



ANALYTICAL REPORT

RISKS IN PROVIDING ENGINEERING AND CONSULTING SERVICES IN CONSTRUCTION



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Authors of the Analytical Report:

Andrii Havrylov, civil engineer, PhD in Public Administration.

Borys Malyshev, expert in public law and anti-corruption, Doctor of Laws, Professor.

General editing:

Taras Sluchykh, Team Lead of the Component Integrity Reconstruction in the EU Anti-Corruption Initiative (EUACI).

Olha Kolodochka, Project Expert for Integrity Reconstruction Projects in the EU Anti-Corruption Initiative (EUACI).



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Abstract

In the current context of infrastructure, energy, industry, and construction development in Ukraine, the role of the consulting engineer is becoming increasingly important. The consulting engineer serves as a vital link connecting the customer with the contractor and other participants involved in the implementation of construction projects.

In the context of Ukraine's post-war recovery, the rational and efficient use of funds in construction projects will be crucial for the state and local budgets, as well as for international and domestic investors. In this regard, the role of the consulting engineer will be especially relevant, as representatives of this profession are capable of ensuring transparency, quality, and sustainability of complex infrastructure solutions.

The purpose of this report is to identify and describe the existing risks in providing engineering and consulting services in construction, determine the causes of these risks, and propose appropriate ways to mitigate them.

According to the definition of a consulting engineer provided in the Law of Ukraine "On Regulation of City Planning Activity," the Consulting engineer performs complex and multifaceted functions in practice, including (1) project management, (2) organizational and advisory support, (3) decision-making on behalf of the customer, and (4) other functions specified by an agreement, including technical supervision. Therefore, the consulting engineer plays an important role at all stages of construction project implementation. Nevertheless, the overall level of legal regulation of the consulting engineer's services and the procedures for their provision remains fragmented and insufficient. This is one of the main factors contributing to the emergence of numerous practical challenges.

The methodology of this report is based on interviews with key stakeholders (35 interviews were conducted), as well as on the analysis of legislation and its application practices, and on expert assumptions.

Main research findings

As a result of the conducted research, **19 risks** in the field of providing engineering and consulting services were identified and described. The risks were classified into **six areas** of the consulting engineer's involvement in the implementation of construction projects.

For each identified risk, detailed recommendations were provided for their mitigation, including the use of best practices from Austria, Germany, and France.

Among the identified risks, special attention should be paid to the following:



Insufficient legal regulation of access to the profession of consulting engineer and certification. The lack of clear requirements for training programs, unreasonable restrictions such as the need to obtain additional certificates and civil liability insurance, as well as the inability of foreign specialists to work directly in the Ukrainian market, create barriers to the development of a competitive environment in the field of engineering and consulting services.



Problems in determining the cost of engineering and consulting services and payments for the services provided. The lack of clarity in defining the cost of engineering and consulting services at the pre-design stage, the absence of reduction coefficients when calculating the cost of services of a consulting engineer, and the lack of a standard form for the act of provided services lead to unreasonable customer expenses and potential abuses by consulting engineers, including payments for services that were not actually provided.



Risks in the procurement procedure for engineering and consulting services. The practice of contracting authorities setting unreasonable requirements for potential participants in tender documentation, as well as the lack of information in state electronic systems about the consulting engineer's performance reports from previous projects, leads to reduced competition in procurement processes and the potential involvement of unscrupulous consulting engineers by customers.



Issues related to the quality of engineering and consulting services. Shortcomings in the Model Contract for the Provision of Engineering and Consulting Services – in particular, the absence of criteria for assessing the quality and timeliness of services, as well as the lack of regulation regarding conflicts of interest between the consulting engineer and contractors – increase the risk of poor-quality service delivery.



Risks in the field of documentation management. The absence of a clear regulation on the structure and content of the consulting engineer's reporting documentation, as well as the lack of mechanisms ensuring the consulting engineer's access to information from contractors, complicates transparency and control over project implementation.



Unregulated interaction between the consulting engineer and other construction participants. The absence of legally defined powers of the consulting engineer to record deficiencies, participate in the preparation of as-built documentation, and ensure oversight of the consulting engineer's performance on behalf of the customer creates risks of reduced construction quality.



Lack of a procedure for admitting foreign consulting engineers to provide services in Ukraine. Foreign companies or professionals intending to provide engineering and consulting services in Ukraine are deprived of this opportunity, as the provisions of the professional standard "Consulting Engineer (Construction)" and the Procedure for Professional Certification apply exclusively to domestic specialists. Such a situation contradicts EU standards and directives.



The main ways to mitigate most of the risks identified and described in the Report include the development and approval of the following acts:

- › Procedure for the Provision of Engineering and Consulting Services in Construction;
- › A new version of the Model Contract for the Provision of Engineering and Consulting Services;
- › Guidelines on the Provision of Engineering and Consulting Services;
- › A national standard (DSTU) guideline defining a typical package and structure of documentation on the progress of construction project implementation;
- › Approval of criteria and procedures for admitting foreign professionals and engineering and consulting companies to the Ukrainian market, as well as procedures for confirming their qualifications and relevant experience.

Additionally, the Report briefly analyzes risks in the field of architectural author supervision of construction projects. The results of this part of the research are presented in the form of a Register consisting of 10 risks and corresponding mitigation measures..

Abbreviations used in the text

- › **MinDevelopment** – Ministry for Communities and Territories Development of Ukraine.
- › **CE** – consulting engineer in the field of construction.
- › **CE services** – engineering and consulting services.
- › **PCB CI** – Personnel Certification Body of the Construction Industry.
- › **FIDIC (Fédération Internationale Des Ingénieurs-Conseils)** – International Federation of Consulting Engineers.

Introduction

Today, in Ukraine, the practice of engaging consulting engineers in construction projects has become widespread. The purpose of involving consulting engineers (CEs) is to assist the customer in ensuring a comprehensive approach to addressing issues that arise in the course of project implementation, in the customer's best interests.

Although the profession of consulting engineer (construction) has existed in Ukraine since 2016, there remain shortcomings in the regulatory and normative framework, as well as the absence of established approaches to defining the list and scope of CE services that a construction customer intends to receive. In practice, determining the cost of such services and managing the documentation workflow during their provision are particularly challenging. The above-mentioned and other factors create conditions under which significant practical problems and risks arise in the course of providing engineering and consulting services.

It is important to note that, under the current legislation of Ukraine, the construction customer independently decides on the necessity and expediency of engaging a consulting engineer, as well as determines the list and scope of services they intend to receive.

In the current context of infrastructure, energy, industry, and construction development in Ukraine, the role of CEs is becoming increasingly important. They serve as a vital link connecting the customer with the contractor and other participants involved in the implementation of construction projects. Thus, a consulting engineer is not only a technical expert and manager but also a strategic partner who helps the customer implement complex projects efficiently, on time, and within the approved budget.

In the context of Ukraine's post-war recovery, the rational and efficient use of funds in construction projects will be crucial for the state and local budgets, as well as for international and domestic investors. In this regard, the role of CEs will be crucial, as they are capable of ensuring transparency, quality, and sustainability in complex infrastructure solutions. Engaging consulting engineers will also promote the adoption of international standards and practices, paving the way for attracting foreign investment and external financing.

This Report aims to identify existing risks in the provision of CE services in construction and to propose appropriate ways for mitigating those risks.

The section of the Report devoted to the experience of providing engineering and consulting services in the European Union – in particular, in Austria, Germany, and France – aims to outline the pathways for the future development of the CE services market and the potential areas of activity for domestic consulting engineers.

Research methodology

The purpose of this research is to identify deficiencies in legal regulation, as well as the main corruption, technical, and organizational risks in the activities of CEs at all stages of construction project implementation, and to provide recommendations on measures to minimize those risks.

The understanding of risk in this Report is consistent with ISO 31000:2018(E) Risk Management Guideline¹. Considering the purpose of the research, risk is understood as the negative impact of potential factors on the achievement of objectives (organizational, project, or process-related) in the course of providing engineering and consulting services in construction. In this Report, risk also includes corruption risks – that is, factors that contribute to, cause, or condition the commission of a corruption-related offense or a violation of the Law of Ukraine “On Prevention of Corruption”.

Methods used

› **Individual interviews with stakeholders (both internal and external) were conducted.**

A total of 35 interviews were held for the preparation of this Report, including:



› **Preliminary Hazard Analysis (PHA)** – Section B.5 of DSTU IEC/ISO 31010:2013.

› **Structured “What-If” Technique (SWIFT)** – Section B.9 of DSTU IEC/ISO 31010:2013.

¹ <https://www.iso.org/obp/ui/en/#iso:std:iso:31000:ed-2:v1:en>

- › **Cause-and-Effect Analysis** – Section B.16 of DSTU IEC/ISO 31010:2013.
- › **Scenario Analysis Method**, which involves modeling plausible scenarios of committing corruption and corruption-related offenses (Clause 11 of the Methodology for Corruption Risk Management, approved by Order of the National Agency on Corruption Prevention No. 830/21 of December 28, 2021²).
- › **Expert Judgment (Reasoned Assumption) Method** – conclusions based on a comprehensive analysis of critically evaluated information from analytical reports and studies, conducted interviews, reports and studies of international organizations, official communications of public authorities, official statistical data, the state of legislation and its enforcement practice, court decisions, and open data from state registers, among others.в тощо.

2 <https://zakon.rada.gov.ua/laws/show/z0219-22#Text>

Section 1.

Fundamentals of the regulatory framework for engineering and consulting services in Ukraine

1.1. Definition of a consulting engineer and their functions

Article 1 of the Law of Ukraine “On Regulation of City Planning Activity” provides the following definition of a consulting engineer (CE):



Consulting engineer – is a specialist with a qualification level, confirmed by the personnel certification body accredited in the relevant field in accordance with the law and/or the economic entity which has such specialists in its composition, that manages the project, provides organizational and advisory support for the complex of works connected with the creation of an architecture work, adopts appropriate decisions on behalf of the customer and performs other functions specified by an agreement.

A nearly identical definition is also provided in the Minimum Occupational Safety Requirements for Temporary or Mobile Construction Sites (approved by Order No. 1050 of the Ministry of Social Policy of Ukraine, dated June 23, 2017).

Thus, from the legislative definition it follows that, first, the ability to perform these functions must be confirmed by an appropriate qualification level. Second, the functions of a consulting engineer may be carried out either by an individual or by a legal entity employing such specialists.

The given definition demonstrates that, in general terms, the following functions may be assigned to a CE:



project
management



provision of organizational and
consulting support for the set of
works related to the creation of an
architectural object



making relevant
decisions on behalf of
the customer



performing other
functions defined by
the contract

Other functions may include the responsibility for exercising technical supervision. This is stated in Article 11 of the Law of Ukraine “On Architectural Activity”: “The obligation to carry out technical supervision may be assigned by the customer to a specialized organization or a specialist in technical supervision or a consulting engineer, with the definition of their powers in the contract agreement”.

Article 22-3 of the Law of Ukraine “On Regulation of City Planning Activity” also specifies that a CE is a separate user of the E-cabinet of the Unified State Electronic System in the field of construction. In addition, information about the consulting engineer (if engaged) must be included in the documents submitted to obtain a construction permit (Article 37 of the same Law). The same provision is contained in the Procedure for Performing Preparatory and Construction Works, approved by Resolution of the Cabinet of Ministers of Ukraine No. 466 of April 13, 2011 (as amended by Resolution No. 747 of August 26, 2015).

By Order No. 350 of the Ministry for Communities and Territories Development of Ukraine (MinDevelopment) dated December 29, 2017, On Amendments to the Qualification Characteristics of the Profession “Consulting Engineer (Construction)”, amendments were introduced to Issue 64 “Construction, Installation, and Repair Works” of the Handbook of Qualification Characteristics of Employees’ Professions, approved by Order No. 249 of the State Committee for Construction, Architecture and Housing Policy of Ukraine dated October 13, 1999 (as amended). The section “Tasks and Responsibilities” for the profession Consulting Engineer (Construction) was presented as follows: “Participates in monitoring the compliance of used material and technical resources with design solutions, in verifying the volumes of completed construction works and the quality of construction materials, in pre-design works, and in preparing input data for project documentation for the construction of the facility. Performs the tasks defined in this section under the supervision of a consulting engineer (construction) of a higher qualification”.

By Order No. 108-22 of January 13, 2022, the Ministry of Economy approved the professional standard “Consulting Engineer (Construction)³”, which defines the main purpose of the professional activity as follows: “Organizational and consulting support of a set of works related to the creation of a construction facility through the provision of engineering and consulting services in construction, including those related to procurement procedures for goods, the development of design documentation, construction works, and construction-related services; contractual relations; organization of construction production and management of construction project implementation; control of quantitative and qualitative indicators of construction works; improvement of design documentation; management of risks arising during the implementation of construction projects; pre-trial dispute resolution; and ensuring occupational safety measures to meet the needs of construction market participants”.

It is worth noting that under the current legislation of Ukraine, the customer is not required to engage a CE. This is done at the customer’s discretion, depending on the need, the level of project complexity, and the availability of funds to pay for CE services.

3 https://register.nqa.gov.ua/uploads/0/392-nakaz_108.pdf

1.2. Accreditation of bodies certifying the qualification level of a consulting engineer

As mentioned above, Article 1 of the Law of Ukraine “On Regulation of City Planning Activity” stipulates that CEs may perform their functions only if their qualification level is confirmed by a personnel certification body accredited in the relevant field in accordance with the law.

According to Article 6 of the Law of Ukraine “On Accreditation of Conformity Assessment Bodies”, accreditation is carried out by the National Accreditation Agency of Ukraine. The National Accreditation Agency of Ukraine is a state organization established by the central executive authority responsible for shaping state policy in the field of economic development. It conducts non-commercial economic activities and is not intended to generate profit.

As stated in the Law of Ukraine “On Regulation of City Planning Activity”, the accreditation of CEs is carried out in the field of personnel certification. The official website of the National Accreditation Agency of Ukraine contains a list of personnel certification bodies (DSTU EN ISO/IEC 17024)⁴.

As of the date of this Report, only two such bodies related to CEs were identified from the list available on the website of the National Accreditation Agency of Ukraine:



All-Ukrainian Public Organization “Association of Experts of the Construction Industry” (PCB CI)⁵ – accreditation periods for confirming the qualification of CEs: November 21, 2016 – November 20, 2021; July 28, 2022 – July 27, 2027.



State Enterprise “National Institute for Infrastructure Development”⁶ (including for consulting engineers (construction) in the field of motor roads) – accreditation periods for confirming the qualification of CEs: February 23, 2021 – February 22, 2026. Accreditation was suspended on September 18, 2023, and reinstated on December 6, 2023.

1.3. Model contract for the provision of engineering and consulting services in construction

Article 11 of the Law of Ukraine “On Architectural Activity” stipulates that the model forms of contracts for technical supervision and for the provision

⁴ <https://naau.org.ua/3-reiestr-akreditovanikh-ooov>

⁵ <https://drive.google.com/file/d/1xANCh6fiRFuqiAcvBEQADbKICu6Y51tB/view>

⁶ <https://drive.google.com/file/d/1NVMfx1v8IhCxH7jOJ6HR4v9lv5g03FtN/view>

of CE services in construction are approved by the central executive authority responsible for the formation of state policy in the field of architecture.

This article also establishes, as mentioned earlier, that “the obligation to carry out technical supervision may be assigned by the customer to the CE, with the definition of their powers specified in the contract agreement”. Thus, the CE performs their functions by concluding an agreement with the customer for the provision of the respective services.

The model contract for the provision of CE services in construction was approved by Order No. 787 of the MinDevelopment of Ukraine dated August 6, 2024.

The model contract has a recommendatory nature, and the parties have the right, by mutual agreement, to amend certain terms provided in this model contract or to supplement its content. The form specifies that “the list of services (functions) of the Contractor, agreed upon by the Parties taking into account the specific features of the Facility, the scope of financing, the Customer’s requirements, and the stage at which the Contractor is engaged, is defined in Annex 1, which is an integral part of this Contract”. However, Annex 1 does not establish any framework whatsoever for determining the types of services provided by the CE.

However, in the case of road consulting services, the following legal situation has developed. The Presidential Decree of Ukraine “On Certain Measures to Create Conditions for the Development and Improvement of the Quality of Motor Roads” dated July 19, 2019, No. 529/2019, contains an instruction to the Cabinet of Ministers of Ukraine to introduce, by January 1, 2020, the obligation for customers involved in the construction, reconstruction, and repair of motor roads to engage, on a competitive basis, an independent consulting engineer in the field of road construction (FIDIC) at the stages of procurement, execution of works, and warranty maintenance. However, the Law of Ukraine “On Motor Roads” and the “Uniform Requirements for the Design, New Construction, Reconstruction, and Major Repair of Public Motor Roads” (approved by Resolution No. 1065 of the Cabinet of Ministers of Ukraine dated December 28, 2016) still provide that the engagement of a CE by the customer is not mandatory.

As noted in one of the court decisions⁷, “by their nature, the FIDIC standard contract forms, in any edition, are not regulatory acts but rather recommended documents developed and regularly improved by the International Federation of Consulting Engineers (FIDIC), the largest international association in the field of construction consulting”.

Therefore, the mandatory application of FIDIC standard contract forms in Ukraine is generally established by the terms of international financial organizations that provide funds for the implementation of investment projects in Ukraine. Accordingly, the customer’s obligation to engage a CE may arise from the conditions for the provision of funds by investors, who insist on the use of FIDIC contract forms.

7 <https://reyestr.court.gov.ua/Review/118988241>

1.4. Liability of the consulting engineer

In the event of a consulting engineer's breach of the provisions of the agreement on the provision of CE services or violation of the construction legislation, the CE bears legal liability as prescribed by the relevant law.

Thus, civil liability of the CE arises under the provisions of the Civil Code of Ukraine in cases where the CE violates the terms of the agreement on the provision of CE services to the customer.

Administrative liability of the CE may arise under Article 96 of the Code of Ukraine on Administrative Offenses ("Violation of legislative requirements, construction norms, standards, and rules during construction") in cases where the CE violates the requirements of legislation, construction norms, standards, rules, or approved design decisions during new construction, reconstruction, restoration, or major repair of facilities or structures.

Administrative liability may arise only in cases where the CE has failed to perform, or has performed incompletely, their obligations stipulated in the agreement with the customer and/or by construction legislation. The agreement on the provision of CE services in construction may establish the consulting engineer's obligation to sign the documents "Certificate of Acceptance of Completed Construction Works" (Form No. KB-2v) and "Statement of the Cost of Completed Construction Works and Expenses" (Form No. KB-3). These documents serve as the basis for settlements between the customer and the contractors. In this process, the CE does not merely sign the mentioned documents but verifies the information contained in them and approves them, thereby providing the customer with a service that confirms the quality and scope of the works performed by the contractor.

If this service was provided by the CE in a poor-quality manner, incompletely, or using inaccurate data, then the actions of the CE cause damage to the customer in the form of overstated expenses. In other words, the consulting engineer's actions lead to excessive financial expenditures by the customer due to the inclusion in the sample form KB-2v of, among other things:

1) types and costs of works that were not actually performed by the contractor; and/or

2) expenses for materials that were not actually used by the contractor.

Therefore, if discrepancies are found in the volume and/or quality of the works actually performed, the CE, after signing Form No. KB-2v and Form No. KB-3, may be held liable under various types of legal responsibility, including criminal liability. The latter may arise, in particular, under Article 367 of the Criminal Code of Ukraine ("Official Negligence"). According to existing court practice⁸, a CE – as well as a person performing technical supervision – engaged by the Customer under a contract, after personally signing the Certificate of Acceptance of Completed Construction Works (Form No. KB-2v), is regarded as a person performing organizational, managerial, and administrative functions by special authorization of the Customer. Therefore, under part 3 of Article 18 of the Criminal Code of Ukraine, such a person is considered an official.

If the CE was involved in falsifying documents that became the basis for

8

See for example: <https://reyestr.court.gov.ua/Review/121141935>

the Customer's payment for the Contractor's services, the CE may be held liable under Article 358 of the Criminal Code of Ukraine ("Forgery of documents, stamps, seals or letterheads, and sale or use of forged documents, stamps and seals"). The Supreme Court, in its ruling⁹, stated that a primary accounting document such as Form No. KB-2v – the Certificate of Acceptance of Completed Construction Works – certifies specific facts that may cause legal consequences in the form of the emergence, exercise, modification, or termination of certain rights and/or obligations, and therefore constitutes an official document. Consequently, its falsification entails criminal liability under Article 358 of the Criminal Code of Ukraine.

Deficiencies in the legal regulation of engineering and consulting services and ways to improve it



Lack of an approved list of services provided by the CE.

According to the definition of a CE provided in the Law "On Regulation of City Planning Activity," the CE performs complex and multifaceted functions in practice, including:

- › project management;
- › organizational and advisory support;
- › decision-making on behalf of the customer;
- › other functions specified by an agreement, including technical supervision.

Despite this, the overall level of legal regulation of the CE's services and the procedure for their provision (aimed at implementing the functions specified in the Law) remains rather superficial¹⁰. Currently, the documents that contain indicative lists of services provided by the CE depending on the stage of their engagement include:



- › The Guidelines for Determining Construction Costs, approved by Order No. 281 of the MinDevelopment of Ukraine dated November 1, 2021, "On Approval of the Estimation Standards of Ukraine in Construction";
- › Methodology for Determining the Cost of Road Works and Services Related to the Cost Estimation of New Construction, Reconstruction, Repairs, and Maintenance of Public Roads, approved by Order No. 753 of the Ministry of Infrastructure dated October 7, 2022.

However, the list of services provided there is structured in terms of indicators for determining the cost of CE's services. On the other hand, there is no regulatory act that would govern the procedure for providing CE's services at all.

⁹ <https://reyestr.court.gov.ua/Review/100396171>

¹⁰ The only exception (with significant reservations) can be considered the legal regulation of the CE's services in cases where they are engaged in the design, new construction, reconstruction, and major repair of public roads — according to the "Uniform Requirements for the Design, New Construction, Reconstruction, and Major Repair of Public Roads", approved by Resolution No. 1065 of the Cabinet of Ministers of Ukraine dated December 28, 2016)

The absence of regulation regarding the list of CE's services and the procedure for their implementation becomes particularly evident when compared with the legal regulation of technical supervision, which may be carried out either by a technical supervision engineer or by a CE. Thus, Resolution No. 903 of the Cabinet of Ministers of Ukraine dated July 11, 2007 approved the "Procedure for Technical Supervision during the Construction of an Architectural Object." Clause 5 of this Procedure establishes a number of clear provisions regarding the content of technical supervision, and Clause 6 defines the list of rights granted to the person performing technical supervision, including the right to demand certain actions from the contractor.

Lack of regulation of interaction between the CE and other participants in the construction project.

Ukrainian legislation does not define the procedure for interaction between the CE and other participants in construction projects, which complicates the implementation of the CE's functions related to project management and decision-making on behalf of the customer. This also has negative consequences for the customer, as the CE does not have legally defined powers to obtain documents and information from contractors or to record construction deficiencies. At the same time, in certain cases, the CE may even bear criminal liability in cases of discrepancies between the actual volume and quality of work performed by the contractor (if, under the contract, the CE is authorized to sign the Act of Acceptance of Completed Construction Works, Form No. KB-2v).

Recommendations

- 1** Amend Chapter 61 of the Civil Code of Ukraine to establish the procedure for relations between the contractor and the CE engaged by the customer during construction (see detailed recommendations in Section 2).
- 2** The Cabinet of Ministers of Ukraine should approve the "Procedure for the Provision of Engineering and Consulting Services in Construction", which would define:
 - › an indicative list of CE services, taking into account the type of construction and the class of consequences (responsibility class) of the construction object;
 - › the procedure for exercising the CE's rights and obligations during the provision of services (see detailed recommendations in Section 2);
 - › the CE's powers in interactions with other participants in the construction project (the person performing technical supervision, the author's supervision, the contractor, and the customer), taking into account the type of construction and the class of consequences of the construction object (see detailed recommendations in Section 2);
- 3** Amend legislation to include provisions allowing the involvement of CEs in

projects that are subject to special legal regulation, in particular:

- › Amend the Law of Ukraine “On Sea Ports of Ukraine” to include a provision that CEs may be engaged in the design, construction, and repair of hydraulic structures and infrastructure facilities of sea ports.
- › Amend the Air Code of Ukraine to include a provision that CEs may be engaged in the design, construction, and repair of airports and airfields..

Section 2.

Identified risks in providing engineering and consulting services in construction and measures to mitigate them

- RISK 1:** Possible abuses due to the lack of a clear procedure for determining the cost of CE's services at the pre-design stage of the construction project implementation.
- RISK 2:** Possibility for the CE to receive payment from the customer for services that were not actually provided.
- RISK 3:** Unjustified expenses incurred by the construction customer due to a possible mismatch between the cost of CE services and their actual scope..
- RISK 4:** Threat of reduced competition in the market for CE services due to deficiencies in tender documentation during the procurement of such services.
- RISK 5:** Possibility of customer abuses in the form of establishing unreasonable or excessive requirements for participants in the procurement procedure for CE services in favor of a pre-selected CE (i.e., customer's lobbying of third-party interests) and the likelihood of engaging an unscrupulous CE.
- RISK 6:** Probability of abuses in the actual performance of CE services by specialists whose composition differs from the personnel listed in the tender proposal.
- RISK 7:** Likelihood of CE providing low-quality services to the customer due to deficiencies in the Model Contract for CE services and the absence of approaches for determining quality indicators of such services.
- RISK 8:** Possibility of the CE receiving improper benefits from contractors due to the lack of a prohibition on concluding an agreement with a CE who has a conflict of interest with the contractor.
- RISK 9:** Insufficient control by the CE over the cost indicators of the construction project implementation.
- RISK 10:** Probability of non-compliance with the provisions of the Framework Agreement between Ukraine and the European Union regarding the eligibility rules for persons, entities, and materials for supply in the case of construction financed (co-financed) under the

implementation of measures of the Ukraine Facility Plan.

- RISK 11:** Possible abuses by the CE in providing the customer with documents reflecting the progress of the construction project implementation due to the lack of regulation concerning the content and scope of documentation created or obtained by the CE during the project implementation and provided to the customer under the terms of the concluded contract.
- RISK 12:** Possible abuses by contractors in granting the CE access to relevant information and documents concerning the progress of the construction project implementation.
- RISK 13:** Possibility of abuses during the implementation of the construction project due to the absence of a mechanism for interaction between the CE and other project participants.
- RISK 14:** Possibility of abuses by construction project participants due to the lack of legal regulation of the CE's authority to record defects and deficiencies and to participate in the preparation of as-built documentation.
- RISK 15:** Possibility of abuses by the CE due to the absence of a mechanism for the customer to control the CE's activities.
- RISK 16:** Probability that training programs for obtaining or upgrading the CE qualification do not meet practical needs.
- RISK 17:** Unjustified restriction of access to the CE profession due to the requirement to provide confirmation (such as a policy) of civil liability insurance.
- RISK 18:** Unjustified restriction of access to the CE profession due to the requirement for persons seeking a CE qualification certificate to hold two additional certificates (technical supervision engineer / construction expert / design engineer)..
- RISK 19:** Probability of artificial restriction of competition in the market for CE services due to the inability of foreign specialists to provide such services in Ukraine.

2.1. Risks in determining the cost of services of the consulting engineer and settlements for the services provided

RISK 1

Possible abuses due to the lack of a clear procedure for determining the cost of CE's services at the pre-design stage of the construction project implementation

SOURCES OF RISK 1

The cost of CE's services and technical supervision is determined in accordance with the Guidelines for Determining Construction Costs, and for road construction projects – according to the Methodology for Determining the Cost of Road Works and Services.

When preparing investor cost estimate documentation, the cost of such services is determined as a percentage of the total of Chapters 1–9 of the consolidated cost estimate for the facility – up to 3%, depending on the stage at which the consulting engineer is engaged. At the same time, expenses for maintaining the customer's service must also be included, as it retains its essential functions, such as managing the land plot, approving the project, financing the construction, and accepting the works (facility). However, in practice, situations arise when the cost of the construction project increases according to the indicators of the consolidated cost estimate and/or the contractual price.

When a decision is made to engage a CE, the relevant needs must be provided for in the design (or adjustment) assignment of the project documentation. Procurement of CE's and technical supervision services to meet the needs of the state, state-owned enterprises, territorial communities, and amalgamated territorial communities is carried out in accordance with the Law of Ukraine "On Public Procurement". In this case, the contractual price for such services is formed based on the results of the procurement procedure.

The construction customer, taking into account the cost, complexity, and other specific features of the construction project, as well as its own needs and capacities, may:

- › engage a CE to provide services under an agreement for engineering and consulting services, depending on the stage at which the engineer is engaged (the cost of services is determined at up to 3% of the total amount of Chapters 1–9 of the Consolidated Cost Estimate);
- › engage a CE to provide a set of services, including technical supervision, under an agreement for engineering and consulting services and technical supervision of construction (the cost of services is determined at an amount not exceeding 4.5% of the total amount of Chapters 1–9 of the Consolidated Cost Estimate);
- › engage a CE to provide a set of services, including technical supervision and the performance of the customer's functions under the relevant agreement (the cost of services is determined at an amount not exceeding 5.5% of the total amount of Chapters 1–9 of the Consolidated Cost Estimate).

According to construction project participants interviewed—primarily customers—the optimal option is to engage a CE to provide a comprehensive set of services, which includes both CE services and technical supervision of construction performed by the same engineer.

It should be noted that an individual CE may provide such services only if they hold the appropriate category certificates, while a legal entity may do so provided it employs certified specialists of the required qualifications.

However, in practice, difficulties arise when determining the cost of CE services at the pre-design stage, since cost indicators for construction are not yet available. Estimating the cost of such services based on the cost indicators of analogous projects is complex and risky due to the lack of clear technical and cost characteristics of the future facility. Moreover, if the CE is engaged at the pre-design stage as a result of a tender (where the expected cost of services is determined by the customer using the cost indicators of an analogous project), an additional issue may arise regarding adjusting the contract price with the CE in cases where, according to the cost estimate section of the project documentation approved by the customer, the actual cost indicators of the CE's services turn out to be higher.

The customer independently determines the list of services they intend to receive from the CE. However, when forming this list, the customer is not always able to correctly identify the entire scope of services or the stage of the project at which they are to be provided. As a result, the cost of services determined by the customer may not correspond to the actual cost—either being overestimated or underestimated.

At present, there are no regulatory or normative legal acts defining the scope of functions of a construction customer. At the same time, the Guidelines for Determining the Cost of Construction establish the possibility of assigning the functions of the construction customer to a CE.

However, it is currently impossible to determine the exact list and scope of services provided by the CE within the framework of performing the customer's functions.

Consequently, this creates a risk of inefficient use of funds by the construction customer, amounting to approximately 1% of the total cost of Chapters 1–9 of the Consolidated Cost Estimate.

MEASURES TO MITIGATE RISK 1

The MinDevelopment should:

- › provide clarifications regarding the current scope of functions performed by the construction customer and the possibility of delegating such functions to the CE;
- › develop a “Procedure for the Provision of Engineering and Consulting Services in Construction”, specifying a detailed list of services to be provided by the CE when delegated the customer's functions (if such delegation is permissible);
- › develop and approve a “Database of Comparable Projects” for facilities that

may fall under the categories of “standard construction projects” or “reusable projects”;

- › amend the Guidelines for Determining Construction Costs to establish mechanisms for calculating the cost of CE’s services when engaged at the pre-design stage;
- › amend the Guidelines for Determining Construction Costs to include mechanisms for calculating the cost of services when the CE is assigned the functions of the construction customer;
- › amend the Guidelines for Determining Construction Costs to establish mechanisms for calculating the cost of services when the CE is engaged to provide a comprehensive set of consulting and technical supervision services.



RISK 2

Possibility for the CE to receive payment from the customer for services that were not actually provided

SOURCES OF RISK 2

Although the list of services of the CE must be defined in the agreement between the CE and the customer, in practice, payments for the provided services are made not based on the actual volume of services rendered but proportionally to the certificates of completed construction works (Form KB-2v).

The basis for payment for the services rendered is the Certificate of Completed Works (Provided Services) of the CE. The reporting documentation submitted by the CE to the customer usually reflects only the general progress of the construction project. In other words, it does not contain details on the specific scope of services provided by the CE during the reporting period.

For example, most agreements between the CE and the customer include provisions requiring the CE to ensure occupational safety measures or pre-trial dispute resolution. However, in practice, situations may arise when such services are provided only periodically or not provided at all. Under these circumstances, the customer may pay the CE for services that were not provided or were provided only partially.

The procedure for paying for the CE’s services (including technical supervision), as stipulated by the Guidelines for Determining Construction Costs, makes it impossible to pay directly for the CE’s actual services.

MEASURES TO MITIGATE RISK 2

The MinDevelopment should approve a standard form of the Certificate of Services Provided by the CE, with a mandatory requirement to clearly indicate the actual services rendered; amend the Guidelines for Determining Construction Costs, including the section establishing the procedure for paying the CE directly for the services provided, in cases where the CE is engaged to deliver a set of consulting and technical supervision services.



RISK 3

Unjustified expenses incurred by the construction customer due to a possible mismatch between the cost of CE services and their actual scope

SOURCES OF RISK 3

According to the Guidelines for Determining Construction Costs, the cost of the CE services at the stage of the investor's estimate documentation is determined as a percentage of the total amount of sections 1–9 of the consolidated cost estimate. This cost serves as a limit and a basis for determining the expected value of the procurement.

At the same time, depending on the type of construction and the class of consequences (responsibility category) of the construction project, the total cost of project implementation often amounts to billions of hryvnias. However, the actual scope of services provided by the CE for such a high-cost project may remain comparable to that of projects with the same class of consequences but significantly lower total costs.

As a result, a disproportion arises between the cost of the CE's services and their actual scope, which in turn leads to the construction customer incurring significantly inflated and unjustified expenses related to payment for the CE's services.

This is confirmed by the results of interviews conducted with construction customers who have experience in implementing construction projects of various types and different classes of consequences (responsibility category). They note that the scope of services provided by the CE for high-cost construction projects does not differ from that for projects of any other cost level.

At the same time, construction customers emphasize the need to introduce a mechanism for calculating the cost of CE services according to the formula "the higher the construction cost, the lower the CE service cost".

MEASURES TO MITIGATE RISK 3

The MinDevelopment should:

- › develop a mechanism for categorizing construction projects into one of four construction cost groups:
 - projects with a low level of construction cost (CCG1);
 - projects with a medium level of construction cost (CCG2);
 - projects with a high level of construction cost (CCG3);
 - projects with an extremely high level of construction cost (CCG4);
- › determine the threshold level of construction cost for each group;
- › establish the procedure for calculating the cost of CE services and introduce a mechanism for applying reduction coefficients to determine the CE service cost depending on the construction cost group (CCG) to which the project belongs, in accordance with the principle "the higher the construction cost,

the lower the CE service cost”;

- › amend the Guidelines for Determining Construction Costs regarding the calculation of the cost of CE services.

2.2. Risks in the procurement procedure for engineering and consulting services

RISK 4

Threat of reduced competition in the market for CE services due to deficiencies in tender documentation during the procurement of such services

SOURCES OF RISK 4

The absence of legislative provisions defining the list and scope of services that may be provided by a CE, as well as the CE’s role in the construction process, often leads in practice to customers incorrectly defining the subject of procurement. This, in turn, may result in the establishment of unreasonable requirements in the tender documentation for contractors providing CE services in construction.

As already mentioned, the current legislation of Ukraine does not contain provisions requiring the customer to engage a CE in the implementation of construction projects. Therefore, the decision to involve a CE is made independently by the construction customer, based on its needs and financial resources.

The procurement of CE services is carried out in accordance with the provisions of the Law of Ukraine “On Public Procurement” and the Specifics of Public Procurement of Goods, Works, and Services for Customers Covered by the Law of Ukraine “On Public Procurement” for the Period of Martial Law in Ukraine and for 90 Days after Its Termination or Cancellation, approved by the Resolution of the Cabinet of Ministers of Ukraine No. 1178 of October 12, 2022 (as amended).

The list and cost of CE services as a business entity are determined in accordance with the Guidelines for Determining Construction Costs, approved by Order of the MinDevelopment of Ukraine No. 281 of November 1, 2021 (Amendment 2), and the Methodology for Determining the Cost of Road Works and Services, approved by Order of the Ministry of Infrastructure of Ukraine No. 753 of October 7, 2022.

When preparing tender documentation, CE service customers independently determine the stage at which the contractor will be engaged, their powers, and the list of services they expect to receive. At the same time, the contract for the provision of CE services may include a list of services that duplicate those of the technical supervision contractor.

The lack of clear criteria for engaging a CE in construction projects by state and municipal customers also creates a risk of inefficient use of budget funds, particularly when the construction customer has an in-house construction management service or a capital construction department/division whose responsibilities include project implementation oversight, and the functional

duties of their specialists are similar to those of the engaged CE.

The uncertainty of criteria for selecting construction projects (consequence class (responsibility), construction timelines, construction cost indicators, etc.) for which it is mandatory or advisable to engage a consulting engineer creates the likelihood of involving a CE in projects where CE services are not actually necessary.

MEASURES TO MITIGATE RISK 4

The Cabinet of Ministers of Ukraine should approve the “Procedure for the Provision of Engineering and Consulting Services in Construction”, which should, among other things, define:

- › the list of services provided by the CE;
- › the stage of the construction project at which the CE is engaged, including through the procurement procedure;
- › the distinction between CE services and the services of the technical supervision contractor;
- › the specifics of engaging a CE in construction projects by state and municipal customers (in cases where the construction customer’s staff includes specialists whose functional responsibilities are similar to the CE’s powers);
- › the criteria for construction projects (consequence class (responsibility), construction timelines, construction cost indicators, etc.) for which it is advisable to engage a CE.



RISK 5

Possibility of customer abuses in the form of establishing unreasonable or excessive requirements for participants in the procurement procedure for CE services in favor of a pre-selected CE (i.e., customer’s lobbying of third-party interests) and the likelihood of engaging an unscrupulous CE

SOURCES OF RISK 5

Currently, the requirements for participants in the procurement procedure for CE services in construction are determined by the customer independently, which creates the possibility of artificially setting discriminatory requirements that may limit the number of potential tender participants.

Some CEs interviewed noted that there are numerous cases where customers, in the terms of CE service procurements, set unjustified and excessive requirements.

These include the following common conditions in tenders for the procurement of CE services:

- › unreasonably high requirements regarding the CE’s work experience;
- › unreasonably high requirements for staff experience and number;

- › requirement to have two or more certified lead CEs;
- › requirement to provide evidence of specific volumes of services rendered under similar projects and contracts;
- › unreasonably high requirements regarding the CE's material and technical resources (such as the presence of specialized equipment, an office, or representative offices in a specific region or regional center);
- › requirement to have specific software (e.g., “AC-4”, “Zodchiy”, “LIRA-SAPR”, ArchiCAD, etc.);
- › requirement for staff involved in providing CE services to hold special certificates (for example, a survey expert certificate for participation in new construction projects).

Thus, customers essentially have the tools to create artificial barriers for potential tender participants. This significantly reduces competition in the procurement of CE services. The inclusion of such requirements in tender documentation may indicate either a lack of understanding by construction customers of the types and scope of services they intend to receive, or an intention to organize the tender in such a way as to ensure that the services are provided by a pre-determined contractor—without formally violating the requirements of the Law of Ukraine “On Public Procurement.”

Currently, the public procurement electronic system Prozorro and the Unified State Electronic System in Construction do not contain information on the quality of CE services provided during the implementation of previous projects, nor on the compliance of those services with the requirements of the previous customer as defined in the contract.

Meanwhile, services provided by CEs during previous construction projects may have been incomplete, of poor quality, or delivered in violation of the terms of the contract and the applicable standards. Moreover, the team of specialists declared at the procurement stage may have differed from those actually involved. There is also the possibility that the CE engaged in corrupt or other unlawful actions, identified either by the previous customer or by oversight authorities.

MEASURES TO MITIGATE RISK 5

The MinDevelopment should:

- › approve the Guidelines on the Provision of Engineering and Consulting Services, which should define, in particular, qualification requirements for CEs depending on the type of construction, the class of consequences (responsibility) of the construction object, and the stage of engagement;
- › implement a mechanism for displaying information in the Unified State Electronic System in Construction about CE performance results through the publication of corresponding reports reflecting the completeness and quality of services provided, the actual specialists involved, and the absence of violations of legal requirements or contract terms by the CE.

The MinEconomy should:

- › approve Methodological Recommendations on the Specifics of Conducting

 **RISK 6**

Probability of abuses in the actual performance of CE services by specialists whose composition differs from the personnel listed in the tender proposal

SOURCES OF RISK 6

Currently, the legislation does not provide for legal liability in cases where the specialists declared in the tender proposal do not actually provide CE services at the site, or when they are replaced by other specialists who do not possess the necessary qualifications. Likewise, the legislation does not establish requirements for obtaining the customer's approval when the direct provider of CE services engages subcontractors. Furthermore, the Model Contract does not contain provisions that would define the distribution of services provided between the direct provider (the winner of the tender procedure) and the subcontractor(s) engaged by them.

MEASURES TO MITIGATE RISK 6

The Verkhovna Rada of Ukraine should:

- › amend the Law of Ukraine “On Liability for Offenses in the Field of City Planning Activity” to establish the responsibility of the CE for violations related to the inconsistency between the class of consequences of the construction object and the level of certification of the person who actually provides CE services at the site.

The MinDevelopment should:

- › approve amendments to the Model Contract for the Provision of CE Services in Construction to:
 - establish the obligation of the service provider to ensure that the composition of specialists who actually provide CE services corresponds to the personnel declared in the tender proposal;
 - define the conditions and procedure for obtaining the customer's approval, if necessary, for the replacement of personnel during the execution of the contract for the provision of CE services.

2.3. Risks related to the quality of engineering and consulting services provided

 **RISK 7**

Likelihood of CE providing low-quality services to the customer due to deficiencies in the Model Contract for CE services and the absence of approaches for determining quality indicators of such services

SOURCES OF RISK 7

The Model Contract for the Provision of CE Services, approved by Order of the Ministry for Communities, Territories and Infrastructure Development of Ukraine No. 787 of August 6, 2024, contains significant shortcomings regarding the regulation of relations between the CE and the customer.

By its legal nature, such a contract is a service contract.

According to Article 901 of the Civil Code of Ukraine, under a service contract, one party (the contractor) undertakes, at the request of the other party (the customer), to provide a service that is consumed in the course of performing certain actions or carrying out certain activities, and the customer undertakes to pay the contractor for the service, unless otherwise provided by the contract. The subject of the contract concluded between the CE and the customer is the provision of CE services; however, the list of such services is included in a separate annex. At the same time, the Model Contract contains no regulation concerning the content of this Annex.

In practice, the content of the contract for the provision of CE services is determined independently by the customer. Moreover, the draft contract constitutes part of the tender documentation and, therefore, cannot be amended after the tender procedure has been completed. As a result, the CE who wins the tender must sign the contract “as is.”

At the same time, the Model Contract has several significant shortcomings:

- › it fails to take into account specific features depending on the type of construction and the class of consequences (responsibility) of the construction project;
- › it lacks a list of criteria for the timeliness, quality, and completeness of the services provided by the CE;
- › it insufficiently regulates the reporting procedures of the CE regarding the services provided;
- › it does not specify cases in which the essential terms of the contract may be amended in accordance with public procurement legislation.

It should be noted that these shortcomings may lead to a range of negative consequences for the implementation of a construction project, including: uncertainty in assessing the quality and completeness of the CE’s services; the risk of receiving low-quality services; and the lack of mechanisms for holding the CE accountable in cases of poor-quality or incomplete service delivery.

MEASURES TO MITIGATE RISK 7

The MinDevelopment should amend Order No. 787 of August 6, 2024, and supplement the Model Contract for the Provision of CE Services with provisions that:

- › ensure an appropriate level of flexibility in contract terms depending on the type of construction and the class of consequences (responsibility) of the construction project;
- › establish a list of criteria for the timeliness, quality, and completeness of

services provided by the CE;

- › regulate the reporting procedures of the CE;
- › define cases for amending the essential terms of the contract in accordance with public procurement legislation.



RISK 8

Possibility of the CE receiving improper benefits from contractors due to the lack of a prohibition on concluding an agreement with a CE who has a conflict of interest with the contractor

SOURCES OF RISK 8

Currently, Ukrainian legislation lacks a clear prohibition against engaging a CE under a contract in cases where the CE cannot perform their contractual duties objectively and impartially due to a conflict of interest with contractors involved in the construction project where the CE is engaged.

Such cases include situations where the CE:

- › is a head or a member of the management body, a founder, or a participant of a legal entity acting as a contractor for the construction project;
- › is an employee of the contractor for the construction project;
- › provides services or performs any other type of work for the contractor related to the construction project.

It should be noted that legislation currently does not define a list of cases in which a CE may directly or indirectly obtain undue benefits from a contractor.

MEASURES TO MITIGATE RISK 8

The Verkhovna Rada of Ukraine should amend the Law of Ukraine “On Regulation of City Planning Activity” to establish an exhaustive list of cases in which engaging a CE under a contract is prohibited due to a conflict of interest, including cases where:

- › the CE is a head or a member of the management body, a founder, or a participant of a legal entity acting as a contractor for the construction project;
- › the CE is an employee of the contractor for the construction project;
- › the CE provides services or performs any other type of work for the contractor related to the construction project.



RISK 9

Insufficient control by the CE over the cost indicators of the construction project implementation

SOURCES OF RISK 9

At the construction stage, the main cost components of project implementation are the cost of construction works and the cost of construction materials, equipment, machinery, and construction-related products.

The purchase and supply of construction materials, equipment, machinery, and construction-related products for the project are carried out by the contractor, unless otherwise specified in the construction contract.

According to the provisions of the construction contract, the customer is obliged to accept and pay for the completed construction works, which means that they bear responsibility for the efficient use of funds.

Monitoring by the CE of the cost of construction materials, equipment, machinery, and construction-related products is one of the tools ensuring effective control over the project's cost indicators and the efficient use of funds.

Under the provisions of contracts for CE services, the CE is responsible for ensuring control over the cost indicators of the construction project implementation.

As a rule, such monitoring is carried out by the CE in accordance with the procedure approved by the customer. This procedure may be developed by the construction customer independently or with the involvement of the CE. The list of construction materials, equipment, machinery, and construction-related products subject to cost monitoring is usually formed based on the types of work with the greatest share in the overall project structure. However, all construction materials, equipment, machinery, and construction-related products – without exception – have an impact on the cost indicators of the construction project implementation.

The effective implementation of cost monitoring by the CE is hindered by the following factors:

- › the absence of regulatory and legal acts that define the mechanism, establish the procedure for cost monitoring of construction materials, equipment, machinery, and construction-related products by the CE, and determine the monitoring format;
- › the lack of a national database on the average cost of construction materials, equipment, machinery, and construction-related products across regions;
- › the CE's limited access to documents confirming the cost of construction materials, equipment, machinery, and construction-related products purchased or supplied by the contractor;
- › the absence of internal databases maintained by CEs containing average cost data on construction materials, equipment, machinery, and construction-related products.
- › the absence of specialists within the CE's staff who regularly perform such monitoring (when procuring CE services, the customer does not set requirements for the availability of such specialists within the CE's team, since customers generally believe that this monitoring can be carried out by a cost engineer or directly by the CE).

MEASURES TO MITIGATE RISK 9

The MinDevelopment should:

- › ensure the creation and periodic updating, within the Unified State Electronic System in Construction, of a national database containing average costs of construction materials, equipment, machinery, and construction-related products across regions;
- › approve the Procedure for Monitoring the Cost of Construction Materials, Equipment, Machinery, and Construction-Related Products by CEs;
- › amend the Model Contract for the Provision of Engineering and Consulting Services to include an annex covering the results of price monitoring for material resources.



RISK 10

Probability of non-compliance with the provisions of the Framework Agreement between Ukraine and the European Union regarding the eligibility rules for persons, entities, and materials for supply in the case of construction financed (co-financed) under the implementation of measures of the Ukraine Facility Plan

SOURCES OF RISK 10

The absence of an obligation for the CE to monitor the origin of construction materials, equipment, machinery, and construction-related products—purchased and supplied by the contractor – may lead to violations of the eligibility rules for materials set forth in Article 5 of the Framework Agreement between Ukraine and the European Union on specific mechanisms for implementing EU financing for Ukraine under the Ukraine Facility instrument, particularly concerning the origin of material resources from eligible countries.

MEASURES TO MITIGATE RISK 10

The MinDevelopment should when amending the Model Contract for the Provision of Engineering and Consulting Services to include an annex on the results of material price monitoring, ensure that, in the case of construction projects financed (or co-financed) under the Ukraine Facility instrument, the monitoring results must include information on the compliance or non-compliance of the country of origin of material resources with the list of eligible countries defined in Article 5 of the Framework Agreement.

2.4. Risks in ensuring proper documentation support during the implementation of the construction project



RISK 11

Possible abuses by the CE in providing the customer with documents reflecting the progress of the construction project implementation due to the lack of regulation concerning the content and scope of documentation created or obtained by the CE during the project implementation and provided to the customer under the terms of the concluded contract

SOURCES OF RISK 11

Відсутність у законодавстві положень про типовий склад та зміст документації. The absence in legislation of provisions defining a standard composition and content of the documentation that the CE must provide to the customer under a CE services agreement.

One of the common situations is assigning the CE the responsibility for the documentary support of the construction project's implementation. This involves the creation and/or receipt of documents that must reflect the progress of the construction project. The purpose of such documentation is to prepare and transfer to the customer a package of documents that would subsequently reflect the project's construction history and contain information that may be used by the customer or the property owner during the operation of the completed facility.

The mechanism for such document flow is only superficially defined in the Model Contract for the Provision of CE Services in Construction (Annex 6 "List of Documentation Provided by the Customer to the Consulting Engineer" and Annex 7 "List of Documentation Provided by the Contractor to the Customer"). These annexes do not even include an indicative list of such documentation. Thus, the customer and the CE must independently determine the relevant list and scope of documents. In practice, however, this is complicated by the fact that the customer is often unaware in advance of what specific documents should be listed in the annexes, while the CE may be interested in reducing the list of documents that he is required to provide to the customer.

As a rule, the main requirement of the construction customer is that the CE provide reporting documentation (reports) for specific periods and keep minutes of meetings. The reporting frequency is determined by the customer independently and must be specified in the agreement with the CE.

In most cases, customers require the CE to submit an inception report, monthly reports, quarterly reports, and a completion report. In some cases, customers also require the CE to provide weekly reports.

At the same time, a significant number of customers interviewed emphasized the overly formal approach taken by CEs to presenting financial indicators of project implementation in their reporting documentation. They also pointed out the absence of cumulative statements of construction works performed and paid for at the site in the reporting documentation.

Customers further noted that the report templates approved by them and

provided to the CE at the stage of signing the CE services agreement later turn out to be unsuitable for the purposes of documentary support of construction project implementation. As a result, customers are forced to ask the CE to adjust the report templates.

At the same time, construction customers emphasize the importance of receiving properly prepared reporting documentation from the CE. Such documentation, together with the design documentation (including the cost estimate section), contractual documentation, work completion certificates, statements of the value of completed works, and as-built documentation, is required by regulatory authorities during inspections. Due to its chronological nature, it serves as confirmation of the scope, quality, and cost of construction works performed on the site over the corresponding period.

Thus, at present, the main elements of documentation flow are meeting minutes and reporting documentation. However, these documents alone are insufficient to reflect the actual progress of the project. The documentation package should also include documents received from other participants in the construction project implementation, including the customer.

At the same time, unlike the technical supervision contractor, the CE is not granted by law any authority to establish requirements for the contractor to provide documentation confirming the volume of construction works performed. The CE also lacks the authority to obtain documents confirming the volume and quality of construction works, which serve as the basis for payments for the completed works. Unless otherwise provided in the CE services agreement, the CE also has no access to correspondence or other documents of other participants in the construction project implementation that contain information related to the construction process.

MEASURES TO MITIGATE RISK 11

The MinDevelopment should approve a national standard (DSTU) guideline defining the typical package and structure of documentation on the progress of construction project implementation, which the CE must provide to the construction customer under the CE services agreement.

At a minimum, the typical documentation package should include the following information:

- › data on the development of design documentation, its expert review and approval, information on any revisions or amendments made to the design documentation during construction, and information on changes introduced by the author's supervision contractor;
- › as-built documentation, including as-built drawings;
- › documentation forming the basis for payments for completed works;
- › information on the results of technical supervision of construction;
- › other documents reflecting the course of construction.



RISK 12

Possible abuses by contractors in granting the CE access to relevant information and documents concerning the progress of the construction project implementation

SOURCES OF RISK 12

The lack of an obligation for contractors to provide the CE with documents and information on the progress of the construction project. As indicated in the Model Contract, the powers of the CE necessary for fulfilling the terms of the Contract are to be specified by the customer when concluding contracts for design works, construction works, supply, and other agreements requiring the CE's participation to the extent defined by the consulting services agreement.

However, Article 837 of the Civil Code of Ukraine, as well as Sections 3 and 4 of Chapter 61 of the Civil Code governing construction contracts (Articles 875–886) and contracts for design and survey works (Articles 887–891), contain no mention of the CE. Such a reference appears only in paragraph 28 of the General Conditions for the Conclusion and Performance of Construction Contracts in Capital Construction (approved by Resolution No. 668 of the Cabinet of Ministers of Ukraine dated August 1, 2005), which states that when a CE is engaged, the customer has the right to specify in the construction contract the CE's powers and the contractor's obligations to grant the consulting engineer access to the construction site.

These circumstances may hinder the CE's access to information and documentation on the progress of construction works that are in the possession of contractors.

Separately, it is necessary to highlight the lack of legislative regulation concerning the scope and content of the CE's reporting documentation submitted to the customer. In practice, such reports are usually prepared by the CE in an arbitrary format and do not always contain information that accurately reflects the actual progress of the construction project. For instance, the CE's reporting documentation for the customer does not always include data on the volume of completed construction works or the financial indicators of the project's implementation. This situation primarily occurs when the CE and the technical supervision engineer are engaged by the customer under separate contracts and have no communication between them. The insufficient amount of information obtained by the CE is also affected by the absence of clear communication with other participants in the construction project, such as designers/authors' supervision engineers and contractors/subcontractors.

At the same time, in most cases, the CE's reports are overloaded with general information (e.g., about project participants, type of construction, or the class of consequences of the construction object).

Currently, there is no regulation of the structure or content of the CE's reporting documentation, nor a standard list of documents created or obtained during the implementation of a construction project that the CE must provide to the customer. The procedure for transferring as-built documentation from the contractor to the CE is also unregulated.

Moreover, legislation does not define separate lists of documents to be

submitted to the customer by the contractor, by the technical supervision engineer, and by the CE, respectively.

As a result of these factors, the quality of construction may be reduced, construction costs may be overstated, and the customer may receive a set of documents that does not fully reflect the progress of the construction project. Consequently, at the operation stage, it may be impossible to identify the root causes of problems that arise after the commissioning of the construction object.

MEASURES TO MITIGATE RISK 12

The Verkhovna Rada of Ukraine should amend the Civil Code of Ukraine to establish the procedure for contractual relations between the contractor and the CE engaged by the customer, including:

- › a mechanism for the CE's access to documentation and information held by the contractor that is related to the construction of the object;
- › a procedure for the pre-trial resolution of disputes between the contractor and the CE.

2.5. Risks in the interaction among participants of the construction project implementation



RISK 13

Possibility of abuses during the implementation of the construction project due to the absence of a mechanism for interaction between the CE and other project participants

SOURCES OF RISK 13

The main role of the CE is to ensure the quality of construction. However, in practice, achieving this goal is extremely difficult due to the lack of a unified legislative mechanism for the CE's interaction with other construction participants, as well as the absence of defined scope and forms of influence of the CE on the activities of other construction participants.

The contract for the provision of CE services formalizes relations only between the construction customer (the fund manager) and the CE. At the same time, other participants are involved in the implementation of the construction project: designers and performers of author supervision, contractors, technical supervision performers, and suppliers of construction goods and services engaged directly by the customer. Indirectly, this list also includes local self-government bodies and state and municipal supervisory authorities.

In practice, the mechanism for the CE's interaction with other construction participants is established on a case-by-case basis, taking into account numerous subjective and objective factors. However, the difficulty in forming stable relations between the CE and other construction participants is caused by the lack of relevant regulatory and advisory acts..

MEASURES TO MITIGATE RISK 13

The Cabinet of Ministries of Ukraine should:

- › approve the Regulations on the Provision of Engineering and Consulting Services, which, among other things, should define:
 - the main powers of the CE, including powers to verify the compliance of cost indicators for the implementation of the construction project with the budget part of the project documentation approved in the prescribed manner;
 - the procedure for interaction of the CE with designers, performers of author and technical supervision;
 - the procedure for interaction of the CE with the contractor (as a detailed specification of the relevant provisions to be established in the Civil Code regarding the CE's interaction with the contractor).
- › consider the issue of comprehensively regulating the general procedure for interaction among all construction participants (the customer, contractor, CE, technical supervision, author supervision, etc.).



RISK 14

Possibility of abuses by construction project participants due to the lack of legal regulation of the CE's authority to record defects and deficiencies and to participate in the preparation of as-built documentation

SOURCES OF RISK 14

Currently, DBN A.3.1-5:2016 "Organization of Construction Production" does not include provisions on the CE's authority to make entries in the General Work Log and the Author Supervision Log regarding defects and deficiencies identified by the CE, nor on the CE's right to participate in the preparation of as-built documentation, including as-built drawings and hidden works completion certificates.

It should be noted that the CE lacks clearly defined legal grounds to perform the following important functions:

- › participate in the preparation of as-built documentation;
- › verify the content of completed work certificates (KB-2v);
- › record comments on the quality of work performed in the General Work Log;
- › issue instructions to eliminate defects and deficiencies identified during inspections of completed works by the contractor, etc.

Under the current legislation, the contractor can refuse to provide the CE with documentation or information related to construction without any negative consequences for themselves.

In addition, if the CE make entries in the General Work Log, they may later be accused of tampering with a primary accounting document, and the General

Work Log itself may be considered improperly completed due to the CE's actions and subject to replacement.

An instruction issued by the CE to eliminate defects and deficiencies identified during the construction process may be ignored by the contractor, since the authority to issue such instructions is legally granted only to the person performing technical supervision.

A CE's request to the contractor to provide as-built documentation may also be ignored, as such documentation is submitted to the technical supervision performer to confirm the volumes of completed works.

Current legislation does not clearly define the CE's authority regarding the preparation, signing, or approval of Completed Work Certificates (Form KB-2v) and Certificates of the Cost of Completed Construction Works (Form KB-3). In practice, the CE's signing (or endorsement) of these certificates is carried out based on the contract for CE services. At the same time, the customer assigns the CE the responsibility to verify these certificates in terms of the cost indicators' compliance with the cost estimate section of the design documentation approved in the prescribed manner. For the proper fulfillment of this duty, the CE must have information about the actual volume of work performed during the reporting period and have confirmation that such work was completed with proper quality. However, the CE may face significant difficulties in the following cases:

- ▶ when the technical supervision engineer and the CE have differing opinions regarding the volume and quality of the works subject to payment, leading to a conflict situation;
- ▶ when, for various reasons, the contractor addresses the customer directly during construction with a proposal to amend or adjust the design documentation approved by the customer, and the customer, based on such a request, instructs the designer to make the corresponding changes directly;
- ▶ when the authors' supervision representatives, at the contractor's suggestion, make minor changes to the design documentation directly at the construction site without informing the CE.

Thus, the CE does not always possess complete and up-to-date information about changes made to the design documentation, even though such changes affect the cost indicators of the construction project's implementation. At the same time, under the terms of the CE services contract, the CE is responsible for those very cost indicators.

Therefore, certain factors complicate the establishment of effective interaction between the CE and other construction project participants, which negatively affects both the quality of construction and the CE's ability to fully perform their contractual obligations to the customer.

A separate issue is the lack of legal regulation concerning the CE's authority to participate in the preparation of as-built documentation. Current regulatory documents do not provide for the CE's participation in preparing such documentation, including as-built drawings and hidden work closure certificates, even though one of the CE's functions is to control the quality of works performed at the construction site.

The General Work Log is the primary production record that reflects the

technological sequence, timing, quality, and conditions of construction works performed at a construction site. At the same time, the authority to make entries in the General Work Log, including notes on identified defects and deficiencies, is legally vested only in the person responsible for technical supervision of the construction.

Contractors who participated in the interviews noted that they perceive the requirement to provide the CE with the General Work Log for making entries concerning the quality of ongoing construction works as unlawful, since the contractor has contractual relations exclusively with the customer and is in no way bound to the CE. Contractors express a similar attitude toward the CE's requests to provide as-built documentation and certificates of completed construction works, as such documents are submitted to the technical supervision engineer.

Both CEs and authors' supervision representatives who participated in the interviews pointed out the complexity of the relationships arising between them. The authors' supervision representatives noted that design documentation is developed at the request of the direct customer of the construction project and approved by the customer's order. There are no contractual relations between the CE and the authors' supervision. When the CE establishes requirements or provides suggestions for amending the design documentation, the authors' supervision representatives usually demand that such proposals be agreed upon with the customer, and in some cases with both the customer and the contractor. This results in an increase in bureaucratic procedures and a slowdown in construction progress, and in some cases — even its suspension.

Another important unresolved issue, both for contractors and customers, is the status of the CE's signature on as-built documents and certificates of completed works, since the current legislation does not define the CE's powers and scope of responsibility in the process of preparing as-built documentation.

Another issue is that when providing CE services, they should not duplicate the functions of technical supervision (if the technical supervision is not performed by the CE). Such duplication may lead to a reduction in accountability for quality control on the part of both the technical supervision engineer and the CE.

As for the issuance by the CE of orders to eliminate defects and deficiencies identified during construction, in practice it is usually required that the CE coordinate the content of such orders with the technical supervision engineer and the customer. Naturally, this reduces the effectiveness of the CE's performance of its functions.

In turn, the authors' supervision engineer makes entries and issues orders in the corresponding author supervision log. Thus, there is no mechanism for recording in the as-built documentation the defects and deficiencies identified by the CE, which creates a risk that the contractor will fail to take measures to eliminate the defects and deficiencies detected by the CE.

MEASURES TO MITIGATE RISK 14

The MinDevelopment should amend DBN A.3.1-5:2016 "Organization of Construction Production" to grant the CE a full range of powers to participate in the verification and preparation of as-built documentation. In particular, the CE should be authorized to make entries in the General Work Log and the Author

Supervision Log concerning the defects and deficiencies identified by the CE, as well as to participate in the preparation of as-built documentation, including as-built drawings and hidden works completion certificates.



RISK 15

Possibility of abuses by the CE due to the absence of a mechanism for the customer to control the CE's activities

SOURCES OF RISK 15

Under the terms of the agreement concluded between the CE and the customer of the construction project, the CE performs a number of functions, the main objective of which is to ensure the high-quality implementation of the construction project.

However, during the interviews, construction customers noted that they currently lack any legally guaranteed tools to monitor the ongoing activities of the CE within the scope of their obligations under the CE Services Agreement.

Construction customers reported that they do not have information regarding how frequently the CE visits the construction site or what specific actions the CE takes during such visits.

Some customers pointed out the following shortcomings in the CE's performance: insufficient attention to construction sites; an inadequate number of site visits; incomplete monitoring of project implementation; and communication with project participants carried out mainly via telephone, text messages, or emails — that is, often without the CE's physical presence on the construction site.

There have been multiple cases where the CE prepared meeting minutes and reporting documents without actually visiting the construction sites, basing them solely on data and photos provided by the contractor.

Customers also noted that the insufficient number of CE site visits is often explained by the CE's workload and the large number of contracts they maintain with other construction customers.

Thus, it can be stated that in such cases, the construction customer in fact receives services in a scope significantly smaller than that stipulated in the contract.

In practice, all interaction between the customer and the CE in this area is limited to reporting documents and meeting minutes. Meanwhile, for other key participants in construction, the legislation explicitly requires maintaining respective logs that record each action performed by a given participant.

It should be noted that the absence of legally established interaction between the CE and other construction participants leads to a number of negative consequences:

- › the inability of the CE to fully perform contractual obligations;
- › misunderstandings among participants in project implementation, which

- negatively affect construction quality;
- › violation or insufficient protection of the customer’s legitimate interests.

MEASURES TO MITIGATE RISK 15

The MinDevelopment should amend DBN A.3.1-5:2016 “Organization of Construction Production” to introduce a Log for the Provision of Engineering and Consulting Services at the construction site, and establish the procedure and frequency for maintaining it by the CE.

2.6. Risks related to access to the profession and certification of consulting engineers



RISK 16

Probability that training programs for obtaining or upgrading the CE qualification do not meet practical need

SOURCES OF RISK 16

Training and professional development programs for CEs are developed by training centers at their own discretion and are not subject to any approval or endorsement by state authorities. Moreover, the content of such programs is not differentiated according to the category of the certificate of the responsible provider of construction services or the class of consequences of the construction project, nor does it take into account the specifics of different construction projects. Legislative requirements for individuals conducting training for construction industry specialists have not been established.

As a natural person, a CE specialist represents the corresponding profession (“Consulting Engineer (Construction)”, code KP 2142.2 according to DK 003:2010). They provide services to a customer either under an employment agreement (as part of a legal entity) or directly under a contract for CE services.

The qualification requirements, general competencies, and job functions of this profession are defined in the professional standard “Consulting Engineer (Construction)” (hereinafter – the Professional Standard), approved by the Order of the Ministry of Economy dated January 13, 2022, No. 108-22 (prior to its approval – by Amendment No. 11 to Section 1 “Managers, Professionals, and Specialists” of the Handbook of Qualification Characteristics of Employees’ Professions, Issue 64 “Construction, Installation, and Repair Works,” approved by the Order of the Ministry of Regional Development, Construction, and Housing and Municipal Services of Ukraine dated December 29, 2017, No. 350).

Information about CEs, including the date and number of their certificates and qualification categories, is entered into the Register of Construction Activities.

The Professional Standard provides for a four-level qualification categorization:

- › Lead CE;

- › First Category CE;
- › Second Category CE;
- › Basic Category CE.

Professional certification of CEs is carried out in accordance with Article 17 of the Law of Ukraine “On Architectural Activity” and the Resolution of the Cabinet of Ministers of Ukraine “Certain Issues of Professional Certification of Performers of Certain Types of Works (Services) Related to the Creation of Architectural Objects” dated May 23, 2011, No. 554 (as amended by the Resolution of the Cabinet of Ministers of Ukraine dated June 23, 2021, No. 651).

Professional certification is conducted by the MinDevelopment and/or a self-regulatory organization in the field of architectural activity, which, in accordance with the Law of Ukraine “On Architectural Activity”, has been delegated the authority to conduct professional certification in the respective area, based on the qualification characteristics of occupations or relevant professional standards. At the same time, MinDevelopment and/or the self-regulatory organization may establish an architectural and construction certification commission and determine its working bodies to carry out professional certification.

According to the above-mentioned Resolution, engineering activity in the field of construction — in terms of coordinating the actions of all participants in the construction process — is classified as a type of work (service) related to the creation of architectural objects, the performers of which are subject to professional certification.

The Personnel Certification Body of the Construction Industry of the All-Ukrainian Public Organization “Association of Experts of the Construction Industry” (hereinafter – PCB CI) provides, among other things, certification services for Consulting Engineers (Construction) in accordance with the requirements of the standard SOU-S-001:2016 “Procedure for Certification of Construction Industry Specialists.”

Specialized training for candidates seeking certification as Consulting Engineers (Construction) to prepare for qualification exams is carried out by the training centers of the construction industry (TCCI) recognized by the PCB CI. Certification examinations for candidates are conducted in the certification centers of the construction industry (CCCI) also recognized by the PCB CI.

The training programs for construction industry professionals intended for subsequent certification as Consulting Engineers are not subject to approval or coordination with relevant educational institutions.

No qualification requirements are established for instructors, and the training programs do not provide differentiation depending on the qualification level of specialists. Institutions and organizations engaged in this activity are not subject to monitoring concerning the quality of their training, retraining, and professional development services for construction industry specialists. This fact is noted by professionals who have undergone training in order to obtain a certificate of the corresponding category.

In interviews, construction industry specialists also note that these training programs provide only a general understanding of the CE’s activities and fail to reflect most of the practical aspects, complexities, and risks that CEs encounter in the course of their work.

Current legislation does not provide for the accreditation of institutions that conduct training, retraining, and professional development of construction industry specialists. At the same time, the activities of CEs are directly related to the creation of architectural objects and, accordingly, to ensuring safe operating conditions. Thus, deficiencies in the training procedure create risks to the safety of individuals who will operate or temporarily stay at the completed construction site.

MEASURES TO MITIGATE RISK 16

The MinDevelopment should establish requirements for the content of training programs for obtaining and upgrading the qualification of CEs, as well as determine the frequency of their approval; establish qualification requirements for individuals who conduct instruction under these training programs.

RISK 17

Unjustified restriction of access to the CE profession due to the requirement to provide confirmation (such as a policy) of civil liability insurance

SOURCES OF RISK 17

The requirement for a certification applicant to provide proof (such as an insurance policy) of civil liability insurance does not comply with the provisions of the Procedure for Professional Certification of Performers of Certain Types of Works (Services) Related to the Creation of Architectural Objects (approved by Resolution of the Cabinet of Ministers of Ukraine No. 554 of May 23, 2011).

According to paragraph 5.8, section V of the standard SOU-S-001:2016 “Procedure for Certification of Construction Industry Personnel¹¹” a certification applicant must provide proof (such as an insurance policy) of civil liability insurance for their professional activity within the declared field of certification (profession). At the same time, the PCB CI determines the list of professions that require such proof of civil liability insurance, while the amount of insurance compensation is defined separately for each profession.

At the same time, the Procedure for Professional Certification of Performers of Certain Types of Works (Services) Related to the Creation of Architectural Objects (approved by Resolution of the Cabinet of Ministers of Ukraine No. 554 of May 23, 2011) provides an exhaustive list of documents to be attached to the application for admission, and among them there is no requirement for the applicant to submit proof of civil liability insurance.

Specialists who have undergone the process of obtaining the consulting engineer qualification note that the requirement to provide a civil liability insurance policy is clearly excessive, and purchasing such a policy becomes an additional financial burden for the applicant.

Thus, the requirement to include a civil liability insurance policy among the documents submitted leads to the following negative consequences:

¹¹ <https://ospbg.org.ua/wp-content/uploads/2024/11/Forma-BG-Z-IKB.pdf>

- › non-compliance with the law—the certification body imposes a requirement not provided for by legislation;
- › unjustified expenses for the applicant;
- › restriction of access to the profession, since refusal to provide a civil liability insurance policy results in denial of professional certification.

It should be noted that representatives of the PCB CI, referring to SOU-S-001:2016 “Procedure for Certification of Construction Industry Personnel,” consider the requirement to submit a civil liability insurance policy as part of the documentation package to be legitimate.

At the same time, a corporate standard (SOU) is a regulatory document developed, approved, and used by a specific organization to standardize all areas of its activity.

However, the Standard of the Organizations of Ukraine must comply with the requirements of Ukrainian legislation.

MEASURES TO MITIGATE RISK 17

The MinDevelopment should:

- › take measures to eliminate the requirement for certification applicants to provide proof of civil liability insurance.

The Personnel Certification Body of the Construction Industry should:

- › bring SOU-S-001:2016 “Procedure for Certification of Construction Industry Personnel” into compliance with Ukrainian legislation by removing from the list of documents submitted by certification applicants the requirement to provide a civil liability insurance policy.



RISK 18

Restriction of access to the CE profession due to the requirement for persons seeking a CE qualification certificate to hold two additional certificates (technical supervision engineer / construction expert / design engineer)

SOURCES OF RISK 18

The conditions for obtaining a qualification certificate and permission to work as a consulting engineer are established by the Handbook of Qualification Characteristics of Employees’ Professions. Issue 64. Construction, Installation, and Repair Works (as amended), approved by the Order of the State Committee for Construction, Architecture, and Housing Policy of Ukraine dated October 13, 1999, No. 249, and by the Professional Standard “Consulting Engineer (Construction)”, approved by the Order of the Ministry of Economy of Ukraine dated January 13, 2022, No.108-22. The provisions of this standard set out the procedure for certifying specialists in the construction sector.

The certification procedure is complicated by the requirement to hold

additional certificates of the relevant category — technical supervision engineer / design engineer / construction expert. Under this procedure, in order for a consulting engineer to obtain a certificate of the corresponding category, the specialist, in addition to having the appropriate education, experience, and work record, must also possess two additional certificates of a technical supervision engineer / construction expert / design engineer. Without such certificates, the specialist may only obtain a “basic” category certificate and, accordingly, cannot provide CE services in full. At the same time, the CE is a distinct profession that may include elements of other professions but is not identical to the professions of technical supervision engineer, construction expert, or design engineer, and requires specific knowledge and skills. In particular, certification of design engineers and construction experts is carried out according to their respective specializations.

In particular, the Professional Standard for CEs defines the following professional competence (A5): “the ability to develop a feasibility study or an investment project.”

According to paragraph 5.1 of DBN A.2.2-3:2014 “Composition and Content of Project Documentation for Construction”, a feasibility study (FS) is developed on the basis of initial data for industrial facilities and linear objects of engineering and transport infrastructure that require a detailed justification of relevant decisions and an assessment of the feasibility and alternatives of their construction. The composition and content of the FS are provided in Annex C to DBN A.2.2-3:2014 and include at least 23 sections, the development of which cannot be performed by a single individual and requires the involvement of specialists in engineering design across various disciplines.

Certification of design engineers is carried out in the following specializations:

- › design engineer in noise protection;
- › design engineer in building energy efficiency;
- › design engineer in mechanical resistance and stability;
- › design engineer in cost estimation documentation;
- › design engineer for motor roads;
- › design engineer in health and environmental protection;
- › design engineer in structural operation safety;
- › design engineer in surveying;
- › design engineer in fire safety;
- › design engineer in construction technology.

Thus, possession by a CE of one of the above certificates in the field of engineering design does not resolve the issue of the independent development of a FS.

It should be noted that paragraph 3.23 of DBN A.2.2-3:2014 defines the FS as a design stage carried out by the project developer.

In the context of the Professional Standard, a feasibility study is a document that determines the technical feasibility and economic viability of implementing

a project.

The professional competence (paragraph A7), under which a CE analyzes the initial data for design and the project documentation developed by the designer, also does not require possession of a design engineer's certificate; rather, it is based on the CE's knowledge, skills, and professional experience.

Therefore, the requirement for a consulting engineer to possess a design engineer's certificate is unjustified.

Section C of the List of Labor Functions in the Professional Standard defines the CE's obligation to ensure proper engineering control over the quantitative and qualitative indicators of construction works.

The labor competencies defined in this section cannot be equated with the labor competencies of a construction technical supervision engineer, since the CE acts as an independent representative of the customer, separate from other participants in the construction project. Their responsibility includes both general control over project implementation and selective oversight of the actions of project participants in terms of their compliance with the project's objectives.

Such activities of the CE are administrative and technical in nature, rely on the CE's knowledge, skills, and experience, and do not require possession of additional certificates, including a certificate of a technical supervision engineer.

During interviews, specialists from capital construction departments indicated that, due to the absence of certificates for technical supervision engineers, construction experts, or design engineers, they are effectively unable to obtain a "Leading" category CE certificate and can only apply for a "Basic" category certificate. At the same time, they emphasized that within capital construction departments they have participated in and accumulated many years of experience in implementing construction projects of consequence class (responsibility) CC3, and the functions they performed are equivalent to those performed by a CE on similar projects.

The CEs interviewed noted that construction expert certificates (usually survey expert certificates) are rarely used in practice due to workload in their main area of activity.

Summarizing the opinions of construction specialists, it can be concluded that the requirement for additional certificates for CEs is unjustified.

It should be noted that, according to the Procedure for Professional Certification of Performers of Certain Types of Work (Services) Related to the Creation of Architectural Objects (approved by the Resolution of the Cabinet of Ministers of Ukraine dated 23 May 2011, No. 554), the professional development of performers of certain types of work (services) related to the creation of architectural objects must take place at least once every five years. Thus, a person who intends to upgrade their qualifications in the area of CE is forced to simultaneously upgrade qualifications in other areas (technical supervision, design, or expertise), regardless of whether their consulting engineering activity is related to these other areas. In turn, the need to upgrade qualifications in other areas leads to additional financial burden on that person.

Obtaining an additional certificate should be the right of the person who intends to engage in the relevant field, not their obligation. Therefore, holding additional certificates may be an added advantage for a CE, including in terms

of confirming experience, but it cannot be a requirement for obtaining a CE certificate. Based on their own judgment, a specialist who has officially obtained a CE certificate may choose to expand their areas of activity by obtaining additional certificates, such as those for a technical supervision engineer, construction expert, or design engineer. However, possession of additional certificates cannot be a mandatory condition for obtaining the CE profession.

Thus, the requirement to hold additional certificates can be regarded as an artificial restriction on market access. The current artificial barriers and the complex procedure for obtaining CE qualification certificates significantly limit the access of a broad range of experienced and trained construction specialists to the consulting engineering market.

MEASURES TO MITIGATE RISK 18

The MinDevelopment should:

- › Conduct a comprehensive analysis of the construction services market and provide clarifications regarding the functions assigned to project implementation participants, including the construction customer, the technical supervision performer, and the CE.
- › Carry out a comprehensive analysis of the procedure and conditions for obtaining the CE profession and make the necessary amendments to the “Procedure for Professional Certification of Performers of Certain Types of Work (Services) Related to the Creation of Architectural Objects” (approved by Resolution of the Cabinet of Ministers of Ukraine on 23 May 2011, No. 554 “Certain Issues of Professional Certification of Performers of Certain Types of Works (Services) Related to the Creation of Architectural Objects”).
- › Define the conditions for providing additional construction services by CEs that are not included in the CE’s competencies according to the Professional Standard.
- › Address the developer of the Professional Standard “Consulting Engineer (Construction)” (approved by the Ministry of Economy of Ukraine on 13 January 2022, No.108-22) regarding amendments to exclude the requirement for additional qualification certificates (technical supervision engineer / construction expert / design engineer) for persons wishing to upgrade their category, and eliminate the “basic” category.



RISK 19

Artificial restriction of competition in the market for CE services due to the inability of foreign specialists to provide such services in Ukraine

SOURCES OF RISK 19

Ukrainian legislation does not establish a procedure for admitting foreign CEs to provide services in Ukraine.

The provisions of the Professional Standard “Consulting Engineer (Construction)” and the Procedure for Professional Certification of Performers of

Certain Types of Work (Services) Related to the Creation of Architectural Objects apply exclusively to domestic specialists. As a result, under current conditions, foreign companies or specialists wishing to provide CE services in Ukraine are unable to obtain the corresponding certificate. As a rule, in practice, the business activities of foreign companies are carried out either through the establishment of their representative offices in Ukraine, the creation of a consortium, or by engaging certified domestic specialists on a contractual basis. Thus, in order to operate in the Ukrainian market, foreign companies are compelled to cooperate with domestic professionals, as a result of which the construction customer, even when involving foreign specialized companies, in fact receives services from Ukrainian CEs.

This situation contradicts Ukraine's European integration processes, as the EU Services Directive (Directive 2006/123/EU) requires member states to eliminate unjustified or discriminatory requirements that affect the provision of services within their territory. To ensure the rights of service users, the Directive stipulates that member states must remove barriers to service provision by providers registered in another member state. Furthermore, Article 53 of the Treaty on the Functioning of the European Union (TFEU) provides for the adoption by the European Parliament and the Council of the EU of directives on the mutual recognition of diplomas and other qualifications necessary in each member state for access to regulated professions.

Representatives of foreign CE companies confirmed during the preparation of this Report the existence of the aforementioned difficulties when entering the Ukrainian CE services market. They specifically noted that the level of Ukrainian CEs, whom foreign companies are forced to engage to provide services while operating in Ukraine, does not always meet the requirements set for personnel in these foreign companies, while the cost of services provided by domestic CEs is unreasonably high.

MEASURES TO MITIGATE RISK 19

The Cabinet of Ministers of Ukraine should define and approve the criteria and procedure for admitting foreign CEs and CE companies to the Ukrainian market, as well as the procedure for such foreign specialists to validate their qualifications and relevant experience.




Section 3.

Experience of EU countries in engineering and consulting activities (Austria, Germany, France)

Experience of Austria

Legislative Regulation

The activity of CEs in Austria is regulated by the Civil Engineers Act (Ziviltechnikergesetz, ZTG) and the Austrian Trade Code (Gewerbeordnung). The ZTG defines the requirements for professional practice, including licensing. Construction projects are governed by the Austrian Building Code (Bauordnung). The Public Procurement Acts (Bundesvergabegesetz, BVergG) establish the procedures for CE participation in public projects and regulate the pricing of services.

-  **National Association:** The Association of Consulting Engineers in Austria – Fachorganisation der Beratenden Ingenieure (VBI), established in 1921.
-  **Functions:** The VBI coordinates CE activities, develops quality standards, conducts professional training and certification. It represents members' interests before public authorities, cooperates with FIDIC on contract standards, and advises the government on technical issues.
-  **Additional Legislative Framework:** In addition to the ZTG, CE activities are subject to the General Civil Code (ABGB), which governs contractual relations. The ÖNORM standards also apply, setting technical requirements for construction projects.



Regulatory Documents

- › **ZTG:** Regulates access to the profession and licensing.
- › **ÖNORM standards:** Technical norms for construction, e.g. ÖNORM B 2110.
- › **FIDIC contracts:** Used for international projects.
- › **Bauordnung:** Regulates building codes.
- › **BVergG:** Defines the pricing mechanism for public procurement contracts.

Education and Professional Development

Consulting engineers in Austria receive their education at technical universities such as TU Wien. Foreign diplomas are recognized through ENIC-NARIC Austria. Continuing professional development is provided by the Austrian Chamber of Civil Engineers (Kammer der Ziviltechniker), which offers courses in construction law, FIDIC standards, and BIM technologies. Modern training programs emphasize life cycle management of buildings (Life Cycle Costing) and process digitalization (BIM Level 2 and higher).

Certification

To practice in regulated professions, registration with the Kammer der Ziviltechniker is required. Certification involves verification of education, professional experience (at least three years of practical work), and passing examinations. FIDIC certification is not mandatory, though experience with FIDIC contracts is highly valued. There are also certification programs in environmental consulting and sustainable construction, such as those offered by ÖGNI – the Austrian Green Building Council.

Contractual Relations

Contractual relations are governed by the Austrian General Civil Code (Allgemeines Bürgerliches Gesetzbuch, ABGB), particularly sections on contracts for services (§§ 1151–1170). For international projects, FIDIC contracts and ÖNORM B 2110 standards are applied. In public projects, framework agreements (Rahmenverträge) are widely used to define long-term relationships between the consulting engineer and the customer.

Cost Determination

The cost of CE services in Austria is often based on ÖNORM B 2110, which defines the scope of work and calculation methods. For public projects, pricing is regulated by BVergG, which establishes indicative fee rates. In private projects, prices are determined by mutual agreement, usually taking into account the project's complexity, scope, and the consultant's qualifications. For large-scale projects, FIDIC contracts may be used, with fees calculated as a percentage of the total project cost.

Payment Procedures

Payments are typically made in stages: an advance payment (10–20% of the contract amount), interim payments upon completion of project phases (e.g., after submission of design documentation), and a final payment after project completion. For framework agreements (Rahmenverträge), payments may be made monthly or based on completed work volume. Payments are governed by the ABGB, and delays may result in penalty charges.



Experience of Germany

Legislative Regulation

CE activities in Germany are regulated by the Architects and Engineers Act (Architekten- und Ingenieurgesetz). The key regulatory document is the Fee Structure for Architects and Engineers (Honorarordnung für Architekten und Ingenieure, HOAI). Construction projects are governed by the Federal Building Code (Baugesetzbuch, BauGB), in which CEs play a significant role. The 2021 revision of the HOAI partially liberalized fee rates, making them indicative rather than mandatory, thereby allowing greater flexibility in agreements between consultants and customers.



National Association: The national association of CEs in Germany is the Association of Consulting Engineers (Verband Beratender Ingenieure, VBI), established in 1903.



Functions: VBI unites consulting engineers, promotes the standardization of professional practices, develops recommendations for contracts and fee structures, and conducts professional training programs. The association actively cooperates with the German government and international organizations, such as FIDIC, to harmonize professional standards.



Additional Legislative Framework: The activities of CEs are also governed by the German Civil Code (Bürgerliches Gesetzbuch, BGB), particularly Sections 631–650, which define the framework for contracts for work and services. The Act Against Restraints of Competition (Gesetz gegen Wettbewerbsbeschränkungen, GWB) influences the procurement procedures in the public sector.



Regulatory Documents

- › **HOAI:** Defines the standards for remuneration and the scope of services of consulting engineers.
- › **BauGB:** Regulates the planning and implementation of construction projects.
- › **DIN standards:** Technical norms, such as DIN 276, which governs construction cost accounting.
- › **VDI-Richtlinien:** Recommendations issued by the Association of German Engineers (VDI).
- › **GWB (Gesetz gegen Wettbewerbsbeschränkungen):** Affects the rules for procurement and competition in the public sector when hiring consulting engineers.

Education and Professional Development

Consulting engineers in Germany typically receive their education at technical universities, such as TU München or RWTH Aachen. Continuing professional development is available through Ingenieurkammern and professional associations like the VDI, which offer courses on BIM, sustainable construction, and project management. Training programs often include modules on digital technologies (e.g., BIM Level 3) and energy-efficient design.

Certification

Certification is not mandatory for all consulting engineers, but registration with the Ingenieurkammer is required for regulated activities. Holding specialized certificates – such as DGNB Consultant (German Sustainable Building Council) certification – significantly increases market competitiveness and professional recognition.

Cost Determination

Service fees are governed by the HOAI, which provides indicative fee scales based on the type, complexity, and scope of the project. Following the liberalization of HOAI in 2021, the parties may agree on individual rates, but HOAI remains the main reference framework. For international projects, FIDIC contracts are often applied.

Payment Procedures

Payments are typically made in stages: an advance payment (up to 20%), interim payments after the completion of specific phases (e.g., conceptual design, working documentation), and a final payment upon project completion. In public projects, payments are regulated by the GWB, while in private projects they are governed by the BGB. For large-scale projects, monthly payments based on actual work performed may also be used.

Experience of France

Legislative Regulation

The activity of CEs in France is governed by the French Labour Code (Code du travail) and the Construction and Housing Code (Code de la Construction et de l'Habitation, CCH). A distinctive feature of France is the Loi MOP (Maîtrise d'Ouvrage Publique), which clearly defines the roles of the customer, designer, and CE in public projects.



National Association: CEs in France are represented by SYNTEC-Ingénierie, established in 1987.



Functions: SYNTEC-Ingénierie develops professional standards, advises the government on technical regulations, and promotes digital innovation in the construction sector. The association also represents its members' interests in negotiations with public authorities and international organizations, such as EFCA (European Federation of Engineering Consultancy Associations).



Additional Legislative Framework: In addition to the CCH and Loi MOP, CE activities are regulated by the French Civil Code (Code Civil), particularly Articles 1710–1799, which govern service and works contracts.



Regulatory Documents

- › **CCH, NF standards, FIDIC contracts.**
- › **CCAG (*Cahier des Clauses Administratives Générales*):** Standard administrative clauses applied in public procurement contracts, including those involving CEs.

Education and Professional Development

Education is obtained at engineering schools such as École des Ponts ParisTech or CentraleSupélec. Continuing professional development is available through SYNTEC-Ingénierie and other professional organizations that offer courses on BIM, energy efficiency, and project management following HQE standards.

Certification

To work in regulated fields, consulting engineers must be registered with the Ordre des Ingénieurs. Specialized certifications are also available in energy efficiency, particularly the HQE (Haute Qualité Environnementale) certification, which grants access to major “green” projects.

Cost Determination

The cost of CE services in France is determined based on the CCAG for public contracts or through mutual agreement between parties in private projects. The Loi MOP requires a clear definition of the project scope before a contract is signed. For “green” projects, higher rates may apply due to the additional certification requirements under HQE.

Payment Procedures

Payments are typically made in stages: an advance payment (10–15%), interim payments after the completion of specific stages (e.g., approval of design documentation), and a final payment upon project completion. In public projects, payments are governed by the CCAG, while in private projects they fall under the Code Civil. Late payments may result in penalties as stipulated in the contract.

Possible directions for applying the experience of Austria, Germany, and France in the field of engineering and consulting services in Ukraine

The experience of Austria, Germany, and France in the field of CE services can be valuable for Ukraine, particularly in the context of infrastructure reconstruction, implementation of modern technologies, and harmonization with European standards.

Below are the possible areas for adapting best foreign practices:

Experience of Austria:

- › **BIM technologies:** In Ukraine, where BIM implementation is still at an early stage, Austria's ÖNORM standards and training programs for specialist preparation could be adopted.
- › **Environmental consulting:** The ÖGNI certification system could be adapted to promote green construction in Ukraine, particularly for projects financed by international organizations.
- › **Framework agreements:** The use of framework agreements (Rahmenverträge) could simplify long-term contracting with CEs in Ukraine, especially for projects financed from the state budget.

Experience of Germany:

- › **HOAI and fee standardization:** The Ukrainian market for CE services currently lacks a clear pricing system. Implementing analogues of HOAI could ensure transparency, justification, and fairness in fee calculations.
- › **DIN standards:** Standards – particularly DIN 276 – could be used to improve Ukraine's construction cost accounting system.
- › **DGNB certification:** Introducing a sustainable construction certification system could increase the attractiveness of Ukrainian projects for European investors.

Experience of France:

- › **Loi MOP:** The model of clearly delineating roles in projects financed from the state budget could be valuable for Ukraine to prevent conflicts between customers, designers, and contractors.
- › **HQE certification:** Experience in energy-efficient construction could be applied to modernize Ukraine's housing stock, especially within energy efficiency programs.
- › **SYNTEC-Ingénierie:** Cooperation with the French association could help Ukrainian CEs gain access to European service markets and training programs.

Conclusions

The analysis of risks related to the provision of CE services in construction, presented in this Report, has revealed a number of systemic issues that negatively affect the efficiency, transparency, and quality of construction project implementation in Ukraine.

Overall, the identified risks indicate the need for a comprehensive approach to improving the legal and regulatory framework governing CE activities, with a focus on clearly defining their powers, interaction procedures, reporting standards, and control mechanisms.

Implementing the proposed risk mitigation measures, as well as taking into account and adapting the best practices from EU countries, will help enhance the transparency, efficiency, and quality of CE services — which is especially important in the context of Ukraine's post-war recovery and attraction of international investment.

The main conclusions regarding the identified risks are summarized below:

- › **Insufficient legal regulation of access to the CE profession and certification.** The lack of clear requirements for training programs, unreasonable restrictions such as the need to obtain additional certificates and civil liability insurance, as well as the inability of foreign specialists to work directly in the Ukrainian market, create barriers to the development of a competitive environment in the field of CE services.
- › **Problems in determining the cost of CE services and payments for the services provided.** The lack of clarity in defining the cost of engineering and CE at the pre-design stage, the absence of reduction coefficients when calculating the cost of services of a CE, and the lack of a standard form for the act of provided services lead to unreasonable customer expenses and potential abuses by CEs, including payments for services that were not actually provided.
- › **Risks in the procurement procedure for CE services.** The practice of contracting authorities setting unreasonable requirements for potential participants in tender documentation, as well as the lack of information in state electronic systems about the CE's performance reports from previous projects, leads to reduced competition in procurement processes and the potential involvement of unscrupulous CEs by customers.
- › **Issues related to the quality of CE services.** Shortcomings in the Model Contract for the Provision of CE Services – in particular, the absence of criteria for assessing the quality and timeliness of services, as well as the lack of regulation regarding conflicts of interest between the CE and contractors – increase the risk of poor-quality service delivery.
- › **Risks in the field of documentation management.** The absence of a clear regulation on the structure and content of the CE's reporting documentation, as well as the lack of mechanisms ensuring the CE's access to information from contractors, complicates transparency and control over project

implementation.

- › **Unregulated interaction between the CE and other construction participants.** The absence of legally defined powers of the CE to record deficiencies, participate in the preparation of as-built documentation, and ensure oversight of the CE's performance on behalf of the customer creates risks of reduced construction quality.
- › **Lack of a procedure for admitting foreign CEs to provide services in Ukraine.** Foreign companies or professionals intending to provide CE services in Ukraine are deprived of this opportunity, as the provisions of the professional standard "Consulting Engineer (Construction)" and the Procedure for Professional Certification apply exclusively to domestic specialists. Such a situation contradicts EU standards and directives.

Annex 1.

Register of risks in the provision of engineering and consulting services in construction and measures for their mitigation

Risk No.	Risk	Risk Mitigation Measures
1	Possible abuses due to the lack of a clear procedure for determining the cost of CE's services at the pre-design stage of the construction project implementation.	<p>The MinDevelopment should:</p> <ul style="list-style-type: none"> – Provide clarifications regarding the scope of functions currently performed by the construction customer and the possibility of delegating such functions to the CE; – Develop a “Procedure for the Provision of Engineering and Consulting Services in Construction” that defines a detailed list of services provided by the CE in cases where powers related to the performance of the construction customer’s functions are delegated to them (if such delegation is permitted); – Develop and approve a “Database of Comparable Projects” for facilities that may fall under the category of “standard construction projects” or “repeated-use projects”; – Amend the Guidelines for Determining Construction Costs to establish mechanisms for calculating the cost of CE services when engaged at the pre-design stage; – Amend the Guidelines for Determining Construction Costs to define mechanisms for calculating the cost of CE services when the CE is assigned duties related to performing the functions of the construction customer; – Amend the Guidelines for Determining Construction Costs to establish mechanisms for calculating the cost of services provided directly by the CE when engaged to deliver a comprehensive set of CE and technical supervision services.

2	Possibility for the CE to receive payment from the customer for services that were not actually provided.	<p>The MinDevelopment should:</p> <ul style="list-style-type: none"> - Approve a standard form of the Certificate of Services Provided by the CE, with a mandatory requirement to clearly indicate the actual services rendered; amend the Guidelines for Determining Construction Costs, including the section establishing the procedure for paying the CE directly for the services provided, in cases where the CE is engaged to deliver a set of consulting and technical supervision services.
3	Unjustified expenses incurred by the construction customer due to a possible mismatch between the cost of services and their actual scope.	<p>The MinDevelopment should:</p> <ol style="list-style-type: none"> 1) Develop a mechanism for categorizing construction projects into one of four construction cost groups: <ul style="list-style-type: none"> - projects with a low level of construction cost (CCG1); - projects with a medium level of construction cost (CCG2); - projects with a high level of construction cost (CCG3); - projects with an extremely high level of construction cost (CCG4); 2) Determine the threshold level of construction cost for each group. 3) Establish the procedure for calculating the cost of CE services and introduce a mechanism for applying reduction coefficients to determine the CE service cost depending on the construction cost group (CCG) to which the project belongs, in accordance with the principle “the higher the construction cost, the lower the CE service cost”; 4) Amend the Guidelines for Determining Construction Costs regarding the calculation of the cost of CE services.
4	Threat of reduced competition in the market for CE services due to deficiencies in tender documentation during the procurement of such services.	<p>The Cabinet of Ministers of Ukraine should approve the “Procedure for the Provision of Engineering and Consulting Services in Construction”, which should, among other things, define:</p> <ol style="list-style-type: none"> 1) The list of services provided by the CE; 2) The stage of the construction project at which the CE is engaged, including

		<p>through the procurement procedure;</p> <p>3) The distinction between CE services and the services of the technical supervision contractor;</p> <p>4) The specifics of engaging a CE in construction projects by state and municipal customers (in cases where the construction customer's staff includes specialists whose functional responsibilities are similar to the CE's powers);</p> <p>5) The criteria for construction projects (consequence class (responsibility), construction timelines, construction cost indicators, etc.) for which it is advisable to engage a CE.</p>
5	<p>Possibility of customer abuses in the form of establishing unreasonable or excessive requirements for participants in the procurement procedure for CE services in favor of a pre-selected CE (i.e., customer's lobbying of third-party interests) and the likelihood of engaging an unscrupulous CE.</p>	<p>The MinDevelopment should:</p> <ul style="list-style-type: none"> - Approve the Guidelines on the Provision of Engineering and Consulting Services, which should define, in particular, qualification requirements for CEs depending on the type of construction, the class of consequences (responsibility) of the construction object, and the stage of engagement; - Implement a mechanism for displaying information in the Unified State Electronic System in Construction about CE performance results through the publication of corresponding reports reflecting the completeness and quality of services provided, the actual specialists involved, and the absence of violations of legal requirements or contract terms by the CE. <p>The Ministry of Economy should:</p> <ul style="list-style-type: none"> - Approve Methodological Recommendations on the Specifics of Conducting Public Procurement of Consulting Engineer Services.
6	<p>Probability of abuses in the actual performance of CE services by specialists whose composition differs from the personnel listed in</p>	<p>The Verkhovna Rada of Ukraine should:</p> <ul style="list-style-type: none"> - amend the Law of Ukraine "On Liability for Offenses in the Field of City Planning Activity" to establish the responsibility of the CE for violations related to the inconsistency between the class of

	the tender proposal.	<p>onsequences of the construction object and the level of certification of the person who actually provides CE services at the site.</p> <p>The MinDevelopment should:</p> <ul style="list-style-type: none"> - Approve amendments to the Model Contract for the Provision of Engineering and Consulting Services in Construction to: <ul style="list-style-type: none"> 1) establish the obligation of the service provider to ensure that the composition of specialists who actually provide CE services corresponds to the composition of specialists proposed by the contractor in its tender proposal; 2) define the conditions and procedure for obtaining the customer’s approval, if necessary, for the replacement of personnel that may occur during the contract implementation.
7	Likelihood of CE providing low-quality services to the customer due to deficiencies in the Model Contract for CE services and the absence of approaches for determining quality indicators of such services.	<p>The MinDevelopment should amend Order No. 787 of August 6, 2024, and supplement the Model Contract for the Provision of CE Services with provisions that:</p> <ul style="list-style-type: none"> a) ensure an appropriate level of flexibility in contract terms depending on the type of construction and the class of consequences (liability) of the construction project; b) establish a list of criteria for the timeliness, quality, and completeness of services provided by the CE; c) regulate the reporting procedures of the CE; d) define cases for amending the essential terms of the contract in accordance with public procurement legislation.
8	Possibility of the CE receiving improper benefits from contractors due to the lack of a prohibition on concluding	<p>The Verkhovna Rada of Ukraine should amend the Law of Ukraine “On Regulation of City Planning Activity” to establish an exhaustive list of cases in which engaging a CE under a contract is prohibited due to a conflict of interest,</p>

	an agreement with a CE who has a conflict of interest with the contractor.	including cases where: a) the CE is a head or a member of the management body, a founder, or a participant of a legal entity acting as a contractor for the construction project; b) the CE is an employee of the contractor for the construction project; c) the CE provides services or performs any other type of work for the contractor related to the construction project.
9	Insufficient control by the CE over the cost indicators of the construction project implementation.	The MinDevelopment should: 1) ensure the creation and periodic updating, within the Unified State Electronic System in Construction, of a national database containing average costs of construction materials, equipment, machinery, and construction-related products across regions; 2) approve the Procedure for Monitoring the Cost of Construction Materials, Equipment, Machinery, and Construction-Related Products by CEs; 3) amend the Model Contract for the Provision of Engineering and Consulting Services to include an annex covering the results of price monitoring for material resources.
10	Probability of non-compliance with the provisions of the Framework Agreement between Ukraine and the European Union regarding the eligibility rules for persons, entities, and materials for supply in the case of construction financed (co-financed) under the implementation of measures of the Ukraine Facility Plan.	The MinDevelopment should: - when amending the Model Contract for the Provision of Engineering and Consulting Services, the MinDevelopment should include an annex on the results of material price monitoring, ensure that, in the case of construction projects financed (or co-financed) under the Ukraine Facility instrument, the monitoring results must include information on the compliance or non-compliance of the country of origin of material resources with the list of eligible countries defined in Article 5 of the Framework Agreement.
11	Possible abuses by the CE in providing the customer with documents reflecting	The MinDevelopment should approve a national standard (DSTU) guideline defining the typical package and structure of documentation on the progress of

	<p>the progress of the construction project implementation due to the lack of regulation concerning the content and scope of documentation created or obtained by the CE during the project implementation and provided to the customer under the terms of the concluded contract.</p>	<p>of construction project implementation, which the CE must provide to the construction customer under the CE services agreement.</p> <p>At a minimum, the typical documentation package should include the following information:</p> <ul style="list-style-type: none"> - data on the development of design documentation, its expert review and approval, information on any revisions or amendments made to the design documentation during construction, and information on changes introduced by the author's supervision contractor; - as-built documentation, including as-built drawings; - documentation forming the basis for payments for completed works; - information on the results of technical supervision of construction; - other documents reflecting the course of construction.
12	<p>Possible abuses by contractors in granting the CE access to relevant information and documents concerning the progress of the construction project implementation.</p>	<p>The Verkhovna Rada of Ukraine should amend the Civil Code of Ukraine to establish the procedure for relations between the contractor and the CE engaged by the customer, including:</p> <ul style="list-style-type: none"> a) a mechanism for the CE's access to documentation and information held by the contractor that is related to the construction of the object; b) a procedure for the pre-trial resolution of disputes between the contractor and the CE.
13	<p>Possibility of abuses during the implementation of the construction project due to the absence of a mechanism for interaction between the CE and other project participants.</p>	<p>The Cabinet of Ministries of Ukraine should:</p> <ul style="list-style-type: none"> - approve the Regulations on the Provision of Engineering and Consulting Services, which, among other things, should define: a) the main powers of the CE, including powers to verify the compliance of cost indicators for the implementation of the construction project with the budget part

		<p>of the project documentation approved in the prescribed manner;</p> <p>b) the procedure for interaction of the CE with designers, performers of author and technical supervision;</p> <p>c) the procedure for interaction of the CE with the contractor (as a detailed specification of the relevant provisions to be established in the Civil Code regarding the CE's interaction with the contractor);</p> <p>- consider the issue of comprehensively regulating the general procedure for interaction among all construction participants (the customer, contractor, CE, technical supervision, author supervision, etc.).</p>
14	Possibility of abuses by construction project participants due to the lack of legal regulation of the CE's authority to record defects and deficiencies and to participate in the preparation of as-built documentation.	The MinDevelopment should amend DBN A.3.1-5:2016 "Organization of Construction Production" to grant the CE a full range of powers to participate in the verification and preparation of as-built documentation. In particular, the CE should be authorized to make entries in the General Work Log and the Author Supervision Log concerning the defects and deficiencies identified by the CE, as well as to participate in the preparation of as-built documentation, including as-built drawings and hidden works completion certificates.
15	Possibility of abuses by the CE due to the absence of a mechanism for the customer to control the CE's activities.	The MinDevelopment should amend DBN A.3.1-5:2016 "Organization of Construction Production" to introduce a Log for the Provision of Engineering and Consulting Services at the construction site, specifying the procedure and frequency for maintaining it by the CE.
16	Probability that training programs for obtaining or upgrading the CE qualification do not meet practical needs.	<p>The MinDevelopment should:</p> <p>- establish requirements for the content of training programs for obtaining and upgrading the qualification of CEs, as well as determine the frequency of their approval;</p> <p>- establish qualification requirements for individuals who conduct instruction under these training programs.</p>

17	Unjustified restriction of access to the CE profession due to the requirement to provide confirmation (such as a policy) of civil liability insurance.	<p>The MinDevelopment should:</p> <ul style="list-style-type: none"> - take measures to eliminate the requirement for certification applicants to provide proof of civil liability insurance. <p>The Personnel Certification Body of the Construction Industry should:</p> <ul style="list-style-type: none"> - bring SOU-S-001:2016 “Procedure for Certification of Construction Industry Personnel” into compliance with Ukrainian legislation by removing from the list of documents submitted by certification applicants the requirement to provide a civil liability insurance policy.
18	Unjustified restriction of access to the CE profession due to the requirement for persons seeking a CE qualification certificate to hold two additional certificates (technical supervision engineer / construction expert / design engineer).	<p>The MinDevelopment should:</p> <ul style="list-style-type: none"> - conduct a comprehensive analysis of the construction services market and provide clarifications regarding the functions assigned to project implementation participants, including the construction customer, the technical supervision performer, and the CE; - carry out a comprehensive analysis of the procedure and conditions for obtaining the CE profession and make the necessary amendments to the “Procedure for Professional Certification of Performers of Certain Types of Work (Services) Related to the Creation of Architectural Objects” (approved by Resolution of the Cabinet of Ministers of Ukraine on May 23, 2011, No. 554 “Certain Issues of Professional Certification of Performers of Certain Types of Works (Services) Related to the Creation of Architectural Objects”); - define the conditions for providing additional construction services by CEs that are not included in the CE’s competencies according to the Professional Standard; - address the developer of the Professional Standard “Consulting Engineer (Construction)” (approved by the Ministry of Economy of Ukraine on 13 January 2022, No. 108-22) regarding amendments to exclude the requirement for additional qualification certificates

		(technical supervision engineer / construction expert / design engineer) for persons wishing to upgrade their category, and eliminate the “basic” category.
19	Probability of artificial restriction of competition in the market for CE services due to the inability of foreign specialists to provide such services in Ukraine.	The Cabinet of Ministers of Ukraine should define and approve the criteria and procedure for admitting foreign CEs and engineering and consulting companies to the Ukrainian market, as well as the procedure for such foreign specialists to validate their qualifications and relevant experience.

Annex 2.

Register of risks and measures to mitigate them in the field of architectural author supervision of construction projects

General conditions for the implementation of author supervision over construction:

Author supervision over construction is a control process carried out by the architect, the project author, other developers of the project approved in the prescribed manner, or persons authorized by them throughout the entire construction period.

The purpose of author supervision is to ensure that the completed construction works comply with the design documentation, as well as with the architectural, technical, technological, and other solutions provided for in the approved project. This distinguishes author supervision from technical supervision, which focuses on verifying the quality of construction works.

Author supervision is mandatory for projects subject to commissioning, regardless of the customer's form of ownership, but by agreement, it may not be carried out for projects of Category I complexity.

The main components of author supervision are:

- › **Compliance control:** verification of whether the construction works correspond to the design solutions, including architectural and planning, urban development, technical, and environmental requirements.
- › **Visual and documentary inspection:** carried out without instrumental measurements, through visual inspections and analysis of documentation.
- › **Maintenance of the author supervision log:** recording all site visits, comments, violations, and their rectifications in the author supervision log, which is handed over to the customer upon completion of the works.
- › **Interaction with the contractor and the customer:** in case of detected deviations from the project, the person conducting the supervision notifies the customer and, if necessary, the state architectural and construction control authorities.

Register of risks and measures to mitigate them in the field of author supervision

Nº	Risk	Source of Risk	Mitigation Measur
1	Violation of the copyright of the designer of project documentation	By the decision of the construction customer, a person/institution/organization that is not the designer of the project is engaged to carry out author supervision	Legally establish the customer's obligation to ensure compliance with the copyright and lawful interests of the designer of project documentation
2	Violation of the rights and lawful interests of the construction customer due to the designer's refusal to transfer the right to carry out author supervision to the person/institution/organization designated by the customer	The designer's refusal to transfer the right to carry out author supervision to the person/institution/organization designated by the customer	Define at the legislative level the cases in which the mechanism of alienation or mandatory transfer of copyright applies
3	Failure to detect construction defects in a timely manner by the author supervision performer	Limited access of the author supervision performer to the construction site or insufficient frequency of inspections	Establish an inspection schedule in the contract, ensure photo and video documentation
4	Potential conflicts between the author supervision performer, customer, and contractor	Lack of clear contractual provisions and lack of a regulated communication procedure	Conclude a detailed contract for author supervision with clearly defined rights and obligations of all interested parties; introduce mediation for dispute resolution
5	Deviations from project documentation by the contractor	Insufficient control by the author supervision performer or disregard of prescriptions by the contractor	Regular site visits, recording in the author supervision log, interaction with the technical supervision performer

6	Potential conflicts with the CE due to the latter's requirements to amend or supplement the project documentation	Identified deficiencies in project documentation, changes in the key parameters of the construction object, or proposals by the CE to improve the technical characteristics of the facility	Define at the legislative level the procedure for interaction among participants in construction project implementation
7	Corruption risks related to receiving undue benefits	Collusion between the author supervision performer and the contractor in falsifying confirmations of the scope and quality of work performed or compliance of materials used with the project documentation	Ensure effective control by the customer and the CE
8	Possible loss of information related to author supervision	Physical loss of the author supervision log	Maintain an electronic author supervision log and ensure backup of author supervision records
9	Delays in payments for author supervision services	Lack of a regulated payment procedure between the customer and the author supervision performer	Provide for advance payments by the customer for author supervision services; clearly define the payment procedure in the contract, including a payment schedule
10	Detection of hidden defects caused by poor design solutions	Lack of legislative regulation	Establish at the legislative level a mechanism for compensating losses incurred by the construction customer in such cases, and introduce liability insurance for author supervision

