Costa Rica Successfully Increases Passport Issuance Thanks to IAI Industrial Solutions

The Costa Rican General Directorate of Migration and Foreigners controls entry and exit of people into Costa Rica and administers migratory flows and the integration of the country's migrant, refugee and national population. It also contributes to the fight against human trafficking and migrant smuggling by managing the migratory flows that contribute to the country's development and security. Its passport grants access to about 150 countries — making it the most powerful passport in Central America.

The Project

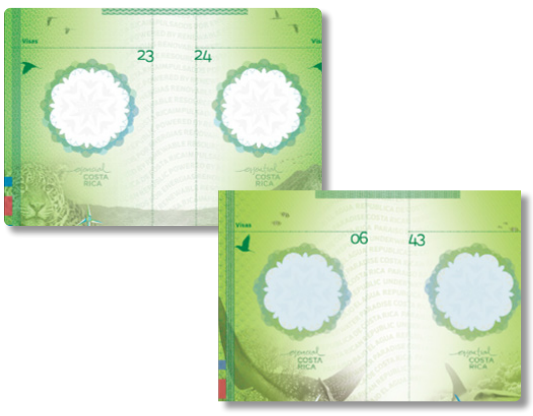
In early 2022, the General Directorate began issuing its bicentennial biometric passport, featuring vibrant imagery designed to share Costa Rica's culture with the world. The imagery is focused on four core elements: biodiversity, renewable energy, education and peace, and human talent. In addition to a chip containing biometric data embedded into the passport's cover, the booklet's pages have more than 60 security features, including holographic designs, microtext, security threads, intaglio print, latent images, relief patterns, multiple laser images and flipbook animations.

To further enhance security and durability, the passport data page is constructed of highly robust polycarbonate (PC) material. Due to its inherent resilience, the PC-constructed data page easily withstands the rigors of laser engraving — allowing for the application of innovative security features such as Veridos' CLIP ID® which combines laser engraving and colour inkjet printing to create a highly durable, lifelike image of the ID holder in true, vivid colour. Not only does this application permanently embed the image within the document ensuring that it cannot be separated for the utmost in document integrity protection — but also aids in visual verification as ID holder images are brilliant and true to life.

Beyond vibrant ID holder portraits, PC data pages also allow for the inclusion of a multiple laser image (MLI). In the case of the Costa Rica passport, the MLI is that of a turtle — proudly representing Costa Rica's revered reputation as the "Region of the Turtles."

A transparent window and a holographic strip are also embedded directly into different layers of the data page, eliminating the risk of counterfeiting.

"The colour images and advanced features created a significant sense of security and belonging for Costa Rica passport holders, making the new booklets highly desirable. This generated an approximate 20% increase in requests for new and replacement passports," said Rosibel Vargas Durán, Migration Manager of Costa Rica's General Directorate of Migration and Foreign Affairs.



The Solution

To accommodate the increased production volume, a general tender was issued for suppliers with the expertise to meet all project requirements. The contract was ultimately awarded to Veridos and its partner GSI, who recommended bringing in IAI industrial systems B.V. Collectively, they would design and deploy a comprehensive solution utilising three IAI BookMaster® Pro (BMPro) systems, each customised with a special 50-passport capacity input hopper for rapid production.

With a proven performance in the security documents market, BMPro is an industrial, precision-engineered solution for high-quality passport personalisation. It features a modular design for maximum versatility and customisation — and can perform an array of essential functions spanning book identification, chip encoding, laser engraving, inkjet printing and verification.

For the Costa Rica passport project, the highly versatile BMPro proved an ideal solution as it was capable of applying cutting-edge security features that combine laser engraving, Drop On Demand (DoD) inkjet printing technology and chip encoding all in one go — ensuring maximum productivity.

Moreover, the system's simplified setup and operation minimised start-up and switch-over times — and the ease with which all areas can be accessed for maintenance coupled with the use of limited consumables will keep operational costs at a minimum going forward.

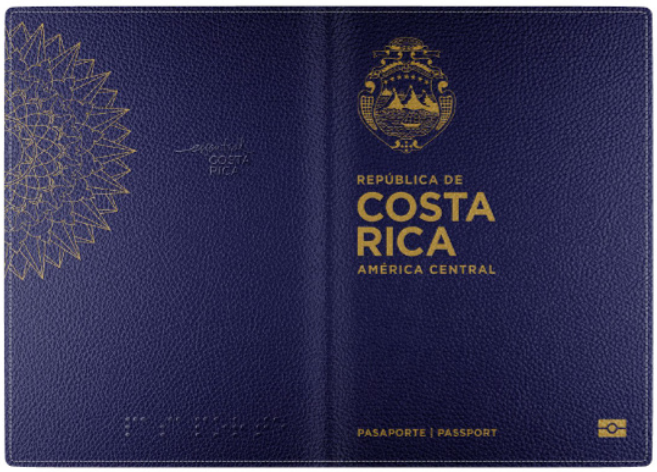
The Result

Today, the General Directorate is producing approximately 400,000 biometric passports annually, nearly a 60% increase over the previous passport — and at a rate that would not be possible without the high-speed laser engraving and production capabilities of the BMPro system.

Deployment and implementation were also swift — just one year to install all machines and commence production — despite the logistical challenges presented by the global pandemic at the time.

"The coordination between Costa Rica and these key technology providers allowed for the successful implementation of the passport, enabling us to quickly meet the high demand for passport applications and achieve the perfect balance between security, durability and the vibrant imagery that showcases Costa Rica's culture at the forefront of the global stage."

- Rosibel Vargas Durán
Migration Manager of Costa Rica's General Directorate of Migration and Foreign Affairs



Which IAI personalisation technologies are used in the Costa Rica Passport?

The Costa Rica Passport is completely personalised by IAI's BookMaster® Pro system. This includes the following applications and technologies:

IDENTIFICATION

Documents are identified quickly and accurately by reading a pre-printed barcode label located on the outside back cover of the booklet.

CHIP ENCODING

All personal data is encoded in the contactless chip.

LASER ENGRAVING

The holder's photograph and personal data are engraved on the data page. This includes a multiple laser image (MLI) and a second photograph engraved in a transparent window.

CLIP ID®

(Colour Laser Image Protected ID)

A Veridos-unique technology supported by IAI BMPro systems, CLIP ID combines laser engraving and colour printing within a customised lenticular structure. The result is a laser engraved, high-quality colour photograph of the ID holder embedded within the polycarbonate data page. The laser engraving process ensures the image is applied deep within the document substrate, making it inseparable from the data page thus maximising security.

VERIFICATION

Cameras cross-check all applied visual data and features, while a chip reader checks the electronic data to ensure that the personal information has been applied correctly.

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