

Towercos: How Not to Miss The Small Cell Opportunity

Small Cell demand surges yet deployment obstacles are still unresolved

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August 2018



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After recent hype in the small cells industry, the number of small cell deployments has finally taken off in markets racing for 5G and no more apparently than in the US.

Industry analysts have consistently overestimated the number of small cell deployments for years. Yet now we know that more than half of Verizon's wireless deployments in 2017 were small cells. Earlier this year, T-Mobile announced plans to

deploy 28,000 small cell nodes. Sprint plans to deploy 40,000 outdoor small cells – on top of other small cell deployments with cable companies and a million indoor femtocells in customer households¹.

Despite grand deployment plans, the reality is US operators are struggling

¹ Source: Fierce Wireless "Verizon: Around 62% of all wireless deployments in 2017 were small cells", Mar'18

to deploy small cells at their desired pace. This is mainly because: The strict municipality and RF licensing and permitting; high site acquisition and backhaul provisioning costs not justifying return on investment; lack of internal capacity to coordinate the rollout of such a number of sites within a short timeframe.

As highlighted in a previous article on these series “What you need to know about the rise of small cell infracos” (www.deltapartnersgroup.com/what-you-need-know-about-rise-small-cell-infracos), large small cell deployments by operators create an opportunity for infrastructure companies, such as Towercos, that sell infrastructure as a service to MNOs.

This article will first highlight recent developments in the small cell space in the US, that may serve as learnings for infrastructure companies in other parts of the world that are yet to experience a small cells in their markets.

We believe TowerCos in particular have an opportunity to expand to the small cell business due to obvious business adjacencies. For this purpose, we also included a small chapter summarizing a few factors that TowerCos ought to consider before entering the space.

Key discoveries from the US small cell infrastructure market

1. There is a limited time window of opportunity to serve large numbers of small cell sites to operators, so early preparation pays off

- The launch of 5G will vary significantly depending on its market. However, once an incumbent or challenger operator announces a heavy investment in the new technology, almost invariably the other operators follow. This means that infracos will see demand for small cells surge simultaneously in the market. Due to these competitive dynamics, an Infraco that has done its job before securing sites is likely to capture the lion's share of the market
- For example, for the past three years Crown Castle in the US has embarked in a mission to acquire fibrecos – such as Lightower, FibreNet, NextG among others – to provide a network of inter-city fibre and small cell sites in urban and sub-urban cities. When the demand surged

last year, Crown Castle was able to immediately sell thousands of colocations and continues to win additional contracts with major telcos as other infracos and contractors fail to meet their provisioning SLAs.

2. Expect MNOs to be ready to outsource Small Cell deployment and site management

- Operators deploying small cells require a different skillset vs. traditional macro deployments, such as the ability to deal with different types of landlords – e.g. municipalities, owners of commercial venues – as well the know-how to deliver power and backhaul to diverse types of sites – e.g. lampposts, facades, etc. Operators will take time to build these capabilities organically. The above means more business for Infracos if they are willing to take it
 - Examples of MNOs leasing from infra service providers are Verizon, AT&T, Sprint
 - Examples of Infracos in US provisioning small cells are Towercos (Crown Castle, American Tower), Fibrecos (Zayo, Uniti) and more specialized small cell players like Mobilite

3. The two biggest value add drivers for infracos to MNOs are site acquisition and backhaul provisioning

- **On site acquisition:** Securing the right of way (ROW) from municipalities, RF/zone permitting and the lack of specialized small cell network rollout teams, means Infracos able to build a sizable portfolio of small cell-adequate sites are likely to rent those locations at price premiums
- **On backhaul provisioning:** Fibre-to-the-small cell represents the largest cost component of the solution and one which may command longest lead time in delivering the solution if not ready. These services are more in demand by mobile-only operators with limited fixed footprint.

4. Different business models exist for infrastructure and contractor companies deploying small cells

- Companies deploying small cells typically perform all or some of the following services to MNOs:
 - Site acquisition: procuring attachment rights from municipalities, utilities and private entities, as well as securing ROW, conduit, attachment rights;
 - Radio frequency (RF) design and planning: although less common than the rest of activities, some companies will perform RF analysis on behalf of the MNO;
 - Site conditioning: deployment of backhaul and power solutions to the site; and
 - Site management: 24/7 NOC services, ongoing maintenance and upgrading of the site.

Yet there are two main business models that co-exist in the US small cell market and that drive fundamentally different returns

- **Contractor role:** The small cell deployment contractor performs selected small cell deployment tasks on behalf of the MNO. The 'right of way' contract as well as all deployed equipment is owned by the MNO. The contractor is paid a 'one-time' deployment services fee, plus a small ongoing fee if the company performs site maintenance services.
- **Passive small cells as a service:** The company proactively builds a portfolio of small cell sites that then markets to the MNOs. The company is responsible for investing upfront in site acquisition and conditioning, including in many cases building or leasing inter-city fibre or high capacity microwave links. This company owns the infrastructure it builds; hence it is an infrastructure company ("Infraco"). Instead of one-time fees infracos will typically charge recurrent fees to MNOs for the use of the company's infrastructure, similar to the Towerco model.
- **Small cells connectivity as a service:** The Infraco invests and deploys both the passive and active elements of the small

cell solution and provides connectivity as a service to the MNOs. The spectrum used for the solution can be leased spectrum from the MNO renting the site, owned spectrum from the Infraco or unlicensed spectrum. Typically, active small cell as a service provider will command higher recurring service fees than the previous two models.

5. Small Cell colocation as a service business model is not as compelling as the Towerco business because of the complexity of sharing infrastructure

- Small cells are being deployed in lampposts, other urban infrastructure and facades, making it challenging for infracos to serve more than one MNO in the same location – which results in most of the cases in lower business margins than Towercos
- Yet, there are several of synergies infracos should exploit in the small cell business, such as the opportunity to build an inter-city fibre circuit that can serve multiple tenants. There's also the ability to negotiate municipality contracts in bulk that allow to accommodate multiple MNOs utilizing the different urban infrastructure available
- As small cell equipment technology evolves, infracos offering connectivity as a service may be increasingly able to serve multiple MNOs from one cell. We see this business model potentially becoming more popular as MNOs start using unlicensed spectrum for fixed-wireless use cases

Main Factors That Need to be Assessed by a Towercos Considering Entering the Small Cell Space

What are the key factors TowerCos need to assess when venturing into the Small Cell space?

	Opportunities	Potential source of growth after tower consolidation / slowdown The # of small cells forecasted to reach 10x that of macro cells by 2025	Potential expansion in the value chain TowerCo can increasingly move into providing connectivity a service products – e.g. provision of managed connectivity to end customer through multi-operator small cells, provision of managed backhaul connectivity, etc.	
	Risks	Lower ROIC than towers Small cells business models typically generate less margin due to difficulty in sharing and lower rent prices	Complexity to execute New technical skills are required for active sharing, such as dealing with many multiple assets and landlord types More complexity is added if the TowerCo is seeking to offer connectivity as a service	Large upfront investment commitment required

If TowerCo is willing to enter into the small cell space, should they consider acquiring specialized players?

	Opportunities	Cheap "acquire" targets currently in the market As of today, most specialised players' valuations are still relatively small compared to that of TowerCos	Sizable synergies of adjacent infra Existing TowerCo assets, such as macro towers, fibre backhaul, relationships with municipalities and MNOs, can be leveraged by specialised players	
	Risks	Scarce number of targets in emerging markets Albeit growing in number lately, many markets in Europe, Latam and Asia are still missing companies that specialize in small cell infra models	Business models of specialized players are not yet validated Its returns can erode margin and net profit of macro business	Limited number of targets in the market

Conclusion

Similar to the US, we foresee a strong small-cell opportunity for infrastructure players in markets where 4G is already the dominant technology. TowerCos across Europe and selected markets in Asia, Latam and Africa should assess the optimal time and approach for developing small-cell business.

At the same time, operators with limited capabilities to deploy small cells at scale and/or lack key enablers such as intra-city fibre assets must consider the best path forward to secure 5G readiness. Options are these operators will need to either boost organically their capabilities and fixed footprint or select the right infrastructure partners to outsource part of the required workload and investments.

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