Process Outline of BME Equipment Acquisition for the New NCCS

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Introduction

In 2022, the 24-storey new National Cancer Centre Singapore (NCCS) will be launched within the Singapore General Hospital (SGH) campus. This new building will be able to house more facilities for cancer care, research and education, thereby enabling us to better focus on our experience and expertise in preventing, screening, diagnosing, and treating cancer, in order to provide our patients with the best possible prognosis.

The inaugural NCCS was built in 1993 as a unit of the SGH to conduct clinical and basic research on cancer, as well as to provide clinical services to cancer patients. It was later moved into the prevailing 6-storey building. However, due to rising demands for cancer treatment, the facilities in the current NCCS has to be further expanded. With the proposed increased capacity, the new NCCS will be able to house state-of-the-art Biomedical Engineering (BME) equipment to provide the best in class cancer treatment and research. Hence, an effective and efficient process has to be in place in order to successfully acquire these aforementioned sophisticated equipment, thereby ensuring that the facilities are fully operational.

Objective

To outline and implement the process of acquiring BME equipment for the new NCCS building.

Methodology

The following flow-chart will describe the processes involved in acquiring the BME equipment.

- User will raise request and provide catalogs for the equipment that the department require to purchase.
- Cost estimation for the equipment will be considered.
- Specifications for the equipment will be defined.
- Initiating • The project plan schedule will be outlined. This include milestones such as writing specifications, critical coordination works, and testing and commissioning.
 - Request for Proposal (RFP)/Invitation to Quote (ITQ) will be launched.
 - Site visits will be arranged to better understand the site condition.
 - Vendor(s) to make clarifications if they have any doubt and submit RFP/ITQ.

Result

The methodology of the acquisition process will apply to most BME equipment such as Angiography Systems, Magnetic Resonance Imaging (MRI), Computed Tomography (CT), Linear Accelerators (LINACs). The following flow-chart will elaborate on the process leading to successful commissioning of the equipment, and thereby achieving the desired operational standards of the equipment.



- Submitted RFPs/ITQs will be evaluated, and Vendor(s) that are able to meet the specifications will be identified. Planning
 - Presentation, demonstration, and/or provision of trial unit from Vendor(s), if necessary. • Negotiation on price, specifications, and/or Terms & Conditions, where applicable.
 - Health Technology Assessment (HTA) approval will be obtained.
 - Contract agreement will be established with awarded Vendor.
 - Upon the release of Purchase Order (PO), the Vendor will proceed to execute and manage the manufacturing and shipment of equipment.
 - To cater to the requirements of the equipment, coordination work between NCCS, main contractor, and Vendor will be employed for the site preparation. • Meanwhile, the order status of the equipment will be closely monitored.
 - Before the equipment is delivered, the Vendor and main contractor has to ensure that the site condition adheres to all safety guidelines and procedures.
 - The equipment will then be delivered and positioned as planned.
 - Physical/Mechanical installation takes place.
 - Calibration, testing, and commissioning of equipment is performed.

Controlling

Delivery

Executing



Conclusion

With the adoption of the process illustrated above, the purchasing and installation workflow can be managed and executed smoothly. Thus, ensuring maximum efficiency and minimal wastage of time and effort. In return, the extra man-hours can be saved and reallocated accordingly for better use. In conclusion, the acquisition process of BME equipment will bring certainty and conviction to the transition plan, which in turn will result in a smooth process to the new NCCS building that everyone would be proud of.