



Government of Samoa

Health Facilities and Assets Management and Maintenance Strategy

FY2022/23 – FY2026/27

MINISTRY OF HEALTH

ACRONYMS

AMSS	Assets Management and Maintenance Support Services
F&P	Finance and Procurement
FY	Financial Year
HCWM	Healthcare Waste Management
HFAMM	Health Facilities and Assets Management and Maintenance
HICT	Health Information and Communication Technology
HPED	Health Protection and Enforcement Division
HSP	Health Sector Plan 2019/20 – 2029/30
HSCRM	Health Sector Coordination, Resourcing and Monitoring
IA	Internal Audit
LC	Legal Consultant
MOH MCWC	Ministry of Health Management Capital Works Committee
MOF	Ministry of Finance
MOH	Ministry of Health
M&E	Monitoring and Evaluation
MTDs	Multi-Disciplinary Teams
MTIHH	Malietao Tanumafili II Hospital
NHS	National Health Service
OSH	Occupational Safety and Health
TTMH	Tupua Tamasese Meaole Hospital

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INTRODUCTION

Background Information:

The Government of Samoa had instituted structural and administrative changes for the Ministry of Health (MOH) by February 1st, 2019, which saw the enactment of the MOH Amendment Act 2019. The latter therefore enabled the merging of the two entities: National Health Services (NHS) and Ministry of Health, and expected the revival of the country's focus on prevention, community engagement in health; the strengthening of primary health care (Public health) and reducing costs associated with duplicated organizational arrangements. The merging of the two entities: NHS which was mandated under the National Health Service Act 2006 (amended in 2014) to provide healthcare services and MOH which was mandated under the Ministry of Health Act 2006 to monitor and regulate the provision of healthcare services, was timely. It required a repositioning of the organization in the three Professional Pillars of: Public Health; Hospital and Clinical; and Governance. Health facilities and assets maintenance as a support service cuts across the three strata of the professional dynamic and thus its strategic development and financially supported; is utmost significant.

In the same year (2019), the Ministry of Health in collaboration with Samoa's health sector developed the new health sector plan to guide the sector's activities and program implementation in the next ten financial years. One of the priority areas identified in the Health Sector Plan (HSP) that needs to be implemented in the timeframe of the sector plan is to further improve Samoa's health systems, governance and administration. That included the decentralizing of the provision of health services to rural health facilities through the doctors' rotational programme and the formulation of Multi-Disciplinary Teams (MTDs), improve the conditions of all public health facilities (main hospitals, district hospitals and health centres) and procurement of medical equipment that are needed in provision of safe and good quality health services demanded by the population.

Our health facilities and hospitals contain enormous amount of systems, information technologies and medical equipment that are required for provision of efficient, effective, safe and good quality health services to our people. Hence, maintenance and management of these health facilities and assets are very crucial to ensure they are well maintained, tested, and kept in reliable conditions at all times.

The Health Facilities and Assets Management and Maintenance Strategy FY2022/23 – FY2026/27 is developed to use as a guiding tool to effectively manage the planning, procurement, installation, utilization and repairs of health facilities and assets. As the majority of health facilities and equipment are either simple or user-related, it is the aim that the better care and regular maintenance enable by this strategy will have a significant positive effect on accelerating the delivery of safe and good quality health services in three major areas of MOH services: Corporate Governance and Regulations; Hospital and Clinical Services and Public Health Services.

Objectives:

The main objectives of this policy and strategic document are to:

- (i) establish the Health Facilities and Assets Management and Maintenance action plan and related costing implementation plan to best guide the work of the Assets Maintenance and Support Service (AMSS)
- (ii) place notable focus on facilities and assets maintenance in MOH's strategic plans and policies

- (iii) accelerate the division's capacity building standards, to ensure high quality performance and capabilities
- (iv) establish coordinated planning and regularize health and safety inspections
- (v) ensure financial predictability for health facilities and assets management
- (vi) clarify the concepts of management and maintenance, its importance and classifications in health area; and
- (vii) develop work mechanisms to assist biomedical engineers, biomedical technicians and the Ministry of Health Assets and Maintenance personnel with effective maintenance of health facilities and medical equipment; and
- (viii) effectively plan and implement the procurement, installation, maintenance and repair of health facilities and assets.

The assets groups that this strategy covers are:

- ✓ buildings
- ✓ medical equipment
- ✓ services, plants and infrastructure
- ✓ non-clinical equipment
- ✓ office furniture and fittings and
- ✓ health information and communications technology (ICT).

Financial, human, goodwill and intellectual property are out of the scope of this strategy. Assets in scope are those owned and operated by the Ministry of Health.

Timeframe:

Assets management plans typically take a long-term view of 10-20 years based on the lifecycles of the assets portfolio, for which they have been developed. The Ministry of Health has a diverse range of assets that operate within a complex health services environment. The asset life cycles range from 3 years for some ICT equipment to approximately 10 years for buildings and health infrastructural assets. This strategy takes a 5 year view to be in line with most of assets lifecycles.

SITUATIONAL ANALYSIS

Historical Background

Health continues to be one of Samoa's government key priorities in its previous national strategies (Strategy for the Development of Samoa – SDS) and in its current Pathway for the Development of Samoa FY2021/22-FY2025/26 (PDS). From 2006 to 2017, major infrastructural developments were conducted for health as part of public health sector reforms. These developments include the relocation, refurbishment and furnishing of district hospitals due to severe damages of some district hospitals by 2009 tsunami, building new TTM hospital, renovation and extension of MTII hospital, and new headquarters for the Ministry of Health, establishing of Faleolo Health Centre to cater for emergencies at Faleolo International Airport, Orthotics and Prosthetics Workshop as well as establishing a Pharmaceutical Warehouse.

The maintenance of the major infrastructural developments of hospitals and workshops mentioned above was guided by the National Health Service Maintenance Policy for Facilities and Physical Assets 2012 before the former National Health Service and Ministry of Health officially merged on 1st February 2019. This policy was also used to monitor the management and maintenance of health facilities and physical assets under National Health Service supervision at that time. These include:

(i) Health Facilities in both Upolu and Savai'i

a. Upolu

- ✓ TTM Hospital
- ✓ Leulumoega District Hospital
- ✓ Lalomanu District Hospital
- ✓ Poutasi District Hospital
- ✓ Faleolo Health Centre
- ✓ Lufilufi Health Centre
- ✓ Sa'anapu Health Centre

b. Savai'i

- ✓ MTII Hospital
- ✓ Foailalo District Hospital
- ✓ Safotu District Hospital
- ✓ Satupaitea District Hospital
- ✓ Sataua District Hospital
- ✓ Vaipouli Health Centre

(ii) Physical Assets

- ✓ Lands
- ✓ Buildings and inclusions
- ✓ Medical equipment
- ✓ Non-medical equipment
- ✓ Furniture and
- ✓ Vehicles.

From 2018 during the measles epidemic till now with COVID-19 pandemic, more infrastructural developments and increase in procured health assets happened as part of the Ministry's measles epidemic recovery and COVID-19 pandemic preparedness and response. Most of these

developments and procurement were donor-funded and Ministry of Health is continuously committed to improve health facilities and assets management, enhance health information flow, processes and systems and overall assets maintenance capability.

Health Facilities and Assets Utilization Assessment

Health facilities management and maintenance and plant operations play significant roles in patient and healthcare professionals' safety. It is the cornerstone for providing the best patient care possible. Hence, MOH responsible staff should prioritize the management and maintenance of health facilities and assets through implementing routine and special maintenance services of all health facilities and assets of the Ministry and take the lead in implementing cyber-security initiatives.

In 2018, the Ministry of Health conducted the Health Facilities and Assets Utilization Assessment in 2018 as part of their health facilities and assets management and maintenance mandated function. The aim of this assessment was to assess, redefine and restructure health services especially services provided in rural areas through enhancement of health facilities and assets management and maintenance.

The key focus areas of this assessment were:

- (i) general inspection health facilities
- (ii) condition of capital and fixed assets
- (iii) facilities utilization
- (iv) health information system and equipment management and maintenance
- (v) pharmaceutical services provision
- (vi) immunization program implementation and procurement and
- (vii) NCDs registries.

Some of key challenges identified during this assessment include:

FACTORS	CHALLENGES
Compliance of health facilities to standards for general conditions and safety inspection of health facilities	6 out of 11 facilities inspected were rated unsatisfactory as they are not fully complied with the standards. They have poor maintenance of facilities and equipment (both medical and ICT equipment)
Condition of Capital/Fixed Assets	A lot of damaged assets are not properly recorded/reported/written off. All rural health facilities do not have a capital/fixed assets register
Health facilities utilization	Most of rural health facilities are under-utilized due to shortages of staff. In terms of monitoring both medical and ICT equipment in rural health facilities, there is no maintenance check-log for each facility, and there is a need to have regular monitoring and calibration to have effective machinery and equipment up to standard.

The recommendations from this assessment that are considered to enhance health facilities and assets management and maintenance include:

- (i) Regularize health facilities and assets utilization assessment to track the progress and status of health facilities and capital/fixed assets to inform health facilities and assets management and maintenance services and procurement
- (ii) Enhance health information system through the e-health project to minimize the issues of scattered and duplicate health information
- (iii) Capacity build the existing assets maintenance staff and recruit more qualified and certified staff to perform the core functions and responsibilities of the Assets Management and Maintenance Services Division.

On February 1st 2019, all health facilities that were managed by NHS namely: (i) TTM Hospital in Upolu & MTII Hospital in Savaii), (ii) 10 district hospitals and 2 health centres were transferred under the management of the merged Ministry of Health through its newly established Assets Management and Maintenance Services Division (AMS).

The main functions of this division are to:

- (i) leading, managing and overseeing facilities and assets maintenance
- (ii) ensuring all building and non-medical equipment and other maintenance activities and developments are carried out in accordance to relevant legislations and regulations;
- (iii) overseeing and managing the quality of support services to all divisions efficiently and effectively;
- (iv) work collaboratively with Finance and Procurement division in the procurement of capital equipment and infrastructure as well as updating the MOH Assets Register. The latter which is centralized with Finance and Procurement Division;
- (v) ensuring effective maintenance of health facilities to provide comfort of health staff, patients and occupants;
- (vi) interacting with the organizations or suppliers providing warranty services of the various systems in health facilities such as ventilation, air-conditioning, electrical supplies, water supply and other facilities supplies; and
- (vii) delivery of facility maintenance and repair services to build environments and provide strategic advices on the efficient operation of health buildings to minimize operational life cycle costs.

Health Facilities and Assets Management and Maintenance Workforce:

In the MOH Act 2016 (amended in 2019), the Ministry of Health is responsible for the life-cycle management and maintenance of all health facilities and assets under its supervision and administration. These include land, buildings, plants, medical equipment and products, ICT equipment, vehicles, office furniture and fittings.

At the moment, there are four main divisions of the Ministry of Health who deals with management and maintenance of health facilities and assets of the Ministry. These include:

1. *Assets Management and Maintenance Division*

The Assets Management and Maintenance Division is the newly established division under the Ministry of Health Organizational Structure as one of the outcomes of the merger that was effectively implemented on 1st February 2019. The division are divided into two sections which are:

- (i) Assets Maintenance and Support Services Section

The Assets Maintenance and Support Services Section is responsible for:

- ✓ renovation of health facilities (main hospitals, district hospitals) both in Upolu and Savai'i
- ✓ maintenance of health clinics at Matagialalua
- ✓ maintenances of oxygen plants, plumbing system, water system, sewage system, boiler and standby generators in main hospitals in case of emergencies.

There are fifteen (15) staff under the Assets Maintenance Section. These include:

- Principal Technician for Electrician and Refrigeration
- Senior Plumbing officer
- Senior Air Con and Refrigerator Technician
- Leading hand Technician for Electrician
- Mechanical Engineer
- Senior oxygen and plan officer
- Boiler Overseer
- Sewerage plant operator
- Senior oxygen Operator
- Oxygen Plant Assistants (2)
- Air Condition and Refrigerator Technicians (2)
- Leading Hand Technicians for Carpentry (2).

2. Hospital and Clinical Biomedical Engineering Unit

The Hospital and Clinical Biomedical Engineering Unit's core is specialized with management and maintenance of medical devices across all health facilities in Samoa. Their mandated functions include:

- ✓ Medical equipment priority list (submission of recommendations for the purchase of new equipment, if the equipment is urgent and most demanding)
- ✓ Specifications and evaluation (validate equipment specifications, to obtain superior equipment at a competitive price and, in turn, consistently improve the quality of patient care)
- ✓ Acceptance and commissions (procurement process)
- ✓ User training (conduct trainings for all medical staff, nursing staff and allied health professionals and relevant people who will be using the equipment, and
- ✓ Medical equipment maintenance (conducts corrective and preventative maintenance services to keep medical equipment in optimum working condition and consists of periodic inspection, preventive maintenance, and corrective maintenance disposal and replacement).

Workforce wise, there are only six (6) qualified engineer employed under the Biomedical Engineering Services Unit to provide management and maintenance services for 3,000 medical equipment in all health facilities under the Ministry's supervision. Health Information and Communication Technology Division

3. Health Information and Communication Technology Division

The Health Information and Communication Technology Division is mandated to implement their mandated core functions which are:

- ✓ Plan, develop, monitor and enforce standards and policies relating to acquisition, use, maintenance and disposal of IT-related infrastructure, software and equipment

- ✓ Ensure confidentiality, integrity and availability of IT related resources for the Ministry such as network infrastructure, data security, contingency etc.
- ✓ Provide technical IT advice and trainings to users
- ✓ Provide IT support and maintenance services such as helpdesk, troubleshooting, configurations, etc.
- ✓ Process requests for hardware, software, network and ICT related service deployments for MOH to ensure value for money, consistency and compliance,
- ✓ Maintain ICT Assets register
- ✓ Create, delete or disable computer accounts including electronic storage areas and email accounts while observing MOH data retention periods
- ✓ Day to day responsibility for the management and security of all MOH infrastructure and systems, and
- ✓ Monitor for actual or potential IT securities breaches within the MOH ICT systems and reporting to the appropriate people as need be.

4. *Human Resources and Administration – Transportation Section*

The Transportation Section of MOH Human Resources and Administration are mandated to effectively manage and maintain all vehicles procured by the Ministry and donated by partners in health to assist the Ministry of Health in provision of the following services:

- ✓ Primary health care services such as immunization, disease surveillance, environmental health inspections, rural health outreach services
- ✓ Patient transportation and transfers
- ✓ Monitoring and supervision
- ✓ Haulage of medical and health supports logistics
- ✓ Public health emergencies preparedness and response
- ✓ Health specialist outreach services and
- ✓ General administrative assignments.

The transport used by the Ministry of Health includes general purposes vehicles, ambulances, special vehicles for ENT and Rheumatic fever screenings and healthcare waste management trucks.

Achievements:

1. *Assets Management and Maintenance Division*

Every financial year, this division under the Assets Management Section deals with updating the MOH Assets Register. They also conducted assets count and stocktaking to ensure registered assets are in their registered locations and assets that are out of order are properly written off and replaced.

For the Assets Maintenance and Support Services section, they were able to conduct renovation of buildings at TTM Hospital, doctors residents at Sa'anapu and Lalomanu, maintenance of health clinics at Matagialalua, Lotemau Mall and district hospitals, maintenance of standby generators in main hospitals and pharmaceutical warehouse, monitoring of plumbing companies works in all health facilities and ongoing repair of air-conditioning system.

At the end of last year, this team was able to construct the Ambulance Services Centre at TTM Hospital by themselves, which was one of their milestones they had reached in this financial year.

In the beginning of this year (2022), the Assistant Chief Executive Officer for this division came on board and facilitated some of major maintenances services for some health facilities. These include:

- Renovation of the Nurse Hostel as part of COVID-19 pandemic preparedness and response
- Replacement of air conditioning system in MOH Headquarters and TTM hospital
- Implementing repair services for TTM hospital buildings

2. Hospital and Clinical Biomedical Engineering Unit

Currently, there are approximately 3,000 medical equipment with the estimated value of SAT53 million that the Biomedical Engineering Services Unit are responsible for.

In the last two financial years (FY2019/20 & FY2020/21), the Ministry of Health was accountable to the procurement and maintenance of approximately 900 new medical equipment to assist with measles epidemic response and recovery in 2018-2019 and COVID-19 preparedness and response from 2019 till now.

3. Health Information and Communication Technology Division

Since the merger official took place on 1st February 2019, some of Health Information Communication and Technology developments made and achieved include:

- Improved connections across all health facilities under the Ministry of Health
- Merging of the former two networks i.e. MOH headquarters and main hospital
- Finalizing four policy documents to facilitate effective monitoring of IT equipment in the Ministry of Health. These policies include: email policy, internet and social media policy, ICT security and network policy and MOH Staff ID policy.
- Extension of ICT network through fibre connection to the warehouse
- Official launching and rolling of e-health project (M-Supply, Tamanu, Tupaia and Meditrak) and
- Provision of regular quarterly preventative maintenance for all IT equipment in MOH premises.

4. Human Resources and Administration – Transportation Section

In this Financial Year, the Ministry of Health was blessed with new vehicles donated by development partners to enhance the provision of health services that required transportation. These vehicles include 8 ambulances donated by Japan, 2 healthcare waste management trucks funded by World Bank, 1 pick-up donated by Ministry of Women, Community and Social Development for mobile ENT screening and other new vehicles procured under the Ministry's local budget to replace the vehicles that were written off.

Challenges:

All four divisions that are dealing with management and maintenance of health facilities and assets had encountered challenges in their own fields of work. These include:

1. Shortages of Staff

Shortages of staff that deals with provision of management and maintenance services for health facilities and assets is a long-overdue challenge for the Ministry of Health.

As of today, there are only six (6) staff of the Ministry who deals with assets management services. These include: Principal Assets Management Officer, Senior Assets Officer, Senior Store-man, Assets Accountant, Store-man and Assets Clerk. In real situation, there is a

significant shortage of staff in this area taking into account hundreds of assets in 12 health facilities under the supervision of the Ministry of Health which include main hospitals, district hospitals and health centres both in Upolu and Savai'i.

For assets maintenance, some of the staff have limited technical knowledge on their areas of work and there is a dire need for capacity building trainings to upskill the assets maintenance staff in order to meet the expected core competencies for assets maintenance services.

The Biomedical Engineering Unit had faced the same challenge. As stated above, this unit deals with maintenance and repairs of more than 3,000 medical equipment. This means that each staff is responsible for managing and maintaining an average of 500 equipment. This is so outrageous and unhealthy for the Occupational Safety and Health of the staff. Hence, there is a need to recruit more qualified staff who have clear lines for biomedical responsibilities in this unit to lessen the burden of work overload by the unit. According to the Samoa Health Workforce Development Plan 2020-2026, the Biomedical Engineering Services Unit should have in place 6 qualified Biomedical Engineers (*4 for TTM Hospital to serve health facilities in Upolu & 2 for MTII Savaii to serve all health facilities in Savai'i*) and 5 qualified biomedical technicians (3 for Upolu and 1 for Savai'i). For the existing Biomedical Engineering Staff, capacity building trainings should be provided and accredited in order to have the skills and knowledge required for performing their assigned areas of work.

Even in the Health Information Technology and Communication division, shortage of staff is an issue, given the fact that there is rapid increase of IT equipment used to support the provision of hospital and clinical services, public health services and even corporate governance and regulatory mandated functions of the Ministry.

2. Assets Procurement Process

All divisions responsible for implementing management and maintenance services for MOH facilities and assets had experienced the same problem with procurement of these items. It is either the delay in processing Purchase Orders, tendering process or releasing of payments. This is an ongoing issue that had been raised with the Finance and Procurement Division, and the Internal Auditing division is currently looking for ways of improvement.

3. Assets Registration

Different assets are registered under different registers. For instance, medical equipment registers is under the Biomedical Engineering Unit while ICT equipment register is with the Health Information and Communication Technology division, and other assets are registered under the Assets Management and Maintenance Division's register. There is a need to consolidate these assets to formulate a proper and firm MOH Assets Register while other register by each unit can be kept by them for record-keeping.

These challenges are well considered in this MOH Facilities and Assets Management and Maintenance Strategy to enhance health assets management and maintenance system.

HEALTH FACILITIES AND ASSETS MANAGEMENT AND MAINTENANCE (HFAMM) STRATEGIC AGENDA

VISION

Effective Management and Maintenance of Health Facilities and Assets for a Resilient and Sustainable Health System for Samoa

MISSION

To maintain all health facilities and assets especially medical and ICT equipment to the appropriate standards and ensure they are used to provide the best healthcare services to patients



OUTCOMES

- ✓ *Improved safe and healthy environment for patients, health workers and visitors*
- ✓ *Improved provision of safe and quality people-centred health services*
- ✓ *Motivate health staff to perform their duties to the best of their abilities and*
- ✓ *Increase patients satisfaction*

PURPOSE

To enable the Ministry of Health to meet its service delivery objectives efficiently and effectively, and minimize risks associated with health facilities and assets failure

Guiding Principles

The key principles that underpin this strategy are:



KEY STRATEGIC AREAS

This strategy provides four (4) Key Strategic Areas to assist the Ministry of Health with addressing the challenges and bridging the gaps identified with regards to provision of management and maintenance services to effectively monitor the usage of its facilities and assets.

These Key Strategic Areas include:

1. Management and Maintenance of Health Facilities

The vision of the Ministry of Health in its Corporate Plan for Financial Year 2020/21-FY2022/23 is ***“Accelerating Health and Well-being for a Healthy Samoa”***. This emphasizes the focus of the Ministry of Health to strengthen public health system and revitalize primary health care through:

- (i) Enhancing management and operations systems which support hospital and clinical services
- (ii) Improve the quality of the delivered public health and primary health care services and
- (iii) Enhancing community participation and engagement in primary health care.

Good maintenance and repair of health facilities and infrastructure and keeping them safe and clean are also of the important approaches for the results referred to in bullet numbers (i) and (ii) above. These can be achieved through enhancing and developing health facilities and assets management and maintenance.

This section specifies the health facilities management and maintenance procedures for the Ministry of Health staff and contractors responsible for maintenance of all health facilities both in urban and rural areas to facilitate the maintenance, repair, monitoring and supervision in all health facilities. The key areas to look at include:

1.1 Maintenance of Buildings

This section outlines strategies and actions for the operation and maintenance of MOH facilities. These include cleaning, pest control, security, grounds maintenance, scheduled routine and non-routine maintenance, asbestos removal and adherence to building codes and standards. The intention is to allow health facilities management and maintenance to be planned, costed financially and forward determined.

For facilities maintenance works mentioned above, tender processes of the government should be followed in accordance with the Ministry of Finance Procurement Operating Manual 2020.

It is very important to take good care of the health facilities because of the positive impacts they create to the staff, patients and visitors. On one hand, patients and visitors would feel comfort and relaxed in a hospital with good infrastructure. Therefore, the Ministry's Assets and Maintenance staff should pay attention to these aspects when planning for health facilities maintenance. Checking and inspecting the buildings on regular basis, can alert maintenance staff on the hazards that might harm the health facilities and the population. Those who use health facilities, should ensure that all facilities, equipment and services were checked, inspected and fully maintained in accordance with existing legislations, policies, guidelines and strategies such as Samoa

PUMA Act 2004, National Building Code of Samoa 2017, Samoa MOH Occupational Safety and Health Policy 2021, National Healthcare Waste Management Strategy FY2021/22 – FY2024/25 and MOH Plumbing Policy 2020-2025 in appropriate periods following the recommendations of faults, defects and hazards, corrections and verify the reliability of maintenance when required.

Checking health facilities both in Upolu and Savaii in urban and rural areas are conducted through using the indicators in the inspection form (Annex 1), which represents the guide to check and follow up the procedure of maintaining the buildings, electrical systems, water systems, air-conditioning system and everything related to infrastructure in health facilities.

1.1.1 Routine Maintenance

Routine maintenance of health facilities includes activities that are needed to be constantly acted upon. These include fire system maintenance, pest control, air-conditioning service, electrical and plumbing related as well as elevator and telecommunication upgrades.

Routine Maintenance Plan

Strategy	Activities	Levels of Service
To maintain all health facilities fire systems in accordance with National Building Code of Samoa 2017	<ul style="list-style-type: none"> ✓ Fire system audits and testing ✓ Alarm testing ✓ Fire drills ✓ Communication with FESA 	<ul style="list-style-type: none"> ✓ Fire systems operate as expected and meet the relevant code ✓ Meeting all fire system regulatory requirements ✓ Provide reporting to MOH Executive Management ✓ Training of maintenance staff and compliance
Sustain the life of Air-conditioning and heating systems to ensure efficient and effective environmental temperature control in all facilities	<ul style="list-style-type: none"> ✓ Air-conditioner servicing ✓ Duct cleaning ✓ Filter replacement ✓ Air quality testing 	<ul style="list-style-type: none"> ✓ Air-conditioning is services in accordance with the relevant building codes ✓ Serviced by qualified trades persons ✓ Total prevention of airborne particles leading to health risks
Electrical maintenance for all electrical related equipment and plan	<ul style="list-style-type: none"> ✓ Thermal scanning ✓ Test and tag ✓ Generator power-plan management ✓ Lamp replacement 	<ul style="list-style-type: none"> ✓ Electrical contractors must be qualified and possess relevant and documented proof of qualification ✓ All contractors should be familiar with MOH policies and standards ✓ Be covered with sufficient level of liability and insurance ✓ Work to Occupation Safety and Health standards
Elevator maintenance	<ul style="list-style-type: none"> ✓ Schedule elevator servicing ✓ elevator inspection ✓ Safety systems testing 	<ul style="list-style-type: none"> ✓ Meeting the international standards for elevator servicing ✓ Ensure highest level of public safety ✓ Plan for reliable operation 24/7
UPS Maintenance	<ul style="list-style-type: none"> ✓ Maintain and test all 	<ul style="list-style-type: none"> ✓ Provide a continuous power

Strategy	Activities	Levels of Service
	<ul style="list-style-type: none"> UPS units ✓ Regular maintenance ✓ UPS upgrade and replacement scheme 	<ul style="list-style-type: none"> supply to critical systems and facilities ✓ Ensure safety systems are powered 24/7 ✓ Uninterrupted power to all alarm systems and critical infrastructure ✓ Provide UPS with sufficient capacities
Plumbing maintenance	<ul style="list-style-type: none"> ✓ Drainage maintenance ✓ Water treatment ✓ Backflow prevention testing 	<ul style="list-style-type: none"> ✓ Plumbing contractors must be qualified and possess relevant and documented proof of qualification

1.1.2 Non-routine Maintenance

The Ministry of Health requires non-routine maintenance to its facilities and surrounds due to environment damage or staff movements. Where natural disasters cause damages, the responsibilities for health facilities is to repair building damages in a safe and timely manner. Non routine maintenance can also result in building fit-outs as a result of changes in staffing or equipment required by the occupants.

Ministry of Health should maintain a register of suitable contractors that provide services for non-routine maintenance.

Non-routine Maintenance

Strategy	Activities	Levels of Service
To repair building damage in a safe and timely manner	<ul style="list-style-type: none"> ✓ Repairs of natural disasters damages ✓ Other 	<ul style="list-style-type: none"> ✓ Repairs are made by suitable qualified staff/trades persons ✓ Repairs are guaranteed ✓ Repair work is assessed and quality tested
Change to building fit-out with efficient and minimum disruption to MOH operations	<ul style="list-style-type: none"> ✓ Desks and shelves repairs ✓ Partition removal ✓ Equipment installed/removed 	<ul style="list-style-type: none"> ✓ Provide timely response to the needs of each MOH division ✓ Use quality materials ✓ Ensure highest levels of safety are met
Construction and building renovations	<ul style="list-style-type: none"> ✓ Maintain the structural integrity of all buildings ✓ Upgrade and refit as buildings age ✓ Extend usable space or adjust structure to accommodate more staff 	<ul style="list-style-type: none"> ✓ Provide building extensions and refit to accommodate new or additional staff ✓ Uplift buildings to a modern system to maintain a high property value ✓ Use of qualified and proven trades
Materials and tools	<ul style="list-style-type: none"> ✓ Provision of repair materials 	<ul style="list-style-type: none"> ✓ Ensure appropriate and safe material

Strategy	Activities	Levels of Service
	✓ Provide tools and equipment for minor repairs	storage ✓ Retain a stock level of materials to ensure fast repair times ✓ Stock sufficient tools for facilities repairs and minor work ✓ Use qualified trades to perform repairs and maintenance outside the qualification of facilities maintenance staff of MOH

1.1.3 Standards, building codes and specifications

The facilities asset management of MOH buildings requires inspections and auditing (reporting on conformity) of works relative to the national building standards. This strategy ensures MOH work is carried out in accordance with the following standards, building codes and specifications:

- (i) All construction works should adhere to the building codes stated in the National Building Code of Samoa 2017
- (ii) Any repairs, extensions or building renovation should meet the codes specified and standards equal or better to the standards required for construction
- (iii) Any maintenance should meet safety and health standards as stated in MOH Occupational Safety Policy and Guideline 2021 and Occupational Safety, Samoa Occupational Safety and Health Act 2002 and Samoa Occupational Safety and Health Regulations 2017.
- (iv) All properties must be maintained to meet the Samoa Building Alignment Ordinance 1932 and Samoa Planning and Urban Management Act 2004 and not comprise the National Building Code of Samoa 2017.
- (v) All fittings and internal fixture must meet safety standards as stated in the MOH Occupational Safety and Health Policy and Guideline 2021
- (vi) Servicing or inspection of Air-condition assets is performed in accordance with MOH specifications, manufacturer's recommendations or regulatory requirements for a specific asset.

1.1.4 Cleaning Services

Cleaning services in main hospitals should be contracted due to the shortages of cleaning staff in the Ministry of Health and cleaning contracts are awarded through successful tender to local contractors relevant for each site. The following table outlines the required strategy, activity and level of service.

Health Facilities Cleaning Plan

Strategy	Activities	Levels of Service
To maintain all facilities under MOH to acceptable level of cleanliness	✓ General cleaning ✓ External cleaning ✓ Sanitary services ✓ Other cleaning	✓ Achieve acceptable levels of cleanliness to provide a safe, healthy and comfortable work environment

		<ul style="list-style-type: none"> ✓ Minimize disruption to BAU activity ✓ Keep costs to a minimum
Waste removal	<ul style="list-style-type: none"> ✓ Silt and pit waste removal ✓ General waste removal ✓ Recycling 	<ul style="list-style-type: none"> ✓ Ensure waste levels are kept to a minimum ✓ Provide environments free from germs, dirt and grime ✓ Act in an environmentally responsible

1.2 **Grounds Management**

This section outlines strategies and actions for the operation and maintenance of health facilities grounds. MOH grounds men ensure all MOH owned buildings, depots and sites have sufficient and reliable garden or ground maintenance. The focus is on the external aspects of the health facilities and assets management and maintenance strategy and includes item such as gardening, grass cutting, tree maintenance and tree removal, car park maintenance, signage, external lighting and external security.

1.2.1 ***Gardening Maintenance and Grass Cutting***

Ministry of Health utilizes local contracts in performing garden maintenance on its sites. The garden maintenance includes general garden upkeep, landscaping, grass cutting and removal and tree management. The table below provides strategies, activities and level of service has the following contracts in place for gardening and grass cutting.

Garden Maintenance Plan

Strategy	Activities	Levels of Service
To maintain gardens and land area to an appropriate level of usability and safety	<ul style="list-style-type: none"> ✓ Garden maintenance ✓ Landscaping ✓ Watering and weeding ✓ Mulching ✓ Removal and disposal 	<ul style="list-style-type: none"> ✓ Contractor has suitable equipment and safety procedures ✓ Appropriate removal process that is environmentally acceptable ✓ Contract has proven experience to perform the task
Tree repair or tree removal to maintain public safety and prevent damage to adjacent assets	<ul style="list-style-type: none"> ✓ Tree lopping ✓ Tree repair ✓ Tree removal ✓ Stump removal 	<ul style="list-style-type: none"> ✓ Contractor has suitable equipment and safety procedures ✓ Appropriate removal process that is environmentally acceptable ✓ Contract has proven experience to perform the task
Maintain grassed areas in all facilities	<ul style="list-style-type: none"> ✓ Grass cutting ✓ Weed control 	<ul style="list-style-type: none"> ✓ Contractor has suitable equipment,

Strategy	Activities	Levels of Service
	<ul style="list-style-type: none"> ✓ Slashing ✓ Clipping removal 	<ul style="list-style-type: none"> qualifications and safety procedures ✓ Appropriate removal process that is environmentally acceptable
Pest control	<ul style="list-style-type: none"> ✓ Vermin baiting ✓ Spraying for vectors ✓ Termite controls ✓ Pest proofing 	<ul style="list-style-type: none"> ✓ Environmentally approved solutions ✓ Safe and reliable barriers ✓ Approved and tested contractors

1.2.2 Vehicle Storage and Traffic Management

Ministry of Health facilities including its headquarters, main hospitals, district hospitals and health centres have car parking and spaces for specialized service vehicles that require maintenance and expansion. These vehicles storage areas at MOH facilities have the following plan in place for maintenance and traffic management.

Vehicle Storage and Maintenance Plan

Strategy	Activities	Levels of Service
To safely construct and maintain vehicle storage, car parks and gates, drives for safety and traffic flow efficiency	<ul style="list-style-type: none"> ✓ Vehicle storage construction ✓ Car park resurfacing ✓ Security systems ✓ Lighting ✓ Vehicle storage signage ✓ Specialist vehicle storage construction and refurbishment 	<ul style="list-style-type: none"> ✓ Suitable contractors utilized ✓ Construction meets approved standards ✓ Standard dimensions used for vehicle bays, roads and entrances ✓ Safety standards are maintained ✓ Disaster planning and evacuation contingency considered
Maintain and update line marking for traffic flow and safety	<ul style="list-style-type: none"> ✓ Line marking ✓ Signage ✓ Line re-painting ✓ Speed limit evaluation ✓ Speed humps 	<ul style="list-style-type: none"> ✓ A property needs to be used safely, effectively and maintained in a condition that is fit for the purpose for which it is intended ✓ Traffic management maintained for safety and efficient traffic flow ✓ Contributes to vehicle safety and the reduction of accidents
Special vehicle accommodation to protect high-cost vehicles	<ul style="list-style-type: none"> ✓ Healthcare wastes storage ✓ Ambulances storage ✓ Vehicle shelters ✓ Vehicle wash area maintenance 	<ul style="list-style-type: none"> ✓ A property needs to be used safely, effectively and maintained in a condition that is fit for the purpose for which it is intended

Strategy	Activities	Levels of Service
		✓ Adopt high levels of safe access

1.3 **Security**

Ministry of Health uses a variety of security approaches for maintaining the security of the physical facility assets. The buildings and surrounding land must be protected and a security plan has the following strategies, activities and service expectations for security services.

Security Plan

Strategy	Activities	Levels of Service
To protect the facility assets from theft, unauthorized access and damage or destruction	<ul style="list-style-type: none"> ✓ Contracted security services ✓ Alarm system action ✓ Security staff for monitoring and internal patrols ✓ Monitoring systems ✓ Gates and locks maintenance 	<ul style="list-style-type: none"> ✓ Suitable contractors utilized with security training ✓ Safety standards are maintained above all ✓ Buildings and exterior have security monitors, alarms or patrols as appropriate ✓ Control locks and keys to ensure secure access to authorized staff only ✓ Acknowledge alarms in a timely manner
Electronic access and building pass controls	<ul style="list-style-type: none"> ✓ Access ID pass printing ✓ Management of security access levels ✓ Termination of access ✓ Monitor and manage access pass distribution 	<ul style="list-style-type: none"> ✓ Ensure appropriate access levels ✓ Allocate Photo IDs to all staff and contractors ✓ Terminate access with exit procedure for staff and contractors ✓ Review access levels and allocation of secure areas from time to time.

1.4 **Health Facilities Supporting Services**

The effective management of health buildings and properties requires items and activities that support the effort to manage. The largest cost item is labour costs for staff to manage health facilities and administers various programs and contracts. The support services for health facilities management also includes local travels, training, conferences and accommodation and other employee related costs.

The table below presents the strategies for health facilities supporting services

Strategy	Activities	Levels of Service
Staff to manage health facilities, inspect, plan and report	<ul style="list-style-type: none"> ✓ Recruit more permanent staff to manage health facilities under the supervision of the Ministry of Health ✓ Recruiting staff have the 	<ul style="list-style-type: none"> ✓ Utilize MOH permanent staff with experience and knowledge of all health facilities under MOH ✓ Ensure appropriate

Strategy	Activities	Levels of Service
	relevant/required skills	trainings and support are made available

1.5 Hygiene and Sanitation

The cleaning and disinfection of surfaces in health facilities is becoming increasingly important in the multi-barrier approach for preventing infection, in addition to hand hygiene and proper reprocessing of medical equipment. Hence, it is very important for health staff both clinical and non-clinical to promote and strengthen hygiene and sterilization standards within their working facilities through:

Strategy	Activities	Levels of Service
Provision of hygiene and sanitation services in health facilities	<ul style="list-style-type: none"> ✓ Outsource general cleaning services to qualified/certified cleaning companies ✓ Recruit skilled staff to be responsible for sterilizing tools used in health facilities for medical treatments. ✓ Hand hygiene ✓ Safe use of medical devices and equipment ✓ Use of Personal Protective Equipment ✓ Safe disposal of healthcare wastes ✓ Ongoing hygiene and sterilization education 	<ul style="list-style-type: none"> ✓ Maintain health facilities clean including the areas of general use such as bathrooms, waiting rooms and places where health services are provided ✓ Follow Infection Prevention Control Procedures and Protocols set by MOH ✓ Use pesticides inside and outside health facilities to reduce the spread of insects and rodents ✓ Enforce NO SMOKING policies within health premises.

1.6 Linen and Laundry

The Ministry of Health's top priority is always the safe and care of patients in all health facilities. We ensure the patients are comfortable and ultimately healthy. In order to achieve this, the staff must take great care to ensure that health facilities, instruments used for treatments and linens are clean.

Hospital laundry requires much different than other linens because they can be soiled with body fluids or blood, which can cause spread of infection. To effectively manage hospital linens and laundry, below are standards that need to be followed:

Strategy	Activities	Levels of Service
Provision of sufficient stock of linens and	<ul style="list-style-type: none"> ✓ Secure adequate stock of clean and sustained linens in health facilities 	<ul style="list-style-type: none"> ✓ Sufficient supplies of linens and bedcovers are available for all health facilities when needed ✓ All health facilities have washing machines and dryers and other necessities

Strategy	Activities	Levels of Service
		required for implementing laundry services
	✓ Manage laundry services needs whether inside or outside each health facility efficiently	✓ All health facilities have staff responsible for laundry management and processes
	✓ Provide IPC training for laundry staff in health facilities	✓ Compliance with IPC protocols and guidelines when collecting mattresses and linens for laundry purposes and safety in laundry management
Handling of Dirty Laundry	✓ Secure a laundry room equipped with fully automatic washing machines and driers taking into consideration separating washings for infected laundry	✓ Separation of laundries as follow <ul style="list-style-type: none"> ▪ Dirty laundry (used linens not containing body fluids and not used for infected persons) ▪ Infected laundry (linens used for infected patients or wetted with blood or other body fluids) ▪ Other items (curtains)

Before handling the dirty laundry, the following infection control practices should be taken into consideration:

- ✓ Put on thick gloves and masks before work
- ✓ Spate contaminated linens using the laundry separation mentioned above
- ✓ Tightly close the bags of dirty laundry and
- ✓ Move laundry bags using carts.




1.7 **Healthcare Waste Management**

All staff in all health facilities has a responsibility to dispose of healthcare wastes in a manner that poses minimal hazards to patients, visitors and the staff. This can:

- (i) Minimize the spread of infections and reduce the risk of accidental injury to staff, patients and visitors/relatives
- (ii) Reduce odours and provide an aesthetically pleasing atmosphere
- (iii) Reduce the likelihood of contamination of the soil or ground water with chemicals or micro-organisms
- (iv) Contribute in health facilities safety and protect from pollution.

1.7.1 *Danger posed by healthcare wastes*

As articulated in the National Healthcare Waste Management Strategy 2020-2025 hereunder are some danger caused by healthcare wastes to the population:

POPULATION	DANGERS
 Staff	<ul style="list-style-type: none"> Sharps pose the greatest risk and can cause injury and transmission of serious infections including HIV, Hepatitis B and C
 Patients and Visitors	<ul style="list-style-type: none"> Staff members who have improperly handled contaminated waste can easily spread infections to patients
 Community	<ul style="list-style-type: none"> Contaminated waste can be found by children and cause them injury and infection Scavenged wastes such as reused syringes and needles, IV fluids bags can put the community at risk of infection

1.7.2 *Principles of Healthcare Waste Management*

All health facilities are encouraged to implement Healthcare Waste Management Best Practices that are articulated in the National Healthcare Waste Management Strategy 2020-2025. These are illustrated in the diagram below:

Healthcare Wastes Management Best Practices

1. Waste Minimization	<ul style="list-style-type: none"> Practices to prevent or reduce the generation of waste
2. Segregate at Source	<ul style="list-style-type: none"> Segregating waste at the point of generation using color-coding, labelling and appropriate containers
3. Internal Handling	<ul style="list-style-type: none"> Ensuring the safe movement of waste from the point of generation to the point of storage
4. Storage	<ul style="list-style-type: none"> Ensuring the safe and appropriate storage of waste until it can be transported for treatment and disposal
5. Off-site Transport	<ul style="list-style-type: none"> The transportation of waste from storage to an on-site or off-site point of treatment and disposal
6. Treatment and Disposal	<ul style="list-style-type: none"> The safe and appropriate treatment and disposal of waste, either on-site or off-site

Source: National Healthcare Waste Management Strategy FY2020/21-FY2024/25

1.8 Occupational Safety and Health

Implementing of all health services involve different levels of risks from high to low, and there is always the possibility of injury along with the potential for infection and illness.

Many patients are admitted to each health facility because of infectious bacteria and viruses. They are contagious, and their illness can be either transmitted to other patients or even the health staff (both clinical and supporting staff). This requires the Ministry of Health to enforce the infection prevention and control measures in the National Infection Control Policy 2011-2016 and strengthen the implementation of Occupational Safety and Health measures in the MOH Occupational Safety and Health Policy and Guideline 2021, to guide health and safety control measures within all health facilities under the administration of the Ministry.

The Ministry of Health Occupational Safety and Health Policy and Guideline 2021 was developed and approved in March 2021 to guide the Ministry of Health's program and services to ensure that the health workers Occupational Safety and Health requirements are addressed and necessary OSH compensations are available for the staff. All health staff should fully comply with this policy and health workers should be compensated according to the level of hazard/risk they are exposed to in their respective areas of work as summarized in the table below.

AREAS OF SERVICES	OCCUPATION	POTENTIAL HAZARD/RISK	LEVEL OF RISK
Clinical services, surgical theatre, and intensive care units	The staffs in these areas deliver the core healthcare services within main and district hospitals.	Processes generated products, by-products and wastes exposes the staff to blood borne pathogens, poor clinical ergonomics related complications, strips, trips, falls, hazardous chemicals, equipment hazards, infections from infectious patients, radiation exposure and workplace violence	HIGH
Casualty and Emergency Departments	Staff providing these services handle emergency responses and sometimes they are called in from other sections hence "import" and "export" related OSH complications	Common OSH risks are Blood, Blood borne Pathogens, Hazardous Chemicals, Slips/Trips/Falls, Tuberculosis, Latex Allergy, Equipment Hazards, Workplace Violence, Workplace Stress, and Methicillin Resistant Staphylococcus Aureus (MRSA)	HIGH
Biomedical Engineering	The staff providing these services are in charged with installation and maintaining equipment within the facilities	Risks include exposure to contaminated equipment and environment, Hazardous Chemicals in Engineering Section, Nosocomial Diseases, Fire safety, Lockout/ Tag out, Asbestos Exposure, Electric Shock, Mercury Exposure and Welding Fumes.	HIGH

AREAS OF SERVICES	OCCUPATION	POTENTIAL HAZARD/RISK	LEVEL OF RISK
Laboratory	Personnel in this area participate in diagnoses process and interacts with Blood borne Pathogens (BBPs), Tuberculosis (TB), and hazardous chemicals	Exposures related to processes and products from Blood borne Pathogens (BBPs), Tuberculosis (TB), Exposure to hazardous chemicals, Exposure to Needle stick/ Sharps Injuries, Work Practices and Behaviours, Engineering Controls, Latex Allergy Slips/ Trips/Falls and Ergonomics	HIGH
Dental Services	The dental staff examines patients' dental health and provide treatment, check teeth, gums and other parts of the mouth along with E-rays and tests to diagnose dental problems, clean teeth and remove plaque and identify tooth decay and replace cavities with fillings.	Exposure to infections including HIV and viral hepatitis; percutaneous exposure incidents, dental materials, radiation and noise. Musculoskeletal disorders; psychological problems and dermatitis; respiratory disorders and eye insults	HIGH
Pharmacy & Pharmaceutical Warehouse	Staffs are responsible for storing, dispensing and preparation of hazardous drugs.	Signage and labelling lacking. Lack of safety label on all syringes and IV bags containing hazardous drugs during Preparation, Handling Practices, Hazardous Drugs During Administration, Hazardous Drugs During Care Giving, Disposal of Hazardous Drugs, Hazardous Drugs During Storage, Latex Allergy, Ergonomics and Workplace Violence	HIGH
Morgues	These Personnel are responsible for receiving bodies of deceased patients and helps place bodies in compartment trays. They also confirm identification of bodies and releases bodies as appropriate. Being a morgue staff can also assist pathologists in performing autopsies	Smell of dead bodies will cause acute respiratory diseases that may affect their lungs Have the possibility to be infected from a patient died of infected disease. Lack of basic equipment forcing the staff to improvise and use out-dated equipment such as hammer, axe and butcher's knife risks include employee exposure to infectious diseases	HIGH

AREAS OF SERVICES	OCCUPATION	POTENTIAL HAZARD/RISK	LEVEL OF RISK
		and agents, (e.g., staph, strep, TB, HIV, HBV), and chemicals such as Formaldehyde Other potential hazards in the morgue include: Latex allergy from wearing latex gloves. slips/trips/falls Ergonomics and supply of equipment for lifting and handling dead bodies	
Medical Imaging and Radiology	These personnel are responsible for providing assistance to physicians in their efforts to diagnose and treat disease by providing them with timely and reliable information obtained from radiographic examinations using the least amount of radiation necessary for conducting the radiographic examination. To ensure the reliability of this diagnostic information, careful attention must be given to the performance of every examination, beginning when the examination is ordered and continuing until the examination results have been returned to the requesting physician.	Infected with infectious diseases carried by patients coming for medical imaging and radiology services Risks of radiation	HIGH
Port health services	These personnel are responsible for providing health services at all points of entries to protect the country from pandemics	Loss of life/cause disability during implementation of vessels checks Infected with infectious diseases carried by incoming travellers Lack of PPEs and when provided staffs tend to either ignore or use wrongly, Lack of PPEs and when provided staffs tend to either	HIGH

AREAS OF SERVICES	OCCUPATION	POTENTIAL HAZARD/RISK	LEVEL OF RISK
		ignore or use wrongly, verbally abuse, infectious diseases transmission	
Healthcare waste management services	These staff are in charge of collecting and disposing of all healthcare wastes from all health facilities and morgues	Airborne disease, infectious diseases due to smelling and touching wastes like blood and body fluids, body parts, sharp injury from needle stick or any sharp medical object or device, mucous membrane exposure e.g. mouth, eye and nose, contact with no intact skin e.g. dermatitis, eczema, acne and cuts	HIGH
Administration Services	The staff in this section is in charge of core administration and operations largely facilitating other medical and technical staff to do their work better.	Risk of non-compliance with the regulations particularly national OSH related legislations, regulations, policies and strategies	MEDIUM
Central stores/general storage services	The staff in this area are the key link between other health workers and supplies/equipment and vice versa	Main risk include exposures due to poor store, housekeeping, hazardous chemicals spills and exposure e.g. ethylene oxide, mercury, glutaraldehyde, burns/cuts, ergonomics, slips, trips, falls, and latex energy	HIGH
Kitchen and dietary	Personnel providing these services handle food services for patients both preparation and serving	General housekeeping OSH issues, kitchen ergonomics, kitchen equipment safety, fire safety, hazardous chemicals, machine guarding, food borne diseases, slips, trips, falls, electrical safety, food poisoning	HIGH
House Keeping and Laundry	The staffs providing these services are in-charge of cleaning and making laundries for health facilities	Staff not trained and not aware both of provisions of the law on personal safety at work and of what actions to take so as to be secure. Lack of PPEs and when provided staffs tend to either ignore or use wrongly may cause infection from dirty laundries of infected patients. Lack of or out-dated SOPs.	HIGH

Sources of information: MOH OSH Policy & Guideline 2021

2. Management and Maintenance of Medical Equipment and Plants

The management and maintenance of plants, medical in health facilities forms an essential part of the tasks and responsibilities of the Ministry of Health Assets Management and Maintenance Division and Biomedical Services Unit in collaboration with technical divisions under the Hospital and Clinical Services and Public Health Services departments. They are responsible for the validity and maintenance of the Ministry of Health plants and medical equipment as well as for the procedures relevant to the selection and expiry of these health assets.

The main task for a successful and efficient management and maintenance is to assure the safety and efficient work of devices used for patients care in order to secure the provision of best health services for the population. This can be achieved through working according to a mechanism that aims to explain, demonstrate and plan the way of managing the maintenance of plants and medical equipment. In addition, this mechanism seeks to select documents and forms used by responsible MOH staff to document and monitor the works needs to be accomplished. This should be done because the management and maintenance of these assets are of great importance that it deals with the most precious values the human.

2.1 Plants and Medical Equipment Management

Health assets such as plants, medical equipment takes place within the context of human, material, structural, organizational and financial resources. It is a process which helps hospitals and health facilities to develop, monitor, and manage plants and equipment to promote the safe, effective and economical use and effective maintenance. The Ministry of Health as the responsible agency should set up and regularly review the management and maintenance of these assets to ensure they are used in accordance with purposes for which they were invented.

The typical life cycle approach for plants and medical equipment management consists of nine stages. These include:

Figure 1: Stages of Plants and Medical Equipment Management



Source: WHO, 2010

Stage 1: Planning

Planning process is very important in decision in health plants and medical equipment management because it provides technology vision where health facilities should position itself. It can specify the following conditions for decision making process:

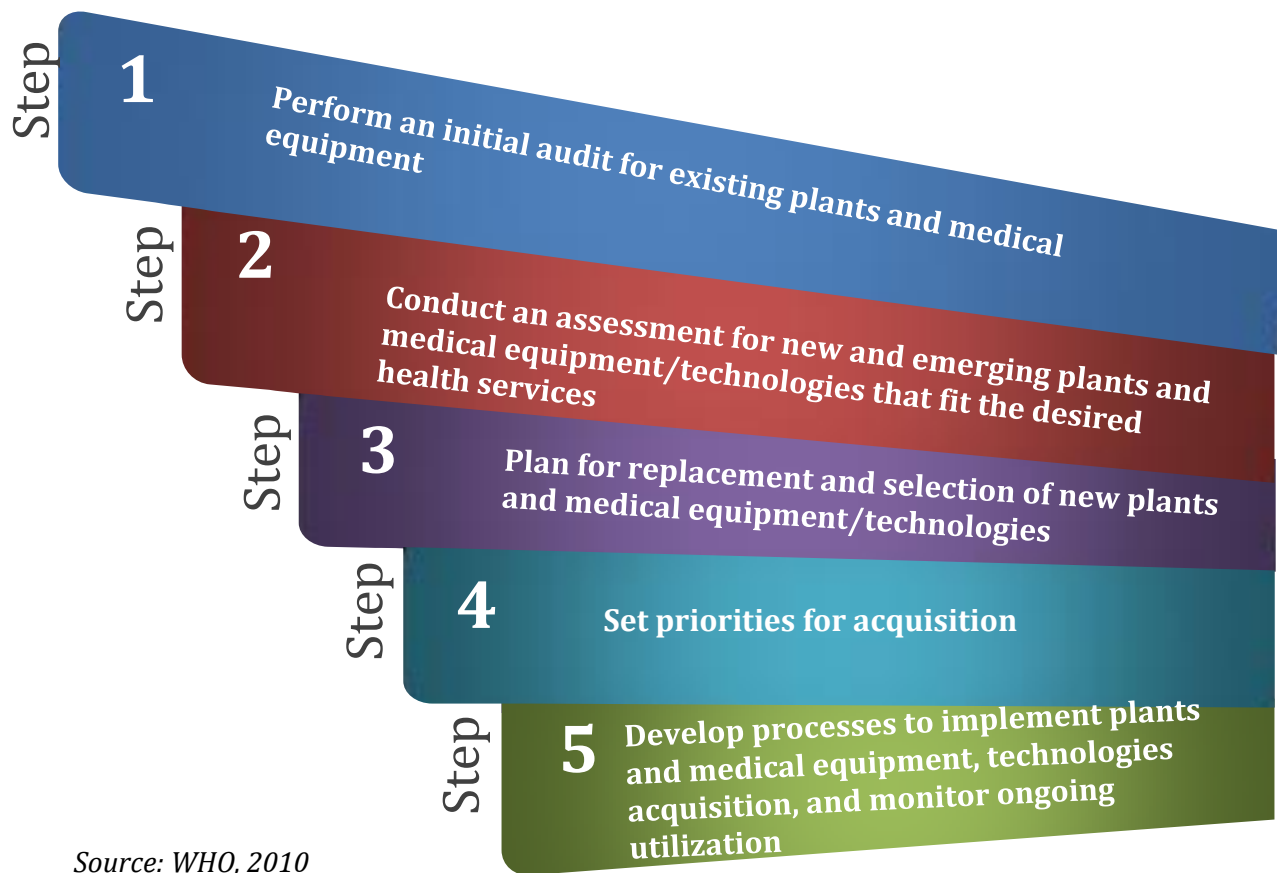
- ✓ Demonstrated needs and benefits
- ✓ Available qualified users
- ✓ Confirmed maintenance services and support
- ✓ Adequate environment support and
- ✓ Regulatory compliance.

These conditions are simple and should be applied to any routine acquisition of health assets and medical equipment.

Planning health plants and medical equipment management is the responsibility of the MOH Assets and Maintenance Division in collaboration with the Biomedical Services Division, Finance and Procurement and Health Sector Coordination, Resourcing and Monitoring Division. Their planning role is to ensure a balance between clinical and technology sectors of health facilities in addition to meeting the community needs.

The planning procedures include:

Figure 2: Plants and Medical Equipment Management Planning Process



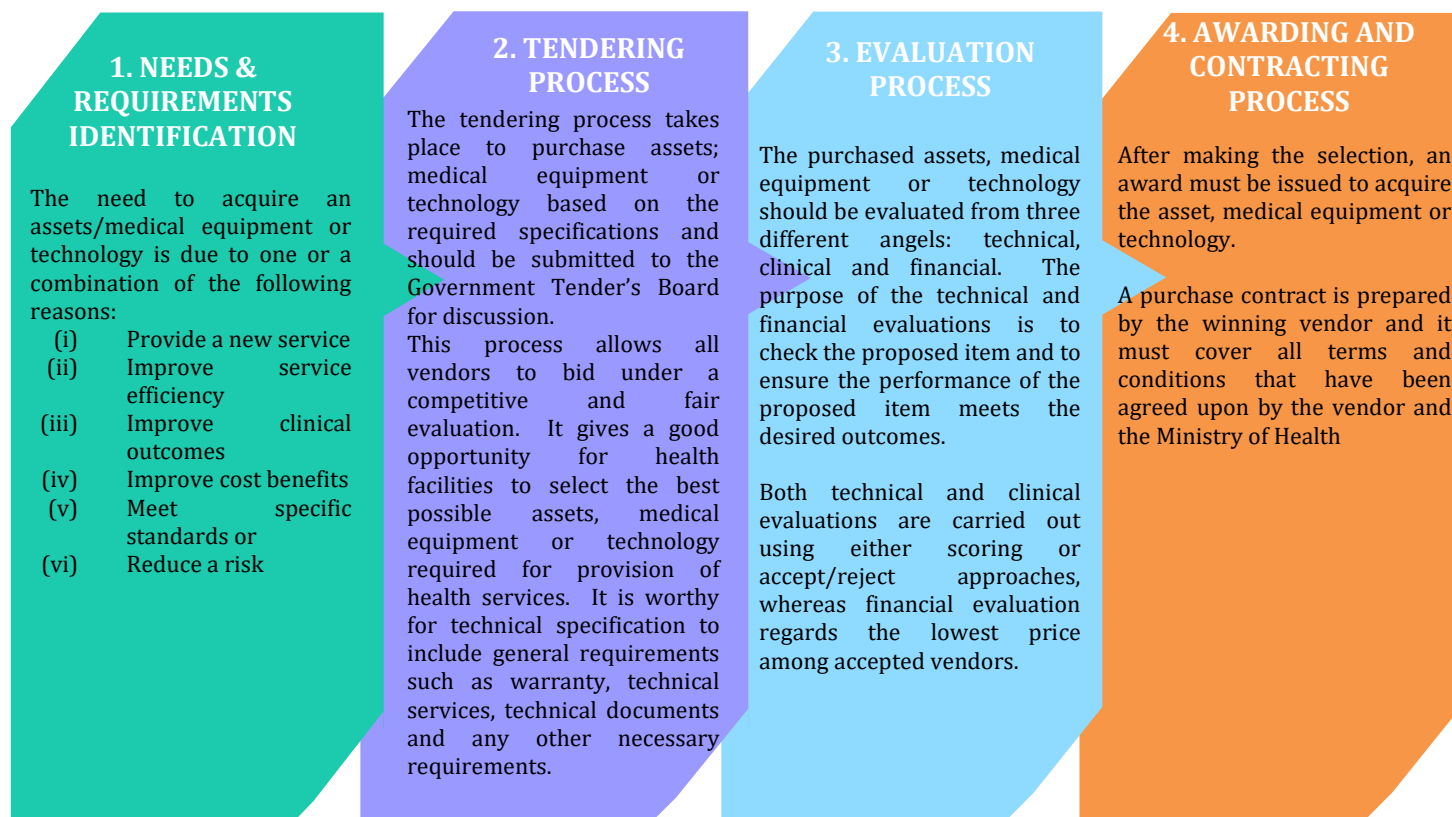
Source: WHO, 2010

Stage 2: Acquisition

Samoa's health system is known for its continued procurement of new plants and medical equipment intended to enhance the delivery of healthcare services and outcome of patient care not only in the two main hospitals in Upolu and Savai'i (TTM Hospital at Motootua & MTII Hospital at Tuasivi), but also in district hospitals and health centres in both islands. However, funding constraint is considered the major challenge in introducing new technologies and equipment to the service. Hence, more attention is given to the acquisition process with the strong emphasis given on both health service delivery outcomes and funding availability.

Acquisition process usually follows the government process articulated in the Public Finance Management Act 2001, Government Assets Operating Manual and Maintenance of Government Assets Management Module. This is shown in Figure 3 below:

Figure 3: Government Acquisition Process



Source: Samoa Ministry of Finance Treasury Instructions – Procurement & Contracting, 2016

Stage 3: Delivery and Incoming Inspection

The Biomedical Services Unit in collaboration with the Assets Management and Maintenance Division, Health Sector Coordination, Resourcing and Monitoring Division and the Finance and Procurement Division of the Ministry of Health are responsible for ensuring the incoming inspection on procured items includes verification of accessories, manuals if required, and electrical safety and operation in accordance with all applicable policies. Incoming procured items should be carefully checked for possible damages and compliance with specifications in the Purchase Order.

In addition, they also ensure an incoming inspection on procured items by verifying the following:

- ✓ Accessories existence
- ✓ Manuals existence
- ✓ Electrical existence
- ✓ Compliance with specifications and
- ✓ Possible shipment damage

Stage 4: Inventory and Documentation

Inventory and documentation is the assistive stage in the plants and medical equipment management planning life cycle. It provides information to support health assets management in different stages.

Upon completion of the incoming inspection, a plant or equipment record file should be created and it should be active throughout the lifespan of these assets. The record file should contain the following data:

- ✓ Item Control Number (ICN)
- ✓ Generic description of the item/equipment
- ✓ item manufacturer, model and serial number
- ✓ Owner division and the location of the item
- ✓ Purchase Order number and date
- ✓ Item's acquisition cost
- ✓ Supplier's name, address and contact details
- ✓ Warranty conditions and expiration date
- ✓ Abbreviated description of the inspection and preventive maintenance requirements and intervals
- ✓ Abbreviated service history
- ✓ Information regarding any applicable service contract
- ✓ Location of the item's user and service manual

Stage 5: Installation and Commissioning

Installation and commissioning can be carried out by in-house technical staff if they are familiar with the given item. If the installation and commissioning are needed from the suppliers, in-house technical staff should monitor this process. In general, installation process should be compatible with standard policies for medical equipment installation.

Stage 6: User Trainings

To reduce the possibility of equipment malfunction following service or repair, all MOH Staff involved in maintaining and servicing health plants and medical equipment and technologies must be properly trained to appropriate standards for the work they are carrying out. Operator error is noted as the leading cause of equipment malfunctioning.

Incorrect usage of medical equipment will also greatly increase maintenance problems. Hence, it is very crucial to conduct proper trainings for users and should be regularly monitored to ensure appropriate skill levels required for equipment and technology operation. In fact, training should also include all other staff such as clinical and technical staff. This should be reflected in the Terms of References and Contracts of suppliers.

Stage 7: Monitoring of Use

One of the common mistakes in plants and medical equipment management is to believe that the warranty period is covered by the supplier; hence no in-house technical attention is necessary. The Ministry of Health responsible staff should become the link between the Ministry and the suppliers, and should observe any supplier's technical staff. This provides the learning opportunity for the responsible personnel. This performance should also be documented in the service history of the procured items by the responsible staff.

Stage 8: Maintenance

The maintenance of plants and medical equipment involve all activities related to providing an adequate level of service and limiting downtime of each equipment. Maintenance or service activity is required in order to ensure the procured items are kept functioning within the limits imposed by the test criteria and return these items to the required level of functioning after breakage or other failure.

There are types of maintenance that should be carried out for procured plants and medical equipment. These include:

(i) Preventive Maintenance

Preventive maintenance refers to actions undertaken to extend the operational intervals between failures to extend the life of plants/equipment, or to detect and correct problems that are not apparent to the users.

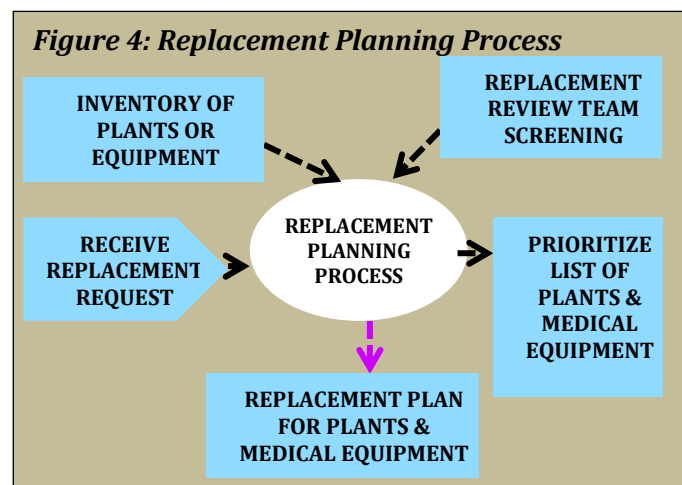
(ii) Corrective Maintenance

Corrective maintenance refers to any service that involve repair, in addition to any specific service include repairs performed under the service contract or repairs performed by vendors during the warranty period.

Stage 9: Replacement or Disposal

Replacement is the last stage of plants and medical equipment management life cycle. All equipment reach the point in their life where the cost-benefit ratio goes to the negative because of:

- Decreased reliability,
- Increased downtime,
- Safety issues,
- Compromised care,
- Increased operating costs,
- Changing regulations, or
- Simply obsolescence.



The synopsis diagram below (Figure 4) illustrates the replacement process in terms of participants, inputs, and output.

For the disposal of obsolete assets or medical equipment, safety procedures must be followed in order to protect the responsible staff and the environment. The ideal health assets or medical equipment replacement planning system should be developed in a more facility wide approach, and should cover all assets and equipment employing accurate objective data for analysis.

Before disposal, these benefits of using scrapped equipment must be considered for the benefit of the Ministry:

- (i) use spare parts with similar equipment/item,
- (ii) replace with new ones with the same vendor/s, or
- (iii) use as dummies in internal training if necessary.

2.2 **Plants and Medical Equipment Maintenance**

To effectively plan for the maintenance of Plants and Medical Equipment, the following steps and procedures are adopted:

Figure 1: Four Steps of Plants and Medical Equipment Maintenance



Source of Information: WHO, 2010

Step 1:**Plants and Medical Equipment Precise Inventory**

Precise inventory is very important to be done for all plants and equipment procured for record keeping and assets management and maintenance purposes. The inventory should include:

(i) *Preparing the plant/equipment card consisting the following details:*

- ✓ Name of the plant/equipment
- ✓ Number of the plant/equipment
- ✓ Ownership categories (rental/leased equipment, donated equipment o hospital-owned equipment)
- ✓ Location of plant/equipment
- ✓ Model
- ✓ Warranty term since the date of its launch and
- ✓ Repairs documentation

(ii) *Preparing maintenance card consisting the following details:*

- ✓ Information about the plant/equipment (name, number, function)
- ✓ Priority of the plant/equipment
- ✓ Procedures needed to be done (maintenance, calibration) and
- ✓ Plant/equipment instructions and guidelines.

Step 2:**Identification of Types and Levels of Plants and Medical Equipment Maintenance**

Fixing the types of maintenance required for each plant or equipment (daily, weekly, monthly, biannually, or annually) and their timings as per in Form 2 Annex 2.

Identifying the levels of maintenance for procedures aspect which are set in four levels:

Level 1: is the daily works required (Daily Walk Around, Checking, Test, Cleaning, Simple lubrication and calibration.

Level 2: is the regular maintenance to be done on timely basis along with some repair

Level 3: is the works that require experience and skill to accomplish them as well as doing those repairs out of the capabilities of level two; and

Level 4: is the annual or semi-annual works, replacing parts and inclusive repairs, which require the availability of financial and logistical resources and repair equipment.

Step 3: Setting Assets or Medical Equipment Priority Levels

Assets or medical equipment priorities are set according to their importance as follow:

LEVELS OF PRIORITY	DEFINITION
High Priority	Assets or equipment that work in continuance way and when they are out of service, it impacts the safety of the staff and patients so they are indispensable, including but not limited to fetal heartbeat device, generator, boiler to name a few.
Medium Priority	Assets or equipment that do not affect services or there is an alternative for them when they are out of service for a short time
Less Priority	Assets or equipment that do not affect the continuance performance of the health service in case they are out of service for maintenance

Step 4: Distribution of Maintenance Works

Distribution of maintenance work on responsible staff in line with their qualifications and areas of expertise in addition to their normal work in accordance with the levels set in the previous steps and as follow:

LEVELS OF MAINTENANCE WORKS	DEFINITION	RESPONSIBLE DIVISION/STAFF
Level 1	Professional and technical qualified staff that are directly in touch with assets/equipment provided that they are trained practically so they can conduct their assigned tasks in level one of maintenance.	✓ Biomedical Services Division
Level 2	Engineers and technicians/qualified who have engineering background and some experience in the field of assets and equipment maintenance and the conduction of regular maintenance and repair. This is the responsibility	✓ Biomedical Services Division ✓ Assets Management and Maintenance Division
Level 3	Qualified Engineers/staff with experience and ability to conduct maintenance and reaper that level two cannot perform	✓ Biomedical Services Division ✓ Assets Management and Maintenance Division
Level 4	Qualified Engineers/Staff with experience in inclusive repairs and all kinds and levels of maintenance and the availability of funding for the maintenance works	✓ Biomedical Services Division ✓ Assets Management and Maintenance Division

3. Management and Maintenance of ICT Equipment

ICT maintenance is considered as the set of all actions which have as an objective to retain an item (or the whole system) in, or restore to, a state in which it can perform the required function. The actions include the combination of all technical and related administrative, managerial, and supervisory actions such as tests, measurements, replacements, adjustments and repairs. Notice that the term “can perform the required function” covers also fixing of problems (bugs) which may be present but not detected during the acceptance test(s), as well as adaptations to a changing environment.

Since ICT equipment and systems covered in this strategy belong to the Ministry of Health, ICT-maintenance doesn't differ in nature from other assets such as medical equipment and plant maintenance.

MOH ICT Assets management and maintenance are the core responsibilities of the Health Information and Communication Technology of the Ministry (HICT). This division is responsible for developing, managing and implementing ICT procurement protocols as well as ICT securities policies and processes for the effective management and maintenance of ICT equipment, tools and systems that are used to support health services delivery.

3.1 **ICT Assets Management**

The Health Information and Communication Technology must keep accurate and up to date register of new, transferred and written off equipment's.

All MOH ICT equipment must be marked accordingly and the ICT Unit will refer to the Asset Management Unit request to label equipment's whose marks have faded through the years if encountered during their service calls or are being used without asset numbers. A full equipment stock take should be completed at least once a year. Equipment allocated to an individual user must not under any circumstances be reallocated within the division (or any other user) without prior notification of the ICT Unit. This is to ensure correct management of sensitive information and account setup. As well as ensuring whether the equipment will work in its planned location. In the event that a staff member leaves MOH or is in a long term leave, then all loaned ICT assets must be returned to the HICT Division for checking whether it will need to be replaced or damaged and lost equipment cost must be deducted from end of employment benefits.

3.1.1 Process for marking new ICT Assets:

Once new equipment arrives, the Asset Management Unit (AMU) must be notified immediately to mark the assets before setup and before they are disseminated to the relevant division. Once the Assets Management Unit marked the details, will then be entered into the HICT Asset Register.

3.1.2 Process for Reallocation/Transfer of ICT Equipment/Assets

The Division must inform the Asset Management Unit of their request for equipment transfer. Once asset transfer process is complete the ICT unit will then move to action setup of user account, files and information.

3.2 **Management of MOH Network Access**

Users requiring access to the Ministry's network must complete an ICT Access Form which must be justified and endorsed by their divisional Manager and handed over to the Assistant Chief Executive Officer for Health Information and Communication

Technology for approval and action by the ICT Unit. Signing this form indicates the user has read, understood and agrees to comply with the policies. Access will not be approved if there is not enough justification to allow it especially for internet and email access. Access to the network will be discontinued upon termination of an employee, completion of contract, end of service of temporary employee or disciplinary action resulting from violation of this policy or other related policies.

3.3 **Procurement of ICT Equipment**

New Requests:

All requests for procurement of new equipment's must be directed to the Health Information and Communication division, and must be accompanied by a budget confirmation from the Finance and Procurement Division. Request must include justification and endorsement and approval of the Output Manager i.e. Manager or ACEO.

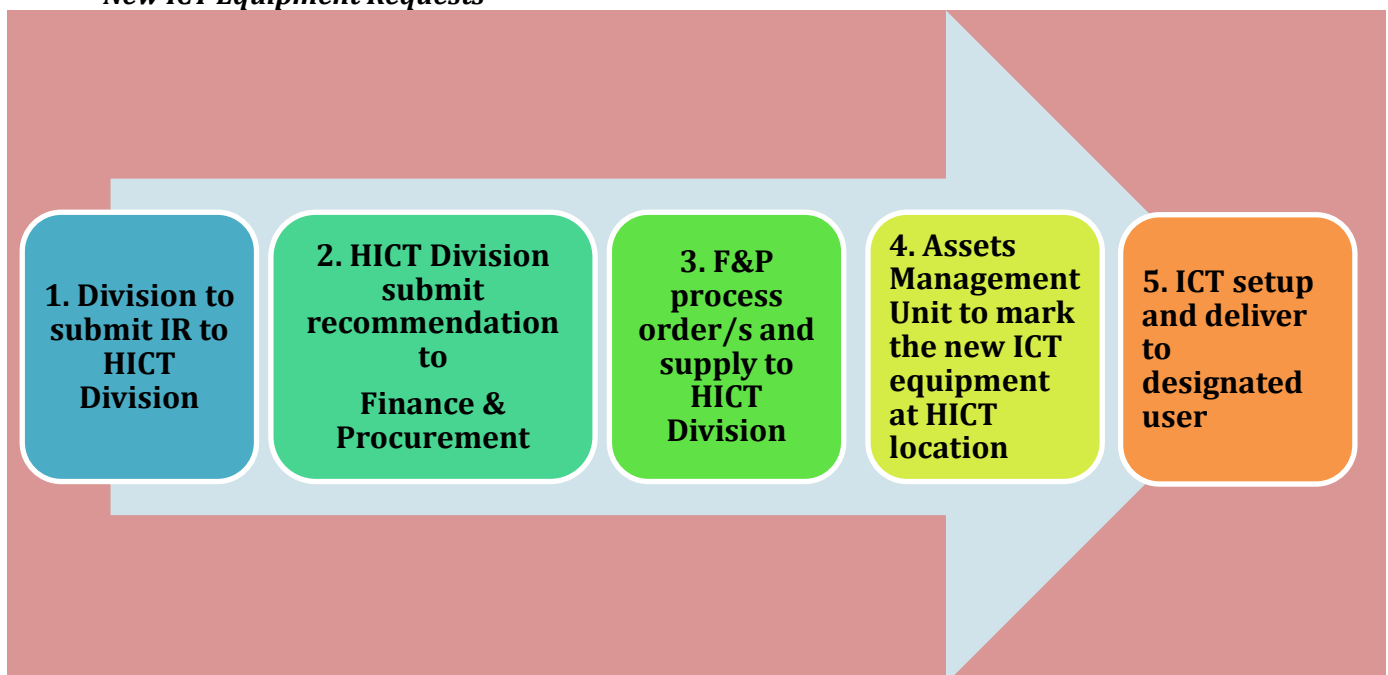
Request for quotation will then be carried out in accordance with the HICT minimum specification requirements.

ICT unit recommendation will be done and referred with all relevant documents to Finance and Procurement Division to action the relevant procurement processes.

Equipment must be handed directly to HICT division upon their receipt, for confirming the correct specifications and for relevant network setup before handing over the user.

The diagram below, illustrates the sequence of events for new ICT equipment requests.

New ICT Equipment Requests



3.4 Replacements:

The HICT Unit will check the equipment and confirm status of equipment for write off. HICT Write-Off Recommendation report will then be given to the Asset Unit to initiate the formal Write Off process. Write-off report by MOH Assets Management Unit will be used as a supporting document for the procurement of replacement equipment.

3.5 PC Password Management

All MOH systems feature password control as part of the identification and authentication methods. Sharing of passwords is strictly forbidden and users must be fully aware of their responsibilities to the network once they are approved access. The MOH password management procedures include the following requirements:-

- Initial passwords are given to users once registration is complete.
- Initial password changed by the user after first successful log on.
- Complex password made up of mixture of letters and numbers, minimum 8 characters.
- System enforces a password change every 90 days.
- Password is not displayed when user types in the password dialogue box.

3.6 Management of Antivirus/Anti-Malware

MOH has deployed an enterprise Antivirus solution to protect against malicious software and this is deployed to all clients and servers.

Receipt of junk/SPAM email is a nuisance and in some instances could be a threat; all users should be cautious about any potential unsolicited emails and delete them at the earliest possible opportunity.

Use of removable/USB drives is limited to Senior level up to Management level. For any user below Senior level that requires access to use flash drive, their divisional Manager must authorize their usage. This is to control the entrance of Trojan viruses into our network.

3.7 Network Security

External connections in and out of MOH computer networks, supporting MOH services are subject to rules set by the HICT Division. Anyone requiring an external connection, either for support services or extended organizational activities, must contact the HICT Division. Remote access is forbidden. However, if the need warrants access, then endorsement by ACEO HICT will be needed and referred to the Director General for official approval.

4. Management and Maintenance of MOH Vehicles and Office Furniture

4.1 **Management and Maintenance of MOH Vehicles**

The Ministry of Health Human Resources and Administration is responsible for managing and maintaining of all MOH owned vehicles. Their responsibility is to ensure that all vehicles of the Ministry are maintained properly, meet safety standards, are insured and repair and maintenance budgets for vehicles are used wisely.

4.1.1 MOH Vehicles Management

The Transport Section under the Human Resources and Administration Division is responsible for proper maintenance of MOH vehicles. Principal Transport Officer is the primary contact for vehicle issues along with responsibilities for vehicle maintenance, authorized drives and vehicle use.

The Ministry's vehicles shall be operated and services in a safe, efficient and environmentally sound manner. Each health facility both in Upolu and Savaii has a vehicle and an ambulance to support the provision of health services in rural health facilities. The Principal Transport Office should have a preventative maintenance program listing the required maintenance activities for each type of vehicle the Ministry owns or leases.

All MOH vehicles shall follow the manufacturer's recommended maintenance schedule for each vehicle.

If the vehicle mileage use is low, preventative maintenance is to be performed at least once a year.

All maintenance and repairs performed on MOH vehicles must be documented and retained for the life of the vehicles.

The Transport Unit should also include plans for replacing vehicles when they have been in operation for at least 7 years. When a vehicle is due to be replaced due to age and/or mileage, the Human Resources and Administration division should review the need for the vehicle and consider alternatives.

4.1.2 MOH Vehicles Maintenance

Safety Inspections

All MOH owned vehicles must have a valid vehicle safety inspection completed biennially with the following exceptions:

- (i) New vehicles not previously titled and registered are not required to be inspected for the two year period following their model year of manufacture.
- (ii) Speciality vehicles such as low-speed vehicles do not require safety inspections
- (iii) Most vehicles may be required by the Land Transport Authority Act 2007, Samoa Road Traffic Ordinance 1960 and Samoa National Road Code 2020.

Vehicle Care

MOH drivers are responsible for the day-to-day care of vehicles they are using. Under no circumstances should a MOH driver operate a vehicle that may be unsafe or ignore an unsafe condition. Follow the advice listed below to maintain the vehicle in a safe, operable condition:

(i) **Fluids:**

- a. Make at least weekly checks of fluids on the vehicle and fill as necessary
- b. Have a vehicle check, if it is low on engine oil, automatic transmission fluid, power steering fluid, brake fluid or engine coolant
- c. In order to prevent freeze-up, **do not add plain water** to the radiator, coolant reservoir or windshield washer container.

(ii) **Leaks:**

- a. Look on the ground under the vehicle for fluid leaks
- b. Report any leaks immediately to the Principal Transport Officer

(iii) **Tyres:**

- a. Visually inspect the tyres daily
- b. Look for imbedded nails
- c. Check regularly for uneven wear and for proper air pressure

(iv) **Flats:**

- a. **Do not** drive the vehicle with a flat tyre as it may ruin the tyre and or the rim and the driver may be held responsible for the damages.

(v) **Damage:**

- a. Check the vehicle frequently for body damage
- b. Report any damage promptly to the Principal Transport Officer
- c. Complete and Insurance Office auto accident report form.

(vi) **Lights:**

- a. Check the exterior lights and turn signals regularly for proper operation

(vii) **Noises:**

- a. Be alert for unusual noises that may signal mechanical problems

(viii) **Gauges:**

- a. The following gauges/lights indicate a potential problem.
 - ✓The temperature gauge reads abnormally hot
 - ✓The oil pressure gauges reads low
 - ✓The red critical engine light is “**on**”
 - ✓The amber caution light (check/service engine light, power loss light or emissions light) in the late model vehicles is “**on**”

Responsibilities:

The following are the key people that are responsible for management and maintenance of MOH vehicles:

(i) MOH Drivers:

Drivers of MOH vehicles must:

- ✓ Hold a valid driver's license
- ✓ Have the approval from MOH to operate the vehicle
- ✓ Properly reserve and sign out a vehicle running sheets
- ✓ Operate the vehicle in a safe manner consistent with national vehicles laws and regulations
- ✓ Conduct a vehicle safety inspection prior to the daily use of a vehicle

(ii) Principal Transport Officer:

The Principal Transport Officer must:

- ✓ Monitor the performance of all MOH drivers
- ✓ Oversee the operation of all MOH vehicles on daily basis
- ✓ Be responsible for insuring new MOH vehicles
- ✓ Provide vehicle management reports on monthly basis

4.2**Management and Maintenance of MOH Office Furniture**

In order to provide efficient health services, the process of notification, proper identification, pick-up, repair, replacement and proper return of office furniture are the tasks shared by all MOH divisions.

Office furniture that are covered in this area include: portable patients' room furniture such as bedside tables, over-bed tables, guest chairs, beds, IV stands and health office furniture such as desks, shelves, cabinets, couches, partitions, conference tables and conference chairs.

4.2.1 *Management of Office Furniture and Fit-Out*

The items such as desks, partitions, walls which are maintained in health buildings are referred to as Furniture and Fit-Out. These items need to be properly managed and maintain as well. Furniture, fittings and air-conditioning need to be adjusted, moved, upgraded and replaced as the occupants move around or the number of staff in an area increase. The table below presents the strategies for effective management and maintenance Furniture and Fit-Out.

Management of Office Furniture

Strategy	Activities	Levels of Service
Maintain the desks, chairs and other furniture to an acceptable level of quality	<ul style="list-style-type: none"> ✓ Desk adjustments and replacement ✓ Office chair upgrade and replacement cycle ✓ Provision of desk drawers and shelving 	<ul style="list-style-type: none"> ✓ Maintain the desks, chairs and other furniture to occupational safety and health standards ✓ Adjust seating and desk levels to accommodate the

Strategy	Activities	Levels of Service
		occupational safety and health of individuals ✓ Ensure adequate storage for staff and consultants
Replace or upgrade air-conditioning to accommodate additional staff and patients	✓ Air-conditioning tuning ✓ New air-conditioning systems ✓ Upgrade to air-conditioning systems	✓ Use qualified refrigeration trades people ✓ Build the capacity of MOH air-conditioning personnel ✓ Ensure systems meet all Occupational Safety and Health requirements ✓ Maximize staff and patients comfort

4.2.2 Procurement of New office Furniture & Fit-Out

The procurement of new office furniture should follow Procurement Methods and Thresholds for Goods and General Services articulated in the Ministry of Finance Procurement Operating Manual 2020 (refer to Annex 3).

4.2.3 Repair/Replacement of Office Furniture & Fit-Out

Upon detection that a piece of furniture is broken, heads of each division or department is responsible for informing the Assets Management and Maintenance Services Division for assistance. The Assets Management and Maintenance Services Division will conduct a repair feasibility assessment. If the furniture can be safely repaired, the repair will be completed and returned the furniture to its location. If the repair is not possible, the point of contact in medical wards will be notified and a replacement will be provided for the repaired item.

Some furniture may be under warranty, so no cost will be assessed.

HEALTH FACILITIES AND ASSETS MANAGEMENT AND MAINTENANCE ACTION PLAN

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
Health Facilities Management and Maintenance						
Management and Maintenance of Buildings and floors	Provision of cleaning services for all health facilities	<ul style="list-style-type: none"> Recruit janitors in all district hospitals and health centres and effectively monitor their performance 	asap	AMSS HR & Admin. F&P	SAT100,000.00 per year	Local Budget
		<ul style="list-style-type: none"> Hire contracted cleaning vendors to clean two main hospitals (TTM Hospital & MTII Hospital) and effectively monitor the performance and compliance of cleaning services with the terms and conditions in their contracts 	Ongoing	AMSS HR F&P HSCRM LC IA	SAT2,000,000.00 (Based on the current Tender-TTM hospital only)	Local Budget

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
		<ul style="list-style-type: none"> • Submit cleaning services progress reports 	Monthly basis	AMSS IA	SAT12,000.00 per year (\$1,000 per month)	Local Budget
	Effective management of health facilities fire systems	<ul style="list-style-type: none"> • Conduct fire alarm systems audits and testing in collaboration with FESA 	Quarterly basis	AMSS FESA F&P	SAT50,000.00	Local Budget
		<ul style="list-style-type: none"> • Conduct Fire drills in collaboration with FESA 	Financial yearly basis	AMSS FESA F&P	SAT50,000.00	Local Budget
		<ul style="list-style-type: none"> • Effectively maintain and update fire extinguishers in all health facilities 	Ongoing	AMSS FESA F&P	SAT70,000.00	Local Budget
	Effective management and maintenance of Air-conditioning and heating systems in all health facilities	<ul style="list-style-type: none"> • Outsource air-conditioning and heating systems management and maintenance services to qualified and certified air-conditioning vendors for 	Financial yearly basis	AMSS F&P HSCRM LC	SAT1,000,000.00	Local Budget DPs

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
		servicing of air conditions in all health facilities include: duct cleaning, filter replacement if necessary, air quality testing and air conditioning repairs/ replacement				
		<ul style="list-style-type: none"> Recruit qualified air-condition technician in Health Facilities and Assets Maintenance division to oversee the works of contracted air-conditioning vendors and monitor their compliance with the signed contracts 	asap	AMSS HR & Admin. F&P	SAT100,000.00 per year	Local Budget
	Effective management and handling of	<ul style="list-style-type: none"> Monitor and strengthen the implementation 	Ongoing	HPED IPC&QA AMSS	SAT10,000.00	Local Budget WHO

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
	Healthcare Wastes	of the National Healthcare Waste Management Strategy 2020-2025				
		• Develop and implement Standard of Operating Procedures for Healthcare Wastes Disposal and Removal for all health facilities	December 2021	HPED IPC&QA AMSS	SAT10,000.00	Local Budget WHO
		• Effectively monitor the operation of incinerators both at Tafaigata and Vai'aata	Ongoing	HPED IPC&QA AMSS	SAT\$400,000.00	Local Budget DPs
		• Procure PPEs for the safety of the healthcare waste management staff	Ongoing	HPED IPC&QA F&P HSCRM	SAT\$400,000.00	Local Budget DPs
	Effective Plumbing preventive	• Recruit qualified plumber for the	Asap	AMSS HR & Admin. F&P	SAT1,200,000.00 per year	Local Budget

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
	maintenance in all health facilities	Health Facilities and Assets Maintenance Division				
		<ul style="list-style-type: none"> Hire qualified plumbing contractors to provide repairs and maintenance services for plumbing systems in all health facilities including: management and maintenance of drainage system, water treatment, backflow prevention testing, boiler system and water pipes connections and lines 	Financial yearly basis	AMSS F&P HSCRM LC IA	SAT1,200,000.00 per year	Local Budget
	Operative Repairs of health facilities damage	<ul style="list-style-type: none"> Hire qualified building contractor to operate major 	asap	AMSS F&P HSCRM LC	SAT500,000.00	Local Budget DPs

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
		health facilities repairs and assessment				
		<ul style="list-style-type: none"> Conduct health facilities and assets management training for the health personnel responsible for management and maintenance of health facilities 	asap	AMSS HR & Admin. HPD&R HSCRM F&P	SAT50,000.00 per year	WHO DPs
	Repair to external damaged items in a safe and timely manner	<ul style="list-style-type: none"> Recruit more qualified maintenance staff to be responsible for Fencing damage repairs, Signage damage, Burst water pipes and other minor repairs 	asap	AMSS HR & Admin. F&P	SAT100,000.00 per year	Local Budget
Health Facilities Supporting Services	Effective management and maintenance of health facilities, inspect, plan and report	<ul style="list-style-type: none"> Establish an in-house facilities management team consisting of health staff with relevant 	By end of 2021	MOH MCWC	No fund required	

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
		skills to assist the Health Facilities and Assets Maintenance division with health facilities management and maintenance				
		<ul style="list-style-type: none"> • Conduct health facilities assessment 	Six monthly	AMSS HPED IPC&QA F&P IA	SAT10,000.00 per year	Local Budget
Security	Effective monitoring of health facilities access	<ul style="list-style-type: none"> • Allocate photo IDs to all health staff and visitors IDs for contractors 	Ongoing	HICT	SAT20,000.00 per year	Local Budget
		<ul style="list-style-type: none"> • Install and effectively monitor surveillance cameras in health facilities 	Ongoing	HICT AMSS	SAT100,000.00	Local Budget DPs
	Protection of health facilities and assets from theft, unauthorized access and	<ul style="list-style-type: none"> • Outsource security services to licensed security patrol contractors to 	Financial yearly basis	AMSS HR & Admin. F&P LC IA	SAT600,000.00	Local Budget

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
	damage or destruction	perform security patrols in health compounds as needed				
		<ul style="list-style-type: none"> Effectively monitor the health facilities alarm systems, gates and locks maintenance action 	Ongoing	AMSS	SAT50,000.00	Local Budget
Garden Maintenance	Effective maintenance of gardens and landscaping	<ul style="list-style-type: none"> Hire a landscaping contractor/s to deal with gardening and landscaping in all health facilities 	Financial yearly	AMSS F&P HSCRM LC IA	SAT360,000.00(as per current Budget)	Local Budget
Medical Equipment and Plants Management and Maintenance						
MOH Vehicles Management and Maintenance	Safe construction and maintenance of health facilities car parks	<ul style="list-style-type: none"> Effectively monitor designing, resurfacing, marking signage, line re-painting of car parks in all health facilities 	Ongoing	AMSS F&P IA	SAT40,000.00	Local Budget

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
Health Information and Communication Technology Management and Maintenance						
Management and maintenance of HICT equipment	Procurement, monitoring, repair and written off of HICT equipment	<ul style="list-style-type: none"> Provide technical specifications for procurement, and effectively monitor the usage, repair and written off of HICT equipment 	Ongoing	HICT HSCRM F&P	No fund required	
	Procurement, installation and upgrading of HICT Software	<ul style="list-style-type: none"> Provide technical specifications for procurement of HICT software, and effectively monitor its installation and upgrading 	Ongoing	HICT HSCRM F&P	No fund required	
	Recruitment of technical HICT staff	<ul style="list-style-type: none"> Recruit more technical ICT staff for HICT unit 	Asap	HICT HR & Admin. F&P	SAT250,000.00 per year	Local Budget
Office Vehicles and Office Furniture Management and Maintenance						
MOH Vehicles Management	Safe construction and maintenance of health	<ul style="list-style-type: none"> Effectively monitor designing, 	Ongoing	AMSS F&P	SAT20,000.00	Local Budget

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
and Maintenance	facilities car parks	resurfacing, marking signage, line re-painting of car parks in all health facilities				
	Special vehicle accommodation to protect high-cost vehicles	<ul style="list-style-type: none"> Construct a safe healthcare waste trucks storage, ambulances shelters, vehicle shelters and vehicle wash area in all health facilities 	Ongoing	AMSS F&P PH H&C	SAT50,000.00	Local Budget
	Effective maintenance and servicing of all MOH vehicles	<ul style="list-style-type: none"> Conduct regular maintenance and servicing of all MOH vehicles including ambulances, healthcare wastes trucks 	Ongoing	AMSS F&P	SAT100,000.00 per year	Local Budget
		<ul style="list-style-type: none"> Establish and or update MOH Vehicles Register 	Ongoing	AMSS F&P	No fund required	
Management and Maintenance	Effective maintenance of Office Furniture	<ul style="list-style-type: none"> Establish the maintenance and repair 	By December 2021	AMSS F&P	SAT5,000.00	Local Budget WHO

KEY STRATEGIC AREAS	STRATEGY	ACTIVITIES	TIMEFRAME	IMPLEMENTING PERSONS	COST	SOURCES OF FUND
Office Furniture		Standard Operating Procedures (SOPs) of health assets and equipment				
		• Regularly update the MOH assets register	Quarterly basis	AMSS F&P IA	SAT20,000.00 a year	Local Budget
		• Conduct health assets stock taking or inventory on regular basis	Quarterly basis	AMSS F&P IA		
		• Establish or update write-off assets and or equipment on regular basis	Quarterly basis	AMSS F&P IA		

RISKS AND MITIGATION MEASURES

Health Facilities Management and Maintenance Risks

The management and maintenance of health facilities and buildings face a diverse range of risks that can negatively impact on health workforce performance. The top five risks for health facilities management and maintenance include:

RISKS	DESCRIPTION	MITIGATION MEASURE/S
Internal Risks		
Health and Safety	This is the primary concern for all health staff in each health facility especially those who are given the weighty role of ensuring health and safety is up to scratch.	Ensure the MOH staff are fully complied with Occupational Safety and Health standards in the MOH OSH Guidelines 2021
MOH Staff	The equipment and capital assets that the health staff will be used on site for health services provision involves some levels of risks such as exposed to infectious diseases from handling of healthcare wastes in health facilities, injuries as a result of conducting health facilities renovation and repairs to name a few.	All health staff both clinical and supporting staff should be trained on proper handling of healthcare wastes in all health facilities, and effectively monitor their compliance with the Healthcare Waste Management Strategy 2020-2025.
External Risks		
Finance	Changes in health funds allocated for health facilities management and maintenance impact upon facilities management and maintenance.	Budget allocations for health facilities management and maintenance should be reassessed on regular basis based on evidences provided. Consider outsourcing other services that cannot be handled by the health facilities maintenance staff.
Hazards	Like any other health facility or hospital, all health facilities under the Ministry of Health face extreme to low level risk from hazards such as bad weather, changes to building designs, and public health emergencies such as epidemics and pandemics	Implement risks mitigation measures in the MOH OSH Policy 2021 to minimize exposure of staff, patients and visitors to hazards risks.

Medical Equipment Management and Maintenance Risks and Mitigation Measures

While the effectiveness of health services provision depends on having required assets especially medical equipment in place, it is essential to not only enhance health facilities capability, but also to predict the risks related to sudden failure of medical equipment. The table below present some of the risks that we might experience.

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
1	Clinical	Patient misdiagnosis due to medical equipment	Short term inability to treat patients/Single fatality/Considerable damage to infrastructure	Unlikely to occur in next 10 years	8	Medium	End users should test run equipment before usage. Call Biomed support in the slightest of doubt. Label equipment and set it aside until it is redeemed by a certified or Biomed person.	Consult latest PM conducted, report and record all actions taken.
2	Clinical	Harm to end users caused by medical equipment	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	End users should test run equipment before usage and only trained staff should use the equipment.	Maintenance will be performed semi-annually or annually depending on the equipment.

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
3	Clinical	Breakdown of machines and equipment caused by untrained end users/clinicians.	Short term inability to treat patients/Single fatality/Considerable damage to infrastructure	Highly likely to occur in next 10 years	20	High	User training & follow-up "train the trainer" style of trainings on new medical equipment during installation and commissioning	Trained end users should train and inform all users after training and should ask Biomed for another refresher training if required
4	Clinical	Abuse & exploitation of medical equipment by end users	Short term inability to treat patients/Single fatality/Considerable damage to infrastructure	Highly likely to occur in next 10 years	20	High	Detailed incident report submit from Area/location followed by investigation.	Irresponsible end-users may face appropriate penalty.
5	Service Provision	Inability to deliver service or device because out of stock consumables and spare parts	Short term inability to treat patients/Single fatality/Considerable damage to infrastructure	Highly likely to occur in next 10 years	20	High	All consumables supplies and frequent stocktaking by end users are recorded & monitored. Appropriate orders must be placed well in	Item utilisation & monitoring report is advisable for end users.

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
							advance before stock runs out	
6	Service Provision	Inability to deliver replacement devices due to cost and availability	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	Highly likely to occur in next 10 years	15	High	Urgency requesting management support ASAP.	Sufficient consideration during annual financial budget preparation.
7	Service Provision	Basic daily maintenance not conducted by end users	Some inconvenience to patients/Short term injury or illness/Minimal damage to infrastructure	Highly likely to occur in next 10 years	10	High	Awareness raising activities, Support Network Training (SNT) course.	Appropriate Performance Measure reflective to Management.
8	Service Provision	Past management of scheduled and unscheduled maintenance	Some inconvenience to patients/Short term injury or illness/Minimal damage to	Highly likely to occur in next 10 years	10	High	Amend & attend urgent cases where most appropriate. In worst case scenarios, call	Review & evaluate PM plans and Biomed Projects with respect to staff, timing & resources

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
			infrastructure				external support.	availability.
9	Health & Safety	Injury caused to clinician due to technical malfunction	Some inconvenience to patients/Short term injury or illness/Minimal damage to infrastructure	May occur in the next 10 years	6	Medium	Incident report by Area/location followed by investigation & inspection.	Submit detailed report & recommendation to management.
10	Health & Safety	Injury caused to Engineers & Biomed staff during the course of their duties	Some inconvenience to patients/Short term injury or illness/Minimal damage to infrastructure	Likely to occur in next 10 years	8	Medium	All possible safety precaution should be taken when carrying out a maintenance work.	MOH training on OH&S, maintain high standards, develop and reinforce the Standard Operation Procedure for Biomed (applied Biomed maintenance manual)

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
11	Health & Safety	Injury to Biomed staff while travelling to or at site visit	Some inconvenience to patients/Short term injury or illness/Minimal damage to infrastructure	Unlikely to occur in next 10 years	4	Low	MOH driver should be skilled and drive MOH staff safely to and from site visits	Advanced driver training
12	Health & Safety	Fire caused by flammable chemicals	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	Unlikely to occur in next 10 years	6	Medium	Fire extinguishers should be placed inside office & working areas and must carry a current fitness identify.	MOH training on OH&S, maintain high standards, develop and reinforce the SOP for the Biomed, Fire safety & evacuation training
13	Health & Safety	Fire caused by electrical safety	Some inconvenience to patients/Short term injury or illness/Minimal damage to infrastructure	Unlikely to occur in next 10 years	4	Low	Fire extinguishers be placed in office & work places where necessary.	MOH training on OH&S, maintain high standards, develop and reinforce the SOP for the Biomed, Fire safety & evacuation

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
								training
14	Health & Safety	Fire caused by smoking	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	MOH rules states that no smoking is allowed on hospital premises and therefore all personnel should comply and must be strongly enforced	Continue the strict no smoking policy (SOP manual), Fire safety & evacuation training
15	Health & Safety	Fire caused by inadequate maintenance of machinery	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	Unlikely to occur in next 10 years	6	Medium	Fire extinguishers should be placed in work places where necessary.	MOH training on OH&S, maintain high standards, develop and reinforce the SOP for the Biomed, Fire safety & evacuation training

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
16	Human resources	Theft of consumables, devices or tools	Short term inability to treat patients/Single fatality/Considerable damage to infrastructure	Likely to occur in next 10 years	16	High	Security for tools and materials, lockable cupboards, daily tidying, limited access through signing for materials, stock control process. Also all Biomed personnel have access to the rooms.	Act responsibly or Code of conduct policy applied.
17	Human resources	Trained professional staff leave the service	Short term inability to treat patients/Single fatality/Considerable damage to infrastructure	Likely to occur in next 10 years	16	High	Graduates and remaining staff should be trained by leaving trained staff as much as possible before leaving the service.	MOH to provide support to the trainees and help them wherever possible. Call external support.

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
18	Human resources	Short staffed	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	Likely to occur in next 10 years	12	High	Prioritize workload by extreme. Staff presence; should attend to emergency issues first and then attend to all pending issues as much as possible.	Manager and Principal to continue to create professional working environment which supports and nurtures personnel, continuous professional development opportunities, further training, career pathways, etc.
19	Human resources	Bribery / corruption	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Act responsibly and enforce discipline during the course of duty.	Apply Code of professional conduct.

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
20	Funding	That the MOH cannot afford the supply of Biomedical equipment	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Share or reallocate current resources where most appropriate	Use the MEMC priority list and allocate donor funding according to the priority.
21	Funding	MOH cannot afford additional items and consumables when run out	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Utilise current stock with most care and finance and procurement division to pay suppliers in a timely manner	Request Management for emergency funds allocation or redirect funding application.
22	Contractual	Not under Biomed direct control	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Comply with Biomed Procedure Manual	Enforce & monitor and report to management

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
23	Legal & regulatory	Equipment provided by suppliers do not comply with essential standards	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Recommend to return item to supplier at their own cost as it does not pass the performance and verification stage of the commissioning process	Call & advise supplier for immediate replacement.
24	Environmental	Biomedical equipment exposed to extreme temperatures which will cause malfunction.	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Make appropriate recommendation where most applicable & affordable	Proposal to management & include relevant information for justification.
25	Infrastructure	Breakdown of machines and equipment caused by inadequate maintenance	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Order spare parts & equipment accessories before PM time, stock them ready, make allocation to comply with PM plans and have	Review & evaluate PM plans and Biomed Projects with respect to staff, timing & resources availability.

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
							them implemented on time.	
26	Infrastructure	Insufficient or inappropriate equipment is procured for new building	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Utilise current stock in hand with most care	Review and re-evaluate item specification and clinical procedures appropriateness before procurement process.
27	Infrastructure	Donated equipment and accessories that Biomed are unaware of leads to misuse, misplacement and unsupported.	Short term inability to treat patients/Single fatality/Considerable damage to infrastructure	Likely to occur in next 10 years	16	High	Call Biomed service before donation is accepted regardless of kinds and types of equipment.	Apply the MOH Medical Equipment Donation Policy.

							Proposed mitigating action/s (to reduce unacceptable risk)	
No.	Risk Criteria	Risk Description relating to medical devices	Consequences	Likelihood	Risk Assessment Code (RAC) (1-5 = low) (6-9 = medium) (10-20 = high)	Grade	Short term mitigation	Long term mitigation
28	Infrastructure	Inappropriate storage location damages materials stock	Short term inability to treat patients/Single fatality/Considerable damage to infrastructure	Highly likely to occur in next 10 years	20	High	Make appropriate recommendation where most applicable & affordable	MOH should build a new warehouse for Biomed equipment, accessories and consumables.
29	Information systems	Losing paper based records	Reduced ability to treat patients/Long term injury/Some damage to infrastructure	May occur in the next 10 years	9	Medium	Record folders for all accountable records in the Biomed office and only Biomed Team have access to it. And only released to authorised MOH officials.	Every record be accounted for and stored in a secured filing cabinet for future references.

MONITORING AND EVALUATION OF HEALTH FACILITIES AND ASSETS MANAGEMENT AND MAINTENANCE

The key performance indicators below will be used to monitor and evaluate the implementation of this strategy.

KEY AREAS	KEY PERFORMANCE INDICATORS	TARGETS	REPORTING FREQUENCY	SOURCES OF INFORMATION FOR VERIFICATION
Health Facilities Management and Maintenance				
Health Facilities Management and Maintenance Workforce	Evidence of qualified health facilities management and maintenance employed under the Health Facilities and Assets Management and Maintenance Division	Capacity building trainings conducted for the staff on specialized areas such as: - Electrician - Technician - Plumbing - Healthcare waste management - Carpentry	Annually	MOH Annual Reports
Management and maintenance of health buildings	Percentage of health facilities that: - Are in good condition - Need renovation or - Need replacement/relocation	At least 80% of health facilities are in good condition	Annually	Health Facilities and Assets Assessment Reports MOH Annual Reports
	Percentage of health facilities with cleaning services provided	100%	Ongoing	
	Percentage of health facilities with fire alarming system	100%	Ongoing	
	Percentage of health facilities with air condition system	At least 90%	Ongoing	
	Number of fire alarm drills conducted for all health facilities	At least 1 drill	Annually	
Healthcare Waste Management	Percentage of health facilities with Healthcare Waste Management Standard Operating Procedures	100%	Ongoing	Healthcare Waste Management Monitoring Reports
	Compliance rate of	At least 90%	Ongoing	

KEY AREAS	KEY PERFORMANCE INDICATORS	TARGETS	REPORTING FREQUENCY	SOURCES OF INFORMATION FOR VERIFICATION
	health facilities with the National Healthcare Waste Management Strategy 2020-2025			MOH Annual Reports
	Evidence of effective operation of healthcare waste management incinerators at Tafaigata and Vai'aata	Incinerators operation are well monitored and managed	Ongoing	
Health Facilities Support Services	In-house health facilities and assets management and maintenance committee established	MOH Health Facilities and Assets Management and Maintenance Working Committee in place	Ongoing	Health Facilities and Assets Assessment Reports MOH Annual Reports
Security	Percentage of health facilities with security services provided	At least 90%	Ongoing	Health Facilities and Assets Assessment Reports
	Percentage of health facilities with surveillance cameras	At least 60%	Ongoing	MOH Annual Reports
	Percentage of health staff with MOH official ID	100%	Ongoing	
Medical Equipment & Plants Management and Maintenance				
Biomedical Equipment	Number of registered biomedical equipment in service	2,000	Annually	Biomedical Engineering Register
	Percentage of operational equipment in service	At least 95%	Annually	MOH Annual Reports
	Percentage of assets in service passed "end of life" expectancy	At least 25%	Annually	
	Average downtime (No. of days) of biomedical equipment	At least 14 days	Annually	
	Percentage of planned preventative maintenance completed on time	At least 80%	Annually	
	Number of corrective maintenance	At least 300	Annually	

KEY AREAS	KEY PERFORMANCE INDICATORS	TARGETS	REPORTING FREQUENCY	SOURCES OF INFORMATION FOR VERIFICATION
	interventions – Life threatening priority			
	Number of biomedical equipment failures due to operator error	Below 200	Annually	
	number of corrective maintenance interventions – routine priority	300	Annually	
	Number of biomedical equipment failures due to technical factors	Below 200	Annually	
	Number of biomedical equipment failures due to environmental factors	Below 200	Annually	
	Number of biomedical equipment failures due to other factors	Below 100	Annually	
Health Information and Communication Technology Management and Maintenance				
ICT Equipment	Number of ICT equipment procured, repaired, written off and/or replaced	HICT register updated	Ongoing	HICT Register MOH Annual Report
	Number of ICT software purchased, installed and upgraded		Ongoing	
Vehicles and Office Furniture Management and Maintenance				
Vehicles Management and Maintenance	Number of vehicles per health facility	At least 2 vehicles including ambulance	Ongoing	Health Facilities and Assets Assessment Reports MOH Annual Reports
	Number of vehicles procured, repaired, written off and/or replaced	MOH Vehicles registered developed and updated	Annually	
	Number of vehicles serviced	All	Annually	
	Percentage of health facilities with car parking and garages	At least 80%	Ongoing	
Furniture	MOH furniture are registered	Health Assets register is updated	Ongoing	Health Facilities and Assets Assessment
	Number of furniture procured, repaired,		Ongoing	

KEY AREAS	KEY PERFORMANCE INDICATORS	TARGETS	REPORTING FREQUENCY	SOURCES OF INFORMATION FOR VERIFICATION
	written off and/or replaced			Reports MOH Annual Reports

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Ministry of Works, Transport and Infrastructure (2017). *Samoa National Building Code 2017*. Apia

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ANNEXES:

Annex 1: Form 1: Health Facilities Management and Maintenance Checklist

STANDARDS	CRITERIA VERIFICATION MEETING STANDARDS	FOR OF	COMPLIANCE IN MEETING STANDARDS (SCORE)			BASIS EVALUATION SCORE/ COMMENTS/ ACTION PLAN	FOR
			Full (2)	Partial (1)	None (0)		
1. Existence of Health Facilities Maintenance Plan	Verify that:						
	- the building appears in good shape						
	- there is not a lot of inoperable equipment in the hospital						
2. Existence of the maintenance and repair manuals for equipment are in one location	Verify whether:						
	- The maintenance and repair manual for hospital equipment are maintained in one place in the hospital						
	- Electrical, air, water and waste system works						
3. Existence of health master record of maintenance for each piece of equipment in health facilities	Verify whether:						
	- There is an inventory of all equipment room by room or department by department in each facility						
4. Existence of records that details the schedule maintenance to be performed for each piece of equipment on a regular basis or schedule	Verify whether:						
	- Action records that details when regular maintenance is being performed each month for all equipment						
	- For each month, there is a schedule of the maintenance that is to be performed for that particular month						
5. Existence of reporting system to show the state of each piece of equipment at the time of each test and to initiate any further action which	Verify whether:						
	- There are reports that show the state of equipment when tests are administered and if further action is required						

STANDARDS	CRITERIA VERIFICATION MEETING STANDARDS	FOR OF	COMPLIANCE IN MEETING STANDARDS (SCORE)			BASIS EVALUATION SCORE/ COMMENTS/ ACTION PLAN	FOR
			Full (2)	Partial (1)	None (0)		
may be necessary							
6. Electrical Systems Maintenance tasks are identified and performed: There are routine inspections, oiling, and replacement of defective parts for electrical systems	Verify whether:						
	- Routine inspection of electrical systems occurs						
	- Replace of defective parts that are identified						
7. Plumbing and Water Systems Maintenance Tasks are identified and performed:	- There is annual plan for inspection and replacement of defective parts						
	Verify whether:						
	- Routine inspection of plumbing and water systems occurs						
8. Renovation of health facilities – interior and exterior of buildings when required:	- Replacement of worn washers and defective plugs						
	- There is annual plan for inspection and replacement of defective parts						
	Verify the existence of:						
	- Required renovations on the outside of the building have been performed recently and appear sound when inspected						
	- Required renovations on the interior of the building have been performed recently and appear sound when inspected						
	- Renovations include: ○ Painting and washing down ○ Road and pathways repaired ○ Drainage and sewage work						

STANDARDS	CRITERIA VERIFICATION MEETING STANDARDS	FOR OF	COMPLIANCE IN MEETING STANDARDS (SCORE)			BASIS EVALUATION SCORE/ COMMENTS/ ACTION PLAN
			Full (2)	Partial (1)	None (0)	
	<ul style="list-style-type: none"> performed ○ Roof and gutter maintenance performed ○ Pointing of brickwork and stonework floors finished ○ Electrical rewiring ○ Other: replacement of sinks, shelves, windows, pipes and doors 					
9. Health facilities grounds and environment are clean	Verify the:					
	- Cleanliness of hospital wards					
	- Cleanliness of hospital corridors					
	- Grounds are free of litter and there is no discarded hospital equipment					
	- Toilet blocks are clean and plumbing is in order					

ROW	SCORING COMPLIANCE WITH THE STANDARDS				
A	Total Score (Sum total checks for full, partial and no compliance)				
B	Score for each category (Full compliance =2, Partial compliance=1 and Non-compliance=0)				
C	Score of Full, Partial and Non-Compliance (Row A x Row B)				
D	Total: Sum of Scores for Full, Partial and Non-Compliance (Add all three columns in ROW C)				
E	Score Possible (Total Criteria x 2-less any N/A)	50			Total Criteria 25 x 2 points = maximum 50 points (less any N/A)
F	Percentage Compliance with Standards (Row D/Row E)	100%			

Annex 2: Planned Preventive Maintenance of Plants and Medical Equipment

MEDICAL EQUIPMENT/PLANT		PREVENTIVE MAINTENANCE FREQUENCY
1.	x-Ray complete system	Quarterly
2.	CT Scanner Complete system	Quarterly
3.	MRI Scanner complete system	Quarterly
4.	Mammography complete system	Quarterly
5.	Cath Lab System	Quarterly
6.	C-Arm machine	Quarterly
7.	Arterial Blood Gas Analyser	Quarterly
8.	Heart & Lung Machine	Quarterly
9.	Electrosurgical Unit	Quarterly
10.	Autoclave	Quarterly
11.	Ultrasonic Washer	Quarterly
12.	Dental X-Ray Machine	Quarterly
13.	Ultrasound Machine	Six monthly
14.	Intra-Aortic Balloon Pump (IABP)	Six monthly
15.	Echocardiography Machine	Six monthly
16.	TMT Machine	Six monthly
17.	PFT Machine	Six monthly
18.	Patient monitor	Six monthly
19.	Cardiac Monitor	Six monthly
20.	ECG Machine	Six monthly
21.	Defibrillator	Six monthly
22.	Anaesthesia Machine	Six monthly
23.	Ventilator	Six monthly
24.	OT Table	Six monthly
25.	OT Light	Six monthly
26.	Suction Machine	Six monthly
27.	Endoscope/Laparoscope	Six monthly
28.	Syringe & Infusion Pump	Six monthly
29.	Infant Warmer	Six monthly
30.	Phototherapy Unit	Six monthly
31.	Fetal Doppler	Six monthly
32.	Patient bed	Six monthly
33.	Pulse Oximeter	Six monthly
34.	ACT Machine	Six monthly
35.	Tourniquet System	Six monthly
36.	Blood and Fluid Warmer	Six monthly
37.	Electromyogram Machine	Six monthly
38.	Electroencephalogram machine	Six monthly
39.	Bi-Pap Machine	Six monthly
40.	Humidifier	Six monthly
41.	Holter System	Six monthly
42.	Continuous Positive Airway Pressure system	Six monthly
43.	Infant resuscitator	Six monthly
44.	Microwave Diathermy	Six monthly

MEDICAL EQUIPMENT/PLANT		PREVENTIVE MAINTENANCE FREQUENCY
45.	Hot pack unit	Six monthly
46.	Traction unit	Six monthly
47.	Continuous Passive Motion System	Six monthly
48.	Cold pack unit	Six monthly
49.	Ultrasonic tens system	Six monthly
50.	Microscopes	Six monthly
51.	Centrifuge/Cryofuge	Six monthly
52.	Hot plate (Lab)	Six monthly
53.	Cell counter	Six monthly
54.	Cell separator	Six monthly
55.	PH Meter	Six monthly
56.	Refrigerator	Six monthly
57.	Deep Freezer	Six monthly
58.	Bio-Safety Cabinet	Six monthly
59.	Laminar Flow	Six Monthly
60.	Incubator	Six monthly
61.	Urine Analyser	Six monthly
62.	Micropipettes	Six monthly
63.	Weighing balance	Six monthly
64.	Plasma thawing Bath	Six monthly
65.	Platelet agitator	Six monthly
66.	Tube Sealer	Six monthly
67.	ELISA Reader	Six monthly
68.	Immuno Assay System	Six monthly
69.	Microtome	Six monthly
70.	Refractometer	Six monthly
71.	Ophthalmoscope	Six monthly
72.	Slit lamp	Six monthly
73.	Keratometer	Six monthly
74.	Auto Perimeter	Six monthly
75.	Image Capturing System	Six monthly
76.	Dental chair	Six monthly
77.	Dental sterilizer	Six monthly
78.	Lithotripsy machine	Six monthly
79.	Uroflowmeter	Six monthly
80.	ENT Examination Unit	Six monthly
81.	Harmonic Scalpel System	Six monthly
82.	Chest Vibrator	Six monthly
83.	Fibrillator	Six monthly
84.	VDRL Rotator	Six monthly
85.	Hormone Analyser	Six monthly
86.	Air sampler	Six monthly
87.	Wax bath	Six monthly
88.	Surgical/Operating Microscope	Six monthly
89.	Phaco-emulsification machine	Six monthly
90.	Tissue flotation bath	Six monthly

MEDICAL EQUIPMENT/PLANT		PREVENTIVE MAINTENANCE FREQUENCY
91.	Vortex Mixer	Six monthly
92.	Transport Incubator	
93.	GeneXpert Dx System	Yearly or after 2,000 tests/module
	- Discard of used cartridges	Daily
	- Cleaning of cartridge bay interior	Weekly
	- Cleaning of syringe plunger rod, instrument surfaces, and fan filters with soapy water	Monthly
	- Calibrating of all modules	Yearly

Annex 3: MOF Procurement Methods & Thresholds

C.2.1. Procurement Thresholds

The procurement thresholds stipulate the financial limits for the mandatory application of the procurement methods. The primary procurement method must be applied at all times, however, where relevant circumstances warrant the use of an alternative method the prior written approval of the Tenders Board must be obtained before commencement of any procurement activity, regardless of the threshold. The Tenders Board's approval shall form part of the record of procurement proceedings.

The thresholds, the approving authorities and methods required for each type of procurement are set out in Table 4 as follows:

Table 4: Financial Delegation Threshold (B4 Schedule)

Thresholds (SAT)	Methods of Procurement	Authorities to Approve
Works		
Above 500,000	<ul style="list-style-type: none"> ▪ Primary method: open competitive tender ▪ Alternative methods: Limited/Selective/Restricted Bidding 	Cabinet
Above 200,000 – 500,000		Tenders Board
Above 150,000 – 200,000		<ul style="list-style-type: none"> ▪ Tenders Board (in case of a department or government agency) or ▪ Board of Directors of a public body (in the case of a public body)
Above 50,000 – 150,000	<ul style="list-style-type: none"> ▪ Primary method: Request for Quotation ▪ Alternative methods: Limited/Selective/Restricted Bidding 	
Above 5,000 – 50,000	<ul style="list-style-type: none"> ▪ Primary method: Request for Quotation (3 written) ▪ Alternative methods: subject to Tenders Board prior approval 	Relevant Chief Executive Officer

Thresholds (SAT)	Methods of Procurement	Authorities to Approve
Up to including 5,000	<ul style="list-style-type: none"> ▪ Primary method: Request for Quotation (3 oral) ▪ Alternative methods: subject to Tenders Board prior approval 	
Goods and General Services		
Above 500,000	<ul style="list-style-type: none"> ▪ Primary method: open competitive tender ▪ Alternative methods: Limited/Selective/Restricted Bidding 	Cabinet
Above 200,000 – 500,000		Tenders Board
Above 100,000 – 200,000		<ul style="list-style-type: none"> ▪ Tenders Board (in case of a department or government agency) or ▪ Board of Directors of a public body (in the case of a public body)
Above 50,000 – 100,000	<ul style="list-style-type: none"> ▪ Primary method: Request for Quotation ▪ Alternative methods: Limited/Selective/Restricted Bidding 	
Above 5,000 – 50,000	<ul style="list-style-type: none"> ▪ Primary method: Request for Quotation (3 written) ▪ Alternative methods: subject to Tenders Board prior approval 	Relevant Chief Executive Officer
Up to including 5,000	<ul style="list-style-type: none"> ▪ Primary method: Request for Quotation (3 oral) ▪ Alternative methods: subject to Tenders Board prior approval 	Relevant Chief Executive Officer
Consultancy Services		
Above 500,000	<ul style="list-style-type: none"> ▪ Primary method: Request for Proposal ▪ Alternative methods: Limited/Selective/Restricted Bidding 	Cabinet
Above 200,000 – 500,000		Tenders Board
Above 50,000 – 200,000		<ul style="list-style-type: none"> ▪ Tenders Board (in case of a department or government agency) or ▪ Board of Directors of a public body (in the case of a public body)
Up to including 50,000	<ul style="list-style-type: none"> ▪ Primary method: Request for Proposal 	Relevant Chief Executive Officer
Thresholds (SAT)	Methods of Procurement	Authorities to Approve
	<ul style="list-style-type: none"> ▪ Alternative methods: subject to Tenders Board prior approval 	

Source of Information: MOF Procurement Operational Manual 2020