



# Crane Authentication™

Case Study  
Regulated & security

## Imprensa Nacional- Casa da Moeda (INCM)

Forming an enduring partnership that  
is delivering more effective excise  
programs worldwide.

Recognizing the need for broad capabilities and regional presence in the global tax stamp market, INCM and Crane Authentication determined to unite their respective strengths. Over the years, the partnership has evolved into collaborations on multiple global tax stamp programs. The relationship is an example of how technology transfer and a partnership approach can lead to innovation excellence across industry.

### Challenges

As the Portuguese national mint and official printing office, the Imprensa Nacional-Casa da Moeda (INCM) has a long and rich history in security print. The current entity dates from 1972, but it traces its origins back more than eight centuries. Over the years, INCM has expanded their global positioning through partnerships with European counterparts and on the African continent, as well as with universities and research establishments, bringing diverse experience and reach to its collaborations.

Crane Authentication shares a longstanding commitment to innovation. From the pioneering of high-security optical features to scalable digital platforms and online detection of illicit trade, Crane Authentication has expanded its own capabilities significantly. This combination has proven particularly compelling for government excise programs, providing traceability, authentication, and intelligence around controlled products.

In the early 1990s, INCM sought a supplier of optical security features, but also the equipment and expertise to produce these components themselves. Crane Authentication emerged as an ideal partner. 1993 marked

the beginning of a partnership that now spans more than two decades, with Crane Authentication providing the technology and training for INCM to emboss security features onto government-issued documents.

The global tax stamp market remains complex, with evolving international initiatives and legislation. Examples include the WHO Framework Convention on Tobacco Control (FCTC) and the EU Tobacco Products Directive (EU TPD). These mandates call for stringent traceability and security measures throughout the supply chain, which are typically demanding to implement. Furthermore, dealing with very high product volumes and multiple production lines brings its own set of practical challenges.

In 2021, both parties recognized an opportunity to advance their partnership, uniting the track record INCM held as a security printer with the proven authentication and traceability technology offered by Crane Authentication. This included working to integrate the Insight platform into INCM manufacturing processes.



## Solution

With the integration of Crane Authentication Insight, INCM can now establish a secure, tracked supply of tax stamps from the point of order to their distribution to customers globally. The collaboration between Crane Authentication and INCM underpins excise programs that span both secure authentication and traceability:



**Crane Authentication Product Integrity:** optical technology delivers robust security at overt, covert, and forensic levels, enabling INCM to benefit from highly effective authentication



**Crane Authentication Traceability:** using integration capabilities of the Insight platform, unique identifiers (UIDs) are now embedded within the INCM manufacturing process, facilitating identification from individual units to cartons and master cases

With the data captured by the Insight platform, INCM customers can now monitor all production and movement declarations in real-time, along with operator details, metadata, and geo-locations for each event. This facilitates mobile enforcement anywhere within their supply chain and advanced business intelligence reporting, providing them with assurance over the integrity of the tax stamp supply.

Tax stamps, printed by INCM, carry overt, covert, and forensic features, in addition to being able to include an optical foil for enhanced security. The combination of these security printed tax stamps from INCM and the Crane Authentication Insight platform has resulted in a complete solution for excise programs.

Additionally, for tobacco products, Portugal uses tax stamps that feature UNIQODE, a unique identifier developed by INCM and the University of Coimbra. Aesthetically pleasing and secure, UNIQODE includes multiple security levels and a proprietary 2D barcode. This integrates with Crane Authentication optical security stamps, for enhanced validation and authentication using a mobile device. Highly resilient to counterfeit, each unit has its own unique cryptographic key. Crane Authentication also supplies INCM with complete self-adhesive tax stamps for Portuguese liquor products, featuring overt, covert, and forensic security.

## Results

The success of this 20 year partnership is an example of how technology transfer and collaboration can lead to the protection of over 10 billion excisable products. INCM has become self-sufficient in producing authentication features to extend its capabilities in global security print. INCM and Crane Authentication are now solution partners for multiple global tax stamp programs, with UNIQODE instrumental in the stamps produced together. Through combined strengths of optical security technology, traceability, and security print, the partnership is set to deliver further successful excise programs worldwide.