

**4 METHODS OF CONTRACTING IN PROJECT  
MANAGEMENT AND THEIR RELATIVE ADVANTAGES  
AND DISADVANTAGES**

**NAME: ANGELO DIMO**

**STUDENT NUMBER: 2246213**

**PROJECT MANAGEMENT**

**LCBB5005**

**LECTURER: DOREEN AMUNDAM**

**COMPONENT 2**



## **Introduction**

The purpose of this essay is to discuss diverse methods of contracts and their application in project management. Project management can be defined as the application of procedures, skills, methods, experience, and knowledge for fulfilling pre-determined project objectives. It is basically applied to ensure that the project activities can lead to satisfying the requirements or project deliverables. It can also be described in another way, which suggests that project management refers to the process of people being led and their work being supervised to fulfil the project objectives within the pre-determined constraints regarding time and budget (Nenni *et al.*, 2024). In this process, external entities are often engaged in the projects for certain purposes either for delivering items or completing activities. Lastly, it can also be more cost-effective for the team to contract from third-party sources than to use its own resources and/ or labour (Seboka and Gidebo, 2025). In this essay, four different methods of contracting will be discussed in detail, including turnkey, DIY (do-it-yourself), multi-contract, and multi-contract and DIY combined. Their merits and demerits will also be explained while justifying their selection as per their appropriateness for certain projects.

## **Main Body**

The Turnkey Contract method refers to when the entire responsibility of a project is given to a single contractor, and they have the responsibility to complete it throughout all activities, from planning and design to commissioning and project handover. Moreover, the scope of their responsibility covers every aspect of the project, and they have to deliver a fully functional project to the clients. A major characteristic of this method is that it uses a single point of contact for the project (Viitanen, 2024). Thus, it allows for making the process of project management and coordination simpler. Meanwhile, it also eliminates the need for the project owner to be actively involved in the process, and they can get involved to the extent they want to.

This method is frequently utilised in large-scale projects that tend to be complex and require comprehensive solutions. Moreover, in such projects, it is more effective to use specialised expertise, knowledge and efficiency while having a clear sight of accountability through one point (Roux *et al.*, 2024). In large infrastructure projects, multiple steps are involved from conceiving to integrating all important components or facilities. So, the person or company being contracted will be accountable for it and they have to deliver a completed project. This is where the term turnkey can be applied because the contractor firm generally has to deliver the project in a functional state that is ready to be used immediately (Donati *et al.*, 2024).

Moreover, the contract also shifts the risks and responsibilities of the project to the contractor firm. Thus, it can be ensured that the project has satisfied the quality and performance standards as well as deadlines.

It is commonly utilised in construction, infrastructure development and manufacturing projects (Rajeev, 2024). These projects have multiple components, and contracting them to one firm allows for seamlessly incorporating of everything into the completed and functional system or facility (Álvarez-Pozo *et al.*, 2024). There are certain features of turnkey contracts that offer appealing options to clients, which makes them use this for their projects. In complex projects, the project requirements can vary from engineering, and design to contracts for it to be completed. However, managing the responsibility ensures all requirements are taken care of by the contractor (Álvarez-Pozo *et al.*, 2024). Thus, the clients do not need to contact or coordinate with several entities. Turnkey contracts come with a fixed price for the entire project, which is beneficial for clients to know and manage the project budget.

As opposed to the turnkey method, the method of Multi-contracting involves multiple parties. It can be described as the process where the project owner contacts multiple parties or contractors and hands them over the responsibilities of specific stages or activities of the project. It is also known as multi-prime contracting because the owner approaches multiple prime contractors who will take responsibility. The project stages and tasks are divided and distributed among the contractor parties based on their expertise and experience. This includes design, planning, procurement of materials and construction (Sun and Sun, 2021). In this case, the project owner has to take the responsibility of coordinating between the contractors and managing relationships among them to ensure that all components come together seamlessly for the project's successful completion.

Based on this, it is apparent that the key characteristic of this method is the multiple points of contact. Every contractor involved also has a different and specific scope of work within the entire project. Their responsibility can also be extremely specific, like structural aspects or plumbing (Tripolone, 2024). Therefore, the project owner still retains complete control over the project while also being able to use specialised or experienced experts from the market.

There are certain conditions that make the method more appropriate and useful in certain situations or types of projects (Nasir *et al.*, 2022). It is generally used in large-scale construction infrastructure projects or commercial projects. When projects have complex requirements, it is more beneficial to divide the project scopes and activities among several prime contractors (Sun and Sun, 2021). Thus, the project owner can benefit from their knowledge, experience and expertise based on the area of specialisation for each contractor.

This method is also more useful in large projects because they usually have strict project timelines and tight schedules. Therefore, dividing the phases and activities among multiple contractors allows for the tasks to be performed simultaneously with individual contracts (Li *et al.*, 2024). Moreover, the overall timeline can be minimised. The owner can also negotiate the terms for each contract separately, which creates the potential for reducing the overall budget.

As compared to the previous two methods, the DIY contracting method is more self-sufficient. This refers to the process where the project owner maintains complete responsibility for managing and supervising the project activities. This includes every aspect of the project, from creating contracts to managing it themselves instead of using a third-party entity or company, or a general contractor (Putri and Sulthoni, 2022). This is generally used when the organisation or project owner possess knowledge, experience, or expertise as well as resources for carrying out themselves independently (Maley, 2024). So, it does not require external parties to act as general contractors for handling or coordinating between the sub-contractors.

This method is more appropriate to use in small or medium-scale projects, and only if the company or owner can ensure that they have enough expertise to complete the project successfully as per its requirements. The type of projects, where this method is commonly used include software development, IT and home renovation or improvement projects. It can also be applied in small or medium-scale construction projects and marketing, research, and development projects (Paragliola *et al.*, 2024). However, it is only suitable when the project's scope, the owner can manage activities and complex requirements.

In such cases, the scopes are also specific and comparatively smaller, which makes it more manageable. In such instances, it is not necessary to recruit external contractors. Similarly, tech companies are most likely to have the workforce and necessary skills for their software development projects (Afolabi *et al.*, 2022). Thus, they can utilise their own resources to complete them. Since it eliminates the need for including external parties, it also eliminates the cost of it. Moreover, it also decreases costs by using their own resources.

The combined implication of Multi-Contracting and DIY Contracting demonstrates a hybrid approach to project management by combining two diverse types of contracting methods. This approach will enable the owner of the project to divide all features of the project into what they want to control. However, other parts can be outsourced to external sources or other contractors that may be hired to do the work (Yao and Wang, 2024). Thus, it leaves a balance that is maximally advisable because the project owner will still reap the benefits and

have full control of the project when it involves third parties or agencies for their specific specialisation or skill sets, while at the same time minimising costs.

This makes it possible to consider considerable variations in the scope and requirements present in a project. As a result, they need ideas for achieving these and ensuring they meet the needed level of quality (Adjei-Arthur *et al.*, 2022). At the same time, it can also happen that the project owner does not have sufficient skills, knowledge, or resources for each of the components of the project. Therefore, they require outsourcing as they depend on external service providers to perform specific tasks (Hendrickson *et al.*, 2024). The application of this method can be found in modular construction and research and development projects. This allows organisations to oversee certain elements of the project internally and reduces costs. In modular construction, it is more beneficial when the construction of some items is given to specialised companies.

In terms of determining the merits and demerits of contracting methods, a hospital construction project has been selected for this section, and each method can be explained as per its advantages and disadvantages.

The Turnkey Contracting method creates a single point of accountability, where only the contractor firm holds all responsibilities. Moreover, they have to ensure that every deliverable, objective, and requirement has been met and all components have been incorporated. In a hospital construction project, the requirements are complex and it is a large-scale project (Kirk, 2022). It also has several specialised aspects or requirements, such as healthcare equipment, infrastructure systems for emergency power, and others. It is more suitable for organisations to hand over the responsibility to a single firm. This also means the hospital administration does not have to take responsibility or interact with multiple contractors. They do not need to coordinate between them (Nwajei *et al.*, 2022). This is especially beneficial if they have other healthcare facilities to manage, and using this method eliminates the additional burden.

The presence of a single contractor means they can determine and handle the project activities to ensure it can be completed before the deadline. This minimises the involvement of multiple stakeholders which can cause delays to it. Thus, the hospital can be built and handed over ready to use quickly (Shiferaw, 2024). Meanwhile, the contractor can ensure that they have complied with all legislation and regulatory requirements, like fire safety and seismic compliance, which are necessary in a healthcare facility.

However, handing over all risks and responsibilities to contractors comes with excessive costs. This covers project site conditions, labour issues, changes in raw materials prices, etc.

So, in exchange, the owner has to bear the inflated costs of handing it over. This also means that the hospital administration does not stay actively involved in the project including all the stages. So, they may not have an opinion on every aspect or activity (Marnada *et al.*, 2022). Instead, if they have specific brand or item requirements for construction or medical infrastructure, they have to specify and negotiate them clearly from the beginning (Wang and Chen, 2023). Furthermore, if the administration suddenly has to add to the scope like increasing the number of rooms or operation theatre infrastructure, adding it later increases the costs of modification substantially.

Furthermore, Multi-contracting allows them to distribute the responsibilities among multiple prime contractors that have areas of specialisation and can take responsibility for specific project components. For instance, considering specific requirements in a healthcare facility that are different from general construction, they can choose a contractor firm for installing healthcare equipment separately (Fredriksson *et al.*, 2024). This also reduces the costs since they can add new contractors as needed and negotiate terms with each.

Additionally, it gives the administration more flexibility and control. They can control the materials and companies to use for their hospital or equipment (Li *et al.*, 2024). Based on this, they can determine the best contractors and suppliers to choose as per their specialisation, especially for the sensitive requirements like surgical units and ICUs. It also divides the risks among the administration and multiple contractors. On the other hand, they have to coordinate and communicate with all contractors. They are responsible for bridging the communication between them, managing the project schedule, logistics and preventing conflicts. This increases the complexity and burden significantly. They can hire a project management consulting company, but it also increases the cost (Fredriksson *et al.*, 2024). With multiple contractors, they also have to check the work and ensure compliance by themselves individually for each component. Otherwise, it creates a compliance risk.

Through the application of DIY Contracting, the hospital administration can maintain maximum control over the construction project, budget, timeline, and decision-making. They can make changes and customise all components as per their requirements and service structure and even expand the scope to include more equipment or space. They can use their in-house expert team if they have one, like project engineers, architecture or designers who are more aware of healthcare facility structures, which in turn reduces the project's overhead expenses. They can also negotiate directly with suppliers for cost efficiency (Tulokas *et al.*, 2024). However, they must have in-depth knowledge, experience, expertise, and suitable resources required for hospital construction, such as knowledge of structural engineering,

hospital infrastructure, safety standards, equipment, etc. Otherwise, they may end up making mistakes that increase the risk of budget overrun. It also increases the burden on the administration as they have to make all decisions, apply for permits, and check for compliance (Sun *et al.*, 2024). In addition, it also prevents them from undertaking core planning, whereas the overall project risks can be increased and the respective professionals will hold responsibility for it.

This hybrid approach that contains Multi-Contracting and DIY, enables the administration to strike a balance because they can control and decide on the healthcare aspects of the project and use contractors for the construction aspect. It also reduces cost because they can save on not hiring contractors for everything. At the same time, using specialised contractors gives them assurance of the quality standards and compliance (Hanioglu, 2022). On the other hand, it makes it highly challenging to coordinate between hospital resources, staff, and contractors. Otherwise, it can create communication gaps and delay progress. Moreover, the administration has to ensure that they have the resources and capabilities for the DIY aspects. Otherwise, the project completion cannot be successful and they may have to correct mistakes after construction is finished, which can make it even more expensive (Hanioglu, 2022). It also increases the burden on the administration significantly, especially since they have to ensure compliance and quality standards for their own work and contractors' work.

## **Conclusion**

In conclusion, the essay has covered four contracting methods in project management. Explaining them individually suggests that the turnkey method is suitable for efficiency and simplified management and coordination, but has higher costs. This research has highlighted that, Multi-contracting allows for selecting specialised contractors individually, but it makes management challenging. On the other hand, DIY offers project owners the most control over their projects, but increases risks if they do not have enough expertise. Meanwhile, multi-contracting and DIY combined create a hybrid approach that is an ideal balance, but it is highly challenging to coordinate and uphold compliance and quality requirements.

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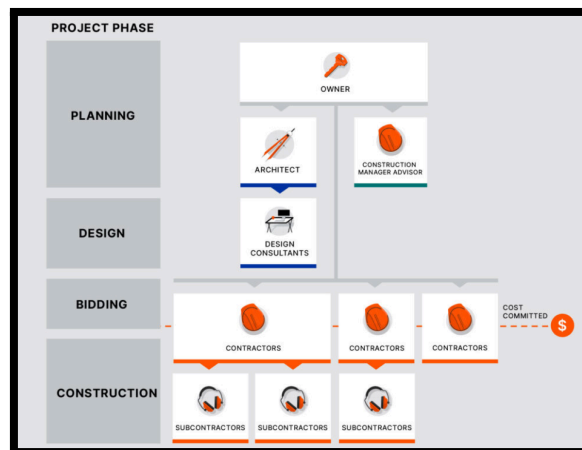
## Appendices

### Appendix 1: Turnkey Contracting



Source: (Álvarez-Pozo *et al.*, 2024)

### Appendix 2: Multi-Contracting



Source: (Sun and Sun, 2021)