THE BENEFITS OF THE FINANCIAL VALUE CHAIN INTEGRATION: THE ITALIAN EXPERIENCE THROUGH CBI

Liliana Fratini Passi*

ABSTRACT. This paper presents the Italian experience about financial services interoperability through the CBI. The paper presents the market scenario, the international initiatives to enable the cross border interoperability and how e-invoicing supports the integration of financial value chain. CBI enables the activation of document exchange, invoice financial request and payment orders, and supports automatic reconciliation between commercial and financial data and supports the e-invoicing in Business to Government (B2G) area: the CBI channel. The CBI standardization activities will also support interoperability and the creation of international business communities.

^{*} Liliana Fratini Passi is Chief Executive Officer of Consorzio CBI. created under the auspices of ABI (Italian Banking Association). The Consorzio CBI owns the governance of the CBI "white label" Service, with the aim to support financial institutions in order to ease the corporate management of electronic multibanking connections and e-invoicing transmission. She is also President of the Financial Services WG under the Task Force on Trade Facilitation created by the Ministry for Economic Development, and Domain Coordinator of Finance & Payments domain under Supply Chain Programme Development Area (PDA) by the UN/CEFACT (United Nations Centre for Trade Facilitation and Electronic Business). Board member of the ISO20022 RMG and of the International Payment Framework Association (IPFA); Country Information Manager (CIM) of e-invoicing; member of the Italian Committee for the SEPA migration promoted by ABI; member of the former "Expert Group on Electronic Invoicing" appointed by the European Commission and of the Italian Multistakeholder Forum on e-invocing created by the Italian Tax Authority. She has participated, as speaker and coordinator, in the major Italian and international conferences on payment system, e-invoicing and corporate banking. Previously, she worked at ABI for the introduction of the Euro in Italy, and she joined Wind Telecomunicazioni SpA (start-up) in the Finance Department, working on all the billing and collection procedures. In 2001, she contributed to the start-up of ACBI, Italian Corporate Banking Association, under the auspice of ABI. Moreover, in 2008, as Secretary-General, she coordinated the birth of Consorzio CBI.

INTRODUCTION – THE ITALIAN CBI COMMUNITY

Recent improvements in network technologies and the Internet boom in Italy made it possible to communicate at lower costs, ensuring a remarkable widening of applications and therefore opening the way to new supply channels of products and electronic services. At the same time, Italian banks boosted their investment in Information Technology in order to develop innovative services in support of the various types of customers: consumers, enterprises and public agencies.

Among these services offered by Italian banks, those based on Interbank Corporate Banking (CBI) standards have gained importance for the corporate marketplace. The Customer to Business Interaction (CBI) Consortium[†] has defined these standards in order to develop and improve the CBI Service in a cooperative context.

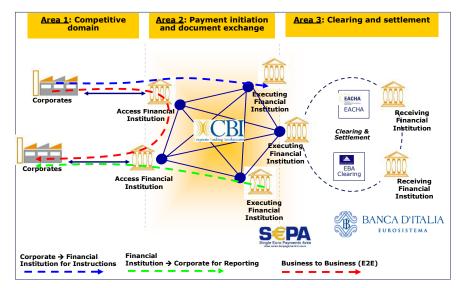
The CBI Consortium represents the Italian best practice in the field of the innovation and standardization of corporate banking services, intended for the business target (corporate clients and public administrations). It was established on May 20th 2008, in order to maintain the activity developed by the previous Associazione per il Corporate Banking Interbancario (Association for the Interbank Banking Corporate - ACBI), which was started up in 2001.

To date, 660 banks have joined the CBI Consortium (that accounts for more than 90% of all the Italian banking Community) and as of November 2008, Poste Italiane (the national postal service) has become an Associate. In line with the PSD, the Consortium's associates will also include new Payment Institutions and foreign banking institutions in the future.

[†] The Italian name is Consorzio CBI – Customer to Business Interaction, in this paper we will use CBI Consortium

There are more than 850,000 enterprises, above all SMEs (December 2011 source) that use CBI functionalities offered by the relative Banks. Public Entities are also part of the client target base.

The Interbank Corporate Banking, the Italian CBI, is an on-line banking service allowing firms of all sizes to work directly, through their computer, with all the banks they have relations with. By centralising all the firm's relations with the whole banking system in one single point, the CBI Service provides a wide range of financial information and commercial tools based on cooperation among banks, without limiting competition. In fact, the CBI architecture is based on a "shared model", where the CBI Consortium defines communication protocols and standards, while each single bank develops its own IT platforms and applicative solutions in its competitive area.



In particular, the CBI is a "Payment Initiation" network based also on XML standard messages designed according to message standards used in clearing and settlements circuits, such as SEPA ones. The CBI network enables interoperability among players and end-to-end STP communication.

Communication between companies and banks is logically partitioned in three main areas:

• The first area involves Customer to Access Bank flows exchange. The corporate users access the service platform and send orders to the Access Bank. In this area CBI standards are not mandatory, but they are often used to guarantee faster message processing and ease the forwarding of flows into the CBI network (Area 2), where CBI standards are mandatory.

• The second area: this area involves message exchange between banks associated to the CBI Consortium. The directory ensures information routing in this area; such information contains the identification references of all CBI clients. CBI standards in this case are mandatory.

• Third area: in this area, the executing banks - on which the corporate users keep their accounts - execute the order, communicating with the receiver banks. The adopted message standards are very similar to the CBI ones. CBI here is out of scope.

Hence, the Consortium defines the technical and regulative standards of the CBI Service, on national and international levels, and manages a modern technological infrastructure in order to support the relations among the different parties of the CBI's community (institutions, public bodies, enterprises, trade associations, software vendors, service providers, etc.). This represents a guarantee for consortium members, who are able to provide their customers (enterprises, public administrations, intermediaries, etc.) with innovative services, either in the core collection and payment area (SEPA compliant), or in the innovative area of document management (e.g. e-invoice), according to main national and international standards in line with ISO 20022.

In line with the market trends and with the institutional interest and commitment towards the Public Administrations' innovation and

efficiency, the CBI Consortium is currently developing its business model and service offer along two principal directions:

- supporting the development of new models of interaction between banking system and public administration: "the New CBI Access point towards the Public Administration"

- developing an innovative service model versus the retail sector.

The role of CBI Consortium as the Italian standardization competence centre

As in the rest of the world, the globalization process is affecting Italian business players. Italy is, in fact, among the major exporting and importing Countries in the world (7th position according to our National institute for foreign trade - ICE).

This implies the need for Italian companies to interface with international trade partners, leading to a high complexity level and high costs, because of the implementation and management of a wide range of expensive solutions. In this context, banks play a key role, supporting companies through an innovative service that facilitates their communication with international counterparts.

Aware of the new needs of the market's players, both banks and corporate clients, the CBI Consortium is fully committed in promoting standardization since 2005, mainly because we believe in the role played by standardization spread as a principal support to the most relevant business needs. Therefore, we are actively working to:

- promote the standards spread in the Italian community;
- support the adoption of ISO-based international standards;
- enable the creation of international business communities.

There are four main factors influencing the level of adoption of electronic initiatives in Europe:

Legislation: the regulatory frameworks in the different countries are well defined; however, the lack of standards and common legislation are still an obstacle to a widespread adoption of electronic invoicing practices at a continental level. From a legal point of view there is a substantial alignment with Community regulations, even though the transposition of the legal regulations in each country has led to differences in the treatment of standards, where there are still relevant local customizations.

Use of standards: from a purely technological point of view, dominant standards are: OASIS UBL and the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) cross Industry Invoice (CII) standard. In particular, the UN/CEFACT has recently approved version 2.0 of the CII standard which focuses on improving interoperability between physical and financial supply chains. The CII proposes itself as a format for global electronic document exchange among trading partners. It has the potential to become an important accounting document with legal implications for both the sender and the receiver. It may also be used as a means for declarations and tax recoveries, for statistical declarations, and to support export and import statements in the context of international trade documents. Given the recognition of the CII standard at cross-industry level, the general belief is that UBL will converge to it.

Role of the public sector (B2G): the main differences between European countries lies also in the intervention of public authorities for the spread of e-invoicing solutions. Nordic and English-speaking countries share the culture of a more liberal market, where decisions are made without excessive limitations or control. Central governmental bodies act as facilitators, but there are risks with enterprises.

Mediterranean countries, on the contrary, are characterized by relatively low private resourcefulness. The central agencies define and impose rules to avoid 'do-it-yourself' initiatives that impact on taxation and legal aspects.

As far as Italy is concerned, numerous initiatives have been launched for the adoption of e-invoicing solutions in the business-togovernment domain as described in the following table.

Country	Main initiative	Description		
UK	Zanzibar Managed Service	UK Government's Electronic Procurement Managed Service. Supplier Portal (e-Invoicing hub) facilitates e-Invoicing free-of- charge.		
Germany	eProcurement Platform	Virtual marketplace allowing authorities to procure goods and services electronically. No e-invoicing capabilities.		
France	eProcurement Platform	Public sector bodies to publish call for tenders online and receive electronic bids. No e-invoicing capabilities.		
Spain	Facturae	All Spanish central public administrations mandated by law to receive invoices electronically from their suppliers. By 2009 extended to regional and local administrations.		
Denmark	NemHandel	ETrade platform. Since 2005, suppliers to the Danish publ sector required by law to send invoices electronically.		
Sweden	Single Face To Industry (SFTI)	Development of standard business processes, messages a data.		
Netherlands		Grouping of organisations directly or indirectly linked to electronic invoicing: software providers, industry associations government institutions and users.		
Finland	XXX	Finnish public administrations process all invoices through one dedicated and selected service operator (Itella).		
	Public Administration Portal	All government ministries to accept invoices submitted electronically.		

Business Models adopted: as regards European business models for the provision of electronic invoicing services, these are essentially based on the number of transactions managed and scaled to volumes. Then, there are ancillary services (example: reporting; validation; storage; trans-coding) that add value to the commercial offer. In many markets there is a division between sender-side and receiver-side of electronic invoicing service providers. Banks may be considered more active in the B2C sector and with small and medium-sized enterprises: they hardly allow format changes.

Operators, instead, have traditionally offered their services to large companies and SMEs in the B2B market. They point to value added services and offer tailor-made services.

The final objective of these activities is that of strongly supporting our stakeholders achieve their goals and satisfy their business needs in terms of interoperability, STP, end-to-end communication among players, rationalization of procedures, operational flexibility, ERP integration, international reachability, financial resources optimization.

Participation in international initiatives

In order to achieve the maximum alignment to international issues of the banking sector, the CBI Consortium, thanks to its role of standardization body, takes part in several ongoing international initiatives (EPC STF, CEN e-Invoicing WGs, UN/CEFACT Supply Chain PDA, ISO 20022 SEG and RMG, IPFA, CGI).

Therefore, the CBI Consortium has established liaisons with stakeholders and decision-makers both on national and international levels, actively contributing to the activities developed inside to the most relevant Working Groups, promoting the standardisation of payments and documents solutions, adopted also by the public entities:

-**CEN Workshop** - E-invoice Phase 2 (European Committee for Standardisation) which aims to define high-level principles to guarantee interoperability of e-invoicing solutions across Europe, at a regulatory and commercial level;

- UN/CEFACT (United Nations Centre for Trade Facilitation and Electronic Business): Domain Coordinator of Finance & Payments domain under Supply Chain Programme Development Area (PDA);

- EPC (European Payments Council) - SEPA Payment Scheme Standard Task Force which has the objective of maintaining SEPA

guidelines and standards (Credit Transfer, Direct Debit in the interbank domain), whilst promoting homogeneity on the Customer-to-bank domain within EU;

- **IPFA**: active role in the IPF Association for the definition of a crossborder payment interbanking framework and spread of the initiative at a global level;

- Expert Group on E-invoice: defines the rules and models required to make SEPA payment schemes interoperable with e-invoicing solutions.

Besides these, the most relevant results the CBI gained thanks to its international participations are related to the ISO 20022 and the EC e-Invoicing Expert Group, illustrated in detail in the following paragraphs.

Focus on the ISO 20022 RMG and Payments and Trade Standards Evaluation Groups activities

The value of the ISO 20022 is strongly connected to the definition of standards supporting business processes in the financial context, based on specific and shared methodologies to design the messages (UML – Unified Modeling Language). The CBI Consortium, as representative of the Italian Banking community, is member of the:

- RMG (Registration Management Group), the group aimed at evaluating requests for registration into the ISO 20022 Repository for standards of financial messages.

- Payments and Trade Services SEGs (Standard Evaluation Groups), committed in the technical evaluation of Payments and Trade standards to be included in the ISO 20022 Repository; these groups have been involved with the analysis of the e-invoicing standard to be registered on the basis of the initiative of UN/CEFACT in the ISO 20022 Repository.

The CBI Consortium has been the first submitting Italian organization to set standards for the Business Area Trade Services in the ISO20022 Repository, lodging the Invoice Financing Request service (in November 2007) and the Creditor Payment Activation Request (CPAR) service (in September 2010).

Insights: the path of the CBI services' registration in the ISO 20022 Repository

Registration of the Invoice Financing Request Service[‡]

Based on the structure of the e-invoice standard header (see *paragraph 4*) and the expertise acquired in 2006 through the analysis of the stakeholders' business needs in the national and international scenario, CBI Consortium has submitted the Invoice Financing Request Business Justification to ISO 20022 Registration Authority (RA).

The Business Justification evaluation phase has been successfully completed by the competent RA in May 2006. The message definitions have been approved by the Trade Services SEG as UNIFI message definitions in October 2007, with the official registration status in the UNIFI Data Dictionary and the publication of the new 'UNIFI messages' in the Business Process Catalogue at www.iso20022.org.

The development of such service is based on the assumption that in a market with increasing competition, it is vital for enterprises to access credit without having to renegotiate conditions. This service

- http://www.iso20022.org/UNIFI_trade_services_messages.page#TradeServi cesInitiation
- http://www.cbi-org.eu/Engine/RAServePG.php/P/287610010410

[‡] For more information see

will simplify the process through which corporate require a financing on the invoices issued.

The invoice financing service allows enterprises (especially SMEs) to optimize the management of cash flow and account receivables, as well as internal business processes automation. In particular, the added value of this service consists in the simplification of the activities through which enterprises switch the invoice into working capital, facilitating payments and operational costs before the relevant invoice is cashed, accompanied or not by credit remission.

The invoice financing service includes the following messages:

1. InvoiceFinancingRequestV01: this message enables the Financing Requestor to initiate the invoice financing process by the First Agent;

2. InvoiceFinancingRequestStatusV01: this message enables the First Agent to notify the Financing Requestor of the status of an invoice financing request or the status of an invoice financing cancellation request previously sent by the Financing Requestor itself;

3. InvoiceFinancingCancellationRequestV01: this message enables the Financing Requestor to request the First Agent to cancel a previously sent invoice financing request.

Registration of Creditor Payment Activation Request (CPAR) Service§

Some enterprises are hampered by internal inefficiencies bound to the payment processes management, which limits their ability to control payment orders and receive funds by their service and product users within a limited period of time. Consistently with these needs, CBI Consortium has defined an innovative functionality which

[§] For more information see

http://www.iso20022.org/UNIFI_payments_messages.page#CPAR http://www.cbi-org.eu/Engine/RAServePG.php/P/287610010410

basically consists of a payment request, pre-filled by the beneficiary and sent to the debtor on the basis of the same ISO pain structure, thus enabling an automatic settlement: the CBI CPAR (Creditor Payment Activation Request).

In 2008, CBI Consortium submitted the CPAR Business Justification to ISO 20022 RA and the message definitions were approved by the Payments SEG as UNIFI message definitions in September 2010 followed by the official RA publication.

The CPAR service allows a bank's beneficiary customer (e.g.: a corporate acting as a seller) to submit to the originator (e.g.: a corporate or a citizen or a Public Administration acting as a buyer) a credit transfer request, including all the creditor side and the remittance information details.

CPAR can be used to request payment for both electronic and paperbased documents (e.g. electronic/paper invoices) and can also support reconciliation activities on existing document standards (e.g. EDI/EDIFACT invoice standards).

In this way, the CPAR service ensures the integrity of remittance information and enables automatic reconciliation and interoperability, overcoming issues that characterise traditional manual reconciliation processes in terms of possible mistakes and mismatches between commercial and financial documents, avoiding long processing times and high processing costs.

This set includes the following message definitions:

1. CreditorPaymentActivationRequestV01: this message is sent by the Creditor sending party to the Debtor receiving party, either directly or through agents. It is used to initiate a CPAR

2. CreditorPaymentActivationRequestStatusReportV01: this message is sent by one party to the following party in the creditor payment activation request chain. It is used to inform the latter about the positive or negative status of a CPAR request.

THE E-INVOCING MARKET

Over the last years, the issue of e-Invoicing has attracted considerable interest from most national stakeholders, which are recognizing the benefits it brings in terms of complete integration and dematerialisation of business processes.

A definition of e-invoicing is provided in the EU Council Directive 2001/115/EC of 20 December 2001 which aims at simplifying, modernising and harmonising the conditions for invoicing in respect of value added tax, and includes rules on e-invoicing and archiving: "The sending of invoices 'by electronic means', i.e. transmission or making available to the receiver and storage using electronic equipment for processing (including digital compression) and storage of data, and employing wires, radio transmission, optical technologies and other electromagnetic means". In this definition no paper document is involved.

In Italy, the "E-invoicing Observatory" of the School of Management of the Milan Polytechnic, one of the most active institutional stakeholders in analyzing market trends and benefits related to the adoption of e-invoicing services, classifies e-Invoicing solutions in two broad categories:

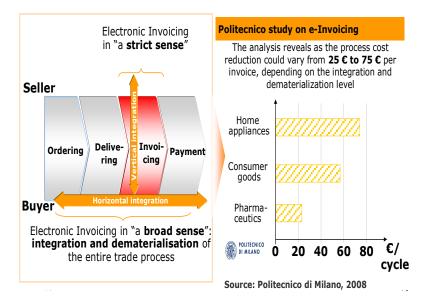
- e-invoicing solutions in a "Strict" sense, including those solutions that allow e-invoices process dematerialization: from invoice issuing to digital archiving

- e-Invoicing solutions in a "Broad" sense, ensuring the dematerialization and structured integration of all the order-delivery-invoice-payment cycle and impact logistics, commercial, administrative and financial processes.

The CBI Consortium collaborates with the Milan Polytechnic in order to support market analysis and studies about e-invoicing, enabling a wider spread of e-invoice "culture". The report of 2008^{**}, strongly supported by the CBI Consortium, demonstrates that the process costs can be reduced by about 25€-75€ as the integration and

^{**} Report 2008, Observatory on e-Invoicing, Milan Polythechnic

dematerialization level increases. The biggest the integration the highest the cost reduction achievable.



According to the same study, from the point of view of companies, the main hints emerging are the following:

- E-invoicing is best addressed in the broadest sense of integration and dematerialization of the trade process

- The return on investment is generally positive in all cases of e-invoicing adoption.

- The companies, with different levels of complexity in the administrative activities, quickly (the payback period is less than 1 year) cover their investments in the different scenarios of the e-invoicing adoption (strict sense and complete integration of the commercial cycle).

As we can observe, the green color identifies a Payback period of less than 1 year; yellow identifies a Payback period from 1 to 2 years; red identifies a Payback period of more than 2 years

I < PBT [years] < 2		Company with administrative activity				
-	2 < PBT [years]	low	medium	high		
Rectronic involcing	Accounts payable digitalization and archiving	1,8	0,5	0,1		
	Accounts receivable archiving	0,9	0,2	0,1		
	Electronic invoicing VAT- compliant	1,0	0,7	0,6		
Integration and dematerialization	Total integration and dematerialization of the trade process	0,7	0,5	0,4	the most	
	Integration of the order-to- payment cycle	0,6	0,5	0,4		
	Integration of the order-to- invoice cycle	0,6	0,5	0,4		
	Integration of the invoice- to-payment cycle	1,2	0,7	0,5		
	Payments integration	0,7	0,1	0,1		
	Unilateral exchange of invoices	3,9	0,9	0,1		
	Unilateral exchange of orders	1,0	0,3	0,1		

Following this result, we can analyze an international research⁺⁺ that has demonstrated that the adoption of e-invoicing guarantees higher cost savings compared with the paper based process, both for the seller and for the buyer.

As case study, it analyses an enterprise with 5,000 employees:

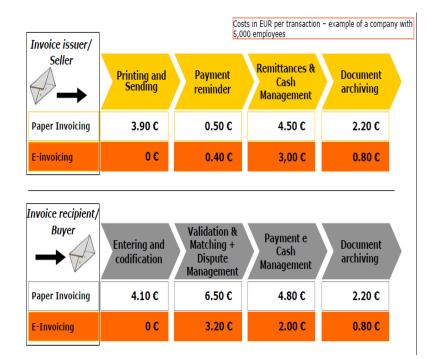
- Using paper invoicing, the cost of the process is:
 - € 11,1 for the seller
 - € 17,6 for the buyer

The total cost is around € 28-29

- Using electronic invoicing, the cost of process is:
 - € 4,2 for the seller (savings of € 6,9)
 - € 6 for the buyer (savings of € 11,6)

The total cost is around € 10-11 (total savings: € 18)

⁺⁺ Souce: "e-Invoicing & EBPP" - Billentis 2009



According to another research, carried out by the Milan Polytechnic^{‡‡}, approximately 1.3 billion Business to Business invoices and approximately 1 billion Business to Consumers are exchanged each year in Italy – in all sectors, mainly in the energy, telephony, and professional service sectors. Dematerialisation can be applied to a rather low percentage of such invoices, yet saving as much as €80 per invoice, depending on the sector and the implemented solution's coverage. The potential benefit for Italy – in terms of increased productivity deriving from the widespread adoption of electronic invoicing – would be between € 10 billion per year – if dematerialisation were applied to the invoicing phase alone – and € 60 billion per year – should it be applied to the entire trade cycle. That means between 1 and 4% for the annual GDP.

^{‡‡} Report 2009, Observatory on e-Invoicing, Milan Polythechnic

A widespread adoption of electronic invoicing would, amongst other things, have an extremely important, long-awaited impact on the Public Administration – benefits conservatively estimated to fall between €300 million and €2 billion annually, depending on the adoption model – and equally significant would be the

potential impact on PA suppliers.

Furthermore, according to the creation and maintenance of a sustainable environment, migrating from paper to e-invoicing reduces the use of natural resources, especially trees, playing an important role in a company's corporate social responsibility agenda.

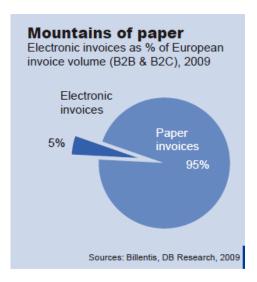
"It has been calculated that a 1,000,000 paper invoices require approximately 400 trees. With 30 billion invoices sent annually in Europe, e-invoicing can save significant amounts of natural resources. A 1% increased adoption of e-invoicing could lead to an annual reduction of tree usage of approximately 800,000 trees and towards reduction of CO2 emissions." §§

However, in Italy, the market of e-invoicing has yet to mature. Around 60,000 companies in Italy assimilate the e-invoicing principles on the Order-Payment chain, but the invoice document is involved in only 1 process.

Even in the rest of the World the e-invoicing penetration rate remains relatively low, but growing. In a world of expanding electronic communication it must seem anachronistic that in 2010 the invoice (one of the most important documents used in commerce) is still predominantly issued and sent as a paper product. In Europe, companies last year issued nearly 30 billion invoices. However, only about 900 million of them were sent electronically to other firms (Business to Business); 500 million invoices were sent electronically to private citizens (Business to Consumer).

^{§§} E-invoicing 2010, EBA & Innopay, May 2010

What is more, exchanging e-invoices is still too complex and costly, in particular for SMEs. While 42 % of large enterprises claim they receive or send e-invoices, the adoption rate among SMEs remains at a lower level (22 %). As a result, the average market penetration of e-invoicing remains rather low in Europe and is currently estimated to be about 5 % of all invoices annually exchanged for Business to Business relations.***

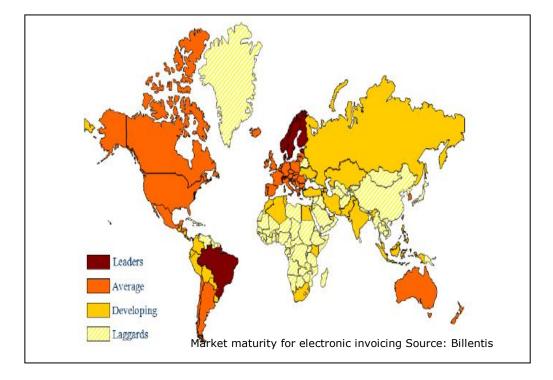


To the detriment of consumers and enterprises alike, the existing rules that govern e-invoicing in Europe are still fragmented along national lines and most of the potential of e-invoicing is still untapped. This creates important opportunities for improvement. The mass adoption of e-invoicing within the EU would lead to significant economic benefits and it is estimated that shifting from paper to e-

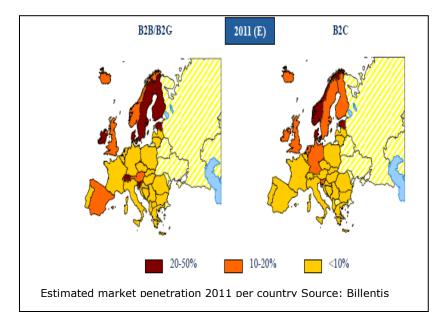
^{*** &}quot;E-Invoicing / E-Billing in Europe: Taking the next step towards automated and optimised processes" written by Bruno Koch and Billentis in February 2009.

475

invoices will generate savings of around EUR 240 billion over a sixyear period.



For these reasons, in Europe, with an estimated volume growth of 35% for 2011, E-Invoicing is currently one of very few growing markets.



The analysis of potential benefits and the actual state of adoption seem in partial contradiction, thereby creating the need to identify possible development factors. The actors commonly identified as crucial for a more widespread adoption of electronic invoicing are mainly found outside the company – the Legislative framework and the availability of clear technical standards and rules shared by all – and only rarely is emphasis placed on the importance of the management of internal change. This last factor, however, is crucial, as the risk is that its absence might impede electronic invoicing projects, or somehow prevent their full exploitation.

Regarding Government initiatives, politicians and interest groups are displaying a growing interest in e-invoicing. The European Commission is making efforts to evaluate and unlock the potential of electronic invoicing to boost the efficiency of the European economy. The background is the eEurope initiative (and its successors) launched as part of the Lisbon agenda. Moreover, the new Single Euro Payments Area (SEPA) is seen as an excellent platform for

innovations in the payment process. And one of these is European e-invoicing.

The European Commission, understanding the importance of this innovation process and its benefits for all the stakeholders (enterprises, public administrations, financial institutions, etc.) has set up various initiatives to support the wide adoption of e-invoicing in Europe, guarantying the interoperability between the European Members. The first step was the creation of the Expert Group on e-Invoicing in 2008, in order to define a European Framework on e-Invoicing.

In order to implement the important results of the Expert Group on e-Invoicing the European Commission adopted, on 2 December 2010, the Communication "Reaping the benefits of e-invoicing for Europe", as well as the decision to set up a European Multi-Stakeholder Forum on e-Invoicing, which was announced in the Digital Agenda for Europe, with the goal to make e-invoicing the predominant method of invoicing by 2020.

At the same time we should also bear in mind that, through the Digital Agenda for Europe†††, the European Commission has proposed to spend almost €9.2 billion from 2014 to 2020 on pan-European projects to give EU citizens and businesses access to high-speed broadband networks and the services that run on them. The funding, part of the proposed Connecting Europe Facility (CEF), would take the form of both equity and debt instruments and grants. It would complement private investment and public money at a local, regional and national level and EU structural or cohesion funds. At least €7 billion would be available for investment in high-speed broadband infrastructure.

⁺⁺⁺/* Com/2010/0245 F/2 */ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions A Digital Agenda For Europe (26/08/2010)

According to the European Commission, there are still barriers blocking the free flow of online services, entertainment and payments across national borders.

The Digital Agenda is a plan to gradually update the single market area and provide it with a set of rules, thus abating costs and increasing efficiency for online business. The key goals are to establish a single area for online payments, boost the business and ensure higher protection of EU consumers using the web.

At the same time, the Digital Agenda for Europe calls for the removal of the regulatory and technical barriers that prevent a mass adoption of e-invoicing and the replacement of paper invoices. To this end, electronic invoicing (e-invoicing) is part of the European Commission's flagship initiative.

FOCUS ON E-INVOICING EXPERT GROUP ACTIVITIES AND CREATION OF THE EUROPEAN MULTI-STAKEHOLDER FORUM ON ELECTRONIC INVOCING

The Expert Group on e-Invoicing was appointed by the European Commission in December 2007 and started its work in February 2008 with the main mission of developing a European e-Invoicing Framework, defining conceptual structure, business requirements, standards and legal issues, needed to guarantee the interoperability of e-invoicing solutions in Europe. This Framework is fundamental to support the spreading of e-invoicing even in the Business-to-Government relationship, in order to completely grasp the benefits deriving from the elimination of paper-based e-invoicing procedures and to write off investments already done by them in dematerialisation of their procurement processes and their supply.

The important results of the Expert Group have been formalised in the Expert Group Final Report and are to be seen in 2 main documents:

• the "*European Electronic Invoicing Framework*" (EEIF), where the final outcomes of the above mentioned groups have been

merged. The Final Report, which is mainly intended for the European Commission, its Member States, Public Administrations and einvoicing services providers, focuses on small and medium enterprises' needs. The recommended e-invoicing framework relies on several principles, among which the most representative are equal treatment among electronic and paper invoices, technological neutrality and harmonization and simplification of rules and procedures related to e-invoicing processes;

• the **Code of Practice**, which represents the guide for companies and SMEs, identifying the "good practice", has to be implemented for a successful adoption of the e-invoicing solutions. After the Italian consultation process, as regards the "Core Principle" of the Code of Practice, related to the **internal business controls enabling the validity of the invoices**, the Italian community:

- sees no limits to the non-compulsoriness of the digital signature

- agrees that further requirements have to be identified in order to grant the authenticity and integrity of the electronic flows

The European E-invoicing Framework is based on 6 recommendations, which are detailed inside the Final Report. In particular, the key contents are the following:

- Recommendation 1: Meet the needs of SMEs as a priority focus
- Recommendation 2: Harmonise and clarify the legal and VAT framework based on equal treatment of paper and electronic.
- Recommendation 3: Maximise interoperability and reach
- Recommendation 4: All actors to adopt a common invoice standard and data model- the UN/CEFACT v.2.
- Recommendation 5: Establish an organisational process for the implementation of the EEIF.
- Recommendation 6: Widely promote and communicate the benefits.

The Final Report was under public consultation until February the 26th 2010, hence the international community was able to evaluate the proposed framework and make suggestions, in order to further improve the Final Report. At the end of the consultation process, In April 2010, the Commission organised a Conference on "Electronic Invoicing in Europe" to debate with a wide range of stakeholders the recommendations of the Expert Group on e-invoicing.

On 13 July 2010 the Council adopted Directive 2010/45/EU amending Directive 2006/112/EC on the common system of value added tax as regards the rules on invoicing. This Directive, which will be transposed by 1 January 2013, sets out new VAT rules as regards e-invoicing and removes the obstacles to the uptake of e-invoicing by creating equal treatment between paper and e-invoices, while also ensuring that no additional requirements are imposed on paper invoices.

The Commission adopted, on 2 December 2010, the Communication "Reaping the benefits of e-invoicing for Europe" and a Decision to set up a European Multi-Stakeholder Forum on e-Invoicing, which was announced in the Digital Agenda for Europe. The Communication identifies a set of actions to support the uptake of e-invoicing by ensuring legal certainty and promoting the development of interoperable e-invoicing solutions based on a common standard, paying particular attention to the needs of SMEs. The Communication also urges the Member States to take action and promote e-invoicing at national level. All actions aim at making e-invoicing the predominant method of invoicing by 2020.

The "European Multi-Stakeholder Forum on Electronic Invoicing" started its activities on 13 September 2011. It brings together key players from the private and public sector of all Member States. It provides a single platform to exchange experiences and best practices which can pave the way for a broad-scale adoption of e-invoicing at both national and EU level. Each Member State has to create its own **National Stakeholder Forum**, which in Italy started on 20 December 2011. The CBI Consortium participates in this

Stakeholder Forum in order to represent the Italian banking system know-how and experience in the field of e-invoicing.

How e-invoicing supports the integration of the financial value chain

In this scenario, the firms' increasing needs have driven the CBI Consortium to develop innovative services regarding e-Invoicing; in particular, value added services have been introduced to help banks develop advanced offers to their clients. On this common base, each single bank can develop value added and distinctive services in its competitive space: for example, the reconciliation service, or the support in the dispute process between seller and buyer, or the electronic archiving to ensure the legal validity of e-invoices.

The CBI e-invoicing services are characterized by relevant features, such as

- ISO 20022 XML compliance
- Multi-standard format
- System information on the transmission status
- Faster request elaboration
- Data security/integrity and quality

For the definition of the CBI e-Invoice standards, the CBI Consortium has developed gap analyses among the most important international standards and collected also the stakeholders requirements through the CBI Stakeholder Forum (consisting of Institutions, enterprises and Association). Moreover the CBI Consortium took into consideration the UNCEFACT TBG1 standard and it has completed the gap-analysis with the main international standards, so as to ensure the interoperability.

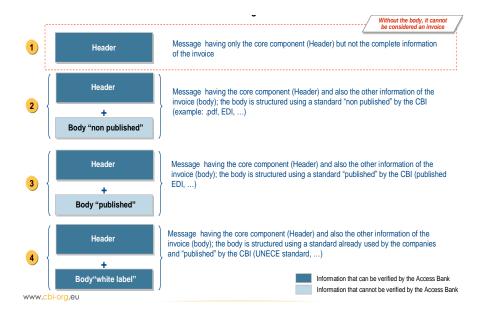
The CBI e-invoice standard is based on a **"double layer" approach**, with two main information blocks:

- The **header** contains only the summary information about the invoice (not the entire document), comprising necessary data for

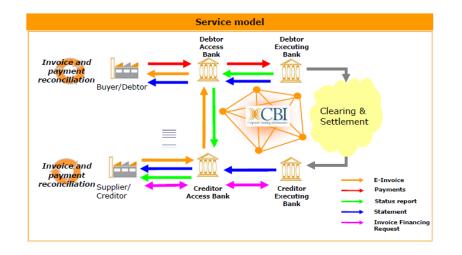
the bank to grant its financing (date and protocol number of the document, information about the supplier, information about the customer, information about the total amount, etc.)

- The **body** contains detailed commercial information about the invoice (description of the goods, references to the shipping note, unit price, applied discount, line total amount, information about taxation, etc.)

Four possible scenarios have been identified to structure the messages (see figure below).



In this way the CBI e-Invoicing Service will be interoperable with the existing systems, used by extended business community (i.e. proprietary standards as EDI, UN/EDIFACT, INDICOD, others, etc.).



The CBI enables the activation of document exchange, invoice financial request and payment orders, and supports automatic reconciliation between commercial and financial data.

The model ensures financial institutions, connected to CBI network, to communicate directly, sending and receiving invoices in a nonstructured modality too. This brings the best flexibility in the commercial relation, relieving the parties from compliance with rules for the structuring of reference documents.

E-invoicing in Business to Government (B2G) area: the CBI channel

Once realized how important e-invoicing is, several European countries have decided to implement a Roadmap to make e-invoicing compulsory in the B2G domain:

• The **Danish government** made e-invoicing compulsory in the commercial relationship between Public Administrations and its suppliers n 2005; as a consequence Danish Government and its suppliers have already acquired substantial experience in the conduct of e-Invoicing, estimating savings to society of upwards of EUR 100 million annually. As a case study we can show how the

Danish National IT & Telecom Agency (NITA) under the Ministry of Science, Technology & Innovation has launched a national open ebusiness framework, 'NemHandel', based on a new national serviceoriented infrastructure and utilizing state-of-the-art open standards to facilitate the exchange via the Internet of e-business documents (e.g. electronic invoices), both business-to-government and business-tobusiness.^{‡‡‡}

• The **Finnish Government** has announced that it will accept only e-invoices. All government agencies will be ready to send einvoices at the latest by the end of 2010. It has been proposed to mainly use market solutions for e-invoicing (standards, network and service providers). The programme is part of the Finnish government's SEPA migration plan. The elnvoicing activities in Finland concentrate around the Finnish elnvoice Forum, coordinated by the Finnish Information Society Development Centre. It aims to promote the widespread adoption and use of electronic invoicing based on common standards and procedures. The Forum is a central collaboration and meeting point for the different parties involved, such as developers, service providers, experts and the users of electronic invoicing. In the Finnish e-invoicing environment, operators and banks are equally providing elnvoiving services for businesses and public sector. The banks and e-invoicing service providers have agreed upon basic procedures that enable elnvoices to be sent and received reliably in a common trunk network. This means that the invoicing traffic between the invoice issuer and invoice recipient is conveyed uniformly even if the parties use the services of different einvoicing service providers.§§§

• in **Spain**, e-Invoicing to Public Administration will be mandatory for all suppliers, regardless of size or turnover, as of November 2010. For this purpose, a national structured format called 'Facturae' has been defined in cooperation with the Spanish Banking Association. The public sector is trying to boost e Invoicing among small and medium-size enterprises from a more practical point of

- http://www.youtube.com/watch?v=w7lx62l8ktg
- SSS For more information see: http://www.tieke.fi/display/English/elnvoice

^{‡‡‡} For more information see the video:

view and not only through legal rules. As a matter of fact, the official electronic invoicing website in Spain (www.facturae.es) presents legal rules, technical documentations about FACTURAE format and about signature policy, free applications etc. For instance, the Ministry of Industry, Tourism and Trade has developed an application called "Gestión de Facturación Electrónica" that allows users to easily generate electronic invoices compliant with the "FACTURAE" format scheme. Developed as an open source, it is mainly aimed at SMEs, microSMEs and self-employed workers, giving them the possibility of solving their paper invoicing storage-related problems. This website also allows users to download a general set of utilities to help developers create and verify digital signatures. As regards the private sector, the Chambers of Commerce are very active in promoting and helping the implementation of a simplified utilization model of the e-invoice for SMEs. Other private sectors, such as the automotive one, are also very much involved but, for the moment and in general terms, the use of e-invoicing is still limited. Several important private associations have created working groups on electronic invoicing. For example CEOE (Businessmen Association). AMETIC (IT Companies Association), CCI (Banking Association), etc.****

In Italy, e-Invoicing for the supply of goods and services to the public sector has started to become mandatory under a phased timetable. The compulsoriness was introduced with the 2008 Budget Package (article 1, paragraphs 2009 to 214 of Law #244 dated 24th December 2007), which introduced the obligation for suppliers of public sector authorities and national public institutes, to issue, transmit and archive invoices exclusively in electronic format. Consequently, the Public Administrations cannot process any payment for invoices issued on paper. The main objectives the government wants to achieve with this requirement are the following:

- automate the flow of purchase invoices by public administrations

^{****} For more information see www.facturae.es

- reduce costs related to invoicing archiving, both for suppliers and public authorities

- speed up a widespread use of electronic invoicing both in business-to business and business-to-bank relations, with significant benefits for the entire "country's network".

The legal implementation will be done through "incremental steps", depending on companies' turnovers; in fact, the start-up of the system (in an experimental phase) will cover only large companies and some authorities (probably the financial authorities themselves). The extension of the obligation for large companies to invoice to all authorities involved and the gradual inclusion of smaller companies will follow.

The legal framework has also defined a reference model for the exchange of e-invoices, which envisages that electronic invoices must be transmitted to public sector authorities using a "unified interchange system" administrated by SOGEI (Società Generale di Informatica) – company of the Ministry of Economy and Finance - as a single interface for suppliers. Indeed, the decision on how the electronic invoices must be transmitted to the unified interchange system, i.e. whether to use an internal solution, an ASP platform or outsourced services, is left to the supplier itself.

The Italian Community is currently waiting for the issuing of the second decree of the Economy and Finance Ministry, in agreement with the Innovation and PA Ministry, defining the technical, administrative and procedural rules aimed at making the aforesaid system effective.

In this scenario, CBI took part in the legislative procedure in order to strengthen the possibility of proposing CBI as a main interlocutor for B2G (Business to Government).

NEW CBI ACCESS POINT TOWARDS PUBLIC ADMINISTRATION

The public sector plays a key role in actively fostering the competitiveness of the European economy and promoting the financial market. This is due to its close relation with companies and private citizens and to the numerous payment and collection transactions it initiates and receives every day. The purposes of public administrations (PA) – as agreed by the EU Council in the Lisbon Agenda – are clear, and financial integration acts as one of the core levers to achieve the Lisbon objectives.

Consequently, during the last years, "quality", "efficiency" and "savings" have become the key drivers in the renovation process of the Italian Public sectors, in response to the strong inefficiencies in the administrative and payment processes management. Due to spare resources and low adoption of standardization and ICT solutions, in fact, Public Administrations present today highly customized procedures and tools/services for each institution, highly complicated running of internal processes, which compromise the public institutions' capacity to offer excellent services and optimize their internal processes.

A significant indicator is the cost for the whole Italian system of "paper-based" management of PA documents and payments, whose estimated value is around € 50-70 billion.

Against this backdrop, several stakeholders categories (in particular, Institutions, Public entities and Banks) have recently shown growing interest in cooperating to remove administrative burdens and modernize procedures, including the promotion of dematerialized means of payment.

This new approach has arisen thanks to some discontinuity trends and drivers, closely connected to:

• some relevant **regulations and initiatives affecting the payments scenario** are SEPA (Single Euro Payments Area) and PSD (Payment Services Directive), which consider the innovation of payment processes (e.g. migrating government payments away from paperbased and cash processes) a vital component for creating modern

infrastructures designed to reduce costs, to establish efficient operational structures and, above all, to further improve the service level of government agencies interacting with citizens and enterprises. SEPA will be the platform on which e-government solutions such as e-invoicing, e-procurements, e-payments, esignatures and e-services in relation to taxation, customs and social security will be further developed.

• the **standardization initiatives**, promoted by international bodies such as ISO, SWIFT, UN/CEFACT, provide the Public Administrations with the opportunity to adopt a common language supporting interaction and message exchanges and a more efficient organization, thus giving the possibility to benefit from homogeneous tracked and traced information and data, easily comparable and usable, and from savings due to the reduced costs of management and maintenance of different procedures and IT systems.

• the **financial crisis**, which has clarified the relevance of the public entities' role in ensuring the market stability and supporting the country's economic recovery.

Following these considerations, the Italian institutional players (including the Italian Government) are actively working to promote integrated vision and action for the PA innovation and efficiency, based on new technologies, widespread security and quality standards and simplification of interaction models. The Institutional Programme for the modernization of the Italian System ("i2012 – Innovation strategies"), defined consistently with the most relevant results gained in PA issues by the main European best practices (e.g. Denmark, ...), has brought to the launch of initiatives that target all levers, i.e. legal framework, ICTs, processes re-organisation, human capital. The above mentioned initiatives are based on the involvement and cooperation of all relevant national stakeholders (e.g. PA at central and local level, banking players, enterprises, ...). The programme identifies key-objectives structured on three main areas:

1. e-Economy: innovation in the B2G e G2B relations.

2. e-Society: innovation in the C2G and G2C domain, supporting the digitalization process by the citizens.

3. e-Government: innovation of PA internal procedures and PAcitizens/corporate relationship

In this perspective, the Italian Banking System, represented by ABI (Italian Banking Association) has recently subscribed an agreement with the Innovation and PA Ministry, thus engaging in the support of the "eGov 2012" and "Reti Amiche" objectives, in cooperation with Digit PA. The banking system is now defining and developing appropriate Operational Agreements, aimed at analyzing the technical, organizational and legal issues related to the provision of public services through the banking channels.

In line with the above described development of Italian PA needs, the CBI Consortium has recently developed a new Access Point Service, according to which the CBI Consortium can act as a neutral access point, providing Public Administrations with the access points to the CBI network, in representation of the entire Italian banking system.

Through that decision, banks are giving up the option of playing as access bank toward public administrations. The role of the access point is associated to an "impartial" overlaying subject representing the entire banking sector. Considering the Italian Public Administrations requirement to identify any outsourcer related to a supply value bigger than a certain amount through a public call for tenders, the decision of the Italian banking system, represented by the CBI member banks, has an important meaning in terms of market positioning of the access point services.

An Access Point is a CBI role defined by the CBI Consortium Statute and Legal Framework, that is certified and listed in the dedicated technical subject roster. The Access Point is able to connect member banks to the CBI network. The actual Access Point manager is a market player, sometimes owned by a bank, that provides the technical platform through which financial flows are sent and

received between the member bank and the CBI network, in compliance with CBI message standards.

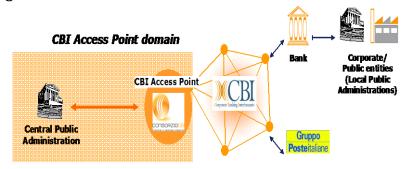
From the very beginning of the CBI initiative, only banks have been able to benefit from Access Point services in order to exchange financial flows with other member banks connected with the CBI network. The CBI network has indeed always been directly accessed by banks. With the new CBI Access Points services, the CBI Consortium can act as an Access Point towards Italian Public Administrations.

Basically, the new CBI Access Point services, whose creation is entrusted to an outsourcer, are represented by an extended gateway service that enables the interconnection among different network infrastructures (Public Administrations existing networks and CBI network).

More in depth, the Access Point functionalities can be summarized as follows:

- Routing and addressing of the exchanged flows
- Dispatching and receipt of flows compliant to CBI XML and conversion of flows in other requested format
- Enveloping on CBI standards of unstructured documents
- Security requirements in line with CBI standards
- Advanced Routing functionalities (e.g. VAT/taxpayer code)
- Access utilities to the CBI Directory for routing query
- Centralized Help Desk and monitoring tools
- Disaster Recovery
- CBI standard diagnostic tool
- Flows Storage
- Conversion of formats and schemes of exchanged flows, based on protocols defined together with the client
- Performance measurement and monitoring tools (e.g.: web data monitor)

As mentioned before, all the Italian Public Administrations are facing an important process of rationalization, strongly supported by the current Government, aiming at maximizing the value of services delivered to citizens. Against this backdrop, issues such as cost reduction, efficiency increase, decrease of paper-based transactions and activities, dematerializations and so on are paramount. The value proposition of the CBI Access Point services works accordingly with that trend, so as to enable, in the future, the management of all relations between Public entities and banking systems through one single access window.



THE PUBLCI ADMNISTRATON'S CASE STUDIES

Three Public Administrations have asked the CBI Consortium, as an impartial interlocutor representing the Italian banking community, for specific support in order to rationalise the current model for their interaction with the banking system.

The above mentioned Public Administrations are:

1. Ministry of Economy and Finance, for the financial monitoring of big public works. This service makes a wide visibility of the financial movements generated for the realization of public works possible;

2. Equitalia, to rationalize the management of the fund administrated by the justice system (Fondo Unico Giustizia – FUG)

and the cash management of the group. CBI allows Equitalia to obtain all the information about bank account relations connected to the FUG and dispose/use these relations through telematic means.

3. Agenzia del Territorio, to allow the Agency's web users to pay for its services via credit transfer.

Consistently with the current regulatory evolution (e.g. E-government plan 2012), CBI is evaluating the chance to set up an extension of CBI Gateway Service towards other institutions.

Insights: project "Capaci" project

A thorough analysis of the first project - the Italian Financial Monitoring Project – makes it is clear that the aim is to monitor the financial flows involved in specific public issues, in order to make public bodies aware of

- funds related to a single public work;
- payments executed in the whole supplier/customer chain;
- cash flows moved from/to specific banking accounts.

To let the public administration reach this target, CBI developed a solution based on the use of CBI assets: CBI Network, CBI Access Point service and some of the CBI functions and in particular SEPA Credit Transfer with the corresponding status report, that are ISO compliant functions, and the financial statement.

In particular this project – named "Creation of Automated Procedures Against Criminal Infiltration in public contracts – CAPACI" project - has been presented by Italian Ministry of Interior (Department of Public Security Coordination and Planning of Police Forces Office), in partnership with CBI Consortium and Former PA, to the European Commission to respond to a Call for Proposal within the ISEC programme "Prevention Of And Fight Against Crime" and has been awarded by the Commission in order to let the applicant fulfil the objectives of the project.

The project title commemorates Giovanni Falcone, assassinated at Capaci in 1992, whose success as an anti-mafia magistrate derived

partly from the painstaking examination of thousands of bank records. In order to facilitate and automate this kind of action, Italy is creating an IT system to monitor financial flows in the supply chain of large public contracts, as part of a general initiative to counter money-laundering and Mafia penetration into major public works. The system will enable authorities to monitor the activity of businesses in these projects, prevent the infiltration of capital of illicit origin and combat the appropriation of public funds by organized crime.

The model requires companies to sign a contract to open a dedicated bank account, to carry out all contractual activities through this account only and to make payments exclusively by means of XML SEPA bank transfers. The use of a dedicated bank account has an important added benefit, in that it makes it possible for investigators to overcome difficulties relating to the right to privacy. Contractors are required to indicate the CUP (Single Project Code) in the bank account and on all bank transfers, making it possible to identify, with certainty, the project the data refers to.

Using the CBI Consortium network, which covers almost the entirety of Italian banks and Post Offices, a focal point has been created. It daily collects data on all SEPA payments, as well as statements for all dedicated bank accounts, together with the relevant CUP.

Project CAPACI can represent a best practice for other international communities. In this period the CBI Consortium is organizing various meetings with international delegations to present a solution that can be available immediately to countries already using the SEPA system and, after the necessary adaptations, to all Member States.

The e-procurement of Public Administration

The electronic instruments are an essential part of eGovernment, owing to their ability to reduce transaction and management costs and to increase efficiency in terms of higher speed of the purchase process, lower expense and more opportunities of choice and competitiveness.

In Italy, a crucial role is played by Consip, a company owned by the Italian Ministry of Finance, which manages the MEPA (Electronic Market for the PA), an electronic tool facilitating the procurement process of the Public Administration.

In order to support a better integration of this process with the essential phases of payment and reconciliation, Consip has involved the CBI Consortium and Italian banking system in the MEPA project. In particular, the MEPA platform could be integrated through the connection with the CBI network, enabling the use of payment/collection instruments, information and document management.

The e-billing project

In the international scenario, a new service is being developed to allow an enterprise to send the bills online to its client, in order to pay them automatically via the Internet (EBPP - Electronic Billing Presentment and Payment), simplifying the reconciliation process.

In Italy these services have not been developed yet, because this kind of market is less competitive. However, after the issuing of the Payment Service Directive (PSD), some non-banking players of the market are offering services enabling, for example, gas, power, water consumption or penalties, etc.

In this scenario, coherently with its evolution guidelines, the CBI Consortium is developing a service model ad hoc to allow consumer and companies to visualize and pay their bills through the e-banking service.

In particular, the e-billing service of the CBI Consortium will allow to:

- visualize all the billings of the users related to a defined period through their e-banking;
- authorize the payment of the selected billings;
- define Value Added Services towards the debtor or the Biller in the competitive area;
- integrate the service in a multichannel logic.

The basic service is firstly directed to the Central Public Administration, which collects their credits through billing services; the service is designed to allow, in a second phase, its possible reuse by Banks towards other entities such as Companies or Local Public Administrations.

CBI AS A BRIDGE TO FOREIGN E-INVOICING COMMUNITIES

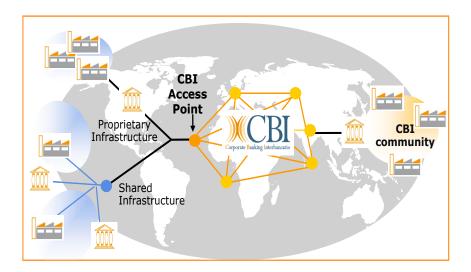
The CBI Consortium is analyzing the functional and technical requirements of its network to ensure the opportunity of interconnecting with cross-border Communities. CBI's goal is to act as a gateway between national and international partners, thus creating widespread business communities.

The objective could be reached through the network's interoperability and flexibility, but also through the semantic interoperability of standards. The CBI standardization activities will support interoperability and the creation of international business communities.

From that point of view, the CBI Consortium, in line with its mission and role, will support:

• Interoperability of payment services and cross-border e-invoicing exchange

• Creation of international extended business communities via ISO messages



The International Trade Hub

In the field of the cross-border interoperability, the Italian Ministry for Economic Development (MiSE) launched the "Strategic roundtable on Trade Facilitation" in 2009, in order to facilitate international trade commercial transactions (import-export trade).

The CBI Consortium is collaborating with MiSE to promote electronic Trade Facilitation services and to implement the IT platform named "International Trade-Hub Italia" (ITH). This platform will enable:

- electronic management of procedures for import/export and administrative controls (e.g. customs controls) throughout applications provided by financial institutions too
- information exchange between enterprises and Public Administration throughout banks and other financial institutions
- massive adoption of electronic invoicing and electronic document management (e.g. e-ordering)

To support ITH implementation, CBI Consortium is now completing functional analysis to identify the best technological solution to support ITH operation and activities, also leveraging on the experience already gained in providing "access point services" to Public Administration.

The ITH project is expected to contribute significantly to the growth of the Italian economy and it can represent a best practice for other international communities.