

Data management is a pressing challenge for towercos in a time of change

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Analysys Mason and TowerXchange, the leading organiser of events for the towerco sector, are jointly leading a new working group dedicated to the increasingly business-critical topic of data utilisation and visualisation. We conducted a detailed study of 48 towercos and MNO tower operating units, and shared our findings at the latest TowerXchange Meetup Americas event in Boca Raton, Florida in July. The results of the study are included in our report entitled [Towerco data management: improving the relationship with MNOs](#).

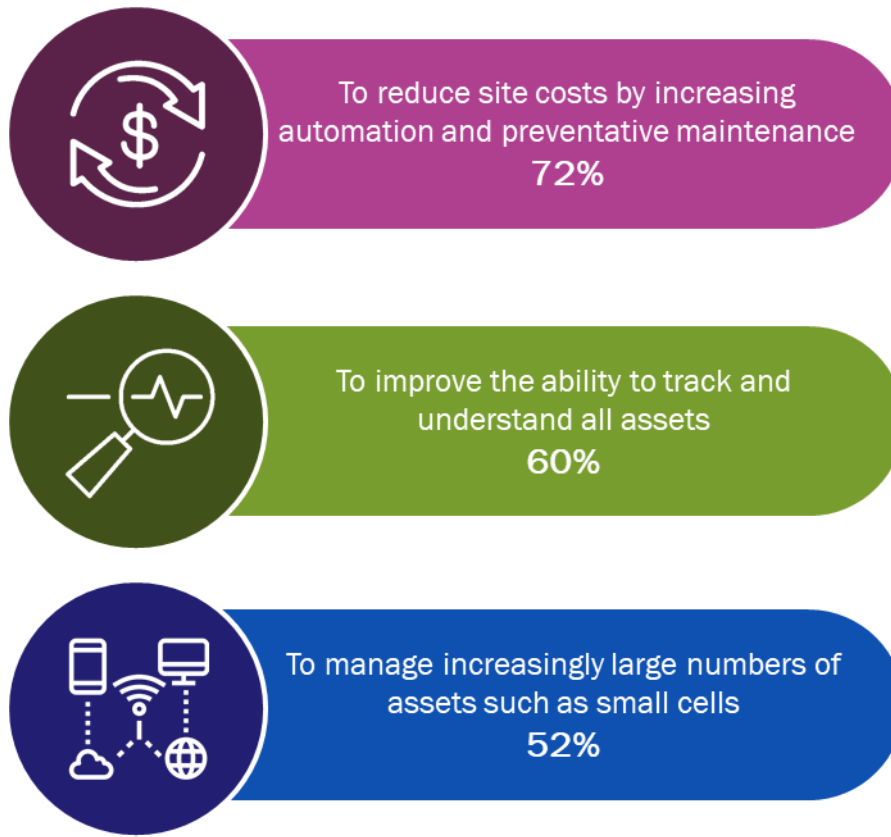
The next steps for the working group are to prioritise actions which could help to address the challenges of data collection and analytics in the towerco sector, with the aim of establishing best practice and making a strong business case for investing in advanced data systems.

Improved data management will help towercos to manage denser, more-diverse networks

Many towercos are looking for new sources of revenue growth that are related to MNOs' deployments of the denser, more-complex networks that are needed for 4G expansion and 5G. Towercos are considering extending their neutral host model to include small cells, edge computing, fibre and value-added services.

With many additional elements to manage, it will be increasingly important to have accurate and up-to-date data about all these assets, in order to understand performance and pre-empt problems. Our survey established the top three objectives for towercos that wish to improve their asset management during 2019–2022 (see Figure 1). Attendees at the working group meeting agreed that advanced data collection, analysis and visualisation would contribute to achieving these objectives.

Figure 1: Top three towerco asset management objectives (the percentage citing each as a top-three objective is indicated)



Source: Analysys Mason, 2019

Better data management may help towercos to achieve the objectives listed in Figure 1 in the following ways.

- It could allow towercos to receive real-time information about site performance and potential problems.
- It could enable advanced analytics to support a more accurate valuation of assets when negotiating tenancies, acquisitions or service level agreements (SLAs).
- It could provide predictive capabilities for planning site additions, upgrades and maintenance.
- It could allow towercos to share data with an increasingly complex set of partners and customers.

Towercos have under-invested in data systems and a gap remains between aspirations and reality

Our research revealed that there is a deep gulf between towercos' aspirations and their real-world practices in many cases. Most towercos admitted to using Excel as their primary tool, and there were significant gaps in their knowledge of their tenants' equipment and even their own assets. Many acquire tower portfolios with very incomplete data about the equipment involved; some only monitor critical sites. In an extreme example, two respondents admitted to only knowing the precise location of 35% of their sites, yet they were keen to adopt AI-enabled analytics.

Several respondents highlighted that towercos have not typically invested heavily in IT and data systems, and this has created an intelligence gap between them and their MNO tenants.

Many towercos first need to invest in automated systems to collect accurate data rather than relying on site visits, but an even greater challenge is to integrate and cross-reference every source of data (either the towerco's own or a third party's) to enable rich, forward-looking decision making and to underpin fully automated management processes.

One working group member said, "It's like we have connected homes, but no intelligence to combine them. Some people have data on network performance, some on assets, some on power – there is no aggregation or analysis."

The case for investing in data systems must be made around a step-by-step approach based on best practice

Some towercos envisage a 'big bang' approach to implementing data management, but most say that their executive teams will be more convinced by a gradual approach, with clear returns at each stage. "We are still getting data collection right, then we can define the KPIs, then refine them," said one participant.

A relatively low-risk first step is to introduce smart on-site devices to collect information automatically about metrics such as power consumption or antenna weight. This could immediately achieve a key objective for towercos: to reduce the number of costly site visits required to identify the equipment on a particular tower in order to bill MNOs accurately.

However, there is a big difference between asset tracking and the monitoring of asset performance. An even bigger difference exists between these processes and proactive trouble-shooting and forward planning. Such activities will require not only data collection, but also the ability to visualise and analyse it in a detailed way. Emerging solutions include augmented reality overlays of on-site equipment for remote monitoring and the use of crowd-sourced data to establish usage per site.

The respondents of our survey were open about the lessons that they could learn from MNOs, but there are still areas in which they have better knowledge than their key tenants. Most working group members felt that open frameworks for sharing data and achieving a common view of the whole network would be helpful. In particular, it would be valuable for infrastructure designs to be easily integrated into MNOs' radio plans, and to correlate towerco asset tracking with MNO network performance monitoring, so that the relationships between the two could be understood and actions could be taken.

This ability to share data forms the basis of the key goals of the working group: to listen to the views and experiences of the towercos and their suppliers, to identify areas of best practice and strong market solutions and to drive a consensus about next steps, in order to ease towercos' path to achieving full business intelligence.