



AKER SOLUTIONS CASE STUDY

Aker Solutions ASA, headquartered in Norway, is a leading global provider of engineering and construction services, technology products, and integrated solutions in the energy, maritime, and marine-resources industries, with aggregated annual revenues of approximately NOK 58-billion (over USD\$6.8-billion). The company employs 26,000 people in 30 countries, and has roots dating from the 1700s.

Aker Solutions is divided into four business areas, all of which act globally. One of these, Subsea, utilizes an extensive SAP solution, including CAD interfaces from CIDEON.

To manage its worldwide engineering data, Aker Solutions utilizes SAP PLM. They currently store both 3D models and drawings in a unique global database, regardless of whether the items were generated by their AutoCAD or SolidWorks systems.

Every Subsea engineer worldwide can search the SAP drawing database, access to which is controlled by an advanced “access rights” concept. Through additional software solutions from CIDEON, Aker Solutions was able to migrate legacy files and information quickly and easily. Today, CIDEON automates critical document processes like the creation of viewing formats.



Subsea tree Kristin

With CIDEON support, Aker Solutions was able to finish the migration of its legacy files and install a new general template early in 2005. Local roll-out was completed the following Fall, with global roll-out following during 2006.

Today, all Aker Solutions locations – in Norway, the UK, the United States, Brazil, Angola, Malaysia, India, and Singapore – are working with SAP PLM and CIDEON’s supporting solutions.

After the successful Go-Live, CIDEON’s Rico Tabor interviewed Aker Solutions’s project leader and others about the SAP solution and the Aker Solutions installation. He spoke with Peter Svelander, Supply Chain and PLM Team Advisor in Aker Business Service, Aker Solutions’ IT organization; Jan Eine, CAD Manager; and Stian Enger, Global Process Owner, SAP PLM, in Aker Solutions, each of whom has been intimately involved with both Aker Solutions’s SAP solution and CIDEON’s installation.

This is their story. Rico Tabor is CIDEON Account Executive, Northern Europe and Africa:

What is “subsea operations”?

Jan: Subsea Operations delivers a complete range of subsea solutions to the oil and gas industry, from concept through manufacturing, fabrication, and commissioning.

Before we adopted CIDEON’s SAP solution, we used folders and an in-house system we had developed to manage our many thousands of CAD images. Individuals signed out drawings they needed and signed them back in when they finished. When we were accessing files only from offices here in Norway, we sent IT an email to obtain access authorization.

We knew we needed something more robust when we began requiring simultaneous multiuser global access; it

was very clear that access limited to one person at a time would hinder global productivity.

- We knew we needed a managed system that would achieve several things for us:
- First, we needed a system that provided quick, easy, simultaneous access to drawing and model files by multiple authorized individuals, to enable concurrent engineering on the same project and same assemblies;
- Second, we understood that geography could not be an impediment; people in the United States and elsewhere had to realize file access that was as fast, thorough, and productive as people in Norway or anywhere else worldwide;
- Third, the document review and approval process had to be seamless and expeditious regardless of worksite location; and
- Fourth, we needed a robust system for change management.

At the same time, we needed a system to manage product data / product lifecycle while working well with SAP, which we were implementing.

How did you find CIDEON?

Peter: We talked with SAP to find available CAD integration solutions that dovetailed with SAP to the extent we sought. That's when we became aware of CIDEON as a Preferred Partner of SAP, and we were quickly sold on its advantages since they related very well to our objectives.



Did Aker Solutions require any customization?

Peter: We knew that the standard SolidWorks/SAP interface from CIDEON was able to provide us with the basic business processes we wanted. We also specified some additional development which was delivered from CIDEON during project implementation.

Using the solution in a live environment, we have identified various areas where changes have been needed to improve our work. Most of the improvements have been delivered as customer add-ins from CIDEON. The tight connection between CIDEON development and its consultants has been very productive for us.

In implementing the CIDEON solution, what was your initial focus?

Peter: The main focus initially and since launch has been SolidWorks, and there has been other work ongoing with AutoCAD.

How do you use those programs and could you describe the legacy file import process?

Jan: We use SolidWorks for all mechanical drawing and we use AutoCAD for process and instrumentation diagrams and for layout drawings, though the vast majority of our work is through SolidWorks.

We had a huge set of legacy drawings and models stored on various file servers and local PDM systems. One of our major concerns was the need to convert all files and bring them over to SAP. It was impossible for us to migrate all the files to SAP in one go, therefore the process has been partly manual, converting files on an as-needed basis, and partly automated using the Import PDM program delivered by CIDEON. The ability to do managed mass uploads on demand is very important to us.



With CIDEON's solution we are free to migrate step by step only what is really needed. We have successfully converted approximately 40,000 CAD files using the CIDEON tool.

Could you describe your experience during the CIDEON implementation and global roll-out?

Peter: The template for the SAP implementation was established in February, 2005. Installation, training, and rollout followed, and were all completed in Norway by September, 2005.

Our experience in implementing SAP PLM with CIDEON's support was very positive. We have had issues, but they all have been solved in close cooperation with SAP and CIDEON. The training was very thorough. When it was completed, we had an excellent understanding which was necessary as we started using SAP.

Our initial focus involved converting drawings to enable concurrent engineering. We contracted with CIDEON to do implementation testing on their Conversion Engine, integration testing, training, and end-user support. They initially trained our SAP consultants, who became our "Super Users." In turn, those Super Users handled the training of our Aker personnel / CIDEON users.

After the rollout in Norway, we continued our phased roll-out program in the United Kingdom in February, 2006, followed by U.S.A. Brazil, Angola, Malaysia, India, and Singapore. Aker Solutions Super Users travelled from Norway to the different implementation sites to train the users.

You had to access and convert files manually before. How has CIDEON enabled simultaneous access and concurrent engineering?

Stian: Before we had SAP PLM, we had to access files manually. That process is now automated for all files, a considerable savings. When files were in use under the

old system, concurrent engineering wasn't possible since each party would not have known everything that was being done simultaneously by others.

Under the current system, with CIDEON in partnership with SAP, concurrent engineering not only is possible, it is highly productive since changes made by one party are immediately reflected on the drawings in use concurrently, elsewhere. All groups globally now access drawings from our central repository. Concurrent engineering is now possible at our locations worldwide.

What volume of new drawings is generated by the Subsea group?

Jan: We create approximately 100 new drawings including revisions every day. A common way of working is to build the 3D CAD models in Norway and make the detail drawings in the Americas or Asia, so all the files that require global interaction are processed through SAP PLM every day.

At a glance		
Company:	Aker Solutions ASA	
Industry:	Leading global provider of engineering and construction services, technology products, and integrated solutions in the energy, maritime, and marine-resources industries	
Employees:	26,000 in 30 countries	
Challenge:	Creation of an integrated product data management based on the installation of a global and company-wide Product Lifecycle Management	
Solution:	SAP PLM Integration for AutoCAD SAP PLM Integration for SolidWorks CIDEON MicroStation Integration for SAP PLM	
CIDEON Services:	Implementation, adaptations, training	

How is it working?

Stian: SAP PLM gives us more effective global process control. We have assured accuracy in part because our concurrent engineering is using only the latest drawings. That is the single most important issue to us – knowledge sharing, knowledge transfer, and parts sharing, all on an expedited basis.

What would you say are the key benefits, beyond concurrent engineering?

Peter: In projects and throughout the logistics process, you need the materials and the product structure underlying the documents in order to do costing and manufacturing. The process also requires up-to-date documents to follow the procedures and latest design. Today, through this implementation, the CAD environment is integrated into the SAP backbone. It's a streamlined solution which actually forces the engineers into the SAP environment to enter materials, enter product structures, and handle documents within that SAP environment.

Stian: Having everything integrated into one structure worldwide is of great benefit. Every part in the assembly design and creation process is in one place, so coordination is expedited and accuracy is inevitably enhanced.

