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Impact of the Single Euro Payment Area (SEPA) for Government Revenue Management Agencies
Executive Overview

The Single Euro Payment Area (SEPA) promises to simplify and harmonize the processes related to cross-border payments in the European community, making it easier for citizens to complete financial transactions with less cost and inefficiencies.

Because of the scale and nature of their mission, public sector revenue management agencies will play a vital role in the implementation of SEPA. This paper identifies some of the key technical and business challenges that government revenue management agencies should consider in their road map to SEPA.¹

KEY CONCEPTS

- The European Union continues to invest in sustaining its international economic competitiveness. A Single European Payment Area (SEPA) supports this objective by simplifying payment transactions and eliminating economic inefficiencies.
- The SEPA data formats as specified by the European Payments Council (EPC) for the exchange of SEPA payments and are based on the global ISO 20022 XML message standards.
- SEPA Credit Transfer (SCT) provides a mechanism for RMA to make payments out to citizens or to receive payments in from citizens using the SEPA protocols.
- SEPA Direct Debit (SDD) provides a mechanism for revenue management agencies to create pre-authorized debit payment plans with citizens.
- The SEPA Cards Framework (SCF) allows competing banks to create new SCF-compliant debit and credit card offerings, within the guidelines laid out by the SEPA authorities.
- The impact of SEPA on existing and future information technology investments in revenue management agencies needs to be carefully evaluated. A practical approach to SEPA adoption should focus on ease of transition from current payment regimes, risk mitigation, and use of appropriate technologies.

¹ In this document we will use the term “government revenue management agency” as a synonym for any public sector agency that manages the assessment and collection of government revenue in its many forms, including taxes, fees, tariffs, contributions and levies of various types. Examples include tax and customs administration agencies at the national and sub-national levels.
Introduction

An internationally competitive European market is high on the agenda of the European Government. One of the elements necessary to achieve this objective is the creation of a European payments capability which eliminates economic inefficiencies and where differences in the handling of financial payments between the member states have disappeared, essentially making all payments in the Union appear as ‘domestic’ payments.

The SEPA objectives can be summarized as follows:

- Through standardization of Euro payments the objective is to strengthen trust and reliability on a pan-European basis. SEPA intends to create a common payments regime which provides the following features:
  - Equal payment processing cycle times
  - Equal levels of fraud prevention
  - Equal levels of access to SEPA payment mechanisms
  - Electronic payments that approach straight-through processing cycle times

- There will be increased competition in respect to a higher number of competitors, fewer niches or special fields or incompatibilities through lack of standardization.

- There is a foreseen reduction of costs of electronic money and of payment transactions through the competitive offerings of payment providers and banks. Providers and banks are considered as the biggest losers of the SEPA standardization process, with an estimated financial loss of € 40 billion per year in payment transaction fees.
• There will be a reduction of cash money and increase of electronic money through reduction of costs of electronic money.

• Another benefit for governments will be an increasing surveillance of (electronic) money flow particularly regarding money laundering and terrorism funding (unofficially also for surveillance of illicit work [10-30% of GDP's], organized crime and taxes).

Currently, every country in Europe has its own specific rules for payment traffic. This is blocking clear and unified payment traffic in Europe and could block competition between the member states. Therefore, the European Commission and European Parliament came up with a directive, known as the Payment Services Directive (PSD)
SEPA Impact

SEPA will impact euro payments made within its entire geographic area, and has an initial focus on the euro-area. The change program will radically impact the whole of the domestic payments environment.

Today at least 70% of all non-cash payments in the Euro zone are made in Euros. From the beginning, all non euro countries will be able to participate in SEPA when dealing with euro payments and may also choose SEPA standards for their own domestic currency payment instruments.

![Figure 1 Relative importance of the main payment instruments in European Union](image)

In practice, the vast majority of banks throughout SEPA that are active in making and receiving euro payments are expected to participate in the SEPA Schemes and issue cards compliant with the SEPA Cards Framework.

The goal of SEPA is to standardize and simplify the processes around cross-border payment arrangements within the SEPA-zone, which currently consists of 32 countries:

- the 16 members of European Economic Area (EEA) and EU that are in the Euro zone
- the 11 members of EEA and EU that are not in the Euro zone,
- the 3 members of the EEA that are not in the EU: Liechtenstein, Iceland and Norway
- one non EU country that uses the Euro by agreement with the EU, but is not officially part of the Euro zone is Monaco
- Switzerland.

SEPA addresses current inefficiencies in the European market which make cross-border payments in Europe more expensive and less convenient than payment transactions within a given European country. In summary, people that wish to engage in cross-border commerce
within the European community often face higher costs and process inefficiencies due to a lack of standardization and common banking infrastructure.

Before SEPA you could have:

- Domestic payments (within a country)
- Cross-border-payments (outside the country).

With the introduction of SEPA you can have:

- Pan-European Payments (i.e. payments in the Euro currency between bank accounts within the SEPA-zone)
- International Payments (i.e. for non-Euro payments in or outside the SEPA-zone or Euro payments to bank accounts outside the SEPA-zone)

Bank Account Identification

For payers and payees, a direct and visible impact of SEPA is the combined use of IBAN (International Bank Account Number) and BIC (Bank Identification Code, formally known as SWIFT address) to establish SEPA compliant bank account information. IBAN is the international standard for the individual bank account, while the BIC is a standard format of Bank Identifier Codes approved by the International Organization for Standardization (ISO). Use of the BIC and IBAN are mandatory for international payments and after migration to SEPA, and also mandatory for national payments.

Payment Format SEPA

The realization of the Single Euro Payments Area (SEPA) requires agreement on a common set of data to be exchanged in a common syntax and semantic context. The SEPA Data Formats as specified by the European Payments Council (EPC) for the exchange of SEPA payments like direct debits and credit transfers represent such a common data set, respectively.

It is important to note that the SEPA Data Formats do not constitute an exclusive European standard. Rather, the SEPA Data Formats are based on the global ISO 20022 XML message standards. Extensible Mark-up Language (XML) is a de facto international standard for defining and exchanging data, and is becoming firmly established within many member states.

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2 Oracle Whitepaper: XML Database Technology and Tax Administration, July, 2008
These formats are binding for the exchange of SEPA payments between banks. It is recommended that business customers use the SEPA Data Formats to initiate payments. However, banks may continue to accept other formats from customers for the instruction of SEPA payments.

SEPA is a strategic part of a larger economic integration across the European community. The SEPA timeline and mission is ambitious and will take many years to accomplish. Policy makers see the public sector in Europe as playing a key role in driving the transition to SEPA, because of the scale and depth of their involvement in making and receiving payments to citizens. One estimate points out that 20% of the payments in Europe involve public sector organizations.3

The graph above details the totals of Government revenue and expenditure growth in the Euro zone. Figures are in Billion Euro.

Government Revenue Management and SEPA

Government revenue management agencies will be very large customers of the SEPA infrastructure. This is due to the large volume and reach of the payment operations that these agencies are engaged in.

In Europe, government revenue management agencies are engaged in payment arrangements with citizens on a number of levels, including:

- Receiving and accounting for tax payments
- Payment of tax refunds to taxpayers
- Payment of social benefits

3 EPC007_07_Factsheet 2 SEPA Public Administration, EPC, 2007
• Payment for services and goods received

Figure 2 provides a high-level model view for understanding the role of government revenue management agencies in a SEPA context.

In the model, the revenue management agency is engaged with citizens on multiple levels. Citizens can take on the role of suppliers to the agency for a range of goods and services that the authority requires to perform its work.

Citizens also take on the role of taxpayers and contributors – which also includes their role as beneficiaries of the State in cases where the agency acts as a social service benefits payment agent for the State.

In the model, payment transactions are processed through SEPA and each agency must have a functioning interface to the SEPA infrastructure.

There are currently three payment process alternatives in the SEPA payment architecture. These are SEPA Credit Transfers (SCT), SEPA Direct Debits (SDD) and SEPA Cards Framework (SCF).
SEPA Credit Transfer (SCT)

The SCT provides a mechanism for a government revenue management agency to make payments to citizens or receive payments from citizens using the SEPA protocols. In the SCT payment scheme, a debtor party initiates a credit transfer to a beneficiary party. The SEPA infrastructure defines the XML messages that are used to initiate the SCT, and defines the basic lifecycle of the SCT transaction, including the expected time-frames for completion of the transaction from initiation to final settlement and exchange of value between the debtor and the beneficiary.

The SCT commits to a maximum execution time of 3 banking business days following the date of acceptance of a credit transfer message.

The structure of the XML messages that are used to support SCT are based on the ‘UNIFI’ financial services standard from the International Standards Organization. (ISO 20022 Financial Services - Universal financial industry message scheme).

The goal of SEPA is to make these credit transfers as efficient as, or more efficient than current options, regardless of where the payment recipient might live within the European community – that is, regardless of which local bank the citizen may be affiliated with.

For example, a French citizen living, working and banking in Germany could have his/her French tax refund credited to a local German bank.

SCT can also be used by citizens to make payments into a government revenue management agency, again regardless of which European nationality the agency has jurisdiction over.

For example, a Dutch taxpayer that lives in Greece could issue a payment credit transfer from his/her local bank account in Greece to make a tax payment for taxes due in The Netherlands.

SEPA Direct Debit (SDD)

The SDD provides a mechanism for government revenue management agencies to create pre-authorized debit payment plans with citizens. An example of this mechanism would be when a taxpayer creates a payment plan with a revenue management agency to pay off a tax liability with a series of payments over time.

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4 See: EPC125_05 ECT RB v2.31 Approved, EPC, December 2008.
5 See EPC016-06 Core SDD RB V3 2 approved, EPC, January 2009
In the SDD scheme, a debtor party provides a beneficiary party with the right to initiate a direct debit to the debtor’s bank account. The beneficiary will then initiate the direct debit on the basis of the agreement with the debtor. SDD defines the XML messages that are used to form the transactions, and also defines the standard lifecycle of the SDD transaction.

The structure of the XML messages that support the SDD are also developed on the ISO20022 standard.

The SDD process relies on the implementation and management of SDD ‘mandates’ which are formal signed agreements between the debtor (e.g. a taxpayer) and a creditor (e.g. a government agency). The mandates form the contract which allows the creditor to initiate SDD transactions in order to start collection of a tax obligation and other payments due.

Initiation of the SDD starts with a ‘pre-notification’ transaction from the creditor to the debtor not later than 14 days before the actual due date of the payment. Subsequent processing of the SDD is designed to ensure that the payment due date, settlement date and the date that the debtors account is debited occur on the same processing day.

SEPA Cards Framework (SCF)

In contrast with SCT and SDD, the SEPA Cards Framework does not intend to create a new infrastructure of XML messages and transaction protocol schema. Instead the approach for SCF is to allow competing banks to create new SCF-compliant debit and credit card offerings, within the guidelines laid out by the SEPA authorities.

Examples of the use of SCF for tax include:

- Incoming payments from taxpayers on the basis of the use of an SCF-compatible bank card
- Outgoing payments to vendors of the government revenue management agency on the basis of the use of an SCF-compatible bank card

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6 See: EPC075-SCF QAs Version10 Final, EPC, June 2008
SEPA Business and Technical Issues for a Government Revenue Management Agency

Let’s explore some of the SEPA related business and technical issues for a government revenue management agency.

Figure 3 - Overview of an RMA Technical Support Environment for SEPA

Figure 3 provides a context for understanding the issues. For the purposes of this whitepaper, we will focus on the SCT and SDD schemes and on the information technology systems internal to the revenue agency which manage taxpayer information.

In the figure, a government agency forms an interface with the SEPA payments infrastructure at the boundary of the organization. Revenue management related payment transactions can originate or be received by one or more ‘Internal Revenue Management Systems’. Typically, these systems are implemented to support tax or contribution related assessment and payment business processes for various types of government revenue.

The systems manage the data related to taxpayers and contributors, including their payment arrangement details. The systems also integrate with the end-to-end payment processing lifecycle, and need to be tuned to the expected time frames for the various payment schemes. This is very important to taxpayers since timely execution of payment arrangements can have an impact on the additional assessments of penalty and interest in the case of missed payments.

Business Issues

From a business process perspective, the impact of SEPA on government revenue management is very similar to other large organizations. The issues can be summarized as follows:
1. Deciding which SEPA mechanisms are acceptable payment options for specific business processes

2. Running parallel payments operations
   a. Until the SEPA standards are fully absorbed and supported throughout the SEPA zone, it will be necessary to sustain business processes that support both SEPA and non-SEPA payment arrangements

3. Accounting for rejects, returns and refunds
   a. Under the SEPA schemes, exception conditions are defined along with their expected resolution time-frames. Again, this is important to revenue management organizations because failure to receive or make payments in a timely manner can result in additional interest charges as defined by tax legislation.
   b. A SEPA reject is an exception condition that is discovered before the clearing and settlement sub-process takes place within a SCT or SDD transaction.
   c. A SEPA return is an exception that takes place during the clearing and settlement process.
   d. A SEPA refund is an exception where a debtor in an SDD arrangement asks for a refund on a direct debit that occurred on their bank account.

4. Reconciliation
   a. Reconciling fact of payment with fact of value. The fact of payment occurs when a payment transaction is initiated. The fact of value occurs when the underlying monetary assets behind the payment initiation are transferred from the debtor to the beneficiary.

5. Fulfilling expected payment processing timelines
   a. Ensuring that business process can adapt to expected SEPA cycle times, and can adapt to standard exception conditions

6. Preventing fraud
   a. Identifying fraudulent behaviors by monitoring SEPA flows

Technical Issues
The technical issues for SEPA adoption by government revenue management agencies can be summarized as follows:

1. Software system capabilities
   a. Supporting IBAN and BIC capture, update, validation
b. Supporting SEPA transaction emission, receipt, processing and lifecycle

c. Supporting new security and privacy regimes

2. Operating and reconciling parallel payments systems
   a. Using middle-ware to provide a common SEPA translation and mediation service

3. Consolidating accounts payable and receivable operations
   a. Managing batch and grouping options of SEPA transactions

4. Consolidating messaging infrastructure
   a. Using middleware to provide common services
   b. Security and privacy
   c. Managing message lifecycle
   d. Reconciliation with back-end systems
   e. Translation and transition

Future Direction and Opportunities

The long-term goal of the European Payment Council is to use the SEPA payment instruments only electronically.

Over time, paper-based credit transfer mechanisms will disappear and be replaced with electronic payments. This transformation will allow for banks to execute straight-through-processing (STP) mechanisms for payment processing, which aim to minimize payment clearance and settlement times. STP mechanisms will realize very large savings in cost and time as manual, error-prone intervention in the payment process is no longer required.

Value-added services could be offered to customers before and after the payment itself. The aim is to make the handling of payments as easy and quick as possible. Value-added services are already used in many countries but they do not necessarily work cross-border. They will make paying simple and paper-free because everything is done electronically. Examples are:

- E-invoicing – no more paper bills. Electronic bills are received inside the online banking application. Once accepted, the e-invoice automatically sets up a payment instruction. The payment instruction already contains all the information about the amount, payer and receiver. This saves the manual and error-prone work of entering these details.

- E-reconciliation – electronic matching of payments and the bill. When payment is successfully settled, the receiver is informed that the bill is paid. The bill is matched with the payment and the receiver’s records are automatically updated.
• E-government – or eGovernment is using tools and systems made possible by Information and Communication Technologies (ICTs) to provide better public services to citizens and businesses, rethinking organizations and processes, and changing behavior so that public services are delivered more efficiently to the people who need to use them. eGovernment promises all citizens, enterprises and organizations to carry out their business with government more easily, more quickly and at lower cost.

What Should Government Be Doing Now?

Implementation Projects

Implementing SEPA is not a simple task. It might be compared to the Y2K (Year 2000) conversion or the introduction of the Euro. This size, complexity and time span for SEPA adoption deserves the attention of the highest management levels within a government revenue management agency.

There are multiple modifications on several levels needed for a successful implementation of SEPA. In order to reduce time span multiple modifications are often layered. However, the drive to SEPA conversion has to be carefully managed to avoid risks related to introducing too many changes into the organization at one time.

A successful migration to the SEPA regime is likely made up of the following sequence of events:

• The business problem needs to be defined and solved first;
• Complexity and risk must be managed; and
• Appropriate technology is introduced.

Typically, government agencies that start the process by immediately introducing new technology are met with lower levels of acceptance and adoption. And if the risks and complexity of the migration to SEPA are not carefully managed then the concurrent business process and technology changes could overwhelm the transition to SEPA.

A government revenue management agency most likely has several (old) applications that keep the current bank account numbers and information about direct debit certificates (authorizations).

The first step is to define the business problem to be solved and work with business users to design a solution that meets SEPA requirements, while minimizing the risks of complex technical and organizational change.

One approach would be to consolidate these bank account numbers and authorization functions into a single infrastructure application with services in place that are able to interface with
existing applications. This is an application by application approach and it should be implemented with appropriate and proven technology.

The next step would be to add a cross-index for the SEPA bank account conventions (IBAN and BIC7) whilst keeping the old bank account information intact (i.e. store and maintain the old and new bank account and bank routing format). When this is all in place, introduce new interfaces and switch to full compliant SEPA conventions. Complexity is therefore hidden from end-users.

Finally, additional new technologies could be added to enhance the performance, scalability, and reliability of the SEPA related technical functions in the agency.

Please note that the information expressed in this document constitutes the basic set of functional requirements and principles for a ‘stand-alone’ look-up table to identify a BIC corresponding to a local bank identifier contained in an IBAN. It is envisaged that any such databases/services could combine these basic data attributes with other features, such as contact information, routing information and conversion software, as a ‘packaged’ commercial solution.

Some of these data integration services may even be externalized to common government infrastructure or even private enterprises, which in turn would offer these services to multiple government agencies from a centrally managed source.

Business Systems Evaluation

To reiterate: in addressing the impact of SEPA to a government revenue management agency, it is important to define the problem clearly. A first step is to investigate the impact on existing business processes and applications. These investigations should be run as a discovery phase in a project and should focus on the functional side as well as on the technical side and should be treated as separate but integrated threads.

Security and Privacy Issues

Harmonization of payment instruments, rules and juridical framework encourages the use of cross-border services. New institutions, including non-bank financial institutions, are expected to enter into a competitive market of payment services. E-channels will provide outstanding

7 See document EPC148-06 IBAN BIC Database Requirements – This document contains a basic set of functional requirements and principles for a ‘stand-alone’ look-up table to identify a BIC corresponding to a local bank identifier contained in an IBAN. These basic data attributes could be combined with other features, such as contact information, routing information and conversion software, as a ‘packaged’ commercial solution.
efficiency for government agencies, taxpayers, banks and their customers. But it is obvious that trust, availability and usability of e-channels must be safeguarded.

The trust in e-banking must not be hampered by inconsistent security practices or competition driven reduced (security) costs. Only then can the benefits of SEPA be fully realized. Therefore, the European payment industry and participating government revenue management agencies must follow end-to-end security principles⁸ and practices for the remote initiation of transactions for SEPA instruments in their operations and ensured usage in a harmonized way.

Conclusion

In this whitepaper we have described the Single Euro Payment Area concept and explored the impact of this change in payments infrastructure in Europe to the public sector RMA who will have to adopt SEPA.

Efficient revenue management systems are an essential part of the functions of government. Smooth payment processes require particular attention. Technology has a key role to play in supporting financial data exchange and (further) automation of existing processes, with a challenge in retaining high security and privacy standards in a supplier environment that will become more open and competitive.

⁸ See document: EPC397-08 v1 1 C2Bsecurity good practices guide