



Computing

Lessons Learned

Teamcenter v11 Upgrade

Version 1.0

March 27, 2019

DocDB #5878

PREPARED BY:

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Lessons Learned Approvals

Name	Signature	Date

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1. Attendees and Contributors

ATTENDEE NAME	DEPARTMENT / TITLE	ROLE	PHONE NUMBER
Matt Crawford	OCIO/PMO	Project Manager	x3461
Tony Metz	CCD/SOS	Technical Lead	x3476
Irene Shiu	OCIO/SM	BRM	x8455
Roger Slisz	OCIO/SM	BA	x3153
Jodi Coghill	APSTD/Q&M/DD	Engineering Supervisor	x3550
Tony Parker	AD/MSD/CAD	Engineering Supervisor	x4476
Don Mitchell	PPD/MED/MDE	Engineering Supervisor	x4166
John Rauch	PPD/MED/D&D	Engineering Supervisor	x4963

All participants named above gathered together for a lessons learned session and were able to comment on each other's feedback. The Engineering Supervisors were part of the project from the beginning and had detailed knowledge of the system itself and the progress of the upgrade.

2. Highlighted points

The following points are called out for attention. They are boxed with red borders where they appear below.

- Power outage: The PM inquired on Oct. 11 about power outages that might affect go-live Oct. 26–28 and was told “The new transformer installed at IB3 will be down during this time.” This would have affected about 7 client machines. On October 22 we learned through one of the engineering supervisors that the power outage would actually affect the entire Industrial Center! There seems to be no mechanism at present to get notified about planned power outages more than a week in advance.
- We needed the customer divisions (TD, AD, others) to commit a significant amount of time to testing the upgraded Teamcenter and NX. Divisions are under sharp pressure to control budgets and had no way to charge the time we needed to overhead or any project. There needs to be some conversation between Computing and other divisions about means by which they can support Computing's deployment and maintenance efforts on their behalf.
- Other Computing departments providing infrastructure for this project were given some decision-making authority and delivered excellent support.

3. Feedback received

A. Project team feedback

NAME / ROLE	COMMENT	PHASE
Resources and effort		
Technical Lead	There were not enough resources to support operations and carry out this project at the same time. This is a perennial issue which was acute in this project.	All
Project Team	Customer Divisions did not (perhaps could not) commit sufficient resources to testing. Tight constraints on Division budget and charging processes limited the hours they could provide.	Execution
Project Team	Time to test and resolve issues exceed expectations.	Execution
Technical Lead	The FNAL Computing service providers who were involved had decision making power and delivered reliable infrastructure, leading to smooth deployment.	Planning Execution
Technical Lead	The project team was very knowledgeable before starting the project and produced good requirements for the consultants.	Planning
Business Analyst	We had never used scrums to resolve issues after go-live before. It worked very well.	Execution
BRM	The training materials produced by some of the users-testers were very good.	Execution
Outside consultants		
Technical Lead	Some consultants did not have enough knowledge to perform upgrade activities well. This, and frequent switching of consultants, hurt the schedule.	Execution
Technical Lead	There was no project manager on the Siemens side until very late.	Execution
Technical Lead	We had a T&M contract for support. A fixed-price contract might have led to faster work and better cost control but would have had cost and schedule risks if requirements were not utterly complete and accurate.	Planning
Technical Lead	Consultants did not document their work very well.	Execution
Attention to detail		
Project Team	Production servers were missing some recent patches at go-live time.	Execution
Project Team	Workflows in process under v9 could not complete under v11. Should have given new names to all rewritten workflows. Related to next item.	Planning
Project Team	Customers did not check in all data and complete all workflows before go-live, despite communications to do so.	Execution
Project Team	Changes in the product require updates to workflows. We should have a better understanding of how workflows will be affected before starting an upgrade.	Planning

NAME / ROLE	COMMENT	PHASE
Technical Lead	An automatic rollout process was scheduled on UTC time instead of local time and so fired off early. This was a small problem but could have been bigger.	Execution
User interaction		
Technical Lead	Provision of Citrix as an alternate access method allowed time to fix individual workstation problems.	Planning Execution
Technical Lead	We have no training program for new users of Teamcenter and NX. The materials we have are aimed at users learning about changes or additional features.	Planning
Other notes		
Technical Lead	Our sales representative retired and our A-Team moved on to an engagement for a larger customer. DOE's Limitation of Liability restrictions caused us some delays.	Execution
Technical Lead	We are going to have to adapt to the end of free Java RE from Oracle.	Closeout
User-tester	DESY has a staff of 12 supporting Teamcenter, and it is integrated with their vendors and other labs. On the other hand, it is going to be hard for them to upgrade as we did.	Closeout

B. User feedback

NAME / ROLE	COMMENT	PHASE
Engineering supervisors		
Coghill	After go-live, this was much smoother than the previous upgrade.	Execution
Coghill	Communication among the core group (project team and users-testers) was good. Testers knew what was going on, good or bad.	Execution
Coghill	Happy to have work tracked and be held accountable for her part in the punch-list process.	Execution
Rauch	A lot of the problems that were reported during test runs in the Training Center were fixed before-go live.	Execution
Coghill	All flags were tested, but didn't work after go-live. (Answer: The configuration file should have been a straight copy by it had a typo.)	Execution
Mitchell	The lab has no mentoring. New employees aren't taught the processes and standards. Engineers in particular, who often profess dislike for Teamcenter, get no training in it.	All
several	Triage of post-go-live issues saved a lot of time for the engineers. Many reports were wishes for enhancements, and others were training issues answered by available materials.	Execution
Mitchell	Having Teamcenter supported by a skeleton crew means relying on a lot of external resources who don't know our system well. And discontinuous funding meant turnover of those resources.	Planning Execution

Most user feedback is in a survey report which was not yet available when this document was finalized. The BA group carried out the survey and will place the result in CS DocDB #5878 when complete.

4. What was done well

WHAT WAS DONE WELL	PHASE
1. The FNAL Computing service providers who were involved had decision making power and delivered reliable infrastructure, leading to smooth deployment.	Planning Execution
2. The consultants from Siemens had good access to the developers. This helped resolve some major issues quickly.	Execution
3. Project staff did not have other projects to work on.	All
4. Representatives of the customer divisions created test scripts prior to testing.	Execution
5. WordPress proved to be a much better platform for the user-support site.	Planning
6. Having previously skipped version 8 in a 7→9 upgrade helped us know how to skip version 10 and go 9→11.	Planning
7. The master list of use cases for testing was complete and of high quality.	Planning
8. Triage of post-go-live issues saved a lot of time for the engineers. Many reports were wishes for enhancements, and others were training issues answered by available materials.	Execution

5. What could have been done better

WHAT COULD HAVE BEEN DONE BETTER	PHASE
1. The project team was also the operational support group for the product and was, by the vendor's criteria, understaffed even for operations. This was exacerbated when one member of the team went on extended medical leave and never returned.	Planning
2. The outside consultants developed installation scripts that were less than perfect, and we waited longer than we should have before testing and fixing them.	Execution
3. Customer-testers did not distinguish well between reporting defects and requesting enhancements. The project team had to classify all reported issues.	Execution
4. An automatic rollout process was scheduled on UTC time instead of local time and so fired off early. This was a small problem but could have been bigger.	Execution
5. There was a significant scheduled power outage during the go-live weekend. We had inquired about outage plans earlier, but this was put into place on short notice.	Execution
6. Testing started too early, according to some, and testing plus rollout used too much unbudgeted time from the divisions.	Execution
7. If it is possible to make SCCM more transparent, engineers would not have to see or deal with the deployment share.	Execution