



CBRS Seminar

Our Citizens Broadband Radio Service (CBRS) seminar is the only seminar of its kind offered to enterprises that are considering launching mobile and mobile data services over CBRS band in the US.

The Besen Group estimates that the US private LTE market will grow at a compound annual growth rate of 35% between 2019 and 2023 due to the availability of new spectrum bands such as CBRS and MulteFire as well as the maturity of LTE ecosystem. This growth accounts for more than \$3 Billion by the end of 2023.

The Besen Group defines private LTE as a dedicated network for consumers, businesses and Internet of Things. Private LTE network can be based on licensed, unlicensed or shared spectrum.

While our seminar includes an overview of CBRS with a business guide and use cases, it also includes two customized workshops designed to help each organization develop a successful business plan and comprehensive business case with step-by-step instructions.

Our seminar will not only help enterprises gain a solid understanding of the CBRS band, but it will also provide them with key success factors when launching their mobile services.

Session I : CBRS Overview

■ In-Depth Look at 3.5 GHz Band & Licensing

- Understanding three-tier sharing model for CBRS, protection of incumbents and neighboring users
- Priority Access Tier: Eligibility, configuration, frequencies, geographic area and license term
- Priority Access License Auction: PAL application, auction rules and bidding credits
- General Authorized Access Tier: Authorization methodology, geographic area and license term

■ CBRS Network Architecture & Citizens Broadband Service Device (CBSD)

- Describing the Spectrum Access System (SAS) and SAS Functional Architecture
- Determining the registration criteria for CBSDs with SAS and CBSD requirements
- Identifying Spectrum Access System (SAS) function and requirements
- Ensuring the operations of Environmental Sensing Capability (ESC)

■ Private LTE Network Architecture

- Defining the role of Radio Access Network (RAN) and Evolved Packet Core (EPC)
- Establishing the integration of EPC with current enterprise management systems
- Configuring private LTE network as neutral host for public LTE networks

Session II : CBRS Business Guide

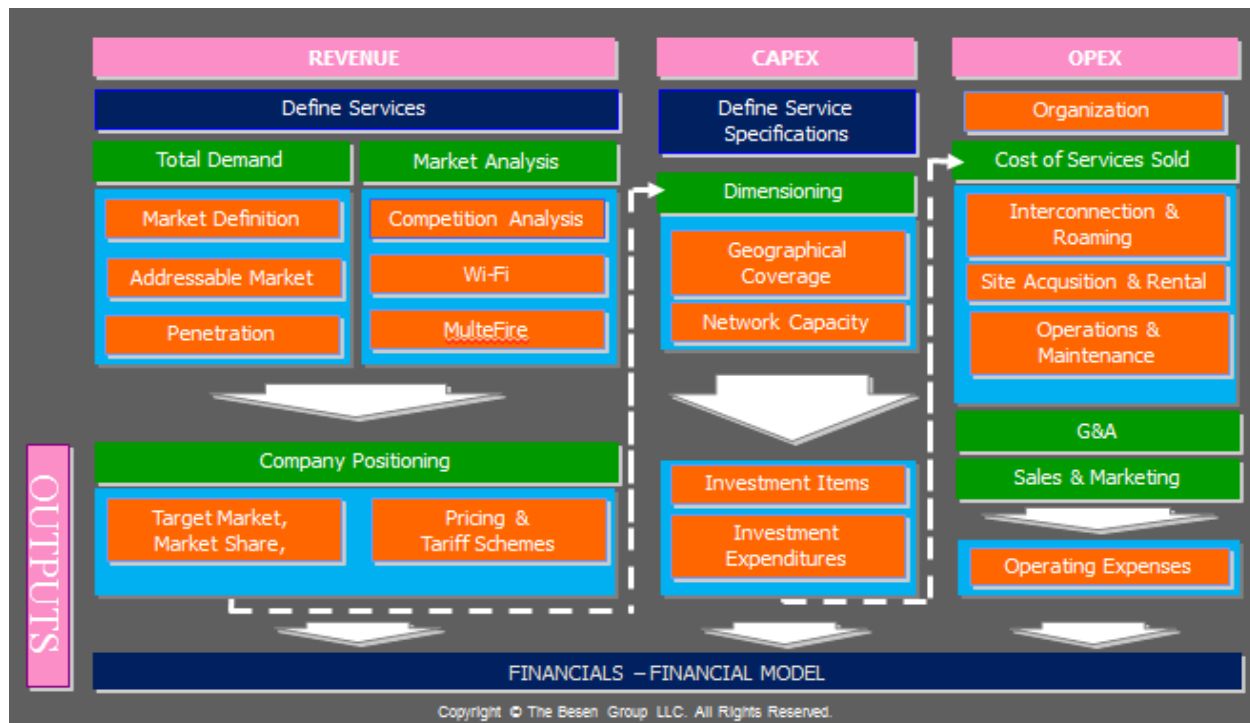
■ Enterprise Market Entry Evaluation & Strategy Planning

- Examining the benefits of owning private wireless networks and identifying key success factors
- Determining CBRS use cases for launching private wireless networks and CBRS service providers
- Developing go-to-market strategy and a comprehensive business plan with financial indicators
- Evaluating multiple CBRS business models and the next steps to move forward

Session III: CBRS Use Cases

- Cable Operator MVNO Use Case
- Enterprise Private LTE Network Use Case
- Fixed Wireless Access Use Case
- Mobile Network Operator Backhaul & Capacity Use Case
- Neutral Host Network (Mobile Virtual Network Aggregator) Use Case
- Venue Owners Use Case

CBRS Business Plan Strategy Workshop



CBRS Business Case Development Workshop

- **Revenue Structure:** Market Sizing, Take-Up Usage, Service Selection and Pricing
- **Capex (Capital Expenditures) Structure:** Network Related and Non-Network Related Expenses
- **Opex (Operating Expenditures) Structure:** Direct and Indirect Expenses
- **Financial Indicators:** Internal Rate of Return (IRR), Net Present Value (NPV), Payback

About The Presenter

[Alex Besen](#) is the Founder & CEO of The Besen Group LLC. He provides advisory and training services to corporate executives in the mobile data industry.

Alex has over 22 years of hands-on experience in the mobile industry working for operators and vendors in North America and Europe in numerous roles including business development, marketing, project management and finance. He has been working with mobile network operators in developing their wholesale business models, advising MVNOs to launch their mobile and mobile data services as well as helping MVNEs with their services portfolios.

Previously, Alex worked at Ericsson with mobile operators on MVNO and UMTS projects in the EMEA (Europe, Middle East and Africa) region. He was also responsible for identifying potential partners and hosting workshops at Ericsson Mobility World (a mobile data laboratory) where developers create, optimize and commercialize mobile applications. Prior to Ericsson, Alex was employed at T-Mobile USA (Omnipoint Communications) where he was responsible for partnerships, joint ventures and provided billing, customer care, marketing and financing solutions to mobile operators. Alex began his mobile career with Pocket Communications based in Washington DC where he managed the company's auction activity for C-block spectrum licenses as well as other activities associated with market research, market segmentation, pricing plans and market distribution strategies.

He holds a BS degree in Management from the University of Tampa and an MBA degree in International Business from the American University. He is fluent in French, Turkish and proficient in Italian.

He has delivered a 4G LTE wholesale seminar to International Telecommunications Union (ITU) in March 2012, Cellular Telecommunications Industry Association (CTIA) in January 2011, Competitive Carriers Association (CCA) in December 2010 and Federal Communications Commission (FCC) in October 2010.

He has spoken at CCA – Mobile Carriers Show 2018, Mobile World Congress Americas 2017, CES 2017, CTIA Super Mobility 2016, Wi-Fi Now USA 2016, CCA - Mobile Carriers Show 2016, CTIA Super Mobility 2015, Sprint Mobility in Action 2014, MVNO Industry Summit USA 2013, MVNO World Congress 2013, CCA Global Expo 2013, MVNO Industry Summit 2012, MVNO Industry Summit 2011, MVNO Industry Summit Latam 2011, LTE North America 2011, LTE North America 2010, MVNO Industry Summit 2010, Eurasia Com 2009, Mobile World Congress 2008, MVNO Summit 2008, MVNO Summit 2007, MVNO Congress 2007, Emerging Mobile Partnerships & MVNOs Conference 2007, CTIA Wireless 2006, and CTIA Wireless 2005.

He was quoted in Bloomberg, Boston Business Journal, Business News Americas, Business Week, CableFax, Chicago Tribune, Computer World, FierceWireless, Hurriyet, Information Week, Le Journal du Net, Light Reading, Los Angeles Times, MIT Technology Review, New York Times, RCR Wireless, Red Herring, SNL Kagan, Telephony Online, The Kansas City Star, The Prepaid Press, The Seattle Times, The Washington Post, Triangle Business Journal, USA Today and Wireless Week.

About The Besen Group

The Besen Group LLC is an international management consulting practice to the mobile data industry headquartered in the Washington DC area, with representatives in Paris and Tokyo.

The Besen Group brings global perspective and an open approach to client engagements, where the transfer of our mobile data knowledge, hands-on experience, and strategic thinking become part of our clients' ongoing competitive strength. Its mission is to provide mobile data players with tools, knowledge, and services enabling them to perform optimally in their mobile environment. The Besen Group's competitive edge is based on practical experience with mobile operators, mobile vendors, and a mobile data laboratory.

Our references include Amdocs, Arterra Mobility, BeQuick, BICS, Cosmote, Ericsson, Fenerbahce, Globecomm, Globalstar, Ligado Networks, Limitless Mobile, MTS, Nokia, Orange, Panasonic, Plintron Americas, Reglo Mobile, Sprint, T-Mobile US and Turk Telekom.

The Besen Group offers the following service portfolios: [Mobile Data Service Portfolio](#), [MVNO Service Portfolio](#), [MVNE Service Portfolio](#) and [HNO Service Portfolio](#).

The Besen Group offers the following training programs: [Mobile Wholesale Seminar](#), [US IoT Seminar](#), [US MVNO Seminar](#), [MVNO Seminar](#), [MVNO Workshop](#), [MVNE Seminar](#), [Cable MVNO Seminar](#) and [CBRS Seminar](#).

All of our services are tailored to ensure that each of our clients' needs are met and surpassed. We work on a project basis or retainer basis with mobile operators, MVNOs, MVNEs, mobile vendors, law firms, investment banks, venture capital and private equity firms from all around the world.

Pricing

CBRS Seminar includes:

- Session I: CBRS Overview
- Session II: CBRS Business Guide
- Session II: Use Cases for CBRS
- Session IV: Customized CBRS Business Plan Strategy & Business Case Development Workshops

For pricing information, please send an email to: seminar@thebesengroup.com.

The seminar price is for unlimited number of participants. The seminar price will vary for a customized seminar.

The duration of the seminar can be one day or half-day. Customers will be responsible for all travel related expenses including air, transportation, and lodging for the presenter.

In case, customers will need a training facility, all Regus business center expenses will be billed additionally.

Payment

Full payment is required prior to the scheduled seminar date.

All payments should be made by check, wire transfer or major credit card.

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For a customized seminar, please contact us at +1.703.981.8168 or by email to: seminar@thebesengroup.com.

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All cancellations must be in writing. Cancellations received two weeks prior to the scheduled seminar date won't be responsible for any service charge.

A service charge of \$1,000 will apply to cancellations received less than two weeks prior to the scheduled seminar date within North America and a service charge of \$2,000 for all other international countries.

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