Acceptance of electronic freight transport information


This briefing provides an initial analysis of the strengths and weaknesses of the European Commission’s impact assessment (IA) accompanying the above-mentioned proposal, adopted on 17 May 2018 and referred to the European Parliament’s Committee on Transport and Tourism.

The IA notes the increase by almost 25% of EU freight transport over the 1995 to 2015 period and an expected further increase of 51% between 2015 and 2050. As regards transport documents, in 99% of cross-border operations, paper documents are required at some point. Handling paper documents is more costly and creates an administrative burden and inefficiency in transport logistics chains. The IA argues that the use of electronic documents in this respect would improve transport efficiency, especially in multimodal and cross-border transport, and facilitate the functioning of the single market. However, the existing legal framework for acceptance of electronic freight transport documents in the EU is fragmented and incomplete. The IA refers to several calls and initiatives to promote acceptance and use of electronic documents in transport (IA, pp. 7-11).

This proposal, which is included in the Commission’s 2018 work programme and is part of the third set of actions of the Europe on the Move initiative, aims to foster the electronic exchange of documents/information in freight transport, in particular for cross-border and multimodal operations.

Problem definition

The problem analysis is supported by stakeholder surveys carried out in the framework of the IA supporting study. The IA defines the main problem as ‘the low and varying degree of acceptance by authorities of information or documents electronically communicated by the business as evidence of compliance with regulatory conditions for the transport of goods on the different EU Member States’ territory’ (IA, p. 11). It identifies two mutually reinforcing problem drivers (D), which are D1) ‘a fragmented legal framework setting inconsistent obligations for authorities to accept electronic information or documents, and allowing for different administrative practices to implement them’; and D2) ‘a fragmented IT environment characterised by a multitude of non-interoperable systems/solutions for electronic transport information and documentation exchange, both for business-to-administration and business-to-business communication’ (IA, p. 11). To illustrate the problem, the IA presents a problem tree, describes different inspection practices of Member States and gives several concrete examples (IA, pp. 12-17 and 111-113). It can be noted that acceptance problems emerge regarding not only authorities but also commercial parties, such as banks and insurance companies. Stakeholders also report non-acceptance problems with third country authorities (IA, pp. 15-16). The current situation is fragmented and uncertain for companies regarding acceptance of electronic documents, as it varies depending on the Member State, the transport mode and the type of documents (IA, p. 20). For example, the degree of digitalisation differs across transport modes, with the highest uptake of e-documents in the aviation sector, and lowest in maritime and inland waterway transport. The IA quantifies the estimated time (387 million hours) and administrative costs (€7.9 billion) of processing freight transport information in 2018.
based on the IA support study. The IA notes that supply chain organisation could be ‘significantly
optimised, if real-time data on the goods being moved were available’ but does not discuss this
further. In multimodal transport operations, stakeholders consider that it would be possible to save
three times more (per shipment) from the digitalisation of existing paper-based processes
compared to a unimodal operation (IA, pp. 18-19).

In the baseline scenario, which builds on the updated EU reference scenario (2016), the digitalisation
agenda would be promoted in the context of the EU digital single market strategy, but without a
targeted EU initiative, Member States would continue slow and selective mode-specific recognition
of electronic documents, by unilaterally adapting their legislative frameworks. Furthermore, road
transport would maintain its dominant role within the EU, given also the expected 27 % increase in
road freight by 2030. The IA finds that the status quo would not support the target for modal shift,
defined in the European Commission's 2011 white paper on a single European transport area, as
paper-based processes generate costs and inefficiencies for companies, in particular where a
change in transport mode or border crossing is involved (IA, pp. 19, 27-29 and 79-96).

Objectives of the initiative

The general objective of the initiative is to ‘contribute to removing barriers to the smooth
functioning of the Internal Market, to the modernisation of the economy and to the greater
efficiency of the transport sector, through enabling wider use of digital technologies’. To achieve
the general objective, the following specific objectives have been defined: SO1) ‘ensure the
establishment, in all EU Member States, of the obligation of acceptance of electronic cargo transport
documents/information by all relevant public authorities’; SO2) ‘ensure the uniform implementation
by authorities of the obligation of acceptance’; and SO3) ‘ensure the interoperability of IT systems
and solutions for electronic exchange of cargo transport information, in particular for business-to-
administration (B2A) regulatory information communication’ (IA, pp. 29-30). According to the Better
Regulation Toolbox (tool#16) the objectives should be specific, measurable, achievable, relevant
and time-bound (S.M.A.R.T. criteria). While they appear to comply with most of these criteria, the
defined objectives are not explicitly time-bound, although, in the assessment section, frequent
reference is made to the 2018 to 2040 timespan (‘full-deployment horizon of electronic transport
documents 2018-2040’). Operational objectives are presented, after the selection of the preferred
option as required by the Better Regulation Guidelines, in the monitoring and evaluation section.
The operational objectives are accompanied by indicators that appear to match the defined
objectives (IA, pp. 60, 97-100).

Range of options considered

According to the IA, policy measures have been identified and screened against the criteria of legal,
political and technical feasibility and effectiveness, efficiency and proportionality (IA, pp. 31-32 and
114-124). The four policy options, in addition to the baseline, have been developed from the
retained measures. The options differ in their scope and depth of intervention (non-regulatory and
regulatory measures). The range of options is sufficiently broad and the IA provides a good
presentation of the policy options, which are set out below.

Option 1 (PO1) would oblige the Member States to adhere to the relevant international conventions
(the e-CMR protocol (road transport), the CMNI convention (inland waterways) and the Hamburg
Rules (maritime transport)) concerning the legal equivalence of electronic contracts of carriage with
voluntary harmonisation of implementation.

In Option 2 (PO2), the Member States’ authorities would be obliged by an EU legal act to accept
electronic transport contracts, providing the necessary information is supplied to prove compliance
with regulatory requirements and that the electronic means comply with specific requirements. This
option includes minimum harmonisation of implementation.

Option 3 (PO3) (the preferred option) obliges the Member States' authorities to accept all regulatory
cargo transport information or documentation (and not only contracts of carriage, as in PO2), which
Acceptance of electronic freight transport information is evidenced as proof of compliance by EU legislation. This option comprises partially harmonised implementation, which would include mode-specific technical specifications for B2A (business-to-administration) communication.

Option 4 (PO4) would be the same as PO3, except that it would aim to harmonise implementation, ensuring full interoperability of the information technology (IT) systems used for e-transport information and documentation exchange. Consequently, a single set of technical specifications would be required for all transport modes.

The options are illustrated in the following table. The preferred option is indicated in blue.

<table>
<thead>
<tr>
<th>Policy measure</th>
<th>PO1</th>
<th>PO2</th>
<th>PO3</th>
<th>PO4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance (Driver 1/Special objective 1)</td>
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<tr>
<td>Member States’ adherence to international contracts of carriage conventions</td>
<td>R</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Amendment of international conventions to remove the limitation of applicability of the provisions on the legal equivalence of e-transport contracts</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Establishment of general obligation for Member States’ authorities to accept electronic means for B2A information/documentation</td>
<td>-</td>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Inclusion in relevant bilateral agreements (EU - third countries) of provisions on mutual acceptance of electronic information/documentation</td>
<td>-</td>
<td>R</td>
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<tr>
<td>Awareness raising, training and exchange of experience</td>
<td>S</td>
<td>S</td>
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<tr>
<td>Requirements for validity/acceptance (Driver 1/Special objective 1)</td>
<td></td>
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<tr>
<td>Amendment of international conventions to align provisions on the validity of electronic contracts of carriage</td>
<td>S</td>
<td>S</td>
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<tr>
<td>Establishment of requirements for acceptance by authorities of B2A information made available electronically</td>
<td>S</td>
<td>R</td>
<td>R</td>
<td>R</td>
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<tr>
<td>Inclusion of provisions on common requirements for acceptance in relevant bilateral agreements (EU - third countries)</td>
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<td>R</td>
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<tr>
<td>Alignment of administrative procedures (Driver 1/Special objective 2)</td>
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<tr>
<td>Review of administrative practices for checks by authorities</td>
<td>S</td>
<td>S</td>
<td>R</td>
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<tr>
<td>Adoption of aligned procedures for regulatory information checks</td>
<td>S</td>
<td>S</td>
<td>R</td>
<td>R</td>
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<tr>
<td>Technical specifications for interoperability (Driver 2/Special objective 3)</td>
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<tr>
<td>Establishment of technical specifications for the implementation of the requirements for acceptance of B2A e-information/documentation</td>
<td>S</td>
<td>S</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Establishment of an EU transport data dictionary/data model</td>
<td>S</td>
<td>S</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Mode-specific technical specifications</td>
<td>S</td>
<td>S</td>
<td>R</td>
<td>-</td>
</tr>
<tr>
<td>Technical specifications common to all transport modes</td>
<td>S</td>
<td>S</td>
<td>-</td>
<td>R</td>
</tr>
</tbody>
</table>
Scope of the impact assessment

The IA provides an assessment of the policy options against the baseline, outlining in particular their expected economic, social and environmental impacts, as required by the Better Regulation Guidelines. The options are also compared in terms of effectiveness, efficiency and coherence. The analysis is based on the support study, modelling with the PRIMES-TREMOVE transport model and stakeholder consultation. Economic impacts comprise both costs and administrative cost savings. The compliance, administrative and enforcement costs result from adjustments to the requirements of legislation, implementation and application. The one-off costs relating to hardware and software systems would depend on a company’s size. The IA provides a cost assessment that is differentiated by company size, as required by the Better Regulation Toolbox (Tool #22). Total compliance costs for businesses are estimated at around €473 million under PO1, €2.676 million under PO2 and €4.375 million under PO3 and PO4 between 2018 and 2040. The compliance costs for authorities relate to investments in IT systems, which are not quantified, and costs concerning certification of solution providers. PO3 and PO4 involve more investment as they cover a wider range of information and documentation, but common interoperability requirements in PO4 mean that costs for authorities would be lower than in PO3. The costs depend on the level of digitalisation and vary accordingly by Member State. The costs of certifying solution providers would be limited in PO1 and PO2, whereas in PO3 and PO4 they would be €17 million (for 2018 to 2040). The estimated enforcement costs amount to €251 million in PO2, PO3 and PO4, whereas in PO1 no significant impact is expected (IA, pp. 41-50). As regards the uptake of electronic means for transport documentation and information, PO3 and PO4 have the highest level of digitalisation for all transport modes and cover all relevant documents/evidence concerning the information required, and not only the contracts of carriage (IA, pp. 41-42). The increased use of e-documents and information would be assumed to lead to significant operational cost savings for transport operators. In particular, under PO3 and PO4 it would result in a costs reduction of about €12 billion in the 2018 to 2040 period (e.g. more efficient transport operation management, fewer errors, faster invoicing). The expected need for IT solutions in PO3 and PO4 would increase the number of IT providers, which would enhance competition and reduce IT system costs. The shipment process is expected to become easier, delivery times shorter and prices lower for consumers. The IA does not present quantified estimates of these assumed impacts. Total administrative cost savings for businesses relative to the baseline over the 2018 to 2040 period would be €1.5-2 billion under PO1, €12.9-17.7 billion under PO2 and €19.7-26.8 billion under PO3 and PO4 (pp. 43-45, 50).

As regards social impacts, the IA mentions the expected reduction in workload and overtime work, which is quantified for all options, and a decrease in jobs related to the processing of paper documents. The IA refers to the stakeholders’ feedback, according to which the employees whose work would become redundant ‘will be more efficiently redeployed in higher-value tasks’, and notes that these kinds of decisions are subject to internal decision-making processes in each company. The IA notes that the negative impact on employment would be expected to be offset to a large extent by overall sectoral growth. In addition, while employment within public administrations would remain the same, as inspections would not be significantly reduced, greater demand for IT solutions would create more opportunities for IT providers (increase in high-skilled employment). Nevertheless, the IA concludes that ‘the overall employment effect is therefore expected not to be
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different from the baseline, under any option' (IA, p. 51). The description of social impacts would have benefited from more detailed explanation as it is to some extent confusing.

Regarding environmental impacts, the most important efficiency gain in the use of natural resources would be linked to the more efficient transport chain. However, the IA openly notes that this impact is difficult to estimate. A large number of stakeholders consulted (more than 70 %) expected a reduction of around 10 % in annual paper consumption (IA, pp. 52-53). The IA does not mention impacts on the paper industry. As regards the modal shift and congestion costs, options PO2, PO3 and PO4 would have almost the same modal-shift level, as PO2 would lead to a 0.2 % decrease in road modal share (around 1 200 million tonnes per kilometre shifted away from road), compared with PO3 and PO4, which would decrease the road share by 0.3 % (around 1 300 tonnes per kilometre shifted from road). The progress in the modal shift would decrease congestion costs most under PO3 and PO4 (€299 million) in 2018 to 2040. The IA notes that changes in the relative costs between transport modes is the main driver for modal shift (IA, pp. 47-48). As a result of the expected progress in modal shift, the IA estimates savings in CO2 emissions at around 1 091 thousand tonnes under PO1, 1 588 thousand tonnes under PO2 and 1 332 thousand tonnes under PO3-PO4 in the 2018 to 2040 period. External costs of air pollution would decrease under PO1 (-€41 million) and PO2 (€12 million), but increase under PO3 and PO4 (both €41 million, in the 2018 to 2040 period), because of the increase in the waterborne transport activity, whereas the emissions factors per tonne-kilometre for air pollutants like NOx and particulate matter for waterborne transport are higher than for road and rail transport’ (IA, p. 52). It would have been worth going into this in more detail in order to explain the increase in air pollution, in particular, given the modal shift objectives. Moreover, the health aspect of this impact could have been discussed.

The IA provides a sensitivity analysis, which did not result in changes to the ranking of the policy options. Risks are discussed in the context of innovation impacts and identified as relating in particular to the security and confidentiality of data registration and communication systems (IA, pp. 50, 57-59).

When comparing the options, the IA considers that in terms of costs and benefits, PO3 and PO4 would be quite similar. PO3 and PO4 would be more effective than PO1 and PO2 on account of the wide information coverage in the obligation of acceptance and the broader specification of the requirements for acceptance of electronic means. The main difference between PO3 and PO4 is the extent to which these technical specifications would be harmonised across the different transport modes, to ensure interoperability. Under PO4 the specifications would be common, whereas under PO3 there would be a minimum set of common specifications but other specifications would take into account transport mode specificities. When comparing and making a choice between these options, proportionality aspects and stakeholders' views have been taken into account. The stakeholders representing the maritime, aviation and rail sectors have voiced concerns about the ‘one-size-fits-all’ approach and the mode-specific investments that have already been made in these sectors. In preferred option PO3, the cross-modal common technical specifications would be defined on the basis of a specific impact assessment and adopted by means of implementing legislation. It is assumed that a ‘sufficient level of interoperability can be ensured without requiring full harmonisation of requirements across all transport modes’ (IA, pp. 59-60, 73-74).

Subsidiarity / proportionality

The legal basis is Article 91 and 100(2) of the Treaty on the Functioning of the European Union (TFEU). Given the different practices and requirements of the Member States in relation to electronic freight documents, the IA notes that the most appropriate level is the EU level to set a uniform approach and common standards for acceptance of electronic freight documents (IA, p. 29). Proportionality is discussed in relation to different measures and when making a choice between PO3 and PO4. For example while the initiative would require public authorities to accept the electronic information/documents, it does not oblige businesses (business-to-administration or
business-to-business) to use the electronic form (IA, pp. 57-58). No reasoned opinions were submitted by the national parliaments by the subsidiarity deadline of 14 September 2018.

Budgetary or public finance implications

The costs for public authorities of preferred option PO3 are estimated at €268 million for the 2018 to 2040 period, including €17 million for certification of solution providers and €251 million for enforcement. The estimated investment costs for public authorities in connection with IT systems are not quantified. For companies, the one-off compliance costs would be €4.4 billion. Administrative cost savings for companies are estimated at €19.7 billion in the 2018 to 2040 period.7 Furthermore, reduction of costs is expected in relation to transport operation costs ($€11.9 billion), CO2 emissions ($€74 million) and external congestion costs ($€299 million) (IA, pp. 75-77).

SME test / competitiveness

The IA provides a differentiated assessment of the costs according to the company's size, including also micro businesses and small and medium sized enterprises, as required in the Better Regulation Toolbox (Tool #22) (IA, p. 45). The Commission has carried out a SME test and, in the SME panel survey, over 80 % of the respondents expect benefits due to lower administrative costs as a result of reduced operational time and simplified business processes. Higher benefits are expected especially in the road sector, where 90 % of the operators are microbusinesses. Stakeholders' feedback indicates that compliance costs would depend on the company's size - bigger companies are expected to invest more than smaller enterprises. These one-off outlays are expected to bring net benefits (IA, pp. 46-47). From the competitiveness point of view, the IA considers that wider use of electronic transport information and documents would make shipments easier, cheaper and faster. The expected need for IT solutions (interoperability) would lead to an increase in the number of IT providers, which would enhance competition and decrease IT system costs for operators. This is also considered to have positive impact on SMEs (IA, p. 50, 56).

Relations with third countries

Under the preferred option, the international conventions concerning mode-specific contracts of carriage are included as support measures, aimed for example at ensuring voluntary adherence by all Member States to the international conventions. The relevant bilateral agreements (between the EU and third countries) are included as regulatory measures, aiming to include provisions on mutual acceptance of electronic information/documentation, common requirements for acceptance and common technical specifications for interoperability. The goal is to ensure a uniform global framework to further facilitate B2B (business-to-business) use of electronic contracts and, especially, in international transport originating or ending outside the EU (IA, pp. 32-33, 38-40).

Simplification and other regulatory implications

According to the IA, the initiative is expected for example to reduce delivery times and costs. The IA also discusses coherence regarding the options and in relation to other EU policy objectives and current and forthcoming legislation. The initiative would decrease barriers to the internal market and to multimodality in transport and enhance the development of the digital single market. Regarding the revision of the Maritime Reporting Formalities Directive, the IA notes that if its scope were to overlap with this initiative, mitigating measures to ensure coordination would be taken, although the IA does not provide information as to what these mitigating measures might look like (IA, pp. 9-10, 56-57 and 105-109).8

Quality of data, research and analysis

The IA is underpinned by an external study, an expert group, a broad stakeholder consultation and the use of modelling (IA, pp. 61, 63-64).9 The IA makes both a quantitative and a qualitative assessment, and openly notes the incompleteness of data especially in terms of distribution of costs between different stakeholders (i.e. operators, shippers), which has been offset by the use of
assumptions and qualitative evidence. The IA explains the methodology used in Annex 4 (IA, pp. 79-96). The IA provides a solid source of data, which is comprehensively referenced, although there could have been more links. In particular, the IA does not provide a link to the supporting study. The IA points out that the estimate of administrative costs savings for companies is based on the assumption of a completely paperless scenario (IA, p. 41). However, as this initiative would not forbid the use of paper documents, it is possible that, as regards freight information/documents, paper formats and paper prints will continue to be used to some extent. In addition, certain impacts could have been explained in more depth, as for example social (employment aspects) and environmental impacts (modal shift, air pollution) would have benefited from more detailed description.

Stakeholder consultation

The Commission conducted broad stakeholder consultations, a summary of which is provided in a dedicated Annex of the IA, as required in the Better Regulation Guidelines. The inception impact assessment, on which feedback could be given between 18 May 2017 and 15 June 2017, resulted in eight replies. The open public consultation (OPC) ran between 25 October 2017 and 18 January 2018, fulfilling the 12-week requirement of the Better Regulation Guidelines. It generated 100 responses from 22 countries (including 20 EU Member States) representing different stakeholder groups. In the SME panel survey, carried out between 24 November 2017 and 22 January 2018, there were 267 responses from 22 EU countries, although 75% originated from five countries (France, Italy, Lithuania, Poland and Portugal). In addition, the Commission organised workshops, targeted surveys, stakeholder meetings and interviews. On the whole, stakeholders voiced support for the initiative and the need to ensure interoperability of different technical solutions. It appears that the views expressed by the stakeholders were for the most part taken into account, and the choice of preferred option (between PO3 and PO4) reflected the stakeholders’ views (IA, pp. 65-72).

Monitoring and evaluation

The IA explains the monitoring and evaluation arrangements and presents the operational objectives (IA, pp. 60 and 97-100). The provisions concerning monitoring and evaluation were included in the legislative proposal along with the corresponding indicators.

Commission Regulatory Scrutiny Board

The RSB issued a positive opinion with reservations on 9 March 2018 on a draft IA. The RSB mainly requested further information about the scope, implementation of the policy options, cost and impact estimates, the interplay between the initiative and parallel EU initiatives, international conventions and bilateral agreements. As required in the Better Regulation Guidelines, the IA explains in Annex 1 how the RSB considerations have been addressed (IA, pp. 61-63). Although it appears that the remarks have been covered to a great extent, the IA could have provided more detailed explanations on the impact estimates, for example, regarding modal shift (air pollution).

Coherence between the Commission’s legislative proposal and the IA

The legislative proposal appears to follow the IA’s recommendations (PO3).

Conclusions

The IA, which has been supported by comprehensive stakeholder consultations and a supporting study, uses both quantitative and qualitative assessment. Overall, the IA provides a good presentation of the problems, objectives and policy options. The range of policy options appears sufficiently broad and the IA also explains the implementation of the measures. An SME test was conducted in the assessment. It appears that the stakeholders’ views were taken into account in choosing the preferred option. It would have benefited the analysis, had the IA explained the estimated impacts in more depth, in particular concerning expected social and environmental impacts.
ENDNOTES

1 The term 'transport documents' refers to documents that 'constitute the contract of carriage between senders and transporters' (such as consignment notes, waybills or bills of lading). The initiative covers 'goods related documents'. The other group of freight transport documents, concerning means of transport (e.g. certificate of vehicle registration) and the personnel manning them (e.g. qualification to drive or conduct a vehicle of a certain type), are not included in the scope of this initiative as these do not need to be exchanged between commercial partners (IA, p. 7).


4 The modal shift target: to shift 30 % of long distance road freight (over 300 km) to rail or waterborne transport by 2030 and more than 50 % by 2050.


7 In Table 6.4. (p. 45), the IA refers to €19.7-26.8 billion between 2018 and 2040, corresponding 75-102 million work hours.


9 The external study 'State of play and barriers to the use of electronic transport documents for freight transport: Options for EU level policy interventions (2018)' was prepared by Ecorys/Grimaldi/ISL; the Digital Transport Logistics Forum (DTLF; platform of transport and logistics experts set up by the Commission); PRIMES-TREMOVE model by ICCS-E3MLab used in the analysis and Ecorys model was used for regulatory costs for businesses and public administrations.

This briefing, prepared for the Committee on Transport and Tourism (TRAN), analyses whether the principal criteria laid down in the Commission's own Better Regulation Guidelines, as well as additional factors identified by the Parliament in its Impact Assessment Handbook, appear to be met by the IA. It does not attempt to deal with the substance of the proposal.

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