

HERMES API/PNR PRODUCT FOR PASSENGER SCREENING

EASY TO IMPLEMENT, CONFIGURE & OPERATE



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Why every country needs an API System

- › **for compliance with mandatory UN regulations**
ICAO, a specialized UN agency, declared an API system mandatory for all member states in 2018. Failure to comply may lead to sanctions. Meeting this requirement is an important step towards a secure and smooth border process.
- › **for optimal security and flow at the border**
Governments and citizens expect border security to be ensured, but security measures should not impede the smooth flow of passengers.
- › **for meeting strategic goals in border management**
Border systems are becoming increasingly interconnected. New technologies permit new ways to prevent and combat transnational crime, terrorism, and illegal immigration. A good API system helps countries harness these technologies and stay on top of border security, to achieve long-term strategic goals in integrated border management.

Five reasons to choose HERMES

- › **Easy and fast deployment**
- › **Ease of administration**
- › **Supports API, iAPI, and PNR out of the box**
- › **Always access to new releases and 24/7 support**
- › **Available in your language right now**

API

Advance Passenger Information is data which the airline sends to the border authority in the destination country. It is usually sent in batch mode: a single manifest for all passengers onboard at 'wheels up'. Interactive API (iAPI) is also possible; here, individual data about each passenger is sent in real time. This gives border authorities more preparation time and can even lead to denial of boarding. API includes the passenger's name, birth date, nationality, country of residence, gender, and travel document type and number.

PNR

The Passenger Name Record contains personal information of a passenger or group of passengers travelling together. This includes their itinerary, but also data such as payment information, frequent flyer data, seat allocation, food preferences, final destination, and any remarks from the airline.

HERMES

HERMES is WCC's software product that screens passenger data for watchlist hits and anomalies. It supports API, PNR, and iAPI checks against existing or newly created national and international watchlists. It also offers risk analysis capabilities for alerting border personnel to previously unknown suspects. HERMES was developed especially for countries in need of an API solution that is easy to implement and maintain, cost-effective, and configurable.

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The Challenge

Millions of people cross borders every day; only some of them pose a security threat. Countries need a system that alerts border personnel to such threats in time to take action. They need a system that helps determine what constitutes a threat. The goal is to handle anomalies *without* impeding the flow of legitimate travel.

Border authorities use passenger data to identify and manage risk. The data journey of passengers starts well before they arrive at the border control point. Early risk alerts and early watchlist hits reduce the pressure on border personnel. But in most cases, passengers do not come up on the radar until after 'wheels up'. Batch API sent by airlines after the flight leaves is still the most readily available source of passenger information.

Most countries have yet to implement effective systems for managing the massive streams of passenger information. This leaves them at a major disadvantage when it comes to border security. Recognizing the seriousness of the problem, UN agency ICAO made having an API system mandatory in 2018.

Setting up a nationwide API system is a considerable effort, even leaving aside legal and infrastructural hurdles. Countries need a system that is fast to implement and easy to operate. Not just to comply with international regulations, but to ensure the highest security without impeding flow at their border. This helps them meet long-term strategic goals in integrated border management.

An effective API system can help prevent and combat terrorism, smuggling, visa fraud, visa overstays, illegal immigration, and other transnational crimes while facilitating the smooth processing of legitimate travelers.

Typos and terrorists – what's at stake?

Tsarnaev. Tsarnayev. A trivial difference – just one letter. And yet, the Boston Marathon bombing might have been prevented if not for this difference.

Tamerlan Tsarnaev was one of the terrorists whose bombs killed three and injured several hundred people in Boston in 2013. He was also on a watchlist. But in 2012, he traveled to Russia for terrorist training and was free to re-enter the US without being detained. Because the watchlist database spelled his name slightly differently, the system failed to trigger the correct alert.

Terrorism cannot be prevented with a single keystroke. But one keystroke can create a crack in the defenses that allows a terrorist to slip through. And that is something technology *can* prevent – and should.



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The Solution

WCC's new software product HERMES is a flexible and future-proof solution for handling passenger data to ensure security and flow at the border. This ready-to-use API/PNR software is easy to implement, maintain, configure, and operate.

HERMES uses a three-step approach.

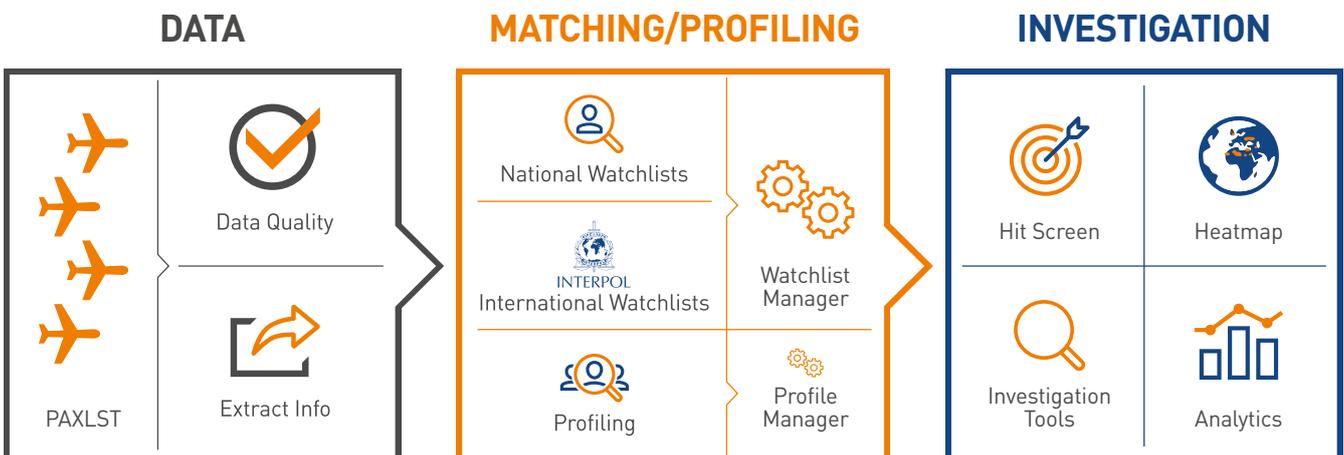
First, HERMES collects all passenger data. WCC can connect you to airlines directly to get these data, but HERMES accepts all standard types of connectivity. Where available, HERMES also uses PNR data to complete the passenger data profile, and points out any data conflicts.

Second, HERMES checks the data against various watchlists. In this step, it is also possible to match data against pre-configured profiles. HERMES uses profiles established by border experts and machine learning algorithms to flag suspicious travelers.

Third, HERMES offers strong capabilities for data analytics and risk assessment. In this step, officers may forward information for further investigation, and specialists can analyze the information in HERMES to identify patterns and risk profiles using heatmaps and other analytical tools.

Features and benefits

- Full watchlist matching functionality
 - Load data from national law enforcement-controlled databases to use as watchlists
 - Connect to national and international watchlists or integrate with systems already connecting to these (e.g. Interpol SLTD)
 - Fuzzy matching on incomplete or incorrect watchlist data
 - Short-term local watchlist functionality (temporary "be-on-the-lookout-for" alerts)
- Automatic load balancing, failover, and disaster recovery capabilities
- Connectivity to airline data providers for accepting passenger data
- Risk assessment based on expert profiles
 - Basic risk profiles provided; easily edited and expanded by border experts
 - Easy to add custom profiles based on customer experience
- Adherence to WCO/IATA/ICAO standards
- Support of UN/EDIFACT PAXLST format and PNRGOV and CUSRES standards
- Enterprise-grade & future-proof solution that can be integrated and extended as required



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Superior matching capabilities

Watchlist data quality is not always optimal. This can have grave consequences; the Boston Marathon story is just one example. HERMES fixes this issue with MITRE Award-winning 'human-like' matching. It easily handles spelling variants, typos, and other data quality problems. This reduces the number of manual checks border officials have to do.

Multi-cultural name matching is a major security pitfall. Take the Arabic name محمد - Mohammed. Transliteration into the Latin alphabet can yield many different spelling variants, such as Muhamet or Mukhammed. Breeder documents may also contain diminutives (Bill for William or Sasha for Alexander) and patronyms (Ivanovich or Ivanovna, son or daughter of Ivan).

Similar issues arise **with international variants of place names**. Watchlists may store the Dutch city of The Hague as Den Haag (Dutch), The Hague (English), La Haye (French), La Haya (Spanish), and so on.

Ambiguous dates pose another hurdle: does 06/08/1999 stand for June 8, or August 6?

HERMES catches & matches any such variants with ease.

Why choose WCC?

- > We are flexible, customer-centric, and approachable
- > Our consultants include former border management and law enforcement experts. We offer a wide range of consultancy services, such as a senior manager experienced in setting up a nationwide Passenger Information Unit or a technical implementation consultant
- > We have over 20 years of experience serving governments and large enterprises
- > Our software is highly configurable and easily implemented without expensive customization
- > Our software supports international identity standards including ICAO, NIST, and IEC/ISO
- > Our customers include the European Commission (EU-VIS), UNHCR, Finnish Police, Mexico/Guatemala Border, and Dutch Immigration and Naturalization Service

The screenshot shows the 'Watch List Rule Manager' interface. The main content area is titled 'Edit watch list rule' and displays a table of search rules. The table has five columns: 'Active', 'Field name', 'Search type', 'If match, importance', and 'If no match, penalty'. The 'Rule name' is 'Default Watch List Settings'. The table lists several rules, including Name, Date of birth, Gender, Nationality, Place of birth, Travel document type, Travel document number, and Travel document issuing authority. Each rule has a checkbox for 'Active', a dropdown for 'Search type', and dropdowns for 'If match, importance' and 'If no match, penalty'.

Active	Field name	Search type	If match, importance	If no match, penalty
<input checked="" type="checkbox"/>	Name	Name matching	High	High
<input checked="" type="checkbox"/>	Date of birth	Exact	High	High
<input checked="" type="checkbox"/>	Gender	Exact	Low	High
<input checked="" type="checkbox"/>	Nationality	Exact	Low	Low
<input checked="" type="checkbox"/>	Place of birth	Exact	Medium	Low
<input type="checkbox"/>	Travel document type			
<input checked="" type="checkbox"/>	Travel document number	Exact	Include	Low
<input type="checkbox"/>	Travel document issuing authority			

About WCC

Our vision

People in organizations make decisions. In the markets we focus on, those decisions profoundly impact people's lives. To make the right decisions in an increasingly complex world, it is necessary to have excellent software. That is what drives us at WCC: enabling people to make better decisions.

Our mission & strategy

WCC wants to give people the answers they need, not just the ones they asked for. We thrive on developing software that can connect, combine, and make sense of large amounts of data stored in different systems. Software that can communicate with the users in a human way, and that delivers superior results so our customers can make a difference. We call this "software that matters". But great software alone is not enough to get the best results. What sets WCC apart is the combination of remarkable software with in-depth knowledge of our customers' business. That is why business and implementation consultancy is an important part of our strategy. We focus on two markets: Employment and Identity.

Our products and services

The core of the Employment market is matching people with sustainable jobs effectively and efficiently. WCC has proven to be unequalled in doing just that. Our Employment Platform, which combines unique search and match capability with advanced gap analysis and referral to the right measures, delivers superior strategic value to our customers. Many of the world's largest employment and staffing organizations use our products and expertise, including Randstad, Robert Half, and the public employment services of Germany, France, and the Netherlands.

The security needs of the Identity market are stringent. Border management and law enforcement agencies face the challenge of quickly and accurately identifying people from huge amounts of data spread over many different databases and formats. WCC's software incorporates the necessary evidence-based algorithms, such as multi-cultural name matching, to make correct identifications. HERMES, our API/PNR solution, adheres to industry standards and is easy to implement and operate. Our customers include UNHCR and the European Union.

WCC Smart Search & Match

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