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The Concept of Design Change Mechanism In Design and Build Contracts To Realize Legal Certainty

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ABSTRACT
The Design and Build (*D&B*) model is recognized for its potential to enhance efficiency by integrating planning and execution within a single contract. However, its implementation in Indonesia is hampered by the absence of a clear legal framework for managing design changes, leading to legal uncertainty and frequent disputes in strategic projects. This research aims to develop a clear and structured legal concept for a design change mechanism within Indonesian *D&B* contracts, grounded in the principles of legal certainty and fair risk allocation. The study employs a normative-juridical approach, analyzing Indonesian regulations (Law No. 2/2017, Presidential Regulation No. 16/2018) and comparing them with established international standards such as FIDIC and NEC4. The findings reveal that while Indonesian regulations generally permit contract modifications, they lack detailed procedures specifically for design changes in the *D&B* scheme. This regulatory gap results in ad hoc negotiations, imbalanced risk sharing, and weak documentation, weakening contractors' legal position. In contrast, international contracts provide structured procedures involving formal notification, impact assessment, and written instructions to ensure transparency. Based on these findings, the study concludes that the formulation of a standardized, procedural mechanism—covering application, evaluation, approval, adjustment, and documentation stages—is essential to ensure legal certainty. The research implies the need for amendments to national regulations or the development of ministerial guidelines that incorporate these principles, which would provide better legal protection, reduce project delays, and foster more equitable and efficient *D&B* project implementation in Indonesia.

INTRODUCTION

Law plays a central role in the success of the national development agenda because it is the foundation for creating certainty, justice, and legal protection for all parties involved in the implementation of infrastructure projects. Infrastructure development is a priority to encourage economic growth and regional equity (Ahmadsyah et al., 2024; Hussain, 2019; Osmundsen & Bygstad, 2022; Samanta, 2015; Smaoui et al., 2021). The government promotes efficient project methods, such as Design and Build, that integrate planning and execution in a single contract.

The legal regulation regarding this model is explicitly stated in Article 15 paragraph (2) of Law Number 2 of 2017 concerning Construction Services, which stipulates that construction work can be carried out in an integrated manner through a single contract that includes planning and implementation services (Arkansyah et al., 2023; Manurung, 2022; Priambodo, 2021; Taiban et al., 2024; Vidyapramatya et al., 2023). This juridical recognition shows that Indonesia's positive law has opened space for efficiency in the project implementation system, as well as providing a legal basis for the Design and Build scheme in the practice of national construction services. Contract law must be responsive to the development of society and business (Agustina et al., 2023; Rico Altito Deanova Sidebang et al., 2025; Supriyadi et al., 2022). The principles of freedom of contract, balance, and legal certainty are important to

ensure fairness and protection for the parties, especially in complex and long-term Design and Build construction contracts. The simplification of regulations through Law Number 11 of 2020 concerning Job Creation, as amended by Law Number 6 of 2023, has a significant influence on the construction services sector, including in the implementation of the Design and Build contract model (Kamil et al., 2022; Manalu & Hoesin, 2023; Pahlawan Mp et al., 2024; Samuel Ivander Aritonang & Anna Erliyana, 2023; Wicaksono & Tristiana, 2025). This reform encourages the acceleration of projects through simplification of business licensing, simplification of procurement, strengthening of the investment ecosystem, and the acceleration of national strategic projects.

This regulation also states that the Design and Build model aims to create unity between planning outputs and implementation results, as well as giving full responsibility to service providers for the overall quality of work. In Indonesia, Design and Build contracts are increasingly used in strategic projects, such as the development of the archipelago's capital city and the transportation sector. Unfortunately, there are no firm rules regarding the mechanism for changing the design, which creates legal uncertainty when there is a change in the scope of work. This contrasts with international practice, such as FIDIC contracts (Clause 13), which clearly regulate the procedure for changes through notice, instructions, and fair price and time adjustments.

Legal problems in design changes are also closely related to the mechanism for the procurement of government construction services, which is regulated in Presidential Regulation Number 16 of 2018 concerning the Procurement of Government Goods/Services and its amendments through Presidential Regulation Number 12 of 2021. The regulation does include provisions regarding contract changes and additional/reduced work but does not specifically regulate the mechanism for design changes in the Design and Build contract system, which has its own complexity. Although there is Regulation of the Minister of PUPR Number 14 of 2020, a regulatory void remains. This void opens up opportunities for unilateral interpretation, disproportionate risk allocation, and disputes between parties in project implementation.

The Design and Build model is also in line with the basic principles of the implementation of construction services as stipulated in Article 3 letter b of Law Number 2 of 2017, namely ensuring order and legal certainty in the implementation of the relationship between service users and service providers (Eastman, 2018; Rathnasiri et al., 2021; Sacks et al., 2018). In its implementation, this model does promise time and cost efficiency as well as synergy between actors, but its effectiveness depends on the clarity of contract arrangements, especially in the face of potential design changes that often arise in the middle of project implementation. Design changes in Design and Build projects are inevitable for a variety of reasons, including new technical findings in the field, changes in the needs of service users, or shifts in spatial and environmental policies.

Based on the literature review, the dominant risk factors in Design and Build contracts include the lack of understanding of service users regarding the integrated contract scheme, the weak definition of the scope of work at the beginning of the contract, and the absence of standard procedures for approving design changes during project implementation. Furthermore, these risks can cause imbalances in the division of responsibilities, reduce the quality of project control, and hinder timely decision-making processes. Therefore,

strengthening the legal and technical aspects of Design and Build contract arrangements, including detailed provisions related to variation orders, is an urgent need to maintain the sustainability and accountability of construction projects. The regulatory void regarding the mechanism for design change in Design and Build contracts in Indonesia creates uncertainty regarding the procedure for approving changes, the authority for approval, and the impact on contract value and time. This uncertainty not only weakens legal certainty but also has the potential to cause inequality and disputes between the parties. In line with Radbruch's view, it is not enough for law to apply formally; it must also guarantee justice and social benefits. Therefore, it is necessary to formulate clear, operational, and applicable legal concepts to answer the needs of modern construction practices. This research focuses on the preparation of a design change mechanism that can provide legal certainty, prevent multiple interpretations, and create a balance of rights and obligations in the implementation of construction contracts.

The aim of this research is to develop a clear, operational, and applicable legal concept for the design change mechanism in Design and Build contracts in Indonesia. This is achieved by identifying and analyzing existing legal gaps and practical problems, examining international contract standards for reference, and formulating a structured mechanism that ensures legal certainty and balances the rights and obligations of all parties. The benefits of this research are expected to contribute theoretically to the development of construction law literature, provide practical guidelines for project stakeholders to prevent disputes and uncertainty, and offer policy recommendations for improving regulations in the national construction services sector.

METHOD

The methods employed included research approaches, research specifications, data sources/legal materials, data collection techniques, and data analysis techniques. This research was normative legal research that examined law as a norm system to solve legal problems. The focus was on legal protection in Design and Build construction contracts, especially related to design changes. The purpose was to analyze the applicable legal provisions as the basis for protection for the parties to the contract.

This research used a normative juridical approach by examining laws and regulations, legal doctrines, and contract standards to answer legal issues in the Design and Build system methodologically, systematically, and consistently. This approach aimed to analyze various legal regulations that governed construction contracts in Indonesia, especially in Law Number 2 of 2017 concerning Construction Services, particularly in Article 1 Paragraph (8), which defined the Construction Employment Contract as a whole contract document that regulated the legal relationship between the Service User and the Service Provider, and Article 46, which stipulated that the employment relationship between the Service User and the Service Provider must be outlined in the Construction Work Contract. This study also used a comparative legal approach by comparing Indonesian regulations with the international standard FIDIC (*Fédération Internationale Des Ingénieurs-Conseils*), which, through the Conditions of Contract for Construction, became the main reference in international construction contracts for projects designed by employers. This approach aimed to identify the strengths and weaknesses of national regulations in the context of the international legal system, particularly

in the aspects of contractual liability, payment methods, and dispute resolution in construction projects.

RESULT AND DISCUSSION

Design Change Mechanism in Design and Build Contracts

Design changes are an almost inseparable part of the implementation of construction projects. In Design and Build contracts, this situation becomes more prominent because planning and execution take place simultaneously. This means that any revision to the design will immediately affect the ongoing construction process. Therefore, clear rules of the game are needed so that these changes can be managed properly and do not cause uncertainty in the implementation of the contract. Apart from being a technical issue, design changes also have legal implications because they relate to the rights and obligations of the parties. Any adjustments that occur will potentially affect the sharing of risk, costs, and the time of work implementation. This is where a structured mechanism is important, so that the Design and Build contract not only provides flexibility to adjust the needs of the project, but also guarantees legal certainty for the parties bound to it.

In the practice of implementing Design and Build contracts in Indonesia, the problem of design change is an issue that almost always arises at every stage of the project. These changes are not solely triggered by technical conditions in the field that are different from the initial planning, but can also arise due to revisions in the needs of assignors, changes in regulations, or developments in construction technology that must be accommodated immediately. This fact shows that the design that was initially considered final in the contract turned out to be dynamic and often required readjustment. The impact is very significant on the success of the project, both in terms of completion time, financing, and the quality of work results, because every design change has the potential to shift the original plan and demands a strict legal mechanism so as not to harm one of the parties. Similar phenomena can also be seen in a number of projects implemented by PT ABC with the Design and Build scheme, such as the construction of Wisma Atlet C-21 and C-23, EPC Security and Marine Facility LNG Donggi-Senoro, Transmart Cilegon, renovation of the GBK Indoor and Outdoor Tennis Stadium, and the construction of the BPKAD Building in West Java Province. The evaluation showed that the delay in work in these projects was caused, among other things, by the frequent use of contract addendum due to requests for design changes from employers during the implementation.

A similar phenomenon was also found in the construction of ASN 4 Flats in the Nusantara Capital City (IKN) area which is the object of this research. Based on the contract document, the mechanism for changing the design is not regulated in detail as is common in international contracts. The contract only confirms that any spatial planning changes, design revisions, or technical drawings improvements must obtain approval from the Commitment Making Officer (PPK) or the Board of Directors. The changes are then poured into the revision of the technical drawings (shop drawings), and in the final stages of implementation are recorded in the As Built Drawing. If such changes have a significant impact on the scope of work, the contract requires the issuance of an addendum as a valid part of the agreement. However, the ASN 4 contract does not provide explicit arrangements regarding legal consequences in the form of cost and time adjustments due to design changes. Thus, the

practice of design changes in this project is more dependent on the policy or discretion of the assignee. This kind of situation has the potential to create legal uncertainty for service providers and put them in a less balanced position than the assignor.

The national legal framework has actually placed construction work contracts, including the Design and Build scheme, as part of the construction services legal system in Indonesia. The presence of these regulations is intended to provide legal certainty while ensuring the creation of a balance in the relationship between service users and service providers. However, if you look more deeply, the existing arrangements are still limited to general principles. There is no clear explanation of how design changes should be regulated and resolved, even though in practice this aspect almost always causes problems in the field. This can be seen from the following three legal instruments.

a) Law Number 2 of 2017 concerning Construction Services
b) Presidential Regulation Number 16 of 2018 jo. Presidential Regulation Number 12 of 2021 concerning the Procurement of Government Goods/Services
c) Regulation of the Minister of PUPR Number 14 of 2020 concerning Standards and Guidelines for the Procurement of Construction Services through Providers

Design changes in the implementation of construction contracts not only have an impact on the technical aspect, but also affect the legal relationship between service users and contractors. The ASN 4 contract provides a real example, where through Addendum II there is a revocation and replacement of the basic design. These changes have direct consequences for the division of responsibility and the burden of risk. When viewed from the perspective of civil law and national regulations in the field of construction services, this condition shows an imbalance in the position between the parties. In general, the impact that arises can be seen from three sides, namely the position of the contractor, the authority of the service user, and the balance of legal protection in the contract. In the ASN 4 contract, the dominance of authority is clear. The PPK has the right to approve or reject changes, and even determine the direction of the implementation of the work through SSUK, SSKK, and contract addendums. The design changes outlined in Addendum II are also completely under the decision of the service user, so that the contractor is only the party that implements the stipulation without a balanced negotiation space. The authority that service users have in construction contracts is indeed very large. As a job owner, service users have the right to determine the scope and standards of work that must be achieved. This is in line with the provisions in the Construction Services Law which places service users as the determining party of the contract direction. However, in practice, this dominance often results in an unbalanced relationship, as contractors simply follow instructions without getting enough space to raise objections or negotiate their impacts.

However, in the absence of objective guidelines governing risk sharing, this authority can cause injustice. This is contrary to the principle of balance and legal certainty that should be the basis for the implementation of construction services. Thus, the practice in the ASN 4 contract shows the need for limits and supervision mechanisms on the authority of service users, so that the employment relationship is more proportionate and protects the interests of both parties in a balanced manner.

Normatively, Law Number 2 of 2017 emphasizes the principle of equality and balance in the implementation of construction services. This purpose is to ensure that service users and

service providers have a balanced position in carrying out their rights and obligations. However, the practice in ASN 4 contracts shows a shift from this principle. The contractor bears the additional risk due to the design change, while the service user has the dominant authority to determine the decisions that affect the execution of the work. This creates an imbalance of risk and shows the weak legal protection for contractors. If there is no clear mechanism to regulate compensation or dispute resolution, the potential for disputes between the parties becomes even greater, either through litigation or arbitration. The provisions in the Construction Services Law clearly emphasize the importance of a balance of positions between service users and service providers. This principle is intended so that no party is unilaterally harmed in the execution of the contract. However, the practice in the field, as seen in the ASN 4 contract, shows that there is a difference. The decision to change the design is entirely in the hands of the service user, making the contractor bear the additional consequences without clarity on the compensation mechanism. This shows that there is a gap between legal norms and real implementation. This imbalance is increasingly visible when it is associated with the aspect of legal protection. Based on Philipus M. Hadjon's theory, legal protection should ideally be preventive and repressive: preventing rights violations as well as resolving disputes when those rights are violated. However, in the practice of design change, preventive protection does not work optimally because there are no standard rules regarding risk sharing. At the same time, repressive protections are also weak because when a dispute arises, the contractor does not have a solid administrative basis to claim his rights. In addition, the weak mechanism for documenting design changes exacerbates this condition. Instructions that are often only delivered verbally in the field do not provide certainty when a dispute occurs. As a result, the resolution path through arbitration and court cannot run effectively due to the lack of written evidence. This situation is in line with the analysis in the previous chapter regarding the limitations of the Ministerial Regulation of PUPR No. 14 of 2020, which only provides a general framework without technically regulating how design changes must be processed. Thus, the ASN 4 case emphasizes the need to reformulate the design change mechanism to ensure the balance of risks while providing real legal protection for the parties.

The unclear mechanism of design change in national construction contracts often causes problems on the ground. Although Indonesian law has recognized the possibility of a contract change, the provisions available are still general and do not provide clear technical instructions. As a result, design adjustments are usually handled practically through negotiations between the parties, which in turn opens up space for uncertainty and differences in interpretation. In contrast, international practice places design changes as natural in construction projects, so clauses regarding variations are always prepared in detail in the contract. Global standards such as FIDIC are designed based on long experience in managing large-scale projects, so that variation procedures are formulated systematically. This arrangement not only determines who is authorized to instruct the changes, but also establishes the administrative flow, the rights and obligations of the parties, and the accompanying legal consequences.

In Indonesia, the absence of standard procedures often makes design changes a source of lengthy debate, especially in assessing cost and time compensation. In contrast to that, NEC4 introduced the concept of compensation events which from the beginning has established a list of events that can give rise to compensation rights for contractors. These events include additional instructions from employers, differences in field conditions, and delays coming from

the project owner. With this classification, the contractor no longer bears the burden of unclear risks, since any event that affects cost and time is already bound by the rules of the contract. The advantages of NEC4 can be seen from the way this contract requires parties who know of the compensation event to immediately give notice. This notification process is then followed by an impact assessment by the Project Manager, so that additional costs and extension of time can be calculated from the beginning. With this kind of procedure, the potential for disputes at the end of the project can be minimized as all the consequences of the change have been discussed and documented early on. In addition, the early warning notice system in NEC4 strengthens the risk management mechanism. Parties who are aware of potential problems are required to immediately submit a notice so that the parties can jointly find a solution before the event causes greater losses. This approach emphasizes dispute prevention, in contrast to the practice in Indonesia where claims are usually resolved only after the project is nearing completion. This model can be a reference for Design and Build contracts in Indonesia so that they no longer rely on informal negotiations, but have a standard mechanism that protects both parties in a balanced manner.

Contracts in Indonesia tend not to explicitly stipulate who can issue change instructions, so it often gives rise to different interpretations between the parties. In the 2016 JCT Design and Build Contract, changes are regulated through the Employer's Instruction mechanism. The employer, or its designee, may issue instructions to change the design, specifications, materials, or methods of work. These instructions must be in writing. If the instruction increases the workload, the contractor is entitled to additional costs or extension of time. Thus, JCT offers a more organized procedure, as well as providing stronger legal certainty than the current practice in Indonesia. In the practice of contracts in Indonesia, there is no rule that explicitly states who has the right to issue change instructions, so it often gives rise to different interpretations between parties. In contrast, the JCT Design and Build Contract 2016 has stipulated that the employer, or authorized representative, has the authority to issue official instructions. Furthermore, the JCT contract regulates how to assess the impact of change on costs and time. If the employer and the contractor can reach an agreement, the value of the variation is calculated based on a mutual estimate. However, if an agreement is not reached, the contract makes room for a formal valuation that is carried out through a valuation procedure. In this process, the role of the quantity surveyor or employer agent is important because it provides a more objective professional assessment. Thus, the contractor is protected from the risk of incurring additional work without compensation, while the employer remains assured that the changes are made in a controlled and transparent manner.

Another obstacle in Indonesia is the issue of cost validation due to design changes that usually only depend on the results of negotiations. In Malaysia's 2018 PAM Contract, the authority to change is given through the Architect's Instruction. Architects can instruct variations of work, but the assessment of the costs resulting from the change is not decided unilaterally. The calculation is carried out by the Quantity Surveyor (QS) who is in charge of objectively assessing the value of the variation before it is ratified. With this combination, PAM builds a system of checks and balances between the technical aspects held by the Architect and the financial aspects validated by QS, thereby encouraging transparency and reducing potential conflicts. The PAM Contract 2018 stipulates that architects have the formal authority to provide instructions for changes. However, this authority does not include determining the

financial value of the change. The architect's instructions only serve as a legitimate basis for changing the design or method of implementation, while the cost impact must be calculated independently. With this separation of functions, the process of changing the design is not solely in the hands of the architect, but is controlled by an objective evaluation mechanism carried out by the Quantity Surveyor (QS). Furthermore, the mechanism in PAM creates a balance between the role of the architect and the QS. The architect retains technical control over the design and quality of the work, but the financial aspects are validated by QS which acts as a professional and independent party. This system of checks and balances encourages openness, reduces potential conflicts, and strengthens legal certainty because every change is procedurally regulated. Thus, the experience of PAM Contract 2018 shows that the separation of roles in regulating variation is not only a matter of technical and cost, but is also an important instrument for maintaining a balance of interests between employers and contractors.

In practice, the implementation of Design and Build contracts in Indonesia is still colored by various problems, especially when there is a change in design. The absence of clear rules regarding the authority, procedures, and legal consequences of these changes makes the parties often move in different ways. This situation creates uncertainty, increases the chances of conflict, and in many cases puts contractors at a weak position. Some of the most prominent problems can be described as follows:

a) Absence of a standard clause on design changes
b) Procedures that are multi-interpreted and prone to disputes
c) Unequal risk sharing
d) Weak documentation and administrative standards

Verbal submission of changes ultimately creates an unbalanced position for the contractor, as the additional work carried out is not supported by strong written evidence. In the dispute resolution process, both in arbitration and in court, official documents are the main evidence. The absence of written records makes it difficult for contractors to prove the basis for carrying out work, so costs and delays that arise often do not get compensation. This condition weakens the contractor's position in the contract, contrary to the principle of balance affirmed in the Construction Services Law, and confirms the importance of the obligation to officially record any changes to ensure legal certainty. encourage the use of an early warning system and prospective evaluation of the impact of change. With complete documentation, any changes can be traced, evaluated, and accounted for transparently. This difference shows that national contracts need to be reformulated to be more accountable and able to provide balanced legal protection for service users and service providers.

Formulation of the Concept of a Design Change Mechanism in Accordance with the Principle of Legal Certainty

Philosophical, Juridical, Sociological, and International Practice Foundations Efforts to formulate the concept of design change mechanisms in Design and Build contracts are not enough just to look at the weaknesses of practices that have occurred so far. The formulation must have a strong philosophical, juridical and sociological basis, while also taking into account established best practices in international contract standards. That way, the mechanism that was born is not only a practical solution, but also has academic legitimacy and relevance to be applied in the field. According to Sudikno Mertokusumo, legal certainty is essentially a

guarantee that the law can be used as a clear and unchanging guideline, so that society is not in uncertainty. A definite law provides a sense of security because everyone can know their rights and obligations. In the context of construction contracts, this principle means that any design changes must be outlined in clear written rules, so as not to give rise to multiple interpretations or protracted debates.

This guarantee of legal certainty is also affirmed in Article 28D paragraph (1) of the 1945 Constitution, which gives everyone the right to obtain fair legal recognition, protection, and certainty. In fact, Law Number 2 of 2017 concerning Construction Services outlines that the implementation of construction services must be based on the principle of legal certainty, although this law has not yet described in detail how the mechanism for design changes should be carried out. Clear but inconsistently applied laws are just as dangerous as vague laws. In contractual relationships, especially Design and Build contracts, the uncertainty of design change procedures has the potential to give rise to multiple interpretations. This can ultimately be detrimental to the parties because the agreement that should be a source of certainty turns into a source of dispute. Furthermore, it links legal certainty with the principle of pacta sunt servanda. According to him, legally made contracts must be complied with by the parties as well as the law. Thus, the mechanism for changing the design should not be done unilaterally, but must go through a mutually agreed written procedure. Without a definite mechanism, the contract loses its certainty of binding, and this undermines the legal protections that should be afforded to both parties.

The concept of legal certainty will be even stronger when it is associated with the theory of legal protection developed by Philipus M. Hadjon. Hadjon distinguishes legal protection into two forms: preventive and repressive. Preventive means that the law must provide clear rules so that rights do not occur, while repressive means that the law is present to resolve disputes when rights have been violated. In Design and Build contracts, legal protection is urgently needed, because design changes have the potential to cause losses, especially for contractors. Without a definite mechanism, contractors could incur additional costs or delays without adequate compensation. Therefore, the formulation of a design change mechanism must ensure protection for both parties, both service users and service providers, so that no party is sacrificed. Philipus M. Hadjon explained that legal protection is not only interpreted as resolving conflicts when disputes have occurred, but also includes efforts to prevent disputes from arising from the beginning. Preventive legal protection comes through clear rules and procedures, which allow the parties to understand and exercise their rights and obligations without creating uncertainty. With preventive mechanisms, the potential for violations or abuse of authority can be suppressed to a minimum. Meanwhile, repressive legal protection is given when rights have been violated. In this context, law functions as a means of remedy and dispute resolution, either through the courts or alternative dispute resolution such as arbitration or mediation. With the existence of repressive mechanisms, the aggrieved party still has legal channels to obtain justice and restoration of rights.

In practice, design changes are often delivered suddenly and with minimal documentation, leaving contractors in a weak position to claim compensation rights. This situation shows the importance of a written mechanism that regulates the procedure for changing the design, because without such rules, the contract would be more easily debated and trigger disputes. The urgency of protection also touches the economic dimension.

Uncertainty in the adjustment of changes can affect the calculation of the project budget, pose the risk of cost overrun, and even have an impact on the overall sustainability of the project. Therefore, clear legal protection not only protects the parties, but also maintains the stability of the construction implementation. With detailed mechanisms for design changes, both service users and service providers can work within a more transparent and predictable framework. This not only reduces the potential for conflict, but also strengthens trust between the parties, so that the Design and Build contract truly serves as a fair and effective legal instrument.

FIDIC also emphasized that each variation instruction must be written so that it has binding force and can be used as a basis for evaluation. With this system, the potential for disputes due to oral instructions can be minimized as all changes are officially documented. On the other hand, contractors are given the right to assess the impact of variations on costs and completion times. This assessment ensures that any changes do not burden either party unilaterally, but still maintain the contractual balance. Apart from being a means of administration, the variation mechanism in FIDIC also functions as a form of legal protection. Written instructions, clear authority, and the right to file a claim create a transparent and fair procedure, so that the legal relationship between the employer and the contractor can run with certainty. In addition, the practice in international contract standards also emphasizes the importance of written mechanisms. FIDIC, NEC4, as well as JCT and PAM Contract place special emphasis on the obligation of official notification through written documents. Verbal instructions are not recognized as a valid basis for making changes unless later confirmed in writing. This mechanism ultimately serves as a form of legal protection for the parties because it prevents multiple interpretations or differences in perception regarding the intention of change. In other words, the principle of written procedure affirms the existence of legal certainty, consistency of implementation, and protection against the possibility of disputes.

In the context of national law, Permen PUPR 14/2020 emphasizes that any contract changes must be outlined in the addendum signed by the parties. Presidential Regulation 16/2018 also states the same thing that contract changes cannot be done unilaterally. While in international standards, even though the employer has the authority to instruct a change, the contract still leaves room for the contractor to refuse if the instruction creates a burden that is not in accordance with the contract. For example, in NEC4, the compensation events mechanism requires a process of notification and agreement between both parties regarding the impact of the change. Thus, the consent of the parties is an important principle that ensures a balance of rights and obligations. Without mutual consent, the changes could potentially be considered a unilateral action that could give rise to legal claims or disputes.

In the practice of design and build contracts, design changes are almost inevitable. This is because this type of contract unites the planning and implementation stages, so that the dynamics of work in the field can give rise to the need for design adjustments. However, any design change has the potential to cause legal uncertainty if it is not regulated with a clear mechanism. Therefore, a system that is consistent and in line with the principles of contract law in the Civil Code, the provisions in Law Number 2 of 2017 concerning Construction Services, as well as the principles of procurement of goods and services as contained in Presidential Regulation Number 16 of 2018 jo. Presidential Regulation Number 12 of 2021 and Ministerial Regulation of PUPR Number 14 of 2020. This need is even more real when it is associated with the results of field research. From interviews with the Site Engineer Manager

and Site Operation Manager at the ASN 4 Flats Integrated Construction Project, it is known that design changes requested by job owners in the middle of construction often have a serious impact. The consequences that arise are not only in the form of additional costs and delays in completion, but also the occurrence of overhead costs that must ultimately be accounted for in the audit of the Financial Audit Agency (BPK). This empirical fact shows that design changes without a well-organized mechanism will pose legal and administrative risks. The results of the review of the ASN 4 Flats contract document show that there are no special arrangements regarding design changes. The Letter of Agreement only outlines the main points of the contract such as the value of the work, the period of execution, and the scope. Meanwhile, the General Terms of Contract (SSUK) do state that any contract changes must be outlined in a written addendum signed by both parties, but these provisions are still general and do not touch on specific aspects of the design change procedure. The Special Conditions of Contract (SSKK) and Framework of Reference (KAK) focus more on technical details and work specifications without providing a mechanism for evaluation, assessment, or approval of design variations.

Based on the study of theory, international practice, and experience in the ASN 4 Flats project, the ideal stages of the design change mechanism can be formulated as follows:

a) Application Stage
b) Evaluation Stage
c) Approval Stage
d) Adjustment Stage
e) Documentation and Supervision Stage

CONCLUSION

In Indonesia, the Design and Build contract lacks clear, standardized mechanisms for design changes in both laws and practice, leading to legal uncertainty, multi-interpretation, and disputes—as evidenced by the ASN 4 Flats Construction project in the archipelago's capital—due to ambiguities in proposal authority, approval processes, and risk sharing for costs and time. This study addresses the gap by formulating a concept grounded in legal certainty principles and Philipus M. Hadjon's legal protection theory, featuring written submissions by authorized parties, documented technical/administrative/financial evaluations, formal contract addendum approvals, and proportionate cost/time adjustments to ensure preventive and repressive protection, balance, and fairness between service users and providers. For future research, scholars could empirically test this mechanism's effectiveness across diverse Design and Build projects, incorporating stakeholder interviews and comparative analyses with other ASEAN countries to refine its applicability.

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