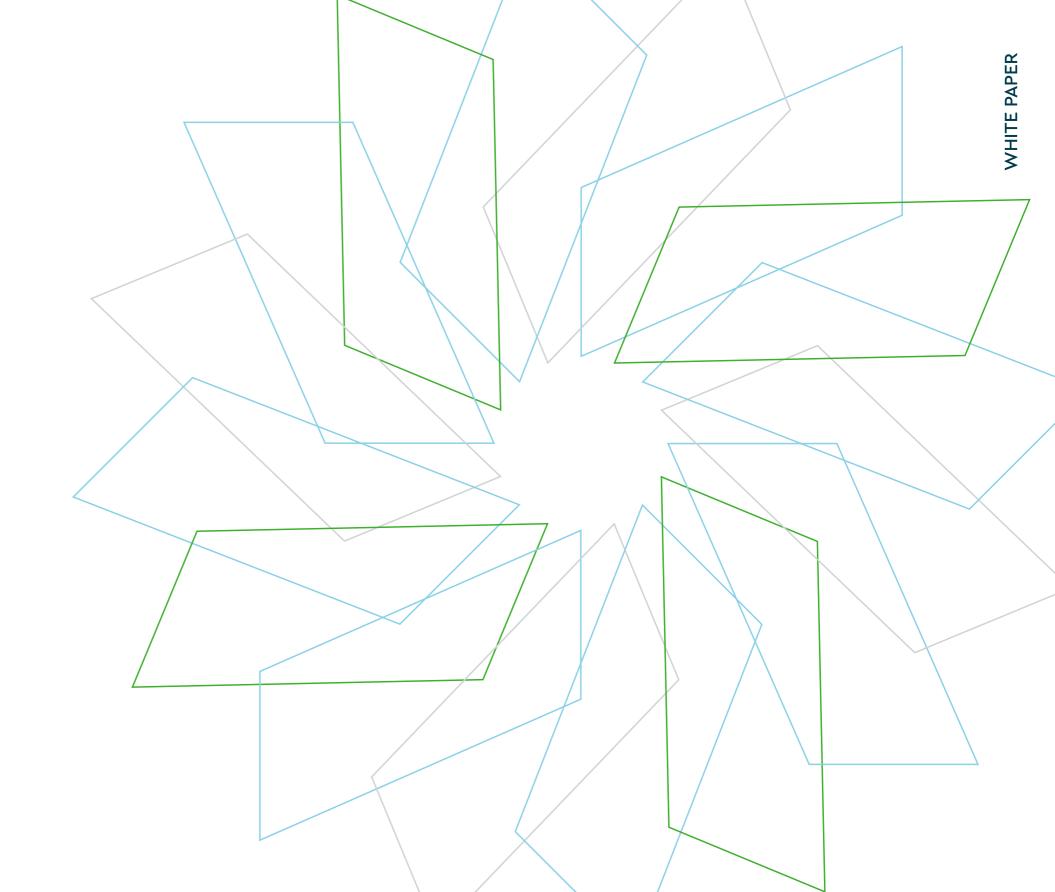


manage your contracts effectively

Can the smart use of technology for contract management

unlock the true benefits of construction contracts?

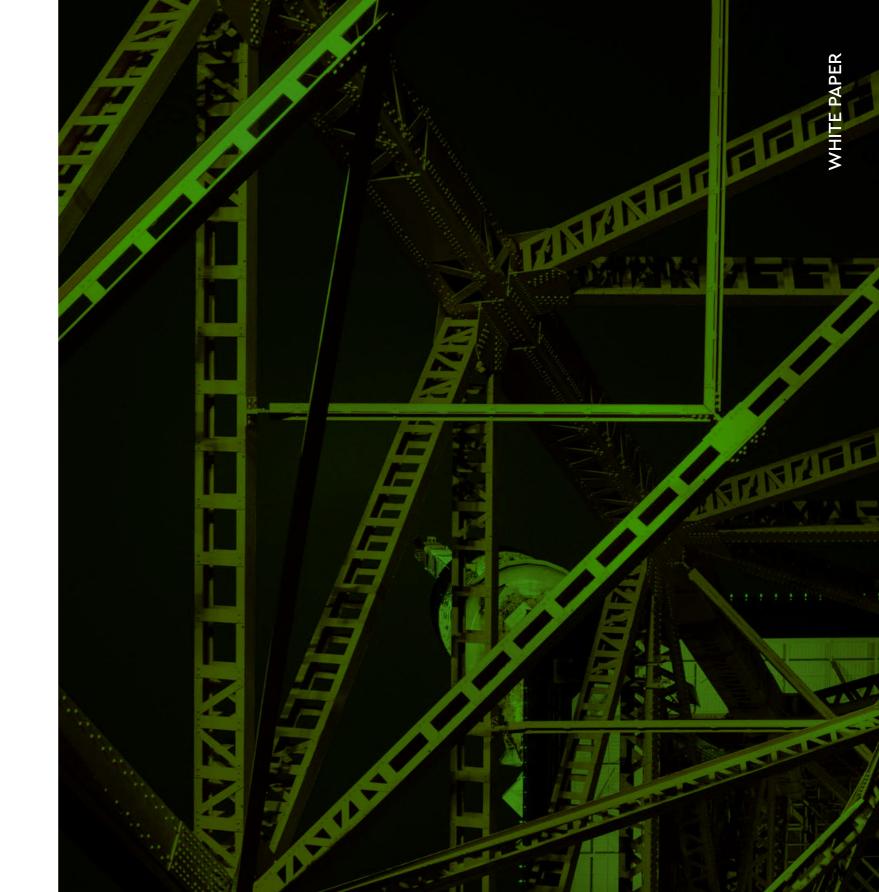


When talking about construction contracts, one may typically refer to a prescribed method of ensuring that all obligations in relation to the construction of a building asset, including delivery of materials, design, installation, including the fulfilment of temporary works¹. A diligent procurement process, considering jurisdictional, operational and delivery requirements can

ensure that the most appropriate form of contract with all relevant provisions and managerial mechanisms is selected. However, despite all efforts to achieve highly desired consistency in contracts drafting, construction contracts inherited a reputation of being overly complex, generally poorly drafted with ambiguous and uncontrolled amendments.

All these often make the day-to-day administration of such contracts both

unduly time consuming and ineffective



In recognition of the aforementioned challenges, more than two decades ago, Latham in his report ², recommended a wide adoption of the New Engineering Contract (NEC) as a less adversarial form of construction contract.

In addition, the report highlighted the importance of successful risk mitigation,

enabled through contract management to achieve desired financial and productivity outcomes and to tackle poor contract management across the industry ^{3 & 4}. Having said that, ensuring a construction contract is in place, no matter how good it is, will unlikely make a project profitable, successful or dispute free by default.

The 2020 CRUX Insight, Engineering and Construction, A Regional Analysis of Causation, which analysed:



1100 projects



88 countries



overall value over

US\$1.8 trillion

the above highlighted

"inadequate contract management"

amongst three of the top causation factors for claims and disputes.

² Latham, M. (1994) CONSTRUCTING THE TEAM Joint Review of Procurement and Contractual Arrangements in the United Kingdom Construction Industry Final Report.

^{3.} Edwards L. (2009) Practical risk management in the construction industry. London: Thomas Telford Ltd, 2009, 1995

⁴ CWC (2015). [online] Available at: http://constructingexcellence.org.uk/wp-content/uploads/2015/03/A6-risk.pdf [Accessed 10 November 2018].

The 2020 report by Arcadis seconded this by citing
"Owner | Contractor | Subcontractor
failing to understand and | or comply
with its contractual obligations"

are amongst the top three construction dispute causation factors⁵. Therefore, compliance, as well as, contract knowledge and expertise seem to be the areas the industry need to focus on.



In the modern construction contract delivery, the Contract Management discipline has been recognised in the UK and US construction markets, but, it is only gaining its momentum in most European construction markets.

Contract Administrator or Quantity Surveyor often performs the role of the Contract Manager on a wide range of competences from change and risk management to subcontract management and procurement.

However, the discipline is not that common and under-represented in the European market. Most contract forms also do not stipulate the need and development of contract management capabilities.

Regardless of type of the contract, successful contract management strategy should support the needs of a given contract and ensure there are no gaps which might expose parties to risks.

This whitepaper will explore the management and governance of construction contracts for the following stages of contract management cycle, such as construction contract execution, fulfilling obligations and complying with requirements of risk management, as referenced in Graphic 1. Additionally, it will investigate roles and responsibilities existing in the industry and address how lack of contract management competence can be tackled with technology.





Problem statement

An overview of the forms of contracts used in the industry

There are various standard and bespoke forms of contracts in common use in the construction industry. In general, the terminology, governance structure and the roles of the participants would be different in each of them. Often contracts are designed to be specific to their market (Graphic 2) and not being utilised for international projects or in a Joint Venture setting for some obvious reasons, such as legislation, language and other qualification criteria.

However, contacts such as the

International Federation of Consulting Engineers (FIDIC)

are recognised internationally and represent engineering best practice contracts (Graphic 3). The fundamental principle behind the FIDIC contracts is the use of GCC (General Conditions of Contract), deemed to be suitable in all cases, based on thousands of successful projects around the world.

Similarly the,

New Engineering Contract (NEC)

family of contracts initially drafted in the UK were designed to be clear, flexible and to pro actively stimulate collaboration. Being used for infrastructure and building contracts, most specifically in the UK, South Africa, Hong Kong and New Zealand they are suitable for worldwide application. Known for helping to improve project management, they can be used in any part of the architecture, engineering, construction, and operations (AECO) sector.



The main contracts used in the UK are represented by the following suits of contracts

JCT The Joint Contracts Tribunal

offers a range of standard forms of contracts, which are famous for being the most widely used contracts in the UK. JCT's flexible and broad portfolio ensures that these contracts are considered to be an industry benchmark, supporting any projects from the complex and large-scale right through to the individual homeowners carrying out alterations. These contracts do require administration but, are not as proactive and prescriptive as NEC contracts, for example.

FIDIC The International Federation of Consulting Engineers

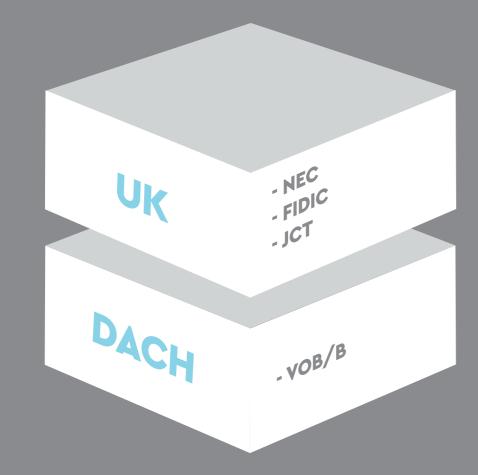
produces a Conditions of Contract which is suitable where an engineer is employed as the agent of the client. This contract sets out the provision of sub-contractors and extensions to any contract period etc.

NEC The Engineering and Construction Contract

comes with a set of standard clauses common to building projects as well as extra clauses which allow it to be adapted to the specific circumstances in hand. It's also written in "plain English" so it's user-friendly, easy to understand and intended to be used by all partners on a building project, particularly where a collaborative team approach is encouraged.

Standard forms of

construction contracts by region







In detai

FIDIC and NEC contracts

NEC3 PSC

NEC3 TSC

NEC3 ECC

NEC4 PSSC

NEC4 PSC

NEC4 PSC

NEC4 PSC

NEC4 ECC

NEC4 ECC

NEC4 ECS

NEC4 ECS

NEC4 ECS

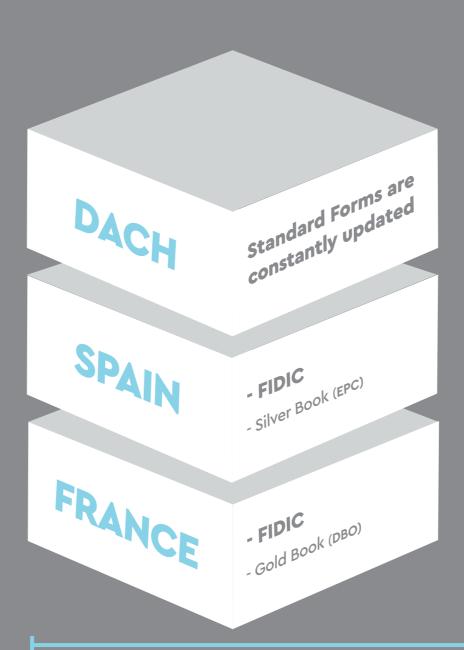
NEC4 ECS

NEC4 ECS

NEC4 ECS

NEC5 ECSC

NEC6 ECSC





Major Projects across all Markets

Alliance Contracts



Europe vs UK contracts:

roles and responsibilities in construction contract management

To ensure compliance with the contract a pre-defined range of tasks supported by competences must be diligently performed by contract managers.

Table 1 on the following page, shows the results of industry research^{7,} performed for the selected skills and competences promoted for Contract Management competences.

All interviewees including the Quantity Surveyors were asked whether they are involved in the delivery of the tasks traditionally performed by quantity surveyors/contract administrators.

The table groups the responses by the 'role' and 'country of operation', where:

- (A) performing/leading
- (B) assisting other function
- (C) not involved

Table 1: Summary of responses based on semi-structured interviews of 10 construction professionals (Source: author's research)

⁷The research comprised semi-structured interviews with professionals working in delivery of construction contracts across the UK, Germany, Sweden and Spain.

The interviews revealed that

Quantity Surveyor (QS) fulfilling a role of the contract manager is a "uniquely British profession" but, in the context of international construction, it is rarely represented or not represented at all.

Organisational structure in European projects offers a completely different model and it is not uncommon that professionals such as architects, engineers and project managers fulfil QS duties. Usually the Project Manager (PM) function plays a leading role in the delivery and "takes full control" of the contract administrator competences.

European PMs and engineers reportedly build up their knowledge about contracts "on the job" and have a more diverse set of contract management skills compared to the UK based professionals. In contrast to any UK organisation, commercial managers in Europe are more likely to fulfil a role of a financial clerk, assisting their

PM function and performing mainly accounting functions, as well as managing specific financial risks. Project teams from European projects largely consist of PMs, construction managers and financial controllers.

Group and number of respondents (in brackets)

		QS/ Commercial UK (4)	QS/ Commercial Europe (1)	PM UK (2)	PM/ Engineer Europe (3)
Contract management Competencies	Valuation of works	(A)	(C)	(B)	(A)
	S/c and SC Payments handling incl. logging into payments system	(A)	(A)	(C)	(A) and (B)
	Change management	(A)	(C)	(B)	(A)
	Value engineering	(A) and (B)	(C)	(A) and (B)	(A)
	Risk management	(A)	(B) and (C)	(A) and (B)	(A)
	Cost control and forecasting	(A)	(B)	(B)	(A)
	Procurement	(A)	(C)	(C)	(A) and (B)

^{8.} Eccles, T. (2009) Professional language, professional culture and university education: The case of quantity surveying doi:10.1080/07908319509525211.

⁹ Wao, J. O. and Flood, I. (2016) 'The role of quantity surveyors in the international construction arena', International Journal of Construction Management. Taylor & Francis, 16(2), pp. 126-137. doi: 10.1080/15623599.2016.1142251

PMs or Engineers based on European contracts felt that a

less bureaucratic approach and "less paperwork" in administering contracts allowed them to deliver contracts without employing a specific contract manager.

IT enabled contract management

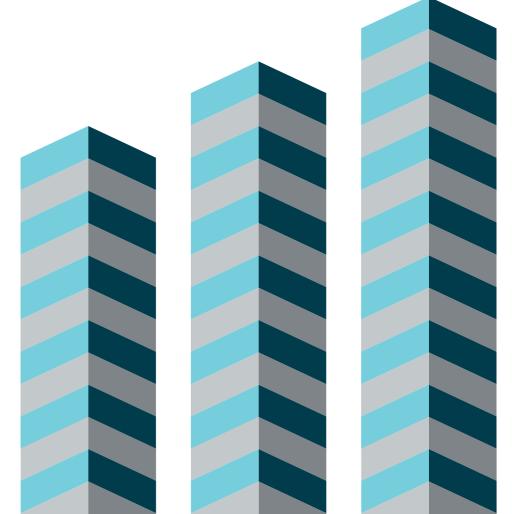
During the interviews the respondents were asked about their perception of technology and automation of contract management processes. The respondents felt that clear roles and responsibilities alongside competence and upskilling should be prioritised and where needed should be supported by digital tools. The trend emerging from the interviews suggests that IT can be used either as a "short cut" for time consuming processes, or to improve the quality of the data and therefore "make life easier". The interviews findings support an idea of an empowered human that has an ability to choose whether to challenge, chase or adapt to technological changes when needed.

Risk Evaluation and Management

Generally, risk in standard UK construction contracts is managed via a project risk register. A client and a contractor run monthly risk management meetings, where all risks relevant to the project are reviewed and discussed. However, this adopted risk management procedure has certain limitations. The respondents felt that only provides a formal mechanism for the contractor and the client to jointly manage risk. In practice, there are often two separate registers existing and being maintained by parties. In this instance, for some of the major risk, where the client is better positioned to take a lead, it is not foreseen as an option. Contractually the early warning notice (EWN) mechanism is used to highlight any matters relevant to the existing

and emerging risks. However, sometimes it is difficult to achieve effective contribution to mitigation of such risks by the client for the risks owned by the contractor. Also interviews revealed that the process of maintaining of the EWN register is often time consuming and requires a lot of administration effort.

The client's risk management governance has a complex hierarchical structure. There is an overall impression that any conversations on the project level are not escalated to the decision-makers at the top of the governance structure in the most efficient way and getting lost due to multiple channels available for communication. Some decisions must go through internal and external audits and even if agreed by the executive leadership team, the outcome on the final resolution can vary.



How can Thinkproject help?







With increasing skills and resource scarcity in the Construction Industry, Thinkproject provides your organisation with a professional, consistent approach to management of your construction contracts.

Thinkproject combines industry leading knowledge and expertise to make sophisticated contract management simple and frees professionals from unnecessary administration burden so that they can focus on delivery.

Our Contracts solution enables a professional, consistent and effective environment to successfully manage your projects. It provides real-time control over a single or group of contracts through embedded contract knowledge and a single source of data.

The collaborative system means all parties remain fully compliant and aware of all contractual events.

Organisations have confidence that their projects will be managed effectively, with business intelligence which provides insight on contract performance, behaviours and key trends, which can be generated at "one-click" saving time and resource.

Complex contract management

made simple











The most time-consuming activities such as monthly and weekly reporting can be performed instantly, based on the single source data and with no manipulation required.

> **Streamlining** resources

Measured savings in contract management staff costs. Team members attending less meetings and instead focusing on higher value tasks

System-led compliance

Average saving with analytics and reporting £8_000

Built-in work-flows, automated reminders and notifications eliminate any need in additional administrative resource

Staff Savings

With increasing skills scarcity Thinkproject provides a professional, consistent, systemled approach to managing contracts, and reducing the need for staff training