



Taking a holistic approach

Best practices for over-the-counter government ID card programs



ENTRUST

SECURING A WORLD IN MOTION

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Introduction

Government organizations are regularly challenged to optimize their secure ID programs to ensure they continuously combat daily threats — from protecting identities and proprietary information, to ensuring the card they produce is a high-quality document that will be consistent in appearance and closely match all other documents issued in the same ID program.

In recent years, desktop card printing has taken critical steps forward in government ID programs. Many of the card printers have now incorporated a variety of new technologies to create higher quality ID cards — such as better printing and personalization of images, as well as more security and durability features.

It's very important for governments to consider how to issue their credentials. When service is a priority, they often choose to issue ID cards in many offices over the counter — typically using desktop card printers. And, there are multiple options and features that government organizations need to consider when determining what printers fit their needs.

The first things that organizations tend to look at are the print quality of cards and what print options are available to them. The two most common print technologies organizations typically compare are direct-to-card printing (DTC) technology vs. retransfer (RT) print technology.

Defining the print technology

To quickly define the difference between the two print technologies, DTC printing is a common technology used by desktop card printers that prints images and/or text directly onto a plastic ID card. Depending on what model or brand of DTC printer is used, this specific print technology may leave a small white border along the edge of the card.

Retransfer printing is a two-step process that transfers images to a film before applying it to the card. The two-step retransfer process creates a true edge-to-edge (100% card coverage) image on the card.

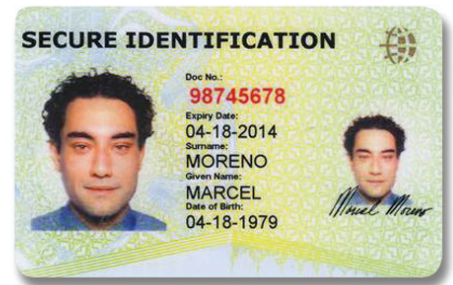
Many believe that the most important factor in selecting the right desktop printer is to differentiate which print technology they prefer and then go with that one. The printing technology, when compared side-by-side, is increasingly hard to differentiate.



CITIZEN ID



FEDERAL GOVERNMENT
EMPLOYEE ID



DRIVER'S LICENSE
PREPRINTED CARD

Market findings

A group of organizations including integrators, government agencies, resellers, and industry influencers around the globe were shown various card images for different programs printed on both RT and DTC printers. Card types included citizen ID cards, federal government employee ID cards, pre-printed driver's licenses, etc.

Information gathered by Entrust indicated that many people cannot see much difference between cards printed with RT printers and those printed with DTC. This is an important finding, as many people believe RT technology would always win out over DTC.

For government ID programs, this is significant given that many times cards do not have to be printed edge-to-edge (which RT technology does), and they can be printed on pre-printed card stock.

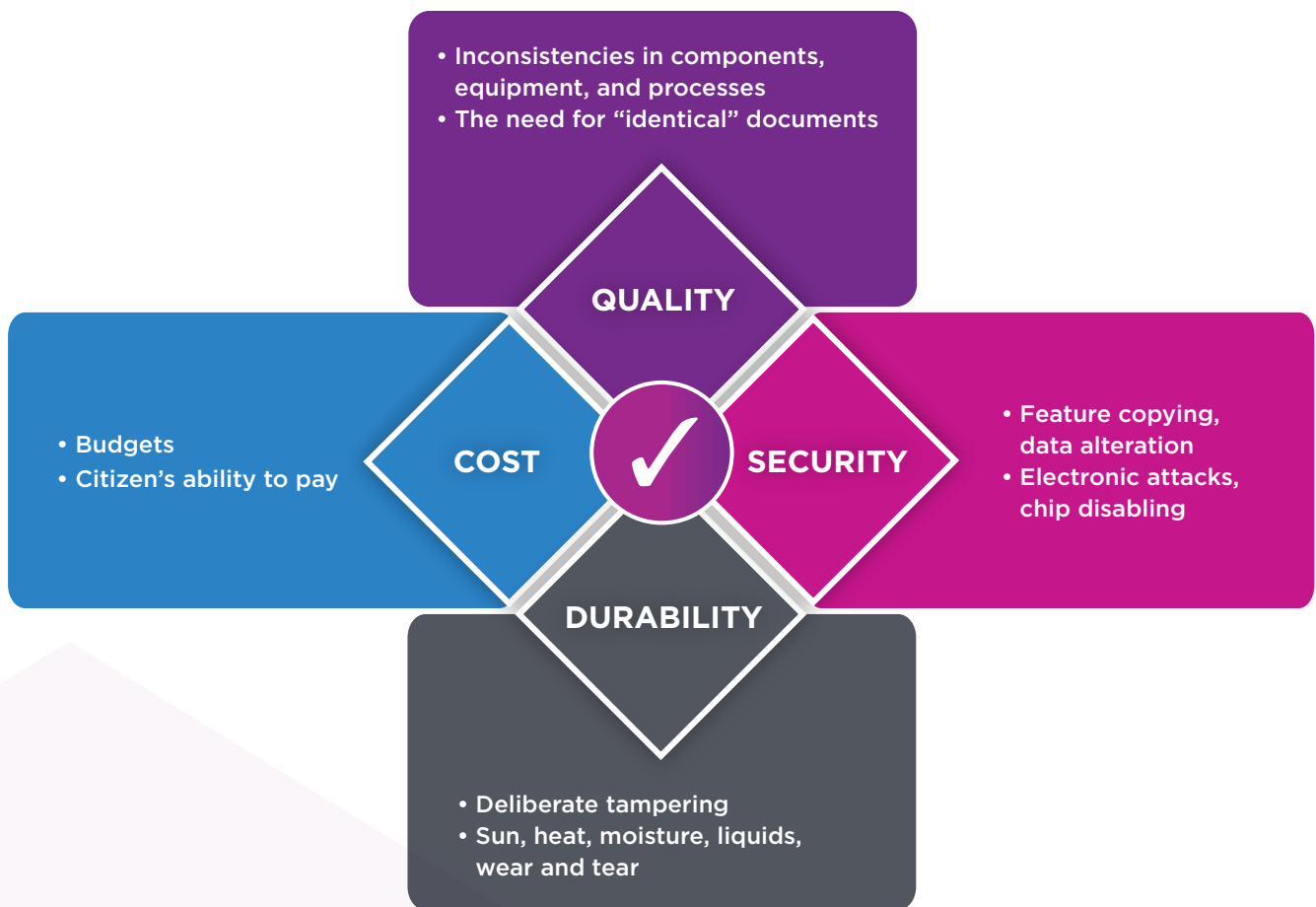
And, when actually given the card samples and asked if they could tell the difference between the two technologies, it was a very even response spread as to who could tell which card(s) had been printed using RT vs. DTC printing technology.

So, what does this all mean?

This means there is a common misconception about print technologies being the most important part of selecting a card printer. The printing quality alone does not justify the need for the additional expense in most ID card designs, as people tend to not even be able to tell the two technologies apart.

Given this, organizations need to take more of a holistic approach when selecting the right desktop printer for the government ID program — part of this does include the print technology, but it also includes the quality of the card, durability and security features put on the card, and overall cost of the program.

Applying a QSDC Framework™ — which stands for quality, security, durability, and cost — helps establish a methodology for card program success. By looking at all of these values, organizations will be able to design a successful identification program that meets real-world challenges while minimizing risk.



Key consideration: layered security features

The fundamental principle in designing an ID program is layered security and the use of multiple security features (overt, covert, and forensic). A single security feature is not capable of defending against all possible threats or enabling quick and confident validating decisions on authenticity. Rather, a network of security features that are clear and intuitive should be layered into every ID.

The greatest differentiator for government ID desktop card printers is security — at multiple levels. There are printer technologies that can make ID cards secure by creating lines of defense against counterfeiting, alteration, and other types of fraudulent production. There are also features built into printers that help protect the devices themselves — along with cardstock and printing supplies — against theft or unauthorized use.

Creating secure cards typically involves various printing technologies and a choice of security laminates or overlays. For example, some printers offer the ability to print text and images that are difficult — or virtually impossible — to recreate without access to your printer. And, some printers also offer the ability to add microtext, secondary photos, ghost photos, digitized signatures, or a tactile feature.

Security laminates and overlays also can elevate the security of photo ID cards. Topcoats and polyester patches can be infused with holographic images that are nearly impossible to replace or repair if someone attempts to alter a card. There are card printers that offer users a wide range of laminate options, depending upon the organization's security requirements.



It's important to note that after the study was conducted, it was apparent that working with the appropriate providers and/or material manufacturers that offer different overlays throughout the supply chain is also very important. Not all base material exhibits the same level or quality of adhesion with DTC and RT technology, and some manufacturers' adhesion material performed better on DTC vs. RT materials (or vice versa). Depending on the card that is being printed or the environment it is being printed in, results will vary.

Laminates can also be enhanced with optical variable devices (OVDs) that can provide overt, covert, and forensic features; however, holographic OVD laminates by themselves are not sufficient in protecting and securing the ID document.

An additional feature that can be used to help validate and authenticate OVDs is serialization of the laminates. This feature provides increased security against counterfeits, as there is a unique identifier number on each laminate that can be associated with the identity of the applicant. This number can be secured in an organization registration database and first line checkers can verify that this number is assigned to the cardholder.

Tactile impressions are also very secure. New tactile features distinctly and physically impress a tamper-evident image into the card substrate and/or protective security laminate at the time of personalization, creating an overt security feature that makes any alteration attempts to the card clearly visible. The process inhibits removal and re-application of the patch onto counterfeit cards, and any attempted removal will cause visible damage to the laminate, rendering it unusable.



Key consideration: durability

Durability matters too. Photos and basic identity data are no longer enough — but combining security and durability will maximize what you get out of your card programs.

Just as organizations should maximize card security with a layered approach that includes incorporating smart chips in card substrates, unique personalization features, and secure overlays with covert features, you need cards to last longer so you can avoid costly re-issuance. The durability features organizations build into their cards need to be resistant to abrasion, chemicals, and normal wear and tear — while making cards more secure.

We all know the text and images that comprise a photo ID card can deteriorate when exposed to environmental factors such as moisture, abrasions, sunlight, and chemicals. The simple act of swiping a photo ID through a card reader can also impact card quality over relatively short periods of time.

The laminates and tactile features noted earlier that strengthen card security also can provide card durability. There are a wide range of laminates and topcoats that are designed to protect against environmental factors and maximize card life. Card issuers can choose from basic, low-cost topcoats, UV overlays, and a full range of polyester laminates that are offered in various thicknesses. Protective laminates can also be infused with a variety of security features to provide a strong combination of security and durability.

Another key consideration is card bowing. Plastic cards tend to bend in the middle because of heat and other environmental factors. This can happen in transportation, storage, or during the printing process itself. Look for card de-bowing features to address this issue. De-bowing reduces scrap and waste in the issuance process and improves the performance of cards that need to be inserted into or swiped through various card readers.

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