e-Procurement evaluating Solution Architecture Template (SAT)

Change control

Table 1-1

Modification	Details
Version 1.0.0 beta	
Initial version	

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1 INTRODUCTION

This document contains the description for a Solution Architecture Document (SAT) for the business capability of e-Procurement *evaluating* business capability.

This SAT is based on EIRA v2.0.0*,* which is aligned with ArchiMate® *3.0.*

The ArchiMate source are embedded in this document in the "Archi format" as well as in "The Open Group ArchiMate Model Exchange File Format".

SAT e-Procurement evaluating v1.0.0 be

SAT e-Procurement evaluating v1.0.0 be

1.1 Purpose of this document

Enterprise and Solution architects can use this document to design solution architectures in the domain of e-Procurement evaluating business capability.

1.2 List of acronyms used in this document

Table 1-1

ABB	Architecture Building Block
BII	Business Interoperability Interfaces
CA	Contracting Authority
CEF	Connecting Europe Facility
CEN	Comité Européen de Normalisation (European Committee for Standardization)
CEN TC 440	CEN Technical Committee 440 – Electronic Public Procurement
EIRA	European Interoperability Reference Architecture
EO	Economic Operator(s)
GDPR	General Data Protection Regulation
HI	Human Interface
IES	Interoperable European Solution
ISA²	Interoperability solutions for public administrations, businesses and citizens
MMI	Machine to Machine Interface
SAT	Solution Architecture Template
SBB	Solution Building Block
UBL	Universal Business Language

2 GOAL, DESCRIPTION AND TARGET AUDIENCE

This chapter gives the goals and a description on e-Procurement evaluating business capability and indicates the target audience and their potential use of this Solution Architecture Template (SAT).

2.1 Goal

The purpose of this SAT is to provide guidance by defining a minimal, but holistic (legal, organisational, semantic and technical) interoperability architecture in the domain of e-Procurement evaluating business capability. This SAT should allow businesses, citizens and public administrations to have a common understanding of the most-salient building blocks.

2.2 What is e-Procurement evaluating business capability?

The e-Procurement evaluating business capability covers the evaluation of the electronic tenders and/or catalogues received by the contracting body following the closing deadline of a tender competition, including electronic exchange to enable the clarification of tender content by evaluations.

2.3 What is a solution architecture template (SAT)

A Solution Architecture Template (SAT) is a specification extending the EIRA providing support to solution architects in a specific solution domain. An SAT contains a motivation (principles, requirements), a goal and a description of the supported functionalities, a sub-set of the EIRA core Architecture Building Blocks (ABBs) covering the four views, a set of specific ABBs extending EIRA's views enabling specific functionalities to be provided by implementations derived from the SAT and the interoperability specifications of selected ABBs and a narrative for each EIRA view.

The benefits of a SAT are the following:

- Provides architects with a common approach to cope with a specific interoperability challenge. It also places the focus on the key-points you need to consider.
- A solution architect can create a solution architecture by mapping existing Solution Building Blocks (SBBs) to an SAT, based on the interoperability specifications that are provided. This is done by providing SBBs for the ABBs identified in the SAT.
- When a solution architect creates an SAT, he/she can define the interoperability specifications for the SAT’s ABBs and moreover recommend specific SBBs which produces faster and more interoperable results.
- An SAT can be created within and across the different views of the EIRA. An SAT can then support architects specialised in different interoperability levels."

2.4 Target audience

This document has the following target audience:

Table 2-1

Audience	Description
Solution Architect	Solution architects in the need of understanding, implementing, or describing an evaluating solution.
Policy maker	Policy makers studying the implications due to policy changes in the area of evaluating

Public Administration / Members States	Public Administrations of the European Union that need to have a holistic view of the evaluating interoperability architecture

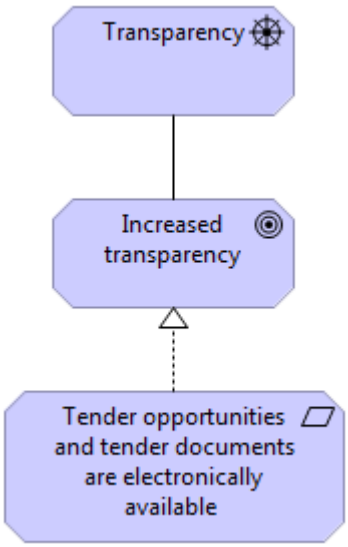
3 E-PROCUREMENT EVALUATING INTEROPERABILITY MAPPED TO THE EIRA

This chapter contains for each EIRA view the corresponding ArchiMate model and narrative. Next to the SAT's EIRA architecture building blocks, the ArchiMate model includes, where applicable, the related specifications, principles and requirements.

The models have been scaled down to fit with the text, they are included in bigger format in the appendix.

3.1 ArchiMate Motivation extension

The following specific requirement complements the general ones specified in the e-Procurement SAT and must be respected by the e-Procurement evaluating solution: *tender opportunities and tender documents are electronically available*.



3.2 How to use this SAT

The present SAT is specifically related to the evaluating business capability of e-Procurement. The present document has to be used in complement to the SAT related to core e-Procurement.

Indeed:

- The e-Procurement core SAT focuses on the architecture that is common to all business capabilities.
- The present e-Procurement evaluating SAT addresses the architecture that is specific to the e-Procurement evaluating business capability.

Said in other words, the e-Procurement core SAT provides the foundation for all e-Procurement business capabilities, while the present SAT complements it by addressing the evaluating specificities.

A solution architect that uses the two Solution Architecture Templates typically wants to perform a gap-analysis between an existing solution and these SATs, or he/she wants to model a solution in the domain of evaluating and uses the two SATs as guidance.

3.2.1 e-Procurement evaluating Gap Analysis use case

Using the two *e-Procurement core* and *e-Procurement evaluating* SATs for gap analysis, the solution architect can map the building blocks of the solution to the ones in the two SATs and identify which building blocks are missing. These building blocks can either indicate missing functionality or missing interoperability specifications.

3.2.2 e-Procurement evaluating Building a solution architecture use case

When building a solution architecture, the solution architect is expected to use the four different EIRA views in the two *e-Procurement core* and *e-Procurement evaluating* SATs and provide a solution in the form of Solution Building Blocks (SBBs) for the Architecture Building Blocks (ABBs) that are indicated. This is done by replacing the Architecture Building Block (ABB) with an annotated Solution Building Block (SBB). The existing Solution Building Blocks in the two SATs should not be removed and replaced. However, the acknowledgement of reusing these building blocks can be done by removing the ABBs which they specialise.

Interoperability Specifications (IoP specs) are added as specialisation of an Interoperability ABB, implemented in the form of an SBB and attached to an ABB as interoperability requirements. The final solution should only contain the implementation (the SBB) of the IoP Spec

The result will be a solution architecture that will contain only SBBs, all ABBs should have been removed (in the case this SAT already provides SBBs for this ABB) or replaced by SBBs (solutions that implement that ABB).

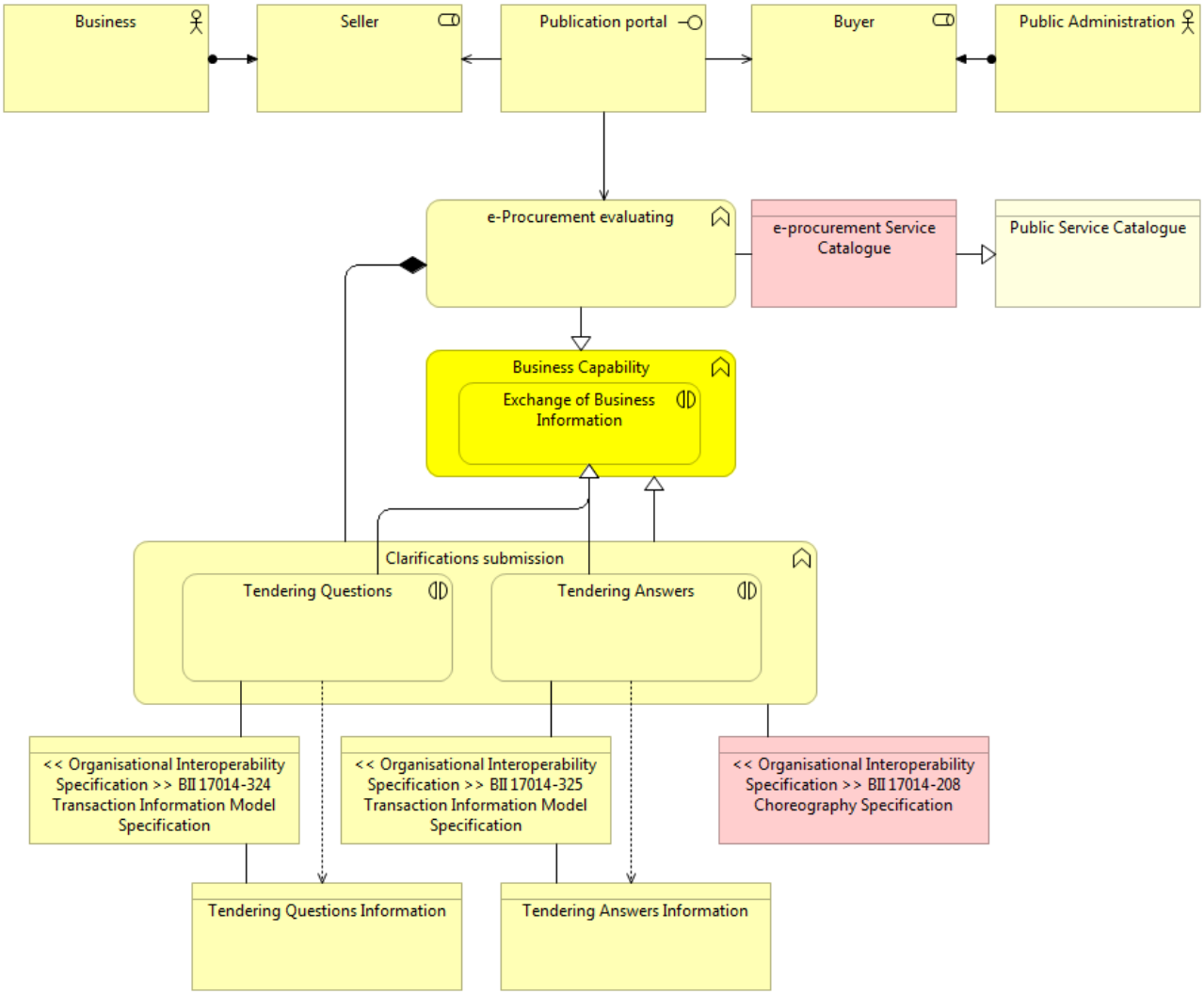
The SAT is a document describing the needed Architecture Building Blocks for a desired solution. This should not be taken as restrictive but as advisory. When an Architecture Building Block (ABB) is present for which there is no implementation foreseen in the form of a Solution Building Block (SBB), it is *strongly* recommended, but not mandatory, to take this ABB into consideration in the final solution.

3.3 e-Procurement evaluating Legal View

There is no supplementary building block in this specific e-Procurement evaluating Legal View in comparison with the e-Procurement core Legal View provided in the e-Procurement core SAT. The core Legal View specified in the e-Procurement core SAT applies.

3.4 e-Procurement evaluating Organisational View

The Organisational view for the e-Procurement evaluating business capability consists in the following sub-set of EIRA Architecture Building Blocks (ABBs) as well as a number of predefined Solution Building Blocks (SBBs):



The e-Procurement evaluating Business Capability is provided using the evaluating Service Delivery Model and is listed in the e-Procurement Service Catalogue.

The Publication Portal is used to evaluate the received electronic tenders and/or catalogues, including the electronic exchange to enable the clarification of tender content.

The e-Procurement evaluating Business Capability is made up of the Business Capability Clarifications submission. It involves the Exchanges of Business Information Tendering Questions and Tendering Answers between the Buyer and the Seller (Tenderer).

The following table lists the Organisational Interoperability Specifications applying to the Business Capabilities and Exchanges of Business Information:

Table 3-1

Business Capability and Exchange of Business Information	Organisational Interoperability Specification
Clarifications submission	BII 17014-208
Tendering Questions	BII 17014-324
Tendering Answers	BII 17014-325

Clarification Submission

Clarification submission choreography describes the process and its variants by which the buyer (the contracting body) can request clarifications to sellers (tenderers) on their tenders in order to perform the evaluation.

The key aspects covered by this choreography are:

- The contracting body has one or more questions regarding clarity of the tender and sends the questions electronically to the tenderer.
- The tenderer answers the questions and sends the answers to the contracting body.

Tendering Questions

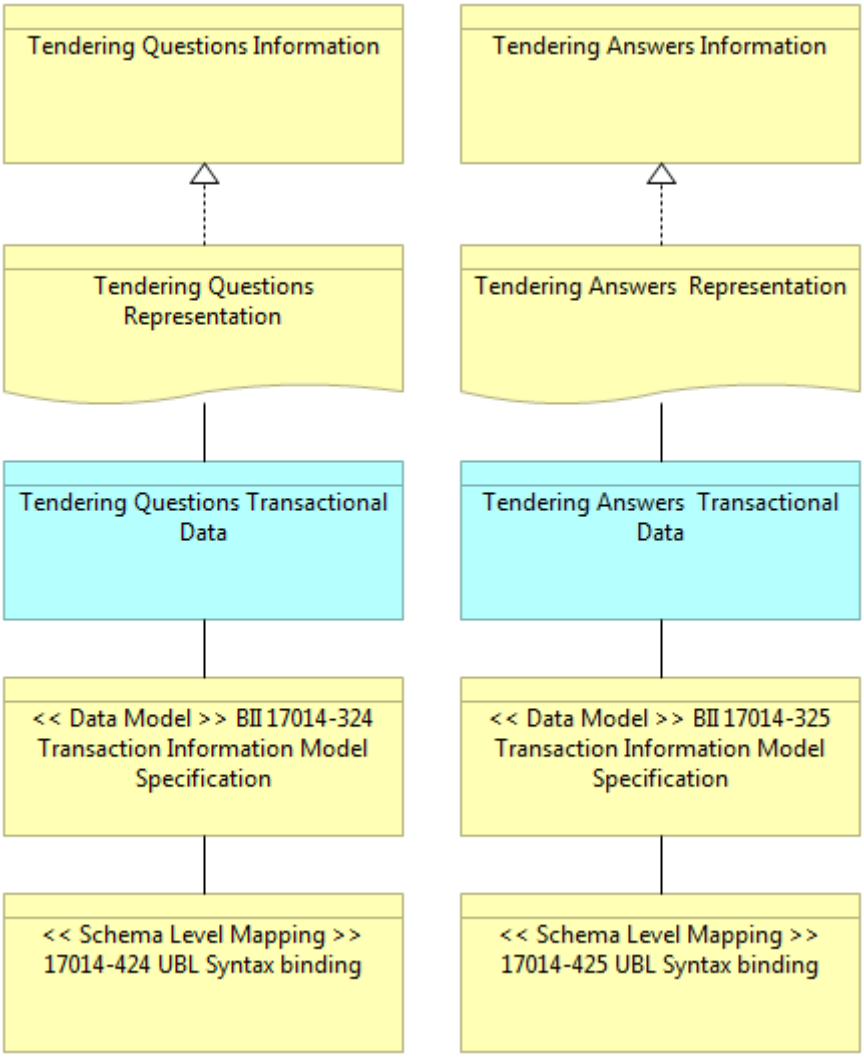
Tendering questions BII transaction provides the set of interoperability specifications to support the electronic exchange of a structured electronic document for requesting clarifications on a tender under evaluation.

Tendering Answers

Tendering answers BII transaction provides the set of interoperability specifications to support the electronic exchange of a structured electronic document for providing clarifications on a tender.

3.5 e-Procurement evaluating Semantic View

The Semantic view of this SAT consists of the following sub-set of EIRA Architecture Building Blocks (ABBs) as well as a number of predefined Solution Building Blocks (SBBs):



The Transactional Data ABBs represent at the semantic point of view the business information exchanged at the organisational point of view.

Consequently, there are 2 Transactional Data ABBs in the e-Procurement evaluating semantic view:

1. Tendering Questions
2. Tendering Answers

Each Transactional Data is defined in a Data Model SBB, the BII Transaction Information Model Specification, itself associated to a Schema Level Mapping SBB, the UBL Syntax Binding specification. These are listed in the following table:

Table 3-2

Transactional Data	Transaction Information Model Specification	UBL Syntax Binding
Tendering Questions	BII 17014-324	17014-424
Tendering Answers	BII 17014-325	17014-425

3.6 e-Procurement evaluating Technical View – Application

There is no supplementary building block in this specific e-Procurement evaluating Technical View – Application in comparison with the e-Procurement core Technical View – Application provided in the e-Procurement core SAT. The core Technical View – Application specified in the e-Procurement core SAT applies.

The Representations of Transactional Data that the MMI presented in the e-Procurement core SAT has to process are the ones shown in the specific Semantic View shown in the previous paragraph of the present document.

There is no supplementary building block in this specific e-Procurement evaluating Technical View – Application in comparison with the e-Procurement core Technical View – Application provided in the e-Procurement SAT.

3.7 e-Procurement evaluating Technical View – Infrastructure

There is no supplementary building block in this specific e-Procurement evaluating Technical View – Infrastructure in comparison with the e-Procurement core Technical View – Infrastructure provided in the e-Procurement core SAT. The core Technical View – Infrastructure specified in the e-Procurement core SAT applies.

There is no supplementary building block in this specific e-Procurement evaluating Technical View – Infrastructure in comparison with the e-Procurement core Technical View – Infrastructure provided in the e-Procurement SAT.

4 REFERENCES

The references listed in the e-Procurement core SAT apply.

5 ACKNOWLEDGEMENTS

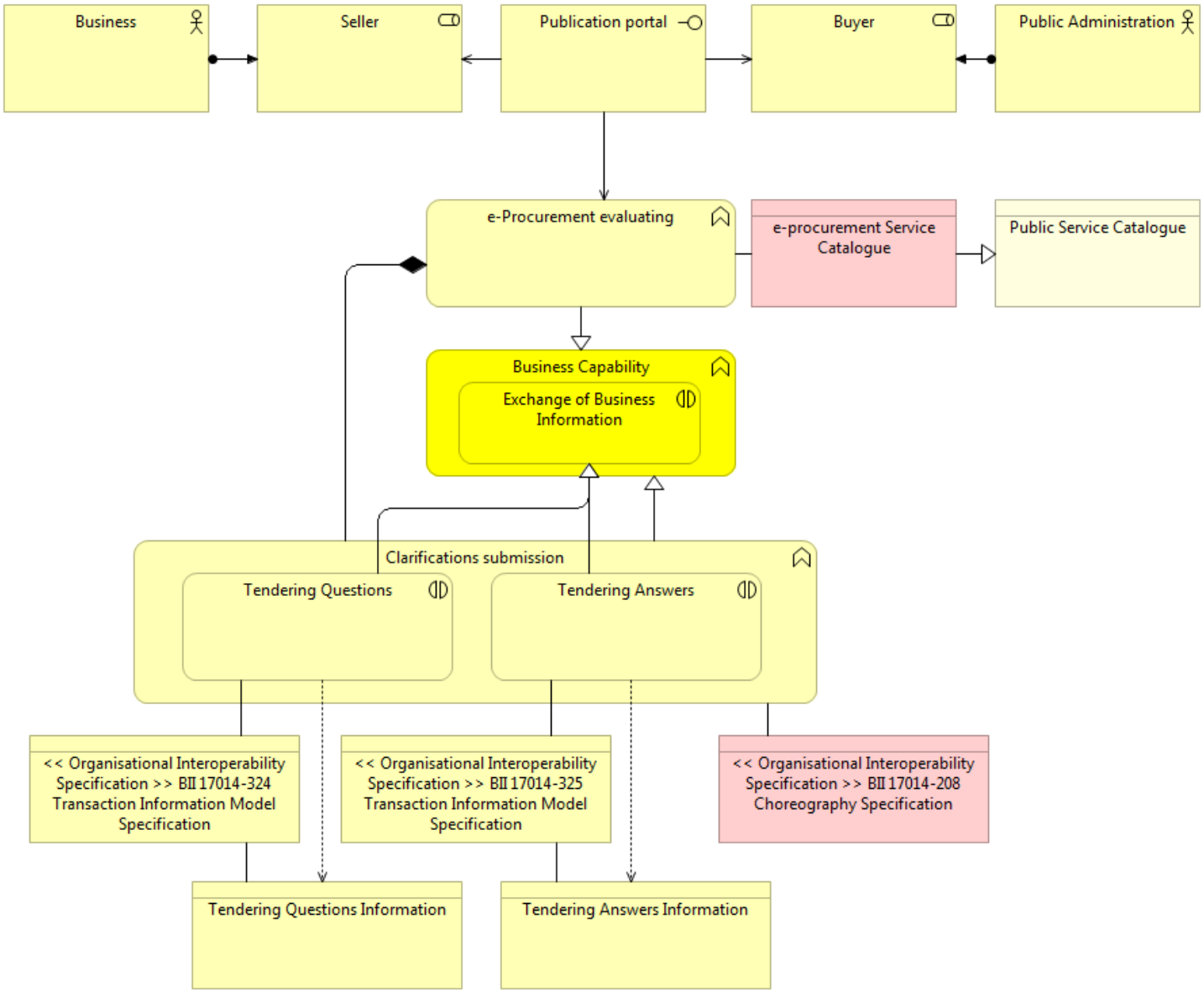
The creation of this SAT was made possible with the help of CEN Technical Committee 440 – Electronic Public Procurement. We would like to thank the following people for their input (alphabetical order):

- APOLOZAN Liviu
- BLOMMESTEIN Fred
- DRIJFHOUT Kornelis
- FROMYR Jostein
- GUASCH Cécile

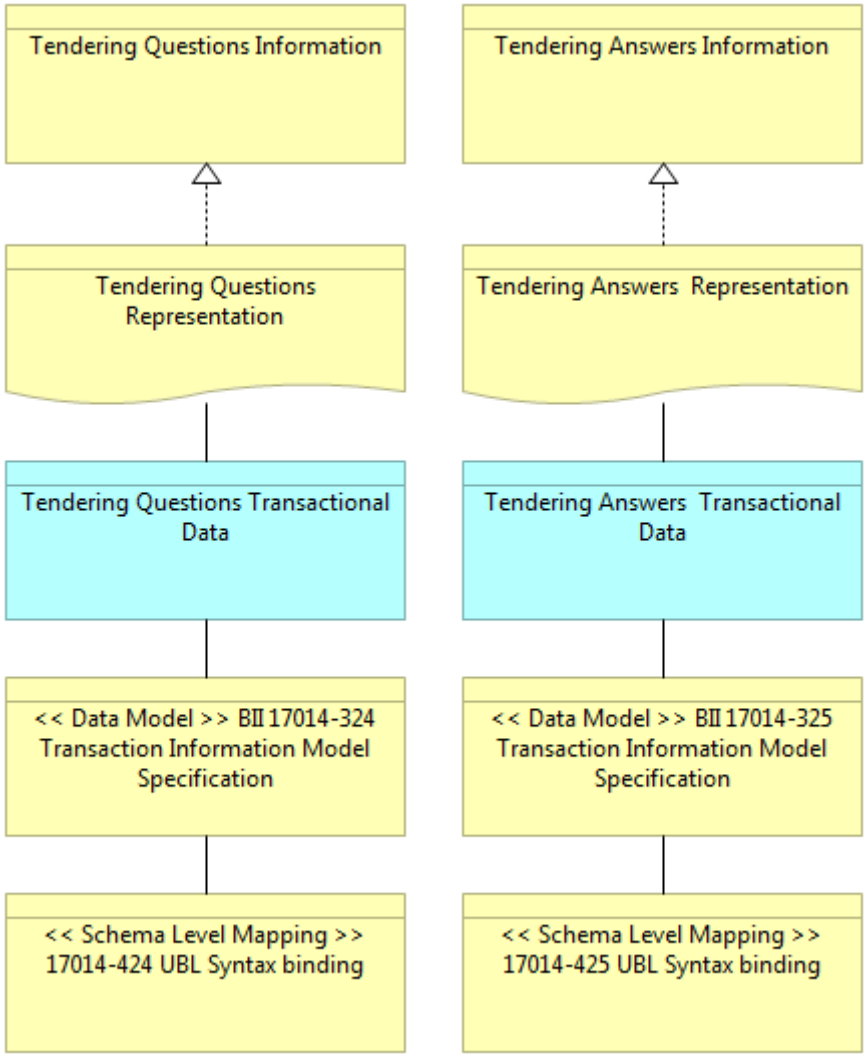
6 APPENDIX: LEGAL VIEW

There is no supplementary building block in this specific e-Procurement evaluating Legal View in comparison with the e-Procurement core Legal View provided in the e-Procurement core SAT.

7 APPENDIX: ORGANISATIONAL VIEW



8 APPENDIX: SEMANTIC VIEW



9 APPENDIX: TECHNICAL VIEW – APPLICATION

There is no supplementary building block in this specific e-Procurement evaluating Technical View – Application in comparison with the e-Procurement core Technical View – Application provided in the e-Procurement SAT.

10 APPENDIX: TECHNICAL VIEW – INFRASTRUCTURE

There is no supplementary building block in this specific e-Procurement evaluating Technical View – Infrastructure in comparison with the e-Procurement core Technical View – Infrastructure provided in the e-Procurement SAT.