JRA4
Network Services Development

K. Kavoussanakis *EPCC, The University of Edinburgh*

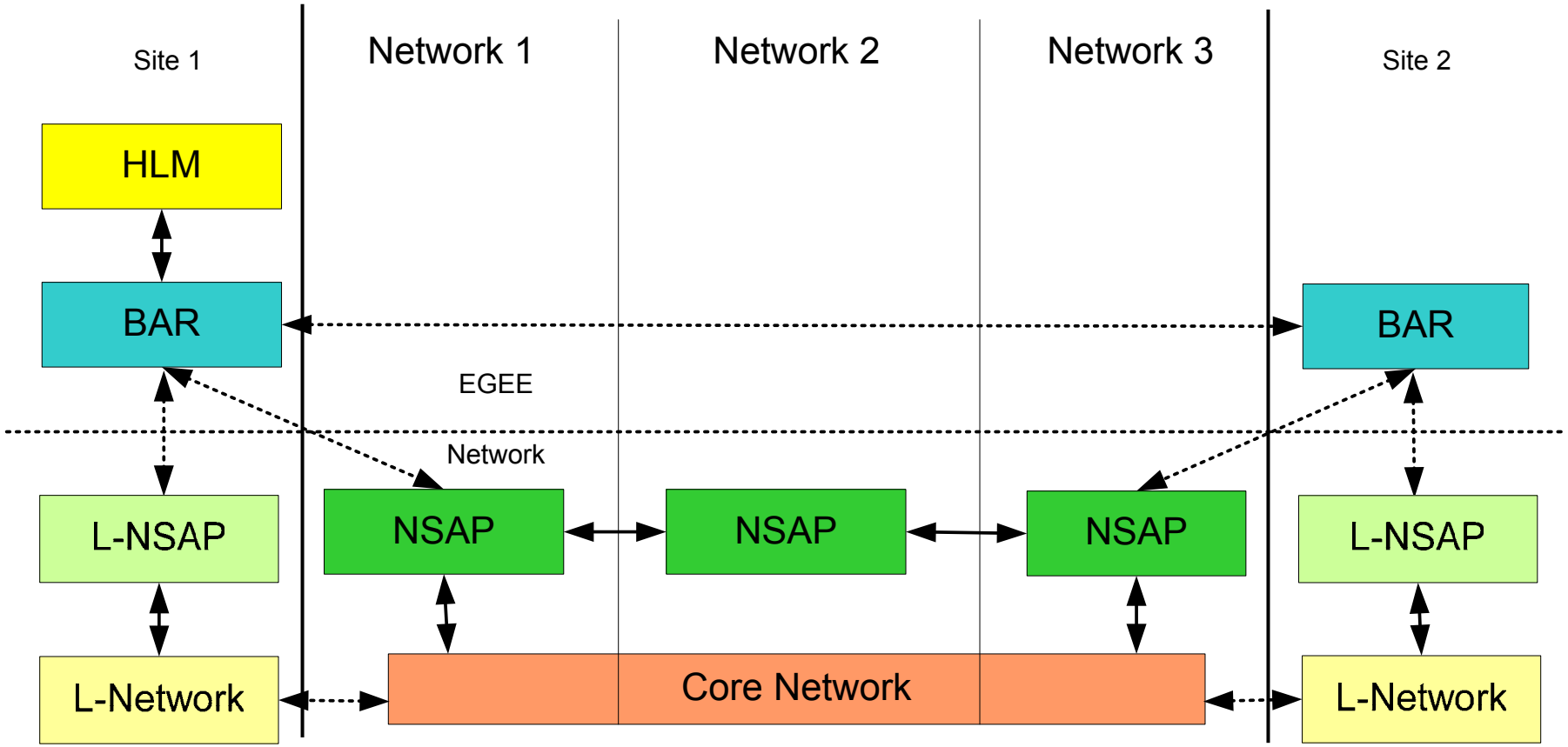
Overview

- **BAR Roadmap**
- **Status quo of NPM**
  - Including deployment of netmon on gLite
- **JRA4 on the road**

Bandwidth Allocation and Reservation

BAR Architecture

- **Now available on DJRA1.4 too**



BAR Issues

- **NSAP belongs to GN2 domain. The two projects do not coincide. GN2 first version perhaps in October 2005.**
  - We can live without that for a pilot
  - Plan and collaborate so as to integrate it as easily as possible
- **In principle agreement with GARR, GRNet and UKERNA to deploy**
  - JRA4 software (BAR)
  - NSAP (dummy now, actual in future)
- **These NRENs chosen as they are in most advanced stage of making IP Premium service available**
- **L-NSAP to run at local sites. Great variation in equipment and difficult to convince local managers to run our software**
  - Approach sites in GARR and GRNET domain for uptake

BAR Roadmap

- **New wording as per updated Annex I**
- **PM15 MJRA4.4 *"Prototype bandwidth reservation within static network configuration"***
- **PM15 MJRA4.5 *"Specification of end-to-end BAR system"***
- **PM18 MJRA4.7 *"Dynamic reconfiguration of key ingress points in response to reservations"***
- **PM21 DJRA4.4 *"Implementation of bandwidth reservation pilot service"***

- **PM15: *"Prototype bandwidth reservation within static network configuration"***
  - "Static network configuration" means it takes 2 days for the request to be satisfied at network level (hand configuration)
  - The notification is immediate though
- **Non-functional prototype completed Feb 2005**
- **Migration of code to gLite CVS complete**
  - Though NSAP code will not go there (external library)
- **TOC submitted to PEB 18 May**
- **Work progressing**

MJRA4.5

- **PM15 (also): *"Specification of end-to-end BAR system"***
- **Design document, including (pilot) deployment plans**
- **Security given serious consideration**
  - Interactions with JRA3
  - Useful overlap with NPM security framework
- **TOC submitted to PEB 18 May**
- **Work progressing**

- **PM18: *"Dynamic reconfiguration of key ingress points in response to reservations"***
- **GEANT will not be doing dynamic reconfiguration**
- **Interpret this as:**
  - Investigation of static local equipment configuration (L-NSAP)
  - Packet marking perhaps?
- **Opportunity to assess JRA1 reservation architecture**

- **PM21: *"Implementation of bandwidth reservation pilot service"***
  - Fixing and hardening of MJRA4.7

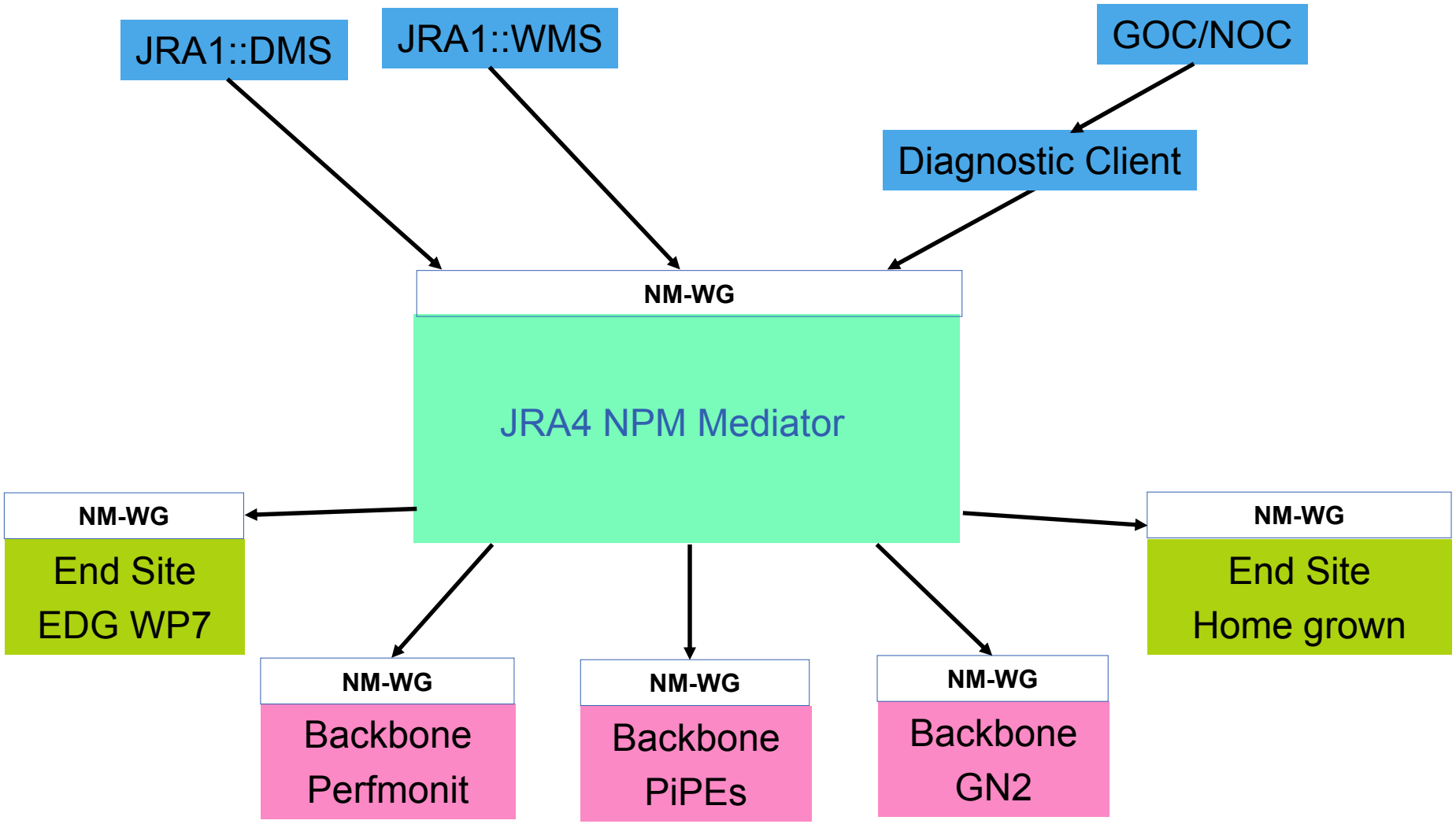
- **GN2 timescales may converge with EGEE in this stage**
  - If yes, this could be a good opportunity to integrate their NSAP
  - In not, we carry on with the dummy one and integrate their NSAP in the last quarter (no associated deliverable).

BAR beyond EGEE-1

- **BAR should move from pilot to deployable service**
- **The above assumes a Premium-IP-rich infrastructure and mature GN2 NSAP**
  - Things network take long to happen
  - There is scepticism whether the NRENs will be happy to install GN2 NSAP
- **The last-mile problem will take time and effort to address at a large scale**
  - Need a successful few sites and enthusiastic users to push their network managers

Network Performance Monitoring

NPM Architecture



NPM Issues

- **Latency of accessing data through WS 3 times as long as overall latency requirement of JRA1**
  - Discussions ongoing

- **Gathering requirements**
  - Doing well with Middleware
  - Doing our own thing with Diagnostic Tool
    - Well informed by JRA4 staff with relevant experience
    - Attempt to gate-crash Operations Workshop next week

- **Deployment of network monitoring tools on gLite**
  - Building RPMS to allow installation of tools
  - Still pursuing avenues with SA1
    - Effort?
    - Scale?

JRA4 on the road

- **EGEE All-activity meetings**
  - Good news: KK will miss one, possibly two next ones
- **EGEE/LCG Grid Operations workshop**
- **TERENA Networking Conference**
  - Representation from SA2
- **JRA1 All-hands by invitation**
  - Much appreciated
- **GN2::JRA1 meeting**
- **EGEE-4**