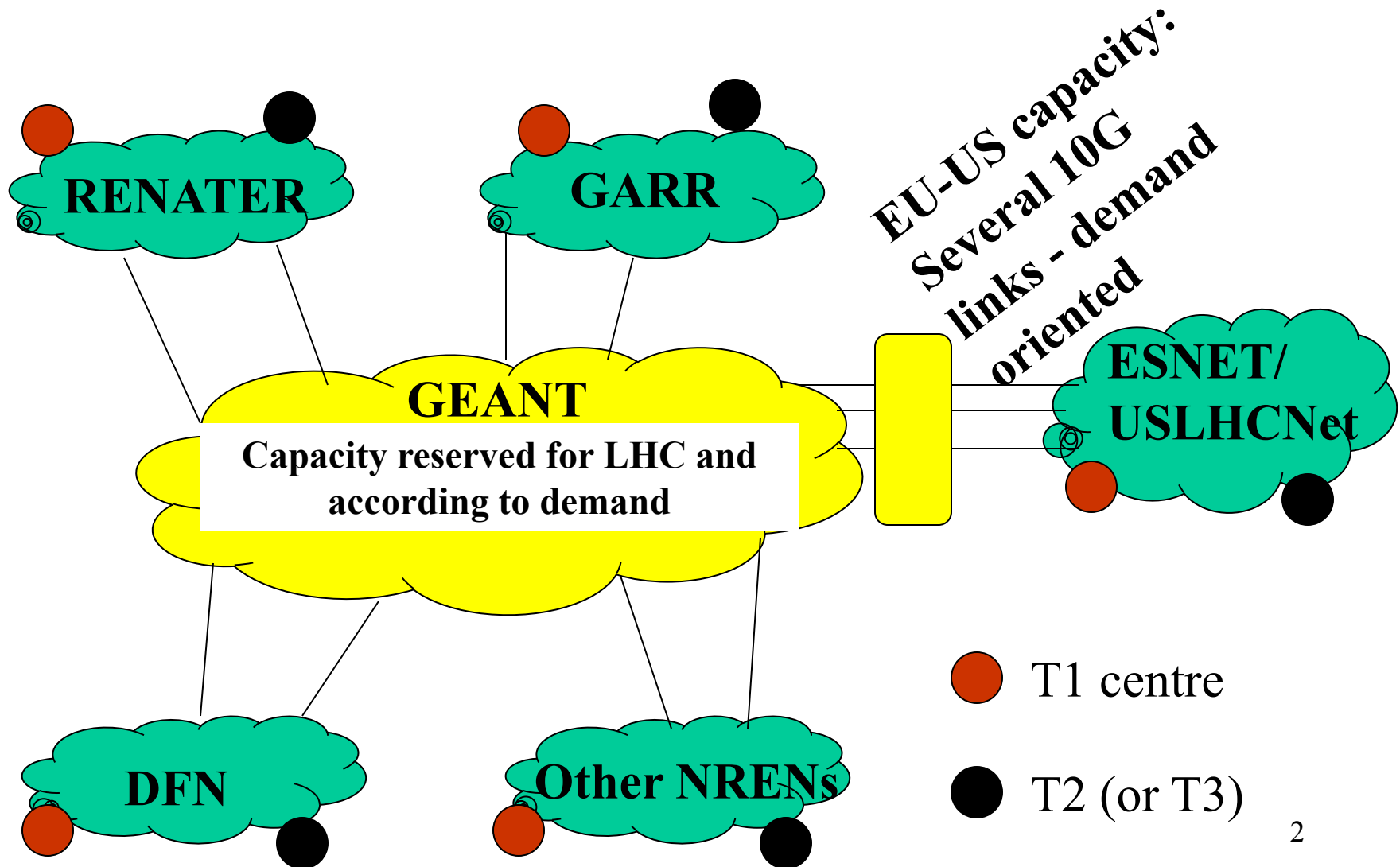


Architecture Proposal for the T2 network for LHC data evaluation

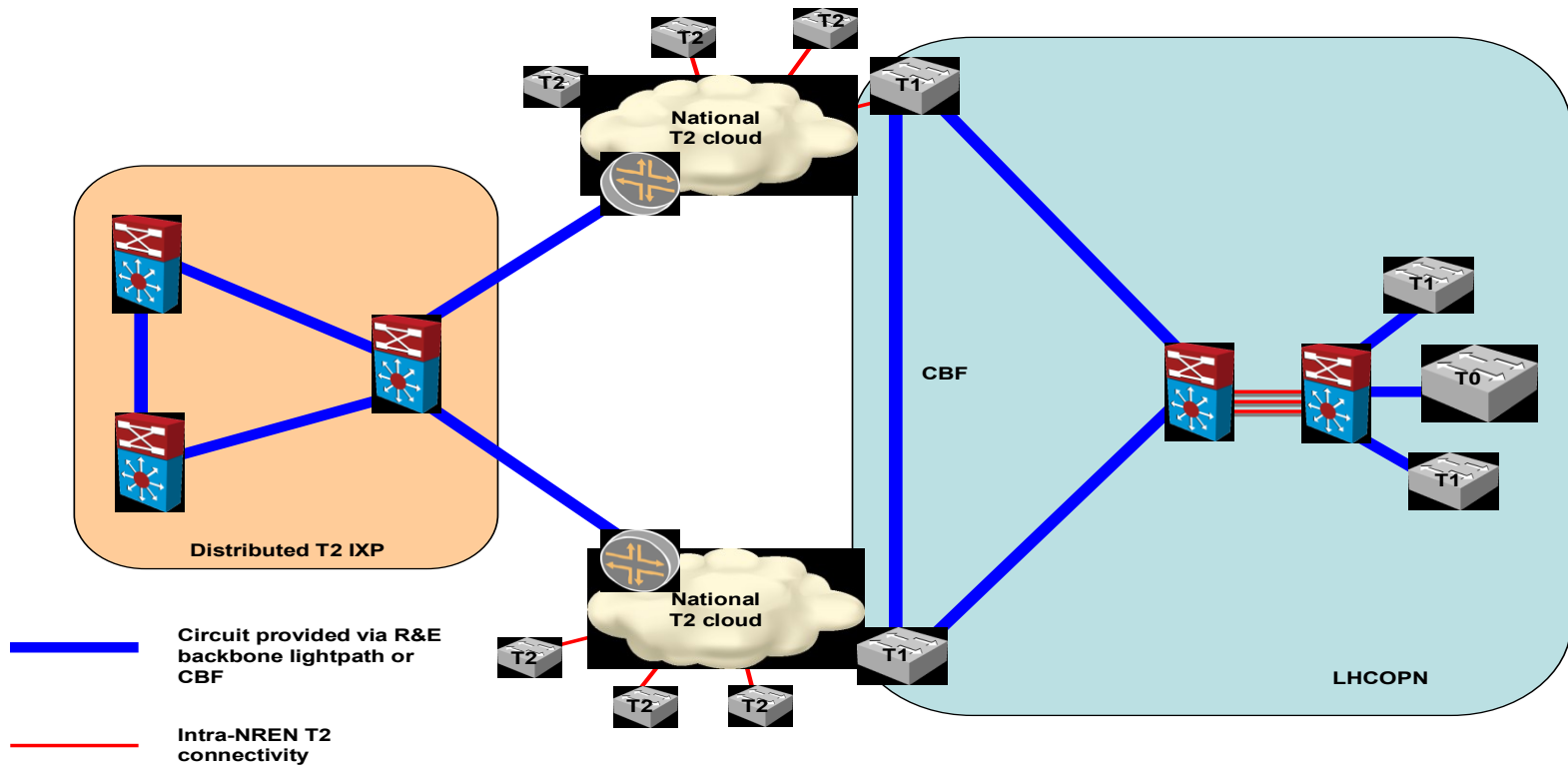
D. Vandromme (RENATER), E. Valente (GARR), K. Ullmann (DFN)

CERN, 13 January 2011

LHC-T2 network: proposed architecture



LHC-T2 network and LHCOPN



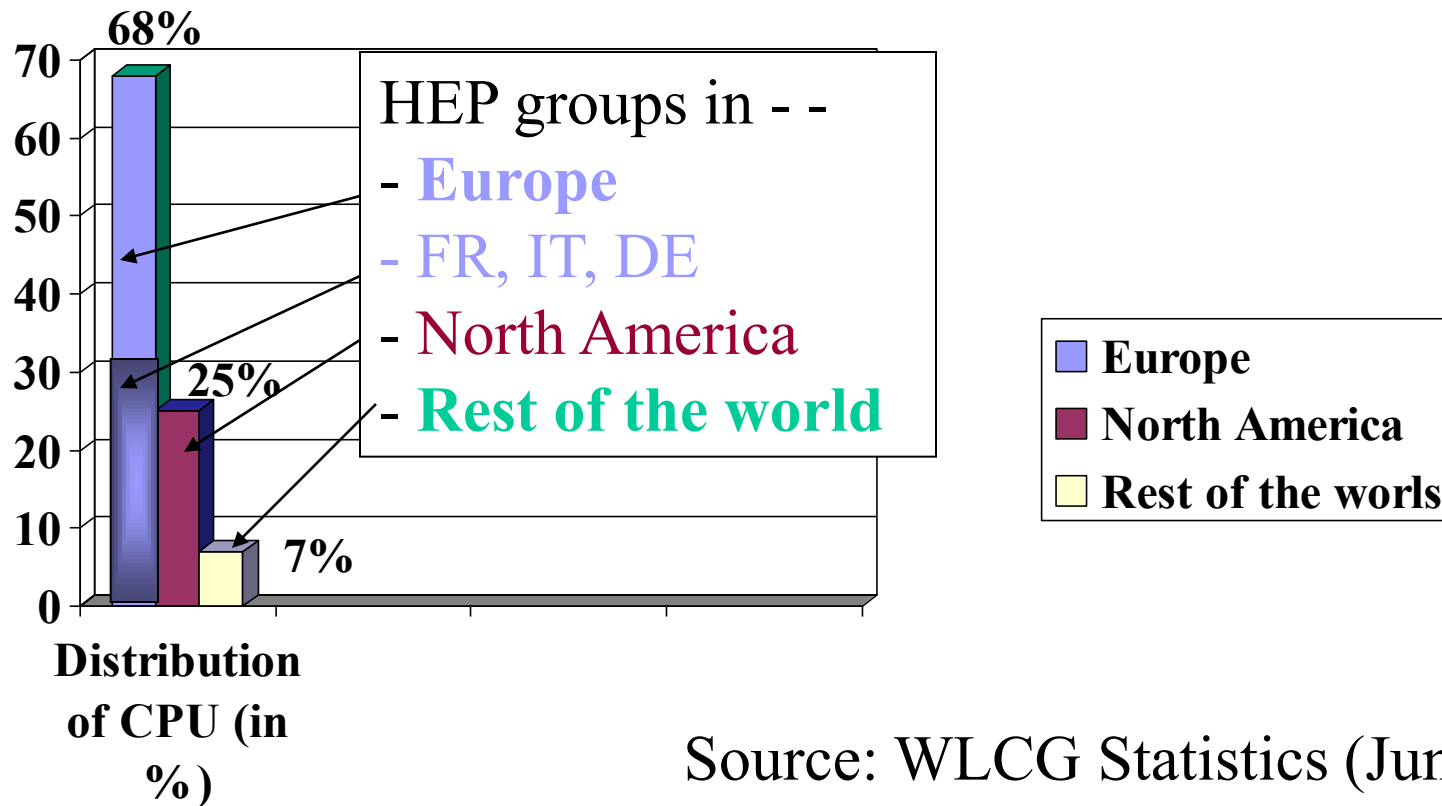
LHC-T2 network: features of architecture proposal (1)

- Requirements of Kors Bos paper achieved
- Common (but federated) backbone structure with a separate bandwidth slice within Europe, US **and** demand driven connectivity EU-US; good connectivity to the rest of the world (on IP level)
- Capacity upgrades in parts of this backbone (Geant+transatlantic+ESNet/USLHCNet) according to needs and demands easily implementable

LHC-T2 network: features of architecture proposal (2)

- **Financing** of this structure is clearly **a national matter** – the federated architecture takes this into account
- The **architecture** provides a **scalable** system, i.e. other ntl. LHC communities can easily join through NRENs. With the LHC communities in FR, IT and DE it covers already 30% of the T2-IT-(CPU-) capabilities.
- Architecture **compatible with** „normal“ **IP structure**
- The system is relatively **easy and fast to implement** with known workflows (in the NRENs)
- The system is **connected with LHCOPN** through the T1s however not violating the LHCOPN AUP

Distribution of CPUs in WLCG



Source: WLCG Statistics (June 2010)
see WLCG web

Next Steps

- **Detailed planning** should **start soon** with all actors (and through topic oriented working groups)
- Goal: to do a **final design until spring 2011** and have an **early implementation** during **summer 2011** already (having in mind that the experiment's pressure may increase very soon)