
## 2016 Roundup


Jarrett Bluth
**CEO**

2016 has been quite a year for Cheytec. From the growth of our flagship EDISON real estate database and the formalization of our Ericsson distribution relationship, to the expansion of our sales and engineering staff, Cheytec's progress and growth has been outstanding. What follows here are a few highlights from Cheytec's and our in-building wireless industry's 2016. We would not be able to execute on our plans without participation of our customers and partners. For that, we offer a big "Thank You!" and are looking forward to a healthy and prosperous 2017!

## EDISON Real Estate Portfolio

Our proprietary and exclusive web-accessible database is focused on providing wireless operators critical real estate information specific to designing and deploying In-Building wireless system. To request access to the database, please click here to email our real estate database specialist.


## Welcome to our Head of Engineering

José Sangiuliano
**Head of Engineering**

We are pleased to announce the appointment of José Sangiuliano as our Head of Engineering. José brings over 20 years of experience in network design and expert knowledge of the telecommunications industry. With a background in the RF design of macro cellular networks and a specialist in In-Building systems, José has pioneered high capacity design strategies that are widely applied today in sport venues and transportation hubs. He joins the Cheytec team at a critical time as the demand for connectivity inside has never been greater and as Cheytec's role is becoming pivotal to the process of enabling In-Building systems


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## Funding Options for In-Building Wireless Systems

There are three evolving business and financial models for designing, funding, building and operating in-building wireless systems:

**1. Carrier-funded**

This is the established model where the mobile network operators (MNOs) provide capital contributions to get the system built – this may be all from the anchor MNO or split among various tenants. Carriers capitalize and provide their baseband or network signal and backhaul. This is a viable model, however it is not great for smaller office opportunities (sub-750K sf) and requires the carrier to be interested and funded for a particular site. Also, this model has issues when demand (i.e. Building/venue owners/enterprises who want better coverage and capacity) outstrips supply (i.e. the MNO's ability to fund in-building systems).

**2. Building Owner/MNO funded**

This is an emerging model where the building owner or enterprise may work with the MNO to provide capital or in-building infrastructure that the MNO can plug into. In such cases, the MNO is typically required to fund their own baseband signal and backhaul. While this model offers the MNO an attractive and reduced barrier to entry, there is still a stringent positive business case involving network capacity, coverage, and cost-of-goods sold which must be achieved for a project to pass into reality. Enlighted building owners and tenants are starting to embrace this model as they look more and more at wireless access as a utility – like power and water. In many of these cases, the owner may want a 3rd party to deal manage the MNO tenant relationship directly, hold the in-building real estate lease, and maintain the installed system.

**3. Cheytec Model**

This is the next progression of the model, where a company like Cheytec comes in, holds the lease with the building owner, designs and builds a system with a blend of capex from the building owner/enterprise customer, the MNO, and perhaps funds the passive infrastructure itself. The Cheytec-funded real estate and infrastructure is then licensed back to the MNO tenant for a low monthly fee. In the case of multiple in-building MNO tenants, Cheytec may even share recurring revenue back with the building owner. This model is a bit disruptive as it separates the real estate and technology solution and may ease capex requirements on both MNO's and the building owner/enterprise tenants. This is the model that has been tested in 2016 and is aligned well for execution in 2017.

## What's happening in the Industry

As new technology develops, Enterprises must evolve their business strategies to manage new demands and challenges. The rise of smartphone use, wearables, sensors, and connected devices are driving forces for investment in practically every industry including telecommunications, media & entertainment, real estate, and retail, etc. With US consumers looking at their devices over 8 billion times a day in the aggregate[1], and predictions of over 1 billion connected things by 2018[2], the challenges for providing customers with the level of connectivity that they desire have never been greater. In 2017 we are looking forward to the continued development and testing of 5G, new technologies using 3.5 GHz spectrum and the continued growth in IoT and connected devices.

[1] https://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/telecommunications-industry-outlook.html
[2] http://www.gartner.com/newsroom/id/3175418


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