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Trust Infrastructure for the Economy of the Future

*Why interoperable economic trust matters, and why it needs a neutral
coordinating body.*

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About WITO.

WITO, the World Interoperable Trust Organization, is a neutral, non-commercial body constituted in Geneva as a not-for-profit association under Swiss law. Its purpose is to strengthen trust in claims about physical and digital objects as they move through the global economy, helping protect consumers and public health, safeguard medicines and food, uphold environmental and climate integrity, support international cooperation, and make cross-border trade more trustworthy. It does this by developing frameworks for verifiable claims and by coordinating mutual recognition between systems. WITO is grounded in open standards and open to any qualifying organisation worldwide.

The case for openness in economic trust infrastructure.

Advanced economies depend on information that cannot be verified by inspection: whether a medicine is genuine, a battery matches its product passport, or a shipment originated where its documentation says. Demand for verified claims is rising under four converging pressures: artificial intelligence, which spreads unreliable information as readily as reliable information; trade realignment, which asks new counterparties to build confidence quickly and at a distance; the circular economy, which depends on knowing what is in a product; and supply-chain scrutiny of labour practices, emissions, and water use. The growing importance of trusted, verified information for the global economy motivates the creation of the World Interoperable Trust Organization (WITO), a non-governmental organization that supports the growth of the trust infrastructure needed for the economy of the future.

The identifiers, credentials, traceability systems, certificates, accreditation, and mutual-recognition arrangements (which we call **instruments**) that let one party rely on another's claim are what we term **economic trust infrastructure**. WITO's working paper, *The Economic Trust Landscape*, maps 619 such instruments across seven functional layers, from identifiers to mandating regulation. The landscape is well developed, and its multiplicity is a source of competition and innovation rather than a defect. It is, however, thickest at the layers where verification is performed and thinnest at the connective layer that would let one instrument recognise another. Authority also sits apart from operational capability: public bodies author 63 of the 67 instruments that compel trust by law, while the layers beneath are built largely by industry and non-governmental bodies.

The gap lies not in the number of instruments but in openness. The paper sets out five challenges:

1. **Openness is structurally under-provided:** mutual recognition benefits everyone who relies on it while its cost falls on whoever establishes it.
2. **Adoption is oriented towards single jurisdictions and markets,** since the two mechanisms that reliably drive it, a government mandate and a dominant buyer's requirement, each serve one jurisdiction or one supply chain.
3. **Interoperability is weakest where authority is greatest:** 43 percent of publicly authored instruments and 47 percent of mandatory ones fall outside any mutual-recognition arrangement, compared with 17 percent of voluntary ones.
4. **Fragmentation constrains innovation,** particularly across domains, because the landscape cannot yet carry a product identifier, a conformity certificate, and a sustainability claim as a single trusted record.

5. **Recognition is not inherently inclusive:** since it depends on meeting a costly threshold, it entrenches those already recognised unless it is deliberately designed to admit smaller firms and lower-capacity economies.

The absence of openness and mutual recognition is not an inherent feature of the global economic trust infrastructure. As illustrated through case studies, measurement standards recognised under the CIPM arrangement, ePassports accepted at almost any border, customs authorities that accept one another's trusted traders, Estonia's cross-domain X-Road, and the admission of African accreditation bodies to the international arrangement all point the same way: openness emerges where a neutral body builds it deliberately and scopes it to a defined purpose.

WITO is constituted to work at that layer, as a not-for-profit association based in Geneva, acting in the general interest, grounded in open standards, and open to any qualifying organisation. Its purpose is to develop and govern frameworks for making and verifying trustworthy claims about physical objects, in cooperation with existing standards bodies, and to coordinate the mutual recognition through which one system's verification is accepted elsewhere. It does this through five activities:

1. frameworks and specifications;
2. mutual recognition;
3. accreditation and oversight;
4. convening; and
5. research and capacity-building.

The first provides better common building blocks; the rest supply the openness the ecosystem lacks while preserving its multiplicity.

This paper does not present a settled position. It is the basis for consultation with the organisations that build and rely on these systems, to establish whether the openness gap is felt where the evidence indicates and whether WITO's purpose and activities are scoped to meet current challenges. Those findings, together with the data report, will be synthesised in a final report in 2027. The consultation questions include the following:

- **The landscape and where it is heading.** How is your part of the economic trust landscape changing, and what is driving that change?
- **Openness, recognition, and trust.** Where do you most feel the absence of interoperability or mutual recognition today, and when a credential, certificate, or identity you issue or rely on is not recognised elsewhere, what does that cost you or your users?
- **Adoption and what drives it.** What most drives, and what most blocks, adoption of your system, particularly for smaller firms and smaller economies?
- **Innovation across domains.** Where would recognition across different domains let you build or offer something you cannot today, for instance by combining an identity, a product record, and a sustainability claim?

- **Inclusion.** What would make a shared recognition arrangement genuinely usable for a smaller organisation, or a producer in a developing economy, rather than a cost only large players can bear?
- **WITO's role, and how to scope it.** Is coordination at the recognition layer genuinely missing today, or is it already being provided in ways we have not accounted for, for instance by the newly merged global accreditation body or by existing digital-trust frameworks, or by intergovernmental initiatives such as UN/CEFACT's Transparency Protocol and Global Registry Information Directory? Where does any existing coordination stop?
- **What you most want to learn.** What questions about this space do you most want answered?

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The Case for WITO

Building openness into the systems that make claims trustworthy.

The global economy is increasingly dependent on trusted, verifiable information. The infrastructure that produces it is extensive, but only loosely connected. The central challenge is not too few systems, but too little interconnectedness between them.

As a neutral, non-commercial body, WITO aims to help close this gap. Its purpose is to strengthen trust in claims about physical objects as they move through the global economy, helping protect consumers and public health, safeguard medicines and food, uphold environmental and climate integrity, support international cooperation, and make cross-border trade more trustworthy. The vision is an economy where a medicine, a component, or a shipment has been verified once by a competent and independent party, and that verification is recognised wherever the object then goes.

This issue paper frames conversations with organisations that build and operate economic trust systems. Those conversations will help WITO refine its purpose, objectives, and activities around stakeholder needs, define the challenges it is best placed to address, and inform a final report to be published in 2027. WITO aims to engage organisations across the landscape, including national digital-identity and trust-service operators; product-trust, traceability, and provenance schemes; testing, certification, and accreditation bodies; standards and framework bodies; regulators and public authorities; industry and civil society; and research institutes.

The paper proceeds as follows. Section 1 explains why the economy runs on trusted information and what it costs when that information fails. Section 2 maps the economic trust ecosystem, drawing on the WITO working paper *The Economic Trust Landscape* (WITO, 2026). Section 3 sets out the five challenges currently addressed in the paper. Section 4 describes WITO, its purpose, activities, and how those activities respond to the challenges in the landscape. Section 5 sets out questions for stakeholders to support the next phase of the project.

Why Trust Infrastructure Matters

Between 2004 and 2012, Rudy Kurniawan convincingly faked some of the world's rarest wines. Working from his home in Arcadia, California, he blended cheaper wines to mimic rare vintages, poured them into old bottles, and added fabricated labels. He sold the bottles through leading auction houses to sophisticated collectors until experts noticed vintages the named estates had never produced. A federal jury convicted him in December 2013, and he was ordered to forfeit USD 20 million and pay more than USD 28 million in restitution (US Department of Justice, 2014). The market rested on a claim buyers could not verify at the point of sale: that the liquid in the bottle matched the label. Once that claim could be faked, price ceased to signal quality.

1.1 The economy relies on trusted information, and will need more of it

Kurniawan's victims were not careless; they were experts deceived because fine wine is a credence good, whose quality cannot be verified by inspection and often not even after consumption. Economists have long shown that such markets are fragile: when buyers cannot distinguish good from bad, they discount everything, good sellers withdraw, and the market shifts toward its worst offerings (Akerlof, 1970). The remedy is machinery that makes unverifiable claims credible: costly-to-fake signals (Spence, 1973) and trusted, independent third parties that certify what buyers cannot check (Power, 1997; Darby and Karni, 1973). Certificates, provenance records, audits, and identifiers do that work. Mutual-recognition arrangements then carry a verified claim from one system to another, turning costly, repeated private verification into shared, portable trust.

Demand for trusted information is rising sharply, driven by four linked pressures:

- **Artificial intelligence** depends on reliable data about the goods, services, and people it describes; without verifiable provenance, it scales bad information as readily as good (Data Provenance Initiative; MIT Sloan, 2023).
- **Trade realignment** requires new supply-chain partners to establish confidence quickly, at a distance, and without a shared history.
- **The circular economy** depends on reliable information about a product's contents and production history throughout reuse, repair, and recycling.

- **Supply-chain scrutiny** is increasing demand for verified claims about forced and child labour, carbon emissions, and water use, none of which is visible in the finished product.

1.2 The cost of getting it wrong

When unverifiable claims prove false, the costs are financial, operational, and sometimes fatal. The scale is already substantial. The World Health Organization estimates that at least one in ten medical products in low- and middle-income countries is substandard or falsified, with roughly USD 30.5 billion spent on them each year (WHO). The OECD puts global trade in counterfeit and pirated goods at about USD 467 billion, or up to 2.3 percent of world trade (OECD, 2025). Food fraud is estimated to cost the global food industry USD 30 to 40 billion a year (Michigan State University Food Fraud Initiative). Behind these figures is the same underlying failure. Claims about physical objects could not be verified until harm had already occurred. The cases below show how that failure appears in medicines, aircraft parts, and food.

Case 1: Contaminated cough syrups, 2022 to 2023.

Cough and cold syrups adulterated with the industrial solvents diethylene glycol and ethylene glycol killed more than 300 children, most under the age of five, across the Gambia, Indonesia, Uzbekistan, and other countries. The World Health Organization issued three medical-product alerts to all 194 member states and warned that the incidents were systemic rather than isolated. Contaminated product moved through the supply chain because there was no reliable way to verify what was actually in it.

(WHO, 2023)

Case 2: Falsified aircraft engine parts, 2023.

A United Kingdom distributor, AOG Technics, supplied around 60,000 aircraft engine parts, most for the CFM56, the world's best-selling jet engine, with forged airworthiness certificates: doctored release documents, invented employees, and false shipment records. The parts reached carriers including Ryanair, American Airlines, and Ethiopian Airlines, and the fraud surfaced only when an engineer at TAP Air Portugal asked the manufacturer to confirm a part's origin and was told the paperwork was fake. A safety-critical claim, backed by fabricated provenance, went uncaught until someone finally tried to verify it.

(Aerospace Global News, 2026)

Case 3: The European horsemeat scandal, 2013.

Horsemeat, at levels from 1 to 100 percent, was found in products labelled as beef across at

least 15 EU member states, the result not of a labelling error but of deliberate fraud in a long, multi-country supply chain. Even the horse-passport system meant to track the animals proved open to duplication and abuse, and the episode exposed how little of the chain could actually be traced.

(European Parliament, 2013)

The Economic Trust Ecosystem

How markets build trust in products, services, and people.

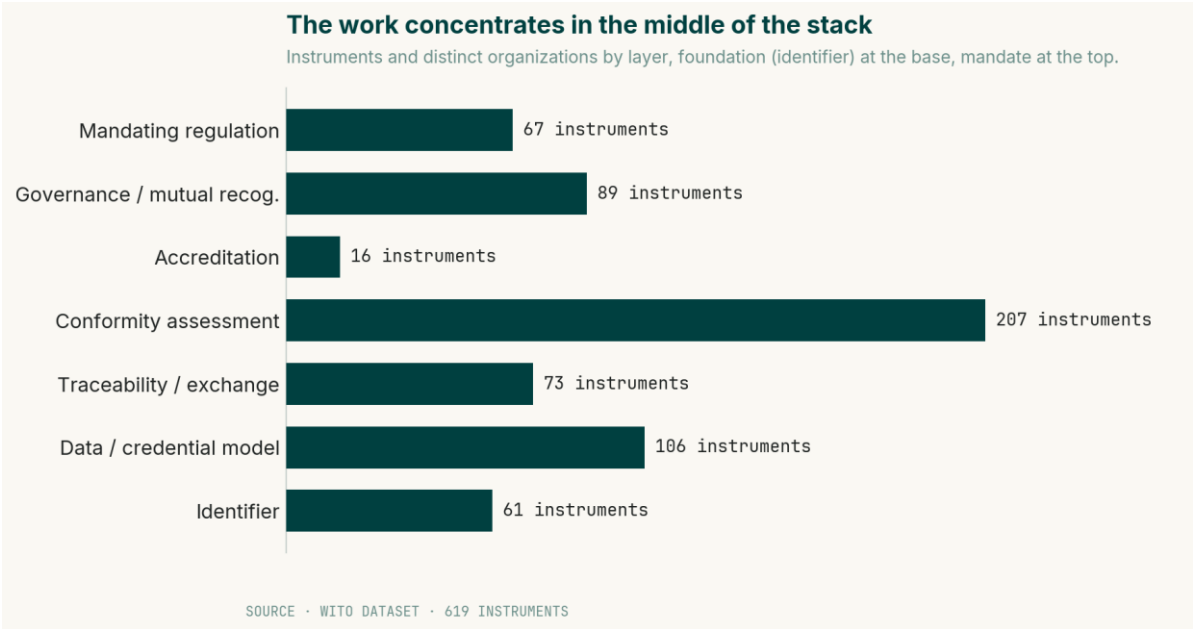
In the working paper, *The Economic Trust Landscape*, WITO has mapped 619 instruments that support trust in markets and trade worldwide. We define an **instrument** as a distinct trust or standards mechanism, such as a regulation, standard, scheme, treaty, accreditation or mutual-recognition arrangement, or operating platform, that creates or verifies trust in a claim about a product, a service, or a person.

The idea that these instruments form infrastructure is well established. Metrology, standardisation, accreditation, and conformity assessment are commonly understood as a country's quality infrastructure: the system that lets a claim be tested once and trusted widely (INetQI, 2017; Kellermann, 2019). Digital-trust practitioners describe a similar layered stack for credentials and recognition (Trust over IP Foundation, 2021).

Intergovernmental work is converging on the same architecture: UN/CEFACT's Recommendation No. 49 and the UN Transparency Protocol specify verifiable credentials for products, conformity, and traceability, and its Global Registry Information Directory project proposes a UN-hosted directory of authoritative national registrars (UNECE, 2026; UN/CEFACT, 2026). *The Economic Trust Landscape* expands the scope of this infrastructure to include all instruments that contribute to creating a verified and trusted claim about a product, a service, or a person, which is fundamental to well-functioning markets and economies.

The Economic Trust Landscape study arranges all 619 instruments into seven functional layers, from identifiers at the base to regulation at the top: identifiers, data and credential models, traceability and exchange protocols, conformity assessment and certification, accreditation, governance and mutual recognition, and mandating regulation. Read from the bottom up, each layer depends on the ones beneath it. The landscape is thickest in the middle, where verification is performed, and thinner at the foundation that names objects and the top layer that compels their verification.

FIGURE 1 · THE GLOBAL ECONOMIC TRUST ECOSYSTEM



Across all the layers, authority and machinery are held by different actors. Public bodies author 63 of the 67 instruments that compel trust by law, while the operational layers beneath – conformity assessment, credentials, and traceability – are built largely by industry and non-governmental bodies.

The connective layer that would let these instruments recognise one another is thin and almost entirely voluntary. Furthermore, the instruments that carry the most force tend to be the least interoperable. Of instruments authored by governments, 43 percent do not have mutual recognition agreements compared to 17 percent for voluntary instruments and 3 percent for hybrid ones. The instruments best placed to compel adoption are the least able to work with anyone else.

Trust Infrastructure Challenges

Five barriers to interoperable economic trust.

The purpose of economic trust infrastructure is to provide trust in claims about physical objects (as well as digital objects and people) as they move through the global economy, helping protect consumers and public health, safeguard medicines and food, uphold environmental and climate integrity, support international cooperation, and make cross-border trade more trustworthy.

Taken together, findings from The Economic Trust Landscape show no shortage of systems, standards, laws, and other instruments (WITO, 2026). The challenge is that this infrastructure remains only loosely connected. The sections below set out the five challenges currently addressed in this paper:

- 3.1 Openness is structurally under-provided
- 3.2 Adoption is oriented towards single jurisdictions and markets
- 3.3 Interoperability is weakest among the most authoritative instruments
- 3.4 Fragmentation constrains infrastructure innovation
- 3.5 Recognition is not inherently inclusive

3.1 Openness is structurally under-provided

The connective layer of the economic trust infrastructure is the part least likely to be built. Establishing mutual recognition between instruments benefits every party that relies on them, yet the cost falls on whoever undertakes it, and the resulting benefit cannot be captured by that party alone. This is a classic under-provided public good: valuable in aggregate, unrewarding to any single provider, and dependent on deliberate collective action rather than ordinary market incentives (Kindleberger, 1983; Tasse, 2000).

The data reflects this failure. Roughly three-quarters of instruments participate in some form of mutual recognition, but 156 of 619 stand alone, recognising and recognised by no other. The arrangements that would connect the rest are the thinnest and most voluntary part of the stack (WITO, 2026).

Box 3.1 · Measurement standards and their mutual recognition

The problem. Reliable measurement underpins every test, certificate, and traded specification, yet a shared, internationally comparable system of measurement benefits everyone and can be built by no single firm or country acting alone. Left to individual actors, each maintains its own standards, and a measurement or calibration accepted in one country carries no authority in another.

In place today. Under the Metre Convention of 1875, states created and now fund a neutral international body, the International Bureau of Weights and Measures, to maintain the shared system. Through the CIPM Mutual Recognition Arrangement, signed in 1999, the national metrology institutes of dozens of countries recognise one another's measurement standards and calibration certificates, so that a measurement made once is accepted across borders rather than repeated.

The lesson. The shared foundation everyone relies on was not supplied by the market. It exists because states created and maintain a neutral body to provide it, which is what an under-provided public good requires.

(Sources: BIPM; the Metre Convention, 1875, and CIPM MRA, 1999.)

3.2 Adoption is oriented towards single jurisdictions and markets

The data shows a close alignment between legal force and uptake: mandate-driven instruments are overwhelmingly mandatory, and market-driven instruments overwhelmingly voluntary (WITO, 2026). The two levers that reliably produce adoption are therefore a government mandate and the requirement of a dominant buyer (Prakash and Potoski, 2007).

Both are structured for a particular jurisdiction or market. A public authority mandates the arrangements that serve its own legal order and capture a benefit it can identify. Likewise, a dominant buyer imposes the requirements of its own supply chain. Neither is constituted to provide for recognition across borders or sectors. Authority is correspondingly banded: public bodies author 63 of the 67 instruments that compel trust by law, while the operational machinery beneath them is built largely by industry and non-governmental bodies (WITO, 2026; Büthe and Mattli, 2011).

The consequence is that the more effectively an instrument is adopted, the more firmly it is bound to the single jurisdiction or market for which it was built. National digital identity for citizens provides the clearest illustration.

Box 3.2 · National identity systems and the international ePassport

The problem. India's Aadhaar and Singapore's Singpass are among the world's most advanced national identity systems, yet each is built for one jurisdiction and recognises no other. Aadhaar enrolment is open only to long-term residents of India, and Singpass only to Singapore citizens, residents, and pass-holders, so neither can be used to prove who you are in the other country. Most national digital identity systems are like this, national by design and unconnected to each other by default.

In place today. A passport is one of the most sovereign documents a state issues, yet almost any country's passport is read and trusted at almost any border, because a neutral body, the International Civil Aviation Organization, maintains one global specification and a shared directory that lets each country validate another's passports. More than 140 states issue these ePassports, with over a billion in circulation. The recognition is deliberately bounded to one purpose, crossing a border, which is what keeps it proportionate.

The lesson. Cross-border trust in a sovereign credential appears when a neutral body builds the openness on purpose and scopes it to a defined use, rather than linking everything to everything.

(Sources: UIDAI; GovTech Singapore; ICAO Doc 9303 and Public Key Directory.)

3.3 Interoperability is weakest among the most authoritative instruments

A quarter of all instruments do not have mutual recognition, but the share rises to 43 percent among publicly authored instruments and 47 percent among mandatory ones. Of the 107 publicly authored silos, 103 are national in scope (WITO, 2026). The instruments carrying the greatest authority are the least able to work with any other.

This pattern is not confined to one sector. Network economics accounts for it: a trust system becomes more valuable as more participants connect, but an incumbent operating a large system may prefer incompatibility to sharing that value. Therefore, compatibility is under-supplied relative to the collective benefit (Katz and Shapiro, 1985; Farrell and Klemperer, 2007). Political science describes the resulting structure as a regime complex, a set of overlapping, non-hierarchical institutions in which no actor holds responsibility for connection (Raustiala and Victor, 2004; Biermann, Pattberg, van Asselt and Zelli, 2009).

Box 3.3 · Pharmaceutical serialisation and customs mutual recognition

The problem. Prescription medicines are among the most tightly regulated products on earth, and every major market mandates its own system to serialise and trace each pack. The US Drug Supply Chain Security Act, the EU Falsified Medicines Directive, and Russia's Chestny ZNAK are examples. All three use the same GS1 barcode, yet none recognises another's records, so a manufacturer selling into several markets must connect to and satisfy each national system separately.

In place today. Under the World Customs Organization framework, national customs authorities run Authorised Economic Operator programmes and then agree to trust each other's vetting through mutual-recognition arrangements. The WCO records dozens of operational AEO programmes worldwide, with a growing web of mutual-recognition arrangements between them, and the EU alone recognises trusted traders from Canada, China, Japan, Switzerland, the United Kingdom, the United States, and others.

The lesson. Even the most sovereign, mandatory, national domain can build cross-border recognition when the authorities choose to take that step, so isolation at the centre of authority is a matter of choice rather than necessity.

(Sources: US FDA; European Commission; World Customs Organization.)

3.4 Fragmentation constrains infrastructure innovation

Fragmentation raises current transaction costs and limits future innovation. When a credential, certificate, or identifier is recognised only by the system that issued it, holders cannot readily reuse it, and third parties cannot build services on it. Interoperability lets a verified claim move into new settings and lets separate trusted claims combine into products no single system could support. It is therefore a driver of innovation, not merely efficiency (Palfrey and Gasser, 2012).

The greatest opportunity lies across domains. Recognition is more developed within verticals, such as identity, accreditation, or certification, than between them. The landscape has begun to address this seam through UN/CEFACT's UN Transparency Protocol (Recommendation No. 49), which specifies how a product passport, conformity credential, and traceability record can travel as linked verifiable credentials. What remains absent is adoption at scale and the recognition arrangements that would let such combined records be trusted across the systems that receive them (UNECE, 2026). This cross-domain seam holds the greatest unrealised value and is least likely to be built by any single national authority or sector.

Box 3.4 · Interoperability across domains: Estonia's X-Road

The problem. Interoperability is more developed within a single domain than across domains, yet the greatest unrealised value lies in letting verified claims from different domains combine. In most economies identity, health, tax, and business records sit in separate systems that cannot draw on one another, so services that would combine them are never built.

In place today. Estonia's X-Road, a shared and neutral data-exchange layer in operation since 2001, connects public and private systems across domains: in the state's own example, an authority can draw on the health system, the tax authority, and the business registry, and the reverse. It is used by some 52,000 organisations and carries around 2.2 billion transactions a year. On this layer a digital prescription combines the doctor's authorisation, the patient's identity, and the Health Insurance Fund's reimbursement in a single step, and 99 percent of prescriptions are now issued this way.

The lesson. The largest gains from interoperability come from combining verified claims across domains, not merely within one, and they appear where a shared, neutral exchange layer is deliberately built and governed.

(Sources: e-Estonia, Republic of Estonia, X-Road and e-Prescription.)

3.5 Recognition is not inherently inclusive

Openness, even where it is achieved, is not automatically inclusive. A body of scholarship shows that standard-setting is distributive in its effects: a codified standard may itself operate as a barrier to entry, and recognition regimes have on occasion entrenched large, well-resourced producers while excluding smallholders and lower-capacity economies, for example where mutual-recognition arrangements incorporate restrictive rules of origin that admit some participants and exclude others (Busch, 2011; Ponte and Gibbon, 2005; Henson and Humphrey, 2010; Chen and Mattoo, 2008). Inclusive recognition requires open and non-exclusive terms of participation, requirements that are proportionate rather than uniform, shared or subsidised compliance costs, and a genuine voice for smaller producers and for actors from the Global South in how recognition is determined.

Box 3.5 · Accreditation and inclusive mutual recognition

The problem. Cross-border recognition depends on accreditation by a body participating in the international mutual-recognition system, Global ACI. The principle is simple: accredited once, accepted everywhere. But meeting the common bar and passing peer evaluation is costly, so many lower-capacity economies remain outside the system. Their exporters' results are often not recognised abroad and must be re-tested. The arrangement can therefore entrench mature quality-infrastructure economies and leave others out (Kellermann, 2019).

In place today. Recognition can be extended where it is built to include. Regional accreditation cooperations let national bodies reach the international bar together. For example, in 2018 the African Accreditation Cooperation was accepted as a recognised region of the ILAC arrangement, so that accredited testing and calibration results from its African member bodies can be accepted in other countries without further examination.

The lesson. Mutual recognition is not inherently inclusive. Since it turns on meeting a costly threshold, it entrenches those already inside unless it is paired with open admission, the pooling of capacity across regions, and support that lets lower-capacity economies both join and have a voice in how the bar is set.

(Sources: ILAC, on the MRA and on AFRAC's recognition; ILAC and IAF on Global ACI; Kellermann, 2019, on quality infrastructure and developing countries.)

The Role of WITO

Building the shared foundations of economic trust.

WITO is a not-for-profit association constituted in Geneva under Swiss law, established to pursue purposes of public utility in the field of digital trust for physical objects. Its purpose, as set out in its statutes, has four complementary parts:

1. **Frameworks for trustworthy credentials.** WITO develops, maintains, and governs frameworks for issuing and verifying trustworthy credentials about physical objects, in cooperation with relevant standards bodies, so that product claims can be made in a consistent, verifiable form. WITO does not author competing specifications: its frameworks build on existing instruments, including W3C Verifiable Credentials, the UN Transparency Protocol, and ISO/IEC identifier standards, and its recognition arrangements are designed to rely on directories such as UN/CEFACT's Global Registry Information Directory to confirm the legal anchors of participants.
2. **Mutual recognition across systems.** WITO coordinates recognition between digital-trust frameworks across jurisdictions, sectors, and standards, so that a verification performed once can be accepted elsewhere, promoting interoperability and reducing technical barriers to trade.
3. **Support for international standards.** WITO supports the implementation of relevant international standards and the work of standards-setting bodies in the field of digital trust.
4. **Alignment with the United Nations and the Sustainable Development Goals.** WITO promotes knowledge of the work of the United Nations in fields adjacent to its competence, including the Goals for industry, innovation, and infrastructure (SDG 9), responsible consumption and production (SDG 12), peace, justice, and strong institutions (SDG 16), and partnerships for the goals (SDG 17).

WITO acts in the general interest and not for the economic benefit of its members, is grounded in open standards, and is open to any qualifying organisation worldwide.

4.1 WITO's activities

WITO fulfils its statutory purposes through five core activities:

- **Frameworks and specifications.** It develops and governs common frameworks for issuing and verifying trustworthy claims about physical objects.
- **Mutual recognition.** It establishes arrangements that allow one system's verification to be accepted by others across jurisdictions, sectors, and standards.

- **Accreditation and oversight.** It accredits issuers and verifiers and supervises compliance, so recognition rests on independent and trustworthy verification.
- **Convening.** It brings together governments, regulators, standards bodies, industry, civil society, and academia to build recognition arrangements that participants can trust.
- **Research and capacity-building.** It publishes evidence and supports participation by developing countries and underrepresented regions, helping keep recognition open to smaller and newer entrants.

Together, these activities respond directly to the challenges in Section 3: they create common building blocks, supply openness, make recognition trustworthy, preserve stakeholder balance, and keep the system evidence-based and inclusive.

Stakeholder Engagement

How WITO will engage the ecosystem it has mapped.

WITO is seeking to engage with stakeholders that are part of, or have a stake in, the global economic trust infrastructure. The aim is to deepen WITO's understanding of the ecosystem, to surface the challenges practitioners actually face, to test whether the openness gap is felt where the data says it is, to refine WITO's purpose, objectives, and activities against real needs, and to explore what a neutral body could usefully do, including whether the work is already being done by others. The insights gathered will be synthesised into the final report published in 2027.

The stakeholders we seek to engage include, but are not limited to, national digital-identity and trust-service operators; product-trust, traceability, and provenance schemes; testing, certification, and accreditation bodies; standards and framework bodies; regulators and public authorities; industry and civil society; and research institutes.

5.1 Questions for stakeholder conversations

The questions below are guidance for semi-structured conversations. Not every question suits every organisation.

The landscape and where it is heading

- How is your part of the economic trust landscape changing, and what is driving that change?
- Where is demand for what you do growing fastest, and why?
- What do you see coming in the next three to five years that the current system is not ready for?

Openness, recognition, and trust

- Where do you most feel the absence of interoperability or mutual recognition today, and when a credential, certificate, or identity you issue or rely on is not recognised elsewhere, what does that cost you or your users?
- Where has mutual recognition worked well, and what made it work?
- In your field, are the most binding, most public, or most national systems the hardest to connect to others, or is that not your experience?
- When you rely on a certificate, credential, or claim from another organisation, what makes you trust it, and how does independence factor into that trust?

Adoption and what drives it

- What most drives, and what most blocks, adoption of your system, particularly for smaller firms and smaller economies?
- Where does adoption depend on a public mandate, and where does the market carry it on its own?
- What would meaningfully lower the cost of participating in your system?

Innovation across domains

- Where would recognition across different domains let you build or offer something you cannot today, for instance by combining an identity, a product record, and a sustainability claim?
- What is the greater obstacle for you: the lack of a common way to make and verify a claim in the first place, or the lack of recognition between the systems that already exist?

Inclusion

- Have you seen recognition or standards requirements work to exclude smaller or newer entrants, even where they were meant to open a market?
- What would make a shared recognition arrangement genuinely usable for a smaller organisation, or a producer in a developing economy, rather than a cost only large players can bear?
- What would give smaller producers and actors from developing countries a real voice in how recognition is set?

WITO's role, and how to scope it

- Is coordination at the recognition layer genuinely missing today, or is it already being provided in ways we have not accounted for, for instance by the newly merged global accreditation body or by existing digital-trust frameworks, or by intergovernmental initiatives such as UN/CEFACT's Transparency Protocol and Global Registry Information Directory? Where does any existing coordination stop?
- If a neutral body worked in this space, which of its activities would help you most, and which least: common frameworks and specifications; mutual-recognition arrangements between existing systems; accreditation and oversight of issuers and verifiers; convening; or research and capacity-building?
- Should this work focus on physical objects and the goods that move in trade, or extend to services and to people and their credentials, and where is the need most pressing?
- What would it cost to build and sustain mutual recognition across systems, and who should bear that cost?
- What would make a neutral, non-commercial body credible and useful to you, and what would make you distrust or ignore it?

- What should a body like this deliberately not do, and who else must be at the table for it to matter?

What you most want to learn

- What questions about this space do you most want answered?
- What evidence would change how you act?

The Case for a Coordinating Response

What this paper establishes, and what follows.

Advanced economies increasingly depend on claims about physical objects that may be challenging or impossible to verify by inspection. This dependence is growing with artificial intelligence, trade realignment, the circular economy, and supply-chain scrutiny.

When verification fails, the cost can be substantial. Shortcomings in the global economic trust infrastructure are not the result of a lack of systems, standards, or laws. Rather, the shortfall is openness. The connective layer that brings together all the instruments of economic trust is thin and almost entirely voluntary: 156 instruments recognise and are recognised by no other, and interoperability is weakest where authority is greatest, with 43 percent of publicly authored instruments outside any mutual-recognition arrangement.

Openness is a public good, being valuable to all, unrewarding to whoever supplies it, and not inclusive unless it is deliberately built to be. Measurement, passports, customs, and cross-domain data exchange show that it can appear wherever a neutral body builds it on purpose and scopes it to a defined use. That lesson is now being applied within the UN system itself: UN/CEFACT's Global Registry Information Directory project takes the ICAO Public Key Directory as its blueprint for a self-sustaining, UN-hosted directory of authoritative national registrars (UN/CEFACT, 2026).

WITO is constituted to work on that layer. Stakeholder conversations are the next step, and the synthesis of this paper and those conversations will be published in 2027. This work will further refine the strategic plan of WITO, enabling it to engage in activities that build trust in our global economy and deliver safety and assurance to people around the world.

References

- Aerospace Global News (2026). AOG Technics director jailed over falsified CFM56 parts. Retrieved 2 August 2026 at <https://aerospaceglobalnews.com/news/aog-technics-director-jailed-fake-cfm56-parts/>
- Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84(3). Retrieved 2 August 2026 at <https://doi.org/10.2307/1879431>
- Biermann, F., Pattberg, P., van Asselt, H., & Zelli, F. (2009). The fragmentation of global governance architectures. *Global Environmental Politics*, 9(4). Retrieved 2 August 2026 at <https://direct.mit.edu/glep/article/9/4/14/14757/>
- Busch, L. (2011). *Standards: Recipes for Reality*. MIT Press. Retrieved 2 August 2026 at <https://direct.mit.edu/books/book/2928/StandardsRecipes-for-Reality>
- Büthe, T., & Mattli, W. (2011). *The New Global Rulers: The Privatization of Regulation in the World Economy*. Princeton University Press. Retrieved 2 August 2026 at <https://press.princeton.edu/books/hardcover/9780691144795/the-new-global-rulers>
- Center for Strategic and International Studies (2024). Palm oil powerhouses: Why the EU's deforestation-free regulation does not work in Southeast Asia. Retrieved 2 August 2026 at <https://www.csis.org/blogs/new-perspectives-asia/palm-oil-powerhouses-why-eus-deforestation-free-regulation-does-not>
- Centre for Social and Economic Progress (2025). India's Carbon Border Adjustment Mechanism (CBAM) challenge. Retrieved 2 August 2026 at <https://csep.org/working-paper/indias-carbon-border-adjustment-mechanism-cbam-challenge-strategic-response-and-policy-options/>
- Chen, M. X., & Mattoo, A. (2008). Regionalism in standards: Good or bad for trade? *Canadian Journal of Economics*, 41(3). Retrieved 2 August 2026 at <https://ideas.repec.org/a/wly/canjec/v41y2008i3p838-863.html>
- Competition and Markets Authority (2016). CMA paves the way for Open Banking revolution. Retrieved 2 August 2026 at <https://www.gov.uk/government/news/cma-paves-the-way-for-open-banking-revolution>
- ConfectioneryNews / William Reed (2023). Cocoa certifications becoming an "administration hell." Retrieved 2 August 2026 at <https://www.confectionerynews.com/Article/2023/12/18/The-cost-for-farmers-of-complying-with-cocoa-sustainability-certifications-special-report/>

- Darby, M. R., & Karni, E. (1973). Free competition and the optimal amount of fraud. *Journal of Law and Economics*, 16(1). Retrieved 2 August 2026 at <https://doi.org/10.1086/466756>
- Data Provenance Initiative & MIT Sloan (2023). Bringing transparency to the data used to train artificial intelligence. Retrieved 2 August 2026 at <https://mitsloan.mit.edu/ideas-made-to-matter/bringing-transparency-to-data-used-to-train-artificial-intelligence>
- Drezner, D. W. (2007). *All Politics Is Global: Explaining International Regulatory Regimes*. Princeton University Press. Retrieved 2 August 2026 at <https://press.princeton.edu/books/paperback/9780691096421/all-politics-is-global>
- Duflo, E., Greenstone, M., Pande, R., & Ryan, N. (2013). Truth-telling by third-party auditors and the response of polluting firms. *Quarterly Journal of Economics*, 128(4). Retrieved 2 August 2026 at <https://www.nber.org/papers/w19259>
- e-Estonia (Republic of Estonia) (n.d.). X-Road (interoperability services) and e-Prescription. Retrieved 2 August 2026 at <https://e-estonia.com/solutions/interoperability-services/x-road/> and <https://e-estonia.com/solutions/healthcare/e-prescription/>
- European Commission (n.d.). Falsified medicines. Retrieved 2 August 2026 at https://health.ec.europa.eu/medicinal-products/falsified-medicines_en
- European Commission (2026). Delay until December 2026 and other developments in the implementation of the EUDR (Access2Markets). Retrieved 2 August 2026 at <https://trade.ec.europa.eu/access-to-markets/en/news/delay-until-december-2026-and-other-developments-implementation-eudr-regulation>
- European Parliament (2013). Horsemeat fraud in the food chain. Retrieved 2 August 2026 at [https://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130493/LDM_BRI\(2013\)130493_REV1_EN.pdf](https://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130493/LDM_BRI(2013)130493_REV1_EN.pdf)
- Farrell, J., & Klemperer, P. (2007). Coordination and lock-in: Competition with switching costs and network effects. In *Handbook of Industrial Organization* (Vol. 3). Retrieved 2 August 2026 at <https://econpapers.repec.org/RePEc:eee:indchp:3-31>
- Global Food Safety Initiative (n.d.). Recognition. Retrieved 2 August 2026 at <https://mygfsi.com/how-to-implement/recognition/>
- Government Technology Agency of Singapore (n.d.). Who is eligible for Singpass? Retrieved 2 August 2026 at <https://ask.gov.sg/singpass/questions/clul28lp4002t3b8g3hnggivy>

- Henson, S., & Humphrey, J. (2010). Understanding the complexities of private standards in global agri-food chains. *Journal of Development Studies*, 46(9). Retrieved 2 August 2026 at <https://ideas.repec.org/a/taf/jdevst/v46y2010i9p1628-1646.html>
- Hogan Lovells (2025). Digital Product Passports in the EU. Retrieved 2 August 2026 at <https://www.hoganlovells.com/en/publications/digital-product-passports-in-the-eu-comprehensive-expansion>
- International Accreditation Forum & International Laboratory Accreditation Cooperation (2026). Launch of Global Accreditation Cooperation Incorporated. Retrieved 2 August 2026 at https://ilac.org/latest_ilac_news/launch-of-the-global-accreditation-cooperation-incorporated/
- International Bureau of Weights and Measures (BIPM) (n.d.). The Metre Convention (1875) and the CIPM Mutual Recognition Arrangement (CIPM MRA, 1999): mutual recognition of national measurement standards and of calibration and measurement certificates issued by national metrology institutes. Retrieved 2 August 2026 at <https://www.bipm.org/en/cipm-mra>
- International Civil Aviation Organization (2021). Doc 9303, Machine Readable Travel Documents (8th ed.); and ICAO Public Key Directory. Retrieved 2 August 2026 at <https://www.icao.int/icao-pkd/epassport-basics>
- International Laboratory Accreditation Cooperation (ILAC) (n.d.). The ILAC Mutual Recognition Arrangement (MRA), "accredited once, accepted everywhere"; and the acceptance of the African Accreditation Cooperation (AFRAC) as a recognised region of the ILAC MRA (2018). Retrieved 2 August 2026 at <https://ilac.org/ilac-mra-and-signatories/benefits/> and https://ilac.org/latest_ilac_news/afac-now-recognised-under-the-ilac-mra/
- International Network on Quality Infrastructure (2017). Quality infrastructure: Agreed definition. BIPM. Retrieved 2 August 2026 at <https://www.bipm.org/documents/20126/42177518/QI-definition.pdf/797073b4-32cf-2bc7-a767-39b65ce152b1>
- Jin, G. Z., & Leslie, P. (2003). The effect of information on product quality: Evidence from restaurant hygiene grade cards. *Quarterly Journal of Economics*, 118(2). Retrieved 2 August 2026 at <https://doi.org/10.1162/003355303321675428>
- Kades, M., & Scott Morton, F. M. (2020). Interoperability as a competition remedy for digital networks. Washington Center for Equitable Growth. Retrieved 2 August 2026 at <https://equitablegrowth.org/working-papers/interoperability-as-a-competition-remedy-for-digital-networks/>
- Katz, M. L., & Shapiro, C. (1985). Network externalities, competition, and compatibility. *American Economic Review*, 75(3). Retrieved 2 August 2026 at <https://econpapers.repec.org/RePEc:aea:aecrev:v:75:y:1985:i:3:p:424-40>

- Kee, H. L., Nicita, A., & Olarreaga, M. (2009). Estimating trade restrictiveness indices. *Economic Journal*, 119(534). Retrieved 2 August 2026 at <https://academic.oup.com/ej/article-abstract/119/534/172/5089551>
- Kellermann, M. (2019). Ensuring Quality to Gain Access to Global Markets: A Reform Toolkit. World Bank and PTB. Retrieved 2 August 2026 at <https://doi.org/10.1596/978-1-4648-1372-6>
- Khera, R. (2017). Impact of Aadhaar on welfare programmes. *Economic and Political Weekly*, 52(50). Retrieved 2 August 2026 at <https://www.epw.in/journal/2017/50/special-articles/impact-aadhaar-welfare-programmes.html>
- Kindleberger, C. P. (1983). Standards as public, collective and private goods. *Kyklos*, 36(3). Retrieved 2 August 2026 at <https://onlinelibrary.wiley.com/doi/10.1111/j.1467-6435.1983.tb02705.x>
- Klein, B., & Leffler, K. B. (1981). The role of market forces in assuring contractual performance. *Journal of Political Economy*, 89(4). Retrieved 2 August 2026 at <https://econpapers.repec.org/RePEc:ucp:jpolec:v:89:y:1981:i:4:p:615-41>
- Masiero, S. (2023). Digital identity as platform-mediated surveillance. *Big Data & Society*, 10(1). Retrieved 2 August 2026 at <https://doi.org/10.1177/20539517221135176>
- Mattoo, A., Mulabdic, A., & Ruta, M. (2022). Trade creation and trade diversion in deep agreements. *Canadian Journal of Economics*, 55(3). Retrieved 2 August 2026 at <https://doi.org/10.1111/caje.12611>
- McDaniels, D., & Karttunen, M. (2016). Trade, testing and toasters: Conformity assessment procedures and the TBT Committee. WTO Staff Working Paper ERSD-2016-09. Retrieved 2 August 2026 at https://www.wto.org/english/res_e/reser_e/ersd201609_e.pdf
- McKinsey Global Institute (2019). Digital identification: A key to inclusive growth. Retrieved 2 August 2026 at <https://www.mckinsey.com/capabilities/tech-and-ai/our-insights/digital-identification-a-key-to-inclusive-growth>
- Michigan State University Food Fraud Initiative (n.d.). Estimated global cost of food fraud. Retrieved 2 August 2026 at <https://foodfraud.msu.edu/>
- Open Banking Limited (2025). OBL Impact Report 7. Retrieved 2 August 2026 at <https://www.openbanking.org.uk/insights/obl-impact-report-7-open-banking-delivers-real-world-impact-as-adoption-accelerates-year-on-year/>
- Organisation for Economic Co-operation and Development & EUIPO (2025). Global trade in fake goods. Retrieved 2 August 2026 at https://www.oecd.org/en/publications/mapping-global-trade-in-fakes-2025_94d3b29f-en.html

- Ostrom, E. (2010). Beyond markets and states: Polycentric governance of complex economic systems. *American Economic Review*, 100(3). Retrieved 2 August 2026 at <https://doi.org/10.1257/aer.100.3.641>
- Palfrey, J., & Gasser, U. (2012). *Interop: The Promise and Perils of Highly Interconnected Systems*. Basic Books. Retrieved 2 August 2026 at <https://cyber.harvard.edu/publications/2012/interop>
- Ponte, S., & Gibbon, P. (2005). Quality standards, conventions and the governance of global value chains. *Economy and Society*, 34(1). Retrieved 2 August 2026 at <https://www.tandfonline.com/doi/abs/10.1080/0308514042000329315>
- Power, M. (1997). *The Audit Society: Rituals of Verification*. Oxford University Press. Retrieved 2 August 2026 at <https://academic.oup.com/book/26482>
- Prakash, A., & Potoski, M. (2007). Collective action through voluntary environmental programs: A club theory perspective. *Policy Studies Journal*, 35(4). Retrieved 2 August 2026 at <https://onlinelibrary.wiley.com/doi/10.1111/j.1541-0072.2007.00247.x>
- Raustiala, K., & Victor, D. G. (2004). The regime complex for plant genetic resources. *International Organization*, 58(2). Retrieved 2 August 2026 at <https://www.cambridge.org/core/journals/international-organization/article/abs/regime-complex-for-plant-genetic-resources/5C6B7B9E45268249D2893621CC64A7E5>
- Regulation (EU) 2024/1781, Ecodesign for Sustainable Products Regulation. Official Journal of the European Union. Retrieved 2 August 2026 at <https://eur-lex.europa.eu/eli/reg/2024/1781/oj>
- Reuters (2023). Coverage of the EU Deforestation Regulation and palm-oil producer response. Retrieved 2 August 2026 at <https://bworldonline.com/world/2023/01/13/498246/malaysia-says-it-could-stop-palm-oil-exports-to-eu-after-new-curbs/>
- Romano, Demaria, & Carbone (2026). A systematic review of the impacts of voluntary sustainability standards on the cocoa global value chain. *Discover Sustainability*. Retrieved 2 August 2026 at <https://link.springer.com/article/10.1007/s43621-026-02623-0>
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87(3). Retrieved 2 August 2026 at <https://doi.org/10.2307/1882010>
- Tassey, G. (2000). Standardization in technology-based markets. *Research Policy*, 29(4-5). Retrieved 2 August 2026 at <https://www.sciencedirect.com/science/article/abs/pii/S0048733399000918>

- The Diplomat (2024). Indonesia, Malaysia welcome proposed delay to EU Deforestation Regulation. Retrieved 2 August 2026 at <https://thedi diplomat.com/2024/10/indonesia-malaysia-welcome-proposed-delay-to-eu-deforestation-regulation/>
- Trust over IP Foundation (2021). Introduction to Trust over IP (v2.0). Retrieved 2 August 2026 at <https://trustoverip.org/wp-content/uploads/Introduction-to-ToIP-V2.0-2021-11-17.pdf>
- UN/CEFACT (2026). About the GRID and DIAs. Global Trust Registry project, public review draft. Retrieved 2 August 2026 at <https://grid.unece.org/docs/draft/About/>
- UNECE (2026). UN Transparency Protocol (UNTP), implementing UNECE Recommendation No. 49: Transparency at Scale. Retrieved 2 August 2026 at <https://untp.unece.org/>
- Unique Identification Authority of India (n.d.). Aadhaar enrolment. Retrieved 2 August 2026 at <https://uidai.gov.in/en/my-aadhaar/about-your-aadhaar/aadhaar-enrolment.html>
- United Nations Conference on Trade and Development (n.d.). Trade costs of non-tariff measures now more than double that of tariffs. Retrieved 2 August 2026 at <https://unctad.org/news/trade-costs-non-tariff-measures-now-more-double-tariffs>
- US Department of Justice, Southern District of New York (2014). Prominent wine dealer Rudy Kurniawan sentenced. Retrieved 2 August 2026 at <https://www.justice.gov/usao-sdny/pr/prominent-wine-dealer-rudy-kurniawan-sentenced-manhattan-federal-court-10-years-prison>
- US Food and Drug Administration (n.d.). Drug Supply Chain Security Act. Retrieved 2 August 2026 at <https://www.fda.gov/drugs/drug-supply-chain-integrity/drug-supply-chain-security-act-dscsa>
- WITO (2026). The Economic Trust Landscape. Companion data report and evidence base for this paper. [Companion report, not publicly available online; no retrieval link.]
- World Customs Organization (n.d.). Authorised Economic Operator compendium and mutual recognition. Retrieved 2 August 2026 at <https://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/tools/aeo-compendium.aspx>
- World Health Organization (n.d.). Substandard and falsified medical products (fact sheet). Retrieved 2 August 2026 at <https://www.who.int/news-room/fact-sheets/detail/substandard-and-falsified-medical-products>
- World Health Organization (2023). WHO urges action to protect children from contaminated medicines. Retrieved 2 August 2026 at

<https://www.who.int/news/item/23-01-2023-who-urges-action-to-protect-children-from-contaminated-medicines>

World Pharma Today (2023). An overview of Russia's Chestny ZNAK national track-and-trace system. Retrieved 2 August 2026 at

<https://www.worldpharmatoday.com/articles/an-overview-of-russias-pharma-serialization-regulations-and-its-national-track-and-trace-digital-system-chestny-znak/>

World Trade Organization (2016). World Trade Report 2016: Levelling the Trading Field for SMEs. Retrieved 2 August 2026 at

https://www.wto.org/english/res_e/publications_e/wtr16_e.htm

World Trade Organization (n.d.). The WTO Agreement on Sanitary and Phytosanitary Measures and the Codex Alimentarius. Retrieved 2 August 2026 at

https://www.wto.org/english/thewto_e/coher_e/wto_codex_e.htm