SMART PAYMENT ASSOCIATION

Instant Issuance

A SPA White Paper

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1. Executive Summary

Today's consumers want their financial institution to offer services that align with their lifestyle, including great service, options and convenience.

The success of card-based payment methods presents an opportunity for banks to create true competitive differentiation for themselves. To stand out, financial institutions must incorporate innovative strategies and advanced technologies, like instant issuance for payment cards.

Instant issuance enables new and existing customers to walk into a branch and, within seconds, receive a fully-functioning, active payment card. For banks this creates opportunities to increase activation rates and interchange revenue. The sooner the card is used, the faster financial institutions can benefit from an immediate return on their investment. A recent analysis of one bank's use of instant issuance showed customers use their cards, on average, within the first 8 hours of receiving the card.

In this paper we explore and clarify what instant issuance is, how it complements the traditional central issuance model and how it can enable issuers to address particular cardholder scenarios and needs.

We look at the marketplace drivers that are changing the notion of who an issuer is and how cards are issued, examining how issuers can leverage the instant issuance model to respond to current trends and position themselves for future advancements. We also identify the opportunities and choices that an instant issuance strategy opens up for issuers.

The paper goes on to review the scope of an instant issuance implementation, including the implications for current processes, and provides best practice implementation recommendations.

Ultimately, the key to effective issuance strategies rests on the ability of issuers, payment schemes and other value chain players to work together. The goal is to develop fully compatible and streamlined processes (in the back end and at the point of issuance). And through this collaboration will come the creation of issuance programs that seamlessly integrate into the wider business strategy of today's financial institutions.

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2. Introduction

The purpose of this SPA whitepaper is to offer a detailed analysis of the 'instant issuance' process for EMV payment cards. A 'must read' document for any payment card issuers considering adoption of instant issuance - from financial institutions, retailers, prepaid and other connected service providers - the paper investigates the opportunities made possible by this alternative model for issuers, and discusses implementation, implications and potential benefits for all stakeholders.

2.1. Context

The traditional business strategies previously employed by card issuers have been challenged by regulatory changes and the ever growing needs of their customers. Acquiring profitable account holders and retaining them has become harder than ever, forcing organizations to constantly re-evaluate and evolve existing practices.

Instant issuance is relevant to all issuers of payment cards; the degree of relevance is subject to individual situation and domestic market condition. Where traditional central issuance methods are used, instant issuance represents the next evolution that enables issuers to better meet customer needs. Instant issuance processes share many elements of traditional centralized card issuance and can be integrated into existing infrastructures.

The emergence of EMV payment options in territories where the instant issuance of magnetic stripe cards is common. For those in the process of EMV migration, the education of cardholders is important and instant issuance offers an opportunity to meet the customer face-to-face.

For issuers who have already migrated to EMV, instant issuance offers a service differentiator, particularly where the penetration of cards and competition for new cardholder acquisition is high.

Post the Global Financial Crisis issuers are looking towards cardholder-centric innovation, while striving for a "top of wallet" status for their card in the eyes of the cardholder. Increased activation rates and the reduction in costs associated with dormant accounts are also core issuer needs.

2.2. Audience

Issuers already engaged in the issuance of non EMV cards, or EMV card issuers interested in launching an instant issuance service to their cardholders.

2.3. Scope

This document provides recommendations and best practice relating to the instant issuance process, a process which incorporates full personalization details including the cardholder name typified by credit and debit cards. The issuance of anonymous cards, for example pre-paid cards, is not in the scope of this paper.

The back-office issuer card management system forms an important part in the initial capture and validation of cardholder data. While SPA members can provide assistance and guidance on this aspect, it is not in the scope of this paper. The focus is on the process from the point at which a validated request to personalize a card is created through to the issuance of the card direct to the cardholder's hand. This includes the issuance or selection by the cardholder of the card PIN.

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2.4. Definitions

- **Instant issuance**: the issuance of a card direct to the cardholder's hand from within a bank branch, retail store, or remote location.
- **Point of issuance**: a bank branch, retail store, or remote location.
- **Issuer CMS (card management system)**: the system or systems used by the issuer to control and manage card-related data.
- **Instant issuance – attended**: the consumer visits the point of issuance and is helped at a desk by a teller/clerk.
- **Instant issuance – unattended**: the consumer does it by him/ herself, using a self-service device such as a kiosk.

2.5. Market trends/drivers

2.5.1. Rationalization of bank branches

Following years of massive expansion, financial institutions across developed markets are closing thousands of outposts as pressures mount to cut costs and more customers embrace online and mobile banking[1]11.3.

Online banking, for example, now accounts for 53% of banking transactions, compared with 14% for in-branch visits[2].

North America and Europe in particular are over-banked and are witnessing a rationalization of branch numbers and a reduction in branch footprints. Indeed, as many as 50% of branches in networks may be declared obsolete in their current form in the developed world by the decade's end.

The majority of bank expansion is taking place in developing countries, where there is significant room for banking growth. India in particular is hugely under-banked, and the market is now ripe for development.

For the branches that remain, the ability to offer value adding services is important. The instant issuance of cards fits with this approach, offering:

- a convenient drop-in service for the local population
- an important branding tool
- an information/training touch point

2.5.2. Customer loyalty depends on convenience and service

According to the recent Jones Lang LaSalle Global Retail Banking 2020 study[3], banks can no longer rely on customer loyalty or inertia: their customer base is increasingly mobile. Overall, people are increasingly savvy regarding their finances and they will demand more from their bank.

For the future, the branch focus will be on service, sales and relationship building as transactions are pushed online or through call centers. The issuer's key challenge will be to make branches relevant for customers in the internet age. The quality of the banking environment, therefore, needs to be improved – through service initiatives, technology initiatives, redesign, innovation and a focus on

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ecology. The move towards the 'retail model' will continue to progress: instant issuance aligns perfectly with this branch evolution vision.

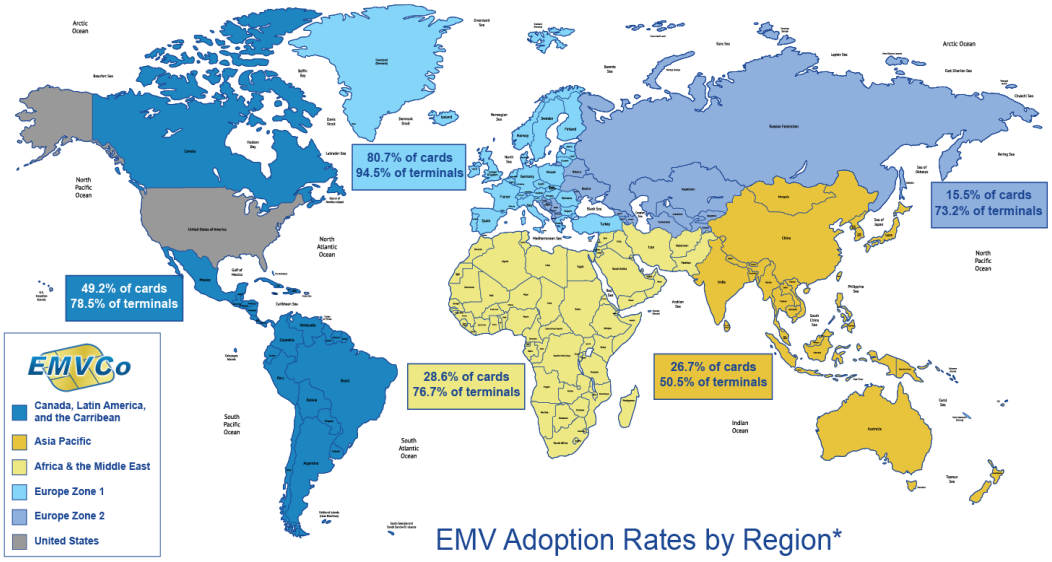
2.5.3. EMV migration

The Smart Card Alliance 2013 Payments Summit concluded[4]: education is the key for the successful U.S. move to chip-based EMV Payments. Clearly, there is an imperative to educate end customers in order to improve the likelihood of a successful launch and migration to EMV.

Consumers making the move from signatures to Chip and PIN will require some explanation on how to use their cards, and this holds true for all regions migrating to this technology. Issuers will need to do a lot of education, developing internal resources and educating clients on what EMV is and how it works.

Instant issuance offers issuers the opportunity to personally detail to cardholders all relevant issues relating to the card program – including the new technology – and improve customer service and satisfaction levels by making this onboarding procedure highly personal. It also opens the way to cross-selling opportunities for other products and services.

Chart 1: Worldwide EMV Adoption[4]



*Figures reported as of Q4 2012 and represent the latest statistics from American Express, JCB, MasterCard, and Visa, as reported by their member financial institutions globally. Figures do not include data from the United States.

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Worldwide EMV Deployment and Adoption*

Region	EMV Cards	Adoption Rate	EMV Terminals	Adoption Rate
Canada, Latin America, and the Carribbean	401M	49.2%	5.6M	78.5%
Asia Pacific	372M	26.7%	5M	50.5%
Africa & the Middle East	50M	28.6%	0.6M	76.7%
Europe Zone 1	755M	80.7%	11.7M	94.5%
Europe Zone 2	46M	15.5%	0.9M	73.2%
United States†				
TOTALS	1.62B	44.9%	23.8M	75.7%

* Figures reported in Q4 2012 and represent the latest statistics from American Express, JCB, MasterCard and Visa, as reported by their member financial institutions globally.

† Figures do not include data from the United States.

2.5.4. The 'I want it now' generation

It is becoming clear that the 'I want it now' generation that is proliferating in numerous regions of the world expects instant gratification. Thanks to new technologies, today's consumers want answers at their fingertips, demands on call and virtually instant contact.

The ability to instantly issue payment cards satisfies this need. What's more, it puts ready-to-use payment cards instantly in the hands of the customers which, in turn, results in increased activation and usage rates. There is no need to wait an average of 10 days for a payment card anymore.

A large percentage of cards delivered by mail are never activated and never used. By issuing cards immediately to customers, activation is automatic.

2.5.5. Emergence of multi-application

There is a growing trend of entrants into the payment market from players where an instant issuance experience is common, for example, transit and retail. The emergence of cards allowing multi applications, including payment, is driving consumer desire for instant issuance methods.

2.5.6. Regional drivers

The emergence of EMV in regions where reaching the cardholder is impractical lends itself to the adoption of instant issuance and overcomes:

- the risk of interception
- cost of delivery
- delivery time

The move to instant issuance is often underpinned by guidance from local central banks pushing issuers to adopt branch issuance; for example, the United Arab Emirates (UAE).

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3. Benefits

3.1. Drives greater cardholder loyalty

3.1.1. Acquisition

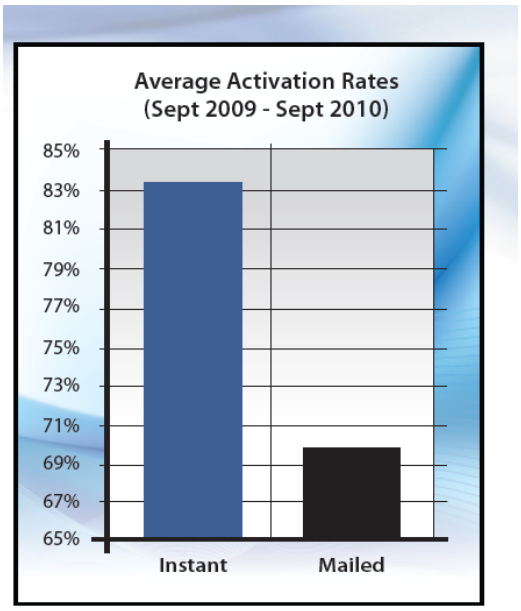
Instant issuance improves the card issuance process for issuers and encourages immediate card usage by delivering a personalized payment card in the branch or point of sales at the time of onboarding a new customer.

3.1.2. Activation and usage

It is important to explain the benefits of a payment card to new customers during account opening, but the effectiveness of this customer education is always limited because of the 7 to 10 days new customers have to wait for their new cards to arrive in the mail. In addition, the card activation plus PIN selection processes require additional steps, contributing to a further delay in customers using their new debit cards.

Instantly issued cards show a significant lift in activation and usage rates compared to mailed cards. Experience has shown that the average days to first use can be reduced by as much as 10 days over mailed cards. This leads to improved payment card metrics (see Chart 2: Card Activation Rates).

Chart 2: Card Activation Rates[5]



Cards are issued and activated on the spot and can be used immediately, instantly boosting card activation and usage rates for issuers which results in higher revenues (see Section 3.1.4).

One customer using this solution has reported a 14% increase in activation rates, with revenue per instant issuance customer at 10% higher than traditional issuance[6].

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3.1.3. Customer retention

Instant issuance is a great way to enhance relationships with end-users, delivering tangible user friendliness and individualized attention. Furthermore, the end user does not have to wait for postal delivery.

Issues at any point in the card application or delivery process can be resolved promptly by trained and empowered staff, enabling cardholder inquiries and complaints to be managed effectively.

All these factors may enhance the customer experience and so increase customer retention and drive customer loyalty.

3.1.4. Generates extra revenue

Implementing instant issuance at the branch-level allows customers to receive their payment card immediately without having to wait the average of seven to 10, or even 14 day period to receive cards through the mail. This enables an increase in activation rates and interchange revenue.

Putting a ready-to-use payment card immediately into the hands of the customer means they can start using their cards faster and start generating revenue for the financial institution almost immediately.

Table 1 shows the yearly and daily value in US dollars of transactions per card, illustrating the underlying value of eliminating the average ten day activation delay.

Table 1: Transaction per card in US dollars[7]

Region	Per year	Per day
World	1.136,24	3,11
Asia Pacific	536,76	1,47
Australasia	4.623,97	12,67
Eastern Europe	1.699,30	4,66
Latin America	961,47	2,63
Middle East & Africa	1.486,41	4,07
North America	1.837,53	5,03
Western Europe	3.017,87	8,27

Credit card spend is universally acknowledged as a key driver of credit card profitability; credit card issuers receive a small percentage of the spend on every card (up to 0.5% for most credit cards[8]); this is known as interchange revenue. The more a credit card is used, the greater the revenue to the bank.

The following customer example shows the calculations of a Western European bank:

- Example calculation 1: "Extra usage days" (a bank in Western Europe)

Number of cards issued = 100k per year
Transaction per day per card: 8.30 USD
Interchange fee: 0.5%
Time saving = 10 days
Extra Interchange revenue = 10 x 0.5% x 8.30 x 100k = 41,500 USD

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- For every 100k credit cards issued and handed out immediately at branch or POS level, an issuer would enjoy 41,500 USD revenue.

The instant issuance of payment cards / debit cards has also been shown to increase activation rates from the industry average of 59%[9].

3.2. Unveils significant cost savings

Instant issuance also eliminates costs associated with traditional card and PIN issuance. These include:

- paper printing costs for the card carrier itself and even PIN mailers on special paper
- production of the PIN mailer
- sending payment cards with carriers and PIN mailers through the postal service since no posting/courier charges of envelope is required

This scope of this saving needs to be considered against the number of cards and PINs that are centrally issued and never activated or used.

Instant issuance can also reduce ongoing support costs where the majority of support is handled from a central location. As new branches are added, the instant issuance system can scale with the bank making it easy and cost effective to expand the technology while offering the customers a great service.

3.3. Enables differentiation and improves customer satisfaction

The 'I want it now' generation has spurred change in many industry sectors; today's consumers want immediate gratification and are no longer prepared to wait for it. Instant issuance provides the instant gratification today's consumers crave and puts a ready-to-use payment card in the hands of the customer immediately.

In regions where payment card penetration is high, competition is fierce. Financial institutions and retailers want a business model that differentiates them from the competition. Instant issuance helps card issuers achieve this goal, positioning themselves as customer-centric with an innovative service that has only recently been introduced in many regions. For card issuers it can become a key element in the onboarding of new customers.
In the same way, existing customers are delighted when they can get replacement cards immediately instead of waiting for cards to be mailed. For customers who have misplaced their cards or fallen victim to theft, instant issuance provides an immediate solution without having to wait days or weeks for a replacement.

In summary, instant issuance is a great way for card issuers to differentiate their services and offer personalized and convenient services to their customers. If wanted, financial institutions can use this service offer to deliberately drive the move of customers back to the branches for specific marketing reasons.

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3.4. Helps implement risk management

The traditional postal-based delivery method for getting payment cards and PINs to end customers can fail or may be intercepted en route, resulting in fraudulent actions.

Instant issuance technologies make it possible to avoid the use of postal mail in defined locations where the risk profile is high, allowing for safer distribution; cardholders are asked to come to the branch to identify themselves, after which staff can issue and hand-out personally any payment cards.

This deliberate action eliminates the risk of physical interception and allows the issuer to control the entire delivery process.

3.5. Reduces errors

In many cases, branch clerks or personnel at the point of sales have to manually communicate with the back office to complete the card issuing process. Instant issuance technologies help to eliminate inefficiencies, improve the standard process for card issuance and minimize the potential for data entry errors when seamlessly integrated into the host application, updating the network automatically.

- **SPA recommendation**: instant issuance is a very attractive proposition to all issuers, financial institutions and retailers. The SPA recommends issuers consider all factors mentioned in this section when evaluating the benefit of such a service.

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4. Process description

Instant issuance is designed to process a request and produce cards immediately. The issuance volumes associated with this kind of solution is usually small, representing the issue of a limited amount of cards per day, per location.

4.1. Architecture

Instant issuance solutions all have the similar high level architecture in which data generation and personalization are undertaken at two locations; data generation is processed in the centralized location and personalization is undertaken at the branch (see Figure 1).

Figure 1: Instant Issuance Implementation – High Level Architecture

4.1.1. Connectivity

Connectivity is one of the most important elements of instant issuance. Implementing instant issuance services requires the establishment of a secure and stable connection between the central systems to the distant locations where personalization is performed.

4.1.2. Central installations

This is the heart of the system. The proper functioning of the entire system depends on the development of the kernel. Special attention should be given to the drafting of the specifications of the bank in order that all the desired features are implemented smoothly.

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4.1.3. Local/branch installations

This is a highly specific part of the project as every organization, and its needs, is different.

It is necessary to define all reports and traceability information necessary for the management and monitoring of each branch (these will include stock reports, production daily report and so forth).

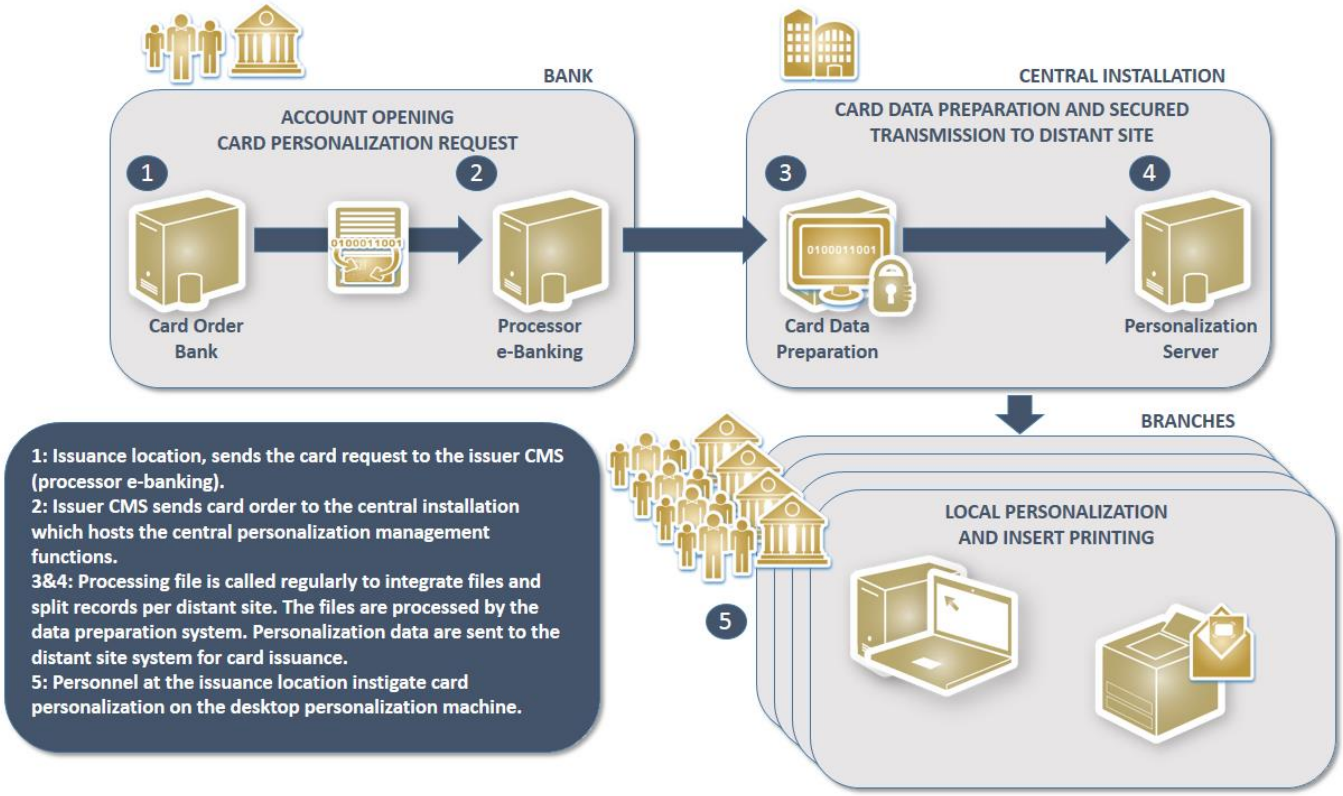
- **SPA recommendation**: keep all operations and architecture at the point of issuance as simple and light as possible. Centralization of all data preparation and management is critical in order to reduce the complexity and cost of an instant issuance program.

4.1.4. Security

Like any other issuance of banking cards, this must be undertaken with respect to the physical and logical security rules of each scheme. Refer to section 7 for further information.

4.2. Instant issuance process

Figure 2: High Level Process



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5. About implementations

5.1. Introduction

The decision to invest in an instant issuance solution should be considered as a global change that is undertaken by an issuer to support its business strategy for optimizing cardholder experience in-branch while ensuring fast return of investment. To achieve a compelling service delivery to end-customers in selected – or in all branches – issuers should investigate a suitable software or hardware solution and consider the right operational process to ensure every actor plays in harmony both centrally (for the solution's administration and support) and in the branch (for card production and card and consumables inventory management).

5.2. Implementation overview

A typical instant card issuance process begins with the customer's data enrolment, incorporating a PIN code selected by the cardholder, which is managed by a teller within an issuer's branch or point of sales. The issuer's back-office will authorize (or deny) the opening of the new account in real-time and generate the magnetic stripe or embossing data. The instant issuance solution then receives a request for card creation (cardholder data) and runs the EMV data generation phase for the requested card product, managing the entire card issuance process through to personalization on a desktop personalization device.

5.3. Implementation challenges

While investigating different software and hardware solutions that are available on the market, issuers will face a wide variety of technology proposals arising from software and/or hardware providers. These will provide a different balance between the cost of investment, total cost of ownership and the running cost, the security of the process, and convenience for the operators, which issuers will need to evaluate.

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5.3.1. Understand what your real needs are

In conjunction with the solution provider, issuers should run an internal diagnostic of their current IT infrastructure to clearly understand its strengths and limitations. This consulting phase will clarify the different systems of an instant issuance process and makes it possible to scope a solution that will have a low impact integration cost to fit in the current architecture. As a result, the final solution could be limited to EMV data processing and card personalization or extended to include enrolment, PIN management, scoring and so forth.

5.3.2. Define your objective for card personalization

Besides the software solution, hardware components form a significant percentage of the instant issuance cost of ownership and running cost per card. There are four types of desktop personalization devices available the market that can be ranked by personalization capabilities:

- embossing (and indent) equipment, typically for international branded credit cards
- thermal or direct to card printer, typically for flat card printing
- retransfer printer, typically for flat card printing, particularly for picture cards program
- combi printer, combining embossing and printing combinations

All equipment may come with EMV level 1 smart card and magnetic stripe encoding modules and provide different printing/ embossing quality, robustness and a different scope security features as well as ease of use.

- **SPA recommendation**: ensure the instant issuance solution is compatible with a wide range of personalization equipment to ensure maximum choice.

5.4. Decision making process (selecting the right partner)

5.4.1. What can solution providers do for you?

Several companies are active on the instant issuance market, providing a piece of – or the entire – instant issuance solution. Some major in software editing, hardware manufacturing or system integration but may also encompass part or the entire value chain required to meet the needs of a specific instant issuance project, which may consist of:

Standard offer components	Value-added services and options
Consulting services (EMV & Instant Issuance)	Enrolment
EMV Instant Issuance Software solution	Scoring & Card Management System
Personalization equipments	PIN management (printing, SMS, self-pin)
Cryptographic hardware, PCs and servers	Deployment services (Mass roll-out)
Project Management	Continuity of business
Support & Maintenance	Card inventory management
Consumables and spare parts	EMV Cards

Card issuers may require a piece – or the entire set – of a solution that could be either provided by a single provider or multiple vendors. Segmenting the value chain may lead to cost – benefit on the

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selected segment(s) but may have consequences for the global acquiring and running cost (time and money) on each segment of the value chain.

By selecting a single provider, issuers will not only reduce selection process time and cost, but can also lower the running cost of the solution and simplify the problem resolution process.

5.4.2. Selecting the right business model

When it comes to selecting the right instant issuance solution, issuers may consider the cost- benefit of two business approaches: an in-sourced solution or a solution as a service option provided by certified service provider.

A. In-sourcing solutions

The issuer purchases all software license, hardware equipments and services necessary to the set-up of the solution. In addition, issuer staff should receive the appropriate training for hosting, monitoring and administrating the solution.

B. Solutions as a Service (SaaS)

The issuer subscribes to an instant issuance service provider based on a committed service level agreement. The service provider will host and manage the central server used for EMV data processing and key management, and provide all necessary staff for system hosting, monitoring and administration. The service must be accessible from a Visa and MasterCard certified data center. In addition, service providers should include all the required local software, hardware and service components necessary for the issuer's staff to run the application smoothly.

The illustration below outlines the primary differences between an in-sourced and SaaS solution.

	Solution in-sourcing	Solution as a Service
Nature of the investment	Capital expenditure	Operating expenses
Hardware & devices	Upfront, depreciation of assets, support & maintenance	Hosting in data center Visa & MasterCard certified premises and processes Included in a SaaS service Service operated by service provider
Software	Upfront, depreciation of assets, support & maintenance	
Hosting	Hosting costs Database licenses	
Security	Secured area for Key Management Appointment of dedicated Security Officers for key administration	
IT implication (central)	EMV and administration training Hosting, monitoring, administration Patch and update management	
Project Management	Dedicated Solution Project Manager Issuer Project Manager	Dedicated Solution Project Manager Minimum Issuer Project Manager
Branch operations	Training for application usage (client)	Training for application usage (client)

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5.5. Setting-up and deploying a solution

5.5.1. Set-up installation

Implementation will require software and hardware investment to host the central server application managing the instant issuance program, from the reception of a card request to the card personalization in the bank's branch or point of sale. This includes the instant issuance server (application administration), a real-time EMV data preparation application (for administrating the EMV profiles) and a key management application with an embedded hardware security module (for key administration). Software will run using a dedicated data base.

A key element of the software solution is the key management application contained in the hardware security module. This should be hosted in a secured room, with specific logical and physical access to prevent fraudulent usage.

Although integration with the issuer's system is mandatory, several technical solutions may be proposed by the solution's vendor to minimize the integration impact. These may include a direct link with the issuer's back-office or sending cardholder data directly to the instant issuance application to minimize the operation impact and ensure the solution acts as an extension of the current infrastructure.

In term of security, all the elements concerned are highlighted in section 7.

5.5.2. Branch deployment

The branch installation consists of personalization equipment connected to a dedicated PC; thernet-driven printers may be connected to the central server. Installations should take place is a secured / restricted area of the branch.

The software application must be secured to allow access solely to authorized users and come with an intuitive user interface that contains a minimum set of features to manage the card personalization; an easy user interface facilitates the handling of the application for non-technical people operating in the bank branch.

Additional features may be requested to leverage the service delivered to end-customers, such as a PIN management feature which allows the cardholder to choose their own PIN code. Other alternatives include the option to print PIN mailers at the bank's branch or distribute PINs to customers via SMS.

5.6. People and processes

The card scheme provides clear guidance on the segregation of duties that should be followed into the branches regarding:

- card personalization
- enrolment of customer data
- PIN management
- plastic card inventory
- ribbons and consumables

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- destruction of spoiled cards and consumables

5.6.1. Operators

Instant issuance solutions require dedicated access to the system and should be segregated to avoid card misuse. It is critical to separate the card personalization from the enrolment and PIN management functions; these should take place in different areas of the branch and be managed by different users.

5.6.2. Plastic cards

Consideration needs to be given to the handling of plastic cards and requires a streamlined process from the initial card ordering from the vendor, through to delivery in branch and storage in a secured area within the branch.

To safeguard card access, two card stock managers should be appointed to verify the card inventory in the vault. The loading/ unloading of the machine should be managed daily in a daily inventory, whereas weekly inventory with reconciliation should be handled weekly.

Solution providers may provide part or a global solution for managing card stock in branch, such as a card inventory feature within the instant issuance application.

5.6.3. Consumables

Ribbons and consumables contain sensitive cardholder information (Name, PAN, Expiry date and CVV2) and should be managed accordingly. It is recommended that the same security level used for the management of plastic cards should also be applied to machine consumables and specific procedures should be put in place to manage the replacement and destruction of the used ribbons.

Solution providers may be able to help by providing a secured solution for replacing and destroying spoiled consumables.

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6. Use cases

6.1. Use case 1: instant issuance of a card with account opening.

The cardholder proposition is that they visit the issuance premises, apply for an account, and then leave the premises with the card. To achieve this outcome the issuer has to consider performing in real time:

- cardholder data capture
- cardholder data verification
- cardholder credit scoring
- account opening / PAN assignment
- card personalization order request.

The resulting card order request is sent to the card personalization management system via a real time link. Full personalization of the card is then managed in a separate room within the issuer's premises, using a desktop personalization machine, and handed directly to the cardholder.

- **SPA recommendation**: in order to take full benefit of a cardholder leaving the premises with a card, it is important that cardholders can transact with it immediately. To enable this facility it is recommended that the cardholder selects their PIN during data capture and then the card is issued already activated.

6.2. Use case 2: replacement card issued instantly

Moving from a central issuance model to issuance from on-premise greatly reduces the time taken to provide a card to a cardholder who has reported a card lost, stolen, or non-functional. The cardholder proposition is very similar to Use case 1, except that data capture is used for cardholder verification and account identification.

The issuer has to consider its existing card portfolio and personalization methods to ensure these can be supported in an instant issuance situation. Limitations of personalization equipment and card base stock inventory need to be considered.

The positioning of the instant issuance premises is critical in order to best fit cardholder demographics. The ability of the cardholder to travel to an issuer's premises in order to get their card is a key consideration. It is no surprise that highly densely populated areas are where issuers establish instant issuance premises.

- **SPA recommendation**: to ease the management of card base stocks, the inventory management process should involve automatic call off and replenishment from a larger central storage location/vault. Infrastructure already established to support central issuance can be used.

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6.3. Use case 3: unattended card issuance from within a branch (kiosk)

While the proposition to the cardholder remains the same as in Use case 1, the experience is very different. With kiosk issuance the cardholder uses a self-service unit which allows the cardholder to apply for a card, and then issues the card. The kiosk is equipped with manual data entry screens, document scanners, and a card personalization machine.

The kiosk is linked to the issuer's back end host systems and to the card personalization management system. All data transfers are instant and all processing is carried out instantly.

- **SPA recommendation**: engagement with payment schemes is required to discuss the use of kiosk issuance. Concessions maybe required.

6.4. Use Case 4: issuer migrating to EMV with an existing instant issuance service

Cardholder education is a critical aspect of EMV migration for any issuer. Instant issuances afford the issuer vital face-to-face time with the cardholder, during which time education can occur. Instant issuance lends itself perfectly to a smooth transition to EMV for the cardholder.

That said, the technical aspects of EMV migration need to be considered. Instant issuance programs designed for conventional magnetic strip only cards are characterized by decentralized data management and less sophisticated card personalization machines. In many cases each branch operates as its own closed loop system. The additional data processing and data encryption required to manage the production of an EMV card forces the issuer to centralize data operations. Similarly, the management of card personalization is also forced into a centralized model. Together with the unsuitability of the card personalization machine, the issuer is typically required to carry out a total replacement of existing instant issuance processes in order to accommodate the migration to EMV cards.

In certain cases part personalization of cards takes place; cards are personalized with PAN and all non-cardholder specific data as a preliminary step (typically as large batches in a central personalization bureau). At the point of issuance only the cardholder name is applied visually to the card. As EMV requires that the cardholder name is added electronically to the chip as well as visually to the card, the necessary personalization equipment and data management needs to be considered.

- **SPA recommendation**: issuers wishing to maximize the benefits of instant issuance in the context of EMV migration should first consult with a card vendor.

6.5. Use case 5: Event based instant issuance

There are specific cases where instant issuance is used to capture new account holders at a mass gathering of people, such as a sporting or cultural event. When coupled with a multi-application card allowing access and payment it can be a strong proposition. Temporary or mobile instant issuance stations are stationed at the event and used for the instant issuance of the card or payment form factor such as a wrist band.

- **SPA recommendation**: once a strategy for cardholder acquisition is set consult with a card vendor who can advise on the practical aspects that need to be considered.

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7. Regulatory environment

In term of security, the selected solution should follow Visa and MasterCard security recommendations for instant issuance and comply with PCI-DSS security standards. Such compliancy provides the best guarantee that the cardholder data being exchanged of the network remain secured until the card personalization at the branch. Moreover, clear segregation of duties based on a 'need to know' basis should be implemented by the software vendor. Beyond sole software, scheme and security standards provide clear guidance on the processes to implement.

7.1. Standards

There are multiple standards and guidelines applicable to instant issuance.

All existing standards relating to the data preparation, applicable for personalization bureau, remain applicable for instant issuance. It's the same concerning data transfer. The big difference relates to issuance in branch or point of sales.

Payment schemes have revised existing guidelines to include new requirements applicable to instant issuance.

Some local schemes (such as GIE CB in France) are working on the instant issuance and have issued draft specifications or recommendations. Often local schemes expect to study each case prior to giving their approval.

7.2. Regulations and rules – instant issuance

It is essential to adhere to the same level of security that exists today in relation to personalization bureau with regard to data preparation and file exchanges. It is also critical to maintain security relating to dual control on stock, access to the card issuance and reporting. Issuance is usually undertaken in bank branches, under the responsibility of the issuer.

7.3. Certification and guidelines

The following certification and guidelines apply to instant issuance:

- MasterCard Security Guidelines for Instant Card Issuance- September 2008
- PCI DSS
- PCI PED (for PIN PAD devices)
- PCI CP (where central servers are hosted by a vendor / SPA member)
- Visa Global Instant Card Personalization Issuance Security Standards August 2009

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8. Future outlook and trends

While instant issuance may be viewed as a differentiator today, in the future it could become standard. This trend is being driven by several factors, including:

- a change in consumer expectations
- the move into payment of actors where instant issuance is common (such as transit, retail).
- the increasing use of alternative payment methods.

The self-service culture is growing in many sectors including finance (transit, ATM, retail) and this is defining card holder behaviors and expectations. Whilst the model is not common today for credit and debit card issuance, it is anticipated that its use will grow. This is in turn will increase consumer demand for card issuance via an unattended kiosk. The desire to service the 24/7 needs of consumers will see issuance kiosks being made available away from the branch network, mirroring the development path of automated teller machines issuing cash at remote locations at the convenience of the consumer.

The increasing use of the mobile handset as a payment device is also driving the move from physical issuance to virtual issuance. While the result form factor is very different, the core elements of the instant issuance process remains common (cardholder acquisition, data preparation).

The trend towards outsourcing is increasing. Post the global financial crisis issuers are moving away from business models requiring high capital expenditure. As a consequence the SaaS model is becoming increasingly attractive for local issuers looking to launch an instant issuance service.

The outlook for instant issuance looks positive:

- more instant issuance projects will be launched
- will remain as a solution for issuance where time is critical (replacement and new accounts)
- will be provided by non-traditional players (in other words, not high street banks).

- **SPA recommendation**: when deploying an instant issuance program an issuer should consider a seamless process to issue cards plus other payment form factors (for example, mobile handsets equipped with a secure element).

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9. SPA approach

While the concept of instant issuance is delightfully simple, establishing a successful service is subject to a host of issues and complexities; from back end process integration to standardization and distribution via a network of issuance spots.

The SPA members are here to help banks and other financial service providers understand both the issues and the opportunities, and to provide practical support and guidance throughout the entire process – from program analysis and design, through product and solution selection to implementation support.

The pace of market change is increasing, requiring institutions to identify and understand these changes and to develop new products and solutions based on the latest technologies.

An in-depth knowledge of the industry and a thorough understanding of the available and future enabling technologies are critical elements in helping to deliver success, and to address emerging market issues.

The SPA members are operating on the cutting edge of this dynamic market and actively driving the transformation and convergence process. This is precisely why the membership is able to offer customers the best support, products and solutions.

From the perspective of the emerging instant issuance distribution model, it is essential that we all share knowledge and collaborate. This is the purpose of this paper, and we hope the detail included will help financial institutions become better positioned and more prepared to engage in the transition.

In working together we can ensure costly errors are avoided when selecting how and instant issuance program will seamlessly integrate with the overall business strategy and processes of today's financial institutions.

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10. SPA Recommendations

1. Instant issuance is a very attractive proposition to all issuers, financial institutions and retailers. The SPA recommends issuers to consider all the factors mentioned in this section when evaluating the benefit of such a service.
2. Keep all operations and architecture at the point of issuance as simple and light as possible. Centralization of all data preparation and management is critical in order to reduce the complexity and cost of an instant issuance program.
3. Ensure the instant issuance solution is compatible with a wide range of personalization equipments to ensure maximum choice.
4. To take full benefit of a cardholder leaving premises with a card it is important that cardholders can transact with it immediately. To enable this it is recommended that the cardholder selects their PIN during data capture and the card is issued already activated.
5. To ease the management of card base stocks, the inventory management process should involve automatic call off and replenishment from a larger central storage location / vault. Infrastructure established to support central issuance can be used.
6. Engagement with payment schemes is required to discuss the use of kiosk issuance. Concessions maybe required.
7. Issuers wishing to maximize the benefits of instant issuance in the context of EMV migration should first consult with a card vendor.
8. Once a strategy for cardholder acquisition is set, consult with a card vendor who can advise on the practical aspects that need to be considered.
9. When deploying an instant issuance program an issuer should consider a seamless process to issue cards plus other payment form factors (for example, mobile handsets equipped with a secure element).

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11. Addendum

11.1. Smart Payment Association – a brief portrait

The Smart Payment Association (SPA) is the trade body of the smart payment industry.

The Smart Payment Association addresses the challenges of the evolving payment ecosystem, offering leadership and expert guidance to help its members and their financial institution customers realize the opportunities of smart, secure and personalized payment systems & services both now and for the future.

A non-profit organization founded in 2004, the association now counts six members including the three founding members Giesecke & Devrient, Gemalto and Oberthur Technologies, and Austria Card, Incard* and Morpho.

With more than 898 million smart payment cards delivered by its members in 2012, SPA represents more than 85% of the smart payment cards market. This figure corresponds to a 12% year-on-year growth (2011 vs. 2012), showing the ongoing momentum of EMV deployment.

The SPA works in partnership with global standards bodies, its own vendor community, and an expanding ecosystem of established and emerging brands offering an ever-growing portfolio of advisory and support services:

- SPA delivers the market's most accurate barometer of payment trends
  - An annual analysis of payment trends based on **actual manufacturer sales data**
  - SPA members represent **85%** of the total smart payments card market
- SPA supports the creation and adoption of standards and best practice
  - **EPC-CSG/SEPA: Card Representative and Vendor Sector Spokeperson**, **Chair** of the EPC-CSG Task Force to specify the SEPA functional and security requirements for emergent & remote payments (Internet + Mobile), **Convenor** of the new EPC-CSG Expert Team on Card Innovative Payments, **Member** of the Preparatory Committee of the SEPA Security Certification Management Body
  - **EMVCo: Technical Associate and Board Advisor** for Card Sector
- SPA extends expert advice and support across the payments ecosystem
  - An eye-growing library of expert **technical resources and thought leadership collaterals** to shape the future of payment
  - **"The Quadrant"** to workout concepts for next payment generation

More information on the Smart payment Association (SPA) at www.smartpaymentassociation.com

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11.2. Abbreviations and glossary

- **EMV – Europay MasterCard Visa:** Global standard for smart card-based payment transactions, maintained by EMVCo, which is owned by the payment schemes MasterCard, Visa, American Express and JCB.
- **Issuer:** Any payment product, which is a service or application, will be provided by an issuer to the consumer. The issuer for payment products is typically a bank or financial institution.
- **Smart card**: A smart card is equipped with an additional high-security semiconductor chip. This chip contains an operating system, cryptographic keys and one or more applications, like payment. The chip has multiple security devices to protect against attackers and fraudsters.
- **SPA – Smart Payment Association:** The previous chapter provides an overview of the Smart Payment Association.
- **PIN:** Personal Identification Number.
- **ATM – Automated Teller Machine**: Used by an issuer to automate the dispense of cash to cardholders via self service machines.
- **POS – Point of Sale**: Terminal used by retailers to enable payment of goods via a card.
- **Online PIN**: resides in the issuer, or third party, host back end system.
- **Offline PIN:** resides on the chip of the card.
- **PAN – Primary Account Number**: 16 digit number on the payment card

11.3. Sources

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