

# Key Conclusions

- Clear need for a T2 network infrastructure.
  - Should not negatively impact the existing T0-T1 OPN services
  - Design exercise to be organised by the LHCOPN group (OPN2) – but extended.
    - Will have funding implications (Regionals, NREN’s Transatlantic) **so needs to be driven by clear and documented user requirements.**
    - Transatlantic will stabilise to a price point but will remain expensive compared to terrestrial. Efficiency of use will remain important.
    - Proposal for a global T2 “open exchange point” model .
      - » Core network connecting a small number of exchanges to which T2’s (and T1’s) can connect.
      - » TRIUMF has this structure in place already.
      - » How would the core be funded?
  - **Is a common solution possible for Atlas and CMS?**
- Need to enhance the partnerships between providers and users.
  - Deployment of intelligent End-End solutions require this.
  - All stakeholders to be involved in the OPN2 planning process.
    - How to organise T2 participation? Regional representatives?
- Infrastructure should be seen as a seamless resource
  - Consistent control plane with automated multi-domain provisioning.
  - Better and more automated operations is essential.
  - Must be fully integrated into the OPN2 planning.
- Pervasive monitoring is needed
  - Needed to be able to truly treat the network as a resource.
  - Must be fully integrated into the OPN2 planning.
    - For Atlas, Perfsonar is implemented at all T1’s and T2’s.
- Create new opportunities for data brokering
  - Content Distribution Networks
  - Models should be considered as part of OPN2 planning.
    - Data distribution and direct access over wide-area.
    - Peer-Peer systems and central servers (Tier-3)