

# ArcFM SOLUTION

The GIS solution tailor-made for utilities



# Introduction to ArcFM XI

# Schneider Electric & Esri Partnership

Jointly Pioneered the Development of Utility GIS 35 years ago...



Utility Network Management  
Specialty



Release Ready  
Specialty



ArcGIS Marketplace  
Provider



ArcGIS Online  
Specialty



Utility Network Specialty  
Gas Utilities Product



Utility Network Specialty  
Electric Utilities Product

1987

ARC/INFO  
MM Power tools

2000

ArcGIS  
ArcFM

2018

ArcGIS Pro  
ArcFM XI

Modern Network  
Management

*Esri Partner Advisory Council &  
Esri CTO Advisory Council*

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# Some of the utilities challenges

How do I keep my GIS more up-to-date?

How do I improve productivity?

How do I enable mobile workflows?

How do I update SCADA/EMS/ADMS?

How do I reduce paper?

How do I capture as-built changes?

How do I improve data quality?

How do I eliminate redundant data entry?

How do I improve my workflow & process?

How do I improve collaboration across departments?



Trends: *Digitization, mobility, tool standardization, engineering, process efficiency, mergers/acquisitions, Utility Network*

# What is ArcFM?

## Modern Network Management

### What is ArcFM?

ArcFM provides **utility-specific software** and time-saving workflows that makes it easier for utilities to accurately map and store asset information from design through operations.

### What is GIS?

A Geographic Information System (GIS) creates, manages, analyzes & **maps all types of data.**

#### Combined Value Proposition

ArcFM leverages the network management capabilities of Esri's ArcGIS to enable modern network management, set the foundation for a digital twin, improve network analysis, and support digital workflows.

#### What is the Difference between ArcFM & ArcGIS?

ArcFM is an extension of the ArcGIS platform for utilities. Specifically, it extends ArcGIS Pro and the Utility Network.

**Key Products:** ArcFM Editor, Designer, Mobile, Fiber Manager

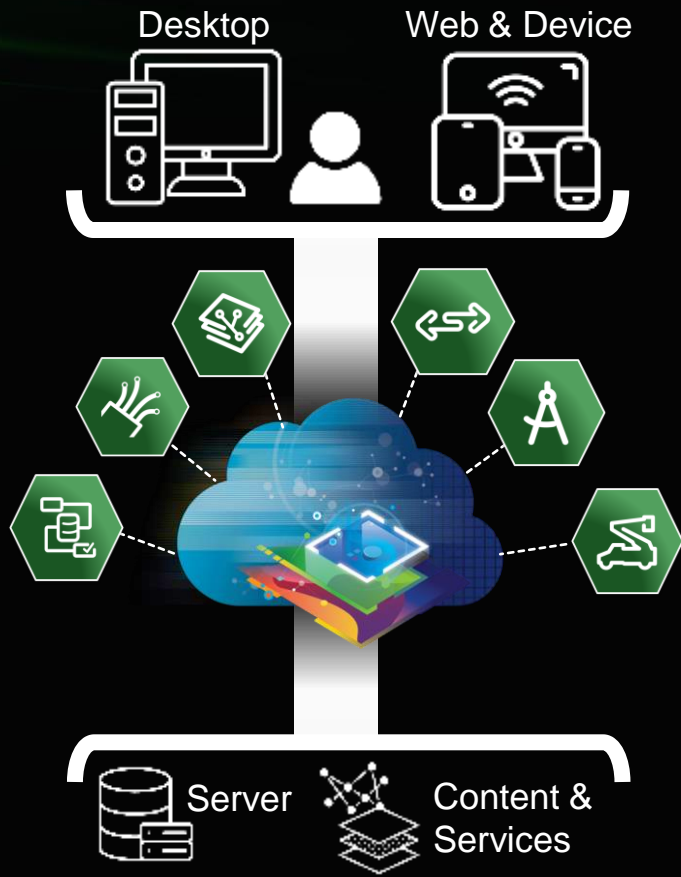
#### Who is Esri?

Esri is the global market leader in **GIS** and provides digital maps to all industries via the ArcGIS platform.

**Key Products:** ArcGIS Pro, Utility Network

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## Client customization

ArcFM  
SOLUTION



Utility Network Management  
Specialty

### • Configuration

- Domain data models
- Domain specific tools
- Editing productivity
- Validation & Logic
- Advanced analytics
- Attribute rules
- User-specific applications
- Utility-specific workflows
- Mobility

## Core ArcGIS platform & Esri Solutions

- Basic data model
- Maps and Apps
- Utility network
- Phase or Pressure management
- Versioning
- Analytic framework
- Attribute rules framework
- Validation framework
- Network editing tools

# Over 500 ArcFM Customers Around the World!



## XL Customers (>5,000,000 metered customers)



## Large Customers (>1,000,000 metered customers)



## Medium Customers (>500,000 metered customers)



## Small Customers (>100,000 metered customers)



## V. Small Customers (<100,000 metered customers)



# ArcFM Solution Portfolio

The most comprehensive utility GIS solution on the market

## ArcFM Editor

*The fastest way to edit inside of ArcGIS Pro*



## ArcFM Designer

*Focused, efficient and intelligent Graphic Work Design*



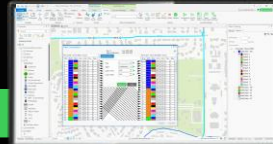
## ArcFM Mobile

*Utility-scale mobile GIS for any size field workforce*



## Fiber Manager & Wavepoint

*Mapping, planning and management of fiber optic networks*



## Feeder Services & GDBM

*Productized integrations, automated version and network management*



## ArcFM Web

*Flexible framework for easy access to GIS*



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# Few words about the Utility Network

# Esri's Statement on the ArcFM UN



“We appreciated being a part of the Schneider Electric ArcFM UN team. The SE R&D Team, Delivery Team and Esri Solutions worked through a Baseline Data Model and the best practices to model the most common electric devices. This whitepaper documents the work product of these meetings.

ArcFM UN incorporates the power of the Utility Network by allowing devices to be modeled in high fidelity that meet the needs of advance systems but removes the spatial representation complexity. We are enabling our customers to use the UN effectively.”

*Mike Miller – Solutions Manager, Esri*

*John Alsup – Geodatabase Product Engineer, Esri*

# The Next Generation of Modern Network Management

## Esri's Utility Network is...

... the main component users work with when managing **utility and telecom networks** in ArcGIS.

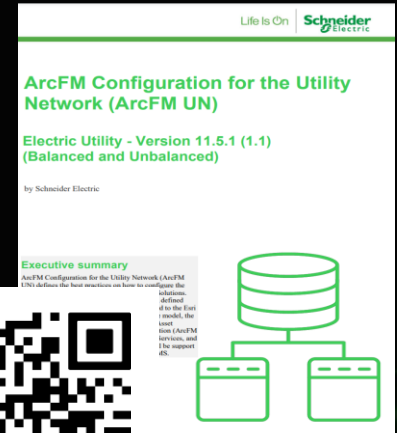
...providing a comprehensive **framework of functionality** to model utility systems.

...designed to model **all components** that make up your system—such as wires, pipes, valves, zones, devices, and circuits.

...allowing you to build **real-world behavior** into the network features you model.

# ArcFM Configuration for the Utility Network

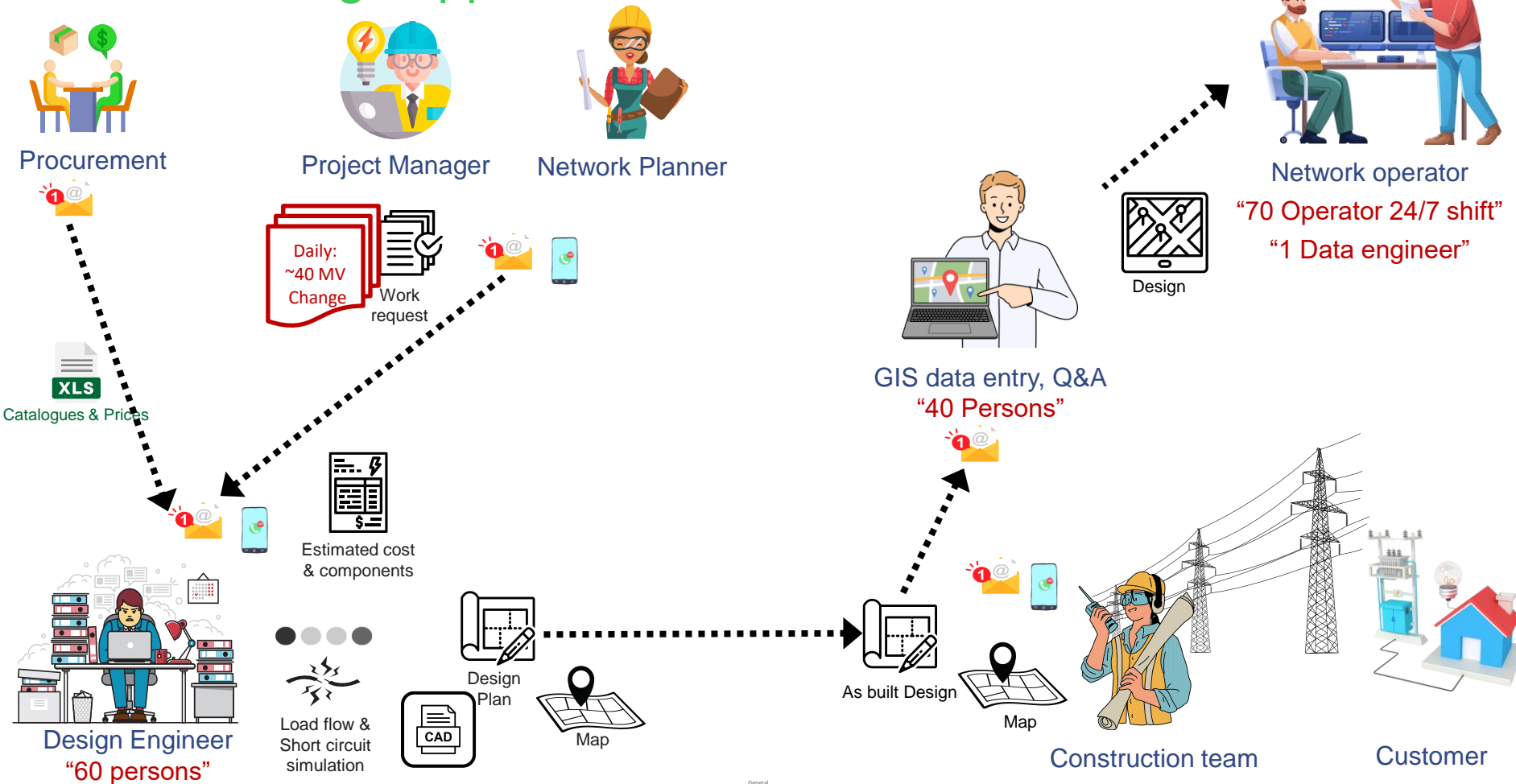
- Jointly built by  **esri** +  **Schneider Electric**
- Documents the **Best Practices** for implementing the Utility Network
- **Integrates** well with other Advanced Systems in the company
- Basis for all ArcFM XI Series **Product Roadmaps**

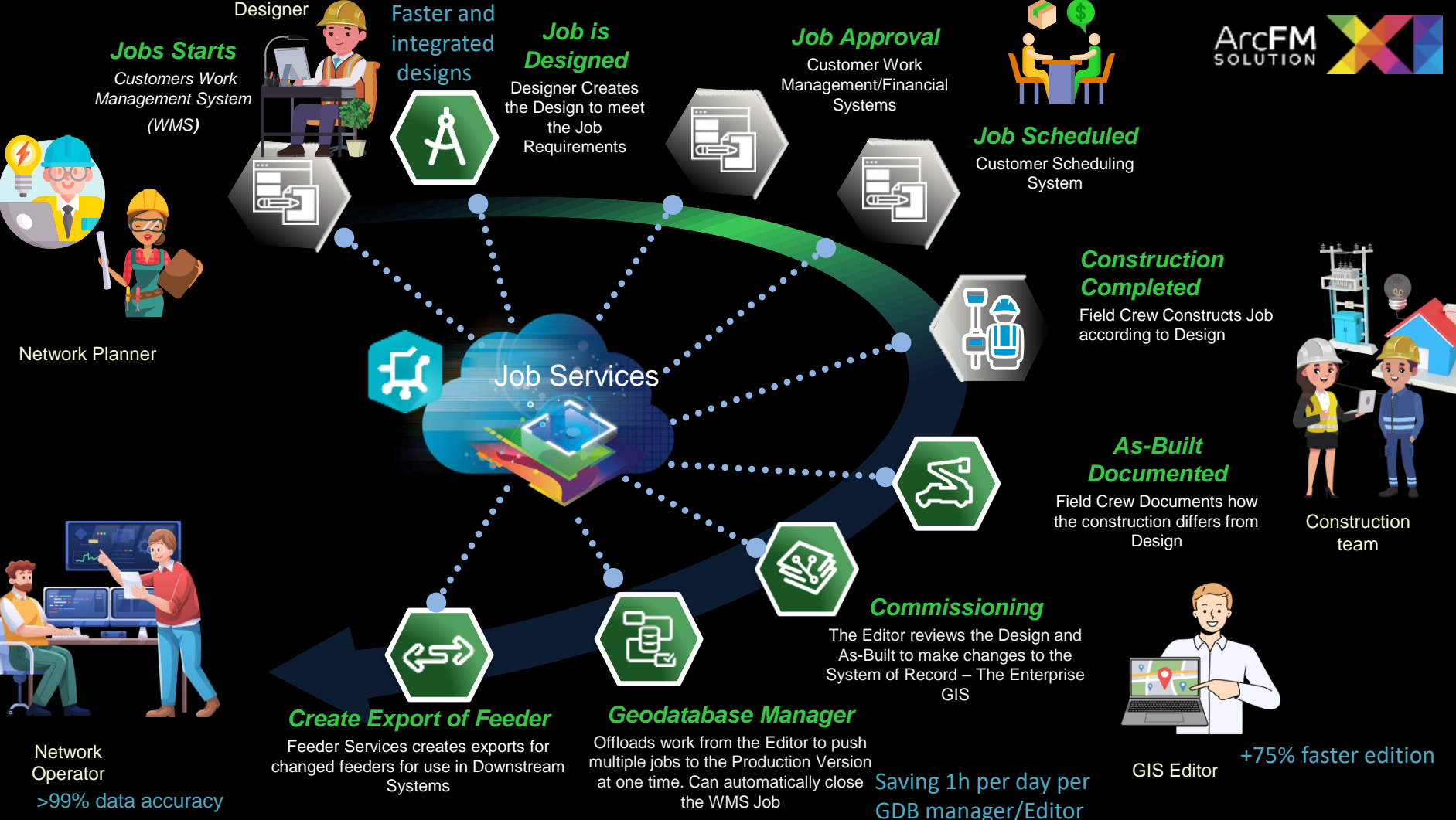


**Available to Download!**

# ArcFM – The system of design

# Traditional design approach: Real use case of a 655 K Customer DSO





**Jobs Starts**  
Customers Work Management System (WMS)



Network Planner



Designer



**Faster and integrated designs**

**Job is Designed**

Designer Creates the Design to meet the Job Requirements



**Job Approval**  
Customer Work Management/Financial Systems



**Job Scheduled**  
Customer Scheduling System



**Construction Completed**

Field Crew Constructs Job according to Design



Construction team

**As-Built Documented**

Field Crew Documents how the construction differs from Design



**Commissioning**

The Editor reviews the Design and As-Built to make changes to the System of Record - The Enterprise GIS



GIS Editor

+75% faster edition



**Geodatabase Manager**

Offloads work from the Editor to push multiple jobs to the Production Version at one time. Can automatically close the WMS Job

Saving 1h per day per GDB manager/Editor



**Create Export of Feeder**

Feeder Services creates exports for changed feeders for use in Downstream Systems



Network Operator

>99% data accuracy

# Quick video of the system of design

The screenshot displays the ArcFM Designer XI interface. On the left, a sidebar shows a list of work requests under 'My Work' and 'Settings'. The main area is divided into three sections: 'Work Request', 'Workflow', and 'Tasks'. The 'Work Request' section shows details for 'NCD SOD Video', including its location and description. The 'Workflow' section lists various actions like 'Push to GIS' and 'Send to ADMIS'. The 'Tasks' section includes 'Cost Estimate' and 'Export Materials to Excel'. The interface is clean and modern, with a search bar at the top and a navigation menu on the left.

Work Request - Electric  
NCD SOD Video  
11713 SW 8th Ave 32607  
Customer - N/A -  
Description - NO DESCRIPTION -

Open Refresh Design Downloaded More

Workflow  
Push to GIS  
Complete Design  
Send to ADMIS  
Send for Approval  
Submit for Construction  
Push to DFCs in GIS

Tasks  
Cost Estimate  
Export Materials to Excel  
QAQC  
Spida Calc

Created: Friday, April 14, 2023 3:45 PM  
Modified: Friday, April 14, 2023 3:45 PM  
Assigned To: Nicholas Dunn  
Notes: - NO NOTES -  
Edit

49b460072c29481ea78eff2e817c2b66



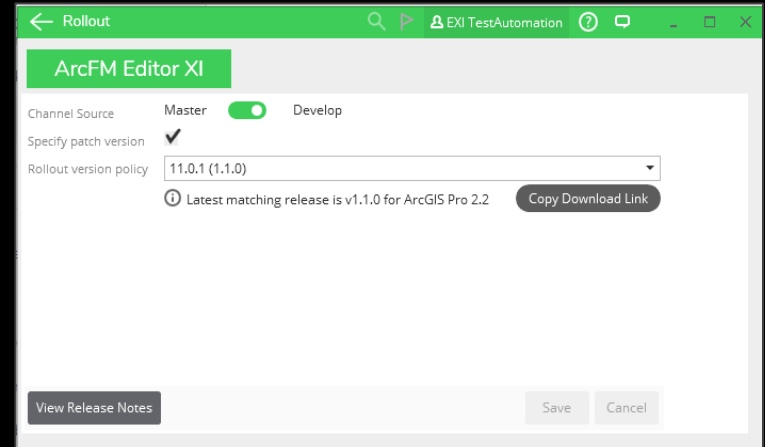
# ArcFM benefits

## Some benefits of ArcFM XI on top of Esri technology

- ArcFM Editor make users up to **75% faster** in ArcGIS Pro
- ArcFM Editor enables **99% GIS data accuracy**
- ArcFM Geodatabase manager saves users **1 hour per day per user**
- ArcFM Designer eliminates backlogs from **2,000 designs to Zero**
- ArcFM Mobile reduces the use of paper maps in the field **by 90%**
- ArcFM Feeder Services reduces integration time from **weeks to minutes**

# Additional Information

- ArcFM Editor XI **Software Updates are Cloud Delivered**
  - Switching to new versions is seamless.
  - You get to control when you adopt new versions.
  - You can “pin” your version and adopt new versions when your team is trained and ready.
- Customer Issues are resolved quickly through our **Telemetry Framework**.
- **Adoption Requirements:**  
<https://myarcfm.schneider-electric.com/myarcfm/s/article/ArcFM-Editor-XI-Supported-Versions>



# Benefits of the XI Series

## Hybrid-cloud Reduces TCO

Secure and Reliable  
Integration Points and  
Workflows

Hosted



Coordination

Markup Edge Sync

Equip. Catalog  
Service

Map and App  
Configuration  
Customizations

Workflows &  
Events

On-Premises



Hybrid Connection Manager

Portal for ArcGIS

ArcGIS Server

# ArcFM Editor Product Profile

● Session Manager

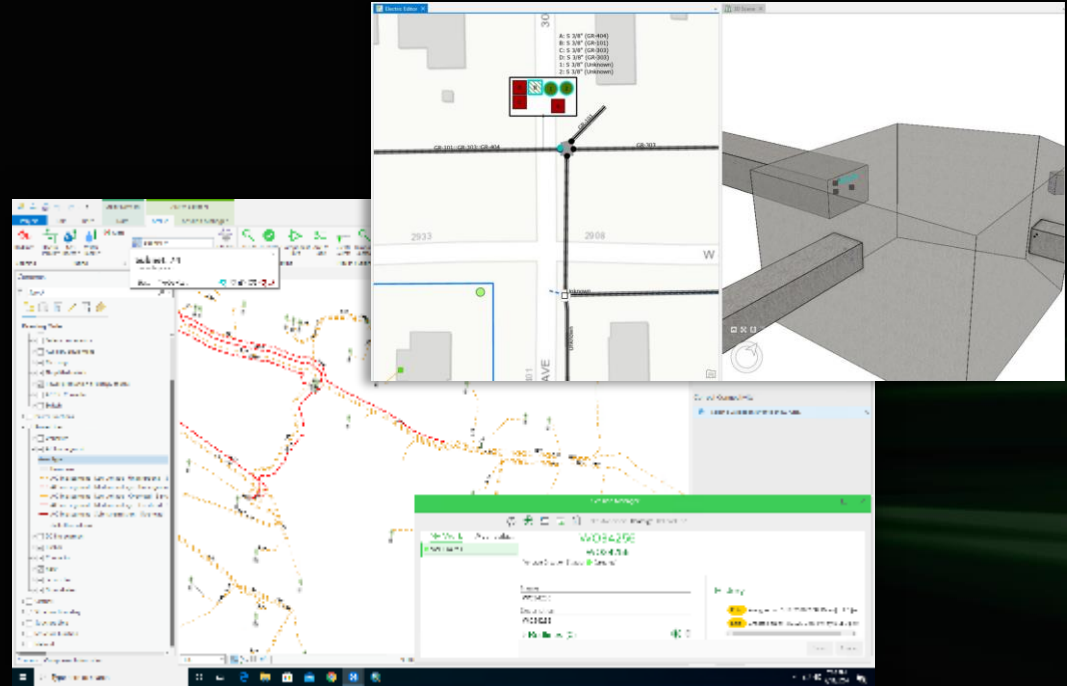
● Field Commissioning

● Productivity Tools

● Conduit Management

● Network Tools

● Validation Assistant



# ArcFM Editor

## How does ArcFM Editor save time?

- Decrease the clicks Esri's named trace tooling from **14 to 4**
- The Split Construction Tool reduces clicks from **28 to 4**
- And Validation Assistant can reduce error resolution effort **by 50%**

Component Information

VLV67

Open

Material: Plastic PVC  
Diameter: 6"  
Valve Type: Ball  
Critical: No

Downstream pipe summary

Pipe Volume: 1 cubic meters  
Pipe Length: 462 meters  
Meter Count: 2

SWI70

Customers

Phase	Count
A	38
B	30
C	37
Total	105

A B C

OH Disconnect Switch, Closed

Choose Phases for Template

A B C

OK

Electric Traces Gas Traces Water Traces

Tracing

Network Management

Session Manager

Test Session 1027

Version Creation Status: (Created)

Name: Test Session 1027

Description:

History

- Created on 10/28/2020 2:32 PM by Rene Martinez
- Approved on 10/28/2020 2:32 PM by Rene Martinez
- Assigned on 10/28/2020 2:31 PM by Rene Martinez by Ren
- Created on 10/28/2020 2:30 PM by Rene Martinez
- Completed on 10/28/2020 2:30 PM by Rene Martinez
- Rejected on 10/27/2020 11:40 AM by Rene Martinez
- Rejected on 10/27/2020 11:39 AM by Rene Martinez
- Assigned on 10/27/2020 11:39 AM by Rene Martinez by Re
- Created on 10/27/2020 11:38 AM by Rene Martinez

ArcFM Validation Assistant

Incorrect Connectivity

Fuse Bank to Fuse : 1

Fuse Bank Pad Mounted Fuse Fuse Unknown

Fuse to Line End : 2

Fuse Unknown Line End Primary Three Phase Terminator

Fuse Unknown Line End Primary Three Phase Terminator

Correct Connectivity

Fuse Cabinet Fuse Line End Primary Three Phase Terminator

Fuse Underground Single Phase Load Break Elbow

Fuse Underground Three Phase Elbow

Fuse Underground Single Phase Elbow

Fuse Underground Dead Break Elbow

Fix all items in group Fix

# ArcFM Mobile Product Profile

Multi-Platform Apps

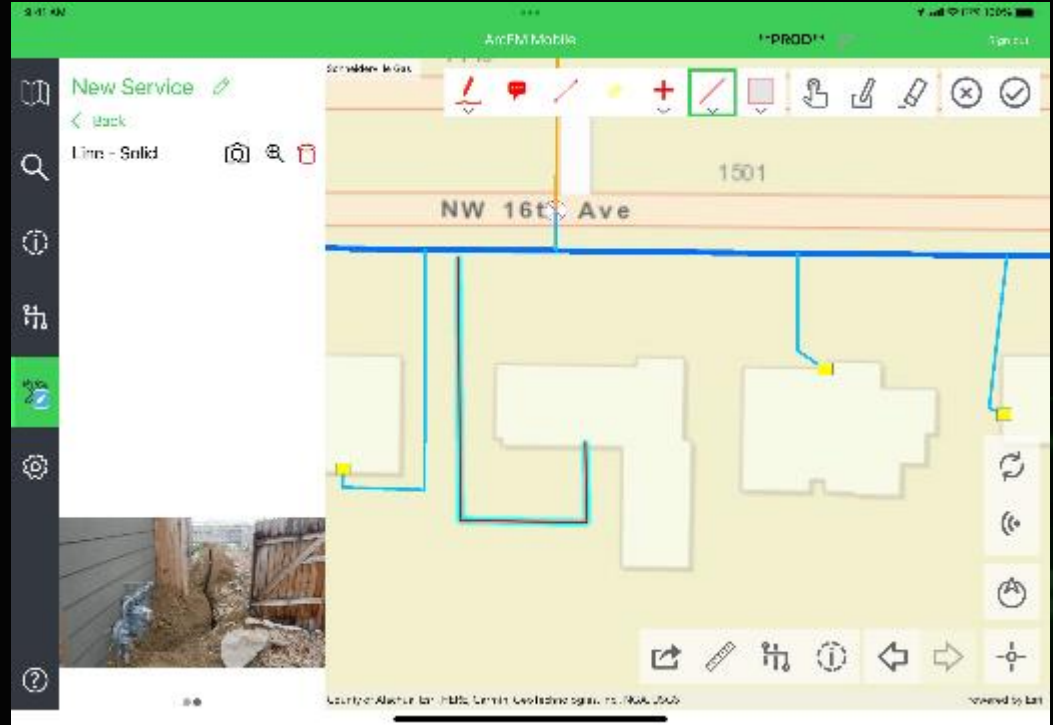
Scalable Offline Maps

Configurable Search

Isolation Tracing

Markup and Photos

Easy Integrations



# ArcFM Fiber Manager Product Profile

OSP Fiber Optic Networks

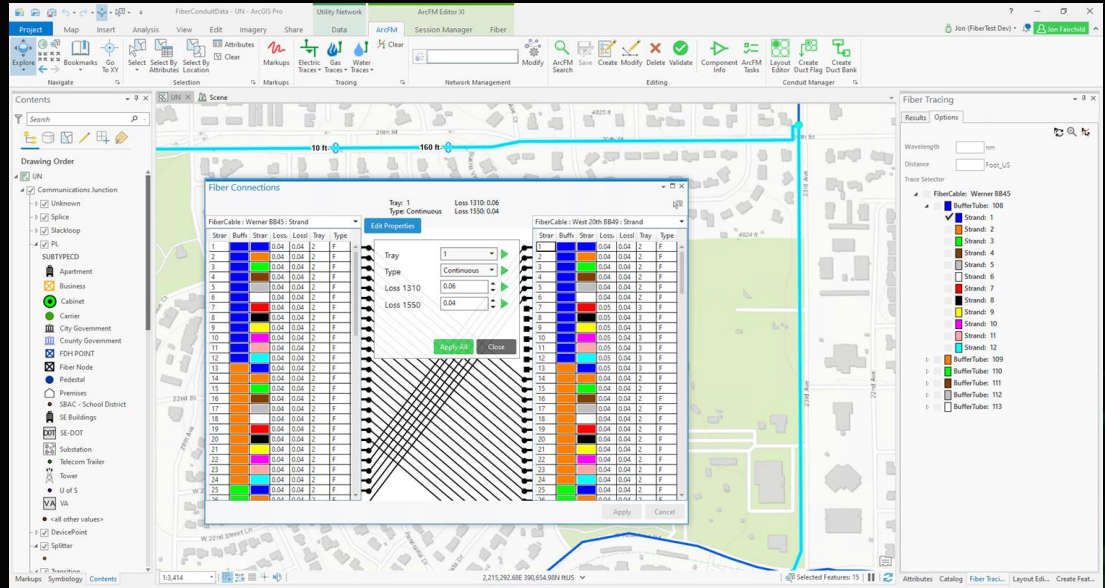
Built on ArcGIS Pro/UN

Catalog-based authoring

Editing productivity

Optical path analysis

Companion web app

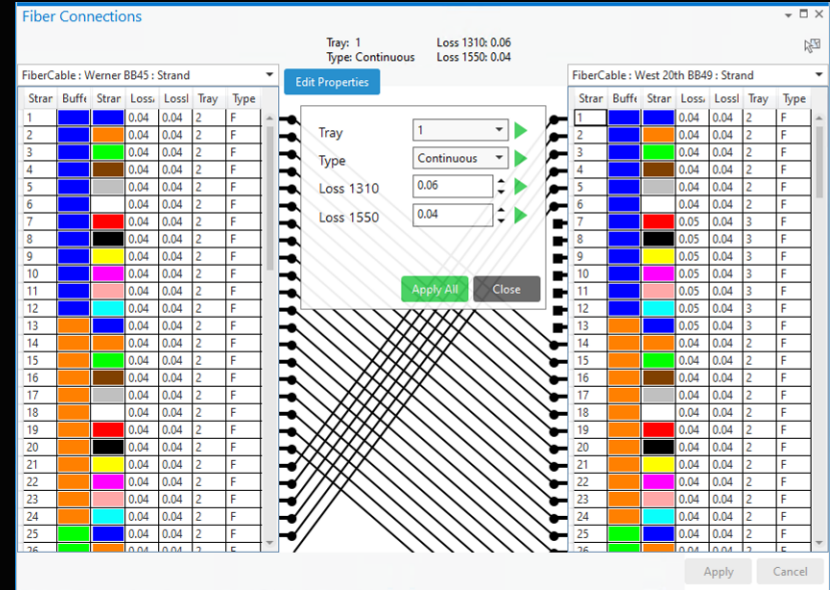




# ArcFM Fiber Manager

What about other utilities such as telecom?

- Robust and intuitive solution optimized for large fiber networks
- Flexible optical network model proven by an extensive customer base
- Innovative extension of the ArcGIS platform and Utility Network



### Fiber Builder

Minerville\_UN\_Fiber\_V2

- Favorites
  - Fiber Optic Cables
    - 3000 Count FiberCable:
      - Overhead
      - Underground
    - Racks
    - Favorites
    - Patch Locations
    - Splice Locations
    - Splitters
    - Slack
    - Riser
    - Transition
    - Patch Panel

10th Ave, 17th St, 18th St, 9th Ave, Cheba Hut, Chipotle, Fraser Dorm, Carter Building, Kepner Building

1:1,100 | 104.6952467°W 40.4121703°N | Selected Features: 0

# Success stories



## Largest ArcGIS Utility Network Migration Client & Early Adopter of Mobile XI

### Project Overview

- Electric division is leading producer of clean, safe, reliable and affordable energy
- 4.5 million electric customers in Georgia, Alabama and Mississippi
- Esri as prime; SE subcontractor for ArcFM XI & services; RAMTeCH for data migration
- Mobile XI already live on 10.8.1 prior to kick off of UN project

### Accomplishments

- Project kicked off in January 2024 with targeted go-live of early 2028 for AL, GA and MS
- Business case based on lifecycle support, equivalency, preparation for future needs such as DER.
- Introduction of GIS design tool for AL and MS, as GA has this today on 10.8.1

# ArcFM Designer

How does designer eliminate backlog?

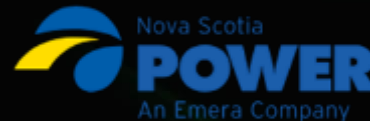
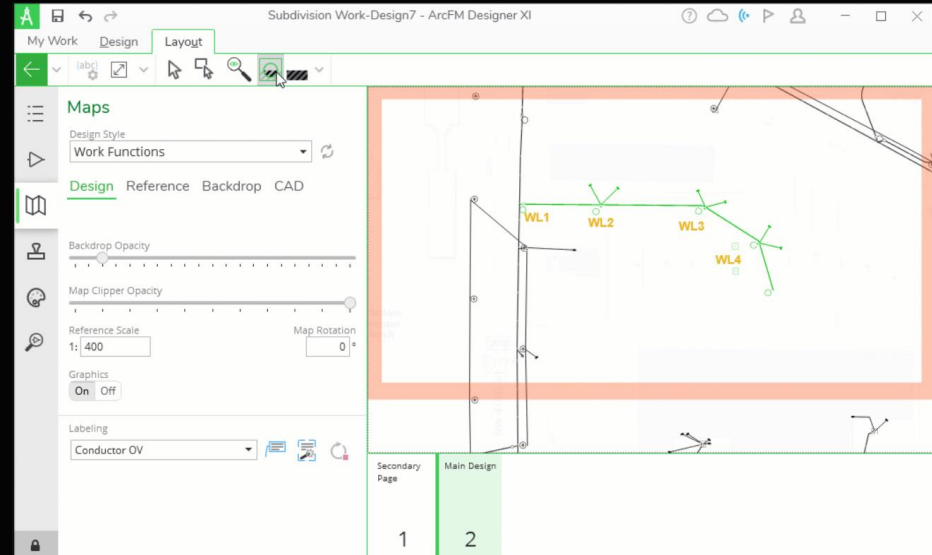
- GIS-based Graphic Work Design
- Field Design Ready
- Integrated with Enterprise Systems

“

*With Designer XI, we reduced their backlog from 2,000 designs to ZERO!*  
~ **Nova Scotia Power**

*Our designs are so accurate with Designer XI that we decided we didn't need to hire the 2 extra headcounts we were planning on this year!*  
~ **Cobb EMC**

”



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## First Client in Production on ArcGIS Utility Network with Integration to ADMS

### Project Overview

- 600,000 Service Area Population
- Implemented first GIS and chose Utility Network to connect GIS to ADMS
- Leveraged ArcFM XI Feeder Services to manage bidirectional connection

### Accomplishments

- Overall improved productivity
- Demonstrated a 99% data accuracy rate
- Early data modeling and best practices provided the path to ADMS integration

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