



Enabling Grids for E-scienceE

eNOC - Status and plans

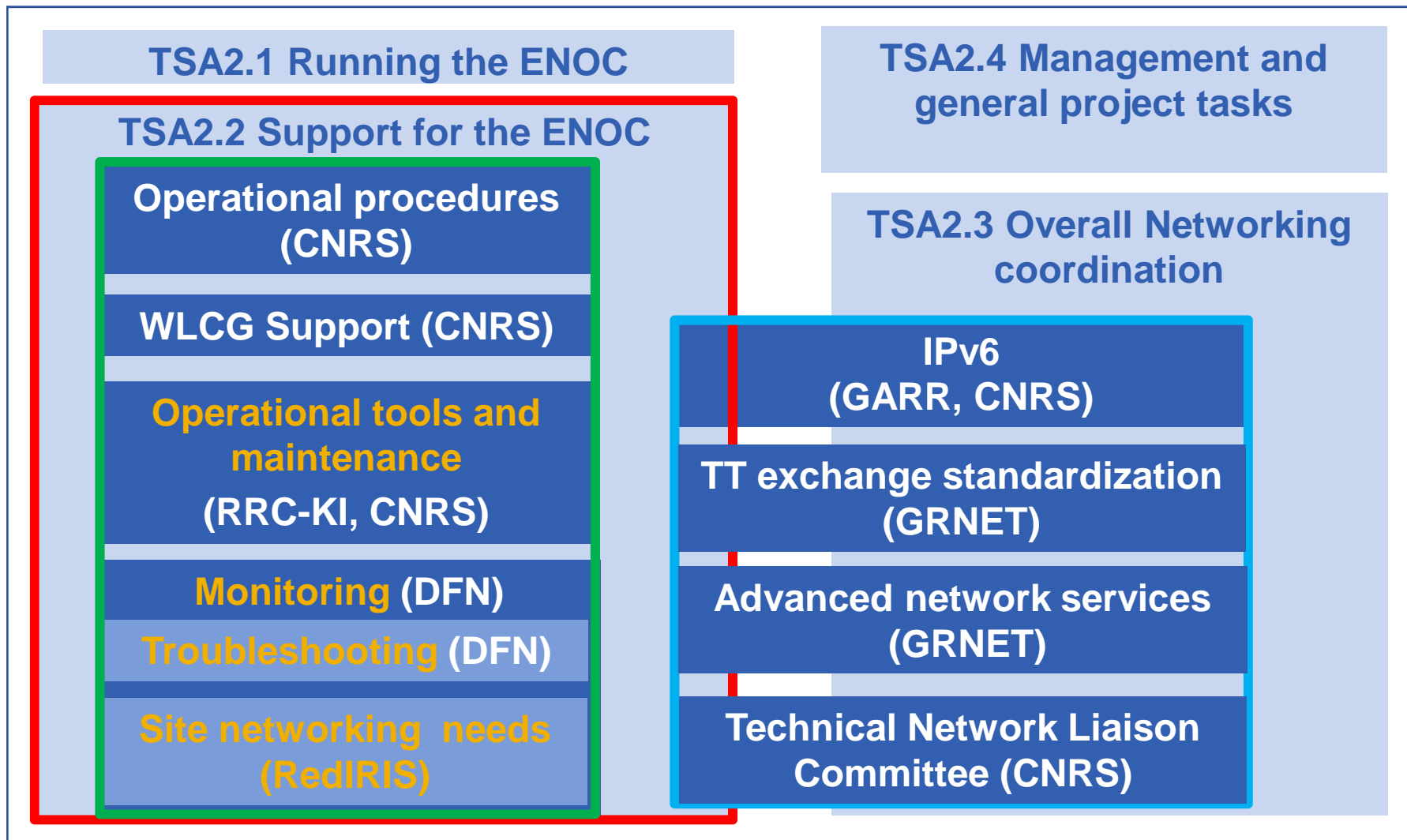
*Guillaume Cessieux (FR IN2P3-CC, EGEE SA2)
SA2 All hands meeting, Roma, 2009-03-27*

www.eu-egee.org



- **Introduction and tasks overview**
- **Tasks review**
 - Internal
 - External
- **Network quality assessment**
- **Report on SA1 interactions**
- **Dissemination and deliverables roadmap**
- **Issues and ongoing work**
- **Conclusion**

- **From last SA2 kickoff, 2008-06:**
 - ENOC tasks split and distributed
 - **More partners involved**
 - Several key work packages to really enhance current implementation
 - Mix everything all together
 - Achievements needed before end of EGEE-III
 - **No extra delay – delayed = lost**



Task	Sub Task	Sub-Sub Task	New in EGEE-III
------	----------	--------------	-----------------

- **Operational procedures – CNRS**
 - No change since design of processes (EGEE-I ?)
 - Should be accurately documented for EGI
 - But something different envisioned for EGI
- **WLCG support – CNRS**
 - Focused on LHCOPN – *Cf. separate talk*
- **Operational tools and maintenance - RRC-KI/CNRS**
 - Results from RRC-KI to be integrated into existing tools
 - Tickets ranking etc.

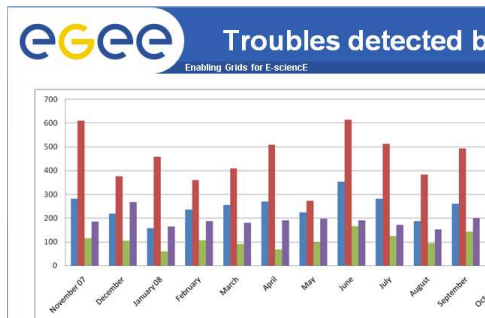
- **Troubleshooting – DFN/Erlangen**
 - ENOC’s servers will be directing tests – software to be integrated onto
 - Must match EGEE organisational structure (ROC, GOCDB...)
 - Enable quick and easy usage

- **Site networking needs - RedIRIS**
 - Autonomous task – Maybe use “EGEE weight” if help needed around perfSONAR

- **IPv6**
 - “Porting of ENOC to IPv6 is not considered a high-priority task”
- **TT exchange standardisation – GRNET/UTH/CNRS**
 - Linux version of TT converter released
 - Now really hard to go ahead without clear NREN cooperation
- **SLA – GRNET/NTUA**
 - Web site and db to handle SLAs to be hosted by the ENOC?
 - ENOC part of processes to set up multi domain SLAs?
- **TNLC - ALL**
 - Good way to have NRENs vision on what we do

- Done by DownCollector

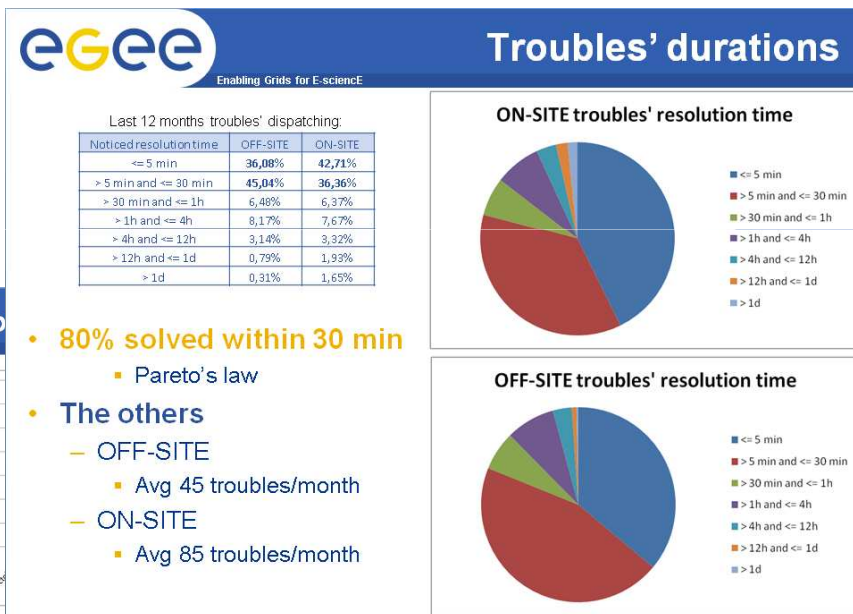
- <http://indico.cern.ch/materialDisplay.py?contribId=5&materialId=slides&confId=40289>
- <https://ccenoc.in2p3.fr/DownCollector/>



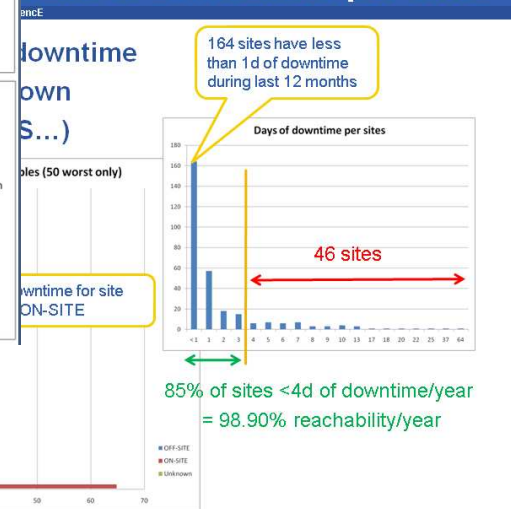
- Scope
 - (300 certified sites)
 - Last 12 months

	Min	Max	AVG	% AVG
OFF-SITES	157	354	248	28%
ON-SITE	273	615	467	54%
Unknown	59	167	106	12%

- 54% of detected problems are ON-SITES



sum of downtimes per sites



- **Scope:**
 - November 07 → October 08,
 - 300 EGEE certified sites
- **Conclusion**
 - Few long outages on resilient transit networks
 - 164 sites have less than 1d of unscheduled downtime per year
 - 85% of sites <4d of downtime/year = 98.90% reachability/year
 - Outages not concentrated on few sites
 - ON-SITE troubles are important things
 - 80% of network troubles are solved within 30 min
- **Generic IP connectivity used by the EGEE project is very reliable**
 - Delivered by ~30 NRENs & GÉANT2

- **EGEE-SA1 = Grid Operations**
- **Our work around network TT is currently not reliable enough to be heavily used by SA1**
- **DownCollector**
 - Useful for COD and ROC, not for sites
 - Possible regionalisation of the tool under study
 - Benefits? No – only matching EGI spirit...
- **Interest in perfSONAR TSS**

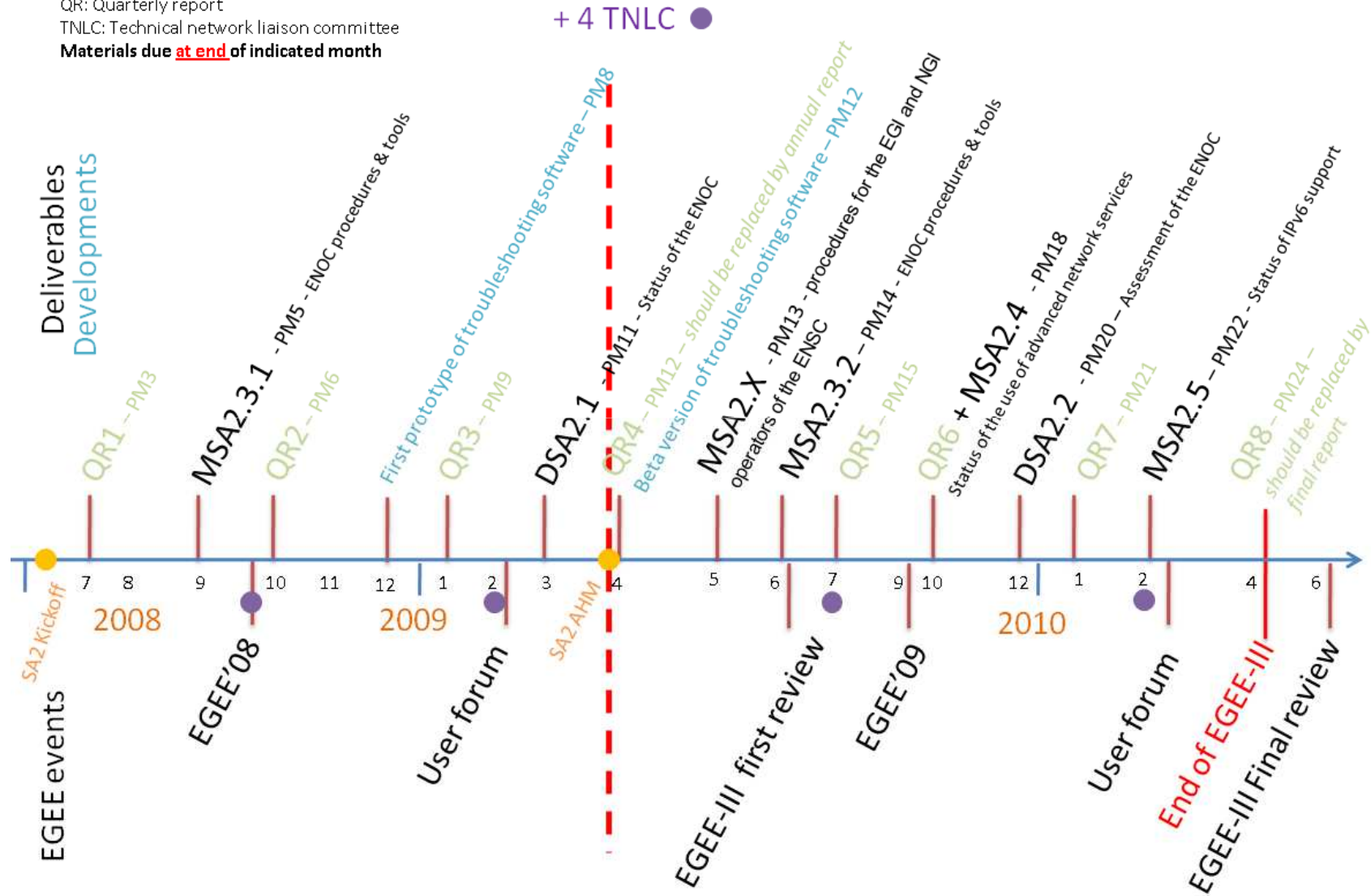
- **In the foreseen regionalised operational model SA2 may not provide services to SA1**
 - ENOC centralising network information for project level structures
 - No need to integrate network operational processes into regionalised Grid operations – NRENs are there

- **Light involvement in EGEE-SA1 OAT**
 - Operation and Automation Team
 - To see how our tools and processes could fit within Grid operation and EGEE / EGI
 - Ensure sustainability of technical interfaces we need (GOCDDB...)
 - Packaging perfSONAR-TSS...

- **TERENA networking conference 2009**
 - A three years thorough review of a project's NOC: the EGEE Network Operating Centre (ENOC)
 - http://tnc2009.terena.org/schedule/presentations/show.php?pres_id=15

- **Huge amount of work done not enough disseminated**
 - Often hidden technical work strongly supporting visible services
 - Even if not always successful could be worth reporting about
 - Work on topology database, impact computation, map rendering, massive trouble tickets handling, monitoring...
 - Ideas?

QR: Quarterly report
 TNLC: Technical network liaison committee
 Materials due **at end** of indicated month



Maintained on <https://edms.cern.ch/document/979306/>

- **Downcollector** - <https://ccenoc.in2p3.fr/DownCollector/>
 - Reached 3GB of monthly traffic (web + Nagios quering)
- **ASPDrawer doing BGP monitoring of LHCOPN**
 - Useful service assessment for 2008 and official for 2009
- **Trouble ticket exchange standard**
 - Work around database (topology, tickets, impacts)
 - Normalisation of network trouble tickets ready to be implemented
 - Rendering on web interfaces
- **Approaches driven by automation**
 - Reasonable efforts to run and maintain things!

- **Around trouble ticket normalisation**
 - Problem of disclosure of network trouble tickets
 - Very hard to have support from NRENs
 - No real benefit for them to deliver standard network TT
 - Discussed during last TNLC
 - So, what's next? Plan B?
 - I think we went as far as possible and we cannot go ahead now without clear NREN support...
- **Lack of network monitoring**
 - Seems stuck due to high technical complexity
 - Hoping NRENs will really converge to perfSONAR
 - Then how to use it at project level for e2e measurements?
- **EGI timeline and vagueness**
- **(Not enough dissemination by SA2)**

- **Source code of all ENOC's tools to be fully published**
 - Mistake this was not done before!
 - Too short term results driven
 - Also focus on documenting three flagship tools
 - DownCollector, ASPDrawer, TTdrawlight
- **EGI vision to be précised and accurately described**
 - Document everything needed to enable a smart tender for EGI network support
- **Collaboration with EELA**
 - Process and tools – to be clarified

- **Focus on three existing tools**
 - DownCollector
 - Having it central is not following EGI spirit, OAT investigating if it can be regionalised
 - Benefit of having it regionalised?
 - ASPDrawer
 - Official LHCOPN monitoring tool for 2009, then replaced by DANTE appliance
 - TTdrawlight
 - Integration of improvement on ticket matching and correlation from RRC-KI

- **New tool:**
 - perfSONAR TSS to be integrated and deployed

- **ENOC running according to plans**
 - Background tasks devolved to partners and ongoing fine
 - We strictly targeted end of EGEE-III for results

- **Network support for EGI to be précised**
 - Role, responsibilities, manpower dispatching, useful tasks...

Question/Comment?