

# 2013 – 2023

## GLOBAL **DISTRIBUTED ANTENNA SYSTEM (DAS) MARKET**

BY COVERAGE, BY OWNERSHIP, BY TECHNOLOGY, BY END USER, BY REGION, COMPETITION FORECAST & OPPORTUNITIES



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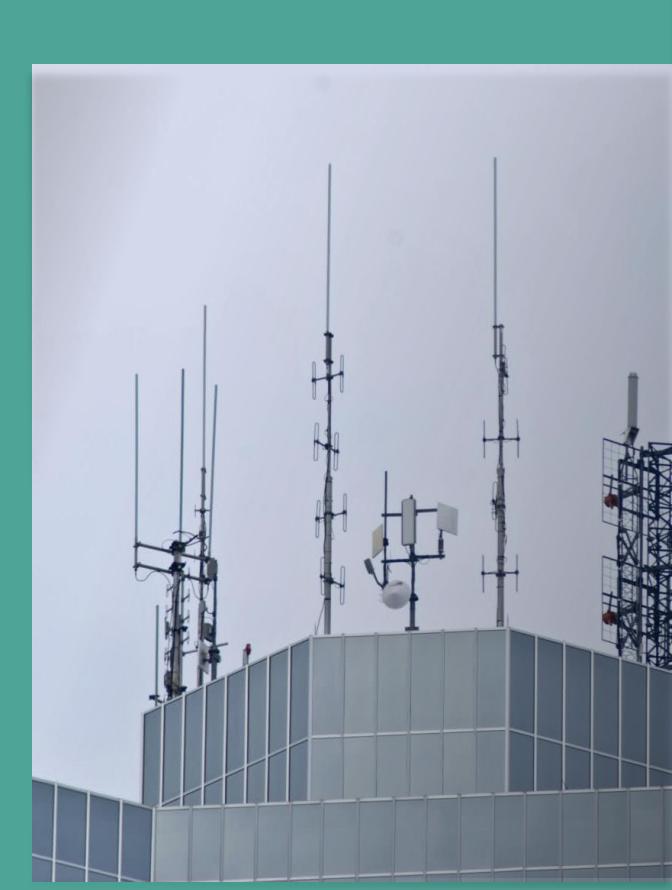


# PRODUCT OVERVIEW

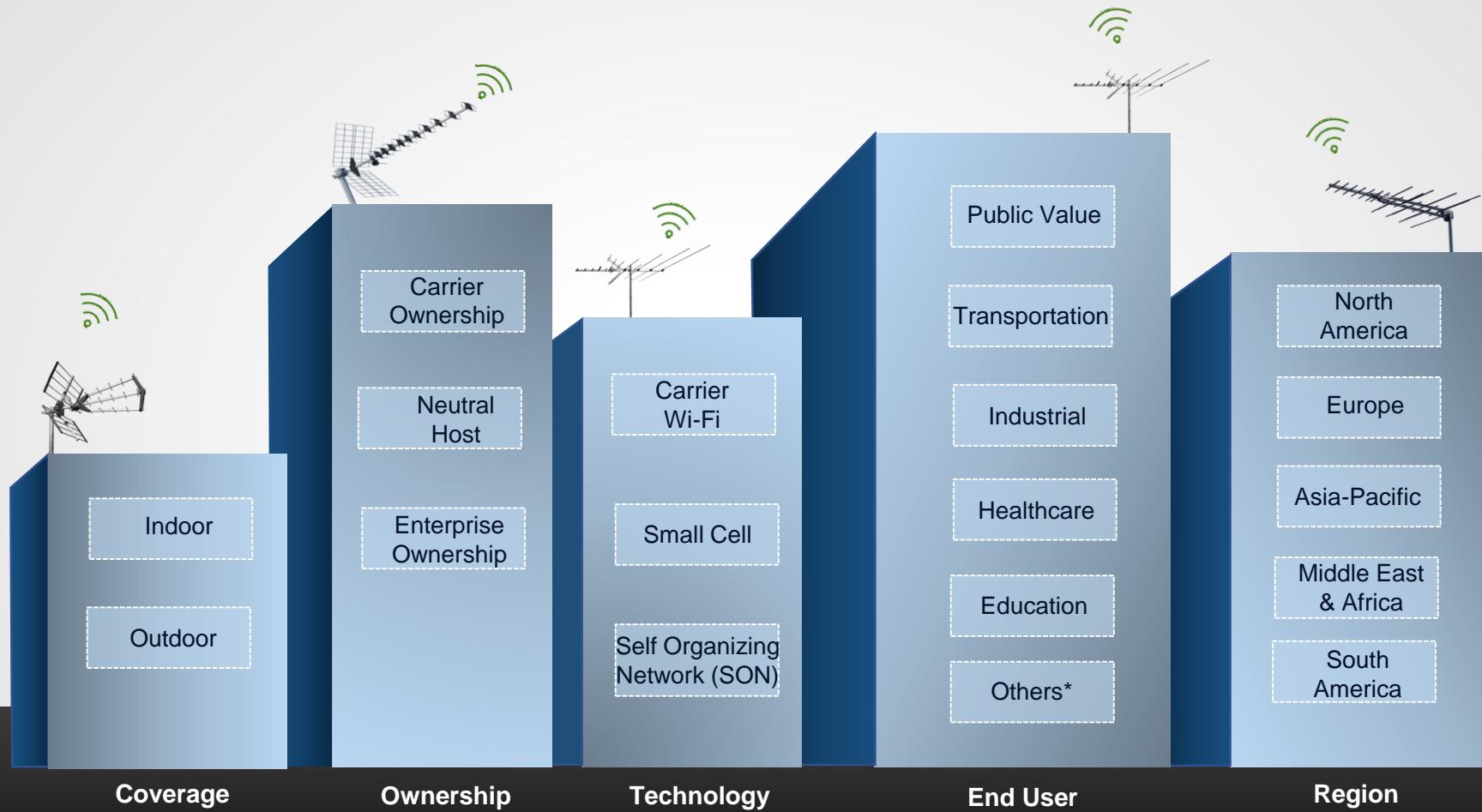
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## DISTRIBUTED ANTENNA SYSTEM (DAS)

- A Distributed Antenna System (DAS) comprises of a group of antennas, which are physically connected to a central controller, which is connected to the carrier network's base station or macro cell. DAS are signal boosters that strengthen the signal reception of cellular operators by removing dead spots.
- Distributed antenna system can be deployed on the basis of coverage type - Indoor (in building) and Outdoor. Adoption of indoor coverage type is growing as it is being increasingly used in malls, shopping centers, medical centers, etc. for improving the network coverage.
- Distributed Antenna System are being used across various end user sectors including public venues, transit terminals (airports, metro stations, etc.), industrial establishments, medical facilities, education institutions, etc. as they offer numerous benefits to users such as lower interference and better coverage, especially in areas that cannot be effectively covered with traditional sites.



## DISTRIBUTED ANTENNA SYSTEM (DAS)



*Others\*- include Hospitality, Residential, etc.  
Source: TechSci Research*





Source: TechSci Research

## DEFINITION

### ENTITY

Drives demand for DAS

Customer

Manufactures DAS components and also provides support to the integrators with product training

DAS OEM

Set the design standards. Also provides Radio Frequency (RF) source with participation in funding

Wireless Carrier

Distributor

Supplies inventory locally. In addition, distributor works with partners to generate/tap market opportunities

Cable Contractor

Installs DAS cable infrastructure

Consultant and A&E Firm

Develop & publish bid specification along with evaluating bid responses

DAS Integrator

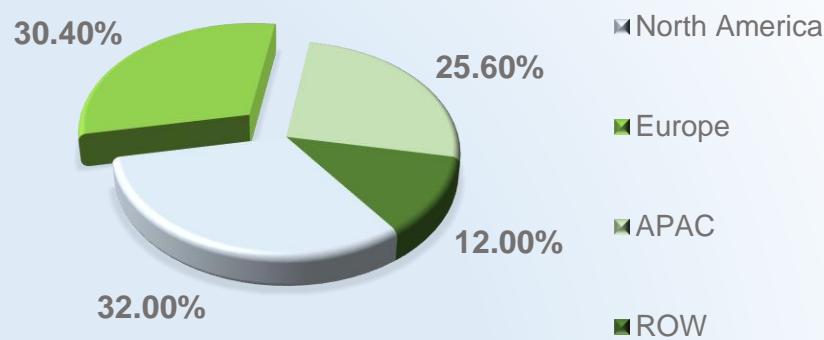
Interfaces with all ecosystem players to ensure successful deployment of the DAS. Designs, implements and supports the DAS. Coordinates in carrier funding and integration.



Source: TechSci Research

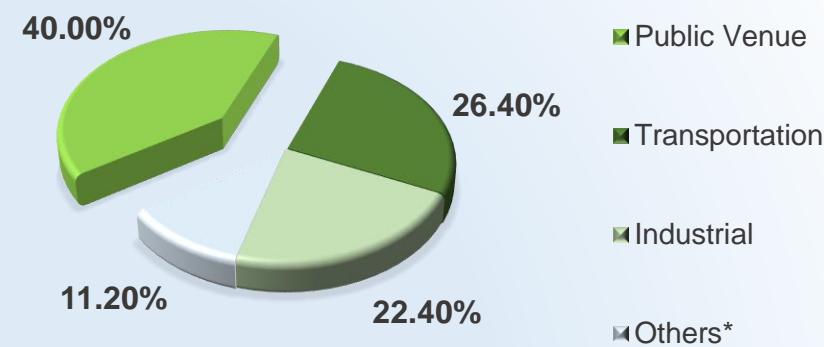
# VOICE OF CUSTOMER

**FIGURE 1: REGIONAL SPLIT, (N=125), 2018**



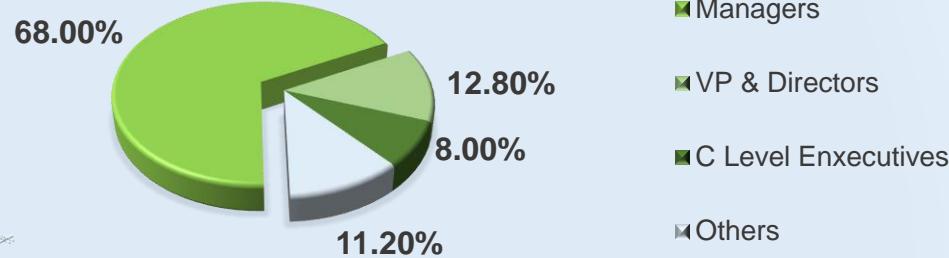
Source: TechSci Research

**FIGURE 2: END USER SPLIT, (N=125), 2018**



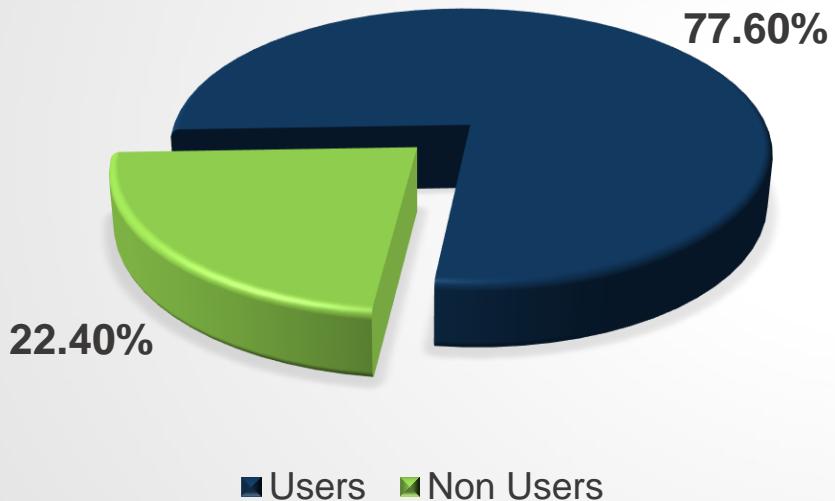
*Please Note\*: Others includes Healthcare, Education, etc.*  
Source: TechSci Research

**FIGURE 3: RESPONDENT CATEGORY SPLIT, (N=125) 2018**



Source: TechSci Research

**FIGURE 4: DISTRIBUTED ANTENNA SYSTEM USER VS  
NON-USER GROUP ANALYSIS, (N=125), 2018**

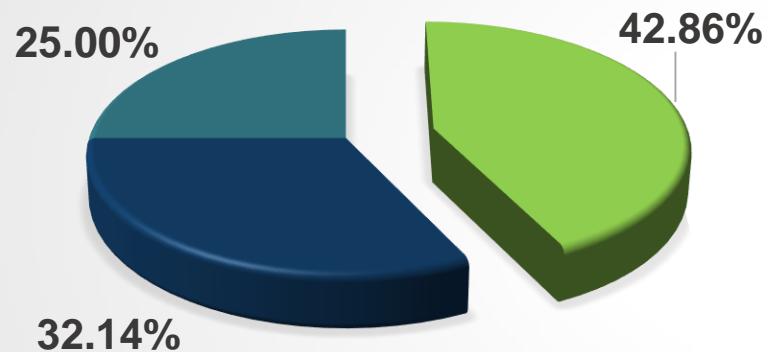


Source: TechSci Research

In considered sample size it is found that the penetration of DAS in five different region, globally is **more than 75%**. Remaining percentage of the respondents are using alternate technologies which is available in the market.



**FIGURE 5: DISTRIBUTED ANTENNA SYSTEM, ADOPTION BY NON-USER GROUP (N=28), 2018**



- Less than 6 Months
- In Between 6 to 12 Months
- More than 12 Months

*Source: TechSci Research*

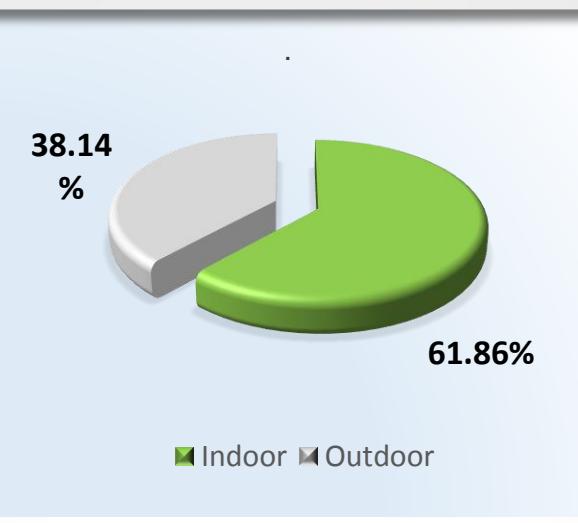
**42.86%** of the non-user are already in the planning phase to integrate DAS on different sites to boost the signal and maintain the connectivity. Majority of the respondents comprise of Enterprises and Public Venues which are primarily focusing on enhancing the connectivity to provide flawless services to the commuters & existing user base.



**FIGURE 6: DISTRIBUTED ANTENNA SYSTEM, BY COVERAGE TYPE BY USER GROUP (N=97), 2018**

Increasing demand for staying online is pushing the mobile carrier providers to deploy DAS in Public Spaces as well.

Stadium and other public venues are on the top list.



DAS is majorly being deployed for Indoor application when compared with Outdoor application.

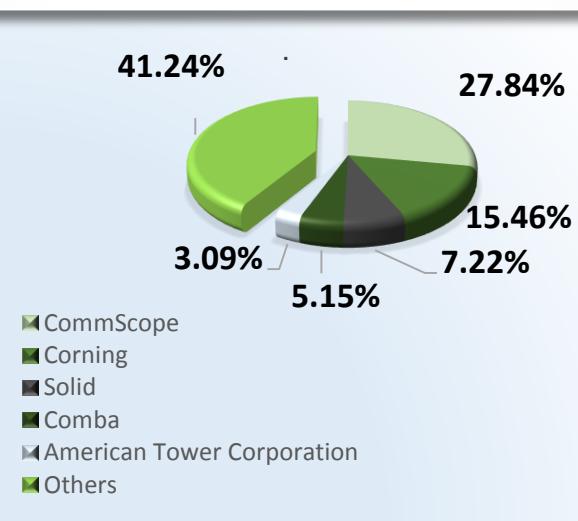
With increasing number of new construction and the need to provide good connectivity throughout the building, the adoption of Indoor DAS is high

**FIGURE 7: DISTRIBUTED ANTENNA SYSTEM, BY CURRENT VENDOR, BY USER GROUP (N=97), 2018**

**41.24%** of the respondents has selected others.

Others include local and regional players as well and few common names are as follows

- Boingo
- Cobham
- Dali, etc.



CommScope stands out to be the most prominent DAS Solution providers, as its user base is spread across different region, worldwide.

Despite of its regional presence in North America it has good reach across the globe, along with their promising solution offering.



Small cells were developed to support a single band of services, for e.g. 2G, 3G, 4G, etc.

Hence, small cell will not be able to support current scenario.

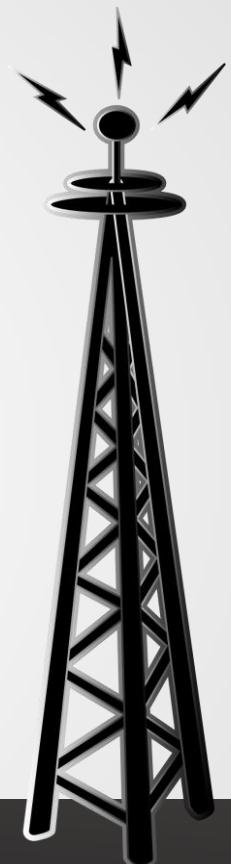
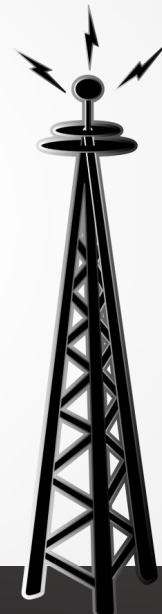
Parallel technologies like SON which could be a better option

Majority of the respondents suggested that Small Cells integration with DAS will enhance the coverage and capacity of reach in different venues. As, Small Cells are comprised of a fiber optic transport network and multiple wireless access points, which will help in extended reach.

Also, they identified that Small Cell can withstand more than 70% work done by DAS

**81.44%**

**18.56%**



**FIGURE 8: SMALL CELL'S CONTRIBUTION FOR FURTHER DEVELOPMENT OF DAS, BY USER GROUP (N=97), 2018**

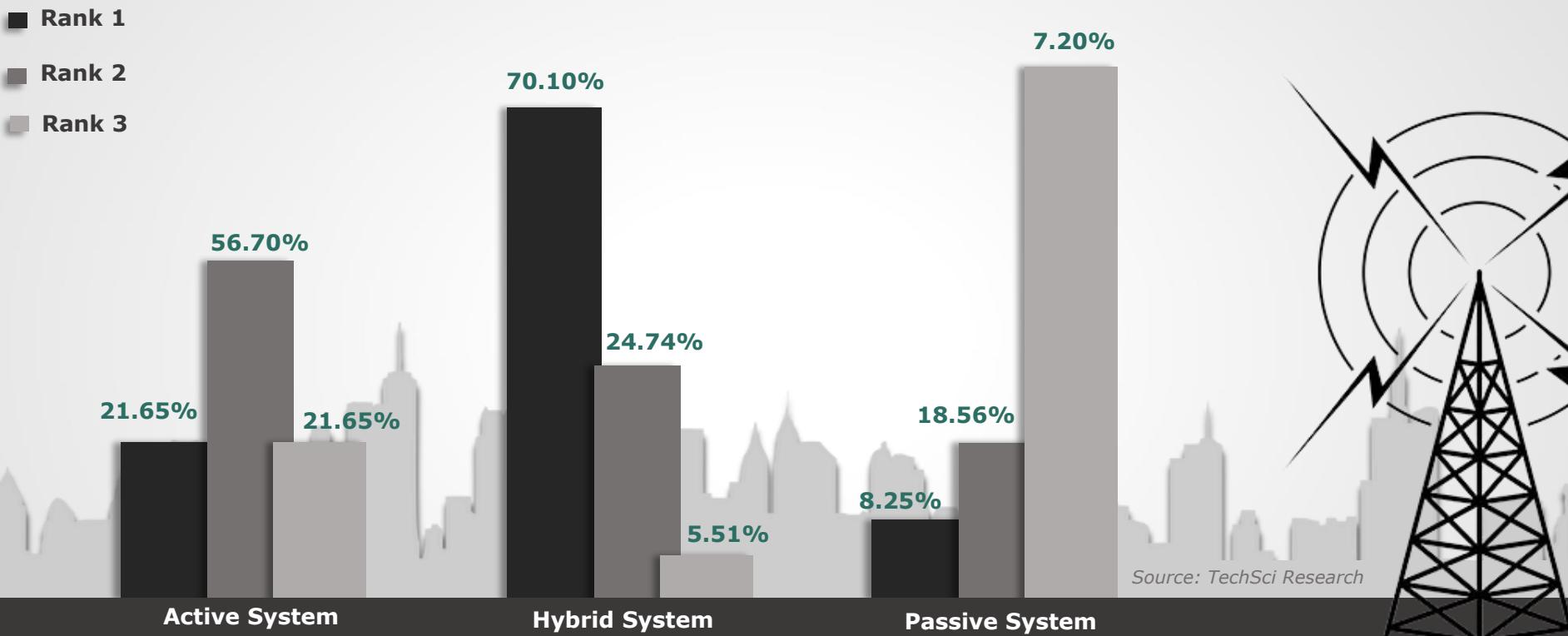
**No Contribution**

**Major Contribution**

Source: TechSci Research



**FIGURE 9: DAS PREFERRED SYSTEM RANKING, BY USER GROUP (MULTIPLE SELECT, N=97), 2018**

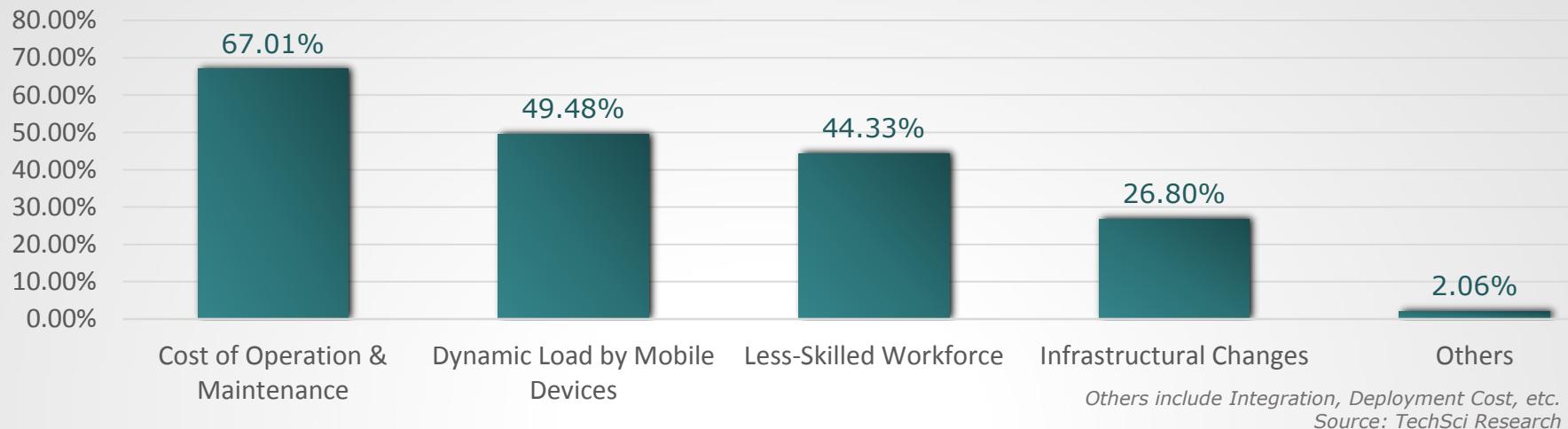


Majority of the respondents Ranked Hybrid DAS setup to be the first priority and as per them this is the best available option in the market.

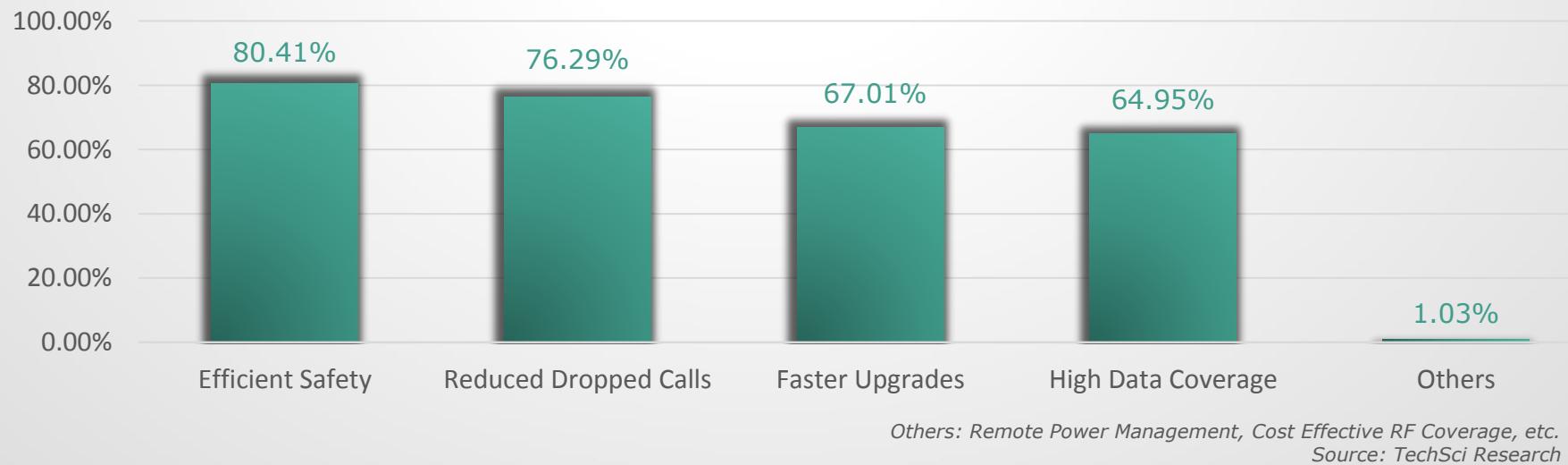
- Hybrid DAS combines both the Active & Passive DAS for signal distribution.
- This also has less signal loss when it is compared with the Passive DAS.



**FIGURE 10: DISTRIBUTED ANTENNA SYSTEM (DAS) MARKET CHALLENGES, (N=97), 2018**

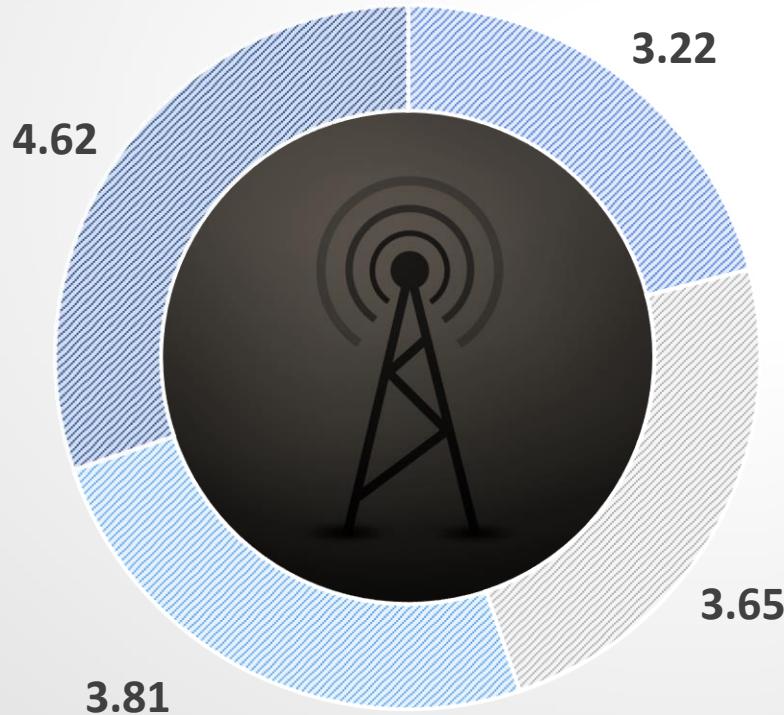


**Figure 11: Distributed Antennas System (DAS), By Customer Expectation (N=97), 2018**



**FIGURE 12: PARAMETERS INFLUENCING PURCHASE DECISION OF DISTRIBUTED ANTENNA SYSTEM (DAS), BY USER GROUP (1-2=LEAST IMPORTANT, 3=NEUTRAL AND 4-5=EXTREMELY IMPORTANT, N=97), 2018**

- High Coverage Area
- Lower Infrastructure Cost
- Throughput
- Efficient Signal Propagation

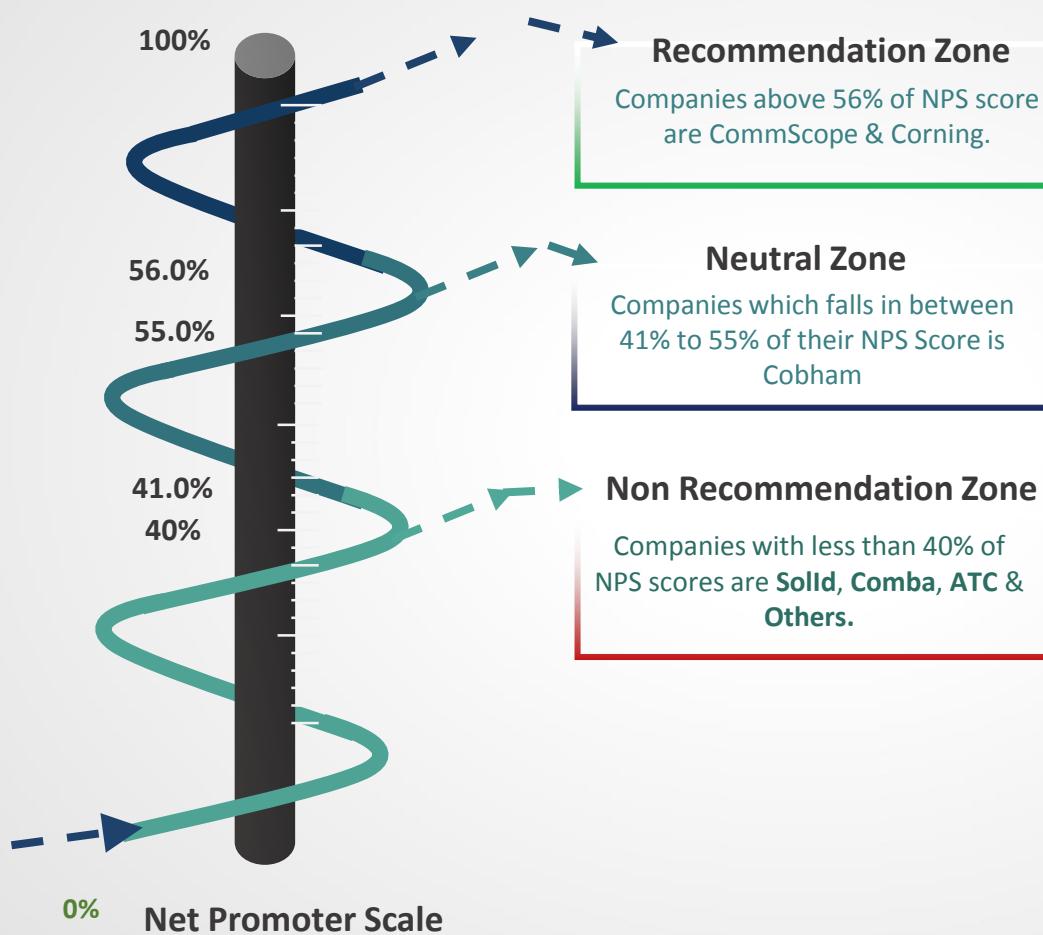


### Efficient Signal Propagation:

Majorly in Active & Hybrid DAS Signal Propagation becomes an important factor as, proper connectivity is a must. Also, both of these setup need to transmit the signal in high obstruction scenario.



FIGURE 13: NET PROMOTER SCORE, (N=97), 2018



CommScope & Corning constitutes a good NPS scores as their after sales service is above satisfaction level.

Cobham has an average of NPS score as the users are satisfied with their services but on the other hand they have a concern regarding their cost structure.

Companies like Solid, Comba & Others shares marginally low NPS score as end user are not satisfied by the performance of the solution when it is compared with the cost of the solution.



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## Related Reports

**Global DAS Market Forecast and Opportunities, 2021**

**India Elevators & Escalators Market Forecast and Opportunities, 2021**

**India Building Automation Market Forecast and Opportunities, 2021**

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