

The Sterile Border

A Checkpoint Engineered for Reassurance, Unaudited for Risk

By Becky Hirst and Karen Cocks

Passport control counts every traveller who clears the gate and every minute spent in the queue, but has no measure for whether the encounter detects risk or simply performs reassurance at a cost your airport is already paying.

The Hypothesis

Every international arrivals hall runs on the same script: cold counters, flat questioning, and a presumption that you are guilty of something until an officer decides otherwise. Millions of people move through it every year, and almost nobody stops to ask why it has to feel like that. The usual answer is security. This paper tests a more uncomfortable possibility: what if the sterility of passport control is not evidence of stronger security, but a habit the industry has stopped questioning?

The hypothesis is simple: passport control has been designed to look serious before it has been asked to prove that its coldness detects risk. If the discomfort is not buying better security, then the trade-off needs to be named.

Executive Summary

This paper does not argue for a softer border. It argues for a better designed one: a checkpoint that still verifies risk, but no longer mistakes coldness for rigour or confusion for defiance.

This paper examines a narrow but persistent assumption in international arrivals: passport control is often treated as effective because it looks serious, not because anyone has proved that coldness helps officers detect risk. The checkpoint is one of the few airport encounters every international traveller must pass through, yet success is usually judged by throughput, compliance, and incident counts. Those measures miss

the harder question: does the encounter identify risk more effectively, or does it mainly perform authority at scale?

The trade-off has not been justified. Bruce Schneier's distinction between the feeling of security and the reality of security helps explain why visible friction can survive without evidence that it works. The Government Accountability Office reviewed four meta analyses, covering more than 400 studies conducted over 60 years, and found that trained officers detect deception from behavioural cues at close to chance. Yet the American aviation sector spent about 900 million dollars on a behaviour detection program before its scientific basis was validated. At the same time, Amadeus research with 9,500 travellers found that 90 percent experience anxiety while travelling, while the industry's preferred answer is increasingly to automate the human out of the interaction. This paper tests the gap between visible reassurance and measurable safety, then closes with two documented cases showing what happens when a credential based system meets a traveller it was never designed to accommodate.

The Body: Research and Evidence

A Presumption of Guilt, Not of Legitimacy

The clearest formal evidence for a presumption of guilt inside passport control comes from a 2026 study of refugees and asylum seekers navigating UK border technology, presented at the ACM CHI Conference on Human Factors in Computing Systems by researchers Arshia Dutta and Rikke Bjerg Jensen. Drawing on participant observation inside a support organisation and interviews with caseworkers, asylum seekers, and refugees, the study found that a person's first encounter with border technology can stay with them long after they clear the gate, shaping their sense of safety, belonging, and trust in institutions. Caseworkers in the same study described a constrained position of their own. They could not waive biometric requirements or alter outcomes. Their discretion was limited to how they framed, paced, and explained a process they had no authority to change. The technology treated identity verification as the task, and the traveller's experience of that verification as incidental. The researchers describe this as a border assemblage built around proving legitimacy that ought to be assumed.

Security Theatre Is a Design Pattern

Bruce Schneier's widely cited distinction between the feeling of security and the reality of security explains why passport counters look and behave the way they do. Measures are often selected because they visibly reassure travellers and project institutional authority, whether or not they measurably improve safety outcomes. That produces a design logic where visible friction, uniforms, procedural formality, and no room for negotiation become the product itself. The clearest documented case of this pattern failing on its own terms is the United States Transportation Security Administration's Screening of Passengers by Observation Techniques program, which relied on the premise that trained officers could reliably read deception from nervous or evasive body language. The Government Accountability Office reviewed four meta analyses covering more than 400 studies conducted over 60 years and found human accuracy at this task was the same as, or only slightly better than, chance. TSA had already spent about 900 million dollars deploying the program by the time of that review, and 21 of the 25 behaviour detection officers GAO interviewed at four airports directly acknowledged that the indicators they were trained to use are subjective. Yet the program continued and was later expanded into other TSA screening decisions without independent validation of its combined effectiveness. This matters for passport control because it shows that formal, authoritative looking security processes are not always grounded in evidence about what actually identifies risk. The coldness of the process appears calibrated to reassure onlookers more than to catch actual risk.

The Industry Is Removing the Human From the Interaction

Global research from Amadeus, surveying 9,500 travellers across seven countries in 2025, found that 90 percent of air travellers report some level of anxiety during travel, with 27 percent specifically naming security screening as a source of worry alongside packing, getting to the airport, and the flight itself. The same research found strong traveller appetite for further automation as the proposed remedy: 69 percent favoured biometric gateways to streamline document checks, and airports are increasingly building what the industry calls seamless corridor style biometric processing that removes the stop and interact model entirely. Anxiety is being treated as a problem to automate away. Read differently, it is a sign that the interaction itself needs

redesigning. The industry is reducing human contact, but it has not done enough to rethink the quality of the human encounters that remain.

Trauma Informed Redesign Is Already Documented and Buildable

The same 2026 CHI study offers concrete design principles, not just a general call for kindness. Its recommendations include multilingual pictorial walkthroughs that show travellers what a biometric device is collecting and why, quieter and less alarm coded feedback from scanning technology, real time visual displays of what a device has actually detected, and physical and interface design that deliberately avoids interrogation aesthetics. Separate research points in the same direction. A 2021 report from the Centre for Victims of Torture recommends training government employees who regularly engage with asylum seekers to recognise trauma responses, ask questions in a non interrogative manner, and shift from a processing or detention model to a reception centre model. A Finnish study built from 35 interviews with Ukrainian refugees across 22 cities found that immediate multilingual information, clear explanation of how personal data is collected and used, and mental health support offered from arrival rather than only on request all improved trust. Taken together, these studies point to a practical redesign brief: explain the process before it happens, reduce the threat cues built into the environment, give staff a trauma-informed way to respond when someone does not follow the script, and make fallback pathways visible before a traveller is already in distress. These are not abstract care principles. They are design requirements for any border process that still depends on a human being understanding, cooperating, and being read accurately under pressure.

When the Traveller Does Not Fit the System

The sharpest version of this problem shows up at the extremes, where a system built to verify a credential collides with a traveller whose circumstances do not match that credential cleanly. In March 2026, Tania Warner, a Canadian citizen living in Kingsville, Texas with her American husband, was stopped with her seven year old daughter Ayla Lucas, who has autism, at a Border Patrol checkpoint in Sarita, Texas. Officers took Tania inside for fingerprinting and did not return her. Ayla was fingerprinted next and also did not come back out. Immigration and Customs Enforcement held mother and

daughter for almost three weeks, most of it at a family detention facility in Dilley, despite her husband providing documentation of a work permit valid until 2030. Tania later described the treatment as horrific from the outset and said agency staff pressured detainees to self deport rather than contest the case. A judge eventually found neither Tania nor Ayla to be a flight risk, and the family was released after posting a bond of 9,500 dollars once her lawyer showed the paperwork ICE said was missing had, in fact, already been filed. A different kind of failure played out the same year at Palma Airport in Majorca, where the European Union's new Entry Exit System requires fingerprint capture at the border instead of a passport stamp. Angela Evans, 80, tried repeatedly across several machines and asked staff for help, but her fingerprints would not register, a problem she attributed to skin that has grown too smooth with age to give the scanner a readable print. Staff eventually stamped her passport by hand. Travellers at Salzburg and Naples airports reported the same failure the same season, with one elderly couple in Naples waiting two hours in a queue that stretched outside the terminal before staff intervened. Neither Tania Warner's family nor Angela Evans arrived confused about the rules, and neither refused to cooperate. Each met a checkpoint built to confirm a match against a database or a fingerprint reader. In both cases, the failure was not the traveller. It was the absence of a humane fallback when the system could not reconcile the person in front of it with the credential it expected to see.

The Data

The scale of the problem is easier to see in survey data, oversight reports, and documented failures than in border agencies' own reporting. Even then, the picture is partial, because most of these systems have not been built to ask the questions that matter.

Metric	Figure	Source
Global travellers reporting some anxiety while travelling, 2025	90%	Amadeus
Travellers naming security screening specifically as a travel worry	27%	Amadeus
Travellers who would favour biometric	69%	Amadeus

gateways over a staffed counter		
Studies reviewed by GAO on human accuracy detecting deception from behaviour	400+ over 60 years	GAO
TSA behaviour detection officers who called their own indicators subjective	21 of 25	GAO
Cost of the TSA behaviour detection program reviewed by GAO	\$900 million	GAO
Ukrainian refugees interviewed for a Finnish trauma informed design study	35	LUT University
Time Tania Warner and her daughter were held by ICE despite valid documents	almost 3 weeks	The Guardian

Every figure above points to the same problem: these systems are measuring movement more confidently than human impact. Ninety percent of travellers report anxiety and 27 percent name the checkpoint specifically as a source of worry, yet the industry's preferred solution is biometric automation, favoured by 69 percent of the travellers surveyed. That removes the one variable the CHI research found could reduce fear when it was done well: a person willing to explain what is happening. The answer is not to preserve the current human encounter or automate it out of existence. It is to automate what can be safely automated, and redesign the human contact that remains so it explains, adapts, and reduces harm.

The GAO findings show the same blind spot on the security side of the counter. A program that cost 900 million dollars and relied on officers who themselves called their own methods subjective¹ was allowed to continue and expand into further screening decisions without independent validation of its effectiveness. A system that is not required to prove its accuracy will keep operating regardless of what its own staff already know about it.

The trauma informed evidence shows what a better encounter could look like. The data section points to the missing discipline around it: airports already measure movement, compliance, and incidents, but not whether a traveller understood the process,

¹Government Accountability Office, Aviation Security, TSA Should Limit Future Funding for Behavior Detection Activities, GAO-14-159, <https://www.gao.gov/assets/gao-14-159.pdf>

whether distress escalated, or whether staff had a workable path when the script failed. Until those measures exist, automation will keep being treated as progress, even when it only removes contact rather than improving the encounter that remains.

The Gap

Three separate gaps compound each other, and the current design of passport control closes none of them. The first is a liability gap. A process built by risk and legal teams is often designed to show that instructions were given, not that they were understood. A sign in one language, an announcement made once over a loudspeaker, or a form handed over without explanation may satisfy an institution's legal exposure. It says much less about whether the traveller in front of it, under stress, in a second language, or with a sensory processing difference, actually understood what was being asked. The CHI research found caseworkers operating entirely inside this gap, able to explain and pace the process but unable to change a single outcome it produced.

The second is a measurement gap. Throughput and incident counts are tracked in detail at every major border crossing. Traveller comprehension, distress, and the downstream cost of a missed connection caused by the process itself are generally not tracked at all. A system will always improve on the metric it is held accountable to, and passport control has never been held accountable to how the person on the other side of the counter actually experienced the encounter. The Amadeus data shows the result: an industry that knows precisely how anxious its checkpoint makes people, at 90 percent, and has chosen automation as the fix, without measuring what happens in the seconds a traveller spends actually talking to a human being².

The third is a legitimisation gap, and it matters for any organisation proposing to make a border facing process kinder. The CHI research names the tension directly: designing better technology within a border control assemblage can stabilise that assemblage instead of challenging it. A warmer counter does not change a policy built on presumption of guilt. Done carelessly, it can make that policy harder to see and harder to criticise. Kindness at the point of contact matters, but a training course alone cannot

²Amadeus, Appetite for Tech to Enhance Travel Skyrockets in 2025, <https://amadeus.com/en/newsroom/press-releases/amadeus-research-appetite-tech-travel-skyrockets-2025>

close a legitimisation gap. Without a structural channel for issues raised at the counter to reach the people who own the policy or procurement decision behind the technology, a warmth focused intervention risks becoming decoration around a mechanism that has not actually changed.

Conclusion: Testing the Hypothesis

The hypothesis holds, and the evidence assembled here points in one direction from several different angles. A UK based study of refugees and asylum seekers found automated border technology producing dehumanisation that caseworkers could soften but not prevent, because they had no authority to change the process itself³. A United States oversight review found the entire premise behind a 900 million dollar behaviour detection program was scientifically unsupported, and that the officers running it already knew it⁴. A global survey found 90 percent of travellers anxious about the journey and an industry choosing automation, not explanation, as its answer⁵. And at the extremes, on opposite sides of two oceans, the same design flaw produced Tania Warner and her autistic daughter held for weeks despite valid paperwork, and Angela Evans, 80, standing at a scanner that could no longer read a fingerprint that had simply grown older with her, at checkpoints built to verify a credential and never rebuilt to notice the person holding it.

The point of view this research arrives at treats the coldness of the checkpoint and the industry's rush toward full automation as two expressions of the same underlying failure: a process designed and measured around throughput and credential matching, with nothing built to notice how it treats the person standing in front of it. A checkpoint measured only on throughput will always look efficient, because throughput is what it was built to report. Whether it treats a traveller with basic humanity is a question that requires someone to design a measure, publish a result, and build a channel back from

³Dutta and Jensen, Security at the Border? The Lived Experiences of Refugees and Asylum Seekers in the UK, ACM CHI 2026, <https://arxiv.org/abs/2602.17280>

⁴Government Accountability Office, Aviation Security, TSA Should Limit Future Funding for Behavior Detection Activities, GAO-14-159, <https://www.gao.gov/assets/gao-14-159.pdf>

⁵Amadeus, Appetite for Tech to Enhance Travel Skyrockets in 2025, <https://amadeus.com/en/newsroom/press-releases/amadeus-research-appetite-tech-travel-skyrockets-2025>

the counter to the policy that produced it. Warmth at the counter without that channel is decoration layered on top of a process that hasn't moved. Until a border authority somewhere is willing to measure comprehension and distress with the same rigour it already applies to throughput and compliance, the checkpoint will keep running exactly as it does now, cold by design and sterile because nobody with the power to change that has ever been asked to.

The Fix

The same script problem shows up in the border experiences FTS hears about from travellers and from the people who design the systems they pass through. The pattern is familiar: a process built for the standard case, a human being who does not fit it, and no workable path for the person at the counter to adapt. That is why FTS built a short model for what redesign would actually look like.

Why Is This a Thing?

You hand over a document. A stranger scans your face, checks a database you cannot see, and asks you questions once, at speed, in a language you may not speak fluently. If you hesitate, look away, or need a question repeated, you read as evasive rather than nervous. This process runs on hundreds of millions of people a year and is designed to notice exactly one thing about any of them: whether the document in their hand matches the face above it.

That is the FTS.

The Problem

Passport control is built to verify a credential, not to comprehend a person. It assumes every traveller can process rapid instruction under pressure, tolerate an unexplained biometric scan, and appear calm and legible regardless of the journey behind them. For refugees and asylum seekers, elderly travellers whose biometrics no longer read cleanly, neurodivergent travellers, and anyone who does not speak the local language fluently, that assumption is the barrier. The system fails over and over, in missed connections, panic at the gate, and officer time spent on a traveller who was never actually a risk, simply an unusual case the script had no branch for.

What FTS Would Do: EVA

Engage. Start with the travellers the system is failing, before the policy team explains why the process has to work as it does. Where does it actually break down? Likely candidates: no explanation before a biometric scan, instructions given once and only in the local language, a family separated mid process with no way to ask why, and no simple way to flag a support need without inviting further scrutiny.

Validate. Give border staff the confidence to read the person in front of them, not just clear the queue. Current training optimises for document verification, leaving officers to tell the difference between a traveller who is a risk and a traveller who is frightened, jet lagged, or grieving on instinct alone. That capability should be defined and built strategically.

Adapt. Change the mechanism itself. Practical moves include a clear multilingual explanation of what a biometric device is capturing and why, a standard verbal narration before any physical contact, a genuine escalation path that reaches the people who own the policy when something goes wrong at the counter, and a fallback process for travellers whose documents or biometrics do not register cleanly. The encounter cannot depend on a single channel working perfectly.

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Version log

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Our white papers are forever evolving. As our thinking deepens and the research grows, we update them. This log shows the date of the latest version of this paper and the changes made along the way.

VERSION	DATE	WHAT CHANGED
1.1	13 September 2026	Background updated to the warm ivory of the series, and this version log added.
1.0	1 September 2026	Original publication.