Overview SA3

Markus Schulz CERN GD

EGEE 4

- **Integration, Testing And Certification**
  - Sounds familiar…….haven't we done this for the last years?
- **What's new**
  - From the proposal:

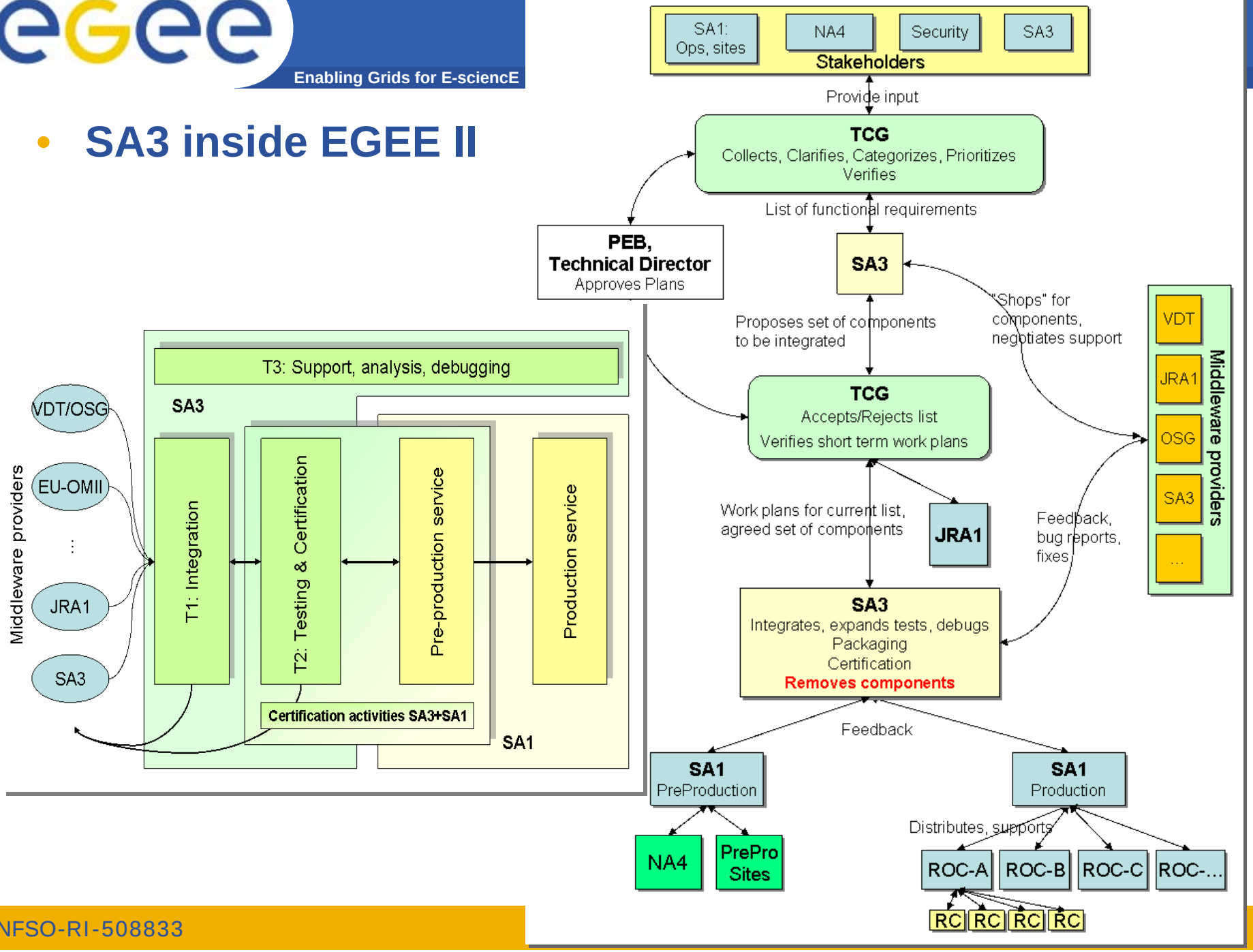
> The SA3 activity decouples the production of deployable middleware distributions from the middleware developments. This is crucial at this point in the project, as the focus must be on making the infrastructure that now exists as reliable and robust as possible. Further middleware and services development will be driven by need and utility as determined by the users and operations group via the technical coordination group.

- **And more quotes**

To this end the activity needs, as part of its team, staff capable of detailed software analysis, debugging, and fixing. The activity will provide missing tools where appropriate to its staffing level and negotiate with middleware providers, both within the EGEE- II project and external to it, to provide missing functionality and services.

The SA3 activity will lay out explicit criteria that software must comply with in order to be included in the middleware distributions. These criteria will include aspects of service management, security, documentation, installation, configuration etc. In addition, it must be clear between SA3 and the middleware providers what the support model for each component will be, and how the middleware providers agree to react to problem reports. Components may be removed from an SA3 distribution if they do not satisfy these criteria and fail the certification tests.

- **SA3 inside EGEE II**



Tasks

- **T1: Integration and packaging**
- **T2: Testing and certification**
- **T3: Support, analysis, debugging, problem resolution**
- **T4: Interoperability**
- **T5: Capture Requirements**

- **Partners: CERN +**
  - PSNC,TCD, ▪ IMPERIAL, INFN,UKBH
  - UCY, GRNET, CSIC, PIC, CESGA, FZJ

  - Partners active in testbeds, tests, and specific interoperation tasks

T1: Integration and packaging

- **Select middleware from inside and outside the project**
  - In line with TCG strategy
- **Run integration and build systems**
  - ETICS project can help here
  - More platforms than now (Linux distributions, Win….32/64)
- **Manage dependencies (middleware, application area)**
- **Produce public distributions including deployment documentation**
- **Packaging the distribution for deployment**
  - Has to be easy to be used with existing fabric management systems
    - Lightweight, not a replacement for fabric management
- **Close interaction with SA1**
  - Deployment testing via SA1 pre-production service

T2: Testing and certification

- **Test and certify stacks**
  - Coordinate and contribute to the development of test suites
    - Tests come from all activities
    - Test Coordinator in SA3
      - *SA3, SA1, JRA1, NA4 and INTAS*
  - Interoperability and co-existence tests
  - Tests on different platforms
  - Security and vulnerability tests
  - Testbeds at CERN and at at least 2 remote sites
    - Pre-production run by SA1----> Deployability
  - Verification that requirements are met

- **Testbeds (a Zoo)**
  - Build system
  - Integration testbed (basic functional tests)
  - Application Preview (new functionality)
  - Certification and test development test bed ----> distributed
    - Deployment, interoperation, stress and other complex tests
  -

T3: Support, analysis, debugging, problem resolution

- **Addresses problems seen in production**
  - In depth understanding
- **Coordinate solutions within or with middleware providers**

- **Team active in certification**
- **Members have a developer profile**
  - Have to dive into code (and better surface after a while)
  - Have to be experienced in distributed systems
- **Can provide ad-hoc solutions that are in the team's scope**
- **Negotiate through the TCG with providers solutions**

T4: Interoperability

- **Work with other grid infrastructure projects (OSG, ARC..)**
  - Agree on practical standards
  - Together with SA1 make these “standards” visible and give feedback based on experinece
    - GGF ……
- **Work on interoperability schemes for other stacks**
  - UNICORE…..

T5: Capture Requirements

- **Requirements are managed via the TCG**

- **Middleware requirements from SA1/SA3 are coordinated by SA3**
  - At this stage we expect requirements to be based on:
    - Experience in usage, operation, deployment and integration

Industry Integration

- **Close link with “CERN openlab for DataGrid applications”**
- **Access to cutting-edge technology (storage, clusters, networks)**
- **Main activities**
  - Interoperation
    - With commercial stacks
  - Soft and hardware optimization
  - Virtualization
    - First via software, later based on hardware
  - Testing and certification
    - On industry partners test beds
  - Porting
    - Already provide IA64 port
  - Feasibility studies of possible business models
    - Price models ???

What & When

- **PM1**
  - MSA3.1 Inventory of services and tools in use on the production grid
  - Gap analysis
- **PM 2**
  - MSA3.2 Definition of the SA3 release process
    - Criteria that new software has to met
  - Describe interactions with TCG, SA1 and middleware suppliers
  - MSA3.3 Plan for interfacing EGEE and UNICORE middleware
  - MSA3.4 Same for ARC
- **PM3**
  - MSA3.5 Test plans for services in MSA3.1
- **PM6**
  - MSA3.6 Publication of test suites to allow providers test before delivering
- **PM11**
  - DSA3.1 Report on the releases produced in the first year, status of interoperability, full release notes and documentation

What & When

- **PM15**
  - MSA3.7 Review of the testing and certification - follow up on process (MSA3.2)
  - Recommend changes for 2nd year
- **PM18**
  - MSA3.8 Update of MSA3.1 (Inventory and gap analysis)
- **PM22**
  - DSA3.2 Update DSA3.1

Organization

- **Integration and packaging**
  - Mainly at CERN with INFN contribution
- **Testing**
  - Coordination by CERN
  - Distributed with partners specializing in certain aspects of testing
    - Security
    - Operation of testbeds
    - Functional and stress test
- **Debugging, analysis and support**
  - CERN and INFN
- **Interoperation**
  - CERN, FZJ and UKBH
    - Specialisation on different infrastructures
- **Requirement capture**
  - CERN