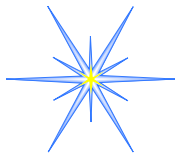# The Need for Technical Solutions Underlying Wireless and Mobile Health Systems

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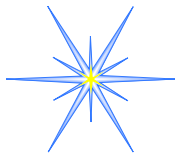
In-Home Architecture

Characteristics

- Flexible sensing and actuation architecture
  - A utility!
- Heterogeneous
  - Plug and play apps
- Ease of Deployment and Maintenance
- Evolve
- Cloud supported

Underlying Research

- Realities for ADLs
- Anomaly Detection
- Speaker ID
- Mood
- Reverberation
- Dependencies
- …

Physical ⟺ Cyber

- Physical world is complex
  - New faults -> blocked sensor, moved sensor
  - Human is unpredictable
  - Assumptions made for cyber are often too simplistic

- Interventions
  - Comprehensive understanding of the complete spectrum of types of human-in-the-loop controls
  - Safety critical
  - System ID versus ML
    - The duality of FC and ML