

# ShareAspace: Leveraging Technology Pillars

## Eurostep's Collaboration Solution

### CIMdata Commentary

#### Key takeaways:

- *ShareAspace provides a fixed, consistent, and extendable data model based on the ISO PLCS<sup>1</sup> (Product Life Cycle Support) standard for all industrial companies.*
- *ShareAspace manages data from multiple sources over the product's lifecycle while ensuring that configurations are properly controlled yet easily consumed and reused.*
- *ShareAspace offers users a multi-faceted access interface with security levels that meet all relevant and complex security requirements.*

In today's competitive economy a critical aspect of business success for product manufacturing and operating companies is establishing and managing a productive supply chain. Companies face numerous challenges when collaborating with their supply partners. Difficulties often arise with disparate product data models and data formats. Companies struggle with controlling widely distributed product data in multiple repositories. Concerns over protecting intellectual property and in some cases ITAR<sup>2</sup> controls can force companies to spend non-productive hours monitoring data sharing. CIMdata views solving these challenges as critical to the success of products and the businesses that manufacture them.

### ShareAspace

Eurostep<sup>3</sup> has developed a solution, ShareAspace, that helps overcome these difficult challenges. By leveraging specific leading-edge technologies Eurostep has built ShareAspace on a number of core concepts (or technology pillars).

#### Data Model

Defining the product's data model is a critical aspect of a product's development and operation. At its core ShareAspace uses the ISO PLCS information model for all customers without needing any customization. ISO 10303-239 (PLCS) is an international data standard that identifies the information necessary to define and support a product throughout its lifecycle. PLCS can represent product configurations, assemblies, and parts including product requirements and a historical record of the states of a product. PLCS can also contain management information, such as dates and approvals assigned to parts. This extensive, common core data model for all companies provides an important level of stability for the ShareAspace solution.

Because a company may not need the full richness of the PLCS data model, ShareAspace offers the "configuration" construct as a template atop the PLCS standard data model that represents each customer's specific part of the data model relevant to their domain—driving that user's database layer and ShareAspace APIs (application interface).

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<sup>1</sup> [http://docs.oasis-open.org/plcs/plcslib/v1.0/cs01/help/plcslib\\_overview\\_content.html](http://docs.oasis-open.org/plcs/plcslib/v1.0/cs01/help/plcslib_overview_content.html)

<sup>2</sup> ITAR—International Traffic in Arms Regulations.

<sup>3</sup> Research for this commentary was partially supported by Eurostep.

Within ShareAspace’s software architecture at the configuration level the concept of “Soft Typing” provides a data layer for user company-specific data attributes. CIMdata welcomes this approach to customizing a data model without disrupting the core. In addition, it introduces a business domain language that is easy to use for domain experts as it hides the ISO standards vocabulary, something that sometimes comes across as too generic and hard to relate to for a given business.

## Consolidating Data Sets

Manufacturing companies are painfully aware of the volume of data needed to design and produce a product, as well as the data generated to operate the product. Even in the best of circumstances, the same or related data is stored in different repositories and systems, including those across the supply and partner value chain. ShareAspace has the capability to consolidate datasets from different source systems and merge them in a controlled manner. ShareAspace consolidation copies the data into the hub. It is possible to link to source systems from ShareAspace to access additional information. CIMdata sees this capability as an important step toward building a Digital Twin of the product. The Digital Twins represented and embedded in ShareAspace are supporting different life cycle stages implying that the collaborative Digital Thread is also represented in ShareAspace.

## Security

ShareAspace offers multiple secure ways to control what data an organization can access. This allows the manufacturing company to limit access to competing suppliers’ information and to limit access to each company’s intellectual property. These capabilities also act as a foundation for one of the prepackaged applications of ShareAspace—Export Control.

ShareAspace Export Control enables the sharing of data between product stakeholders subject to export control regulations, such as ITAR/EAR (Export Administration Regulations). This is of major importance in global value chains. It manages the data that needs to be controlled when exported and maintains records that are required by authorities.

Data covered by export control regulations requires a government issued license that defines who can see the data. ShareAspace has put in place additional controls so that only those entitled to see the data are granted access. Limitations are applied to ensure that specific data can only be extracted or copied in conformance with the relevant license. ShareAspace maintains an audit trail of all information that has been shared by whom and on what date.

## Architecture

The ShareAspace software architecture is a layered stack built upon the platform of the ShareAspace core. A library of processes and constructs sits above the core. Atop that is the Extension Framework for any custom code need by an industry vertical or individual company. CIMdata sees this as a proper way to manage customizations ensuring smooth upgrades.

The ShareAspace solution is available to run in the cloud using Azure or on premise.

## Conclusion

Supplier networks are critical to the success of product development and ongoing operation of the product. A collaboration solution must manage speed, agility, and at the same time quality. Eurostep’s ShareAspace leverages pillars of technology to support an evolving network found in the supply chain with a standard data layer, distributed data resources, and ample security

capabilities. CIMdata believes Eurostep's ShareAspace solution should be considered by any manufacturing or operation company with a global supply chain.

### **About CIMdata**

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design, deliver, and support innovative products and services through the identification and implementation of appropriate digital initiatives. Since its founding nearly forty years ago, CIMdata has delivered world-class knowledge, expertise, and best-practice methods on a broad set of product lifecycle management (PLM) solutions and the digital transformation they enable. CIMdata also offers research, subscription services, publications, and education through certificate programs and international conferences. To learn more about CIMdata's services, visit our website at <http://www.CIMdata.com> or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0) 495.533.666.