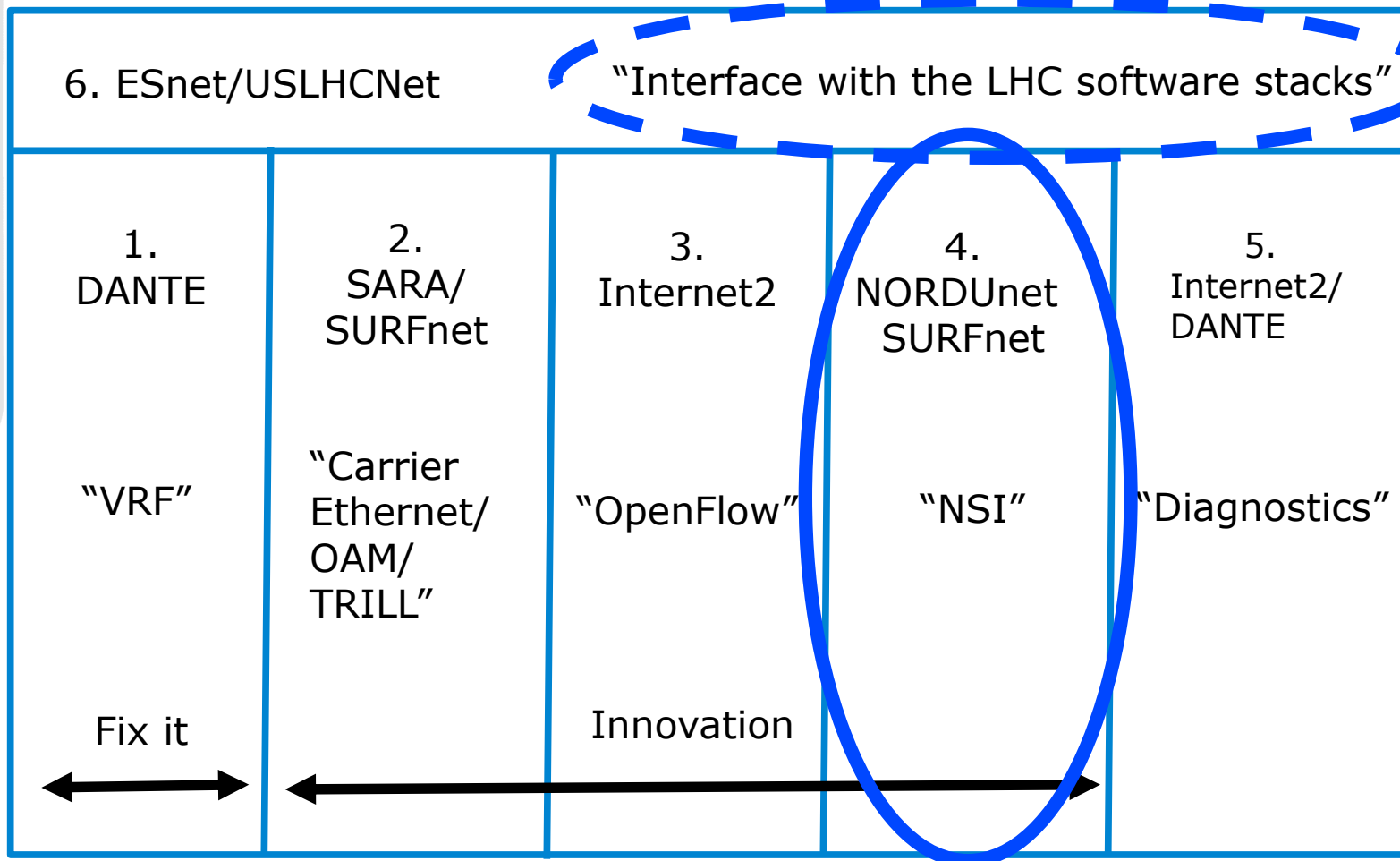


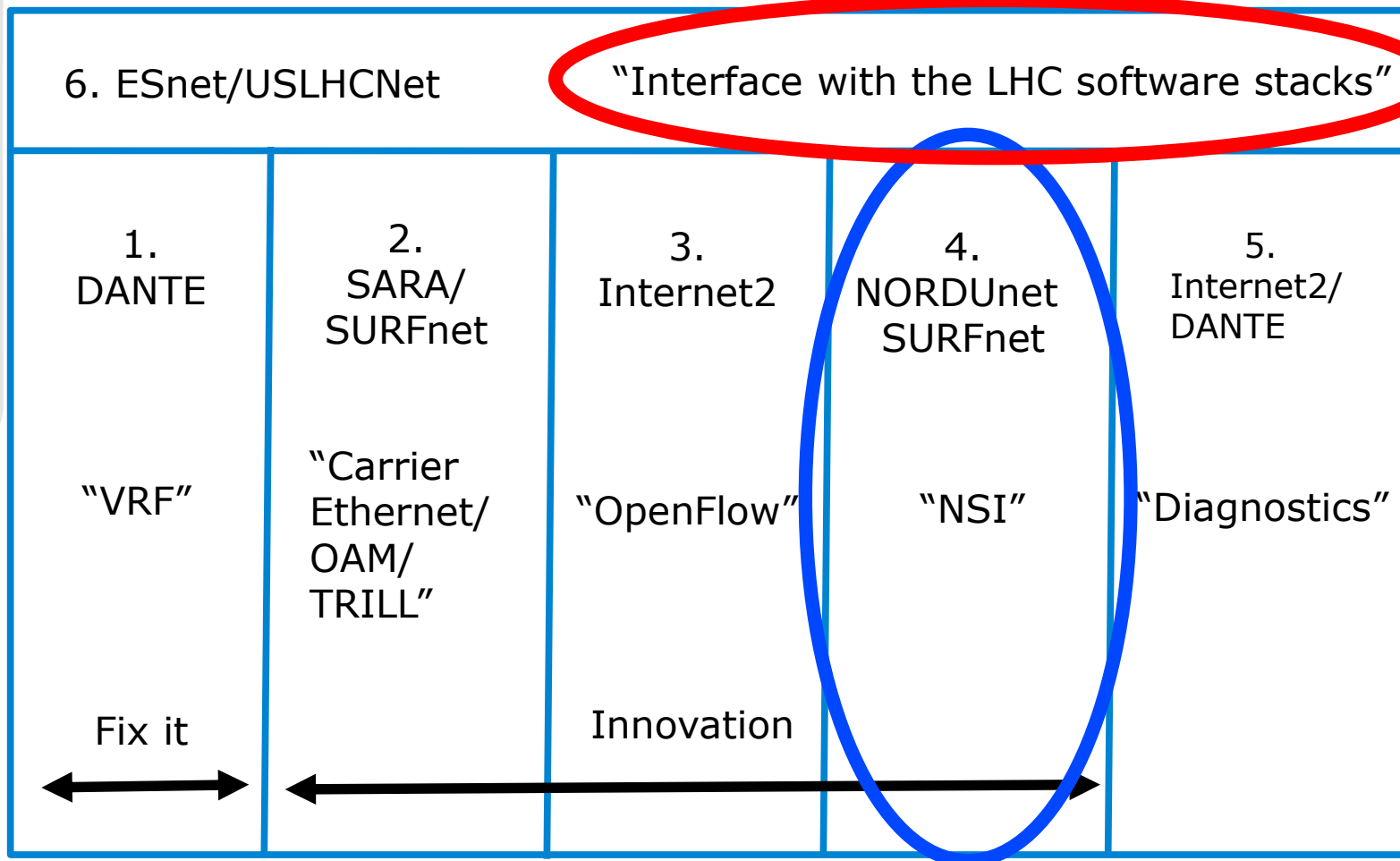
# Report of the CERN LHCONE Workshop May 2013

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**LHCONE Meeting**  
**Paris, 17-18 June 2013**



Result of the LHCONE meeting in Amsterdam, December 1&2, 2011





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- Objective of Experiments is to treat networks as just another schedule-able resource (like CPU, Storage, etc)
  - Require applications to be network-aware at many levels
  - Require networks to deliver not only schedulable capacity, but also information about available resources, performance, etc
  - Bigger topic than P2P and BoD
- BoD and NSI remains a critical component
  - The key requirement is still “predictable delivery of bulk data”
  - ... but applications want to be able to predict properties of network resources ahead of time
  - Monitoring is of growing importance and need more attention
- It's not about contracts and SLAs
  - ... it's about being able to create applications that understand the network and can take network properties into account, in an interactive manner.

- CDN
  - Is what we need actually a CDN? Can existing CDN solutions do the job?
  - Can CDN solutions handle the two-way nature of LHCONE, or is the focus too much on one-way bulk transfer
- IETF ALTO (Application-Layer Traffic Optimization)
  - RFC 5693, RFC 6708
  - Draft protocol, May 20 2013 (exp. 21 Nov 13)
  - "... provide applications with information to perform better-than-random initial peer selection..."
  - There appears to be mission overlap
- Requirements
  - We still have some way to go
  - An interactive process is needed
  - We need to take practical steps to accomplish this

- Objective: to provide feedback to understanding of requirements
  - Be part of interactive process of requirement definition
- Idea for setup
  - Static mesh of low capacity, controlled by NSI2.0
  - Use NSI change request to ramp bandwidth up and down and traffic is changing
  - Use Open Exchanges as core components
  - Use experimental circuits between OLEs as key resource for the experiments
  - Use phedex or similar to do the callout to manage capacity
- Scale
  - Small number of sites
  - Sites interested in participating, with resources to deploy end to end
  - Objective is not the service for those sites, but what we learn doing it