Efficiency Through Simplicity

Ametek - EPDM XML Exporter Addin

How an Ametek manufacturing division is using a CADSharp EPDM Add-in to eliminate duplicate entry, reduce errors and create higher efficiencies every day within their sales, engineering and manufacturing departments.

Overview

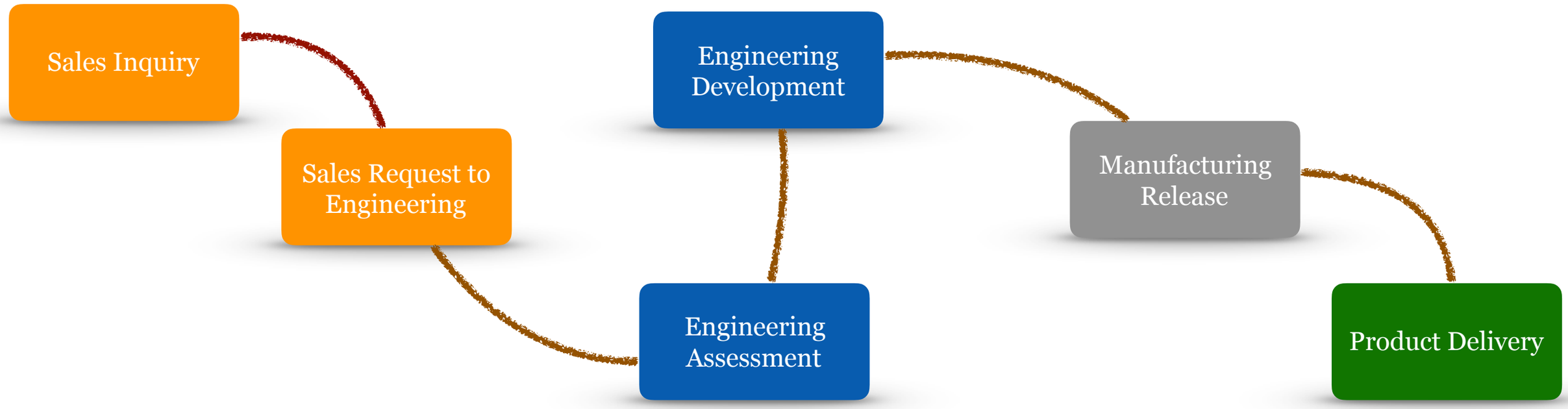
TMC designs and manufactures advanced building floor vibration isolation systems for nanotechnology. TMC isolators support ultra precision measurements, instruments, and manufacturing. A good portion of the business is build to specification for the customer.

TMC faces the challenges typical of all manufacturing businesses when it comes to document and data management. Simply put, it means getting the correct data in the correct place at the correct time.

For TMC using SolidWorks and its sister product EPDM to manage the CAD files was only the beginning. TMC needed to pass information back and forth between sales, engineering, and manufacturing in a fluid, accurate manner within the bounds of a defined workflow.

TMC has three primary business systems manage their data; an MRP system, the CAD document manager (EPDM) and a dashboard database that tracks the in-process sales and engineering data before it is passed off to the MRP system. This case study focus's on connecting the latter two systems together.

The Challenge



In simple terms, this workflow represents the path a new customer request through initial inquiry to product ship

For many years TMC captured and managed the engineering changes (ECO's) and sales requests (SPR's) in their dashboard database, referred to internally as WhiteBoard. Since WhiteBoard is only adept at managing data (not documents) this meant that all approvals took place on paper.

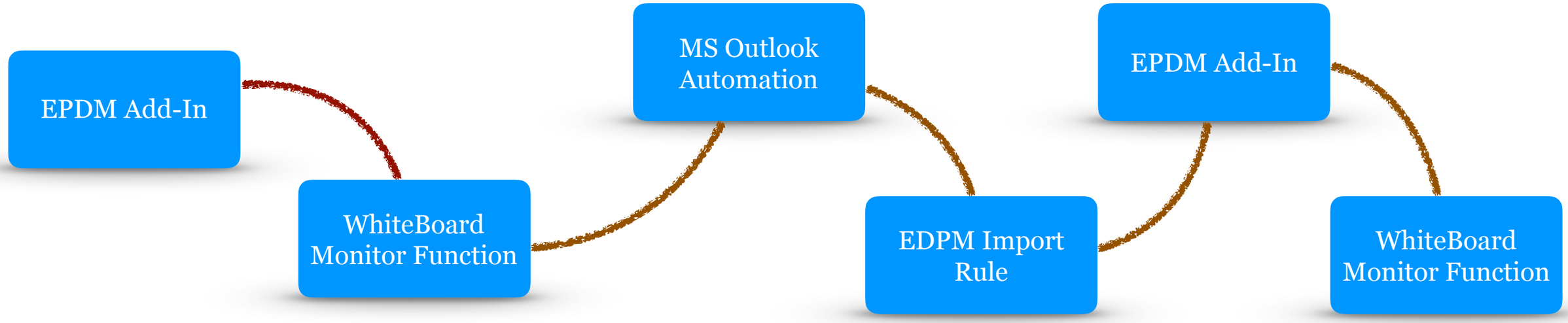
The paper trail was unwieldy and difficult to maintain accuracy. The process allowed for potential discrepancies in the paper records vs. the White board data. Discrepancies that in turn could cause delays or confusion.

On the advice of a data management consultant TMC instituted the use of their EPDM system to create and process all ECO's and SPR's. This allowed for the digital approval of these documents in a controlled workflow. However, it still left Whiteboard to be manually updated. This represented a duplication of effort of what was done in EPDM and did nothing to reduce the errors that had been occurring all along.

TMC needed a way to automate the creation of a Whiteboard entry when a new ECO or SPR was created in the EPDM document management system.

"The representative from CADSharp supported us through the entire transition, and rolled it out in such a way that we experienced little disruption or frustration. At the on set of the project we adopted a crawl, walk, run approach. I'm happy to say that we are running today, and I am very pleased with the results of the overall project. I would highly recommend CADSharp for any data management challenges that medium to larger size organizations face". ***J. Nealey - Lead Project Engineer***

The Solution



In simple terms, this workflow represents the mechanisms' that created a closed loop automated system to synchronize EPDM to Whiteboard

CADSharp LLC was tapped to create the cornerstone of the automation TMC was looking for.

CADSharp developed an EPDM Add-in that allowed key variables in EPDM to be exported to an XML file upon the execution of a designated workflow transition. At the same time aliasing those names to map into the Whiteboard system.

The CADSharp Add-in initiates the creation of a new entry in whiteboard when the XML it creates is seen by WhiteBoard in a watched folder. In less than a minute after the XML file appears in the folder an entry is created in WhiteBoard with all the correct information pulled from EPDM.

The EPDM Add-in is used again when an SPR or ECO is released. Here again, the Add-in creates an XML file that is absorbed by the WhiteBoard system, thus updating the original entry created earlier. This represents the closed-loop aspect of this integration.

WhiteBoard does not have direct XML export abilities, but the use of its email triggers allowed WhiteBoard to communicate back to EPDM a requisition ID number that EPDM needs to provide updates to WhiteBoard along the workflow process.

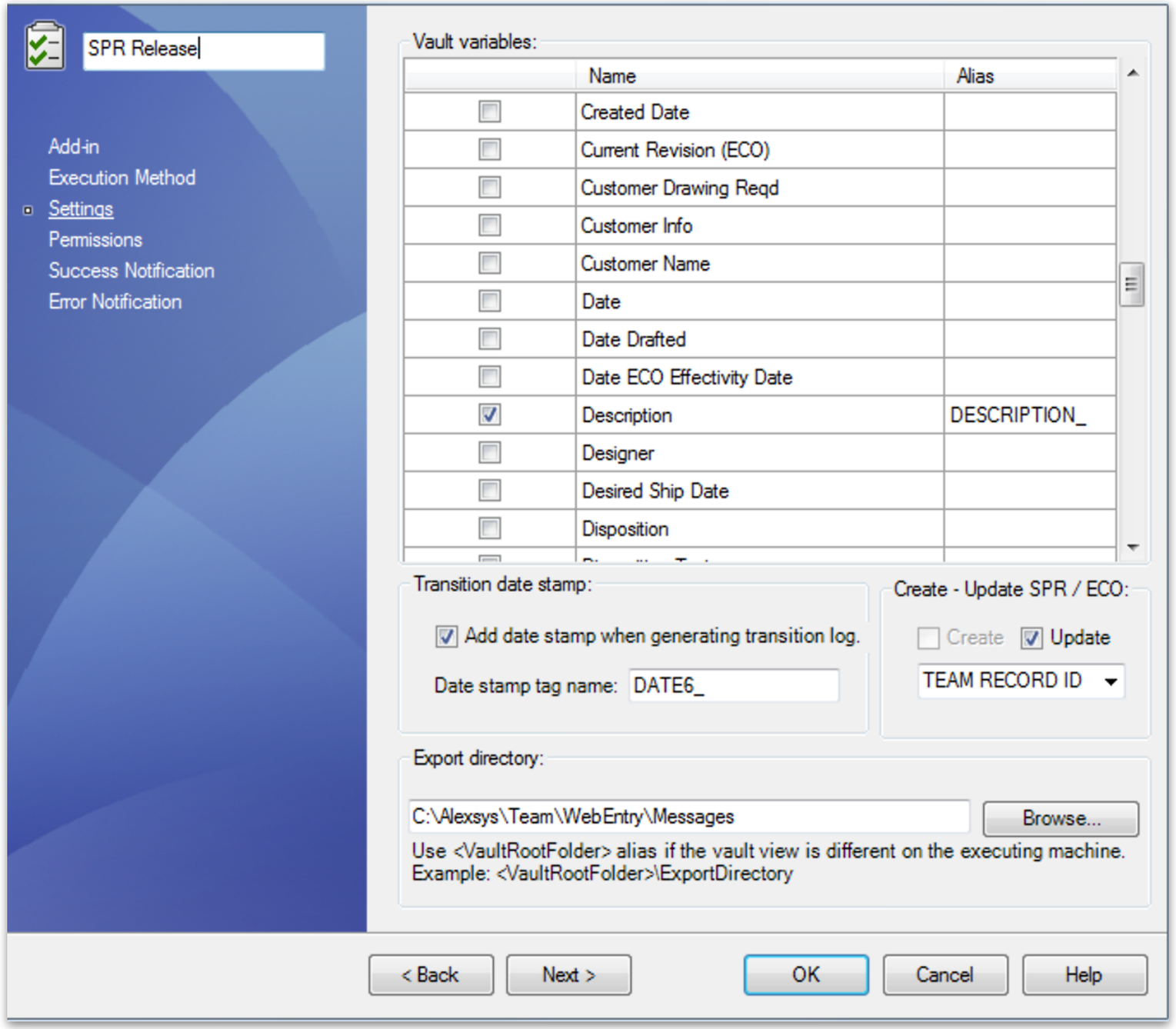
The Add-in

To the right is the “working” area of the Add-in the CADSharp developed for TMC.

This image shows the area where all the EPDM variables can be selected for export using the check boxes on the left. The right hand column is a text field for typing in the name of the field name that is used in the remote database (an alias).

The Add-in also allows for generating a date stamp when the actual transition takes place in the EPDM workflow. This value can also be aliased to the corresponding field in the remote database. This date stamping feature easily allowed for the capture of an SPR or ECO’s inception date and then later the release date.

“Following the CADSharp integration the redundant data entry was eliminated, saving time and eliminating delays and confusion due to data base errors. Additionally, prior to the integration our processes were dependent on physical paper being processed. After the integration our processes were able to leverage digital signatures, automated notifications, automated number generation, and were made to be paperless”. **J. Nealey - Lead Project Engineer**



Conclusion

TMC faced significant challenges to reduce workflow inefficiencies and errors when attempting to integrate two of their business systems.

CADSharp quickly architected, developed and delivered the right solution for TMC's needs. The solution provided the simplicity and accuracy TMC required.

"I would estimate that CADSharp's expertise and the work they performed for us reduced our new order processing and handling by 30% while at the same time improving the quality of our documents and usefulness of our data. Over time I see that number growing even higher as we master these new tools at our finger tips. Overall the changes have been fantastic, and puts us in a position to grow vs. being constrained". ***J. Nealey - Lead Project Engineer***

TMC is now leveraging the strengths of each system to highest levels and has substantially reduced errors and eliminated duplicate entry in the Whiteboard altogether.