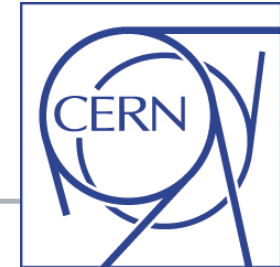# CERN – Service Management

Service Management for IT & GS

Awareness Training

Geneva, 11.1.2011
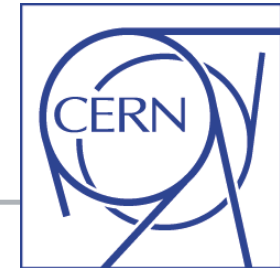Jochen Beuttel – ncc Management Consultants

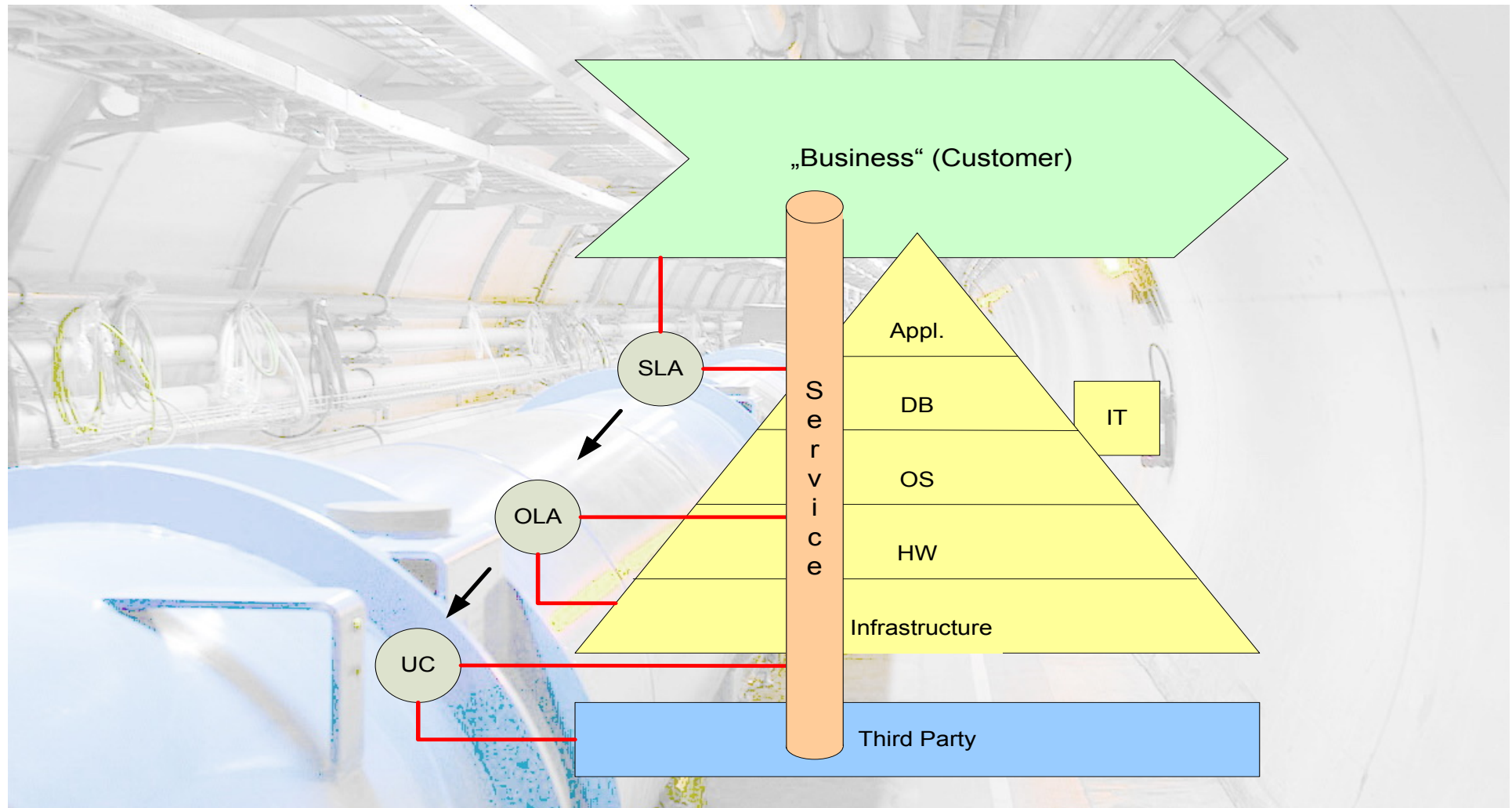# Service Management for CERN

What is Service Management?

- Service Management is a set of specialized organizational capabilities for providing value to customers in form of services. The capabilities take the form of functions and processes for managing services over a whole lifecycle.

- Service Management is also a professional practice supported by an extensive body of knowledge, experience and skills. A global community of individuals and organizations in the public and private sectors fosters its growth and maturity.
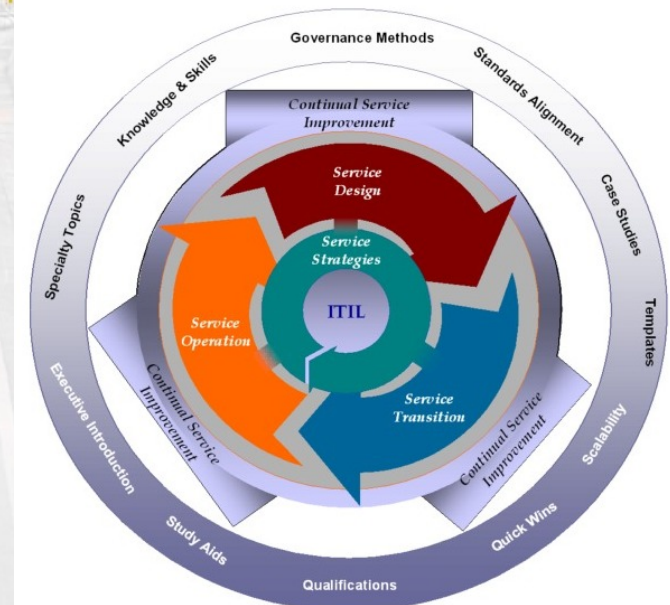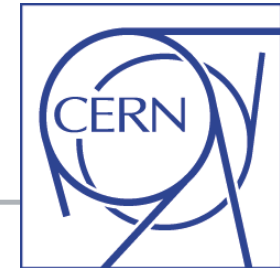
Service Management for CERN
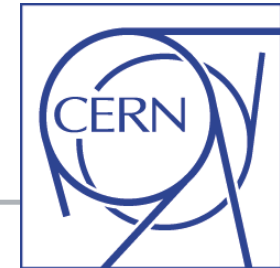
What is Service Management?

Service Management for CERN

What is Service Management?

CERN Management

Projects & Experiments

HR   EN   FP   GS SEM/SI ME/FB   BE   TE   PH
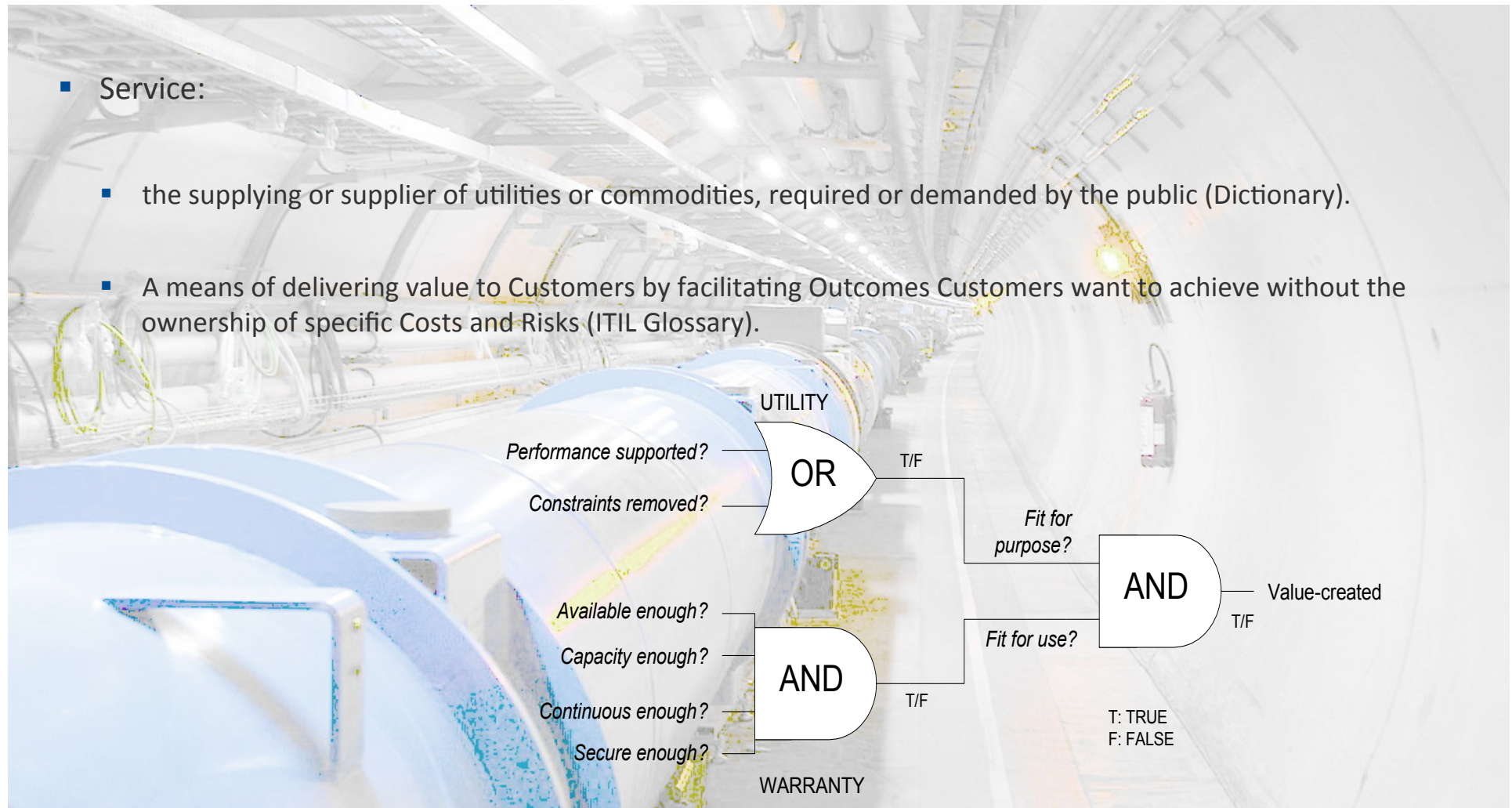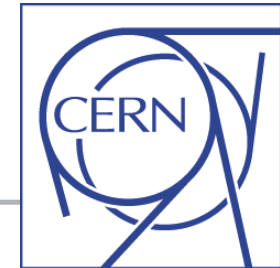
GS AIS/ASE

IT

Service Management for CERN

What is a Service?

- Service:

  - the supplying or supplier of utilities or commodities, required or demanded by the public (Dictionary).

  - A means of delivering value to Customers by facilitating Outcomes Customers want to achieve without the ownership of specific Costs and Risks (ITIL Glossary).

UTILITY

Performance supported? ─┐
                         ├─ OR ── T/F ──┐
Constraints removed? ────┘   │
                                        ├── Fit for
                                        │   purpose? ──┐
                                        │   ├─ AND ── Value-created
Available enough? ──┐   │   Fit for use? ┘   T/F
Capacity enough? ───┤   │
                    ├─ AND ── T/F ──────┘
Continuous enough? ─┤
Secure enough? ─────┘

WARRANTY

T: TRUE
F: FALSE

Service Management for CERN
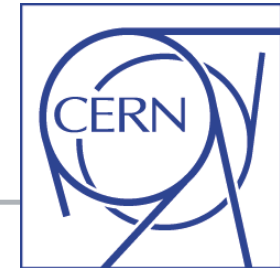
What is a Service?

- Service Description:

    - Name
    - General Description
    - Service Offers
    - Limitations
    - Additional Information
    - Related Information
    - Customer
    - Primary User Group
    - Secondary User Group

    - Contact Information
    - Operation Time / Opening Hours
    - Support Time
    - Service Time
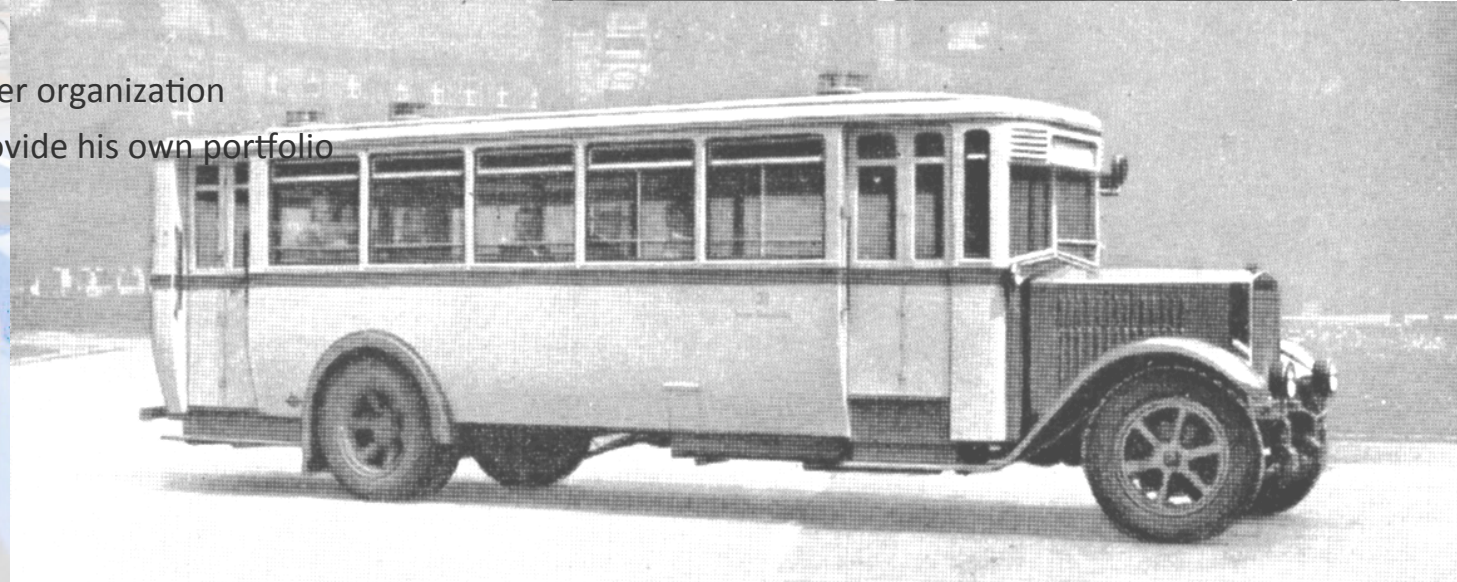   - Capacities
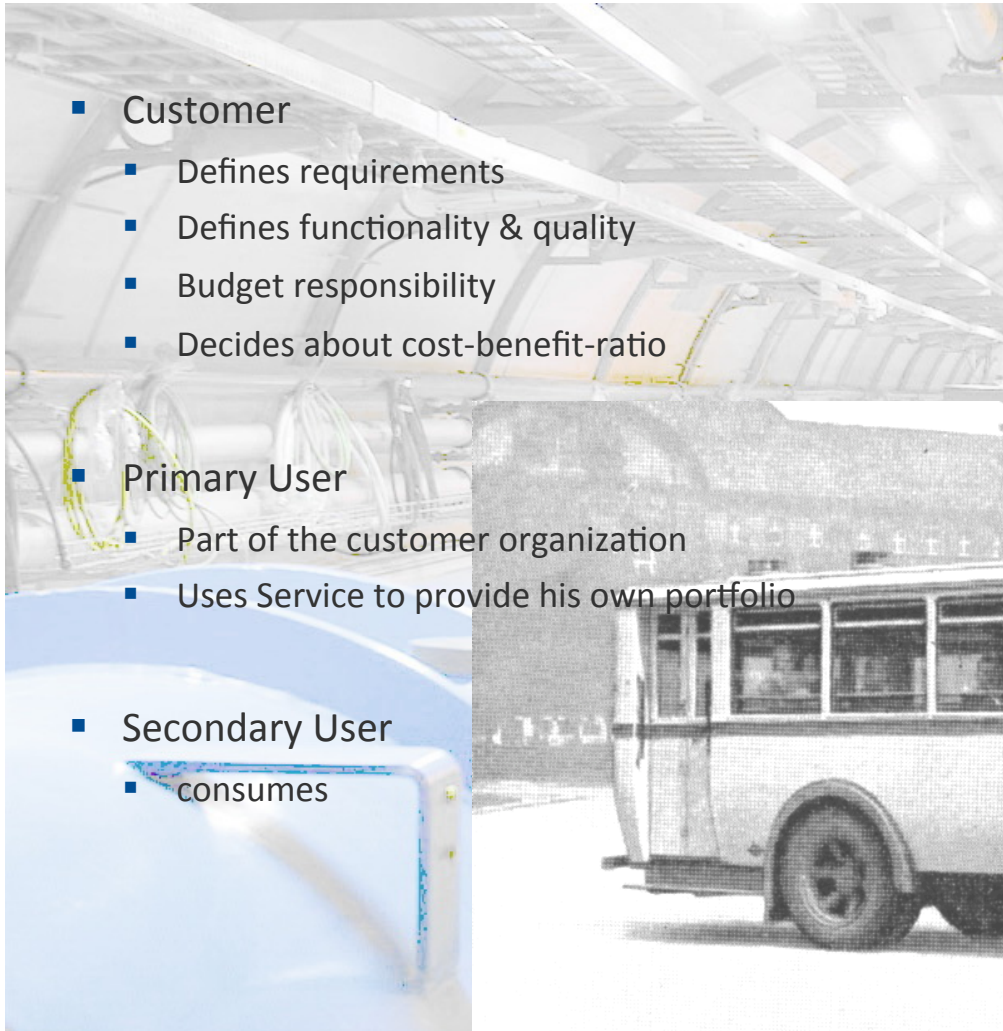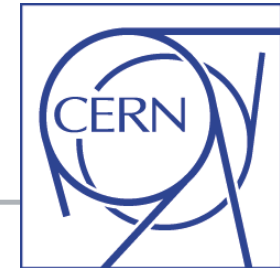   - Availability
    - Performance

Service Management for CERN

What is a User & a Customer?

- Customer
  - Defines requirements
  - Defines functionality & quality
  - Budget responsibility
  - Decides about cost-benefit-ratio

- Primary User
  - Part of the customer organization
  - Uses Service to provide his own portfolio
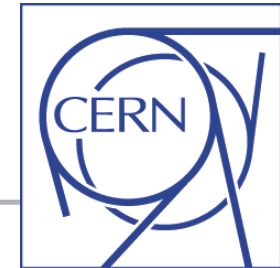
- Secondary User
  - consumes

Service Management for CERN

What is a function?

- Functions are units of organizations specialized to perform certain types of work and responsible for specific outcomes.

- Functions are elements of hierarchical line organizations with their own resources and capabilities (methods, skills etc.).

- Within functions roles are defined to take over certain activities, through which functions are embedded in overall processes.
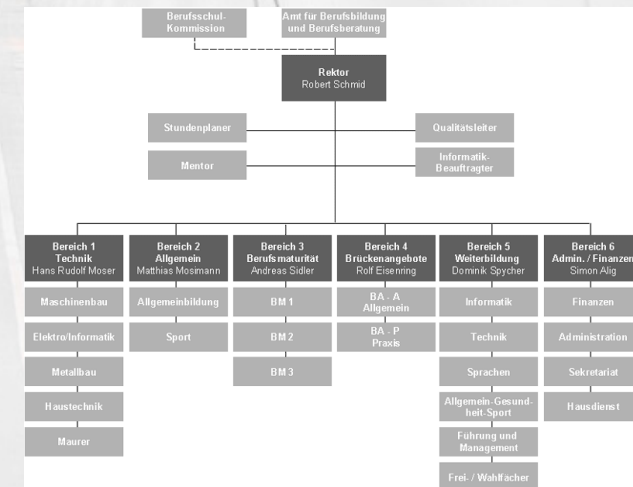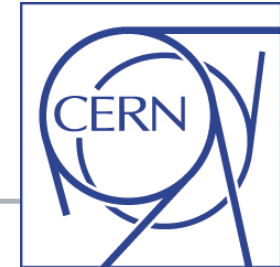
Service Management for CERN

What is a process?

- A temporal and logical linking of individual activities which connects and uses resources and capabilities to – directly or indirectly – generate a value for the customer.

- Processes have the following characteristics:

  - Measurable
  - Specific result (defined output)
  - Specific buyer/customer
 - Specific trigger (defined input)

Service Management for CERN

What is a Service Owner?

- The Service Owner is accountable for one or more services within the GS or IT organization regardless of where the underpinning technology components or professional capabilities reside.

- As a single point of accountability the Service Owner represents their service(s) towards service customers. The Service Owner's main responsibility is to define the service(s) in terms of functionality, scope, capacity, quality and costs in agreement with customer requirements.

- Responsibilities also include managing service performance to ensure that all functions, functional units and processes contributing to service provision are adequately involved as well as continual improvement activities and management of all changes affecting the services under their care.
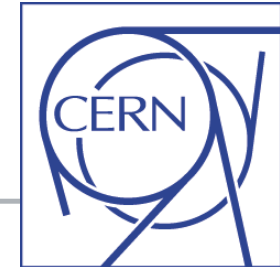
Service Management for CERN

What is a Service Manager?

- The term "Service Manager" refers to a team of members from GS/SMS and IT/DI-SM.

- This team is responsible for the overall definition, coordination, monitoring and continuous improvement of all activities and efforts related to Service Management as a whole.

- To that respect the Service Manager team has no operational responsibility for any business services nor for any internal (support) services.

- The Service Manager team does, however, have responsibility for overall service quality, i.e. is responsible for monitoring service delivery and identifying, initiating and coordinating efforts to restore services to agreed levels in case of any Incidents.

- The Service Manager team is the owner of all Service Management processes.
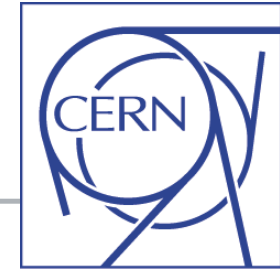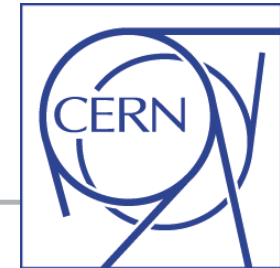
Service Management for CERN

Benefits of IT Service Management

- Support for corporate business processes

- IT organization acts as a service provider

- Uniform, defined and agreed IT Services

- Methodical design of IT processes

- Business relationship between IT organization and customers

- Improved communication between IT customers, IT users and IT organization

- Measurable contribution to the value added chain by effective and efficient IT processes
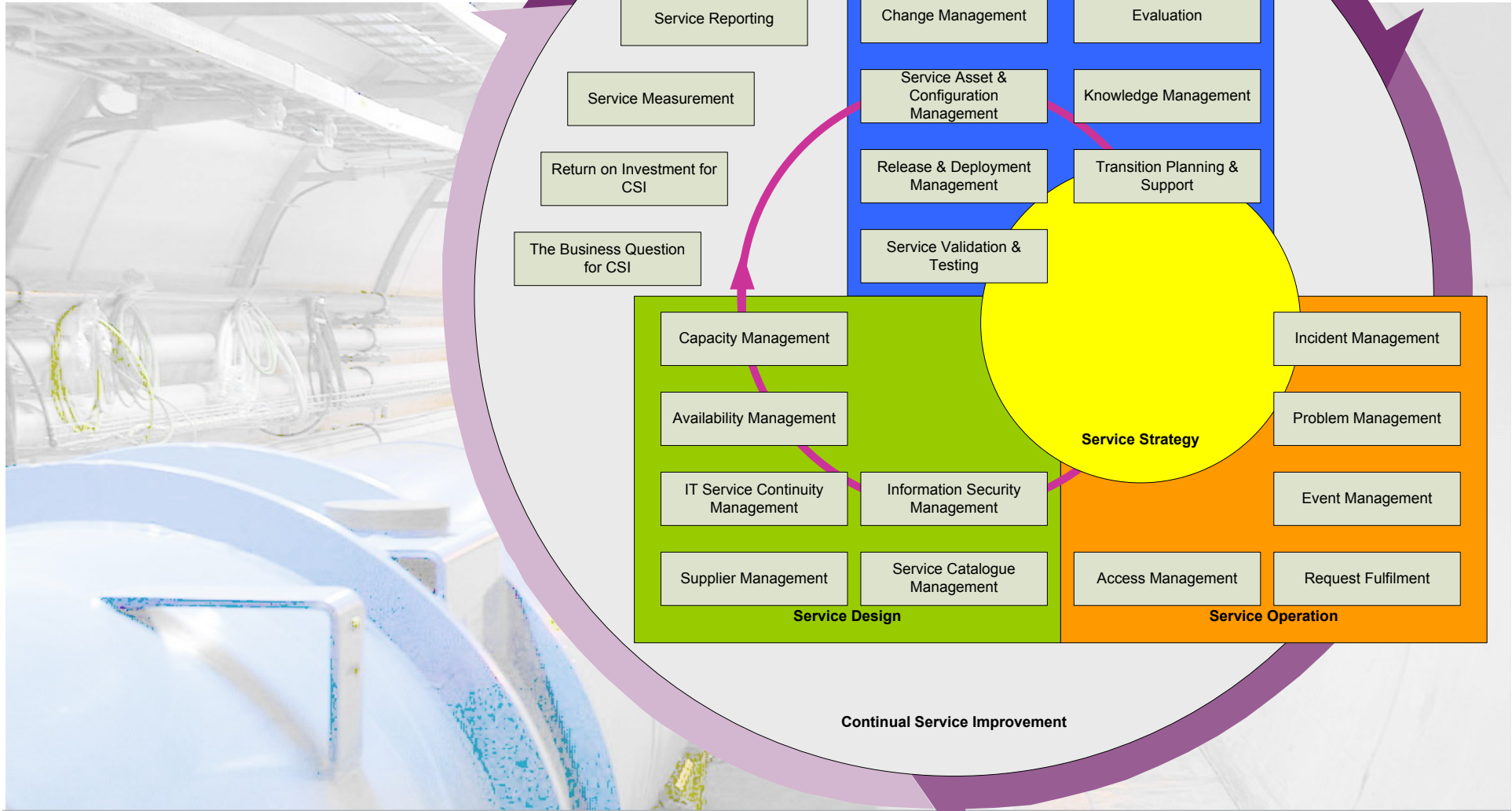
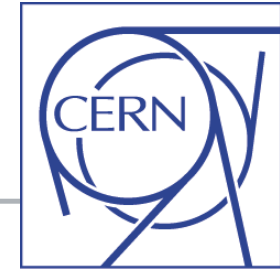# Service Management for CERN

What is ITIL?

Service Management for CERN

The ITIL v3 Framework

Service Level Management

7 Step Improvement Process

Service Reporting

Service Transition

Change Management

Evaluation

Service Measurement

Service Asset & Configuration Management

Knowledge Management

Return on Investment for CSI

Release & Deployment Management

Transition Planning & Support

The Business Question for CSI

Service Validation & Testing

Capacity Management

Incident Management

Availability Management

Service Strategy

Problem Management

IT Service Continuity Management

Information Security Management

Event Management

Supplier Management

Service Catalogue Management

Access Management

Request Fulfilment

Service Design

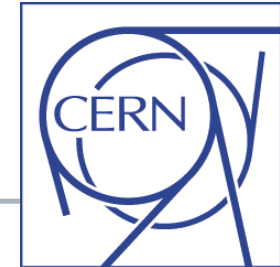**Service Operation**

Continual Service Improvement

Service Management for CERN

Service Catalogue Management – Goals

- The goal of Service Catalogue Management is to provide a single source of consistent information on all agreed services, and ensure that it is widely available to those who are approved to access it
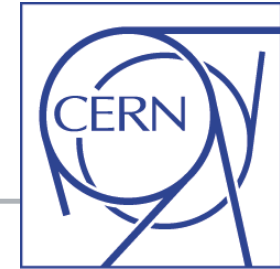
Service Management for CERN

Service Catalogue Management – Activities

- Agreeing and documenting a service definition with all relevant parties

- Alignment with Service Portfolio

- Producing and maintaining the Service Catalogue

- Alignment with IT Service Continuity Management

- Alignment with support teams, suppliers as well as with Configuration Management

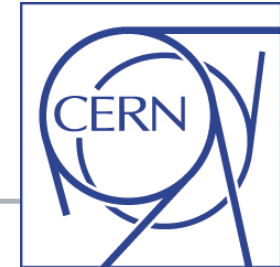- Alignment with Business Relationship Management and Service Level Management

Service Management for CERN

Service Catalogue Management – Aspects

- Overview of all operational services with characteristics and information about service providers and users

- Capture services as CIs (Interface to Service Asset & Configuration as well as Change Management)

- Planning tool for IT Service Continuity (Business Impact Analysis) as well as Capacity Management

- Business Service Catalogue
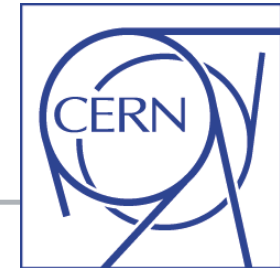
- Technical Service Catalogue

Service Management for CERN

Service Catalogue

- Functional Services

  & Functional Service Elements

  - The „Status Quo"
  - Lists all technical services, activities & functions
  - E.g. „Mailing Infrastructure", „Technical Network" or „Service Desk 1st Line"
  - Group and Section leaders in charge of all quality and resource related topics
  - Related to „workgroups" – groups of experts

UDS - Tim Smith

HUS
- Service Desk 1st Line
- Service Desk 2nd Line
- Print Device Support
- STP
- Printshop
- Computing Newsletter

CDS
- INSPIRE
- CDS

AVC
- Video Conferencing
- Indico
- Webcast
- Audiovisual Infrastructure
- Mobile Film Recording

# Service Management for CERN

Service Catalogue

- Customer Services & Service Elements

  - From the user's point of view
  - Different for different types of users
  - Combination of functional elements to provide a complete functionality for users
  - New „Service Owner" Roles representing Services
  - Related to users

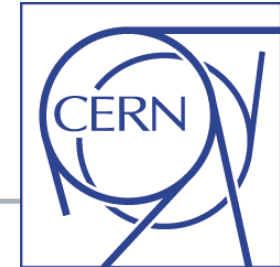| Desktop & Workplace								
Mail & Web Service		Print Service		Firewall Service	Desktop Service			Certificate Service
Mail Service	Web Service	Printshop	Printing Service	Firewall Configuration Service	Windows Desktop Service	Linux Desktop Service	Mac Desktop Service	Certification Authority Service

Service Management for CERN
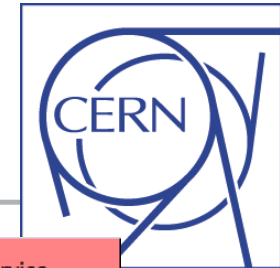
Service Catalogue

- Functional & Customer

  Service Element Relations

  - Connecting both sides of the catalogue
  - Contains classification to shows level of importance
  - Supports automation & selected views
 - Related to priority matrix for Incident Management

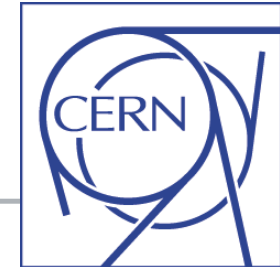|	Mail & Web Service	
	Mail Service	Web Service
Service Desk 1st Line	C	C
Service Desk 2nd Line		
Print Device Support		
RITS Configuration		
STP		
Printshop		
Computing Newsletter		
Mailing Infrastructure	A	
Distribution Lists	C	
Web Authoring		B
Sharepoint		B
IIS		A
Apache		B
Active Directory	B	B
Certificates	C	C
Alerter		
Windows Server Hosting		B
DFS		B
Hyper-V	B	B
Printing Server Infrastructure		
Public Terminal Server		
Linux	B	B
Windows	B	B
MAC OS	B	
Technical PC Specification		

Service Management for CERN

Service Level Management – Goals

- The goal of Service Level Management is to ensure that an agreed level of IT service is provided for all current IT services, and that future services are delivered to agreed achievable targets. Proactive measures are also taken to seek and implement improvements to the level of service delivered
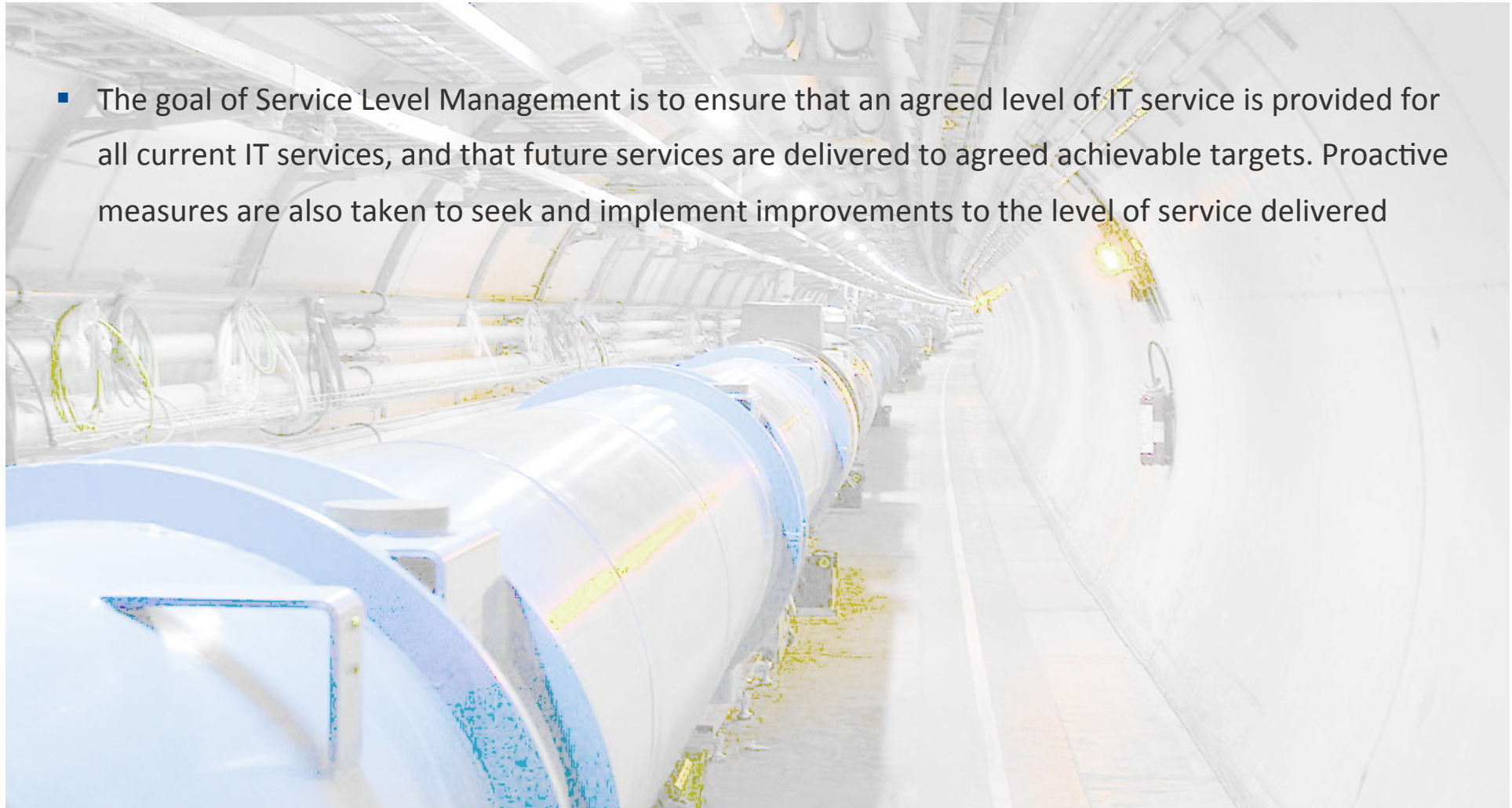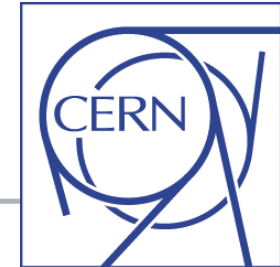
Service Management for CERN

Service Level Management – Activities

- Determine, negotiate, document and agree requirements for new or changed services in SLRs; translate requirements into SLAs between service provider and customer

- Translate SLAs into OLAs and UCs

- Monitor and measure service performance achievements of all operational services against targets within SLAs

- Collate, measure and improve customer satisfaction

- Produce service reports

- Conduct service review and instigate improvements within an overall Service Improvement Plan (SIP)

Service Management for CERN

Processes

Incident Management	Request Fulfillment
▪ **Restoration of Services as fast as possible**	▪ **Best possible fulfillment of every type of request**
▪ **Minimization of the negativ impact on Users**	▪ **Classification of requests including workflow**
▪ **Collection of experiences & knowledge**	▪ **Collection of experiences & knowledge**
▪ **Knowledge transfer from the 3rd to the 1st line**	▪ **Usage of existing standard request procedures**
▪ **Optimized collaboration of IT groups**	▪ **Definition of additional standard requests**
▪ **Priorities**	▪ **Timelines**

Every possible decision is made in advance:

Service-oriented control
Service-oriented measurement
Service-oriented reporting

Service Management for CERN
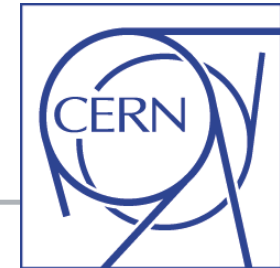
Incident Management

- Detection and recording
- Classification & initial support
- Investigation & diagnosis
- Resolution & recovery
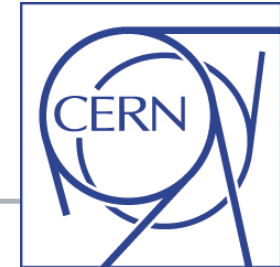- Closure
- Tracking
- Process quality improvement
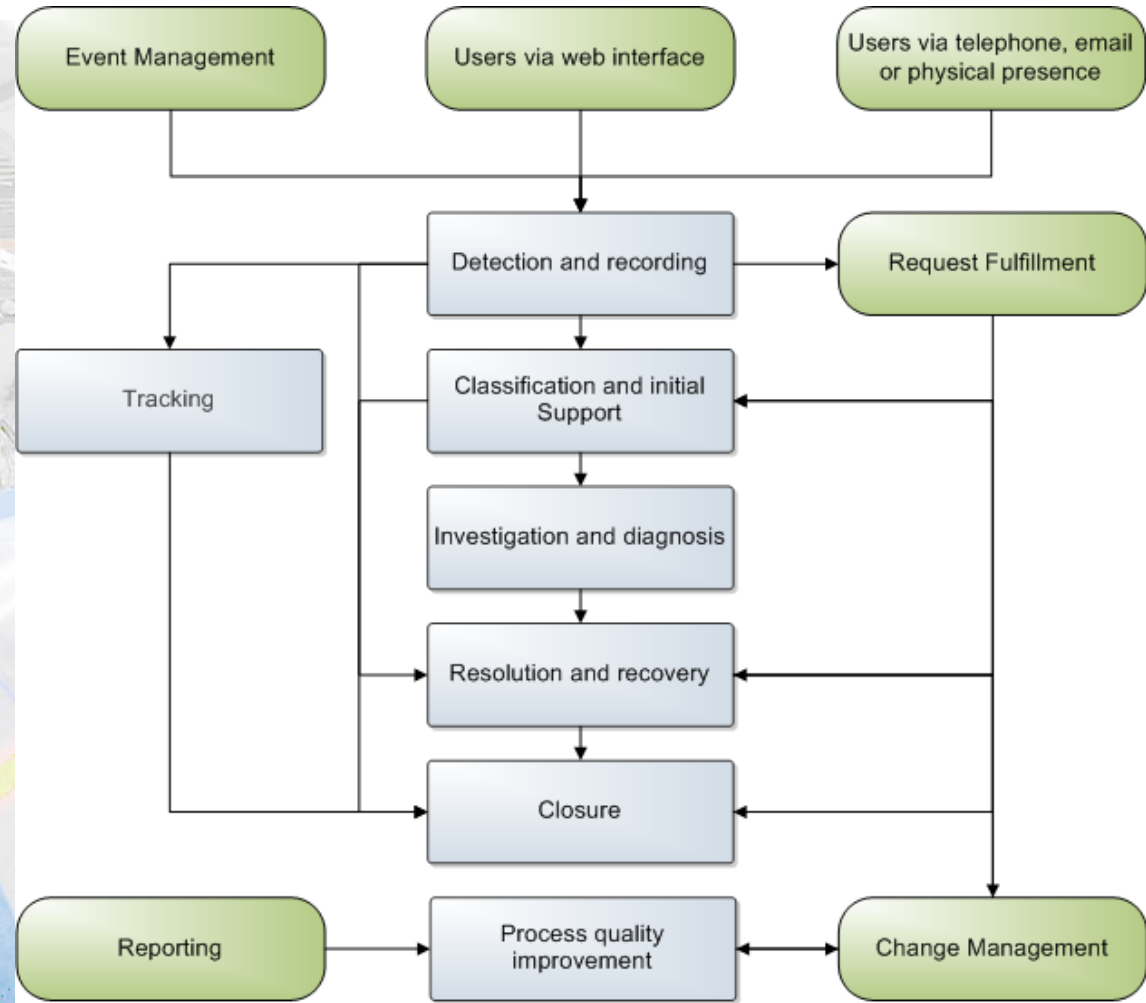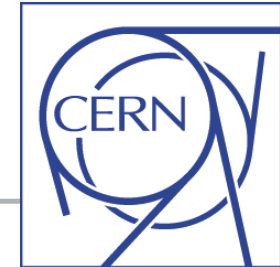
Service Management for CERN

Incident Management – Basic concepts

- Timescales

  - Timescales must be agreed for all Incident-handling stages (according to the priority level of the Incident) – based upon the overall Incident response and resolution targets within SLAs.

- Incident Models

  - An Incident Model is a way of pre-defining the steps that should be taken to handle a specific type of Incident.

- Major Incidents

  - Separate procedure with shorter resolution times and greater urgency to solve Incidents with severe impact.

Service Management for CERN

Incident Management – Prioritizing

- Impact
  - Impairment of business processes
  - Threat to Service Levels
- Urgency
  - Temporal impact on business processes
- Prioritization of Resources
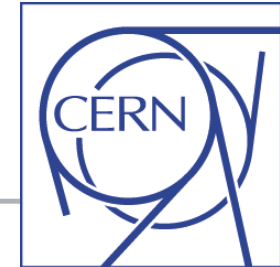 - Employees
  - Time
  - Money

Impact + Urgency = Priority

Service Management for CERN
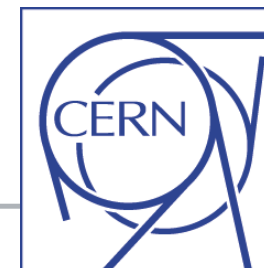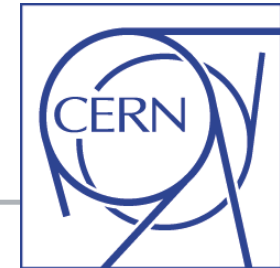
Incident Management – Escalation

Hierarchic Escalation

Authority

Competence

Functional Escalation
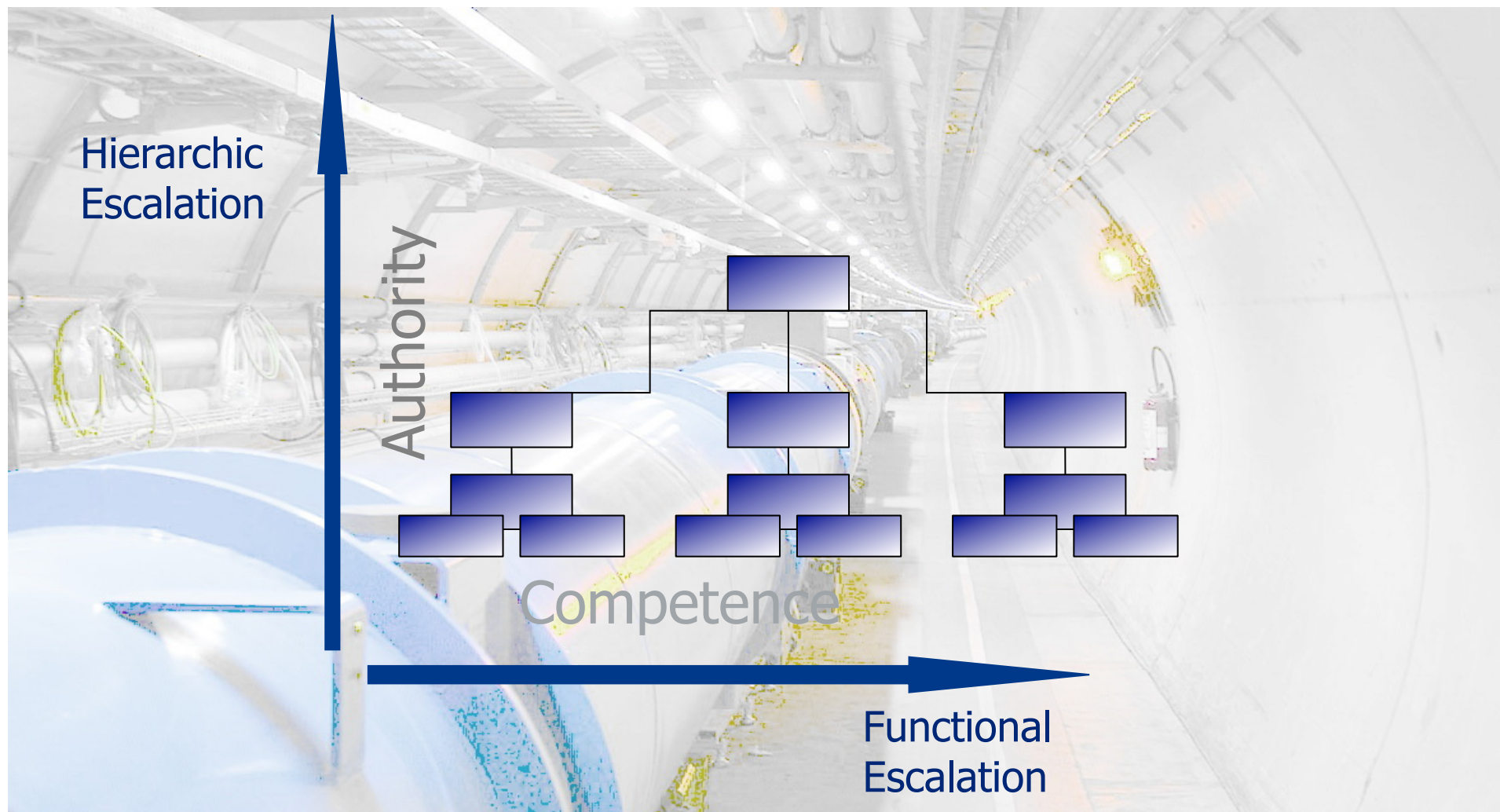
Service Management for CERN

Incident Management – Roles

- First Line
    - Service Desk

- Second Line
    - Support Groups or sections
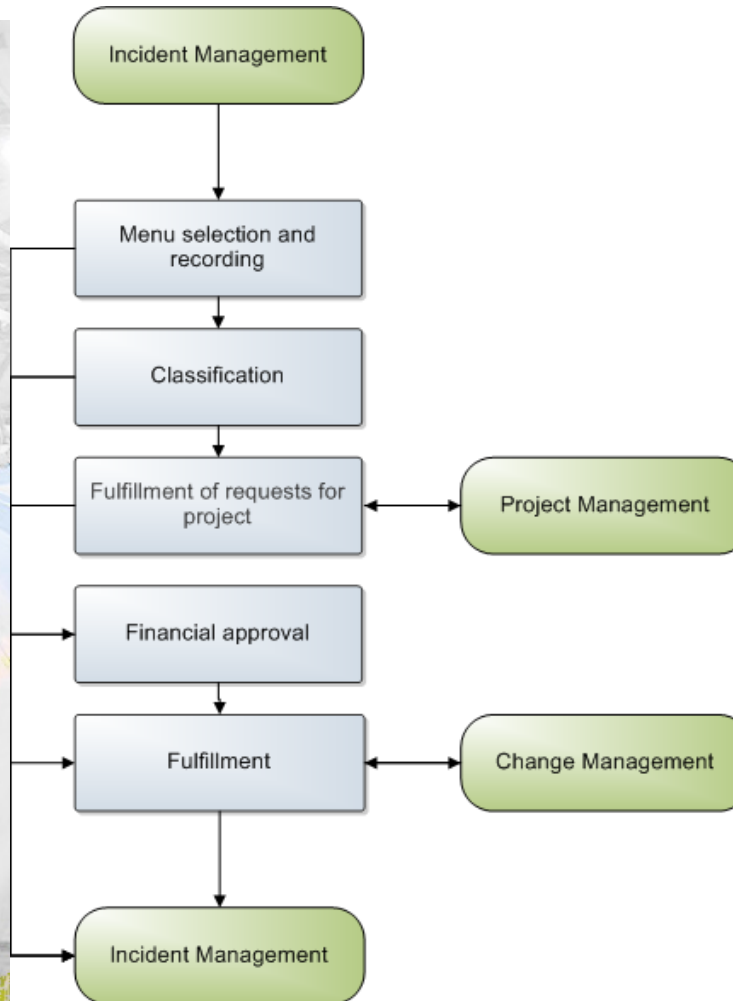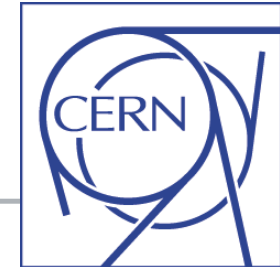
- Third Line
    - Sections or third party support

Service Management for CERN

Request Fulfillment

- Menu selection and recording

- Classification

- Fulfillment of request for projects
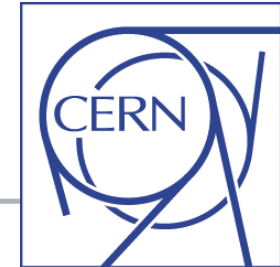
- Financial approval

- Fulfillment

Service Management for CERN

Request Fulfilment – Goals

- The goal of Request Fulfilment is to provide quick and effective access to standard services which business staff can use to improve their productivity or the quality of business services and products through a standardized and formalized process
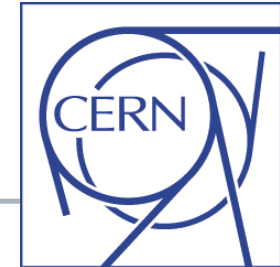
Service Management for CERN

Request Fulfilment – Definition

- Service Request
    - The entire scope of all possible requests and demands submitted by users

- Request Model
    - Standardized handling of Service Requests by using predefined Request Models (which typically include some form of pre-approval by Change Management)
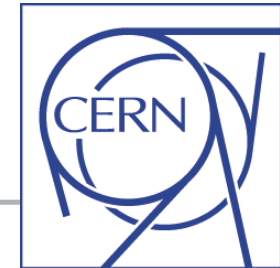
Service Management for CERN

Event Management – Goals

- The goal of Event Management is to control all events which occur within the IT infrastructure in order to ensure normal operation and identify all deviations from normal operation.
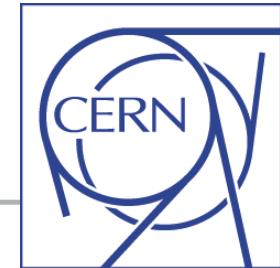
Service Management for CERN

Problem Management – Goals

- The goal of Problem Management is to prevent problems and resulting incidents from happening, to eliminate recurring incidents and to minimize the impact of incidents that cannot be prevented.
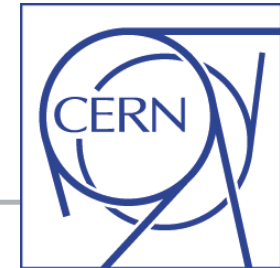
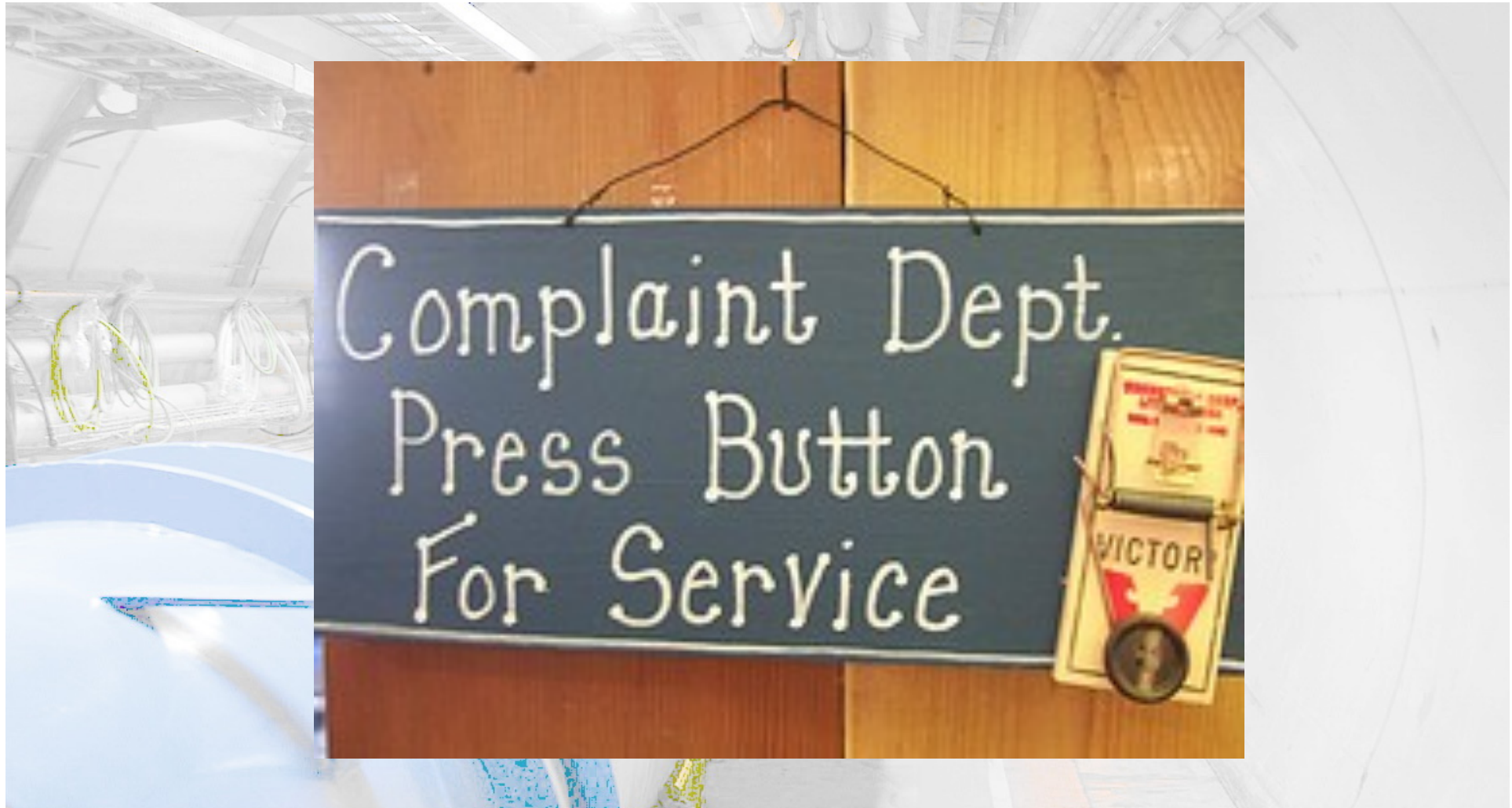# Service Management for CERN

Change Management – Goals

- The goal of Change Management is to respond to the customer's changing business requirements while maximizing value and reducing incidents, disruption and re-work.
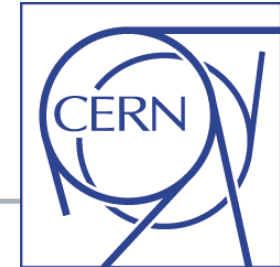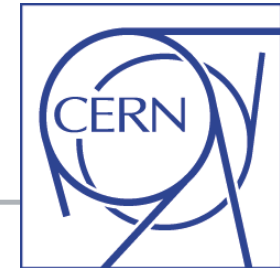
Service Desk
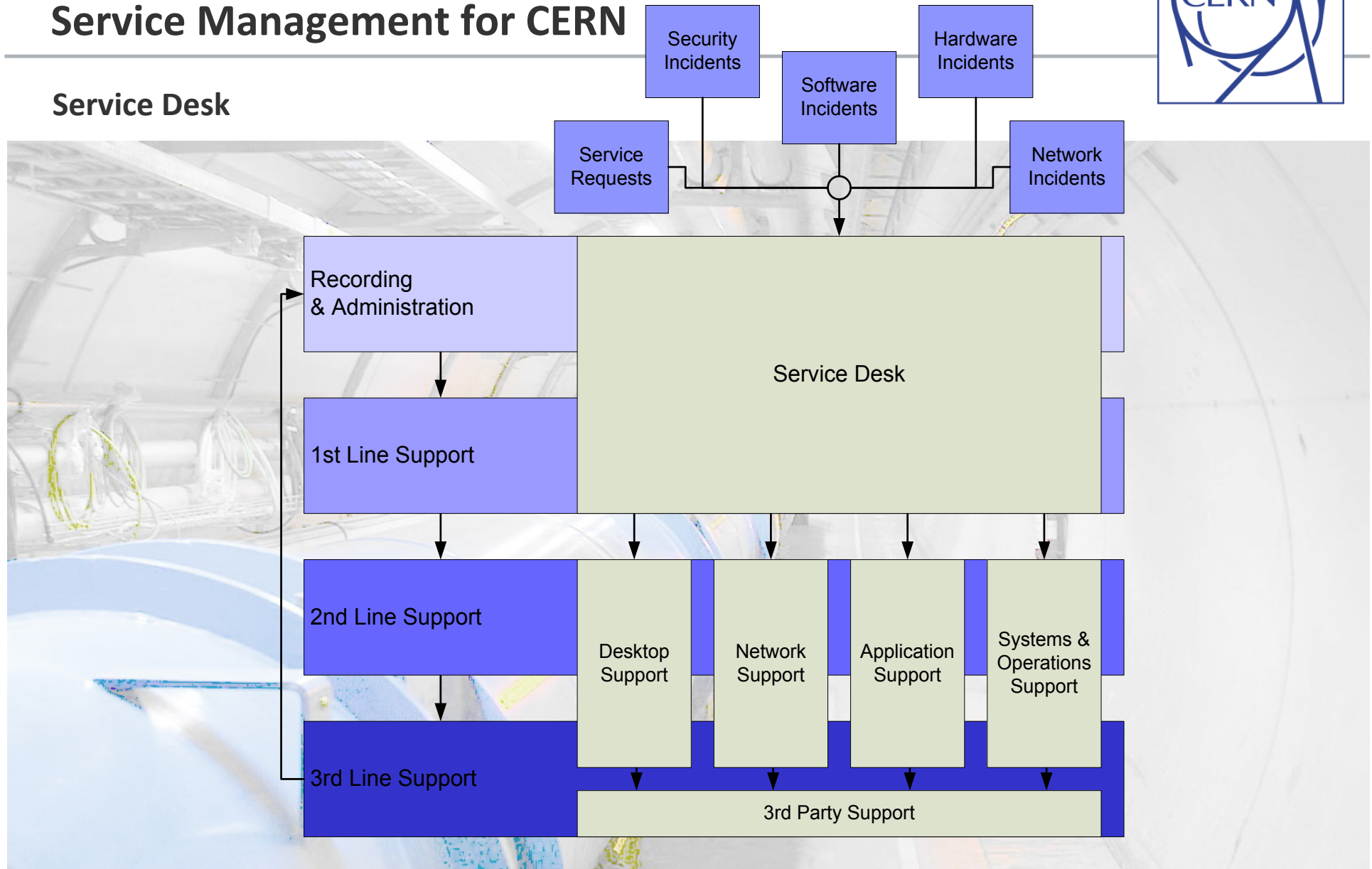
Service Management for CERN

Service Desk

- The Service Desk provides the interface between the IT organization and its users.

- Single Point of Contact (SPoC)

- The Service Desk is the contact point for IT users, recording and handling failures of IT Services and Service Requests
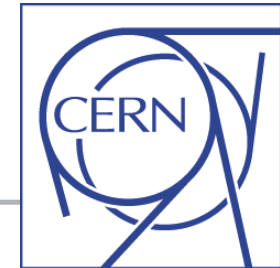
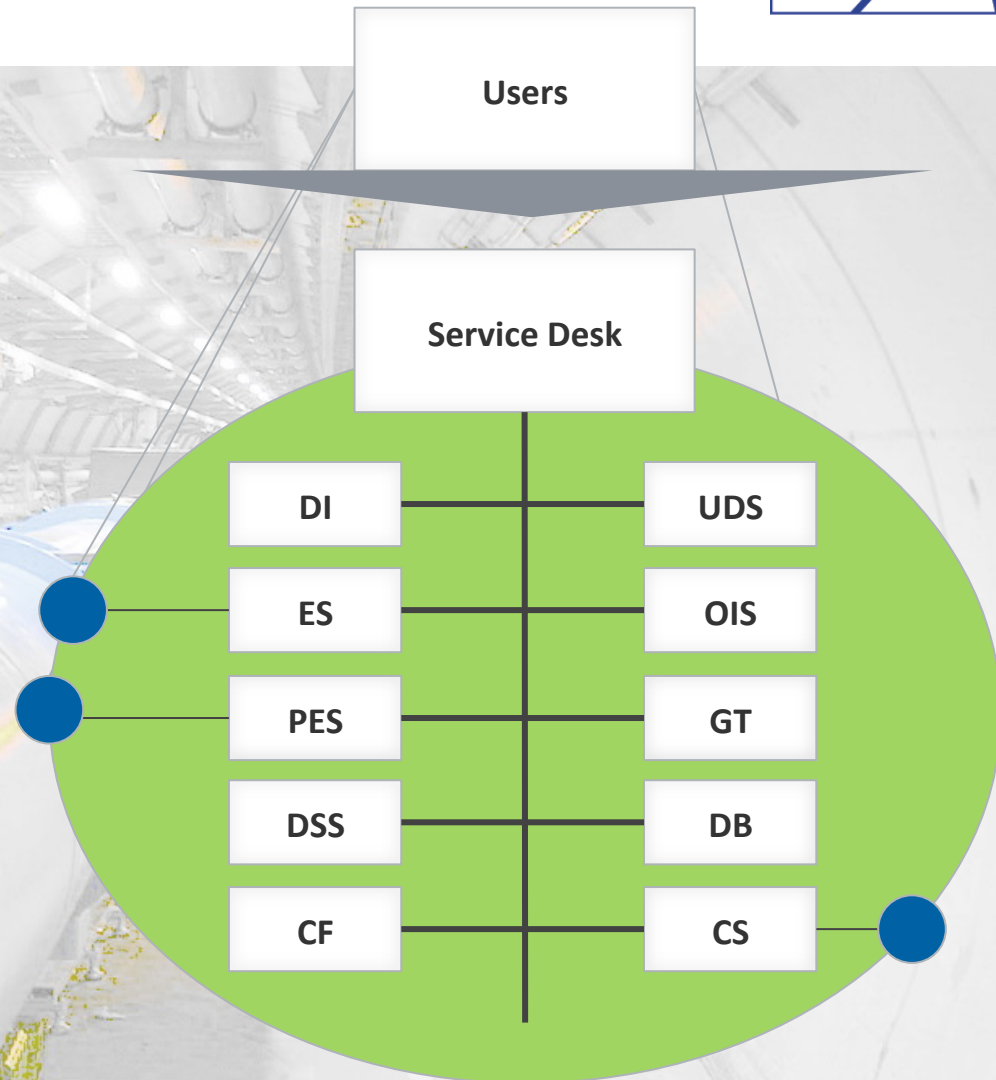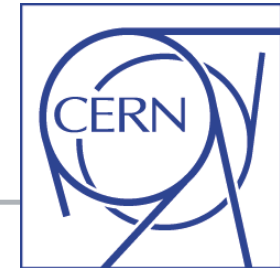# Service Management for CERN

Service Desk

Service Management for CERN
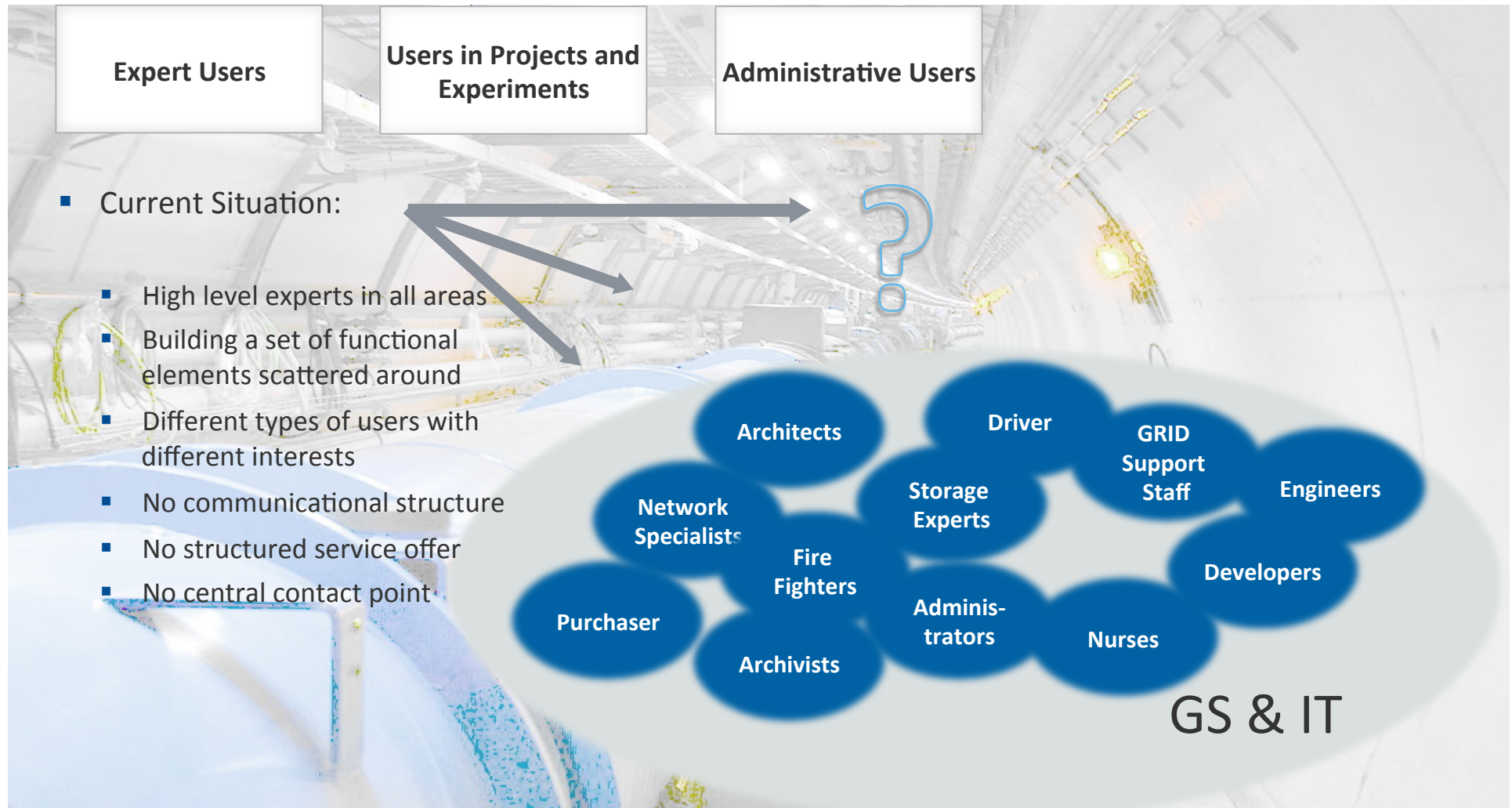
Service Desk

- Offers Support for every User

  - New Contract with SD provider
  - Measured Quality Control
  - Solution, Answer or Dispatching
  - Integration in new Processes
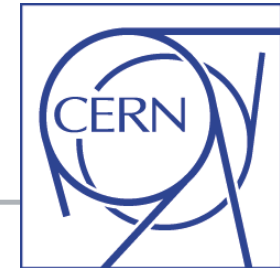 - Supported by selected and new configured tool

Users

Service Desk

DI	UDS
ES	OIS
PES	GT
DSS	DB
CF	CS

Service Management for CERN

Steps for Improvement

Expert Users	Users in Projects and Experiments	Administrative Users

- Current Situation:

    - High level experts in all areas
    - Building a set of functional elements scattered around
    - Different types of users with different interests
    - No communicational structure
    - No structured service offer
    - No central contact point

Architects

Driver

GRID Support Staff

Engineers

Network Specialists

Storage Experts

Fire Fighters

Developers

Purchaser

Administrators

Nurses

Archivists

GS & IT

Service Management for CERN

Steps for Improvement

Expert Users	Users in Projects and Experiments	Administrative Users

- Introduction of a catalogue with all provided Services from a user's point of view!

CERN Service Catalogue

Architects
Driver
GRID Support Staff
Engineers
Network Specialists
Storage Experts
Fire Fighters
Developers
Purchaser
Adminis- trators
Nurses
Archivists

GS & IT

Service Management for CERN

Steps for Improvement

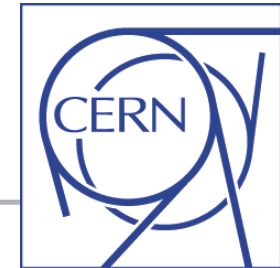| Expert Users | Users in Projects and Experiments | Administrative Users |

- Introduction of a catalogue with all provided Services from a user's point of view!

- Introduction of central processes for all groups and sections.

CERN Service Catalogue

Architects
Network Specialists
Purchaser
Fire Fighters
Archivists
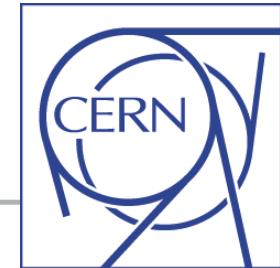Nurses

GS & IT

Driver
GRID Support Staff
Engineers
Developers
Storage Experts
Administrators

Service Management for CERN

Steps for Improvement

| Expert Users | Users in Projects and Experiments | Administrative Users |

- Introduction of a catalogue with all provided Services from a user's point of view!

- Introduction of central processes for all groups and sections.

- Introduction of a tool to automate processes and to organize knowledge.

CERN Service Catalogue

Architects

Network Specialists

Purchaser

Fire Fighters

Archivists

Nurses

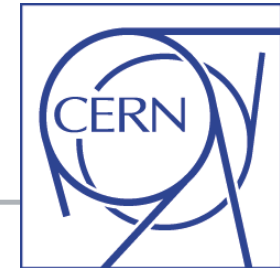Driver

GRID Support Staff

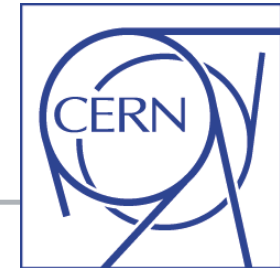Engineers

Developers

Storage Experts

Administrators

GS & IT

Service Management for CERN

Steps for Improvement

Expert Users

Users in Projects and Experiments

Administrative Users

- Introduction of a catalogue with all provided Services from a user's point of view!

- Introduction of central processes for all groups and sections.

- Introduction of a tool to automate processes and to organize knowledge.

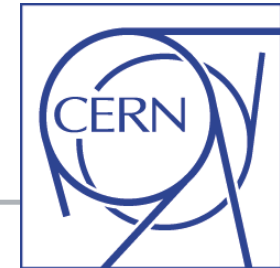- Introduction of a central Web Page covering all Services

CERN Service Web Page

CERN Service Catalogue

Architects

Network Specialists

Purchaser

Fire Fighters

Archivists

Nurses

Driver

GRID Support Staff

Engineers

Developers

Storage Experts

Administrators

GS & IT

Service Management for CERN

Steps for Improvement

- Introduction of a catalogue with all provided Services from a user's point of view!

- Introduction of central processes for all groups and sections.

- Introduction of a tool to automate processes and to organize knowledge.

- Introduction of a central Web Page covering all Services

- Introduction of a central Service Desk

Expert Users

Users in Projects and Experiments

Administrative Users

Service Desk

CERN Service Web Page

CERN Service Catalogue

Architects

Network Specialists

Purchaser

Fire Fighters

Archivists

Nurses

Driver

GRID Support Staff

Engineers

Developers

Storage Experts
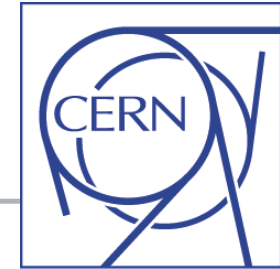
Administrators
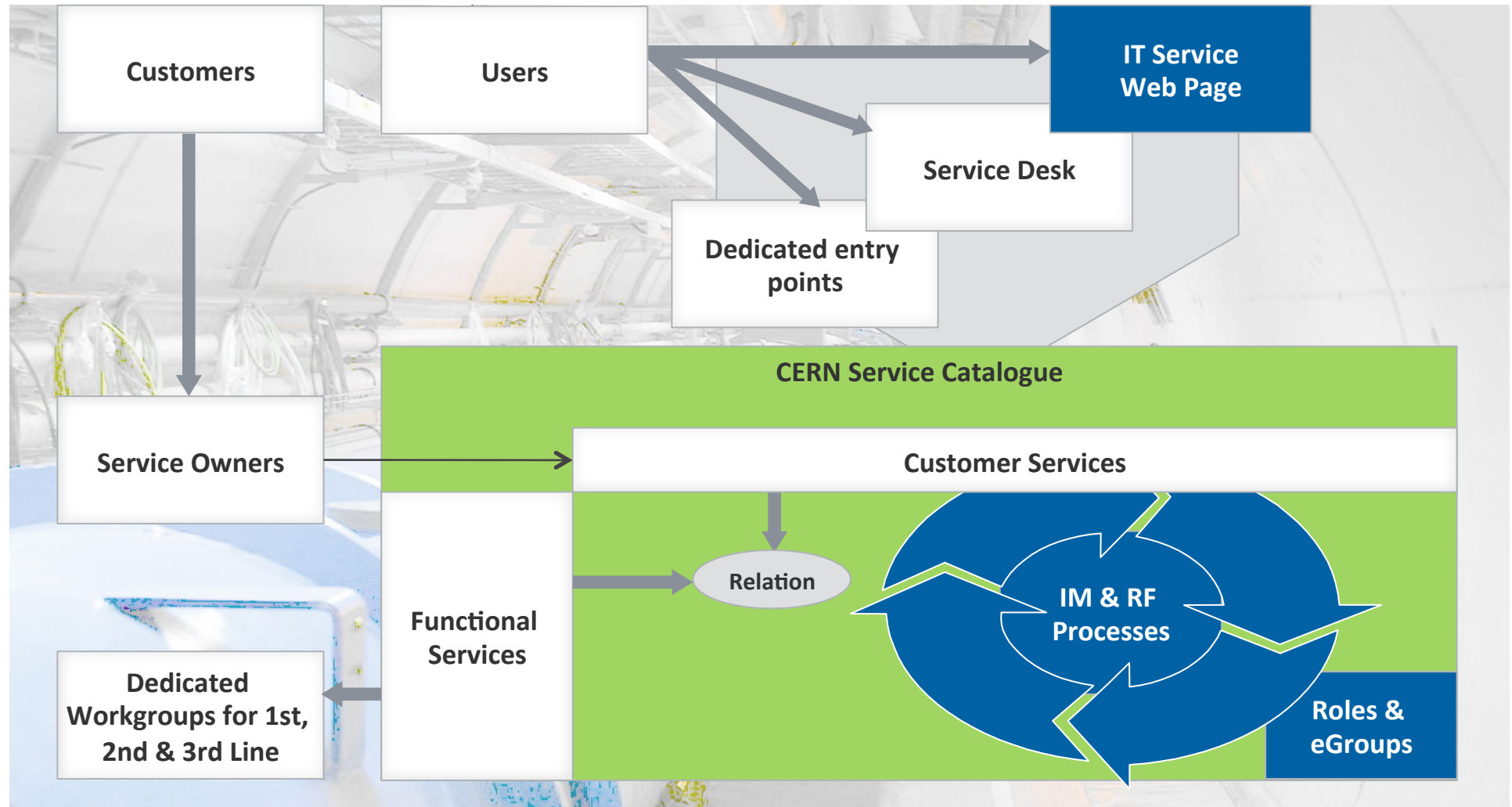
GS & IT
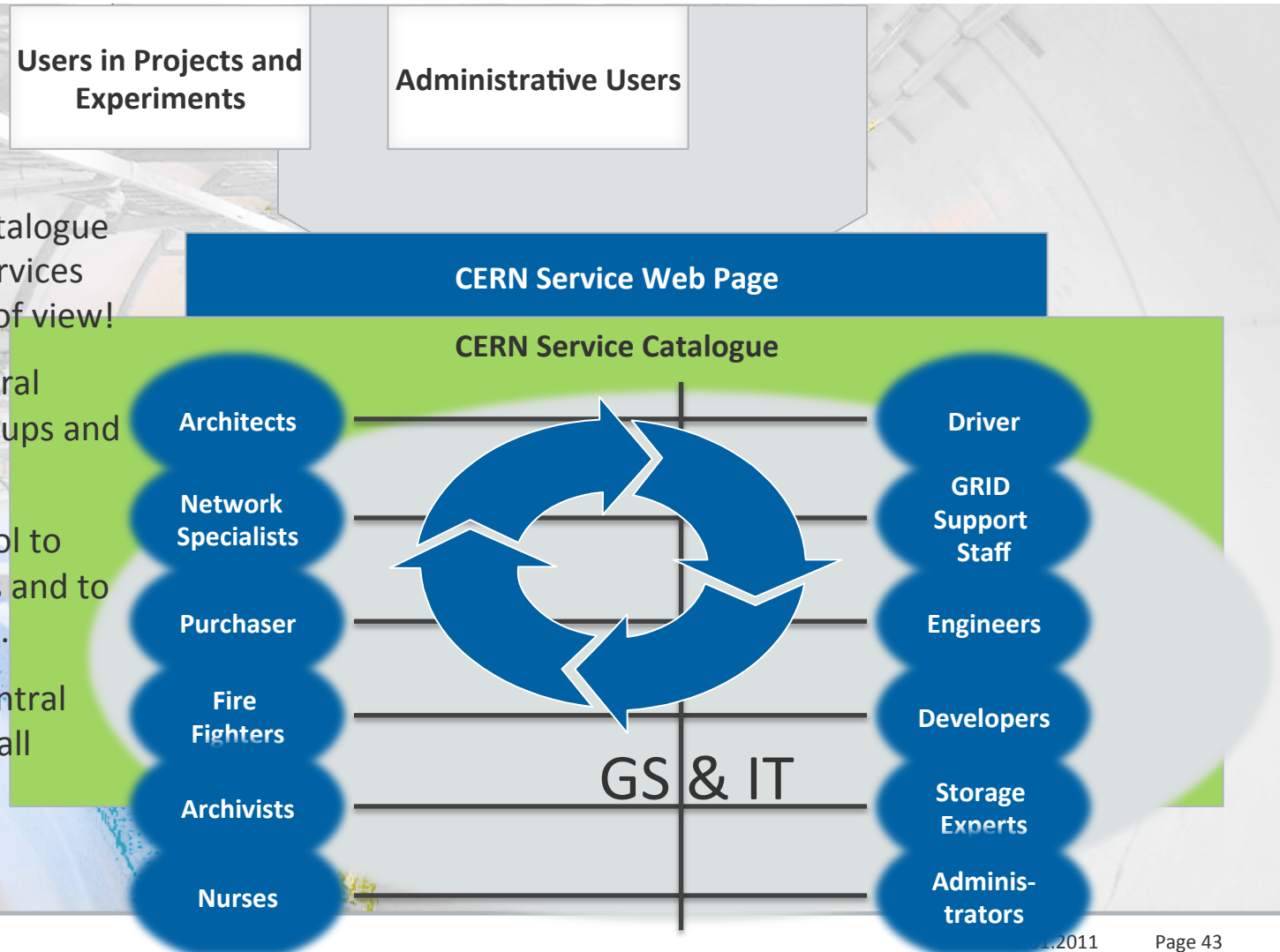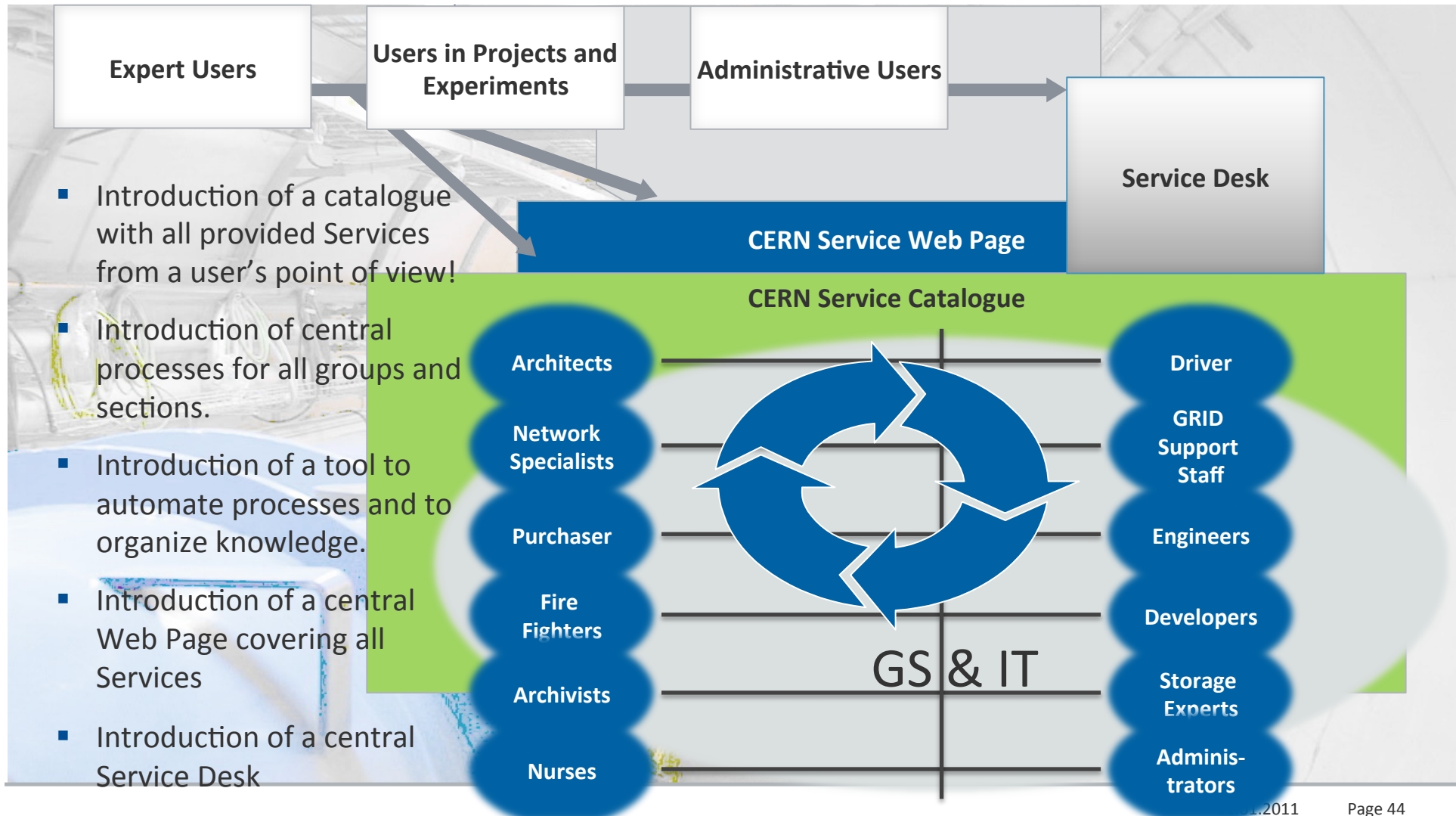
Service Management for CERN

Web Portal

- Offers the complete IT Portfolio

- Four ways to enter IT

  - By Service
  - By Function
  - By Action
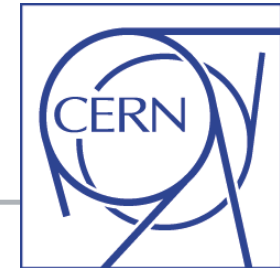 - By Search functionality

IT Service Web Page

Customer Services

Functional Services

Relation

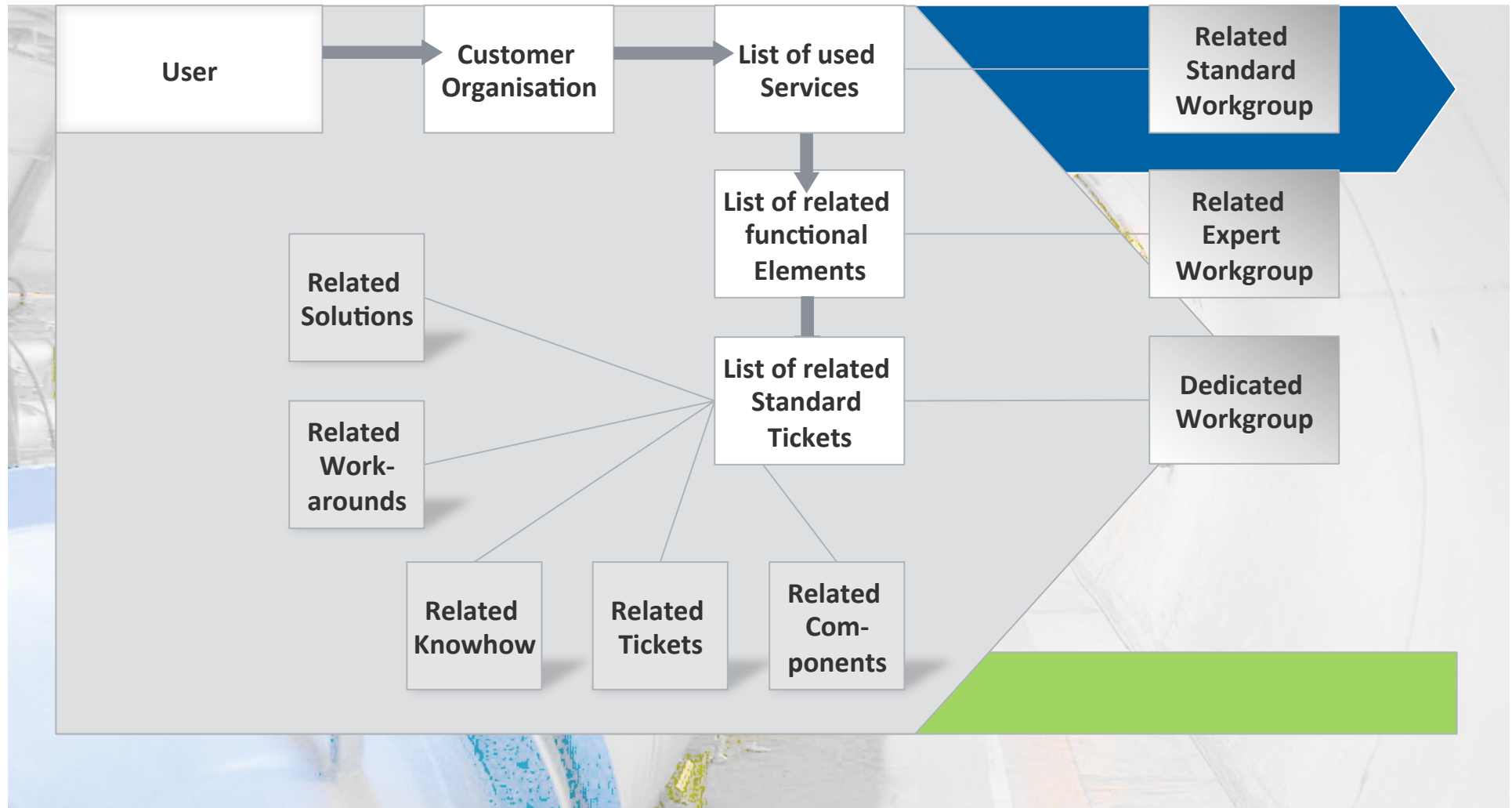**Requests**

Incidents
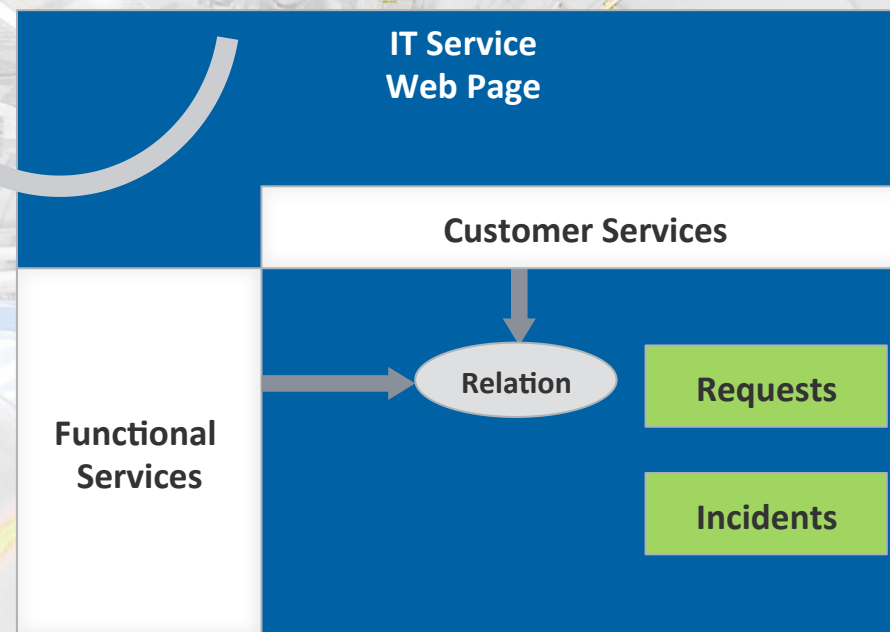
Service Management for CERN
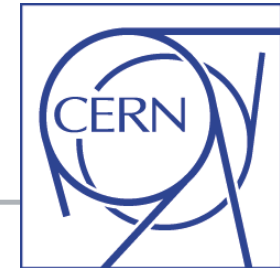
Communication

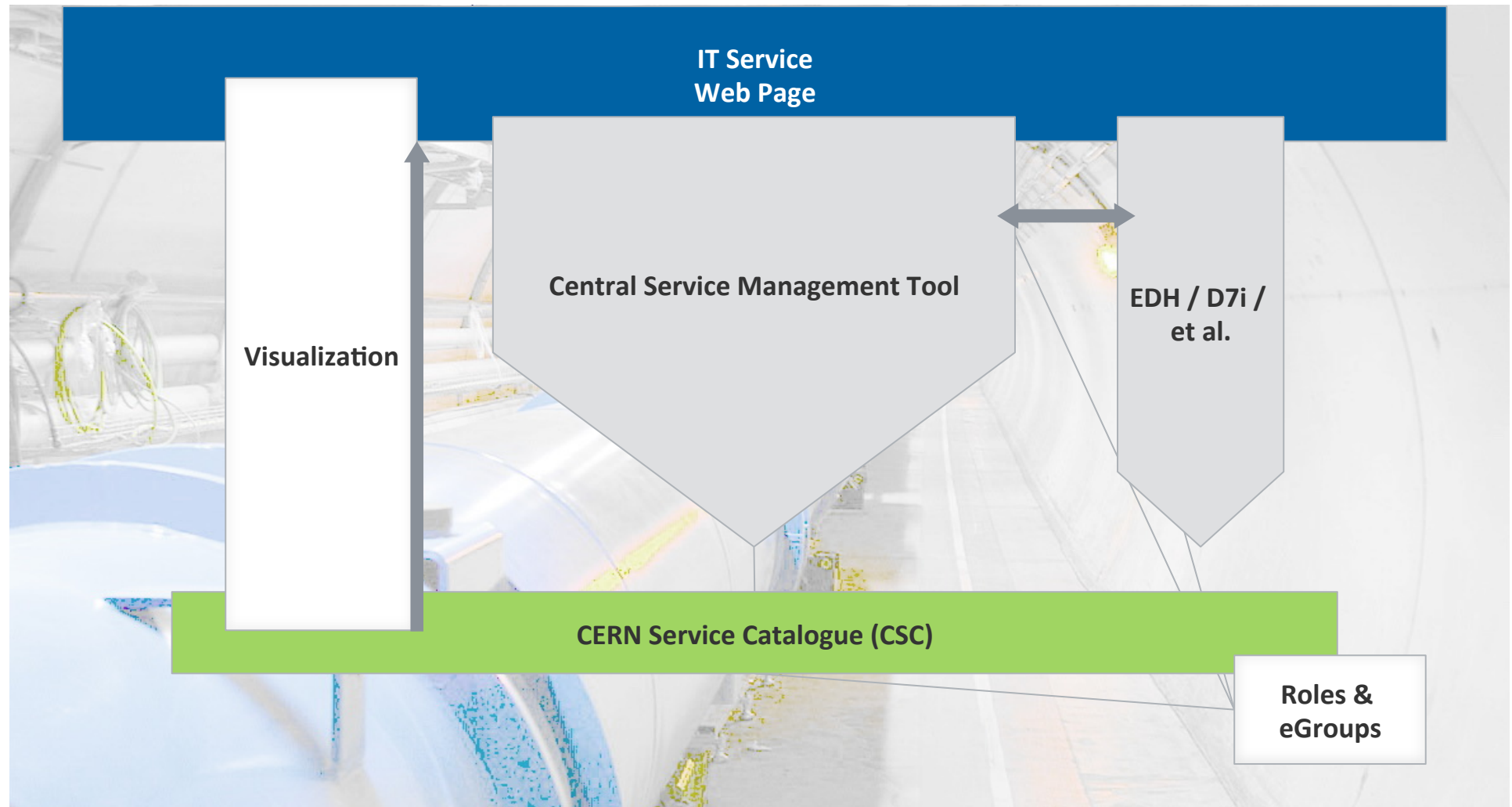# Service Management for CERN

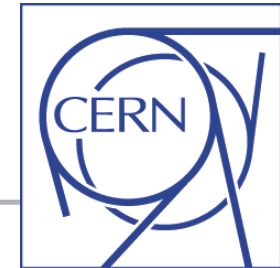## Process Automation

Service Management for CERN

Tools

Jochen Beuttel

ncc Management Consultants GmbH

Machtlfinger Straße 13

81379 München

Tel.: +49 89 614432 500, Fax.: +49 89 614432 190

Email: info@ncc-consulting.com

Internet: www.ncc-consulting.com