Eurostep Codex of PLM Openness (CPO) Statement

Executive Summary

Eurostep is built on the concept of openness and open product data standards. From the day the company was registered in 1994, and through all the years since, Eurostep has been active in standardization networks, engaging with policy makers, user communities and IT industry. Eurostep is more dependent on the success of standards and their industrial adoption and usability than almost any other PLM vendor and so we welcome the initiative with the Codex of PLM Openness.

ShareAspace is at its core designed using the standards specifications, so the commitment is to more than just using standards to define interfaces. Eurostep's PLM Software is open in architecture, application, components and infrastructure. This enables integration with other enterprise and legacy systems at any phase of a product's life cycle. Eurostep is pleased to participate in the Codex of PLM Openness. The product included in the CPO statement is ShareAspace. Eurostep has fulfilled compliance with each CPO statement as described in the Basic Understanding of Openness and Associated Requirements, Version 1.0, 08.03.2012.

CPO Statement, ShareAspace

- The following table shows in summary how ShareAspace fulfils the CPO Statements.

- Company name: Eurostep AB
- Product name: ShareAspace
- Contact person: Magnus Färneland

- List of supported Standards:
  - Information standards: ISO 10303 (P21, AP239, AP214, AP203, PDM Schema), XML, OpenXML
  - Deployment Platform: Windows Server, Active Directory Federation Services, SQL Server, IIS (HTTP/HTTPS), Microsoft .Net
  - Software Platform: C#, ASP.Net MVC, Web Services REST, JSON, AJAX, HTML, Javascript
  - Software Distribution: Microsoft Installer (MSI), NuGet packages

CPO-terms	Fulfilled	Partially fulfilled	comment
2.1 Interoperability	X		
2.2 Infrastructure	X		Supported on the Microsoft platform
2.3 Extensibility	X		
2.4 Interfaces	X		
2.5 Standards	X		
2.6 Architecture	X		
2.7 Partnerships	X		

2.1 - Interoperability

CPO Statement

IT customers develop and maintain very different PLM system environments due to specific process needs and different PLM histories (e.g. legacy systems). Openness in this respect means that an IT system has the ability to be integrated into different environments and that it has to communicate efficiently with various other IT systems.

- 2.1.1 IT customers shall be able to realize system integration, on their own or via third parties, based on process requirements.
- 2.1.2 IT users shall have access to their data. It shall be possible to exchange this data, including relations between the data, between IT systems.
- 2.1.3 Therefore IT interfaces shall be provided by the IT vendors. a. These IT interfaces should be based on standards (if available). b. IT customers should ask IT vendors about any risks regarding data and process integrity. IT vendors may provide best practices.
- 2.1.4 IT customers should use officially supported versions of IT systems and state-of-the-art levels of IT infrastructure to minimize the effort required to achieve interoperability.

ShareAspace

Interfacing to other IT systems and integrating the information found in those IT systems is a core feature of ShareAspace. Hence Interfaces as such are a major part of the complete solution to the IT Customer.

- 2.1.1 ShareAspace is provided with an open API that enables any customer or third party supplier to realize required system integrations.
- 2.1.2 ShareAspace is based on an open standard ISO10303-239 (PLCS) available in the public domain.
- 2.1.3 ShareAspace is provided with standard interfaces, enabling the IT customers to standardize their communication with partners and suppliers.
- 2.1.4 Eurostep can only agree.

2.2 - Infrastructure

CPO Statement

IT customers bear the high investment costs involved in developing and maintaining their IT infrastructure. This IT infrastructure comprises the network and system platforms (hardware, OS). Due to the fact that the IT infrastructure is continually evolving, long-term lifecycle planning of the respective IT components (hardware, OS) is required.

Openness in this respect means that an IT system can be integrated into an existing or planned IT infrastructure environment in the long term.

- 2.2.1 The IT customer and the IT vendor shall share lifecycle planning with regard to applied/supported hardware and operating systems.
  The IT customer and the IT vendor should agree on the HW/SW platforms to be supported to minimize development and maintenance costs (i.e. Linux derivates, etc.).
- 2.2.2 Lifecycle plans may be subject to change, but because of the severe consequences (costs, long timeline) involved, deviations from these lifecycle plans shall be communicated as early as possible. This communication may be at least one year in advance.

ShareAspace

Eurostep supports deployment of the core ShareAspace components on the Microsoft operating system. Integrations to other legacy systems can be hosted or deployed on other platforms provided they communicate using the standardized ShareAspace Interfaces.

- 2.2.1 ShareAspace is supported on all major versions of the Windows platform. Preferred versions are communicated in the HW/SW specifications provided with the software.
- 2.2.2 Planned changes in the support of hardware are communicated to the ShareAspace community as soon as the plans are fixed and committed.

2.3 - Extensibility

CPO Statement

IT customers have to establish efficient processes based on suitable IT systems (cf. Figure 1) to achieve competitiveness in their market. The functionality provided by IT systems in the market frequently does not completely cover requirements in this regard. Openness in this respect means that IT customers have the option of extending the functionality of an IT system in order to implement required process adaptations and to map their own know-how in the IT system.

- 2.3.1 IT vendors shall provide development environments for implementing extensions, which in particular
  - a. should provide the build-time environment for implementing changes/add-ons to the data model, the business logic and rules, and the user interface.
  - b. should provide the tools needed to create a runtime executable that can be implemented on top of the standard installed code.
  - c. should provide appropriate documentation of the interfaces (APIs) and the integration architecture.
- 2.3.2 IT customers shall be able to commission third parties to realize extensions (based on their IT customer license agreements).
- 2.3.3 IT vendors shall provide a change request system and feedback regarding change requests within the agreed timeframe (customer contract agreement). This requirement shall be valid for sections 2.1 - 2.6 as well.

ShareAspace

The core philosophy with ShareAspace is that it extends and leverages the complete PLM environment by consolidating the information from several best-of-breed systems. This approach means that you extend the platform with business processes, authoring tools and consumer applications on top of a consolidated standards based information set.

- 2.3.1 The core data model of ShareAspace is based on a standard and cannot be altered. This is to ensure that data stored in Share-A- space® can always be communicated using the standard interfaces. However, on top of this standard model the IT Customer can build business object models using the building blocks of the standard model and tailor the processes and user interfaces of the OOTB ShareAspace. All required tools, APIs and documentation for developing such customizations are provided using NuGet packages, to simplify the process for IT Customers and third party providers.
- 2.3.2 IT Customers are free to choose who will provide their extensions to ShareAspace as long as they have a signed license agreement with Eurostep.
- 2.3.3 IT Customers with a signed M&U agreement have the right to post change requests as well as receive all new versions of the core software.

2.4 - Interfaces

CPO Statement

In order to realize the required interoperability (2.1) and extensibility (2.3) of an IT system, IT customers need access to available, documented and performing IT interfaces.

- 2.4.1 IT interfaces shall be documented based on a common understanding and methods of documentation.
- 2.4.2 IT vendors shall provide a maintenance statement for interfaces to IT customers one year in advance.
- 2.4.3 IT vendors shall endeavour to maximize version and release compatibility with regard to new releases of and changes to IT interfaces.
- 2.4.4 IT vendors should offer the same IT interfaces to IT customers (or third parties commissioned by these IT customers) as those used internally by the IT vendors, insofar as they have been published.
- 2.4.5 There should be no difference in the functionality and performance of IT interfaces with regard to batch processing and direct interaction.
- 2.4.6 Cancellation of an interface shall be announced as early as possible.
  - a. Cancellation of an IT interface by an IT vendor should be announced at least one year in advance.
  - b. In the case of a cancellation, the IT vendor should provide an adequate replacement or, if this cannot be done in time, a workaround.

ShareAspace

Interfacing to other IT systems and integrating the information found in those IT systems is a core feature of ShareAspace. Hence Interfaces as such are a major part of the complete solution to the IT Customer.

- 2.4.1 ShareAspace is provided with standard interfaces and documented accordingly, enabling the IT customers to standardize their communication with partners and suppliers.
- 2.4.2 Communications regarding interfaces follow the same process as for all other components in the ShareAspace platform. See answer to 2.2.2.
- 2.4.3 Utilization of the standard interfaces to ShareAspace ensures compatibility between versions and releases.
- 2.4.4 All ShareAspace components use the same API as the one exposed to IT Customers and third party solution providers.
- 2.4.5 See 2.4.4
- 2.4.6 Communications regarding interfaces follow the same process as for all other components in the ShareAspace platform. See answer to 2.2.2.

2.5 - Standards

CPO Statement

The term “standard” as used here is synonymous with norm, standard, industry standard, vendor-specific standard. The development and maintenance of a complex system environment can only be done efficiently if standards are used as far as possible. This is valid for all the previously mentioned aspects of openness (interoperability, IT infrastructure and extensibility).

- 2.5.1 IT vendors should support relevant standards and document their usage. IT vendors shall provide a list of the standards implemented in a specific IT system.
- 2.5.2 With regard to the support of future standards, IT vendors shall provide a statement of intent and should provide a roadmap relating to the usage of standards for specific processes.
- 2.5.3 If supporting a standard, IT vendors should adhere to the related best practices and use cases (if available).
- 2.5.4 To ensure standards-based interoperability, IT vendors should participate in the related Implementor Forum (if available).

ShareAspace

Eurostep is built on the concept of openness and open product data standards. From the day the company was registered in 1994 and through all the years of existence, Eurostep has been active in standardization networks actively engaging with policy makers, user communities and IT industry. This is reflected in the ShareAspace product.

- 2.5.1 ShareAspace is in its core based on an international information standard and is provided with standard interfaces. A list of supported standards are is provided as part of this CPO Statement.
- 2.5.2 The product roadmap is available to partners and IT Customers with a signed M&U agreement.
- 2.5.3 It is in Eurostep’s interest to adhere to best practices in order to fulfil our vision of making PLM collaboration easy for all.
- 2.5.4 Eurostep intend to participate in Implementer Forums (if available) for the relevant standards.

2.6 - Architecture

CPO Statement

The IT architecture comprises the components making up an IT system, the relationships between these components and the way in which they interact and have been integrated. IT customers need access to the individual components so that; (1) they can create GUIs (clients) for specific user groups which leverage the capabilities of the different IT systems, and (2) administration and continued operation of the different layers (e.g. OS, DB, application and client) can be delegated to the appropriate internal organizations.

- 2.6.1 The IT system shall have a documented architecture.
- 2.6.2 The IT system shall have a clear and documented separation of the individual tiers (e.g. n-tier architecture, peer-to- peer etc.).
- 2.6.3 If appropriate, it should be possible to adapt the tiers independently of one another. This applies in particular to the presentation tier.

ShareAspace

ShareAspace is built on modern technology and standards according to the thinking around cloud based architectures with independent roles that make up a complete system.

- 2.6.1 Full ShareAspace documentation including deployment architecture is available to partners and IT Customers with a signed license agreement.
- 2.6.2 ShareAspace has an n-tier architecture of independent components, where all components can be distributed to any number of machines in order to maximize flexibility and scalability of the complete system.
- 2.6.3 Since the ShareAspace approach is to NOT customize the persistent data layer it is in the business object model and presentation layers that an IT Customer will deploy its adaptations.

2.7 - Partnership, IT vendors and IT customers

CPO Statement

The openness of an IT system cannot be seen separately to its IT vendor or the IT customer:

- Contractual stipulations regarding customer-supplier relationships and, for example, third-party solutions are part of the overall “openness” picture.

- The requirements of IT customers and their purchasing behaviour influence the further development of the openness of marketable IT systems.

- 2.7.1 IT customers and IT vendors show mutual respect for their respective intellectual property, e.g. any product or roadmap information shall be treated as confidential.
- 2.7.2 IT vendors who signed the CPO agree to subject their CPO-related IT systems to the terms of the CPO and report on fulfilment (CPO statement). This CPO statement may be part of the presentation of new IT systems or IT system updates/upgrades.
- 2.7.3 IT customers who signed the CPO agree to the terms and definitions of the CPO and recognize the CPO as an evaluation criterion for IT systems.
- 2.7.4 Data generated by IT users with an IT system is and remains the intellectual property of these IT users. Appropriate interfaces shall be available for accessing this intellectual property.
- 2.7.5 Co-operations (e.g. joint ventures) between IT customers should be made possible by means of license agreements from the IT vendors.
- 2.7.6 IT vendors shall support the integration and extension of their IT systems by IT customers and/or third parties in accordance to contractual stipulations.
- 2.7.7 IT vendors should offer appropriate partnership models for third-party companies.
- 2.7.8 IT users and innovation communities should be supported by the IT vendors.

ShareAspace

Eurostep operate as a Software Vendor and through selected partners.

- 2.7.1 Eurostep and IT Customers with a signed license agreement for Share-A- space® must apply to the rules set forth in the agreement.
- 2.7.2 With this CPO Statement Eurostep ShareAspace has an n-tier architecture of independent components, where all components can be distributed to any number of machines in order to maximize flexibility and scalability of the complete system.
- 2.7.3 Since the ShareAspace approach is to NOT customize the persistent data layer it is basically in the business object model and presentation layers that an IT Customer will deploy its adaptations.
- 2.7.4 A core data model based on an open international standard with relevant standard interfaces to access the data stored, enables the IT Customer to be in full control over its own information.
- 2.7.5 A ShareAspace installation allows users from different organization to securely exchange and share data making it an ideal platform for joint ventures.
- 2.7.6 One of the core features of ShareAspace is to be able to integrate information from legacy IT systems. Naturally this require co-operation and collaboration between IT customers, IT vendors and third-party companies.
- 2.7.7 Eurostep has an extensive partner program that enable third-party companies to act as solution providers for a complete ShareAspace system
- 2.7.8 Eurostep support any initiatives around developing new applications on top of the ShareAspace platform and run annual ShareAspace Forums to promote these and share the latest information with ShareAspace community.