



## PITSS.CON Success Story

### *IT documentation does not have to be static*

*“With PITSS.CON it is possible to gain a deep understanding for the technical interdependencies of our application very efficiently and in a very short period of time.”*

*Wolfgang Stramitzer, iALADIN European Competency Center Manager, Air Liquide - ALSEIS*



Almost all companies are confronted with the same question: what to do if IT experts responsible for the development and operation of important business applications are no longer available. This topic was also intensively discussed at Air Liquide, market leader in gases for industry, health and the environment, when it came to the long-term maintenance of a major core application deployed internationally in ten Central and Eastern European countries.

The close co-operation of Air Liquide, Oracle Austria, PITSS and sec produced a database-based documentation solution based on PITSS.CON which goes far beyond current static documentation approaches worldwide. Already during development it ensured that the documentation can give answers to questions not even known at the time of implementation.

“The question of why there has been a crash or an error situation precisely now and in this constellation only arises if an error occurs during production“, as Wolfgang Stramitzer, iALADIN European Competency Centre Manager at Air Liquide, puts it in a nutshell. “With our current documentation system we are in a position to find an answer to this question. What is special about our solution approach is that not just our developers themselves can find solutions any time but also end users of Oracle Forms due to our comprehensive dynamic documentation.“

*Complex Forms Systems  
with PITSS.CON up to date  
at the press of a button at  
a glance*

#### **The almost typical task: IT expertise must not be lost**

Usually, in-house applications developed over many years precisely cover the specific requirements of company-specific business processes: generally extremely complex and often enormously extensive – but not well documented. If employees then retire or resign, or if an external service provider ceases operations, this can mean a nasty surprise for affected companies – surprises Air Liquide definitely wanted to avoid. The application concerned is tailor made for gas business processes and was created more than 20 years ago. It has been continuously extended ever since. Today the technological basis is formed by Oracle Fusion Middleware 11g in addition

to the Oracle database. Forms, Reports, SQL, PL/SQL, ProC, C programs and shell scripts are used; all in all the system consists of several thousand objects. The development environment is accordingly complex.

“No company can maintain a complete overview of a system that has continuously been developed over 20 years”, says Kurt Kriegler, head developer of the solution and managing director of the Oracle partner sec software engineering & consulting gmbh. “With thousands of objects, the complexity exceeds the capabilities of even the best developer. Without up-to-date documentation, interface changes for example very quickly become a bit of a lottery.”

Possible solutions were discussed in close collaboration with Oracle Austria to guarantee a consistently high quality of documentation. The aim was to secure the knowledge of development experts without unnecessary effort in order to allow third parties an easy access to the complex software.

“We wanted documentation that lives. Documentation which makes it easier for the experts to share their knowledge and which is useful for themselves”, explains Wolfgang Stramitzer. “Classical documentation of the code or 500-page handbooks already outdated at print time were therefore not an option for us.”

#### **The innovative idea: store expert knowledge directly in the system**

Managed by sec, a dynamic documentation system with a three-stage architecture was created with the help of PITSS.CON. It covers all requirements of an up-to-date IT documentation system. This was proved by the Oracle Consulting audit in the course of the acceptance tests at the end of the project.

The first stage contains a static overview of the entire system landscape in a 40-page framework document. It explains the aim and structure of the documentation, provides information about the development environment and processes and the underlying technologies as well as the infrastructure. It also covers contact information for all persons relevant for the system. In short, the document serves as an introduction and describes the application’s entire metadata which is not often changed.

“It is the only paper that was produced in the course of the project”, Wolfgang Stramitzer proudly says. “All other information is directly inside the system for when it is needed.” The second stage of the documentation environment contains the technical overview of the system, the documentation of the business logic and also its relationship to the elements of the application. This was realized by sec especially for Air Liquide. All the technical elements – tables, jobs, Forms or Reports etc. are provided in real time in this integrated APEX and Forms-based application and allocated to the application’s business processes also reproduced in the system. If a new element is added it is immediately visible in the documentation environment and can be described by the developer.

Wolfgang Stramitzer explains the approach being taken: “All new and revised elements in the system are completely documented by default in our current development process. The entire application, which has grown over time, with around 20,000 elements is being successively reworked. The allocation of elements to the business processes is complete; with the follow-up documentation we are proceeding systematically and prioritizing the elements according to their importance for the business processes”.



*Air Liquide tank farm and trailer fleet*

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The developers themselves already benefit from the new documentation system at this expansion stage. If changes to an element are due, just a few clicks are enough to ascertain which business processes are affected. If a problem arises in a business process, the causes can be sought much more systematically as it is known which elements are linked to the process.

The linking of the elements to one another in terms of cross-referencing is documented dynamically by the third stage of the documentation system. Since it is possible to ascertain which object is used where and how, what interdependencies there are and what side-effects can occur at any time at the press of a button, errors are already systematically excluded when planning further developments. If errors still occur, problem analysis is greatly simplified and even employees who are not especially familiar with the application can intervene very quickly and competently. This is made possible by PITSS.CON, a high-performance Oracle Forms and Reports development platform already used at Air Liquide in 2006 for migrating Forms but which had not been used since.

### **The necessary technology: automation makes the impossible possible**

Used as an integrated part of the new documentation system, PITSS.CON has established itself as a major component in the company's development and quality assurance process. To gain a complete overview of the Oracle Forms application it is loaded with all elements, completely analyzed, stripped down to its smallest components and stored in PITSS.CON's data repository.

PITSS.CON penetrates the application completely and records all objects of all data types as well as ASCII files, Oracle Forms, Reports und menu modules, object libraries (OLBs) und program libraries (PLLs). This makes it possible to reproduce interdependencies and processes transparently and comprehensibly and gives the foundation for further analyses and the subsequent enhancement of the application. The documentation is fully dynamic and available at any time in real time. Thanks to the integrated version and configuration management, any version can also be comprehensively documented and changes traced and analyzed across several versions.

“It is really simple to analyze dependencies and possible side-effects with PITSS.CON. The detail analyses offered give answers to the most varied questions, as it is immediately obvious what is interconnected where and how in the application – fully dynamically and in real time. That is an extremely helpful function, especially for error analyses“, Kurt Kriegler praises the platform. Wolfgang Stramitzer adds: “With PITSS.CON it is possible to gain a deep understanding for the technical interdependencies of our application very efficiently and in a very short period of time. This has been convincingly proven during audits by Oracle.“

### **The neutral view: Audits by Oracle Austria**

Right from the start, the project was supported by Oracle Consulting since for Air Liquide the perspective of independent experts was essential in order to arrive at a lastingly efficient solution.

Wolfgang Stramitzer explains: “We developed the concept together with Oracle. Oracle recommended the use of PITSS.CON and checked the quality of the overall application very critically in the concluding acceptance tests. The results show that we have chosen an ideal approach.“



*Air Liquide gas bottles*

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In the final review, Oracle employees with profound Forms expertise but who were neither familiar with the application and nor had any sector-relevant experience had to implement four tasks in the application within just a few days using only the documentation as a guide and without any support or briefing from the existing developing team.

“One of the test cases was the extension of the barcode – which is a typical change for many parts of the application”, says Andreas Freitag, a senior consultant with Oracle Austria. “Without the documentation solution by sec and PITSS.CON our colleagues would have been completely lost. The right route to implementation could thus be taken within a very short period of time. With a little more time they would have been able to perform the change completely and without problems.”

Oracle’s review report therefore confirmed that the developed documentation system had achieved its aim: information about the application is presented so comprehensibly that a third party unfamiliar with the application can very quickly find and implement problem solutions. “A result we are very pleased with and wish to build on” says Wolfgang Stramitzer. “Annual reviews of our system documentation and environment are planned as part of our constant optimization process so that we maintain permanently the high level of quality we have reached now and avoid further risks.”

#### **The surprising added value: further use scenarios**

The range of use of PITSS.CON, originally only destined for dynamic analyses as part of the documentation, was extended to various other areas in the course of the project due to its broad range of services.

The sec team used PITSS.CON not only in the planning phase but also for the further development and maintenance of the application, as it efficiently frees employees from routine activities.

“It is our task to analyze our customers’ processes together with them and to realize appropriate IT solutions as efficiently as possible. The more tools can support us in this the better. We support our customers more efficiently with powerful tools such as PITSS.CON, which completely support tasks such as mass changes. I would also like to mention how intuitive and easy to learn PITSS.CON is. Once installed, very little instruction is necessary before you can work with it extremely efficiently. We will also recommend it to other customers if the need arises.”

Wolfgang Stramitzer confirms the significant value of PITSS.CON for Air Liquide. “The broad benefit for documentation, development and quality assurance was pivotal for the integration of PITSS.CON into our development environment. It contributed greatly to reaching our ambitious goal – breaking new ground with ‘living’ IT documentation”.



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*Andreas Freitag  
Business Operations Manager -  
Oracle Austria*





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PITSS is the leading provider of software & services for modernizing and effectively managing Oracle applications. The PITSS Group was established in 1999 and has gained international recognition with over 1,000 customers and a multitude of successful Oracle projects. PITSS is an Oracle Gold partner and, as a member of the Oracle Modernization Alliance (OMA), is the only Oracle Forms Migration partner for automated migrations. With sites in Stuttgart (HQ), Wolfratshausen near Munich, Bielefeld (Germany), Milton Keynes (UK) and Troy (USA) as well as certified international partners, the company successfully provides support for IT projects of medium sized companies, large enterprises and public contractors across the globe.



*Air Liquide air separation unit*

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