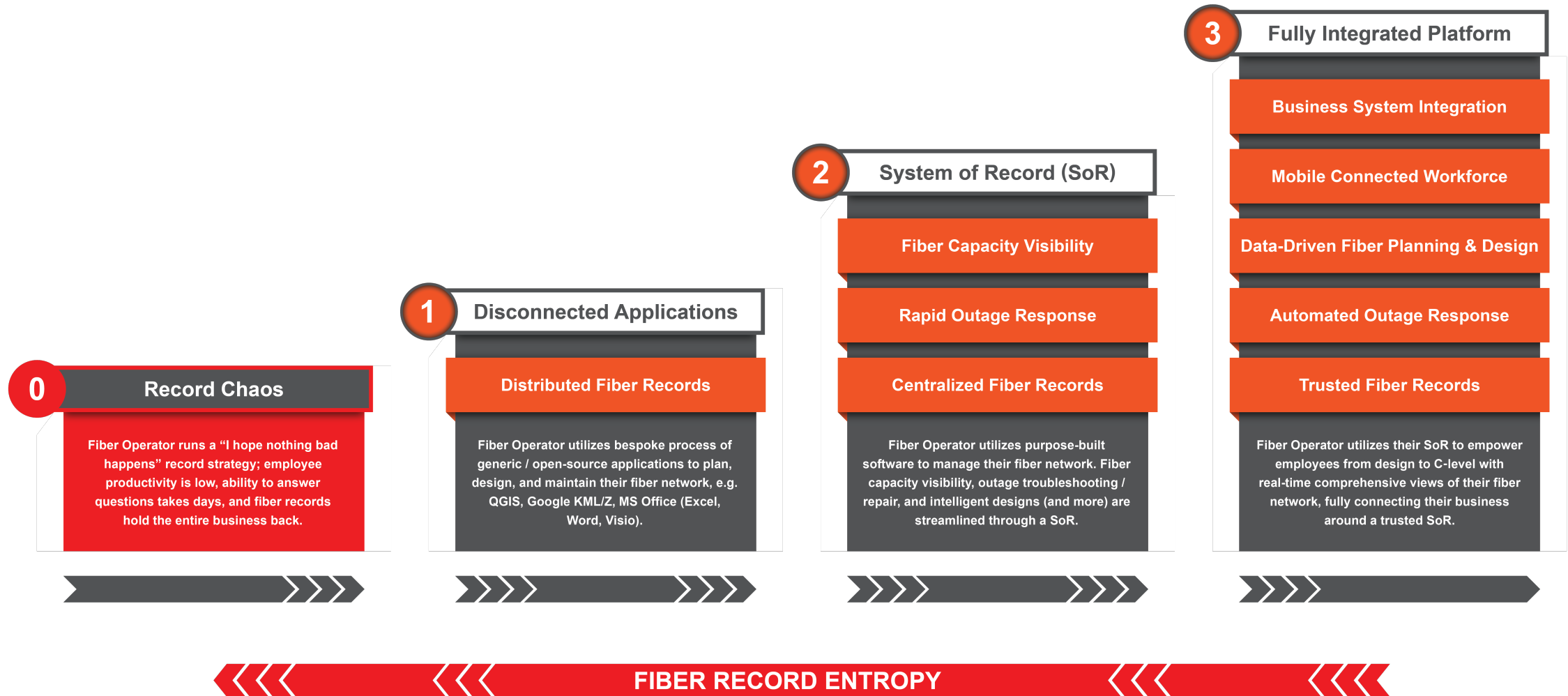


OSP INSIGHT[®]

An IQGeo business

Fiber Operator Maturity Model



Other Fiber Optic Software

- **Not Much of a Track Record**
New solutions are still adding necessary features and might not be around for the long-haul
- **Overly Complex**
Software that doesn't understand the day-to-day fiber workflow
- **Closed Platform**
Data movement is often restricted, making integrations impossible
- **Expensive & Rigid Deployment**
Many solutions are inflexible in their pricing and deployment

OSPInsight

- **Most Trusted Fiber Optic Software**
We have 25+ years building fiber inventory software and are going to be around for the long-haul
- **Ease-of-Use**
Designed by fiber operators, Learn in minutes what takes weeks with others
- **Open Platform**
Your data is your data, use our Open API, deep geospatial integrations to integrate all your business processes
- **Flexible Pricing & Deployment Options**
Pricing that works for you, with on-premise & cloud options

1

Documentation

Reliable and secure system of record for all your critical network elements

2

One Truth

Single source of truth to disseminate knowledge across your company

3

Workflow

OSPInsight was designed by field engineers for your end-to-end workflow



25+ Year Pedigree



Uncomplicated User Experience



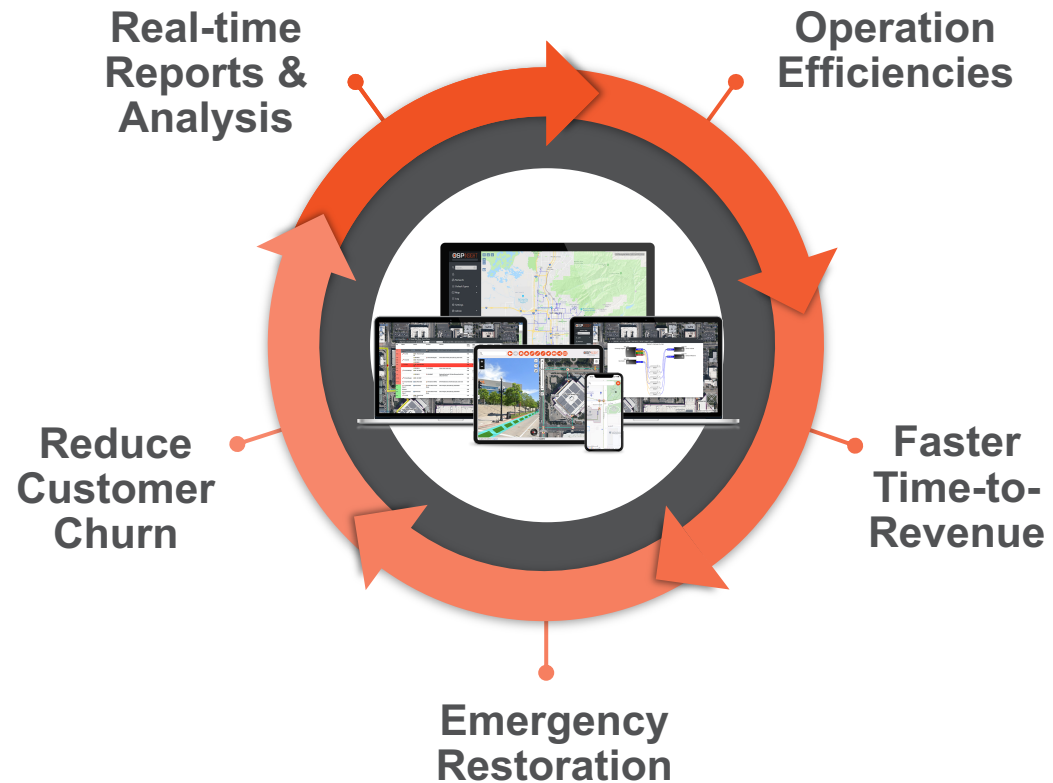
Industry Best Practices



200+ Customers



- **Plan & Design**
Design new parts of your fiber network and see those plans next to your network infrastructure.
- **Day-to-day Operational Management**
Troubleshoot service downtime, manage capacity, update network documentation in real time, and support field technicians.
- **Real-time Monitoring & Alerts**
Connect to your field and test equipment to see the health of your network in real-time and receive alerts immediately if there is an outage.
- **Sales & Customer Support**
Estimate construction costs for new builds and explore potential business opportunities.



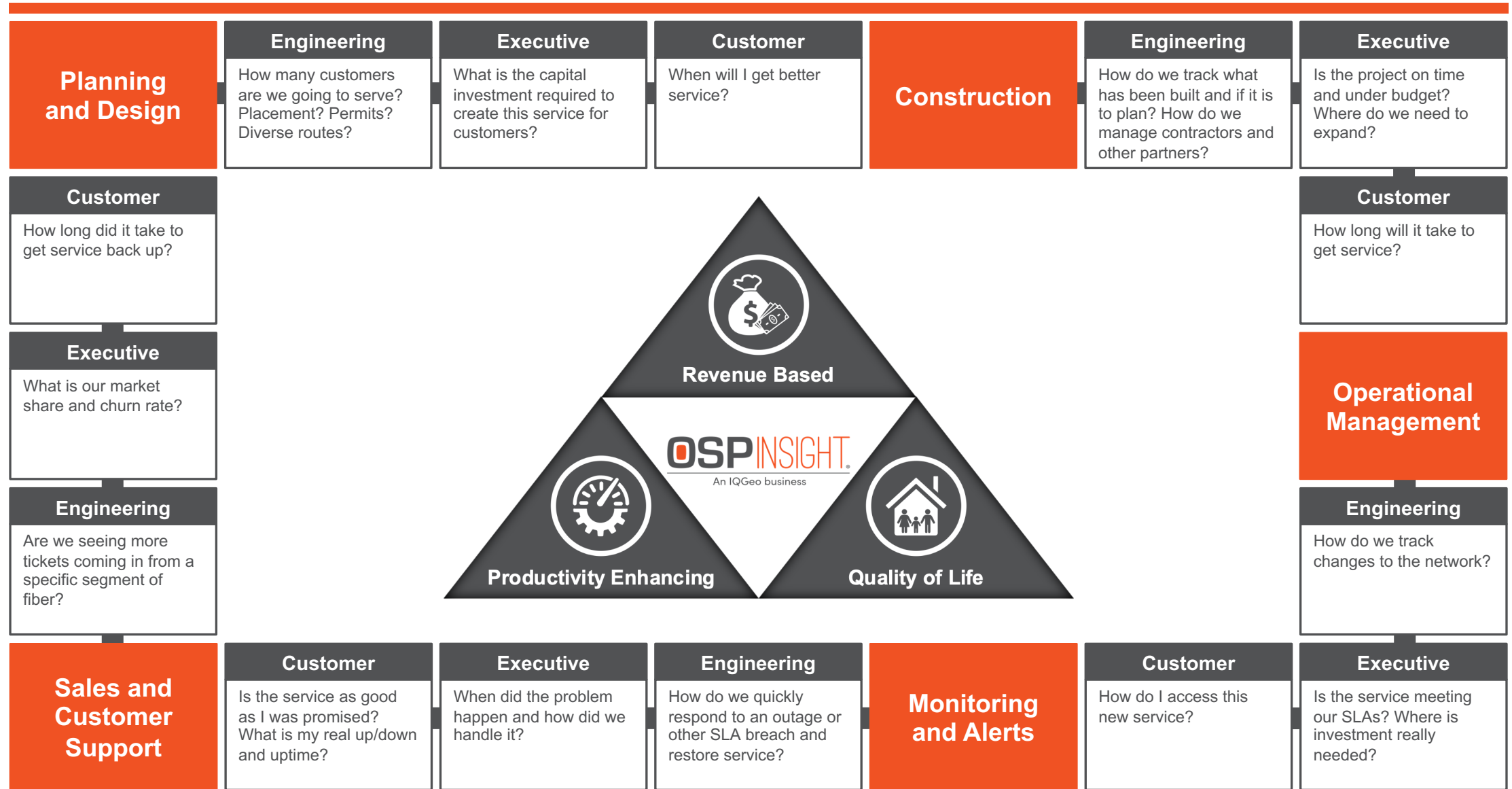
- **Operation Efficiencies**
Keep accurate records up to date with ease, reducing manual data work.
- **Faster Time-to-Revenue**
Digitize your workflow from high level design to as-built.
- **Emergency Restoration**
Find and fix affected fibers faster with proprietary fault-finding capabilities.
- **Reduce Customer Churn**
Improve service and reduce churn by relating customers to their fiber service.
- **Real-time Reports & Analysis**
Run tax, accounting, and capacity reports with a few clicks, improving decision making across your business.

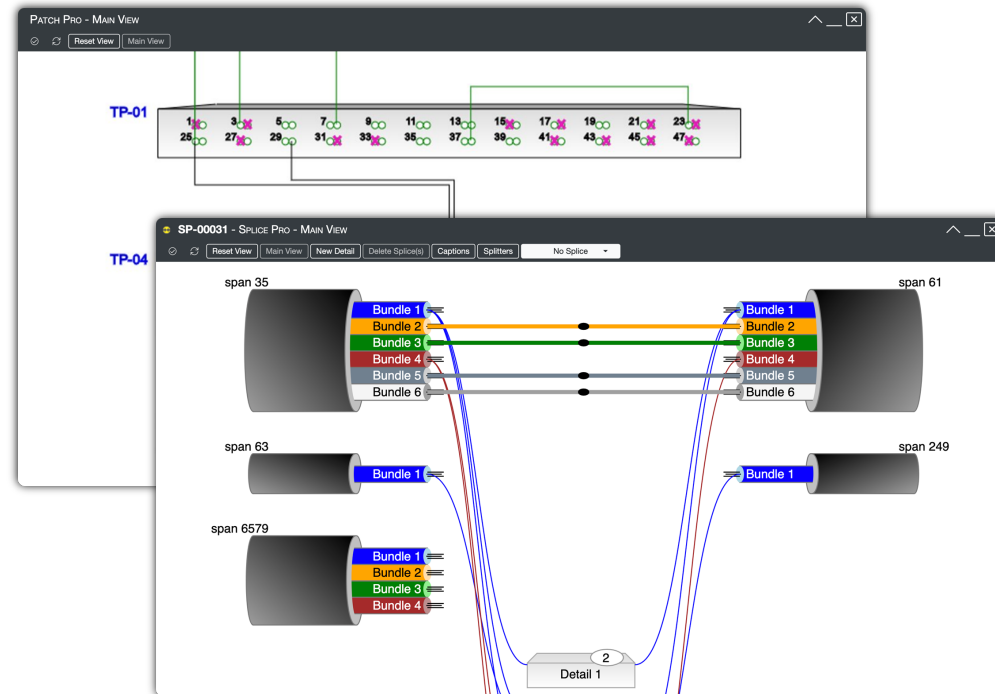
Core User Types

| | Basic User | Viewer User | Editor User |
|--|------------|-------------|-------------|
| Access to Network Map | ✓ | ✓ | ✓ |
| Bookmarks | ✓ | ✓ | ✓ |
| Geocoding | ✓ | ✓ | ✓ |
| Map Overlays | ✓ | ✓ | ✓ |
| Themes | ✓ | ✓ | ✓ |
| Bill of Materials and Work Orders | | ✓ | ✓ |
| Create and Edit Plan Lines and Plan Points | | ✓ | ✓ |
| Export to KML / CSV | | ✓ | ✓ |
| Reporting Add-On, including CSA Report | | ✓ | ✓ |
| Route Detail and Find Fault | | ✓ | ✓ |
| Splicing Reports | | ✓ | ✓ |
| Taper Report | | ✓ | ✓ |
| Utilize Visualization Tools | | ✓ | ✓ |
| View document / file relations | | | ✓ |
| Change Network Settings | | | ✓ |
| Create Network Entities on Network Map | | | ✓ |
| Create Work Orders | | | ✓ |
| Edit Network Entity Attributes | | | ✓ |
| Update Network Entities | | | ✓ |

*Features above are available both in the Web Platform and in Add-On packages

Fiber Operator Revenue Lifecycle





What is the Visualization Tools Add-On?

The Visualization Tools Add-on is a set of visualizations to manage connectivity records, including splicing, patching, and duct capacity.

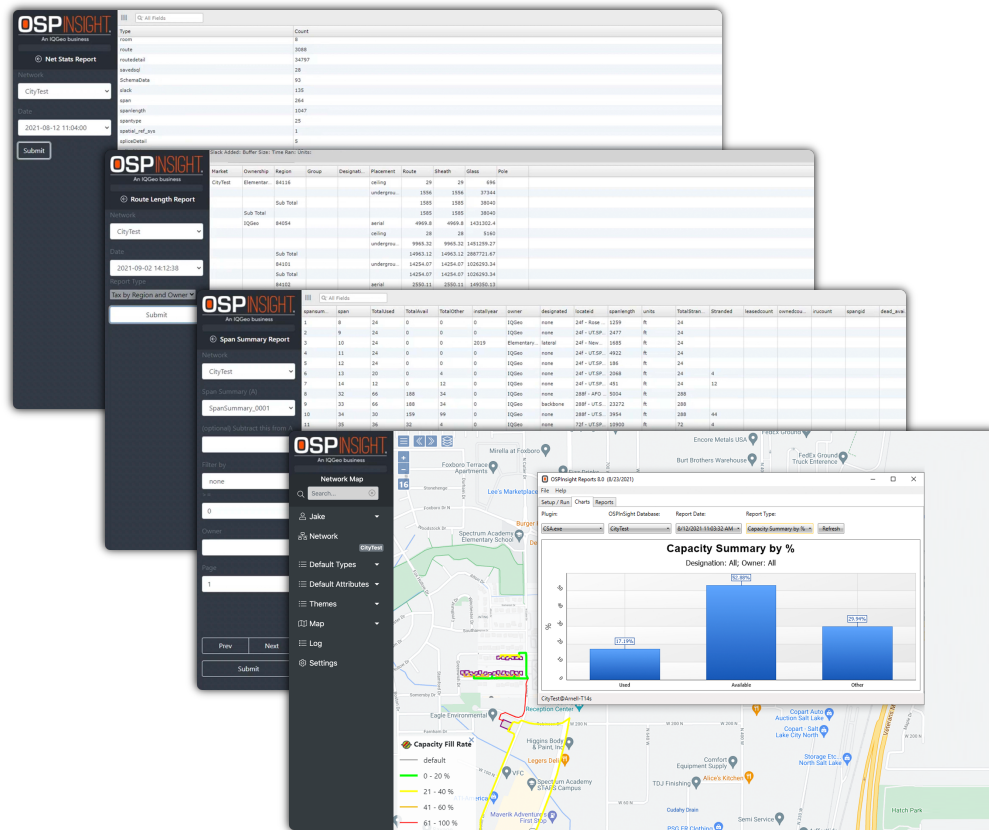
What is included?

The initial launch of the Visualization Tools Add-on includes:

- Splice Pro

Future addition to the Visualization Tools Add-On includes:

- Patch Pro (In Development)



What is the Reports Add-On?

The Reports Add-on integrates our legacy Desktop Reports application into the OSPInsight Web software. We've retooled large portions of Desktop Reports to remove third party dependencies (i.e. MapInfo, Microsoft Access) and improved our long-standing and industry-proven reporting of fiber assets.

This new Desktop Reports will now ship as a plugin application to be used in conjunction with OSPInsight Web. Desktop application users now have the ability to create and schedule new reports, serving as an admin over your reporting functionality. Once finalized, reports will be available for OSPInsight Web users to view and export.

What is included?

Out-of-the-box you will have access to several key standard reports:

- Cable Span Analysis (CSA) / Span Summary Report
- Route Endpoint Report
- Route Length Report
- Network Statistics (Net Stats) Report



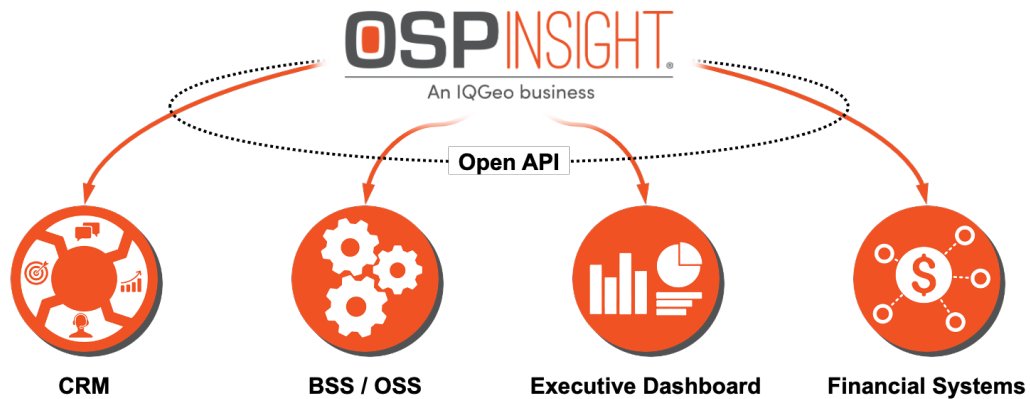
What is the Mobile Add-On?

Mobilize your OSP Insight database by utilizing IQGeo's revolutionary mobile first platform.

What is included?

The Mobile Add-on includes:

- Redline and markup
 - Plan and design your network using any device; online or offline
- Street View
 - Use Google Street View to interact with your network objects
- Picture Attachments
 - Attach pictures to network objects within your OSP Insight database



What is the Open API Add-On?

With OSPInsight, you have a full lifecycle platform in planning, designing, building, and operating a fiber network. However, we understand that in order to operate a fiber network there are other needs that you would want to sync with OSPInsight. In order to do that, we have created an open API which uses a RESTful API.

The OSPInsight Open API makes it easy for you to pull unique identifiers of your data out of OSPInsight and integrate these unique identifiers with other systems that hold your network data.

- To avoid “swivel chair” problems, OSPInsight can integrate with other business systems through the Open API Add-on
- Documentation for the API is available at api.ospinsight.com
- We’re regularly updating the Open API with more end points

Active Work Order - Aros Safety
Price List: Splice and Crack Splicing

of Network Entities: 18
of Tasks: 81

Labor Cost
Material
Total Cost

Deactivate

| AROS SAFETY - BILL OF MATERIALS (SUMMARY) | | | | | | | |
|---|--------------------|----------------------|----------|------|------------|-------------|-----------------|
| Category | Sub Category | Description | Quantity | Unit | Unit Price | Total Price | Materials Notes |
| Material | Handhole / Manhole | Tier 15 30"x48"x36" | 3.00 | Each | 690.00 | 2,070.00 | |
| Material | Conduit | 2" HDPE SDR-11 | 30.00 | Foot | 0.90 | 27.00 | |
| Material | Racks and Cabinets | 45RU 19" Mountin... | 1.00 | Each | 160.00 | 160.00 | |
| Material | Splice Enclosures | OSP 48 Splice | 3.00 | Each | 195.00 | 585.00 | |
| Material | Patch Panel | 1RU Rack Mount ... | 1.00 | Each | 70.00 | 70.00 | |
| Material | Aerial | 7/16" galvanized ... | 341.20 | ft | 0.70 | 238.84 | |
| Material | Aerial | Brace | 3.00 | Each | 24.00 | 72.00 | |
| Material | Aerial | Cross Arm | 3.00 | Each | 49.00 | 147.00 | |

| AROS SAFETY - LABOR TASK LIST (SUMMARY) | | | | | | | |
|---|-----------------------|------------------------|------------------------|-----------------------|------------|------------------|-----------------|
| Category | Sub Category | Description | Quantity | Unit | Unit Price | Total Price | Materials Notes |
| Material | Aerial | Hourly Labor | All | 1 Man Crew - Aeri... | 4.00 | 125.00 | 500.00 |
| Material | Underground | Place Remove Res... | 3.00 | Each | 250.00 | 750.00 | |
| Material | Fiber Optic | Hourly Labor | All | 2 Man Crew - UG ... | 18.00 | 215.00 | 3,870.00 |
| Material | Conduit | Building Entry | Core | Core Foundation | 1.00 | 350.00 | 350.00 |
| Material | Conduit | Building Entry | Core | Core Floor | 1.00 | 275.00 | 275.00 |
| Material | Conduit | Building Entry | Core | Xray Floor or Fou... | 1.00 | 650.00 | 650.00 |
| Material | Conduit | Building Entry | MPOE/CPE Civil | Place FTP, Rack in... | 1.00 | 235.00 | 235.00 |
| Material | Conduit | Building Entry | Place Cable | Pull Cable, Innerd... | 30.00 | 1.25 | 37.50 |
| Material | Conduit | Building Entry | Infrastructure, Ris... | Place 2" EMT (Buil... | 30.00 | 9.63 | 288.90 |
| Material | Conduit | Building Entry | Intercept Conduit | WYE Cast 2" | 1.00 | 266.25 | 266.25 |
| Material | Underground | Directional Bore | Directional Bore ... | 426.51 | 18.00 | 7,677.17 | |
| Material | Underground | Directional Bore | Directional Bore ... | 147.64 | 15.00 | 2,214.57 | |
| Material | Fiber Splice and T... | Miscellaneous | Ring cut & enclos... | 3.00 | 360.00 | 1,080.00 | |
| Material | Fiber Splice and T... | Miscellaneous | Setup and Tear d... | 4.00 | 170.00 | 680.00 | |
| Material | Fiber Splice and T... | Fiber Splicing (Per... | 2 - 12 splices | 18.00 | 37.50 | 675.00 | |
| Material | Fiber Splice and T... | OTDR Testing | 1 - 12 traces | 6.00 | 4.50 | 27.00 | |
| Material | Fiber Splice and T... | Power Meter Testi... | 1 - 12 fibers | 6.00 | 4.50 | 27.00 | |
| Material | Fiber Splice and T... | Miscellaneous | Enclosure install | 1.00 | 300.00 | 300.00 | |
| Total Costs | | | | | | 22,169.55 | |

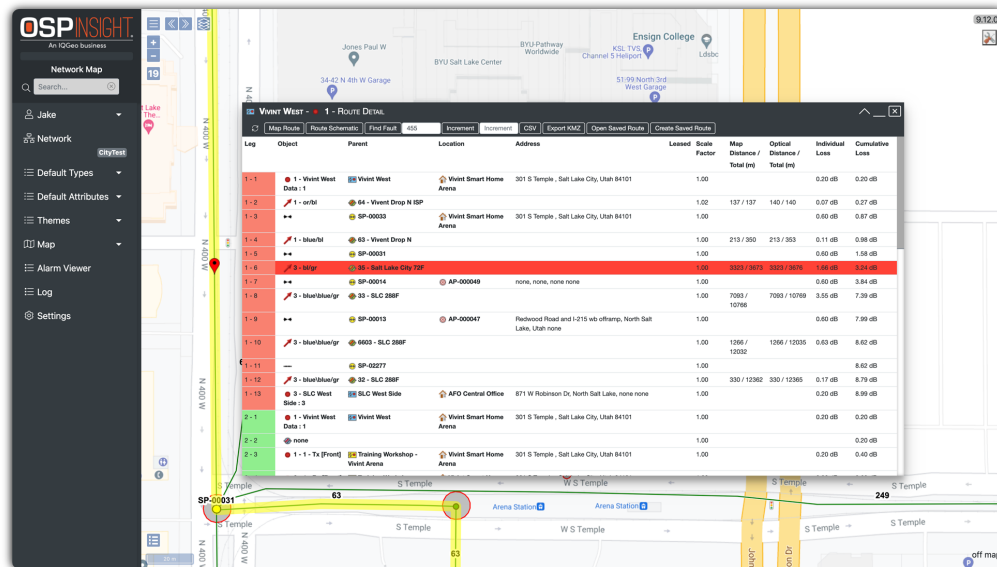
What is the Bill of Materials Add-On?

The Bill of Materials Add-On provides a new set of features for quick cost estimation during the fiber network design process..

What is included?

The Bill of Materials Add-on includes:

- Active Work Order
- Bill of Materials Summary Table
- Labor Task List
- Price Lists
- Global Tasks



What is the Alarm Monitoring Add-On?

The Alarm Monitoring Add-On can be used to identify the location of a network fault (break / degradation) an OSP Insight technician can put those measurements into the OSP Insight Find Fault Tool and find exact locations based on the information that the user has added to their database

Benefits of the Alarm Monitoring Add-On:

- Brings visibility of Remote Fiber Test System across an organization
- Layer 1 active monitoring
- Remove complexity
- Reduce time to provisioning
- Build quality assurances
- Field Testing – Reduce: Time to repair, truck rolls

The screenshot shows a web application window titled "TAPER REPORT FOR SPAN 64". It features a table with columns for #, End Point, Parent, Dir, Leased Status, Status, Priority, Users, Location, Address, and Route. The table lists various fiber strands and their utilization details.

| # | End Point | Parent | Dir | Leased Status | Status | Priority | Users | Location | Address | Route |
|---|--------------------------|----------------------------------|-----|---------------|--------|----------|-------------------|-------------------------|---|-------------------|
| 1 | 3 - SLC West Side : 3 | SLC West Side | ▶ | ▶ | Used | medium | Vivint Smart Home | AFO Central Office | 871 W Robinson Dr, North Salt Lake, none none | Vivint Smart Data |
| | 1 - Vivint West Data : 1 | Vivint West | ▶ | ▶ | Used | medium | Vivint Smart Home | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |
| | 1 - 1 - Tx [Front] | Training Workshop - Vivint Arena | ▶ | ▶ | | | | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |
| | 2 - 1 - Rx [Front] | Training Workshop - Vivint Arena | ▶ | ▶ | | | | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |
| | 1 - Vivint East Data : 1 | Vivint East | ▶ | ▶ | Used | medium | Vivint Smart Home | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |
| | 3 - SLC East Side : 3 | SLC East Side | ▶ | ▶ | Used | medium | Vivint Smart Home | AFO Central Office | 871 W Robinson Dr, North Salt Lake, none none | Vivint Smart Data |
| 2 | 4 - SLC West Side : 4 | SLC West Side | ▶ | ▶ | Used | medium | Vivint Smart Home | AFO Central Office | 871 W Robinson Dr, North Salt Lake, none none | Vivint Smart Data |
| | 2 - Vivint West Data : 2 | Vivint West | ▶ | ▶ | Used | medium | Vivint Smart Home | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |
| | 3 - 2 - Tx [Front] | Training Workshop - Vivint Arena | ▶ | ▶ | | | | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |
| | 4 - 2 - Rx [Front] | Training Workshop - Vivint Arena | ▶ | ▶ | | | | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |
| | 2 - Vivint East Data : 2 | Vivint East | ▶ | ▶ | Used | medium | Vivint Smart Home | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |
| | 4 - SLC East Side : 4 | SLC East Side | ▶ | ▶ | Used | medium | Vivint Smart Home | AFO Central Office | 871 W Robinson Dr, North Salt Lake, none none | Vivint Smart Data |
| 3 | 5 - SLC West Side : 5 | SLC West Side | ▶ | ▶ | Used | medium | Vivint Smart Home | AFO Central Office | 871 W Robinson Dr, North Salt Lake, none none | Vivint Smart Data |
| | 3 - Vivint West Control | Vivint West | ▶ | ▶ | Used | medium | Vivint Smart Home | Vivint Smart Home | 301 S Temple , Salt Lake City, Utah 84101 | Vivint Smart Data |

What is a Taper Report?

One of the most widely used reports in fiber network management is the Taper Report which provides a detailed view of the utilization of individual fibers in a specific cable.

These reports are valuable for many reasons and are essential to successful network management and growth as they support different kinds of operational functions

Business Development Personnel

Taper Reports can be used by business development personnel to understand whether they have capacity within a cable to support new clients or leads.

Network Engineers

Network engineers can use Taper Reports to understand which clients may be affected by faults or breaks in lit fiber strands, allowing them to disseminate information appropriately.

| Leg | Object | Parent | Location | Address | Leased Scale Factor | Map Distance / Total (m) | Optical Distance / Total (m) | Individual Loss | Cumulative Loss |
|------|------------------------------|----------------------------------|-------------------------|---|---------------------|--------------------------|------------------------------|-----------------|-----------------|
| 1-1 | 1 - Vivint West Data : 1 | Vivint West | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | 1.00 | | | 0.20 dB | 0.20 dB |
| 1-2 | 1 - or/bl | 64 - Vivint Drop N ISP | | | 1.02 | 137 / 137 | 140 / 140 | 0.07 dB | 0.27 dB |
| 1-3 | 1 - SP-00033 | SP-00033 | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | 1.00 | | | 0.60 dB | 0.87 dB |
| 1-4 | 1 - blue/bl | 63 - Vivint Drop N | | | 1.00 | 213 / 350 | 213 / 353 | 0.11 dB | 0.98 dB |
| 1-5 | 1 - SP-00031 | SP-00031 | | | 1.00 | | | 0.60 dB | 1.58 dB |
| 1-6 | 1 - 3 - bl/gr | 35 - Salt Lake City 72F | | | 1.00 | 3323 / 3673 | 3323 / 3676 | 1.66 dB | 3.24 dB |
| 1-7 | 1 - SP-00014 | SP-00014 | AP-000049 | none, none, none none | 1.00 | | | 0.60 dB | 3.84 dB |
| 1-8 | 1 - 3 - blue/blue/gr | 33 - SLC 288F | | | 1.00 | 7093 / 10766 | 7093 / 10769 | 3.55 dB | 7.39 dB |
| 1-9 | 1 - SP-00013 | SP-00013 | AP-000047 | Redwood Road and I-215 wb offramp, North Salt Lake, Utah none | 1.00 | | | 0.60 dB | 7.99 dB |
| 1-10 | 1 - 3 - blue/blue/gr | 6603 - SLC 288F | | | 1.00 | 1266 / 12032 | 1266 / 12035 | 0.63 dB | 8.62 dB |
| 1-11 | 1 - SP-02277 | SP-02277 | | | 1.00 | | | | 8.62 dB |
| 1-12 | 1 - 3 - blue/blue/gr | 32 - SLC 288F | | | 1.00 | 330 / 12362 | 330 / 12365 | 0.17 dB | 8.79 dB |
| 1-13 | 1 - SLC West Side : 3 | SLC West Side | AFO Central Office | 871 W Robinson Dr, North Salt Lake, none none | 1.00 | | | 0.20 dB | 8.99 dB |
| 2-1 | 2 - 1 - Vivint West Data : 1 | Vivint West | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | 1.00 | | | 0.20 dB | 0.20 dB |
| 2-2 | 2 - none | none | | | 1.00 | | | | 0.20 dB |
| 2-3 | 2 - 1 - Tx [Front] | Training Workshop - Vivint Arena | Vivint Smart Home Arena | 301 S Temple , Salt Lake City, Utah 84101 | 1.00 | | | 0.20 dB | 0.40 dB |

What is a Route Detail?

The Route Detail provides essential data that includes fiber endpoints, distances between panels, fiber status, fiber priority, and cable locations. A Route Detail is used to find each object along the route to verify route accuracy.

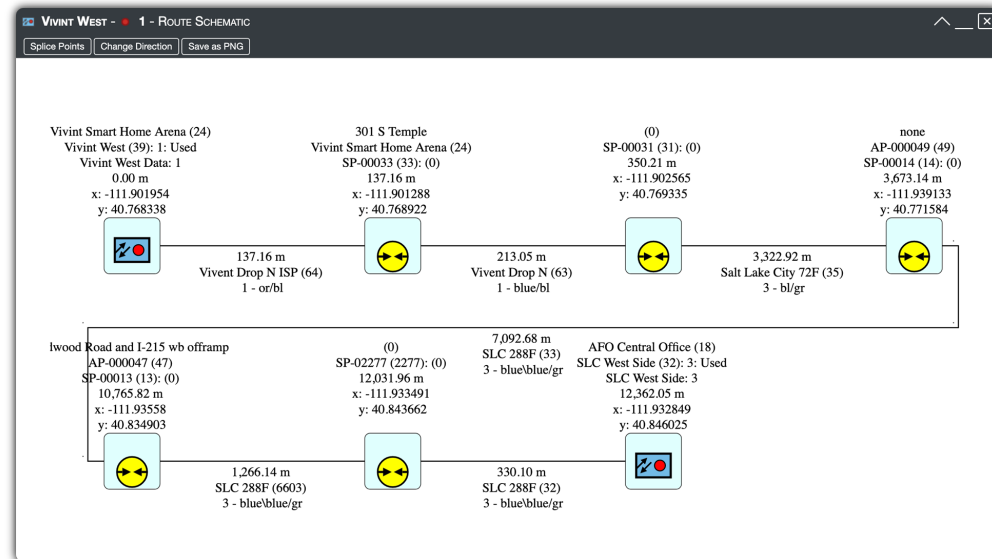
The Route Detail provides you with OSP Insight's Find Fault tool which can pinpoint the location of breaks along fiber optic cables with remarkable precision using inputs from optical time-domain reflectometers (OTDRs).

Network Operators

Network Operators use OSP Insight's Find Fault tool to address cable breaks and get clients back up and running on your network with little interruption.

Network Technicians

Network Technicians can diagnose where and why signal attenuation may be occurring along a cable. Signals may need to be boosted where long distances separate endpoints.



What is a Route Schematic?

The Route Schematic provides essential data that includes fiber endpoints, distances between network objects, as well as splice point and termination point information.

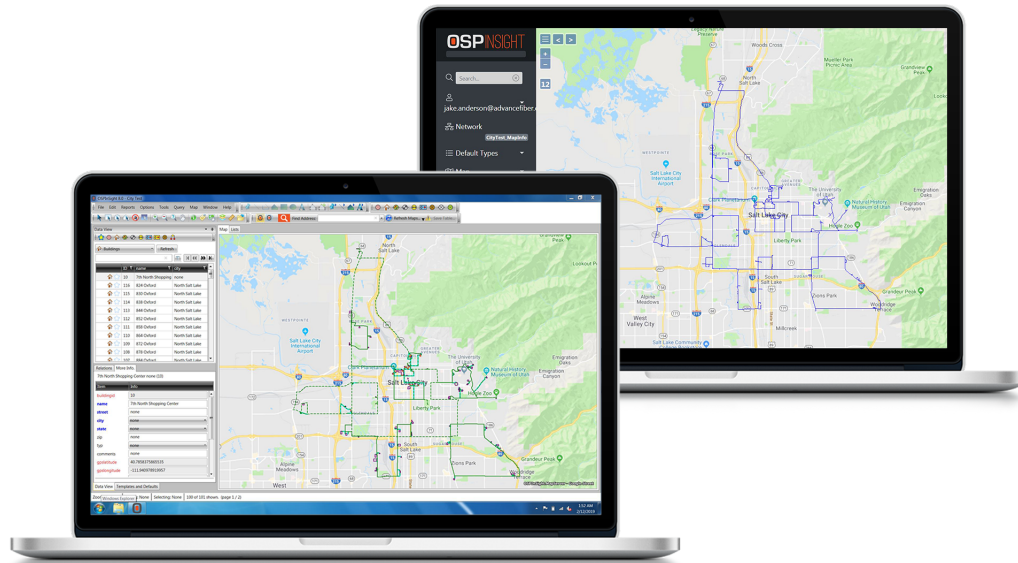
The Route Schematic is used as a graphical resource to quickly view and share your fiber route to verify route accuracy, and efficiency.

Network Engineers

Network Engineers have the locations of all endpoints along a cable, the distances between them, and panel assignments, making it so they can quickly and easily verify route accuracy and efficiency.

Network Technicians

Network Technicians can diagnose where and why signal attenuation may be occurring along a cable. Signals may need to be boosted at locations where long distances separate endpoints.



OSP Insight is deeply integrated with the industry's leading GIS providers, allowing you to pull your fiber network data into the rest of your geospatial processes.

Real-time Integration with Industry Leading GIS

- MapInfo
- Open Source



OSPInsight uses the latest web technologies and APIs allowing you to seamlessly sync with the other systems in your business.

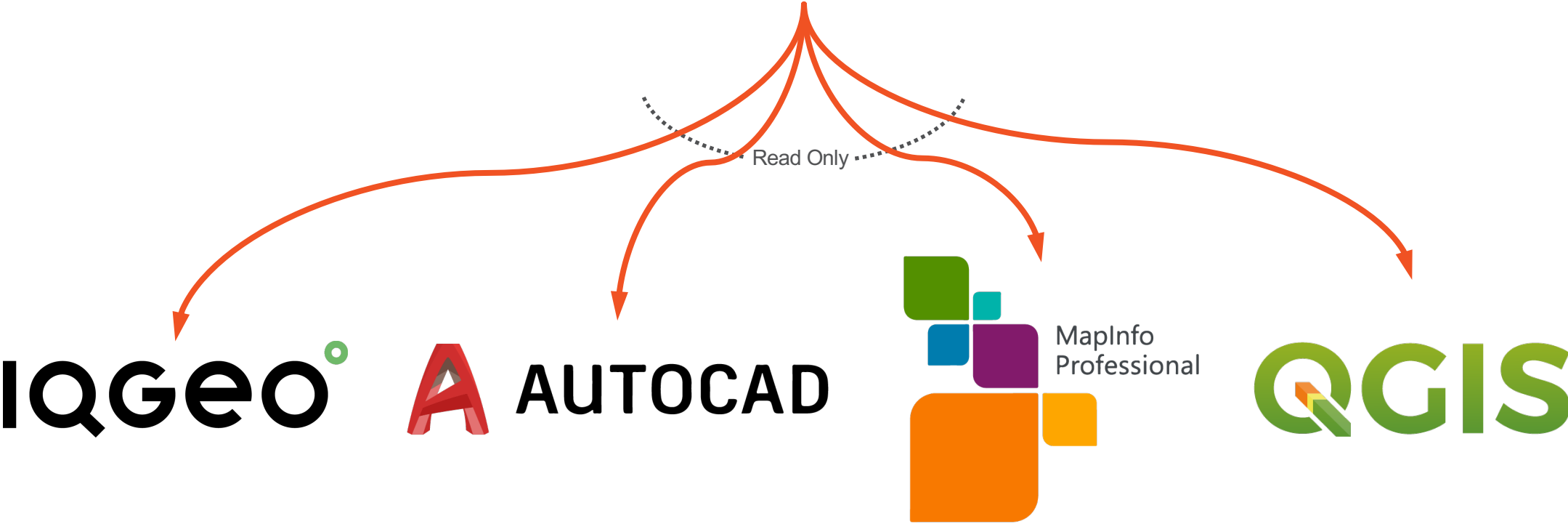
Automated Design – Biarri, Comsof

Provisioning – Netcracker

Workforce Tracker – Service Now

CRM and Sales – Salesforce

OSP INSIGHT. OGC Compliant Data Store



Onboarding Plan

| Week 0 Orientation Email | Week 1 Admin Kickoff | Week 2 Core User Kickoff | Week 3 Editor Deep Dive | Week 4 Data Conversion Kickoff | Week 5 – Week 12 |
|--------------------------------|--|--|--|--|------------------|
| Primary Purpose | | | | | |
| User Setup | Data Conversion Planning | Orientation and Early Training | “Three Building Test” | Finalize Data Conversion Plan and Timeline | |
| Customer Roles | | | | | |
| Fiber Records Lead IT / DBA | Fiber Records Lead IT / DBA All Editor Users | Fiber Records Lead All Editor Users All Viewer Users | Fiber Records Lead All Editor Users | Fiber Records Lead All Editor Users Data Owners (IT) | |

Executing the Data Conversion
 Dependencies: (1) Size of Network (2) Quality of Data (3) Format of Data (4) Who is Responsible for Work?



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Cody Espinoza
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Discovery Call

Platform Demonstration

Evaluation Plan and Stakeholders

Execute Evaluation Plan

Procurement and Paperwork

Implementation Plan

| Week 0 | Week 1 | Week 2 | Week 3 | Week 4 |
|--------------------------------|---|---|--|--|
| Orientation Email | Admin Kickoff | Core User Kickoff | Editor Deep Dive | Data Conversion Kickoff |
| Primary Purpose | | | | |
| User Setup | Data Conversion Planning | Orientation and Early Training | "House Building Test" | Finalize Data Conversion Plan and Timeline |
| Customer Roles | | | | |
| Filter Records Lead / IT / DBA | Filter Records Lead / IT / DBA / All Editor Users | Filter Records Lead / All Editor Users / All Viewer Users | Filter Records Lead / All Editor Users | Filter Records Lead / All Editor Users / Data Owners (D) |

Executing the Data Conversion
Dependencies: (1) Size of Network (2) Quality of Data (3) Format of Data (4) Who is Responsible for Work?

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