



## How Transformation Manager Fits in Supply Chain

### The problem

**Supply Chain is a very demanding** sector, with constant changes that must be closely monitored, most of the times with near real-time data flows. This results in needing frequent quality checks, a costly and time consuming requirement.

**The high complexity caused by the** diversity of targets' and sources' formats might lead to consistency issues and errors that will require the expenditure of valuable resources in order to be solved.

**Moreover, creating the transforms** specific for each business is an integration task that requires business specific knowledge and the different standards used in alternative data stores make the whole procedure unsuitable or extremely difficult for team work and changes or translocation of the employees.

**Very often crucial data are held in** outdated, dysfunctional legacy systems which make data integration and standardization a real headache.

**The supply chain integration often** requires features such as:

- Automatic scheduling and transfer of files
- Email notification if errors are detected
- Audit Tables which hold the records processed for subsequent review
- Log Files which summarise the transforms that have been run
- Lookup tables to assist with transform logic,

adding to an already costly, time consuming and often prone to mistakes procedure.

**Many companies are nowadays using** SAP Integration, since their NetWeaver Enterprise Architecture provides a single interface to all of a company's business applications. However, it has often been said that access to SAP's Enterprise and Resource Planning (ERP) data is particularly difficult and requires expert knowledge and SAP implementation details are not well publicised and access to underlying SAP tables is not encouraged - however, this is intentional as the recommended access is through the SAP published interfaces, which are well documented and stable.

## The solution

**ETL have recently delivered a variety** of supply chain integration projects to the Enterprise Resource Planning (ERP) industry. They are using Transformation Manager, or TM, to deliver enterprise supply chain solutions for companies worldwide and TM transforms have achieved "Powered by SAP NetWeaver®" certification. The workflow may comprise initial bulk load of data, near real-time data flows and periodic updates such as end of day and end of month, with data stored in staging databases as needed. In some cases ETL has worked with partners with specialist supply chain planning or dashboard products.

**TM is a feature-rich tool that** authorises, tests, debugs and deploys data integration components, comprised of:

- a design tool, that offers a unique combination of drag and drop authoring alongside user defined business logic, described in a powerful yet easy to read syntax, ensuring TM is a practical and highly flexible tool
- a debugger, that provides an interactive environment for analysis of transform execution, by the setting of breakpoints and stepping through transform statements. Detailed information and statistics are available to assist with analysis
- a test tool, TM Test Tool allows the user to run the transformations iteratively, providing verification as the transformation project is built step by step

**All transforms are created in the TM** Design Tool using a drag and drop paradigm and when creating transforms the model including all constraints is

displayed. Transforms are easily updated as the business changes and a rich set of Data Quality and Reporting features is included. The data quality checks are made at each stage and users are automatically notified by email if any errors are detected so that these can be corrected as quickly as possible. In addition, regression tests can be implemented to ensure systems are truly in synchronization.

**Using TM for supply chain is extremely** easy and cost-effective. It can handle both synchronous and asynchronous calls in either direction. TM also offers the most flexible integration, accessing all kinds of data and automatically transferring data throughout the enterprise exactly when needed.

**ETL provides a TM SAP Adapter which** provides a bi-directional interface with all three SAP published interfaces:

- A. Business Application Programming Interface (BAPI)
- B. Remote Function Call (RFC)
- C. Interface Document (IDoc),

overcoming the usual problems of SAP Integration.

**SAP's Interface Repository details** their vast range of domain topics (which SAP refers to as components) for their currently supported releases. Choosing the specific topic and release will be domain specific, but most of ETL's work to date has involved the SAP LO (Logistics) component. TM SAP adapter passes input and output parameters as XML documents and

these are created and read respectively by TM Transforms.

**The SAP interface meta-data XSD** (send or receive messages) is easily loaded in to TM Design Tool. In addition, the TM SAP adapter will also be able to read SAP 'help values' from a SAP server and store these as part of the model constraints. All details of the model are visible and accessible - elements and attributes, relationships, attribute types, cardinality, mandatory values, documentation and help values - to assist with the design of transforms.

Moreover, the workflow and rules for exchanging data must be fully defined, while frequent quality checks must be met, costly and time consuming requirements.

