



# Requirements for Future Experimental Facilities

**Key Issues:** Enable collaboration and end user involvement



# Collaboration

## TODAY

- Platform-driven approach
- Silo-ed through
  - Governance
  - Technology
  - Funding
- Little support for
  - Data exposure
  - Validation methodology
  - Benchmarking

## TOMORROW

- Clear exposure for
  - Input & output data, e.g., topologies
  - System components
  - > reproduction & comparison
- Make (annotated) data available to larger community
  - E.g., funding requirement
- Integrate available, in particular local, test beds through, e.g., increasing efforts in emulation
- Push for governance structures that enable collaboration

# End-user involvement

## TODAY

- Test beds are largely for the research community
- End-user research very point-oriented
  - Little system focus
- Large holistic IPs rarely exist
  - If so, system and end-user folks stay rather separate

## TOMORROW

- Involve end-users in the design but also the result
  - Can we build test beds in which research and its results can be lived in?
  - Can we make the Future Internet part of our life?
- Merge research with concepts of crowd-sourcing
  - Research as an open innovation process

# Beyond the End-user: Holistic System Design

## TODAY

- Very isolated communities in system design
  - ‘architects’, technologists, business designers, strategists (end users?)
- Isolation continues in (experimental) evaluation
  - Little involvement beyond own community

## TOMORROW

- Make experimental platforms part of a holistic system design process, involving a wide variety of communities
  - > **School of Architecture** recommendation of EIFFEL whitepaper
- Incorporate relevant metrics into monitoring capabilities that will allow for economic and environmental evaluation