Blueprint for a Pan-European E-Services Solution

June 2011

Table of Content

1 Introduction

1.1 Background

The recent years have seen an important growth of e-commerce activities, generating a compelling need for secure e-payment services. While certain initiatives in this regard have emerged in local contexts and while their successful development has to be recognised, it appears at the same time that there is primarily a need for e-services at a pan-European level. The requirement for a pan-European approach towards e-services is also strongly supported by the European Commission and the ECB who encourages the banking industry to engage in e-services on a pan-European level, as highlighted in the 7th ECB SEPA Progress report.

The subject was addressed by the Innovation Committee of the Board of EBA CLEARING (EBA CL) and the Innovation Committee concluded that a collaborative initiative involving interested banks should be explored by EBA CL with a view to further studying a scenario for the delivery of pan-European e-services by the Company. Following these recommendations, the EBA CL Board requested the Management of EBA CL to investigate the activities and services which the Company could develop in the area of e-services.

The present blueprint document is issued by EBA CL. For the blueprinting phase, EBA CL management has consulted those shareholder banks that volunteered to step forward as potential future users to give their opinions and advise as to what they would like to see from such a solution.

This document presents the requirements and functionalities identified during the blueprinting phase of a pan-European e-services solution. Please refer to Annex 3 for a list of the representatives of shareholder banks who have contributed during the consultation process.

This document, once accepted by EBA CL Board as a way forward on e-services by the Company, will serve as a basis for consultation with the wider community of shareholders, other banks and representative stakeholders amongst the e-merchants and consumer communities.

This document is the property of EBA CLEARING and is confidential to EBA CLEARING and its shareholders.

1.2 Purpose

The purpose of this document is:

1. To provide a market analysis of the e-services and e-payments market, and to identify areas in the cooperative space for developing pan-European e-services.

2. To describe the key characteristics of a pan-European e-services solution and to provide a high level overview of such a service, including the definition of the high level requirements.

3. To describe the business rationale for EBA CLEARING to develop and maintain an e-services service.

4. To describe the legal context in which such a service should operate and related roles and responsibilities.

5. To provide background information for the proposed business considerations.

1.3   Summary of findings

There is a need for a pan-European solution for e-services. EBA CL proposes to offer this solution and play the role of solution manager.

- While e-commerce is rising, there is no existing pan-European solution that meets the needs of consumers and merchants for e-commerce that include both Push Payments and Direct Debits. EBA CL is well placed to provide such a solution that will enter the competitive space alongside other solutions, some of which are described in section 2.

- The main characteristics of the solution are described in section 3. It should be an authorisation solution (not itself a payments solution); real time and internet based; developed around a four corner model and multi-purpose.

- The required operational elements and an overview of processing flows are described in section 4.

- Section 5 describes the role of EBA CL as a solution provider.

- Section 6 looks at the business benefits of such a solution and the business considerations for the banks.

- Section 7 describes the implementation plan foreseen at the time of writing. The implementation should be done in a phased approach. The long-term vision is a multi-purpose solution which shall be re-usable for various payment instruments, or innovative payment / authorisation services such as m-payments, and in different currencies. It is required that in the first phase, the study concentrates on e-payments and e-debits in the SEPA area. Thus the design of the solution shall rely on an evolutionary model while the immediate application will be limited to credit transfers and direct debits.

Appendices list in more detail the requirements that should be met in such a solution, whether requirements of Buyers, Sellers or requirements of the payment schemes around, security, service level, governance, legal or related to oversight.

1.4   Terminology

A glossary is given in the Annex 2, however the following terminology is noted from the beginning.

Buyer: The term 'buyer' is used noting that a buyer can be a consumer, a small business, a medium-sized business or any other organisation that uses a human interface to purchase something. File based corporate purchasing solutions or solutions that may require dual signatures are not in the scope for the present version and short-term solution.

Seller: The term 'seller' is used normally to mean a 'merchant', however it is not excluded that the seller is an individual making a one off sale via an online market place or other tool.

Seller Bank: This is the bank[1] of the Seller offering e-authorisation services to its Sellers. This is also called the Creditor Bank.

Buyer Bank: The bank of the Buyer offering the Buyer the possibility to authenticate an e-authorisation Request. This is also called the Debtor Bank. A real-time dialogue between the Debtor Bank and the Buyer should be available.

---

[1] Whenever the term bank is used, it is includes all authorised payment service providers, including, without limitation, banks and licensed payment institutions.

2   Market analysis

2.1   The European market for e-commerce

The size of the e-commerce market in 2010 is estimated to be between 5% and 8% of total retail volume with a total value of e-commerce in Europe in 2010 was EUR 170 Bln. The market for e-commerce is growing fast, with estimated growth rates between 10% and 20%.

There are large differences in e-commerce markets in local countries. However, these countries that are in early days of development (such as Italy, Spain) are estimated to show high growth rates.

Cards are commonly used, especially in credit card oriented countries, such as UK and France. However, the use of Online Banking for initiating credit transfers, including OBeP (Online Banking ePayment) solutions is gaining more popularity.

–   60% of all European e-commerce transactions are done using card solutions.

–   20% is done using bank solutions (credit transfer or direct debit) and OBeP solutions (mainly from The Netherlands, Germany, Austria, Switzerland and the Nordics).

–   20% is done through other means (such as e-wallets and payment on delivery).

2.2   Existing solutions

There are a number of live solutions in the market for e-commerce. These include domestic solutions, card-based solutions and e-wallets. These are well documented in the market, but there is no pan-European scheme covering multiple payment channels.

2.3   Ongoing initiatives

On a pan-European and global level there are a number of initiatives on the further development of e-commerce. These initiatives are:

–   E-operating model for e-payments (EPC) and E-operating model for SDD (EPC)

–   EPS – Giropay – iDEAL interoperability PoC (paper exercise)

–   Secure Vault Payments – Interac Online and PayO (ICPNO)

–   Clear Xchange –person to person electronic payments solution by Bank of America, JP Morgan Chase and Wells Fargo

2.4   Conclusion

While e-commerce is rising, there is no existing pan-European solution that meets the needs of consumers and merchants for e-commerce that include both Push Payments and Direct Debits.

3 Solution Description

This section describes the scope and key requirements of the solution identified by EBA CLEARING to facilitate e-commerce and other e-services. Below are listed the main points and key requirements.

The solution will be:

−   An authorisation service.

−   Real time and internet based.

−   Based on terms and conditions around a four corner model.

−   Multi-purpose.

−   Compliant with legal and requlatory requirements and allowing the banks to satisfy regulators' expectations.

3.1   An e-authorisation solution

This e-services solution will create a real-time confirmation/authorisation that can be used to authorise a range of payment transactions or other applications agreed within the solution.

Although the solution will firstly be used to initiate payments (whether Credit Transfer, Direct Debit, or other) it is not a payment scheme in itself.

It is a mechanism to allow a Buyer and a Seller (who may have never met each other) to exchange information in real time through trusted parties (the Banks) to provide each other with the necessary level of trust and certainty that the Buyer is who he says he is, that a payment has been made or that a mandate received by a Seller is really a valid mandate signed by the account holder.

More details on the given specific uses are described below.

3.2   A real time internet based solution

The solution is designed to be used in an internet context. The first example of this is a Buyer shopping from its home, using its computer with an internet browser on the website of a Seller (Merchant).

Having said this, there is no reason why the same cannot be implemented on hand held devices that are internet enabled, or any other technology that does the same thing (Mobile phone, Tablets, Fixed Terminals in railway stations etc).

3.3   4-corner model

The solution will enforce the same terms and conditions for all Participants in order to ensure compliance with the agreed service levels, especially regarding security. A document defining terms and conditions is therefore considered necessary in order to describe the mandatory requirements and the implementation guidelines applying to the Participants.

Banks will adhere to the terms and conditions, as Buyer Bank, Seller Bank or both; and, where necessary, they will ensure that their agreements with the Buyers and Sellers will be compatible with the terms and conditions and will allow compliance therewith by the Banks. Such terms and conditions will include

– Solution Level: Access criteria, generic roles and responsibilities, branding.

– Application level: Rules around the link between the authorisation and the underlying payment instrument(s), if any.

– Technical Level: Message flows, message standards, security, service levels.

This solution will be based on the same 4-corner model that the SEPA schemes are based on, giving the banks the responsibility and choice of how and what to offer to their customers, all within a harmonised customer experience.

The solution will define the interbank space, from an end-to-end perspective – excluding the underlying payment instrument-, therefore including obligations for the benefit of involved customers, especially at the customer experience and at the security and operational levels.

On the other hand, the solution will leave to banks the choice on the commercial relationship with their customers and the tailoring of corresponding product offerings.
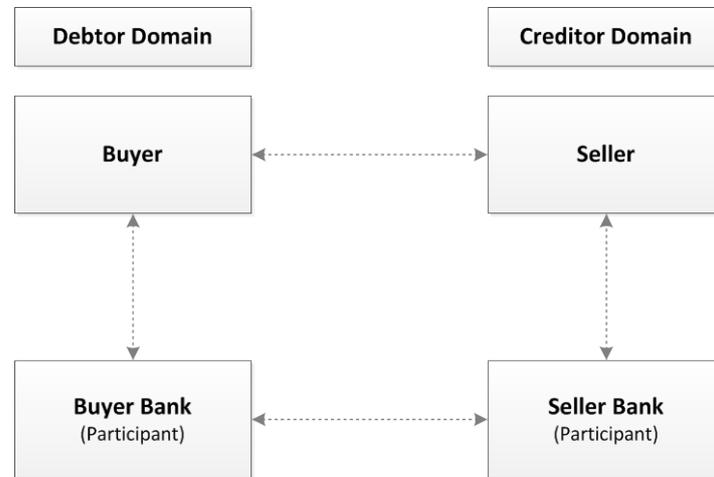
Figure 1: The 4-corner model for e-services

The roles of the 4-corner are described in the terminology section at the beginning of the document, and a more detailed explanation of the 4-corner model is given in section 4, which describes the Operating Model.

3.4 Multi-purpose uses of the e-services solution

The solution will allow Buyers to use the web in a number of different ways. Examples of these are listed below. These use-cases will be further prioritised in terms of implementation timeline (please see 3.5).

Push Payment use-cases

The solution will facilitate the following use-cases:

- Payment initiated via a Seller website, where the payment is sent to the Seller at the next available opportunity but within PSD timeframes.

- Person to person payment, where one person pays the other via an online market place.

- Person to person payment via hand-held devices, iPhone Apps where today one person might hand the other cash or a cheque.

- Pre-generated Payment that is finally initiated on delivery of the goods (Conditional payment).

- Payment where the Buyer can, on an optional basis, get insurance to secure the delivery of the ordered goods.

- 1 hour service level single payment.

- Scheduled payment, to be credited on a particular date.

- Multiple scheduled payments for the same amount that is released periodically for a number of iterations.

- Instalment based Payments. Generate an authorisation for a total amount but allow the payment to be made in instalments.

  N.B. the first instance of a Push Payment will be a SEPA credit transfer, but the solution will also allow settlement by credit card and non-euro credit transfers such as Swedish Kroner or Polish Zloty.

- Re-use of the solution for local e-payment solutions is possible under the conditions of that local solution (including brand and other conditions).

Pull Direct Debit use-cases (E-mandates)

The solution will allow Buyers to:

- Set up, modify or cancel an E-mandate for a SDD Core Recurrent Direct Debit with a fixed or variable amount, specifying the Collection date and the period of recurrence.

- Set up an E-mandate for a SDD Core One-off Direct Debit with a fixed or variable amount.

- Set up an E-mandate for a SDD B2B Recurrent Direct Debit with a fixed or variable amount, specifying the Collection date and the period of recurrence.

- Set up an E-mandate for a SDD B2B One-off Direct Debit with a fixed or variable amount.

- Set up, modify or cancel an E-mandate for a SDD Core Recurrent Direct Debit with a fixed amount, specifying the Collection date and the period of recurrence, where the Buyer agrees to waive the refund right in order to provide additional certainty to the Seller.

- Set up, modify or cancel an E-mandate for a SDD Core one-off Direct Debit with a fixed amount, specifying the Collection date, where the Buyer agrees to waive the refund right in order to provide additional certainty to the Seller.

- Set up an E-mandate for a SDD B2B One-off Direct Debit with a fixed amount where the Buyer agrees to waive the refund right in order to provide additional certainty to the Seller.

With the further evolution of existing SCT and SDD schemes, and the development of new schemes, more use-cases may be added in due course.

Example of E-identity use-case

As well as the creation of the authorisation, the solution could allow the Seller to obtain confirmation that the Buyer is over 'a requested age', if required, in accordance with the applicable national laws.

3.5 Phasing and roll out

The different functions will be rolled out in a phased approach starting with E-mandates and a single SEPA Credit Transfer. Built into the design will be the ability to handle multiple types of transaction and these will be rolled out on an ongoing basis (for example, it is envisaged that the solution will be used to initiate card transactions in a later phase).

For more details on the phase 1 scope, see paragraph 4.3.

3.6 Scope

- The solution has a pan-European focus, without being limited to Europe.

- The solution is intended for use in the context of e-commerce in the Single Euro Payments Area[2].

- Given the pan-European nature of the model and the direct relation with SEPA payment instruments, the model focuses on payments done in SEPA, denominated in Euro, but remaining open to other currencies. Potential activities with regard to foreign exchange should be handled by the Buyer Bank or Seller Bank.

- Participating Buyer Banks and Seller Banks must have a registered office in the European Economic Area or in one of the other SEPA countries.

---

[2] 27 EU Member States + Iceland, Liechtenstein, Norway, Switzerland and Monaco

- There is no restriction to the domiciliation of Sellers and Buyers as long as they respectively hold an account with the Seller Bank and Buyer Bank.

- The solution provides a set of terms and conditions and requirements for the organisation of the collaborative space between Participants.

3.7 Reach

On the Merchant side, the solution will aim to reach a level of market penetration that is today seen by the most popular schemes in the countries where such schemes are most used. This will be a quasi-total reach where all merchants that sell via the internet have subscribed to this solution.

While the solution will remain one of a number of competitive offerings that may exist, it is hoped that by being better in providing real-time assurances on the authentication of the Buyer, pan-European Merchants will choose to take the solution from their Banks.

On the Buyer side, the target is that most buyers who have access to internet banking also have access to this solution as provided by their Banks.

3.8 Providing Trust

The solution gives the Buyer and the Seller sufficient assurances that they can do business with each other, even though (in some cases) they have never met.

The Seller has the confirmation that the Buyer exists, that the Buyer's account exists and with which bank, and that it supports the payment type being used. The Seller also knows that the Buyer has the credentials necessary to access the account and that the Buyer has instructed the Buyer Bank to initiate or allow a payment to be made.

3.9 'Guarantee of payment'

Depending on the use and the type of transaction, the Seller will require assurances that it will receive the funds from the Buyer.

When the e-service is used to authorize a 'push' payment, it is foreseen or foreseeable that the Buyer Bank will be requested to 'guarantee' that the funds will follow the authorization to the Seller Bank, and so the Seller can benefit from this guarantee, unless he does not requires it.

3.10 Value Added Services

Banks will be able to offer value added services around the authorisation solution as long as these are compatible with the terms and conditions of the e-authorisation solution.

3.11 Branding

The solution will have a brand that is recognisable to Buyers across SEPA.

3.12 Infrastructure requirements and additional services

It will be necessary to have one or more providers offering services in the interbank space to support and facilitate the roll out or functioning of the solution.

As part of the solution EBA CL will offer to Banks:

– A central Directory and Directory services.

The following services could also be offered by EBA CL (subject to further investigation):

– Routing Service (sourced by a Seller Bank).

– Creditor Service (sourced by a Seller Bank).

– Validation Service (sourced by a Buyer Bank).

In order to facilitate a fast role-out of the solution, EBA CL could also offer a front end 'bank selection plug-in' which the banks can on-provide to the merchant for 'plugging-in' their website.

4 How does it work

4.1 The four corner model and components

This section provides an overview of the solution, the roles and responsibilities of the various actors in the 4-corner model, and the technical components of the service.
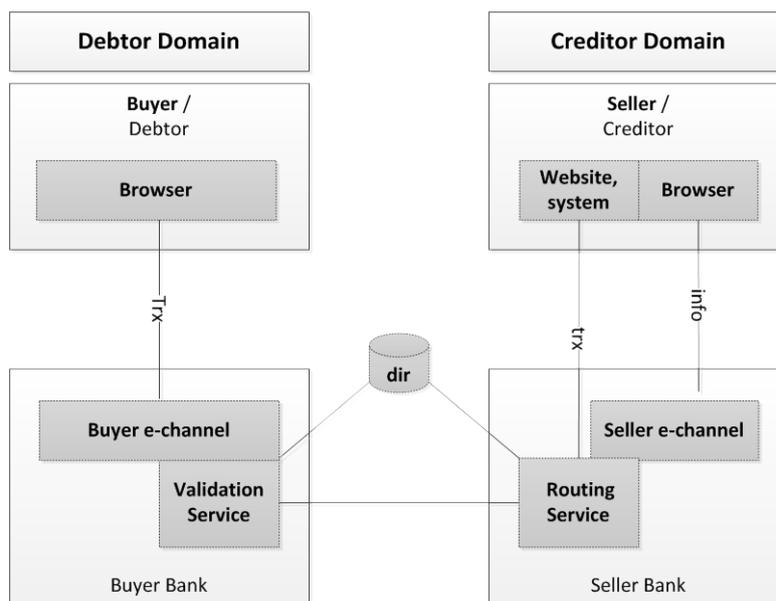
Figure 2: Roles and components of the e-services solution

Seller Bank

The Seller Bank has an agreement with the Seller to provide e-authorisation services. This includes the capability (Routing Service) to route e-authorisation requests from the Seller to the Buyer Bank (Validation Service).

The Seller Bank implements a Routing Service based on the e-services solution requirements. The Routing Service can be outsourced or built in house, but it always falls under the responsibility of the Seller Bank as a Participant in the solution.

The Seller Bank must have the capability to process the underlying payment, having adhered to the appropriate underlying payment schemes.

Buyer Bank

The Buyer Bank has an agreement with the Buyer to provide e-authorisation services. This includes the capability to validate with Buyers e-authorisation Requests (Validation Service) as received in messages from a Seller Bank (Routing Service), and exchanging results.

The Buyer Bank implements a Validation Service based on the e-services solution requirements. The Validation Service can be outsourced or built in house, but it always falls under the responsibility of the Buyer Bank as a Participant in the solution.

The Buyer Bank must have the capability to initiate or process the underlying payment, i.e. initiate an SCT, or initiate a direct debit mandate, having adhered to the appropriate underlying payment schemes.

Seller

Seller (technically the processing applications of the Merchant) interacts with a Routing Service under the responsibility of the Seller Bank. Seller sends e-authorisation requests to the Routing Service offered under the responsibility of the Seller Bank.

Seller implements a secure connection with the Routing Service under responsibility of the Seller Bank (potentially using a Payment Service Provider) and sends e-authorization requests to the Routing Service offered under responsibility of his bank (Seller Bank).

Sellers are not Participants in the solution and are not listed in the e-services Directory.

Buyer

Buyer validates e-authorization requests using the Validation Service offered by the Buyer Bank. Buyers are not Participants in the solution and are not listed in the e-services Directory.

4.2   One Solution, many applications

The solution will define three layers that need to be documented and organised.

- Business and Governance Layer

  This layer describes general access criteria and requirements, uses of the brand as well as organisation of user feedback and change management procedures and the business model structure.

- Application Specific Layer

  The Application is the e-commerce use of the solution and is linked to payment instruments. Below are example applications.

  The data requirements may vary between applications, while being based on one messaging suite. The content of the message at the application level is known as the 'Payload'.

  Many applications will exist. Participants will be free to use some but not others (e.g. not all banks support a B2B product).

- Infrastructure Layer

  The infrastructure layer describes the security protocols, service levels, technical methodologies that are required to transfer Application data (the Payload). Although the Payload may vary, the security and technical transport mechanism will not change.

  The infrastructure itself supports the flows as provided by one or more supplier(s).

A pre-requisite and an external component are the payment schemes, such as SCT or SDD Core. The authorisation service will be developed around these schemes.

At the highest level, banks take the capabilities of the e-authorisation solution, combine them with the existing payment schemes and create products that they deliver to customers. This level is in the competitive space.
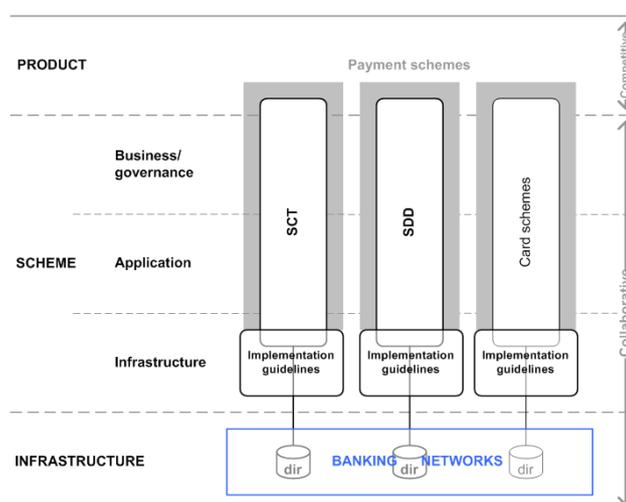
4.3 Applications proposed for Phase 1

Type	Scheme	Application
CT	SCT	Create Single Credit Transfer
DD	SDD CORE	Create Recurrent e-mandate
		Modify Recurrent e-mandate
		Cancel Recurrent e-mandate
DD	SDD CORE	Create One Off e-mandate
		Modify One Off e-mandate
		Cancel One Off e-mandate

Type	Scheme	Application
DD	SDD B2B	Create Recurrent e-mandate
		Modify Recurrent e-mandate
		Cancel Recurrent e-mandate
DD	SDD B2B	Create One Off e-mandate
		Modify One Off e-mandate
		Cancel One Off e-mandate

4.4   Infrastructure Components

4.4.1   Creditor Service

The Creditor Service is the component offered by the Seller Bank to the Seller. It provides reporting services to the Seller with regard to e-authorisation requests and transactions processed by the Seller Bank.

EBA CL could offer white label Creditor Service capabilities to the Seller Bank.

4.4.2   Routing Service

The Routing Service is the technical service authenticating the Seller, routing messages from the Seller to the Validation Service. The Seller Bank will implement a Routing Service compatible with the e-services solution requirements. It can be developed by the Seller Bank, or it can be sourced from a third party.

As part of the arrangement between the Seller and the Seller Bank there will be a technical connection between the Seller and the Routing Service.

4.4.3   Validation Service Description

The Buyer Bank will implement a Validation Service based on the requirements set by the e-services solution. The Validation Service receives e-authorisation requests from the Routing Service and processes them according to the terms and conditions of the solution.

The Validation Service receives e-authorisation request messages from Routing Services and authenticates the Buyer allowing him to perform the actions agreed within the Buyer Bank and themselves to authorise the request.

The mechanism that the Validation service (under the control of the Buyer Bank) uses to authenticate the Buyer is up to the Buyer Bank and the Buyer, as long as minimum requirements defined by the solution are met.

4.4.4   Directory Description

The solution will provide a Directory to enable real-time exchange of messages between the Routing Services and the Validation Services. The Directory contains information about Participants and how to reach them and is only accessible to Participants of the solution, as registered at EBA CL.

The Directory is the technical cornerstone of the solution.

Content

The Directory will provide a listing of all Buyer Banks (and their Validation Services) and a listing of all Seller Banks (and their Routing Services) that participate in the solution. This would include BICs, names and any other agreed identifiers.

The Directory will provide information about how Participants can be addressed for secure message exchange.

The Directory does not list individual Buyers and Sellers.

The following information will be stored in the Directory Service:

- Presentation Information, such as the Name of the Validation Service.
- Connectivity information (IDs, URLs).
- Authentication credentials (public keys, certificates).
- Service Information (contact details, supported applications, etc).

The Directory Service will comply with the relevant data protection requirements.

Provisioning

The manager of the solution will run an admission and provisioning process that will be defined in the solution terms and conditions. Provisions and procedures around changes will also be defined and implemented.

Access

There will be one or more secure mechanisms to access the Directory by the Participants or their service providers.

The Directory will include a real-time query and response protocol to obtain specific information about Participants to the counter Participants (to allow the messaging between Validation and Routing Services). Full or incremental downloads will also be available and defined.

It can only be accessed by Participants (or their Routing and Validation Services).

Participants can access the database to retrieve only the information that is relevant or necessary for them, so a Routing Service only obtains information about Validation Services and vice versa.

4.5   Message flows and process steps

The solution will be composed of the following process steps:

Registration => E-Authorisation => [if applicable] Payment

Registration and provisioning

Event	Actions
The Seller Bank joins the solution	The Seller Bank agrees to the Terms and Conditions. The Seller Bank provides technical details about the Routing Service. The Seller Bank is provisioned in the Directory.
A Seller wishes to use e-authorisation services.	The Seller agrees to the terms imposed by the Seller Bank. Questions around pricing or product package are left in the competitive space.
The Buyer Bank joins the solution	The Buyer Bank agrees to the Terms and Conditions. The Buyer Bank provides technical details about the routing service. The Buyer Bank is provisioned in the directory.
A Buyer subscribes to internet banking.	Buyer signs the Buyer Bank's Terms and Conditions applying to the use of internet banking including the e-authorisation service. Buyer receives logon credentials as defined by the Buyer Bank.

Seller Bank takes updated directory.
Seller's website is populated with information on Participants.

E-Authorisation

The e-authorisation follows the model below. The specific cases depend on the application used.

The diagram below is taken from the EPC Core SDD Rulebook v5.0 (Annex 7 – e-Mandate).
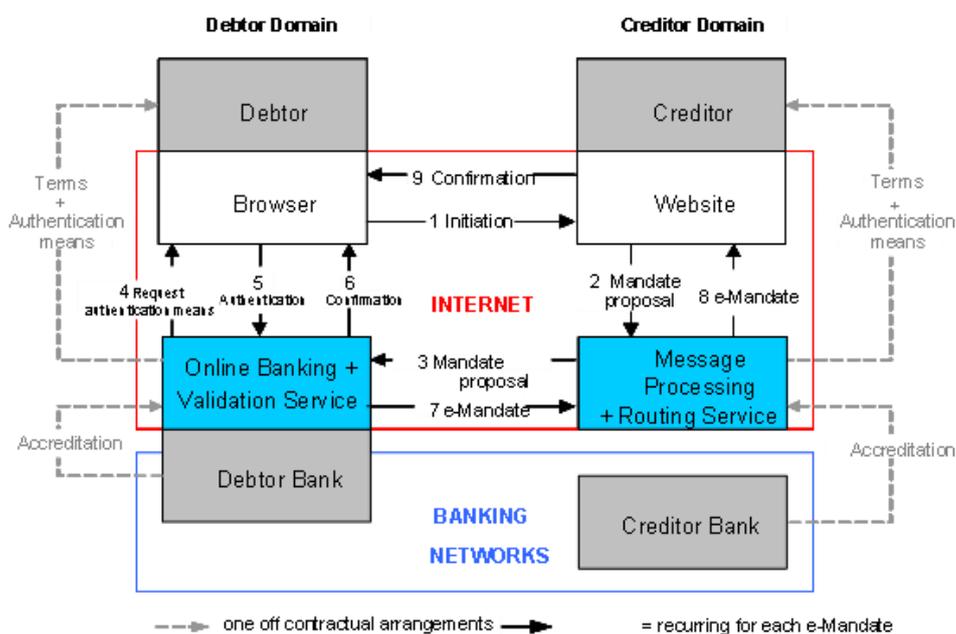
The following steps have been written in a generic way so as to apply to a Credit Transfer or a Direct Debit, but also giving specific illustrations of how the solution would allow two specific applications. Other applications may exist.

- A Core SDD recurring mandate
    - o Conforming to the rules of the SDD Core Rulebook using the option for e-mandates.
    - o Conforming to the SDD CORE e-mandate Implementation Guidelines.
    - o Modified by a solution specific AOS or practice that may be agreed subject to the fact that it does not change the nature of the scheme.
- An SCT Single payment
    - o Conforming to the rules of the SCT Rulebook.
    - o Conforming to the SCT Implementation Guidelines.
    - o Modified by a solution specific AOS or practice that may be agreed subject to the fact that it does not change the nature of the scheme.

For each step the table below describes the information flow on technical level, and for reasons outlined above specific information for creation of a SDD Core recurring mandate and an SCT single payment[3].

Event	Actions		Component
	Information flow at technical level		
	Specific notes for an SDD Core recurring Debit.	Specific notes for an SCT Single payment.	
0	The Buyer goes to the Seller website, sees the text explaining the advantages of using this method next to the Brand icon. A form is presented to the Buyer requesting certain items. This includes the Buyer's Bank that is selected from a list of options existing in the directory. The Buyer fills in the form and clicks "OK".		Creditor Service
	Information describes the rights and obligations of using a SDD.	Information describes the rights and obligations of using an SCT.	
1	The information containing the e-authorisation data is received and stored by the Seller. This information does not include personal bank account data.		Creditor Service
	The mandate information submitted contains the data as described in SDD Core DS-12.	The payment information contains the data required for an e-authorisation request related to an SCT single payment.	
2	The Seller approves data and sends the authorisation request to the Seller Bank.		Creditor Service
	The mandate proposal is sent using the PAIN.009	The payment authorisation request is sent.	
3	The Sellers Bank sends the authorisation request to the Buyer Bank using the Buyer Bank name or ID taken from the initial request.		Routing Service
	The mandate proposal is sent using the PAIN.009	The payment authorisation request is sent.	
	The Buyer is directly redirected from the Seller's website to the secure authentication page of its online banking service. The Buyer Bank		Validation Service

---

[3] When in the text reference is made to the SEPA rulebooks, the following documents are meant:
SEPA Core Direct Debit Scheme E-mandate Service – Implementation Guidelines ,version 5.0, Issued 1 November 2010
SEPA Core Direct Debit Scheme Rulebook, version 5.0, Issued 1 November 2010
SEPA Credit Transfer Scheme Rulebook, version 5.0, Issued 1 November 2010

4 5 6	presents a logon screen containing the normal validation options that the Buyer sees when he logons to internet banking. The Buyer authenticates himself in the manner agreed between the Buyer and the Buyer Bank. The Buyer confirms to the Buyer Bank that he wants to authorise this request. The Buyer Bank confirms to the Buyer that the instruction has been accepted.	
	The Mandate is confirmed. / The Payment Order is accepted.	
7	The Buyer Bank sends a confirmation to the Seller Bank that the instruction has been accepted.	Routing Service
	An e-mandate validation message (DS13, pain.0012) is sent back. / A payment confirmation/authorisation is sent back to the Seller.	
8	The Seller receives the authorisation from the Seller Bank.	Creditor Service
	As above. / As above.	
9	The Seller confirms the status of the authorisation to the Buyer via the browser.	
	The Buyer is informed of the status of the transaction. / The Buyer is informed of the status of the transaction.	

Technical note: although the flow looks like a point to point transfer of data between the Seller, the Seller Bank and the Buyer Bank, this will be a very fast messaging from the web-server of the Seller to the Buyer Bank, via a Routing Service of the Seller Bank.

Delivery (9) and Payment (10)

Delivery of the goods or services will take place in accordance with the agreement between Buyer and Seller.

Direct Debit	Credit Transfer
For collections the rules under the core scheme differ under e-mandates as described under sections 4.2 and 4.4 of the rulebook.	A pacs.008 is sent by the Buyer Bank to Seller Bank to transfer the funds, as soon as possible.

5 The role of EBA CLEARING

EBA CL will act as a solution provider that will put in place the solution.

During the Project phase EBA CL will:

- Describe the terms and conditions of the solution concerning Participants and, if necessary, infrastructure providers (i.e. the technical standards).

- Create and register a solution brand.

- Organise the delivery and role out of the solution.

- Organise testing and go live of the solution.

Once the solution is running EBA CL will, in its capacity as solution manager:

- Maintain the terms and conditions and the solution documentation.

- Run the processes around admission, exit and changes of Participants.

- Seek user feedback, and manage changes and upgrades to the solution.

EBA CL will also provide

- A Directory (Mandatory).

And for those who need, assuming there is sufficient demand, all or some of the following:

- A Routing Service (Optional).

- A Creditor Service (Optional).

- A Validation Service (Optional).

Participants will pay fees to cover the services provided on a cost recovery basis.

5.1   Solution Documentation

The solution documentation will be organised to allow different "Applications" to sit within one generic solution architecture.

```
                        ┌─────────────────────────────────────┐
                        │  EBA CL Solution  Document Suite (*) │
                        └─────────────────────────────────────┘
```

General Introduction
SCH_GEN (*)

What this is all about

What it is: product definition
How it works: end-user perspectives
Benefits for stakeholders
Relation to SEPA
Documentation Overview

(*) 'Scheme', 'SCH' to be replace with e-services scheme brand name

Rules & Regulations
SCH_GOV

What is expected from participants in a e-service

Generic Roles & Responsibilities
Access Criteria
Directory
Business Model Structure
Branding
Legal

Any **E-Service**
SCH_APP_...

What service/functionality is offered, and how

Service Specific Roles & Responsibilities – if any
Process Flows
Payload Messages
Data Dictionary
Service Specific Specifications – if any
Directory Data and Access
Service Levels
Relation to Service- Related Standards

Messaging Standards
SCH_INF

How information is exchanged securely

Interface Specifications
Directory Specifications
Relation to Open Internet Standards

6 Business Considerations

It is felt that the business benefits of launching an e-services solution - for both the Buyer Bank and the Seller Bank - do not rely a priori on a Multilateral Interchange Fee.

These business benefits come from:

- Charging for services.

- Creating the possibility of selling new services.

- Reducing costs.

- Improving customer satisfaction.

- Improving brand image.

- Retaining and gaining new customers.

- Meeting strategic threats such as disintermediation by non-banking entities or decline in use of cards for online payments.

- Meeting regulatory expectations.

6.1 Benefits for the Seller Bank

The Seller Bank will meet the needs of retailers by offering a secure online payment method, with pan-European reach, where the Buyer is authenticated by its online banking credentials. Other requirements that are met are described in Annex 1.

The Seller Bank will charge its web-merchants fees for access to the services needed to use the e-authorisation solution. These new revenues are deemed to grow as online commerce is increasing.

The Seller Bank will also be able to reduce the costs related to handling disputed card transactions, from increased take up of online banking.

6.2 Benefits for the Buyer Bank

The Buyer Bank will meet the needs of consumers as described in Annex 1.

The Bank will be able to charge for this service, and so gain new revenues. Furthermore new products could be sold in relation to online commerce.

The Bank may also reduce the costs related from handling disputed card transactions; from increased take up of online banking.

Considering that its customers will be redirected to its online banking site for every online purchase, the Buyer Bank will benefit from an increased exposure and a closer customer relationship. This will reduce advertising costs, improve brand recognition, put the bank at the centre of the online purchasing experience, and allow banks a better insight in their customers' needs, more efficiently than client surveys.

6.3   Meeting strategic threats

It is often stated that the share of card payments in online transactions is declining in favour of alternative payment solutions. OBeP solutions are a way for banks to compensate the corresponding loss of revenues.

There is the risk that Banks are disintermediated in payment solutions offered by online wallets, Paypal and others.

Moreover it is foreseen that the e-authorisation will allow the initiation of a card payment and so cooperate with card business rather than cannibalize it.

6.4   Meeting regulatory expectations

The regulators (ECB, EC) are looking forward for the banking industry to providing a SEPA wide online e-payments solution. As expressed in the 7th SEPA Progress Report, the Eurosystem are concerned by the increase of fraud in online payments and the slow progress made in the area of e-SEPA. From their point of view, there is a strong and urgent need for a SEPA wide secure and efficient online e-payment solution.

7 Implementation Plan

The following plan is described over four phases, each phase dependent on the previous one. The aim would be to have a Live service in June 2012, albeit with a Pilot community of banks and merchants.

Phase 1: Study of the e-services topic leading to the publication document and subsequent decision to embark on the next steps.

Phase 2: Inform the banks and the stakeholders, and engage banks and e-merchants in view of establishing the group of willing banks prepared to participate in this project for implementation.

November 2011: Decision to create a pilot group of banks and e-merchants, which have formally committed to participate to the pilot launch of the service.

Phase 3: Create detailed documents to allow bank internal implementation, to enable service vendors selection and to support the launch of the service(s).

Phase 4: June 2012. Launch of Live Pilot and subsequent ramp up and creation of reach.

8   ANNEX 1: Requirements for an e-authorisation service

8.1   Requirements from a Buyer perspective

This section describes the requirements that Buyers who make purchases over the internet or other 'e' channels have, based on knowledge gathered during the consultation phase of the blueprinting exercise.

These requirements will be validated in due course with the corresponding stakeholders (e.g. customers' and merchants' associations).

It is understood that some of these requirements may conflict with each other e.g. ease of use over security.

- The e-authorisation solution should provide a uniform, consistent, branded user experience. This means that Buyers are offered a uniform user experience across Sellers throughout Europe based on their own issuing e-payments proposition.

- The brand must be usable on the Internet in online e-commerce contexts.

- The solution must use authentication mechanisms that are familiar to the Buyer, i.e. re-using mechanisms used for online banking.

- The solution must be fully secure from a Buyer point of view. It should be designed to prevent execution of unauthorised transactions.

- In order to create an attractive proposition for the Buyer, the solution should have a significant reach towards online sellers.

- The solution should be simple to understand and to use.

- Processing of the information of the e-authorisation request should be done in real-time but it will be up to the Buyer's Bank to immediately reflect this on the Buyer's account balance/reservation.

8.2   Requirements from a Seller's perspective

This section describes the requirements that Sellers who sell products over the internet or other 'e' channels have, based on knowledge gathered during the consultation phase of the blueprinting exercise.

These requirements will be validated in due course with the corresponding stakeholders (e.g. in particular merchants' associations).

- The solution must support a number of payment methods, primarily, the SEPA Credit Transfer, SEPA Direct Debit (using e-mandates) and potentially cards.

- The authorisation that the seller receives should give the Seller an appropriate level of confidence that the payment will follow, based on the type of product being sold.

- The solution must meet the needs of sellers in different e-commerce contexts:

  o Real Time delivery of services / perishables.

  o Delivery of physical goods, after funds have been booked to the Sellers' account or upon sufficient level of confidence that funds will be transferred.

- The solution should seamlessly fit into existing checkout processes of the Seller, aiming to minimize risk of Buyers terminating the checkout process.

- The solution should provide significant pan-European reach towards Buyers.

- The solution should have low complexity in terms of technical implementation, embedding in existing e-commerce 'collection' processes and maintenance.

- The solution should facilitate automatic reconciliation of the payments.

8.3   Security requirements

This section describes the requirements on the level of security of the solution from an end-to-end perspective.

- The solution must be compliant (or allow compliance) with the security requirements as dictated by applicable laws, regulations and regulatory requirements.

- The solution will enforce a minimum level of security on Participant banks by stating practices that are mandatory. Banks that do not comply with mandatory requirements will not be allowed to participate.

- Critical data elements will not be carried through via the web protocol but will be transferred via another layer of communication.

- The directory will not hold data of the Seller or the Buyer.

- The validation service will require a two-factor authentication mechanism.

8.4   Technical requirements (including standards)

Technical requirements are:

- The business architecture will distinguish between transport messages (messaging) and payload messages (messages). The transport messages

will be suitable for multiple services/applications that are defined through payload messages.

- The e-services payload messages take as a starting point the appropriate SWIFT/ISO messages for e-payments/e-mandates, but aims for specific subsets to make payload messages fit for purpose.

- The e-services transport messages take as a starting point open Internet standards, but aims for specific subsets to make transport messages fit for purpose. Only if requirements cannot be met using these standards, extensions will be made.

8.5   Service Level Requirements

The following Service Level requirements are imposed on the solution and its Participants:

- The solution will be available on a 24/7 basis, excluding periodical maintenance. Requirements around maintenance windows and reasonable down time will be given.

- Response times at each stage of the process.

8.6   Legal Requirements

Legal requirements in relation to the solution include, without limitation, the following:

- The solution must have a sound legal basis.

- Terms and conditions need to be established under one single governing law.

- The terms applying to participation in the solution shall, apart from duties in the relationship among participants (as Seller Bank and/or Buyer Bank) as regards the e-authorisation layer, also include, inter alia, obligations relating to the capacity to initiate and receive the underlying payment transactions in accordance with and under the rules of a separate payment scheme which is out of the scope of the solution, requirements relating to the security of the authentication methods used.

- The rights and obligations of the participants in relation to an undertaking to initiate a payment or, if applicable, an undertaking to transfer funds shall need to be spelled out as part of or as a complement to the solution documentation.

- Buyers and Sellers are not participants. Buyer Banks and Seller Banks shall be required to ensure compliance with certain requirements on the part of respectively the Buyer and the Seller.

- In addition to the e-Commerce Directive (2000/31/EC) which is the basic legal framework for electronic commerce in the Internal Market, the solution must comply with all applicable laws and regulations (e.g. data protection, consumer protection).   Additionally, regulatory requirements (e.g. stemming from requirements relating to security of payments) shall need to be complied with.

- The validity and enforceability of the terms and conditions shall need to be established under the laws of all relevant jurisdictions, e.g. through obtaining legal opinions from (counsels to) the participants.

- The participants to the solution will also have to ensure compliance with applicable legal requirements including specific requirements imposed by national law.

8.7   Governance Requirements

Participation is open to all authorised payment service providers, including without limitation banks and licensed payment institutions, in the Single Euro Payments Area provided the admission criteria are met, and these will include, inter alia:

- The Participant is able to comply with the terms and conditions of the solution.

- The Participant complies with the applicable legislation.

Upon implementation of the solution, specific decisions will be taken with regard to the decision-making process for the solution, and the role of EBA CLEARING.

8.8   Oversight requirements and expectations

This solution is in the first place an authorisation solution; nevertheless it triggers payment initiation and may not be exempt from oversight. Clarity shall need to be obtained on whether a multi-purpose e-authorisation solution could, wholly or partially fall within the scope of the ECB oversight framework for payment instruments as applies for the SEPA credit transfer and SEPA direct debit schemes.

The ECB, the EC and others have expectations from the banking industry to provide e-service solutions as described in the ECB SEPA 7th Progress Report, EPC works which refer to a roadmap paper of the Commission "Completing SEPA: a Roadmap for 2009-2012" and the Commission's Digital Agenda for Europe (COM(2010)245 final/2).

The solution should comply with such expectations.

Each participant will be responsible to ensure that its implementation of the solution is compliant with the relevant oversight, supervisory and national rules.

8.9   Country specific requirements

There might be a number of country specific requirements or considerations that should be checked and taken into account. Such requirements could include:

- Specific requirements with regard to domestic use of direct debit and e-mandate instruments.

- Specific requirements with regard to the use of credit transfers, such as the ability to 'recall' SCT payments once done by the Buyer.

- Requirements stemming from 'national' payments regulatory frameworks, laws of a given jurisdiction, consumer protection law, data protection laws.

9   ANNEX 2: Terminology

Creditor Services: services offered by the Creditor Bank that allows the Seller to initiate and manage Online Payments via the web.

Buyer: The party authorising a transaction using a Validation Service offered by the Buyer Bank. This could also include a person acting on behalf of a business. This is also called the Debtor.

Buyer Bank: Bank or payment institution holding the account of the Buyer and offering Validation Services to the Buyer.

Creditor Bank: The bank of the Seller.

Debtor Bank: The bank of the Buyer.

Directory: A technical component in the e-authorisation solution that can be accessed by participants in the e-authorisation solution to obtain information about other participants.

End-user: A user of Online Payments capabilities. See also Buyer and Seller. An End-user is not a Participant in the Solution.

E-services: Services to facilitate and support e-commerce transactions between Sellers and Buyers, such as e-authorisations.

E-services model: A framework for the delivery of e-services based on open standards and internet technology applied in a 4-corner model.

E-authorisation: Buyer provided authorisation (via the Validation Service offered by the Buyer Bank) to initiate a payment for a specific Seller.

E-payments: See Online Payments.

E-authorisation request: A request from a Seller to a Buyer (via the Seller Bank and the Buyer Bank) requesting an E-authorisation of a Payment.

E-authorisation solution: A solution for exchanging e-authorisations over the internet between a Buyer and a Seller, in a four-corner model.

'Guarantee' of Payment: Guarantee provided by the Buyer Bank to the Seller Bank that the funds will be transferred to the bank account of the Seller.

Online Payments: Payment methods allowing online Sellers to integrate payment capabilities in their web shops.

Participant: An actor in the solution that directly interacts with the Solution (See also Buyer bank and Seller Bank). Buyers and Sellers are not Participants.

Payment Confirmation: The confirmation from the Buyer Bank (via the Seller bank) to the Seller that a requested payment has been authorized by the Buyer. A Payment Confirmation may or may not provide Guarantee of Payment.

Payment Instrument: The type of payment used in relation to the e-authorisation solution.

Routing Service: The technical component under responsibility of the Seller Bank routing Authorisation Requests from a Seller to the Validation Service.

Seller: A person or a business trading goods or services over the internet, requiring payment from an End User. Also called Creditor.

Seller Bank: Bank or payment institution holding the account of the Seller and offering Routing services to the Seller.

Solution: (in the context of this document): A set of business, application and infrastructural specifications and terms and conditions to define the interactions and obligations of Participants in the E-authorisation solution.

Solution owner: The organisation managing the Solution, including governance, development and marketing of the Solution.

Validation Service: The technical component under responsibility of the Debtor Bank that validates Authorisation Requests received from the Seller and sends back the result (via the Routing Service).

10 ANNEX 3: Consulted representatives of Shareholders banks

BBVA	**Jesús Lozano Belio**
Banco Popolare	**Daniele Danese**
Bank of America Merrill Lynch	**Imran Ali**
Bank of America Merrill Lynch	**Neil Buchan**
Bank of Ireland	**Jonathan Kidd**
BNP Paribas Fortis	**Francis De Roeck**
BPCE	**Alban LECUIR**
Commerzbank AG	**Hans-Joachim Molitor**
Commerzbank AG	**Lothar Stockhausen**
DZ Bank	**Andrea Meier**
DZ Bank	**Karen Weber**
FFFS	**Pekka Laaksonen**
Handelsbanken	**Lars Herslöf**
Helaba	**Jörg-Christian Meyer**
ING Bank NV	**Ad van der Poel**
ING Bank NV	**Angélique Leemans**
Intesa Sanpaolo	**Cosimo Rullo**
Intesa Sanpaolo	**Daniela Dell'Arciprete**
Intesa Sanpaolo	**Daniele Lisciandrano**
Intesa Sanpaolo	**Loretta BRIANO**
JP Morgan	**Colin Peachment**
La Caixa	**Maria Pilar Franquet**
National Bank of Greece	**Marios Plessas**
Nordea	**Pekka Järvinen**
Raiffeisen Bank International AG	**Gerald Hechl**
RBSG	**Giangiulio Bagnai**
SEB Merchant Banking	**Björn Flismark**
Société Générale	**Stella PETIOT**
Swebank	**Edvind Nygaard**
UniCredit S.p.A.	**Eleva Scavi**
UniCredit S.p.A.	**Fabio Stragiotto**
UniCredit S.p.A.	**Paolo Alessandro Penati**

End of document