



CONSTRUCTION THINK TANK

Recommendations for better contracts from
the UAE Construction Industry Think Tank

Vol 2 | April 2020

FOREWORD

ACHIEVING THE VISION

UAE Centennial 2071 provides a vision for the UAE to be the world's leading nation by its 100th anniversary. Built around the pillars of education, economy, community cohesion and government development, the strategy envisages a country that not only competes on the global stage, but one which leads.

A strong construction sector will deliver the projects needed to achieve those goals on time and on budget, while at the same time protecting the environment and enforcing best practices.

About \$710bn-worth of building and civil engineering projects are planned or underway in the UAE. These projects are vital to delivering the Centennial 2071 vision. But shortcomings in the UAE construction sector could negatively impact the country's objectives.

The social and economic disruption caused by the coronavirus (Covid-19) outbreak will shape the UAE construction industry for years. But the extent of its impact can be mitigated by accelerating long-overdue reforms to the way the construction industry operates.

In 2019, the UAE Construction Industry Think Tank identified poor planning and outmoded procurement practices as factors in the UAE construction sector's adversarial culture.

The resulting high levels of waste on projects has created an industry that is characterised by late delivery, cost overruns and poor public perception. The wasted capital could be utilised more effectively to supplement economic development.

The think tank concluded that poorly worded contracts with a lopsided distribution of project risk between clients and contractors, were a major barrier to success in the construction sector. Having healthy, well-balanced contracts will allow contractors to price and execute projects safely with better margins.

The second meeting of the UAE Construction Industry Think Tank in December 2019 examined the opportunity to improve project delivery in the UAE through better construction contracts. This White Paper summarises the body's findings, and sets out 26 industry recommendations for improving construction contracts, and in turn, helping the UAE achieve its vision.



HAVING HEALTHY,
WELL-BALANCED
CONTRACTS
WILL ALLOW
CONTRACTORS
TO PRICE AND
EXECUTE
PROJECTS SAFELY
WITH BETTER
MARGINS"

Mohammad Al Shouli

Executive Vice President, Global Head of Contracting Finance
Mashreq Bank

INDUSTRY REPRESENTATIVES



A MODEL FOR SUCCESS

ROLES

- Provide standard clauses which include a clear definition of roles and responsibilities
- Stakeholders jointly employ an independent engineer to resolve disagreements
- Segregate the design role of the engineer from project management
- Publish guidance to project owners, clients and contractors to promote the use of standard contract models and discourage unfair amendments to these contracts

COLLABORATION

- Project owners drive the adoption of standardised contracts across a project. All stakeholders are familiarised with each party's contracted scope of work
- Include rewards and penalties for delivery against project targets
- Include consequences for failing to deal with variations and claims within a stipulated time frame
- Mandate mechanisms to drive collaboration, such as meetings with an independent facilitator
- Project owners inform stakeholders about the funding model to be adopted for the scheme
- Introduction of government incentives could encourage greater collaboration

LEGISLATION

- Review payment terms, including extended payment periods and 'pay when paid' clauses
- Remove 'on-demand' bonds and change legislation around bond conditions
- Consolidate federal and local health, safety and environment and sustainability requirements
- Introduce legislation requiring feasibility studies to be prioritised and to involve all parties
- Contractor to be involved in early stages of design
- Establish a government-backed platform to encourage regular communication between industry stakeholders such as government, construction sector players and academics

TECHNOLOGY

- Introduce a set of industry standard definitions for specific technologies used in construction. Update these definitions periodically to reflect newer versions of the technology
- Issue government mandates to specify the level of technology required for a project
- Clarify the responsibilities of each stakeholder in terms of the ownership, sharing, accuracy, and risks of collecting and managing project data

WELFARE

- Define HSE and sustainability (HSE&S) targets to be achieved across the project
- Include penalties and reward clauses that encourage over-delivery against HSE&S targets
- Requirements related to worker welfare and sustainability written into new legislation, including a mandatory third party compliance audit

DISPUTES

- Specify an independent third party that is paid for by more than one stakeholder in a project to certify work completion, variation and claims, approved by the relevant legal authority
- Include alternate dispute resolution mechanisms and ensure both parties are familiar with the dispute resolution process to be employed
- Preserve the standard dispute resolution provisions in standard form contracts
- Outline a process for bond encashment to be transparent, fair and equitable

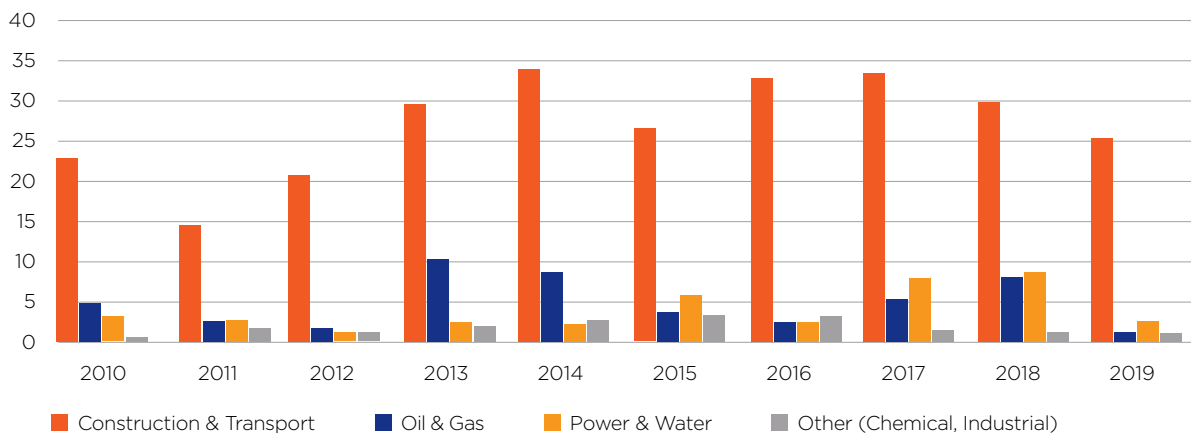
THE STATE OF THE MARKET

CONSTRUCTION AND TRANSPORT PROJECTS ACCOUNT FOR 77 PER CENT OF PROJECTS PLANNED OR UNDERWAY IN THE UAE

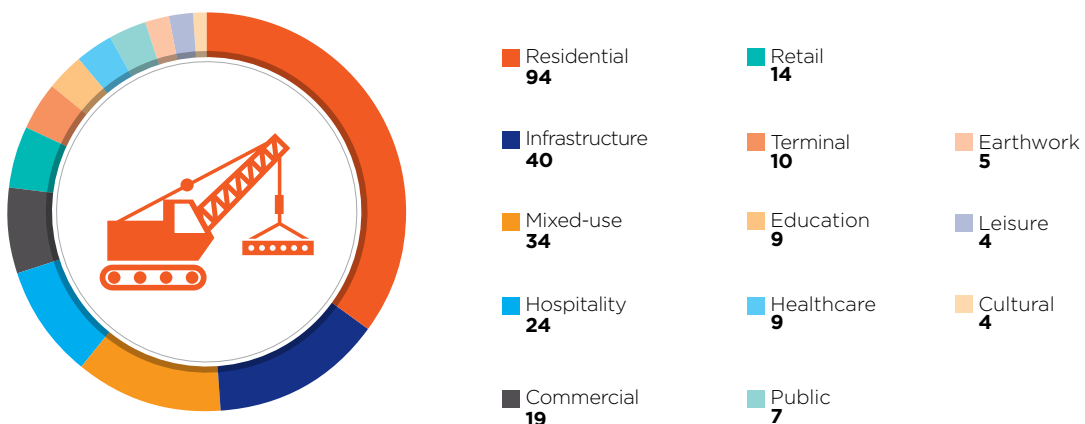
The long-term vision of the UAE and other states in the GCC is to establish diversified and sustainable growth economies that provide foundations for thriving, happy societies. At the heart of these visions is the need for modern, flexible and efficient infrastructure.

Despite huge investments in the built environment over the past two decades, the region still has huge infrastructure needs as it seeks to build fast, efficient transport and logistics networks, reliable supplies of clean energy, and happy, high-functioning communities.

UAE PROJECT CONTRACT AWARDS, 2010-19 (\$bn)

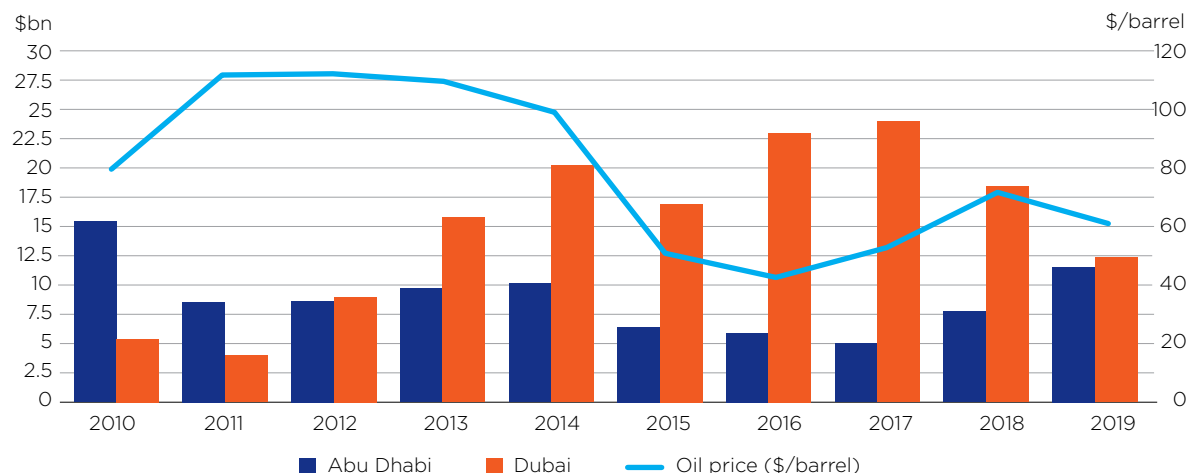


UAE CONSTRUCTION AND TRANSPORT AWARDS BY SECTOR, 2010-19 (\$bn)



Source: MEED Projects

CONSTRUCTION AND TRANSPORT AWARDS IN DUBAI AND ABU DHABI, 2010-19



Crucially these foundations must be delivered on time and efficiently. As population growth drives higher demand for services, lower oil prices mean that governments are less able to continue financing projects in the traditional way.

While the focus of governments is to bring private sector partners into the market, the focus for the construction industry is to reduce the cost of projects by removing waste caused by unnecessary changes and delays, increasing productivity and eliminating disputes.

The UAE currently has about \$917bn-worth of projects planned or underway.

Construction and transport projects account for nearly \$710bn, more than 77 per cent of total active projects in the UAE.

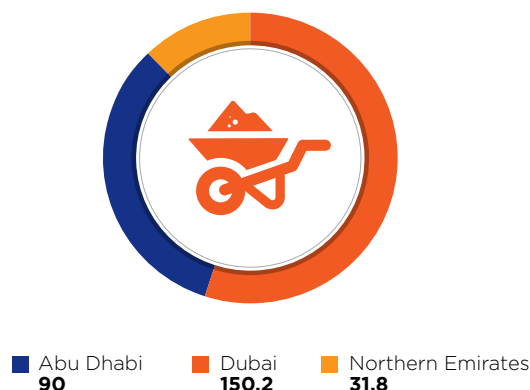
Between 2010 and 2019, \$379bn-worth of contracts were awarded in the UAE, of which about \$272bn of contracts were awarded on construction and transport projects.

Some of the biggest construction and transport contracts awarded between 2010-2019 include the \$2.96bn Abu Dhabi Midfield Terminal, the \$2.8bn Dubai Metro Red Line extension and the \$1.5bn Cleveland Clinic in Abu Dhabi.

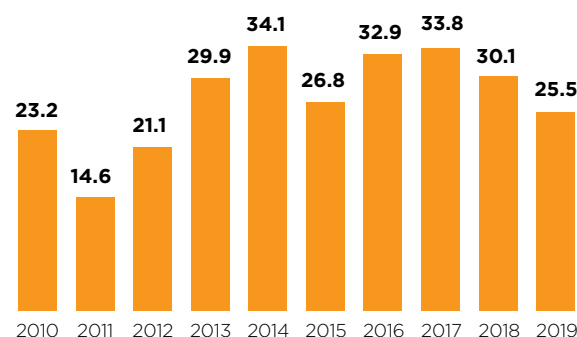
Construction contract awards in the UAE peaked in 2014, with Dubai sustaining a high level of awards until 2017 as the emirate built towards Expo 2020.

However, as demand has slowed for real estate and oil prices have hit government spending, award levels have fallen in 2018 and 2019.

UAE CONSTRUCTION AND TRANSPORT AWARDS BY REGION, 2010-19 (\$bn)



UAE CONSTRUCTION AND TRANSPORT CONTRACT AWARDS, 2010-19 (\$bn)



Source: MEED Projects

A NEW APPROACH

A SLOWDOWN IN THE REAL ESTATE SECTOR HAS EXPOSED ISSUES IN UAE CONSTRUCTION THAT MUST BE ADDRESSED

Of the \$592bn of construction and transport projects planned in the UAE, about 87 per cent are in the design stage, indicating a healthy pipeline of future projects for the UAE construction industry.

The key issue for contractors, however, is when will projects be brought to the market.

Since the fall in oil prices in 2014, the UAE construction market has slowed down. Not only have there been fewer contracts being awarded, but those that are going ahead are doing so much more slowly as project clients in the UAE are operating with tight budgets and are trying to conserve cash.

With oil prices collapsing by almost 60 per cent in March 2020, the economic disruption caused by the coronavirus (Covid-19) outbreak has significantly increased the fiscal pressure on governments and is certain to slow down future projects in the region.

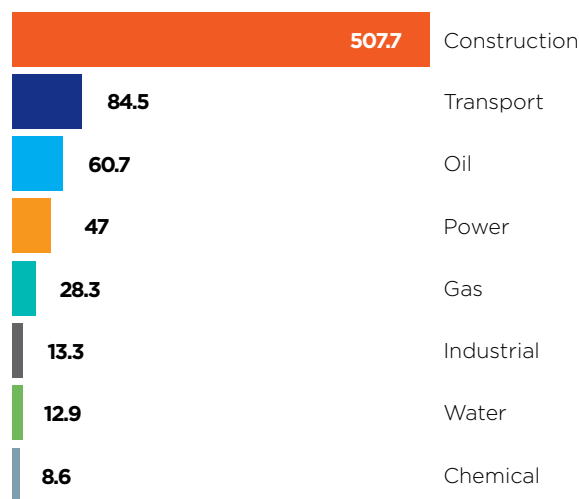
Over the past 15 years, the largest spenders on construction in the UAE have been private or semi-private sector real estate developers in Dubai. Companies such as Emaar, Nakheel, Dubai Properties, Meydan and Meraas have been busy developing master planned projects that have provided construction companies with a bumper crop of opportunities.

Even before the Covid-19 outbreak, the flow of projects had slowed considerably. After years of frenetic activity, Dubai's real estate market is over supplied and developers are wary of instigating new schemes.

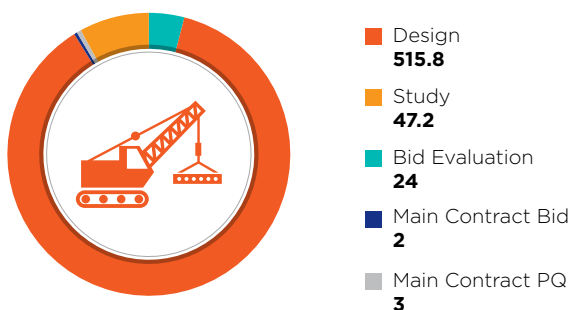
The growing oversupply of real estate has led to softening property prices, undermining the business case for many upcoming real estate projects.

In late August 2019, UAE Vice President, Prime Minister and Ruler of Dubai Sheikh Mohammed bin Rashid al-Maktoum took steps to address the problem by forming a higher committee for real estate.

UNAWARDED PROJECTS IN THE UAE BY INDUSTRY (\$bn)



UNAWARDED CONSTRUCTION AND TRANSPORT PROJECTS IN THE UAE (\$bn)



Source: MEED Projects

The Real Estate Planning Committee aims to regulate the real estate sector in Dubai and develop a clear strategy to balance the demand and supply of real estate projects in the emirate.

The committee promises to assess Dubai's real estate sector at all levels, study the needs of the market, evaluate all future real estate

UAE CONSTRUCTION AND TRANSPORT PROJECTS AT THE TENDERING STAGE (\$bn)



Source: MEED Projects

projects, develop an integrated plan for the real estate sector to regulate and control the pace of work on projects, and attempt to achieve a balance between supply and demand.

The expectation is that supply will be controlled. This will likely mean fewer projects being delivered in the future and therefore an inevitable reduction in new project opportunities for contractors.

The falling number of new project opportunities is increasing competition for contractors. According to statistics released by the UAE Ministry of Economy in December 2019, the construction industry ranked first on the list of business activities that acquired licences in the UAE in 2019.

Contractors are forced to adopt a lowest-price-wins approach to securing contracts, eroding profit margins and often sacrificing quality for quantity. This leaves little room for investments in areas such as talent, technology and research, undermining the value of the industry.

Delayed payments, undetermined claims for client variations to contracts and adverse trading conditions have brought into question the survival of some construction firms operating in the UAE. Very tight margins on projects can quickly turn into loss making projects without approval of variations and claims revenue.

This issue is set to be compounded by new accounting rules, which limit the scope for recognising revenue from claims and variations, placing additional stress on any project that experiences a high level of change and delay.

The courts' recently increased willingness to issue expedited payment orders is a step in the right direction where amounts are not in dispute, but a more muscular approach is need-

ed to ensure that cash flows more efficiently through the supply chain. These challenges and problems will affect the UAE's growth plans.

While the sharp fall in demand for property and tourism resulting from the Covid-19 is temporary, it is could take years to fully recover. The UAE construction industry must act quickly.

It is time to rework the approach to construction, to create a more productive, streamlined and cost-effective industry. Firm steps are required to break harmful practices that have become entrenched in the industry. Many of these practices can be improved with better contracts, complete designs and a more considered approach to contract modifications in the context of the overall lifecycle of the asset and its return on investment.

FIVE CHALLENGES

1. Projects often proceed to construction before designs are fully complete
2. Contractors take on projects that change significantly in scope during the construction period, resulting in claims and disputes, which impact the final value and return on investment
3. Construction holds limited appeal among young graduates
4. The industry is slow to adopt latest technologies, as tight budgets hinder investment in research and development
5. The fragmented nature of the construction sector makes it difficult to share lessons learned. Knowledge is lost as project teams disband and firms begin processes from scratch

ENABLING REFORM

AUTHORITIES CAN PROVIDE EFFECTIVE GUIDELINES ON IMPROVING CONSTRUCTION CONTRACTING ACROSS THE UAE

The UAE construction sector has faced tough business conditions since 2015 as a result of the fall in oil prices and the subsequent drop in project activity.

The economic disruption caused by the coronavirus outbreak at the start of 2020 coupled with the collapse in oil prices means that the situation is set to become more difficult in 2020, before it improves.

A cash flow problem that has dogged the industry for the past five years is set to become a crisis unless radical action is taken quickly by businesses and government alike.

The sharp drop in new projects since 2015 has resulted in increased competition and reduced profit margins. At the same time, inefficient processes, poor project management, unnecessary delays, significant design changes and wasteful procurement practices resulted in costly delays and disputes. Additional challenges have come from a mounting scarcity of skilled professionals and low adoption of technology. Boosting productivity in the UAE construction market is a tough proposition.

In addition to the pressures faced by contractors of having to deliver projects at ultra-competitive bid prices, the fast-track approach taken on many real-estate developments has turned what should be a collaborative process into a vicious, adversarial cycle. Right at the heart of the problem is the construction contract. It also sits at the centre of the solution.

The contracts used in construction go a long way to defining the relationship and culture between contract parties, setting the rules of engagement and responsibilities that must be adhered to throughout the project.

However, contracts currently used in the UAE construction sector are often modified by project paymasters to pass on risk to their contractors.

Often this results in disputes between contractors and their clients over who is responsible for unexpected costs and late design changes.

The introduction of a standardised construction contract tailored for the UAE could benefit project delivery in the UAE by restricting bad behaviour and reducing disputes.

A report published by McKinsey Global Institute in 2017 titled Reinventing Construction reveals that lagging construction productivity costs the global economy \$1.4tn annually.

It is estimated that poor project planning could result in nearly 30-40 per cent of project spending being wasted in the UAE construction sector. With a project pipeline of \$710bn, this could represent waste of as much as \$320bn.

If savings are made through improved productivity, it can be cycled back into the construction industry for activities such as research and development.

A well written standard contract tailored for the UAE construction sector would seek to introduce fairer distribution of risk and improve collaboration among project parties, reducing the likelihood of disputes.

Ultimately, however, it is up to the contracted parties, the client and contractor, to implement the contract fairly, which requires a shift in the attitude towards contracting.

GOVERNMENT ROLE

The government can be a key agent of change in the efforts to improve the contractual environment in UAE construction. Accounting for nearly 42 per cent of the value of construction and transport contracts awarded in 2010-19, the government holds the power to influence positive change in the way projects are awarded and delivered.

With a growing urban population in the country, it is also necessary to enforce regulations to



ensure public interest is at the heart of construction development.

In June 2018, Crown Prince Sheikh Mohammed bin Zayed al-Nahyan approved a AED50bn (\$13.6bn) economic stimulus package and ordered the settlement of payments to private sector suppliers by Abu Dhabi's construction sector.

Subsequently, Abu Dhabi moved to address payment problems in the emirate's construction sector in March 2019, with an Executive Council circular asking for contracts to be amended to "oblige contractors and suppliers to pay subcontractors within 30 days of receipt of government payments".

The inclusion of contract clauses related to sustainability and worker welfare during construction and infrastructure projects would help the government ensure that national targets are achieved.

For example, if project parties were able to quantify waste generated from construction projects, these figures could be converted into case studies that would help the industry avoid time and budget overruns, and reduce wastage of resources – dovetailing with the UAE's Centennial 2071 goals.

The government is also well-positioned to catalyse change in areas such as technology adoption. Public expenditures account for a

major portion of projects in the UAE, spanning infrastructure, from roads to buildings.

The government's purchasing power touches every corner of the construction industry, while its regulatory power allows it to set standards that involve using new technologies and innovation.

In 2013, Dubai Municipality issued a mandate requiring large-scale projects to use building information modelling (BIM) technology. A well-known example of this is Dubai Roads & Transport Authority's (RTA) Route 2020 metro expansion project.

The RTA ensured that BIM was utilised from the inception of the project, which was one of the biggest in the market to adhere to UK level 2 BIM standards. Work on Route 2020 began in 2016, and teams have accordingly provided the RTA with BIM files starting from the design stage of the project.

A standardised construction contract will enable the application of different regulations from the various jurisdictions in the UAE. It can also be used to encourage greater collaboration on projects to improve productivity and to ensure on-time and on-budget delivery.

There is widespread consensus that the introduction of standardised construction contracts presents a real and significant opportunity to reduce waste across the lifecycle of the project.

WORKING TOGETHER

THE SECOND UAE CONSTRUCTION THINK TANK SOUGHT TO DEFINE A STANDARDISED CONSTRUCTION CONTRACT MODEL FOR THE UAE

As long as a project runs smoothly, any contract signed between project parties is merely a legal document. In the event of a dispute however, the contract can quickly become the critical factor in determining the success of a project.

The problem is that projects frequently do not run smoothly, making the construction contract a vital piece of the projects industry.

If the contract is well-drafted, it is likely to ensure a swift and equitable resolution. On the other hand, an ambiguous and poorly written document can result in lengthy delays, cost overruns and poisoned relationships.

Over the course of the MEED-Mashreq Construction Partnership, discussions with leading industry experts have revealed that some of the critical problems in the construction sector originate from either ambiguity or improper administration of contracts.

These problems include incomplete designs, significant changes to design during construction resulting in confusion over the scope of work, unbalanced risk allocation, misalignment among various project parties and, in recent years, uncertainty around data ownership and security.

The situation is made worse when standard contracts are heavily amended, often tipping the scales unfairly in favour of the project owner.

Finding a way to remove the traditional adversarial approach to contracting is vital to create a more productive and efficient construction industry.

The purpose of the second UAE Construction Industry Think Tank is to develop a set of rec-

ommendations for a framework for standardised contracts that would improve the construction industry culture in the UAE.

The intention is to add to the discussions and recommendations that resulted from the first Construction Industry Think Tank.

While the first think tank took a broader perspective on the key challenges impacting the UAE construction market, this edition offers suggestions on improving the contractual framework for the industry.

The aims of a standardised construction contract for the UAE are to:

- Provide mechanisms for minimum design requirements before awarding a contract to reduce cost overruns
- Ensure clarity for design responsibility
- Foster collaboration
- Ensure fairer risk allocation
- Encourage full project life-cycle considerations
- Encourage best practices in line with the objectives of the UAE
- Define HSE and sustainability targets
- Allow for risk sharing from new processes and technologies
- Ensure on-time payments
- Reduce disputes
- Provide mechanisms for speedy dispute resolution

At the second UAE Construction Industry Think Tank, representatives from across the UAE construction industry gathered to address six key questions:

THE QUESTIONS

THE OPPORTUNITIES FOR A MODEL CONSTRUCTION CONTRACT



How can contracts clarify roles and responsibilities?



How can contracts increase industry collaboration?



How can construction produce fair contracts?



How can contracts enable technology adoption?



How can contracts improve social welfare and environmental sustainability?



How can contracts ensure that disputes are avoided or resolved quickly?

ROLES AND RESPONSIBILITIES

One of the biggest areas of concern surrounding construction contracts in the UAE is the absence of clauses that clearly define the roles and responsibilities of the contracted parties on a project.

Contractors say that the ambiguity created by unclear contract terms can mean that they come under pressure to assume responsibility for tasks that not only increase their costs, but their schedules and timelines as well.

Contractors are calling for contracts that do not compel them to take on risks that they did not price into their bids.

From the burden of unplanned costs caused by extensive variations, which are often reimbursed late, if at all, to the erosion of trust, the consequences of imbalanced contracts are taking a toll on the UAE's contracting sector.

Falling profit margins and liquidity challenges, combined with contractual terms that enable payment delays weaken the sustainability of construction companies in the UAE.

In this environment, project disagreements can escalate to become contractual disputes that lead to time and cost overruns that harm the delivery of the project. Contractually, the client's resident engineer is the proper party to facilitate client-contractor conflicts.

However, many question the independence of the engineer, who is usually contracted by the client and may find it difficult to abide by the impartiality required to administer variation claims or contractual disputes. Furthermore, designs provided by the engineer are often incomplete or ambiguous, leading to conflicts at later stages.

It is common practice for standard contracts, which include clear guidelines regarding the engineer's role, to be rewritten into lopsided documents that benefit the project owner but which prejudice the rest of the project supply chain.

Contractors in the UAE call for improved client behaviour through better-drafted agreements.

THE SOLUTION

Contractual terms must be written to ensure a fair distribution of responsibilities, rewards and risks.

Fairness can be written into construction contracts by drafting agreements that reward good behaviour and which encourage collaboration. Bonuses for early completion, for example, can be shared by both contractor and engineer.

By removing ambiguity from the definitions of roles and responsibilities into contracts, all parties will understand what risk they are carrying and must 'own'.

The crucial role of the project manager is commonly rolled into that of the designer, following the approach of the standard FIDIC Conditions. But this creates tension if the contractor blames the design for delay or cost overruns. The solution lies in a truly independent party to mediate such issues in the interests of the project rather than any specific party.

Standard contracts should be written for different procurement models such as design and build; design, build and operate; and design-build-finance-operate-maintain.

Standard contracts should also have the flexibility to cater for framework contracts, early contractor involvement and other collaborative models, and small or purely supply contracts.

HOW CAN CONTRACTS CLARIFY ROLES AND RESPONSIBILITIES?

CHALLENGES	RECOMMENDATIONS
AMBIGUOUS LANGUAGE Construction contracts are often ambiguous and do not define clearly the responsibilities of each stakeholder.	CLEARER TERMS Provide a set of standard clauses for use in contracts that provide a clear definition of roles and responsibilities, and which avoid contradictory terms.
CONFLICT OF INTEREST The engineer has a role under the contract where on one hand he acts as the client's agent and on the other hand the 'judge' between the contractor and client when they disagree.	DEMARCATED ROLES Differentiate the role of the engineer as the employer's agent and as the adjudicator between the employer and its contractor. Stakeholders may jointly employ an independent engineer that is in essence engaged by all contracted parties. Alternatively, the contracting parties can agree to a mediator appointed by an impartial organisation where necessary.
DESIGN RESPONSIBILITY Commercial pressure often drives clients to award projects while the design is incomplete or key elements have not been finalised, causing additional costs during project execution. The engineer has often designed the project. In the event of a design issue where the contractor may claim additional time and budget, there is tension in the engineer's decision making. If the engineer rules in favour of the contractor, he may, in effect, be admitting a mistake which has cost the client more money.	DIFFERENTIATE DESIGN ROLE Segregate the design role of the engineer from project management. If the project designer is doubling up as engineer of record, then the work must be split and the contract must clearly explain their responsibilities under each role. The client and engineer should strive to produce a complete design before the tender stage.
AMENDMENTS It is common practice to heavily amend standardised contracts, such as the Fidic suite or the NEC suite. The deviation from standard form of contracts can lead to stakeholders misinterpreting the amendments in the absence of standardised terms.	BACK TO BASICS Publish guidance to project owners, clients and contractors that promotes the use of standard contract models and discourages amendments.

DRIVING COLLABORATION

Lack of collaboration is a long-standing issue for the UAE's construction industry. For every stakeholder involved on a project, the end goal is to complete the project with as little overrun as possible.

The absence of standardised contracts in the UAE leads to multiple parallel individualised contracts agreed between the client and each project party, which typically favour the client.

This can result in project collaboration taking the backseat against more immediate concerns such as tight cash flows and managing variations.

Most construction contracts lean towards client-favourable terms and it is common to find agreements that feature excessively flexible payment schedules.

Traditional contracts do not reward project stakeholders when they exceed their contractual obligations, such as delivering a task ahead of its scheduled time. There is no incentive for a contractor to 'work better'.

Another barrier to collaboration is the absence of transparency within project teams. Existing contract models can often lead to toxic working setups where communication is weak between contractors and consultants, guaranteeing that any measures to spur project collaboration fail.

THE SOLUTION

A contract model is required that formalises equitable business practices that not only encourage collaboration, but which mandates construction stakeholders to work together during a project's duration.

There is a need to include terms that not only discourage bad behaviours, such as payment delays or failure to recognise variations, but which also encourage good behaviours.

The formation and deployment of such a model agreement requires buy-in from all parties, including project owners, so that they no longer use unaligned contracts as a mechanism to enable bad behaviours.

Research by McKinsey Global Institute (MGI) found that more collaborative agreements and operating models can be found in integrated project delivery (IPD) or project alliancing. Under such models, key delivery partners (usually the owner, engineer or architect, major equipment manufacturers, and contractors) work together during a defined pre-planning period to develop the project scope, schedule, and budget.

These partners form a single contract including a no-fault clause; and operate under a joint management structure that governs the project execution.

HOW CAN CONTRACTS INCREASE INDUSTRY COLLABORATION?

CHALLENGES	RECOMMENDATIONS
DISPARATE CONTRACTS Project contracts in the UAE often are not aligned or integrated, with various project stakeholders entering into agreements that do not allow for cross-organisational collaboration.	CONTRACT ALIGNMENT Clients or their representatives drive the adoption of standardised contracts throughout the construction programme. All stakeholders are familiar with each party's contracted scope of work.
LACK OF INCENTIVE Where contractors are willing to drive savings of time or cost during construction, existing contract models do not encourage them to implement these suggestions.	INCENTIVISING GOOD BEHAVIOUR Standard contracts to outline sets of performance rewards and penalties for project delivery against contract targets
VARIATION AND CLAIMS Change orders and variations are generally instigated by clients, but the risk of changes sits with the contractor. This not only affects the contractor's current project but also subsequent ones, as variations can tie up the contractor's time and resources for longer than originally planned, with the contractor typically funding this until a resolution is reached	RESOLVING ISSUES Minimise probable variations and ensuing claims by increasing time spent on removing uncertainties prior to awarding the contract.
	Introduce regular project stakeholder meetings with strict timelines for resolving and approving necessary variations and claims during the project execution.
	Variations should be approved and certified with within a stipulated time frame, eg: 90 days.
OPAQUE MODELS Siloed working models are the norm in UAE construction, with each project party typically conducting its on- and off-site activities independently from its peers on the project.	GREATER TRANSPARENCY Mandate mechanisms for collaborative behaviour, including meetings chaired by an independent facilitator
INHERENT RELUCTANCE Concern around intellectual property protection, payment and variation delays, and unfair contract terms that open up project stakeholders, especially contractors, to greater risk are all factors hindering collaboration.	EDUCATE AND ENCOURAGE Project owners to inform stakeholders about the funding model to be adopted.
	Government incentives can be introduced to encourage greater collaboration.

LEGISLATION FOR BETTER CONTRACTS

As the biggest project client in the UAE, the government can influence other project owners and contractors to work in a way that complements its vision. The role of government in providing a framework to bring project parties together is critical and will help reduce bad behaviours.

The majority of existing legislation applicable to construction industry is created and governed individually by each of the seven emirates in the UAE. Select federal standards, such as the UAE Fire and Life Safety Code of Practice, are available and enforced in the sector.

The key federal legislation applicable to the UAE construction sector is the Civil Transactions Code Federal Law No. 1 of 1985, which sets out the legal principles applicable to contracts. A section of the law exclusively caters to the construction contracts, known as ‘muqawala’.

Specific legislation is required to safeguard against malpractices such as unfair payment clauses; inefficient health, safety and environment (HSE) rules; and complacent applications of sustainability mandates. A common code would remove the inconsistencies that interfere with the fair administration of contracts.

Waste and low levels of productivity are growing concerns for UAE construction. Existing legislation does not require project owners and clients to consider the economic impact of building schemes, and as such, industry waste is not adequately quantified or understood.

THE SOLUTION

Standard contracts need to legislate out commonly occurring bad behaviours.

Greater legislative support is required for the construction industry to administer fair contracts. Stronger legal guidelines will help to remove the unfairness in industry agreements.

The public sector can also drive improvements through the adoption of model contracts that aim to achieve a fair risk balance. Model contracts improve procurement through familiarity of use and the encouragement of good project management.

Greater communication is required between construction companies and experts from the UAE’s public and private sectors to better understand the shortfalls of industry-specific legislation and regulations, and how these can be amended or updated to foster the environment required for fairer contracts to replace prevailing unbalanced models.

Legislation can be used to ensure that payment delays do not push out smaller, specialist construction businesses.

Case studies and research must be carried out with the aim of quantifying the industry’s total waste output in dollars and hours. This would help in understanding how these overruns ultimately impact the asset value and its expected return on investments, or if left unchecked, how the costs are then written off by the contractors and their supply chain, leading to some of the loss-making annual results being observed in the market.

HOW CAN CONSTRUCTION PRODUCE FAIR CONTRACTS?

CHALLENGES	RECOMMENDATIONS
INSUFFICIENT LEGISLATION A market-wide preference for the use of terms such as ‘pay-when-paid’ leads to persistent payment delays, creating cash flow challenges for subcontractors that already tend to operate on lower margins than main contractors and consultants.	IMPROVED LAWS Require contracts to include improved payment terms, and wage and subcontractor payments. Review extended payment periods and ‘pay when paid’ clauses to ensure they are not used to unfairly delay payments or avoid client responsibilities. Remove ‘on-demand’ bonds and change legislation around bond conditions.
FRAGMENTED STANDARDS The fragmentation of standards across the different jurisdictions of the UAE means contracts are not standardised across the country, increasing the scope for unfair practices.	UNIFIED CODE Consolidate federal and local HSE and sustainability requirements. Codes such as Abu Dhabi’s Estidama Pearl Rating and Dubai’s Green Building Code could be combined to create a federal sustainability mandate.
HIGH WASTE There is a lack of common construction measurement standard in the UAE. This is exacerbated by the use of a mix of local or regional standards, which make comparison across project portfolios difficult. As a result, waste generated by the industry is not fully understood by stakeholders.	INCREASED EDUCATION Introduce legislation requiring feasibility studies to be prioritised and that all parties involved on a project participate in the process. A common construction measurement standard can be mandated.
LACK OF COMMUNICATION Open and regular communication remains a challenge on construction projects.	DESIGN-ASSIST Contractor to be involved in early stages of design to improve constructability.
	GOVERNMENT-BACKED PLATFORM Establish a government-backed platform to encourage communication. Mandated stakeholders in the platform will include: federal entities; project developers; contractors, subcontractors and consultants; and technical experts and academicians.

ROLE OF TECHNOLOGY

The emergence of new technology can fundamentally change relationships and processes in construction and raises many challenges for regulators and planners.

When it comes to incorporating technology clauses in construction agreements, lawyers are often limited by a lack of subject expertise or by being brought in too late, once all the technologies have been decided.

BIM in particular has demonstrated significant benefits in construction.

A survey conducted by Heriot-Watt University in 2015 of over 500 architecture, engineering and construction professionals working on UAE construction projects, revealed that 87 per cent had used BIM in their organisations and 62 per cent had used BIM for more than one project.

Dubai Municipality released a circular in August 2015 updating its mandate regarding the use of building information modelling (BIM) across construction projects in the emirate.

The note followed its 2013 mandate – titled Circular (196) – which pertained to the application of “the first stage of BIM” in the construction and mechanical elements of buildings that are 40 floors or taller; buildings with areas spanning 2.78ha; specialised facilities, such as hospitals and universities; and structures “requested on behalf of a foreign office”.

The level of BIM is unspecified however, while the technology has evolved far beyond.

THE SOLUTION

Mandates similar to the one issued for BIM in Dubai could be created for other emerging technologies that would benefit the construction sector.

These pieces of legislation could become a template for any new technology tools that emerge in the future, provided that they sufficiently outline the terms and responsibilities related to data ownership and management.

The same also holds true for technology-focused construction contracts ie, smart contracts, which could be standardised and replicated for industry-wide use.

Dubai, in particular, has the capability and tools to provide an integrated platform to collect data from the construction industry and to initiate a knowledge sharing process. The private sector can be encouraged to make use of this.

Stakeholders can collaborate to develop a contract model that fairly distributes risks and responsibilities related to the adoption of contemporary technology in construction projects. This mode can be used as a template for future technology tools as well.

The technology-centric business model must clearly specify what data must be collected during a project; how this data will be collected and managed; which stakeholder manages the data; and parameters within which this data can be shared or disseminated.

HOW CAN CONTRACTS ENABLE TECHNOLOGY ADOPTION?

CHALLENGES	RECOMMENDATIONS
OUTDATED CONTRACT MODELS Existing construction contracts do not adequately cover the nuances of working with technology providers.	SPECIALISED CONTRACTS Produce a set of industry standard definitions for specific technologies used in the construction industry. Update these definitions periodically to reflect new versions of technology. Agreements must include these terms.
INCONSISTENT STANDARDS Existing contract models do not specify a baseline for technology incorporation in construction projects.	LEGISLATIVE BACKING Government mandates, similar to those issued by Dubai Municipality in 2013 and 2015 for BIM adoption, to specify the level of technology that project construction programmes must incorporate. This will help in sharing information to enable real-time decision-making and reduce cost overruns.
LOSS OF DATA The absence of mandates to formalise activities such as data gathering and data storage on projects means knowledge and information that could help better operate the existing projects or plan future developments is lost.	KNOWLEDGE MANAGEMENT Contracts must clarify the responsibilities of each stakeholder in terms of the ownership, sharing, accuracy, and risks of collecting and managing project data.

IMPROVING WORKER WELFARE

The UAE has in place various federal- and emirate-level systems established to ensure both worker and environmental welfare in various industries, including construction. However, there is no uniform application of these laws on all projects.

The lack of a single authority responsible for health and safety monitoring, regulation and prosecution across the UAE makes it difficult to maintain and improve standards in the UAE construction industry.

Worker rights are ensured under the UAE's labour law, which requires that employers provide the safe working conditions for their staff. Other legislation includes the Ministry of Human Resources and Emiratisation's midday work break scheme, Dubai Municipality's Al Safat rating system and Abu Dhabi's Estdama Pearl Rating System.

Expo 2020 Dubai's worker welfare policy – widely seen by private-sector companies as the highest standard in operation in the UAE today – is designed to ensure that all companies working on the World Expo's developments are contractually responsible for their employees.

The policy contains 10 key principles aligned with international guidance on workers' rights, including the International Labour Organisation (ILO) and the United Nations (UN).

Among the areas covered by this policy are procurement pre-qualifications; employment practices such as wages and working hours; accommodation facilities; and the quality of transportation.

In addition to UAE law requirements, Expo 2020 Dubai's contracts include 117 requirements that are bound into every agreement, of which half are linked to employment practices, with the rest pertaining to worker accommodation and management practices.

Expo 2020 recognises that laws cannot deliver the welfare they promise unless their enforcement is also standardised. And so, the Expo's worker welfare team monitors and audits all contractors and external parties work-

ing on the 4.38 square kilometre site. Before a company can bid for an Expo 2020 Dubai contract, it must complete a detailed questionnaire about its worker welfare practices.

Once a contractor or supplier submits a tender bid to work on Expo 2020, the Expo 2020 Dubai worker welfare team conducts an accommodation audit and inspection of the contractor's headquarters.

The bidding company is also audited within three months of commencing work at the Expo 2020 Dubai site, following which it must provide status reports; submit to project reviews each month; and be audited every six months to ensure promised welfare standards are delivered.

The Expo 2020 HSE model takes a holistic approach to ensuring and rewarding these company efforts. In December 2018, Expo 2020 hosted its first Better Together Awards to recognise the initiatives, individuals and organisations delivering the World Expo's required HSE performance.

THE SOLUTION

Project owners must recognise that the onus to meet the highest standards and to drive continuous improvement in HSE performance lies with the contracts they offer. The prevailing model of one-sided contracts that unfairly allocate risk to contractors discourages companies from fully committing to the delivery of high HSE standards.

Clients must turn to adopting, in full or part, the approach implemented by Expo 2020 Dubai to ensure that social and environmental welfare is engrained in the contract instead of being an afterthought in a commercially driven agreement.

HOW CAN CONTRACTS IMPROVE SOCIAL WELFARE AND ENVIRONMENTAL SUSTAINABILITY?

CHALLENGES	RECOMMENDATIONS
DISPARATE GOALS Levels of environmental and HSE awareness may vary on a project based on each stakeholder's individual goals, limiting the team from reaching its full potential of social and sustainable welfare.	SPECIFY TARGETS Standard contracts to define HSE and sustainability targets to be achieved across the project.
UNCLEAR ROLES Contractors are typically motivated to deliver only the levels of HSE and sustainability required by their contracts. It is likely that standards that could have been exceeded with the right planning are instead left at the minimum required by the contract.	FAIRER CONTRACTS Standard contracts to include penalties and reward clauses that encourage contractors to over-achieve HSE and sustainability targets.
WELFARE MANDATES Current legislation falls short of mandating performance clauses for sustainability and worker welfare.	UPDATE LEGISLATION Requirements related to worker welfare and sustainability should be written into new legislation, including a mandatory third party compliance audit, and priced correctly in bids.
LOST EFFORT Unsustainable practices in construction projects lead to a significant amount of time and effort wasted, which costs a lot of money. There is no clear approach to handling the different types of wastes generated during construction projects. And no effort is made to quantify lost productivity on projects.	LEAN THINKING Waste could be reduced or eliminated through a lean approach to construction and by reducing frequent changes in scope during construction process to avoid inefficient rework and delays.

DISPUTE AVOIDANCE AND RESOLUTION

Poorly defined and ambiguous contractual responsibilities and processes are among the biggest factors in construction disputes.

According to a 2019 report by construction consultancy Arcadis, poorly drafted or incomplete and unsubstantiated claims were the top cause for Middle East construction disputes in 2018. Second was failure to properly administer a contract.

Current contracts do not contain robust tiered dispute resolution systems and instead parties are quick to begin litigation or arbitration proceedings. Encouraging parties to use alternative dispute resolution (ADR) mechanisms such as expert determination or mediation would allow projects to continue while avoiding lengthy and expensive court or arbitral proceedings.

Fidic contracts routinely include provisions for Dispute Review Boards (DBs) to be appointed through the lifetime of the project. The World Bank has mandated that all its funded projects, which are undertaken using Fidic forms, must include DBs

A DB will not only prevent and resolve disputes, it will also ensure clients and contractors are fully informed of any potential issues that could have an impact on the delivery of a project on time and on budget.

THE SOLUTION

Construction contracts should set out clearly the conditions and requirements for critical tasks such as submitting a variation, claim or extension of time request, as well as establish the approval payment and progress cycles that must be adhered to by all parties to ensure dispute avoidance.

A standard contract must clearly outline the dispute resolution mechanisms that must be complied with by all parties. Disputes must be dealt with within a stipulated time frame.

To encourage collaborative working and the use of early intervention techniques other industry bodies like the Royal Institution of Chartered Surveyors (RICS) are advocating for the use of Conflict Avoidance Panels which identify potential disputes early, mitigate risks and protect reputations of the parties while keeping costs down.

There have been important steps taken in the areas of formal dispute resolution, with industry experts advising companies to explore the guidelines of Centre for Amicable Settlement of Disputes, established by Dubai Law No. 16 of 2009 to help mediate disputes prior to them being referred to court.

Commercial courts in the UAE have evolved as the industry has expanded – a construction-specific court was announced in Abu Dhabi in April 2009, and Dubai International Financial Centre (DIFC) Courts launched a technology and construction division in September 2017.

Having written provisions in a contract that are intended to manage behaviours, e.g. by encouraging co-operation, is not enough. There should also be mechanisms in place that underpin such provisions and enable disputes to be avoided and or resolved quickly and cheaply as they emerge.

HOW CAN CONTRACTS ENSURE THAT DISPUTES ARE AVOIDED OR RESOLVED QUICKLY?

CHALLENGES	RECOMMENDATIONS
DISTRUST ON PROJECTS Contractors are wary of client representatives – such as consultants or engineers – to provide fair reviews of their performance.	IMPARTIAL THIRD PARTY Standard contracts will specify an independent third party that is paid for by more than one stakeholder in a project to certify work completion and variation claims. This entity would effectively be employed by the project team, not just the client, and is approved by the relevant legal authority.
UNCLEAR RESOLUTION ROUTES It is common to find stakeholders discussing the right ADR option only after a dispute has arisen – a process that drains critical resources.	SPECIFIC ADR OPTIONS Include ADR mechanisms in project agreements, to ensure that in the event of a dispute, all stakeholders are familiar with the process to reach a solution.
UNFAIR CONTRACTS A variety of issues, including unfair risk allocation, poor communication, unclear payment clauses and unrealistic deadlines, effectively set up stakeholders for contractual disputes during the course of the project.	FAIRER CONTRACT TERMS Preserve the standard dispute resolution provisions in standard form contracts, such as those produce by Fidic. Such contracts outline the terms and conditions related to payments, claims, extensions of time, variations, and crucial work components that should be adhered to during the construction process. Outline a process for bond encashment to be transparent, fair and equitable.

MEED MASHREQ CONSTRUCTION PARTNERSHIP

Over the past three years, the MEED Mashreq Construction Partnership has provided valuable insights into the industry, with the support of senior executives and thought leaders from around the world



Report 1 *New Thinking for the New Normal*

The challenges and opportunities for UAE construction
October 2017



Report 6 *Building Future Cities*

Can the industry keep up with rapid industry development?
April 2019



Report 2 *Driving Better Value in Construction*

Improving efficiency and productivity in projects
January 2018



Report 7 *Blockchain for Construction*

Deploying blockchain technology for projects and people
July 2019



Report 3 *Delivering Innovation in Construction*

Latest technology transforming project delivery
April 2018



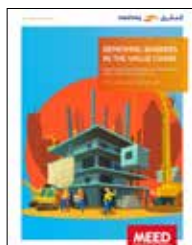
Report 8 *Contracting for a Brighter Future*

Improving the construction contracting environment
October 2019



Report 4 *Transforming Construction: Lessons from oil & gas*

Oil industry practices provide a way forward for construction
November 2018



Report 9 *Removing Barriers in the Value Chain*

Opportunities to transform the construction supply chain
December 2019



Report 5 *Regulating Construction: Adapting to new standards*

How regulatory trends are affecting the construction sector
February 2019



Construction Industry Think Tank

The first Construction Industry Think Tank suggested strategic initiatives to improve productivity in the UAE construction sector

