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THE DIGITALIZATION OF CUSTOMS AND BORDERS BETWEEN THE EU AND TURKEY: A "TECHNICAL BRIDGE" TO UNBLOCK VISAS AND THE CUSTOMS UNION?

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International Developments in the Digitalization of Borders and Customs

Internationally, digitalization has changed borders and customs from "over-the-counter" verification points into information hubs where data moves before people and goods. Such interactions are not just technical: they involve mutual trust at the political level, transparency, and data governance. Globally, three frameworks have standardized digital technology in the exchange of goods: the World Trade Organization (WTO) Trade Facilitation Agreement,[1] which introduced electronic submission and advance filing of documents, the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) Recommendation No. 33 on the National Single Window Model,[2] and the World Customs Organization's Framework of Standards to Secure and Facilitate Global Trade (SAFE) on risk management and customs-business partnership.[3]

This international technical framework has popularized practices that were once experimental, including pre-arrival data (EAD), whereby carriers and traders submit key information on consignments before the goods reach the border so that authorities can perform advance risk analysis; single-window exchange channels, i.e., digital portals through which operators upload documents and declarations in one place instead of dealing separately with customs, sanitation, and other border agencies; and the "one-time-only" principle, under which public authorities reuse data that has already been lodged in government systems rather than repeatedly asking traders to provide the same information.[4] In passenger movement, the aviation sector promotes contactless and biometric standards, such as the International Air Transport Association (IATA) One ID initiative,[5] while the International Civil Aviation Organization (ICAO) is developing Digital Travel Credentials (DTCs), a digital, verifiable version of the e-passport.[6] Innovation in these fields also involves the use of artificial intelligence (AI), the Internet of Things (IoT), blockchain, and biometrics.[7]

In 2024, trade between Turkey and the European Union exceeded EUR 210 billion, making Turkey the EU's fifth-largest trading partner and the EU the primary destination for Turkish exports. Regarding the movement of people, about 62 million tourists visited Turkey in 2024, with a substantial portion—around 27 million—coming from European countries, partly due to the visa exemption regime for EU citizens. Conversely, legal border crossings by Turkish citizens into the EU remain more limited. Schengen visa applications reached 1.17 million, making Turkey the country with the second highest number of applicants worldwide, with approximately 1.1 to 1.2 million actual entries into the Schengen area.[8]

In this framework of intense commercial and political relations, this analysis examines the most significant digital developments and structures facilitating the movement of goods and people between the EU and Turkey. Moreover, it addresses the limitations and potential opportunities offered by the digitalization of borders and customs for relations between Ankara and Brussels.

The European Union

The European Union has outlined an ambitious plan for the interoperability of information systems at borders and for visas. Two key regulations—(EU) 2019/817 and 2019/818—establish a shared digital architecture consisting of four main components. First, the European Search Portal (ESP) functions

as a single "front door" through which border and consular authorities can access multiple large EU databases simultaneously, rather than searching each system individually. Second, the shared Biometric Matching Service (sBMS) enables authorities to compare fingerprints and facial images stored in those systems. Third, the Common Identity Repository (CIR) consolidates basic identity information from different databases into a single record for each individual. Fourth, the Multiple Identity Detector (MID) identifies situations where the same person appears to hold multiple or conflicting identities.[9] For border crossings, the Entry/Exit System (EES), which will go live with a phased rollout starting October 12, 2025, replaces paper stamps with electronic and biometric records of entries and exits for third-country citizens.[10] The data will be stored for three or five years, depending on compliance with entry requirements.[11] After EES is fully implemented, the European Travel Information and Authorization System (ETIAS) will be introduced, adding a pre-authorization process for visa-exempt travellers, along with a pre-departure migration risk assessment.[12]

For goods, the pillar of these systems is the Import Control System 2 (ICS2)[13] and the EU pre-arrival safety data (ENS) platform, which from 2025 will cover all modes of travel, including road and rail, with interactions via the Shared Trader Portal/Interface and authentication using the Uniform User Management & Digital Signatures (UUM&DS) system.[14] In the background, the EU Single Window Environment for Customs[15] mixes automatic government-to-government (G2G) exchanges of non-customs certificates via the EU Customs Single Window – Certificate Exchange (EU CSW-CERTEX) middleware and, later, a single business-to-business (B2G) channel for operators (to be implemented progressively until 2031).[16]

Turkey

Turkey, for its part, has significantly aligned its customs and borders procedures with the EU. It has been part of the Common Transit Convention (CTC), which allows goods to move under a single transit declaration across several European countries since 2012 and uses the New Computerized Transit System (NCTS), the shared IT system that manages these common transit operations,[17] updated to Phase 5 in November 2024, in technical harmony with EU standards.[18] Digitalization continues with a national Single Window (*Tek Pencere Sistemi*, TPS)[19] and a Port Single Window (*Liman Tek Pencere*, LTP) for licenses, permits, and certifications, providing the technical basis for future connections with the European Single Window. These platforms allow businesses and logistics operators to submit documents once online instead of visiting multiple offices, reduce waiting times for trucks and containers at ports and land borders, and make procedures more predictable and "EU-compatible" for companies trading with or through Turkey. Regarding personal data, the Personal Protection Data Law was amended in 2024 to regulate cross-border transfers[20] through Turkish adequacy decisions, Standard Contractual Clauses, and Binding Corporate Rules. However, the EU has not yet adopted an adequacy decision for Turkey, which would require any transfers to be tied to solid contractual bases and conducted in a timely manner through Data Protection Impact Assessments (DPIAs), i.e., structured evaluations undertaken before any activity that could pose a high risk to personal data, helping authorities and companies map risks, assess proportionality, and adopt appropriate safeguards. In practice, they ensure that sensitive data processing, including international transfers, is designed and conducted in a way that protects individuals and meets EU-level privacy standards.[21] The latest

economic report by the Office of the Presidency of the Republic of Türkiye affirms that Ankara aims to align more closely with European standards for data exchange and protection, as well as to develop digital customs.[22] However, there is still no implementation framework for such changes.

More broadly, this digital alignment is crucial for Turkey's position in global trade: the faster and smoother goods can cross its borders, the more attractive the country becomes as a logistics corridor between Europe, Asia, and the Middle East. By adopting systems that are compatible with EU and worldwide standards, Ankara not only simplifies life for traders who already operate within these frameworks but also signals that its borders are transparent, predictable, and safe from a data-protection and security perspective. Over time, this combination of efficiency and higher standards can strengthen Turkey's credibility as a trusted partner and encourage more investment in routes and supply chains that pass through its territory.

Where Do the EU and Turkey Align or Clash?

Regarding transit, Turkey's accession to the Common Transit Convention (CTC), the international agreement that harmonizes transit procedures between the EU and partner countries, and the interoperable New Computerised Transit System (NCTS), the shared electronic system used to lodge and control transit declarations, has established continuous flows with member states, offering tangible benefits in terms of time and data quality. An important political point is the electronic A.TR (Temporary Admission of Goods from Turkey without Paying Customs Duties), which was temporarily digitalized during the COVID-19 pandemic. Since the summer of 2024, the EU has now accepted digital forms of A.TR certificates with QR codes.[23] In 2025, the Customs Cooperation Committee formalized this practice,[24] reducing errors and verification times. Additionally, when Turkish goods enter the EU, operators submit Entry Summary Declarations (ENS), containing advance safety and security data, to the EU's Import Control System 2 (ICS2), the central IT platform that analyses these declarations for risk, via common interfaces: routines that have already made risk analysis more predictable. The strong economic interdependence between the EU and Turkey, over EUR 210 billion in trade in goods in 2024, creates significant incentives for common standards and verifiable performance.

Beyond transit, cooperation and friction also stem from regulatory choices. On the customs side, the EU–Turkey Customs Union already subjects most industrial goods to the same tariff treatment and broadly similar border procedures, while agriculture, services, and public procurement remain outside the current framework and are frequent sources of dispute. In the field of mobility, Schengen visa rules and Turkey's national visa regime rest on different risk and migration-management priorities, and the absence of an EU data-protection adequacy decision for Turkey limits the direct sharing of information. These convergences and gaps define where digital tools can quickly be plugged into existing legal structures and where political negotiations are still needed to adjust the underlying rules.

Digitalization could serve as a "technical bridge" to streamline visas and modernize the EU-Turkey Customs Union, provided the technology is connected to measurable and transparent results. Its value lies in performance transparency, including customs clearance times, data accuracy,

the percentage of automated checks, system reliability, and certificate verification speed. The digital infrastructure to track all these aspects is already in place within the new European pre-arrival goods control systems and the "single window" that exchanges certificates between authorities. The European entry/exit systems improve traceability, and if the Commission were to apply the "visa cascade" logic (longer and multi-entry visas for those who comply with the rules), there would be a clearer reward mechanism for some groups of travelers. However, political and legal constraints still exist. Concerning the roadmap for visa liberalization, some clear objectives required by the EU have not yet been achieved by Ankara. Technology helps demonstrate reliability, but it does not replace reforms in asylum, judicial cooperation, security, and data management. On the customs side, the update requires a political agreement and the definition of shared data quality standards with businesses.

Conclusions

A possible approach in the short- to mid-term could involve launching pilot projects between administrations, between the EU and Turkey, to automatically exchange non-customs certificates through the European Single Window. Additionally, publishing an EU-Turkey dashboard with clear key performance indicators (such as timeliness, data quality, automation, and digital certificate issuance) would be beneficial. Linking performance to incentives by proactively applying the visa cascade, implementing trusted traveler lanes at border crossings, and making targeted updates to the Customs Union in digital chapters or services where value is demonstrated can create a virtuous circle of trust and practical benefits. As already mentioned, there is an operational precedent, the electronic A.TR certificate, which was temporarily adopted between Turkey and the EU during the pandemic and was later officially adopted to track the movement of goods between the EU and Turkish customs. This demonstrates that when emergencies occur and clear benefits for operators are presented, policies tend to adapt. Gradually extending this model to other areas could help turn the digital space into a foundation of negotiated trust for visas and customs unions. In more ordinary times, gradually extending this model to other areas would not resolve the underlying political disputes, but it could anchor visa and customs cooperation in measurable outcomes, such as faster clearance, fewer errors, and more predictable travel, rather than in purely declaratory commitments.

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The Istanbul Policy Center–Sabancı University–Stiftung Mercator Initiative aims to strengthen the academic, political, and social ties between Turkey and Germany as well as Turkey and Europe. The Initiative is based on the premise that the acquisition of knowledge and the exchange of people and ideas are preconditions for meeting the challenges of an increasingly globalized world in the 21st century. The Initiative focuses on two areas of cooperation, EU/German-Turkish relations and climate change, which are of essential importance for the future of Turkey and Germany within a larger European and global context.

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