Service Management for CERN

Service Owner & Functional Manager Meeting

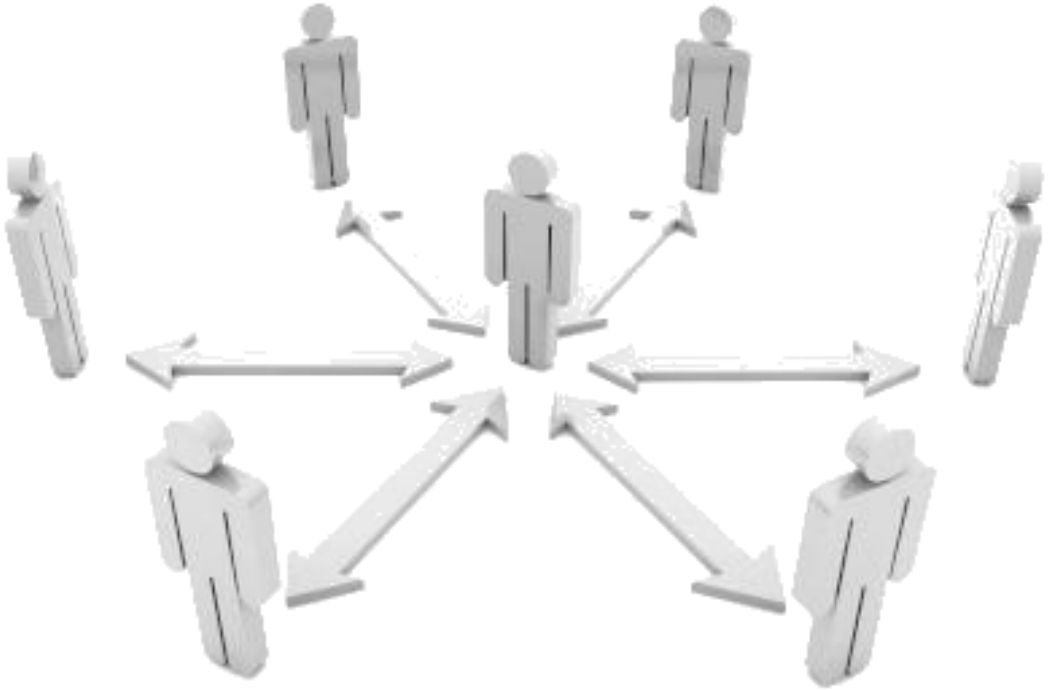
Phase 2

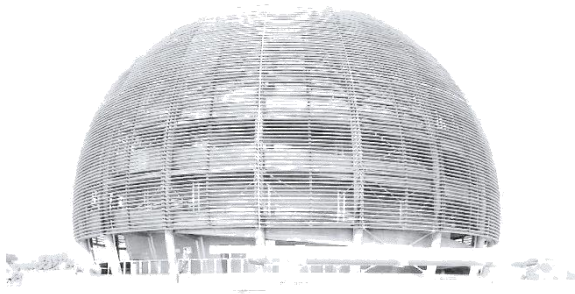
Geneva, 20.03.2013

Service Owner & Functional Manager Meeting

Agenda

- A view back
- New topics
  - Service Catalogue Maturity Check
  - Service Level Targets
  - Risk Management
- Ongoing tasks





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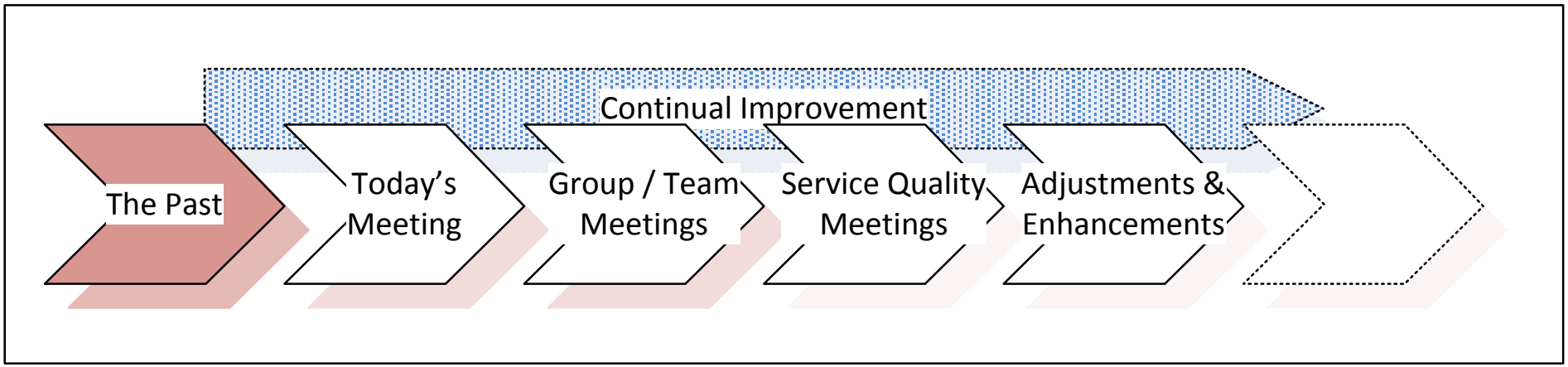
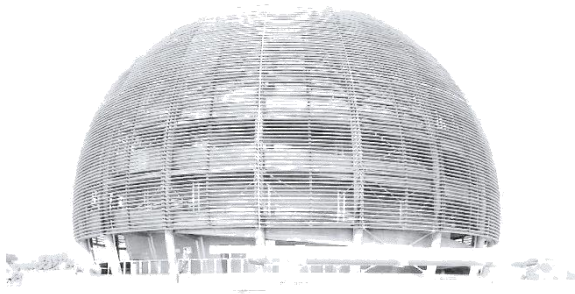
The Past



- Achievements
- The vision 2010
- Service Owner's responsibilities 2010



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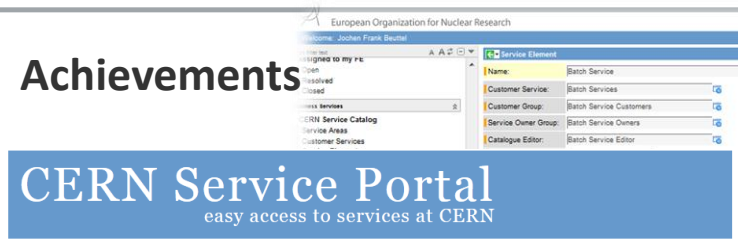
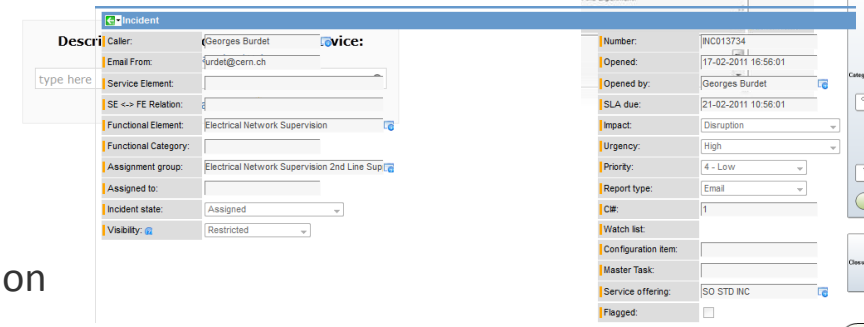
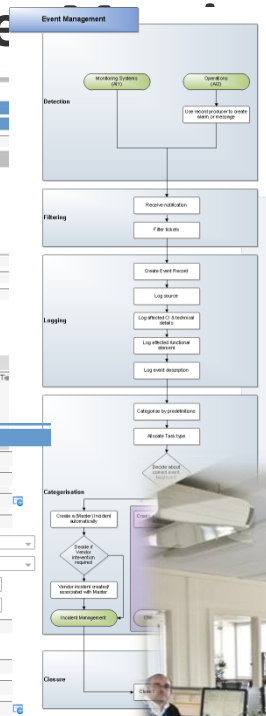
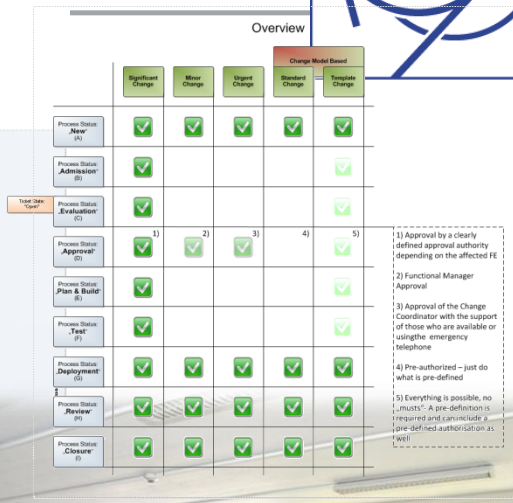
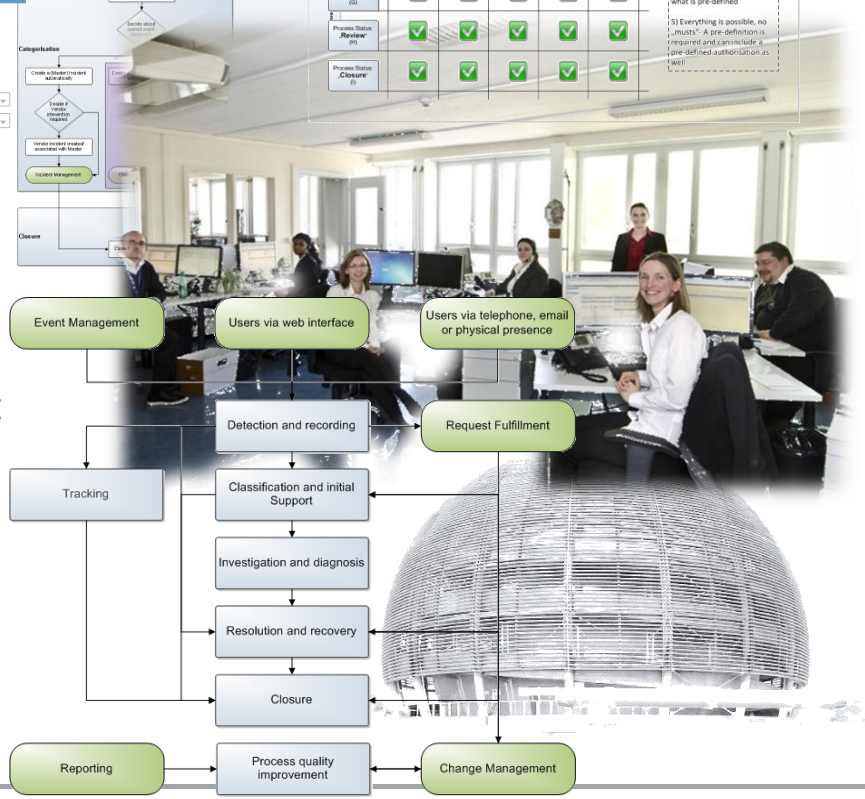
Achievements











- Vision
- Service Catalogue / Service Portal / Service Owners
- Service Desk / Service-Now / Incident Management & Request Fulfilment
- Knowledge Management / Event Management / Change Management
- Integration of GS / IT / HR / FP
- Communication / PR / Reporting

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Our vision 2010:

- Improve the 'user experience' for service delivery at CERN through
  - **Simple, coherent, traceable standardized processes** for request fulfilment and incident management (and more in future)
  - Hide the internal organization details from the users, and let them focus on the what they want to achieve
- Improve the efficiency and effectiveness of CERN as a service organization by
  - Introducing a new "customer service perspective" on CERN. All services will have documented scope, and service quality parameters (when is the service available, when is support available, what are the targets for responding to an incident, what are the targets for service availability, etc..) in **the CERN Service Catalogue**
  - Creation of a 'service owner' role to these customer services. **Service owners** are accountable for the service quality.
  - Measuring the service delivery indicators, enabling the establishment of a baseline for discussion on changes, and starting a continuous improvement process.

Service Owner - Duties & Responsibilities 2010

- The **Service Owner is coordinating** a specific service or a bundle of **services** within the organization regardless of where the underpinning technology components or professional capabilities reside.
- As single point of contact he **is representing the service** towards the customers of the service.
- His main responsibility is the **definition of the service** or services concerning their functionality, scope, capacity, quality and costs in agreement with the customers and their specific requirements.
- On the other side he is **coordinating the provision of the service** performance in a way that the performance delivering functions, functional units & processes are completely involved.
- He is responsible for the coordination of **continual improvement** and changes affecting the services under their care.

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Service Owner – Tasks 2010

- Describe the service
- Identification of customers and users of the service
- Representation of the service across the organization
- Communication with customers about functionality and quality of the service
- Understanding of customer requirements
- Understanding the mode of provision of the service
- Point of escalation (notification) for major Incidents
- Organizes and participates in service review meetings
- Delivery of information for maintaining the Service Catalogue, the processes and the tools used for Service Management

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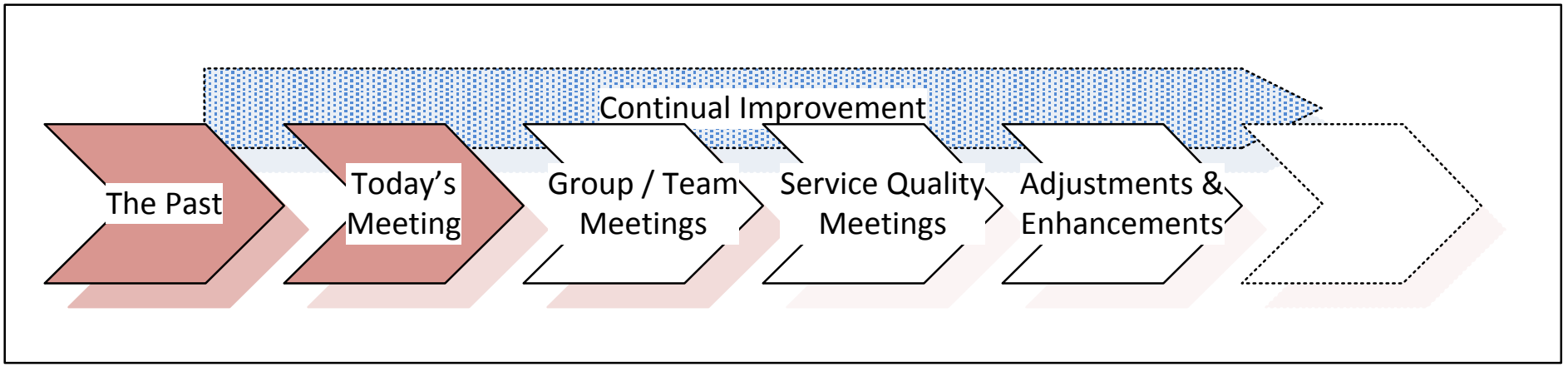
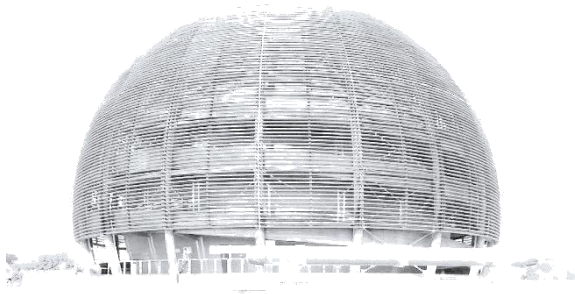
Today's Meeting



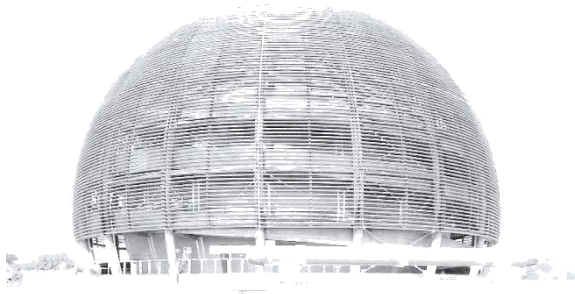
- Service Catalogue Maturity Check
- Service Level Management
- Risk Management



Service Catalogue Maturity Check

- There is still invalid information displayed on the portal.
- All the dependencies between Services and Functions and all Relation Types (A,B,C) should be checked to ensure correct dispatching
- Key words in English and French should be revised and completed to improve the search functionality of the portal

- All structural corrections will be made by the Service Management Team.



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Service Level Management

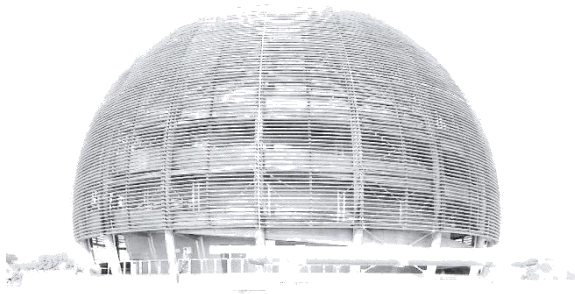
Service level management was implemented from the start (for Incident) but never properly configured and used.

We are now ready to start using it for both Incident & Request

Definitions:

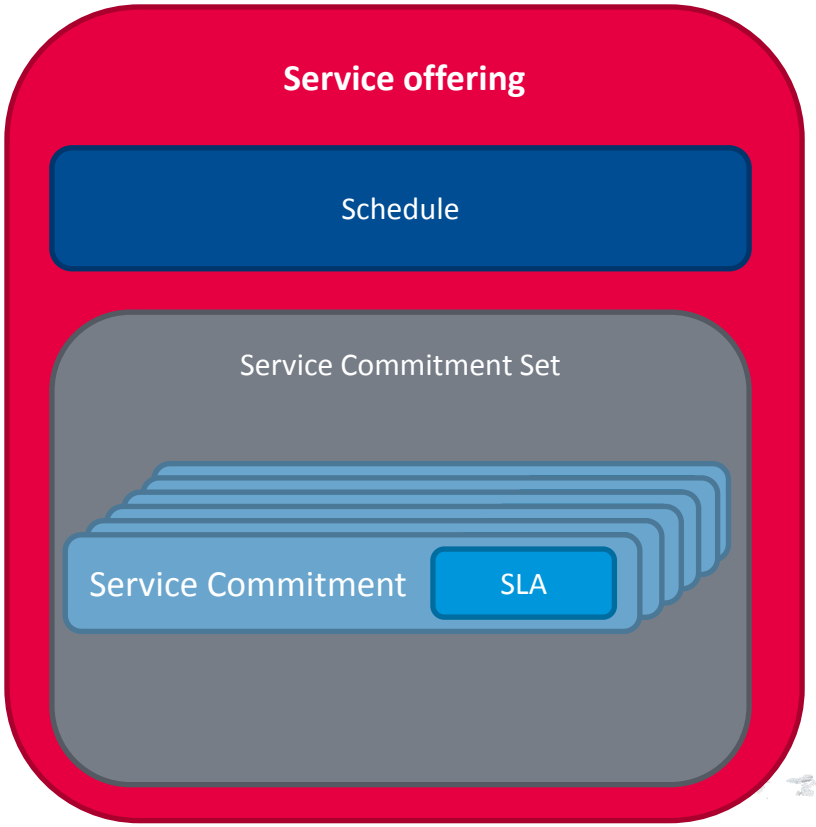
- Service Availability Levels
  - Percentage of Service availability within a defined timeframe
  - Used to report on service availability/quality
  - Not available before monitoring and clear definitions are established

- Service Level Targets for restoration & request fulfilment
  - Allow the User & Customer to have realistic expectations
  - Allow to measure the service quality



Service Level Targets

- are necessary to enable supporters to prioritize their work aligned with the customers expectations.
- So called “Service Offerings” are build out of two different elements:
  - Service Schedule
  - Service Commitments, bundled in a set
- The Service Offerings are related to Service Elements



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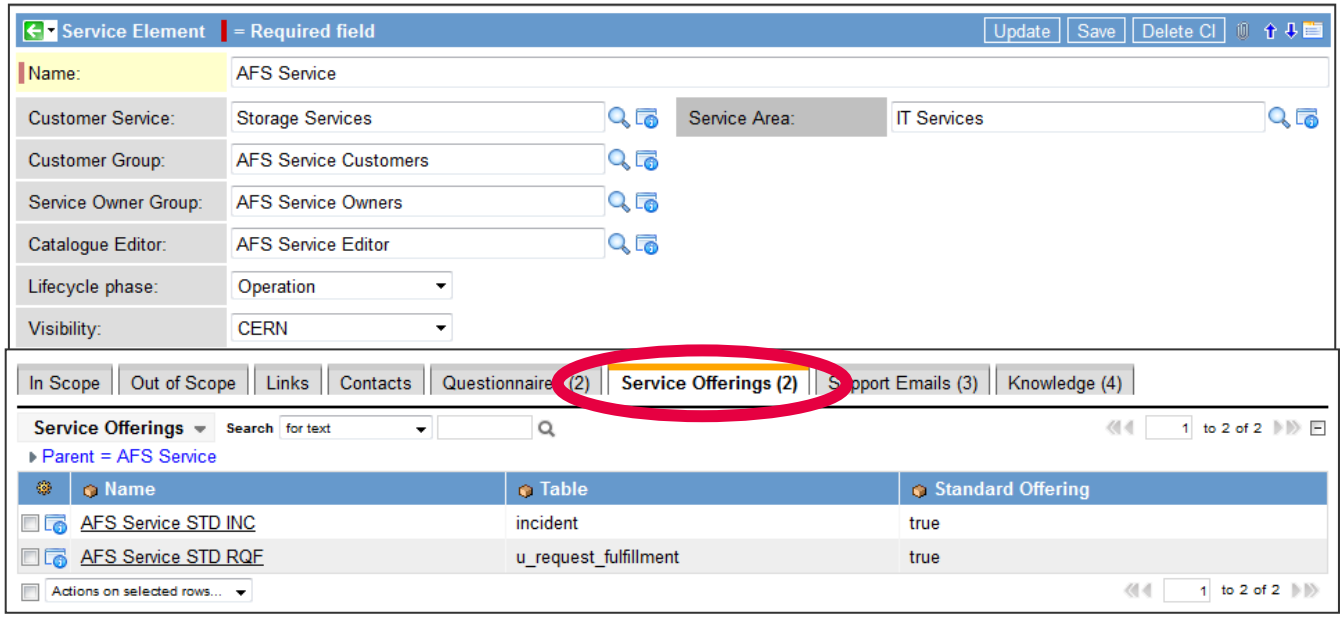
Service Level Targets – Service Offerings

The Service Offerings (for INC and RQF) are related to the Service Elements.



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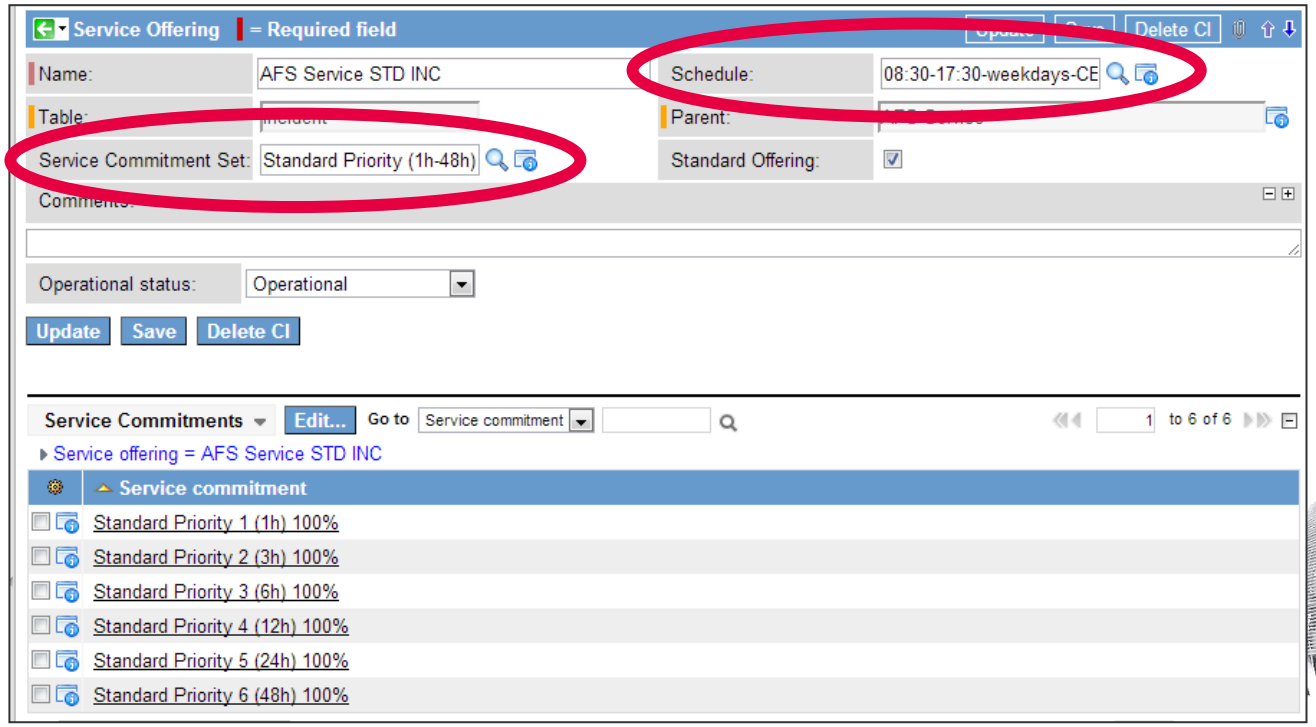
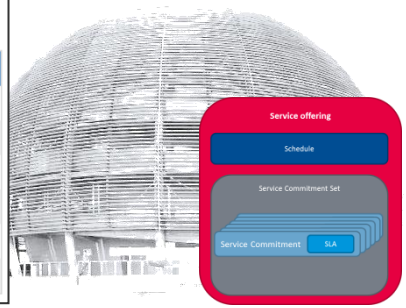
Service Level Targets – Service Offerings

- Service Owner may select Schedule & Commitment Set





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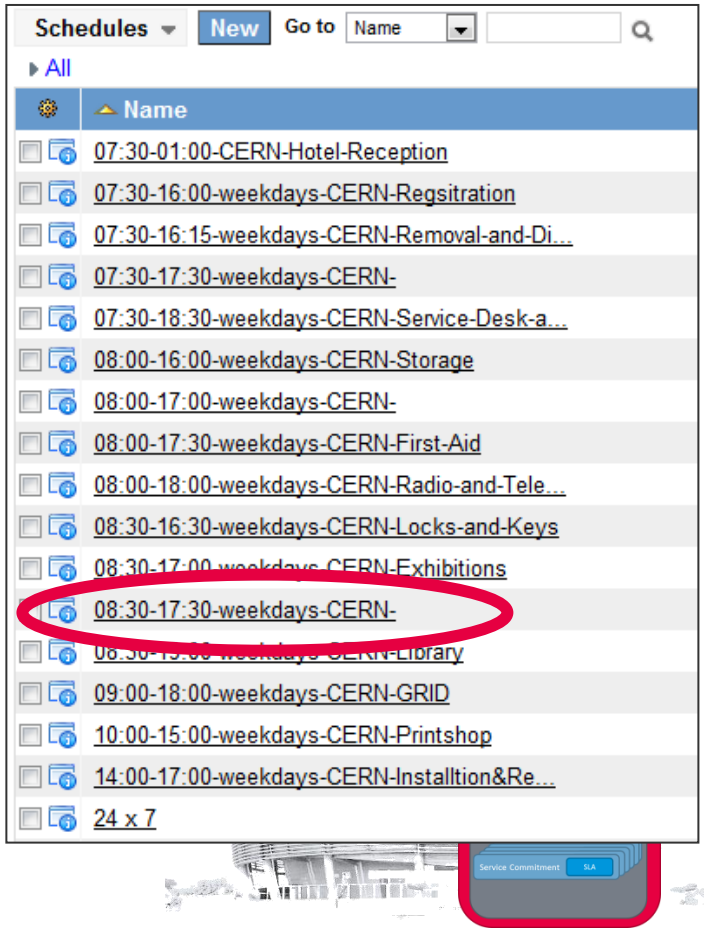
Service Schedule

- The timeframe which defines, when a service is supported.
- Set of “standard” schedules defined for CERN
- Others are possible on request
- Determines when the time is measured.
- SLA clock will only run within the defined schedule.

- Example :
  - Schedule is defined as “CERN working hours” 8:30-17:30 on working days only
  - Ticket is created on Friday afternoon at 17:00
  - Clock starts at Friday 17:00 when the ticket is created
  - Clock pauses at Friday 17:30 when schedule ends
  - Clock restarts at Monday 8:30 when schedule starts



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Service Commitments

- The (average) time to restore the service defined per priority
- The (average) time to fulfil a request defined per priority
- Service Commitments are defined as sets for priorities 1-6
- Every “SLA” relates a priority and a restoration time.
- Sets of Standard SLAs available for INC and RQF
- Others are possible on request

Priority			Impact			
			Service Down or a critical adverse impact on provision of service to the Business	Service Degraded or a major adverse impact on provision of service to the Business	Service Affected or a minor adverse impact on provision of service to the Business <1%	Service Disruption 1 User or a small number of the population affected
Urgency	High The damage caused by the Incident increases rapidly.		P1	P2	P3	P4
	Medium The damage caused by the Incident increases considerably over time		P2	P3	P4	P5
	Low The damage caused by the Incident only marginally increases over time		P3	P4	P5	P6

SLAs | New | Go to Name | 1 to 12 of 12

All > Type = SLA > Name does not contain HighCritical > Name does not contain Low

Name	Type	Duration	Table	Active
Request Standard Priority 1 (4h)	SLA	4 Hours	u_request_fulfillment	true
Request Standard Priority 2 (1 day)	SLA	8 Hours	u_request_fulfillment	true
Request Standard Priority 3 (2 days)	SLA	16 Hours	u_request_fulfillment	true
Request Standard Priority 4 (4 days)	SLA	1 Day 8 Hours	u_request_fulfillment	true
Request Standard Priority 5 (1 week)	SLA	4 Days 16 Hours	u_request_fulfillment	true
Request Standard Priority 6 (2 weeks)	SLA	3 Days 8 Hours	u_request_fulfillment	true
Standard Priority 1 (1h)	SLA	1 Hour	incident	true
Standard Priority 2 (3h)	SLA	3 Hours	incident	true
Standard Priority 3 (6h)	SLA	6 Hours	incident	true
Standard Priority 4 (12h)	SLA	12 Hours	incident	true
Standard Priority 5 (24h)	SLA	1 Day	incident	true
Standard Priority 6 (48h)	SLA	2 Days	incident	true

Actions on selected rows... | 1 to 12 of 12

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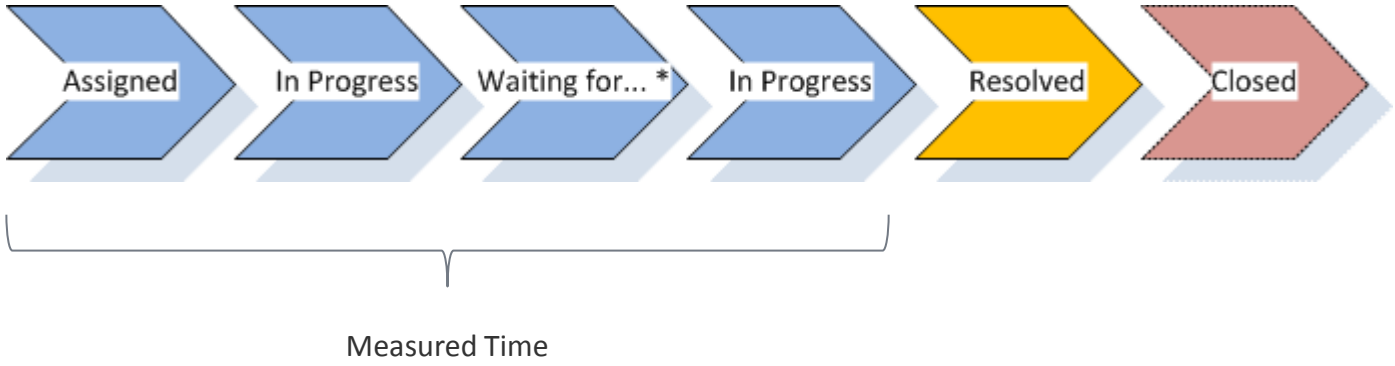
Excursion: Priorities

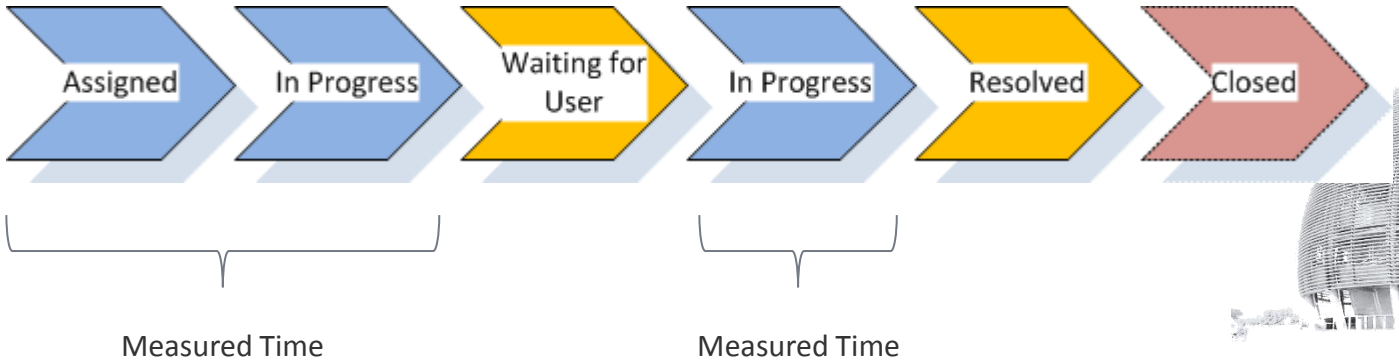
Priority						
				Impact		
			Service **Down** or a critical adverse impact on provision of service to the Business	Service **Degraded** or a major adverse impact on provision of service to the Business	Service **Affected** or a minor adverse impact on provision of service to the Business <1%	Service **Disruption** 1 User or a small number of the population affected
		High The damage caused by the Incident increases rapidly.	P1	P2	P3	P4
	Urgency	**Medium** The damage caused by the Incident increases considerably over time	P2	P3	P4	P5
		Low The damage caused by the Incident only marginally increases over time	P3	P4	P5	P6

Service Offerings – Impact on tickets

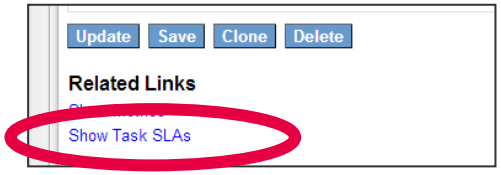
- The SLA measurement starts running with the assignment of a ticket and measurement stops if the status is changing to “Resolved”



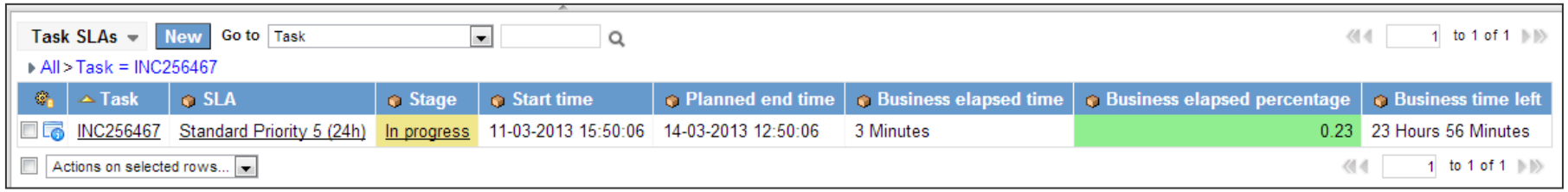
- SLA time is not measured while the ticket status is “Waiting for User”



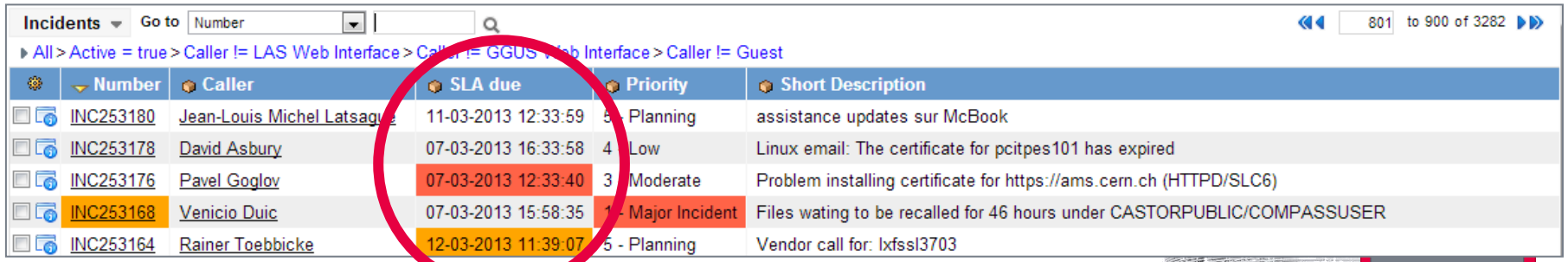
Service Offerings – Impact on tickets



- The detailed SLA information can be made visible to supporters (click the link in the ticket)



- The SLA Information can be made visible on the overview as well.



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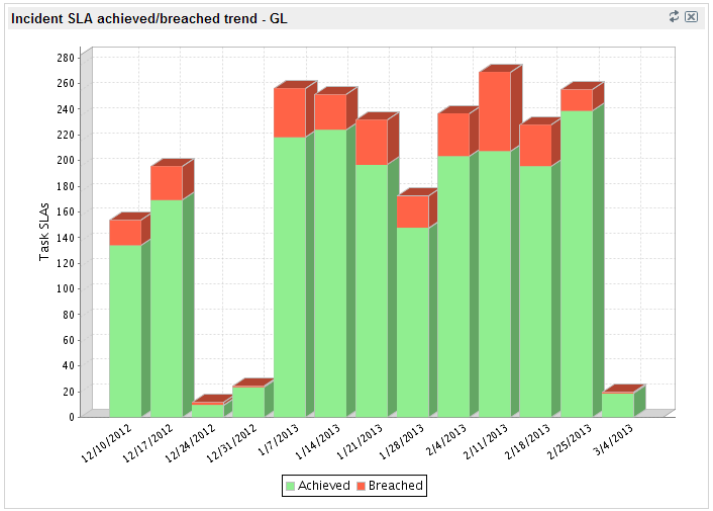
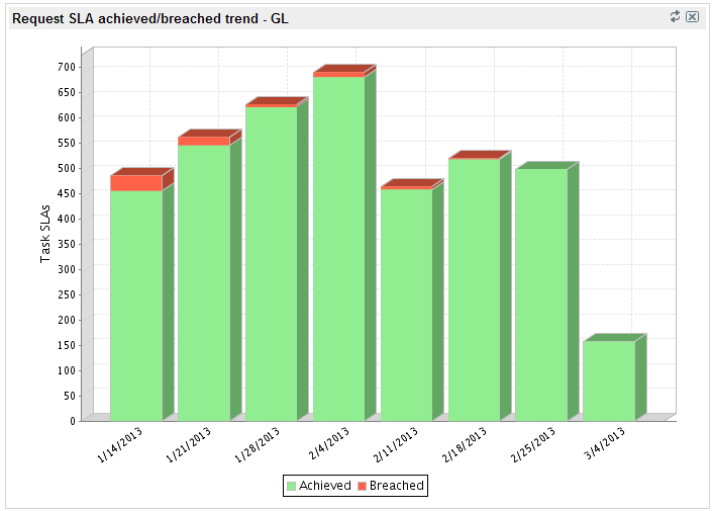
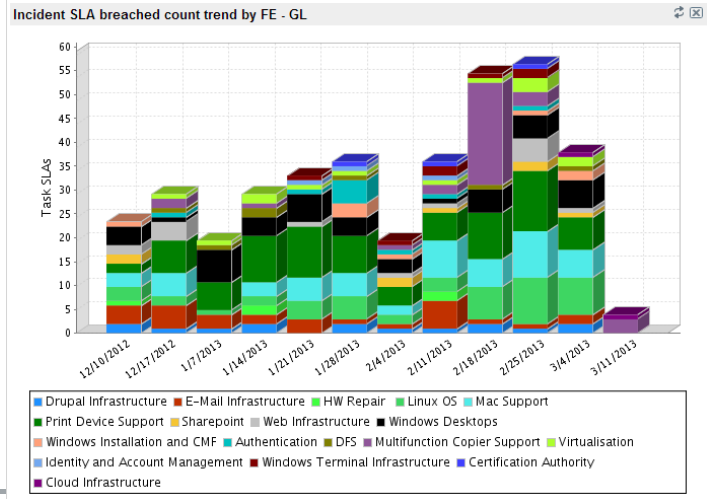
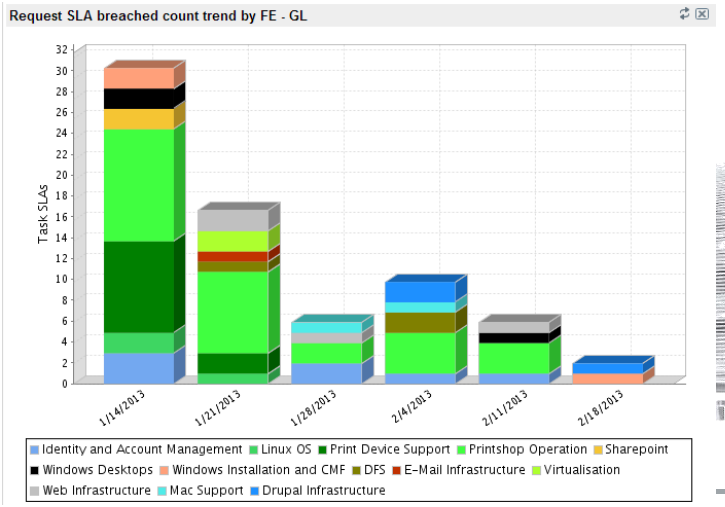
Example 1: IT-OIS group results









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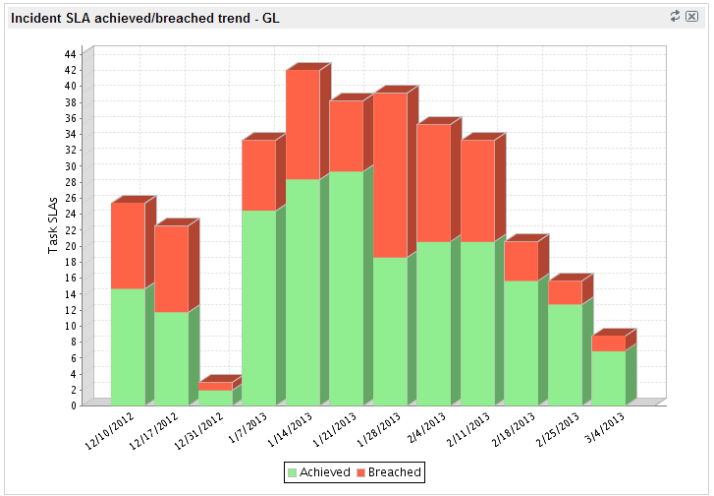
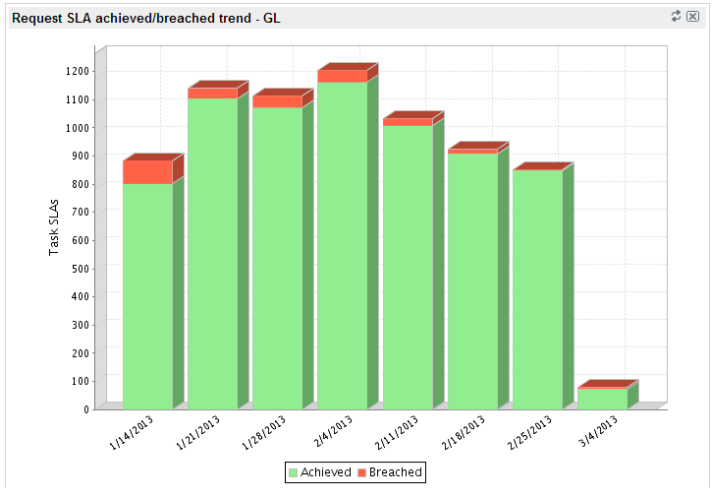
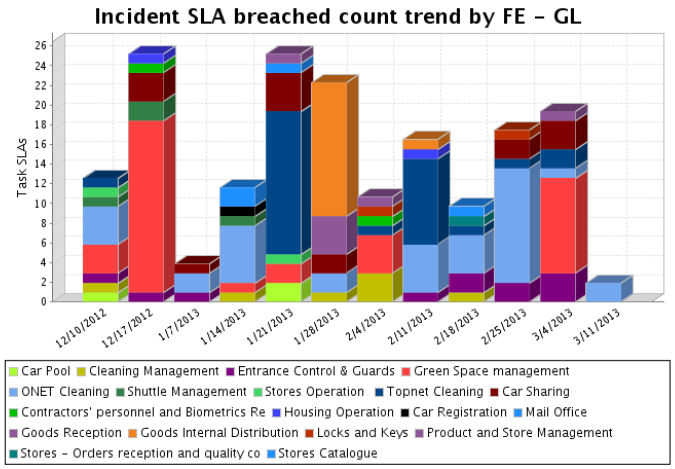
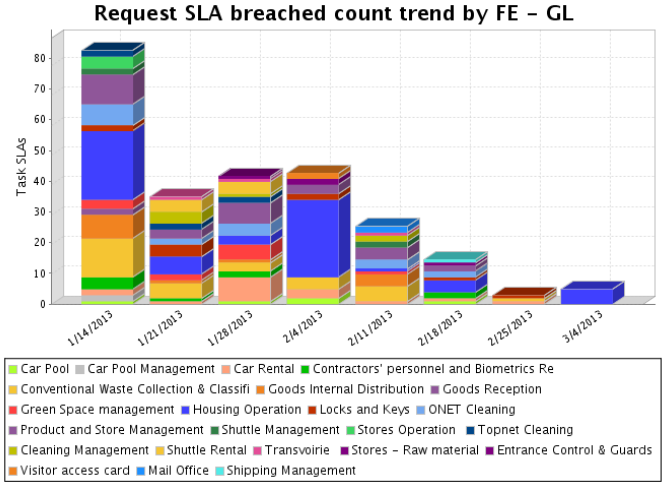
Example 2: GS-IS group results









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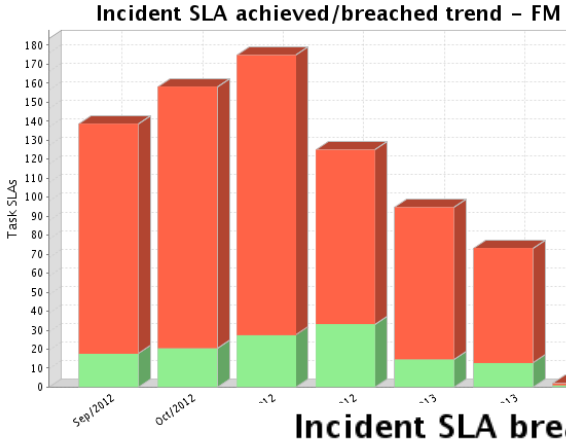
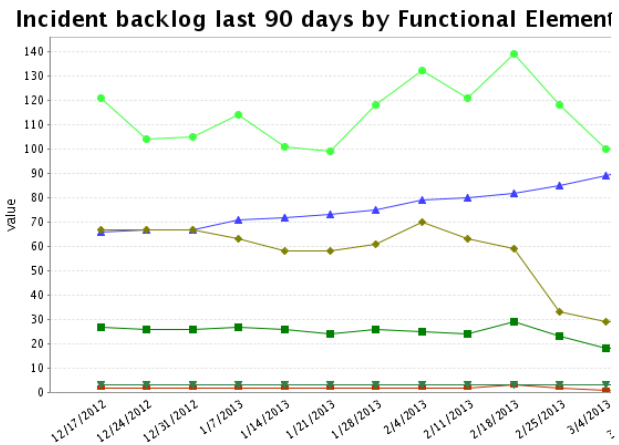
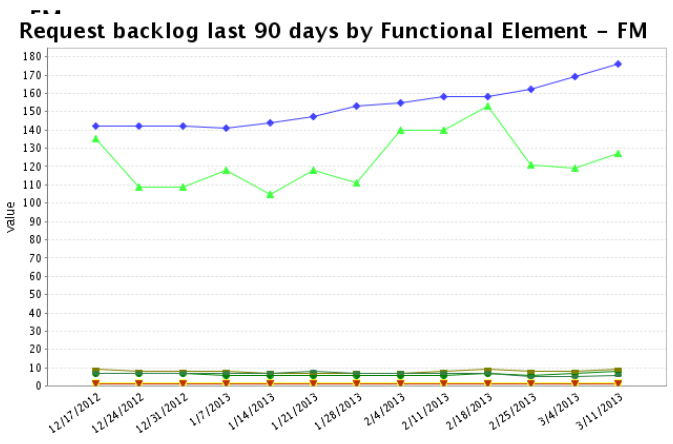
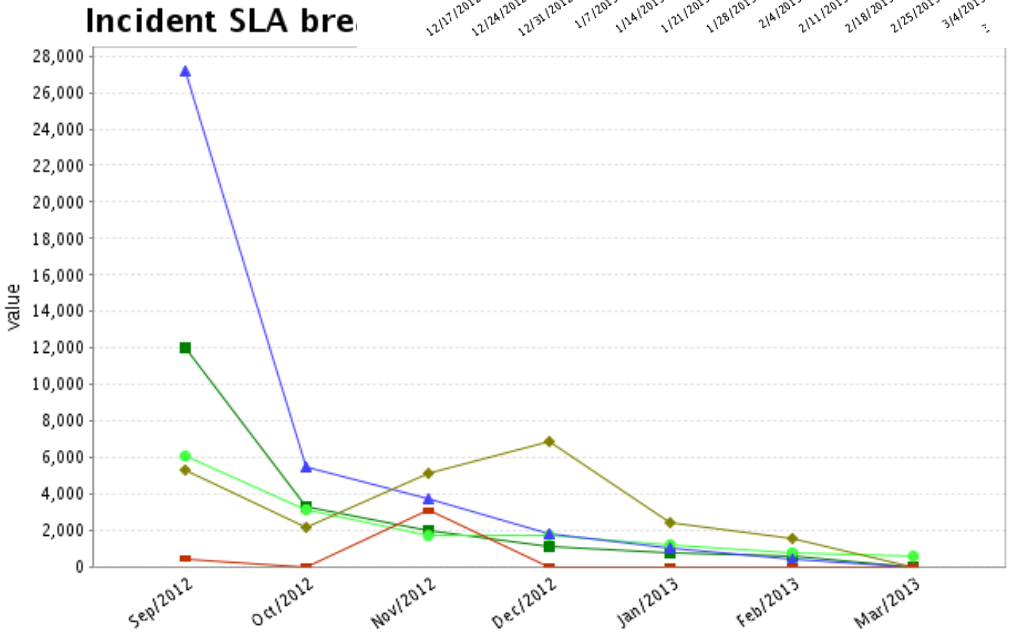
Example 3: Detailed reports by Functional manager (anonymous)









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Today's status

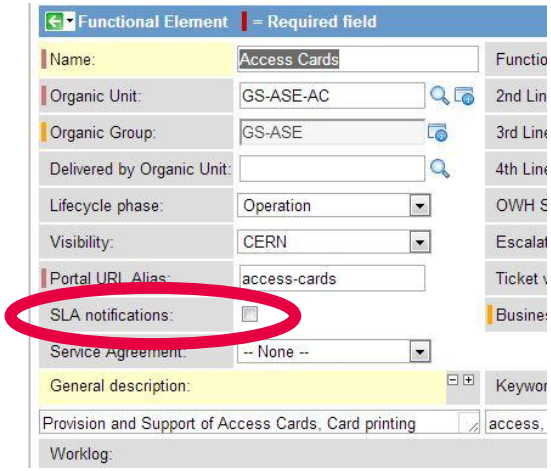
- The Incident SLA information was collected since the start of Service-now at CERN
- Request information was collected since January 2013
- The Standard P1(1h)-P6(48h) time was used for all Incidents
- Real resolution-time data is available as well.
- You can look at previous months graphs to see performance of a service
- Reports are available for Service Owners

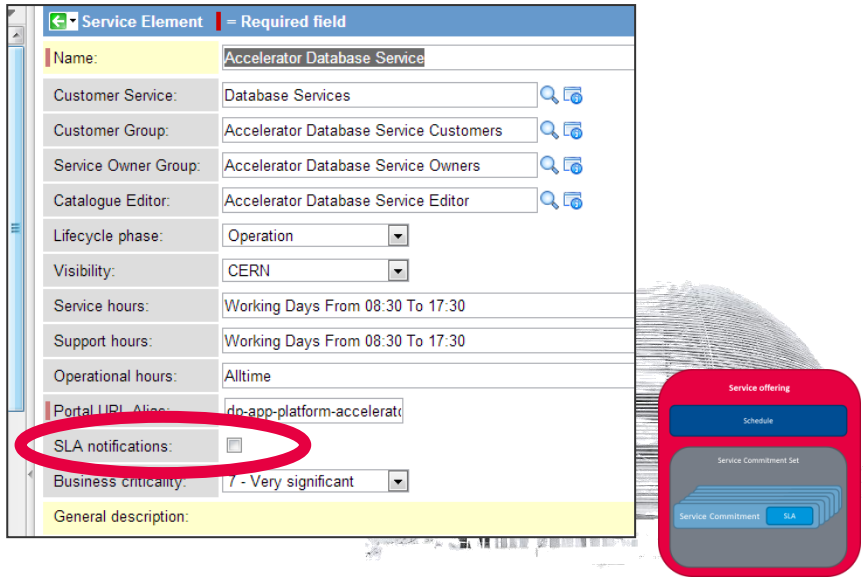
Service Owner & Functional Manager Meeting

“Switching on” Service Level Management

- Requires
  - Realistic targets set for clearly defined services
  - Backlog at a sustainably level
  - Trained & motivated support teams

- Results in
  - SLA notifications 50%, 75%,100% for supporters
  - Escalation to Functional managers at 100%
  - Escalation to Service Owners at 100%
  - Coherent Service performance reporting

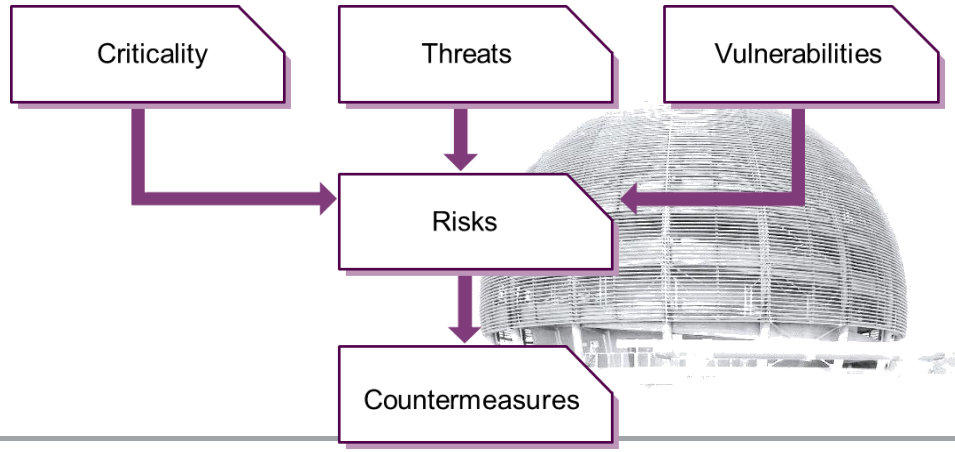




Risk Management

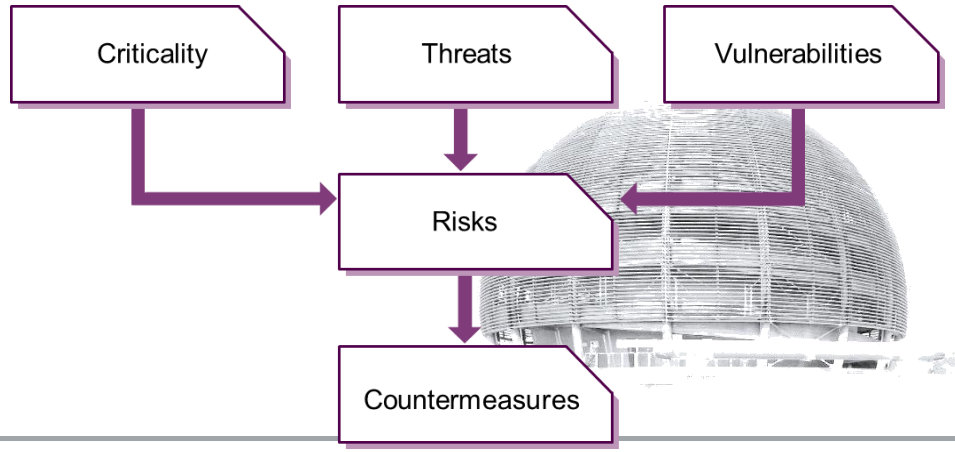
- is used by management to support better decision-making through a good understanding of risks and their likely impact on the business
- by identification of the risks affecting the services
- by application of countermeasures based on the impact in case of failure

- Risk = Criticality x Threats x Vulnerability



Risk Management

- The Criticality is related to the Service Element
- Threats and Vulnerability are related to Functional Elements
- The Criticality of a function is the highest related Criticality of a services



Service Criticality

- There are ten different levels of Criticality
- Starts with 1 (nil), ends with 10 (catastrophic)
- Levels 9 (disastrous) and 10 (catastrophic) are out of scope!
- All levels are defined and described following the CERN-wide used classification.

Criticality (impact if we 'loose' the service)					
		Factor	DG scale	Criteria to help in the classification of criticality	Safety Risk
Minor	Nil	1	1	very few people affected; people can work on 'other' activities; workaround exists; cost < 1KCHF; safety is not affected; only visible in small contained area; no reputation issue	Nil / Very Limited
	Hardly visible	2	1	several people affected; cost <5KCHF; safety is not affected; not visible outside CERN; no reputation issue	
	Very limited	3	1	small group of people affected; cost <10KCHF; safety is not affected; not visible outside CERN; no reputation issue	
Average	Limited	4	1	considerable number of people affected (>20); cost <20KCHF; possibly affecting people outside central services; no reputation issue	Limited
	Visible	5	1	considerable number of people affected (>50); cost <50KCHF; possibly affecting people outside CERN; CERN reputation possibly slightly affected	
	Significant	6	1	considerable number of people affected (>100); cost <100KCHF; seriously affecting considerable population inside and outside CERN; CERN reputation possibly affected	
Major	Very significant	7	2	considerable number of people affected (>500); cost <400KCHF; seriously affecting very significant population inside and outside CERN; CERN reputation most likely affected	Significant
	Important	8	2	large number of people affected (>1000); cost <1MCHF; very seriously affecting large population inside and outside CERN; significant risk to CERN reputation	
Critical	Disastrous	9	3	large number of people affected (>1000); cost <10MCHF; affecting very large population inside and outside CERN; putting survival of CERN at risk; possible serious injuries	Major
	Catastrophic	10	5	large number of people affected (>1000); cost >10MCHF; affecting large population inside and outside CERN; putting survival of CERN at big risk; possible loss of life	

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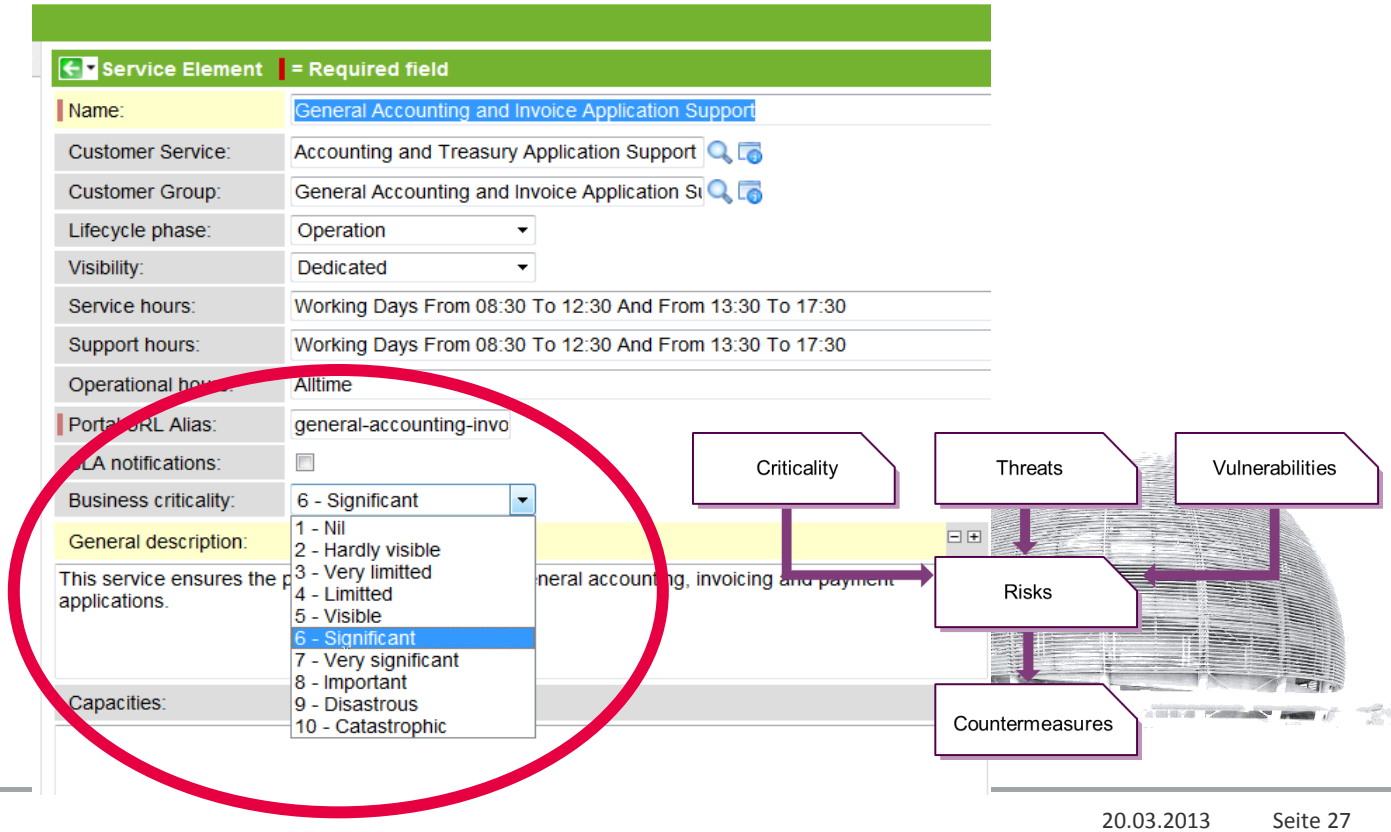
Service Criticality

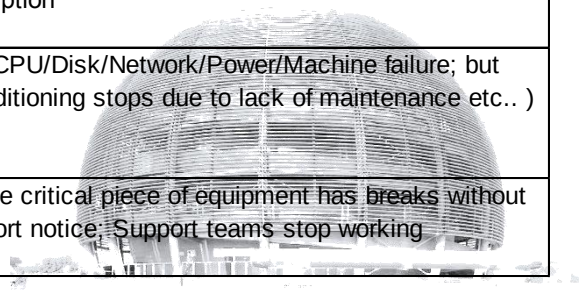
- In Service-now the Service Criticality can be changed for every Service Element
- It's called "Business Criticality" (because it's coming out-of-the-box)



Threats

- There is a pre-defined list of 7 threats
- Compiled and agreed by IT and GS top management

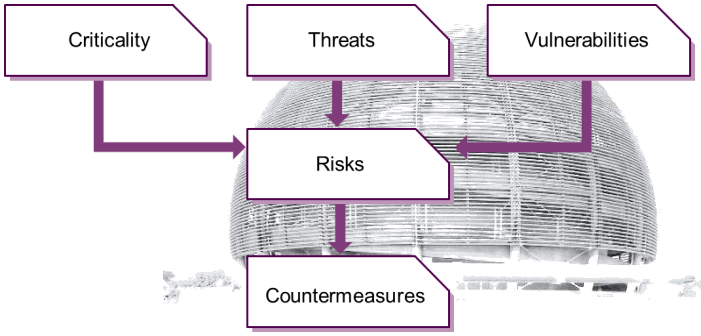
Disaster	4	Flood, Storm, Earthquake, Fire destroys part of infrastructure, Plane Crash
Confidentiality / Legal / Reputation	6	CERN is legally reponsible (software disseminated) or confidential personnel data is disseminated; Confidential information falls in the 'wrong' hands. CERN infrastructure is used as platform to propagate or launch cyber attacks, or disseminate intellectual property protected material.
Inside Attack (Intentional Malicious Acts / Fraud / Hacking)	5	Disgruntled Employee intentionally alters data/files/settings/etc.. Or steals resources necessary to provide a service. An attack from 'inside'.
Terrorist Attack	1	Physical sabotage, bomb, gas, etc..
External Attack (Hacking, Computer Virusses)	6	Sql Injection ; Buffer overflows, etc… cause File corruption
Material Failure / Loss of Tool / Function / Data	8	Wrong manipulation; Software bug; Material Failure (CPU/Disk/Network/Power/Machine failure; but also a falling tree, a collapsing roof, heating or airconditioning stops due to lack of maintenance etc..)
Single point of failure / No plan B / Strike	6	One person having essential knowledge is absent; one critical piece of equipment has breaks without spare; You can't obtain service from elsewhere on short notice; Support teams stop working



Vulnerabilities

- Vulnerability is the level to which an Asset (Service/Function) is exposed to a Threat
- There is a pre-defined list of 10 vulnerabilities

Vulnerability of an asset to a threat (after mitigation); the chance a threat if it happens 'breaks' the asset?		
Not	Impossibly	1
	Improbably	2
	Unlikely	3
Maybe	With difficulty	4
	Possibly	5
	Likely	6
	Probably	7
Yes	Quite easily	8
	Easily	9
	Immediately	10



Service Owner & Functional Manager Meeting

Risks, Threats & Vulnerabilities

- are related to Functional Elements

Links (5) | Activities | Provided goods and products | Functional Element Categories | Functional Element Parameters | Questionnaires (2) | Knowledge (55)

Support Email (3) | **Functional Element Risks (7)**

Functional Element Risks New Go to Risk name 1 to 7 of 7

Risks

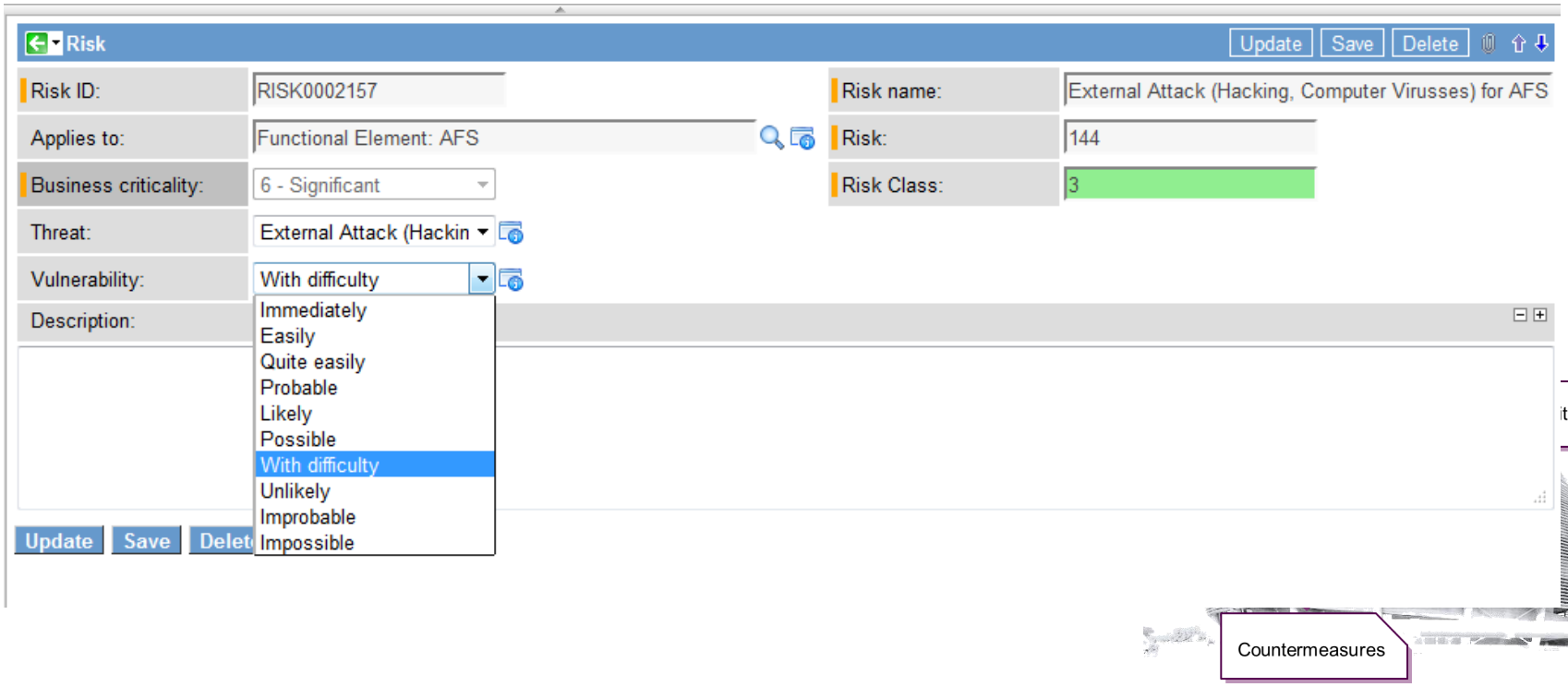
Risk name	Threat	Vulnerability	Risk	Risk Class
External Attack (Hacking, Computer Virusses) for AFS	External Attack (Hacking, Computer Virus...	With difficulty	144	3
Terrorist Attack for AFS	Terrorist Attack	With difficulty	24	4
Disaster for AFS	Disaster	Unlikely	72	4
Single point of failure / No plan B / Strike for AFS	Single point of failure / No plan B / St...	With difficulty	144	3
Confidentiality / Legal / Reputation for AFS	Confidentiality / Legal / Reputation	Improbable	72	4
Inside Attack (Intentional Malicious Acts / Fraud / Hacking) for AFS	Inside Attack (Intentional Malicious Act...	With difficulty	120	3
Material Failure / Loss of Tool / Function / Data for AFS	Material Failure / Loss of Tool / Functi...	Likely	288	2

Actions on selected rows... 1 to 7 of 7

Service Owner & Functional Manager Meeting

Risks, Threats & Vulnerabilities

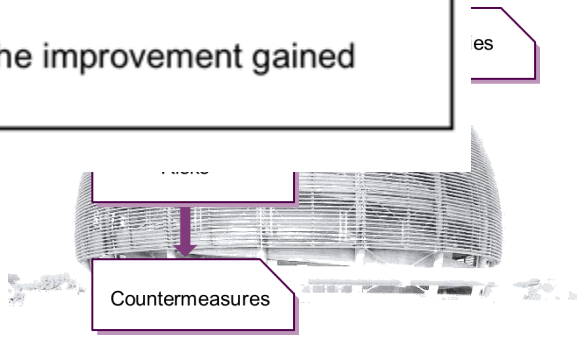
- A description is required for every defined risk, including threat and vulnerability



Risks, Threats & Vulnerabilities

- For every threat there should be only one risk
- For every threat the correct vulnerability should be assigned
- The Risk Class will be calculated automatically

Risk Class	Threshold	
I	300	Intolerable risk
II	200	Undesirable risk, and tolerable only if risk reduction is impracticable or if the costs are grossly disproportionate to the improvement gained
III	100	Tolerable risk if the cost of risk reduction would exceed the improvement gained
IV		Negligible risk



Service Owner & Functional Manager Meeting

Risks, Threats & Vulnerabilities – IT Example: AFS

Logout

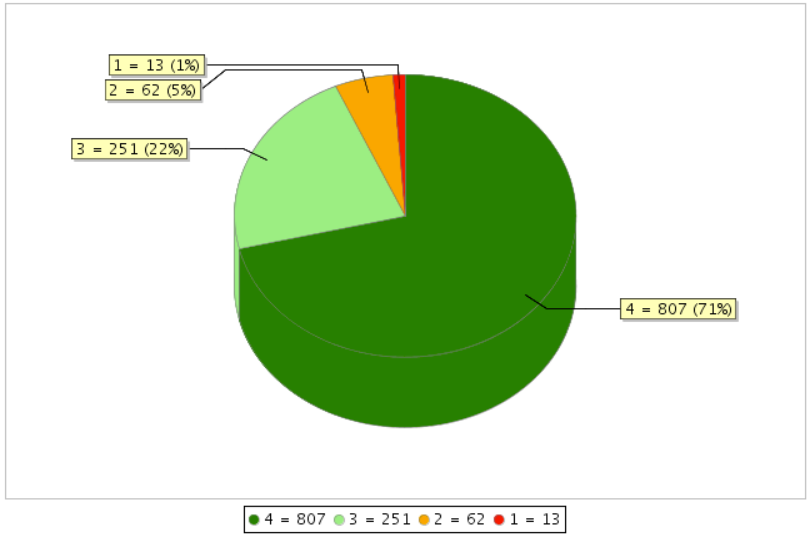
Risks Go to Risk name 1 to 7 of 7

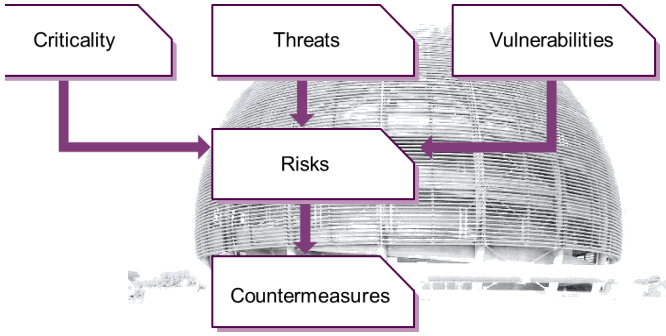
All > Functional Element Lifecycle phase = Operation > Functional Element Organic Unit Name starts with IT > Functional Element = AFS

Risk name	Vulnerability	Risk	Risk Class
External Attack (Hacking, Computer Virusses) for AFS	With difficulty	168	3
Terrorist Attack for AFS	With difficulty	28	4
Disaster for AFS	Unlikely	84	4
Single point of failure / No plan B / Strike for AFS	With difficulty	168	3
Confidentiality / Legal / Reputation for AFS	Improbable	84	4
Inside Attack (Intentional Malicious Acts / Fraud / Hacking) for AFS	With difficulty	140	3
Material Failure / Loss of Tool / Function / Data for AFS	Likely	336	1

Actions on selected rows... 1 to 7 of 7

Response time(ms): 216, network: 23, server: 96, browser: 97





Service Owner & Functional Manager Meeting

Risks, Threats & Vulnerabilities – GS Example: EDH

Logout

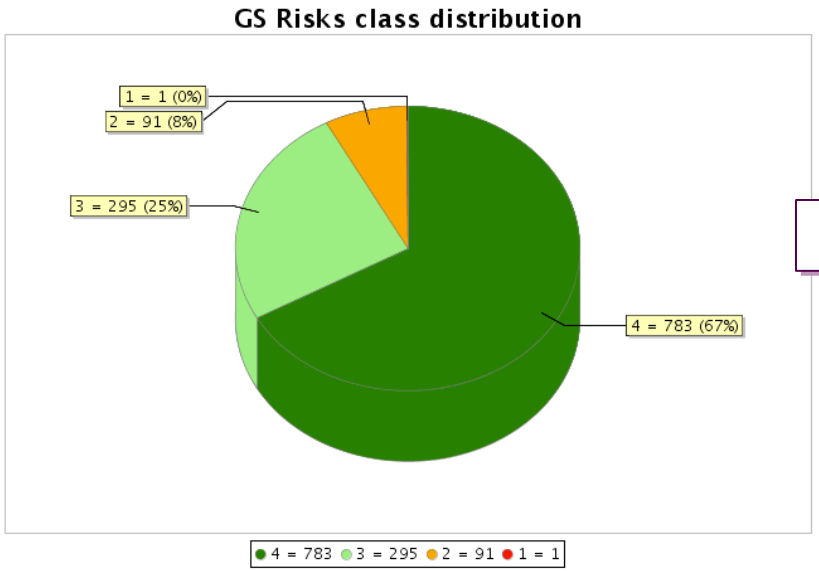
Risks Go to Risk name 1 to 7 of 7

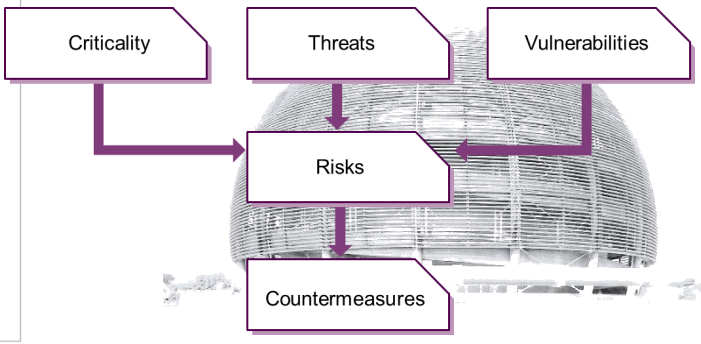
All > Functional Element Lifecycle phase = Operation > Functional Element = EDH

Risk name	Vulnerability	Risk	Risk Class
Confidentiality / Legal / Reputation for EDH	Probable	252	2
Inside Attack (Intentional Malicious Acts / Fraud / Hacking) for EDH	Probable	210	2
External Attack (Hacking, Computer Virusses) for EDH	With difficulty	144	3
Terrorist Attack for EDH	Impossible	6	4
Material Failure / Loss of Tool / Function / Data for EDH	Likely	288	2
Disaster for EDH	Unlikely	72	4
Single point of failure / No plan B / Strike for EDH	With difficulty	144	3

Actions on selected rows... 1 to 7 of 7

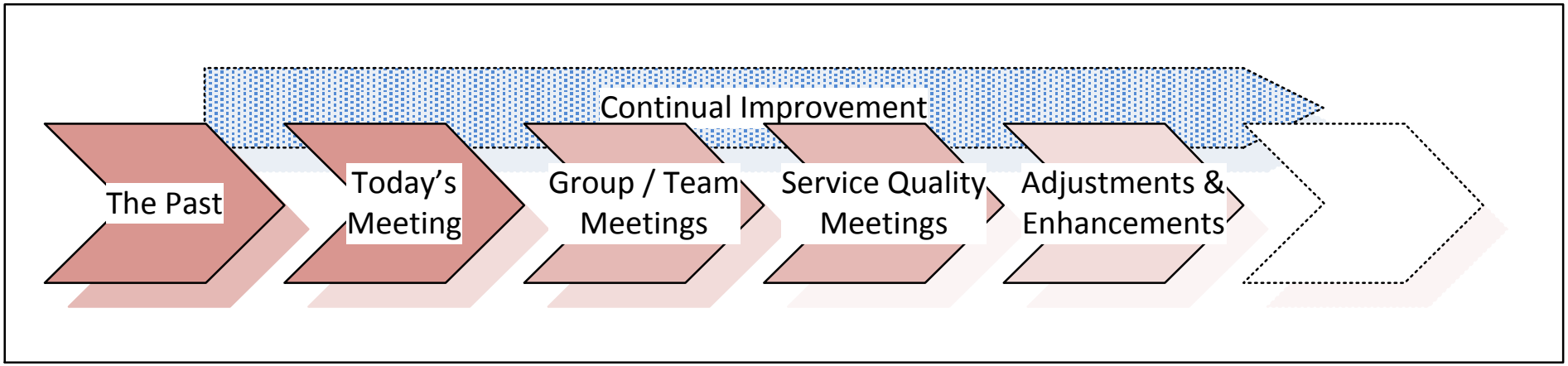
Response time(ms): 172, network: 33, server: 56, browser: 83



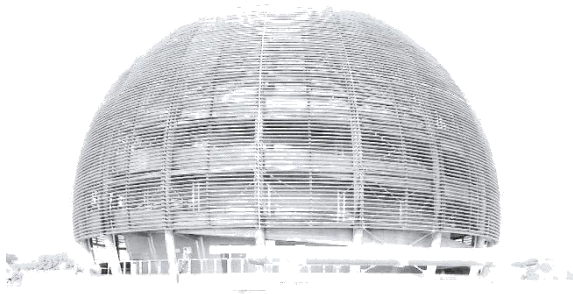


Service Owner & Functional Manager Meeting

Ongoing Tasks



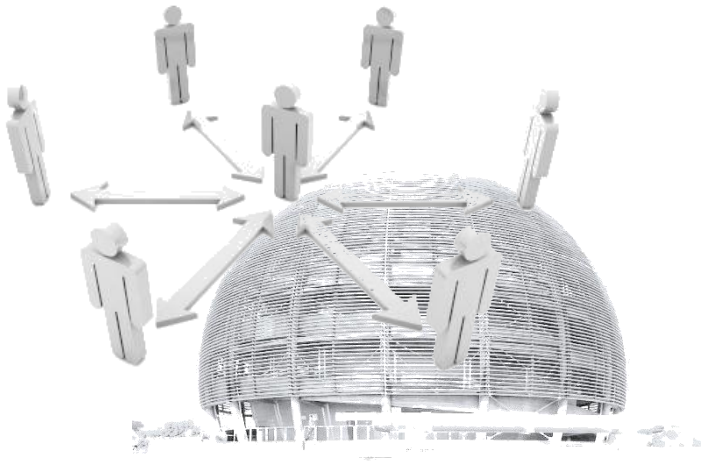
- Meetings with Service Owners & Functional Managers
- Coaching sessions with support teams
- Service Quality Meetings



Service Owner & Functional Manager Meeting

Meetings with Service Owners & Functional Managers

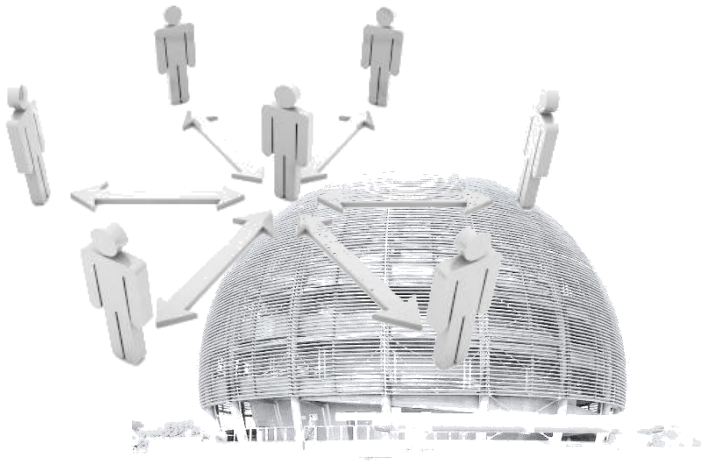
- Analyze past performance
- Adjust working methods to SLAs
- Set realistic targets



Service Owner & Functional Manager Meeting

Coaching sessions with support teams

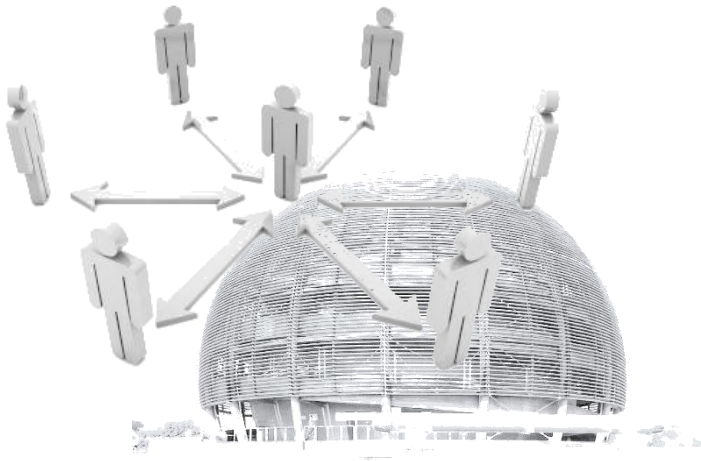
- Align working habits with priority & SLA
- Revert to “standard” homepages
- lift the service catalogue content to maximum quality
- solve problems with processes, structures or the tool directly



Service Owner & Functional Manager Meeting

Service Quality Meetings

- Chaired by Service Owners
- Communication and feedback with and from customers and users
- Agreement about Service Level Targets
- Establishment of regular Service Review Meetings to
  - understand the needs and requirements of users and customers
  - Improve user & customer satisfaction
  - establish a communication base



Conclusion

Our vision 2013:

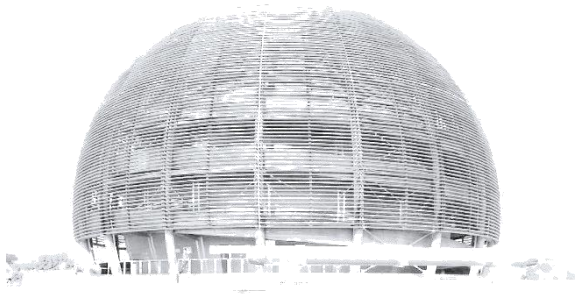
- The overall goal of the service management groups of CERN is to build a **central governance structure** for the all service providing units of CERN.
- Purpose of this governance structure is to establish visibility over the relation between service provision, quality and resources, both people as well as financial. The central aim of this structure is to enable the perfect alignment of the optimized usage of resources with the needs of the organisation.
- Prerequisite for the fulfilment of this goal is the definition, implementation and improvement of **mature service management structures & processes** combined with consistent measurement and reporting structures.

Service Owner & Functional Manager Meeting

Service Owner – Tasks 2013

- Improve the service catalogue
- Define the values for Service Level Management (in cooperation with FMs)
- Define the Criticality values
- Organise and establish Service Review Meetings

- Use the support and help of the Service Management Team – their definitions, templates and presence in all meetings if necessary

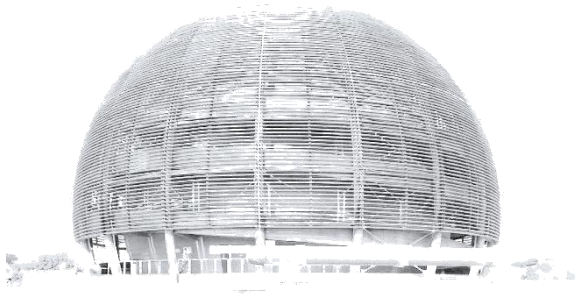


Service Owner & Functional Manager Meeting

Functional Manager – Tasks 2013

- Improve the service catalogue
- Look for coaching sessions with support teams
- Define the values for Vulnerabilities

- Use the support and help of the Service Management Team – their definitions, templates and presence in all meetings if necessary



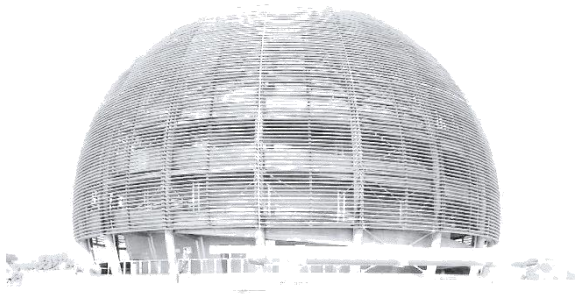
Service Owner & Functional Manager Meeting

Service Owner & Functional Manager – Checklist

Responsible ➔		SE Owners	FE Managers
Check list targets ⬇			
Service Catalogue	Contents checking	☑	☑
	Keywords	☑	☑
	Visibility level	☑	☑
	SE/FE relations	☑	
Service Level Management	Service Schedules	☑	
	Service Commitment sets	☑	
	Contractors UP		☑
Risk Management	Business Criticality	☑	
	Vulnerability		☑
	New risk creation		☑
Backlog checking	Update the current backlog	☑	☑
Service Quality Meeting	User's feedback	☑	☑
	Service complaints	☑	

Service Owner and Functional Manager – Documentation page: User Guides

- https://services.web.cern.ch/wiki/training-material



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