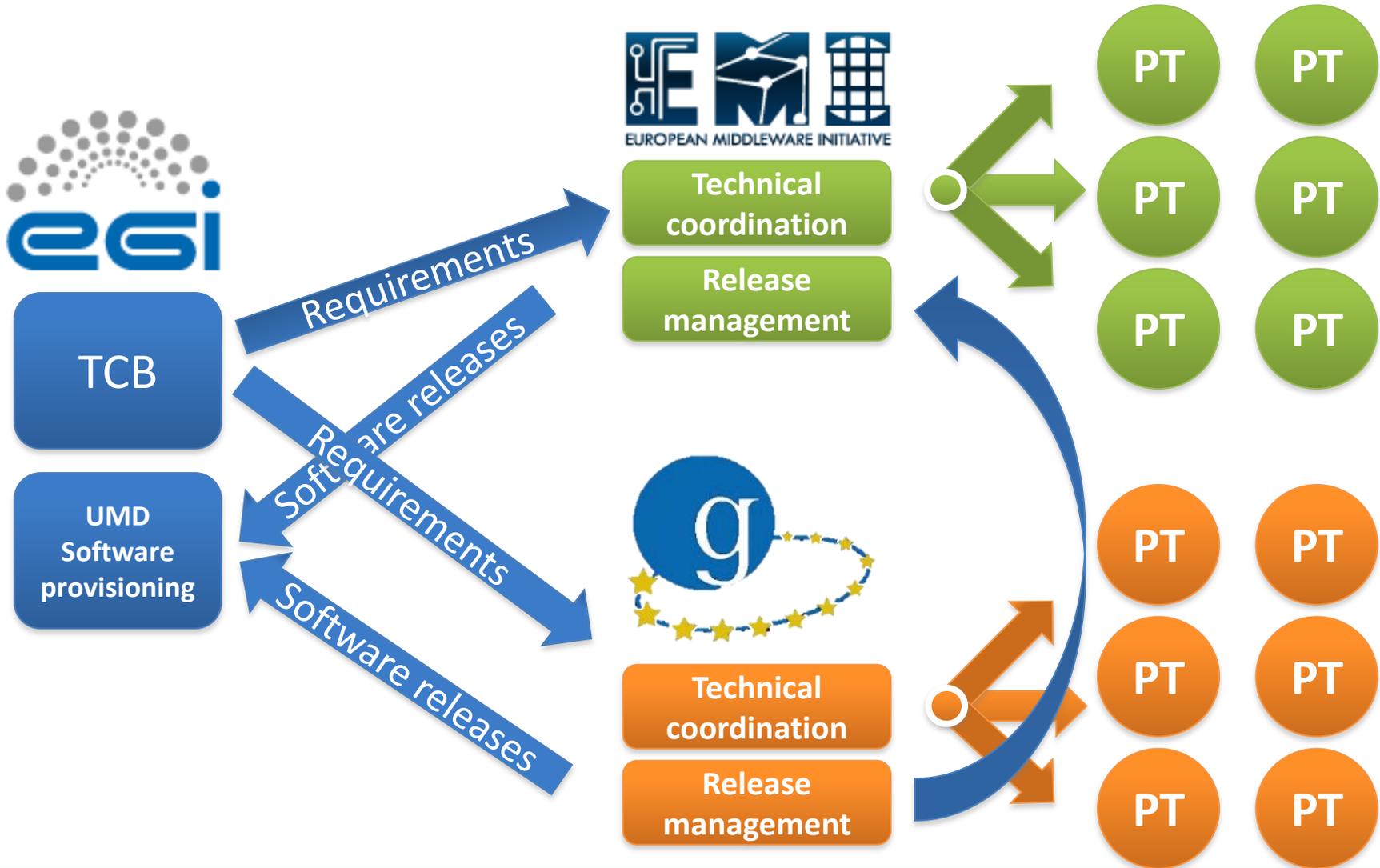


EGI Unified Middleware Distribution: heterogeneous middleware components for a distributed e- Infrastructure

T. Ferrari/EGI.eu on behalf of
Peter Solagna/EGI.eu

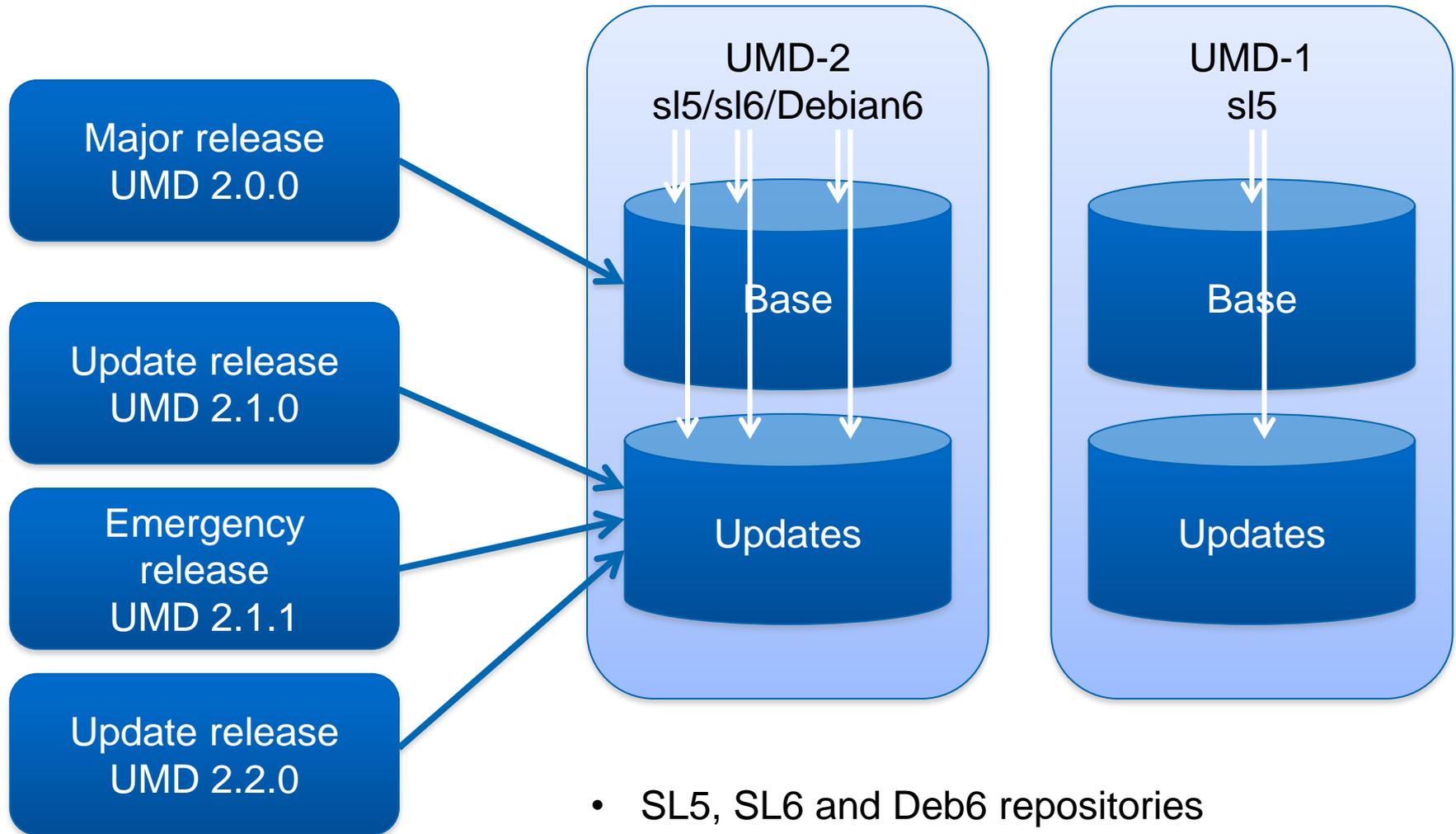


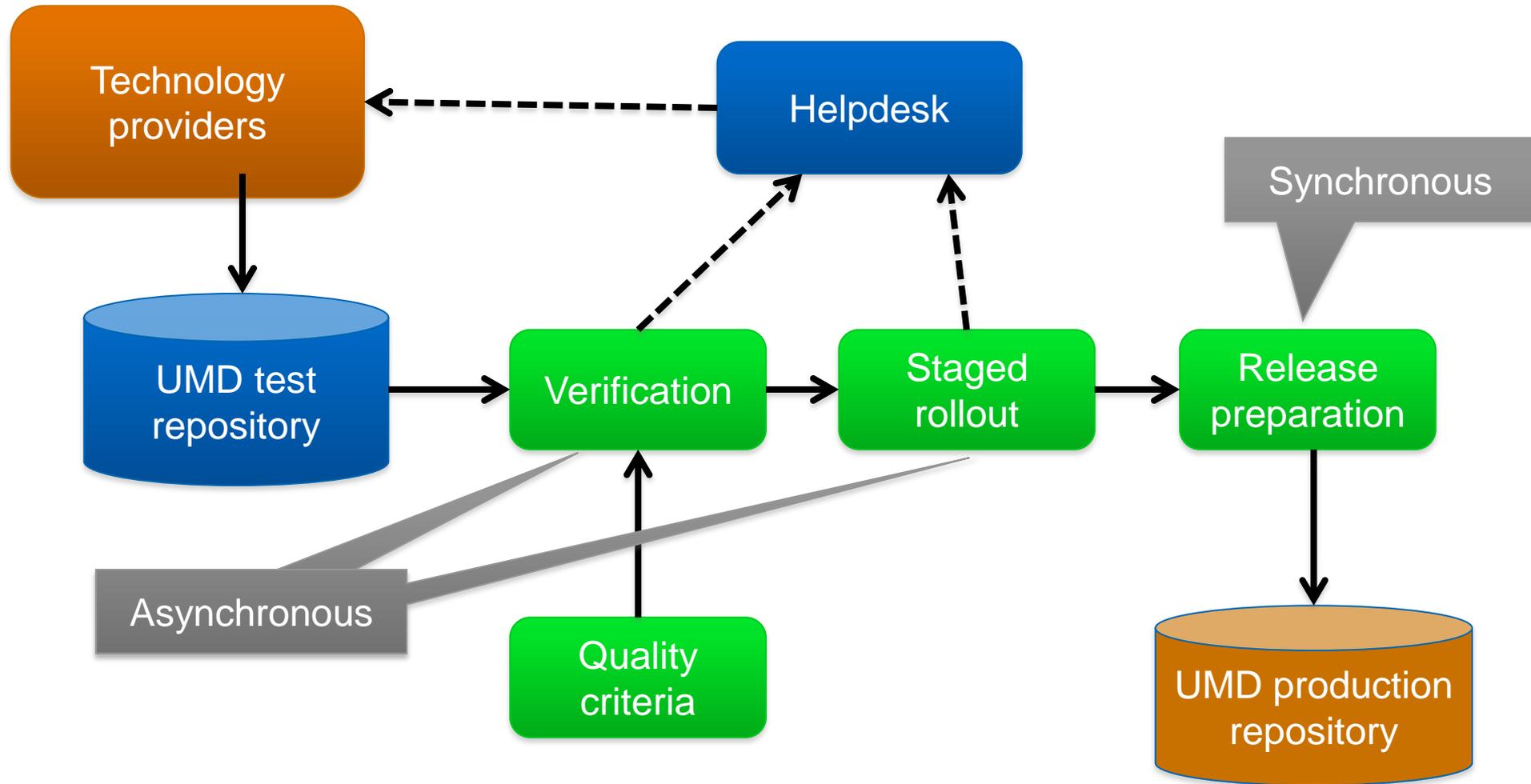


EGI **UMD** distribution integrating the products released by the Technology Providers (TPs)

- Provides the **capabilities** required by the infrastructure and user community
- **MoUs and SLAs** in place with the technology providers
 - User support, critical bugs and security vulnerability

- UMD does not:
 - Develop patches or new features for the middleware
 - Repackage software in new RPMs
- EGI does:
 - Perform **software verification and verification** on top of the TP quality assurance
 - New releases tested in the EGI infrastructure, with real use cases
 - Provide RPM and DEB **repositories**
 - **Single** set of repositories to be configured
 - Products pushed in the production repository only after the **validation** and **verification**
 - **Protection** from new releases





- Dedicated activity defines the criteria to test the **middleware capabilities**
 - **Capability** specific criteria (e.g. GLUE and SHA-2 compliance, publishing of service information)
 - **General criteria** (e.g. documentation or file permissions checks)
- The criteria are published in a public document:
 - **Quarterly update cycle**
 - **Peer reviewed** by technology providers representatives
- Criteria are mapped to the products to make more efficient the verification process

- Products deployed in a **dedicated testbed**
 - **Private cloud** infrastructure
 - The **virtual images** are kept as ‘golden copy’ for future deployment/testing
- The **verification team** performs checks to verify all the criteria relevant for the software release
 - Some criteria are applicable only to major releases of the software
- Output: **report** with the results of the checks
 - Critical failures lead to rejection
 - All failures generate high priority GGUS ticket

- Test the products in a production environment
 - Deployed in a small number of Early Adopter (EAs) sites (1~5)
 - Expert site managers
 - Exposed to real users and use cases
- EA produce a SR report with the result of their testing
 - Issues are evaluated, if the impact is critical the product is rejected
 - High priority tickets are opened to notify the developers
 - Often a workaround is provided and the product is released in UDM

- The products that successfully pass verification and staged rollout are released in one of the scheduled updates of UMD
- The reports from verification and staged rollout are parsed as well as the possible GGUS tickets
 - Known issues and workaround are reported in the UMD release notes
- Release candidate is generated to test that the release integrates within the existing UMD production repositories
- After the released is successfully tested it is deployed in the UMD repository

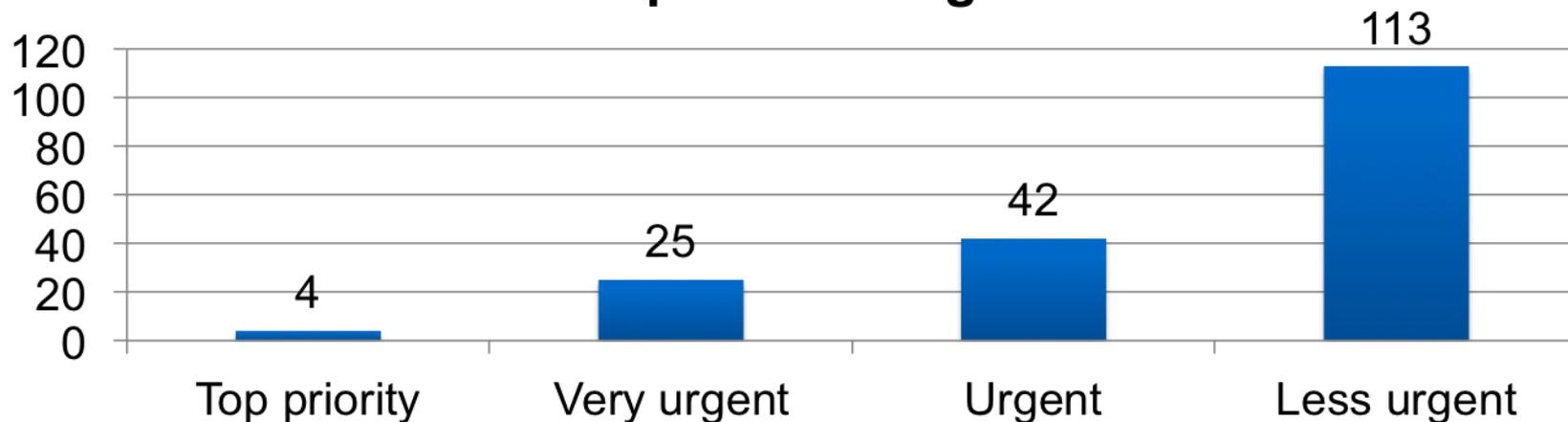
Major release	Number of updates	Number of products	
		EMI	IGE
UMD-1	14	38	9
UMD-2	8	34	7

- Technology providers produced 5 (2+3) major releases and 38 updates over two years
 - 2 UMD major releases, 20 updates
- Median elapsed time between TP release and UMD release: 31 days
 - ~200 software updates tested, 19 rejected

- 19 rejected products (9%)
 - Critical issues affecting one or many use case
- Was the remaining 91% perfect?
 - If verification and staged rollout find non critical issues, or critical issues with a workaround, the product can be released in UMD
 - **UMD release notes** contain the known issues discovered during software provisioning

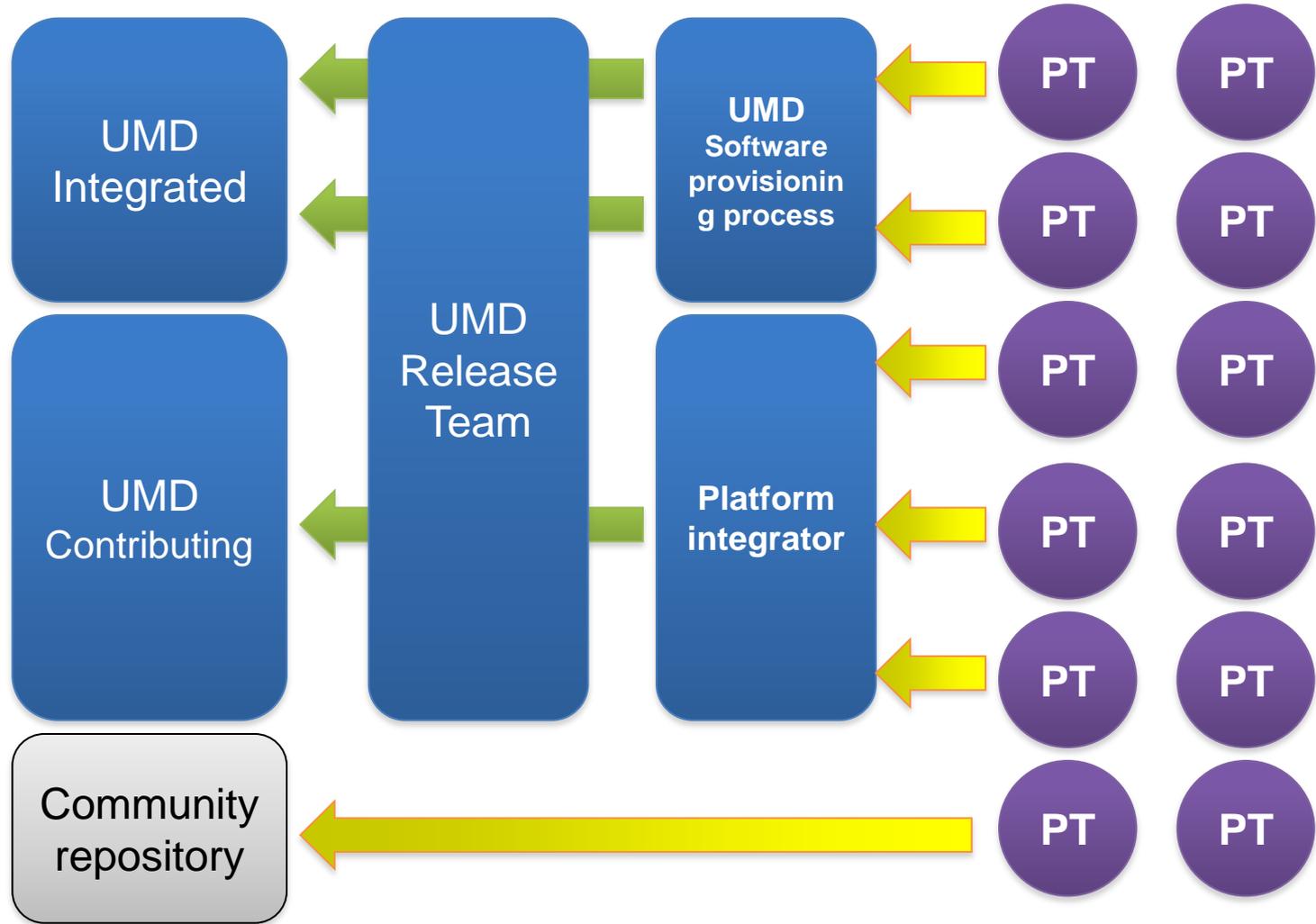
- When an issue is discovered during the software provisioning developers are notified with a GGUS tickets

Number of ggus tickets opened during software provisioning



- After the end of EMI and IGE, **UMD** needs a new structure to be scalable with more **Platform Integrators (Pis)** who are less coordinated (more independent) than before
 - UMD software provisioning (verification and staged rollout in a single release)
 - will be applied to products according to **requirements**
 - UMD **quarterly releases**
 - Give access to PTs to a subset of the EGI **verification testbed** to perform integration testing (*new activity*)

- **Core products** → core infrastructure capabilities
 - accounting, information system or user authentication
 - Software verification and release in UMD performed centrally by EGI
- **Contributing products** → Platform Integrators integrate a set of products (the platform)
 - contains products certified to work together and integrated with the core platform
 - Software verification is performed by the PI (EGI guidelines)
 - UMD repository different from the core one
 - Platform Integrator will mediate communications between EGI and product teams, acting as contact point
- **Community products** → user communities will use dedicated repositories (provided as a service by EGI) to distribute community specific components. Release process entirely controlled by the communities



- **UMD**

- Quality assurance, stable releases
- One repository for
 - Core
 - Contributing
 - Community

- **UMD Release Team**

- Loose coordination of PTs around critical bug fixing, security vulnerabilities, timing of releases
- Requirements