



# **MIMS Project**

## **SOW for MIMS Selection and Implementation**

**DOCUMENT NUMBER: HOM0078**

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**SUMMARY:** This document provides a Statement of Work (SOW) for the work to be done to identify and implement a suitable Maintenance Management Information System (MIMS) at the User of a Defence Force System, as well as at the Supplier of the system.

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## APPROVAL PAGE

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## AMENDMENT HISTORY

<b>Doc Issue</b>	<b>Doc Date</b>	<b>Amendments</b>	<b>Doc Change Proposal</b>
Rev 1	06 MARCH 2018	Original Document	Not applicable

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## 1. SCOPE

### 1.1 Purpose of the Document

This document describes the minimum tasks to be performed by the Contractor to identify a suitable MIMS that can be used by the Client as well as the CSIR for a Defence Force Product System in a synchronised and coordinated manner.

### 1.2 Background and System overview

The CSIR has developed and is in the process of delivering to the South African National Defence Force (SANDF) Client a Product System consisting of three different Products. The products are delivered to two different sites approximately 200km apart, while operations will take place from only one (main) site. To enable operations from the main site, the equipment delivered to the other sites need to be assembled and transported to the main site. The logistics support system that was developed for the Product System requires a Maintenance Information Management System (MIMS) that can easily track maintenance cycles on various equipment mainly at the main site, including expiry dates, spares levels and various other aspects as described in the URS for the MIMS [1].

### 1.3 Document Overview

The document was compiled using the Implementation Concept for the MIMS [2] as an input. The SOW in this document supersedes [2] therefore the Implementation Concept document will not be provided to the Contractor.

## 2. DOCUMENTS, DEFINITIONS AND ABBREVIATIONS

### 2.1 Applicable Documents

- [1] User Requirements for Maintenance Information Management System, Document No. MR048-8000000-501 Rev 1

### 2.2 Referenced Documents

- [2] Implementation Concept for the MIMS dated 31 August 2017.

### 2.3 Definitions

N/A

### 2.4 Abbreviations

CMMS	Computerised Maintenance Management System
EAM	Enterprise Asset Management
iOBL	Initial Operating Baseline
FRACAS	Failure Reporting and Corrective Action System
LSAR	Logistic Support Analysis Record
MIMS	Maintenance Information Management System
OEM	Original Equipment Manufacturer
OT&E	Operational Test and Evaluation
SANDF	South African National Defence Force
SOW	Statement of Work

URS	User Requirement Statement
PBS	Product Breakdown Structure

**3. IMPLEMENTATION PHASING OF THE MIMS IN TERMS OF THE PRODUCTION PHASE AND COMMISSIONING PHASE OF THE MAIN PROGRAMME**

A maintenance management tool capability is required that enables management of multiple instances (serials) of item types (part numbers). The equipment to be managed and maintained will be distributed over a number of locations, including at the CSIR and User facilities. Reliance on purely manual management information processing is not advisable and can introduce unnecessary risk to Project objectives and the equipment.

A suitable software solution should reduce risk by:

- Use of an integrated Asset Tracking and reporting capability.
- Enabling scheduling and monitoring of maintenance requirements, execution and serviceability status (complete, consolidated).
- Maintainers not having to gather task requirements information from a separate asset register and various project baseline reports.
- Enabling integrated capture of maintenance task results, correlated with failure records and corrective action progress information.

In order to achieve this it is envisaged that the MIMS be introduced to the main programme during the production phase, prior to the delivery of the Main Equipment to the User. The initial introduction of the MIMS should be within the CSIR organisation in Stellenbosch, and gradually migrated to the User environment. Refer to Figure 1 for a conceptual phasing for implementing the computerised maintenance management capabilities for the System (initially for the Project and finally for the User Base and on-going contractor support).

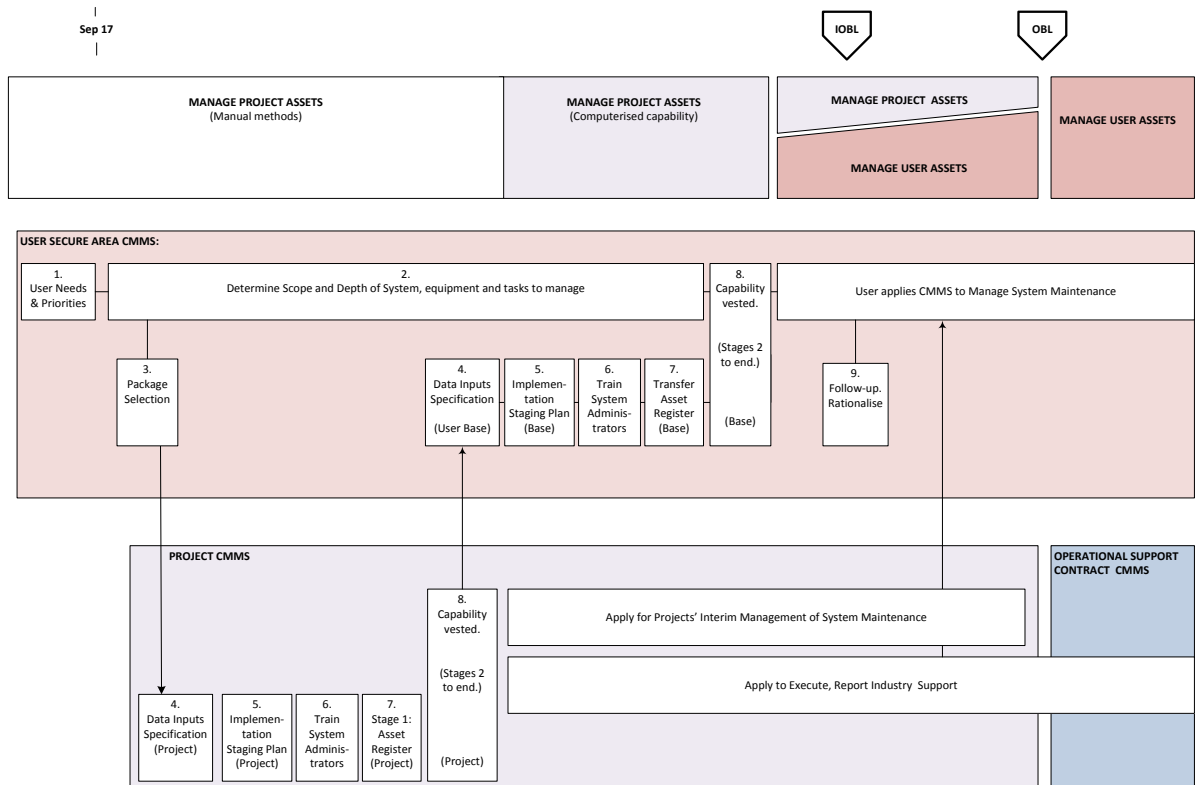


Figure 1: Integrated Implementation Phasing

The implementation phasing need to satisfy the User (phasing) requirements as described below:

### **3.1 User Requirements**

Computerised maintenance management capabilities need to be in place when the User becomes responsible for managing care of the new System. User Secure Area maintenance management capabilities need to be in place (implemented) to enable the User to accept transition of System Maintenance Management.

It was determined that the Base operation of the capability would require minimum 3 x maintenance software application work-positions in the Base Secure Area: ([Foreman], [Admin Clerk] and [Stores]).

The User indicated the following implementation preferences:

- In selecting the maintenance software application solution, it would be advantageous for the User if the acquisition process included a trial demonstration with example data. (E.g. CSIR illustrating the use with an excerpt of the new systems support data on an OEM evaluation copy.)
- The equipment data and equipment Project –Phase maintenance histories should be maintained on a maintenance software application installation already for the Project Phase at the CSIR in Stellenbosch.
- The maintenance software application capability (populated with the new system data) may then be supplied with the new system equipment to the User Base. The typical implementation risks associated with new information systems can in that way be reduced by enabling the User with a working solution that the User may proceed to integrate into the Base secure-area technical organization.

### **4. Contractors response required**

The Contractor is required to provide a quotation for consultation services to the CSIR (Stellenbosch), with the main aim to recommend and demonstrate a suitable MIMS solution. The recommendation shall include as a minimum purchase price, on-going support cost, implementation considerations, Supplier /s, training requirements and operator skill level considerations. The quotation shall be based on, as a minimum, the work as specified in the attached SOW.

The price shall be fixed, and shall cover all the work and deliverables as stated in the SOW.



# Annexure A

## Statement of Work (SOW)

### 1. Clarify outputs

#### 1.1 Input

MIMS URS [1]

#### 1.2 Output

**Clarify the essential outputs required from the system. Prioritise essential vs. merely beneficial in terms of the value that the capability is required to provide.**

The MIMS URS [1] defines the User's maintenance management capability requirements for the SANDF Base secure area. Typical outputs of the MIMS are:

- To maintain the condition of purchased equipment to protect the acquisition investment.
- To maintain project equipment in serviceable condition, enabling readiness for Production Phase OT&E and Training.
- To economise on maintenance requirements and make effective use of existing Customer capabilities.
- To support in-use assessment of developed support elements and structured transition of equipment upkeep capabilities to the User Organization.
- To reduce the risk of unserviceable equipment causing unplanned delays and associated project and customer costs.
- To contribute to dependability of safety-critical systems.
- FRACAS
- Spare parts level (minimum stock)
- Job card management
- Asset LOCATION management

#### 1.3 Acceptance criteria

Acceptance by the Customer for the successful completion of this task shall be by means of the following:

User Representative Certificate of Acceptance

### 2. Clarify Scope and Depth

#### 2.1 Input

Output from SOW Item 1: Clarify outputs

User inputs

#### 2.2 Output

Clarify the equipment (scope and depth) to be addressed in the maintenance strategy to be supported by use of the maintenance software application.

*(The immediate scope is to support the maintenance, care and readiness of the current Production Phase equipment. The depth to which equipment require to be managed*

*(serialised) on the maintenance software application needs to be determined from the interim current Project use and support of the equipment.)*

### **2.3 Acceptance criteria**

Acceptance by the Customer for the successful completion of this task shall be by means of the following:

User Representative Certificate of Acceptance

### **3. Determine features required**

#### **3.1 Input**

Output from SOW Item 1: Clarify outputs

Output from SOW Item 2: Clarify Scope and Depth

User inputs

#### **3.2 Output**

Determine how the features of the maintenance software application will be applied and populated to produce the required system functional, operator interaction, tasking and reporting outputs.

#### **3.3 Identify available, proven maintenance software applications that can meet the requirements (see 1).**

#### **3.4 Determine how to structure the system PBS to enable system readiness assessment from maintenance results.**

#### **3.5 Determine the key data elements to be entered, processed, stored, managed and reported on the software system.**

#### **3.6 Configuration of input and output form (reporting) options.**

#### **3.7 Assign operating positions, responsibilities and authorities, operating cycles and quality assurance.**

- A. Can the system adapt to our needs as we grow? *(For the User's application, growth in requirements is envisaged to be in the number of equipment and maintenance tasks (capacity) to be managed. The on-going enhancements that progressive commercial suppliers will over time introduce to keep their offering competitive should, for this application, be more than adequate. Investing in a well-supported commercial package can enable the user to stay up to date with global improvements in maintenance management practice )*
- B. What training is needed? *(The implementation approach includes training. To be further detailed during trial software evaluation and selection.)*
- C. Determine the time/ budget required to implement. *(Manual processes will not provide the required results and will not sustain the operational capability - a tool / software solution is required. Affordable commercial solutions are available. Early commencement of implementation is required. Estimates for the Implementation Effort can be determined during the proposed trial evaluation and selection exercise.)*

Once selection of the software application is made, detail implementation planning should be compiled as to how the given features of the application will be applied and populated to produce the required system functional, operator interaction, tasking and reporting outputs. The feasibility of implementation to be considered as part of Evaluation and Selection.

**3.8 Acceptance criteria**

Acceptance by the Customer for the successful completion of this task shall be by means of the following:

User Representative Certificate of Acceptance

**4. Identify System Data**

**4.1 Input**

Output from SOW Item 1: Clarify outputs

Output from SOW Item 2: Clarify Scope and Depth

Output from SOW Item 3: Determine features required

User inputs

CSIR inputs

**4.2 Output**

Fully identify the system data and operating data inputs required in the maintenance software application to enable producing the required outputs.

**4.3 Acceptance criteria**

Acceptance by the Customer for the successful completion of this task shall be by means of the following:

User Representative Certificate of Acceptance

**5. Determine Logical Implementation**

**5.1 Input**

Output from SOW Item 1: Clarify outputs

Output from SOW Item 2: Clarify Scope and Depth

Output from SOW Item 3: Determine features required

Output from SOW Item 4: Identify System Data

User inputs

CSIR inputs

**5.2 Output**

Determine the logical implementation staging for the required maintenance management capability and allocate the system data and operating data inputs required for each stage. (Detail Implementation Plan.)

**5.3 Acceptance criteria**

Acceptance by the Customer for the successful completion of this task shall be by means of the following:

User Representative Certificate of Acceptance

**6. Evaluation and recommendation**

**6.1 Input**

Output from SOW Item 1: Clarify outputs

Output from SOW Item 2: Clarify Scope and Depth

Output from SOW Item 3: Determine features required

Output from SOW Item 4: Identify System Data

Output from SOW Item 5: Determine Logical Implementation

User inputs

CSIR inputs

**6.2 Output**

Potential solutions that would satisfy the requirements as determined during the previous steps need to be identified. An evaluation needs to be performed on these solutions taking into account at least the following aspects:

- i. Purchase cost
- ii. Annual license cost (if applicable)
- iii. Potential for User to add own defined features
- iv. Practical and security restrictions on Implementation
- v. OEM Support concept and cost
- vi. Ease of use
- vii. Compliance to features & functions required
- viii. Country of Origin
- ix. Value for money

**6.3 Acceptance criteria**

Acceptance by the Customer for the successful completion of this task shall be by means of the following:

Delivery of an evaluation report covering the aspects above, including a recommendation for the most suitable solution.

**7. Demonstration**

**7.1 Input**

Output from SOW Item 1: Clarify outputs

Output from SOW Item 2: Clarify Scope and Depth

Output from SOW Item 3: Determine features required

Output from SOW Item 4: Identify System Data

Output from SOW Item 5: Determine Logical Implementation

Output from SOW Item 6: Evaluation and recommendation

User inputs

CSIR inputs

**7.2 Output**

Following the recommendation for the most suitable solution for MIMS, the Contractor shall obtain a demonstration version of the recommended solution, and implement it at the CSIR premises in Stellenbosch. The demonstration version of the MIMS shall be

populated with dummy data sufficient to demonstrate the required features and functions.

Note that no additional expenditure by the CSIR is permitted/intended once the tender is awarded. Thus any potential cost in order to demonstrate software must be included in the Contractor's tender submission. The CSIR does not intend to purchase any software as part of the demonstration. Trial versions of software may be utilised by the Contractor to demonstrate the functionality of the software.

**7.3 Acceptance criteria**

Acceptance by the Customer for the successful completion of this task shall be by means of the following:

CSIR Representative Certificate of Acceptance

**8. Subsistence and Travel (S&T)**

Requirements for S&T need to be included in the quotation.

The Main Contractor (CSIR) is located in Stellenbosch (Western Cape). It is foreseen that the Contractor would be required to travel to the CSIR in Stellenbosch at least twice during the execution of this SOW. Additionally it is foreseen that the Contractor may be required to travel to the User who is situated in Langebaan (Western Cape). The consultations with the Main Contractor (CSIR) and the User (SANDF) for each visit can take place at the same time period (i.e. only 2 visits required, each visit includes consultation with the CSIR in Stellenbosch and consultation with User in Langebaan).

Additional allowance must be made for the demonstration of software as described in SOW Item 7.