



Telrad 
We're on your wavelength.

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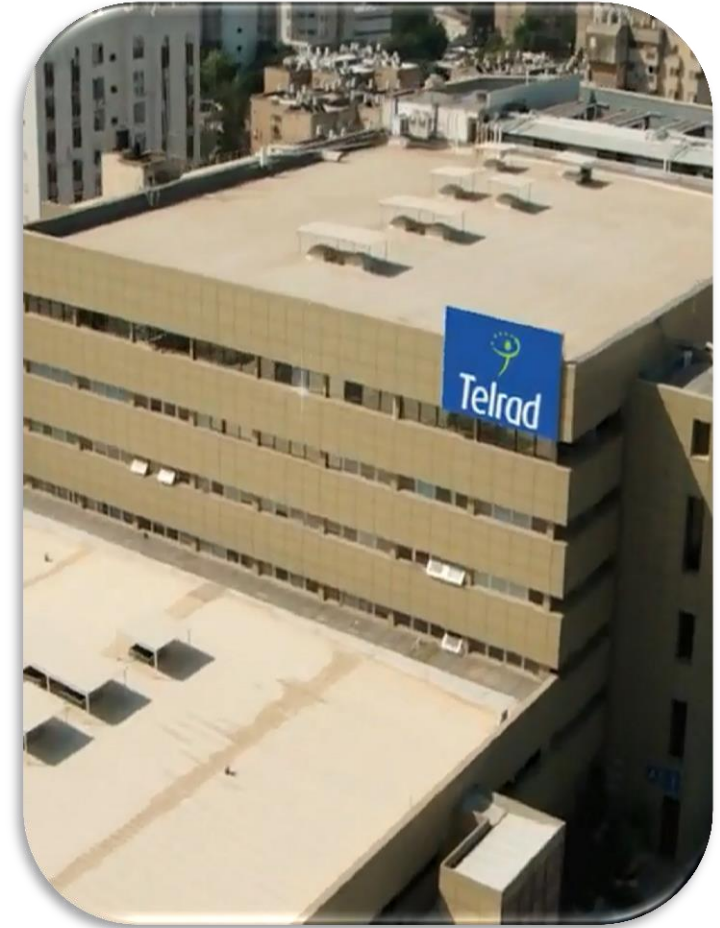
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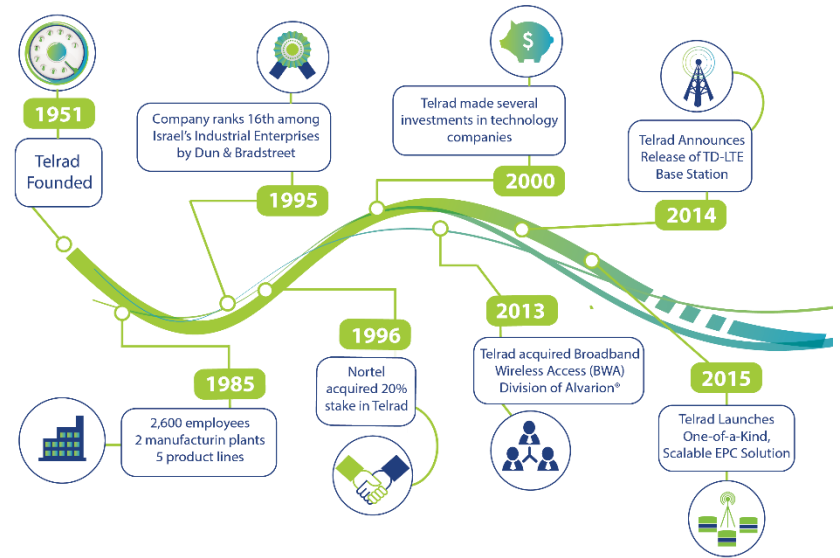
Telrad's Focus and Mission

- Deliver the industry's best End2End TDD - LTE solutions optimized for "Fixed" Broadband Wireless Access at a price that enables the quickest ROI possible.



Telrad Networks: A 60+ Year Telecom Legacy

- Founded in 1951
- HQ in Lod, Israel
- Backed by Fortissimo Capital
- Part of the Telrad Group



Telrad 
We're on your wavelength.

Magalcom 
whatever IT takes

Oasis 
When IT (really) matters

Telrad 



60+

Years in
Telecom

400+

Employees

3 Million

Wireless Links Deployed

300+

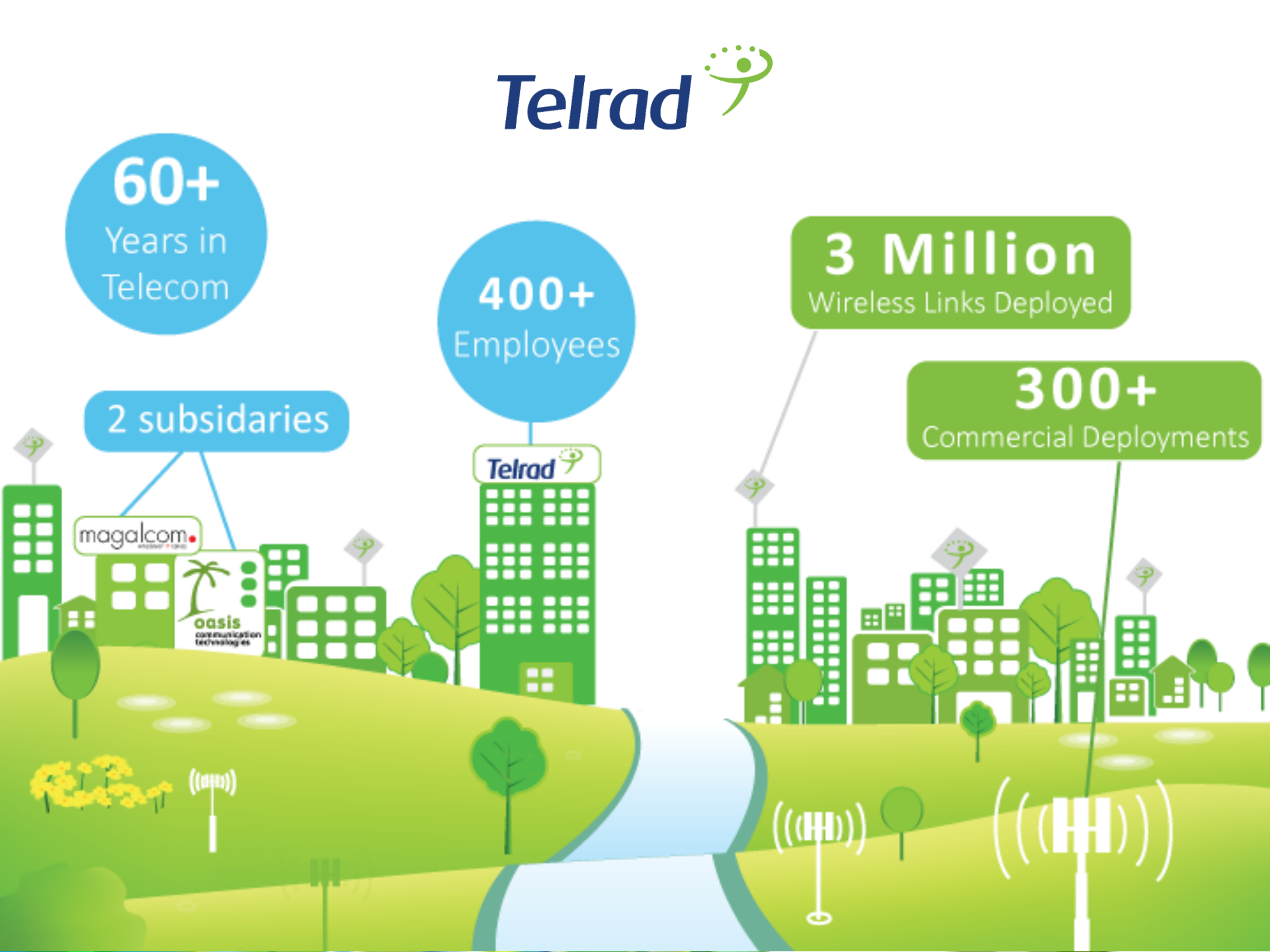
Commercial Deployments

2 subsidiaries

magalcom

oasis
communication
technologies

Telrad



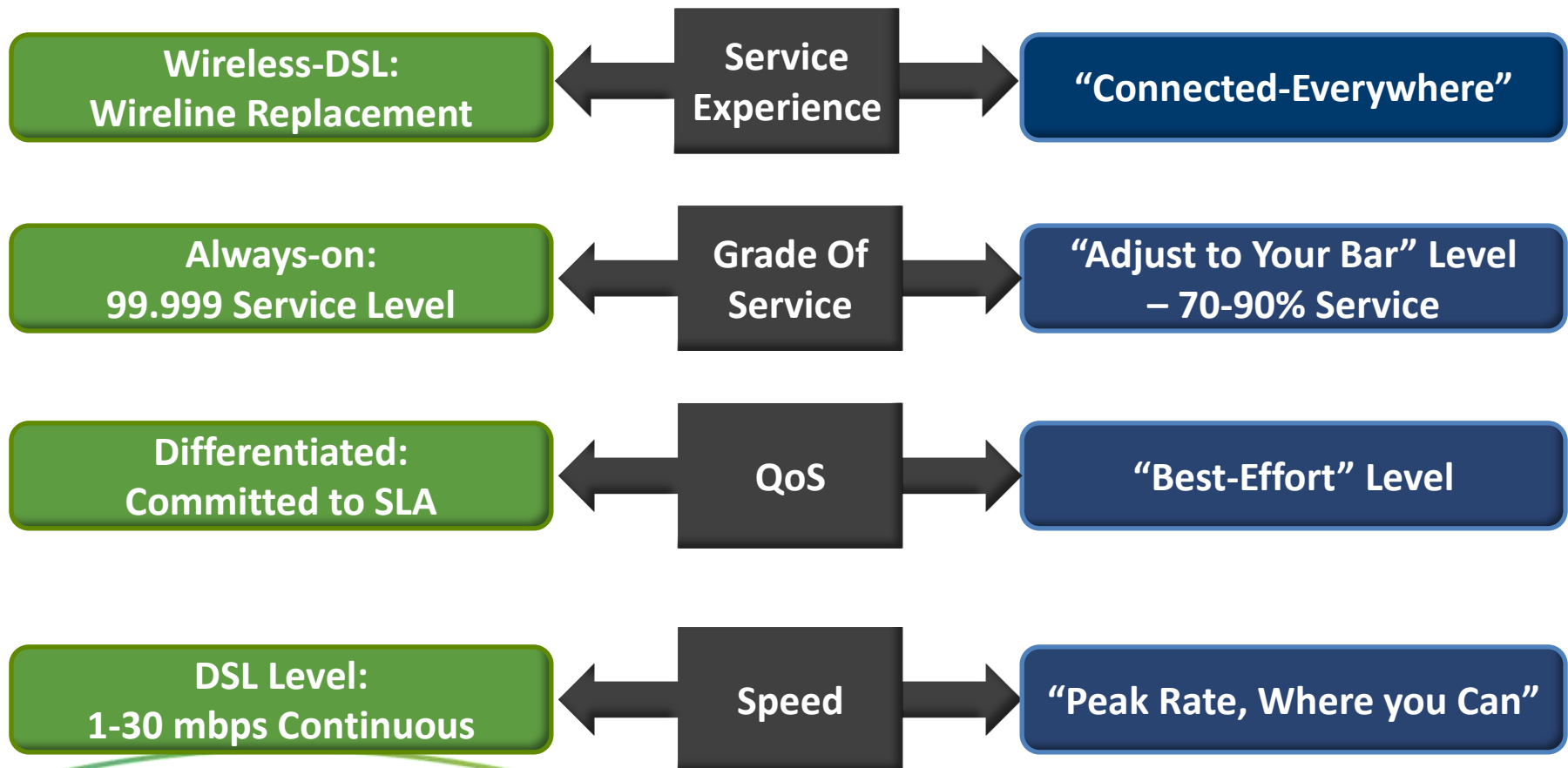
Goals for Fixed LTE - Broadband Wireless Access

- Offer competitive xDSL/Fiber-like broadband services for small business/ residential/ under-served areas
- Deliver 5Mbps to 25Mbps service to meet capacity demands
 - ▶ Streaming HD, 4K,
 - ▶ Standard Data
 - ▶ High quality Data, Voice
 - ▶ No data caps
- CapEx model that supports a valid business case
 - ▶ Pay as you grow
- ROI in months - not years

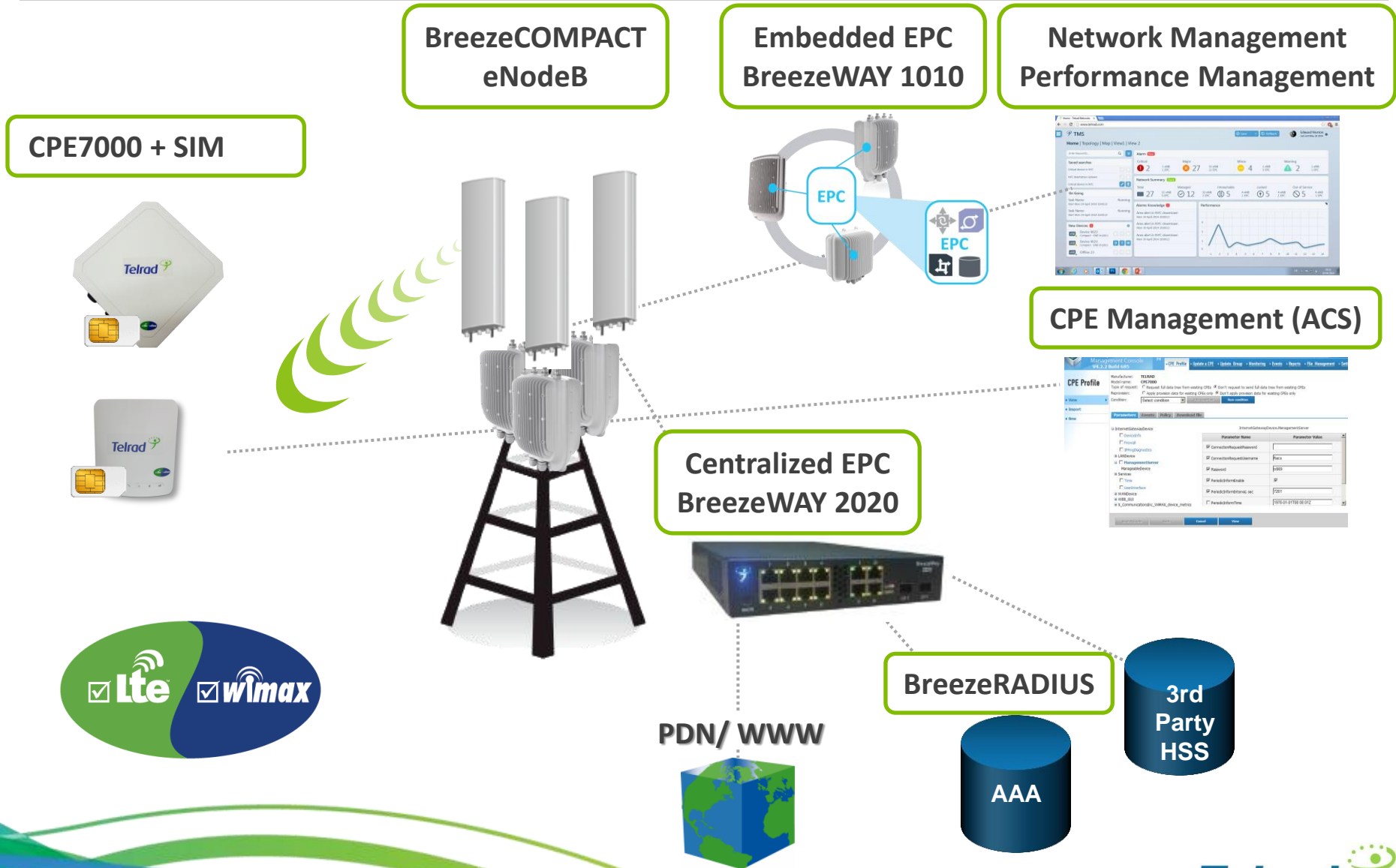
Fixed vs. Mobile LTE

BWA Fixed

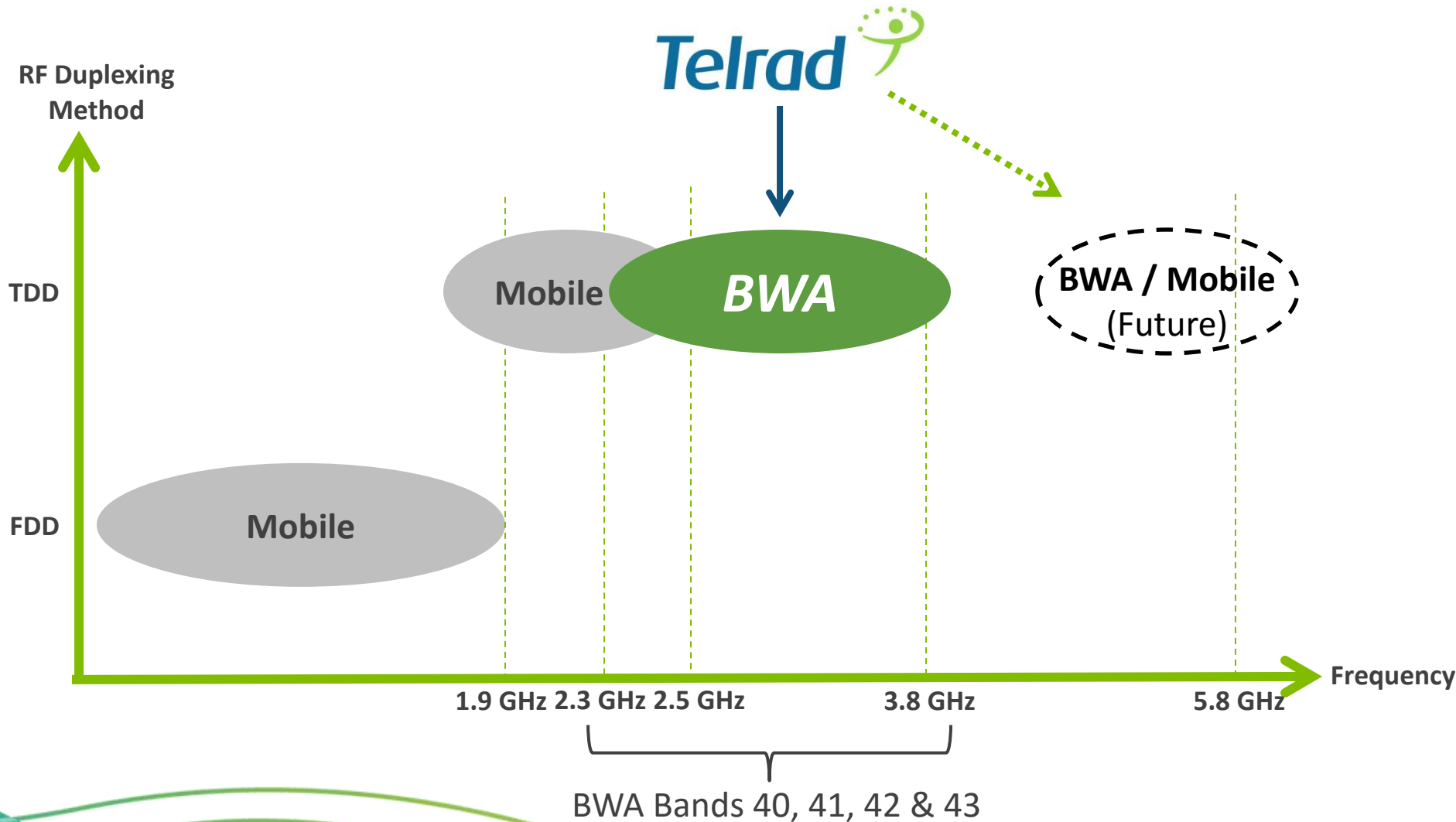
Broadband Cellular Mobile



Telrad E2E Fixed BWA Solution



LTE Orientation by Frequency & Application

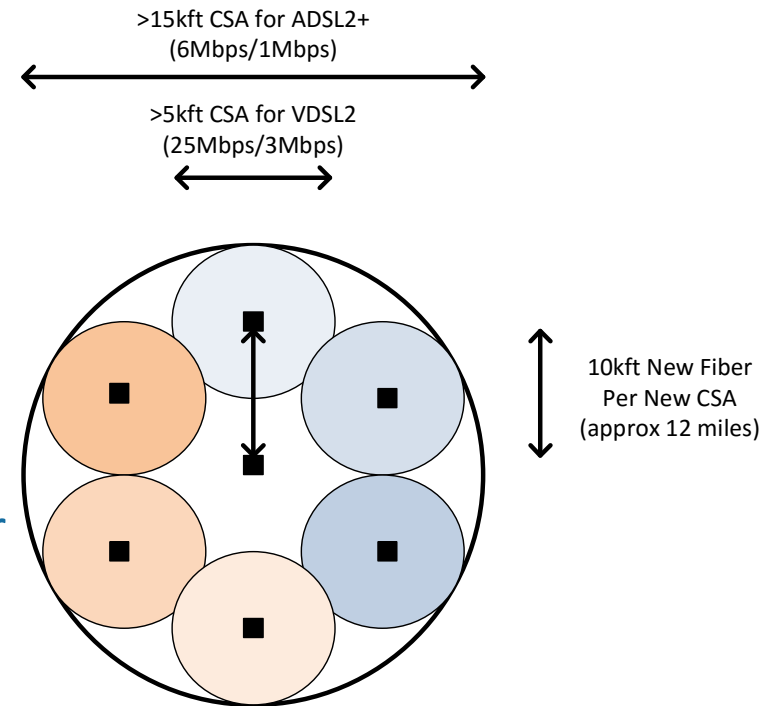


Broadband Options

- ADSL2+
 - ▶ Provides up to a 6Mbps DL service
 - ▶ Requires fiber to a DSLAM at 15kft or less from the subscriber
- VDSL
 - ▶ Provides true broadband of 25Mbps
 - ▶ Requires fiber to a DSLAM at 5kft or less from the subscriber
- FTTH
 - ▶ Services of up to 1Gbps currently offered
 - ▶ Major investment in providing fiber to the customer premise

High Cost of xDSL and Fiber

- Fiber construction
 - ▶ \$25k - \$50k per mile
 - ▶ Trenching is not possible in some cases
 - ▶ Aerial may also be overly complicated in areas
 - ▶ FTTH may not provide an acceptable ROI
- DSL approach
 - ▶ Still requires fiber close to the subscriber
 - ▶ Dependent on the quality of existing copper
 - ▶ Example 300-sub area
 - Typical investment of \$400k - \$700k
 - \$1,400 - \$2,400 per subscriber average cost



The Fixed LTE Alternative – Broadband with an ROI

- Capable of delivering quality broadband
 - ▶ 5Mbps – 25Mbps services (depending on avail spectrum)
 - ▶ Consistent “wireline like” performance
- Fiber or wireless backhaul to fewer locations
 - ▶ Providing backhaul only
 - ▶ One connection for every 150-300 subscribers
- Lower average cost per user than fiber and xDSL
 - ▶ \$650 - \$750 per subscriber in most cases
 - ▶ Lower OPEX and installation costs



Telrad is THE Solution for Fixed LTE

- More relevant base station technology
 - ▶ Small cell form factor with macro cell performance
 - ▶ 4x4 outperforms competitive 2x2 and 8x8 solutions in fixed deployments
- Relevant core solution
 - ▶ Distributed, centralized, or mixed
 - ▶ Future virtualized capabilities that leverage current EPC
- Consistent performance and user experience
 - ▶ Reuse strategies that work for fixed
 - ▶ Highest bit/Hz to deliver maximum capacity
- Features appropriate for fixed
 - ▶ Layer 2 and static IP services, IPCRF, AAA radius
 - ▶ Fixed-focused feature set at a more appropriate cost

Servicing a Global Customer Base



LTE Milestones – Evolution

“EXPANDING CAPACITY”

2014

Telrad LTE Solution Launch

- LTE RAN – BreezeCOMPACT eNodeB family
- LTE CORE – BreezeWAY 2020 (MC-EPC)
- CPE7000 – Indoor/Outdoor CPE (WiMAX/LTE Rel. 9)
- New NMS – BreezeVIEW

2014

40mbps

100mbps

2015

2015

Focus on Fixed BWA

- LTE BWA E2E solution/capabilities
- Embedded LTE Core – BreezeWAY 1010
- Performance enhancements
- WiMAX → LTE transition

2016

200mbps

2016

BWA LTE-Advanced

- LTE Rel. 10
- Carrier Aggregation
- MU-MIMO
- MIMO 4x4
- LTE CPE Cat. 5/6 CPE

>500mbps

2017

2018

2017-18*

BreezeCOMPACT eRAN Solution

- LTE Rel. 11 & Beyond
- Cloud RAN Solution
- Small Radio
- eICIC, COMP, Relay

Telrad

*NOTE: Current plan

Thank You!

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