

EADs and ETAs: Added value to the construction sector

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Written by CSIL – Centre for Industrial Studies

Foreword

This report is part of the research project “EAD and ETA added value” carried out by CSIL – Centre for Industrial Studies – for the European Organisation for Technical Assessment (EOTA).

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Quotation is authorised as long as the source is acknowledged.

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List of Abbreviations

AB(s)	Approval Bodies
AVCP	Assessment and Verification of Constancy of Performance
CEN	the European Committee for Standardization
CIS	Community Innovation Survey
CPD	Construction Product Directive
CPE	Construction Product Europe
CPR	Construction Products Regulation
CUAP	Common Understanding of Approval Procedure(s)
DG GROW	Directorate General for Internal Market, Industry, Entrepreneurship and SME
DoP	Declaration of Performance
EAD(s)	European Assessment Document(s)
EC	European Commission
EDD	Eco-Design Directive
EEA	European Economic Area
EED	Energy Efficiency Directive
EFTA	European Free Trade Agreement
ELD	Energy Labelling Directive
EMCD	Electromagnetic Compatibility Directive
EOTA	European Organisation for Technical Assessment
EPBD	Energy Performance of Buildings Directive
ETA(s)	European Technical Assessment(s)
ETAG(s)	ETA Guideline(s)
EU	European Union
FIEC	European Construction Industry Federation
hEN(s)	harmonised standard(s)
hTs	harmonised technical specifications
LVD	Low Voltage Directive
MD	Machine Directive
NB(s)	Notified Body(ies)
NLF	New Legislative Framework
OECD	Organization for Economic Co-operation and Development
OJEU	Official Journal of the European Union
PAC	Product Area Code
R&D	Research and Development
RESD	Renewable Energy Sources Directive
RTAB	Responsible TAB
SME(s)	Small-Medium Enterprise(s)
TAB(s)	Technical Assessment Bodie(s)
TFEU	Treaty on the Functioning of the European Union

Executive summary

Objectives

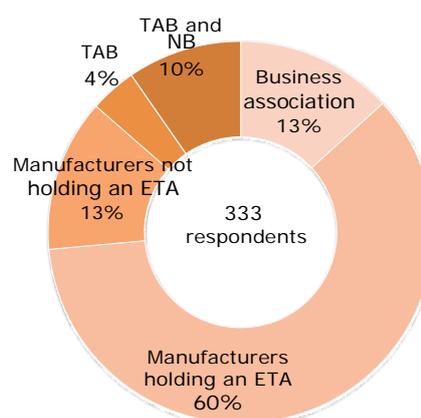
This report provides an assessment of the **added value and relevance of the European Assessment Documents (EADs) and European Technical Assessments (ETAs)** as well as of the EAD development process, coordinated by the European Organisation for Technical Assessment (EOTA) and implemented in collaboration with its members, the Technical Assessment Bodies (TABs). The overall objective is to identify possible areas of improvement for EOTA to achieve the goals of the Construction Products Regulation (CPR) and deliver a better service to the construction sector.

Methodology

Methods of analysis include:

- A **desk review** of regulatory documents and previous studies and evaluations of the CPR and EOTA;
- An **online survey** to collect a diversified set of information and opinions on the topic of this study. A total of 333 stakeholders participated in the survey;
- Eight **semi-structured interviews** with stakeholders to complement the analysis and gain deeper understanding.

Number of respondents in the online survey



Main findings

- Between the entry into force of the CPR and 31st December 2019, a **total of 439 EADs** has been adopted. **7,708 ETAs** were developed in the same time period.
- A large majority of the stakeholders interviewed find that the EOTA route is a valuable alternative route to CE marking in the absence of harmonised standards (hENs). Around 70% of the manufacturers and business associations surveyed consider that the EADs largely **meet the manufacturers' needs**.
- The ETA route has a **high standing among construction industry professionals both within and outside the EU**. The ETAs are recognised by the manufacturers and business associations surveyed as important documents that not only allow cross-border trade of CE-marked products, but also improve the manufacturers' reputations, increase their sales and opportunity to access new markets.
- Over time, EOTA has accomplished the tasks assigned to it by the CPR better and better. The stakeholders consulted, i.e. manufacturers, business associations, and TABs, are especially satisfied with the **confidentiality** and **timeliness** of the process, considered effective to ensure faster placement of more innovative

products into the market. More than 80% of the TABs consider that EOTA carries out its tasks effectively.

- The analysis of all the EADs developed so far confirms that the EADs tend to be more numerous in some product areas than others. Over 80% of the TABs and 70% of the manufacturers and business associations believe that the EADs are more relevant and numerous for **products characterised by higher innovativeness and larger product variety**.
- About 73% of survey respondents (manufacturers, business associations, and TABs) agreed that the EOTA route contributes to enhancing manufacturers' potential for product innovation. A considerable share of respondents (between 65% and 90%, depending on the type of stakeholder) considers that **the EOTA route targets, at least partly, new-to-the-world or improved products**. The length of the hENs' development process is not aligned with the constant incremental innovations typical of certain product areas and therefore makes the EOTA route more relevant to the needs of manufacturers of such products.
- Building on official definitions of innovation existing in the literature, this report proposes a **simple methodology to assess the degree of innovativeness** of the products covered by EADs based on information contained in the EADs themselves. The process would allow distinguishing between radically innovative, moderately innovative, incrementally innovative or non-innovative products.
- Beyond the issuing of ETAs, nearly 60% of the TABs have been involved in the development of EADs. **The TABs significantly differ from one another in terms of available human and financial resources as well as in range of expertise**. This can explain why some TABs are more active than others. The checklist for the TABs and the establishment of a technical quality management team in the EOTA secretariat have contributed to improving the quality of the EADs submitted to the European Commission. This improvement is expected to reduce, in the near future, the time required for revisions and approval.
- The degree of overlap and conflict between the EADs and existing hENs is limited and not regarded as problematic by the stakeholders. **A higher number of EADs in some product areas has been found to be appropriate and necessary to these areas**. This indicates that the EOTA and the CEN route truly complement each other, as they tend to cover different types of products.
- The majority of stakeholders agreed that ETAs could not be replaced by any other third-party body verification without a loss of product credibility. About 70% of respondents indicated that **repealing the EOTA route would be detrimental to the companies' economic performance**.

Recommendations

- There is still room for all stakeholders involved to **further streamline the EAD development process**, through a greater sharing of best practices; more clarity on the process timeline for manufacturers; a faster and smoother revision process by the European Commission; and a significantly timelier EADs citation process in the EU Official Journal by the European Commission. Some of the proposed improvements may require a revision in the CPR.

- Different parties suggested the possible reintroduction of the “**fitness-for-use**” concept in the ETAs, which was removed by the CPR but is considered by the manufacturers to be very useful.
- Given the importance of the ETAs for the industry, it could be considered to give EOTA the means to **monitor the consistency and quality not only of EADs but also of ETAs** and communicate any concerns to the designating Member States and the Commission.
- In line with the CPR provisions, the Member States should make sure that **periodic performance audits on the nominated TABs** are carried out properly. EOTA and/or the European Commission could be involved in this process to make sure that the performance audits are conducted consistently across all Member States.
- The findings of this study, more complete and up-to-date than the previous reports on CPR implementation and EOTA, should be **taken into account in the ongoing discussions about reviewing the CPR**.
- Building on the findings of this study, a **follow-up study** could be initiated by (or in collaboration with) the European Commission to better explore the implications that any change in the CPR could have, and to develop concrete proposals on how the EOTA route could be improved under the different policy options being considered in the review of the CPR. Considering that any legislative amendment increases uncertainty among stakeholders and significantly slows down the standardisation process, the impact of a possible repeal of the EOTA route should be duly assessed against all available evidence.

1.Introduction

1.1. Background

In 2013, the Construction Products Regulation (CPR) (Regulation (EU) No. 305/2011) entered into force as an Internal Market instrument to promote the single market and the free movement of construction products within the European Union (EU), replacing the 1989 Construction Product Directive (CPD) (89/106/EEC).

The CPR lays down harmonised conditions for the marketing of construction products, relying on the use of a Declaration of Performance (DoP) and the CE marking. The products' performance is assessed against a harmonised technical specification (hTs), i.e. a harmonised standard (hEN) or a European Assessment Document (EAD). The harmonised standards are developed by the European Standardisation Organisations (CEN/CENELEC): they provide a technical basis to assess the performance of construction products. If a product is fully covered by an already existing standard, the manufacturer must draw up the DoP, based on this harmonised standard (hEN), and affix the CE marking. Alternatively, if the performance of a product cannot be fully assessed based on any existing hENs, **manufacturers are provided with a voluntary alternative route to CE mark their product.** They can submit a request to a Technical Assessment Body (TAB) to issue a product-specific European Technical Assessment (ETA). The ETA is based on a European Assessment Document (EAD), which is a harmonised technical specification for construction products. The European Organisation for Technical Assessment (EOTA) is responsible for developing the EADs, in collaboration with its members, i.e. the TABs designated by the Member States.¹

The CPR lays down conditions for the placing on the market of construction products by establishing harmonised rules on how to express the performance of construction products in relation to their essential characteristics and on the use of the CE marking on those products (Article 1, Reg. (EU) 305/2011).

Therefore, the CPR has not only provided manufacturers with an alternative route to CE marking, but has also assigned to EOTA a crucial role in achieving the CPR objectives. In this framework, EOTA is increasingly involved in the development of new EADs following the ETAs requests from manufacturers. **Since the CPR came into force until the end of 2019, EOTA has developed 439 EADs based on which the TABs have issued 7,708 ETAs.**²

EOTA is a non-profit organisation, set up under the CPR. It works in close co-operation with the European Commission, the EU Member and EFTA States, the European Standardisation Organisations, and other stakeholders in research and construction.

In 2016, an evaluation was carried out, on behalf of the European Commission (Directorate General for Internal Market, Industry, Entrepreneurship and SME - DG GROW), to investigate the relevance,

¹ EOTA Member States are: Austria, Belgium, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, Turkey.

² Source: EOTA Sharepoint.

effectiveness, efficiency, coherence, and EU added value of EOTA (BRE et al. 2016). The study found that EOTA was not only carrying out the tasks and fulfilling the objectives set out in the CPR, but that, given its resources, it was also useful and effective. However, some concerns were raised as to whether the structure, systems and processes of EOTA were such that the ETAs were developed in a cost-effectively manner, due, among other things, to a lack of transparency about the total development costs. To make EOTA fully support the CPR implementation, BRE et al. (2016) suggested EOTA put greater emphasis in providing clear and detailed guidelines, disseminating best practices and lessons learnt, setting up a Technical-Scientific Committee, and sharing information with relevant stakeholders.

Later in 2019, based on BRE's study of 2016 and further information provided by EOTA, the Commission published an evaluation report to the European Parliament and the Council whose conclusions were to some extent more negative. Despite assessing that EOTA fulfils all its tasks and that the flexibility of the ETA route has supported the transition from the CPD to the CPR, the evaluation report identified a number of structural issues regarding the EOTA route. By looking at the types of cited EADs and the distribution of EADs and ETAs among different product areas and holders (i.e. TABs and manufacturers, respectively), the evaluation report concluded that the EOTA route did not concern innovative products, was serving only a limited number of manufacturers. It also argued that it was performing well only if compared with the underperformance of the main standardisation route, as the latter does not provide exhaustive coverage of all construction product areas.

The Commission is currently working on a possible revision of the CPR. The findings of previous studies are being taken into consideration in this process, particularly regarding the previously identified weaknesses of the EOTA route, but also the general malfunctioning of the standardisation route. On the 8th April 2020, the Commission published the second version of the document "Refined Indicative Options for the Review of The Construction Products Regulation", where different future scenarios are outlined, among which a repeal of the EOTA route.

1.2. Objectives

This study aims to provide EOTA and other stakeholders with a comprehensive and unbiased understanding of the strengths and challenges of the EOTA route. By investigating the added value and relevance of the EADs and ETAs, the overall objective is to support and improve EOTA's tasks to more effectively achieve the goals of the CPR and deliver a better service to the construction sector.

Specific objectives of the study are:

- To analyse and evaluate the **EAD development process**, take stock of the progress achieved in the latest years and highlight areas for possible further improvement;
- To analyse and evaluate the **relevance** of EADs and their related ETAs at different levels (e.g. product areas, geographic distribution, TABs involved);
- To provide a framework and a methodology to assess the **innovativeness** of construction products covered by EADs;
- To analyse and evaluate the **uniqueness** of EADs in the EU harmonisation scheme;
- To define the content of a possible future **broader study** that further investigates the relevance of the ETA route in the context of the CPR revision process.

1.3. Methodological tools

This study builds on a mix of quantitative and qualitative evidence, collected through three methodological tools: a desk review of relevant documents, a set of semi-structured interviews with key stakeholders, and an online survey to collect a large number of responses around some key issues. The triangulation of these three sources of information allows having a comprehensive picture of the current situation and getting more robust and objective results.

Desk documentary review

The team systematically collected and analysed relevant and up-to-date evidence from different documents regarding the CPR, EOTA, and especially the EOTA route. The majority of the documents reviewed were evaluations and meta-evaluations and legal documents. The team also reviewed the position papers and other grey literature collected from the official websites of European and national business associations of construction products. The collected evidence was critically reviewed and a cross-check of different sources was made. Annex I includes the list of documents reviewed.

Semi-structured interviews

A total of eight semi-structured interviews with EOTA officers, TABs, business associations and manufacturers was performed. The interviews were a source of qualitative information which allowed a better understanding of different mechanisms either identified through the documentary review or detected from the responses of the online survey. With the aim to collect evidence at both a general and a specific level, the team had a first scoping interview with EOTA, then some interviews with TABs, business associations and some manufacturers to deepen the analysis of particular issues; a final concluding interview with EOTA was conducted to confirm some factual information and ask additional, final questions. Annex II includes the list of the eight interviews carried out.

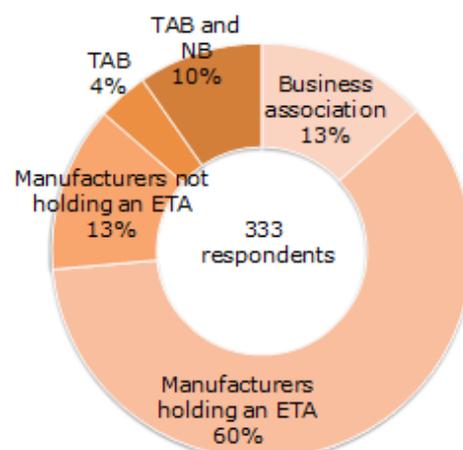
Online survey

An online survey was launched to manufacturers of construction products, relevant business associations and TABs. The survey was implemented with the SurveyMonkey software and remained open for three weeks, from March 29th to April 17th 2020. The objective was to get information directly from stakeholders on the strengths and weaknesses of the EOTA route.

Even if the survey responses cannot be considered statistically representative of the entire population of construction manufacturers, it was a key source of qualitative and structured evidence that could be combined with the findings from the semi-structured interviews.

The questionnaires used for the TABs, the business associations and the manufacturers are included in Annex V. They include questions to collect general information on the

Figure 1 - Distribution of respondents to the survey



Source: Authors

respondents, opinions on the procedures implemented by EOTA in EAD development process, on the degree of possible overlap between different EADs and between the EADs and other EU legislation or national requirements, on the relevance of EADs and ETAs and the impact of the EOTA route on product innovation. Even if the ongoing COVID-19 emergency made it more difficult to reach the enterprises and associations, a total of 333 responses were collected.

The responses were anonymised and processed in accordance with the GDPR rules. Annex III provides some aggregate descriptive statistics on respondents.

1.4. Structure of the report

This report sets out the key findings of the whole study. After this introductory section, it is structured as follows:

- **Section 2 - The EAD development process:** it describes the EAD development process and assesses its strengths and weaknesses, suggesting possible actions to streamline the procedures or improve the quality of the process;
- **Section 4 – The relevance of EADs and their related ETAs:** it presents data to illustrate the degree of use and coverage of EADs and the related ETAs at different levels, such as product areas, country, issuing TAB discussing the main factors determining the relevance of the EADs and their related ETAs;
- **Section 5 – EADs and product innovativeness:** this section discusses the innovativeness of products covered by EADs and proposes a methodology to assess in a systematic way the innovation level of construction products for which an EAD is developed;
- **Section 3 – The uniqueness of the EADs:** it illustrates the positioning of the EADs in the EU harmonisation scheme, showing the possible overlaps or complementarity across different EADs, between the EADs and the hENs, and between the EADs and other EU legislation and national requirements;
- **Section 6 – Conclusions:** this concluding section summarises the main findings of the study and the recommendations on the different aspects of the EOTA route emerging from the report. It also presents a proposal for a possible broader study on the relevance of the EOTA route.

The report is accompanied by a set of Annexes:

- Annex I: References of documents consulted;
- Annex II: List of interviews;
- Annex III: Statistics on survey respondents;
- Annex IV: Literature review on how to define and assess product innovation
- Annex V: Survey questionnaires.

2.The EAD development process

This section aims to describe the EOTA tasks and the EOTA route for the development of EADs and to assess their strengths and weaknesses. Based on the opinion of a large and diverse number of stakeholders, it also includes some recommendations about how to possibly streamline the EAD development process and maximise its added value.

The main findings are:

- More than 80% of the surveyed manufacturers agreed that the procedures and the guidelines implemented by EOTA in the EAD development process are effective in ensuring good quality and confidentiality.
- More than 80% of the TABs responding to the survey agreed that EOTA effectively carries out all the tasks attributed to it by the CPR.
- The way that EOTA performs its duties has improved over time thanks to actions undertaken by the organisation, in particular: improved technical and formal expertise within the EOTA Secretariat; reinforced quality control over the EADs; new modalities to improve information; and data sharing among the TABs.
- The EAD development process is significantly faster than the hEN development process, making the EOTA route effective in responding to the needs of manufacturers. However, over 60% of the manufacturers are not fully satisfied with the current timeliness of EAD development. The main reason is the delay in EAD publication on the OJEU by the European Commission, considered to be the major weakness in the process.
- Suggestions to EOTA to further improve and streamline the process include greater sharing of best practices among the TABs and a coordinated, periodic performance audit of the TABs.
- Suggestions to the European Commission to improve the EOTA route include providing faster and more consistent comments to reduce EAD preparation time and ensuring the timely publication of EADs in the OJEU. Additionally, several stakeholders raised the need to reintroduce the “fitness for use” concept within the CPR as a way to reinforce the efficacy of both the EOTA and the CEN routes.

2.1. EOTA and its responsibilities under the CPR

2.1.1. EOTA's tasks

EOTA is a non-profit organisation, based in Brussels and established in 1989 with the entry into force of the **Construction Product Directive** (CPD, 89/106/EEC). The acronym was initially meant as "European Organisation for Technical Approvals". Under the CPD, its primary role was to coordinate all activities relating to the issuing of European technical approvals, i.e. technical assessment of the fitness-for-use of a construction product for an intended use, and to monitor and progress the drafting of ETA Guidelines (ETAGs). EOTA has always been performing its duties using the scientific and technological expertise of its members – the Approval Bodies.

Since the entry into force of the **Construction Product Regulation** (CPR) in July 2013, EOTA changed its name into "European Organisation for Technical Assessment" and its statute. Among the most relevant novelties introduced by the CPR, there is the formalisation of the notion of 'assessment' which overtook the 'fitness for purpose' concept envisaged by the CPD. Under the CPR, manufacturers are provided with means to assess the performance of their products, rather than with an approval of the fitness for purpose of their products. Thus, under the CPR, EOTA no longer works on technical approvals, with the support of the Approval Bodies (ABs), but works on Technical Assessments and coordinates the Technical Assessment Bodies (TABs). Yet, its overall goal has not changed: EOTA is still responsible for developing and adopting harmonised technical specifications, i.e. EADs, for the construction products.

Recital 23 of the CPR states that EOTA shall have been established by TABs "to coordinate procedures for the establishment of draft European Assessment Documents and for the issuing of the European Technical Assessments, ensuring the transparency and the necessary confidentiality of those procedures". In turn, according to Article 29(1) of the CPR, TABs have to be designated by the Member States of the European Union (EU) and the European Economic Area (EEA) within their territories, notably for one or several product areas.³

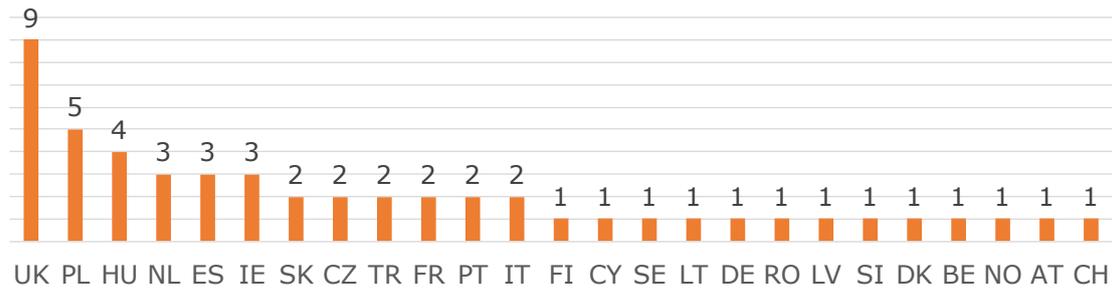
Technical Assessment Bodies (TABs) are in charge of the technical assessment of construction products and are entitled to issue European Technical Assessments (ETAs). The TABs are mandated on a national level.

However, not all relevant Member States have designated a TAB. Currently, EOTA comprises 52 TABs out of 54 members, which are unevenly located across the EU and EEA Member States, i.e. there are countries with more than one single TAB and countries where there are no TABs (see Figure 2).⁴

³ The product areas for which TABs may be designated are listed in Table 1 of Annex IV of the CPR.

⁴ Historically, under the CPD, there were 43 TABs that Member States have then split according to product area specialities.

Figure 2 - Number of TABs by country



Source: Authors based on EOTA data

Article 31(4) of the regulation enumerates the specific tasks that EOTA “shall at least carry out” (see the following Box).

Box 1 - EOTA tasks according to the CPR

- Organise the coordination of the TABs and, if necessary, ensure cooperation and consultation with other stakeholders;
- Ensure that examples of best practices are shared between TABs to promote greater efficiency and provide a better service to the industry;
- Coordinate the application of the procedures set out in Article 21 and in Annex II of the CPR, as well as provide support to that end;
- Develop and adopt European Assessment Documents (EADs);
- Ensure that adopted European Assessment Documents and references to European Technical Assessments (ETAs) are kept publicly available;
- Communicate any observations concerning a TAB not fulfilling its tasks in accordance with the procedures set out in Article 21 and in Annex II of the CPR to the Commission and the Member State which designated the TAB;
- Ensure that adopted European Assessment Documents and references to European Technical Assessments are kept publicly available.

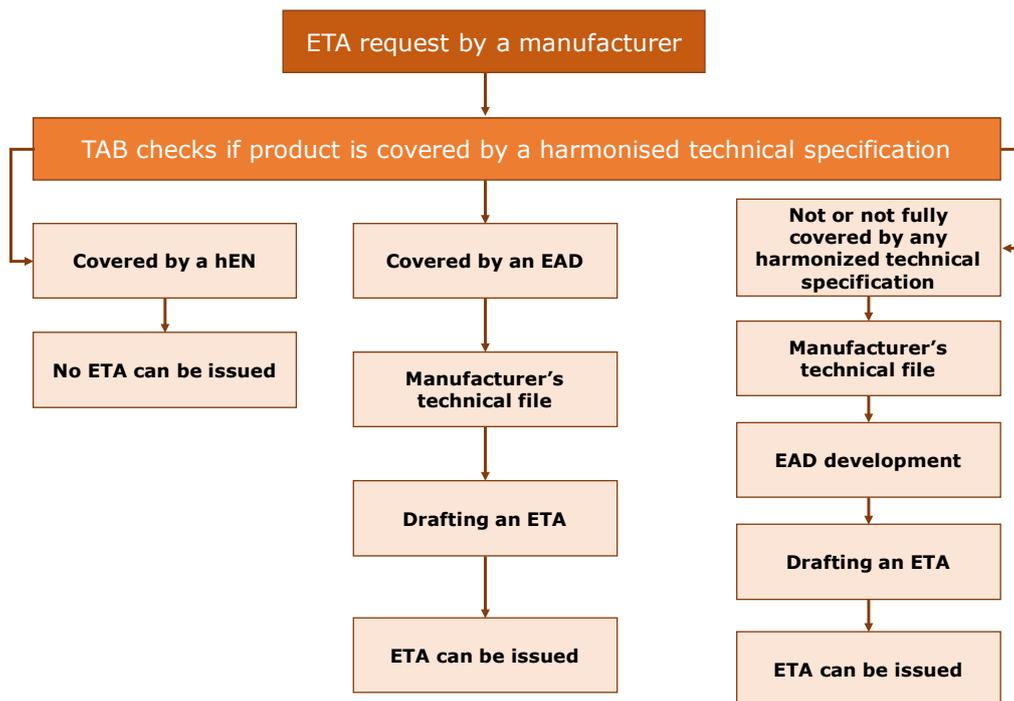
2.1.2. The EOTA route in short

The EAD development process is regulated by Article 21 and Annex II of the CPR. Accordingly, **the EAD development process takes place whenever a manufacturer requests an ETA for a product that is not or not fully covered by an already existing hTs, i.e. hENs or EAD** (see Figure 3). Before formally requesting an ETA, manufacturers usually consult a TAB of their choice, to investigate the possibilities of obtaining a technical assessment for their product(s). Based on the consultation with the selected TAB, manufacturers may opt to request an ETA; if no hENs nor EADs covering the product under consideration exist, the development of a new EAD is required. Upon the reception of an ETA request, the responsible TAB needs to make sure that there are no existing hENs nor EADs related to the product in question, concerning not only the product itself but also its intended use, the durability, and the essential characteristics the manufacturer intends to declare. Then, if there are no hTs as such, the EAD development process needs to be put in motion.

ETA: document providing information on the performance of a construction product, in relation to its essential characteristics.

EAD: The documentation of the methods and criteria accepted in EOTA as being applicable for the assessment of the performance of a construction product in relation to its essential characteristics.

Figure 3 - European Technical Assessment issuing process



Source: Authors based on EOTA website

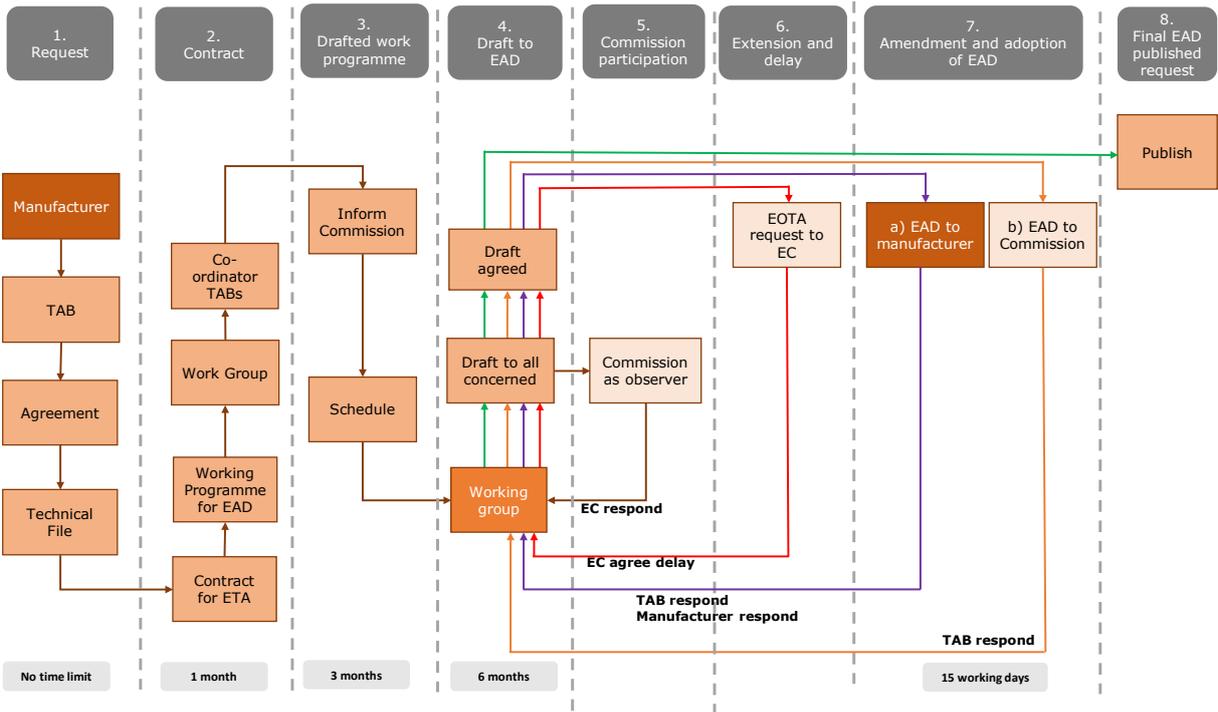
This is the standard way to develop truly new EADs. However, **there are also other two circumstances where an EAD can be developed.**

Under the CPD, manufacturers could hold European technical approvals which were issued by Approval Bodies following either the guidelines for European technical approvals (ETAGs) or the Common Understanding of Approval Procedures' (CUAPs). These European technical approvals had a five years validity. In accordance with recital 21 and Article 66(4) of the CPR, manufacturers had the possibility to use their European technical approvals as ETAs throughout the period of validity of those approvals (i.e. maximum until the 1 July 2018). More specifically, if the European technical approvals were based on a CUAP, the latter necessarily needed to be converted into an EAD and the European technical approval to be replaced by an ETA by the 30th June 2018.

ETAG: guidelines drafted by EOTA, in collaboration with the industry, upon mandate of the EC/EFTA, on how to assess, in a harmonised way, products of a particular product family.
CUAP: guiding document issued by EOTA member bodies, applying for the assessment of individual products of a particular applicant.

If the technical approval documents were based on ETAGs, the latter could either be converted into EADs or they could be "used as EADs" in accordance with Article 66(3) of the CPR.⁵ Even if the continued existence of ETAGs is allowed by the regulation, EOTA aims at converting all remaining ETAGs that are still relevant for the construction sector into EADs by September 2020.⁶

Figure 4 - Procedure for developing and adopting an EAD



Source: Authors based on European Commission, DG GROW (2016). Supporting study for the evaluation of the relevance of EOTA tasks

Annex II of the CPR describes in eight sections the actions that have to be implemented to develop a new EAD by all relevant stakeholders, i.e. manufacturers, responsible TABs, EOTA, other TABs, and the European Commission (a graphical representation of the

⁵ Article 66 comma 3 of the CPR provides TABs with the possibility to issue ETAs using 'ETAGs as EADs' as long as the former contain all the necessary elements in accordance with Article 24 and their technical content is still aligned with the state of art, meaning non outdated.

⁶ Source: EOTA, Sergio Vasquez, interview for Fastener +Fixing Magazine, Issue 12, January 2020.

process is provided in Figure 4). In particular, the Commission may participate as an observer throughout the whole process, but it is required to provide its observations and comments on the drafted EAD and to cite it on the Official Journal of the European Union (OJEU) once it is finalised. **The full cost of the development and adoption of EADs shall be entirely borne by the TABs and EOTA**, in accordance with Article 20(2) of the CPR. Member States shall instead ensure that TABs contribute to the financial and human resources to EOTA (Article 31(5)).

In reality, **the procedures outlined in the regulation are not consistently followed by relevant stakeholders due to some unclarity and contradiction within the CPR itself**. Whereas, according to section 8 of Annex II of the CPR (Final European Assessment Document to be published), the adopted EAD shall not be published before the ETA has been issued and the product has been CE-marked, in some cases to proceed with CE-marking a product,⁷ Notified Bodies (NBs) need to refer to a published EADs. Thus, in such situations, the EAD shall not be published since the CE-marking has not yet been affixed on the product in question but neither the CE-marking can be affixed since the EAD has not been published yet. To overcome this contradiction, it is common practice to send the EADs to the Commission for publication in OJEU leaving out the CE-mark stage.

The CPR does not only describe the procedures to develop new EADs, but it also defines the principles that the development and adoption of EAD shall follow. Specifically, according to Article 20, *“the procedures for developing and adopting European Assessment Documents shall:*

- a) Be transparent to the manufacturer concerned;*
- b) Define appropriate mandatory time limits in order to avoid unjustified delay;*
- c) Take appropriately into account the protection of commercial secrecy and confidentiality;*
- d) Allow for adequate participation by the Commission;*
- e) Be cost-effective for the manufacturer;*
- f) Ensure sufficient collegiality and coordination amongst TABs designated for the product in question”.*

Transparency, confidentiality, cost-effectiveness and timeliness imperatives are also indicated in recitals 19 and 23 of the CPR, which further defines the Commission’s involvement in the EOTA route.⁸

⁷ It applies to products falling under the Assessment and Verification of Constancy of Performance (AVCP) system 1, 1+, 2.

⁸ European Commission (2019). Report from the European Commission to the European Parliament and the Council on the implementation of Regulation (EU) No 305/2011 of the European Parliament and of the Council. Brussels, 24.10.2019 COM(2019) 800 final <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2019:0800:FIN:IT:PDF>

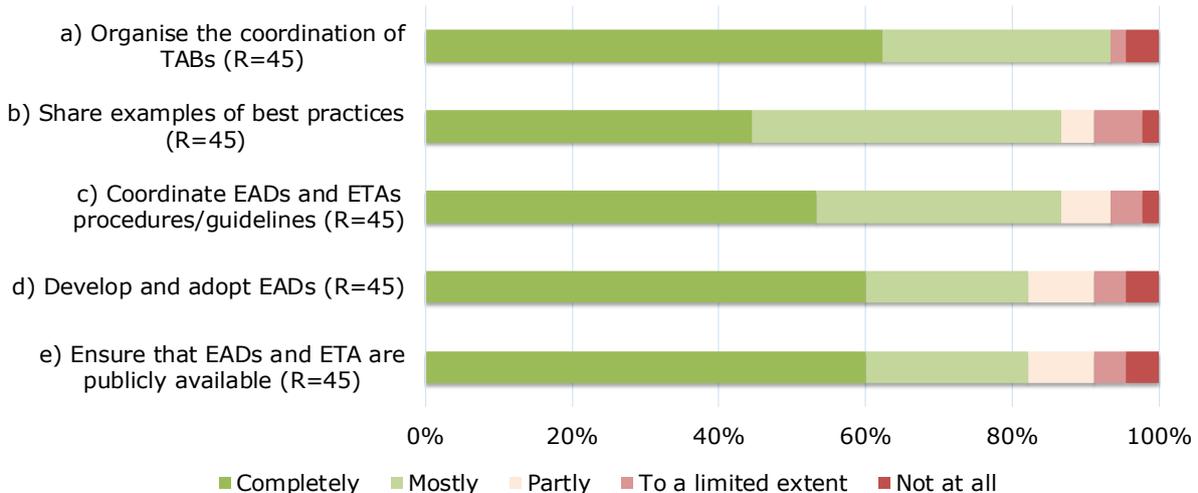
2.2. Critical assessment of the EOTA route

2.2.1. Has EOTA fulfilled its tasks?

Overtime, EOTA has better and better accomplished the tasks assigned to it by the CPR. Already in 2016, in its evaluation report to the European Parliament and the Council⁹, the European Commission highlighted that “*the policy goals for EOTA (...) were attained*”. Focusing on the content of Article 31 of the regulation, BRE et al. (2016) found that, given its resources, EOTA was adequately effective in the performance of its tasks. However, on the one hand, manufacturers were complaining with the TABs about the EAD development process being too long, complicated and uncertain. On the other hand, the TABs were not satisfied with EOTA’s provision of technical expertise during the EAD development process. Moreover, at that time, there were some concerns related to the sharing of best practices between TABs: in principle, the TABs compete with each other in the delivery of services to the industry, and this could inhibit best practices sharing. Other issues were raised concerning the development and adoption of EADs, where collaboration between TABs and better information sharing was again deemed necessary.

Since 2016, the situation has significantly improved. Indeed, more than 80% of the TABs responding to the survey launched in the context of this study (March-April 2020) agreed that EOTA effectively carries out all the tasks (a-e) defined in the CPR (Article 31(4)) (see Figure 5).

Figure 5 - To what extent does EOTA meet the following objectives, according to the TABs?



Note: this question was answered only by TABs
Source: Authors

Such improvements have been driven by two measures undertaken by EOTA in the latest years. On the one hand, EOTA has renewed the staff of the Secretariat, which has now a higher level of technical and formal expertise, and reinforced the quality control over the EADs. On the other hand, in 2018, EOTA developed an internal web-based tool (Sharepoint) to improve information and data sharing among the TABs, which has revealed to be very effective and widely used. Thanks to this tool, the TABs can easily find

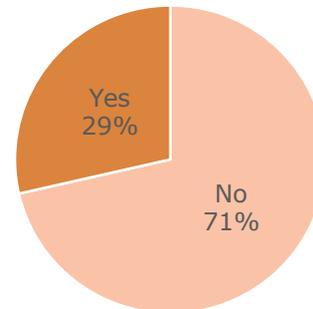
⁹ European Commission (2016). Report from the Commission to the European Parliament and the Council. Brussels, 7.7.2016 COM(2016) 445 final. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0445&from=EN>

information about all the adopted EADs which are publicly available on the EOTA website, and thus are also able to provide a better service to the industry.

Furthermore, improvements were also made to support the sharing of best practices and information and to promote innovation. As an illustrative example, in the fixings' products area, the most relevant industry for EOTA's activities (see Section 3.4), in July 2019 EOTA has created a new working group, the so-called 'Expert Group Fixings', which gathers experts from the entire related industry, TABs, and associations.

This high degree of satisfaction of the TABs with EOTA activities is corroborated by the fact that **only a small share of the TABs** (29% of the total) **feel the need for EOTA to undertake additional tasks**, while 71% believes it shall not carry out any other task (see Figure 6).

Figure 6 - Should EOTA be charged with additional tasks, according to the TABs?

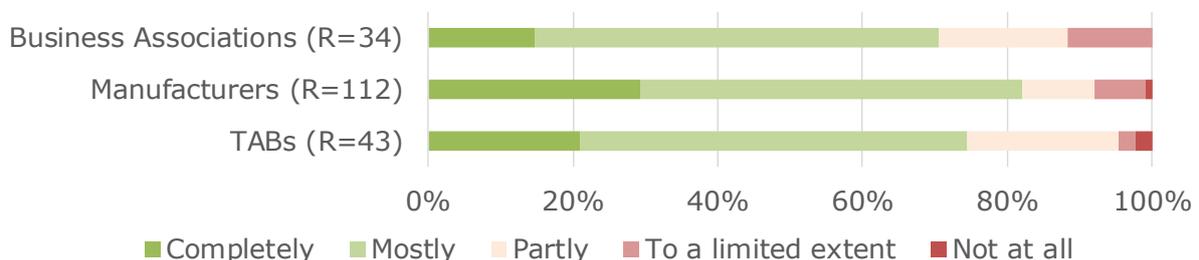


Note: this question was answered only by TABs
Source: Authors

This result diverges from the findings of 2016. Indeed, in 2016, more than half of the TABs interviewed by BRE et al. (2016) suggested that EOTA should have been charged with additional tasks, especially technical tasks, such as producing comparative studies to improve knowledge sharing on evaluation methods and harmonising methods across the Member States, undertaking a technical review of EADs, and so on. The fact that a smaller number of TABs now would like to charge EOTA with additional tasks can be regarded as indicative of the high level of satisfaction for the activities undertaken by EOTA and the changes already made over the last years (i.e. new and more qualified staff, Sharepoint development, set up of a team for EADs' technical review).

More than 80% of the surveyed manufacturers agreed that the procedures and the guidelines implemented by EOTA in the EAD development process are effective in ensuring a certain quality level (see Figure 7).

Figure 7 - To what extent do the procedures and guidelines implemented by EOTA in the EAD development process achieve the EAD quality objective?



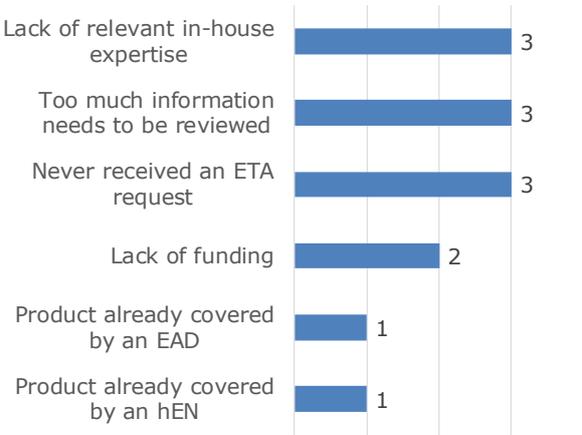
Source: Authors

Nevertheless, there is still room for improvement. According to the interviews carried out and the opinions of the survey respondents, the quality of the EADs and the ETAs could be further improved. As already pointed out in 2016 by BRE et al. (2016), stakeholders feel the need for better quality control of TABs’ outputs, in order to ensure consistency of quality across them. Indeed, they also underlined that there are considerable **discrepancies in the quality of the service provided by existing TABs**.

“EOTA could be charged with the role of making sure that the quality of ETAs published meets the requirement, even though it is acknowledged that this is a tremendous task and not foreseen by the CPR” (surveyed TAB).

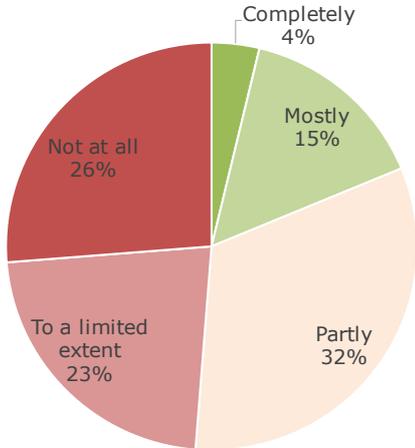
Specifically, interviewees highlighted that **the 52 existing TABs deeply differ one with the other not only in terms of human and financial resources, but also in terms of technical and formal (legal and procedural) expertise**. Firstly, the limited human and financial resources may hinder some TABs from adequately performing their tasks. To some extent, the TABs themselves confirmed the existence of this problem. Out of the 45 respondent TABs, three admitted that they have never been involved in the EAD development, due to a large amount of information to be reviewed, which suggests they lack the sufficient human resources to perform the task (see Figure 8). However, according to manufacturers, this has only a limited impact on the ETA issuing process: less than 20% of firms believe that the TABs are discouraged from issuing ETAs if a new EAD has to be developed (see Figure 9). For the remainder, the EAD development process poses only limited or no constraints at all.

Figure 8 - Why have you never been involved in an EAD development process (Question for the TABs)?



Note: 7 TABs answered this question

Figure 9 - Are TABs discouraged from issuing ETAs if an EAD needs to be developed?



Note: 80 Manufacturers answered this question

Source: Authors

Secondly, the lack of technical and formal expertise in some TABs has several implications. Out of the 45 respondent TABs, three indicated that they have never been responsible for the development of any EADs because they lack in relevant in-house expertise (see Figure 8), meaning that lack of technical expertise may prevent TABs from being responsible for the development of new EADs. The shortage of technical and formal skills also has a negative impact on the quality of the EADs and ETAs that the TABs produce. This poses two main challenges for the EOTA route.

On the one hand, according to the manufacturers surveyed, **the ETAs represent reference documents not only in the EU and EFTA countries, but also at the global**

level: non-European customers recognise the added value of buying products covered by an ETA, as a proof of the product performance (on this, see also Section 3.6). As an illustrative example, EOTA has recently signed a cross-licencing agreement with the American assessment organisation ICC-ES which will allow “*both sides to use the (copyrighted) technical content of the other for their own specifications*”, meaning that EADs could be used as technical background for marketing European construction products in the US.¹⁰ Other evidence of the value recognised by foreign countries to the EOTA route is provided by the fact that non-European manufacturers request ETAs to assess the performance of their products. The strong positive reputation of the ETAs is, to some extent, a legacy of the previous European technical approvals’ high-level quality, which were developed at a time when there was a smaller number of TABs, each one with a very high level of expertise.

If the ETAs are not of sufficiently high-quality, their reputation, the reputation of the responsible TAB and of the EOTA route as a whole risk being compromised. As a consequence, the competitiveness of the European construction products industry could also be negatively affected.

On the other hand, the lack of formal expertise in some TABs may undermine EOTA’s reputation as an organisation in front of the Commission, which has already shown its concerns regarding the quality of the EADs submitted for its final review.¹¹ Formal expertise regards the knowledge of the legal aspects, e.g. formal requirements, which some TABs often struggle to catch up. This difficulty can be explained by two reasons:

- The European Commission has introduced several modifications in the formal requirements for the development of the EADs in the past (i.e. EAD structure, format, and so on), which generated some confusion among TABs;
- Some TABs have never been involved in the development of any EADs (more details on this are given in section 3.5) and, therefore, could not develop sufficient expertise in the EAD process.

The Quality Management team established by EOTA in October 2019 within its Secretariat, in charge of performing a technical review of the EAD drafts and the checklist submitted by the TABs, is expected to ensure more quality and consistency between different EADs and check that they all comply with the requirements in force. **Better quality control could also be useful to speed up the EAD development process**, thanks to a more limited number of rounds of revisions by the TABs and the European Commission. The effectiveness of this action could be measured only in the coming months and years, since so far the TABs still have not had the possibility to really perceive the impact of such a quality check. Nonetheless, there is preliminary evidence showing that the quality of the latest EADs has already improved. This is expected to have consequential positive reputational effects on the EOTA route also in front of the European Commission.

¹⁰ EOTA press release of 11 December 2019. EOTA specifications could soon serve as a basis for access to the US market <https://www.eota.eu/en-GB/content/eota-specifications-could-soon-serve-as-a-basis-for-access-to-the-us-market/37/706/>

¹¹ European Commission (2019). Report from the European Commission to the European Parliament and the Council. Brussels, 24.10.2019 COM(2019) 800 final <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2019:0800:FIN:IT:PDF>

2.2.2. Strengths and weaknesses

According to the respondents to the survey, the procedures and guidelines implemented by EOTA for developing and adopting the EADs ensure, at least partly, the respect of the transparency, timeliness, confidentiality, cost-effectiveness, and collegiality/participatory principles listed in the CRP (see Figure 10).

“From the manufacturers point of view, confidentiality is the main strength of the process, together with flexibility and speed” (interviewed business association).

Stakeholders are particularly satisfied with the protection of commercial secrecy and confidentiality. More than 80% of surveyed manufacturers agreed that the procedures implemented by EOTA in the EAD development process ensure confidentiality. Confidentiality is one of the major strengths of the process for two reasons. On the one hand, the confidentiality of the process preserves the business of interested manufacturers, especially when the new EAD under development concerns innovative products. The importance of confidentiality does not relate to product protection (even by reading the EADs, competitors would unlikely be able to copy the product), but rather to business strategies protection. Indeed, thanks to the confidentiality of the process, the competitors cannot anticipate manufacturers’ move and, therefore, the competitive advantage is preserved. On the other hand, confidentiality ensures a smooth and faster development process. One business association underlined the differences that they observed when an EAD is developed under confidentiality as compared to when it is not.¹² When the confidentiality principle is respected, the manufacturer which requests the ETA is the sole interlocutor on behalf of the industry: this allows new EADs to be developed within a tight timeframe, being the discussions focused only on relevant technical aspects. Conversely, when the process is carried out disregarding the confidentiality principle, then competitors and business associations may take part in the working group, and they are allowed to raise their opinions. Even if they do not have voting power, still their involvement tends to slow down the development process.

“It took 3 years to release an EAD without confidentiality” (interviewed business association).

Previous studies¹³ pointed out that there is a **link between confidentiality and EADs’ proliferation**, noticing that because of confidentiality, manufacturers are informed only of the already adopted EADs, and not about the EADs under development. This potentially poses a trade-off between ensuring full confidentiality and limiting EADs’ proliferation.¹⁴ However, even if it is true that manufacturers cannot be informed about EADs under development, it is likewise true that when a TAB informs EOTA about the need to develop a new EAD, the organisation could inform the TAB of whether there is a similar EAD under development (e.g. same product, same intended use, and so on). When such circumstance occurs, the two responsible TABs jointly work on the development of a single EAD, but without informing the respective ETA requestors of the fact that there is also another manufacturer involved in the process, so as to ensure confidentiality.

¹² According to the CPR, in principle confidentiality shall be ensured until the publication of EADs but manufacturers can also decide to allow the development of the EAD to be carried out disregarding the confidentiality principle.

¹³ European Commission (2019). Report from the European Commission to the European Parliament and the Council. COM(2019) 800 final of 24th October 2019 <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2019:0800:FIN:IT:PDF>

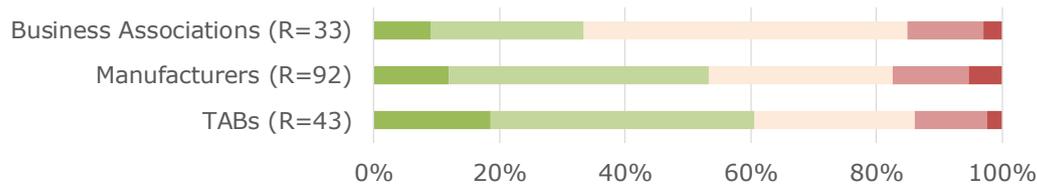
¹⁴ Ibidem.

Even though mechanisms of coordination among TABs are in place to limit the EADs' proliferation, the perception among stakeholders is that **the current procedures and guidelines still do not sufficiently prevent the EADs' proliferation** (see Figure 10 (g)). Half of the surveyed manufacturers stated that the EAD development procedures and guidelines implemented by EOTA are not very useful to limit the EAD proliferation. However, one TAB surveyed highlighted that as long as the CPR and its Annex II require the development of the new EADs whenever the intended use of the product, or even few characteristics, are not covered by any existing hTs, the proliferation of the EAD could not be really reduced.

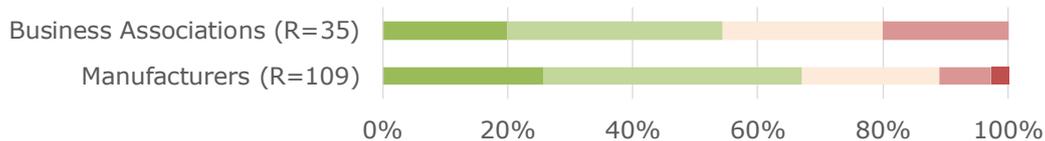
Figure 10 - To what extent the EAD development procedures and guidelines implemented by EOTA (excluding the citation process at European Commission level) achieve the following objectives?



(g) Limitation of EADs proliferation



(h) Clarity of responsibilities and respect of rules¹⁵



Source: Authors

Whether the procedures and the guidelines are transparent enough to the stakeholders is unclear. Whereas TABs and manufacturers are more convinced of EOTA’s adherence to the transparency principle, business associations seem to be more reluctant (see Figure 10 (a)). However, the majority of the business associations agree that, in any case, responsibilities and rules are generally clear (Figure 10 (h)). Some interviewed associations complained about the limited transparency of the process in general, in particular about the limited communication of where the development process stands and when a new EAD is developed. Concerned manufacturers claimed not to be able to gather information about the implementation of the EAD development, thus lacking a clear view of its timing. Moreover, it was raised the point that not all stakeholders are adequately informed of when an EAD is amended.

The timeliness of the EAD development process represents, at the same time, one of its main strengths and weaknesses (see Figure 11). Indeed, thanks to the EOTA route, manufacturers can obtain the document in a relatively short term as compared to the time needed to develop an hEN. As an illustrative example, one interviewed business association explained that, whereas an EAD for a product falling in the fixing product area may take up to 15 months before being adopted, an hEN could take up to 5 years before being published (i.e. four times as long). But, even if EADs provide a faster solution as compared to hENs, their development process is still too slow. One surveyed manufacturer complained that the process still needs too much time and too private engagement, while another pointed out that the change from CUAP to EAD under the CPR slowed down the process.

“The EOTA route provides a fast-track, which allow us no longer wait until hENs are published” (interviewed manufacturers).

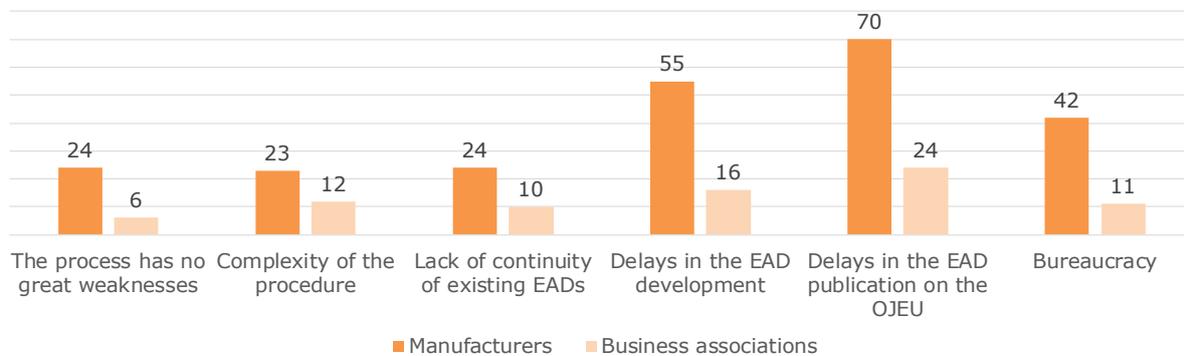
However, both manufacturers and business associations agree that **the main weakness of the process is represented by the delays in the EAD publication on the OJEU by the European Commission.** These delays, which according to EOTA represented already an issue in the past, are now posing a significant challenge for the process. Currently, there is a backlog of 84 EADs pending for publication, as the last publication took place in May 2019. This is the result of the so-called “Elliott case”:¹⁶ the European Court ruled that hTs are full-fledged legal documents, which the Commission shall be responsible for. The

¹⁵ This question was not asked to the TABs.

¹⁶ The case concerned a dispute between James Elliott Construction and Irish Asphalt on the interpretation of a hEN (EN 13242:2002). Specifically, James Elliot Constructions brought an action against Irish Asphalt since, according to the former, the aggregate provided by the latter within a supply contract was not compliant with the specifications of the relevant harmonized EN for aggregates adopted in Ireland (I.S. EN 13242:2002).

overall citation process has been remarkably slowed down ever since, since the Commission is taking a long time to ensure the legal consistency and quality of each document. This has clear implications on the EOTA route, because, in general, the products cannot be CE-marked before the EAD is being cited in the OJEU (with some exceptions, as explained in section 2.1.2).¹⁷

Figure 11 - Which are the weaknesses of the EAD development process?



Source: Authors

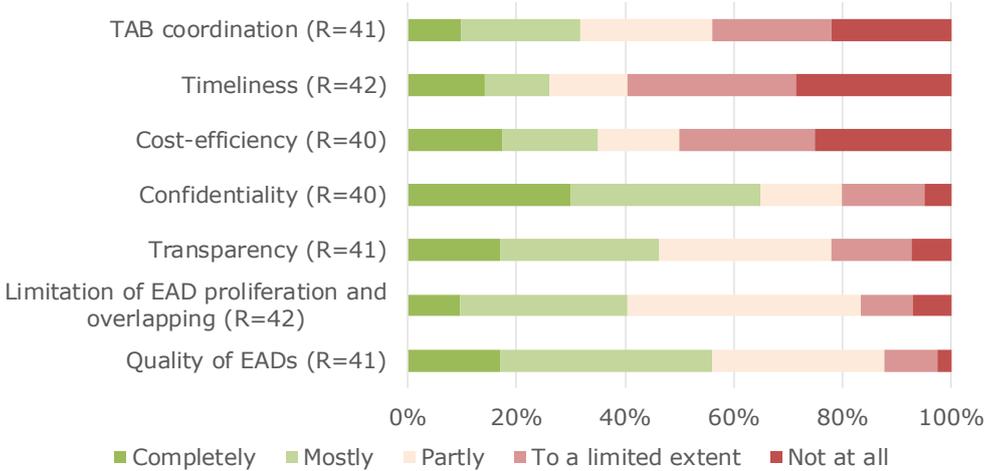
Moreover, some stakeholders raised concerns about the **continuous changes in requirements introduced by the Commission**, which were also mentioned as one of the reasons behind the delays in the EAD development process. As an illustrative example, by the time the European Commission reviews an EAD, the requirements valid at the time it was drafted are already outdated, and so a longer review process is needed to update the document. In this regard, a TAB highlighted in the survey that such continuous changes, together with insufficient staff within the Commission, limits the Commission’s contribution in respecting the principles underlying the EAD development process (see Figure 12).

Finally, stakeholders raised the point that **the overtaking of the ‘fitness for use’ concept with the CPR has weakened the efficacy of the EOTA route, as well as that of the European standardisation process**. At the moment, the ETAs only cover the essential characteristics of a product for an intended use, but not its fitness for use, unlike with the previous European technical approvals (under the CPD). Even if the online survey did not include a specific question on the “fitness for use” notion, it is interestingly to notice that many stakeholders indicated it as an important element which, if included in the ETAs, would increase the value of these documents for the manufacturers. This issue was already raised by the Commission’s staff working document of 2019, where the lack of the CPR in addressing the need for information on product safety (i.e. fitness for use) was pointed out as relevant.¹⁸

¹⁷ Products whose Assessment and Verification of Constancy of Performance (AVCP) system is 1, 1+, 2+.

¹⁸ European Commission (2019). Commission Staff Working Document. Brussels, 24.10.2019 SWD (2019) 1770 final. <https://ec.europa.eu/docsroom/documents/37827/attachments/1/translations/en/renditions/native>

Figure 12 - To what extent does the European Commission achieve the following objectives?



Note: only TABs answered this question
Source: Authors

2.2.3. Scope for streamlining the process

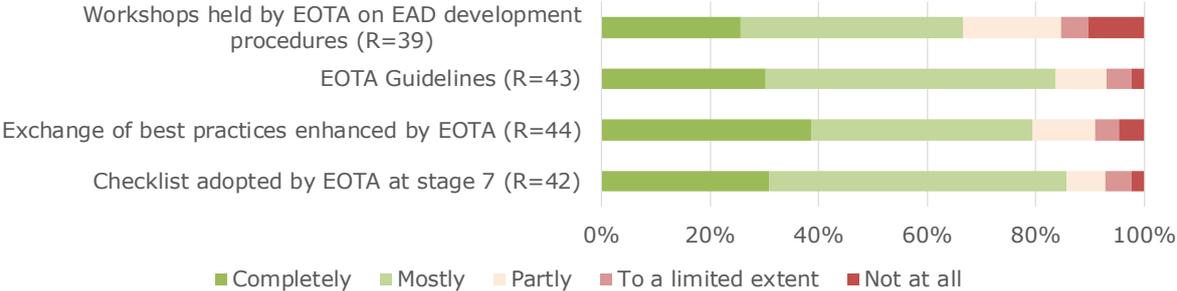
Together with its members, **EOTA is highly committed to improving and streamlining EAD procedures.**¹⁹ In short, the findings of the present study confirm that some improvements were made as compared to the situation analysed in 2016 by BRE et al. (2016). Over the latest years, EOTA has undertaken a number of actions and initiatives which have turned out to be effective in improving the EOTA role (thanks to stronger in house technical expertise), the coordination of the TABs and the sharing of information. Other initiatives were taken with the specific purpose of streamlining the EAD development process (see Figure 13). Over 80% of the TABs believe that the most effective actions relate to the development of the EOTA guidelines on how to develop EADs and the adoption of a checklist, developed by the Commission, which is in use by TABs since June 2019 for ‘amendments and adoption of an EAD’ (stage 7 of the EAD development process, see Figure 13) to improve the EAD quality.

“The checklist is helpful because it is combined with the quality check by the EOTA secretariat” (surveyed TAB).

Even if the process has improved since 2016, 70% of the TABs that participated in the survey indicated that the EAD development process could be at least partly further streamlined. Specifically, most of the TABs (close to 60%) believe that **a greater sharing of best practices as well as greater coordination between TABs would be advisable.** One TAB highlighted in the survey that it would be helpful to establish Working Groups for specific product areas with a significant EADs activity, similar to the one already established for fixings. These groups would be in charge of ensuring consistency among the EADs and solve technical problems from specific EADs.

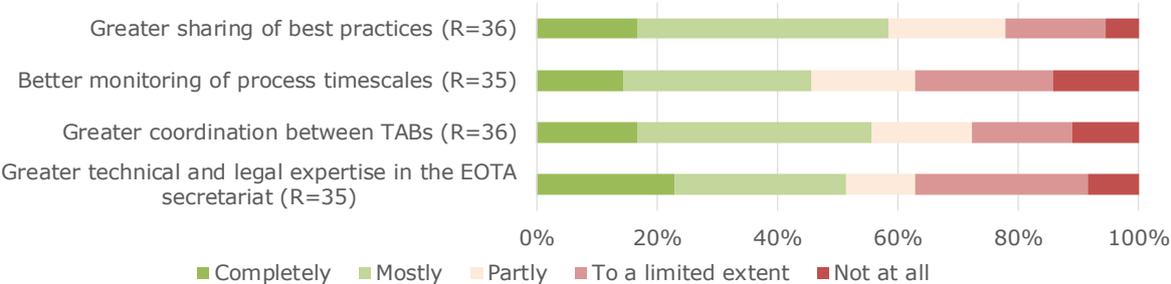
¹⁹ This was one of the main conclusions of the presentation hold by Karsten Kathage, President of EOTA, during the Stakeholder Advisory Group meeting which was held in Brussels on the 15th November 2017.

Figure 13 - To what extent have the following EOTA actions/initiatives streamlined the EAD development process?



Note: only TABs answered this question
Source: Authors

Figure 14 - To what extent could EOTA further streamline the EAD development process through...?

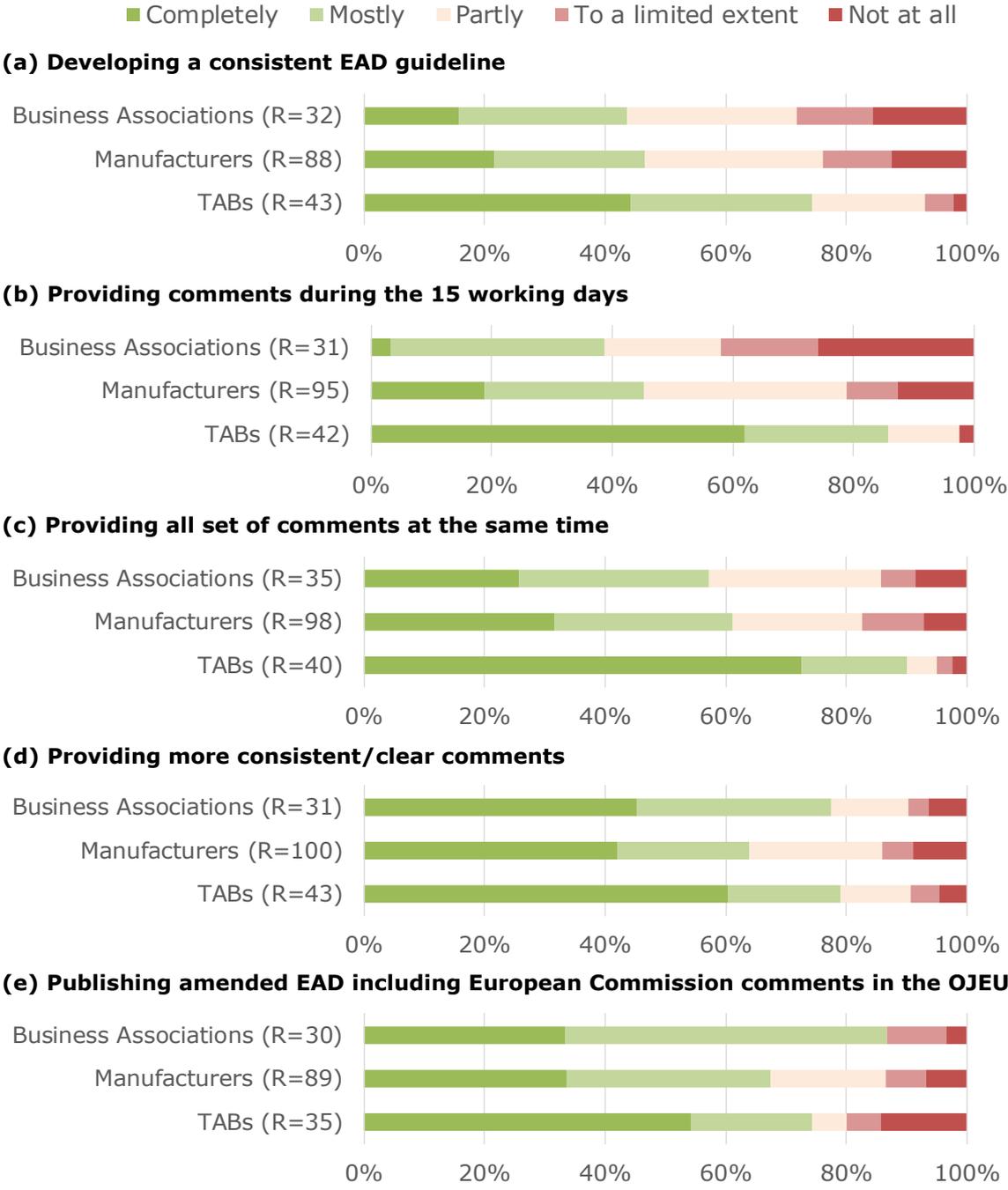


Note: only TABs answered this question
Source: Authors

Moreover, as previously mentioned, improving the quality of the work carried out by the TABs and the consistency across different EADs could help reduce the time needed for the EAD development. The CPR foresees that the Member States that are responsible for designating the TABs, also conduct a regular audit of their activities. It could be discussed the opportunity to make **such performance audits more structured, frequent (e.g. every year) and similar across the Member States**, under the guidance of either the European Commission or EOTA. The monitoring would not be meant to penalise in any way the inactive TABs or those experiencing more difficulties in the EAD development, but to ensure that all the TABs have potentially the adequate technical expertise to provide a high-quality service to the industry. This could help to fasten the EAD development and revision process, as well as to reduce the reputational risk for EOTA and for the EAD development process, deriving from the lack of capacity and experience of some TABs.

EOTA could also try to **increase the transparency of the process for the manufacturers and business associations, particularly regarding its timeline**. For instance, a web tool to track at what stage the EAD development process stands could be developed so that manufacturers could be kept updated of the progress made and the overall status of the process. Following the confidentiality principle, this could be integrated into a private access page of the EOTA website, which only parties involved could have access to through a username and password. A similar system is used by the European Commission to manage the Horizon 2020 projects (the ECAS participant portal).

Figure 15 - To what extent could the European Commission contribute to further streamlining the EAD development process by ...?



Source: Authors

Finally, some actions might also be undertaken by the European Commission to streamline the process. Indeed, as shown in Figure 15, stakeholders (firms, business associations and TABs) believe that the Commission could help streamline the process by providing more consistent and clear comments, all set of comments at the same time, and publishing amended EADs including the European Commission’s comments, when the EAD is cited in

the OJEU. This would allow the TABs from learning from previous comments when developing new EADs.²⁰

By comparing the answers in Figure 15 with those in Figure 14, it emerges that, according to the TABs, **the Commission has a greater role to play than EOTA to streamline the EAD development process and, particularly, making it shorter**. Specifically, over 80% of TABs believe that the process would significantly improve if the Commission provided more timely and clear comment; conversely, only 42% of TABs consider EOTA responsible for reducing the time of the EAD development by better monitoring of the process timescales.

²⁰ The respondents indicated to make the Commission's comments publicly available, but not to include the EC comments in the EADs for citation, as this will make the citation even more complex and lengthy.

3.The relevance of EADs and their related ETAs

The present section aims to assess the relevance of EADs, i.e. the capacity of the EOTA route to meet the needs of manufacturers. It does so by presenting and critically analysing the degree of coverage of ETAs and EADs issued over time by sector, product area, geographical distribution and TABs involved. The added value and relevance, also in economic terms, of EADs and their related ETAs are also discussed.

The main findings are:

- 439 EADs have been adopted since the entry into force of the CPR until the end of 2019. The share of new EADs developed every year has increased progressively over time. A total of 7,708 ETAs has been issued in the same period.
- The distribution of EADs among different product areas is highly skewed, being concentrated in some product areas more than in others. This is due to the degree of innovativeness, potential for intra-EU cross-border trade, market competition in each product area, industry structure, and market size of each construction product. The degree of coverage and detail offered by the existing hENs also plays a role in the number of EADs.
- The number of ETAs issued based on each EAD also varies significantly. For innovative or very specific products, it is often the case that only one ETA is issued per EAD.
- Not all TABs have been involved in the development of an EAD (in 2019, 32 out of 52 participated). The number of TABs involved has increased over time, denoting a progressive diversification among the TABs involved.
- Factors determining the manufacturer's choice of one TAB rather than others include the quality and speed of service provided; the TAB's reputation and proven technical expertise; and the fee charged for ETA development.
- ETAs are requested by manufacturers operating all over the world. While 6,521 (85%) ETAs were requested from manufacturers located in an EU28 Member State, the remaining 1,187 (15%) were requested from manufacturers located in non-EU28 countries. This finding is coherent with the EOTA route's high standing among construction industry professionals outside the EU.
- German manufacturers hold the largest share of ETAs issued (25% of the total), followed by Italy (9%) and Poland (8%).
- The legal uncertainty about the future of the EOTA route is currently limiting the number of manufacturers' requests for new ETAs.
- The EOTA route provides manufacturers with a valid alternative to CEN's route and creates added value for the entire construction sector. Around 70% of the surveyed manufacturers and business associations hold that the EADs largely meet industry needs.

- The ETAs also have an economic relevance for the manufacturers. Holding ETAs increases companies' reputations and has a positive effect on the business. About 70% of respondents indicated that repealing the EOTA route would be detrimental to their companies' economic performance.

3.1. Data and methodology

EOTA has provided the core team with the full database of EADs and ETAs developed from 2014 to the end of 2019. Different from the previous European Commission evaluation report (2019), which analysed only EADs cited in the OJEU,²¹ **the present study looks at a larger and more up-to-date number of EADs, i.e. 439 in total**, including all the EADs developed, either cited or not in the OJEU.

Descriptive statistics on EADs and ETAs are presented, distinguishing by EAD typology, ETAs issued, product area, and TAB leading the development process. On this basis, multiple dimensions are investigated, among which the EADs' evolution over time, the most and least represented product areas, as well as the role of TABs. To identify relevant patterns and trends, correlations between different variables are also examined.

Finally, to further enrich the analysis, quantitative statistics are complemented and triangulated with the evidence collected both through the survey and desk review, and in-depth interviews with selected stakeholders.

3.2. Evolution of EADs by type

As discussed in section 2.1.2, EADs are developed by TABs upon reception of an ETA request by a manufacturer for a product which is not covered or not fully covered by existing hENs nor an existing EAD. To address the manufacturer's need, the TABs could either develop a truly new EAD, or amend an existing EAD, or develop a new EAD based on an existing document issued under the CPD, namely the guidelines for European technical approvals (ETAGs) or 'common understanding of approval procedures' (CUAPs).²²

Thus, four EAD typologies can be distinguished:

- new EADs which were developed from scratch;
- EADs based on existing EADs and developed as their amendment;
- EADs based on common understanding of approval procedures (CUAPs);
- EADs based on the guidelines of the European technical approvals (ETAGs).

Since the entry into force of the CPR until the end of 2019, 439 EADs have been adopted.²³ The first EAD was adopted in May 2014 by the Austrian TAB - OIB – to convert an existing CUAP related to the product area "13 – Structural timber products, elements and ancillaries". **The majority of EADs adopted has been developed either from scratch (new EADs) or to convert existing CUAPs.** Indeed, as shown in Figure 16, out of the 439 adopted EADs, 202 (46%) are new EADs, 149 (34%) have been developed and

²¹ The EC study looked at 217 EADs.

²² As explained in Section 2.1, the conversion of a CUAP into an EAD was possible until the end of June 2018. Under the CPD, the concept of CUAPs was developed by EOTA to support the issuing of European technical approvals falling under Article 9(2) of the CPD, when the issuing was not possible by means of applying ETAGs.

²³ Source: EOTA Sharepoint.

adopted to convert an existing CUAP, 52 (12%) have been developed to amend previous EADs and 36 (8%) have been developed and adopted to convert an existing ETAG.

The EADs process is market-driven. For this reason, neither can EOTA or the TABs forecast the number of EADs to be developed in the following year, nor is it possible to explain why in 2017 and 2019 there was a relatively lower number of EADs. Some interviewees have suggested that the decreased number of EADs in 2019 may be partly explained by the uncertainty that manufacturers are facing concerning the future of the EOTA route. One manufacturer indeed pointed out that as long as they are not sure about the future of EADs and ETAs, they will tend to avoid investing time and money in CE-marking their products through the alternative route. Furthermore, the decrease in the number of EADs in 2019 can also be due to the attempt by EOTA to group similar construction products (i.e. those having the same assessment methods and essential characteristics) in one EAD, by better coordinating the responsible TABs.

The 2019 European Commission evaluation report stated that most of new EADs (either new or based on amendments) were related to products partially covered by an existing standard or EAD. For this reason, the Commission (2019) assumed that they either included few additional characteristics or only referred to a wider scope or additional intended uses. Yet, the evolution over time of EADs clearly shows that the share of new EADs has progressively increased, passing from 30% in 2014 and 2015, to 52% in 2018 and 2019 (see Figure 16).

In contrast, the share of EADs based on CUAPs has steadily decreased. The sharp decline in the yearly number of EADs based on CUAP is due to the legal provisions (CPD and CPR) related to the validity of the European Technical Approvals.

Indeed, as explained in section 2.1.2, European Technical Approvals could be valid only until July 2018, and so manufacturers had to convert these by 30 June 2018. This explains why, immediately after the entry into force of the CPR, there was a strong effort by the TABs to convert CUAPs into EADs, but then this trend naturally decreased.

Figure 16 - Share of EADs adopted by typology and by year

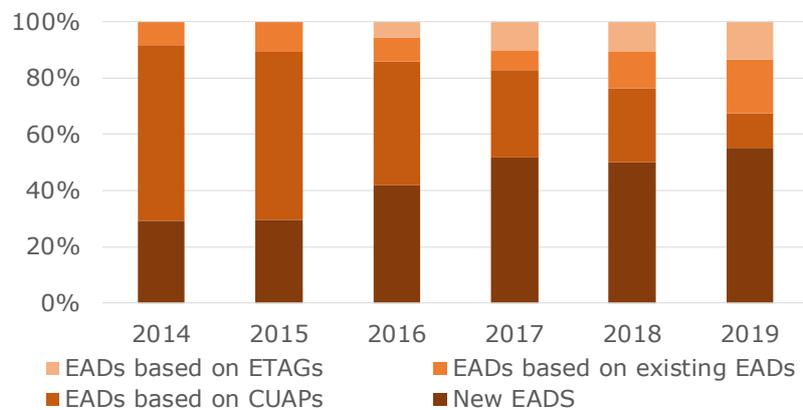
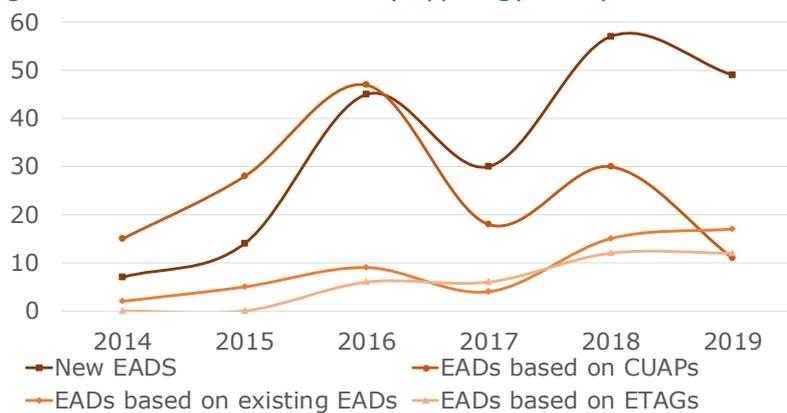


Figure 17 - Number of EADs by typology and year



Source: Authors based on EOTA data

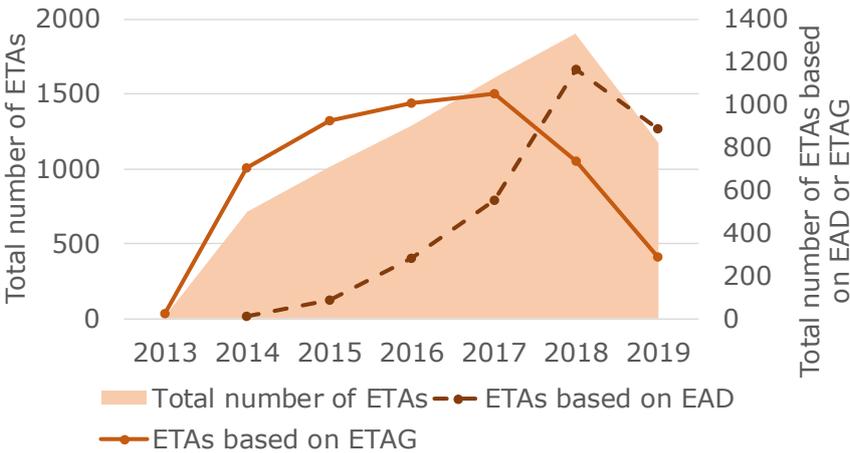
Moreover, the relatively stable number of EADs based on existing ETAGs may result from Article 66(3) of the CPR, that provides TABs with the possibility to issue ETAs using 'ETAGs as EADs' as long as the former contain all the necessary elements in accordance with Article 24 and their technical content is still aligned with state of the art, meaning non-outdated.

The gradual **ramp-up of the number of new EADs adopted also reflects the improvements made in their development process** (see section 2.2). As some interviewees pointed out, it took some time before all stakeholders had an adequate and common understanding of the new regulation's requirements. The continuous changes introduced by the European Commission on the EAD requirements, e.g. on the EAD format (on paper versus electronic) and the structure of the documents, increased uncertainty and confusion among manufacturers and TABs, and contributed lengthening the time to get acquainted with the new requirements and procedures.

3.3. Evolution of ETAs and their relationship with the EADs

The first two ETAs under the CPR were issued on 6 December 2013 by ETA-DK – the Danish TAB – based on an ETAG used as EAD. Since then, the number of ETAs issued has steadily increased up to 2018, when a lot of "old" European technical approvals expired, leading to a decrease in the total number of ETAs. The number of ETAs reached a total of 7,708 ETAs at the end of 2019.²⁴ Over time, the number of ETAs based on EADs has increased exponentially; conversely, the number of ETAs based on ETAGs has followed an inverse U-shaped curve. In other terms, **more and more ETAs are based on EADs**, while the number of ETAs based on ETAGs has increased at a low growth rate until 2016 and then has started decreasing.

Figure 18 - Number of ETAs per year by type of document they are based on (2013-2019)



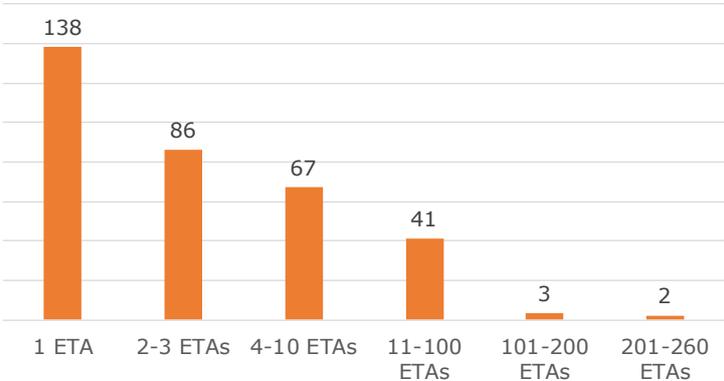
Source: Authors based on EOTA data

Overall, **out of the total of 7,708 ETAs issued by the end of 2019, 4,729 (61%) were based on an ETAG used as an EAD, while 2,979 (39%) were based on an EAD.** These 2,979 ETAs were based, more precisely, on 337 EADs out of the 439 that have been adopted since 2013.

²⁴ Source: EOTA Sharepoint.

The number of ETAs issued based on each EAD varies significantly. As illustrated in Figure 19, 138 EADs were used as a basis to develop a unique ETA each; the other 199 were used as a basis for issuing two or more ETAs, up to the extreme situation where one EAD (EAD 330232-00-0601) has been used as a basis for issuing 260 different ETAs. These differences can be explained by the scope of the EAD in question: for innovative or very particular products it is often the case that only one ETA is issued per EAD; conversely, the more the product becomes accepted by the market, the more numerous ETAs can be issued based on the same EAD. The number of times that an EAD is used as a basis for ETAs also depends on when the EAD is cited. Since the full text of the EAD can only be published once the EAD is cited, and in some cases CE marking is only possible then (due to AVCP requirements), follow-up ETAs are more likely to occur then. Considering that 203 EADs have been adopted in 2018 and 2019 and only 34 of them have been cited in the OJEU, the number of ETAs is likely to increase.

Figure 19 - Number of EADs used as a basis for ETAs, by number of ETAs issued (2014-2019)

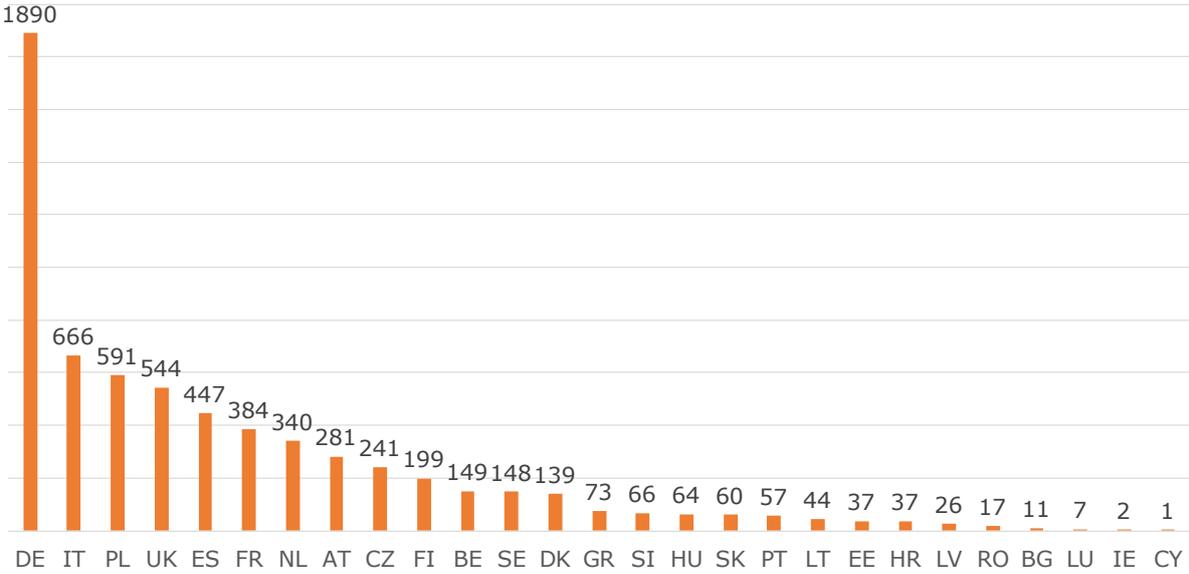


Source: Authors' based on EOTA data

7,708 ETAs issued between December 2013 and December 2019 were based on the request from manufacturers from 68 different countries. In particular, **6,521 (85%) of manufacturers that requested an ETA are from the EU28 Member States, while 1,187 (15%) from non-EU28 countries.** Overall, requests from German manufacturers represent the relative majority (1,890, corresponding to 25% of the total), followed by requests from Italian (666 requests, i.e. 9%) and Polish manufacturers (591 requests, 8%). The only European country where no manufacturer has ever requested an ETA is Malta. Overall, the number of ETA requests is proportional to the size of the construction market.

Moreover, ETAs are widely requested also from manufacturers located in some non-EU28 Member States, especially by Swiss manufacturers, which recorded a total of 340 requests.

Figure 20 - Number of ETAs issued, by manufacturer's country (only EU28 Member States)



Source: Authors' based on EOTA data

Figure 21 - Number of ETAs issued, by manufacturer's country (all over the world)



Source: Authors' based on EOTA data

3.4. Distribution of EADs by product area

Each construction product has its peculiarities which influence the relevance of EADs in each product area, i.e. the need for more or less EADs to be adopted. Even if all 36 product areas (listed in Annex II of the CPR) could potentially be covered by an EAD, in fact, the distribution of EADs among them is highly skewed, as shown in Figure 22:

- Fixings (product area code, hereafter PAC, 33) and thermal insulation products and composite insulation systems (PAC 4) have the largest share and number of EADs adopted, respectively 13% and 11%;
- Fixed firefighting equipment (PAC 10) or to space heating appliances (PAC 27) have the lowest number of EAD, i.e. only 1;
- Sanitary appliances (PAC 11) and aggregates (PAC 24) and power, control and communication cables (PAC 31) have no EADs at all.

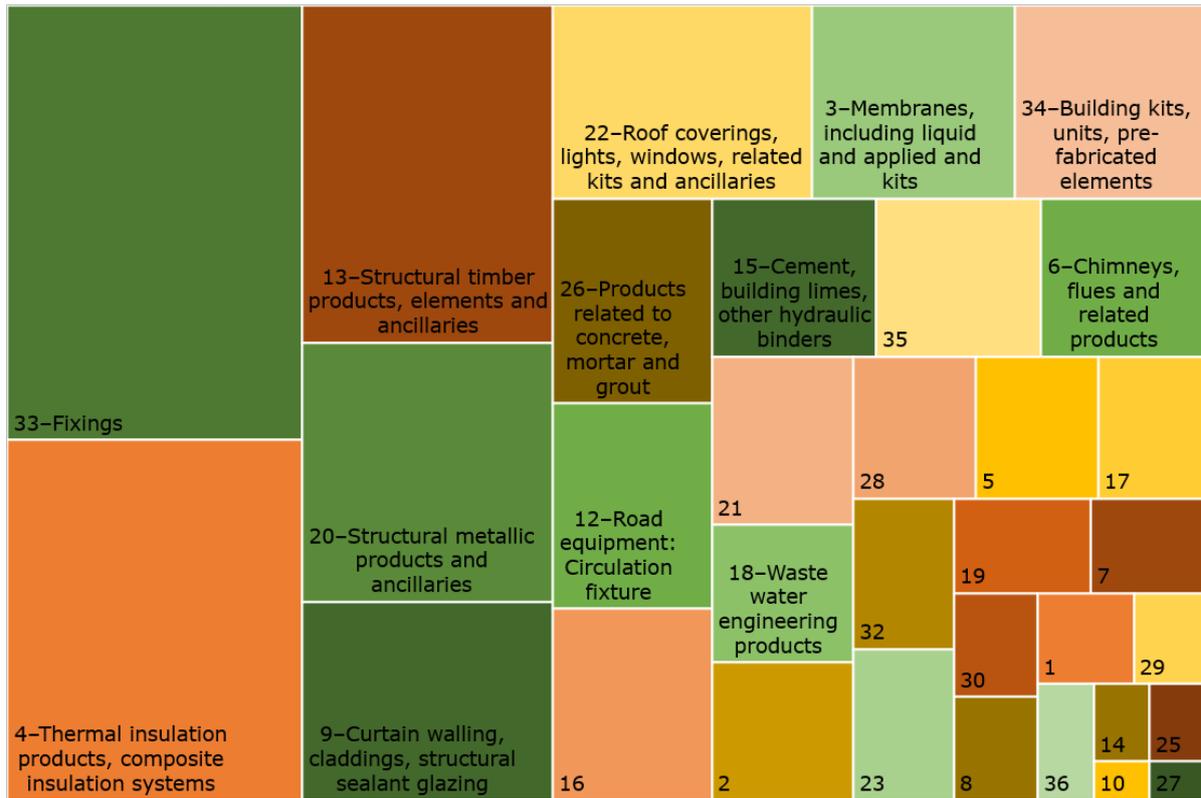
The number of product areas covered by the EADs every year follows the general trend of EAD development: the number of product areas covered by the EADs adopted in 2014 was 14, increased to 29 in 2016, decreased to 23 in 2017 and after a slight increase in 2018, it decreased again in 2019. This means that not all product areas were covered every year by new EADs. The distribution of EADs among the different product areas has only slightly changed over the years. The share of EADs for fixings (PAC, 33) and thermal insulation products and composite insulation systems (PAC 4) has slightly decreased over the years, but they have always remained the dominant ones (see below for reasons).

Evidence shows that, focusing only on the top 10 product areas to which 66% of adopted EAD are related, **the typology of EADs differs significantly across product areas** (Figure 23):

- The largest share of new EADs relates to roof coverings, lights, windows, related kits and ancillaries (PAC 22): they are more than 70% of all EADs issued for this product area;
- New EADs represents the largest share of all types of EADs also for other products areas: curtain walling, claddings, structural sealant glazing (PAC 9), products related to concrete, mortar and grout (PAC 26), and building kits, units, pre-fabricated elements (PAC 34);
- Only 10% of EADs for road equipment (PAC 12) are new;

Product areas like thermal insulation products, composite insulation systems (PAC 4), and structural metallic products and ancillaries (PAC 20) have a higher share of EADs developed on the basis of pre-existing CUAPs.

Figure 22 - Adopted EADs by product area (2014-2019)

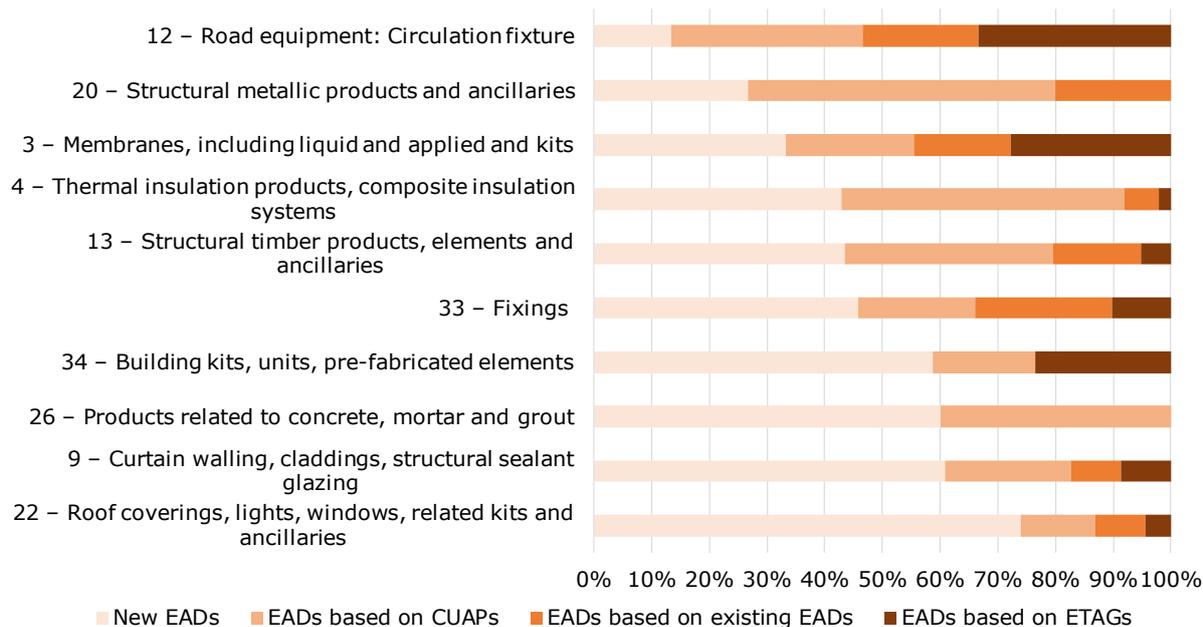


Source: Authors based on EOTA data

Note: The full list of product areas included in the CPR is as follows:

- | | |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1 - Pre-cast concrete products | 18 - Waste water engineering products |
| 2 - Doors, windows, shutters, gates and ancillaries | 19 - Floorings |
| 3 - Membranes, including liquid and applied and kits | 20 - Structural metallic products and ancillaries |
| 4 - Thermal insulation products, composite insulation systems | 21 - Wall and ceiling finishes (external and internal), internal partition kits |
| 5 - Structural bearings, pins for structural joints | 22 - Roof coverings, lights, windows, related kits and ancillaries |
| 6 - Chimneys, flues and related products | 23 - Road construction products |
| 7 - Gypsum products | 24 - Aggregates |
| 8 - Geotextile, geo-membranes and related products | 25 - Construction adhesives |
| 9 - Curtain walling, claddings, structural sealant glazing | 26 - Products related to concrete, mortar and grout |
| 10 - Fixed firefighting equipment | 27 - Space heating appliances |
| 11 - Sanitary appliances | 28 - Pipes, tanks and ancillaries (not in contact with water for human consumption) |
| 12 - Road equipment: Circulation fixture | 29 - Construction products in contact with water for human consumption |
| 13 - Structural timber products, elements and ancillaries | 30 - Glass products (flat, profiled or blocks) |
| 14 - Wood based panels and elements | 31 - Power, control and communication cables |
| 15 - Cement, building limes, other hydraulic binders | 32 - Sealants for joints |
| 16 - Reinforcing and pre-stressing steel for concrete and ancillaries, post tensioning kits | 33 - Fixings |
| 17 - Masonry and related products, including units, mortars and ancillaries | 34 - Building kits, units, pre-fabricated elements |
| | 35 - Fire stopping, fire sealing, fire protective or retardant products |
| | 36 - Other |

Figure 23 - Typology of EADs in the top 10 product areas (2014-2019)



Source: Authors based on EOTA data

The aspects that may make the EADs more diffuse and relevant for specific product areas are several.

First of all, **the innovativeness** of construction products is one of the main factors affecting the number of EADs in each product area. The interviewed stakeholders confirmed that the more the product is innovative, the more an EAD needs to be developed. The high number of new EADs adopted for the fixings is due to the fact that this product group, in particular the anchor systems, is very dynamic, with many innovative products regularly placed on the market and with its intended uses extended continuously. This aspect goes together with another peculiarity of this product area, which is the high product variety. Fixing are characterised by huge product variety, which explains the need for more EADs. Conversely, more standards products such as structural joints are more likely to be associated with a lower number of new EADs.

Another important factor behind the uneven distribution of EADs among the 36 product areas is **market competition**. Given the benefits that holding an ETA may generate for manufacturers, the latter tend to request ETAs to demonstrate their innovation advantage. Thus, manufacturers can request more or less ETAs depending on the innovativeness of their products and on the potential competitive advantage they could gain from placing it into the market. In turn, this increases or decreases the probability of a new EAD to be developed.

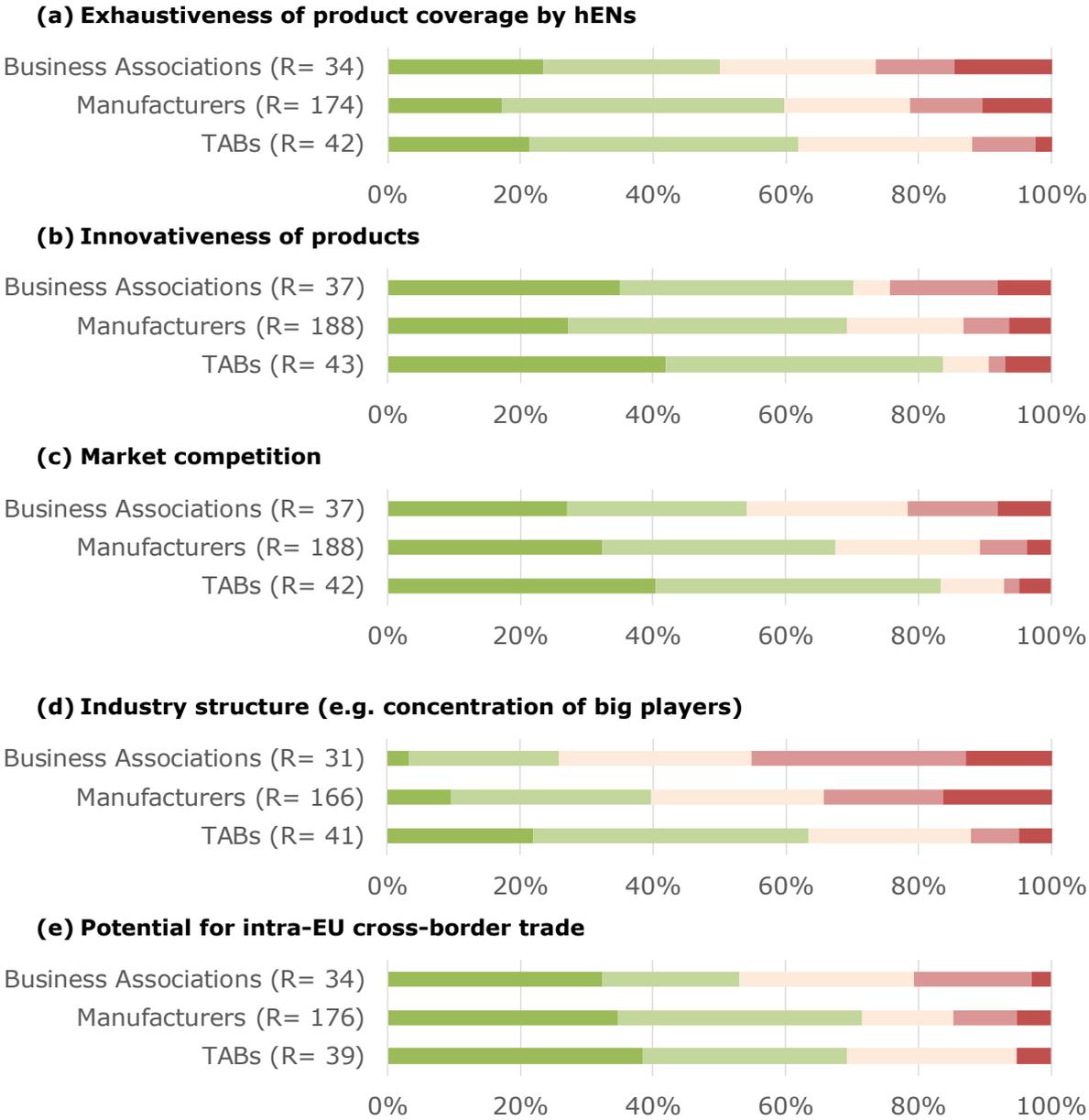
The probability of a new EAD to be developed also depends on the **potential for intra-EU cross-border trade** intrinsic of the product in question. Being the EOTA route intended to allow the CE-marking to those products not (or not fully) covered by hENs, cross-border trade is both the main advantage offered by the EOTA route, but also its main driver. Most of the manufacturers decide to request ETAs, and so potentially to set in motion the EAD development machine, with the ultimate aim of increasing their export in Europe.

Also, the **industry structure and the size of the market** are determinant factors explaining the uneven EADs' distribution across the 36 product areas. As emerged during the interviews, the market for fixings is about six or even eight times bigger than that, for

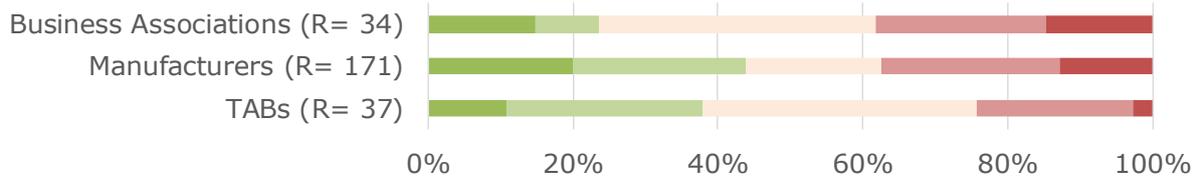
instance, the market of metallic products. This explains the large product variety and the need for more EADs to be developed.

Finally, the adoption of new EADs depends on the **degree of coverage and detail offered by the existing hENs**. If the hENs do not cover all relevant essential characteristics of a product, it is more likely that a new EAD is issued in that particular product area. The high number of EADs related to thermal insulation products and composite insulation systems (PAC 4) is partly due to the low coverage of existing hENs. Conversely, glass products (PAC 30) are covered by a relatively small number of EADs, given that the product is well covered by existing hENs. An extreme case is represented by the aggregates product area (PAC 24), which is nearly entirely covered by hENs and therefore has no EADs.

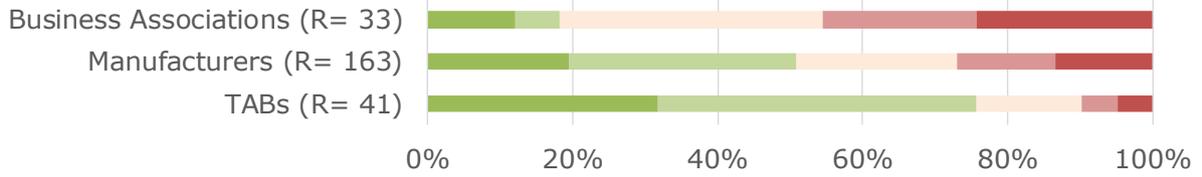
Figure 24 - To what extent the following factor may explain the different EADs' distribution among product areas?



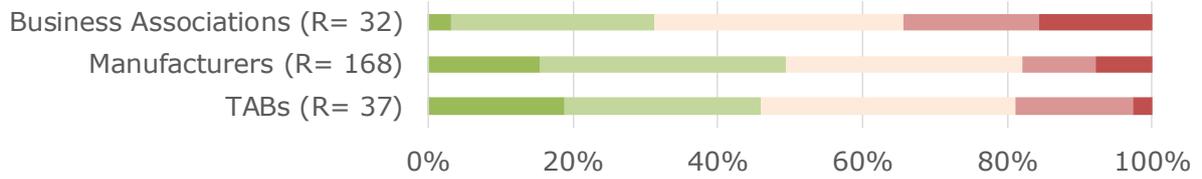
(f) Potential for extra-EU cross-border trade



(g) Size of market



(h) Length of product innovation or improvement cycles



Source: Authors

3.5. Distribution of EADs by responsible TAB

EAD’s adequacy in meeting manufacturers’ need strongly depends on the capacity of the TABs in providing a high-quality service. In this section, the degree of involvement of TABs in the EAD development process is examined in more detail.

Not all TABs have ever been involved in the development of an EAD. As shown in Figure 25, only 32 (out of a total of 52 TABs, i.e. 62%) have been responsible for developing at least one adopted EAD. However, the situation has significantly improved over the years, along with the increasing demand for new EADs. In fact, in 2014, the number of different responsible TABs was only seven. This trend denotes an increasing diversification of the TABs involved in the EAD development process.

Even if 25 countries have at least one TAB in their territory, the TABs responsible for one or more EADs are located in 20 countries. At the end of 2019, the six countries where no TABs had never been responsible for any EAD development were Hungary (4 TABs), Ireland (3 TABs), Cyprus (1 TAB), Latvia (1 TAB), Lithuania (1 TAB). Furthermore, in countries where there is more than one TAB, it is often the case that not all existing TABs have been responsible for the development of an adopted EAD. For instance, six out of the nine TABs from the UK have never been responsible for any adopted EAD.

Moreover, **a higher number of TABs in each country is not necessarily correlated with a higher number of EADs** in the country (see Figure 26). About 58% of the total EAD adopted between 2014 and 2019 were developed in Germany, Austria, and Denmark, which are countries with only one TAB each. In particular, out of a total of 439 EADs, 144 EADs (33%) were developed in Germany, 63 (14%) in Austria, and 47 (11%) in Denmark. In the UK and Poland, which are the two countries with the highest number of TABs, the number of EADs developed is very low, summing up to 17 EADs (4%) in the UK and 10 EADs (2%) in Poland.

Figure 25 - Number of EADs adopted between 2014 and 2019, by country and responsible TAB

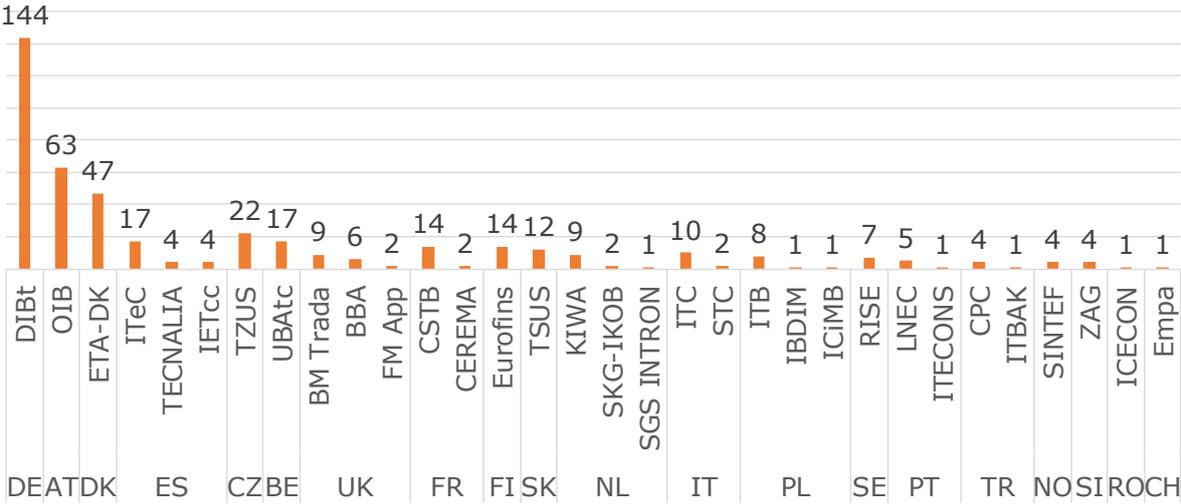
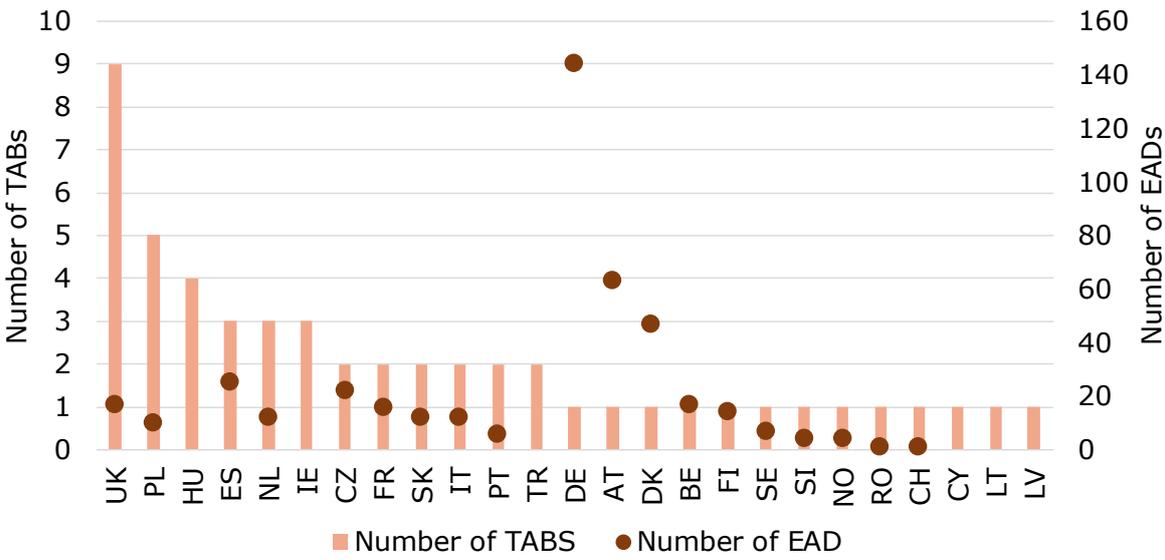


Figure 26 - Number of TABs and issued EADs in each country



Note: bars indicate the number of TABs located in each country, while balls indicate the number of EADs developed by TABs located in that country. Source: Authors' based on EOTA data

The concentration of the EAD development procedures in some TABs rather than others is due to a number of reasons:

- The quality of service provided by the TABs and available resources:** the interviewed stakeholders indicated that not all the TABs provide manufacturers with a high-quality service because of the lack of technical expertise, which is often exacerbated by the lack of human and financial resources. In fact, the TAB's level of funding significantly differs among countries, and this influences the number of qualified people available to work on the ETA/EAD development process. For instance, the DIBt in Germany can rely on larger financial resources than other TABs, which in turns allow it to have a greater and more specialised pool of experts.
- The TAB's reputation and proved technical expertise:** the manufacturers tend to approach the TABs that have a stronger reputation and that have already demonstrated some technical expertise in the product area of interest. Thus, it can be argued that the more a TAB participates in the development of EADs, the more expertise and reputation is built and the more manufacturers it is likely to attract in the future. This virtuous circle can explain why some TABs are more and more active than others.
- Time-to-market considerations:** both the staff availability and the know-how retained by certain TABs are linked to the speed of the service delivered. Manufacturers tend to prefer the TABs that can offer the quickest route that enables them the fastest certification of their products. This is particularly important for more innovative products.
- The fee charged by the TABs for the ETA development:** the manufacturers have to pay a fee for the ETA, in addition to the cost for the product performance testing. The fee charged by the TABs generally varies from one TAB to another. Some manufacturers may decide to require the services of one TAB rather than

"It is common practice for a manufacturer to approach the same TAB its competitors also refer to" (interviewed TAB).

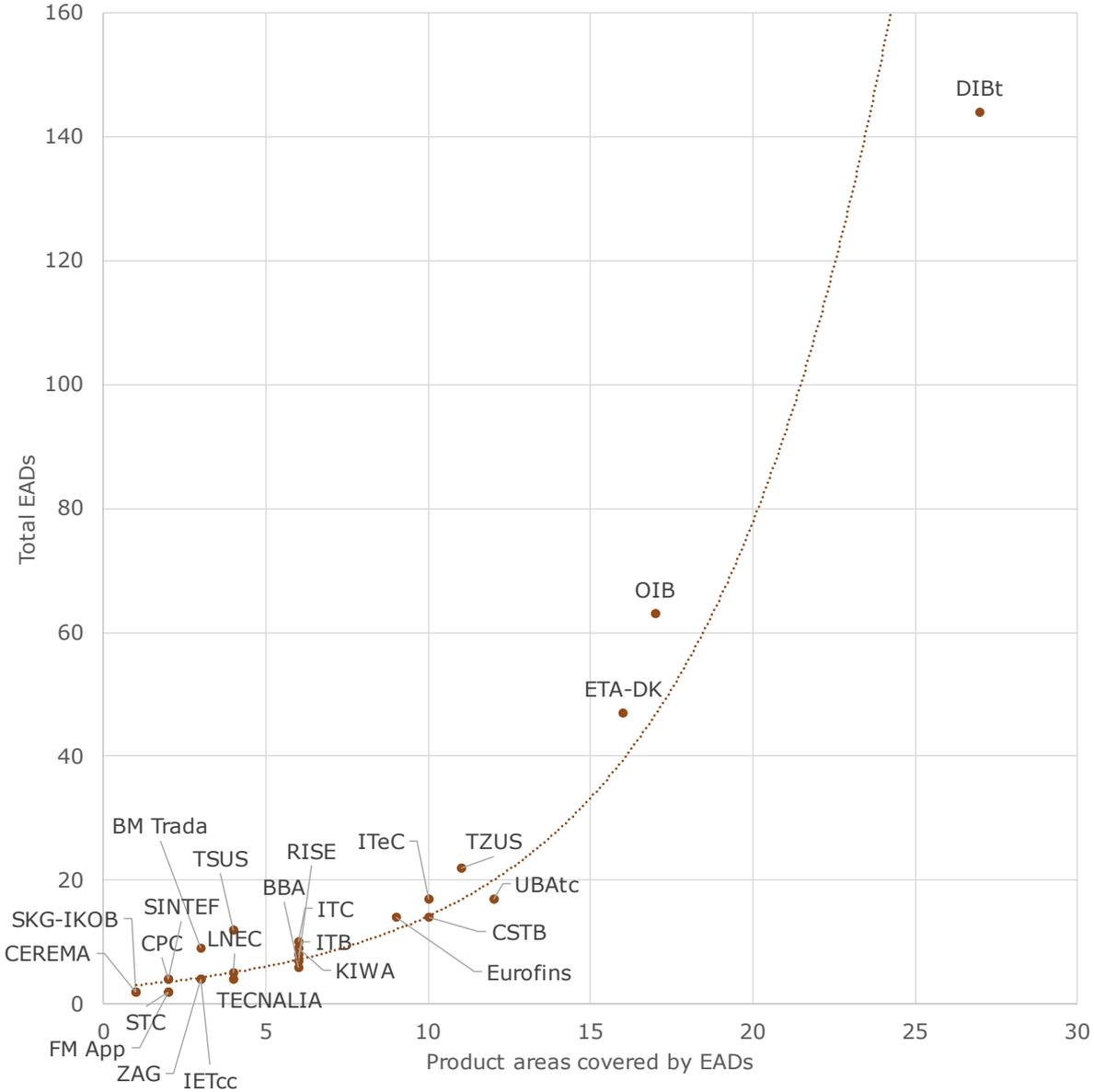
another in consideration of the cost related to the ETA development. In any case, interviews indicate that the quality of the service and the time-to-market are more crucial factors for the manufacturers' decision of which TAB to approach.

Moreover, given that TABs' activities are strongly driven by manufacturers and, in turn, manufacturers are keen on establishing long-lasting relationships with the TABs they had good experiences with, **some TABs are starting specialising in particular product areas**. As an illustrative example, when focusing on the three most active TABs (DIBt in Germany, OIB in Austria, and ETA-DK in Denmark), the analysis of the product areas they mostly deal with confirms this specialisation tendency:

- In Germany, 49% of EADs developed by the German TAB (DIBt) relate to only three product areas: fixings (41 EADs in total), thermal insulation products, composite insulation systems (21 EADs), and 20 structural metallic products and ancillaries (9 EADs).
- The Austrian TAB (OIB) instead deals mostly with structural timber products, elements and ancillaries), chimneys, flues and related products (11 EADs), and road equipment (8 EADs). Together, these three product areas cover 59% of all OIB's EADs.
- In Denmark, 45% of EADs developed by the Danish TAB (ETA-DK) are in only three product areas: structural timber products, elements and ancillaries (7 EADs), curtain walling, claddings, structural sealant glazing (7 EADs) and roof coverings, lights, windows, related kits and ancillaries product areas (7 EADs).

Overall, there is a **correlation between the number of product areas covered and the number of EADs developed by each TAB**, as shown in Figure 27. Indeed, while the German DIBt has developed the largest number of adopted EAD covering almost all the product areas, the other TABs proportionally cover fewer product areas and so produce a smaller number of EADs. Specifically, the OIB (Austria) and ETA-DK (Denmark) hold an intermediate position, covering on average 17 product areas and having developed, on average, 55 EADs each. These two are followed by a group of other TABs (TZUS, CK; UBAtc, BE; ITeC, ES; CSTB, FR; Eurofins, FI) which cover an average of 10 different products areas and has developed about 17 EADs. Finally, the remaining TABs have developed about 4 EADs each related on average to 3 different product areas.

Figure 27 - TABs by number of adopted EADs and number of product areas covered



Source: Authors' elaboration based on EOTA data

3.6. Overall relevance of the EADs and ETAs

The interviewed and surveyed stakeholders generally agree on the importance and relevance of the EOTA route. More than 90% of the surveyed stakeholders believe that **the EOTA route provides manufacturers with a valid alternative to the CEN’s route** (see Figure 28). The high number of new EADs adopted reflects the actual need for an alternative assessment route. Around 70% of the surveyed manufacturers and business associations considered that the EADs largely meet the manufacturers’ needs (Figure 29).

The development of new EADs in particular product areas is to a large extent driven by the absence of an exhaustive harmonisation scheme based on hENs, but also because of the long time needed to develop new hENs (see section 2.2.2), which prevent the manufacturers from placing new products on the market in the needed tight time period.

As also indicated by the Commission²⁵, the proliferation of EADs in certain product areas, and therefore its relevance, is likewise driven by the industry and by the specific characteristics of the products, which, according to the opinion of the stakeholders, tend to be characterised by a higher degree of product innovativeness and variety.

Figure 28 - To what extent are the EADs important in case no hENs exist

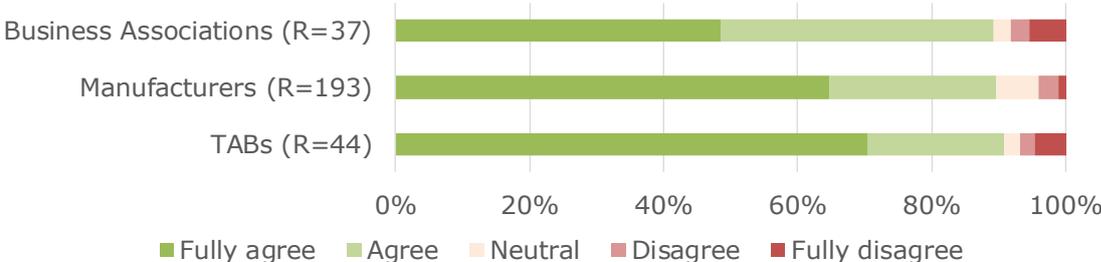
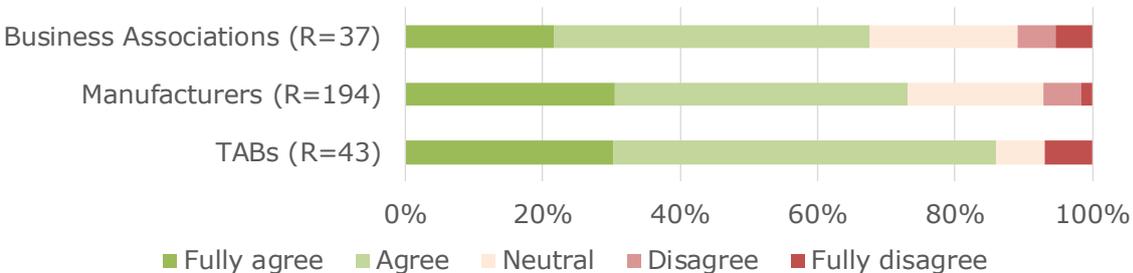


Figure 29 - To what extent do EADs meet manufacturers’ needs?

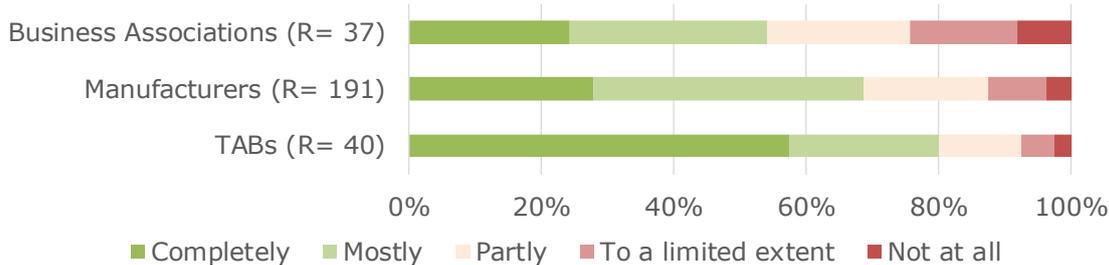


Source: Authors

Overall, **the majority of TABs and manufacturers agree that the EOTA route creates added value for the entire construction sector**. The large number of ETAs issued is already per se indicative of the added value that manufacturers attach to such documents. According to the stakeholders, ETAs represent useful reference documents which provide manufacturers with a faster and more tailored way to CE marking than harmonised standardisation.

²⁵ European Commission (2019). Report from the Commission to the European Parliament and the Council (COM(2019) 800 final)

Figure 30 - To what extent does the EOTA route create added value for the entire construction sector?

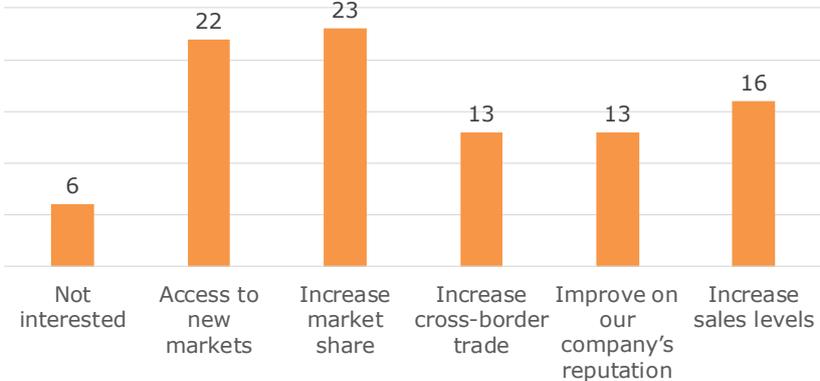


Source: Authors

Interestingly, about 87% of manufacturers surveyed agreed that ETAs are useful as a recognised brand they can use in their marketing. For instance, some survey respondents pointed out that holding ETAs enable manufacturers to gain the clients' confidence. Regardless of the possibility granted by the ETAs to CE-mark a product intended for cross-border trade, stakeholders recognise that holding the ETA has a **positive impact on the reputation** of the company, which in some cases is critical to allow the companies to remain on the market, or to increase their market share and their sales level. **ETAs have, therefore, positive economic effects as well.**

The positive impact of the ETAs was also confirmed by those manufacturers which currently do not hold any ETAs either because their products are already fully covered by hENs, or because they fear that the cost to obtain an ETA is too high. Whatever the reasons why these companies do not own any ETAs yet, 51% indicated that they would be interested in requesting an ETA in the future as it would indeed allow them to **access new markets** and to increase their market share.

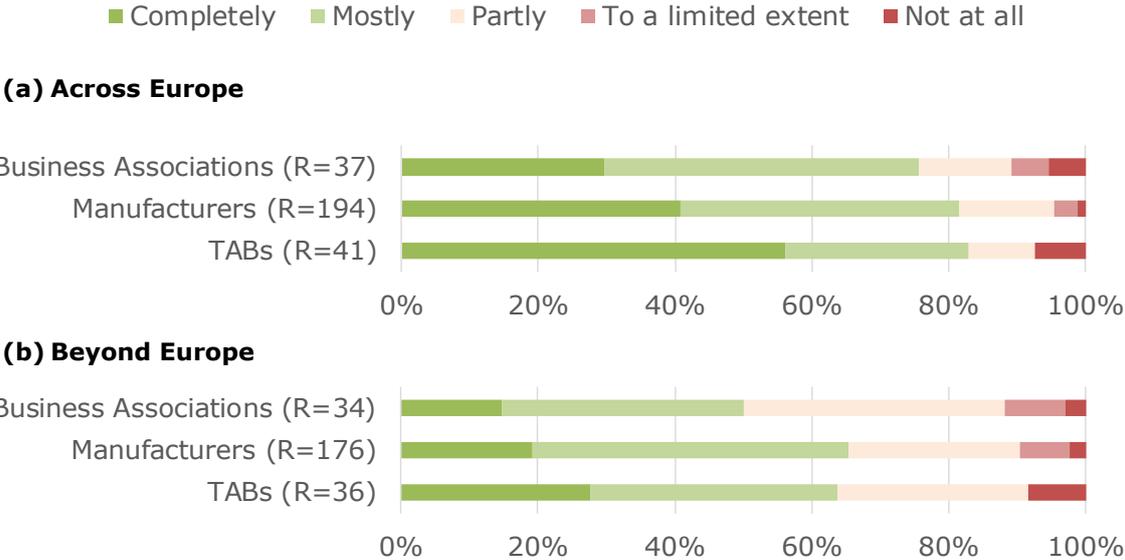
Figure 31 - Why would your company be interested in requesting an ETA in the future?



Source: Authors

Overall, holding an ETA allows accessing to new markets thanks to the fact that **the ETA route, in general, has a high standing among construction industry professionals and national authorities** within and, to a lesser extent, beyond Europe. Some manufacturers interviewed explained that, in some cases, they had to request ETAs because it was explicitly requested by their clients, even from non-European countries, e.g. Singapore and Australia.

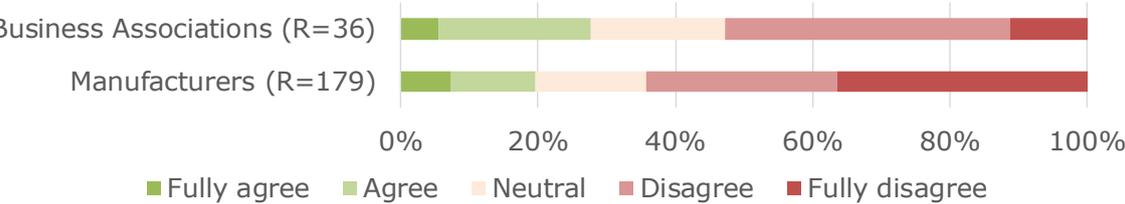
Figure 32 - To what extent does the ETA route have a high standing among construction industry professionals and national authorities...?



Source: Authors

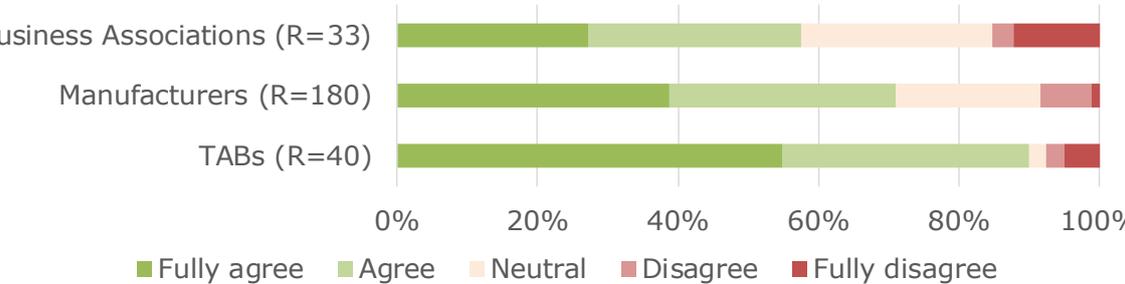
Given all these reasons underlying the relevance and the importance of ETAs, **stakeholders agreed that ETAs could not be replaced by any other third-party body verification without any loss of credibility to products.** About 70% of respondents indicated that the repealing of the EOTA route would be detrimental to the companies' economic performance.

Figure 33 - To what extent do you agree that the ETA could be replaced by any other third-party body verification without any loss of credibility to our product?



Source: Authors

Figure 34 - To what extent do you agree that the repeal of the ETA route would be detrimental to companies' economic performance?



Source: Authors

4.EADs and product innovativeness

This section aims to analyse the innovativeness of construction products covered by EADs. It illustrates the link between the EOTA route and innovation and the mechanisms behind. It also proposes a methodology to assess, in a systematic way, the innovation level of construction products for which an EAD is/has been developed.

The main findings are:

- Innovation in the construction sector typically occurs incrementally and somewhat obscured, leading to dramatic transformation only in the long run.
- About 60% of surveyed manufacturers agreed that the EOTA route contributes to enhancing their potential for product innovation. Manufacturers feel more confident in innovating given the existence of the EOTA route.
- In most cases, the EOTA route targets products that are at least partly innovative. Between 65% and 90% of respondents consider that EOTA targets products which are new-to-the-world or more complex than previous product versions.
- The hENs cannot properly address the needs of manufacturers who are creating innovative products because the hENs' development process is considered too long and rigid, according to interviewed stakeholders.
- Currently there is no way to systematically assess the degree of innovativeness of all the construction products covered by the EADs. An ad hoc methodology has been proposed and successfully tested on a sample of EADs. It consists of using the information already contained in the EADs and, through the application of clear criteria, distinguishing whether the product is radically innovative, moderately innovative, incrementally innovative or not innovative.

4.1. Innovation in the construction sector

Innovation plays a key role in the modern economy in all sectors. It spurs productivity in individual factories and contributes to a dynamic and growing economy. In relation to the construction sector, Squicciarini and Asikainen (2011) note that, although standardization and regulations may enable the widespread deployment of novel technologies and processes, they can also lead to relatively static systems which may ultimately hinder innovation. Certification practices, whether related to products or firms, may also discourage efforts and investments in small firms due to the additional costs and delays they might imply. According to these authors, **construction is mistakenly perceived as a barely dynamic low-tech industry**. In fact, innovation in the construction sector typically happens in an incremental and 'hidden' fashion, leading to dramatic transformations only in the long run. In particular, they note that the manufacturing of construction products is typically more innovative than the core construction sector.

In this respect, the European Commission's Business Innovation Observatory recognises the innovativeness of construction products, e.g. in the field of smart living and advanced building materials. New technologies in the field of smart living have the following benefits, according to the Commission: reduced costs; lower carbon emissions for constructing, utilising and decommissioning buildings; multiple functions and added value on the materials used on buildings; better attributes, qualities and longevity of buildings and improved quality of life for users. Companies driving the trend provide solutions related to the following aspects of construction: advanced materials, improved processes, innovative concepts and energy efficiency (Business Innovation Observatory, 2014a and Business Innovation Observatory, 2014b).

4.2. The EOTA route and product innovation

The EOTA route is potentially linked to the development of innovative construction products. Indeed, as also emerged throughout the analysis of EADs/ETAs relevance (see the previous section), the EOTA route is of great importance for innovative construction products and for construction products for which the development of a harmonised standard is not a viable option. As if to underline this, EOTA goes beyond the implementation of the CPR and includes among its duties (Article 2(4) of EOTA's statute²⁶) *"the making available and the use of construction products and the facilitation of innovation in construction"*, on top of the objectives regulated by Article 31 of the CPR. Therefore, the EOTA route may constitute a key tool in enhancing innovation by allowing manufacturers, whose products are new and innovative and not (fully) covered by hENs, to CE mark their products upon the issuing of an ETA.

However, there is no comprehensive evidence that allows concluding whether the EOTA route really targets innovative products. **Previous studies did not focus on the innovation aspects given that supporting innovation is not expressly stated as an objective in the CPR.** Only a few studies have briefly outlined this potential spill-over effect. On the one hand, focusing on the CPR-related aspects, a recent study by CSIL (2017) found that 27% of manufacturers surveyed believed that the CPR could have a

²⁶ EOTA consolidated statute of 24th April 2018
<https://www.eota.eu/ckfinder/userfiles/files/2019%20Statutes%20endorsed%20GA13%20and%20GA14.pdf>

positive effect on product innovation, incentivising companies to innovate as far as possible to gain competitive innovation advantages as compared to their competitors.

On the other hand, focusing more on EOTA-related aspects, **previous studies²⁷ did not find factual and unambiguous evidence of a linkage between product innovation and the EOTA route**, being unclear the extent to which the EADs cover new and truly innovative products. More specifically, they found that the majority of EADs were developed to convert existing documents issued under the CPD, i.e. ETAGs and CUAPs, rather than to provide means to assess the performance of new products. Moreover, focusing on EADs cited in the OJEU, the Commission (2019) also asserted that the low share of new EADs (i.e. those not resulting from an ETAG or a CUAP conversion), were, as compared to pre-existing technical documents (hTs), either including only a few additional essential characteristics, or referring to a slightly wider scope, or referring to additional intended uses. A TAB that participated at the validation work of the study “Supporting study for the evaluation of the relevance of the EOTA route” (BRE et al., 2016) pointed out that “*innovation was more in the background and that lack of experience of a product was more often the reason for choosing the EOTA route rather than CEN*”. Somehow deviating from these findings, most of the manufacturers interviewed within the same study indicated that the product for which they had requested an ETA was (at least partly) innovative.²⁸

The present study tries to fill the gap in the literature, by putting more emphasis on evaluating to what extent EOTA route facilitates product innovation and to what extent the route is used by manufacturers as an alternative to assess the performance of innovative products. The results show that the EOTA route contributes to enhancing the potential of manufacturers for product innovation. About 73% of the survey respondents agreed in fact that this at least partly the case (see Figure 35). Although innovation is a manufacturer’s decision driven by the market rather than by legislation,²⁹ **manufacturers feel more confident in innovating given the existence of the EOTA route**. Indeed, as explained by one interviewee, even just knowing that they could then CE-mark their innovative products or that they could obtain an ETA in any case, contributes to decreasing manufacturers’ uncertainty related to the development of a new product.

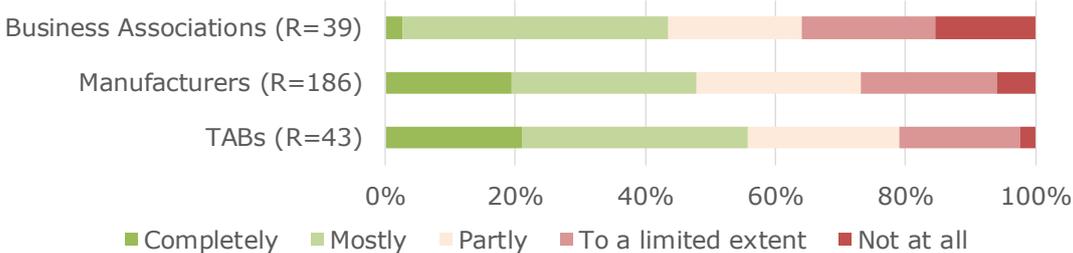
“The EOTA route allows the tradability of innovative construction products within and beyond Europe as it is possible to CE-mark such products, but innovating is a manufacturer’s choice (Interviewed manufacturer).

²⁷ European Commission (2019). Report from the European Commission to the European Parliament and the Council. Brussels, 24.10.2019 COM(2019) 800 final <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2019:0800:FIN:IT:PDF>; BRE et al. (2016); VVA et al. (2017).

²⁸ Out of 29 responses, 6 indicated that the products for which they had requested an ETA were very innovative, 6 that they were innovative, 10 that they were partly innovative, 5 that they were slightly innovative, and 2 that they were not at all innovative

²⁹ RPA (2015).

Figure 35 - To what extent does the EOTA route enhance the potential for product innovation?



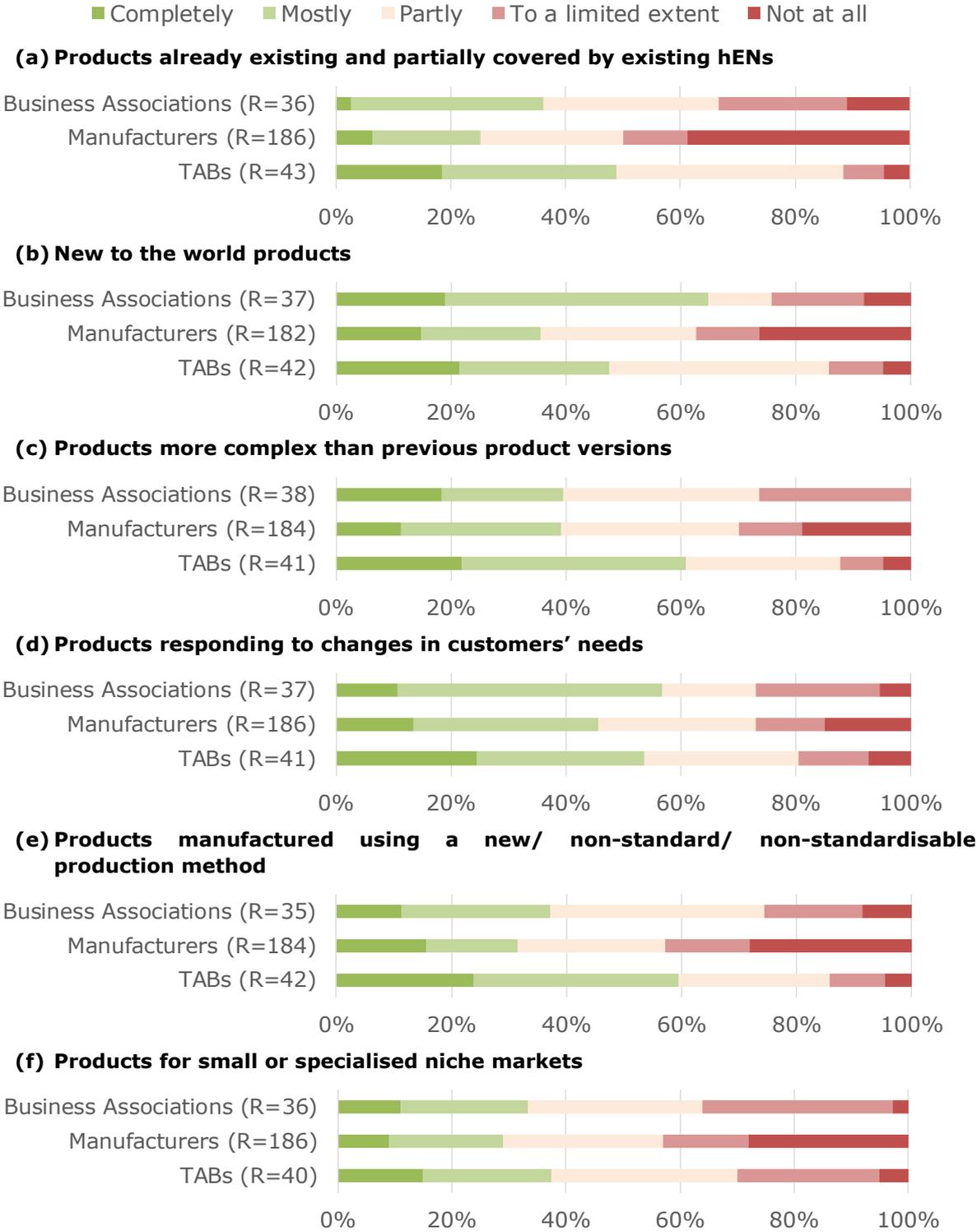
Source: Authors

In the context of the survey launched within this study, TABs and business associations were asked to indicate to what extent the EOTA route targets products that can be considered as innovative and for which an ETA request is submitted by the firms (e.g. new to the world, improved products, niche products, and so on), while manufacturers were asked to indicate for which types of product they had requested an ETA.

Overall, the analysis of the survey responses (Figure 36) indicates that **the products covered by EADs and ETAs are in most cases at least partly innovative**, even if not necessarily completely innovative. A considerable share of respondents (between 65% and 90%, depending on the type of stakeholder) consider the EOTA route targets, at least partly, **new-to-the-world products or more complex than previous product versions**. Surprisingly, the results show that this applies to almost all product areas covered by EADs, meaning that innovation is not specific to a given industry. According to the manufacturers’ responses, it seems that it is only slightly more relevant for thermal insulation products and composite insulation systems (PAC 4), fixings (PAC 33), and structural timber products, elements and ancillaries (PAC 13). These are the product areas where a higher total number of EADs were developed, **confirming the relationship between the proliferation of EADs and innovation**.

A smaller share of respondents considers that the EOTA route targets products for small or specialised niche markets. In fact, as highlighted during the interviews with the TABs, it is more often the case that the ETAs are requested to put a new or improved product, that already introduced in one Member States market, onto the wider European market.

Figure 36 - To what extent does the EOTA route target...?³⁰



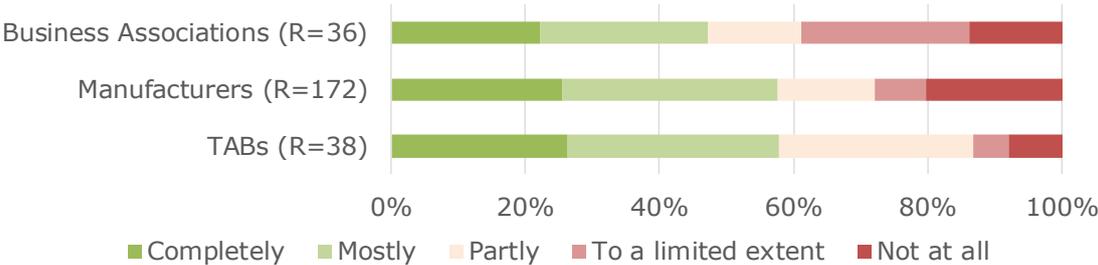
Source: Authors

³⁰ According to the questionnaire, this question was posed in a different way, see Annex V for further details.

Furthermore, stakeholders also noticed that innovative products could not be covered by hENs as effectively as they are covered by the EOTA route. In this regard, interviewees stressed that **the hENs cannot properly address the needs of manufacturers of innovative products, because the hENs’ development process is too long and rigid**. Manufacturers need to put their innovative products on the market as quickly as possible to be able to gain a competitive advantage against their competitors. Moreover, the length of the hENs’ development process, which may last several years, is not aligned with the constant incremental innovations typical of certain product areas, i.e. fixings³¹. This was also partly confirmed by the stakeholders participating in the survey: about 90% of the respondent TABs indicated that the EOTA route targets products where the CEN standardisation does not meet the manufacturers’ needs. This is the typical case, for instance, of products having a short evolution cycle, for which standardisation would constantly lag behind; or of recycled and reused products whose technical characteristics keep evolving requiring nearly customised assessment methods. Such perception was also corroborated by manufacturers. More than 70% of manufacturers declared that the products for which they had requested an ETA were, at least partly, such that the CEN standardisation was inadequate (see Figure 37).

“The reason to create EADs is that the new products or technology cannot be fully tested according to a CEN norm and so the majority of the performance criteria will remain in the new EAD (Interviewed manufacturer).”

Figure 37 - To what extent does the EOTA route target products where the CEN standardisation does not meet manufacturers’ needs?³²



Source: Authors

³¹ Fixings represents a very innovative product area as manufacturers keep trying to improve their products in order to provide increased working life, resistance to higher loads and better performance under seismic conditions.

³² According to the questionnaire, this question was posed in a different way, see Annex V for further details.

4.3. Assessing the innovativeness of EADs

The definition of innovation can be retrieved from the OECD Oslo manual and the European Community Innovation Surveys. Both these sources distinguish different types of innovation generated (product and process innovation). The literature (see Annex IV) also highlights the existence of different degrees of innovation (from incremental to radical and new-to-market), but it does not provide an agreed framework to assess innovation, and in particular the degree of product innovativeness.

As indicated in the previous sections, most of the consulted stakeholders agree that the EOTA route targets innovative products with different degrees of innovativeness, but no systematic evidence is available to determine the innovativeness of specific products. In this section, we build on the definitions of innovation and existing approaches to assessing it that can be found in the literature (Annex IV), and we propose a tailored methodology to systematically measure the level of innovation of construction products covered by the EADs.

4.3.1. Proposed methodology

The literature review, combined with the qualitative evidence collected through the survey and the interviews, highlights that, with reference to the products targeted by the EOTA route, innovation can take place in the form of product innovation, as defined by the fourth edition of the Oslo Manual. Indeed, products covered by EADs are often new or improved versions of existing products.

The proposed methodology is based on the idea of assessing the innovativeness of a product by **comparing the product covered by the EAD with the products already commercialised and traded on the relevant product market, regardless of whether the previous products were already covered by a hTs' provisions**. For example, if the EAD covers an additional characteristic that was already part the product, but that had never been tested/assessed, then such characteristic cannot be considered as additional and the product cannot be considered innovative.

A window cannot be considered innovative if the EAD provides means to test its wind resistance but, even before the EAD development, windows with the same characteristics were already on the market (*interviewed TAB*).

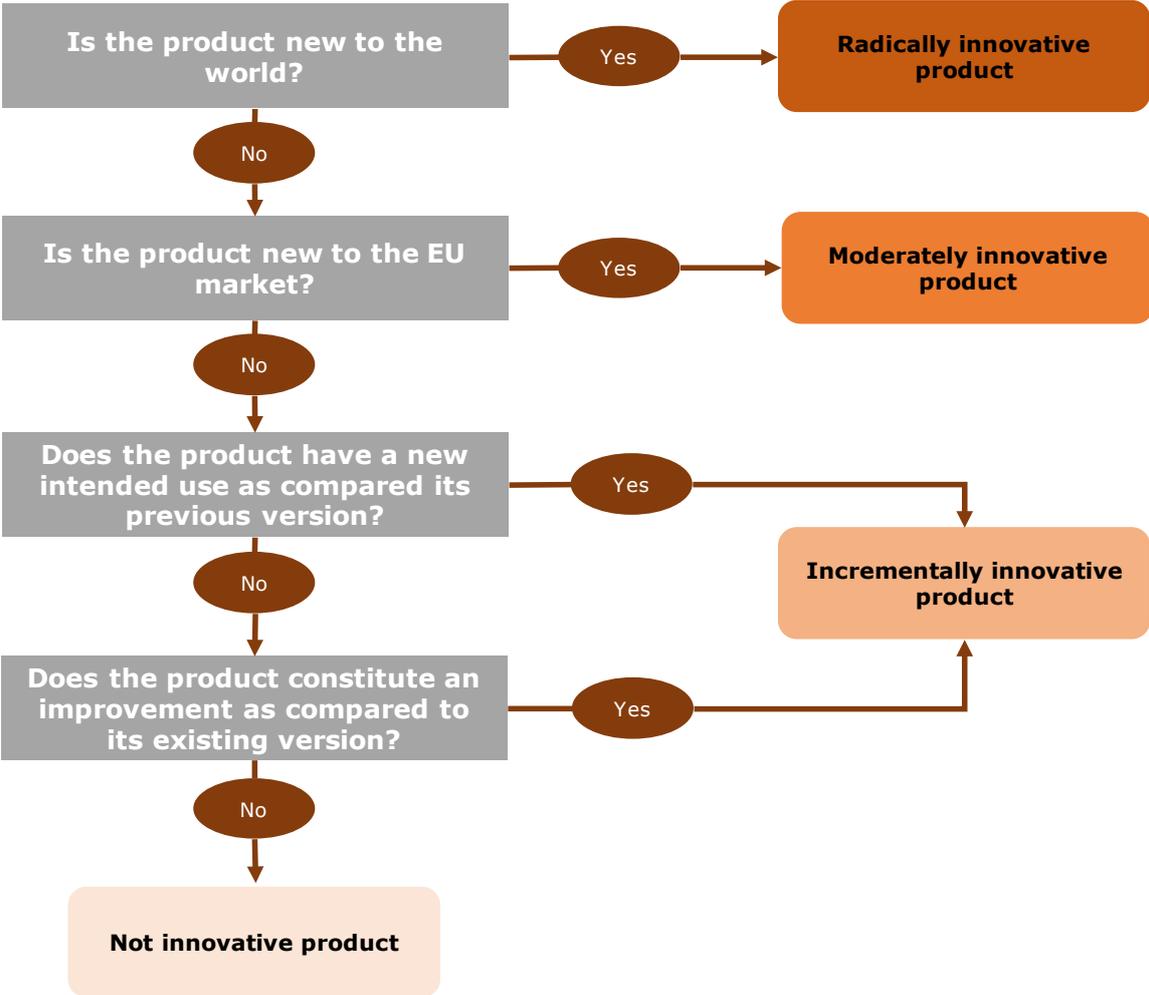
Overall, the assessment process is illustrated by the flow diagram shown in Figure 38. It is based on the information provided in the EADs. The process is made of the following steps, summarised in the Box below.

Box 2 - The process to assess the innovativeness of products covered by the EADs

1. Firstly, the evaluator needs to assess whether a product is new-to-the-world or not, based on the information provided in the EAD section on the description of the construction products (i.e. [section 1.1 of the EAD](#)). **If it is new-to-the-world, then the product is considered a radically innovative product.** Following Ganbaatar and Douglas (2019), a product is defined new to the world if it is “*new to all markets that are heterogeneous in terms of geographical locations, material resources, information, and knowledge*”. In other words, it means that the product is completely new to all manufacturers worldwide, within and beyond Europe, since it is about to be introduced onto the global market for the first time. If the evaluator is not sure of whether the product is new to the world, he/she shall ask further information on this regard to the concerned manufacturer, and, if the assessment is still not possible, he/she should move to the second step of the assessment process.
2. If the product cannot be considered new-to-the-world (i.e. either it is really not new to the world or the evaluator has not enough information on the world market), the evaluator shall assess, based on the same piece of information ([section 1.1. of the EAD](#)) whether the product is new to the Europe market (EU+EFTA), meaning that it has never been manufactured before by any European manufacturers or traded on the European market. Specifically, **if it is new to the European market, the product is considered moderately innovative.** Although it does not represent a disruptive innovation at the global level, it is nonetheless highly innovative in Europe. Thus, following Ganbaatar and Douglas (2019), a product is defined new to the European market if it introduces technical novelties (i.e. it is new) as compared to only its close competitors (i.e. in Europe) which are operating in the same product market for the same type of customers.
3. If a product is neither new to the world nor to the European market, then the evaluator has to assess whether its intended use has been expanded. This assessment should be based on information provided in the EAD section “Intended use(s)” (i.e. [section 1.2.1 of the EAD](#)). If a pre-existing product is adapted to have an extended use, then a wider pool of costumers may potentially use it (in line with Justel et al., 2007).³³ **If the product’s intended use is widened, thereby enabling it to target new costumers, then it is considered incrementally innovative.** The evaluator shall pay attention to whether it is the first time a product is used for the “new” intended use or rather it was already previously the case, but there were no hTs regulating it. If and only if the product has never been used by any economic actors for the intended use envisaged in the EAD, it can actually be considered as incrementally innovative.
4. Finally, the evaluator has to assess if the product constitutes an improved version as compared to a pre-existing version of the same product. This assessment should be based on information provided in the EAD sections “Description of the construction products” (i.e. [section 1.1 of the EAD](#)) and “Essential characteristics of the product” (i.e. [section 2.1 of the EAD](#)). Improvements may concern different aspects of the product, such as additional characteristics, components, materials, sustainable features, maintenance, and so on. Indeed, following Oslo4 and CIS definition, product innovation includes not only the development of new products but also their improvements. However, to take into account that the product is not fully new to the world nor to the market, **improved products are considered as incrementally innovative products.** Again, the evaluator shall assess the improvement by comparing the product in question with the same product that was already available on the market.
5. If the product in question does not fall under any of the previous categories, it is considered not innovative.

³³ This is in line with Justel et al. (2007) who identified among the possible micromarketing discontinuities the situation where through product innovation a firm serves new customer.

Figure 38 - Methodology to assess the innovativeness of products covered by EADs



Source: Authors

Therefore, the proposed methodology allows distinguishing between two types of products covered by the EADs: innovative and non-innovative products. The innovative products can be further distinguished according to their degree of innovativeness as “radically innovative”, “moderately innovative” or “incrementally innovative” products.

As a peculiarity of the EOTA route, **there are also cases where the product itself cannot be considered as innovative, but the testing methods used to assess its performance are innovative**, i.e. they differ from those adopted for the hENs or previous EADs (e.g. they could be cheaper, faster, or more reliable). Even though assessing the innovativeness of assessment methods within the EOTA route could be interesting, there is no comprehensive information available that could allow the evaluation of their degree of innovativeness. A dedicated study should be carried out to address this specific issue.

4.3.2. Test of the methodology

To validate the applicability of the methodology described above, the team carried out a test on six EADs, selected with the support from EOTA, focusing on the most relevant product areas for the EADs and different products in terms of potential intended use and expected innovativeness degree. Thus, the test was carried out on six selected EADs (see

Table 1). These EADs are all still under development so that it is not possible to disclose any further information on them.

Table 1 – EADs used to assess product innovativeness by product area

PAC	Product area description	Number of EADs considered
17	Masonry and related products, including units, mortars and ancillaries	1
22	Roof coverings, lights, windows, related kits and ancillaries	2
33	Fixings	2
34	Building kits, units, pre-fabricated elements	1

By testing the methodology, it was found that:

- One product was assessed as new to the world (radically innovative);
- One product was assessed as (at least) new to the EU market: due to lack of market knowledge, it was not possible to conclude whether the product was also new to the world;
- One product was assessed as incrementally innovative because of its expanded intended use;
- Two were incrementally innovative as new characteristics were included as compared to their previous product’s release;
- One product was not innovative as the EAD was covering a product that has been existing since decades but nor fully covered by an hEN: the EAD development occurred because a manufacturer wanted to obtain an ETA.

Overall, the application of the methodology shed light on the following aspects:

- The proposed methodology appears **clear enough and easy to use** to assess the degree of innovativeness of the products by looking at the information contained in the EADs. Based on this pilot test, it can be estimated that the assessment of each EAD would take indicatively 20-30 minutes.
- **The assessment exercise shall be carried out by the responsible TAB** while writing the EAD. The exercise can also be carried out retrospectively on EADs that had already been developed: in such cases, the responsible TABs shall be involved as they might have more knowledge of the product specificities.
- To ease the application of the methodology, it would be useful if the EADs contain some additional **information regarding the positioning of the product in the market**, possibly based on general information provided by the manufacturer.
- It is important to bear in mind that **a non-tested product essential characteristic is not necessarily innovative**. The novelty of product’s characteristics is to be assessed against the characteristics of the same product before the EAD was developed, and regardless of whether those characteristics had already been tested before.

5.The uniqueness of the EADs

This section aims to analyse the positioning of the CPR, and so of EADs, in the EU harmonisation scheme. It illustrates the EADs' relationship with EU legislation other than the CPR, and with national regulations, as well as the relationships between EADs and between EADs and hENs. Existing overlaps are highlighted and their possible implications on the CPR implementation, especially on the EOTA route, are discussed.

The main findings are:

- Several pieces of European legislation apply to construction products, and this could pose overlap and conflict with the CPR. According to the evidence collected, EADs are generally not in conflict with nor even overlap with the provisions of other EU legislation. Only 28% of manufacturers indicated that the EADs might be otherwise. The extent of such overlap depends on the product in question.
- Despite the effort to replace national rules and standards with harmonised European ones, national product requirements still exist and constitute an obstacle to the realisation of the Internal Market for construction products (CSIL, 2017 and CEPS et al., 2016). However, this study found that the EADs and national legislation are not necessarily in conflict with each other. Indeed, whereas 43% of respondents (fully) agreed that there are overlaps, only 16% indicated that the respective requirements are also in conflict with one another.
- The proliferation of EADs for some product areas could increase the potential overlap among different EADs, as well as between the EADs and the hENs in the same product areas. However, manufacturers perceive the proliferation of EADs as unavoidable and even necessary for products characterised by a large degree of innovativeness, several variants and potential uses.

5.1. The exceptional nature of the CPR

The CPR constitutes an exception within the New Legislative Framework (NLF).³⁴ It differs from the so-called “New Approach Directives” because it does not rely on self-certification through the CE-marking of compliant products, but it harmonises the framework to assess and declare the performance of construction products over their essential characteristics.³⁵ In doing so, the CPR follows the subsidiarity principle. It entrusts the EU with the control over single market access rules, leaving to the Member States the responsibility for safety, environmental and energy requirements applicable to construction works. Another peculiarity of the CPR concerns the rules underlying the CE-marking. Usually, the CE marking is mandatory under the New Legislative Framework for all products covered by a harmonisation act. However, the manufacturers are free to use the assessment methods of their choice. Under the CPR, only harmonised technical specifications, i.e. hENs or EADs, may be used as assessment methods (“common technical language approach”). As to the CE marking, it is only obligatory for products covered by an hEN. The existence of an EAD does not oblige manufacturers to undergo the ETA procedure and obtain CE marking.

“By not certifying product conformity, CE marking for construction products is a passport that allows construction products to travel, but it is neither a work-permit nor a VISA” (surveyed TAB).

The divergence of the CPR from other harmonisation acts following the NLF is due to the specific nature of construction products. The regulation defines a construction product as a *‘product or kit which is produced and placed on the market for incorporation in a permanent manner in construction works or parts thereof and the performance of which has an effect on the performance of the construction works with respect to the basic requirements³⁶ for construction works’.*³⁷ Thus, construction products can be assimilated to some extent to intermediate or semi-finished products, as, by definition, they need to be integrated into construction works. Following the subsidiarity principle, Member States are responsible for defining the building requirements in their territory, which they include into national Building Regulations, and they can decide which specific rules should or should not be harmonised with the CPR.

Moreover, some of the construction products falling under the CPR are also regulated by other EU legislation, which poses potential challenges in terms of overlapping. The same applies at the national level, where not only national marks and requirements but also national Building Regulations could hinder the correct functioning of the CPR. Further issues may arise because of the existence of multiple EADs related to the same product that, in accordance with the CPR, differ, for instance, in the intended use. **All these possible cases of overlapping are typical for the construction products industry in Europe.**

³⁴ The objectives of the New Legislative Framework are spelled out in three legislative documents, i.e. (i) the Regulation (EC) 765/2008, which sets out the requirements for accreditation and the market surveillance of products, (ii) the Decision 768/2008 on a common framework for the marketing of products, and (iii) the Regulation (EC) 764/2008, which lays down procedures relating to the application of certain national technical rules to products lawfully marketed in another EU country.

³⁵ The definition of ‘essential characteristics’ is provided in Annex I of the CPR.

³⁶ The basic requirements referenced in the regulation are seven, namely (i) Mechanical resistance and stability; (ii) safety in case of fire, (iii) hygiene, health and the environment, (iv) safety and accessibility in use, (v) protection against noise, (vi) energy, economy and heat retention, and (vii) sustainable use of natural resources.

³⁷ Non-permanent products in construction works or products that do not have any effect on the performance of construction works are not included in the construction product definition.

5.2. Overlapping between EADs and EU legislation

The CPR is not the only European legislation that applies to the construction products. The co-existence of many pieces of legislation that apply to the construction sector may be the reason for potential overlaps in terms of procedures and requirements, notwithstanding the fact that they pursue similar and complementary objectives. Overall, including the CPR, there are nine pieces of EU legislation related to the construction sector, among which the Eco-Design Directive³⁸ (EDD), the Energy Labelling Directive³⁹ (ELD), the Energy Efficiency Directive⁴⁰ (EED), the Energy Performance of Buildings Directive⁴¹ (EPBD), and the Renewable Energy Sources Directive⁴² (RESO). Additionally, there are also other Directives that are not related to the construction sector, but that still may apply to some construction products, as for instance the Low Voltage Directive⁴³ (LVD) or the Electromagnetic Compatibility Directive (EMCD).⁴⁴

Even if the CPR may potentially overlap and be in conflict with all the above-mentioned regulations, the majority of concerns regards the EDD and, to a lesser extent, the ELD.⁴⁵ Previous studies⁴⁶ found that **there are inconsistencies in definitions and lack of cross-references between the CPR, the EDD and the ELD.**

Concerning the EDD, potential CPR overlaps with the EDD arise whenever a construction product, defined by the CPR, is classified as an energy-related product (for instance, when ventilators are incorporated into construction products). The European Construction Industry Federation⁴⁷ (FIEC) and Construction Product Europe⁴⁸ (CPE) believe that construction products shall fall under the only competence of the CPR. They agree, in fact, that the CPR performs better in achieving not only its objectives but also those of the EDD and the ELD. Moreover, the CPE noted that “the application of the EDD to construction products already covered by the CPR is against the principles of smart regulation”, as manufacturers shall comply with two legislations which are similar in scope and implementation rules.

Even if Article 8(2) of the CPR⁴⁹ shall ensure that CE marking requirements under CPR and other Union harmonisation legislation (e.g. EDD) shall apply in parallel, in fact, it may be the case that the CE marking applies to the same product under the two legislation but with a different meaning according to the product’s intended use.⁵⁰ The 2016 CEPS study “Supporting study for the Fitness Check on the construction sector: EU internal market and energy efficiency legislation” provides an interesting example with reference to local space

³⁸ Directive 2009/125/EC.

³⁹ Directive 2010/30/EU.

⁴⁰ Directive 2012/27/EU.

⁴¹ Directive 2010/31/EU.

⁴² Directive 2009/28/EC.

⁴³ Directive 2014/35/EU.

⁴⁴ For instance, for electric curtains (Directive 2014/30/EU).

⁴⁵ The CPR, the EDD, and the ELD have in common that they all set requirement on products.

⁴⁶ VVA et al. (2018) and CEPS et al. (2016).

⁴⁷ FIEC (2014).

⁴⁸ CPE (2016).

⁴⁹ Article 8(2) of CPR states that “by affixing or having affixed the CE marking, manufacturer indicate that they take the responsibility for the conformity of the construction product with the declared performance as well as the compliance with all applicable requirements laid down in this Regulation and in other relevant Union harmonisation legislation providing for its affixing. The rules for affixing the CE marking provided for in other relevant Union harmonisation legislation shall apply without prejudice this paragraph”.

⁵⁰ VVA et al. (2018)

heaters. In particular, it shows that, whereas compliance with the CPR is required for manufacturers of local space heaters only if the product is incorporated in construction works, compliance with the EDD is required for portable local space heaters. Hence, depending on whether the local space heater is meant to be portable or permanently incorporated in construction works, manufacturers need to comply respectively with the EDD only or with both the EDD and the CPR. Therefore, **such a complex regulatory system may create an extra burden for manufacturers, especially SMEs**,⁵¹ which are required not only to keep on being updated about multiple pieces of legislation, but also to repeat their tests to ensure conformity with the different legislation.

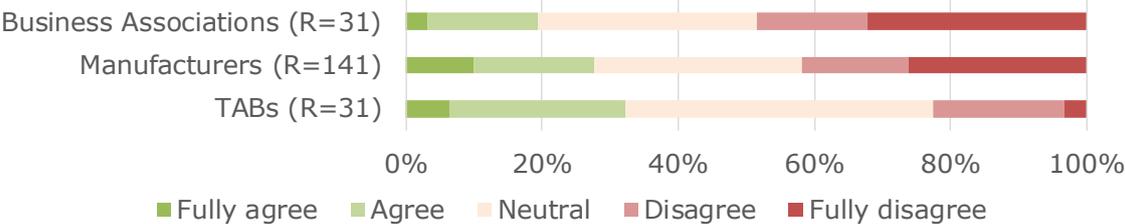
In 2016, the previously mentioned CEPS study found that **potential duplications between the CPR and the EDD existed for five specific product categories**, namely solid fuel boilers, solid fuel local space heaters, local space heaters, water heaters, and space heaters.⁵² However, the "Supporting Study for the review of the CPR" (VVA et al. 2018), stated that actual overlaps with the EDD concern only solid fuel local space heaters, fireplaces and sauna stoves which are covered by both an hEN and the EDD and for which a revision of the standardisation mandate (on space heating appliances) is expected by 1st January 2022. As long as the situation remains as it is, the impact of such CPR duplications with the EDD is significant only for manufacturers that deal with these products, but it is somewhat limited when considering the whole construction products market. Anyway, the CEPS study also indicated that this situation might concern a higher number of product categories than those already detected if the EDD framework is extended to other construction products, thereby worsening the implications for the entire construction products market. The situation described for the EDD also applies to the ELD (Energy Labelling Directive) and its delegated acts, in those cases when the construction products are covered by both hENs and the ELD.

Generally speaking, whenever the CPR is overlapping with other EU legislation for a given product, also the EADs may overlap, i.e. in cases where the product in question instead of being covered by an hEN is covered by an EAD. This potentially requires the TABs to undertake some extra work to make sure that the essential product characteristics are described in the ETA in the same way as they are in any other documents issued in accordance to the relative EU legislation. However, **challenges are seemingly more significant for products covered by hENs rather than by EADs**. The majority of stakeholders interviewed and surveyed indicated that there was no significant overlapping between EADs and other EU regulations. Only 27% of respondents to the survey agree or fully agreed that EADs were overlapping with EU regulations other than the CPR without conflicting with them (see Figure 39). Among manufacturers that indicated that some overlaps exist, a wide part of them is large companies (44%) followed by medium enterprises (26%).

⁵¹ FIEC (2014) and CEPS (2016).

⁵² These five product categories are regulated by the following adopted Commission Regulations (EU): 2015/1185, 2015/1188 2015/1189, 813/2013, and 814/2013.

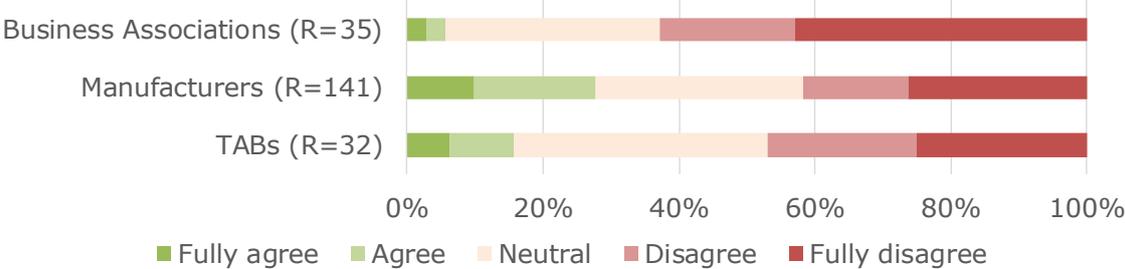
Figure 39 - To what extent do you believe that the EADs overlap with existing EU regulations but are not in conflict with them?



Source: Authors

Likewise, a small share (about 22%) of respondents indicated that EADs are overlapping and in conflict with other EU legislation (see Figure 40). Among manufacturers who did so (28%), the majority of them are dealing either with structural timber products, elements and ancillaries (PAC 13), or wood-based panels and elements (PAC 14), or building kits, units, pre-fabricated elements (PAC 34).

Figure 40 - To what extent do you believe that EADs overlap with existing EU regulations and are in conflict with them?



Source: Authors

Actually, manufacturers’ perception of duplication and potential conflict between the EADs and other EU legislation differs according to the product area they deal with. Almost all interviewees recognised the existence of duplications, e.g. between the EDD and the CPR in general, but also indicated that the extent to which such overlap concerns EADs depends on the product in question. As an illustrative example, one interviewee explained that whereas there may be several overlapping issues in the field of machinery, where also the Machinery Directive⁵³ (MD) applies, there are no issues for fixings products.

Indeed, when analysing manufacturers’ responses by the product areas they deal with, **for the vast majority of product areas, the EADs are neither overlapping nor conflicting with the EU legislation other than the CPR.** Only in a few cases, manufacturers indicated a problem of overlapping, but not conflicting with EU legislation.

⁵³ Directive 2006/42/EC.

5.3. Overlapping between EADs and national requirements

As previously mentioned, under the CPR, following the subsidiarity principle, Member States have exclusive competence in defining construction product and building requirements and are fully responsible for the safety, environmental and energy requirements applicable to the building and civil engineering works.⁵⁴ As an illustrative example of the rationale behind, a TAB explained that even though windows are present everywhere in Europe, due to the different climate conditions, in northern Europe national Building Regulations need to foresee specific technical aspects when regulating windows use (e.g. safety requirement based on stronger windy weather), while this is usually not the case in southern Europe. Hence, whereas the Member States are obliged to allow the marketing of CE-marked construction products, without requiring any additional marks, certificates or testing, they can set requirements on the use of such products in buildings and other construction works.⁵⁵

Member States' regulatory needs differ according to the scope of the local legislation applicable to construction works, and to how their legislation makes use of the common technical language created by the CPR. On the one hand, there are Member States whose current legal system is largely based on the CPR,⁵⁶ because either they had limited specific prior legislation or have dismantled their pre-existing legislation, such as Austria. On the other hand, **there are Member States where the pre-existing national legislation remains partly valid and co-exists with the CPR structure**, such as, for instance, Germany. In the latter case, there are potential conflicts between the national legislation and the CPR.

According to a survey launched by the Commission (DG GROW) in 2018 to Member States authorities and to national federations of architects, engineers and contractors, 47% of respondents stated that there were country-specific values for product performance only for some specific building requirements, while 25% said that this applied to most/all products and building requirements. In this regard, the European Court of Justice clarified, in the so-called Elliott case, that Member States have the right to set performance requirements for construction products, provided that the free movement of products with CE marking is not impeded, which is ensured by hENs. In other words, national marks cannot be required as conditions for placing the construction products in a market.

Despite the effort to replace national rules and standards with harmonised European ones, national product requirements among the Member States are still existing and have limited, so far, the potential effectiveness of the CPR.⁵⁷ **The use of national marks, certifications⁵⁸ and testing requirements constitutes an obstacle to the realisation of the Internal Market for construction products.**⁵⁹ For instance, national building laws differ substantially across the Member States, contributing to fragmenting the markets. Some interviewees indicated that there are, in some cases, national approval

⁵⁴ European Commission (2019). Commission Staff Working Document. Brussels, 24.10.2019 SWD (2019) 1770 final. <https://ec.europa.eu/docsroom/documents/37827/attachments/1/translations/en/renditions/native>

⁵⁵ CEPS et al. (2016)

⁵⁶ According to one interviewee, 90% of national regulations are based on EU legislation.

⁵⁷ CSIL (2017).

⁵⁸ European Commission (2016). Report from the Commission to the European Parliament and the Council. Brussels, 7.7.2016 COM(2016) 445 final. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0445&from=EN>

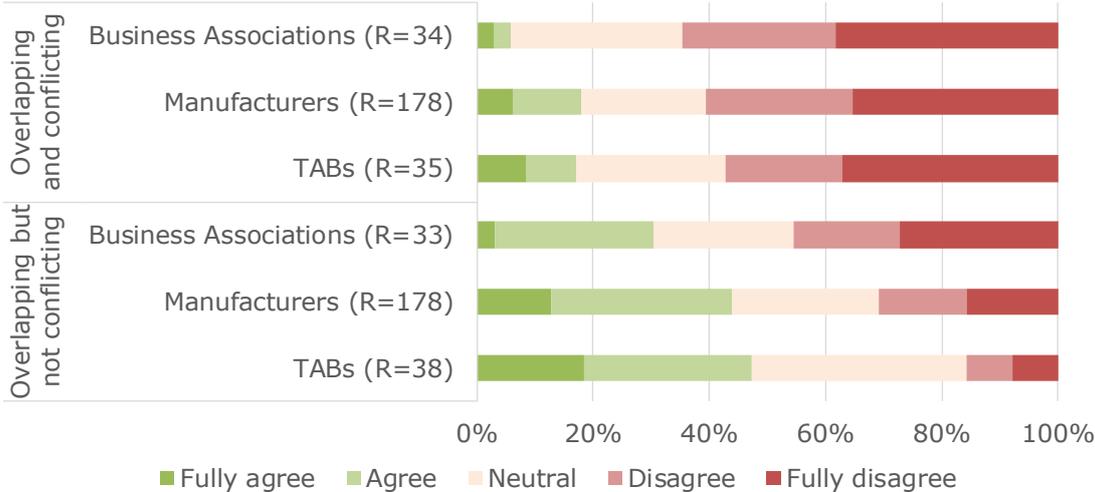
⁵⁹ CEPS et al. (2016).

procedures that differ from the EOTA route, and have the drawback of enabling the entry only into a single country market.⁶⁰

There are cases where, even if CE-marked, products cannot be automatically used (i.e. incorporated into construction works) in all Member States. This is due to the fact that the legislation on construction and civil engineering works is mostly under the competence of the Member States, which legislate at national, regional or even local level, in accordance with relevant secondary EU law and Articles 49 and 56 TFEU.⁶¹ Some interviewees indicated that manufacturers, even if they hold an ETA based on an EAD, can find it difficult to access foreign markets, especially in Germany and in the UK, due to existing national application requirements.⁶² Indeed, Member States can develop local application requirements based on ETAs but integrated with additional application requirements, which pose barriers to the cross-border trade.

Even if the Member States can require manufacturers to comply with national application requirements which go beyond the EAD, **the EADs and the national legislation are not necessarily in conflict with each other**, as also revealed by survey's respondents (see Figure 41). Indeed, whereas 43% of respondents (fully) agreed that there were overlaps, only 16% indicated that the respective requirements are also in conflict with each other. This means that there are few cases where manufacturers are required to carry out additional tests to assess the performance of their products which are not aligned with the tests carried out to obtain the ETA.

Figure 41 - Overlapping between EADs and national requirements



Source: Authors

⁶⁰ BRE et al. (2016).
⁶¹ European Commission (2019). Commission Staff Working Document. Brussels, 24.10.2019 SWD (2019) 1770 final. <https://ec.europa.eu/docsroom/documents/37827/attachments/1/translations/en/renditions/native>
⁶² The applications at national level regulates how to use building products, e.g. how to incorporate construction products into building works.

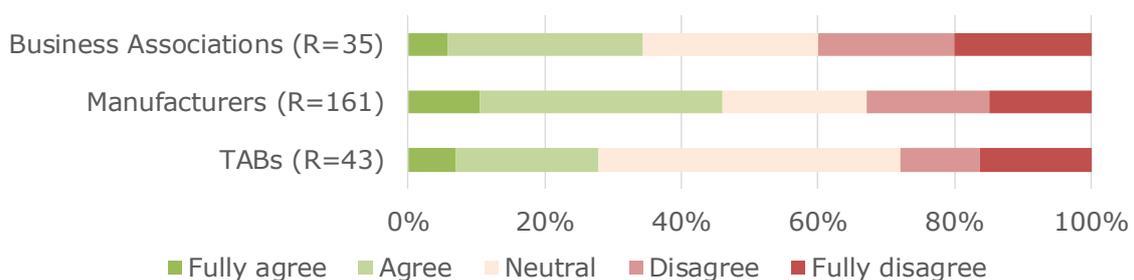
5.4. EAD proliferation: overlaps among EADs and between the EADs and hENs

The evaluation report on EOTA of 2019, prepared by the Commission to the European Parliament and the Council (COM(2019) 800 final), pointed out that, in a number of cases, there was a proliferation issue concerning the EADs. The large number of EADs developed in some product areas such as fixings (see section 3.4 for more details) may increase the confusion for manufacturers and TABs which have to understand which EAD is more relevant for a specific product.

The proliferation of EADs is allowed by the CPR, whose Article 19 states that EADs may be developed whenever the performance of a product in relation to its essential characteristics cannot be entirely assessed based on existing hTs. Moreover, the wide proliferation of EADs for some product areas could be the direct consequence of the high innovativeness of construction products (see more in this in section 4). According to Construction Fixings Europe, fixings, and especially anchors, are products with a high innovative potential which explains the large number of EADs in the field.⁶³ They are used everywhere in the world, and their potential intended uses continue expanding.

Based on the evidence collected in the context of this study, whether or not existing EADs are similar in scope, and so **whether or not there is an unnecessary proliferation of EADs is still an open question.** Interviewees were generally either neutral or unaware of this issue. Indeed, about 40% of respondents agreed that EADs could be similar in scope between each other. Only one interviewee was aware of the coexistence of multiple EADs covering the product area of his interest, (i.e. fixings), but he pointed out that this proliferation was unavoidable and necessary. Surveyed stakeholders have very different opinions in this respect, with no clear pattern emerging (see Figure 42).

Figure 42 - Are EADs similar in scope one with the other?



Source: Authors

On top of the proliferation of EADs, stakeholders also indicated that a further issue concerns the overlapping between the hENs and the EADs. Duplication potentially occurs when EADs are developed because the product in question is only partially covered by an existing hEN. For instance, if a product with a specific intended use is covered by an hEN, but a manufacturer wants to CE-mark the same product with a different intended use, then he/she needs an ETA, and so a new EAD needs to be adopted. This is often the case for

⁶³ Construction Fixings Europe (2019).

mineral wool insulation products. The same applies if the manufacturer wishes to certify through the CE-mark an additional essential characteristic as compared to those envisaged by existing hENs. In these cases, the new EAD will make explicit reference to the relevant hENs. As an illustrative example, while there is an hEN for roof-windows, the Danish TAB developed a related new EAD, after a manufacturer ETA request concerning the combination of two roof-windows into a single one, explicitly referring to the existing hEN.

However, the co-existence of EADs and hENs covering the same product should not represent a big issue because, as regulated by the CPR, hENs' provisions are mandatory while EADs' ones are voluntary. Therefore, it is always up to the manufacturer to decide the basis for the CE marking. In other words, even if some relevant products characteristics are covered by an EAD, the manufacturer has still the possibility to assess the performance of its product only in relation to the characteristics envisaged in the hEN.

6. Conclusions

The conclusion summarises the main findings of the present study and puts forward recommendations for the future based on them.

6.1. Main findings

In accordance with the Construction Products Regulation (EU) 305/2011, the EOTA route is meant to provide manufacturers with the possibility of CE-marking their products in cases where they are not (fully) covered by hENs.

Through a rigorous, in-depth analysis of the regulatory documents, previous analytical and evaluation studies, and consultation with more than 300 different stakeholders in the construction products market, including TABs, manufacturers, business associations, and EOTA representatives, **this study found convergent evidence that the EADs and ETAs offer a relevant and valuable alternative for the harmonisation of construction products to be traded across the EU.** The relevance of the EOTA route derives from the following intrinsic characteristics:

- The relatively fast and highly confidential process for EAD development;
- The existence of a local network of TABs, closer to the needs of the manufacturers and increasingly specialised in certain product areas, centrally coordinated by EOTA;
- The EADs' higher relevance in some product areas that are characterised by large market size, the potential for innovation and trade, and product variety;
- EOTA and the main CEN route generally tend to target different types of products, and the overlap between the EADs and the hENs is considered limited. This suggests that the EOTA route is primarily a complementary, rather than alternative, route for standardisation;
- ETAs are perceived as a key document for manufacturers not only to allow CE-marking and cross-border trade of products but also as a guarantee of product quality that is widely recognised both within the EU market and beyond.

More detailed findings of this study are presented in Box 3.

Box 3 - Summary of the study's findings

The EAD development process

- More than 80% of the surveyed manufacturers agreed that the procedures and the guidelines implemented by EOTA in the EAD development process are effective in ensuring good quality and confidentiality.
- More than 80% of the TABs responding to the survey agreed that EOTA effectively carries out all the tasks attributed to it by the CPR.
- The way that EOTA performs its duties has improved over time thanks to actions undertaken by the organisation, in particular: improved technical and formal expertise within the EOTA Secretariat; reinforced quality control over the EADs; new modalities to improve information; and data sharing among the TABs.

- The EAD development process is significantly faster than the hEN development process, making the EOTA route effective in responding to the needs of manufacturers. However, over 60% of the manufacturers are not fully satisfied with the current timeliness of EAD development. The main reason is the delay in EAD publication on the OJEU by the European Commission, considered to be the major weakness in the process.
- Suggestions to EOTA to further improve and streamline the process include greater sharing of best practices among the TABs and a coordinated, periodic performance audit of the TABs.
- Suggestions to the European Commission to improve the EOTA route include providing faster and more consistent comments to reduce EAD preparation time and ensuring the timely publication of EADs in the OJEU. Additionally, several stakeholders raised the need to reintroduce the “fitness for use” concept within the CPR as a way to reinforce the efficacy of both the EOTA and the CEN routes.

The relevance of EADs and their related ETAs

- 439 EADs have been adopted since the entry into force of the CPR. The share of new EADs developed every year has increased progressively over time.
- A total of 7,708 ETAs has been issued since 2013 until the end of 2019.
- The distribution of EADs among different product areas is highly skewed, being concentrated in some product areas more than in others. This is due to the degree of innovativeness, potential for intra-EU cross-border trade, market competition in each product area, industry structure, and market size of each construction product. The degree of coverage and detail offered by the existing hENs also plays a role in the number of EADs.
- The number of ETAs issued based on each EAD also varies significantly. For innovative or very specific products, it is often the case that only one ETA is issued per EAD.
- Not all TABs have been involved in the development of an EAD (in 2019, 32 out of 52 participated). The number of TABs involved has increased over time, denoting a progressive diversification among the TABs involved.
- Factors determining the manufacturer’s choice of one TAB rather than others include the quality and speed of service provided; the TAB’s reputation and proven technical expertise; and the fee charged for ETA development.
- ETAs are requested by manufacturers operating all over the world. While 6,521 (85%) ETAs were requested from manufacturers located in an EU28 Member State, the remaining 1,187 (15%) were requested from manufacturers located in non-EU28 countries. This finding is coherent with the EOTA route’s high standing among construction industry professionals outside the EU.
- German manufacturers hold the largest share of ETAs issued (25% of the total), followed by Italy (9%) and Poland (8%).
- The legal uncertainty about the future of the EOTA route is currently limiting the number of manufacturers’ requests for new ETAs.
- The EOTA route provides manufacturers with a valid alternative to CEN’s route and creates added value for the entire construction sector. Around 70% of the surveyed manufacturers and business associations hold that the EADs largely meet industry needs.
- The ETAs also have an economic relevance for the manufacturers. Holding ETAs increases companies’ reputations and has a positive effect on the business. About 70% of

respondents indicated that repealing the EOTA route would be detrimental to their companies' economic performance.

EADs and product innovativeness

- Innovation in the construction sector typically occurs incrementally and somewhat obscured, leading to dramatic transformation only in the long run.
- About 60% of surveyed manufacturers agreed that the EOTA route contributes to enhancing their potential for product innovation. Manufacturers feel more confident in innovating given the existence of the EOTA route.
- In most cases, the EOTA route targets products that are at least partly innovative. Between 65% and 90% of respondents consider that EOTA targets products which are new-to-the-world or more complex than previous product versions.
- The hENs cannot properly address the needs of manufacturers who are creating innovative products because the hENs' development process is considered too long and rigid, according to interviewed stakeholders.
- Currently there is no way to systematically assess the degree of innovativeness of all the construction products covered by the EADs. An ad hoc methodology has been proposed and successfully tested on a sample of EADs. It consists of using the information already contained in the EADs and, through the application of clear criteria, distinguishing whether the product is radically innovative, moderately innovative, incrementally innovative or not innovative.

The uniqueness of the EADs

- Several pieces of European legislation apply to construction products, and this could pose overlap and conflict with the CPR. According to the evidence collected, EADs are generally not in conflict with nor even overlap with the provisions of other EU legislation. Only 28% of manufacturers indicated that the EADs might be otherwise. The extent of such overlap depends on the product in question.
- Despite the effort to replace national rules and standards with harmonised European ones, national product requirements still exist and constitute an obstacle to the realisation of the Internal Market for construction products (CSIL, 2017 and CEPS et al., 2016). However, this study found that the EADs and national legislation are not necessarily in conflict with each other. Indeed, whereas 43% of respondents (fully) agreed that there are overlaps, only 16% indicated that the respective requirements are also in conflict with one another.
- The proliferation of EADs for some product areas could increase the potential overlap among different EADs, as well between the EADs and the hENs in the same product areas. However, manufacturers perceive the proliferation of EADs is perceived as unavoidable and even necessary for products characterised by a large degree of innovativeness, several variants and potential uses.

6.2. Future steps

According to the Refined Indicative Options for the Review of the Construction Products Regulation distributed by the European Commission on 21 February 2020, the European Commission has suggested different options to improve the implementation of the CPR, either by improving the current legal framework or making more substantial revisions in the CPR. Also among the policy options envisaged for CPR revision is the repeal of the EOTA route and/or substantial changes to the role of EOTA.⁶⁴

This study provides significantly richer evidence about the value and relevance of the EOTA route than any other studies previously conducted on CPR implementation. Such evidence should be considered by EOTA, the European Commission and other stakeholders involved in the **ongoing discussion over the future of the CPR**.

In general, it should be taken into account that stakeholders already complain about the continuous changes in legislation and requirements introduced by the European Commission, which increase uncertainty among manufacturers and considerably slow down the overall standardisation process. Both the TABs and manufacturers have taken some time to adapt to the provisions of the CPR and tend to be **against a scenario that would significantly change the current system**. Overall, the stakeholders point out that a repeal of the EOTA route would have tremendous consequences on their businesses. They cite that for all to gain a clear and common understanding of the Regulation took a lot of time, and that the transition from the CPD to the CPR was very difficult and costly, especially for manufacturers. Requiring them to move to another legal framework again would be extremely burdensome.

The main suggestion received from the surveyed stakeholders is to put **more effort into improving the current standardisation scheme** based on the hENs and EADs instead of creating a new one. The reintroduction of the “fitness-for-purpose” notion in the ETA and a quality check on the ETAs issued by the TABs could be considered as possible changes to introduce, aimed to better address the needs of the manufacturers and improve the quality of the technical assessment documents.

The upcoming revision of the CPR requires that a wide consensus is built regarding the next steps to take to improve the implementation of the CPR and to reinforce the single market of construction products in Europe. This study highlights the importance of gaining **a better understanding of the strengths and weaknesses of the EAD development process, and of the consequences of a possible repeal of such an alternative route**.

To this end, the launch of a **follow-up study** based on the current acquis of the CPR is recommended. This study would preferably be initiated by (or be in collaboration with) the European Commission, in order to ensure its full integration into the ongoing process of preparing a new regulatory proposal.⁶⁵ Differently from the present study, the next one should be more **focused on the legal and policy implications** related to any revision in the CEN and EOTA routes. The study should develop concrete proposals as to how the EOTA route could be adjusted and improved under the policy options being considered in the review of the CPR.

⁶⁴ EOTA (2020). Open letter to the members of the CPR Review Technical Platform.

<https://www.eota.eu/ckfinder/userfiles/files/cpr-revision-and-maintaining-of-eta-route-v1.pdf>.

⁶⁵ https://ec.europa.eu/growth/sectors/construction/product-regulation/review_en.

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Annex II. List of interviewees

Name of the organisation	Type of stakeholder	Date
EOTA	Client	23 March 2020 and 21 April 2020
Construction Fixings Europe	Business Association	3 April 2020
DI-DK	Business Association	1 April 2020
ETA - DK	Technical Assessment Body	15 April 2020
ITC - CNR	Technical Assessment Body	20 April 2020
KNAUF AQUAPANEL GmbH	Manufacturer	3 April 2020
Mageba	Manufacturer	7 April 2020
Simpson Strong-Tie® A/S	Manufacturer	14 April 2020

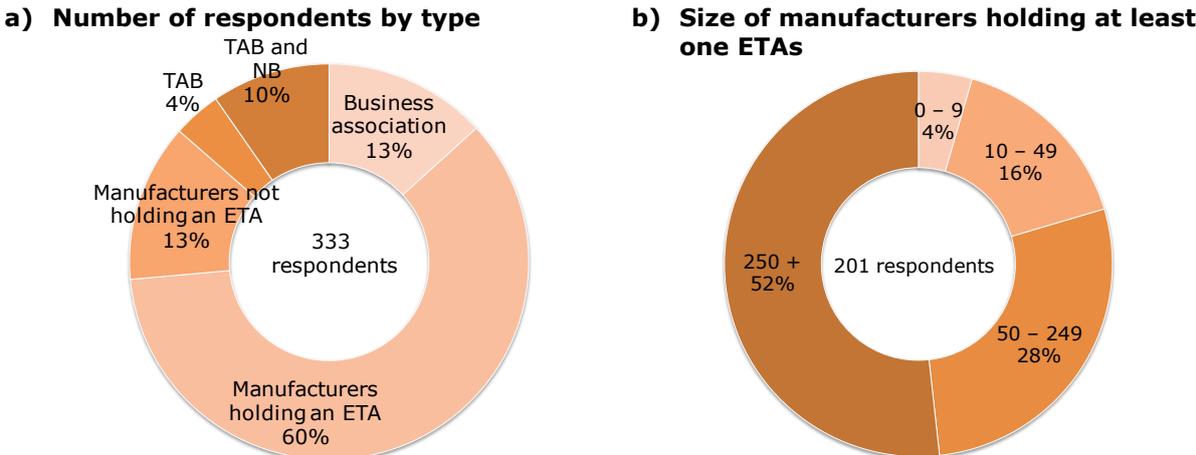
Annex III. Summary results on survey respondents

The survey was implemented with the SurveyMonkey software and carried out between the 29th of March and the 17th of April 2020. All stakeholders were contacted via email and TABs and business association were also kindly asked to forward the link to their manufacturer members in order to reach a higher number of companies. The launch of the survey was advertised on EOTA and CSIL websites and social media. Weekly emails and phone reminders were carried out to increase the number of respondents. In spite of the short timeframe in which the survey remained open, and the particular situation when the survey was implemented (because of the ongoing Covid-29 emergency many associations and companies were closed), the survey collected **a total number of 333 responses**.

As shown in Figure 43(a), 45 (14%) respondents were TABs (32 being at the same time Technical Assessment Body and Notified Bodies, and 13 were only Technical Assessment Body), 244 (73%) were manufacturers (201 holding at least an ETA and 43 holding no ETAs)⁶⁶, and 44 (13%) were business associations.

Moreover, given the scope of the study, only manufacturers holding at least one ETA were asked to fill the full questionnaire while those not holding any ETAs were automatically sent to the end of the survey after having been asked why they were not owning any ETAs and whether they would be interested to get one in the future. Therefore, the large majority of the respondent manufacturers (82%) owns at least an ETA. Out of them, the majority were either large or medium enterprises while only a small share is represented by micro and small enterprises, as shown in Figure 43(b).

Figure 43 - Type of stakeholder dealing with construction products



Source: Authors

⁶⁶ Unless otherwise specified, all the survey statistics on manufacturers refer only to those holding at least one ETA.

Figure 44 shows the geographical distribution of the TABs (a) and of the manufacturers (b). In particular, whereas for manufacturers the absolute number of responses is considered, for TABs the figure shows the rate of responses in each country, computed as the ratio of the number of respondents in each country compared to the total number of TABs there located. At least one TAB per country answered the survey, with the exception of Luxembourg and Latvia.

Whereas the geographical distribution of TABs responding to the survey covers almost all countries where at least a TAB is located, the respondent manufacturers were concentrated in Germany, which is one of the largest market for the construction products industry. In addition to manufacturers from Europe, some manufacturers answered also from Liechtenstein (5), the USA (2), Canada (1), Russia (1), Taiwan (1) and Thailand (1).

At product area level, most manufacturers holding an ETA deal with products belonging to product area 4 - Thermal insulation products, composite insulation systems (45 manufacturers) and to product area 33 - Fixings (43 manufacturers). This result reflects the real situation where the vast majority of EADs and ETAs have been issued for these product areas. Most of business associations participating in the survey represent manufacturers dealing with product area 34 - Building kits, units, pre-fabricated elements (16 business associations) and product area 9 - Curtain walling, claddings, structural sealant glazing (15 business associations).

Figure 44 - Geographical distribution of responses by type of stakeholder



Legend: the grey colour indicates that no answers were collected in a given country, while the orange shades indicate the rate of responses in each country, i.e. the darker the orange shade, the higher the relative rate of responses.
Source: Authors

Figure 45 - Product area distribution of responses by type of stakeholder

(a) Manufacturers

4 - Thermal insulation products, composite insulation systems	34 - Building kits, units, pre-fabricated elements	13 - Structural timber products, elements and ancillaries	35 - Fire stopping, fire sealing, fire protective or retardant products	9 - Curtain walling, claddings, structural sealant glazing	21 - Wall and ceiling finishes (external and internal), internal partition kits	32 - Sealants for joints	20 - Structural metallic products and ancillaries	5 - Structural bearings, pins for structural joints	17 - Masonry and related products, including units, mortars and ancillaries	1 - Pre-cast concrete products	16 - Reinforcing and pre-stressing steel for concrete...	3 - Membranes, including liquid and applied and...	33 - Fixings	19 - Floorings	26 - Products related to concrete, mortar and grout	25 - Construction adhesives	22 - Roof coverings, lights, windows, related...	29 - Constru... products in contact...	30 - Glass products (flat, profiled...	7 - Gypsum products	14 - Wood based panels and elements	6 - Chimneys, flues and related...	23 - Road construct... products	15 - Cement, building...	12 - Road equipment...	8	10	24	18	36 - Other	7	14	6	23	11	27	28	31

(b) Business associations

34 - Building kits, units, pre-fabricated elements	13 - Structural timber products, elements and ancillaries	14 - Wood based panels and elements	21 - Wall and ceiling finishes (external and internal), internal partition kits	9 - Curtain walling, claddings, structural sealant glazing	5 - Structural bearings, pins for structural joints	6 - Chimneys, flues and related products	1 - Pre-cast concrete products	22 - Roof coverings, lights, windows, related kits and ancillaries	7 - Gypsum products	35 - Fire stopping, fire sealing, fire protective or retardant...	11 - Sanitary appliances	15 - Cement, building limes, other...	24 - Aggregates	4 - Thermal insulation products, composite insulation systems	20 - Structural metallic products and ancillaries	30 - Glass products (flat, profiled or blocks)	26 - Products related to concrete, mortar and...	18 - Waste water engineer...	23 - Road construc... products	19 - Floorings	32 - Sealants for joints	25 - Constr... adhesi...	3 - Membra... includin...	12 - Road equip... Circul...	16 - Reinfo... and pre...	2 - Doors, windows, shutters, gates and ancillaries	17 - Masonry and related products, including units,...	33 - Fixings	29 - Constr... produc... in contac...	8 - Geotext... geo...	28	10 - Fixed firefight...	36 - Other	27	31

Source: Authors

Annex IV. Literature review on how to define and assess product innovation

The concept of innovation is at the core of the modern economic theory. In the first half of the XX century, innovation was central in the thought of Joseph Schumpeter. He examined how firms seek competitive advantage and developed the concept of “creative destruction”⁶⁷, which is key to understand the drivers of long-term economic growth. After this pioneering contribution, the literature highlighted that innovations respond to their specific context. The nature of innovation changes over time and is influenced by different factors, such as institutional assets and legislation.

Aiming to provide a common language to discuss and measure innovation, in 1992 the Organization for Economic Co-operation and Development (OECD) issued the first edition of the **Oslo Manual**⁶⁸, which is today a key international reference in the study of innovation. Unlike the first two editions of the Manual which focused on technological product and process aspects of innovation, the two latest editions (Oslo3 and Oslo 4), issued respectively in 2005 and 2018, also included marketing and organisational aspects into innovation. Besides, Oslo4 further develops the distinction, already featured in Oslo3, between innovation as an outcome (i.e. an innovation) and the activities through which innovations come about (i.e. innovation activities). According to Oslo4, **innovation** is defined as follows: “*An innovation is a new or improved product or process (or combination thereof) that differs significantly from the unit’s previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)*”. This definition is complemented with the two following ones:

- **Innovation activities** include all developmental, financial and commercial activities undertaken by a firm that are intended to result in innovation for the firm.
- **A business innovation** is a new or improved product or business process (or combination thereof) that differs significantly from the firm's previous products or business processes and that has been introduced on the market or brought into use by the firm.

Moreover, Oslo 4 also provides basic definitions of a product and business process innovation, namely:

- **A product innovation** is a new or improved good or service that differs significantly from the firm’s previous goods or services and that has been introduced on the market;
- **A business process innovation** is a new or improved business process for one or more business functions that differs significantly from the firm’s previous business processes and that has been brought into use by the firm.

⁶⁷ The idea of creative destruction describes the disruption of an economic activity through an innovation introducing a new way to produce goods or services or entirely new industries.

⁶⁸ The Oslo manual, which is issued by the OECD jointly with Eurostat since 1997, provides guidance for collecting, reporting and using data on innovation. In 2018, the last version was released.

A second important reference in the study of innovation in the European context is the Community Innovation Survey (CIS)⁶⁹. Based on the Regulation 1450/2004/EC, the CIS defines innovation as “*a new or significantly improved product (good or service) introduced to the market, or the introduction within an enterprise of a new or significantly improved process*”. As such, the CIS distinguishes between:

- **Product innovation:** the market introduction of a new or a significantly improved good or service;
- **Process innovation:** a new or significantly improved production process, distribution method or support activity for goods or services.

In the CIS, innovations are based on the results of new technological developments, new technology combinations, or the use of other knowledge acquired by the enterprise. Furthermore, innovations should be new to the enterprise concerned: for product innovations, they do not necessarily have to be new to the market and, for process innovations, the enterprise does not necessarily have to be the first one to have introduced the process.

In short, **both Oslo4 and the CIS identify two types of innovations, i.e. product and process innovation, and provide definitions which are largely similar to each other. Moreover, both support the idea that innovation does not necessarily have to be new to the market.**

In the context of this study, reference shall be made to theories specifically addressing product innovation. Indeed, as mentioned in the previous chapter, within the EOTA route innovation, if any, relates to product innovation, as manufacturers request the ETAs either for new products (i.e. new to them or to the market) or for improved products (e.g. extended intended use).

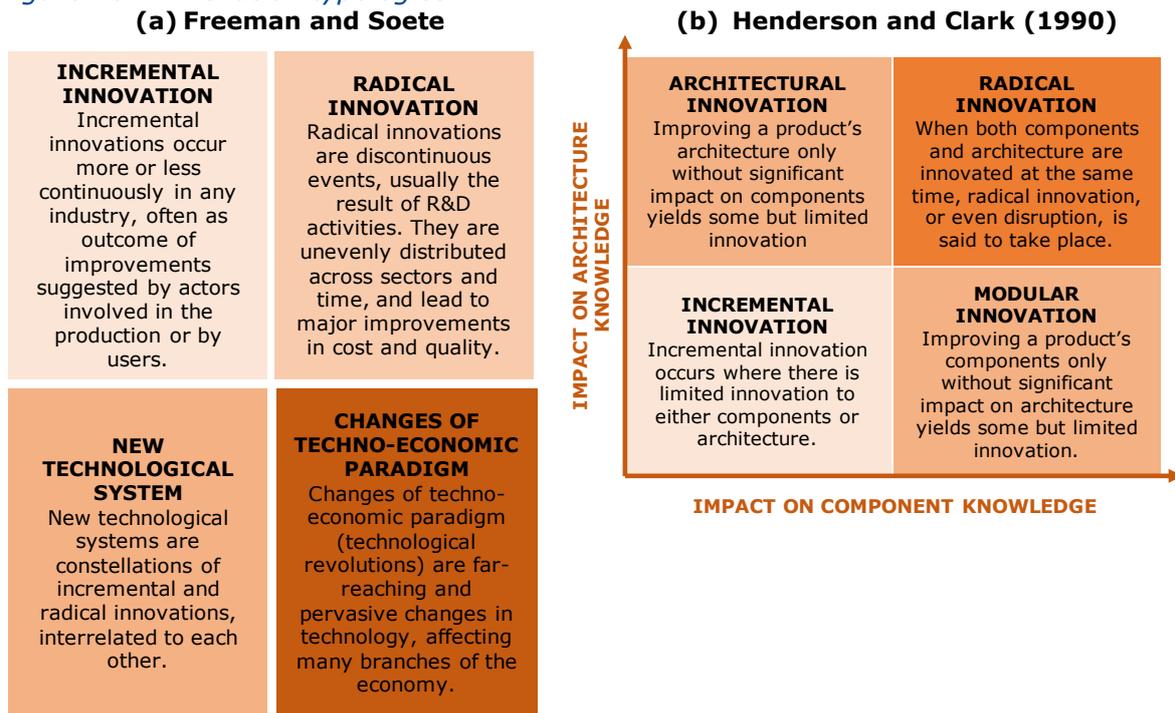
Focusing on product innovation, Freeman and Soete (1987) categorised innovations which are based on technical change into four dimensions: (i) incremental innovations, (ii) radical innovations, (iii) new technological systems, and (iv) changes of techno-economic paradigm (technological revolutions). Henderson and Clark (1990) proposed a more sophisticated approach, structured into four categories of innovations, i.e. incremental, modular, architectural and radical innovations, based on whether the innovation relates to a product’s architecture, components or both.⁷⁰ Starting from these two seminal papers, numerous classifications of product innovation have been developed in the literature over time.⁷¹

⁶⁹ The CIS is conducted in every EU Member State to collect data on innovation activities in enterprises.

⁷⁰ According to Henderson and Clark, a component is a physically distinct portion of the product that embodies a core design concept and performs a well-defined function, while the architecture of the product defines how the components work together.

⁷¹ For a review of innovation taxonomies, see De Jong and Marsili (2005), Coccia (2006), Kotsemir et al. (2013). Coccia (2018), Dziallas and Blind (2019) and Taques et al. (2020).

Figure 46 - Innovation typologies



Source: Authors based on Freeman and Soete (1987) and Henderson and Clark (1990)

On top of the vast literature that aims at categorising product innovation, there is also a strand of literature which has focused on developing frameworks to assess product innovation through indicators and which can provide useful insights in view of assessing the innovativeness of construction products covered by EADs. As pointed out by Dziallas and Blind (2019), however, **more process indicators rather than product indicators exist in the literature and qualitative indicators of innovation are more frequently adopted.**

Justel et al. (2007) developed a model that can be used to identify innovative products once the product development is completed, i.e. from an ex-post perspective. The authors propose a model to assess innovative products based on three dimensions, among which the degree of novelty of the product concept. The latter is assessed as proposed by Garcia and Calantone (2002), by looking at four types of discontinuities, i.e. micro-marketing, micro-technology, macro-marketing, and macro-technology discontinuities occurring in the product concept (see Figure 47).

Figure 47 - Example of discontinuities affecting the degree of novelty of product concept

<p>Micromarketing discontinuities</p> <ul style="list-style-type: none"> • Customer new to the firm • Product use new to firm • Class of service/product totally new to the firm • Satisfies clearly identified customer/clients need 	<p>Microtechnology discontinuities</p> <ul style="list-style-type: none"> • Change in technology used in product development • Production process new to the firm
<p>Macromarketing discontinuities</p> <ul style="list-style-type: none"> • New-to-the-world product • Newness to the market • Product consistent with existing customer values 	<p>Macrotechnology discontinuities</p> <ul style="list-style-type: none"> • Modification of technology used in other industries • Improvements/modification of technology in use elsewhere in the industry

Source: Authors based on Justel et al. (2007)

The type of innovation (i.e. incremental, moderate, or radical) is identified according to which discontinuities occur (see Figure 48).

Figure 48 - Determination of innovation type in the Justel et al. (2007) model

Macromarketing discontinuities	Macrotechnology discontinuities	Micromarketing discontinuities	Microtechnology discontinuities	INNOVATION TYPE
1	1	1	1	Radical Innovation
1	1	0	1	Moderate Innovation
1	0	1	1	Moderate Innovation
1	0	0	1	Moderate Innovation
0	1	1	0	Moderate Innovation
0	1	0	0	Incremental Innovation
0	0	1	0	Incremental Innovation
0	0	0	1	Incremental Innovation

Source: Authors based on Justel et al. (2007)

Garcia and Calantone (2002) and Calantone et al. (2006) distinguish between product innovativeness, which is concerned with technical and marketing discontinuities, and product advantage, which refers to a product’s superiority relative to other products in the marketplace on dimensions such as quality, benefit, and function. Consequently, measures such as the product’s higher quality than competitors, which are often used to assess product innovativeness, are clearly more appropriately applied to product advantage.

Following Calantone et al. (2006), McNally et al. (2010) broke down product innovativeness into three dimensions:

- **Technological discontinuities** arise when firms operate in new technological domains related either to technologies associated with the innovation itself or to new processes associated with development and production;
- **Marketing discontinuities** arise when firms operate in new marketing domains and result when, for example, the product category, competitors, distribution channels, or customers are unfamiliar to the firm;
- **Customer discontinuity** is the extent to which customers are required to change or adapt behaviour patterns when adopting a new product.

A different approach is adopted by Ganbaatar and Douglas (2019), who developed a new measure of product innovativeness. To objectively quantify the innovative features of a product, the authors developed a matrix based on the following two dimensions:

- **Technical novelty:** assessing (i) style changes, i.e. visual newness of a product; (ii) function improvement, i.e. a performance improvement for a pre-existing function of the product; (iii) function addition, i.e. a product is enhanced by a new function that did not exist in the previous version of the product;
- **Market novelty:** assessing whether the technical novelties are new to the firm/to the market/to the world.

The combination of the two dimensions results in nine possible combinations of technical and market novelty, which allow to systematically identify and record the innovative elements that are evident in the product. The number of innovative elements in each cell of the matrix capture the raw data that is collected through an objective observation on the product, and the matrix serves as a systematic assessment framework. On this basis, a final “Product Innovativeness Score” of the new product can be estimated, which is a combination of the technical and market novelty scores of a new product (calculated through inverse and linear functions).

Figure 49 - Product innovativeness matrix by Ganbaatar and Douglas (2019)

MARKET NOVELTY	New to the world			
	New to the market			
	New to the firm			
		Style changes	Function improvement	Function addition
TECHNICAL NOVELTY				

Source: Authors based on Ganbaatar and Douglas (2019)

Annex V. Survey questionnaire

Section A: IDENTIFICATION OF RESPONDENT	
A1. Your organisation name is:	
A2.1. You are a:	<input type="checkbox"/> Technical Assessment Body → Go to B1 <input type="checkbox"/> Technical Assessment Body and Notified Body → Go to B1 <input type="checkbox"/> Manufacturer → Go to J1.1 <input type="checkbox"/> Business association → Go to R1.1 <input type="checkbox"/> Other, not a TAB nor a manufacturer nor a business association → Go to A2.2
A2.2. END OF QUESTIONNAIRE	If you do not represent a manufacturer nor a business association or a TAB, you do not need to participate in this survey. Thank you for your time and your willingness to support this study.

Questionnaire for TABs and NBs

Section B: GENERAL INFORMATION						
B1. Based on your experience, to what extent does EOTA meet the following objectives?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Organise the coordination of TABs, and if necessary, ensure cooperation and consultation with other stakeholders through its Technical Board meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure that examples of best practices are shared between TABs (exchange of e-mails, Technical Board meetings, and so on) to promote greater efficiency and to provide a better service to the industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinate the application of the procedures and guidelines for adopting EADs and issuing ETAs (set out in Art. 21 and Annex II), and provide the support needed to that end	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop and adopt European Assessment Documents (EADs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure that adopted EADs and references to ETA are kept publicly available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B2. In your opinion, do you think that EOTA should be charged with additional tasks?	<input type="checkbox"/> Yes, please specify <input type="checkbox"/> No <input type="checkbox"/> I don't know					
Section C: EOTA AND THE EAD DEVELOPMENT PROCESS						
C1. Have you ever been involved in an EAD development process? <i>(more than one answer is possible)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No, I have never received an ETA request					

	<input type="checkbox"/> No, I have received an ETA request but the product was already covered by an hEN <input type="checkbox"/> No, I have received an ETA request but the product was already covered by an EAD <input type="checkbox"/> No, because of lack of funding <input type="checkbox"/> No, because too much information needs to be reviewed <input type="checkbox"/> No, because of lack of relevant in-house expertise <input type="checkbox"/> Other, please specify					
C2. Based on your experience, to what extent do the procedures and guidelines implemented by EOTA in the EAD development process (not including the citation process at European Commission level) achieve the following objectives?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Quality of EADs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limitation of EAD proliferation and overlapping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transparency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confidentiality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost-efficiency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timeliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TAB coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C3. Based on your experience, to what extent do the following EOTA actions/initiatives streamline the EAD development process?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Checklist adopted by EOTA and in use by TABs since June 2019 for 'amendments and adoption of an EAD' (stage 7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exchange of best practices (infoMails, Technical Board meetings, ...) enhanced by EOTA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EOTA Guidelines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Workshops held by EOTA on EAD development procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C4. To what extent could EOTA further streamline the EAD development process?	<input type="checkbox"/> Completely <input type="checkbox"/> Mostly <input type="checkbox"/> Partly			<input type="checkbox"/> To a limited extent <input type="checkbox"/> Not at all → Go to D1 <input type="checkbox"/> I don't know → Go to D1		
C5. Based on your experience, to what extent could EOTA further streamline the EAD development process through...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
...greater technical and legal expertise in the EOTA secretariat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...greater coordination between TABs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...better monitoring of process timescales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...greater sharing of best practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section D: THE EUROPEAN COMMISSION (EC) AND THE EAD DEVELOPMENT PROCESS						

D1. Based on your experience, to what extent do the EC tasks achieve the following objectives?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Quality of EADs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limitation of EAD proliferation and overlapping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transparency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confidentiality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost-efficiency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timeliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TAB coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D2. To what extent could the EC contribute to further streamlining the EAD development process by ...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
...developing a consistent EAD guideline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing comments during the 15 working days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing all set of comments at the same time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing more consistent/clear comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...publishing amended EAD including European Commission comments in the OJEU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section E: EADs' UNIQUENESS IN THE EU HARMONISATION SCHEME						
E1. Based on your experience, to what extent do you think that EADs developed for the products area(s) you deal with are generally...?	FULLY AGREE	AGREE	NEUTRAL	DISAGREE	FULLY DISAGREE	I DON'T KNOW
Similar in scope to each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing national requirements, but not in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing national requirements and also in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing EU regulations other than the CPR but not in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing EU regulations other than the CPR and in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section F: EADs' RELEVANCE						
F1. Based on your experience, to what extent do you agree with the following statements?	FULLY AGREE	AGREE	NEUTRAL	DISAGREE	FULLY DISAGREE	I DON'T KNOW
EADs meet manufacturers' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EADs are important in case no hENs exist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers avoid requesting ETAs if EADs are needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If the citation process of EADs was improved, more manufacturers would request ETAs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F2. At present, the EADs developed do not uniformly cover all product areas. As an illustrative example, about 13% of all adopted EADs have been developed in the 'fixings' product area while none in the 'sanitary appliances' product area.						
Based on your experience, to what extent do the following factors affect the number of EADs developed in each product area?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Exhaustiveness of product coverage by hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovativeness of products (i.e. EADs are more frequent if products are more innovative)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market competition (i.e. EADs are more frequent where manufacturers use ETAs to demonstrate an innovation advantage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry structure (e.g. concentration of big players)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potential for intra-EU cross-border trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potential for extra-EU cross-border trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size of market (e.g. hEN development is not cost-efficient in small markets)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length of product innovation or improvement cycles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section G: INNOVATIVENESS OF CONSTRUCTION PRODUCTS						
G1. Based on your experience, to what extent does the ETA route enhance potential for product innovation?	<input type="checkbox"/> Completely <input type="checkbox"/> Mostly <input type="checkbox"/> Partly			<input type="checkbox"/> To a limited extent <input type="checkbox"/> Not at all <input type="checkbox"/> I don't know		
G2. Based on your experience, to what extent do EADs cover...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
New-to-the-world products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products more complex than previous product versions (e.g. new product features)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products responding to changes in customers' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products manufactured using a new/ non-standard/ non-standardisable production method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products already existing and partially covered by existing hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products for small or specialised niche markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Products where the CEN standardisation does not meet manufacturers' needs ⁷²	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section H: ECONOMIC RELEVANCE OF THE ETA ROUTE						
H1. Based on your experience, to what extent does the ETA route allow manufacturers to...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Have a valuable alternative route to CE marking in the absence of hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remain on the market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access the EU internal market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access non-European markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase their market share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase their sales level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase their cross-border trade level in Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase their cross-border trade level beyond Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relieve their administrative burden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve their reputation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H2. Based on your experience, to what extent does the ETA route...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Stimulate the internal market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide a common technical language to construction professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitate and provide additional common assessment procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve Europe-wide comparability of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve transparency in product performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create added value for the entire construction sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H3. To what extent, do you agree with the following statements?	FULLY AGREE	AGREE	NEUTRAL	DISAGREE	FULLY DISAGREE	I DON'T KNOW
The repeal of the ETA route would be detrimental to manufacturers' economic performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA route has a high standing among construction industry professionals and national authorities across Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA route has a high standing among construction industry professionals and national authorities beyond Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

⁷² As an illustrative example, products with short evolution cycle where standardisation would constantly lag behind or also recycled and reused products since their technical characteristics are less stable and might require a more individual approach

Section I: END OF SURVEY	
11. Do you wish to receive an executive summary of the study (for free)?	<input type="checkbox"/> Yes. Please specify the email address you wish us to send the executive summary to..... <input type="checkbox"/> No
12. If necessary, would you be available for a short phone interview to provide further information?	<input type="checkbox"/> Yes. Please provide your contact details, phone number, and/or your email..... <input type="checkbox"/> No
13. Thank you for your contribution to our study! If you wish, you can use the following space to provide additional comments.
END OF THE SURVEY	

Questionnaire for manufacturers

Section J: INFORMATION ON YOUR COMPANY		
<p>J1.1. Does your company manufacture construction products? (e.g. products used for residential or non-residential buildings, civil engineering works)</p>	<input type="checkbox"/> Yes → Go to L2 <input type="checkbox"/> No → Go to L1.2	
<p>J1.2. END OF QUESTIONNAIRE</p>	<p style="color: red;">If your company does not manufacture construction products, you do not need to participate in this survey. Thank you for your time and your willingness to support this study.</p>	
<p>J2. To which product area does your product(s) belong to? (more than one option possible)</p>	<input type="checkbox"/> 1 – Pre-cast concrete products <input type="checkbox"/> 2 – Doors, windows, shutters, gates and ancillaries <input type="checkbox"/> 3 – Membranes, including liquid and applied and kits <input type="checkbox"/> 4 – Thermal insulation products, composite insulation systems <input type="checkbox"/> 5 – Structural bearings, pins for structural joints <input type="checkbox"/> 6 – Chimneys, flues and related products <input type="checkbox"/> 7 – Gypsum products <input type="checkbox"/> 8 – Geotextile, geo-membranes and related products <input type="checkbox"/> 9 – Curtain walling, claddings, structural sealant glazing <input type="checkbox"/> 10 – Fixed firefighting equipment <input type="checkbox"/> 11 – Sanitary appliances <input type="checkbox"/> 12 – Road equipment: Circulation fixture <input type="checkbox"/> 13 – Structural timber products, elements and ancillaries <input type="checkbox"/> 14 – Wood based panels and elements <input type="checkbox"/> 15 – Cement, building limes, other hydraulic binders <input type="checkbox"/> 16 – Reinforcing and pre-stressing steel for concrete and ancillaries, post tensioning kits <input type="checkbox"/> 17 – Masonry and related products, including units, mortars and ancillaries <input type="checkbox"/> 18 – Waste water engineering products <input type="checkbox"/> 19 – Floorings <input type="checkbox"/> 20 – Structural metallic products and ancillaries <input type="checkbox"/> 21 – Wall and ceiling finishes (external and internal), internal partition kits <input type="checkbox"/> 22 – Roof coverings, lights, windows, related kits and ancillaries <input type="checkbox"/> 23 – Road construction products <input type="checkbox"/> 24 – Aggregates <input type="checkbox"/> 25 – Construction adhesives <input type="checkbox"/> 26 – Products related to concrete, mortar and grout <input type="checkbox"/> 27 – Space heating appliances <input type="checkbox"/> 28 – Pipes, tanks and ancillaries (not in contact with water for human consumption) <input type="checkbox"/> 29 – Construction products in contact with water for human consumption <input type="checkbox"/> 30 – Glass products (flat, profiled or blocks) <input type="checkbox"/> 31 – Power, control and communication cables <input type="checkbox"/> 32 – Sealants for joints <input type="checkbox"/> 33 – Fixings <input type="checkbox"/> 34 – Building kits, units, pre-fabricated elements <input type="checkbox"/> 35 – Fire stopping, fire sealing, fire protective or retardant products <input type="checkbox"/> 36 – Other	
<p>J3. Country where your company is located</p>	<input type="checkbox"/> Austria <input type="checkbox"/> Belgium <input type="checkbox"/> Bulgaria <input type="checkbox"/> Croatia <input type="checkbox"/> Cyprus <input type="checkbox"/> Czech Republic <input type="checkbox"/> Denmark <input type="checkbox"/> Estonia	<input type="checkbox"/> Lithuania <input type="checkbox"/> Luxembourg <input type="checkbox"/> Malta <input type="checkbox"/> Netherlands <input type="checkbox"/> Norway <input type="checkbox"/> Poland <input type="checkbox"/> Portugal <input type="checkbox"/> Romania

	<input type="checkbox"/> Finland <input type="checkbox"/> France <input type="checkbox"/> Germany <input type="checkbox"/> Greece <input type="checkbox"/> Hungary <input type="checkbox"/> Ireland <input type="checkbox"/> Italy <input type="checkbox"/> Latvia	<input type="checkbox"/> Slovakia <input type="checkbox"/> Slovenia <input type="checkbox"/> Spain <input type="checkbox"/> Sweden <input type="checkbox"/> Switzerland <input type="checkbox"/> Turkey <input type="checkbox"/> United Kingdom <input type="checkbox"/> Other, please specify...
J4. Number of employees in 2019	<input type="checkbox"/> 0 – 9 <input type="checkbox"/> 10 – 49	<input type="checkbox"/> 50 – 249 <input type="checkbox"/> 250 +
J5. Annual turnover in 2019	<input type="checkbox"/> < € 2 Million <input type="checkbox"/> € 2-10 Million	<input type="checkbox"/> € 10-50 Million <input type="checkbox"/> > € 50 Million
J6. Is your company part of a group?	<input type="checkbox"/> Yes, it is the parent company <input type="checkbox"/> Yes, it is a subsidiary. Please specify whether the parent is located <input type="checkbox"/> No	
Section K: EXPERIENCE WITH EUROPEAN TECHNICAL ASSESSMENTS (ETA)		
K1.1. Has your company ever requested and obtained at least an ETA?⁷³	<input type="checkbox"/> Yes, the ETA(s) we obtained were all issued based on an EAD newly developed for us → Go to L1 <input type="checkbox"/> Yes, the ETA(s) we obtained were all was issued based on an existing EAD or ETAG → Go to M1 <input type="checkbox"/> Yes, some ETA(s) we obtained were issued based on EADs newly developed for us and some based on an existing EADs or ETAGs → Go to L1 <input type="checkbox"/> No → Go to K1.2	
K1.2. Why has your company never requested and obtained an ETA? <i>(more than one option is possible)</i>	<input type="checkbox"/> We have requested an ETA but our product(s) was/were fully covered by harmonised European standards (hENs) <input type="checkbox"/> We have never requested an ETA since our product(s) is/are fully covered by European standards (hENs) <input type="checkbox"/> We have never requested an ETA since the costs of the ETA document (excluding laboratory costs) are too high <input type="checkbox"/> We have never requested an ETA since the costs for testing and AVCP are too high <input type="checkbox"/> We have never requested an ETA because of lack of technical expertise <input type="checkbox"/> We have never requested an ETA because of lack of human resources <input type="checkbox"/> We have never requested an ETA because the procedure is too complex <input type="checkbox"/> Other, please specify.....	
K1.3. If applicable, why would your company be interested in requesting an ETA in the future? <i>(more than one option possible)</i>	<input type="checkbox"/> We would not be interested in requesting an ETA in the future <input type="checkbox"/> Holding an ETA may allow access to new markets <input type="checkbox"/> Holding an ETA may allow increasing market share <input type="checkbox"/> Holding an ETA may allow increasing cross-border trade <input type="checkbox"/> Holding an ETA may improve on our company's reputation <input type="checkbox"/> Holding an ETA may allow increasing sales levels <input type="checkbox"/> Other, please specify.....	
K1.4. END OF QUESTIONNAIRE	If your firm has never obtained an ETA, you do not need to answer the next sections of this survey. Thank you for your time and cooperation.	

⁷³ The ETA (European Technical Assessment) is an alternative for construction products not covered by a harmonised standard. It is a document providing information on their performance assessment. The procedure is established in the construction products regulation and offers a way for manufacturers to draw up the declaration of performance and affix the CE marking.
The EAD (European Assessment Document) is a harmonised technical specification for construction products. It is the documentation of the methods and criteria accepted in EOTA as being applicable for the assessment of the performance of a construction product in relation to its essential characteristics.
The ETAG (European technical approval Guidelines) were established by the EOTA under the Construction Products Directive - 89/106/EEC (CPD) - upon mandates of the European Commission.

Section L: EAD DEVELOPMENT PROCESS

L1. Based on your experience, to what extent does the EAD development process (not including the citation process at European Commission level) achieve the following objectives?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Quality of EADs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limitation of EADs proliferation and overlapping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transparency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confidentiality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost-effectiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timeliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TAB coordination in EOTA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clarity of your tasks, and responsibilities and respect of rules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L2. Based on your experience, to what extent are TABs discouraged from issuing ETAs if an EAD needs to be developed?	<input type="checkbox"/> Completely <input type="checkbox"/> Mostly <input type="checkbox"/> Partly			<input type="checkbox"/> To a limited extent <input type="checkbox"/> Not at all <input type="checkbox"/> I don't know		
L3. In your opinion, which are the weaknesses of the EAD development process? <i>(more than one option possible)</i>	<input type="checkbox"/> The process has no great weaknesses <input type="checkbox"/> Complexity of the procedure <input type="checkbox"/> Lack of continuity of existing EADs (EAD versions are short-lived and quickly replaced by new versions) <input type="checkbox"/> Delays in the EAD development (TABs and EOTA) <input type="checkbox"/> Delays in the publication of the EAD in the OJEU <input type="checkbox"/> Bureaucracy <input type="checkbox"/> Other, please specify.....					
L4. How could the TAB you chose have helped you more?					
L5. Based on your experience, could the EAD development process be streamlined? If so, how could EOTA streamline it?					
L6. To what extent could the EC contribute to further streamlining the EAD development process by ...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
...helping to avoid proliferation and overlapping of EADs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...helping to ensure better quality of EADs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...developing a consistent EAD guideline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing comments during the 15 working days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing all set of comments at the same time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing more consistent/clear comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...publishing amended EAD including European Commission comments in the OJEU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section M: EADs' UNIQUENESS IN THE EU HARMONISATION SCHEME

M1. Based on your experience, to what extent do you think that the EADs developed for the product area(s) your firm deals with are generally...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Similar in scope to each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing national requirements, but not in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing national requirements and also in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing EU regulations other than the CPR but not in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing EU regulations other than the CPR and also in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section N: EADs' RELEVANCE						
N1. Based on your experience, to what extent do you agree with the following statements?	FULLY AGREE	AGREE	NEUTRAL	DISAGREE	FULLY DISAGREE	I DON'T KNOW
EADs meet my company's needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EADs are important in case no hENs exist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My company avoids requesting ETAs if a new EAD needs to be developed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the citation process of EADs was improved, I would request more ETAs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N2. Based on your experience, to what extent do the following factors affect the number of EADs developed in the product area(s) your company deals with?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Exhaustiveness of product coverage by hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovativeness of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market competition (i.e. manufacturers requests ETAs to demonstrate an innovation advantage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry structure (e.g. concentration of big players.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potential for intra-EU cross-border trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potential for extra-EU cross-border trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size of market (e.g. hEN development is not cost-efficient in small markets)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length of product innovation or improvement cycles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section O: ECONOMIC RELEVANCE OF THE ETA ROUTE						
O1. Based on your experience, to what extent have the ETAs issued allowed your company to...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Have a valuable alternative route to CE marking in the absence of hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remain on the market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access the EU internal market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access non-European markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase its market share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase its sales level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase its cross-border trade level in Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase its cross-border trade level beyond Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relieve administrative burden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve its reputation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O2. Based on your experience, to what extent does the ETA route...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Stimulate the internal market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide a common technical language to construction professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitate and provide additional common assessment procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve Europe-wide comparability of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve transparency in product performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create added value for the entire construction sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create added value for your company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O3. Based on your experience, to what extent do you agree with the following statements?	FULLY AGREE	AGREE	NEUTRAL	DISAGREE	FULLY DISAGREE	I DON'T KNOW
The ETA is useful as a reference document	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA is useful as a recognised brand we can use in our marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA is useful as a verification that can be submitted to local authorities or insurance companies within the EU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA is useful as a verification that can be submitted to local authorities or insurance companies outside the European Economic Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA could be improved if use instructions were added (which would apply in the absence of national provisions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The ETA could be replaced by any other third-party body verification without any loss of credibility to our product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having a faster and more individual way to CE marking than harmonised standardisation is useful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is very useful that we can request an ETA without any preliminary decision by the European Commission or another expert body.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The repeal of the ETA route would be detrimental to my company's economic performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA route has a high standing among construction industry professionals and national authorities across Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA route has a high standing among construction industry professionals and national authorities beyond Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O5. Based on your experience, to what extent did the following factors influence your company's decision on the TAB to whom you sent the ETA request?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
TAB located in the same country as my company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TAB located in the same country as the main importer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Language spoken in the country where TAB is located	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Existing relationship with TAB (previous ETAs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical expertise of TAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reputation of TAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section P: INNOVATIVENESS OF CONSTRUCTION PRODUCTS						
P1. Based on your experience, to what extent does the EOTA route enhance potential for product innovation?	<input type="checkbox"/> Completely <input type="checkbox"/> Mostly <input type="checkbox"/> Partly			<input type="checkbox"/> To a limited extent <input type="checkbox"/> Not at all <input type="checkbox"/> I don't know		
P2. To what extent were the following factors relevant for the product(s) your company requested an ETA for?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Class of product new to the company	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New-to-the-world product	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product more complex than previous version (e.g. new product features)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product responding to changes in customers' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Product manufactured using a new/ non-standard/ non-standardisable production method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product already existing and partially covered by existing hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section Q: END OF SURVEY						
Q1. Do you wish to receive a summary report of the study (for free)?	<input type="checkbox"/> Yes. Please specify the email you wish to receive the summary report at <input type="checkbox"/> No					
Q2. Thanks for your contribution to our study!					
If you wish, you can use the following space to provide additional comments.					
END OF THE SURVEY						

Questionnaire for business associations

Section R: INFORMATION ON YOUR BUSINESS ASSOCIATION			
<p>R1.1. Does your business association represent manufacturers that deal with construction products? (e.g. products used for residential or non-residential buildings, civil engineering works)</p>	<p><input type="checkbox"/> Yes → Go to R2 <input type="checkbox"/> No → Go to R1.2</p>		
<p>R1.2. END OF QUESTIONNAIRE</p>	<p>If your business association does not represent any manufacturer that deals with construction products, you do not need to participate in this survey. Thank you for your time.</p>		
<p>R2. To which of the following product areas do your members' products belong? (more than one option possible)</p>	<p><input type="checkbox"/> 1 – Pre-cast concrete products <input type="checkbox"/> 2 – Doors, windows, shutters, gates and ancillaries <input type="checkbox"/> 3 – Membranes, including liquid and applied and kits <input type="checkbox"/> 4 – Thermal insulation products, composite insulation systems <input type="checkbox"/> 5 – Structural bearings, pins for structural joints <input type="checkbox"/> 6 – Chimneys, flues and related products <input type="checkbox"/> 7 – Gypsum products <input type="checkbox"/> 8 – Geotextile, geo-membranes and related products <input type="checkbox"/> 9 – Curtain walling, claddings, structural sealant glazing <input type="checkbox"/> 10 – Fixed firefighting equipment <input type="checkbox"/> 11 – Sanitary appliances <input type="checkbox"/> 12 – Road equipment: Circulation fixture <input type="checkbox"/> 13 – Structural timber products, elements and ancillaries <input type="checkbox"/> 14 – Wood based panels and elements <input type="checkbox"/> 15 – Cement, building limes, other hydraulic binders <input type="checkbox"/> 16 – Reinforcing and pre-stressing steel for concrete and ancillaries, post tensioning kits <input type="checkbox"/> 17 – Masonry and related products, including units, mortars and ancillaries <input type="checkbox"/> 18 – Waste water engineering products <input type="checkbox"/> 19 – Floorings <input type="checkbox"/> 20 – Structural metallic products and ancillaries <input type="checkbox"/> 21 – Wall and ceiling finishes (external and internal), internal partition kits <input type="checkbox"/> 22 – Roof coverings, lights, windows, related kits and ancillaries <input type="checkbox"/> 23 – Road construction products <input type="checkbox"/> 24 – Aggregates <input type="checkbox"/> 25 – Construction adhesives <input type="checkbox"/> 26 – Products related to concrete, mortar and grout <input type="checkbox"/> 27 – Space heating appliances <input type="checkbox"/> 28 – Pipes, tanks and ancillaries (not in contact with water for human consumption) <input type="checkbox"/> 29 – Construction products in contact with water for human consumption <input type="checkbox"/> 30 – Glass products (flat, profiled or blocks) <input type="checkbox"/> 31 – Power, control and communication cables <input type="checkbox"/> 32 – Sealants for joints <input type="checkbox"/> 33 – Fixings <input type="checkbox"/> 34 – Building kits, units, pre-fabricated elements <input type="checkbox"/> 35 – Fire stopping, fire sealing, fire protective or retardant products <input type="checkbox"/> 36 – Other</p>		
<p>R3.1. To what extent are you familiar with the EOTA route, including EAD development and ETA issuing?</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> <input type="checkbox"/> Completely <input type="checkbox"/> Mostly <input type="checkbox"/> Partly </td> <td style="width: 50%; border: none;"> <input type="checkbox"/> To a limited extent <input type="checkbox"/> Not at all → Go to R3.2 </td> </tr> </table>	<input type="checkbox"/> Completely <input type="checkbox"/> Mostly <input type="checkbox"/> Partly	<input type="checkbox"/> To a limited extent <input type="checkbox"/> Not at all → Go to R3.2
<input type="checkbox"/> Completely <input type="checkbox"/> Mostly <input type="checkbox"/> Partly	<input type="checkbox"/> To a limited extent <input type="checkbox"/> Not at all → Go to R3.2		

R3.2. END OF QUESTIONNAIRE If your business association is not familiar with the EOTA route, you do not need to answer the next sections of this survey. Thank you for your time and cooperation.

Section S: EAD DEVELOPMENT PROCESS

S1. In your opinion, to what extent does the EAD development process (not including the citation process at European Commission level) achieve the following objectives?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Quality of EADs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limitation of EAD proliferation and overlapping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transparency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confidentiality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost-effectiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timeliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TAB coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clarity of responsibilities and respect of rules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S2. In your opinion, which are the main weaknesses of the EAD development process? <i>(more than one option possible)</i>	<input type="checkbox"/> The process has no great weaknesses <input type="checkbox"/> Complexity of the procedure <input type="checkbox"/> Lack of continuity of existing EADs (EAD versions are short-lived and quickly replaced by new versions) <input type="checkbox"/> Delays in the EAD development (TABs and EOTA) <input type="checkbox"/> Delays in the publication of the EAD in the OJEU <input type="checkbox"/> Bureaucracy <input type="checkbox"/> Other, please specify.....					
S3. How could TABs help manufacturers more?					
S4. In your opinion, could the EAD development process be streamlined? If so, how could EOTA streamline it?					
S5. To what extent could the EC contribute to further streamlining the EAD development process by ...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
...helping to avoid proliferation and overlapping of EADs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...helping to ensure better quality of EADs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...developing a consistent EAD guideline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing comments during the 15 working days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing all set of comments at the same time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...providing more consistent/clear comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...publishing amended EAD including European Commission comments in the OJEU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section T: EADs' UNIQUENESS IN THE EU HARMONISATION SCHEME

T1. Based on your experience, to what extent do you think that EADs developed for the products area(s) your members deal with are generally...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Similar in scope to other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing national requirements, but not in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing national requirements and also in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing EU regulations other than the CPR but not in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overlapping with existing EU regulations other than the CPR and in conflict with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section U: EADs' RELEVANCE						
U1. Based on your experience, to what extent do you agree with the following statements?	FULLY AGREE	AGREE	NEUTRAL	DISAGREE	FULLY DISAGREE	I DON'T KNOW
EADs meet manufacturers' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EADs are important in case no hENs exist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturers avoid requesting ETAs if EAD are needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the citation process of EADs was improved, more manufacturers would request ETAs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
U2. In your opinion, to what extent do the following factors affect the number of EADs developed in the product area(s) your members deal with?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Exhaustiveness of product coverage by hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovativeness of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market competition (i.e. manufacturers requests ETAs to demonstrate an innovation advantage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry structure (e.g. concentration of big players.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potential for intra-EU cross-border trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potential for extra-EU cross-border trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Size of market (e.g. hEN development is not cost-efficient in small markets)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length of product innovation or improvement cycles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section V: INNOVATIVENESS OF CONSTRUCTION PRODUCTS						
V1. In your opinion, to what extent does the EOTA route enhance potential for product innovation?	<input type="checkbox"/> Completely <input type="checkbox"/> Mostly <input type="checkbox"/> Partly			<input type="checkbox"/> To a limited extent <input type="checkbox"/> Not at all <input type="checkbox"/> I don't know		
V2. In your opinion, to what extent does the EOTA route target...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
New-to-the-world products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products more complex than previous product versions (e.g. new product features)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products responding to changes in customers' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products manufactured using a new/non-standard/non standardisable production method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products already existing and partially covered by existing hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products for small or specialised niche markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products where the CEN standardisation does not meet manufacturers' needs ⁷⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section W: ECONOMIC RELEVANCE OF THE ETA ROUTE						
W1. In your opinion, to what extent have ETAs allowed your members to...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Have a valuable alternative route to CE marking in the absence of hENs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remain on the market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access the EU internal market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access non-European markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase market share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase sales level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase intra-EU cross border trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase extra-EU cross border trade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relieve administrative burden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve reputation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
W2. In your opinion, to what extent does the ETA route...?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
Stimulate the internal market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide a common technical language to construction professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitate and provide additional common assessment procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve Europe-wide comparability of products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

⁷⁴ As an illustrative example, products with short evolution cycle where standardisation would constantly lag behind or also recycled and reused products since their technical characteristics are less stable and might require a more individual approach

Improve transparency in product performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create added value for the entire construction sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
W3. Based on your experience, to what extent do you agree with the following statements?	FULLY AGREE	AGREE	NEUTRAL	DISAGREE	FULLY DISAGREE	I DON'T KNOW
The ETA is useful as a reference document	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA is useful as a recognised brand manufacturers can use in our their marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA is useful as a verification that can be submitted to local authorities or insurance companies within the EU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA is useful as a verification that can be submitted to local authorities or insurance companies outside the European Economic Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA could be improved if use instructions were added (which would apply in the absence of national provisions)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA could be replaced by any other third-party body verification without any loss of trust in the construction industry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A faster and more individual way to CE marking than harmonised standardisation is useful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is very useful that manufacturers can request an ETA without any preliminary decision by the European Commission or another expert body.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The repeal of the ETA route would be detrimental to manufacturers' economic performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA route has a high standing among construction industry professionals and national authorities across Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The ETA route has a high standing among construction industry professionals and national authorities beyond Europe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
W4. Based on your experience, to what extent do the following factors influence manufacturers' decision on the TAB to whom send the ETA request?	COMPLETELY	MOSTLY	PARTLY	TO A LIMITED EXTENT	NOT AT ALL	I DON'T KNOW
TAB located in the same country as the manufacturer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TAB located in the same country as the main importer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Language spoken in the country where TAB is located	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Existing relationship with TAB (previous ETAs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical expertise of TAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reputation of TAB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section X: END OF SURVEY						
X1. Do you wish to receive a summary report of this study (for free)?	<input type="checkbox"/> Yes. Please specify the email you wish to receive the summary report at <input type="checkbox"/> No					
X2. If necessary, would you be available for a short phone interview to provide further information?	<input type="checkbox"/> Yes. Please provide your contact details, phone number, and/or your email..... <input type="checkbox"/> No					
X3. Thanks for your contribution to our study!					
If you wish, you can use the following space to provide additional comments.					
END OF THE SURVEY						



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