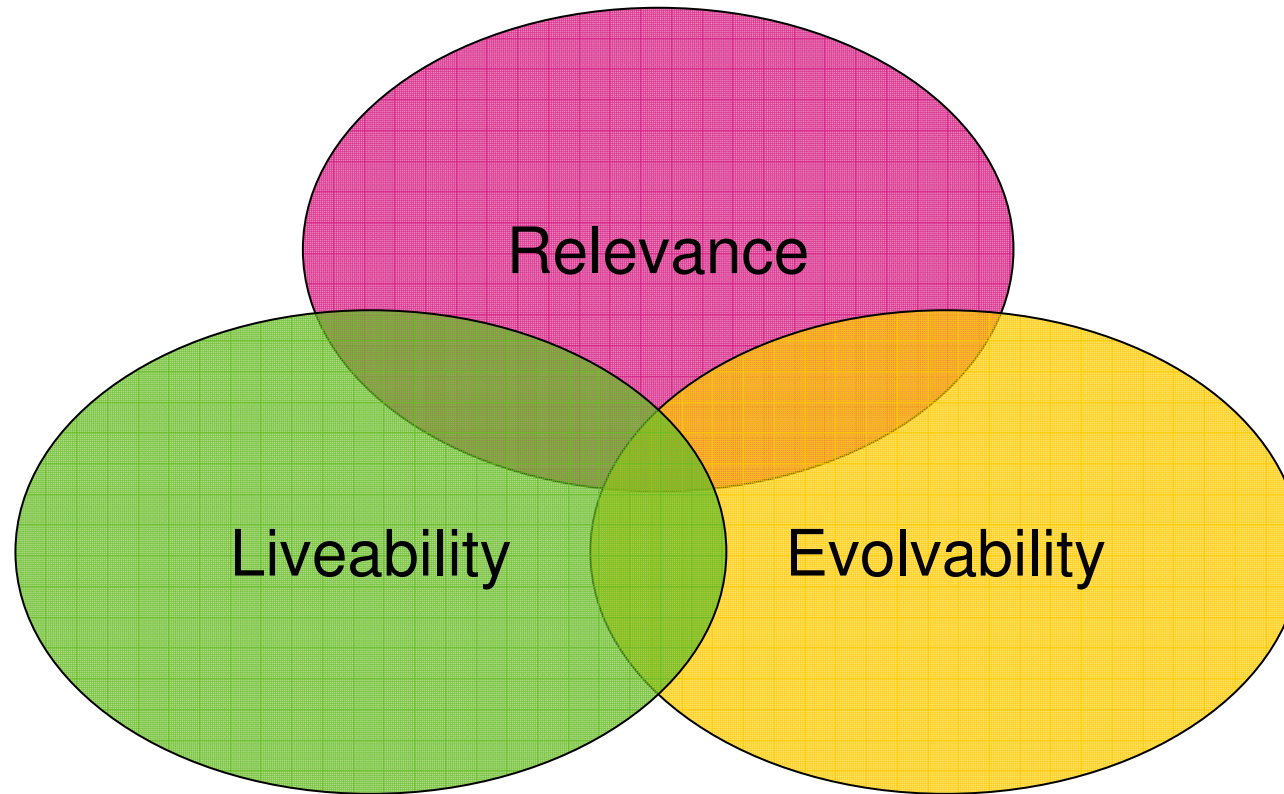


# Perspectives on Needs of the Research Community

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# A Customer's Perspective



# Relevance

- It seems obvious that a test bed should be driven by the needs of the research community
- Belief that ‘contemporary’ research areas can drive the extension (and therefore increase in usefulness) of any test bed
  - Build this into Onelab2
- Examples:
  - Pubsub/data-centric networking (PSIRP)
    - Generic functions for DHT management, discovery, CDNs, ...
  - Routing research (Trilogy)
    - Harder problem since rather low in layers
    - Virtualization plays an important role
  - Cross-cutting
    - Monitoring extensions specific for the areas (e.g., determining churn)
    - Benchmarking for these new areas
    - Operational extensions to the platform (e.g., topology formation)

# Liveability

- Many 'contemporary' research areas are close to the end user
- Isolated technology experiments are important for quantitative analysis (e.g., scalability, delay, ...)
- **BUT:** Validity of technology also dependent on acceptance, usability, impact on end users

-> controlled experiments with direct end user participation must be our aspiration

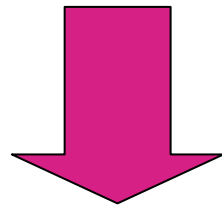
**HARD** since

- it requires means to work with a different community
- It requires means to isolate partitions of the network
- It requires to easily federate/integrate purpose-built local test beds

# Evolveability

Working with the research community establishes an innovation process of test bed extensions

-> proof-of-concept for extensions with full integration in 2<sup>nd</sup> phase towards standard usages across many projects (and so on)



Evolvability of the test bed (and its innovation processes) can be a model for evolving towards (a potentially disruptive) Future Internet

**Do we need architectural 'oversight'?**

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