

# Spectrum Metrology and Data: Need for Better Data, Models and Processes

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## *What needs to be done?*

- *Assess every aspect of how we define, measure, model and threshold spectrum*
  - Develop meaningful definitions (*for interference, spectrum use, application needs*) – we now use static worse case examples and add 3 dB
  - Establish new models (*modernizing our propagation models, metrics and thresholds*) – we use models that are decades old and that don't align with measurement
  - Establish methods for validating models with measured data; Define what inputs are needed (*USG - rx and tx characteristics, interference impact, location of services, duty cycle, use profile...*) – we try to solve problems with partial data
  - Establish disclosure methods and process (*shot clocks, independent oversight, disclosure mechanisms...*) – we need knowledgeable and powerful oversight and process
- These multidisciplinary efforts

## *Implementing the research*

- *Depends on the subtopic! Multidisciplinary; secondary research; measurements; testing...*

## *Challenges*

- *Involving ALL of the players; Moving from static and dynamic; Defining the needs; Getting to agreement; Managing security concerns; Setting up a trust process*

## *Benefits*

- *More honest, accurate and precise results; Input for other work on valuation and policy; Creating more efficient use of spectrum*