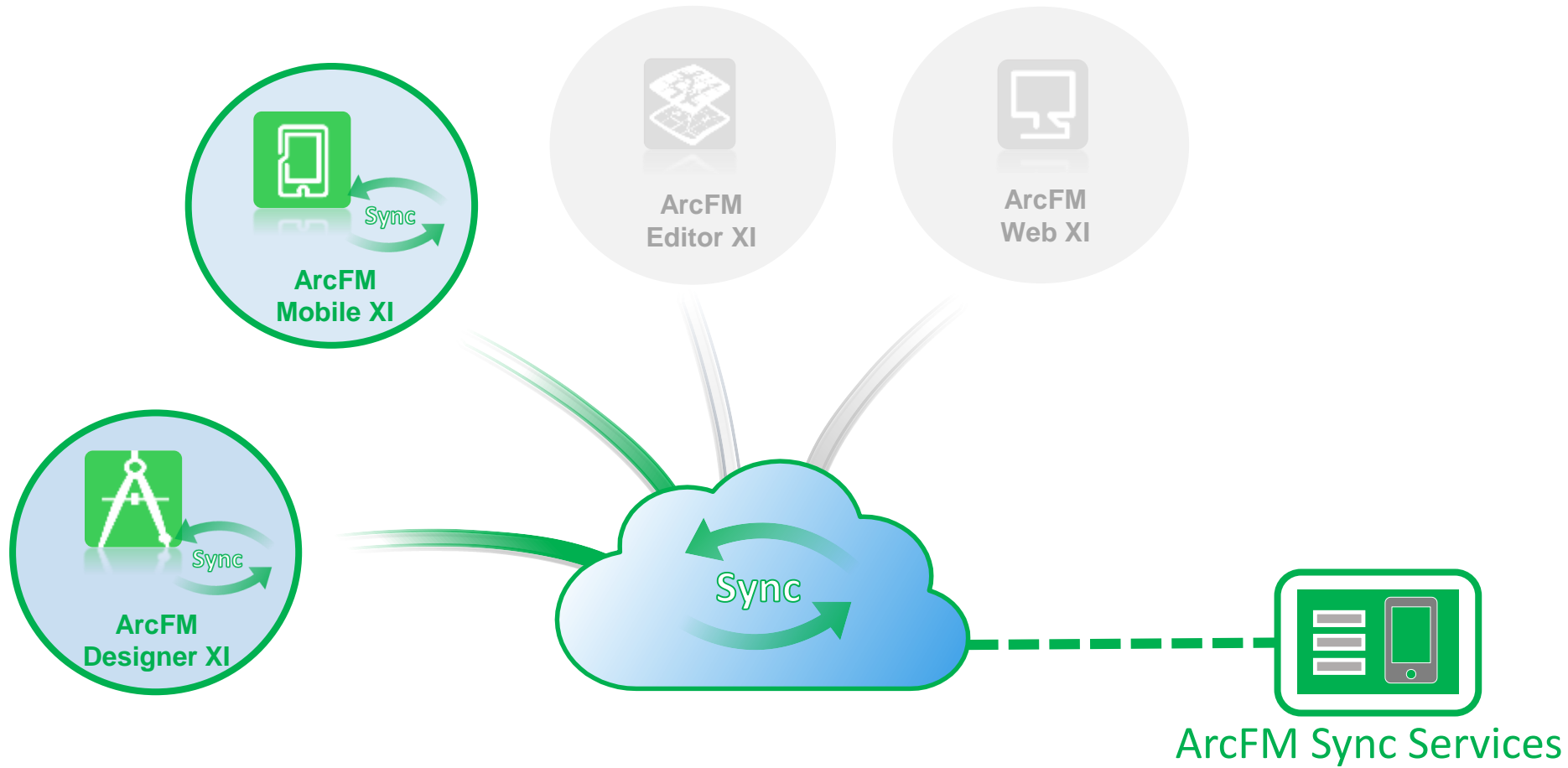
- View the home panel
- View information about this application.
- Find data on the map
- Click, tap, or draw a rectangle on the map to identify features.
- Change visible map layers
- Alter visibility of map layers, perform layer actions, and view the legend.
- Return to initial map extent
- Return to the initial map position and zoom level.
- Relationship

ArcFM Web XI



ArcFM Job Services

Apps that **Talk to One Another**



Connected or **Disconnected**, Works Either Way



ArcFM
Mobile XI



ArcFM
Editor XI



ArcFM
Web XI



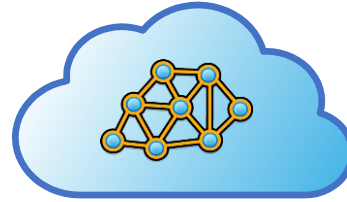
ArcFM
Designer XI

today



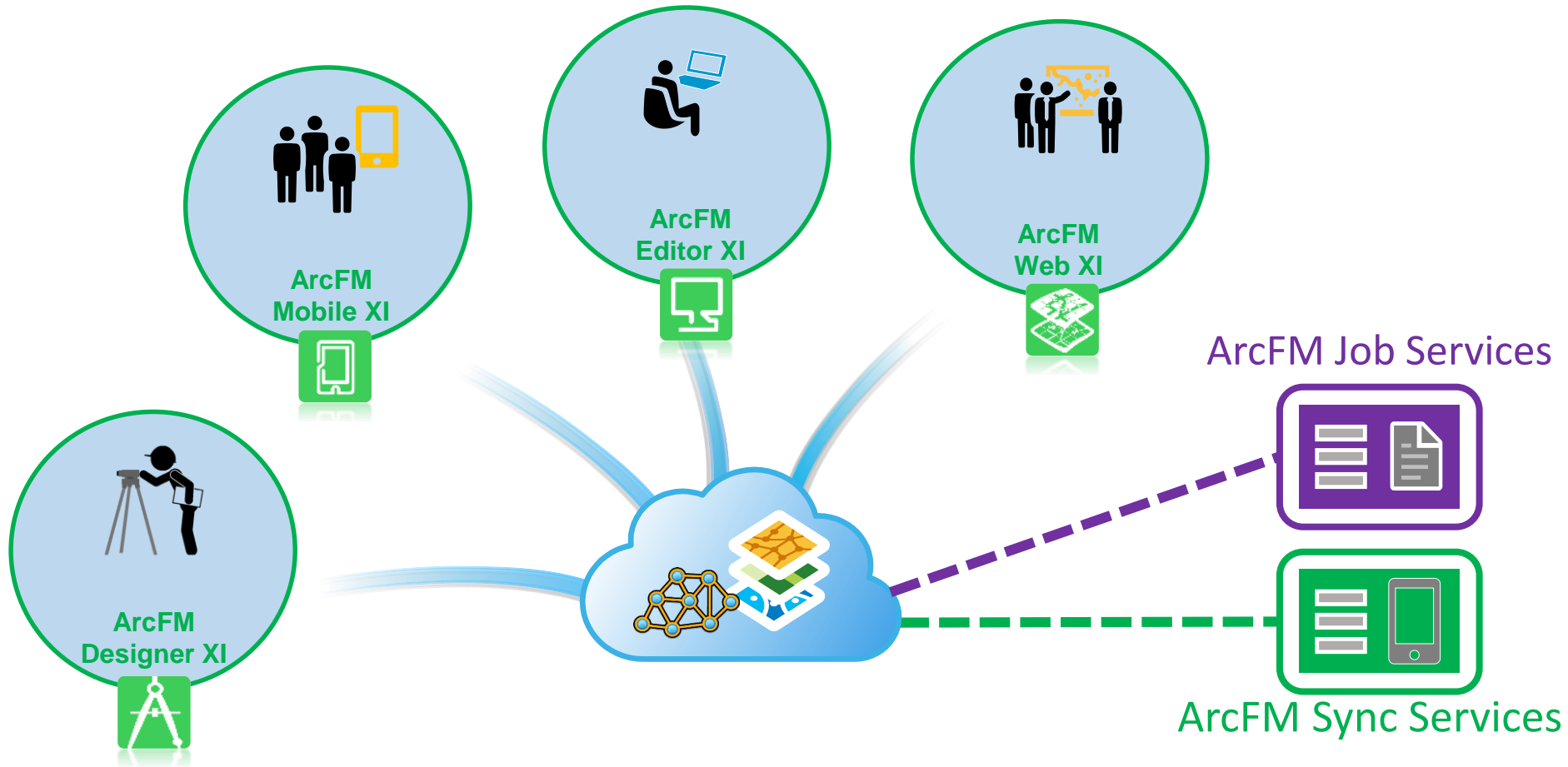
Geometric
Network

tomorrow



Utility Network

Utilities Can Move at Their **Own Pace**



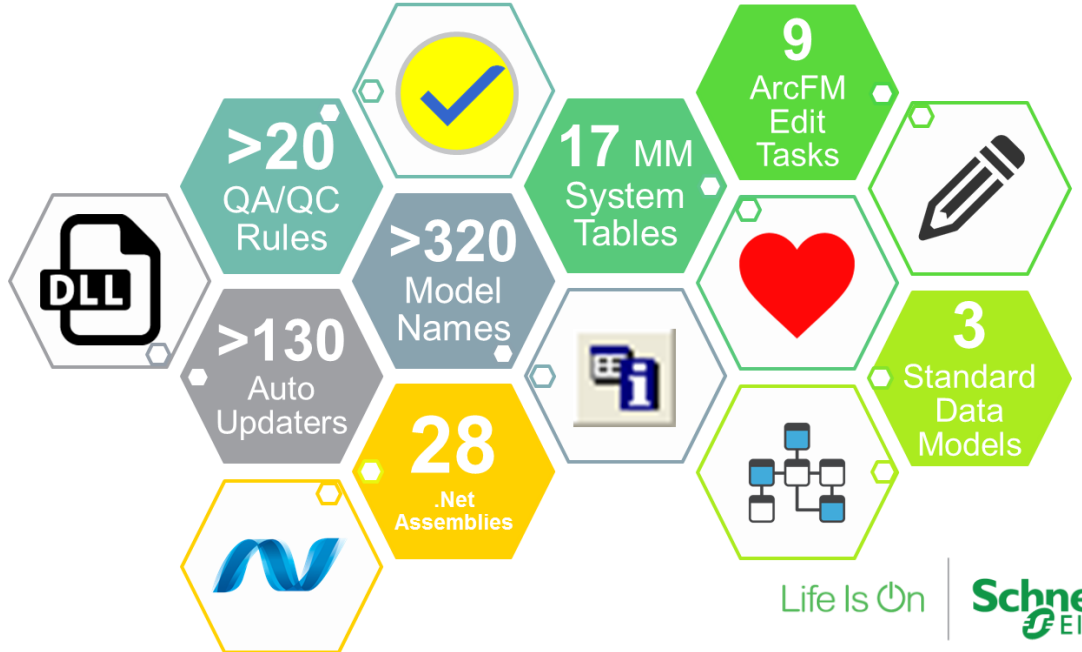
ArcFM Solution XI Series is an **Ecosystem**,
Improving the collective **Design and Construction** process

ArcFM Editor XI Alpha & Pilot Offering

ArcFM Editor XI Alpha

Building Your ArcFM XI Pilot offering in development

- Pilot data and configuration migration
 - ~2 feeders/pressure zones +
 - ~2 AUs +
 - ~2 QA rules +
 - ~8 favorites
 - ~12 Stored Displays/Snapping/Favorites



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Schneider
Electric

How can you keep in touch?



@SchneiderGIS

@EsriEGUG



**Schneider Electric
Geospatial Group**

<https://www.linkedin.com/groups/8531144>



Schneider Electric on Facebook

@SchneiderElectricGIS



ArcFM XI space in exchange

<https://infrastructurecommunity.schneider-electric.com/community/products/gis-products/arcfm-solution-xi-series>

Life Is On



Link 2018: Save the date!

February 27-March 1, 2018

Loveland, CO

@ Embassy Suites





Thank you

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Electric