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GERMAN TELECOMMUNICATION PROVIDER* COUNTS ON QA NAVIGATION'S SOFTWARE LIFECYCLE MANAGER AS PROJECT CONTROL TOOL

Since 2008 a software solution to process on-line orders is being developed as an in-house project for the leading telecommunication provider in Germany. The project is part of an organisation wide solution. The first stage requires 200 man/year to implement.

*The right to name the client is not granted yet.

WANTED: A TOOL, THAT ORCHESTRATES THE FLOW OF DATA

The project needed an infrastructure to manage the different software releases throughout the life cycle in a transparent fashion. The requirements for such an infrastructure grew more and more complex.

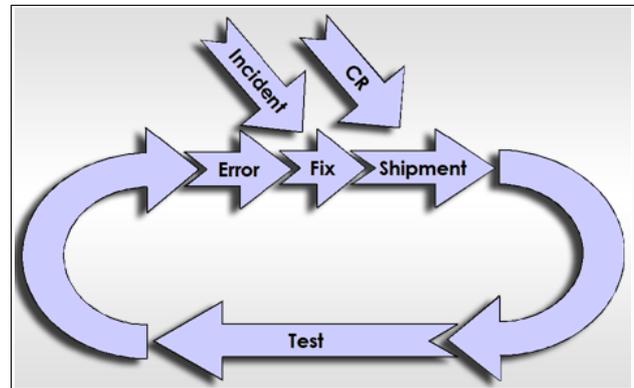
To start with, there were at least two different releases in production and another two under development at all times.

Second, the number of tools used in the project made it hard to concentrate the communicational structures within the project. To compensate this an overall communication and administration for the following sources had to be built:

- Technical Reports from system testing,
- Error reports from the external user acceptance test,
- Incident Reports from production
- Change Requests for changed or new features

The information from the named sources and other projects were held in three different, mutually incompatible tools and had to be integrated to a common view.

Third, extensive facilities for shipment management, providing documentation, communication and control of the software release packets had to be established.



Software Life Cycle Management

Last, but not least the infrastructure had to provide all functions for managing tests, so that the entire processes of the internal system test, i.e. preparation, execution and the processing of the results could be controlled. Error reports from testing were also to be handled.

„We were looking for a tool that would free us from as much effort as possible and support us in our daily business. Extra effort for administration and maintenance was not acceptable.“

The individual stages of processing had to be connected by work flow management system, that is easily adaptable to individual needs of each project.

With a tight project schedule time was critical factor for the choice: an instrument with minimum requirement for installation and set up, that efficiently supports the project's processes and integrates itself into the complex environment within a short span of time had to be found. Burdening the project with big efforts

for administration and maintenance or education for project members was not acceptable. Finally the individual needs of the project had to be met without major effort for adapting the tool.

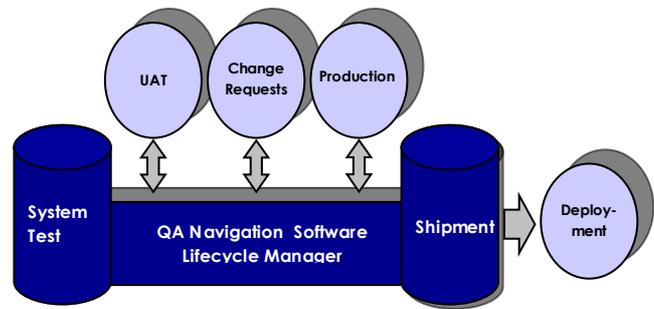
THE SOFTWARE LIFECYCLE MANAGER: SMART FUNCTIONALITY WITH ROOM FOR PROJECT INDIVIDUALISM

The final decision was to use the Software Lifecycle Manager, not only because it provided the required functionality, but also because of its convincing low ratio of the total cost of ownership. The Software Lifecycle Manager actually only required minimal timely and staff efforts for installation and set-up. Administration was simple and clear and was handled without detailed introduction. As the application can be used intuitively, no prior education was required for the more than 100 employees working with the tool. Being an Open Source product, the Software Lifecycle Manager was adapted effortlessly to the specific requirement of the project. Once under way the Software Lifecycle Manager gained widespread acceptance by the project members.

The functional advantages of the Software Lifecycle Managers result from its structure. The application is based on an architecture of objects and services, that are designed to allow implement made-to-measure adjustments to project requirements with minimum effort. At the same time the Software Lifecycle Manager spares superfluous features and concentrates on the actually important aspects of the task.

„The Software Lifecycle Manager is pleasantly light weighted: As a user you are offered exactly the functionality that is needed in the specific situation. This also helps avoiding mistakes.“

The Software Lifecycle Manager offers a broad spectrum of open interfaces via JAVA classes, http services and AJAX services. It allows direct access to its XML data base, all datasets can be exported. This provides maximum flexibility for external data which is a major advantage in the face of the challenges described above. The information from the different, mutually incompatible systems are collected by the Software Lifecycle Manager to a central database and formed into a unified representation.



Software Life Cycle Management

The existing data from other sources can be converted with low effort and imported for the initial set up.

In production the data are collected from the different external systems. There is a bidirectional transmission of statuses. As a result a consistent view on all information that is

„The Software Lifecycle Manager is a box of smart tools And as it is Open Source you have access to all tools.“

relevant to the development team is provided. This proves to be a major advantage for the team. With only one

tool and its uniform presentation spares the team from time consuming searches for information and cross-checking of data. Additionally the developer and the test team are supported by made-to-measure reports, that provide an overview over the incidents, fixes, and artefacts of the shipment.

The management of shipments also benefits from the fact that the integration of external systems is simple. In conjunction with the so formed infrastructure short reaction and turn around times to reported errors and change requests are made possible, while maintaining a high level of quality.

CONVINCING PERFORMANCE IN TEST MANAGEMENT

With the help of the integrated test managements facilities of the Software Lifecycle

„You can tell, that the Software Lifecycle Manager was developed by someone with long time experience in development and testing.“

Manager the entire process of software testing is supported. Due to the seamless integration of test cases , test execution

reports, error reporting and the connected fixes, re-testing and reporting the cooperation between the individual phases of the the project throughout the entire process cycle works without complications. The reduction of

friction that is achieved by navigation by hyperlinks to the individual test artefacts provides a massive relief on the workload. The extensive reports of the Software Lifecycle Managers supports software testing with meaningful statistics about progress of the tests and the state of the reported errors.

In this project a great deal of system testing is executed by automated tests, under control of the Software Lifecycle Manager.

The link between the tests cases and requirements documents the progress in covering the expected functionality.

The data import functionality of the Software Lifecycle Managers makes it possible to automate the compilation of test cases and thus achieve tremendous savings in time and effort. The existing, extensive library of specifications of the project was converted in to test cases by a semi-automated process: with the help of Visual Basic macros in Word test case templates were generated, which only needed a finishing, once they where imported into the data base. The standard reports documented the coverage of the requirements and so documented the progress of test case development.

LEAN – FLEXIBLE – STABLE

In summary the experience made with the Software Lifecycle Manager are positive in all aspects. Additionally, to the advantages described above, the tool features characteristics that separates it from similar products:

- low resource requirements,
- high flexibility,
- easy data transport and
- high availability.

For instance: in the middle of a critical phase of the project a part of the infrastructure became

„The modules of the Report Managers do not require any installation. A standard web-browser is all that is required.. This way a helpful instrument is quickly at hand and without further costs.“

unavailable, due to a fire in the office. Within a few hours all services and all data of the Software Lifecycle Manager were transferred to another system. A standard PC was sufficient as a temporary replacement.

After more than one and a half years of production and with over 4000 documents processed the Software Lifecycle Manager provided constantly high availability with zero

downtime and no loss of data. The fact alone, that the Software Lifecycle Manager has proved itself as an extremely robust system, makes it the preferred choice. Throughout the life time of the project the Software Lifecycle Manager has become part of the daily routines and thus perfectly fulfils its purpose: to make everyone's daily work in development and test more efficient by supporting the user with the functionality needed.