

Operational Concept SAP EP 6.0

EPS Operations

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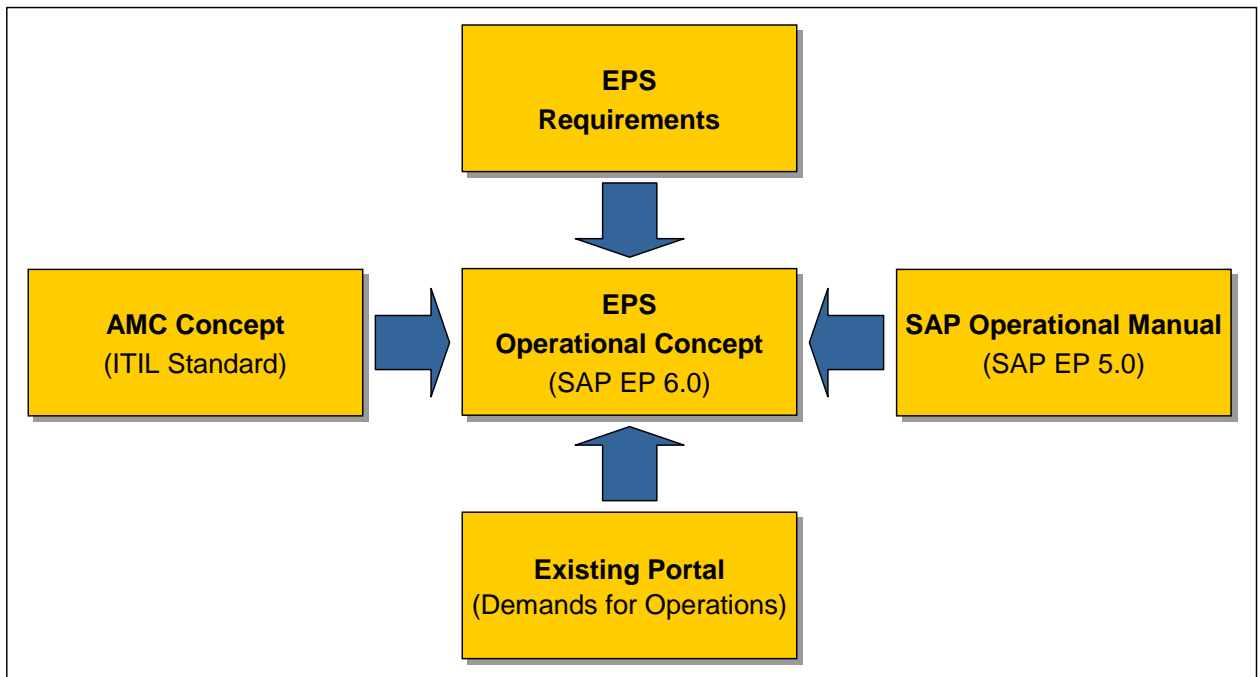
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Introduction

The following document describes an operational concept for a mySAP Enterprise Portal. The intention is to describe the framework needed to operate the portal based on mySAP Enterprise Portal v6.0.

To operate an Enterprise Portal there is more to recognize than within operational models for standard IT Solutions. This is caused by the nature of an Enterprise Portal, because there will be an ongoing demand of changes to realize real business benefits and actualize needed content for Enterprise Groups, Regions and Organizations (GRO's).



Picture 1: Development Components of the Operational Concept

The Operational Concept for SAP EP 6.0 based on

- the experiences of the existing mySAP Employee Portal
- the requirements of Enterprise Portal Services (EPS)
- the business blueprint of an Application Management Center (AMC) and
- the SAP Operational Manual for SAP EP 5.0 added with additional information from SAP regarding SAP EP 6.0

Through the Integration of the AMC Concept, ITIL (IT Infrastructure Library) conventions are considered. ITIL is based on best practices.

A. Business Topics

A.1. Business Model

The section “Business Model” describes the Business Model for IT EPS Portal Operations which will deliver complex SAP Enterprise Portal 6.0 services to their customers. The following topics of the Business Model will be described further:

- Global Definition of Business Model
- Rollout and Scalability
- Interim and Future Solution

A.1.1 Global Definition

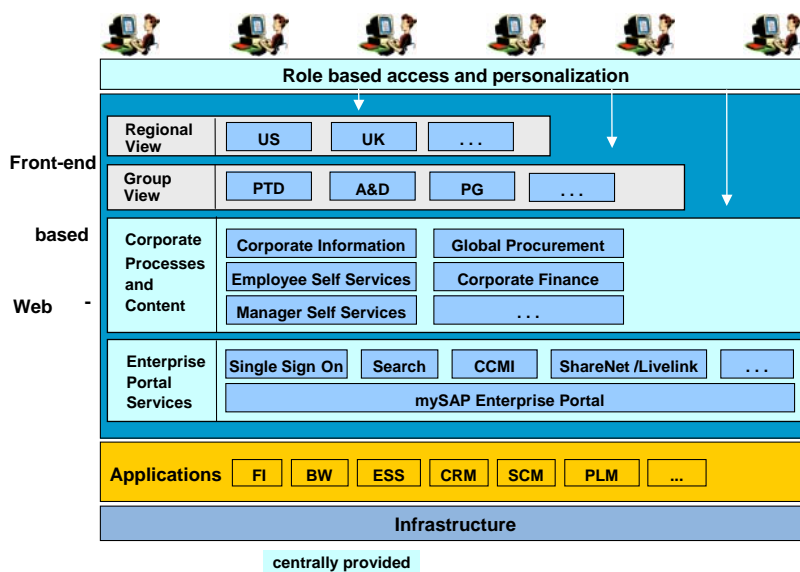
A.1.1.1. Description

The IT organization will deliver Portal Services to GRO's. The scope of this Business Model is to describe the operation processes and requirements on portal operation for SAP EP 6.0. Standards and best practices, as well as the special points of interest of the portal and requirements of IT, will already be taken into account.

The Business Model is a high Level description of

- Involved parties
- Estimated portal user
- Description of dependencies between involved parties and integrated applications
- Charging Model

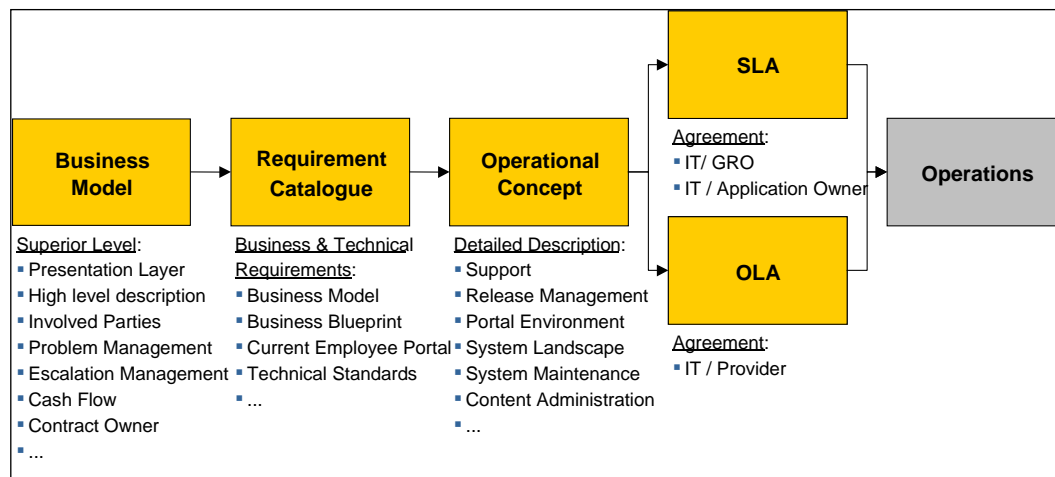
It is a short overview of the complex portal operations work and planning. These topics are described further in the following chapters. The Business Model depicts the general conditions of the economical and organizational aspects.



Picture 2: Logical Portal Architecture [Reference 1]

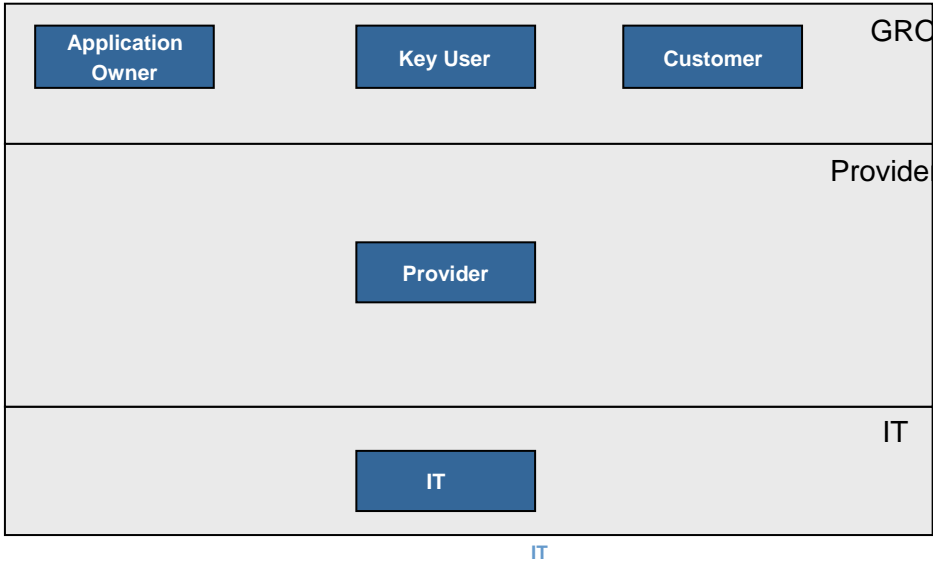
IT offers herewith a standardized enterprise portal for GRO's. GRO users can use this portal through a role based and personalized entry over a Web-based Front-end (Web Browser). The portal offers the possibility of regional or group specific views. Further enables the portal access to corporate processes and content and contains central enterprise portal services. GRO's can start own projects to integrate their own applications for themselves or for internal customer (other GRO's).

The Portal Environment will be hosted by a provider. The Business Model depicts the general conditions of this constellation regarding economical and organizational aspects.



Picture 3: Generic Description of the way of portal operations

A.1.1.2. Involved Parties



Picture 4: Involved Parties of portal operations

The following table shows the involved parties and their roles and description within EPS Operations.

Organizations	Roles	Description
GRO		Enterprise GRO's (Groups, Regions and Organizations) have three roles defined in this tabulation.
GRO	Customer	Each User of the GRO is a customer who uses the services or the content within the portal.

GRO	Application Owner	<p>Application Owner can be</p> <ul style="list-style-type: none"> - GRO's which had implemented their own applications <ul style="list-style-type: none"> • The purpose of these applications can be to use these applications by themselves or • To offer other GRO's the use of these applications. - Enterprise central (e.g. IT) to provide central services (applications) or content for GRO's <p>Central applications will be hosted centrally by the provider, GRO specific applications will normally be hosted by the application owner. GRO's (application owner) can commit with IT and the provider to host their applications within the centrally hosted environments (e.g. to optimize performance requirements). Application owners run their content in the portal, but still are owners of the physical Server and the applications (services.) and content.</p>
GRO	Key User	<p>Each GRO has to define the role "key user", who is the first contact for end users in their location when having problems using portal services. Generally there can be two kinds of user questions</p> <ul style="list-style-type: none"> - functional (login, how to handle an application, ...) - technical (technical problems within an application or within the portal environment)
Provider		<p>The Provider is the responsible organization for the central hosting. He is even responsible for portal operation, support and secures the fulfillment of Enterprise standards.</p>
IT		<p>The Enterprise IT organization is the superior responsible for portal operations.</p>

A.1.1.3. Responsibilities / Contract Owner

Two types of contracts between the involved parties are in scope of the business model:

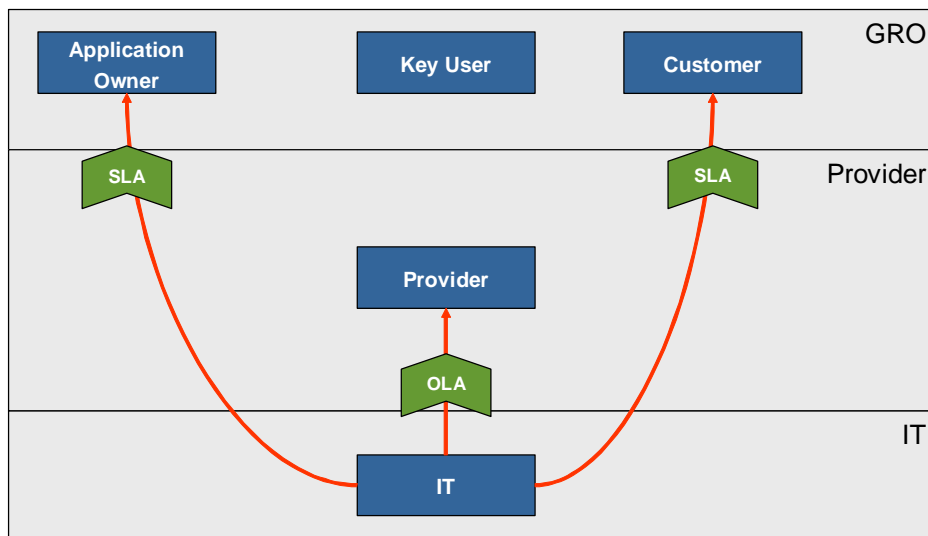
SLA's (Service Level Agreements)
OLA's (Operation Level Agreements)

Basically SLA's are describing the delivered services between the contracting parties. OLA's are describing services and responsibilities between the provider and the contract party IT.

Enterprise IT is the main contract owner in the EPS scenario.
Contracts:

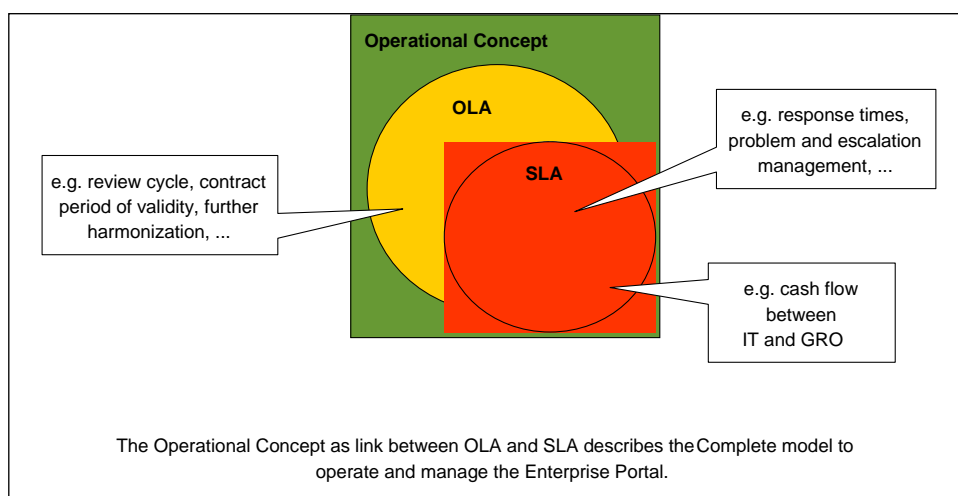
- SLA between Enterprise IT and GRO (customer)
The SLA concluded between IT and customer defines the services, payment terms, etc., to define the relationship between IT and customer.
- SLA between Enterprise IT and GRO (application owner)
The SLA concluded between IT and application owner defines the conditions to run the application within the portal.
- OLA between Enterprise IT and provider
The OLA concluded between IT and provider defines the responsibilities, services, payment terms, etc, for portal operations.

The following picture gives an overview of this contract constellation.



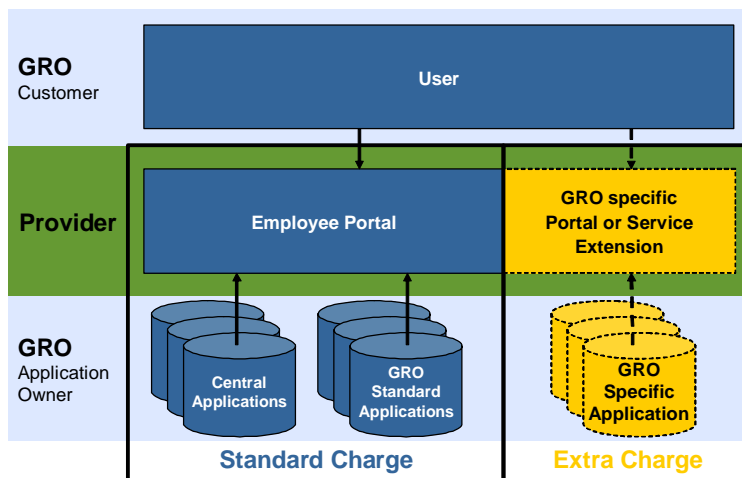
Picture 5: Contract owner in portal operations

Following picture gives an impression of the differences between operational concept, SLA and OLA:



Picture 6: Differences between Operational Concept, OLA & SLA

A.1.1.4. Charging Model



Picture 7: GRO costs

Within the interim solution, customers (GRO's) of the portal have to pay a defined fee per user per year to IT. It's planned to implement a usage related fee.

Within this "standard" fee is integrated:

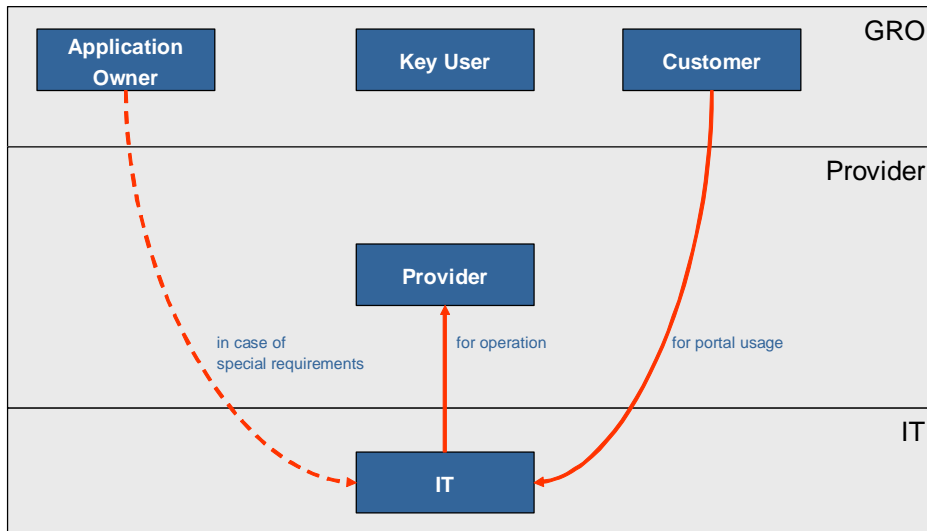
- usage of the portal as user
- central applications
- central services
- provider costs (to operate the environment)

If a GRO plan to integrate a new, GRO specific application there will be extra costs, e.g. for

- application development (including test and go live)
- provider costs for special services
- specific environment extensions
- solving of possible problems within the developed application

GRO Business:

If one GRO is application owner (has implemented a GRO specific application) and another GRO wants to use this specific application. It's within the responsibility of the GRO's to define their responsibilities, payment terms and so on for this GRO business.



Picture 8: Cash Flow – Payment in portal operation

A.1.1.5. Key User Concept

User of the portal can have different kinds of questions (or problems). General there are to main types of user questions:

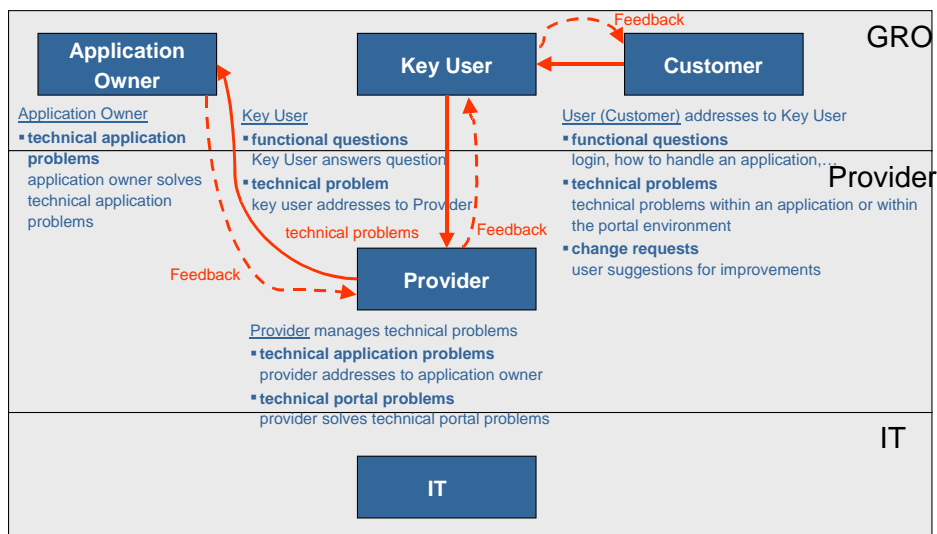
- **functional questions**
Questions about login, how to handle an application, etc
- **technical problems**
Questions about technical problems within an application or within the portal environment

If a provider should be the contact partner for all types of questions he would have to know details about:

- the business logic within every application
- the technical development of all applications
- the technical integration of all applications
- the navigation
- the login
- ...

If a provider would have to offer this, it would be on the one hand quite expensive on the other hand GRO normally have the detailed business know-how to handle functional questions by themselves.

That's why a key user concept was created.



Picture 9: Key User Concept

So Key Users have general responsibilities like:

- solve functional user questions
- summarize technical user problems and address them to the provider
- inform user about solved technical problems
- summarize user change requests (user suggestions for improvements)
- inform user about relevant changes within the portal

“Key User” is to understand as a role. That means that corresponding to the GRO specific capabilities and existing environments the “Key User” can be e.g. a GRO User Help Desk.

A.1.2 Rollout and Scalability

The Rollout and Scalability describes the planned rollout and increasing user amount of the portal from the “Go Live” point to the estimated user amount after one year. This section gives an overview of the demanded scalability and the Global IT Architecture. Topics of this chapter are:

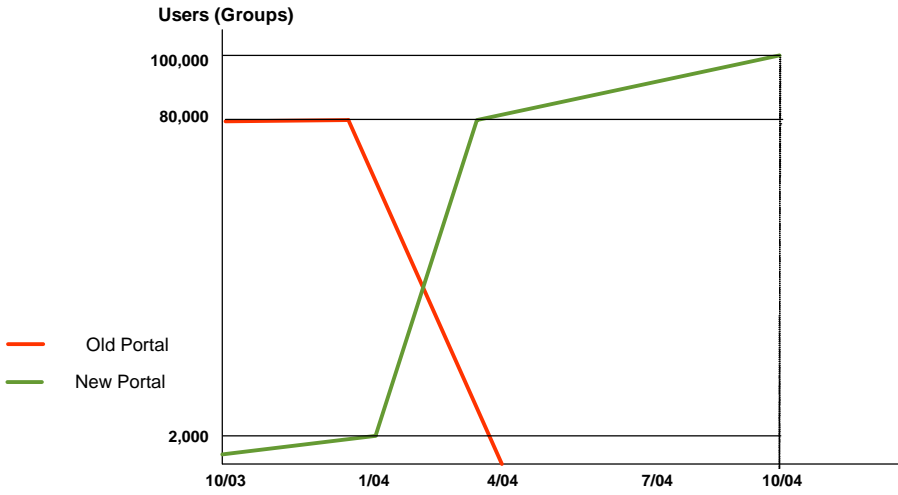
- User Ramp Up
- Application Ramp Up
- Ramp Up for IT Architecture
- Global IT Architecture

A.1.2.1. User Ramp Up

The estimated “go live” takes place on [YOUR DATE HERE]. At this time following amount of users will use the platforms:

Development Environment: ~150 named users
 Test System: ~150 named users
 Production System: ~2.000 named users

The amount of users will increase in the following year from 1500 to 80000 users. In the same time, the usage of the current Portal will decrease. The following illustration gives a detailed view on increasing and decreasing usage of the current running portal and the new Portal.



Picture 10: Planned User Ramp up [Reference 1]

A.1.2.2. Applications and Content Types

The go live of the new Portal will start with about 60 integrated applications on [YOUR DATE HERE]. These applications are defined and put together from the first phase project whose content is the first step of integration.

Within the portal operation two different types of applications and content types have to be differentiated:

- Centrally provided content and applications
- Decentrally provided content and applications

Centrally provided content and applications means content and applications that are placed to disposal from IT to GRO customers. These applications and content are hosted directly by the provider within the portal environment.

Decentrally provided content and applications means content and applications delivered from GRO application- and content owners to other GRO customers and/or their own employees only. The hosting of these applications and contents are within the responsibility of the GRO application or content owners. These applications and content have to be connected to the portal only without delivering of hosting services from the provider.

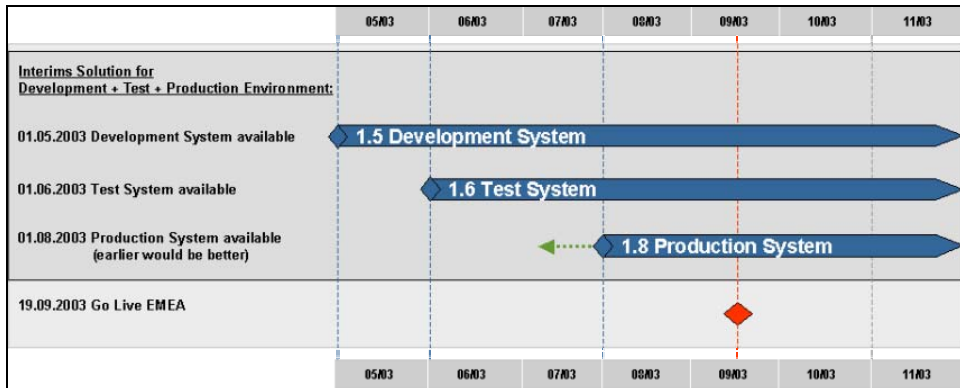
A list of the integrated applications and content is added in the appendix.

A.1.2.3. Ramp Up for IT Architecture

Based on the 3-tier landscape the Rollout Date for go Live are:

[YOUR DATE HERE] Development Platform
 [YOUR DATE HERE] Test Platform
 [YOUR DATE HERE] Production Platform

The following illustration gives an overview about the timeframe till go live.

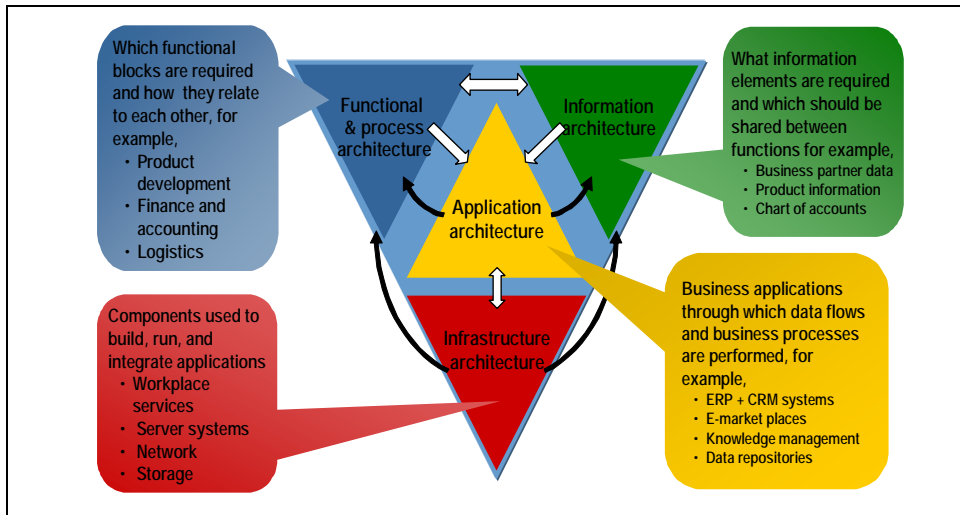


Picture 11: Sample timeline for availability of Development, Test, & Production environment

A.1.2.4. Global IT Architecture

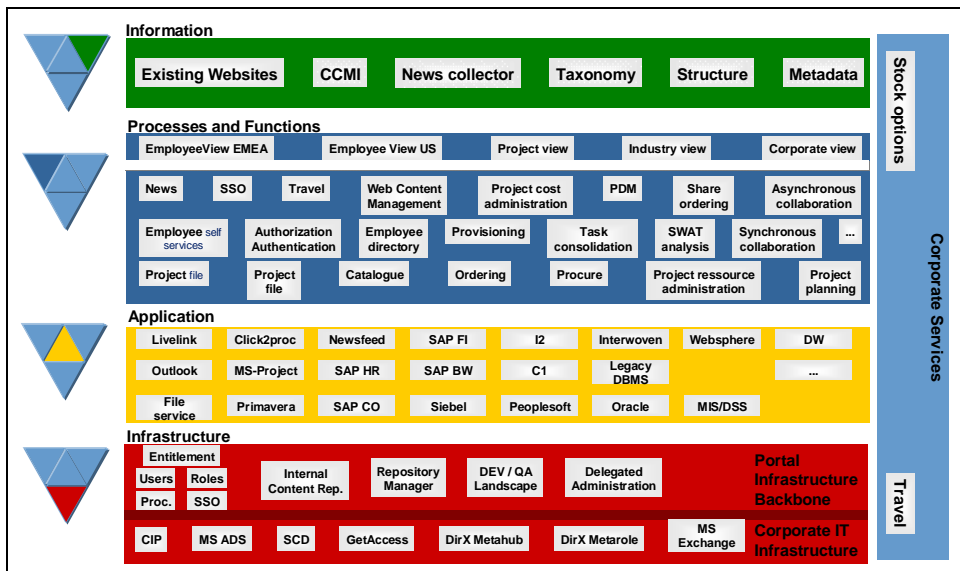
The global IT architecture is composed of four major elements:

- Functional & process architecture
- Information architecture
- Application architecture
- Infrastructure architecture



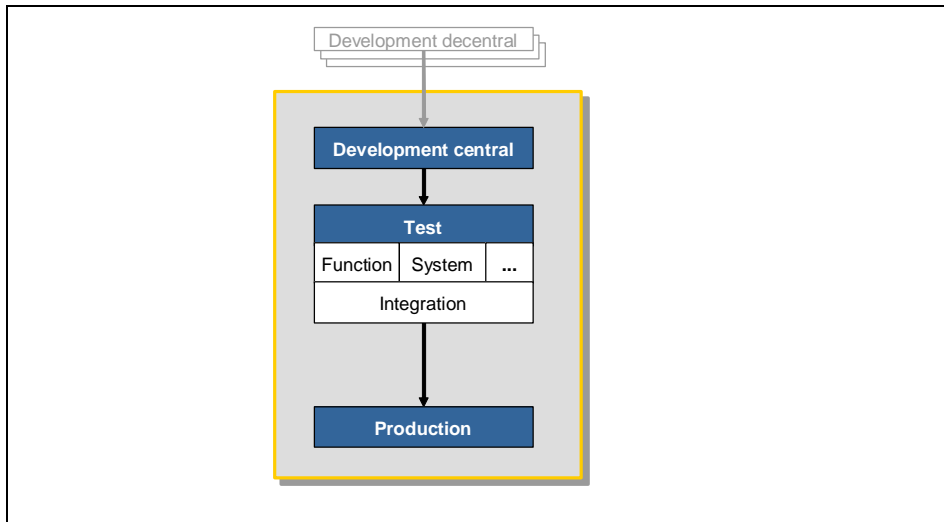
Picture 12: Global IT Architecture [Reference 2]

The following picture shows the logical framework of EPS:



Picture 13: Logical EPS Framework [Reference 2]

The Enterprise Portal environment is built up in a 3-tier architecture. The following illustration gives a top level overview over the environments to be operated by the provider:



Picture 14: Portal Environments

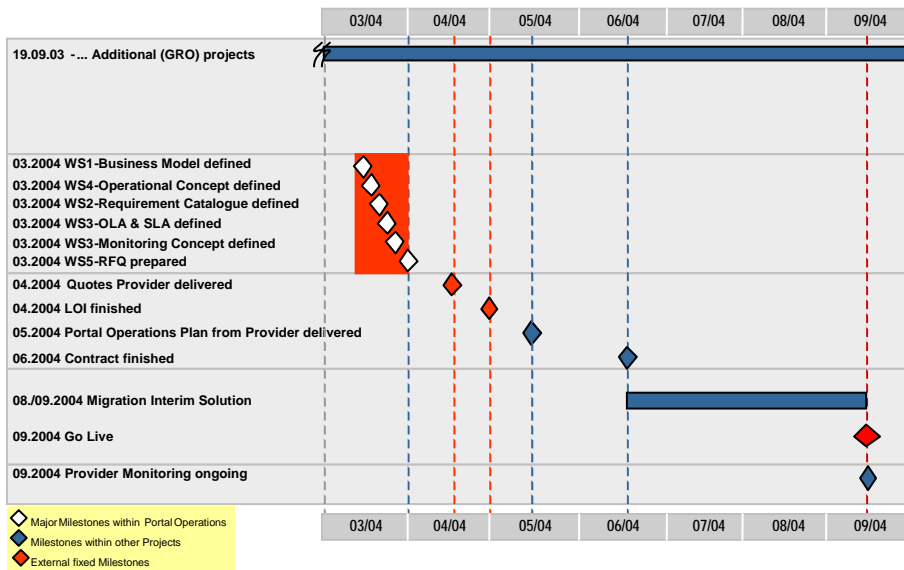
Several decentralized applications (portal content) are integrated via iViews or iFrames in the portal. These systems are typically located decentrally and are hosted by the application owner. These systems have to be accessible from the portal environment.

A detailed list of these applications is part of the appendix.

A.1.3 Interim Solution / Future Solution

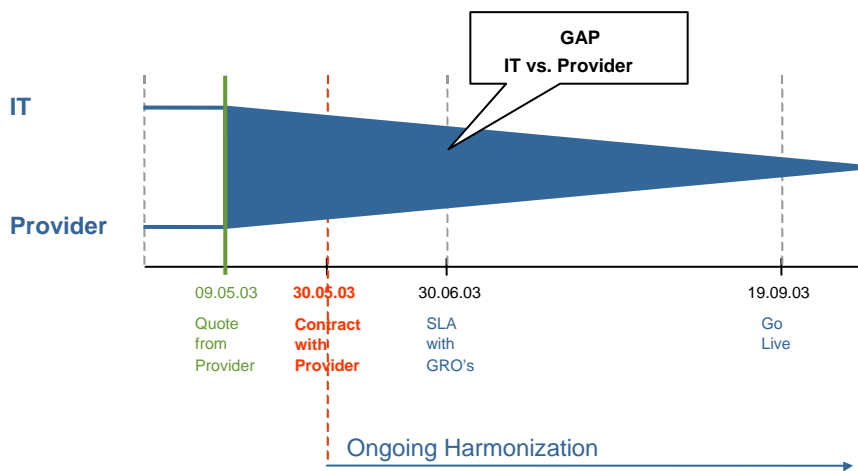
Based on the time requirement of the first project, the defined go live date of [YOUR DATE HERE], and the delivery date of the desired features in the mySAP Enterprise Portal, it wasn't possible to organize a standard request for quotation (RFQ).

So an Interim Solution with an interim provider was required. Planned end date of the interim solution will be [YOUR DATE HERE]. Then, a future (or final) provider will operate the portal. The selection of the future provider will be based on an RFQ process.



Picture 15: Sample RFQ process for 2004 (timelines may be changed)

Caused by the timeframe to initiate the interim solution there is an ongoing requirement to harmonize the IT requirements with the interim provider.



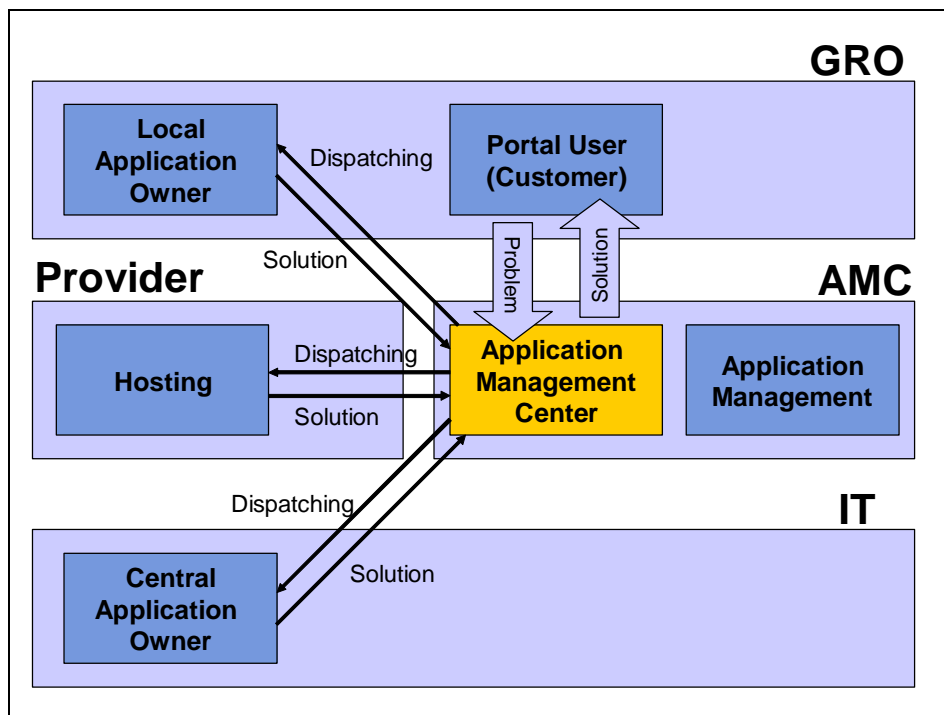
Picture 16: Sample timeline of ongoing harmonization of IT requirements with interim provider

A.1.3.1. Future AMC Migration

It's planned for the Enterprise to implement a shared service organization. This organization will contain an application management center (AMC). In the future it's planned to transfer responsibilities (e.g. future contract owner shall be AMC instead of IT) and processes to AMC. Operation processes will be based on ITIL norms. So it is a further requirement to enable the future migration to AMC.

A.1.3.1.1. Future Support Concept (within AMC Migration)

In the future solution the user help desk of the provider will be replaced by the central AMC (Application Management Center) as a shared service organization of the Enterprise.



Picture 17: Support Concept – Future Solution

A.2. Support

The following concept describes the support requirement for the interim solution (GoLive [YOUR DATE HERE]) and the future solution (estimated on [YOUR DATE HERE]). Basis for this concept is the support concept for the existing employee portal [1].

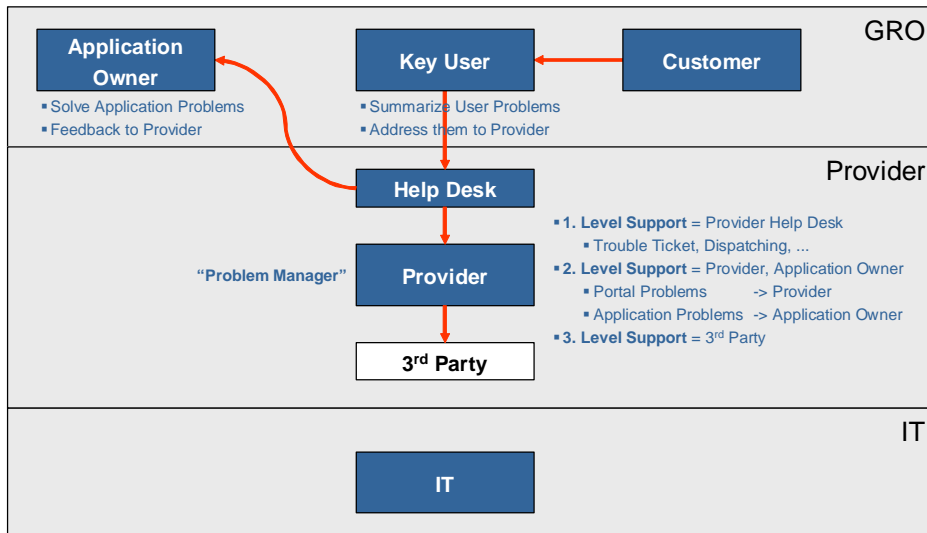
A.2.1 Support Concept

A.2.1.1. Global Definition

Involved parties:

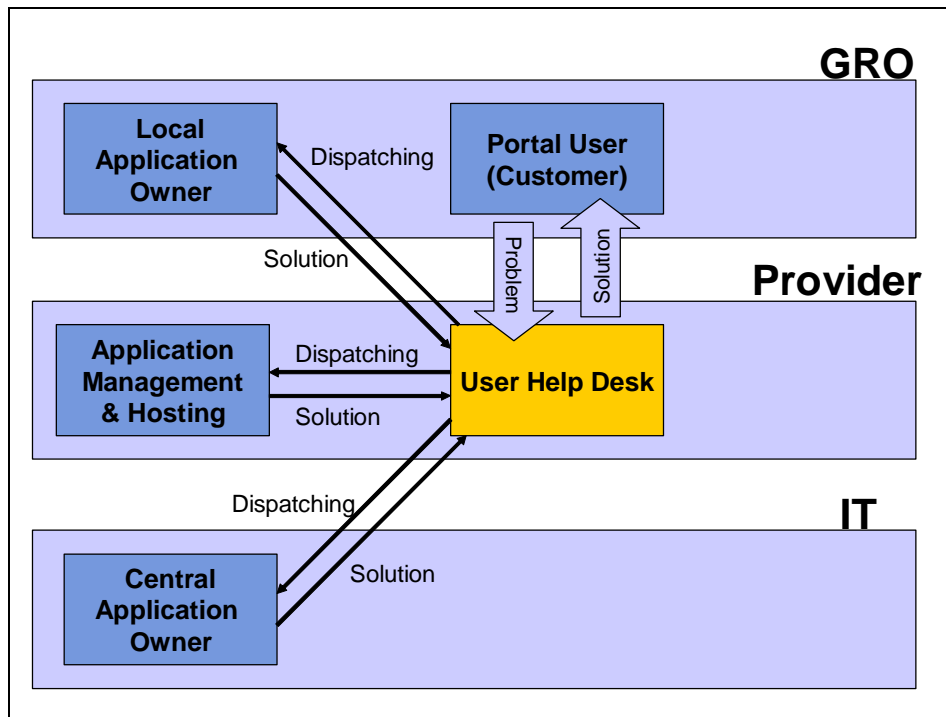
- GRO
- Provider
- IT

The single point of contact for all employee users of the portal interim solution will be the Key User. Each GRO has to define key user for application support. He should be able to solve facile problems. If he is not able to solve it, the key user must summarize the problem and address them to the user help desk of the provider. The support concept will be described in the following picture:



Picture 18: Support Concept – Interim Solution Overview

The support concept regarding the user help desk will be described in the following picture:



Picture 19: Support Concept – Interim Solution User Help Desk

The support is separated in three levels:

- First level support
- Second level support
- Third level support

The first level support will be provided by the User Help Desk (UHD). The main tasks are:

- Ticket creation
- Solutions of easy problems
- Dispatching to second level
- Feedback to user

The second level support will be provided by the application owner (IT or GRO) and the application management of the provider. Main tasks are:

- Solution of Problems
- Dispatching to third level
- Feedback to User Help Desk

The third level support will be provided by the SAP or hardware manufacturer.

In the future solution the user help desk of the provider will be replaced by the central AMC (Application Management Center), see chapter “Interim Solution / Future Solution”.

A.2.1.2. Call Types

Following call types are defined:

- User problems (user, password, ...)
- Usage problems (navigation, personalization, ...)
- Connectivity problems (access, SSO, ...)
- Content problems (content quality, ...)
- Technical problems (stability, availability, performance...)
- Portal application problems (Error messages, ...)
- Other application problems (travel, local applications...)
- Organizational problems (responsibilities, ...)

The responsibilities for problems will be described in the following matrix:

Call Type	Main Responsibility for solution	Organization
User problems	User Help Desk and Application Management	Provider
Usage problems	User Help Desk	Key User
Connectivity problems	Application Management	Provider
Content problems	Content Owner	IT / GRO
Technical problems	Application Management	Provider
Portal application problems	Application Management	Provider
Other application problems	Application Owner	IT / GRO
Organizational problems	Governance	IT

For all non-portal-specific requests the current implemented support processes will be used. The key-user ensures that only portal-specific incidents will be routed to the User Help Desk of portal provider.

For prioritization of call types following categories are defined:

Description	Priority	Response time
A report of " very high " priority is justified if normal business operations may suffer very serious consequences. Work where no delay can be tolerated cannot be performed. This is the result of a complete system failure or by faults in key functions (i.e. entire database server and central instance unavailable, Database crash, no transaction processing possible) of the system in an operational environment. The report requires immediate processing since the fault can result in considerable losses.	1	1 h

<p>A report of "high" priority is justified if normal business operations may suffer serious consequences. Necessary work cannot be performed. This is the result of a system function which is urgently required in the current situation either failing or experiencing a fault. The report requires prompt processing, since any delay in the trouble shooting can result in serious disruption.</p> <p>Examples: Partial system unavailability</p>	2	2 h
<p>A report of "medium" priority is justified if normal business operations are impaired. This is the result of a less significant faulty or failed system function. Work around solution is available.</p> <p>Examples: No deadline connected to process Production system specific problem that doesn't hinder users from carrying out their work.</p>	3	4 h
<p>A report of "low" priority is justified if normal business operations are not impaired or are impaired only slightly. This is the result of a faulty or failed system function which is not required on a daily basis or is used to only a limited extent.</p> <p>Examples: One user is affected; Alternative solutions are possible</p>	4	6 h

A.2.1.3. Support Procedures

For solving incoming calls following processes are defined:

- A support ticket has to be created for all incoming calls.
- The support ticket will be qualified (type and priority) by the User Help Desk
- In case of easy problems (e.g. usage, login) the problem will be solved by the first level support. The first level creates solution documentation and communicates the solution directly to the end user.
- If the first level can not solve the problem, the problem will be dispatched to the assigned second level support. The first level informs the end user about error category and planned solution time. This information will be provided to the end user:
 - in 90% of all cases during 8 hours
 - in 100% of all cases during 2 working days
- The second level support solves the problem, creates solution documentation and communicates the solution to the first level. The first level communicates the solution to the end user and closes the case.

Parameter	Definition
Solution Quotes	<ul style="list-style-type: none">▪ Solution through User Help Desk: 50%▪ Dispatching to Second Level: 50%
Support Times	<ul style="list-style-type: none">▪ Normal Office Times 08:00-17:00
Languages	<ul style="list-style-type: none">▪ German, English

A.2.1.4. Support Volumes

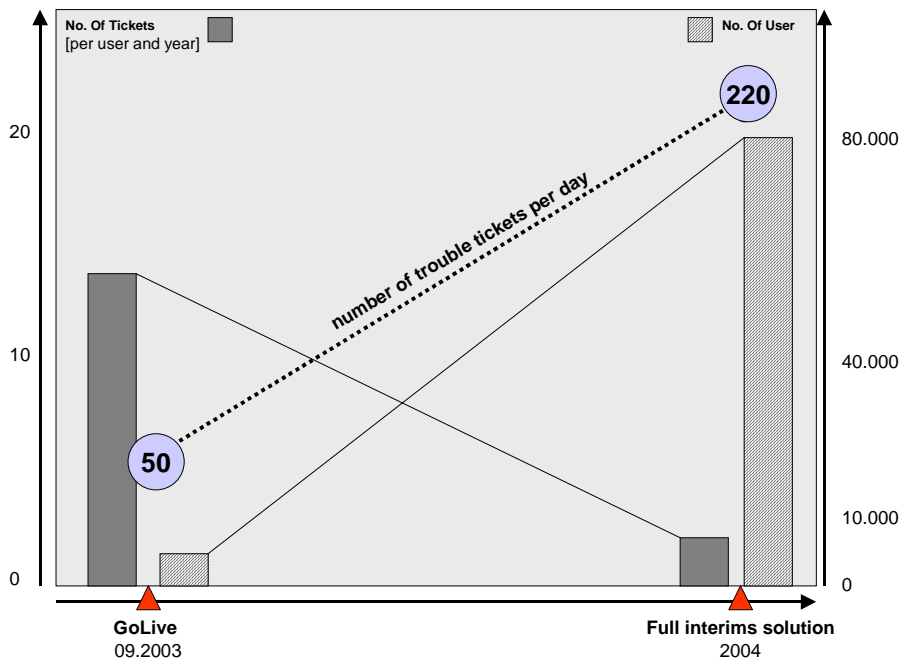
The support volume estimation is based on the user rollout (see business model):

Estimated number of trouble tickets at Go Live (1500 users):

- 12 per user per year
- 50 per day

Estimated number of trouble tickets after Rollout interim solution (80000 users):

- 1 per user per year
- 220 per day



Picture 20: Expected Increase of Call Volume within Interim Solution

A.2.1.5. Reporting

The Provider delivers a monthly reporting about the committed services and KPIs.

The following table contains a list of parameters that have to be reported by the provider. The table lists the parameters, their description and their metrics. The characteristics of the mentioned parameters are added in the appendix.

Parameter	Description	Metrics
Supported Operation Time (UHD)	The Supported Operation Time is the hours of operation during which the User Help Desk is available.	Operation Time / calendar days and hours
Average Hold Time (UHD)	Average hold time measures the average number of seconds a customer waits in the queue after processing by an automatic call distribution (ACD) system to reach a help desk agent.	Queue time after entry into the ACD in seconds
Abandonment Rate (UHD)	Abandonment Rate measures the total number of customers who hang up while waiting after processing by an automatic call distribution (ACD) to reach a help desk agent.	Total number of customers who enter the ACD and number of customers who hang up while waiting after processing.
Closed on Initial Contact (UHD)	Percentage of incidents submitted via telephone to the User Help Desk that is resolved on initial contact, i.e. without call back and without transfer of the incident.	Number of requests in percentage that are closed at the end of the initial contact.
Initial Reaction Time	The time between logging an incoming incident and the beginning of working on the problem according to the problem management process, i.e. acceptance of the incident, depending on the incident priority.	Initial Reaction Time in hours
Customer	This measures the overall satisfaction of end users with the services	Annual surveys with a

Parameter	Description	Metrics
Satisfaction Index (CSI)	(typically using a survey tool).	scale from 1 to 5.

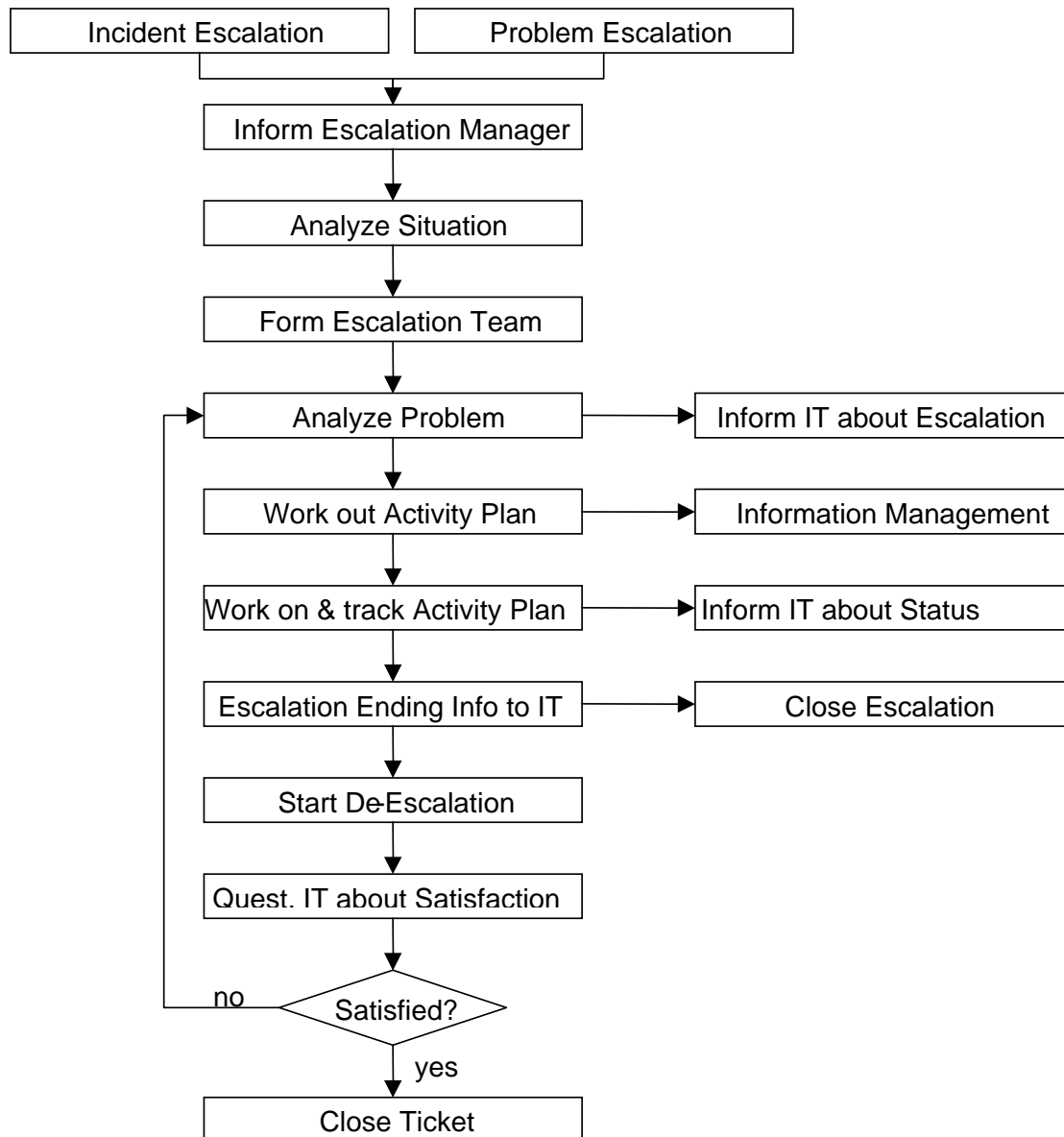
A.2.2 Trouble Ticketing

Every customer call leads to a trouble ticket. Trouble Tickets have different types of user requests to enable analyzing of frequency and request types.

The provider will implement a trouble ticketing systems of his own choice or connect to an existing solution.

A.2.3 Quality Assurance and Escalation Management

The Escalation Management defines the process of escalation between the involved parties. All problems related to the portal which can't be solved directly between application owner, key user, customer and provider has to be addressed to IT. The following illustration gives a short overview of the escalation management procedure.



Picture 21: Escalation Management Procedure

IT is the only escalation addressee for all contracting parties. IT defines an Escalation Manager for these cases. The escalation manager is the owner of the escalation and will coordinate the escalation process and will define the next steps until a resolution. All information needed to manage the escalation has to be addressed to the escalation manager. He informs the escalation sender about status and ongoing activities and track escalations in direction of the solution provider. After the solution of the escalation the escalation manager communicate the solution to the involved parties.

The escalation is initiated after the transgression of defined escalation timeframes. These timeframes are depending of the incident priorities. Following parameters has to be defined and respected:

Parameter	Description	Metrics
Initial Reaction	The time between logging an incoming incident and the beginning of	Measurement in

Parameter	Description	Metrics
Time	working on the problem according to the problem management process, i.e. acceptance of the incident, depending on the incident priority.	minutes or hours
Maximum processing time	Defines the maximum amount of time (MPT) in which the incident is resolved per priority level. The Problem Resolution Rate is the percentage of incidents resolved out of the total number of incidents logged to Application Maintenance within the maximum.	measurement in hours
Downtime	Periods of time in which the system is not available. Three parameters of downtime is the maximum continuous downtime, the maximum number of downtime events per month and maximum downtime per month.	Downtime in hours

The defined characteristics of parameters are itemized in a spreadsheet at the end of this document.

Services

The following services have to be delivered to portal operation:

- Manage User Information (User Administration)
- Solve Usage Problems (1st level Support)
- Provide Maintenance (2nd Level Support)
- Provide Integration of Manufacture Support (3rd Level Support)
- Provide Basis Support (Portal Administration)
- Schedule and Monitor Jobs & Interfaces (Monitoring & Reporting)
- Major Enhancements (Changes to Portal Environment)

The services deliver solutions for problems and changes caused by usage or operation of the portal. Several processes are assigned to these services which will be described later in this document.

A.2.4 Manage User Information (User Administration)

The service Manage User Information consists of three main tasks:

- Administration of User data
- Authorization Management
- License Management

Irrespective of the technical implementation, user data has to be administered either in a central user administration tool or with an external tool like a centrally or decentrally installed LDAP server. Some user administration tasks are performed in the portal, other tasks will be done from decentralized services. Contingently a decentrally installed LDAP Server has to be connected to the portal environment.

The access of users to the portal is controlled via the authorization management. Roles, Groups and Users have to be created and maintained. For accessing integrated applications a Single Sign On is implemented which enables access without re-logout to other systems.

License Management secures the central administration of all needed and used soft- & hardware licenses.

A.2.5 Solve Usage Problems (1st Level Support)

According to the Support Concept, this service delivers support to key users via the user help desk (UHD). The User help desk is the single point of contact for the key users for all kind of problems and incidents which can be forwarded to the application maintenance (2nd Level support) if necessary. Email and telephone access are the defined access channels to the UHD. In the further ongoing optimization it could be useful to integrate a web-based trouble ticketing. The user help desk classifies and prioritizes the problems and incidents in a trouble ticketing tool and is responsible to solve the tasks. If necessary, the UHD forward the incident to the responsible organizations according to the support concept. The UHD provides help in case of:

- Questions (like usage problems, responsibilities, ...)
- Problems (like network performance problems, unknown passwords, ...)

After correction of incident the UHD communicates the solution to the key user. The UHD is responsible for ticket tracking and to keep the OLA regarding end user support.

According to the support concept the UHD has to analyze the problem if the portal environment or integrated GRO application are causing the problem. If the error of the problem is caused by the portal environment, the UHD try to solve the problem or forward it to the second level support.

If the problem is caused by an integrated GRO application the UHD will inform the application owner to solve the problem. The application owner solves the problem and informs the UHD about the solution.

In both cases the UHD is responsible for call tracking and monitoring. The communication of status and solution is also a main task of the UHD.

A.2.6 Provide Maintenance (2nd Level Support)

This service Provide Maintenance (PM) secures the 2nd level maintenance for portal operation. This includes tasks like:

- Solving problems forwarded by UHD
- Forwarding problems to 3rd Level Support provided by manufacturer
- Bug fixing
- Implementing change requests
- Support of key user in reply of problem solution
- Execution of recurring tasks
- Reporting

Provide Maintenance delivers different solutions for incoming requests and incidents. If incident occurs the first time, PM will start with a workaround solution which enables the end user to proceed with his work. After delivering of the workaround PM proceed with the incident analyzing and will deliver a solution. If the incident occurs more often, PM has to provide a solution to avoid this incident by analyzing the cause of incident. PM has to eliminate the incident e.g. by implementing a patch or changing portal configuration.

This service is managed by the provider.

A.2.7 Provide Integration Manufacturer Support (3rd Level Support)

The service "Provide Integration Manufacturer Support" ensures the 3rd level support for the portal environment. The provider has to integrate the manufacturer support into the defined support concept of portal operation. The provider is the responsible organization to make a contract with the manufacturer of the portal environments.

The portal environment comprises all components to operate the portal (e.g.):

- Network Components
 - Router
 - Network Connectivity
 - Network
 - ...
- Security Components
 - Firewall (Hard- & Software)
 - Proxies (Hard- & Software)
 - ...
- Server
 - Portal Server
 - Backup Server
 - ...
- Software
 - Operating System
 - Portal Software (SAP)
 - Database
 - Backup Software
 - ...

The provider has to pay attention to include all portal environments into support contracts with manufacturers of hard- and software.

A.2.8 Provide Basis Support (for Operation)

The service “Provide Basis Support (for Operation)” is responsible for tasks like:

- Coordination of Portal Operations (e.g.)
 - Capacity & availability planning incl. planning of downtimes
 - Software upgrades
 - Backup and restore
 - ...
- Problem- and Change Management (e.g.)
 - Hardware
 - Software
 - Configuration
 - Performance
 - ...
- Portal Administration (e.g.)
 - Data archiving & reorganization
 - Release Management/-planning
 - Network Management
 - HW Management
 - DB Management

- Security Management
- ...
- Transport Management within Portal Landscape

The service “Provide Basis Support” coordinates these tasks and its planning.

A.2.9 Schedule and Monitor Jobs & Interfaces (Monitoring & Reporting)

The service “Schedule and Monitor Jobs & Interfaces” is responsible for

- Scheduling and monitoring of portal operation
- Providing Reports & Statistics
- Problem & change management concerning portal operation

The monitoring of portal operation guaranties an optimization of proactive support to avoid differentiated problems. To ensure high availability of portal environment (hard- & software, applications, network, etc.) this service is essential.

The outcome of the monitoring will be provided in statistics and reports. The reporting enables portal transparency for IT.

Problem & change management is pushed, if the monitoring and reporting recognizes errors or problems of portal environment.

Following Parameters has to be monitored and reported:

Parameter	Definition	Metrics
Application Response Time	The Application Response Time is measured on the application server with SAP standard workload monitors for the Core Business Transactions	The minimum required core business transaction time is measured on the application server with SAP standard workload monitors in seconds
Application Availability	It is defined as establishing a connection through a demarcation point to the hosting site and using the desired application. Availability of each application is measured separately. The Application Availability only pertains to mySAP EP 6.0, Single Sign On and Search and does not include availability outages that are caused by network or server failures	MTBF = Mean Time Between Failure MTTR = Mean Time To Recovery Availability = (MTBF / (MTBF+MTTR)) X 100
Maintenance Window	Maintenance Window is the commitment concerning time specific upgrades, migration and consistent versions across all registered users.	Maintenance Window in hours for a specific period
Supported Operation Time Application Maintenance	The Supported Operation Time Application Maintenance is the hours of operation during which Application Maintenance is available to customers. On-call duty operation time is the state of stand by in order to solve critical problems (priority 1).	Operation Time / calendar days and hours
On-call Application Maintenance duty	On-call duty operation time is the state of stand by in order to solve critical problems (priority 1).	Operation Time in Hours of on-call duty
Maximum Processing Time/Problem Resolution Rate	The Maximum Processing Time (MPT) defines the maximum amount of time the incident is resolved per priority level. The Problem Resolution Rate is the percentage of	The Maximum Processing Time (MPT) is measured in hours; the Problem

Parameter	Definition	Metrics
	incidents resolved out of the total number of incidents logged to Application Maintenance within the maximum processing time defined for a specific priority level.	Resolution Rate is reported in percentage.
System Availability	The system availability category addresses the issue of server uptime of a managed server environment. The service transfer point is the Router exit at Provider site	It is measured the ratio of time that the system is actually available to the total time in the monthly interval that the system is available, expressed as a percentage.
Downtime	Defines the Period in which the system is not available. The downtime consists of three parameters. 1. Maximum Continuous Downtime (MCD); 2. Maximum Number of Downtime Events per Month (MNDEM), 3. Maximum Downtime per Month (MDM).	In hours for 1. Maximum Continuous Downtime (MCD); 2. Maximum Number of Downtime Events per Month (MNDEM), 3. Maximum Downtime per Month (MDM).
System Performance	The system performance is expressed by the Average Response Time (ART), including Local Area Network (LAN) components of the Service Providers' environment, measured via the Computing Center Management System CCMS. All LAN components outside the Service Providers' environment will not be taken into consideration, especially the LAN components of GROs. The GRO is fully responsible for performance issues within their own LAN.	Measured in percentage via the Computing Center Management System CCMS

The characteristics of the parameters and the reporting intervals will be defined in the spreadsheet in the appendix.

A.2.10 Major Enhancements

The enterprise portal is a complex system and changes to the initial configuration and contents will occur. New projects will come into the portal and this service ensures the detailed planned implementation of new projects. It differentiates from minor enhancements like bug fixing or change requests to the productive environment.

The service "Major Enhancements" includes the activities to implement enhancements to the portal like implementation of

- New Projects:
New projects based typically on GRO specific or IT initiated projects.
- Environment Enhancements
Environment enhancements depend typically on the amount of users.

It is even possible that complete systems should be integrated to the portal environment. This would be a major enhancement, too.

A.3. Processes

The processes which support the delivered services of the provider work will be described in this section. The service types are the actors in these processes, but one service can be involved in one or more processes.

The processes described are based on the AMC Business Blueprint which refers to principles of standard ITIL and the Enterprise Process House.

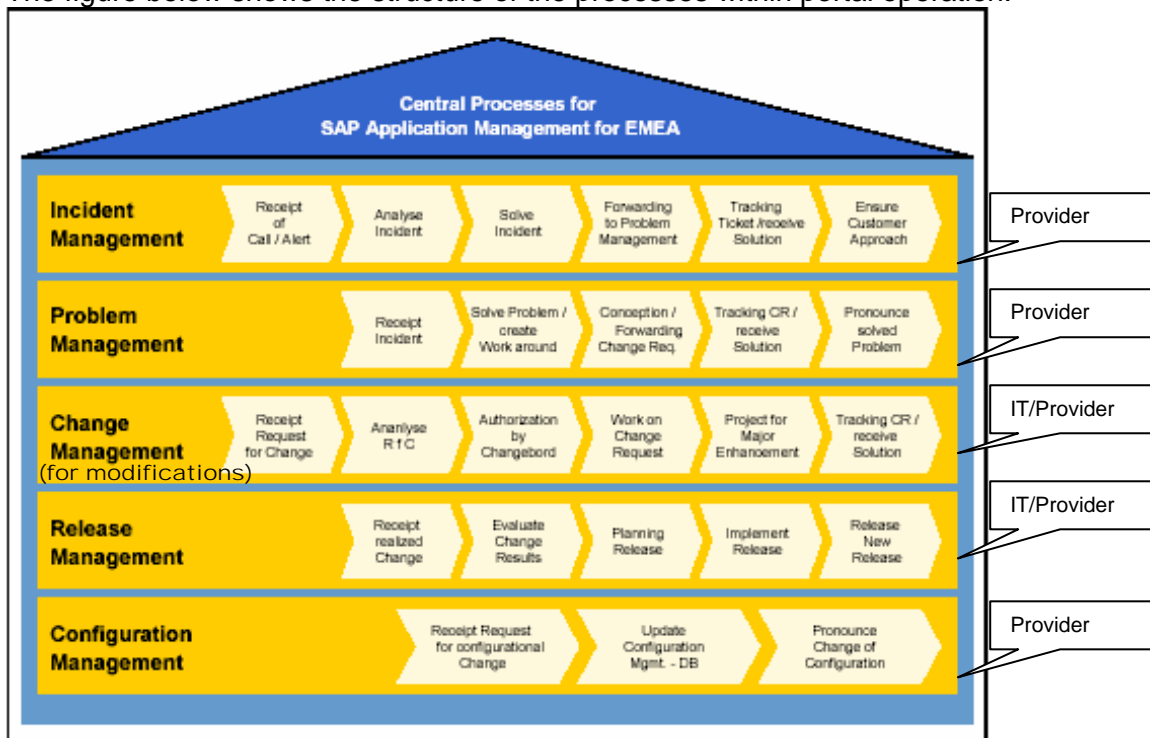
The delivered processes support the portal operation. They classify incidents and accompany the incident from beginning to end. Portal or application malfunction, problems or user feedback can lead to a change of the portal environment.

These incidents or changes has to be solved, but although all the activities have to be properly documented and the software stored and maintained. Daily tasks have to be performed additionally.

The processes delivered for portal operations are:

- Incident Management
- Problem Management
- Change Management (for modifications)
- Release Management
- Configuration Management

The figure below shows the structure of the processes within portal operation:



Picture 22: Structure of processes within portal operations [Reference 3]

An incident is any event that is not part of normal portal operation. It cause or lead to an interruption, mal function or decrease of quality of portal operation. An incident can pass

through all processes of portal operation and is introduced by a user action (support call) or by the monitoring.

Here is a possible sequence of incident solution over all processes:

An incident is received by Incident Management, then it will be analyzed, solved and the solution is communicated to the incident sender. If needed, the incident will be forwarded to the Problem Management. The Problem Management creates the work around or solves the problem. Contingently a change to portal environment has to be done. Then, Problem Management sends a change request to the Change Management. These two processes are managed by the provider. The Change Management analyzes the change request, authorizes the change request and work on it. If the incident should be changed within Release Management, the Release Management plans the release and implements it. The Change Management and Release Management are processes with collaboration of provider and IT. Generally the provider will be responsible for the technical doing and the documentation. For the authorization of changes which can lead to changes in the charging model like increased fees or charging IT will be the responsible organization.

When the change of release is realized, it is routed to the configuration management. The Configuration Management updates the configuration of the portal and records it in the configuration database. This Process will be done by the provider.

A.3.1 Incident Management

The Incident Management receives calls from the key users. After receipt of the incident the incident is analyzed and a solution will be provided. If necessary the incident is forwarded to the problem management and will be tracked by the ticket tracking tool. After solving the incident the solution will be communicated to the end or key user. The detailed process is described in the section support. Please refer to it for detailed information on the work of UHD and working on user problems and questions.

An alert can be recognized by the monitoring of hardware, software and network. This alert is forwarded to the Problem Management.

The Provider is the responsible organization for the Incident Management.

The tasks have to be documented in e.g. service reports, incident statistics and audit reports.

A.3.2 Problem Management

The Problem Management solves the incident forwarded by the incident management or creates a work around. If the incident occurs continuously, it is possible to make changes on the portal environment e.g. on configuration of hardware, software or the network. This change has to be forwarded to the Change Management. The tasks have to be documented and tracked by the Problem Management. After solution the problem has to be communicated.

The Problem Management is controlled and performed by the provider.

Please refer to the chapter Support for more detailed information about the problem management.

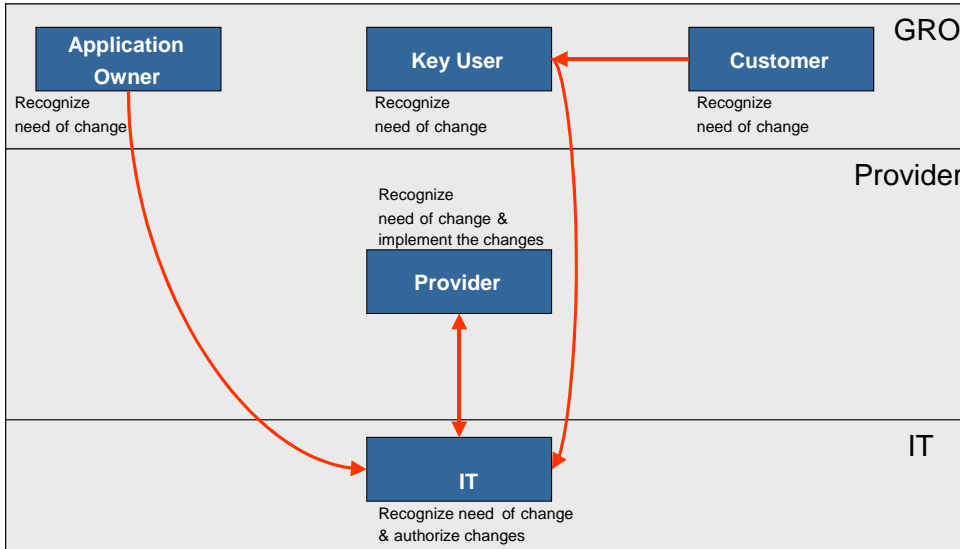
A.3.3 Change Management (for Modifications)

The Change Management has to differentiate two categories of incidents:

- Incidents where an authorization of IT is required
- Incidents where no authorization of IT is required

Changes to the portal can be identified by the end-/key users, the application owners, IT and the provider itself. The GRO's in their roles as customer (end-/key users) and application owner request the change at IT. IT will evaluate the request and will forward the request after authorization to the provider. The provider will plan the change and implement the changes to the portal environment (possibly by forwarding the request to the Release Management). IT will inform the GRO's about the proceeding of the change request and the implementation. Changes and incidents which do not effect the content and applications, but e.g. the hardware or configuration for properly portal operations, have not to be authorized by IT when these changes and incidents do not effect the charging model between IT and the provider. The provider can realize these changes by itself to ensure properly portal operation. If the charging model is affected, e.g. if more hardware is necessary, the provider has to inform IT about the changes and has to demand authorization of IT.

The following illustration gives an overview if the Change Management process and communication.



Picture 23: Change Management Process

All changes of portal environment have to be documented by the provider.

A.3.4 Release Management

Release Management contains the following aspects:

- Integration of new applications
- Application Development and Modifications
- Timelines for Releases
- Change Control Process

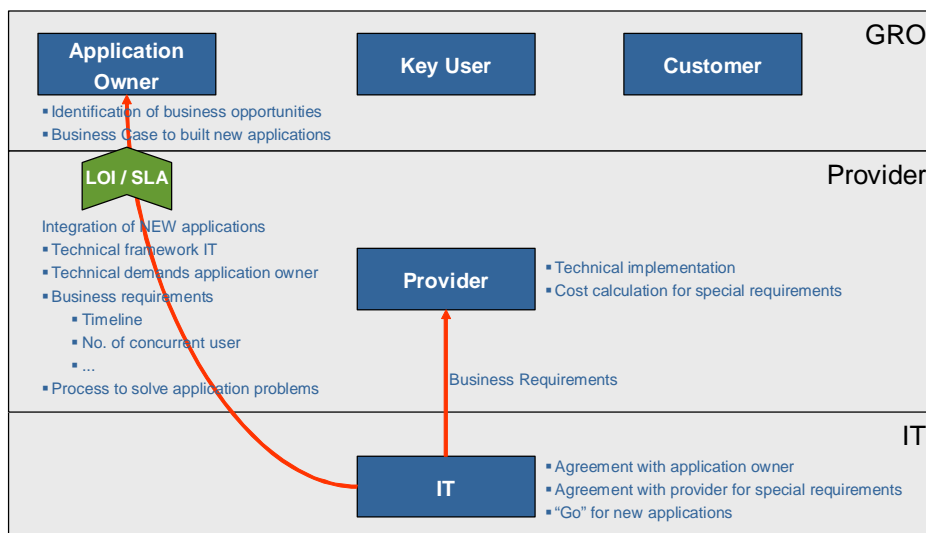
These aspects will be defined in detailed in the following chapters.

A.3.4.1. Integration of New Applications

Due to the complex organizational structure of portal operations an integration procedure for new (or changed) applications into the portal is described in this chapter.

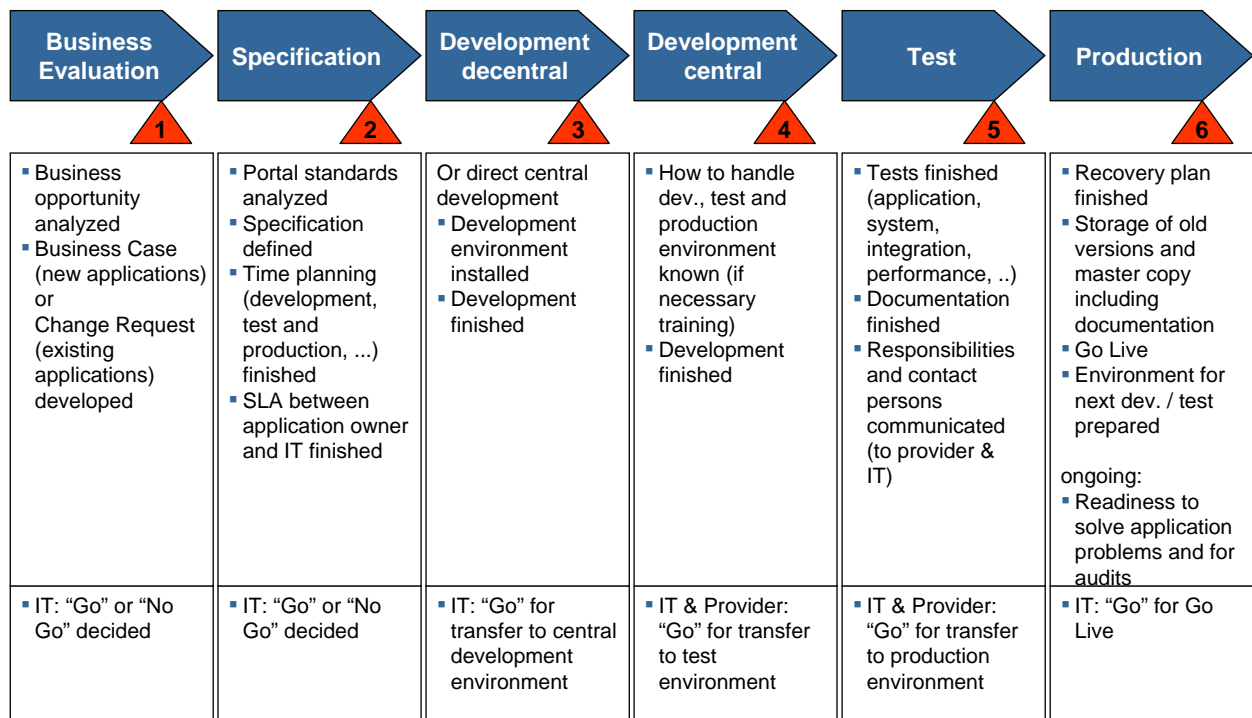
The application owner recognizes a business opportunity and defines a business case. If the application owner accepts the opportunity, IT will conclude an agreement (LOI / SLA) with him defining the integration of the new application. Topics of this agreement are e.g. the technical framework, technical & business requirements and the support process for the new application. IT communicates the “Go” for the new application to the application owner and to the provider. After forwarding the business requirements to the provider, the provider starts with the technical planning and implementation. In case of special requirements the provider has to calculate the additional costs. For these costs, a special agreement between IT and provider will be concluded. Apart from that, the integration procedure follows a standard integration process with standard agreement.

This procedure is shown in the illustration below.



Picture 24: Integration Procedure for New Applications

A.3.4.2. Application Development and Modifications



Picture 25: Overview of Release Management Process

A.3.4.2.1. Step 1: Business Evaluation

Following Tasks have to be delivered:

- **Business opportunity analyzed**
To identify and analyze business opportunities is within the responsibility of GRO's
- **Business Case (new applications) or Change Request (existing applications) developed**
For new applications it's mandatory to develop a business case and hand it over to IT
For changes in already implemented applications it's mandatory to develop a change request and hand it over to IT
- **IT: "Go" or "No Go" decided**
IT decided based on the business case or change request, if the new or changed application will be integrated within the portal.

Result of Step 1:

- Business Case (or Change Request) accepted

A.3.4.2.2. Step 2: Specification

Following Tasks have to be delivered:

- **Portal standards analyzed**
All applications have to keep the portal (defined by IT) and the Enterprise standards.
- **Specification defined**
GRO's develop the application specification based on the portal standards.
- **Time planning for development, test and production finished**
GRO's develop a time plan for the application implementation, especially the timeframes for using the development, test and production environment.
- **SLA between application owner and IT finished**
The implementation of new applications leads as well to rights and duties.
- **IT: "Go" or "No Go" decided**
IT decides based on the specification, time planning and SLA if and when the application can be implemented.

Result of Step 2:

- Specification defined and SLA between IT and Application Owner finished

A.3.4.2.3. Step 3: Development decentral

Following Tasks have to be delivered:

- **Or direct central development**
GRO can decide if they develop on their own, decentralized development environments or if they want to start directly on the central development environment.
- **Development environment installed**
GRO's have to install the decentralized development environment according to the IT standards.
- **Development finished**
Responsibility of GRO's.
- **IT: "Go" for transfer to central development environment**
IT decides when the central development environment can be used according to the overall rollout requirements.

Result of Step 3:

- Decentralized development finished

A.3.4.2.4. Step 4: Development central

Following Tasks have to be delivered:

- **How to handle dev., test and production environment known (if necessary training)**
To secure that only qualified people make changes within the environments.
- **Development finished**
Responsibility of GRO's.
- **IT & Provider: "Go" for transfer to test environment**
IT and provider decide when the test environment can be used according to the overall rollout requirements.

Result of Step 4:

- Handling of environments is known by developers
- If necessary transfer from decentralized to central development environment finished
- Central development finished
- Timeframe for migration to test environment defined

A.3.4.2.5. Step 5: Test

Following Tasks have to be delivered:

- **Tests finished (application, system, integration, performance, ...)**
Responsibility of GRO's.
- **Documentation finished**
Responsibility of GRO's.
- **Responsibilities and contact persons communicated (to provider & IT)**
GRO has to define responsibilities and contacts for the time after go live e.g. to ensure problem solving.
- **IT & Provider: "Go" for transfer to production environment**
IT and provider decide when the production environment can be used according to the overall rollout requirements.

Result of Step 5:

- Tests finished
- Documentation finished
- Contacts communicated
- Timeframe for migration to production environment defined

A.3.4.2.6. Step 6: Production

Following Tasks have to be delivered:

- **Recovery plan finished**
GRO has to define a recovery plan (fall back solution) before go live.
- **Storage of old versions and master copy including documentation**
GRO's have to store old versions and a master copy of the actual application version including the corresponding documentation.
- **Go Live**
- **Environment for next dev. / test prepared**
GRO has to ensure that the central development and the test environment are prepared for the next GRO.
- **IT: "Go" for Go Live**

Result of Step 6:

- Recovery Plan finished
- Master copy and documentation secured
- Go live finished
- Central development and test environment prepared for next project

ongoing:
Readiness to solve application problems and for audits
 Responsibility of GRO's.

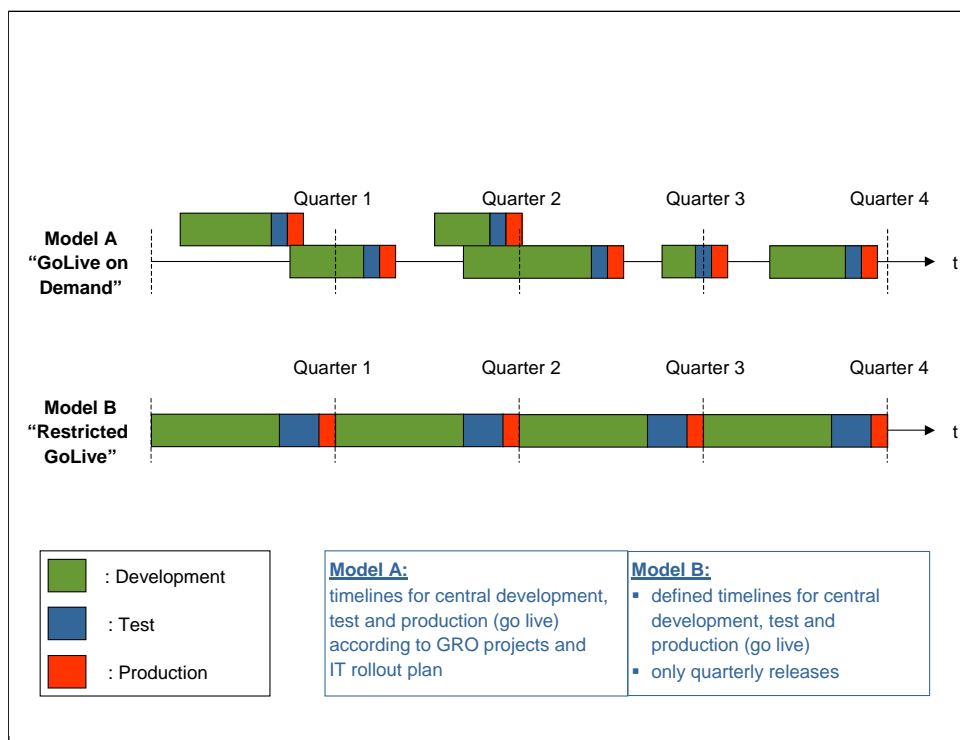
A.3.4.2.7. Remarks

- The Test-System has to be recoverable after integration of dirty development packages

A.3.4.3. Timelines for Releases

For an efficient Release management, the timeline will be realized in two models:

- Model A – “GoLive on demand”
- Model B – “Restricted GoLive”



Picture 26: Release management

For the interim solution (starting on [YOUR DATE HERE]) there will be provided a “Go Live on demand” (Model A). The model ensures fast implementations of new GRO projects after their commitment.

After an estimated time of 6-12 months there will be a switch to a “Restricted Go Live” (Model B). This procedure enables extended usage of the environments by projects within the defined development timeslot. It ensures an integrated testing procedure in the test timeslot over all projects. It leads to a defined go live for all projects quarterly. This model ensures optimized project management and a better test solution (integration & performance tests). Besides this, there will be less effort for implementation because of consolidation of tasks (e.g. software logistic, testing, communication, Go Live support).

A.3.5 Configuration Management

The configuration Management process contains these main activities:

- Planning of configuration
- Identification of configuration structure
- Monitoring the Configuration changes
- Verifying and Audit of configuration management

The organizational and technical context of configuration has to be defined and organized. This activity is part of the configuration planning. Configuration structures (like Owners, interfaces, documentation, ...) are defined, selected and will be implemented in the configuration documentation by the Identification of configuration structure activity.

The implementation and the status of implementation should be monitored by the activity of monitoring the configuration changes. The reporting of the configuration will ensure the activity of verifying. It is recommended to perform audits or spot checks of configuration management from time to time to ensure properly documented configuration of portal environment.

The change control process manages following types of changes:

- Planned Changes
 - Configuration of the Portal
 - Configuration of Infrastructure
 - Upgrades of Service Packs
 - Integration of new applications
- Unplanned Changes
 - Problem Solutions
 - Configuration of the Portal
 - Configuration of Infrastructure

The following is a list of components that were either created or imported in a portal environment (by administrators). They may need to be migrated.

- Portal components (par files, i.e. iView programming)
- Portal services (zar files)
- iViews
- Pages
- External Services
- Worksets and roles
- Portal configuration
 - User management configuration
 - System landscape
- Design / styles
- User mapping
- User/group <> Role assignment
- Data sources
- Channel assignment

- IPanel assignment (Unifier)
- Unifier repository (Unifier), Web components (Unifier)
- CM configuration (Content Management)
- Documents (Content Management)
- ACLs (Content Management)
- Indexes (TREX)

Manual changes are allowed only on the development platform. On test- or production platform changes are only possible via automatic software logistic (transport system of SAP). All changes have to be documented in a change control log for each platform (development-, test- and production environment).

Example for a change control log:

#	Date	Change Request	Description	Owner	Status	Comments
1	t.b.d.					

Changes have to be released by IT. In a future solution a central or decentralized release board could be necessary.

A.4. Change Management

For a project success, a strong change management approach is necessary. To provide a change management solution following aspects are essential:

Communication strategy

- Definition of goals
- Impact analysis to define influences
- Definition of communication mediums

Roles and responsibilities

- Identification of roles (e.g. “customer”, “mediator”, “promoter” and “sponsor”)
- Definition of responsibilities
- Definition of goals for each role and responsibility

Definition of the change management process

- Definition of the communication process (e.g. type, medium, frequency)
- Definition of a “key user” and coaching concept
- Coordination with other projects
- Creation of a communication plan
- Training concepts

The goal of the change management is to:

- optimize acceptance of the solution within the involved parties,
- ensure an fast communication between all involved parties,
- coordination with other projects,
- provide an efficient escalation management,
- integrate future GRO's earlier and
- optimize the solution because of iterative learning cycles

B. Technical Topics - Network

B.1. System Landscape

This chapter contains a view of the system landscape. A description of the following components will be provided:

B.1.1 System Architecture

<Overview of entire 3-tier Landscape with integrated Systems and connection with external Resources>

B.1.2 System Parameters

- Sizing
- Configuration
- Scalability

B.1.3 System Connectivity

<VPN, Leased Line, Network Access, Network Load>

C. Technical Topics - Hosting

C.1. Portal Environment

In this chapter the portal environment regarding hard- and software will be described from a technical point of view. Topics in this chapter are:

C.1.1 Hardware (for development-, test- & productive environment)

<Description of hardware, servername, IP-address, admin-users, passwords>

C.1.2 Installed Prerequisites (like OS, DB, Java, etc.)

<OS, databases, webserver, servlet engine, java runtime, directory server, browser, etc.>

C.1.3 Installed Portal Components

<Documentation of installed (SAP) portal components like platform, unification, IIS, lock server.... (structured overview of portal)>

C.1.4 Decentralized Applications and Portal Content

<List of applications, business packages, support packages, applications, additional software, GRO applications, with IP, services, ports....>

C.1.5 Central Applications and Portal Content

- SSO
- Search
- ...

C.2. System Maintenance

This chapter describes the several tasks to maintain a complex portal operation environment. Many tools and technical processes run in this environment and have to be taken into account.

C.2.1 Server Maintenance/Service Downtimes

- Responsibilities for planning and execution of server downtimes
- Tasks, activities, tools

C.2.2 Security

- Security Policies
- Net Security
- Application Security
- Security Maintenance

C.2.3 Monitoring

- Monitoring Policies
- Monitoring Procedures
- Log files
- Application Monitoring

C.2.4 Back up & Recovery

- Backup Policies
- Backup Concept
- Backup Procedures
- Disaster Recovery

C.2.5 Performance Management

- Performance Monitoring
- Performance Tuning

D. Technical Topics - Application Management

D.1. System Administration

This chapter depicts the necessary steps and procedures of system administration in the portal environment for operation. Several tasks have to be considered e.g.:

D.1.1 Installation

- Licenses
- Installation Procedure

D.1.2 Portal Operation

- Key Performance Indicators for Portal Operation
- Start Up & Shut down Procedure
- Start Up & Shut down Tools

D.1.3 User Management

- User Data in Portal Environment/SSO
- User mapping to integrated systems
- User Role Assignment

D.1.4 Portal Maintenance

- Software Logistic Process
- Maintenance Procedures
- Integration of Business Packages
- Integration of new Components
- Integration of new Applications
- Integration of new data sources

D.2. Content Administration

The portal displays the GRO applications in the browser of the user. All displayed content has to follow several guides and technical requirements. This chapter gives an overview about the following topics:

D.2.1 Global Definition

- Definition of Portal Content Types
- Enterprise Style Guides

D.2.2 Definition of Data Model

<Definition of available content types, for whom the contents are available, content organizations (roles, worksets, pages, iViews), assignment structure (user-role assignment, role-workset/pages/iView-assignment)>

D.2.3 Definition of Navigation Model

<Kind of navigation (top-, second level; browse taxonomy iViews, entry points for worksets and folders, definition of entry points in workset, folder or role)>

D.2.4 Administration of Content

<Administrator types (role admin, workset admin, page admin, iView admin), distribution of content administration tasks (usage of super admin, administration workflow definition, tasks and responsables and competencies)>

D.2.5 User Role Assignment

<Naming conventions (roles, user groups); responsible for user role assignment, documentation)>

D.2.6 Role Design

- Language Maintenance
- Role Migration
- Role - Workset Assignment
- Role - Page Assignment
- Role - External Service Assignment
- Role - Channel Assignment

D.2.7 Workset Design

<Concept of workset, structure of worksets, naming conventions, default language; page assignment and external service assignment>

D.2.8 iView Design

- iView Design
- iView Assignment

D.2.9 External Services and Web Resources

<Naming conventions, documentation of namespaces>

E. Appendix

E.1. Contracts

E.1.1 List of SLA/OLA parameters and characteristics

Parameter	Measurement / Calculation	SLA Characteristic	Frequency of Reporting	Chart
Service Level Parameter for User Help Desk (UHD)				
Supported Operation Time (UHD)	Record attendance	8 a.m.-5 p.m., 200x8	monthly	
Average Hold Time (UHD)	Queue time after entry into the ACD in seconds	<60 sec. Of phone calls	monthly	Pie & Line Chart
Abandonment Rate (UHD)	Total number of customers who enter the ACD and number of customers who hang up while waiting after processing	< 8 % of phone calls	monthly	Pie & Bar Chart
Closed on Initial Contact (UHD)	Number of requests in percentage that are closed at the end of the initial contact.	50 %	monthly	Pie & Bar Chart
Initial Reaction Time	Time difference between logging incoming incident and acceptance of the incident	Prio 1: 1 h Prio 2: 2 h Prio 3: 4 h Prio 4: 6 h On call duty (only prio 1): 1 h	monthly	Line Chart
Customer Satisfaction Index (CSI)	Annual surveys with a scale from 1 to 5.	On a scale from 1 to 5: 4 or higher	annual	Bar or Line Chart
Service Level Parameter for Application Maintenance				
Application Response Time	The minimum required core business transaction time is measured on the application server with SAP standard workload monitors in seconds.	95 % < XX	monthly	Line Chart
Application Availability	MTBF = Mean Time Between Failure MTTR = Mean Time To Recovery Availability = (MTBF / (MTBF+MTTR)) X 100	97,5 %	monthly	Line or Bar Chart
Maintenance Window	Maintenance window in hours for a specific period. Secured through a specific calendar with the customer.	10 h per weekend	monthly	
Supported Operation Time Application Maintenance	Operation Time / Calendar days and hours	8 a.m.-5 p.m., 200x8	monthly	
On-call duty Application Maintenance	Record availability	Only for priority 1: 0 h	monthly	
Maximum Processing Time/Problem Resolution Rate	The Maximum Processing Time is measured in hours, the problem Resolution rate is reported in percentage. Reporting involves a monthly percent total for the Problem Resolution Rate.	Priority 1: 24h (1 day) Priority 2: 16h (2 days) Priority 3: 45h (5 days) Priority 4: 120h (15 days)	monthly	
Service Level Parameter for System				
System	It is measured the ratio of time that the system is actually	98,5 %	monthly	Line

Parameter	Measurement / Calculation	SLA Characteristic	Frequency of Reporting	Chart
Availability	available to the total time in the monthly interval that the system is available, expressed as a percentage. Customary reporting involves a monthly percentage rate.			Chart
Downtime	The downtime consists of three parameters: 1. Maximum Continuous Downtime (MCD); 2. Maximum Number of Downtime Events per Month (MNDEM), 3. Maximum Downtime per Month (MDM)	MCD: 4 h MNDEM: 6 h MDM: 10 h	monthly	Bar or Line Chart
System Performance	In hours for 1. Maximum Continuous Downtime (MCD); 2. Maximum Number of Downtime Events per Month (MNDEM), 3. Maximum Downtime per Month (MDM). Customary reporting involves a monthly number of hours for all three parameters.	80% < 2 % sec.	monthly	Pie & Line Chart
Supported System Operation Time	Calendar days and hours.	8 a.m. – 5 p.m., excluding weekends	monthly	
On-Call Duty	Calendar days and hours.	Weekdays remaining time	monthly	
Time of Maintenance/ Upgrade	Calendar days and hours. Customary reporting involves a monthly days and hours.	Weekends for 10 h, or weekdays for 4 h after 8 p.m.	monthly	
Guaranteed Nightly/Weekly File Backup	Completed / Not Completed; Service Level only met if file backup has been successful. Guaranteed online Backup (full); guaranteed offline Backup (full); Backup Storing	Online 5x per week Offline 1x per week Storing: 32 days	monthly	
Restore	Measurement for UNIX Recovery and NT Recovery in GB/h	Recovery for: Unix: 50 GB/h NT: 10 GB/h		Details reports after any recovery.
Disaster Recovery Time	Measurement in time units. Detailed reports after any event deemed a disaster.	1 week		Details reports after any event deemed a disaster.
Disaster Recovery Test	Successfully completed/not completed. Report after completion of the regular testing process. Details reports after any event deemed a disaster.	Not agreed		Report after completion of the regular testing process. Details reports after any event deemed a disaster.
SAPS (SAP Application Performance Standard)	SAPS measured by defined dialog steps	> 600	monthly	Line Chart
SSO Availability (Single Sign On)	Measured in percentage uptime	Same as system availability	monthly	

E.1.2 SLA between IT and Customer

Please refer to the external document

E.1.3 OLA between IT and Provider

Please refer to the external document

E.2. List of integrated Applications

In the first step the content of the following list is delivered by the portal. It must be pointed out, that this list is subject to running modifications.

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