

System Improvement for the Management of Subcontracted Service Performance Information in Korea's Public Construction

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Abstract: To date, in South Korea, construction subcontracted services have been illicitly conducted without clear grounds, but to establish a sound trading order between the principal contractors and the subcontractors, the government recently began complementing the relevant system to legalize and systematically manage subcontracted services. In line with this move, this study prepared a system designed to manage construction subcontractors' service performance results in a bid to legalize subcontracted services. Towards this end, measures were worked out to integrate subcontracted services and contracted services based on the system for the management of contracted construction technology service performance results. The study findings can be used to formulate measures to protect subcontractors, such as the prevention of low-priced subcontracts, by managing objective, reliable subcontracted service performance results.

1 INTRODUCTION

Subcontract refers to the arrangement by which when the principal contractor commissions a subcontractor to carryout construction work or service, or when the principal contractor re-commissions the construction work or service commissioned by another project operator to the subcontractor, the subcontractor performs the commissioned construction work or service and supplies, delivers, or provides the output to the principal contractor and receives the corresponding price (MOLIT, 2013).

To date, in South Korea, many subcontracted construction technology services have been illicitly and unfairly conducted between principal contractors and subcontractors, through the later issue of written contracts, breach of obligation of notice, delay and adjustment of design changes, non-payment of interests on delay, and failure to maintain certain cash settlement rates. To resolve these problems, the government is currently taking measures to legalize subcontracted services, with a view to establishing a sound trading order between principal contractors and subcontractors; to revise the relevant laws, with a view to systematically managing the transactions; and to prepare the

grounds for implementing construction technology service subcontracts in a bid to improve the relevant systems (KICT, 2013).

In an effort to legalize subcontracted services, this study sought to prepare a system designed to manage subcontractors' service performance results. Towards this end, measures were worked out to integrate the management of contracted and subcontracted services based on the system for the management of contracted construction technology service performance results. As a result, the output of this study can identify the objective, reliable service status between contractors and subcontractors, and can prevent low-priced subcontracts, thus achieving the transparent management of subcontracted services.

2 PROCEDURE FOR THE MANAGEMENT OF SUBCONTRACTED SERVICE PERFORMANCE

South Korea does not have procedures for inquiring, confirming, or approving subcontracted services according to individual ordering agencies.

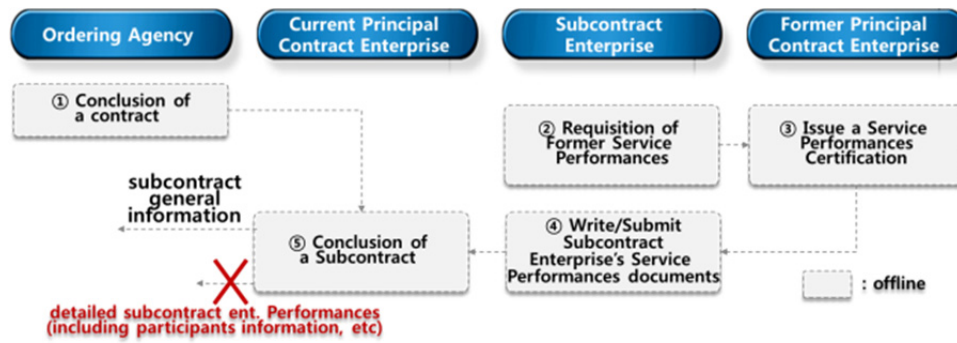


Figure 1: Flow of managing contracted and subcontracted Service Performances (As-Is).

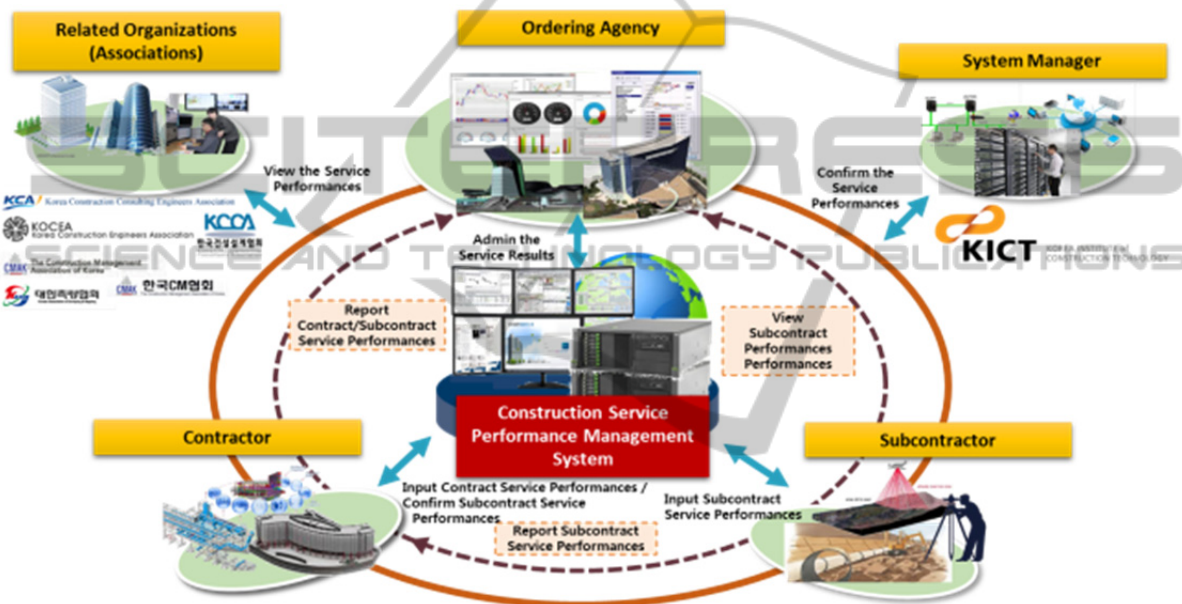


Figure 2: Schematic diagram of the subcontracted service performance management system.

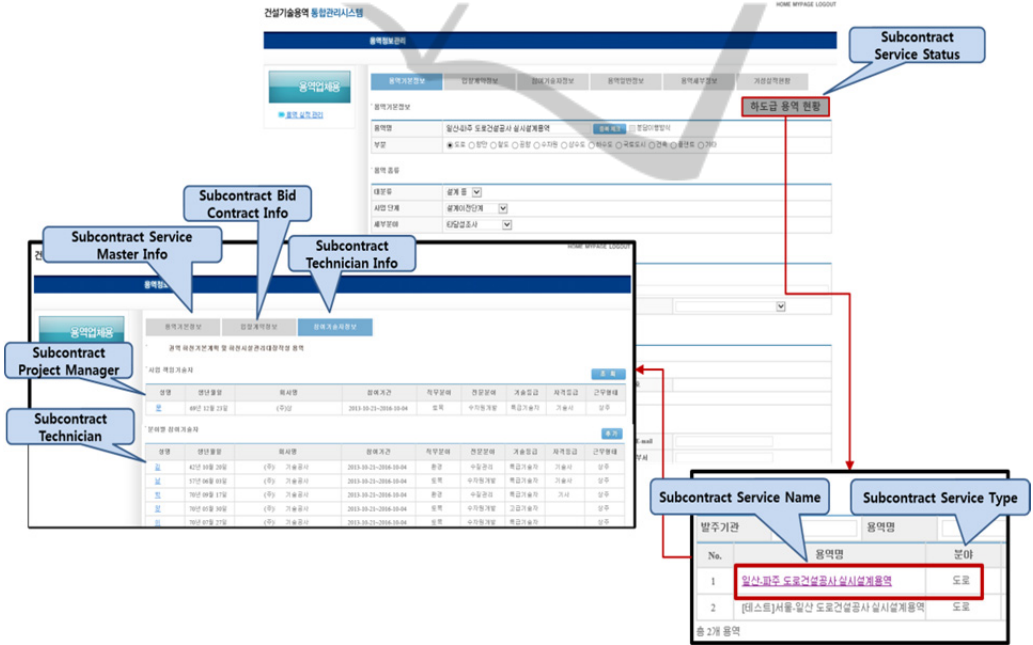
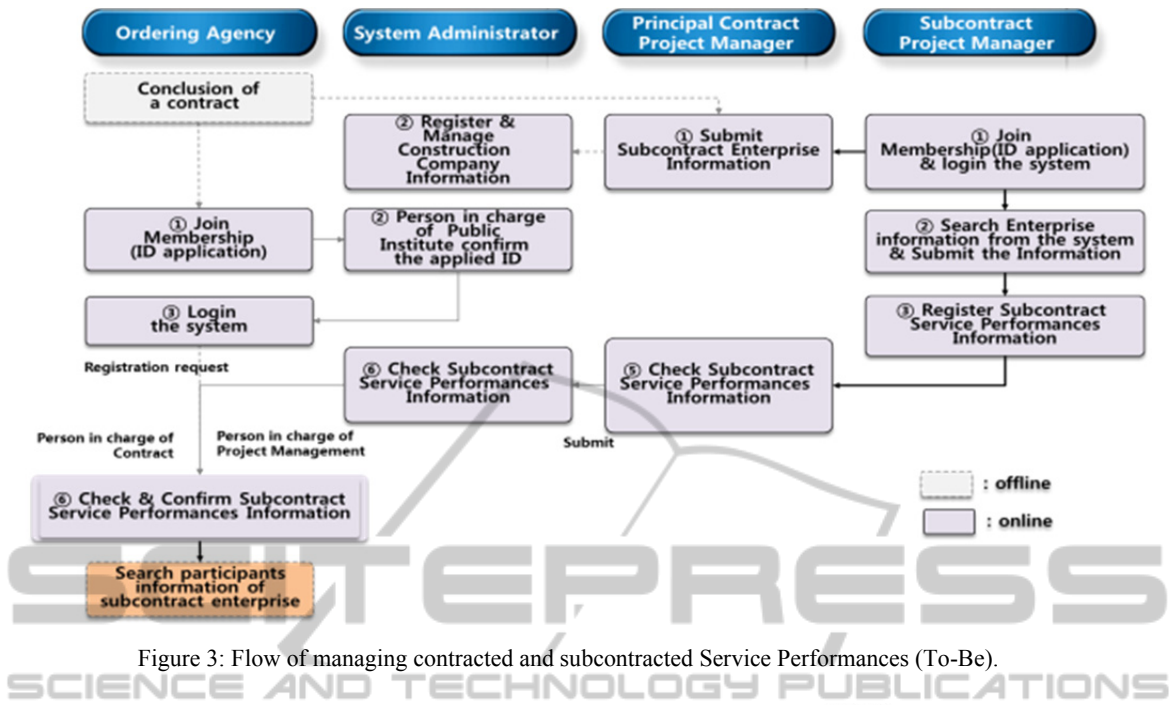
Yet, in domestic public construction projects, when bidding for construction projects preferably with the lowest prices, the bidders should submit the types and volume of the works to be subcontracted to the ordering agency for approval, and the subcontract plans specifying the method and criteria for selecting subcontractors. When signing the contract, the bidder should submit the subcontract plan to the ordering agency, specifying the subcontractors' name, location, and selection methods by work type, as well as the construction amount to be subcontracted and the price thereof, and the subcontract ratio.

As shown in Figure 1, the subcontract enterprise is issued the service performance certifications by the former principal contract enterprises, and submit the service performance documents to the current contract enterprise. But, the contract enterprise don't

submit the service performance documents of subcontract enterprise to the ordering agency. Therefore, it is impossible for the ordering agency to search subcontract enterprise's service performance information until now.

Thus, this study worked out a system for the management of subcontracted construction services similar to the system for the management of subcontracted construction work. In the proposed procedure, the principal service contractor receives the subcontracted service results from the subcontractor, and reports such subcontracted service results as well as the contracted service results to the ordering agency. Figure 2 is the schematic diagram of the subcontracted service performance management system.

The subcontractor inputs the subcontracted service results in the system for the management of the



construction technology service results, and reports this fact to the principal contractor, who confirms the subcontracted service performance information and inputs his contracted service performance information in the system. The input service performance information is reported online to the ordering agency by the principal contractor's service manager.

The ordering agency reviews and approves or rejects the reported contracted/subcontracted service performance information. The approved service performance information is used in submitting service performance confirmation data in other service bids. The following diagram shows the procedure for managing contracted and subcontracted service results (Seongjin Kim, 2013).

As shown in Figure 3, the principal contractor's service manager reports the service performance information, and the system administrator reviews it and then reports it to the ordering agency. At the ordering agency, the contract staffer and the project manager review the service performance information by relevant area, and approve or reject it.

3 DEVELOPMENT THE MANAGEMENT SYSTEM OF SUBCONTRACTED SERVICE PERFORMANCE

According to the hitherto proposed measures for the management of subcontracted service results, the subcontracted service performance is not directly reported by the subcontractor to the ordering agency, but by the principal contractor.

In this study, a screen was configured where the contracted service name can be inputted in the system for the management of construction technology service results, and then the subcontracted service performance information can be inputted. Also, the screen was configured in such a way that when configuring the subcontracted service performance information screen, only the basic service information, bid and contract information, and participating engineer information can be inputted and managed, excluding the detailed information on roads, water, harbors, and other service areas included in the contracted service performance information. Figure 4 shows the screen shot of the subcontracted service performance management system:

As shown in Figure 4, the principal contractor can inquire about the subcontracted service performance information according to the subcontracts by work type. The subcontracted service performance information, however, can be revised directly by the subcontractor.

The study test operated the management of service performance results of five local national land agencies under the control of Ministry of Land, infrastructure and Transport(MOLIT). As a result, national land management agencies were found to perform services in diverse areas, such as roads and water, and contractors with relevant agencies and relevant parties were surveyed, revealing that the service contracts were concluded in diverse types.

The following shows an overview of national land management agencies' services:

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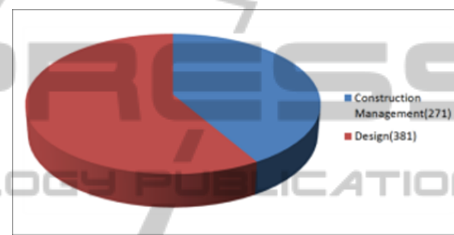


Figure 5: Construction technology service areas.

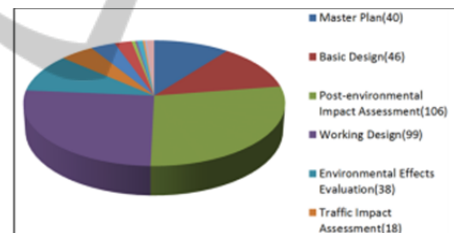


Figure 6: Detailed service areas.

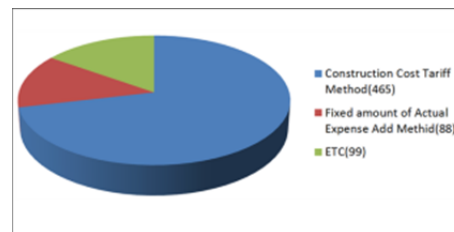


Figure 7: Contracted service price payment.

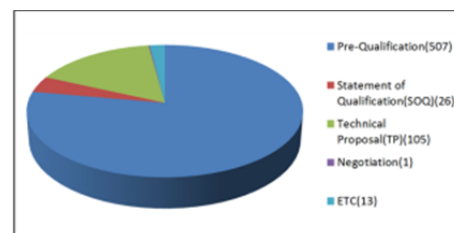


Figure 8: Method of selecting service firms methods.

4 CONCLUSIONS

To date, in South Korea, the management of subcontracted construction technology services has not been properly conducted, leading to many disputes between principal contractors and subcontractors. To resolve these problems, there was a need to ensure the transparent management of the subcontracted service performance results with the participation by all the parties, including the ordering agency, principal contractor, and subcontractor.

To prepare a system for the management of such subcontracted construction technology service performance results, this study established the relations between contracted and subcontracted services and prepared the procedure for handling the subcontracted service performance results. Also, a screen was prepared for managing service performance results, and the system for the management of service results was test-operated targeting national land management agencies.

The proposed system can integrate the management of all contracted and subcontracted service performance results – which have been managed by individual public agencies – to enable the identification of the overview of the public sector's service contract conclusion methods in this country. Also, the subcontracted service performance is reported to the ordering agency, enabling inquiry about the overview of bans on re-subcontracts and subcontractors' qualifications, and enhancing the transparency and fairness of subcontracts, as well as contributing to the protection and fostering of small and medium-sized subcontractors.

The research on the integrated service management system should continue to link all construction technology service performance information and service evaluation information so as to enable the one-stop service management service in the public sector.

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