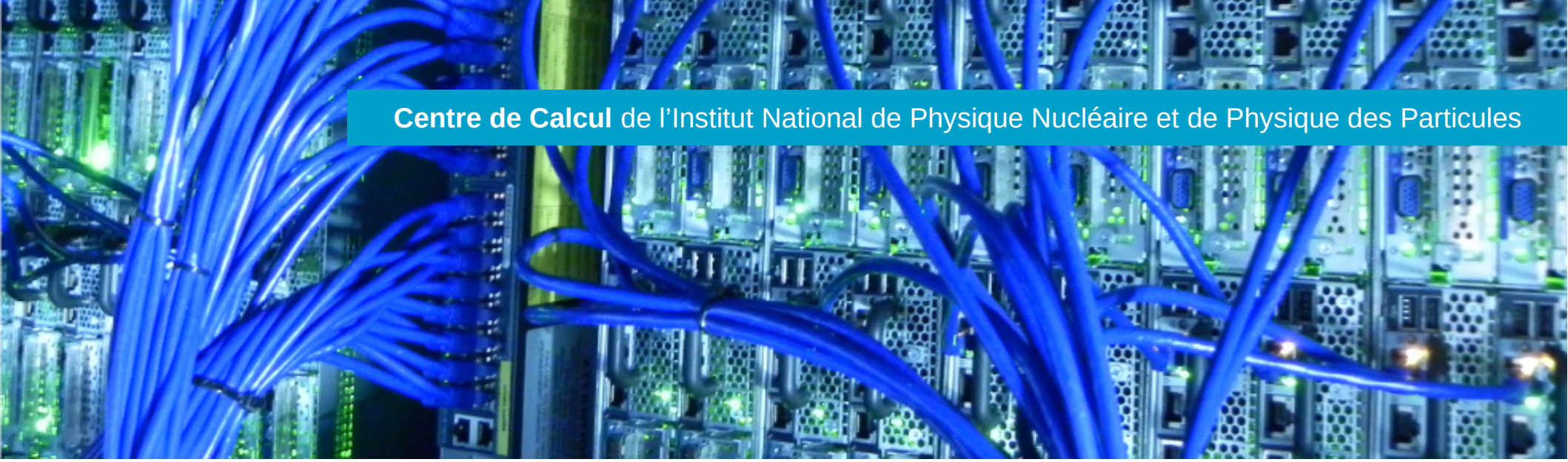

ITIL best practices at CC-IN2P3

NCSA / CCIN2P3 video conference on January 22nd, 2016

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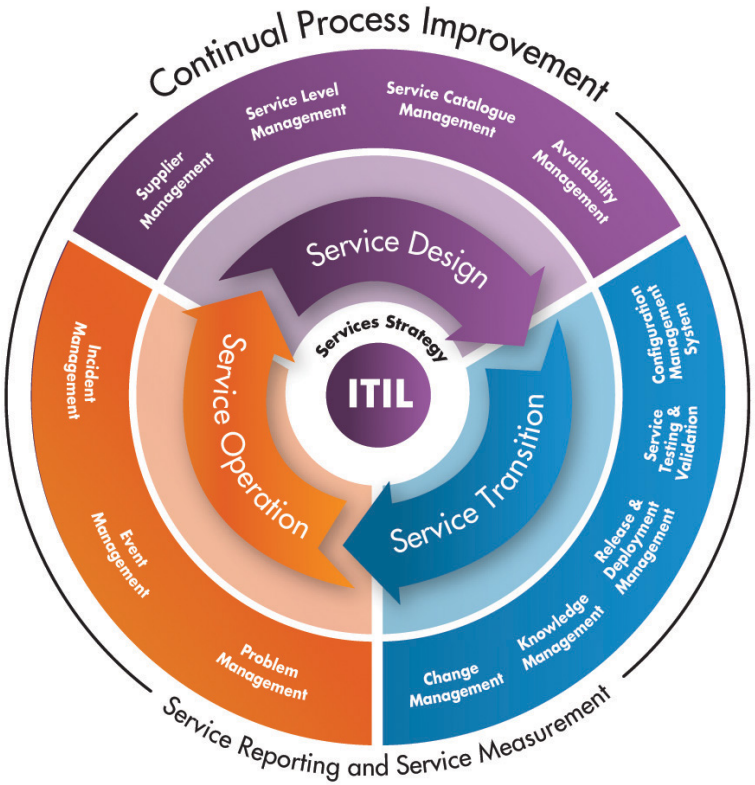
Outline

- About ITIL
- ITIL @ CCIN2P3
  - How it started
  - What we did
- Feedback

- « ITIL advocates that IT services are aligned to the needs of the business and support its core processes. [...] »
- Best practices
  - A lot of common sense
  - Usually things we do without knowing it's “quality”
  - Describes a service life cycle
    - 5 phases
    - 26 processes and 4 functions



- However, it's mainly theory
  - Requires pragmatism to match the existing environment (people and habits)
  - There is no wonderful tool that does everything by itself

ITIL @ CCIN2P3 - How it started ?

- November – December 2009
  - First ITIL V3 Foundation trainings (14 people)
- 2010
  - 10 more (a total of 24 out of 50 computing engineers)
  - First actions in the Operation team
    - We welcomed Dr. Holger Marten from KIT (Karlsruher Institut für Technologie)
      - External view on our Service Desk and IT Operation Control
    - First need was to improve
      - Event and Incident management
      - Internal and external communications
      - We created a Control Room with one staff for Service Desk and one other for IT Operation Control
  - Designation of a Quality manager
    - Propose actions directly to the steering committee
    - Communicate on the quality activity (or related)
- It was the start of ITIL oriented work

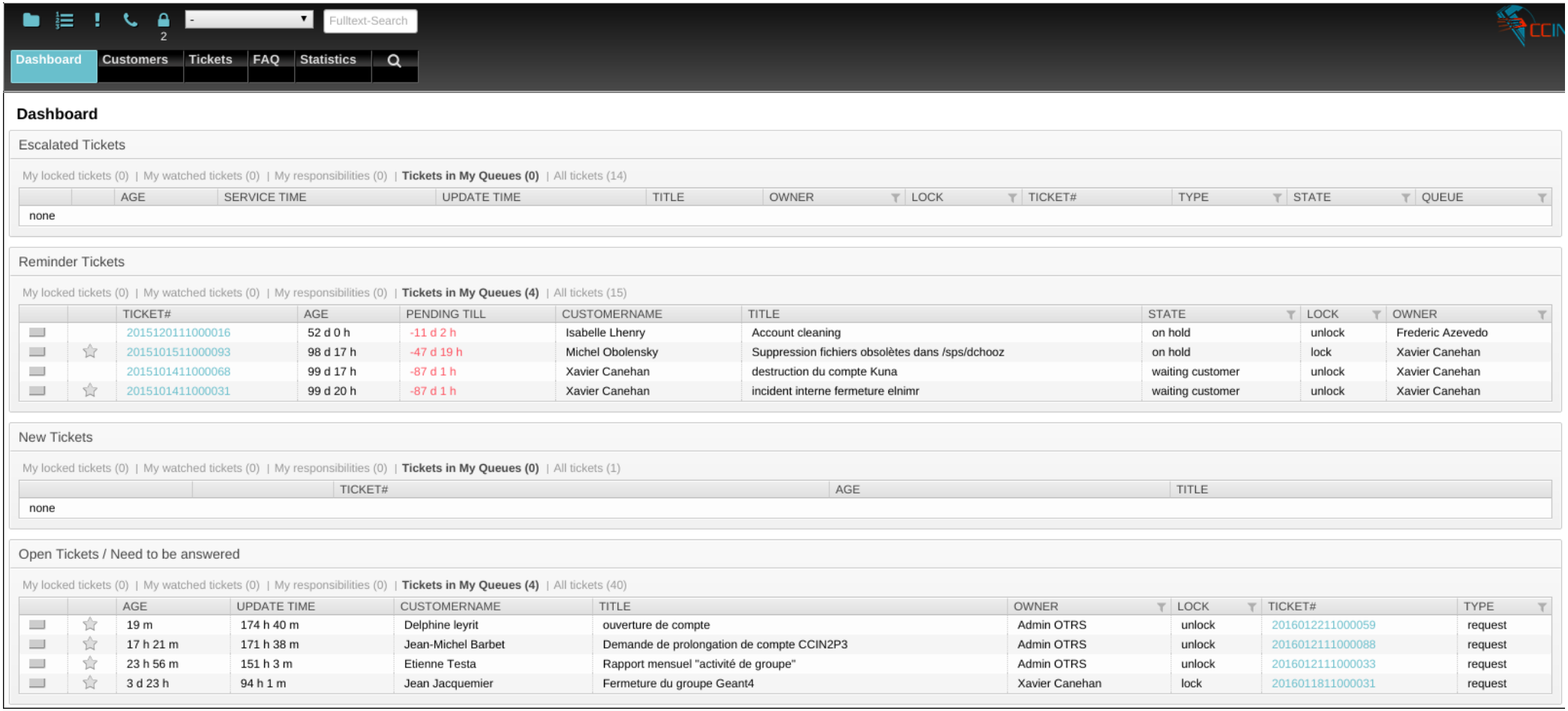
- Trainings
  - Suggest people to have at least the “ITIL Foundation” training
    - Share the same vocabulary : otherwise it's a real difficulty
    - Understand what we are doing
    - See the importance they have in the service quality
    - Total of 34 computing engineers trained and 23 remaining (non permanent)
  - Creation of a group of 3 people with higher level trainings
    - 2 have the four “capabilities” modules
    - Share ideas on what could/should/must be done
    - Suggest a pragmatic approach to do it
- Planing an internal seminar on ITIL for 2016
  - Talk about what we did and what's next

- Some tasks and projects done and in progress
  - Control room improvement
  - Event, Incident and Problem Management
  - Change management process
  - Creation of a Configuration Management Data Base (CMDB)
  - Service Catalog
  - Business continuity
  - Identity Management
  - … and all the daily work of **everybody**

ITIL @ CCIN2P3 – What we did and plans

- Control Room
  - Objectives
    - Make support team closer to the operations
    - Have a better view of ongoing incidents to improve ticket handling
      - Give a more accurate information to the users
      - Have a better reactivity
    - Have a Single Point of Contact (SPOC) for users and also internally
    - Have a more reliable information transfer with the on duty engineer
  - Try to fulfill some ITIL functions :
    - Service Desk
    - IT Operational Control
- We had to change our ticketing system
  - Mandatory tool for our users and Service Desk
  - We changed because
    - We wanted new features (see backup slides for details)
    - Difficult to develop in our old homemade tool

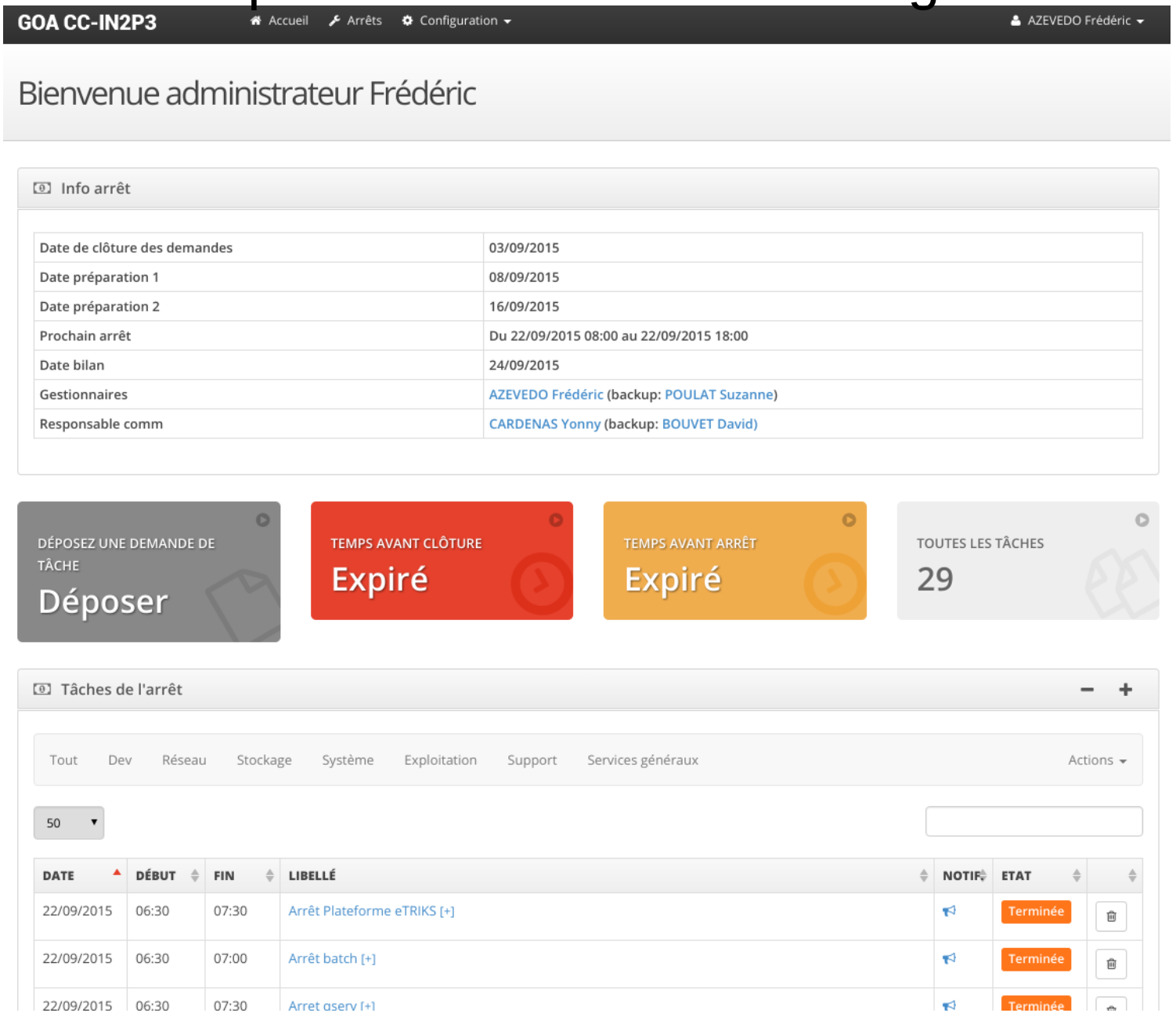
- Dashboard of our ticketing system (OTRS)



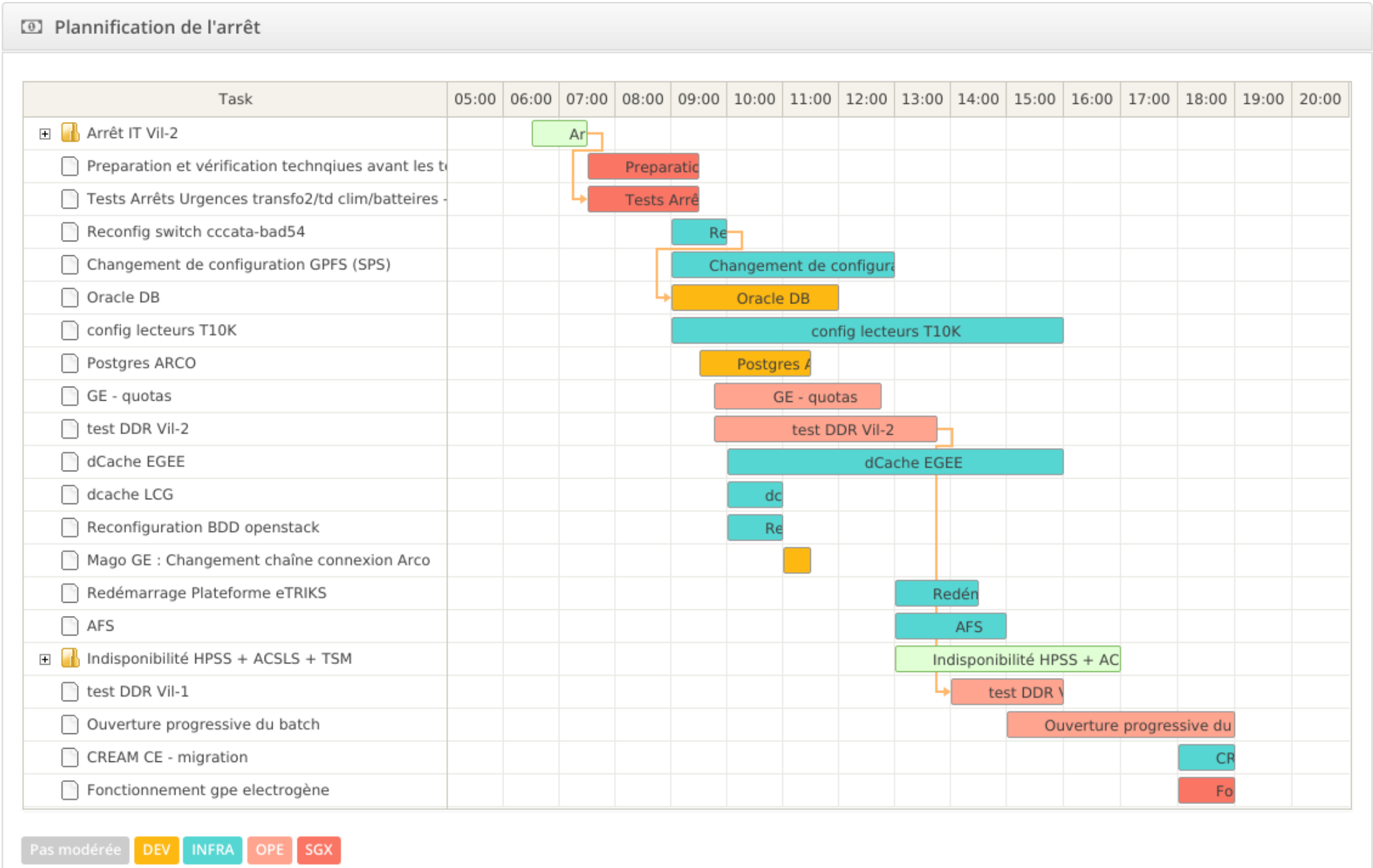
- Event and incident Management
  - The process is not completely defined
  - However we have some rules and procedures
    - To log events in one accessible place
    - To give information how to catch meaningful events and to monitor services
      - Event handling made using Collectd, ElasticSearch and Kibana
      - Monitoring made using Nagios
    - To recommend actions to be taken on given events or incidents
  - The control room is the SPOC for incidents handling
    - Registers the incident and keep a log until closure
    - Has the experience and the knowledge to evaluate impact
- Problem management
  - We don't have so many Problem (in ITIL terms)
  - For now, real problems were dealt without written process

- Change management process
  - We have a change process for major changes
    - We have 4 possible scheduled outages per year
    - For changes with “big” impact
    - For all services, including facility management (chillers, power supply lines, …)
    - We start collecting the needs 1 month before the outage
      - Analyze the impact on other services and on the user
      - Approve the maintenance requests (with the management if needed)
      - Establish a planning
      - Approve the planning with the management and steering committee
      - Have a final review after the outage
  - Process is to be fully defined to include the other changes
    - Working on a pragmatic way to do it
    - Has to be effective and efficient

- Home development for scheduled outages



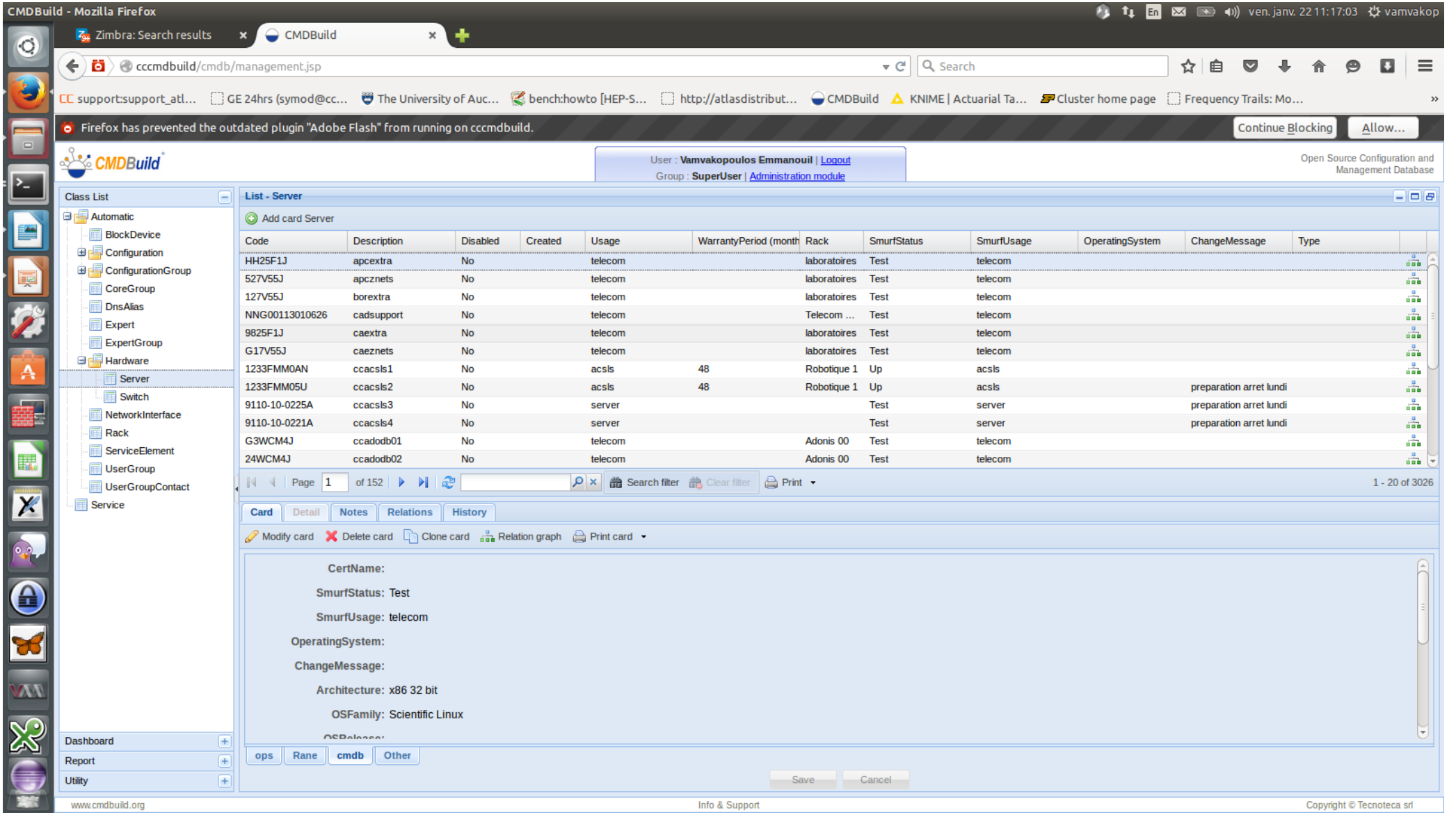
ITIL @ CCIN2P3 – What we did and plans



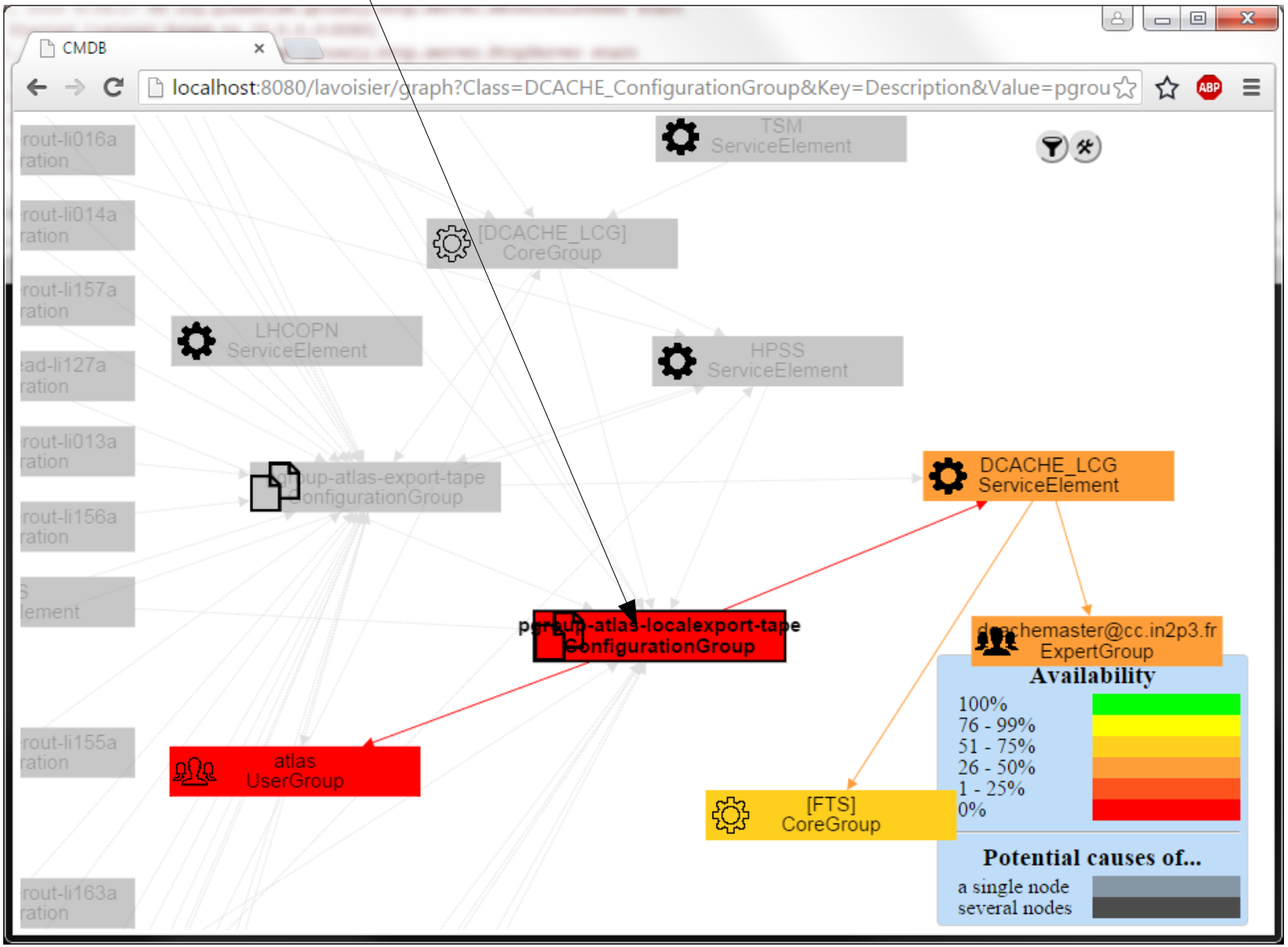
- Configuration Management Data Base (CMDB)
  - Project started Oct. 2012 and ongoing
  - Related to the Service Asset and Configuration Management ITIL process (SACM)
  - We need a gathered view of all the existing configuration items (CI) from all services
    - Each service has his own CI and their relations stored somewhere
      - Excel file, flat file, data base, ...
    - We are gathering these informations into one place
    - But we keep the original files and the way people work with them
  - We are building a system to be able to visualize the impact of a component failure (machine, network, storage component, …)
  - Major difficulties
    - Make people understand it's important and we need it
    - Find available human resources

ITIL @ CCIN2P3 – What we did and plans

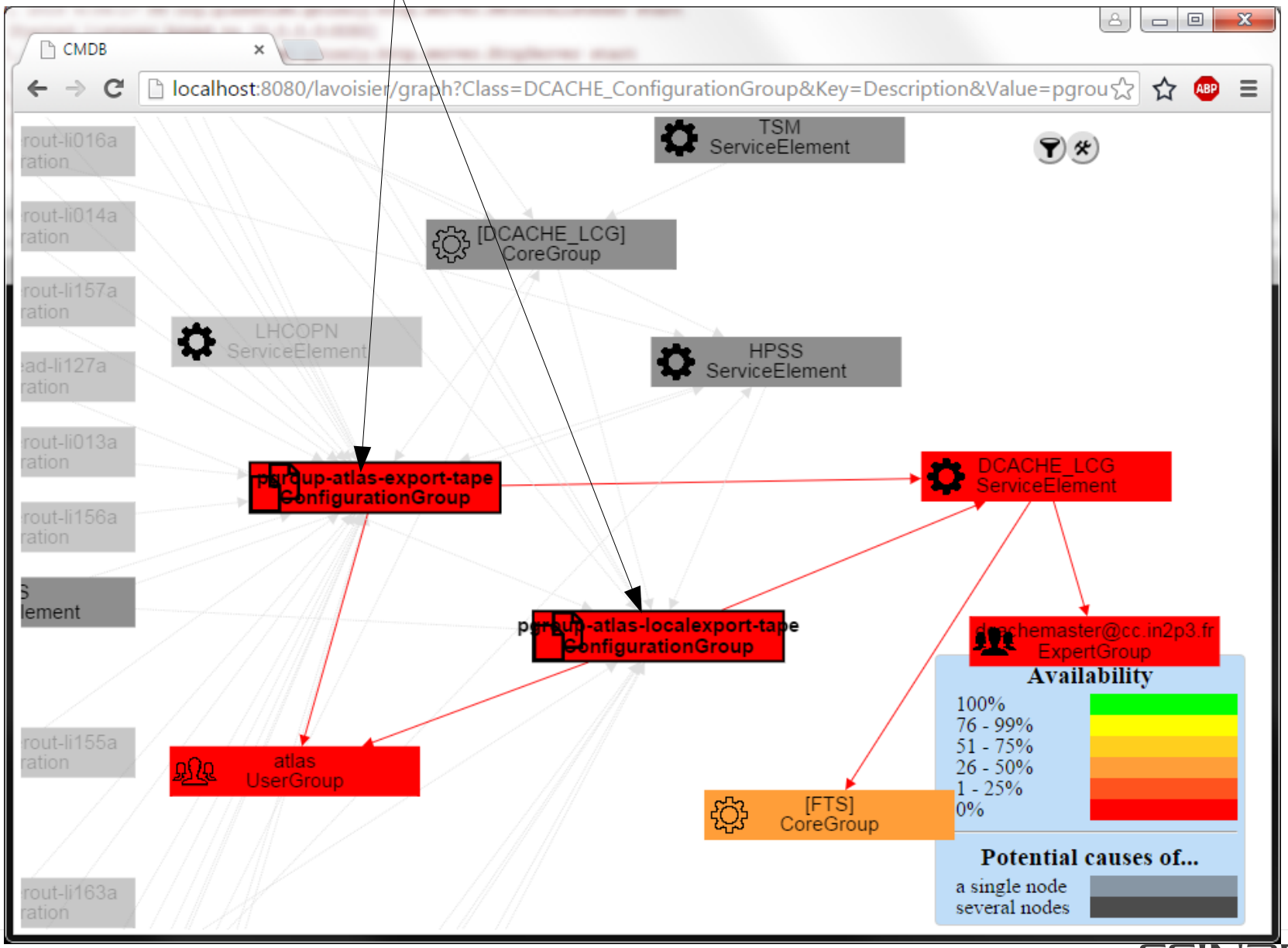
- Cmdbuild interface



- Impact analysis example (home development)
  - With 1 failing item



- Impact analysis example (home development)
  - With 2 failing items



- Service Catalog
  - Work started in 2012 and is still ongoing
  - Related to the Service Catalog Management ITIL process
  - Why ? Isn't it simple to list what we provide ?
    - Seems the answer is : no, it's not so simple :-)
  - Major difficulties
    - Make people understand it's important to have one
    - Make service owners help us describe their services

- Identity management
  - First look at the topic in 2009
  - Project continued in 2014 and ongoing
  - Related to the Access Management ITIL process
  - We are missing a global view of users accounts and access rights
  - We still are using command line on different systems to manage accounts creation and deletion
  - Major difficulties
    - Find human resources available

- Business continuity plan
  - We had a 2 day planned power outage in December 2012
    - We used it as a real use-case to
      - Identify critical services (update the existing one)
      - Ensure our power generator was powerful enough
  - Afterwards we continued to
    - Identify major risks (fire, flooding, epidemic disease, ...)
    - Estimate their “Business” Impact
  - Major difficulties
    - Make people understand it's important
    - Low probability but some CAN happen
    - Due to lack of human resource, we did not go further

ITIL @ CCIN2P3 – What's next ?

- Define processes the way ITIL recommends it
- Finish the ongoing projects
  - Will help us to make a step forward
- Knowledge management
  - Main objective : reduce the number of knowledge sources !
    - Around 5 different sources of informations
    - Sometimes a document exists in different sources and the version is different
- Key Performance Indicators (KPI) on processes
  - By the book : should be the first thing to do (easy to say)
  - Much easier to do when processes, procedures, tools are in place.
  - Be able to put numbers and trends on the benefits we are feeling (reactivity, effectiveness, efficiency and user satisfaction)

Feedback and suggestions

- The management and steering committee **must support** quality related activities

- Major problems are related to the **perception** of people about quality
  - **Convince** them it's important and useful for everybody
  - Show them that they have a **major role** in it
  - **Trainings** can help
    - Have someone with concrete examples from private companies

- **Pragmatism** : otherwise it's a fail before starting (personal feeling)

- Where to begin ?
  - First question might be
    - What do I want to improve (or initiate) ?
  - For production site, “Service Operation” processes are really useful
  - For new services to be designed, let's focus on the “Service Design” processes
  - Indicators are important
    - But not so easy to define at beginning
    - Often felt as a way to control the job done

- ITIL in our collaboration
  - Can help for the services we will set up
    - On their design
      - If new services must be created, common design ?
    - On the way we will handle the changes in production
    - On the way they will be operated
      - Common procedures on common tasks could exist
        - Same escalation rules for an incident on a given service ?
  - Help each-other to improve our services
  - Share knowledge

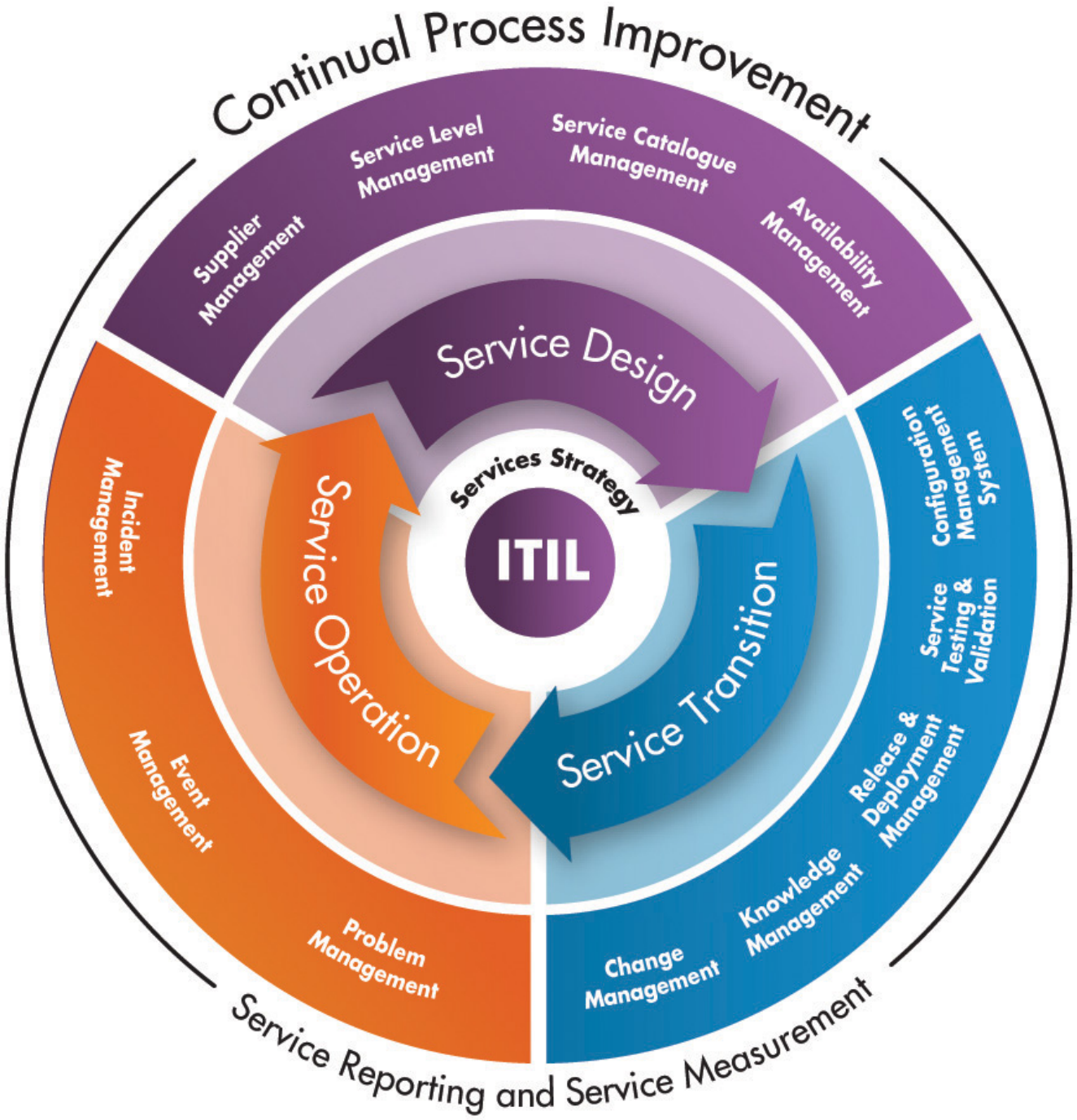
References

- ITIL related : https://www.axelos.com/best-practice-solutions/itil/what-is-itil
- Ticketing system OTRS : http://www.otrs.com/
- Tool used for our cmdb tool : http://www.cmdbuild.org/en
- Identity management tool : http://openidm.forgerock.org/
- Tools used for event handling
  - Collectd : https://collectd.org/
  - Eleasticsearch : https://www.elastic.co/
  - Kibana : https://www.elastic.co/products/kibana
- Monitoring tool is Nagios : https://www.nagios.org/

Questions ?

BACKUP slides

New features wanted in the ticketing system

- Define ticket types
  - Incident
  - Request for Change
  - Information request
- Follow/watch any ticket
- Manage tickets
  - Escalations
  - Statistics
- FAQ
- ITIL compliant product for
  - Change management
  - CMDB
  - Service Catalog
  - Service Level Management
  - Link ticket to any of these

ITIL Service life cycles