



Enabling Grids for E-scienceE

User, Operations and VO Support in EGEE

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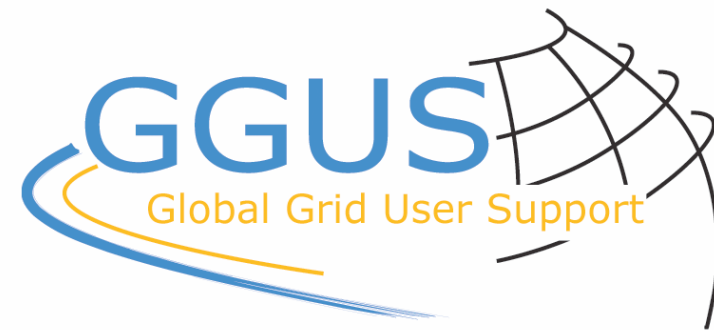
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- **User education**
- **Simple access to a broad range of information**
- **Application integration and support**
- **Day-to-day support for the users of grid data, compute, networking and VO specific services**

- **Distributed nature of the Grid** : experts located everywhere, sometimes in specific centres; spread of resources and services; different policies and laws
- **Variety of users** : beginners, system administrators, operators, network specialists, Virtual Organization communities
- **Variety of applications** : high energy physics, biomedical, earth observation, astrophysics, computational chemistry, etc

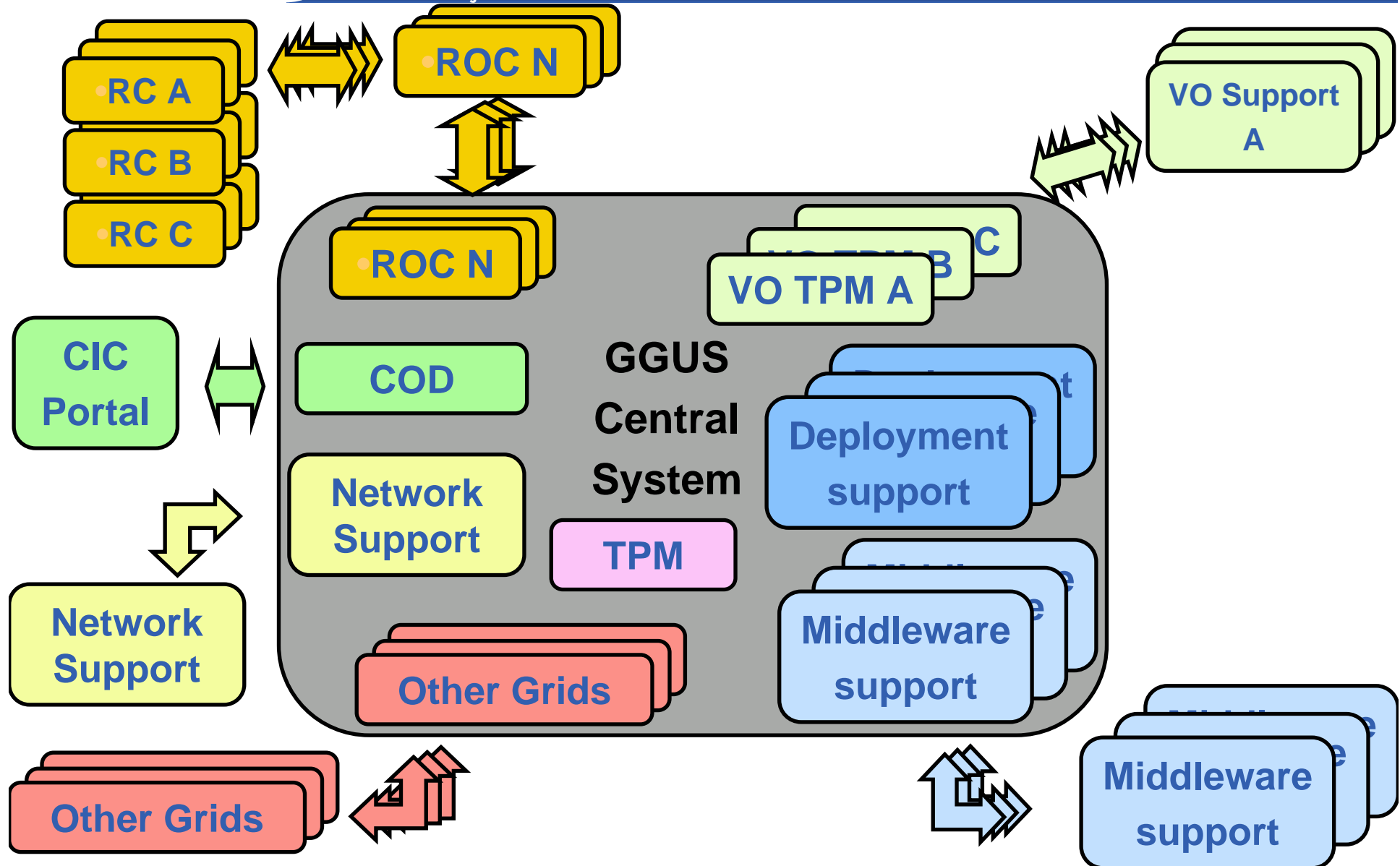
- **Global Grid User Support (GGUS) is the EGEE support infrastructure for Grid users, deployment and operation problems**
- **It offers a large variety of services to satisfy user needs at all levels**
- **It does not substitute but integrate existing infrastructures and coordinates support efforts**

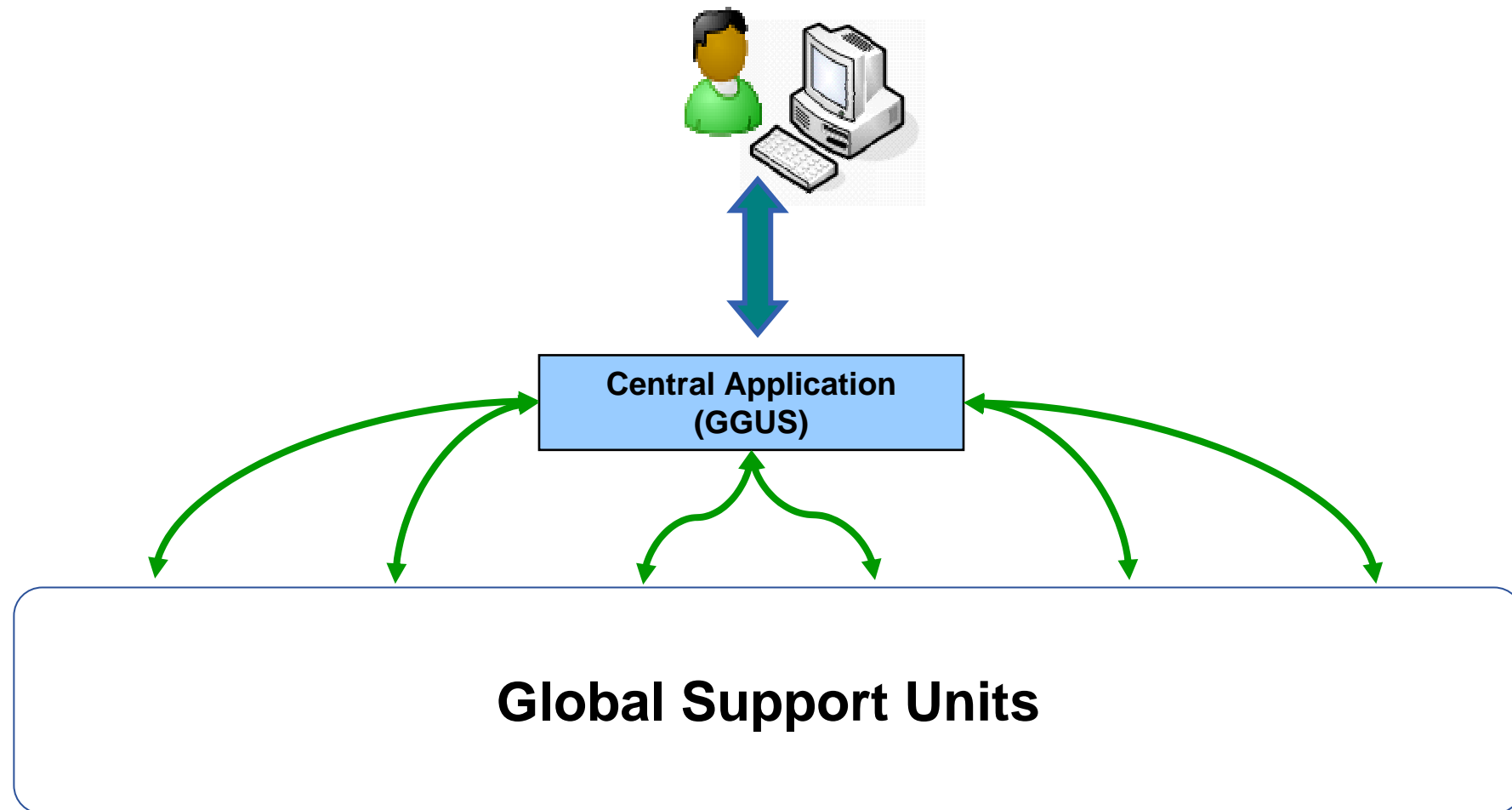


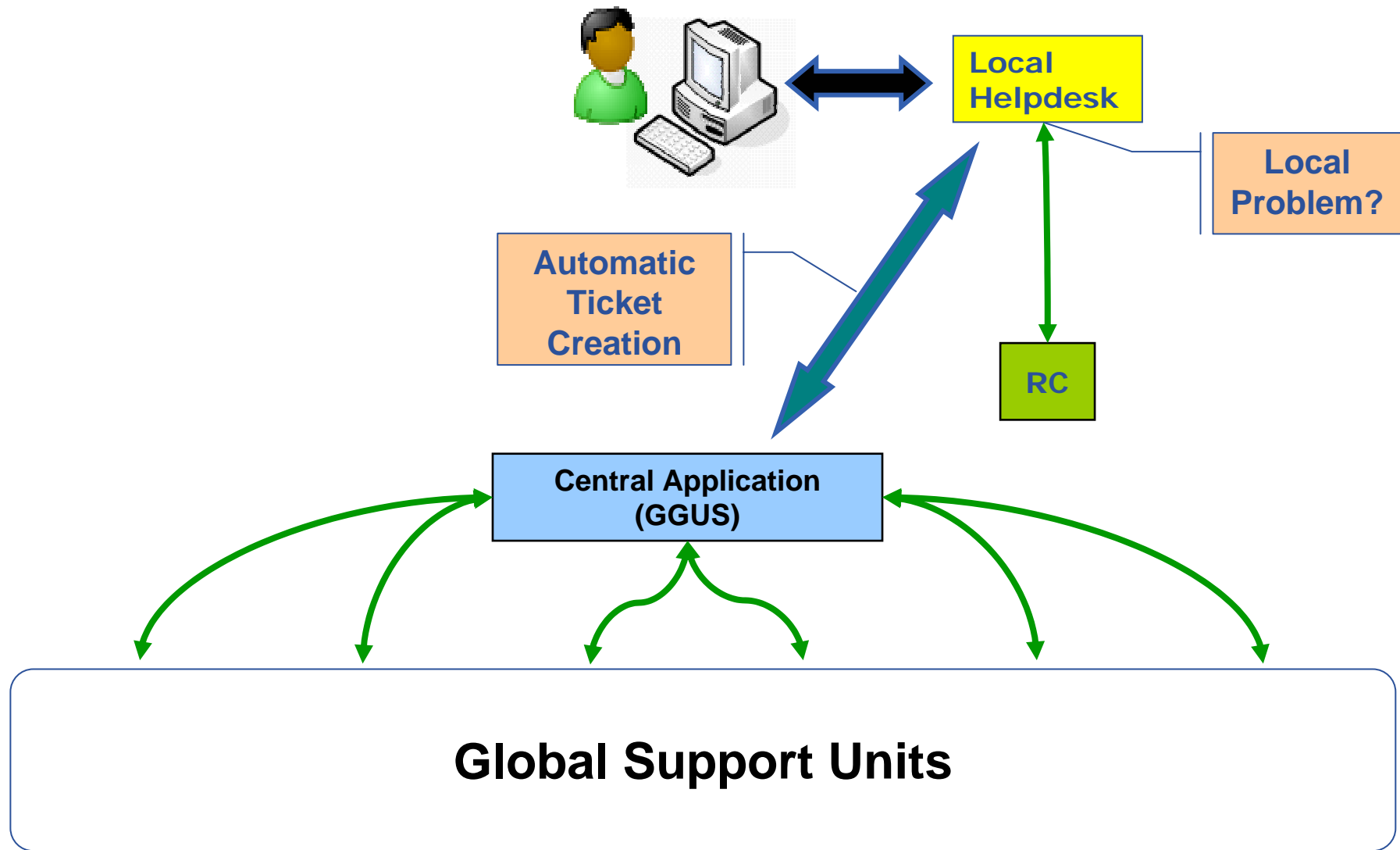
- **A single access point for support**
- **Correct, complete and responsive support**
- **A portal with a well structured sources of information and updated documentation concerning the VO or the set of services involved**
- **Tools to help resolve problems (search engines, monitoring applications, resources status, etc.)**
- **Integrated interfaces with other Grid infrastructures' support systems**

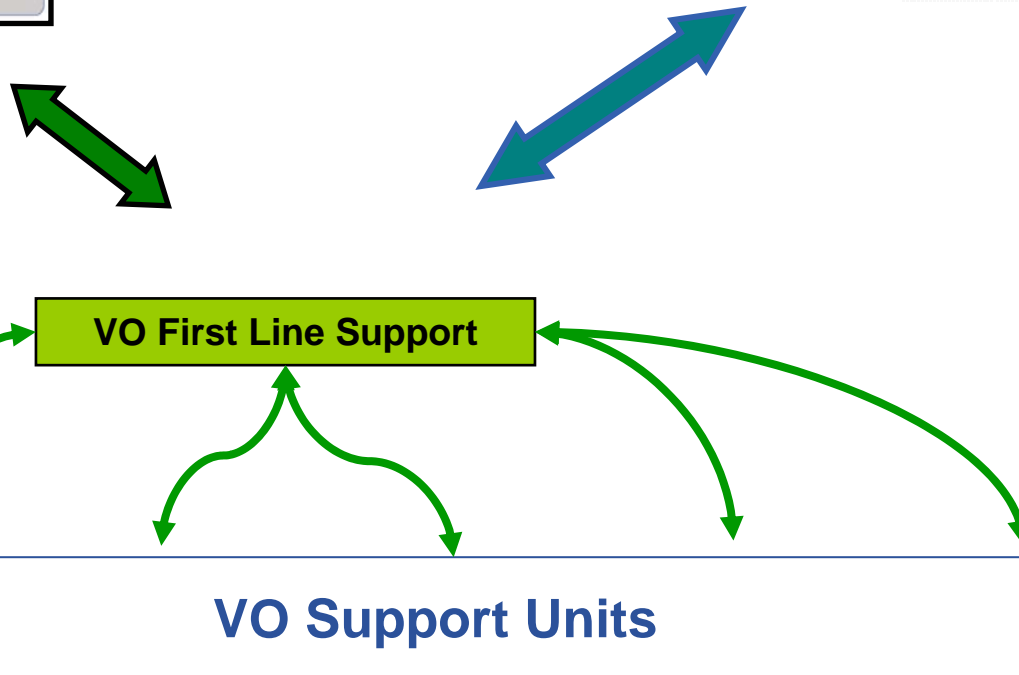
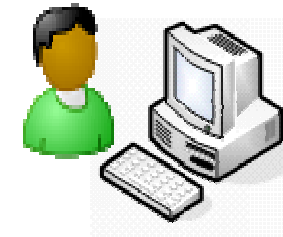
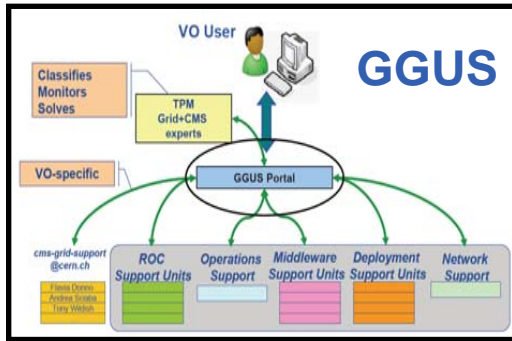
- **GGUS started in 2003 as a prototype support system in LHC**
- **Strictly hierarchical structure in LCG (tier model)**
- **Transition to EGEE meant migration to a different operations model: **The federative approach****
- **11 Regional Operation Centres instead of one Grid Operation Centre**
- **Different approach was needed in user support also**

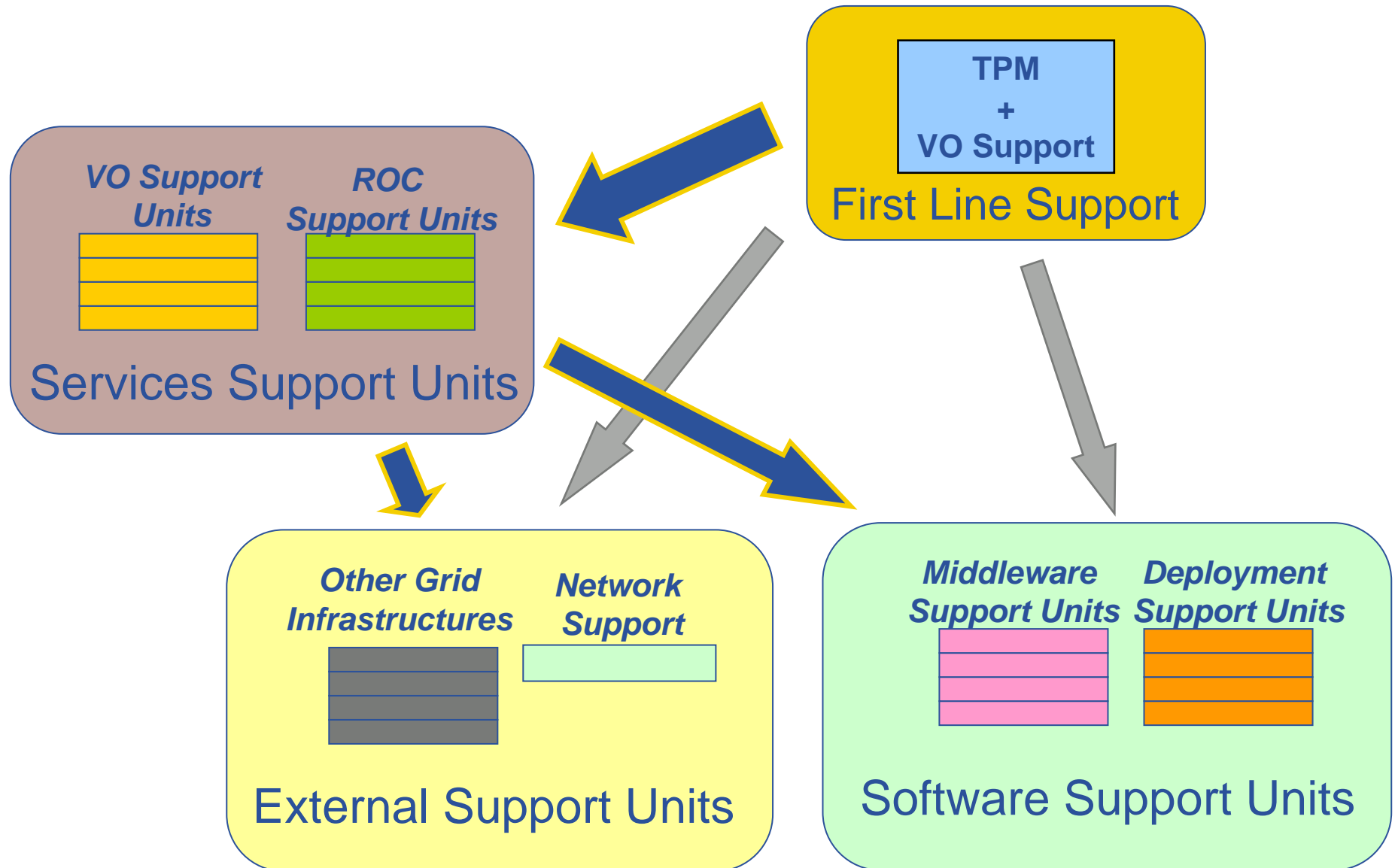
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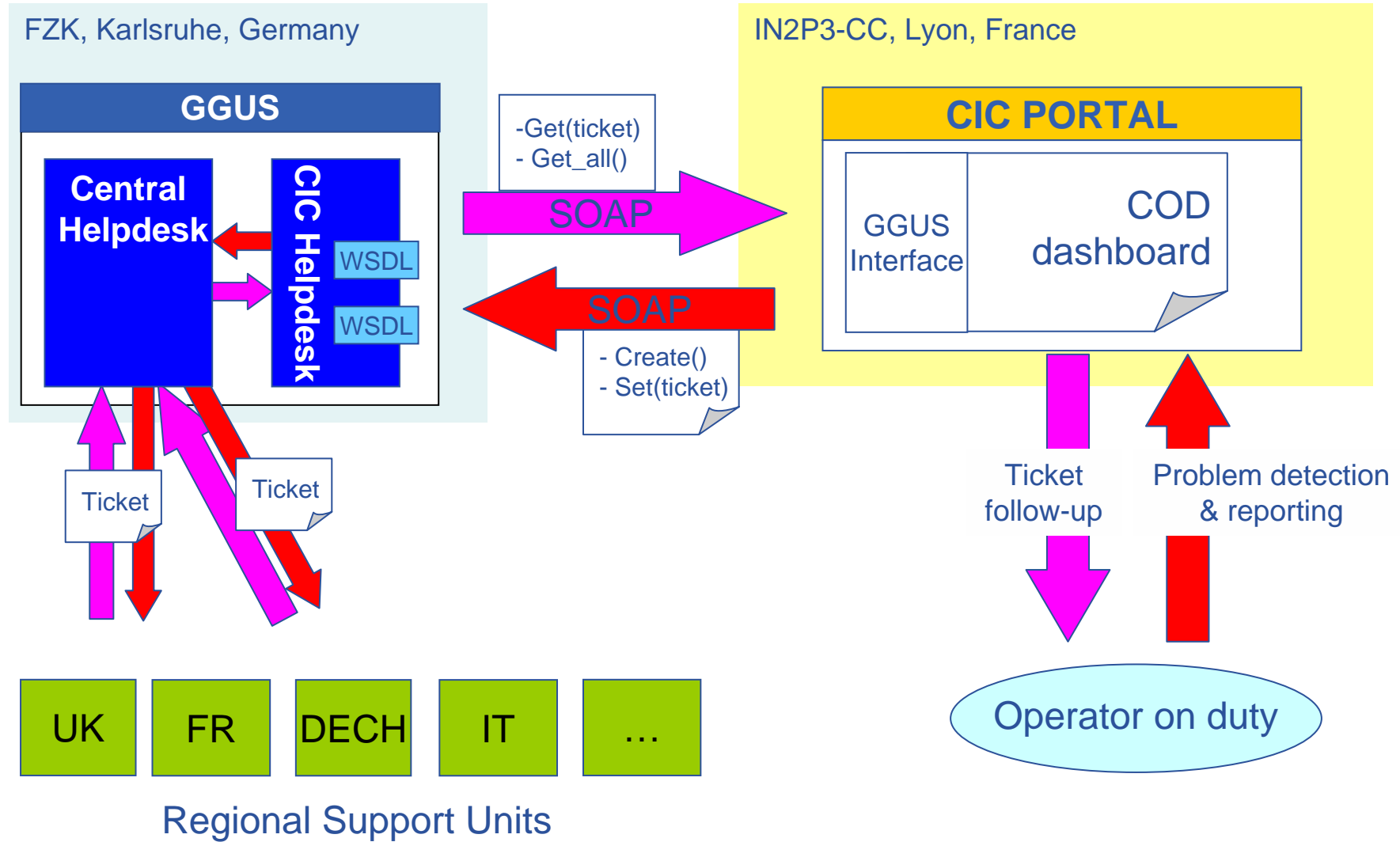




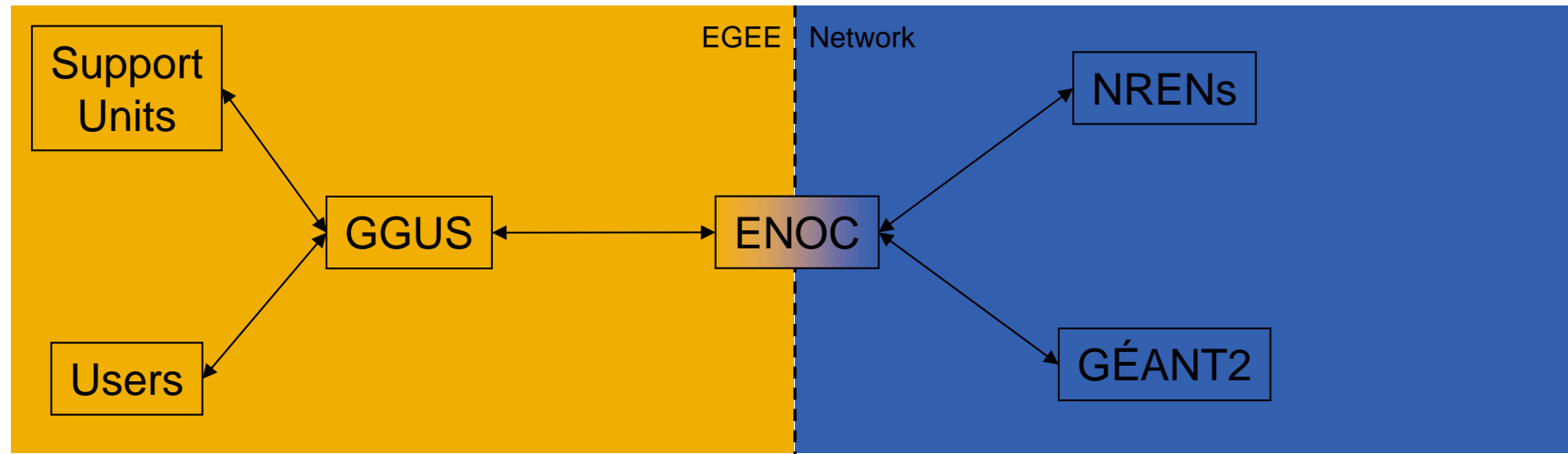




- **Purpose/role**
 - Detect problems by monitoring the grid
 - Report them by creating and assigning GGUS tickets
 - Provide help and follow-up on problems
- **Operations Support teams : “COD”**
 - Teams from the ROCs
 - Weekly shift
- **CIC-Portal/GGUS interface**
 - Based on Web services at GGUS side
 - “COD dashboard”: graphic user interface for operators, hosted at IN2P3 Computing Centre (Lyon, France)

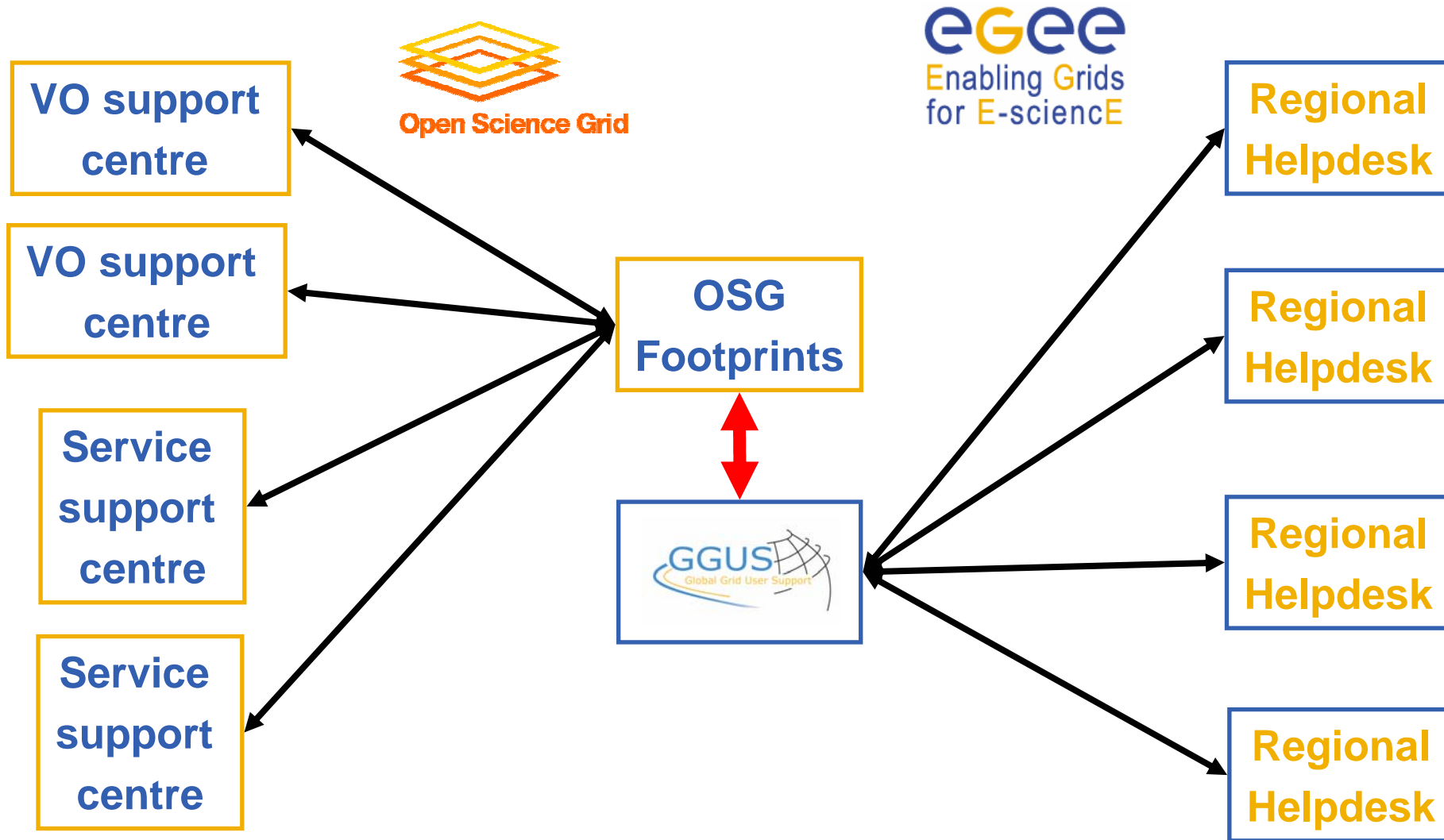


- **Collect tickets from NRENs which agree to send them to the ENOC;**
- **Forward to GGUS the ones that seem relevant (possible impact on the grid infrastructure);**
- **Receive tickets assigned to ENOC by the GGUS TPM (1st level support);**
- **Troubleshoot them provided that the ENOC has access to suitable monitoring tools;**
- **Contact identified faulty domains or reassign ticket to the associated site if there is no evidence of a backbone problem (e.g. LAN issue).**



- **Interface with NRENs is running like in EGEE:**
 - ENOC receives Trouble Tickets (incident, maintenance) from GÉANT and the NRENs (currently France, Germany, Greece, Hungary, Ireland, Italy, Russia, Spain, Switzerland, and United Kingdom);
 - More to come: Poland, the Netherlands, Czech Republic;
 - Forward it to GGUS after analysis and if relevant to EGEE.
- **Identified as the Network Support unit in GGUS:**
 - 2nd level support for network related issues.

- **Ticket Processing Managers (TPM):
Grid experts as first line support**
- **First line support for VOs**
- **Specialized Support: Middleware, Deployment, VO Support**
- **ROCs and RCs: Local support and services**
- **ENOC: Network support**



- **Involve more partners in support**
 - **Share the workload**
 - **Spread the knowledge**
- **Improve supporters responsiveness**
 - **Training**
 - **Raise awareness for support issues**
 - **More resources (more supporters)**
- **Improve usability**

- **Improve accuracy of answers and solutions**
 - **Training**
 - **Monitor support groups' performance**
- **Improve response times**
 - **Training**
 - **Define SLAs together with operations**
- **Keep the support infrastructure up to date**
 - **Fill holes**
 - **Include new areas**

- **GGUS for big VOs is just a small part of their overall user support**
- **It is mainly used by VO experts**
- **All VOs filter user requests before they reach GGUS**
- **Interest in having an interface between VO user support and GGUS**
- **Ways VOs interface GGUS**
 - manually
 - e-mail
 - ticket system interface
- **Contact point for an interface not well defined up to now**