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Change Impact Document

Project: Umoja

Scenario: Facilities Management, Services Management

Process Group: Building Maintenance, Work Order Requests and Fulfillment

Processes: Preventive Maintenance Planning and Monitoring, Building Preventive Maintenance (plan and monitor)

Process Numbers: CS_004_001_002_UE2_PDD, CS_003_003_003_UE2_PDD

PROCESSES	Preventive Maintenance Planning and Monitoring, Building Preventive Maintenance (plan and monitor)
PARTICIPANTS	**OCSS**: Michael Martini, Kristina Tang; **UNOG**: Samira Desai Sangha; **Umoja**: Zlatan Vlahovic, Elsa C. Lorenzo
OBJECTIVES	• To review, validate and enrich change impacts collected through a tactical three-step approach: 1. Review and update the current state and future state process steps – 20 minutes 2. Validate and enrich the change impacts across the transformation drivers – 45 minutes 3. Document and update the policy considerations and open items – 20 minutes

TO-BE PROCESS DESCRIPTION

Background information

Maintenance activities are undertaken to prevent the United Nations property from deterioration, obsolescence and loss in value. It is provided to maintain safe and secure facilities and work environment in order to meet operational needs of staff, delegates and visitors in a timely and proactive manner. Preventive maintenance activities are performed on a routine basis and are typically scheduled using a calendar interval or based on performance (usage and/or measurement result) that involves a form of equipment servicing. The maintenance plan is used to implement preventive maintenance program, schedule repetitive maintenance activities, record history of maintenance activities, track costs and use the information as basis for budget formulation.

Description

The Preventive Maintenance functionality allows the end user to maintain any equipment or property which requires regular maintenance scheduling. It also captures the associated material, resources, cost and postings for maintenance activities, including reporting.

This tool impacts the work of all property stakeholders considerably by supporting the planning and execution of maintenance tasks for equipment, building components &sub-components, and any UN property that requires preventive maintenance program.

With these processes, the United Nations (UN) has the ability to comprehensively track maintenance activities by using real time information. The Preventive Maintenance functionality can be displayed for all staff provisioned with the enterprise role, SD.16 Preventive Maintenance Planner, within the entire UN. Therefore, all Stakeholders/Planners have an opportunity to use existing maintenance programmes to harmonize such activities. There is also an inter- dependency on processes and inputs/outputs from the Finance (FI/CO), Property Management, Plant Maintenance, Real Estate and HR functional areas.

Note: Of the approximately 3,500 equipment in UN HQs, only 159 are piloted in Umoja as of the validation meeting date, 23 November 2016. Conversion of the remaining equipment master data is expected to be loaded by the beginning of 2017.

CURRENT STATE PROCESS STEPS	**Building Preventive Maintenance (plan and monitor): AS-IS HQs Preventive Maintenance example** 1. Property Custodian (PC)/Facilities Management Supervisor (FMS)/Maintenance Shop Supervisor (MSS) prepares yearly preventive maintenance plan. Note: Record generation and registration take place. 2. Section Chief reviews and approves the maintenance plan. 3. PC/FMS/MSS schedules preventive maintenance work. 4. If approval is needed, Section Chief/General Foreman reviews work, checks available budget and approves. 5. Maintenance Shop Staff or Corporate Vendor Personnel carries out maintenance activities Notes: In case maintenance activity would affect productivity, Maintenance Shop Staff schedules maintenance outside working hours. 6. PC/FMS/MSS records activities performed.
FUTURE STATE PROCESS STEPS	**Global Standard Process** 1. Preventive Maintenance Planner reviews maintenance requirements based on manufacturers' recommendations, objects' condition and best business practices[1]. [1]Best business practices • Adoption of best practice methodologies; • Adequate maintenance planning; • Establishment of operating guidelines and policy applicable across the Organization;

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- Establishment and systematic use of Key Performance Indicators (KPI).

2. Preventive Maintenance Planner determines Type of Planning, time-based or performance-based or multiple counter planning.

3. Preventive Maintenance Planner creates a template work order known as a Task List which details the scope of work that needs to be performed and specifies the maintenance strategy/frequency in the Task list.

4. In the case of performance or multiple counter planning, Preventive Maintenance planner uploads[2]/enters the regular reading results into Umoja, which creates the measurement document.
   [2]Upload of the reading results will be part of the enhancements that will replace Galileo.
   Note: The measurement document is automatically recognized by Umoja as to which maintenance is required and what is the measurement point. When information in the measurement document is equal or above the measurement point, Umoja automatically creates the work order for the appropriate maintenance.

5. Preventive Maintenance Planner creates Maintenance Items and the Maintenance Plan which includes the objects, scheduling parameters and Task list.

6. Preventive Maintenance Planner schedules the Maintenance Plan and selects an appropriate start date.

7. In case the service order activities consume the budget, FM.07 - FM Earmarked Funds Documents Certifier has to review and approve the service order.

8. SD.17 – Preventive Maintenance Releaser reviews and releases service orders.

9. Maintenance Shop Staff/Corporate Vendor Personnel executes work/service orders. Follow the process *SC_004_003_001 - Manage Work Order.*

7. After work is completed, Preventive Maintenance Planner enters work order confirmation and completes the work/service order.

8. Preventive Maintenance Planner monitors Maintenance Plan and Task List and reviews it on a periodic basis to make needed adjustments and changes.

Integrated, automated system and enhanced reporting

- Prior to Umoja, processes were manual and paper-based which made monitoring difficult. There was no integration between the work order planning process, recording of work completed and management of equipment record.
  Furthermore, inconsistency in preventive maintenance procedure and planning in many locations generated the following issues:
  - Extra work in corrective maintenance;
  - Higher costs;
  - Lower level quality of service to users;
  - Shorter life to infrastructure and equipment.

  With the integration of Preventive Maintenance with Finance, Source to Acquire (goods), stock inventory level, in-house labor and Funds Management, enumerated below are the advantages of the Global Standard Process:

  Quantitative

- Reduction of maintenance planning effort by reusing standard plan for similar property/equipment over a long-term period;
- Actual maintenance costs (spare parts and labor utilized) are captured;
- Reduced spare part inventory levels based on known numbers of installed equipment and planned maintenance requirements;
- Enables price calculation of different types of services and provision of customer invoicing whenever and wherever applicable;
- Ability to update and manage property status with visibility to warranty information;
- Formulation of the maintenance budget is based on materials and labor usage history, counter readings, inspection condition and risk of failure, which are the basis of forecasted preventive maintenance work;

  Qualitative

- Fewer corrective maintenance performed as a result of preventive maintenance completed on time and on budget. Reduction in unplanned downtime;
- Centralized, standardized and single repository of master data that integrates procurement, finance and logistics functions resulting in minimal user errors and increased accuracy of property portfolio;
- Establishment of bill of materials (BoM[3]) for equipment for planning purposes;
  [3]The BOM is a complete and structured list of the components (represented with object number [material, equipment, functional location], quantity and unit of measure) used during the planning process of a maintenance/service order for the purpose of spare parts identification and planning.
  Note: Ability to use this functionality would be enhanced through generation of BI reports to complement standard ECC reports.

PROCESS IMPACTS (what new business process, being implemented in Umoja, will be transformational for the UN, e.g., employee self-service)

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- Ability to trigger procurement process when re-order point of spares parts and materials is reached and required for servicing, maintenance, and repair operations;
- Improved tracking of service contracts including contractor performance due to visibility of information available from SRM;
- Increased visibility, transparency and access to real-time information that enables maintenance supervisors to manage work schedules, add special work schedules to the operational requirements and utlise resources of service providers more efficiently.

IPSAS changes
- IPSAS requires that if the cost of maintaining already capitalized assets increases the service capability and/or extends the useful life of the assets, such costs should be capitalized and depreciated over the revised useful life of the asset, otherwise it should be expensed when incurred.

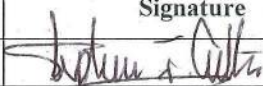|	
ROLES / SKILLS / KNOWLEDGE IMPACTS (new roles that are created as a result of Umoja or current roles undergoing significant change)	**Preventive Maintenance Planner, FM Earmarked Funds Documents Certifier, Preventive Maintenance Releaser** will: • Require extensive training in using Umoja preventive maintenance module, including planning skills, to review and prioritize maintenance requests to develop structured and meaningful preventive maintenance plans and manage preventive maintenance service orders generated from maintenance plans; • Be responsible for the detailed planning and scheduling of work. Typically a Preventive Maintenance Planner operates in reactive mode, however the planning and scheduling tools provided in Umoja enables the Planner to be more pro-active; • Need to enter additional information into Umoja, e.g., planning and scheduling information (Work Order management); • Convert valid maintenance requests to Task List and Maintenance Plan with an estimate of work and necessary materials; • Monitor the execution of work and control attainment of the plan. Once the work is complete, close out the service order and update the appropriate equipment history; • Have increased accountability for maintained planning due to increased visibility of work effort and timely completion; • Have a view of operational activities to align scheduled downtime to the operations plan; • Need to be familiar with relevant policies, SOPs and guidelines. Implementation necessitates the redefinition of current roles. *Preventive Maintenance Planner (SD.16)* • Preventive Maintenance Planner performs the appropriate actions leading to the work order management process. Furthermore, Preventive Maintenance Planner creates and updates the Task Lists, Maintenance Items & Plans. *Preventive Maintenance Releaser* • Reviews each work order.
WORK VOLUME / COMPLEXITY IMPACTS (changes to the amount and difficulty of work, to a job group or part of the organization as a result of implementation of Umoja)	**Preventive Maintenance Planner, Service Delivery Releaser** EFFORT • Considering the integrated and automated system used in Preventive Building and Equipment Maintenance as well as its report generation capabilities, effort in Preventive Maintenance and Service Orders process steps would yield greater visibility, transparency, oversight and better maintenance planning. • Increased effort in recording information for completeness and accuracy to support performance reporting. VOLUME • With regular performance of preventive maintenance, the operational performance of building infrastructure and equipment would improve. Increase in preventive maintenance activities would result in fewer volume of reactive maintenance in the long run.

	COMPLEXITY
	• After becoming familiar with use of Umoja and terminologies associated with Preventive Maintenance, planning, scheduling and monitoring of building and equipment maintenance would be less complex for internal work orders. This would be more complex for work orders performed by external contractors because of the integration of internal and contractor work schedules and detailed recording requirement.
DOA / APPROVER / RESPONSIBILITY IMPACTS (changes in delegations of authority or approval processes as a result of a process being implemented)	• FM Earmarked Funds Documents Certifier reviews and approves service orders with budget consuming activities as a result of Cost Recovery policy. • Preventive Maintenance Releaser reviews and releases service orders.
WORK LOCATION IMPACTS (if the location of specific work is moving to a centralized or regional location, or from a HQ location to the field)	• The roles of FM Earmarked Funds Documents Certifier and Preventive Maintenance Releaser can be performed remotely (global, regional).
REPORTING / ACCOUNTABILITY IMPACTS (impact of the reporting capability of Umoja on UN operations, e.g., whether the transparency of data impact accountability or KPIs)	• Prior to Umoja, limited reporting tools were available. Umoja has reporting capability from ECC and BI that includes standard reports and ad hoc reports that allow monitoring/auditing to support this process.
STAKEHOLDER PAIN POINTS (issues that could potentially create pushback or complaints from stakeholders as a result of a process being implemented)	• Large dedication of time in initial set up and training of staff.
LEGACY SYSTEM IMPACTS (systems that are currently in used that will be replaced by Umoja)	• Prior to Umoja, maintenance plans and work orders were tracked in Excel, other paper-based system and automated system, e.g., MP2 (Maintenance software). • In the case of field missions, Galileo continues to be utilized in recording preventive maintenance activities until its scheduled decommissioning in September 2017.
POLICY IMPACTS (policies that are changing that will reshape the UN)	• Establish Preventive Maintenance Policy.
NEXT STEPS	

REVIEW / ACTION ITEMS

	Action Items	Owner	Comments
1	Create BI reports to support this process	OCSS / Umoja	Reporting requirements currently being identified
2	Create SOPs and training materials on the process	OCSS / Umoja	Ongoing
3	Create SOPs and training materials on monitoring/auditing	OCSS / Umoja	Ongoing
4	Establish Preventive Maintenance Policy	OCSS	In progess
5	Conduct change impact analysis in case their local process steps do not correspond with the As-Is Process Steps in this document	Entities	

PROCESS OWNER ACCEPTANCE

PROCESS OWNER(S)' ACCEPTANCE OF THIS DOCUMENT AND ITS CONTENTS		
Name	Signature	Date
Stephen J Cutts Assistant Secretary-General, OCSS		26/1/17

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