DRAFT DETAILED ROADMAP FOR THE
DIGITAL TRANSFORMATION OF MULTIMODAL DATA AND
DOCUMENT EXCHANGE IN TRANS-CASPIAN SUPPLY CHAINS,
USING UN STANDARDS AND LEGAL NORMS
(draft, July 2023)

1. *Setting the scene*

The global crises of the early 21st century have given the world the opportunity to understand the importance of standards for electronic trade and transport information exchange along multimodal digital corridors that would allow for seamless and contactless data sharing among various modes of transport and sectors in the supply chain. The effects of the Covid19 pandemic have clearly shown that we can and should go beyond vested corporate, institutional, or national interests, beyond departmentalized solutions for the digitalization of international trade and transport, that we should move towards the harmonization of data, documents and processes based on global standards for sharing data and documents. Mr. Lew Chuen Hong, CEO of Infocomm Media Development Authority of Singapore, noted on 30 March 2021: "all of us are looking beyond the pandemic so as to emerge stronger both as governments and as business and I believe the move towards trade digitization is a key pillar. We must try to harmonize our policies and legal frameworks and align to open technology standards. These are all the basic foundations for ubiquitous digitalization."[1]

The aim is to make the "new normal" more aligned with the Sustainable Development Goals globally, including by reducing waste, conserving resources, minimizing environmental damages, creating and maintaining decent jobs for all, and leaving no one behind. If properly implemented, digital exchange of information in the whole supply chain along the Silk Road trade route at the heart of the Eurasian landmass can contribute to achieving this high objective. Building a standardized data set and data model for this information exchange, as a subset of the UN/CEFACT reference data models, aligned with the global semantic standards and linked to regulatory data exchange (notably for Customs clearance) to support seamless and contactless exchange of data along a digital trade corridor, is the technical foundation of this concept. Sensing and managing the transition from exchange of documents (paper or electronic) to the exchange of data is part of the strategic foresight for international trade, and the UN has a key role to play in this process as the provider of international public goods. The global standards and reference data models for multimodal and cross-sectoral digital data and document exchange in the international supply chain are these international public goods with great potential for transforming trade and transport.

Trade between China and Europe has become one of the most important elements of the world economy in the early 21st century. The lion's share of this trade passes through the maritime route via the Suez Canal or, in case of impediments, by the Cape of Good Hope around Africa. Maritime transport is the cheapest, but also the slowest means of transporting the merchandise. According to the 2020 UNECE Euro-Asian Transport Linkages phase III report,[2] more than 95 per cent of the volume (in metric tonnes) and nearly 70 per cent of the value (in USD) of trade between Asia and Europe was transported by maritime routes. Air cargo was less than 2 per cent by volume, but over 30 per cent by value. Railways carried 1 per cent of volume and more than 2 per cent of the value, which is an underperformance, given the advantages in terms of speed regarding maritime and cost regarding air transportation. Road transport of goods between China and Europe (without changing trucks or transhipment *en route*) took

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[1] https://www.wto.org/english/news_e/news21_e/rese_30mar21_e.htm

[2] UNECE. *Euro-Asian Transport Linkages: Operationalisation of inland transport between Europe and Asia*, New York and Geneva: United Nations 2020, p.32, https://unece.org/transport/euro-asian-links

off only in 2017. Further, the main part of inland transportation (essentially by rail) between Asia and Europe used to take place by the Northern corridor, via Russia, facing serious challenges in the current geopolitical situation. The trans-Caspian SPECA route currently accounts for just 3–5 per cent of the total cargo volume for China-EU rail trade. Discussions about opening the northern sea route have started, but that route also depends on passing through Russian territory (territorial waters) as the trans-Siberian railway.

Since 1992, there has never been shortage of attention to the middle route – numerous projects under the Transport Corridor Europe Caucasus Asia (TRACECA), various Silk Road initiatives, the Belt and Road Initiative of China, etc. Yet several issues hamper its efficiency and prevent the increase of its share in cargo traffic between Asia and Europe. The first is the need to change transport modes, legal regimes, and documents and cross borders with diverse administrative procedures and controls. At the Caspian and Black Sea portions of the route, limited port capacities have emerged as an obstacle. Problems persist with the Central Asian part of the route, especially congestion and sub-optimal border procedures. These and other problems cause delays, making it difficult to accurately manage arrival times, and increase the cost of transporting cargo, reducing the route's reliability. The standardized digitalization of information flows in supply chains along this route will make a difference, providing for seamless exchange of essential data and documents in electronic format, improving the preconditions for goods to move faster, while increasing the transparency and security of data.

[Add text on: transport conventions; how the digitalization of multimodal data and document exchange supports the implementation of these conventions; concerted implementation of eTIR in the SPECA countries; etc.]

Figure 1: Trade routes between Europe and East Asia and the Middle corridor
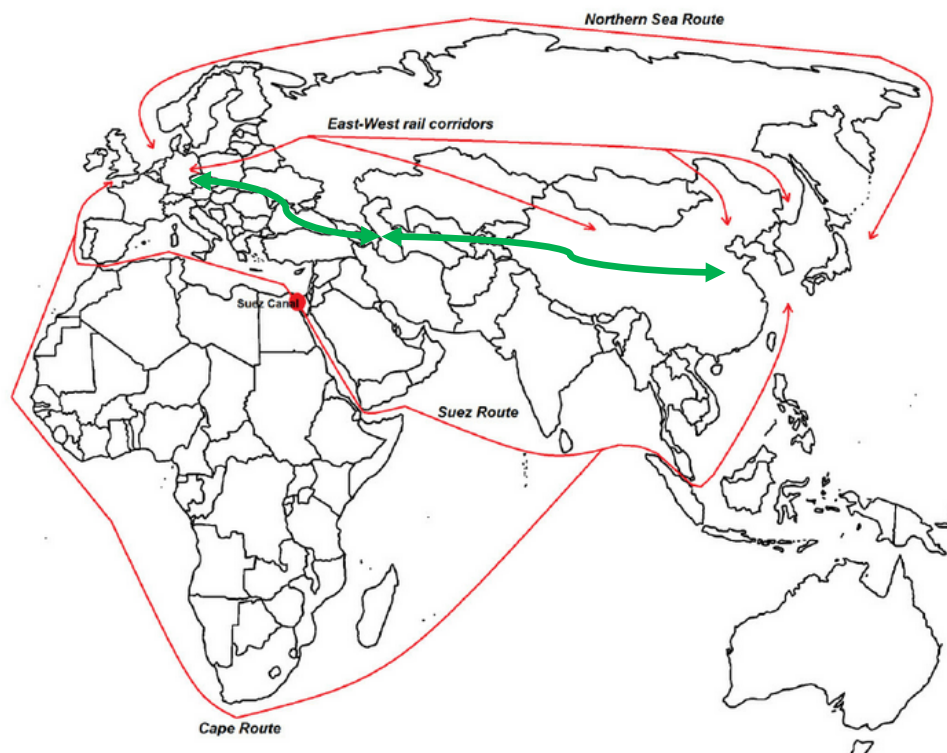
If one adds to the above map further links by air and maritime transport, this will connect the Middle Corridor countries and routes to any point in Europe and Asia, as well as the Americas, Africa, and Australia.

Despite the rapidly increasing importance of the trans-Caspian direction as a potential route to compensate for the loss of activity along the Northern Corridor and trade development of the Central

Asian and South Caucasus countries, the above challenges continue to hinder the efficient use of this alternative passageway. National governments and local companies are working together to solve the issues and effectively optimize the movement of goods through the trans-Caspian route. A concerted action among the States participating in the United Nations Special Programme for the Economies of Central Asia (SPECA) and other countries along the trans-Caspian route, together with UNECE, ESCAP and other UN and non-UN agencies would be very important. It can lay the ground for multimodal digital data and document exchange in supply chains along these routes, using the semantic standards and Multimodal Transport Reference Data Model (MMT RDM) of the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT). This digital transformation will benefit the application of the respective international conventions (e.g., the Montreal Convention of 1999, the TIR, CMR and other conventions), guiding the transportation of goods by rail, road, air and sea. Using the standards will help create a link to the regulatory systems, notably Customs IT systems, that can transfer safety and security-critical information, but also the application of the eTIR system for the exchange of Customs data on transit.

This Roadmap for the digital transformation of multimodal information exchange in the trans-Caspian (SPECA) route, using United Nations data exchange standards and legal norms, is potentially a powerful instrument to achieve the objectives of the countries and the international community to make the procedures and transport of goods along the trans-Caspian route efficient and sustainable. On balance, goods can move only as fast as the information which satisfies the regulatory requirements detailing them, and this is what this Roadmap will help improve.

The Governments of the SPECA participating States have given a clear mandate to UNECE to work on this Roadmap. UNECE is helping governments and the business community in the SPECA region to digitalize information flows in international supply chains. This process was launched by the International High-level Conference on Digital Transformation of Information Exchange in Supply Chains Using United Nations Standards, held in Baku on 31 Oct. 2022, which recommended to strengthen training for experts in the region on UN/CEFACT standards and develop implementation pilot projects in the trans-Caspian corridor. At this conference, Mr. Rashad Nabi oghlu Nabiyev, Minister of Digital Development and Transport of the Republic of Azerbaijan, requested from the UNECE Executive Secretary and UN Under-Secretary General and the Regional Adviser in the Economic Cooperation and Trade Division of UNECE, to develop a Roadmap on how to prepare for a digital trade corridor using the semantic standards and Multimodal Transport Reference Data Model (MMT RDM) and other reference data models of the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT).[3] The 13th International UNECE "Odessa" seminar, held online on 22 December 2022, recommended aligning data exchange along the routes towards the South Caucasus and Central Asia with the UN/CEFACT Multimodal Transport Reference Data Model and the EU Electronic Freight Transport Information Regulation (eFTI). The SPECA Ministerial Meeting on 17 April 2023 reinforced this mandate in its Joint Ministerial Statement by requesting "UNECE to develop a Roadmap for digitalization of multimodal data and document exchange along the trans-Caspian transport corridor using relevant United Nations standards, including through realizing a regional pilot project for SPECA participating States", meaning notably UN/CEFACT semantic standards and MMT RDM. The idea is to use the package of standards for digitalization of multimodal data and document exchange and pilot testing reports from neighbouring countries as a best practice for the digitalization of information exchange in corridors encompassing Azerbaijan.[4] This work will build on years of cooperation on trade facilitation and e-business standards that UNECE has with the region, notably on streamlining procedures and digitalization of multimodal data and document exchange. Developing

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[3] https://unece.org/trade/uncefact/mainstandards
[4] https://unttc.org/stream/electronic-trade-and-transport-documents-and-data

digital connectivity among the SPECA countries requires innovative solutions, using international standards and best practices.

UN/CEFACT is a subsidiary body of UNECE that brings together experts from the public and private sectors, nominated by their Governments to develop international (UN) public goods: semantic standards and reference data models (including the Multimodal Transport Reference Data Model, MMT RDM) or the only global standard for electronic data interchange UN/EDIFACT. UN/EDIFACT has been used for over 30 years for millions of exchanges daily and billions worth of merchandise exchange every year. Experts in the European Union are discussing how the UN/CEFACT standards and MMT RDM can be used as core reference providing multimodal interoperability in the implementation of the EU Electronic Freight Transport Information Regulation (eFTI).

Figure 2: Logical framework for the roadmap:
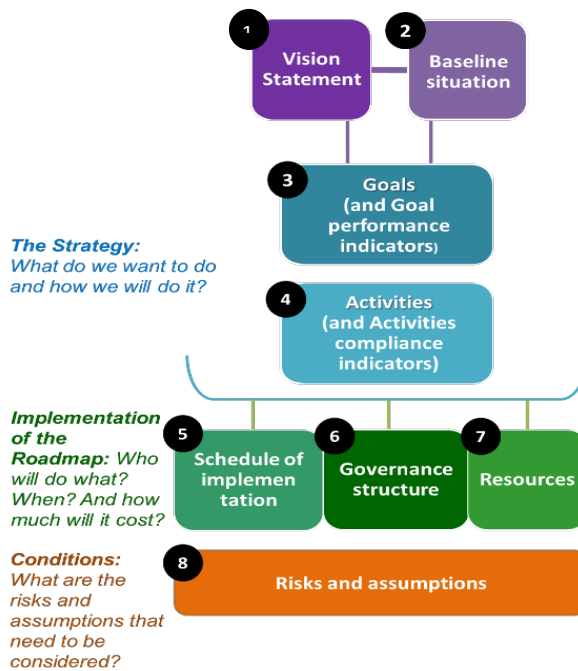
2. *Vision Statement*:

From 2030 onwards, economic operators and all competent authorities in the SPECA participating States will start to use electronic freight transport data provided from economic operators in line with relevant United Nations legal instruments and standards, including the UN/CEFACT package of standards. Data will be interoperable between sectors and the relevant modes of transport along the trans-Caspian transport corridor, with a view to increasing the efficiency of data exchange and the movement of goods across borders.

The Governments of the SPECA participating States and other countries along the Trans-Caspian route will organize the scene for the realization of this vision.

To achieve this vision, the countries participating in the initiative will define the current (baseline) situation, the desired situation and concrete goals for its attainment, as well as goals performance

indicators. The activities to achieve this vision would include defining the scope of the initiative (which areas the products of the digitalization effort using the UN standards will cover); developing an enabling legal background; defining and rolling out pilot implementation projects; capacity-building for relevant staff in the countries to understand and develop solutions in line with the vision and roadmap. The countries must adopt a clear timetable for implementing the steps and building the basis for digital multimodal data and document exchange. In addition, by 2027, all countries will implement the eTIR international system to achieve smooth information exchanges among national Customs IT systems along the corridor.

From this perspective, a working definition of digital corridor for trade and multimodal transport may include the following elements:
  (a) an electronic platform (or combination of platforms) connecting multiple entities to share information on the status of movement of goods in a contingent set of locations from origin to destination,
  (b) using standardized EDI messages, XSD, XML, JSON schemas and/or APIs,
  (c) serving as the basis for accepting digital data by regulatory agencies and economic operators to facilitate the cross-border movement of goods,
  (d) enabling data exchange in a regional setting (critical for regional integration),
  (e) facilitating the free flow of information, data protection, cybersecurity, "localization", etc.,
  (f) involving several layers of information about the goods, their transportation, data submission to authorities, and payment information.

3. *Legal issues to be considered and legal reform*

The Governments of participating States will establish the legal framework to enable the electronic communication of business and regulatory information between concerned economic operators and competent authorities (B2G, B2B, G2B and G2G exchanges) in relation to the movement of goods along the Trans-Caspian route. This framework will lay down:
  (a) the conditions based on which competent authorities are required to accept regulatory information made available electronically by the economic operators concerned,
  (b) the rules for the provision of services related to making regulatory information available electronically by the economic operators concerned to competent authorities and business partners,
  (c) liabilities and rights stemming from the exchange of electronically transferable records instead of documents,
  (d) conditions to guarantee the safety and security of multimodal exchange of information in a digital trade and transport corridor.

Legal issues to be considered in a possible legal reform to enable the digital transformation of multimodal data and document exchange along the Trans-Caspian route:
  (a) Ensure legal equality of paper and electronic documents, as well as electronically transferrable records (datasets), to enable, for example, admissibility in courts of electronic document equivalents and electronic records,
  (b) Create an adequate legal base in the form of laws on e-commerce, e-signature, etc. Adopt in the national legislation the provisions of the UNCITRAL Model Law on Electronically Transferrable Records (MLETR) and all relevant provisions and protocols in the respective international transport conventions,
  (c) Provide rules for authentication and security in information exchanges to enable mutual acceptance and certification of e-signatures; provide legal basis for the acceptance of means of authentication other than signature (e.g., registration of authorized economic operators, verifiable credentials, QR codes, etc.),

(d) Agree rules (in the countries and among the countries) on archiving electronic records,

(e) Provide a mechanism to address liabilities regarding the veracity of data,

(f) Agree on a joint conflict resolution mechanism or a network of such mechanisms related to national platforms and legislation, international conventions, and other legal acts,

(g) Alignment / adaptation to the regimes provided by the international transport conventions in the various modes of transport, such as the COTIF, CMR (with its eCMR protocol), IMO FAL, Montreal, TIR and other conventions.

4. Scope

A standardized electronic data and document exchange along the SPECA (trans-Caspian or Middle) corridor will be based on (a) providing interoperability using the UN/CEFACT voluntary semantic standards and Multimodal Transport Reference Data Model; (b) expansion of the use of the eTIR system, and (c) legal reform. It will cover the digital transformation of:

(a) Key documents accompanying goods carried by the four relevant modes of transport:
  i. CIM/SMGS and SMGS railway consignment notes, possibly, wagon lists, commercial acts, as well as a converter between UN/EDIFACT messages (IFTMIN and others) and other technologies, such as XML, JSON, API, and blockchain,
  ii. eCMR road consignment note,
  iii. airwaybill, dangerous goods declaration, and consignment security declarations (for cargo transported by air),
  iv. Maritime documents: Bill of Lading, IMO FAL documents, and
  v. Four modal dangerous goods declarations (including the air cargo DGD cited above),

(b) Commercial documents, standards and supporting tools provided as voluntary standards by UN/CEFACT: cross-industry invoice, Certificate of Origin, agricultural certificates,

(c) Regulatory information submission and sharing, using as a basic reference the Cross-Border Management Reference Data Model of UN/CEFACT and the WCO Data Model:
  i. Customs data exchange, customs declarations,
  ii. eTIR, which uses the WCO Data Model and will be mapped and, possibly, aligned to the UN/CEFACT reference data models, notably using the Cross-Border Management Reference Data Model.

Figure 3: The information chain in the Trans-Caspian route
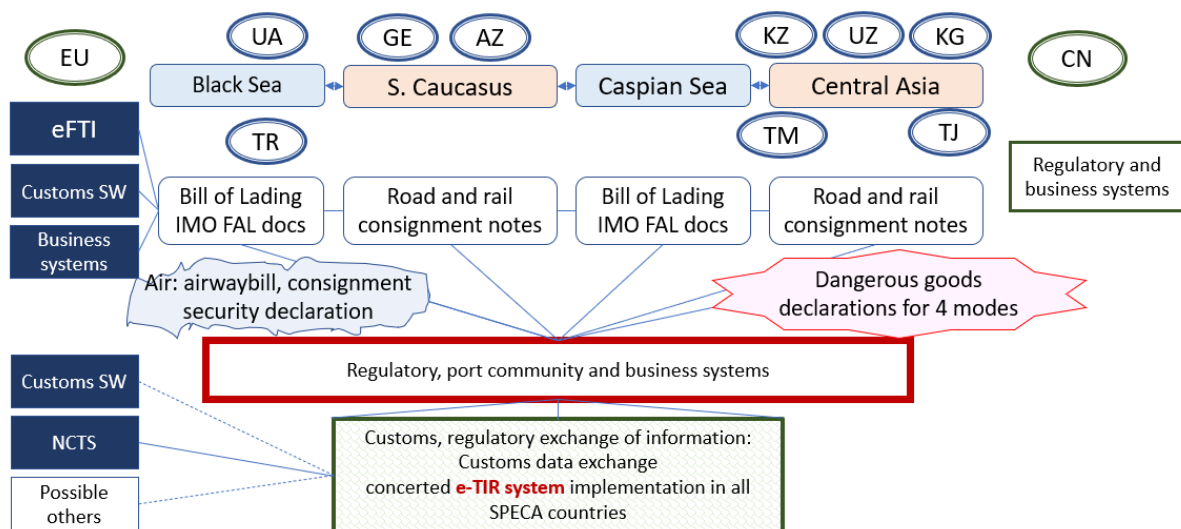
Partners for implementing this work include: UNECE, IMO, ICAO, PS IC TRACECA, GUAM, BSEC, ECO, EU4Digital, European Commission, Eurasian Economic Commission, Belt and Road Initiative, TITR Association, OSJD, CIT, UIC, IATA, IRU, FIATA. On the national level, it is important to bring the most relevant public and private stakeholders to work in national platforms supporting this multimodal data exchange using relevant UN standards. In the countries along the trans-Caspian corridor, it will be important to build such platforms on a national rather than private or external basis.

Figure 4: National layer implementation approach
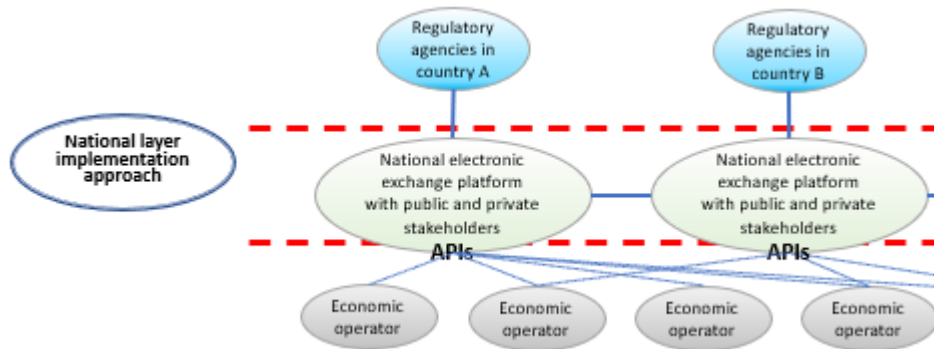
5. *Architecture principles of data exchange models*

The following principles should be considered when building the foundation of seamless data flow along a digital trade and transport corridor in the region.
  (a) Decentralized vs centralized architectural models,
  (b) Trust and security of data models:
    i. Mutual recognition of participating authorized operators sharing electronic data,
    ii. Verifiable credentials,
    iii. QR codes.
  (c) Organizational structure: national platforms.
  (d) Architecture principles:
    i. General architecture principles – keep the architecture:
      o holistic (including all modes of transport, linked to information exchange in the whole supply chain),
      o short and simple (the KISS principle),
      o scalable,
      o modular,
      o guaranteeing maintenance and development,
      o sustainable.
    ii. Basic architecture principles should define:
      o data sovereignty,
      o decentralized approach with common rules of interaction,
      o trust and non-repudiation by default,
      o security requirements and appropriate authentication rules defined,
      o access rights and obligations defined,
      o once-only submission of data,
      o open specifications and standards, providing for interoperability,
      o technological neutrality,
      o easy deployment, integration and transition,

o support during a transition period.

6. *Develop an implementation plan*

An implementation plan may include such elements as:

(a) Identify the specifics of a particular route (SPECA, trans Caspian Corridor, Middle Corridor): types and volumes of goods moved across borders, levels of digitalization of information flows, level of take-up of the UN standards:

  i. Determine the scope and boundaries of the project (which documents will enter the digitalization test); possibly focus on a single product or a set of related products for a pilot testing,

  ii. Determine the composition of the information flow in this corridor:
  - o documents or datasets relevant for the digitalization project identified and made available, including all or most of the four relevant modes of transport (rail, road, maritime and air),
  - o interaction processes defined,
  - o IT solutions to digitalize information flows (existing, under development, or planned),

  iii. Determine the degree of adoption of standards (international, UN/CEFACT, etc.) in IT solutions within the scope of the project,

  iv. Carry out gap analyses in selected countries on their readiness to implement the standards,

  v. Specify the details of the information flow of the corridor:
  - o select/collect datasets from documents,
  - o map datasets to relevant UN/CEFACT reference data models.

(b) Build further interest and political will for the digitalization of information flows along supply chains, including multimodal trade and transport interoperability of data and document exchange, using the United Nations (UN/CEFACT) standards and tools, for example at the SPECA annual events in 2023 under the Chairmanship of Azerbaijan, but also at other events and projects of ADB/CAREC, GIZ, USAID, and other partners.

(c) Finalize the SPECA roadmap for digitalizing a trade and transport route and its plan of action, to be presented for adoption at the SPECA Governing Council and other SPECA fora.

(d) Maintain the discussion platform and network of expertise.

(e) Involve all relevant international and national agencies and business associations dealing with the digitalization of multimodal and intersectoral data and document exchange along supply chains in the countries: agencies responsible for the economy, trade, transport, finance, customs, etc.

(f) Each country to nominate a focal point for the overall initiative and the UN pilot projects. Establish a network of focal points.

(g) The SPECA Working Group on Trade to strengthen work on digitalization of data and document exchange along supply chains in the region, building synergies with the SPECA Working Groups on Innovation and Technology and Sustainable Transport.

(h) Strengthen work on training and raising the capacity of experts in the SPECA countries to understand and implement the UN/CEFACT standards and reference data models in the process of digitalization of data and document exchange in the region.

(i) Develop and initiate pilot implementation projects, e.g., digital twin projects on trans-Caspian movements of goods. UNECE and the Governments of the SPECA countries to collaborate on securing funding from development partners and other sources for these pilot projects.

(j) Involve development partners in the implementation.

(k) Carry out gap analyses in selected countries.

(l) Prepare and carry out training events on the use of the UN/CEFACT standards while establishing digital multimodal corridors; update and use the e-learning tools on the rollout of these standards and their application in the digital transformation of supply chains in the region.
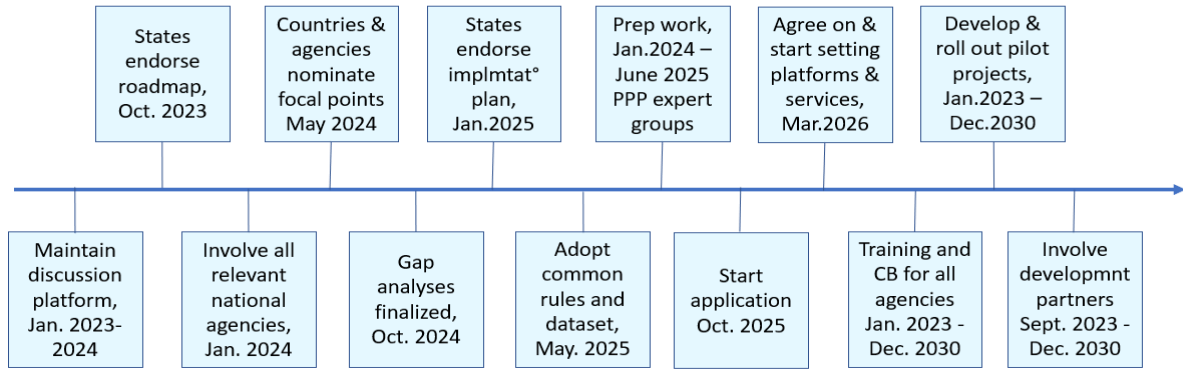
(m) Carry out limited implementation testing projects (e.g., digitalization of a railway consignment notes, to which more documents can be added).

(n) Start small (digitalization of one or two documents), then spill over to other areas and documents for digitalization, using the UN standards.

7. *Connection to the regulatory systems*

It is of key importance that the business information collected from traders and transporters is standardized and structured, so that data with better quality can be fed into the IT systems of the relevant regulatory agencies. This is in line with the main expert recommendations foreseeing a movement from exchange of documents (paper or electronic) to exchange of datasets / electronic transferrable records in the process of digital transformation of information exchange in the international supply chains. The collection of data closest to the source (information available from business) is a key principle in this concept of digital transformation of the supply chain. This is essential from the perspective of the concept of a data pipeline, which will be central for the digital transformation of supply chains in the foreseeable future. In this sense, the government agencies, business community and international partners active in the region are invited to support the implementation of the following recommendations:

(a) Organize the implementation of the eTIR system in a concerted manner in the countries along the SPECA / Trans-Caspian route to facilitate Customs-to-Customs data exchange for transit.

(b) The Customs agencies to consider developing electronic services on collecting and processing data based on documents accompanying goods moved by various modes of transport; adapt data from these documents and use it in the place of summary import declarations.

(c) Further harmonize data in the Customs systems of the countries with the WCO and UN/CEFACT data models. Use the Cross-Border Management Reference Data Model of UN/CEFACT as a key reference to link the trade and transport (business) data and documents with the regulatory - Customs and other regulatory agency - IT systems.

(d) Eliminate legal impediments to regulatory agencies and other stakeholders, collecting required information based on electronic transport documents aligned to international standards, such as the WCO Data Model and the UN/CEFACT semantic standards and reference data models. Use this information as legally valid to facilitate electronic (paperless) exchange of information.

(e) Define rules for information exchange between Customs services and transport companies, associations, and government agencies; enhance the organizational structures for such information exchange. Such agencies as the Coordinating Council of the Republic of Azerbaijan on Transit Freight can be used to facilitate this process.

(f) Optimize internal procedures in these structures based on international standards to ensure interoperability between sectors, modes of transport and with Customs and other regulatory agencies. For maritime transport, explore models for developing maritime single window. Support the work on alignment of data exchange in port community systems in the Caspian and Black Sea regions to the UN/CEFACT MMT RDM as a major tool for achieving interoperability of data and document exchange between ports and the hinterland.

(g) All countries to accede to international instruments facilitating the digitalization of international information flows for data and documents, such as the e-CMR Protocol and Montreal Convention of 1999.

(h) Organize interaction with foreign shipping agencies that are not members of resident associations but carry out activities in the territories of the SPECA and other countries; develop a simple mechanism to provide trusted cross-border information to such companies, even before a procedure of cross-border recognition of electronic digital signatures (EDS) is developed in the region.

(i) Prioritize work on modern methods of ensuring trust and security in multimodal and intersectoral exchange of information.

8. *Timetable*

States endorse roadmap, Oct. 2023

Countries & agencies nominate focal points May 2024

States endorse implmtat° plan, Jan.2025

Prep work, Jan.2024 – June 2025 PPP expert groups

Agree on & start setting platforms & services, Mar.2026

Develop & roll out pilot projects, Jan.2023 – Dec.2030

Maintain discussion platform, Jan. 2023-2024

Involve all relevant national agencies, Jan. 2024

Gap analyses finalized, Oct. 2024

Adopt common rules and dataset, May. 2025

Start application Oct. 2025

Training and CB for all agencies Jan. 2023 - Dec. 2030

Involve developmnt partners Sept. 2023 - Dec. 2030

Annex I: Practical steps and elements to be included in the roadmap:

Timeline	Outputs
2022-	1. Build political will to create digital trade and transport corridor, using global (UN) standards 1.1. Organize a hybrid (physical and online) high-level policymaker forum on the digitalization of information flows in international supply chains to discuss further elaboration and implementation of the package of standards for digital multimodal and multisector information exchange. Note: This event was organized for the SPECA countries as the *International High-level Conference "Digital Transformation of Information Exchange in Supply Chains Using United Nations Standards"* held in Baku, Azerbaijan, on 31 October 2022. 1.2. Maintain the momentum at important SPECA events, such as the SPECA Economic Forums and Governing Council sessions in 2023, 2024 and 2025. Build synergies with other important players, such as the key UN agencies dealing with standards for trade documents and digitalization (UNECE, ICAO, IMO), international organizations (the European Commission, the Eurasian Economic Commission, GUAM, TRACECA, ADB, OSJD, OTIF, etc.), and business associations such as IATA, CIT, IRU, etc., or regional organizations and initiatives, such as TRACECA, GUAM, ECO, CAREC, BSEC, etc. The objective is to secure buy-in for the implementation of the package of standards for the digital transformation of multimodal data and document exchange. 1.3. Follow-up through a series of technical capacity-building workshops for policymakers and experts dealing with digital corridors to present the vision and methodology of digital multimodal transport corridor development building on a common methodology, roadmap and eLearning course, present them to the stakeholder community, and build capacity for implementation.
by Dec. 2023	2. Develop a methodology for the implementation of the global (UN/CEFACT) standards for multimodal data and document exchange, working with UNECE, ESCAP, and other partner agencies, for the implementation of the standards, as well as a guide for the use of this methodology/strategy.
2023-2024	3. Develop further teaching materials and the simple e-learning course on the use of UN/CEFACT standards for digitalization of multimodal data and document exchange. 3.1. Develop, use at seminars, and disseminate a training material on (a) how to implement the package of standards for electronic document equivalents aligned to the UN standards, and (b) how to develop and use data models for digital multimodal transport corridors based on the UN/CEFACT Multimodal Transport Reference Data Model (MMT RDM) (to be published in English and Russian). 3.2. Develop further the simple e-learning course: a set of recorded PPt presentations, arranged in a logical manner.
2023 -	4. Carry out national gap analyses of the readiness of the SPECA countries, Georgia, Moldova, Ukraine, Belarus, etc., to implement electronic document equivalents for key documents accompanying goods, notably: electronic maritime waybill, road, rail, and air consignment notes, invoices, certificates of origin, or other documents.
May-June 2024	5. Organize a capacity-building event for Port Community Systems along the Middle Corridor focused on aligning digital data and document exchange with reference to the UN/CEFACT MMT RDM.

2023-2025	6. Organize capacity-building on regional and national levels.
	   6.1. Organize two regional capacity-building workshops for all target countries with economies in transition to take stock of all the streams of action and explore ways of advancing implementation (in 2023 -2025). Assist the beneficiary countries and the business community to identify (a) business requirements for digitalization of concrete documents and sectors of the supply chain and (b) availability of technical skills to implement the international standards in digital multimodal transport data and document exchange.
	   6.2. Organize national training workshops to (a) identify who is doing what in the countries regarding digitalization of supply chains, (b) train stakeholders on how to use the global standards in their practical work on the digitalization of data and document exchange – notably, how to use the standards when they prepare concrete electronic document equivalents or systems of digital information exchange. These seminars would build national capacities and address key issues at the national level, review the substance and implementation of the methodology for developing digital multimodal transport corridors aligned with international standards (UN/ESCAP to lead a workshop in coordination with UNECE and UN/CEFACT for a combination of counties which also have UN/ESCAP membership). These seminars may involve neighbouring countries and will be focused on concrete issues / groups of countries / corridors / modes of transport. The participants in these seminars will depend on the concrete focus of the seminars.

2024-2026	7. Organize further pilot projects
	   7.1. Organize one pilot project with a sectorial or regional organization (or a digital corridor) with three or more countries to digitalize a trade or transport document used in the countries (e.g., the SMGS or CIM/SMGS railway consignment note, the FIATA multimodal Bill of Lading, the ICC Certificate of Origin, cross-industry invoice, or another document). Cooperate with partner organizations (ICAO, IATA, OSJD, TRACECA, national railways, FIATA, or other agencies) to ensure their buy-in for practical implementation of the standards.
	   7.2. Organize two multi-country and multi-stakeholder pilot projects in a digital corridor or in the implementation of concrete documents with partner implementing entities – UN/ESCAP, ICAO, UN/CEFACT, TRACECA, or others, for a combination of countries. The exact projects will be defined with the countries and the partners and will be demand-driven.

2024 and 2025	8. Organize a stock-taking multi-stakeholder capacity-building and/or policymakers meeting to take stock of the implementation of this roadmap and in 2024 or 2025 and a follow-up meeting in 2026 or 2027.

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