

BAI Communications is ready for 5G



The company's new Group CEO analyses the evolving role of neutral hosts and the new business cases of the emerging technology



Igor Leprince, Group CEO, BAI Communications

For many years, BAI Communications has been providing traditional cellular and Wi-Fi infrastructure for MNOs and transit operators in cities like New York, Toronto, and Hong Kong, benefiting millions of underground commuters, while also operating an extensive transmission network for radio and TV broadcasters in Australia. Now, under the leadership of its new Group CEO Igor Leprince, BAI plans to leverage its technical and strategic expertise in network rollouts to become a 5G neutral host services provider and maximise the business cases for the new technology across some of the world's largest cities. TowerXchange has interviewed BAI's new Group CEO to find out the company's plans and discuss some of the challenges and opportunities that 5G is bringing to telecom infrastructure providers.

Keywords: 5G, Australia, BAI Communications, Business case, Coronavirus, Densification, Infraco, Interview, Metropolitan Transportation Authority, New York City, Nokia, Small Cells, Toronto

Read this article to learn:

- Who Igor Leprince is and what he is bringing to BAI Communications
- From traditional infrastructure provider to 5G neutral host
- The new business cases, opportunities and synergies of 5G
- What 5G networks will look like in urban areas?

TowerXchange: First, congrats on your new role. Can you share your background and tell our readers why you accepted this exciting challenge?

Igor Leprince, Group CEO, BAI Communications: I have been in the telecom industry for more than 25 years. I was privileged enough to be part of Nokia, a company that at a point was close to bankruptcy but came back from that to rebuild a business that was worth US\$40bn when I left. I had different roles at the company and as the president of Global Services, I was part of the management team that led that turnaround.

After that I became chair of West Midlands 5G, an organisation that explores how cities and local governments can maximise the use of 5G. We analysed how to collaborate with neutral hosts, how to develop and improve transport networks as well as many other topics that are now a critical part of the telecom industry agenda in the transition to 5G. Before that, I worked for Bouygues Telecom, Orange and other MNOs, designing wireless networks for the first ten years of my career.

Joining BAI Communications is a very exciting opportunity for different reasons. First, this company has an incredible history, expertise and reputation so there is a strong base to build on. The second aspect is that we have solid, long-term shareholders, the Canada Pension Plan Investment Board (CPPIB). This is another very important element when you are focusing on initiatives that will offer value in the long run, as many of the areas

that we are exploring and developing are future projects that need the trust and support of investors. That strong foundation will allow me to grow the company by leveraging the reputation and great relationships that we have with local governments, transport authorities and private business as well as our technical expertise to become a neutral host leader in this new 5G environment.

TowerXchange: Most of our readers are very familiar with BAI Communications Australia (formerly Broadcast Australia) and its tower portfolio but BAI Communications is much more than a tower provider. Could you please re-introduce the company?

Igor Leprince, Group CEO, BAI Communications:

We are indeed very proud of our tower portfolio and our history, but that is not entirely who we are today. We describe ourselves as a company that designs, builds and operates communications networks, which of course include telecom towers among many other technologies. Our mission is to connect communities around the world.

The company is now evolving, in Australia and globally, to become a neutral host for 5G technology, focusing on the transit business, but also exploring other streams and verticals such as industrial applications, smart cities and public safety. We have different operations and initiatives across five different countries—Australia, Canada, Hong Kong, United Kingdom and United States—where we use our telecommunications networks for a variety of applications.

An overview of BAI's global portfolio

Canada

BAI provides Wi-Fi and cellular connectivity and has installed over 75km of fibre throughout the Toronto Transit Commission (TTC) subway system. They provide fibre backhaul to MNOs and Wi-Fi through its private network. BAI also leverages IoT sensors to assist with monitoring foot traffic at stations, crowding conditions, and origin-destination patterns through the system.

United States

Transit Wireless, a majority-owned BAI Communications company, provides MNOs with cellular and Wi-Fi connectivity for their customers across large infrastructure projects including the New York City subway system. Earlier this year, Transit Wireless was awarded with a Mobile Telecommunications Franchise in New York, which allows them to install and operate 5G equipment on streetlight poles, traffic light poles and utility poles.

Hong Kong

BAI has designed, built, installed and maintained communications systems for the Hong Kong MTR Corporation Ltd (MTR) for over 20 years. The company has also built indoor radio networks in airport terminals, convention centres and major shopping complexes across the country and is currently exploring a pioneer 5G DAS system in a transit environment.

Australia

BAI, with its extensive broadcast network of 752 sites, delivers television and radio broadcast services to 99% of the population and provides tower and fibre co-location services for MNOs, service providers, enterprise and public sector customers. In NSW, they also operate and maintain the Government Radio Network for the NSW Telco Authority.

UK

BAI is working with industry leaders to explore the role of technology, such as the upgrade to 5G, in the transport system of the future ■

TowerXchange: We have seen traditional tower companies evolving towards a more integrated business model where fibre and other new technologies play a very important role in the transition towards 5G. What is your vision for BAI Communications and what are your rollout plans in Australia and globally?

Igor Leprince, Group CEO, BAI Communications:

Again, there is a great opportunity for BAI Communications to become a leading 5G neutral host. BAI is already present in those five countries, hence we have the expertise and knowledge about urban telecommunications infrastructure and know how to deploy in those dense environments. We have great relationships with several local authorities, who are in charge of the permitting process and very often own the assets that we utilise and will be utilising for 5G rollout. Further, we also have the technical and operational expertise in indoor and urban rollouts, in which we continue developing and investing, so I feel we are very well positioned to help MNOs and public entities in the transition towards 5G.

Another relevant aspect of 5G that goes beyond the typical service that you would provide to your MNO partners is the use of the technology in the industrial context, where I also see BAI Communications playing an important role. We are exploring how 5G is going to transform different industries such as healthcare, manufacturing and transport among many others. We currently run transport communications networks and some public safety networks in those countries and we anticipate that the arrival of 5G will bring plenty

of new use cases to our existing capabilities. For instance, by integrating 5G we will be able to monitor pollution and transport congestion.

Our approach goes from a more traditional 5G neutral host that installs and operates small cells to a more holistic take to help our customers by offering alternative services and capabilities, mainly around transport and public safety. That strategy is applicable to Australia and everywhere else. Every city we operate in has different needs and particularities. In Australia, 5G is just starting whereas in a city like New York you already have over 10,000 small cells. The technology advances are different from country to country, but our plan is to replicate our approach in the cities and potentially expand to other surrounding areas in the future.

TowerXchange: The company sets a great example for tower providers that have started to look beyond traditional macro sites in the search of new revenue streams. Could you share some success stories and future projects where your holistic approach to telecom infrastructure is better positioning you to serve your MNO clients' needs?

Igor Leprince, Group CEO, BAI Communications: A very successful story is the creation of the Transit Wireless subway network in New York 15 years ago, when we established a public-private partnership with the Metropolitan Transportation Authority (MTA) to provide wireless infrastructure within the city's underground stations. Now we include connectivity to the top US MNOs through this public-private partnership, which is a little bit different

to the traditional towerco business model but can serve as an example for the industry.

We designed, built and operated those underground networks across hundreds of station and subway lines and even though we started as a pure network provider, we are now becoming more of a service provider as we are evaluating how trains can run more efficiently, as well as exploring public safety aspects and advertising opportunities among other options.

With this approach, you provide a wide range of options to your MNO clients as well as to the transport authorities, while entering new revenue streams by working with advertising agencies, data analytic businesses, etc. Moreover, 5G will allow us to explore more use cases. In Toronto, we are looking at stations that are overcrowded and if there is an incident, you get a better response time. Some of the health and public safety applications that we are implementing will be even more relevant post COVID-19.

TowerXchange: How will 5G networks look and what will be the role of traditional macro sites in the near future?

Igor Leprince, Group CEO, BAI Communications: Nobody has all the answers to these questions and I would not claim that I do, but I can share some thoughts. 5G rollouts are going to be expensive so MNOs need to figure out what is their business case to deploy 5G. For now, except Japan and South Korea, all countries that are developing 5G have started on big cities, as that is where most of their



consumers are. Now, all operators are exploring how to monetise that deployment and it is going to be very difficult to justify the cost of developing that technology at a national level only based on traditional consumers. Here is where the industrial applications become critical. Monetising on those opportunities around healthcare, government partnerships or transportation will be critical to generate an additional source of revenue for the operators and will help driving the speed of 5G deployment. In countries like China, the government's push will also be very important but the appetite from those mentioned industries to explore new use cases will have to be a big driver globally.

In terms of the network itself, macro towers will continue to be important and I expect MNOs to upgrade their current sites with new equipment while also building new ones. However, dense environment like the ones where we operate can't host many more macro sites. Further, for a lot of use cases and densification, sites need to be much closer to the ground. Small cells will then become more and more important, but MNOs cannot start rolling them out in every pole and corner of the city, so the role of neutral host providers really make sense for small cells too.

In conclusion, it will be a combination of macro and small cells, as well as a mix of low and higher

frequencies. You are probably looking at three level of sites with macro, medium-size and micro. Finally, you also need the fibre as you won't have a 5G network without it.

TowerXchange: BAI Communication has an extensive experience in bringing connectivity to indoor and transit services in cities like New York, Toronto and Hong Kong. How does this business model and skills set compares to the traditional "steel and grass" take of tower companies and how can that impact valuation?

Igor Leprince, Group CEO, BAI Communications: Deep-rooted, you use similar engineer capabilities as designing, building and managing networks could be considered a field in itself. However, in this particular 5G urban, dense environment, you require much higher technological capabilities; some of them we have and some other we have to develop. In addition to the technical skills, you need the trust of the local authorities, the right partnerships and access to fibre if, just to name a few elements. Therefore, 5G in urban areas becomes a more complex environment to navigate.

The impact on valuation is more difficult to determine. Based on the above, you can argue that this model requires more technical capabilities and bigger investments, but if you are able to maximise the use cases and succeed, you might be able to obtain higher returns due the criticality of this infrastructure. The challenge here is cracking this complexity of assets, authorities, fibre and different engineering capabilities that you require ■