



**CUT**  
International

EXPLORING CONSUMER PERSPECTIVES ON Wi-Fi 6E

2<sup>ND</sup> INDIA SPECTRUM MANAGEMENT CONFERENCE

7 DECEMBER 2022

# About CUTS

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since 1983

promoting optimal regulation, good governance,  
rules based trade in global south, in this pursuit

bridging the gap between policy and practice  
through evidence based research, advocacy,  
working, and capacity building

initiatives at the intersection of law, technology,  
society include:



# State of Indian Wi-Fi Consumer

## Wi-Fi

~ 700 MHz available as against 15,000 MHz in advanced economies, for W-Fi

India amongst highest mobile data consumption but lowest Wi-Fi usage countries

Wi-Fi can significantly contribute to bridging the **digital divide**



Need for Reliable and Uninterrupted Supply in Bharat - Multiple device connections, information, governance (PM-WANI), welfare & employment opportunities

Need for High-Speed & Low Latency Multiple Use Cases – UHD video streaming, WFH, edtech, healthtech, Infotainment, gaming, AR/VR uses

# Potential of Wi-Fi 6E\*

Key Benefits	Key Challenges
<p>Wi-Fi 6E channels don't overlap or cause interference, <b>enabling reliable, high quality and uninterrupted experience.</b></p> <p>It also <b>reduces battery drain</b>, courtesy TWT (Target Wake Time).</p> <p>Four times <b>more bandwidth than</b> existing Wi-Fi services, helping <b>multiple devices getting connected to higher speed</b> internet.</p> <p><b>Enhanced security</b> than existing services.</p>	<ul style="list-style-type: none"><li>• Higher frequencies have a <b>tougher time penetrating solid walls and floors.</b></li><li>• Wi-Fi 6E has an <b>shorter range</b> than Wi-Fi 6.</li><li>• There are very few <b>devices</b> currently equipped with the Wi-Fi 6E standard, which might make its adoption <b>expensive.</b></li><li>• The technology may not be backward compatible, leading to <b>high cost of compatible hardware.</b></li></ul>

Several theoretical studies have indicated advantages of Wi-Fi 6E for India, but there is a **lack of on-ground consumer perspective**

Wi-Fi (Standard 802.11ax) for 6 GHz band

# How do consumers perceive Wi-Fi 6E?

## Questions

What is the consumer **experience** with **existing** Wi-Fi 6E?

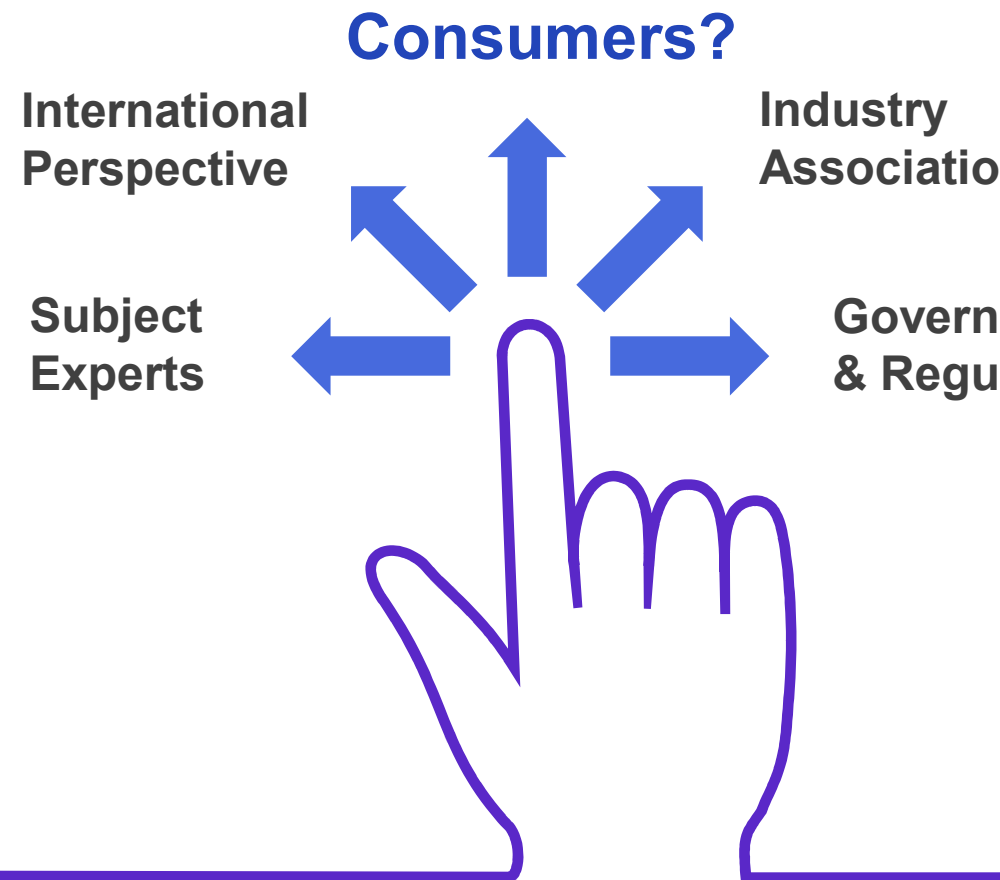
What do consumers **expect** from a new Wi-Fi standard?

How would consumers negotiate **trade-off** between key benefits and challenges of Wi-Fi 6E?

What are the unmet demands, opportunities, **use cases**, and benefits which Wi-Fi 6E will cater to?

What are the **barriers and challenges** that need to be addressed to enable consumers realise full potential of Wi-Fi 6E?

Missing evidence based consumer perspective in discourse around use of 6 GHz band



# Measuring Consumer Intention to Use Wi-Fi 6

## Intervention

Exposing consumers to Wi-Fi services at different existing bands (2.4 and 5 GHz) for specified purposes (streaming, download, upload, interaction) with added elements of speed, cost, reliability, density, range, privacy, and societal norms, to make deductions for Wi-Fi use in 6 GHz band

Choice Experiments

Stated & Revealed Preferences

Qualitative and Econometric Analysis

Perceived Usefulness  
Costs, benefits, change from existing services



Perceived Ease of Use  
Supporting devices, hardware, range, awareness, effort required

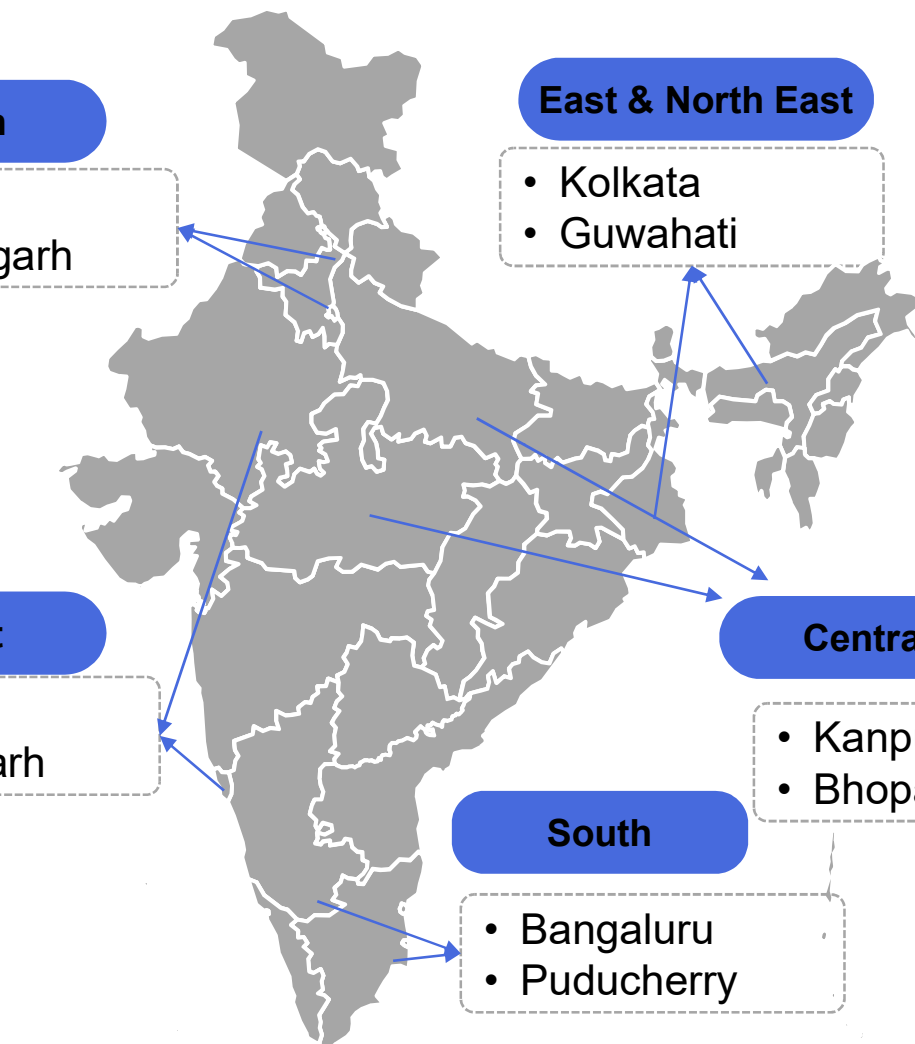
Focus Group Discussions

Behavioural Observation

Awareness generation

Subjective Norms  
Use cases, peer pressure, family considerations

# Nationally Representative Initiative

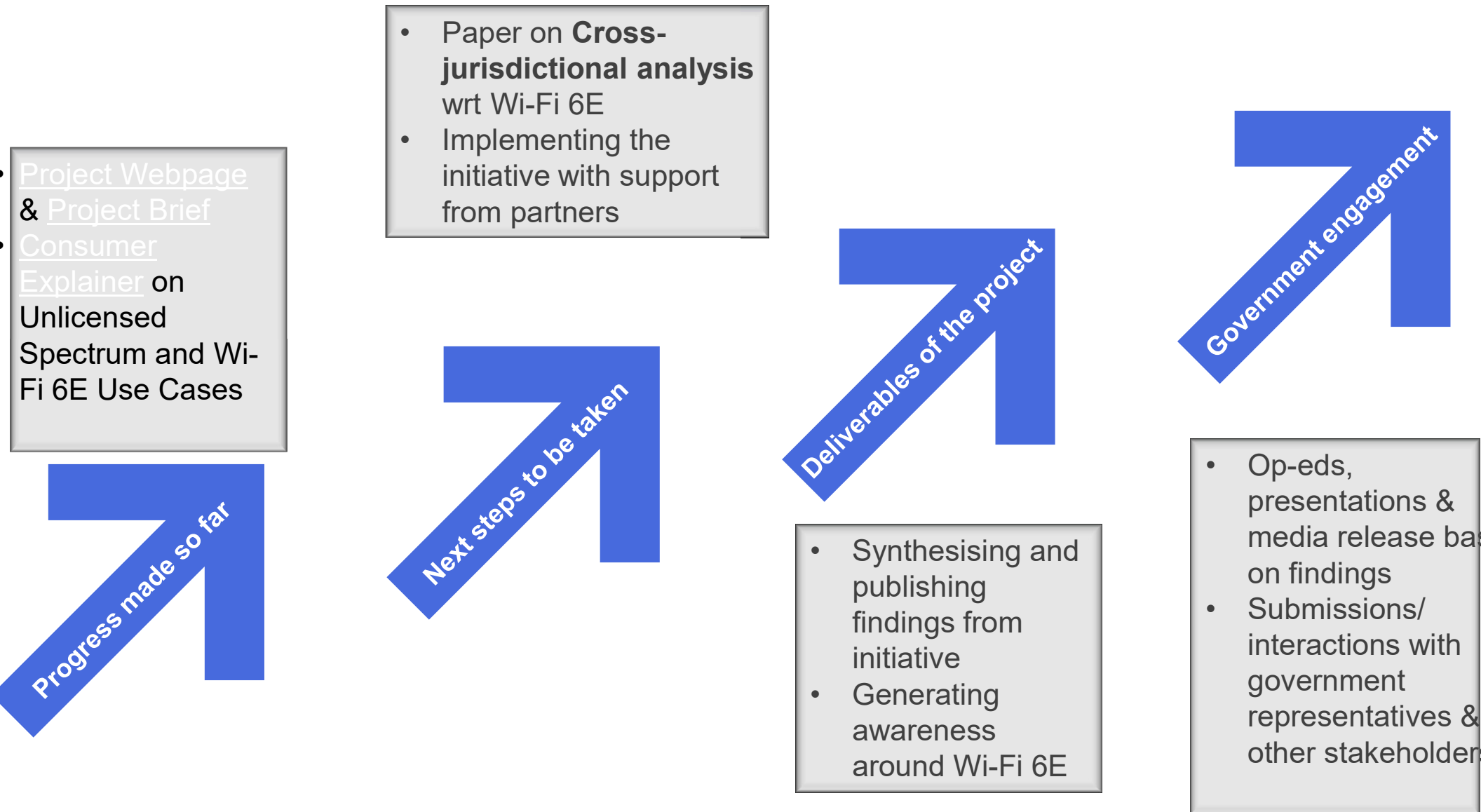


## Focus on in-depth qualitative interactions

- Covering consumers from urban, rural, and peri-urban areas.
- Ensuring diversity in Gender, Education, Age, Income, Occupation, Family Size, Access to Wi-Fi services.
- Highlighting human stories.



# Progress Made and Next Steps





Comments, Suggestions, and Partnerships are Welcome

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# THANK YOU

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