



## **HetConnect™ Solutions**

Heterogeneous Networks

DAS | Small Cell | Macro | Wi-Fi



# Seizing the HetNet Opportunity

AFL's roots are in communications and fiber optics. We started manufacturing operations in 1984 with one product, optical ground wire. Since then we've added thousands of fiber-based products as well as turnkey service solutions for our customers. Our services business now includes over 1,600 engineers, technicians, and project managers across the U.S. and Canada. And AFL's yearly revenues now approach nearly \$1B.

This kind of success doesn't happen by accident. It comes from evaluating the market and making the right moves at the right time. At AFL, we know that the wireless market, particularly the HetNet segment, is a tremendous opportunity. We also know when to shift gears to aggressively pursue an opportunity that makes sense. With that, we're galvanizing our internal resources to make this effort successful.

Why is AFL positioned to take advantage of this opportunity?

- **Long-standing relationships with major carriers in North America include AT&T, Verizon and TELUS as well as enterprise end-users, Wells Fargo and OMNI Hotels and Resorts**
- **Partnerships with major equipment OEM's that are driving HetNet growth**
- **Market leading manufacturer of end to end fiber optic infrastructure**
- **Proven services businesses with HetNet experience and in-house design, build, monitor and support capability**



**"We're committed to deploying more than 40,000 small cells by the end of 2015 as part of Project Velocity IP (VIP). Why? Two reasons: the continued surge in mobile data demand and the finite nature of spectrum resources. We're turning to small cell technology as a key solution to provide customers with the highest quality service."**

John Donovan, AT&T, November 2013





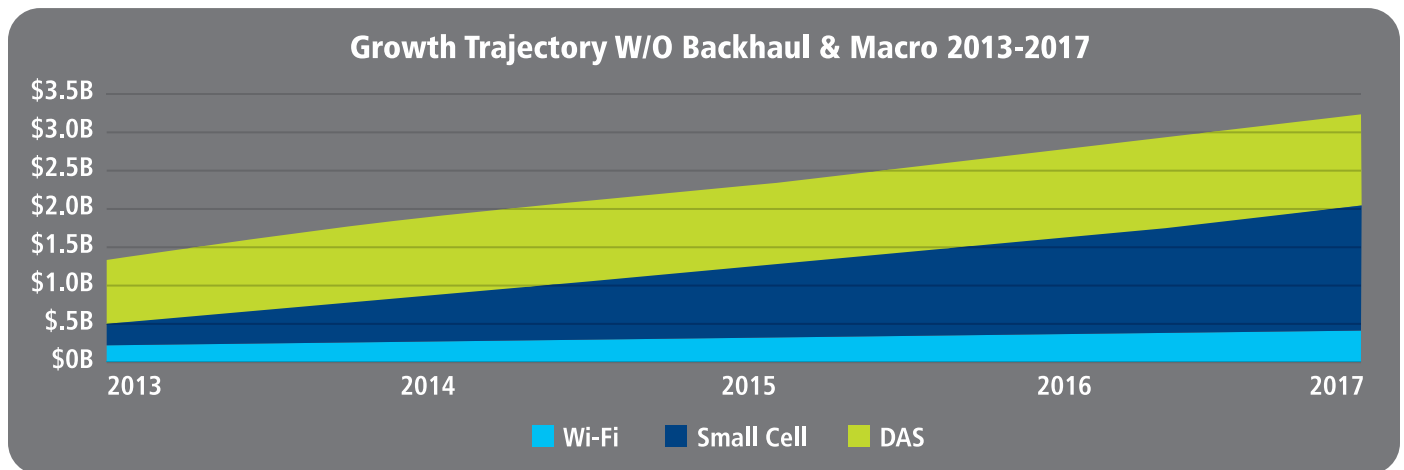
# Wireless Economics— Demand is Exceeding Supply

The story behind the staggering growth in wireless is really one of simple supply and demand. Smart devices are remarkably prolific now, and these devices rely on streaming data that is both readily available and reliable. Looking forward, the appetite for huge amounts of data keeps building and by 2020, experts predict a six-fold increase in data traffic worldwide.

With our roots in communications and fiber optics, AFL saw this demand as an opportunity for rapid growth. We aren't just jumping into a hot industry. We've done our homework and learned that this demand for data falls largely on wireless infrastructures that can't meet 4G/LTE demands. The architecture built over the last decade was not designed to handle today's bandwidth needs. Backhaul, accessibility and capacity are all constrained.

With our research, we know that providers around the world are scrambling to meet the "supply" side of the story. Smaller, more agile, more efficient HetNet topologies, many optically based, will become more commonplace.

These last-mile solutions, including DAS, Small Cell and WiFi all use licensed and unlicensed spectrum to link the macrocellular network. Intelligently deployed, all are viable components of delivering more data to more people faster. AFL's market research has shown the USA and Canadian market investment in services and product areas within our capabilities is growing at a rapid pace, with an annual spend of more than \$3 billion predicted in 2017.





"Through the combination of a number of areas of Services expertise, AFL is equipped to fully support our carrier customers to efficiently deliver wireless capacity. When combined with working with our product teams and vendors, AFL is able to provide the complete HetNet integration solution. The strategy is unique and the overall combination is very exciting."

Mike Booth  
President, Network Services, AFL



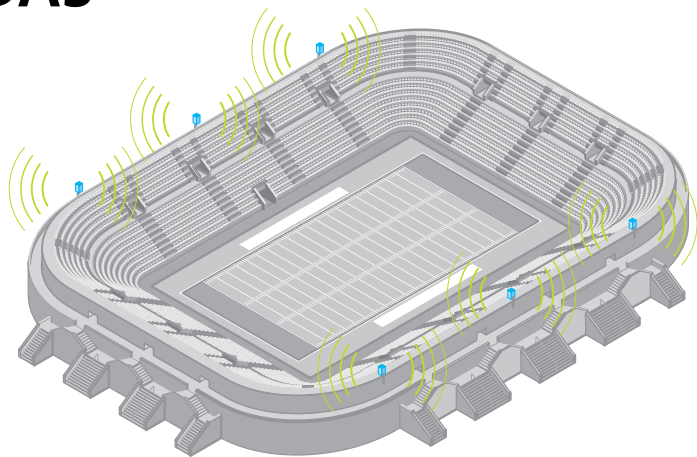
"AFL has a rich history of tailoring solutions for our customers' business and technology needs. Our experience in the design and manufacturing of customized solutions spans many years. With the forecasted growth of installations, new technologies, and our insatiable appetite for bandwidth, existing and new products for HetNet applications will be needed not only in North America, but in all regions of the world. AFL's combined experience providing both engineering services and customized product solutions enables us to provide a strong value proposition to both current and new customers."

Al Swanson  
VP and GM Optical Connectivity, AFL

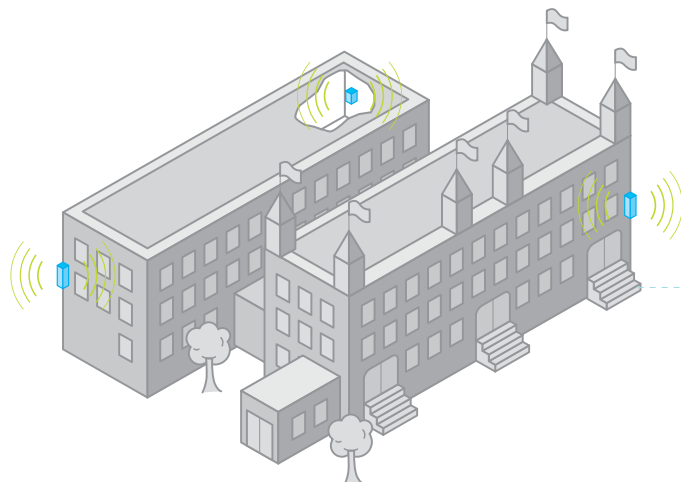


*We have the HetNet covered -*

**DAS**



**Wi-Fi**

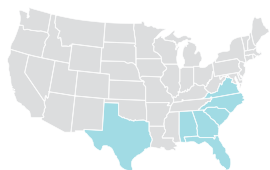


**iBWAVE design teams**

Civils and A&E

Multiple BICSI RCDD engineers

**Enterprise  
Services**



**7 STATE**  
core footprint

**8,100**  
cable projects  
per year

**Monitoring  
& Support**

**18,500**  
support tickets per year

**24x7**  
**NOC**

**Outside Plant  
Services**

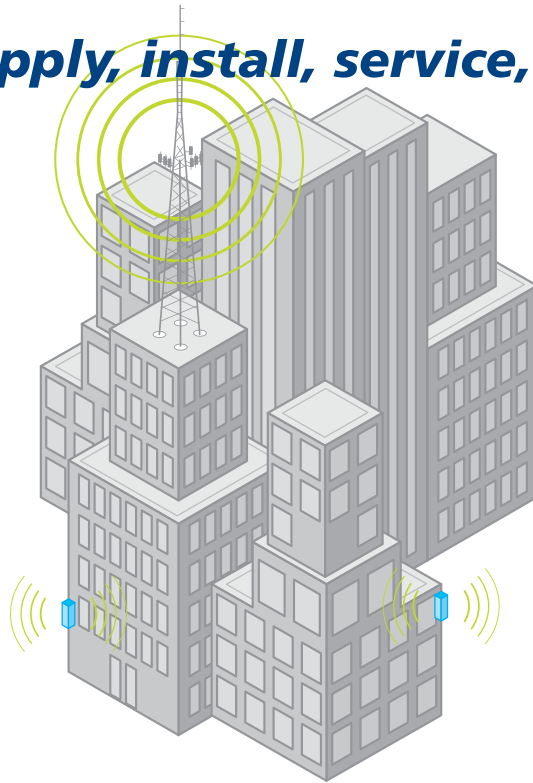
History with more than  
**2,000**  
turnkey installs

Engineered over  
**\$4B**  
in OSP projects

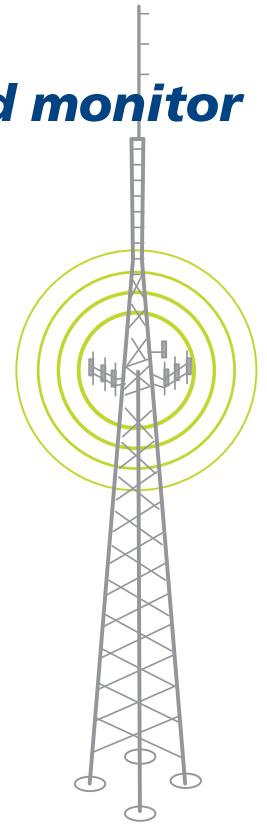


*design, supply, install, service, maintain and monitor*

**Small Cell**



**Macro**



**Fiber optic product solutions engineering**

**Turnkey / General contractor capable**

**Indoor and Outdoor solutions**

**Wireless  
Services**

**5,000+**

base station  
installs/ upgrades



**Product  
Solutions**

**2,500+**

fiber connectivity products

**30 YEARS**

Manufacturing Fiber Optic Cable

**Indoor, Outdoor and  
Harsh Environment cable**

# A Record of Growth

At AFL, we make connections possible. With 30 years of experience in the telecommunications industry, we use fiber optics to integrate voice, video and data applications into specialized solutions that keep our customers connected. Our full suite of tools allows AFL to develop integrated solutions that solve unique technology and application challenges for our customers.

AFL is proud of our history of faithfully serving our customers. Our history began in 1984 when Alcoa, the world's leading producer of primary aluminum and fabricated aluminum, and Fujikura, a global leader in fiber optic technology, formed a joint venture to supply optical ground wire for electric utility and telecommunication providers across North America.

With thousands of products and services that are in use in over 120 countries around the world, we make technology work for our customers. From optical fiber, distinctive cable technologies and connectivity products, to equipment solutions such as fusion splicers, testing and analysis equipment, we have the products our customers need. Plus, we provide engineering, installation and training services with the right technical expertise to build a fully integrated solution every single time.

In today's competitive environment, financial strength is more and more important. Our revenue topped \$900 million in 2014, and AFL will be a \$1 billion company in 2015.

AFL is now owned 100% by Fujikura, a \$6 billion company with a 128-year history of innovation and technological excellence. At AFL, not only are we growing our business organically each year, we are acquiring new companies that fit in the AFL family and provide tangible benefits to our customers. Over the last 30 years, AFL has acquired a total of 28 companies.



"At AFL, we are excited about the opportunities to provide integrated solutions to the wireless industry. Our extensive background in deploying telecommunications networks positions us to make a substantial impact. I'm personally committed to ensuring the AFL team is fully engaged in actualizing the growth potential in this sector."

Jody Gallagher  
President & CEO, AFL

A photograph of a park with a pond and a bridge. The text "AFL will be a \$1 billion company in 2014." is overlaid on the image. The image shows a man and a woman walking on a path near a pond, with a bridge in the background. The scene is lush with green trees and plants.

***AFL will be a  
\$1 billion company  
in 2014.***





# The AFL Culture

At AFL, our associates are driven, passionate and committed to making AFL successful. Our associates like being part of a team where new ideas are welcome. Our people are delivering value to our customers and our business every single day.

While we have a proven and exceptional leadership team, AFL drives decision making down into the organization. We know that the best concepts and processes come from associates on the front line.

Our more than 4,500 associates are at work making things happen for our customers. Also, when properly considered and studied, we know that taking a risk can yield tremendous rewards. At AFL, we're building and nurturing a culture where each associate is empowered to contribute.

AFL is committed to being an exemplary corporate citizen in the communities where we operate. Why? Because it's in our DNA. We have seen our commitments work. Each of us has a role in giving back. Our Community Outreach Program offers opportunities for associates to participate in a wide range of activities focused on giving back. In 2014, our 30th anniversary, AFL is giving back even more by building our own Habitat for Humanity® house. Plus, our associates around the world are participating in 30 days of services to their local communities. Through grants, associate engagement programs, environmental initiatives, sponsorships and so much more, AFL imagines communities that are strong and thriving.

The bottom line is simple. Our culture is all about one thing: enabling each associate to truly make a difference.

**\$1.5M** Community Impact  
(2006-present)

**\$330K** Community Impact  
(2013)

**1,500** Hours Volunteered  
(2013)

# AFL'S HetNet Growth Strategy

## 2 Paths for HetNet Growth

AFL's HetNet growth strategy leverages our full network services and product capabilities. The ultimate goal is to enable an outstanding customer experience to the end user over our customer's wireline and wireless networks.

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### 1 HetNet Services

AFL Network Services will continue to invest in our people and acquire new talent in order to provide our HetNet customers with best in class design and integration services.

AFL Network Services is aligned with all leading HetNet OEMs, including CommScope, Corning, TE, SoLid, TEKO and ADRF.

#### **Target Customers:**

Carriers, Neutral Host and Large Enterprise End Users

#### **AFL's Value:**

In-House Design, Build, Monitor and Support Resources, Super Regional Footprint and TI 9000 Quality

### 2 HetNet Optical Product Solutions

AFL Product Solutions businesses are investing in HetNet resources to bring innovation to HetNet optical infrastructure. AFL's product organization has more than 125 sales professionals in the field.

#### **Target Customers:**

Hetnet Integrators, Distributors, Carriers and Neutral Host

#### **AFL's Value:**

End-to-End Passive Infrastructure, Splice/Test Equipment and Hetnet Application Engineering









## **WIRELESS GROWTH**

Macro | Small Cell | DAS | Wi-Fi

Confidential Material