

*Service Management Delivery Services*

**OSS Expansion Project**

**Supplementary Change Requests**

**Statement of Work**

**Prepared for:**

****

**V1.0**

**Final**

Commercial in Confidence

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Distribution

|  |  |
| --- | --- |
| Name | Organisation |
| Sohaib Ahmed | Mobilink |
| Mohd Al Zeiny | Mobilink |
| Badar Khan | Innovise ESM |
| Andy Onacko | Innovise ESM |
| Mat Middleton | Innovise ESM |

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Approved By | Role | App Status | Version | Date |
| Sohaib Ahmed | Mobilink - NOC Manager | Pending |  |  |
| Mohammed El-Zieny | Mobilink – NOC Senior Manager | Pending |  |  |
| Yusuf Al-Hadad | Mobilink – NOC Director | Pending |  |  |
| Mat Middleton | Innovise – Commercial Director | Pending |  |  |
| Andy Onacko | Innovise - CEO | Pending |  |  |

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# Introduction

## Document Objective

This document will form the ‘Statement of Work’ required to deliver the additional functionality and capability as requested by Mobilink in April 2011.

It will describe the Innovise interpretation of the requirement and clearly state the deliverables, associated work packets, the planned schedules & milestones and any risks, assumptions and dependencies. It will also make reference to the related commercials.

NB: this document details the activities that Innovise and Mobilink will undertake – Mobilink will also need to provide resources to the project in particular to support low level design and test activities.

## Contact

Any questions relating to this document should be addressed to:

**Badar Khan**

Innovise Ltd, Keypoint House

17 – 23 High Street

Slough, SL1 1DY

t: +44(0)7920 808590, email: [badar.khan@innovise.com](mailto:badar.khan@innovise.com)

# Project Objectives

## High Level Solution Overview

Phase 1 of this project was to install the IBM Tivoli Management suite, providing Mobilink with the capability to administer and manage their Network operations.

Phase 2 exploits the baseline created by Phase 1. Event management extended to four additional business network domains. Introduces Change Management, Enhanced CMDB ,additional Probes and MIBs. .

Mobilink have now identified some new additional requirements. tThese change Requests have not yet been scheduled and may follow on from Phase 2 (although we would prefer to at least start the work prior to Phase 2 closure if possible). Exact timelines will be agreed with Mobilink once scope and work packets are agreed.

We have taken each of the elements of the change request and wrapped them into seven work packets. Currently, these are:

* WP0 – Project Management
* WP1 – Integration of New Ericsson Probe into IN Network (Intelligent Network)
* WP2 – Addition of IP Devices to solution
* WP3 – Alcatel B11 Upgrade
* WP4 – Motorola GSR10 Upgrade – may be taken out of scope.
* WP5 – Huawei M2000 Probe Expansion for BSS network environment
* WP6 – Additional Impact Policies for Huawei and Ericsson Probes (as detailed in WP1 and WP5)
* WP7 – Additional MIBs for Core environment
* WP8 – Installation of a subset of the IBM Tivoli Management used by Mobilink in a Staging/Test Environment.

## Items in Scope

The following sections contain information on the items in and out of scope. NB: these are all areas defined in the scope as understood by Innovise.

| **Area** | **In scope** |
| --- | --- |
| WP0 - Project Management | 1. Provide assistance and input with the Testing, Deployment Plan and Support Model. 2. Provide input and collaborate for the following activities:  * Project planning and governance (internal Mobilink gateways) * Technical governance (internal Mobilink gateways) * Testing (incl. UT, SIT, UAT, etc.) |
| WP1 – Ericsson | 1. Install new Ericsson probe into IN network environment 2. Create probe rules – based on the existing Siemens rules 3. Run probe to receive/collect events 4. Create/modify policies (if applicable – ie depending on Mobilink requirements). 5. Test that events and policies produce same results as in previous system. Mobilink need to provide the success criteria prior to testing starting.   Dependency: Mobilink to provide requirements on Event Alarm Handling in order to achieve Step 2.  Dependency: Mobilink to have activated the Ericsson kit (to replace incumbent Siemens environment). This is currently scheduled to be completed around Mid June 2011 – this work packet cannot start until it is in production service.  Assumption: no new policy workflows will be required for this work packet – it is assumed that the existing Siemens policies are valid.  Assumption: Enough events will have been received within a period of 2 days to test the policies. If this assumption is proved incorrect a longer test period may be required and will be subject to Change control. |
| WP2 – Additional IP devices | 1. Receive (from Mobilink) spreadsheet detailing full list of IP addresses and associated SNMP Community Strings for all in-scope devices. 2. Load into ITNM/IP system. 3. Run discovery for up to 2 days 4. Check for failures and fix or escalate to Mobilink for resolution as appropriate. 5. Document and pass over to support.   Dependency: Mobilink to provide full list of IP Addresses and SNMP community string prior to this work commencing.  Assumption: There will be no more than 800 devices in the list  Assumption: This will be done straight onto the live environment – no deployment plan needed.  Assumption: these devices will follow the same policies and escalation rules as existing IP devices and policies. |
| WP3 – Alcatel B11 Upgrade | 1. Apply IBM upgrade/patch on incumbent probe (B10) 2. Check that events are still being processed as per pre-upgrade 3. Investigate any policies which appear to fail 4. Handover to support   Risk: as this upgrade is being done in the live environment – it may be that we cannot simulate all events for testing and therefore it is not possible to see all events coming through in the timescale allowed for testing. This risk could only be fully mitigated by creating a stand-alone test environment and network. Given that this is not going to happen in the timescales allowed by this project – Innovise will assume test acceptance when all events received in the 2 day test data collection period have been validated. |
| WP4 – Motorola GSR10 Upgrade | 1. Apply IBM upgrade/patch on incumbent probe 2. Check that events are still being processed as per pre-upgrade 3. Investigate any policies which appear to fail 4. Handover to support   Risk: GSR10 is not supported in the Motorola 3GPP Probe at the time of writing this SoW. If this has not been fully tested by IBM prior to deployment then Mobilink will need to decide whether the risk of immediate production installation is worthwhile. If Innovise are required to set up test bed to test compatibility this will be an additional activity and an additional CR will need to be raised. |
| WP5 – Huawei Probes | 1. Install M2000 Huawei probe onto BSS environment 2. Create probe rules 3. Run probe to receive/collect events 4. Test that events produce same results as in other existing environments (e.g. T2000)   Assumption: No additional rules or policies will be needed over and beyond the existing Huawei probe configuration elsewhere  Dependency: Mobilink to provide details of Corba connection |
| WP6 – Impact Policies | 1. Create Policy workflow/design (with Mobilink SME(s)) Mobilink to provide Policy requirement via single workshop 2. Configure Impact policies 3. Relevant TSRM incident created if required 4. Test to Mobilink Scenario – respond to any accepted defects 5. Document and handover to support   Dependency: Mobilink to have written test scenario and clear success criteria prior to development.  Assumption: This work packet will amend no more than 4 existing policies  Assumption: This work packet will create no more than 4 Mid level [[1]](#footnote-1)complexity policies  Assumption: This work packet will create no more than 2 High level complexity policies.  Assumption: it is assumed that each “policy” equates to a single workflow it is Mobilink’s responsibility to define the rules of that workflow – Innovise will configure Impact to follow these rules.  Assumption: Test phase will be via single test cycle with second retest cycle if necessary. No more than 3 days elapsed. |
| WP7 – Core MIBs | 1. Obtain two Vendor specific MIBs (Mobilink to specify) 2. Create rules files from MIBs 3. Modify rules (based on Mobilink requirements) 4. Test that events are being processed as per rules file expectations |
| WP8 Staging/Test Environment. | Installation of the following software (for functional but not performance testing):  1. Probe server Collection Layer Omnibus object server + TSRM Gateway  2. Webtop and and Omnibus display layer object server  3. Impact Server and Aggregation layer Omnibus object server  4. TSRM/CMDB application server and database + TSRM deployment server |

## Items Not in Scope

| **Area** | **Out of scope** |
| --- | --- |
| Technology | * No installations or configurations other than those specifically detailed as being in-scope within Section 2.2 of this document. Mobilink are responsible for upgrade of technology components to accept new or upgraded probes and/or MIBs * Staging/Test Environment Hardware,sizing, procurement and hardware build to same AIX 6 baseline as existing production servers . |
| Requirements and Processes | * Documentation of any new “To Be” processes or updates to “Current” ITSM process documentation. * Any other requirements that are not part of the in scope processes. |
| Data Loads | * Data cleansing * Data collection – other than data collected by MIBs/Probes |
| All Work packets | * No other configuration of the modules other than that defined within section 2.3.3. of this document. |
| Non-Functional and business change | * There is no non-functional or business change element in this project from an Innovise delivery point of view. |
| Testing | * Writing of test scripts and generation of use cases is not in the Innovise ESM scope for User Acceptance Testing * Any other testing activities not stated as in scope (e.g. test management, test automation etc) |
| Adoption and Training | * Any other adoption and training activities not stated as in scope. |
| Operational Support for P1 or P2 deliverables | * The project team’s objective and focus will be on delivering work packets deemed in scope deliverables as stated above. Operational support issues should not be addressed to them. Support queries should be directed to the concerned support team. |
| External Systems Integration | No external systems integration |

## Overall Deliverables

The table below details the deliverables MB/Innovise ESM will produce during this phase of the project. Some of the Project deliverables have been included that Innovise ESM is not responsible for as there are dependencies between the work streams.

The table below details the deliverables Innovise ESM will produce during this phase of the project.

| **Work packet** | **#** | **Deliverable** | **Description** | **Responsible** |
| --- | --- | --- | --- | --- |
| WP1. Ericsson | D1.1 | HL Design | Modify existing Siemens design to reflect new Ericsson build. | Innovise |
| D1.2 | Test Cases/Scripts | Document/scripts that detail all test Cases and their exit criteria | Mobilink |
| D1.3 | Ready for Service certificate | Agreement from Mobilink that they have tested all functionality within probe and that they are happy to leave it running within production | Mobilink |
| D1.4 | Build Doc | Document which shows the configuration that has been completed and facilitates handover to support. | Innovise |

| **Work packet** | **#** | **Deliverable** | **Description** | **Responsible** |
| --- | --- | --- | --- | --- |
| WP2. IP Devices | D2.1 | List of devices | Document with details all IP addresses and SNMP Community Strings of devices to be discovered | Mobilink |
| D2.2 | Test Cases/Scripts | Document which details how Mobilink will test this work packet and their exit criteria | Mobilink |
| D2.3 | Ready for Service certificate | Agreement from Mobilink that they have tested all functionality within ITNM/IP and that they are happy to leave it running within production | Mobilink |
| D2.4 | Build Doc | Document which shows the configuration that has been completed and facilitates handover to support. | Innovise |

| **Work packet** | **#** | **Deliverable** | **Description** | **Responsible** |
| --- | --- | --- | --- | --- |
| WP3. Alcatel B11 Upgrade | D3.1 | Test Cases/Scripts | Document which details how Mobilink will test this work packet and their exit criteria | Mobilink |
| D3.2 | Ready for Service certificate | Agreement from Mobilink that they have tested all functionality within new probe and that they are happy to leave it running within production | Mobilink |
| D3.3 | Build Doc | Document which shows the configuration that has been completed and facilitates handover to support. | Innovise |

| **Work packet** | **#** | **Deliverable** | **Description** | **Responsible** |
| --- | --- | --- | --- | --- |
| WP4. Motorola GSR10 Upgrade | D4.1 | Test Cases/Scripts | Document which details how Mobilink will test this work packet and their exit criteria | Mobilink |
| D4.2 | Ready for Service certificate | Agreement from Mobilink that they have completed their test scenarios functionality within new probe and that they are either happy to leave it running within production or need to roll back to previous version. | Mobilink |
| D4.3 | Build Doc | Document which shows the configuration that has been completed and facilitates handover to support. | Innovise |

| **Work packet** | **#** | **Deliverable** | **Description** | **Responsible** |
| --- | --- | --- | --- | --- |
| WP5. Huawei Probes | D5.1 | Test Cases/Scripts | Document which details how Mobilink will test this work packet and their exit criteria – it is assumed that this probe is configured as per other | Mobilink |
| D5.2 | Ready for Service certificate | Agreement from Mobilink that they have completed their test scenarios functionality within new probe and that they are either happy to leave it running within production or need to roll back to previous version. | Mobilink |
| D5.3 | Build Doc | Document which shows the configuration that has been completed and facilitates handover to support. | Innovise |

| **Work packet** | **#** | **Deliverable** | **Description** | **Responsible** |
| --- | --- | --- | --- | --- |
| WP6. Impact Policies | D6.1 | HL Design | Document with details all requirements and functional workflow. This document can be used by Mobilink to produce their test scenarios. To be produced from Workshop with SMEs | Innovise |
| D6.2 | Test Cases/Scripts | Document which details how Mobilink will test this work packet and their exit criteria | Mobilink |
| D6.3 | Ready for Service certificate | Agreement from Mobilink that they have completed their test scenarios functionality within new probe and that they are either happy to leave it running within production or need to roll back to previous version. | Mobilink |
| D6.4 | Build Doc | Document which shows the configuration that has been completed and facilitates handover to support. | Innovise |

| **Work packet** | **#** | **Deliverable** | **Description** | **Responsible** |
| --- | --- | --- | --- | --- |
| WP7. Core MIBs | D7.1 | HL Design | Review of existing design to ensure that it is fit for use in Core Environment. | Innovise |
| D7.2 | Test Cases/Scripts | Document which details how Mobilink will test this work packet and their exit criteria | Mobilink |
| D7.3 | Ready for Service certificate | Agreement from Mobilink that they have completed their test scenarios functionality within new probe and that they are either happy to leave it running within production or need to roll back to previous version. | Mobilink |
| D7.4 | Build Doc | Document which shows the configuration that has been completed and facilitates handover to support. | Innovise |

| **Work packet** | **#** | **Deliverable** | **Description** | **Responsible** |
| --- | --- | --- | --- | --- |
| WP8. Staging/ Test Environment. | D8.1 | Hardware Sizing/Hardware Procurement | Hardware Sizing and Hardware Procurement | Mobilink |
| D8.2 | Hardware Commissioning | Hardware built to same AIX 6 baseline as existing production servers. | Mobilink |
| D8.3 | Install Staging/ Test Environment | Installation of the following software (for functional but not performance testing):  1. Probe server Collection Layer Omnibus object server + TSRM Gateway  2. Webtop and and Omnibus display layer object server  3. Impact Server and Aggregation layer Omnibus object server  4. TSRM/CMDB application server and database + TSRM deployment server | Innovise |
| D8.4 | Warranty of Stage/Testing environment Performance | Warranty of Hardware sizing and performance for Stage/Testing environment | Mobilink |

## High Level Work Package Definition

This section details the Work Packages (WPs) required to complete the deliverables defined in Section 2.4 Only those in scope work packages WPs where Innovise contribute are included here.

### WP0 – Project Management

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| **WP0 – Project Initiation and Management** | | |  | |
| WP0.1 | Initiation | * Creation of SOW * Creation of Project Schedule * Resourcing of Project Schedule | None | * Agreed Project baseline |
| WP0.2 | Project Governance | * Contribution to Steering Committee and Operational project meetings. | * SOW | * Deliverable signoff. |
| WP0.3 | Project Tracking and Reporting | * Management of Innovise resource to deliver to agreed schedule and milestone dates. * Management of change to requirements including impact assessment and raising of changes to Mobilink if required. Prompt escalation of issues pertaining to deliverables that will impact the overall Programme of work | * SOW | * Deliverable signoff. |

### WP1 – Ericsson Probe Install

Mobilink are installing new Ericsson devices to replace incumbent Siemens devices and need one additional Probe (Ericsson Probe) to manage and monitor that environment.

This work packet will install and configure that probe based on policies and rules defined by Mobilink in a single design workshop. It is expected that the policies will be the same as those on the Siemens device.

This work packet cannot commence until Mobilink have completed the install of the Ericsson environment – this is currently expected to be Mid June 2011. It is not yet defined how important it is to apply monitoring immediately after that install or when the Ericsson environment will actually be in live production support.

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| **WP1 – Ericsson <<probe>> Configuration** | | | | |
| WP1.1 | Policies Design | * LLD for the Ericsson Polices | * Workshop notes, SME Input | * LLDs |
| WP1.2 | Configure Policy | * Create Policy workflow/design (with Mobilink SME(s)) | * SOW | * Ready for Test |
| WP1.3 Testing | | The lack of a formal test environment in the Mobilink architecture means that this activity brings its own risk that full regression and integration testing cannot take place until the code moves into Production. It also means that “fixes” have to be developed and tested in the live Environment that could cause substantial delays to other development and testing activities. | | |
| WP1.3 | Testing | * Support Mobilink by responding to agreed defects in Innovise code and providing fix. | * All above WPs | * Exit Test |

### WP2 – Additional IP Devices

Mobilink have a number of additional IP devices which need to be monitored via SNMP traps

It is expected that all events to be monitored are already predefined within the other SNMP trap configuration(s).

NB: this work packet is contained to no more than 800 IP discoverable addresses.

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| **WP2 – IP Devices** | | |  | |
| WP2.1 | Requirements Doc | * Mobilink to produce full list of IP addresses which are to be “discovered”. * Mobilink to provide associated SNMP Community Strings for each device. |  | * Build starts |
| WP2.2 | Add to ITNM/IP | * Load IP addresses into ITNM/IP |  | * Discovery |
| WP2.3 | Run Discovery | * Run Discovery for up to 2 days – escalate any “failures” to Mobilink where device cannot be found or connected to. | * Discovery | * Exceptions |
| WP2.4 | Test | * Make amendments as provided by Mobilink – rerun to check that exceptions are either accepted or removed. | * Exceptions | * Service Ready |
| WP2.5 | Document | * Document final list and configuration details – pass over to support for BAU management |  | * WP Signoff |

### WP3 – Alcatel B11 Upgrade

Mobilink have upgraded part of their BSS network to version B11. This now requires the associated probe to be upgraded to monitor and manage new events/capability.

NB: it is assumed that no new configuration is needed for this work packet – ie that all configuration on B10 probe will be valid and applied to B11 via the upgrade activity.

Assumption: There is documentation in place for B10 configuration which will allow testing of the B11 install. If this assumption is not true then we may need to create document to perform checks that everything is still working as expected – this will be deemed a Scope Change and be subject to Change Control.

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| WP3.1 | Apply Upgrade to B10 Probe | Run upgrade utility | * Probe software Available | * Upgraded probe |
| WP3.2 | Test | Run probe for 3 days Check that all events are being managed/escalated as defined in previous implementation. | * Upgraded probe | * Testing complete |
| WP3.3 | Manage Exceptions | Respond to exceptions found by Mobilink. Fix or escalate as needed | * Testing | * Ready for Service |
| WP3.4 | Support Handover | Inform BAU support teams that service is now live with details of any exceptions/new events as applicable. | * Ready for Service | * WP Closure |

### WP4 – Motorola GSR10 Upgrade

Mobilink plan to upgrade the Motorola environment from GSR9 to GSR10. This now requires the associated probe to be upgraded to monitor and manage new events/capability.

NB: it is assumed that no new configuration is needed for this work packet – ie that all configuration on GSR9 probe will be valid and applied to GSR10 via the upgrade activity.

Assumption: There is documentation in place for GSR9 configuration which will allow testing of the GSR10 install. If this assumption is not true then we may need to create document to perform checks that everything is still working as expected – this will be deemed a Scope Change and be subject to Change Control.

Dependency GSR10 is not supported in the Motorola 3GPP Probe. Currently the project will assume that this work packet cannot start until IBM warrant it within their compatibility matrix. If this assumption is incorrect and Innovise need to do further bench / PoC testing this will be considered a change of scope and subject to Change control.

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| WP4.1 | Apply Upgrade to GSR9 Probe | Run upgrade utility | * Probe software Available | * Upgraded probe |
| WP4.2 | Test | Run probe for 3 days. Check that all events are being managed/escalated as defined in previous implementation. | * Probe installed | * Exceptions |
| WP4.3 | Manage exceptions | Respond to exceptions found by Mobilink. Fix or escalate as needed |  | * Ready for Service |
| WP4.4 | Support Handover | Inform BAU support teams that service is now live with details of any exceptions/new events as applicable. |  | * WP Closure |

### WP5 – Huawei Probes

There is a requirement to extend the Huawei Monitoring into the M2000 environment. It is assumed that the configuration of the probes in existing environments will meet the Mobilink requirement.

Assumption: no design required – will reuse existing design/build doc.

Assumption: Mobilink have defined Test success criteria used elsewhere – no need to produce new scripts.

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| **WP5 – Huawei Probes** | | |  | |
| WP5.1 | Requirements | * Confirmation of Assumption that existing probe rules etc are sufficient for the M2000 environment – if assumption proved false then new design needed and Change control for Scope |  | * Build starts |
| WP5.2 | Rules | * Create Probe Rules on new instance (based on configuration elsewhere) | * Design | * Ready to run |
| WP5.3 | Discovery | * Run Probe for <<how long>> to collect sample events | * Configured rules | * Test |
| WP5.4 | Test | * Confirm that all rules are producing same results as existing environments. Address any exceptions | * Test | * Ready for Service |
| WP5.5 | Support handover | * No documentation needed – assumed that support is already managing other environments and have all documentation needed. | * Exit Test | * WP Closure |

### WP6 – Impact Policies

There is a requirement to extend the Mobilink monitoring to cover new installations these will primarily be in the Alcatel, Huawei and Ericsson environments.

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| **WP6 – Impact Policies** | | |  | |
| WP6.1 | Requirements / Design | * Run workshop with Mobilink SMEs to define workflow and policies. * Create HL design to show how this workflow will be interpreted. |  | * Design Doc |
| WP6.2 | Configure Impact | * Create policies in Impact and associated event mgt flow to TSRM | * Design | * Ready to run |
| WP6.4 | Test | * Support Mobilink in testing to pre-written test scenarios – respond to accepted defects | * Policy running | * Service Ready |
| WP6.5 | Support handover | * Document configuration * Run support handover session | * Test Exit | * WP Close |

### WP7 – Core MIBs

There is a requirement to extend the Mobilink monitoring to cover new installations in the CORE environment.Provisioning for two additional MIBs together with associated probe rule configuration. Given the MIBs are not defined at this stage by Mobilink, this activity is Timeboxed at 12 days.

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| **WP7 – Core MIBs** | | |  | |
| WP7.1 | Preparation | * Download two proprietary MIBs (NB: Mobilink responsibly) |  | * Ready for build |
| WP7.2 | Install | * Create new rules files from MIBs |  | * Design |
| WP7.3 | Configure | * Mobilink to confirm which rules they want to retain? * Innovise to document amended rules list * Innovise amend/remove rules as per design |  | * Ready to run |
| WP7.4 | Run | * Run MIBs for 2 days * Check that rules are being processed as per rules defined in other environments? * Manage exceptions with Mobilink |  | * Ready for service |
| WP7.5 | Support handover | * Assumption that this is a modification to existing documentation rather than a new document (ie just expand MIBs to CORE environment – no new MIBs) |  | * WP Close |

### WP8 – Staging/ Test Environment

There is a requirement for Mobilink to have a basic staging/test environment.

| **ID** | **Title** | **Description / Activities** | **Input(s)** | **Output(s)** |
| --- | --- | --- | --- | --- |
| **WP8 – Staging/ Test Environment** | | |  | |
| WP8.1 | Hardware Sizing/Hardware Procurement | * Hardware Sizing and Hardware Procurement |  | * Hardware Purchased |
| WP8.2 | Hardware Commissioning | * Hardware built to same AIX 6 baseline as existing production servers. |  | * Hardware, Operating System and Network commissioned |
| WP8.3 | Install Staging/ Test Environment | Installation of the following software (for functional but not performance testing):  1. Probe server Collection Layer Omnibus object server + TSRM Gateway  2. Webtop and and Omnibus display layer object server  3. Impact Server and Aggregation layer Omnibus object server   * 4. TSRM/CMDB application server and database + TSRM deployment server |  | * Ready to run * WP Close |

# High Level Work Package Schedule

As Mobilink does not want these work packets started until after phase 2 has been implemented. The exact Schedule to be agreed close to phase 2 completion.

# Delivery Methodology

## Iterative Cycles

The proposed approach consists of four main phases (as stated above):

* Design Phase
* Build Phase
* Test Phase
* Deploy Phase (Soft & Production Launch)

For the Mobilink OSS Phase 2 expansion project Change Requests we intend to continue to use this approach for each major Work Work packet

The following sections detail the objectives, detailed approach and the work packets required for each of the phases.

## Design Phase

### Design Objective

The objective of the design phase is to ensure requirements have been agreed and baselined.

**PRIMARY:** To complete the base technical and interface solution design based on the validated requirements, process gap analysis, interfaces, use cases and OOB capability of the Tivoli suite

### Design Approach

The Design Phase approach will be slightly different for each of the work packets as in some cases we will be extending an existing design to an additional domain/environment rather than creating new functionality.

#### New or Extended Environments

* WP1 Ericsson
* WP2 IP Devices
* WP5 Huawei Probes
* WP7 Core MIBs

It is assumed that the existing design can be reused – a workshop will be held with Mobilnk to confirm that the design is still fit for purpose.

#### Upgrades

* WP3 – Alcatel B11 upgrade
* WP4 – Motorola GSR Upgrade

It is assumed that the existing design will be used as a baseline but that the new probe will bring additional functionality. A workshop will be held with Mobilink to identify which of these will be incorporated.

#### New Functionality

* WP6 – Additional Impact Policies

A workshop will be held with Mobilink SMEs to define the events and the policies/workflow which need to be applied. A design document will be produced and signed off as complete by Mobilink before moving onto configuration

### Assumptions, Risks and Constraints

This table outlines the initial risks etc that Innovise have identified for the Design activities. They should be clarified and transferred to the project register as required.

|  |  |
| --- | --- |
| **Assumptions, Risks and Constraints** | |
| 1 | **Risk:** General. As Mobilink to not have a full Dev/Test environment there is a risk that not all issues cannot be addressed in the test phase and Mobilink cannot go ahead with the implementation of new probes on upgraded kit because of issues outside of Innovise control (eg needs attention from probe manufacturer, or IBM support). If this risk materialises; Innovise will not be responsible for returning the enviornment to how it was prior to upgrade. If Mobilink wish Innovise to perform any additional tasks - this will be subject to Project and potentially Commercial Change Control. |
| 2 | **Dependency:** WP1 - Ericsson. Mobilink to have activated the Ericsson <<what – environment/service?>> This is currently scheduled to be completed around Mid June 2011 – this workpacket cannot start until it is in production service. |
| 3 | **Assumption:** WP1 - Ericsson. No new policy workflows will be required for this workpact – it is assumed that the existing Ericsson policies are valid. |
| 4 | **Dependency:** WP2 – Additional IP devices. Mobilink to provide full list of IP Addresses and SNMP community string prior to this work commencing. |
| 5 | **Assumption:** WP2 – Additional IP devices. There will be no more than 800 devices in the list |
| 6 | **Risk**: WP4 – Motorola GSR10 Upgrade. GSR10 is not supported in the Motorola 3GPP Probe. If this has not been fully tested by IBM prior to deployment then Mobilink will need to decide whether the risk of immediate production installation is worthwhile. If Innovise are required to set up test bed to test compatibility this will be an additional activity and an additional CR will need to be raised. |
| 7 | **Assumption:** WP5 – Huawei Probes. No additional rules or policies will be needed over and beyond the existing Huawei probe configuration elsewhere |
| 8 | **Dependency**: WP5 – Huawei Probes. Mobilink to provide details of Corba connection |
| 9 | **Assumption**: WP6 – Impact Policies. This workpacket will amend no more than 4 existing policies |
| 10 | **Assumption:** WP6 – Impact Policies. This workpacket will create no more than 4 Mid level [1]complexity policies |
| 11 | **Assumption:** WP6 – Impact Policies. This workpacket will create no more than 2 High level complexity policies. |
| 12 | **Assumption**: WP6 – Impact Policies. it is assumed that each “policy” equates to a single workflow it is Mobilink’s responsibility to define the rules of that workflow – Innovise will configure Impact to follow these rules. |

## Build Phase

### Objective

The objective of the build phase is to ensure that user involvement occurs throughout the development lifecycle. The approach below helps to ensure progress can be made after each iteration. It is envisaged that each cycle will be time boxed to ensure iterations are completed on time.

**PRIMARY:** To enhance the capability and functionality of the existing Mobilink monitoring/event management systems

### Approach

Innovise will configure the systems/probes/MIBs etc to the design as defined in the previous phase. They will complete unit testing wherever possible prior to running in live environment prior to handing over to Mobilink for testing.

### Assumptions, Risks and Constraints

This table outlines the initial risks etc that Innovise ESM has identified for the Build activities. They should be clarified and transferred to the project register if appropriate.

|  |  |
| --- | --- |
| **Assumptions, Risks and Constraints** | |
| 1 | **Dependency:** General. It is Mobilinks responsibility to define and document Test success criteria for all work - there is an associated risk that this is not done in a timely manner and testing is delayed or unsuccessful due to scope not being properly defined or understood at the outset. |
| 2 | **Risk:** WP3 – Alcatel B11 Upgrade. as this upgrade is being done in the live environment – it may be that we cannot simulate all events for testing and therefore it is not possible to see all events coming through in the timescale allowed for testing. This risk could only be fully mitigated by creating a stand-alone test environment and network. Given that this is not going to happen in the timescales allowed by this project – Innovise will assume test acceptance when all events relieved in the 2 day test data collection period have been validated. |
| 3 | **Assumption:** WP3 – Alcatel B11 Upgrade. There is documentation in place for <<B10>> configuration which will allow testing of the B11 install. If this assumption is not true then we may need to create document to perform checks that everything is still working as expected – this will be deemed a Scope Change and be subject to Change Control. |
| 4 | **Dependency:** WP6 – Impact Policies. Mobilink to have written test scenario and clear success criteria prior to development. |
| 5 | **Assumption:** WP6 – Impact Policies. Test phase will be via single test cycle with second retest cycle if necessary. No more than 3 days elapsed. |

## Testing Phase

### Objective

The objective of the test phase is to ensure that the system delivers functional and non-functional requirements as per the design produced in the previous build phase

**PRIMARY**: To provide fixes and/or workarounds to qualified defects discovered via testing phase.

**SECONDARY**: To provide list of “Known Errors” which the business deem as non-critical and will not be addressed during the current phase

**SECONDARY**: To create list of accepted enhancements for future development.

### Approach

The Test phase(s) will consist of the following;

* User Acceptance Testing: (UAT) Test scripts (based on use cases produced in the design phase) will be used to ensure that all business functionality is delivered by the system as intended.

The above tests will be run sequentially, with the number of cycles of each test defined to ensure clean exit from each type of test.

### Assumptions, Risks and Constraints

This table outlines the initial risks etc that Innovise have identified for the Test activities. They should be clarified and transferred to the project register if appropriate.

|  |  |
| --- | --- |
| **Assumptions, Risks and Constraints** | |
| 1 | **Assumption:** All scripts will have been written in design phase and shared with Development stream prior to exit from Development |
| 2 | **Assumption:** Test Management system (to log test scripts and defects) will be made available and managed by Mobilink |
| 3 | **Risk:** Innovise understand that there is no dedicated Test Environment available for the in-scope elements of this project. This means that full regression testing cannot be completed for each work packet or sub work packet. The risk is that Testing cannot be completed without impacting other development streams – or that a “fix” to a defect on one work stream has adverse (but not known) impact on another area of development or already accepted code. |
| 4 | **Assumption:** User Acceptance Testing will be carried out by allocated Mobilink resources ensuring that Use Cases have been used to carry out testing scenarios with clearly defined Exit Criteria |
| 5 | **Assumption:** All defects will be reported, (together with STRs) in a pre-agreed format (ie within formal test mgt system or test report) on a daily basis. |
| 6 | **Risk:** Business cannot accept defect as “unaccepted” and will not sign off system causing delay in go live. |
| 7 | **Risk:** “Other side” of the integrations are not yet developed prior to Test. |
| 8 | **Risk:** Defects found that are “OOB” may require fixes from the supplier (i.e. IBM) and may not be available to the project in due time. |

## Deploy Phase

### Objective

The objective of the deploy phase is to promote the system into fully supported operational use.

**PRIMARY:** Deploy new functionality and integrations into Mobilink OSS environment ready for operational use.

**PRIMARY**: Hand over support to level 2 and 3 personnel.

### Approach

The activities which need to be completed will be detailed in the Deployment Plan/checklist or as part of Mobilink’s Service Introduction process. It is likely to comprise of:

* Promotion of code and application to production environment
* Migration of final reference data
* Turning on of new notifications, probes etc.
* Data validation testing by key business units
* Support Handover
* Completion of Service Readiness Checklist
* Early Life Support

### Assumptions, Risks and Constraints

This table outlines the initial risks etc that Innovise have identified for the Deploy activities. They should be clarified and transferred to the project register if appropriate.

|  |  |
| --- | --- |
| **Assumptions, Risks and Constraints** | |
| 1 | **Assumption:** All reference data will be available and produced by Mobilink (in a format which is clean and pre-agreed). |
| 2 | **Assumption:** Mobilink will provide any required training environments and resources. |
| 3 | Risk: Given there is only one environment available there will be increased risk development & testing adversely affecting operations. We will need to agree how this is best managed and the risk minimized. |
| 4 | **Constraint:** Deployment will be required to adhere to the Mobilink Service Introduction process (or similar) and Change Management process. |
| 5 | **Assumption:** WP2 – Additional IP devices. This will be done straight onto the live environment – no deployment plan needed. |

# Project Management

## Project Structure

**Governance Model Roles and Responsibilities**

**Badar Khan: Project Manager**

1st Point of escalation for all project related issues (will escalate to above as needed)

Attendance at Project Steering Committee

Reporting and Attendance at Project Progress Meeting

**Malcolm Andriessen : Innovise ESM Programme Manager**

2nd Point of escalation for all project related issues

Attendance at Project Steering Committee

**Abdullah Rana: Regional Manager**

Point of escalation for general account, sales related matters

**Mat Middleton: Commercial Director**

2nd Point of escalation, for all commercial related issues

Attendance at Programme Executive Steering Committee if required

**Julian Luxton: Project Solution Architect**

2nd Point of escalation for all delivery/technical/product related issues.

Attendance at Project Progress meetings if required

**Specifically we will bring:**

**Innovise Project Manager responsible for**

* Liaison and escalations with Mobilink and Innovise management
* Maintaining schedule and managing Change
* Managing and allocating Innovise resources
* Reporting progress to Mobilink and Innovise

**Innovise Solution Architect responsible for**

* Ownership of the technical end to end solution
* Liaison with Functional and Process owners to determine best practice workflow
* Ownership of content within the development cycles
* Quality management of the code
* Liaison with Mobilink Solution Architect and other Technical SME(s).

**Innovise Senior Technical Consultant(s) responsible for**

* Production of code and technical documentation
* Contribution to development cycles for their nominated streams.
* Responsible for code handover to the nominated teams
* Support to testers – fixing of defects
* Hyper Care support

NOTE:

* Not all personnel will be assigned to the project on a full time basis
* Not all personnel will be able to travel Pakistan due to the security concerns. Where this applies the personnel will work remotely, meetings and workshops will be conducted virtually.

**Indicative Mobilink Roles required to support the project.**

* Functional and Technical Project Manager
* Key stakeholders (i.e. Decision makers)
* Functional and Process owners
* Architect (for infrastructure, data model, security and internal governance design)
* Infrastructure configuration personnel (e.g. network, boxes, OS, DB etc)
* Test Manager and staff.
* Technical SME(s) for interfaces and support handover.

## General Assumptions and Risks

The following is a list of general assumptions and risks across all phases and activities.

|  |  |  |
| --- | --- | --- |
| ID | Type | Assumption / Risk |
| SOW1 | Assumption | Assumption that Process and requirements will be "frozen" i.e. No change once design is completed – any exceptions will be managed by formal change control |
| SOW2 | Assumption | Full development environment will be ready prior to commencement of Build phase. Delay in obtaining environment could increase the amount of time needed to transfer the system to the full development or production environment |
| SOW3 | Assumption | Resources will be provided for all Innovise staff. This will include full connectivity to Mobilink network and facilities as expected where developers are working on site (i.e. Desktops (connected to LAN), preferably two monitors and telephones). |
| SOW4 | Assumption | The Innovise team will have full access to all relevant programme and project documentation. Mobilink will be responsible for creating accounts and setting up access as needed. This will be done within **3 working days** of Innovise notifying Mobilink of a new account requirement. |
| SOW5 | Assumption | Key Mobilink stakeholders/business representatives will have been identified and dedicated to the project. Unless this is done there is a risk that the project is delayed in completion due to a number of activities that need to occur as highlighted within this SOW.  As a result, key Innovise ESM activities that depend on these resources/activities may not get completed as per the schedule stated on this SoW. In this case, a Project Change Request will be raised. |
| SOW6 | Assumption | The management of 3rd Party resources will be the responsibility of Mobilink |
| SOW7 | Assumption | A document review period of **3 working days** will be allowed before either sign off is assumed or give clear direction on what amendments are needed in able to sign off. A single review cycle is also assumed at this stage. |
| SOW8 | Assumption | Mobilink resources will collect, collate and cleanse all necessary reference data –Innovise will be responsible for the definition of that data. |
| SOW9 | Assumption | The Innovise team will have access to all relevant testing and production environments/data to develop, integrate, test and deploy the solution. Mobilink will be responsible for creating necessary routes through firewalls and system accounts to support interfaces into Mobilink systems (Development and production. This will be done within **10 working days** of Innovise notifying Mobilink of a new requirement. |

# Commercial Information

## Payments & Schedule

The cost to deliver the scope is shown below in US Dollars; this is fixed price engagement, excluding reasonable project expenses such as, accommodation & travel. Applicable taxes are not included.

|  |  |
| --- | --- |
| Component | Cost (USD) |
| Software licenses | 342,775 |
| Implementation services | 353,000 |

### Software BoQ

|  |  |
| --- | --- |
| Quantity | Part description |
| 610 | IBM Tivoli OMNIbus and Network Manager Event Device Tier Resource Value Unit License |
| 3 | IBM Tivoli OMNIbus and Network Manager Event EMS Tier Resource Value Unit License |
| 610 | IBM Tivoli OMNIbus and Network Manager Network Device Tier Resource Value Unit License |

### Payments Milestones

|  |  |  |
| --- | --- | --- |
| Milestone | Component | Payment release |
| 1 | Completion of WP3 & WP5 | 25% |
| 2 | Completion of WP2 & WP7 | 25% |
| 3 | Completion of WP1 & WP4 | 25% |
| 4 | Completion of WP6 & WP8 | 25% |

* All prices are indicative at this stage and are subject to approval by IBM/Innovise
* The quote is valid till 15th June, 2011
* Prices above exclude GST, or any other duty imposed by the Govt. Of Pak
* Software licenses include 12 months subscription & support
* Products listed herein are subject to withdrawal & modification by IBM at any time at IBM’s sole discretion.

1. Complexities were previously defined as being:

   LOW- simple escalation of a matching event into a TSRM incident

   MEDIUM – as simple, plus aggregation of more than one child event, or specific data required for the synthetic event

   HIGH – as medium, plus specific lifecycle involved for child events that affects the format/contents of the synthetic event/incident*.* [↑](#footnote-ref-1)