Automation of Digital Walkouts in the Broadband Industry

Fiber Broadband
ASSOCIATION

AIRWORKS

One Hour Webinar

BEFORE WE BEGIN

- Attendees are in **listen-only mode**

- Use the **Control Panel** to access additional tools

- Please submit questions using the **Questions panel**

- The **On-Demand Replay** of today's webinar will be available within 24 hrs on the FBA website under Events / Webinars

One Hour Webinar | Fiber Broadband ASSOCIATION

Adam Kersnowski

Co-Founder and SVP of Strategic Accounts

AIRWORKS

Deliver More Projects Faster

Automation of Digital Walkouts in the Broadband Industry

AIRWORKS

Today's Presenter – Adam Kersnowski

Adam Kersnowski

> Co-founded AirWorks in 2017, currently the Senior Vice President of Strategic Accounts

> Founder/owner of two companies prior to AirWorks:
>> Construction & Drone Data Collection
>> Certified FAA Pilot

> Extensive professional experience with the intersection of technology, A.I., data collection, and engineering workflow optimization, with a special focus on telco.

Agenda

Introductions

Latest Capture Methods

Digital Solutions to Data Processing Challenges

Case Studies

Choosing the Right Approach

AirWorks

The industry leader in **AI-enabled walkout services** in support of engineering projects
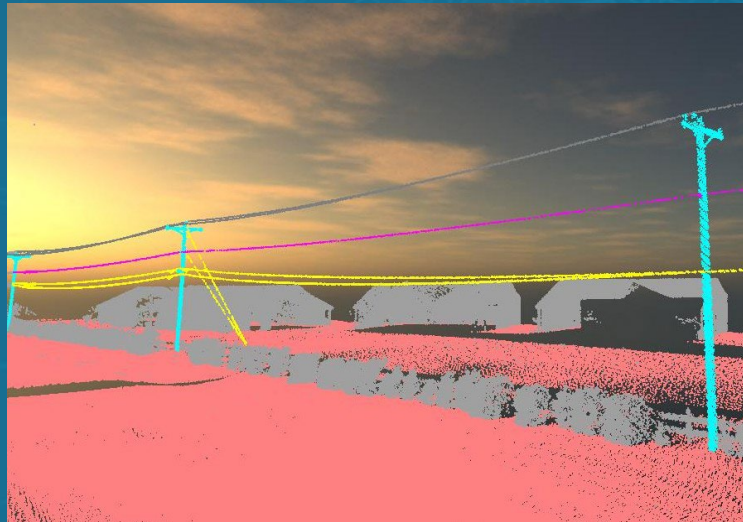
Insights supporting:

- Make Ready
- High Level Design
- As-Builts
- Bill of Materials

- (BOM)
- ROW Permitting
- Clearance Violations

ARCHITECTURE + ENGINEERING

TELECOMMUNICATIONS

Market Dynamics Driving Telecommunications

Funding Drives Innovation

GOVERNMENT FUNDING TO CLOSE DIGITAL DIVIDE

- Examples: BEAD, IIJA, BIP, Tribal Broadband Connectivity Program, Digital Equity Act Programs
- Strict selection criteria for bids

PRIVATE EQUITY TO CAPTURE NEW CUSTOMERS

- Private equity supports expansion into new territories that promise a good take rate
- Fast turnaround times on bids
- Accurately model expansion opportunities

Both Require Increased:

ACCURACY
Quick, accurate expansion plans win RFPs + funds and drive growth

FIELD DATA
Understanding of existing infrastructure vs. old designs

FASTER DESIGN
Get high level designs done faster, enabling faster permitting

Walkout Options

Open-Source Data

Examples: Google Earth, Publicly available data

+ Useful for quick, at-a-glance project site scouting

− Low resolution and potentially outdated

Manual / Boots on The Ground

Ground crews equipped with technology like IKE or Katapult

+ Accurate, human-monitored readings
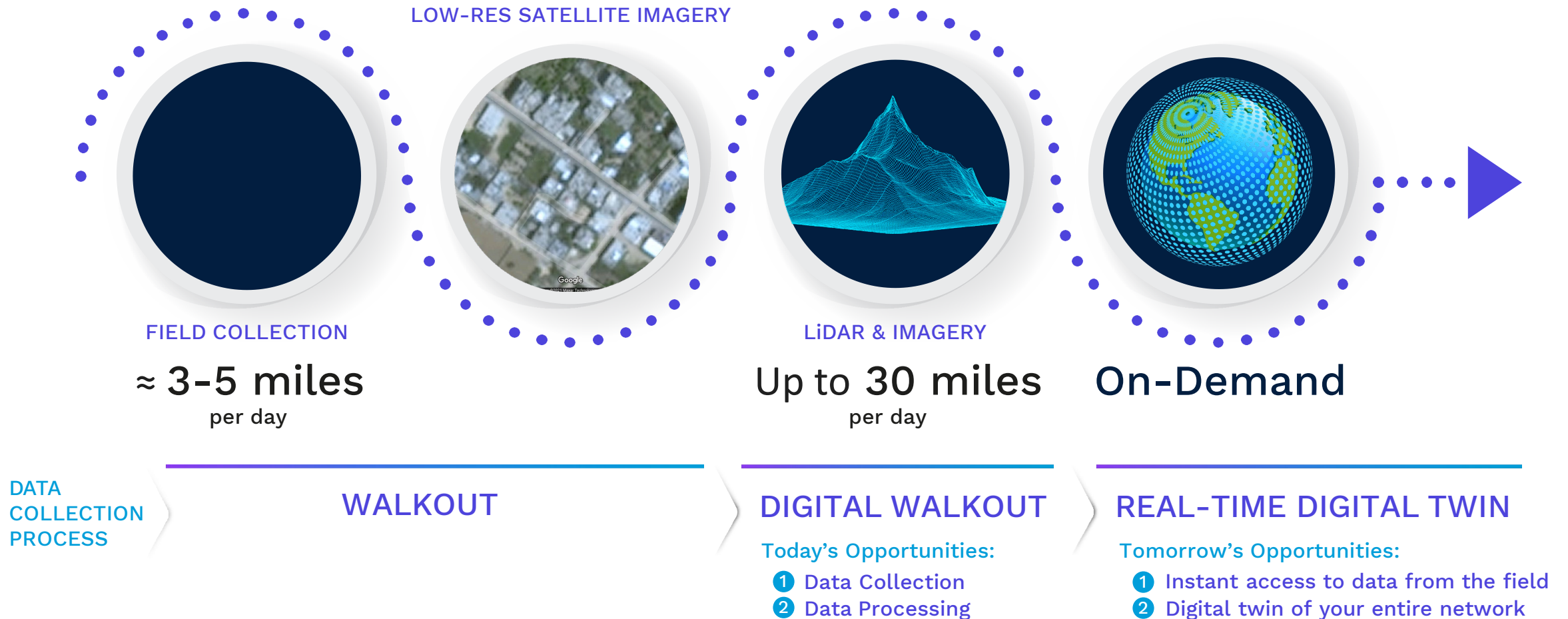
− Challenges with efficiency and scalability

Remote Sensing

Examples: drone/satellite imagery, LiDAR

+ Highly efficient

+ 3D point clouds offer robust, actionable project insights

− Potential accuracy concerns

Hybrid Using Various Methods

+ Remote sensing for high-level design

+ Field crews deployed to complete QC

+ Faster, with human-assured accuracy

Opportunity to Streamline Telecommunications Projects with Better Data Collection Methods

LOW-RES SATELLITE IMAGERY

FIELD COLLECTION

≈ 3-5 miles
per day

LiDAR & IMAGERY

Up to 30 miles
per day

On-Demand

DATA COLLECTION PROCESS

WALKOUT

DIGITAL WALKOUT

Today's Opportunities:
1 Data Collection
2 Data Processing

REAL-TIME DIGITAL TWIN

Tomorrow's Opportunities:
1 Instant access to data from the field
2 Digital twin of your entire network

COST + ACCURACY

SPEED

OPEN-SOURCE DATA

SATELLITE

AIRCRAFT

DRONES

LASER SCANNING, MOBILE LiDAR

Handheld Tech Enabled Field Crew: IKE, Katapult

Low Tech Field Crews

Field Data Capture Options

What determines your need:
- Size of area
- Site conditions (remote, weather, mountainous, etc.)
- Quality of existing data
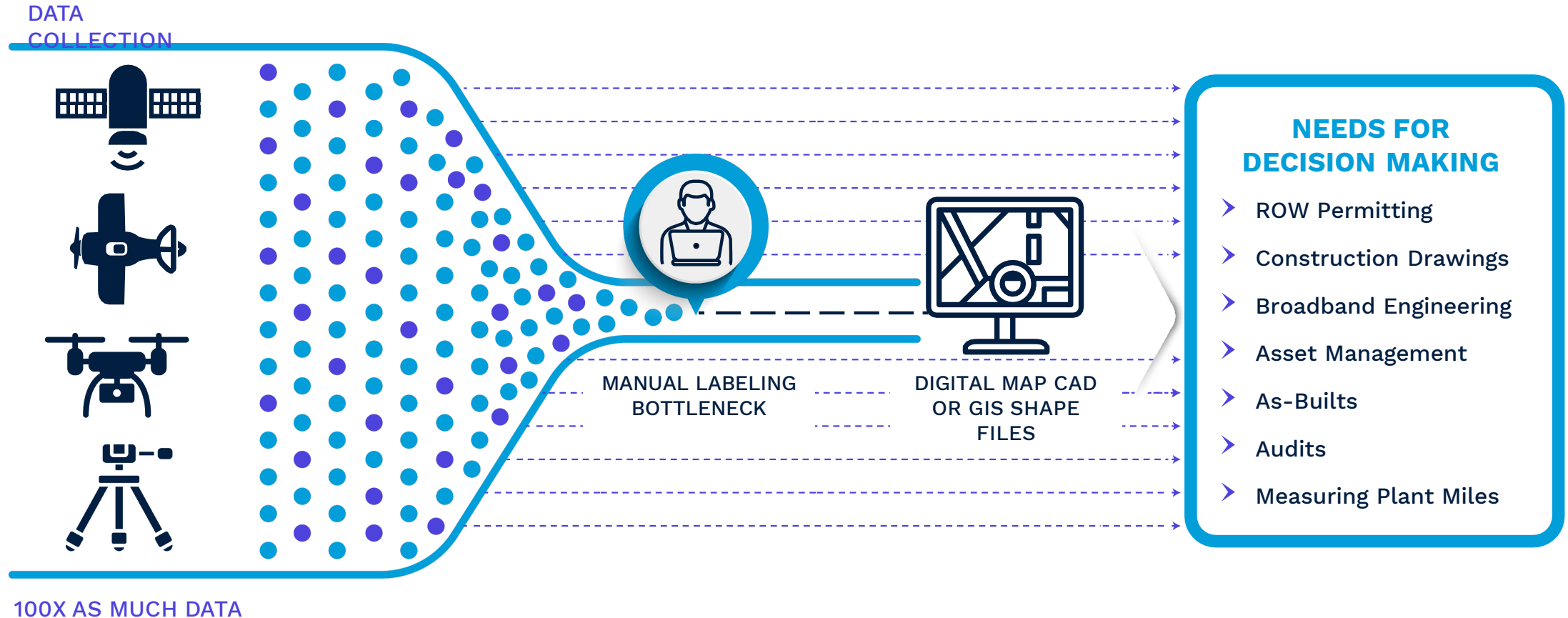- What information is needed

POLL

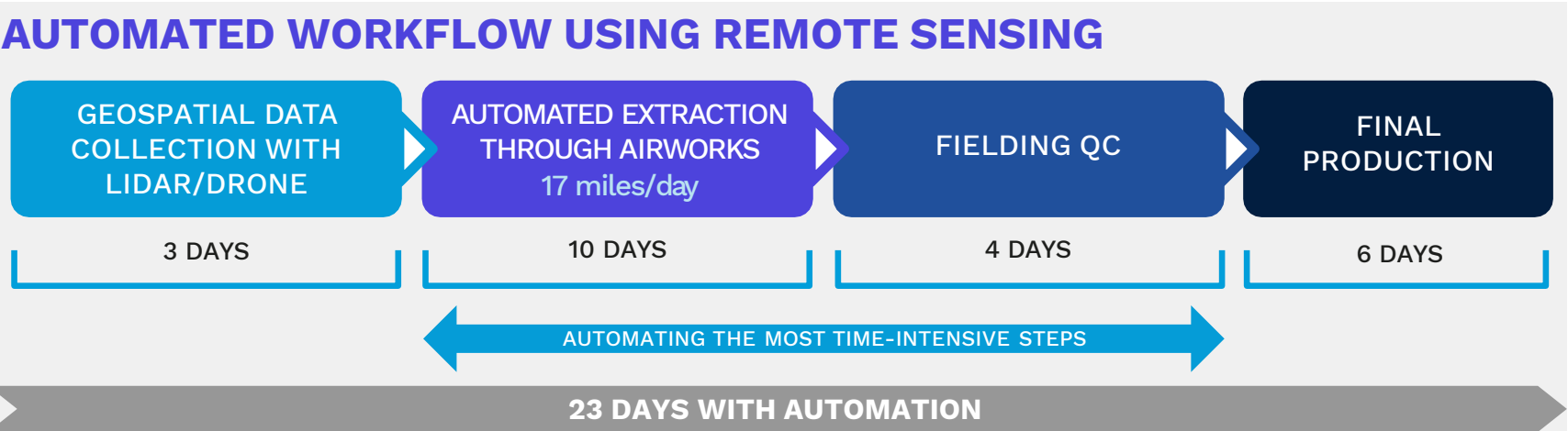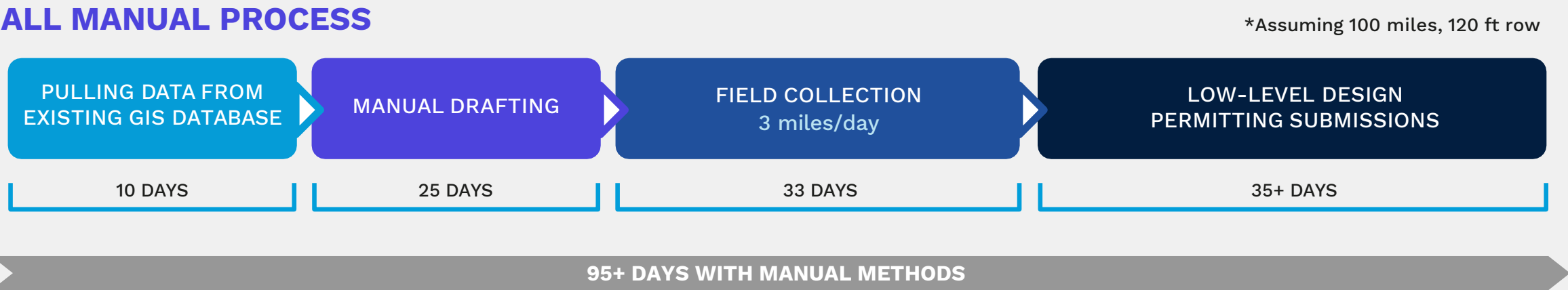What tools do you currently use to capture field data?

There is More Geospatial Data Than Ever,
But Analysis Hasn't Changed

DATA COLLECTION

NEEDS FOR DECISION MAKING

> ROW Permitting

> Construction Drawings

> Broadband Engineering

> Asset Management

> As-Builts

> Audits

> Measuring Plant Miles

MANUAL LABELING BOTTLENECK

DIGITAL MAP CAD OR GIS SHAPE FILES

100X AS MUCH DATA

Automated Field Collection

ALL MANUAL PROCESS

*Assuming 100 miles, 120 ft row

PULLING DATA FROM EXISTING GIS DATABASE	MANUAL DRAFTING	FIELD COLLECTION 3 miles/day	LOW-LEVEL DESIGN PERMITTING SUBMISSIONS
10 DAYS	25 DAYS	33 DAYS	35+ DAYS

95+ DAYS WITH MANUAL METHODS

AUTOMATED WORKFLOW USING REMOTE SENSING

GEOSPATIAL DATA COLLECTION WITH LIDAR/DRONE	AUTOMATED EXTRACTION THROUGH AIRWORKS 17 miles/day	FIELDING QC	FINAL PRODUCTION
3 DAYS	10 DAYS	4 DAYS	6 DAYS

← AUTOMATING THE MOST TIME-INTENSIVE STEPS →

23 DAYS WITH AUTOMATION

+75% time savings with automated walkout technology

USE CASE
Underground

Support For Telecommunications Companies in Underground Deliverables

USE CASES

AUTOMATED / DIGITAL WALKOUT

AS-BUILTS

BASEMAPS

MAKE READY

CONSTRUCTION DOCUMENTS / BOM

AUTOMATED CONSTRUCTION QC

LAYERS + ATTRIBUTES INCLUDE*:

Roads

Vegetation

Pavement Markings

Utility Poles + Attributes

Buildings

Utility Pole Attachments

Sidewalks

Guy Wires

Curbs

Traffic Signals

This list is not exhaustive. We offer 30+ features and can provide custom options if requested.

MasTec: 50% Faster Time to Permitting

Goal:
Underground all overhead cables to reduce risk

Site Size:
200 Miles

Capture Tech:
Nearmap data

Processing:
AirWorks

Speed: Faster ROW permits for utility undergrounding

Efficiency: Get through a massive project backlog of 5+ months

Data: Better data on 200 miles of urban overhead power that the project was undergrounding

Scalability: Accomplish all of this without overloading staff or onboarding new personnel

Result:

- Average permit completion time reduced from 4 weeks to 2.5 weeks
- The entire 5-month backlog was cleared

made possible by **Nearmap** &

USE CASE
Aerial / Above Ground

Classified Point Clouds For Your Telecom Projects

Multi-class* LiDAR Data Processing & Classification:

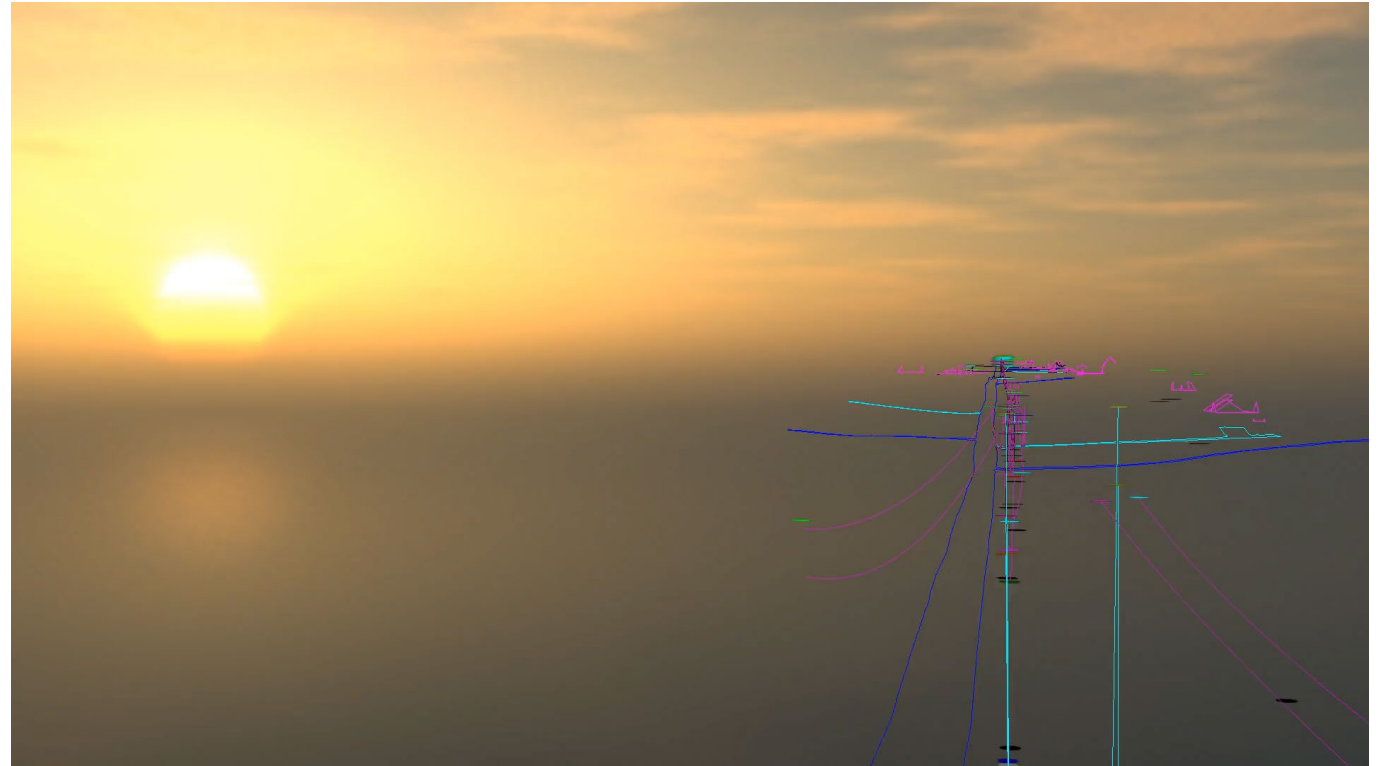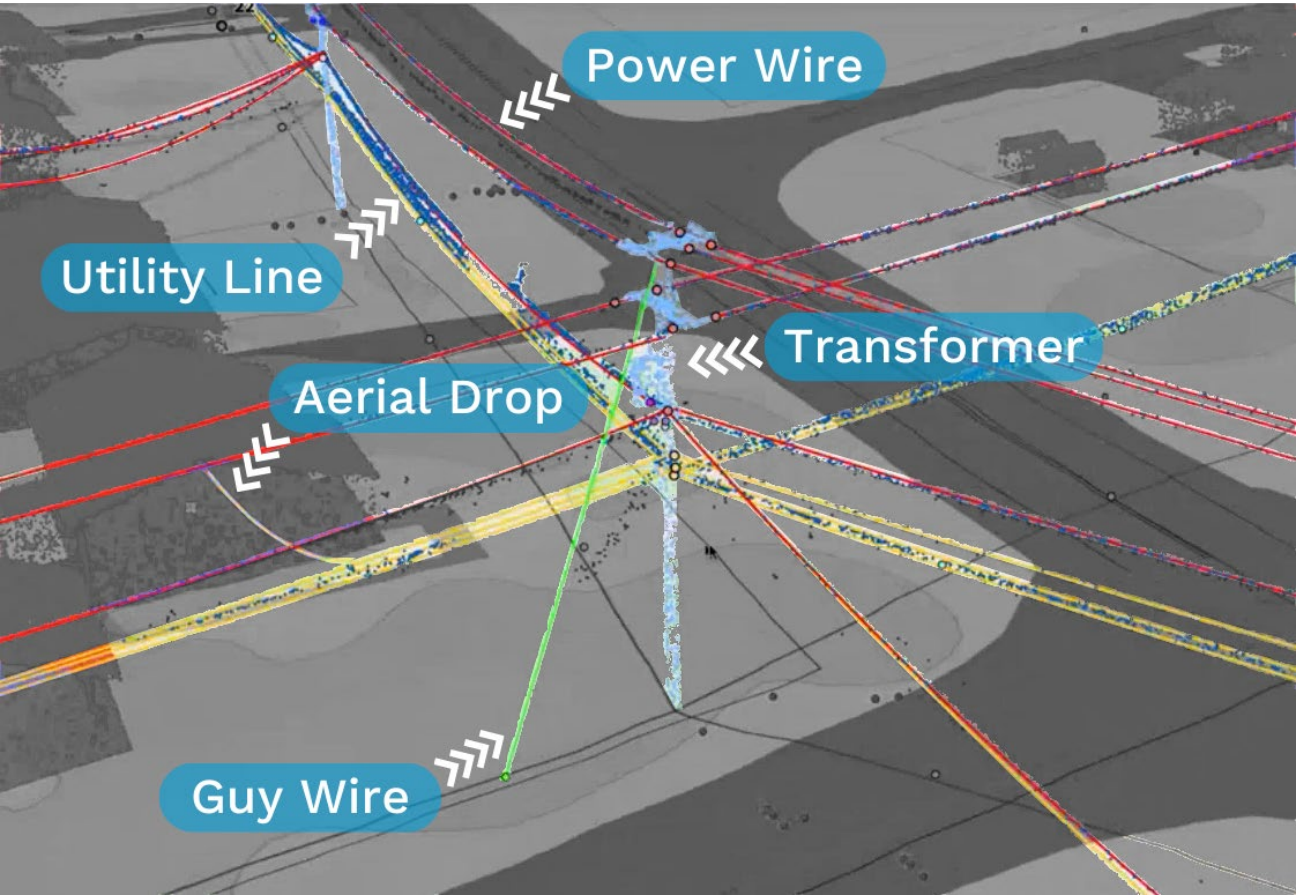|	
Ground	Vegetation
Non-ground	High Vegetation
Buildings	Water
Poles	Telecom Towers

*ASPRS LAS 1.4 Standards
List not exhaustive. More upon request.

Telecom-Specific Attributes and Deliverables

LAYER	DELIVERED AS
Utility Pole	Point
Utility Pole Details	Attributes – height, diameter top + bottom
Utility Pole Attachments	Attributes
DLP	Point – Lowest height
Power/ Comm Wires	Polyline
Guy Anchor	Point

This list is not exhaustive. We can provide 30+ layers and attributes, more upon request.

USE CASE
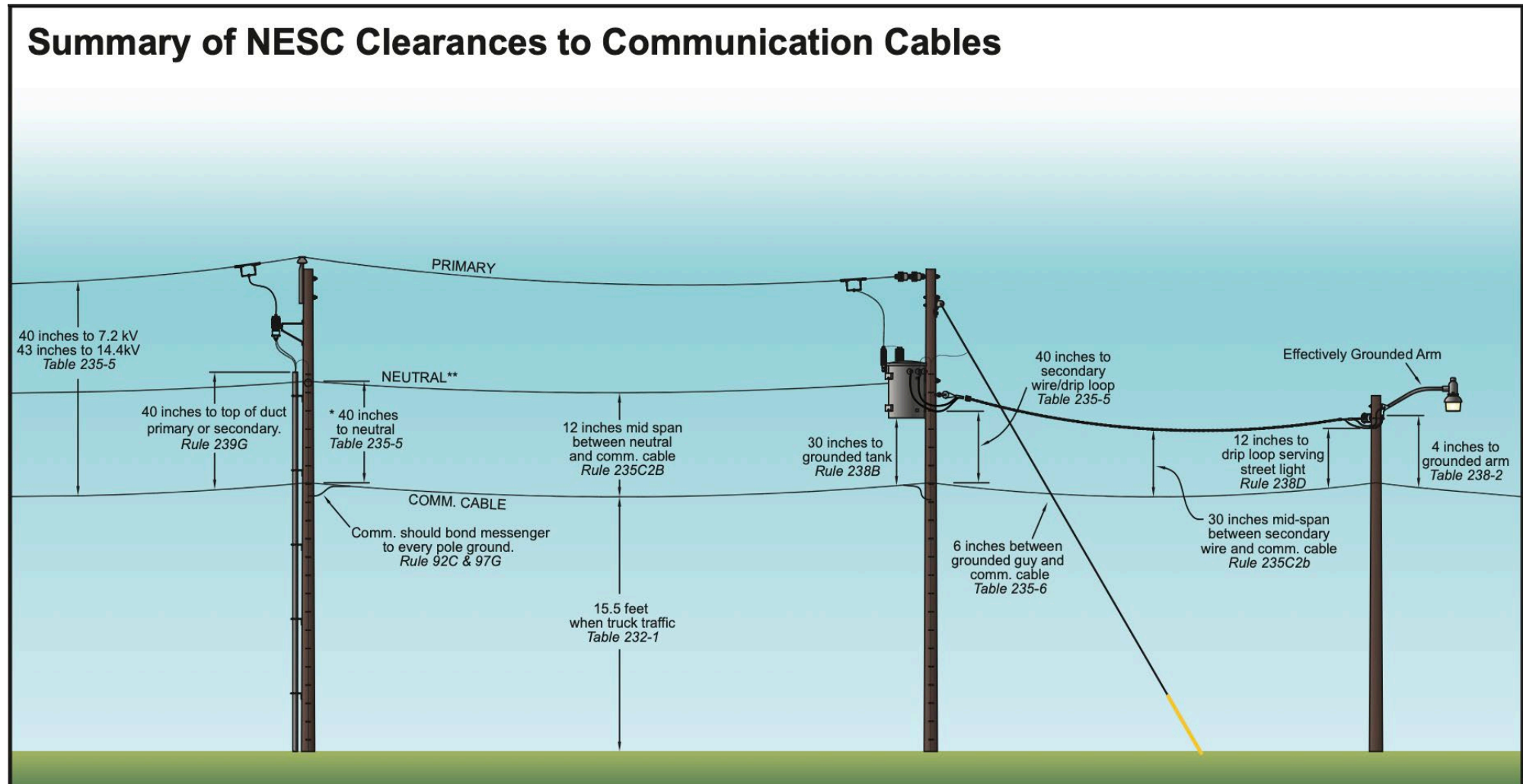# Clearance Violations

AirWorks Automated Walkout Technology

Convert gathered data into a digital twin with layered LiDAR and real-world visualizations

AirWorks Automated Walkout Services
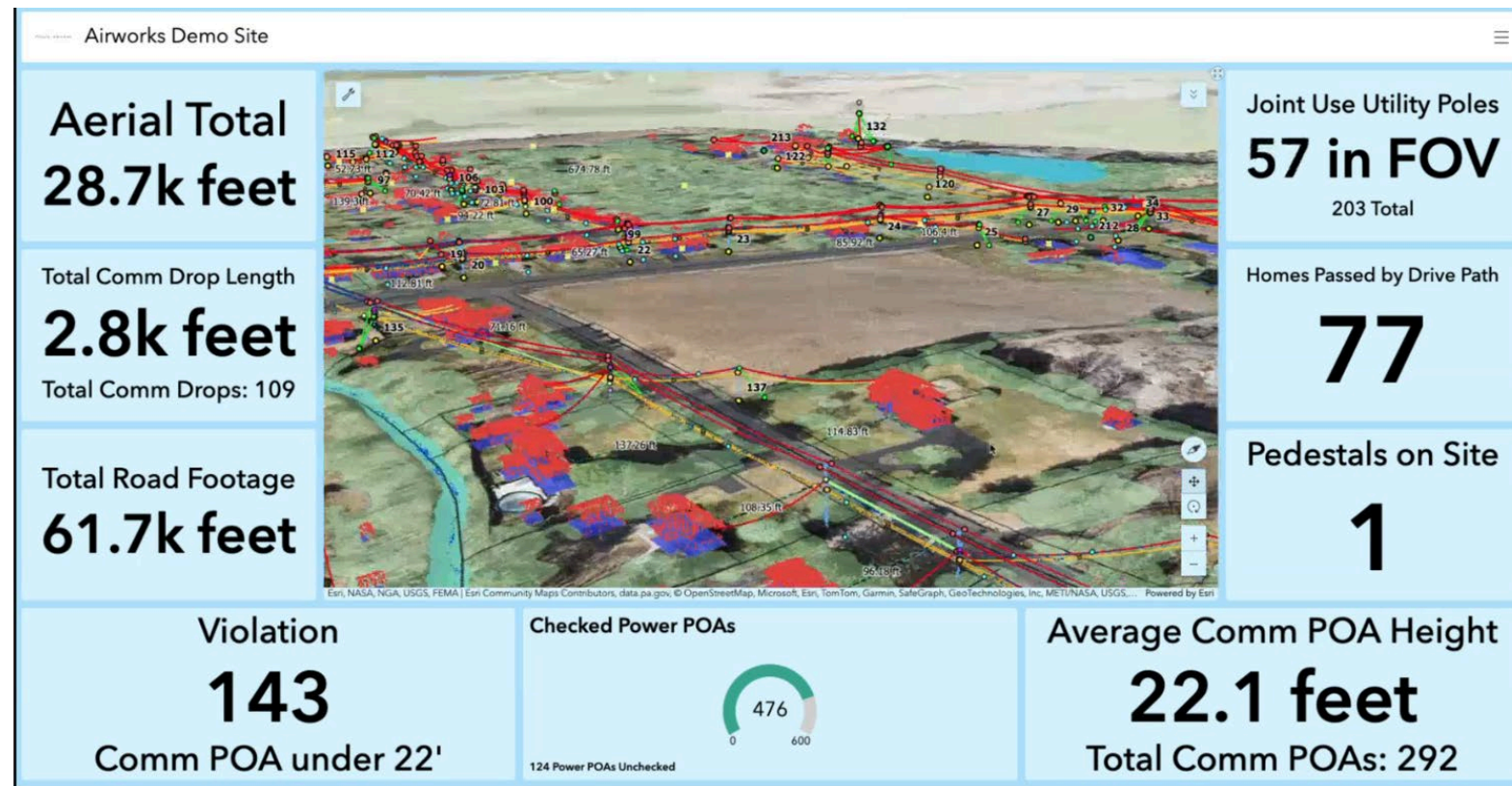

Summary of NESC Clearances to Communication Cables

AirWorks Digital Dashboard

Custom dashboards identifying critical information

AirWorks is Trusted by Industry Leaders

CIVIL ENGINEERING & DESIGN

Jacobs

CEC — Civil & Environmental Consultants, Inc.

CHA

PAPE-DAWSON ENGINEERS

POPULOUS®

BORTON LAWSON — a verdantas company

TRANSYSTEMS

TELECOM & UTILITIES

amentum

LightSett

TILSON

Kimley»Horn — Expect More. Experience Better.

MasTec

HRG — HRGreen®

PG&E

POLL

Please indicate if you would like a free consultation to learn more.

QUESTIONS

JOIN US IN PHILADELPHIA, PA

REGISTER NOW

TUESDAY, MARCH 25, 2025
The Westin Philadelphia

REGIONAL **FiberConnect**

Fiber Broadband ASSOCIATION

FIBER CONNECT 2025

June 1-4, 2025

Gaylord Opryland Resort & Convention Center

Nashville, TN

Save the Date!

2025 Regional Fiber Connect Locations

Philadelphia, Pennsylvania - March 25 | *Digital Equity*

Anchorage, Alaska - July 17 | *Fiber and Fixed Wireless*

Toronto, Canada - August 19 | *Fibre Economics*

Spokane, Washington - September 16 |*Urban & Suburban Digital Divide*

Scottsdale, Arizona - October 16 | *Tribal Broadband*

Kansas City, Missouri - November 11 | *Demand Drivers*

Contact Lucy Green (lgreen@fiberbroadband.org) for Exhibit and Sponsorship Opportunities

Volunteer Now!

We need skilled fiber optic technicians to design, deploy and troubleshoot fiber optic networks. The FBA OpTIC Path Program is our answer to this critical need — but requires volunteers like you to instruct future fiber technicians.
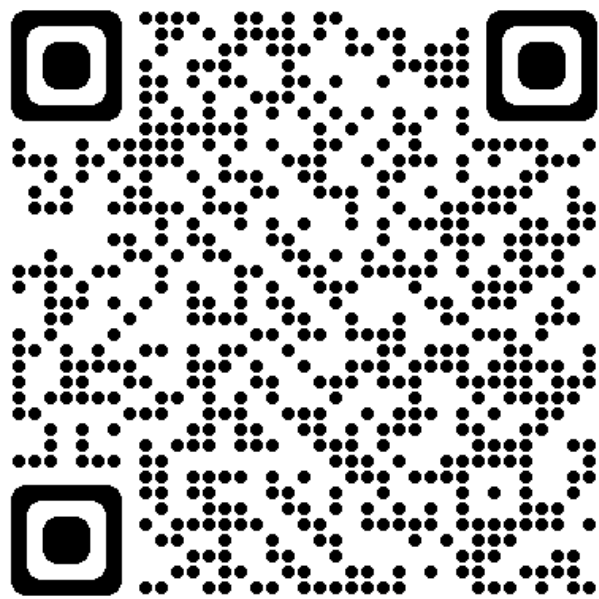
Volunteer to teach!

Upcoming FBA Webinars

Visit the FBA Website to discover & register for upcoming

webinars & events https://fiberbroadband.org/events/

Featuring **Gary Bolton - FBA President & CEO**

Wednesdays at 10 AM Eastern