

# Fidectus' input to EFET BPOC via Slack channel 28.11.2019

## Recommendation on Interoperability

Overall, we were able to implement settlement matching with the specification 2.0 and we found the specification document to be well-written and workable. Since first starting the eSM effort, it was clear to all involved stakeholders (e.g. EFET, BPOC, European OTC energy trading community, Service Providers etc.) that Interoperability is highly important to a successful eSM rollout. History should not repeat itself. eSM stakeholders are asking to avoid service provider lock-in, to making competition a reality and therefore enabling the market to drive innovation. Moreover, the eSM standard should be literally available to any trading company and service provider of any size to get the full benefit out of it. It should be easy to apply and come with a low initial investment risk.

But what does Interoperability exactly mean? Let's start with an acknowledged definition by [AFUL](#):  
**"Interoperability is a characteristic of a product or system, whose interfaces are completely understood, to work with other products or systems, present or future, in either implementation or access, without any restrictions."**

Two of three **musts** required for Interoperability have been defined by EFET's Electronic Settlement Matching specification already: 1) a human-readable eSM standard which is translated to a 2) machine-readable schema in CpML. However, this guarantees that we all speak the same language (e.g. English) and have the same understanding of grammar. It does not yet cover an agreement on how we handle conversations. We might sit in different rooms or whisper and still don't understand each other. To overcome this hurdle and to address the third **must** for achieving Interoperability, **required interfaces should also be well-defined and open to the EFET community; still being technology agnostic**. This said, we welcome that the specification already states (page 8) that "Companies will thus be able to achieve integration with these different service providers and/or systems without having to develop and maintain a different interface for each."

Merging this statement with many trading companies asking to avoid service provider lock-in, market-driven innovation and fair chances to have traders of any size benefit of eSM, only one conclusion is acceptable: **The eSM interface needs to be completely understood by all stakeholders and to work with other systems - no matter if trader to service provider, service provider to service provider or trader to trader communicate - without any restrictions.**

Therefore, we recommend covering the 1) definition of business messages, 2) technical operations and services, 3) specification of connectivity, 4) all in a machine- and human-readable format. This should be applicable to any connection scenario as stated above. An OpenAPI does this job. We have put in effort to "translate" the current eSM 2.0 accordingly. **We believe this definition should be owned, controlled and driven by EFET BPOC**, whereas purely technical discussions can still be covered by CpML.

## eSM Recommendations (with an impact on Interoperability)

We have several recommendations for change. First, I'll go through what we consider the high priority changes where we believe the schema is not correct for the use cases in the specification. These are mostly small changes to fields. Following this, I'll give a larger structural recommendation for improving the schema.

For the field level changes, we agree and support proposed recommendations made by RWEST and Alpiq:

1. <InvoiceID> is a mandatory field but should not be mandatory for a Purchase Order. → Instead use one mandatory field for DocumentID.
2. <SupplierTradeID> is a mandatory field but should be optional for a Purchase Order. → Instead use one mandatory field for <TradeID>.

### Structural recommendations:

We found that the decision to use the same schema for all eSM document types has some significant drawbacks. The document types used in business we're talking about are:

- Invoices
- Purchase Orders
- Financial Statements
- Netting Statements

While these documents share many of the same elements, they are all different. This leads to several issues:

- The differences between document types are captured in descriptive text in the CpML specification rather than in the schema itself. This reduces the effectiveness of the schema as a tool to create and validate documents in a machine-readable manner. There is no way to ensure alignment on implementation of human-readable comments in the specification. Therefore, the EFET objective to achieve Interoperability is threatened.
- Another drawback here is, that data elements for all document types are put together, making many of them optional to allow inclusion only in the document types where they make sense. Again, there is no ability to enforce a common implementation of the schema across suppliers, which has again a negative impact to Interoperability. In addition, it creates additional initial hurdles as it is harder for trading companies (especially smaller ones) to handle this.
- And similarly, many of the data types end up as lists to accommodate netting statements. Comments in the specification state, that for Invoices, there is only allowed to be 1 element in the list. This both reduces Interoperability and forces use of a list for invoices which is workable but not ideal.
- Beyond the issue of shared schema, we found the schema to work quite well. One thing that we feel, is a departure from the norm in schema design, which is pulling out the Aggregation Keys into its own element. While this does provide an easy way to see which keys are Aggregation Keys, the best practice would be to structure the schema in a more natural way with the aggregation keys where they more naturally belong whether that's in the <InvoiceData> or <ProcessInformation> or <Customer>/<Supplier> section. This is more a matter of style and opinion and perhaps less important than the other recommendations.

Therefore, we recommend using 4 document schemas as described in the presentation from RWEST and Alpiq. This should be an easy and quick change for any party involved in implementation, as fields and their schema definition will stay untouched. The existence of fields in different document types will vary and conditional situations will disappear. Rules are now clearly defined in a machine-readable way and the chance of different interpretations and implementations is anticipated, which again guarantees Interoperability.

We are looking forward to discuss with you at BPOC and other service providers.