

**U.S. LTE Metrocell
Lifetime Costs: *A five
year cost estimate***

Market Study
Second Quarter, 2015





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iGR
12400 W. Hwy 71
Suite 350 PMB 341
Austin TX 78738

Table of Contents

Abstract	1
Executive Summary	3
Figure A: Comparison of Five-Year Total Costs (50 metrocells).....	3
Methodology	5
Setting the Stage for Metrocells	6
Network “Pain Points”	6
Different Types of Small Cells	7
Figure 1: Het-Net Overview	8
Femtocells and Picocells	9
Metrocells.....	10
Figure 2: Possible Interference Sources in a Loaded Network	11
Overview of Metrocell Technical Considerations	11
ICIC and eICIC.....	11
X2.....	12
Synchronization	13
iGR’s Definitions of Small Cells	13
Table 1: Different Types of Small Cells, Licensed and Unlicensed Spectrum.....	13
Benefits of Deploying Small Cells.....	14
Cons of Deploying Small Cells.....	15
Small Cell Deployment Requirements	16
Deployment requirements	16
Regulatory considerations	17
Assumptions Regarding Metrocell Installation	17
Locations for Small Cells	18
Bandwidth required	20
Cost estimates	21
Wired, Copper	22
Wired, Fiber	22
Optical options.....	23
Wireless	23
Figure 3: Wireless as a Last-Mile Solution	25
NLoS, nLOS and LOS	25
PTP and PTM.....	25
Figure 4: PtP and PtMP Wireless Backhaul	27
Licensed vs. Unlicensed Microwave	27
Concerns and issues with Wireless Backhaul.....	27
Cost Assumptions for LTE Metrocell TCO Model	29
Deployment Scenarios	32

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Scenario: Fiber Backhaul.....	33
Table 2: Lifetime Metrocell Costs, Fiber to the Pole/Building (50 LTE metrocells).....	34
Figure 5: Five Year Costs, Fiber to the Pole/Building (50 LTE metrocells)	34
Table 3: Five Year Network Spending Costs, Fiber to the New Pole (50 LTE metrocells)	35
Table 4: Five Year Operational Spending, Fiber to the New Pole (50 LTE metrocells).....	35
Table 5: Five Year Network Spending Costs, Fiber to the Existing Pole (50 LTE metrocells)	36
Table 6: Five Year Recurring Costs, Fiber to the Existing Pole (50 LTE metrocells).....	36
Table 7: Five Year Network Spending Costs, Fiber to the Building Roof (50 LTE metrocells)	37
Table 8: Five Year Recurring Costs, Fiber to the Building Roof (50 LTE metrocells)	37
Table 9: Five Year Network Spending Costs, Fiber to the Building Side (50 LTE metrocells)	38
Table 10: Five Year Recurring Costs, Fiber to the Building Side (50 LTE metrocells)	38
Scenario: Wireless Backhaul	39
Table 11: Summary of Five Year Costs, Wireless Backhaul (50 LTE metrocells)	40
Figure 6: Summary of Five Year Costs, Wireless Backhaul (50 LTE metrocells)	40
Table 12: Summary of Five Year Network Spending per Year, Wireless Backhaul (50 LTE metrocells)	41
Table 13: Summary of Five Year Operational Spending per Year, Wireless Backhaul (50 LTE metrocells)	41
Table 14: Five Year Network Spending Costs, Wireless (New Pole; 50 LTE metrocells)	41
Table 15: Five Year Operational Spending, Wireless (New Pole; 50 LTE metrocells)	42
Table 16: Five Year Network Spending Costs, Wireless (Existing Pole; 50 LTE metrocells) ..	42
Table 17: Five Year Operational Spending, Wireless (Existing Pole; 50 LTE metrocells).....	43
Table 18: Five Year Network Spending Costs, Wireless (Building Roof; 50 LTE metrocells) .	43
Table 19: Five Year Operational Spending, Wireless (Building Roof; 50 LTE metrocells)	44
Table 20: Five Year Network Spending Costs, Wireless (Building Side; 50 LTE metrocells)..	44
Table 21: Five Year Operational Spending, Wireless (Building Side; 50 LTE metrocells)	45
Scenario: Wireless Replaced by Fiber Backhaul	46
Table 22: Summary of Five Year Costs, Wireless to Fiber Backhaul (50 LTE metrocells)	47
Figure 7: Summary of Five Year Costs, Wireless to Fiber Backhaul (50 LTE metrocells).....	48
Table 23: Summary of Five Year Network Spending per Year, Wireless to Fiber Backhaul (50 LTE metrocells)	48
Table 24: Summary of Five Year Operational Spending per Year, Wireless to Fiber Backhaul (50 LTE metrocells)	48
Table 25: Five Year Network Spending Costs, Wireless to Fiber (New Pole; 50 LTE metrocells)	49
Table 26: Five Year Operational Spending, Wireless to Fiber (New Pole; 50 LTE metrocells)	49
Table 27: Five Year Network Spending Costs, Wireless to Fiber (Existing Pole; 50 LTE metrocells)	50
Table 28: Five Year Operational Spending, Wireless to Fiber (Existing Pole; 50 LTE metrocells)	50
Table 29: Five Year Network Spending Costs, Wireless to Fiber (Building Roof; 50 LTE metrocells)	51
Table 30: Five Year Operational Spending, Wireless to Fiber (Building Roof; 50 LTE metrocells)	51

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Table 31: Five Year Network Spending Costs, Wireless to Fiber (Building Side; 50 LTE metrocells)	52
Table 32: Five Year Operational Spending, Wireless to Fiber (Building Side; 50 LTE metrocells)	52
Small Cell Vendor Profiles	54
Airspan Networks	54
Airvana	56
Alcatel-Lucent.....	58
Argela.....	63
Cisco	66
Figure 8: Cisco Universal Small Cell Solution	67
Ericsson	68
Fujitsu Network Communications	72
Figure 9: Fujitsu LTE Femtocell System Solution.....	73
Gemtek.....	74
Huawei	75
ip.access	77
Juni.....	80
NEC.....	82
Nokia Networks	85
Oracle.....	89
Figure 10: Oracle Communications Security Gateway.....	90
Public Wireless	91
Quortus	92
Ruckus Wireless.....	94
Samsung Electronics	97
Sercomm	99
SpiderCloud Wireless.....	100
Figure 11: SpiderCloud E-RAN System	102
Taqua	103
ZTE Corporation.....	105
Definitions	108
General.....	108
Device Types.....	108
Services	109
Network Technology.....	110
About IGR	114
Disclaimer.....	114

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Abstract

Small cells and het-nets are two common buzz words that describe how mobile operators are evolving their radio networks. Long accustomed to capital intensive macrocell networks, the key questions everyone is asking is: How much will it cost to rollout small cells? And how much will small cells cost to operate and maintain?

This report answers that question by building on a “Small Cell Costs” report that *iGR* published in late 2013. This report models small cell costs over a five year time period by using the following criteria:

- 50 LTE metrocells deployed in an “urban” market
- The metrocells are deployed on four different types of fixtures: new poles, existing poles, building sides and building roofs.
- For each type of fixture, *iGR* modeled three different backhaul scenarios: fiber only (aerial and underground), wireless only (microwave) and wireless backhaul in the first two years moving to fiber in year three and beyond.

Note that while *iGR*’s small cell cost model was built on average values it can just as easily generate a much more specific answer based on variables unique to a given market.

Key questions addressed in this report include:

- What is a het-net? What are small cells?
- What are network ‘pain points’?
- What is driving the need for het-nets?
- How are pain points identified?
- What are different ways to address pain points?
- Where is it appropriate to deploy small cells (indoor and outdoor)?
- What are *iGR*’s assumptions regarding small cell installations?
- What outdoor locations are best suited for small cell deployments?
- What are the average costs of these outdoor locations?
- What is an attachment? What is the average cost of an attachment?
- What are the different types of backhaul with regard to small cells?

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- What types of backhaul are considered in the model?
- What is the average throughput needed for a small cell? What does that throughput cost?
- How much does it cost to deploy LTE metrocells?
- How much does it cost over five years to deploy LTE metrocells.

Who should read this report?

- Mobile operators
- Small cell equipment manufacturers
- Mobile backhaul suppliers
- Tower companies
- Antenna and tower equipment vendors
- Financial analysts and investors.

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