

Summary of the 13th Contract Review Committee

Okinawa Institute of Science and Technology (OIST) Graduate University

1. Date and time: February 6, 2018 (Tuesday), 9:30-11:30
2. Venue: Conference Square M+ Middle 1, Tokyo
3. Attending members: Manabu Ofuchi, Hidemitsu Sakihama, Itaru Shimizu, Toshiaki Tada, Hideaki Tanaka, Susumu Namerikawa

4. Summary of the proceedings
 - Overview of OIST
The secretariat explained the overview of OIST.

 - Agenda
 - (1) Selection of topics subject to deliberation
It was reported by Mr. Shimizu that the committee selected three contracts from among 200 contracts as subject to its deliberation while taking into account contract methods employed.
(2 contracts of public construction, and 1 contract of goods and services)

 - (2) Deliberation of the three individual contracts
 - [Contracts of Public Construction]
 - i. Construction of new machinery facilities at Lab. 4 of OIST
 - ii. Second-phase construction of new facilities at the Child Development Center of OIST, and construction of other facilities
 - [Contract of Goods and Services]
 - iii. Purchase of a cryogen-free dilution refrigerator

 - Matters reported at the committee meeting
The secretariat explained the result of a survey conducted on procurement-price differences between Japan and overseas, shift of past procurement contracts, and category-by-category analysis.

Reasons for selecting the three contracts for deliberation

Commissioner in charge: Itaru Shimizu

[Contracts of Public Construction]

1. General competitive bidding: No. 34 (Construction of new machinery facilities at Lab. 4 of OIST)

Reasons: i. The contract value was large.

ii. The percentage ratio of the successful bid price against the assumed contract price was high at 98.4%, which is higher than other public works contracts.

2. Negotiated contract: No. 106 (Second-phase construction of new facilities at the Child Development Center of OIST, and construction of other facilities)

Reasons: i. “An emergency situation” was cited as a reason for not having adopted competitive bidding.

ii. The percentage ratio of the actual contract price against the assumed contract price was high at 99.5%.

[Contract of Goods and Services]

3. General competitive bidding: No. 11 (Purchase of a cryogen-free dilution refrigerator)

Reasons: i. Only one company tendered for the contract.

ii. The percentage ratio of the successful bid price against the assumed contract price was 100%.

(2) Deliberation of the three individual contracts

1. Contracts of Public Construction

i. Construction of new machinery facilities at Lab. 4 of OIST (General competitive bidding)

<Summary of the Contract>

- Construction of new machinery facilities at Lab. 4
- Construction was aimed at establishing the world's most advanced large-scale laboratory facilities in the fields of science and engineering (at least 18,000 m²). Construction was costly because it involved establishing advanced air-conditioning and sanitary facilities.
- Bidding conducted based on the initial public notice turned out to be unsuccessful because there was a great gap between the assumed contract price and the bid price. Based on the result, participants in the auction were interviewed regarding their estimated price offers. But fruitful proposals were not put forward from them.
- Securing subcontractors for the project in question was found difficult due to the lack of engineers because construction demand was brisk in Okinawa Prefecture. The situation left contractors with no choice but to secure engineers from other prefectures, which resulted in a surge in manpower costs, categorized as indirect expenses, eventually pushing up bid prices for the contract.
- The second public notice was issued without changing the requirements for participation in competitive bidding after the content of construction, the estimated construction cost and the assumed contract price were reviewed. Two companies tendered in the first auction under the second public notice. One of the two became a successful bidder as its bid price was closer to the assumed contract prices. OIST concluded a contract with the bidder.
- The assumed contract price under the second public notice was roughly in line with the underlying market price. This is believed to have resulted in the percentage ratio of the successful bid price against the assumed contract price standing at a high level.

| Comments from the committee Member | Explanation from OIST |
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| What were specific machinery facilities? | They were facilities related to the building of Lab. 4, including air-conditioning, ventilation and sanitary systems (toilets and water-supply systems). The air-conditioning system included special air-conditioning equipment |

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| | necessary for a research laboratory, leading to the construction project being expensive. |
| The first auction ended in failure. How much is the current gap between the assumed contract price and the bid price in Okinawa Prefecture? Is the gap significant? | The gap is significant. The trend was seen not only in the construction of machinery facilities but also in general construction. Hotel construction has been booming in Okinawa Prefecture, resulting in manpower shortage and the subsequent surge of construction costs. Manpower shortage, including the shortage of skilled engineers, is serious in Okinawa than that of Tokyo and quake-hit Kumamoto Prefecture. |
| Was the initial assumed contract price set based on the market situation in Okinawa? Was the competitive bidding really practical? | The proposed laboratory facilities were designed based on the market situation in Okinawa. The assumed contract price was set in light of unit labor costs in various work fields and material prices in Okinawa, listed in construction industry magazines “Sekisan Shiryo” “Bukka Shiryo” covering estimated construction cost data and prices of various products. However, the bid prices offered in the auction went beyond the initial assumption. |
| Did other projects end in unsuccessful bidding? Were the assumed contract prices set at an appropriate level? | Generally, there would not be a great gap between assumed contract prices and bid prices because assumed contract prices are set based on estimated construction cost data. However, bidding may be affected by a major natural disaster and a possible concentration of Olympic-related construction demand in Tokyo. |
| The Lab. 4 project includes some special | All-out efforts were made from the design |

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| <p>facilities. Could it be possible to make the project less costly by using general machinery facilities?</p> | <p>stage, including consultation with the design office.</p> <p>After the initial auction ended in failure, participants in the auction were interviewed to have their proposals reflected on the design of the OIST project. However, it was found through the interviews that the problem was largely with labor cost rather than technical issues.</p> <p>OIST has endeavored to make the project’s design efficient and cost saving while listening to the opinions of the private sector.</p> |
| <p>Isn’t it important to take into account the opinions of the private sector while not sticking to particular specifications (functions)? Why not introduce new technologies and energy-saving measures?</p> | <p>Yes, it is.</p> <p>Regarding new projects, OIST has been looking for efficient design and procurement methods. Specifically, it has been collecting information on the advisability of adopting the design-to-construction method—a contract method intended to reflect the views of design and constructors in an integrated manner.</p> |
| <p>Isn’t it necessary to ensure that the project be undertaken in conformity with the initial cost estimate?</p> <p>Isn’t it necessary to introduce the so-called “open-book” method in the future?</p> | <p>OIST has never employed the “open-book” method* in the past.</p> <p>*The “open-book” method calls for a constructor to submit the details of engineering work before bidding is held to disclose the payment amount to subcontractors regarding the project. The “open-book” method has already been adopted by some government agencies in their public works projects as “a method for the advanced submission of an engineering system.”</p> |

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| <p style="text-align: center;">—</p> | <p>The state and municipalities have been advised by the Ministry of Land, Infrastructure, Transport and Tourism to refrain from disclosing the assumed contract prices of their public works projects before bidding is held.</p> <p>OIST is considering introducing the design-to-construction method* and PFI. By setting the targeted contract price instead of the assumed contract price, OIST aims to enhance competition among tender participants. OIST intends to consult with the Cabinet Office.</p> <p>*The “design-to-construction method” calls for an order for design and engineering to be placed in an integrated manner.</p> |
| <p>The Lab. 4 project was involving the construction of new machinery facilities, but as for other projects involving only facility renewal, is it possible to delay the placement of orders until engineering demand peaks out as a means of curbing engineering costs?</p> | <p>It is not advisable to delay the renewal of machinery facilities. When budget for facility renewal is not approved, renewal work is conducted on a priority basis while managing the limited budgetary sources.</p> |

ii. Second-phase construction of new facilities at the Child Development Center of OIST, and construction of other facilities (Negotiated contract)

< Summary of the Contract >

- Expanding existing facilities (construction, exterior, interior) became necessary in view of the increase in their use at the Child Development Center.
- An auction based on a general competitive method was held under the initial public notice. However, no parties had offered successful bid prices even until the prescribed number of auctions held. Under these circumstances, OIST negotiated with the firm which offered the lowest bid price. But the negotiation ended in failure amid soaring

prices applied to construction work in Okinawa Prefecture. Also cited was the difficulty of securing skilled engineers due to large-scale construction projects being under way at multiple places in the prefecture.

- The second public notice was issued for another auction based on a general competitive method under which relaxation of requirements for participation was made. However, no successful bidder emerged when the number of auctions held reached the prescribed maximum number. OIST negotiated with the firm which offered the lowest bid price. But the negotiation ended in failure due to the same reasons for which the previous negotiation failed.
- It was found that the assumed contract price set by OIST was not reflective of the underlying price trend of the construction market in Okinawa Prefecture.
- It was imperative for the Child Development Center expansion project to get started as soon as possible because its delay would have affected the OIST's plan to accommodate more children at the center in line with the employment of more teachers and researchers. It was also necessary for the supplementary budget allotted for the project to be executed within the current fiscal year.
- In view of the situation mentioned above, a part of the contents of the order was changed downwardly while the assumed contract price was reviewed. Another auction was held based on the new conditions. OIST negotiated with Company A, the lowest bidder in the auction, and concluded a contract with the company in order to get the project started as soon as possible.
- The contract price OIST agreed to pay through its negotiation with Company A after repeated failures of competitive bidding was the minimum acceptable level for the company in view of the underlying market trend. Consequently, the percentage ratio of the successful bid price against the assumed contract price ended up being at a high level.

| Comments from the Committee Member | Explanation from OIST |
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| <p>Does nursing-care service get affected due to a change to the content of the initial project at the Child Development Center? If it was found that nursing-care service could not be affected, could it have been possible to devise a Child Development Center project that would likely lead to successful bidding in view of the prospect</p> | <p>The auction for the Child Development Center project ended in failure. However, the difference between the bid price and the assumed contract price was small. After no successful bidder emerged in the auction, OIST looked for a negotiated contract that could be concluded without changing the conditions. But the attempt</p> |

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| <p>that the project would take the same course as the Lab. 4 project?</p> | <p>ended in failure.</p> <p>The downward revision to the content of the project was limited to the fields that would less affect the function of the center, including blackboards and outdoor tree planting. These fields were omitted from the initial project because installing them after construction work is completed was considered possible.</p> <p>The project was meant to build good-quality facilities at reasonable costs. Based on this idea, OIST avoided curtailing the content of the project too excessively at the beginning.</p> |
| <p>Was there a major change?</p> | <p>There was not a major change. There was not a change in the area subject to construction work.</p> |
| <p>What was a reason why the contract price was raised from the initial assumed price?</p> | <p>The contract price was raised due to soaring manpower costs amid the difficulty of securing skilled engineers. Material procurement costs did not change much.</p> |
| <p>From the viewpoint of procedures, was it necessary to hold the second auction? Could it have been possible to conclude a negotiated contract after the first auction?</p> | <p>It has been advised by authorities that a state-run university should hold two rounds of auctions.</p> <p>OIST set the auction schedule at early dates in view of a possibility that the first auction could fail.</p> |
| <p>It is necessary to take into account costs associated with the auction process. If auction procedures prolong, the total cost will increase.</p> | <p>While taking into account the overall situation, OIST is prepared to quicken its contract negotiations if the first auction turns out to be unsuccessful, so that the contract could be concluded at an early time.</p> |
| <p>It appears that many construction companies can participate in a tender for</p> | <p>Yes, it is. OIST has invited construction companies to its tenders. However, no</p> |

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| <p>general construction projects. However, in the case of tenders sponsored by OIST, the number of bidders has been only two or three. Is this usual at OIST?</p> | <p>response has sometimes come from them, while some of them declined to participate.</p> <p>Projects sponsored by OIST involve engineering work undertakable by local construction companies. Therefore, OIST has contacted directly such companies. However, they have declined the offers for public works, citing tight schedule due to the undertaking of private-sector construction projects. OIST will continue to make efforts so that many construction firms will participate in its tenders.</p> <p>It is likely that more than 10 companies to participate in a tender for a civil engineering project. However, it is usual to see participation by a few companies in the case of a tender for a construction project like this. Under the second public notice, OIST relaxed requirements for participation in the tender, a step that covered almost all engineering companies operating in Okinawa Prefecture. OIST approached these companies individually but only a few of them tendered.</p> |
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2. Contract of Goods and Services

iii. Purchase of a cryogen-free dilution refrigerator (General competitive bidding)

< Summary of the Contract >

- Given the budget allotted for buying the research equipment being more than 50 million yen, the committee tasked with deciding specifications was launched for product selection. The product to be bought was decided through a general competitive bidding.
- It was decided that a product made by Company B would be bought under this procurement. Specifications decided by the committee envisaged the product made

by Company B. However, it was decided that a general competitive bidding, including screening of tender participants, would be held in light of the fact that products similar to the one selected existed in the market.

- The assumed contract price was decided based on past purchases of the same product by OIST and other organizations, and an estimate made by Company R, a sales agent for the product and winner of the bidding, and presented to OIST as a reference.
- It was found that OIST and other domestic organizations had bought products made by Company B in the past under the contracts only with Company R. The labeled price of the product was the same as the contract price.
- As for the product in question, OIST judged the estimated reference price presented by Company R, the same as the labeled price, as appropriate and adopted it as an assumed contract price.
- Consequently, the percentage ratio of the successful bid price against the assumed contract price was 100%.

| Comments from the Committee Member | Explanation from OIST |
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| Did OIST envisage a Company B product initially? | <p>The laboratory which would place an order initially designated a Company B product. However, it was decided that a general competitive bidding, including screening of tender participants, would be held in light of the fact that products similar to the one selected existed in the market.</p> <p>The laboratory had already used the same type of product.</p> |
| <p>Did the similar products that existed in the market characteristically differ from the one selected?</p> <p>Could it have been rational to have concluded a negotiated contract instead of holding a general competitive bidding in view of the fact that OIST had a preference for a Company B product?</p> | <p>The product was not an ordinary refrigerator but a special refrigerator, which means that specifications to be adopted were limited.</p> <p>However, the reason to choose a negotiated was weak in view of the fact that products similar to the one selected existed in the market.</p> <p>In addition, a negotiated contract was not adopted because OIST was not able to</p> |

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| | confirm that Company R was the only domestic sales agent handling the product. |
| Couldn't it have been possible to negotiate the prices through the negotiated contract? | In the past purchases of products made by Company B by OIST and other organizations, the labeled price of the product was the same as the contract price. In view of this fact, OIST judged that price-cutting negotiations would be difficult, and decided not to negotiate the prices during the stage of contract procedures. |
| Striking a balance between ensuring transparency and pursuing efficiency is important. | — |
| Does the contract contain a clause that covers maintenance expenses? | Maintenance for the first one year will be covered under the contract. Such expenses beyond the one-year period will be covered under another contract being concluded. |
| Why not make price negotiations so that the coverage of maintenance expenses would be packaged into the contract? | OIST considers making such negotiations when requesting CAPEX. OIST exchanged views with overseas agencies, including IST Austria and the Weizmann Institute of Science. According to them, similar price negotiations are under way. |
| Did OIST verify the appropriateness of the document presented by Company R to certify the labeled price? | Yes, we did. |
| Verifying the appropriateness of the price presented by Company R is important. Did OIST verify the appropriateness of the price of each of component items that constitute the refrigerator system? | The price of the entire refrigerator system was checked regarding its appropriateness. However, the price of each of accessories that constitute the system was not checked. |
| Did OIST check the prices of similar products offered by other companies? | Yes, OIST compared the price offered by Company R with the prices presented by |

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| | other companies. |
| If the prices of the products offered by other companies had been cheaper, could OIST have purchased them? | No. The specifications of the products made by other companies did not meet the requirements set by OIST. |

(3) Matters reported by OIST

i. Report on a survey of price differences between Japan and overseas regarding research materials and equipment (presented at the Research Administrator Council in 2017)

< Summary of the report >

- Opinions were filed by foreign researchers. According to them, domestic prices of reagents and expendables are higher than their overseas prices.
- Data were collected and analyzed regarding import products distribution routes for research materials and equipment made by overseas companies and their respective prices in Japanese and overseas markets to grasp the price differences between Japan and overseas and identify the reasons for the differences.
- The analysis of the price differences found that research materials and equipment are sold at the lowest prices in the country where their manufacturers are headquartered.
- It was found that prices are high for products for which no rivalry exists.
- The extent of price differences differs according to the price range to which the product belongs.
- The general tendency is that foreign-made expendables are sold at higher prices in Japan while foreign-made reagents are sold at lower prices in Japan.
- As for chromatography products, Japanese manufacturers have maintained a proven track record in technological expertise and services for years. To counter Japanese rivals, foreign manufacturers may have lowered the prices of their products when marketing them in Japan.
- It was found through the analysis that price differences between Japan and overseas are not the same for all products. The differences are generally determined by such factors as the price range to which the product belongs and competitive situation of the product category.
- The survey of the price differences was meaningful as it may help OIST in negotiations with vendors. The survey may not produce fruitful results in the immediate future. But in view of the fact that this kind of survey has not been conducted at all in the field of public procurement, it was meaningful, especially from

the viewpoint of verifying the appropriateness and rationality of the purchased prices from a global angle.

| Comments from the Committee Member | Explanation from OIST |
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| The survey was conducted excellently. | — |
| What is important is ensuring that the price difference is within a range that is reasonable in terms of exchange rates, distribution costs and supply-demand balance. | — |
| How does OIST see exchange-rate fluctuations? | The unified exchange rate was used when purchased prices were calculated in the survey. It is possible that exchange-rate fluctuations would affect the purchased prices significantly. |
| Is the price different within a reasonable range? | There is an impression that the products in question are sold at high prices in Asian countries including Japan, China and South Korea. |
| What was the methodology for obtaining price information in foreign countries? | OIST requested each foreign manufacturer for price estimation through its website. |
| What percentage of price differences was seen? | The purpose of the survey was to grasp the overall trend of price differences. Therefore, OIST does not have numerical data regarding the price differences. |

ii. Report on research materials and equipment purchases

< Summary of the report >

- Report on research materials and equipment purchases that have been made since 2012.
- Past purchases of research equipment, outsourcing expenses and maintenance fees were analyzed to explore ways to cut costs in these areas, which account for a major portion of the overall cost of OIST activities.
- Explanation focused on research CAPEX (equipment valued at 3 million yen or

more).

- More than 1.6 billion yen was budgeted for research CAPEX in fiscal 2016, representing more than 20% of the total budget. A total of 130 purchase contracts were concluded in the year regarding CAPEX. One contract was valued at an average 15 million yen.
- OIST believes that further cost-cutting is possible in equipment procurement if prospective suppliers are exposed to competition during the stage of cost estimation.
- Currently, many research laboratories designate specific research equipment to be bought when making budgetary request. In that case, however, competition is only between sales agents handling the product being designated. Significant merits cannot be expected from such competition.
- As a means of further cost-cutting, OIST is considering having procurement experts take part in the process of choosing equipment to be bought before making budgetary request. This process supports such equipment selection that competition between multiple manufacturers can be assumed.
- Under this selection method, OIST contacts multiple manufacturers during the stage of selecting equipment, making them recognize competition and placing OIST in an advantageous position in price negotiations.
- The OIST's section in charge of procurement is staffed with employees with research experiences and those with marketing experiences at sales agents, and measures explained above are in place.
- OIST believes that in view of cases of overseas research institutions, it may be necessary to make price negotiations for research equipment, while having the contract cover maintenance expenses for multiple years.

| Comments from the Committee Member | Explanation from OIST |
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| — | <p>Overseas research organizations, such as IST Austria and the Weizmann Institute of Science, make price negotiations with manufacturers without disclosing the products they want, a method aimed at enhancing price competition.</p> <p>When buying a certain research device, the Weizmann Institute of Science, for example, aims to reflect about 10 years of maintenance expenses covered under the</p> |

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| | <p>contract being negotiated. Even if the equipment it would buy has already been decided, the institute would not disclose it while price competition is under way between prospective suppliers. It is said the institution would eventually purchase the intended equipment under these circumstances.</p> <p>OIST thinks it is necessary to take a similar approach in the future.</p> |
| <p>Enhancing competition between brands is effective. Researchers are particular about specifications of research equipment being used by them. Therefore, it is necessary to respect their opinions while promoting competition between brands. If competition is intensified, prices will be more negotiable.</p> | <p>The OIST's section in charge of procurement is staffed with three employees who have been experienced in research while having deep knowledge of the equipment being introduced. The three are involved in the selection of research equipment while working with the laboratory which made purchase request.</p> |
| <p>It is difficult to decide what extent researchers' intention should be reflected in the purchase of research equipment. If their intention is fully respected, a tender being held for the purchase will be ceremonious. If specifications are to be narrowed in line with researchers' wish, it is necessary to rationally explain that such specifications would produce intended research results.</p> | <p>—</p> |

iii. Report on purchases of expendables

< Summary of the purchases >

- Purchases of expendables and reagents totaled 9,600 in fiscal 2016, accounting for 46% of the total purchases of 21,600. In terms of value, however, purchases of expendables and reagents, whose unit prices are both relatively low, represent 6% of the total purchase.

- Three Internet sites are available at OIST to make expendable purchases easier. Data of expendable purchases made via the Internet sites are linked to the OIST’s financial accounting system. The order will be reflected in the accounting system the following day.
- A supplies store similar to a co-op store is set up at OIST.
- A state-run research and development entity (hereinafter called Entity A) purchases expendables through Internet shopping sites, as OIST does. Entity A, however, received an opinion from the Board of Audit of Japan, in which the entity was advised to take remedial measures, including introducing a general competitive bidding, so that it can enjoy benefits from competition.
- As part of efforts to look for easier methods for buying small-value expendables, OIST, like Entity A, places online orders. Based on the Board of Audit of Japan opinion shown above, OIST is considering better ways of further promoting procurement efficiency in the future.

| Comments from the Committee Member | Explanation from OIST |
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| Was the problem with Entity A having placed purchase orders through Internet sites without checking information provided by other similar websites? | According to the report compiled by the Board of Audit of Japan, Entity A buys expendables through 11 shopping sites. A same kind of product was available through multiple sites but its price was different between the sites. Discretionary access to all sites was possible for Entity A. But the purchase system developed for Entity A did not guide the entity to the site that offered the lowest price. It was also pointed out that contract procedures through the Internet system did not reflect the prices seen in general competitive bidding, government procurement contracts and assumed contract prices. |
| — | OIST thinks that what extent clerical costs should be allotted to buying small-value office supplies is controversial. |
| — | The three online sites are currently |

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| | available at OIST for expendable buying. The problem of price differences for the same product has not been detected at these sites because the same products are not offered by multiple sites. If the business scale is to expand in the future, however, it may be advisable to establish a system referencing multiple sites. |
| A state-run Askul-like company in Britain, for example, has chosen several companies as candidate suppliers for each product item. These companies are initially exposed to competition regarding each product item. | — |
| At other universities, several of them have formed a team for joint procurement. Isn't it possible to study the possibility of introducing joint procurement in Okinawa Prefecture, even though it seems difficult due to its geographical location? | — |
| Some private schools have established stock companies through which they were able to achieve a discount of more than 50% in procurement. This example cannot be directly applied to a quasi-state-run organization because a tender is involved. What is important is in-house efforts to come up with a better idea. | — |

(4) Future

Gratitude was expressed to committee members for support that had been extended by them during a two-year tenure.

The members will be notified of a new tenure through the secretariat.