"No walk in the park." The inside story behind Mercedes big CAD swap – TV report

Large OEM's don't switch their enterprise CAD systems every day, so it was a big deal when Daimler Mercedes declared their decision in 2010 to move from Dassault System's CATIA to Siemens PLM's NX.

With more than 6,000 users involved, this project was no walk in the park. There were serious risks attached. Now, after a four-year implemention period, the project is almost finished. While it is a success, there have been some bumps in the road.

By the end of March 2015 the CATIA environment will be completely replaced such that all designs will be done in NX. It's obvious that there must have been huge gains promised to make Daimler Mercedes launch this project. So why did they chose to go with NX? What problems have been encountered during the journey? And how were they solved?

There has been a lot of speculation on all these questions, so our PLM TV News team sought out the true story from Mercedes top management. We have an exclusive interview with one of the most prominent PLM executives in the Daimler organization at the time, professor Alfred Katzenbach. As director of IT Management in Mercedes-Benz R&D department, he was responsible for the preparation and presentation of the project to the Daimler Board.

Today he is retired and can speak freely about the reasons for the change in 2010 and what happened during the implementation process.

Was it a smooth transition process? ”No”, professor Alfred Katzenbach, says in this TV-report. ”A project of this magnitude never is; that's an illusion. Nobody can ever convince me that such a project can run without any difficulties”. It is a comprehensive change process and the nature of change is that it creates uncertainty among many people.

The technology in itself isn't nessecarily the main problem. Instead, says Katzenbach, it's more a question of psychological factors, ”There's always a variety of personality types involved in such extensive organizational changes. We have, for example the "visionaries" and the "innovators", who are always easy to convince. The same goes for the ”early adopters”, while it takes a little longer to convince the ”late-maturing”. And then you've got the ”laggards” who are very hard to convince.”

Add to this the new processes that have to be performed in a new software environment, ”it's not hard to see the complexity of this transition”, professor Katzenbach asserts.

Advanced preparation was crucial for project success.

"A completely new way of doing things gave unexpected benefits"

In the end, the change has proven to be worth the effort. The Daimler Mercedes PLM organization found ways to deal with the problems that arose along the way. ”The experience we had with our collegues from Siemens PLM is that success demands quick responses to fix a problem as soon as it occurs.” Pitfalls were expected and the PLM department at Daimler reacted to address those challenges.

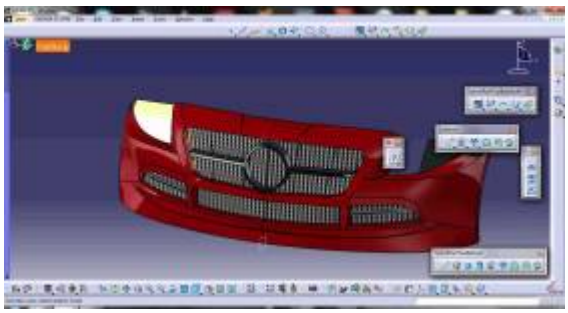
But a successful project demanded more. Advance preparation was crucial. ”When we started this project our intention was to begin with the first new car line in 2015. Now, if we had done things as we did in the past–starting with a new program and keeping the old program alive–it would have led to a transition period stretching to 2028-2030”.

Of course this wasn't an option. ”We had to change our philosophy and create completely new ways of doing things”, said the German professor. And so they did.

”We selected 250 different business cases. For each one of them we worked out the needed methodology, everything based on concrete parts in production. We made videos and placed these in a reference library accessible to the users”.

This turned out to have unexpected additional benefits: ”With these cases we were able to establish new, more effective and commonly used ways of doing things among all our 6,000 plus users”, claims Katzenbach. This important ”harmonization”, as he calls it, was only made possible by a major system switch like the one they initiated.

"The upgrade from CATIA V4 to V5 was like switching to a new system"



Mercedes part designed in Catia V5.

Naturally, pitfalls will occur in the course of a program change of this magnitude. In the Daimler Mercedes case they were even expected. So, woulden't it have been more comfortable to remain in the Catia

environment? No, claims both Siemens PLMs CEO Chuck Grindstaff and professor Katzenbach. ”They made a choice based on the entire set of problems that they have at Daimler”, asserts Grindstaff. ”The capabilities of NX meets their needs, the ability to integrate with the Teamcenter solution (which is and was the PLM-PDM backbone of Daimler Mercedes) , and the future vision that we have. Really, all of those three things together made the difference”, he said and adds that, ”It's unforunate sometimes to hear comments made by our competitors who think that they have the only technology that works. They don't! Our customers every day do the kinds of remarkable things with our technology that we are proud of and they do it because we provide cutting edge tools.”

Chuck's message is that Daimler took on NX because it can do the job most effectively compared to the competition, and professor Katzenbach agrees. He has more than 20 years of experience at Daimler including when they upgraded DS' CATIA V4 to V5. ”When we reflected on the change from V4 to V5 we could see that such an upgrade is like a change of systems. It's not only a version swap. With this experience we decided to ask ourselves the strategic question, ”is this the best option for the company” at the next possible opportunity.”

From the beginning Katzenbach planned to stay with the two-vendor solution they had (CATIA from DS and Teamcenter from Siemens PLM). No doubt a ”multiple strategy” like that has its advantages; both from a risk management and cost perspective. For example, a single vendor strategy carries the risk that your chosen vendor doesn't turn out to have the best development path. So why did the former Mercedes R&D IT manager choose to go for the one-vendor option?

The CAD selection team went to the Daimler Board together with key users

The big problem in the case of CATIA V6 versus NX was that the DS solution required the purchase and use of Dassault's PLM-PDM software, Enovia V6.
”In this discussion it became clear to us that with Enovia V6, as it is today, it would not be possible to support the sophisticated technological processes we have in Daimler”, says professor Katzenbach. ”Furthermore, if we should have chosen CATIA V6, Enovia V6 was mandatory. We would have been forced to run two PLM-PDM systems (Teamcenter and Enovia) in parallel, which would have cost double the money”.

Professor Katzenbach had the support of the users when he went to the Board to present the switch project. This picture is from 2009.

He added that during the second phase of the validation process Daimler also involved the key users in the company very intensively. ”They did some process scenarios in both solutions and when we came to a final decision based on those it became obvious which way we wanted to go. And so, when I went to

the Board for an approval I didn't go alone. The key users came with me and confirmed the choice of the NX direction”.

Important lessons to learn

So far so good, but what about legacy data? How did they solve the pitfalls they ran into? And what do analysts say about making a change of this magnitude? Watch this TV-report to find out. It's rare to get the chance to listen to management from a large OEM speak about their approach to complex projects such as this.

There are many important lessons to be learned from this interview. In this TV-report you will hear from:

- Professor Alfred Katzenbach, former IT Management responsible at Mercedes-Benz R&D department
- Chuck Grindstaff, CEO and president of Siemens PLM Software
- Andreas Schaefer, Siemens PLM Software
- CIMdata analyst, Peter Bilello