

Windchill PTC Data Migration In Under Three Months

Data migration doesn't always go to plan. Yet growing out of one system architecture and migrating to another is critical for a business to survive, thrive and grow as technology evolves. Additionally, the need to migrate to Windchill PTC RV&SI in a company with over 130,000 employees worldwide, 80 requirements documents, 65 FMEA documents and the need for a custom toolset due to data migration and implementation complexity only adds to the potential for unsuccessful migrations.

The Need For A Med Device Corporate Solution

Our client is one of the world's largest healthcare companies. They employ over 130,000 employees worldwide. Prior to SPK's engagement, one of their business units had developed a pilot implementation of Windchill PTC RV&S. However, the pilot implementation was deemed too complex and specific to that business unit to become the corporate design solution.

SPK were initially engaged by the Med Device client to develop a design control solution using PTC Windchill RV&S. This design was required to support all of their Medical Technology business units. Their Medical Technology division has business units developing products for the orthopedic and surgical markets.

The client had a hard deadline for the migration. Six months. This was due to requirements to align with a design freeze window for the selected business units. If the data migration could not be completed within that window, Research and Development (R&D) schedules would either:

- be severely impacted, or,
- the next opportunity to perform the migration would be almost a year later.

Any delays would result in business units not following the most up-to-date corporate best practices for another year. Additionally, their legacy design control tools would have to be maintained for another year. Furthermore, the corporate design control system would be under-utilized.

Problem: Addressing PTC Windchill Migration Issues

Our client champion was a Systems Engineering Manager, and the overall project sponsor was the Senior Director of PLM and Advanced Engineering. There were many other client personnel involved, some from IT Services, others from the Project Management Office, and others from the business units who were using or going to use the Windchill RV&S solution.

After the initial release of the SPK-developed design control solution, our client began planning for the data migration of their business units to move to the new design control solution. Initially, the client engaged ITI, a firm with extensive experience in CAD data migration.



Successful migration before deadline



Thousands of items migrated



Custom and reusable migration

During the initial planning for the migration of the business units' data, SPK advised the client and ITI that there was an opportunity to use the APIs provided by Windchill PTC RV&S. This was a supported and recommended approach from PTC.

ITI decided to implement a direct extract-transform-load (ETL) operation at the database level. After three months had passed working on the ETL approach to data migration, ITI confirmed the database schema for PTC Windchill RV&S involved too much complexity for them to achieve this. Our client now needed to efficiently and effectively identify an alternative solution for successful migration and implementation.

Good Data Migration Starts With The Right Expertise

At this point, the client approached SPK to successfully deliver the migration within the remaining three-month window.

The two business units chose subject matter experts to collaborate with SPK. This allowed us to work as a virtual team. It also enabled us to identify legacy systems risks vs the new corporate design controls system. By completing this analysis, we collectively determined the need to migrate to new record types. These record types would include field names and values changing based on certain criteria.

Solution: Migrating With Windchill PTC RV&S APIs

To achieve a successful and frictionless migration, SPK developed a toolset based on the Windchill PTC RV&S APIs. This toolset we developed included:

1. Permitting data migration from the pilot PTC Windchill RV&S implementation to the client's corporate design controls system.
2. Exportation of individual records (items, in PTC Windchill RV&S nomenclature) as XML. This included the ability to map between different item types, and different field names, and support a variety of value transformation mechanisms.
3. Development of complementary tools to import XML records into PTC Windchill RV&S as new items. By using the PTC Gateway component of PTC Windchill RV&S to export documents as XML and then re-import those documents into the new design controls system, the SPK-developed toolset transformed the field names and values in the interim XML records.
4. Finally, SPK developed a trace-recreation tool which would read the trace relationships defined in the legacy PTC Windchill RV&S system, and recreate those trace relationships within the corresponding migrated data.

Once all the tools were developed, SPK worked closely with the business unit SMEs and the Quality Assurance group of the client to validate. Once validated, the tools would be utilized for repeated trial migrations of the data.

Result: Successful Data Migration To PTC Windchill RV&S

Approximately 80 requirements documents and 65 FMEA documents were migrated, along with hundreds of task items for the two business units, which represented the work of several hundred R&D personnel.

The final migration to the actual client's corporate design controls system was completed with about a week to spare, within the six-month window.

Get A No-Obligation Initial Assessment

For every company that needs to do extensive testing and report on it, there are issues that out-of-the-box systems can fail to address. Make life easier for your valued engineers; contact SPK and Associates for a complimentary initial consultation at (888) 310-4540 or info@spkaa.com.

 SPK really came to the rescue and showcased exactly why they are recognised as industry leaders. Not only did they catch the need to use the supported and recommended approach of using the API's, they also brought our project back on track, collaborated like pro's, developed custom and reusable toolsets, and successfully delivered the migration with a week to spare.

