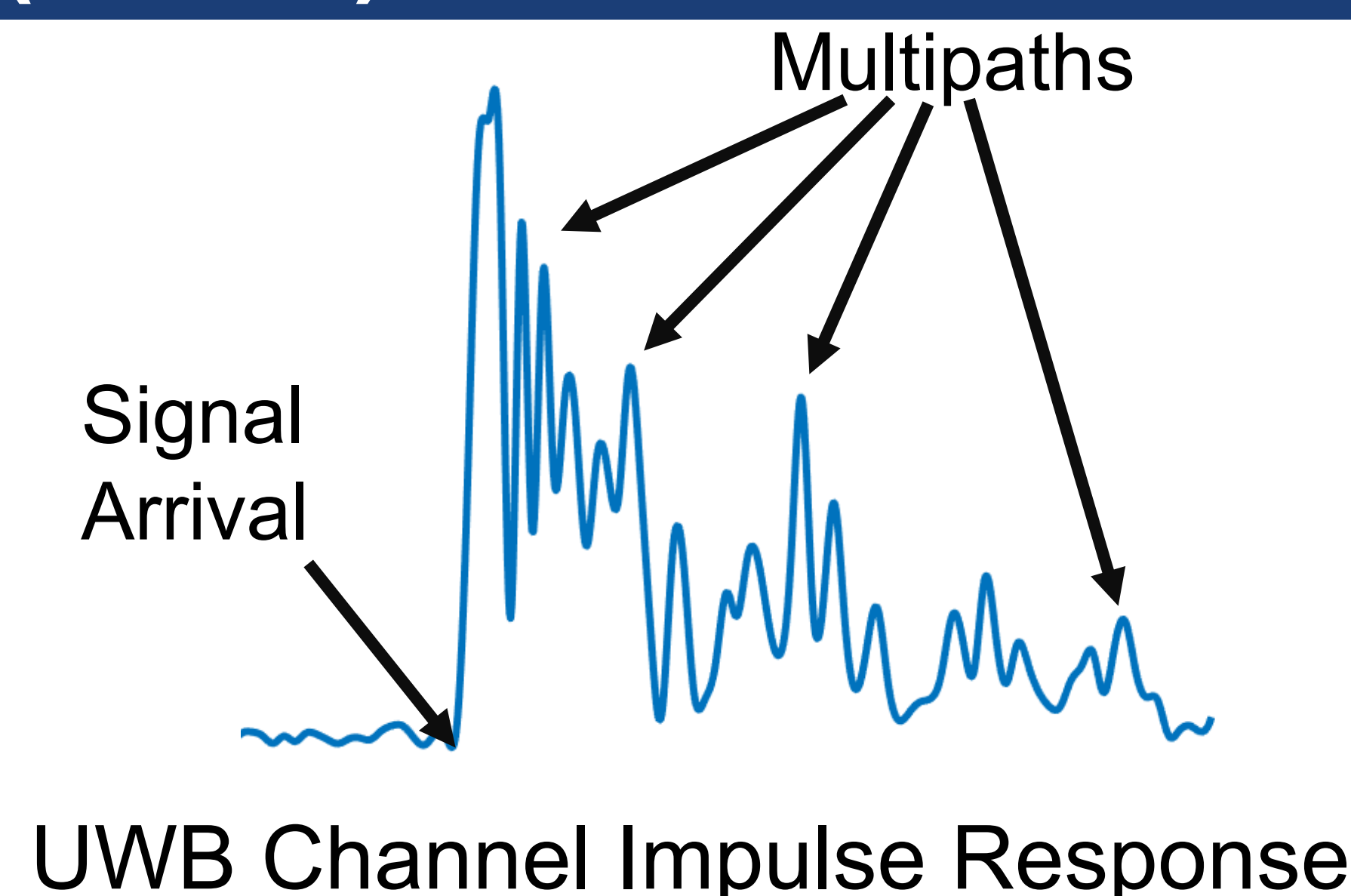


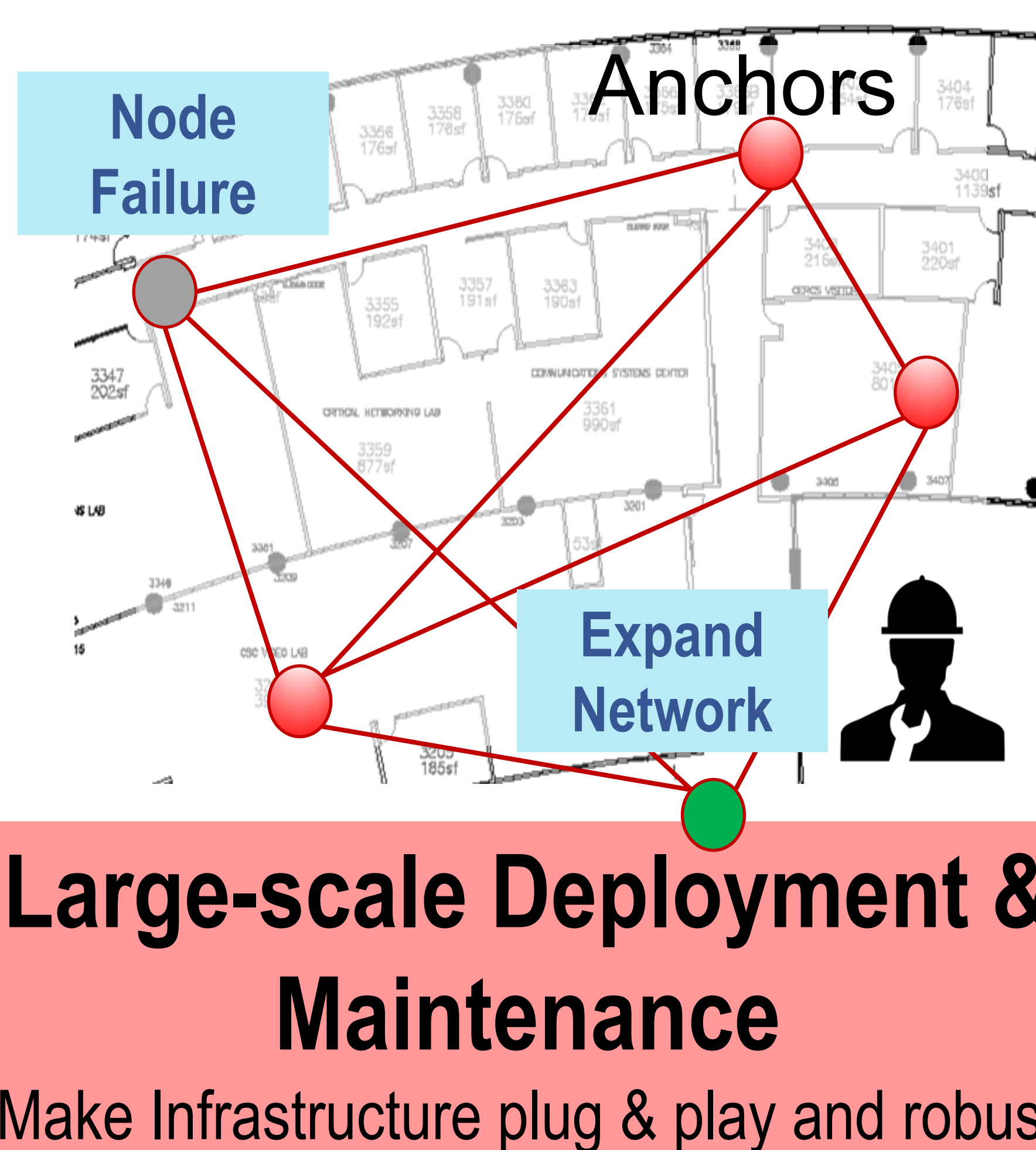
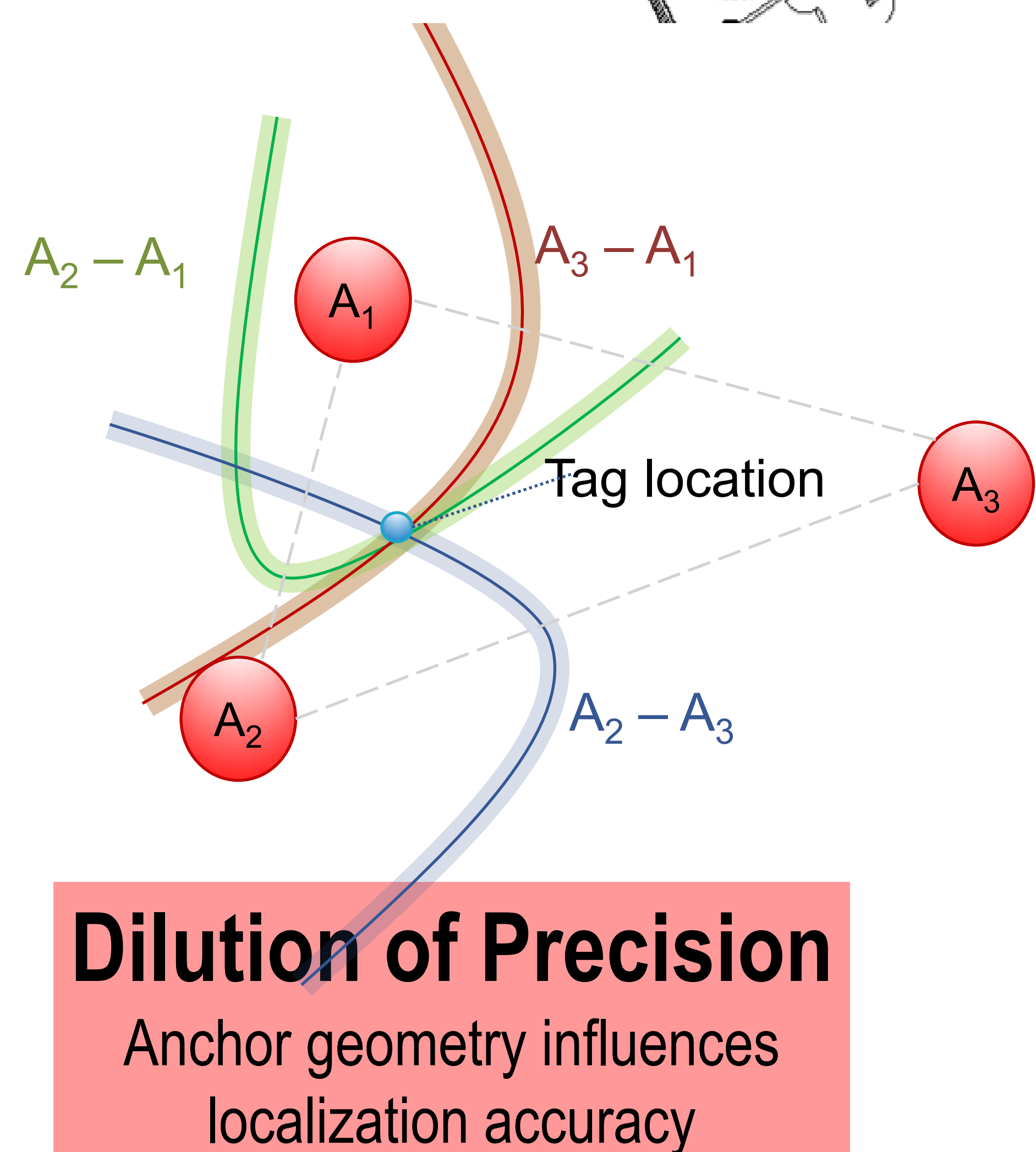
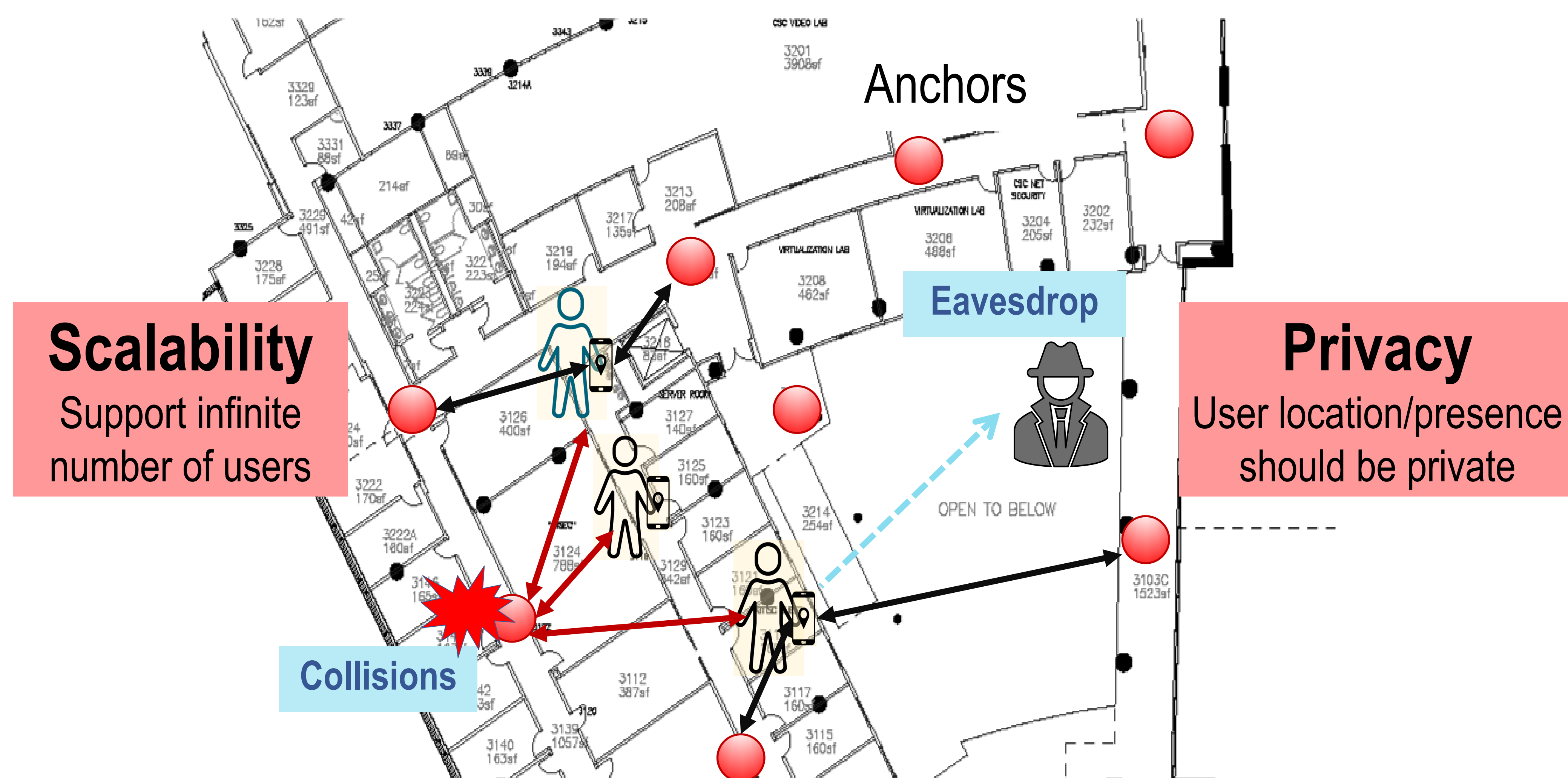


## Why Ultra-Wideband (UWB)?

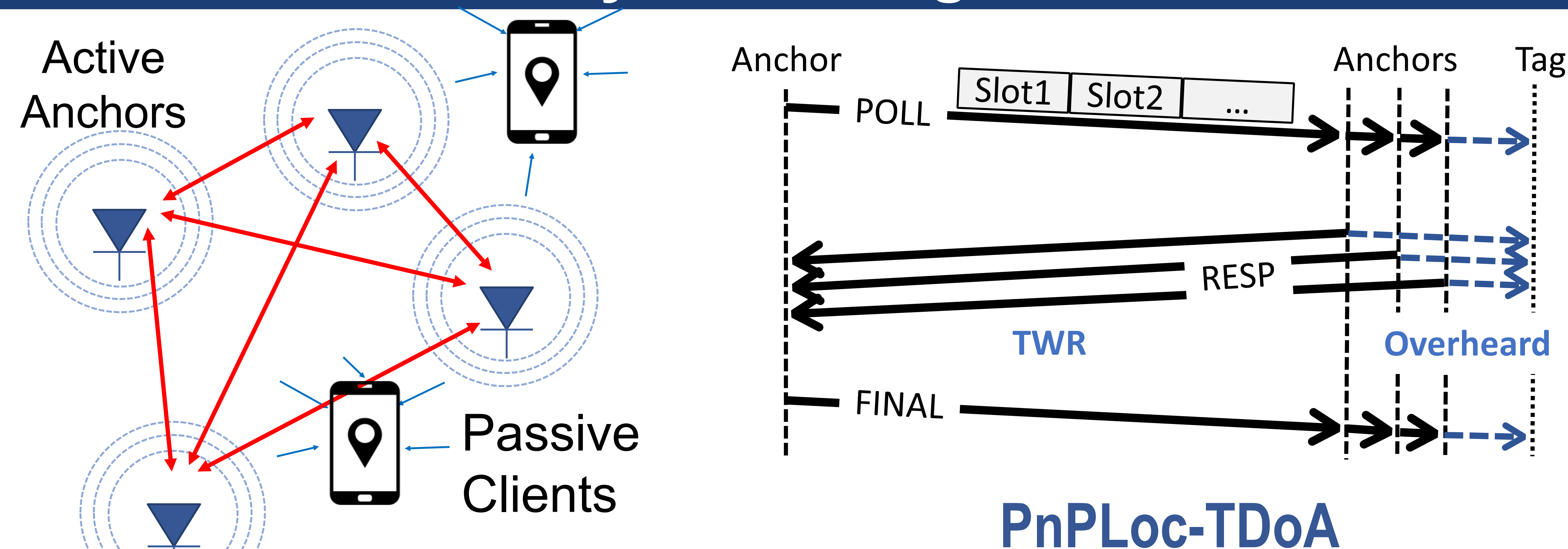
- Robustness against multipaths
- cm-level ranging accuracy
- Penetration through walls and obstacles
- Relatively low power



## Gaps and Challenges

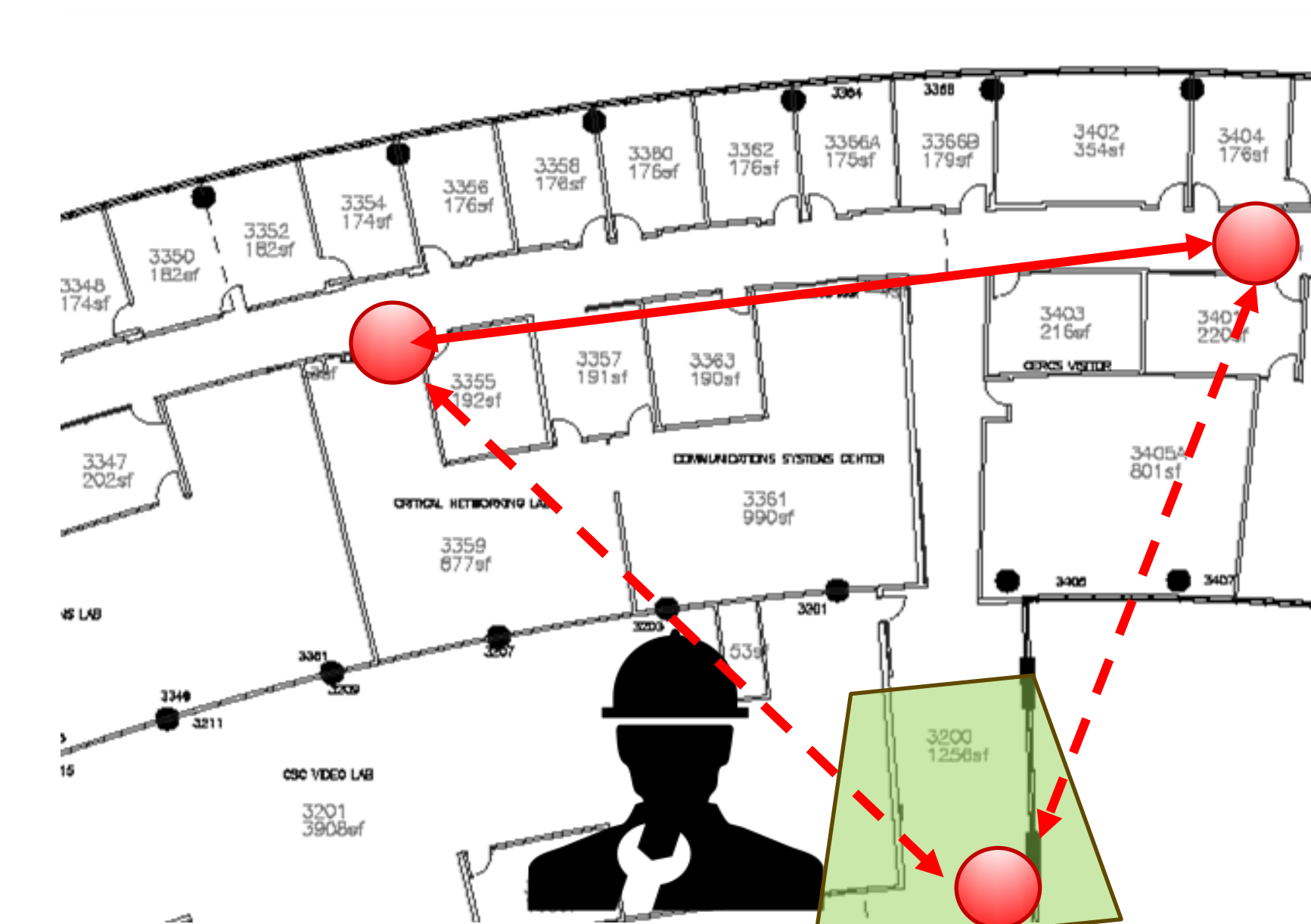


## System Design

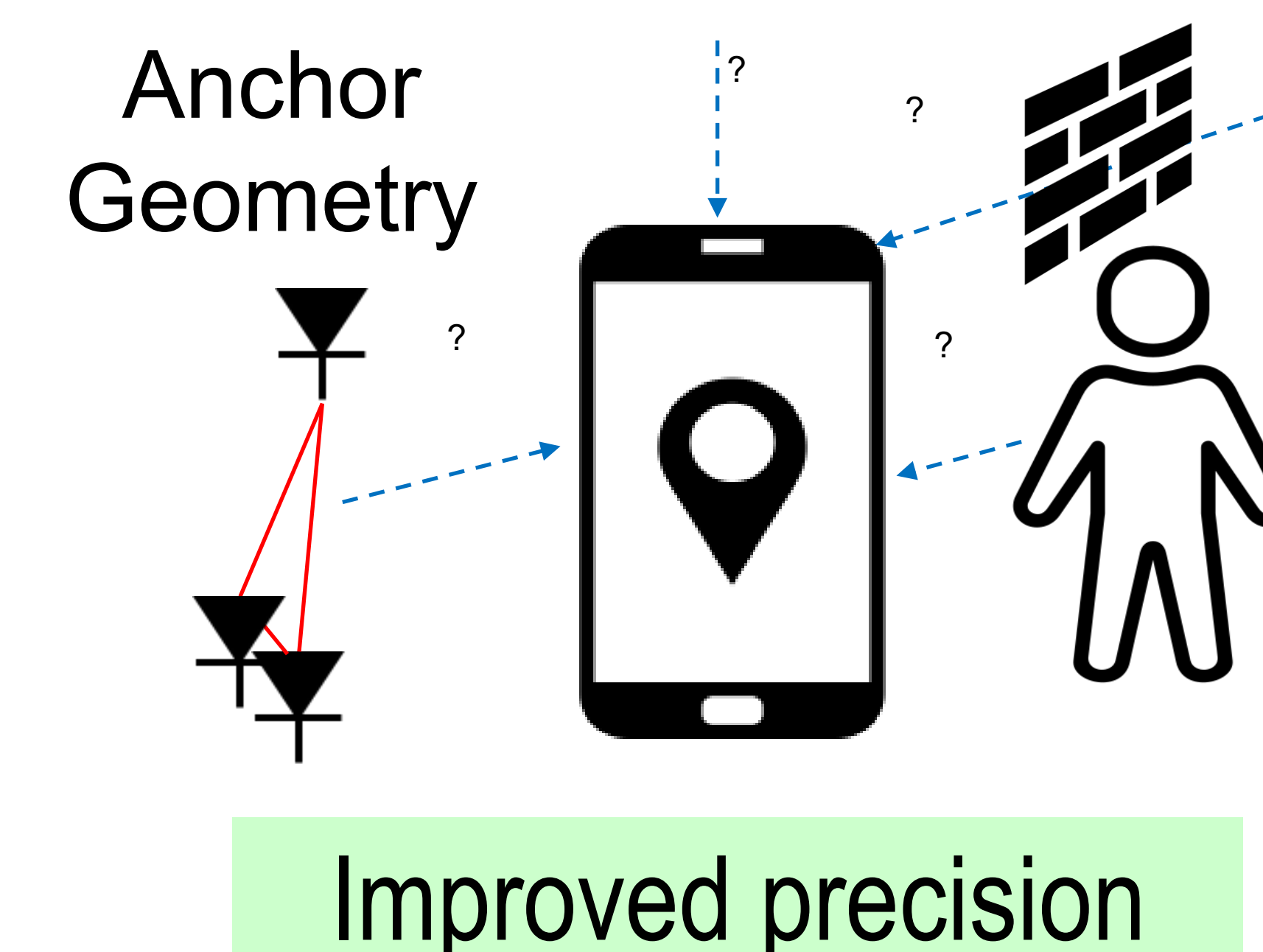


Scalable      Privacy Preserving

- Anchor nodes perform TWR continuously
- Tag overhears TWR messages and extracts its TDoAs to anchors



- Real-time guided deployment
- Self-organizing anchor network



- Anchor selection and filtering based on signal strength and DoP

## Demo

- Mobile phones with UWB tags handed to visitors to try out localization.
- Visitors can turn on/off anchor selection using a button to visualize the improvement introduced by our anchor selection algorithm.

Full paper: Haige Chen and Ashutosh Dhekne. **PnPLoc: UWB Based Plug & Play Indoor Localization. IPIN 2022 (Best Paper Award)**