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Operational Metric Review Project – PMR Issues Log

1. Purpose

This paper provides details of the review by the Operational Metric Review Project (Project) of the Operations Group (OPSG) Performance Measurement Report (PMR) Issues Log.

2. PMR Issues Log Review

2.1. Analysis & observations

Review and analysis have been undertaken of the PMR Issues Log, containing issues noted in the PMR for the period April 2018 to July 2019. The types of issues that have been recorded on the PMR Issues Log are wide ranging. These include basic errors such as data within reporting tables not adding up, and more substantive issues such as downtime from Major Incidents not reflecting the impact to User operations.

The Project proposes that the majority of items are closed as a result of discussion with the DCC, which has provided a level of assurance that these have been resolved or are being managed elsewhere, either through the OPSG Issues Log, or within the wider remit of this Project.

A general observation, from the analysis of the report, is that, given the age of the issues, a shift in approach to recording issues in the PMR Issues Log is necessary to ensure the information captured is more concise and comprehensive. This will support the DCC and OPSG in its resolution and ongoing monitoring of the issues.

2.2. Volume and Type of Issues

The Project proposes that a majority of line items are closed. For example, recent reviews by the Project of recent PMR reports suggest that issues with data volumes not adding up have been resolved and do not appear to be regularly reoccurring. In addition, throughout 2019 the OPSG has overseen several additions to the PMR undertaken by the DCC at the request of SECAS/OPSG to aid understanding.

The Project has not investigated the root cause of issues on the PMR Issues Log. For example, ongoing issues with delivery of Firmware payloads and Alerts to DCC Users. The underlying causes for the failure to meet the current PMR standards will be resolved by the OPSG Operational Issues Log activity.

At the time of the review, there were 74 line items on the PMR Issues Log. From analysis undertaken of the issue, and the response provided by the DCC, the Project considers that 62 of these items can be closed.

The Project has been in discussion with the DCC regarding updates to close the remaining 12 open items. These require a confirmation that the action has been completed e.g. internal investigation by DCC with confirmation of what and when, so that agreement to close or some further action can be agreed.

The table below provides a breakdown of open and closed issues.

Volume	Status	Rationale
32	Closed	Information received from DCC has enabled closure. *
6	Closed	General comments from SECAS PMR review - No further action needed to resolve.
18	Closed	Live issue on OPSG Issues Log e.g. Firmware Updates, Alerts.
5	Closed	Project and DCC have agreed a definition of No Data/No Events.
1	Closed	Issue overseen via BEIS Governance - Meter noise.
12	Open	Awaiting DCC update e.g. query re problem record still outstanding. Annex 1 contains further detail of open Issues.

* Examples of PMR issues closed as a result of DCC information provided include;

- PMR issues resulting from Major Incidents where part of DCC service experienced an outage but not reflected in overall report.
  - DCC has reported according to PMR methodology. The Project has a wider objective to review and propose an ongoing metric for service availability, and Major Incident impacts to Users to remedy for future reports.
- Report Data Tables not adding up correctly.
  - DCC has confirmed the values in tables were incorrect and or confirmed as errors in older reports (April 2018). The Project is assured additional checks are now in place within DCC to avoid these errors reoccurring.
- RDP Data issues – 2018.
  - PMR reports for April/May 2018 reported issues with RDP Data. The DCC implemented a refresh, which has corrected original issues.

2.3. Themes

The following issues have been identified as key themes within the PMR Issues Log that have been further investigated by the project:

1. PMR Exceptions

    a. There is an issue re the use of PMR Exceptions applications and reporting consistency.

    b. The Project followed up with the DCC and notes the DCC is putting in place a Performance Measurement Exceptions List (PMEL) Governance Forum to place better management around the adding and removing of items on the PMEL. The PMEL Governance Forum will provide a regular update to the OPSG.

    c. The Project proposes that this is formalised into a regular update and or a potential seat on the Forum for the OPSG to actively contribute and monitor activity.

2. Definitions

    a. Several Code Performance Measures are reported as “No Data No Events”, however the comments in the PMR Issues Log suggests that the rationale for the use of this terminology is not consistent.

    b. The Project has agreed a working definition with the DCC to get a common understanding and application of these terms;
        i. The term “no data” will no longer be used.
        ii. “No Events” will only be used where “a Service Level entry of “No Events” indicates that although the Performance Measure is applicable, no relevant events occurred during the Measurement Period and there is therefore no data to report upon”.

3. Incidents and Availability Measures

    a. Major Incidents are referenced in the PMR and PMR Issues Log often as a cause of a failure of a metric to meet its Target or Minimum status.

    b. The Project is working with the DCC to understand how availability may be expressed to reflect DCC Users impacts resulting from a Major Incident occurrence.

    c. The Project recommends that data collated by the TOC can be used as a proxy to provide a scale of the issues of an individual incident based on historical installation transactional data. The Project recognises this may not be 100% accurate, as this can be impacted by a number of factors including, but not limited to, User activity impacted by weather events, User system issues, device combinations etc but believes this will deliver a degree of confidence to Users that the impact of DCC system outages is being highlighted in future PMRs.

    d. The Project further recommends that if the action noted above is taken forward that it is reviewed in 6-12 months’ time to understand; a) its effectiveness and value, plus, b) if there are potentially new developments that could better inform the impacts of Incidents.

e. The PMR only measures the time taken by the DCC to resolve Major Incidents, not the impact or any measure of the volume or frequency of Major Incidents occurring. The Project considers that it would be useful for Users to understand within the PMR the overall number of Category 1 and 2 incidents per month, along with a view of the total outage time caused by those Major Incidents within the month. Such a view, combined with the proposal to use the information in the Technical Operations Centre (TOC) as set out above, will provide Users with an overall view of the volume and impact of Major Incidents.

   The Project assessment is that in a steady business as usual state the DCC should not be experiencing regular monthly Major Incidents. The Project recognises that issues will continue to arise in the short to medium term as SMETS1 meters complete their migration and stability of SMETS2 operations occurs. As a result, the Project propose that the metric of Major Incidents should not be greater than 6 per month, with a view to reducing this down and extending the period over which this is measured to quarterly, as the systems begin to operate as expected. The volume per month is based on the current run rate reported by the DCC to the OPSG and SMDG across SMETS1 & 2, and Category 1 & 2 Major Incidents. The Project therefore also recommends that once the Modification is implemented, this measure is reviewed in six to nine months, to check if the volume of Major Incidents is reducing, and the time over which the metric is applied, should be changed.

3. Recommendation

The OPSG is requested to:

- **NOTE** the contents of this paper and the actions undertaken by the Project; and
- **ENDORSE** the recommended actions that will be presented to the SEC Panel by the Project in its OMR report on 10 April 2020

Tim Newton

OMR Project

16 March 2020

1.1 PMR Open Issues

Reporting Period (Month)	PMR Section (CPM, PM etc)	Issue Noted by OPSG	DCC response	Next action DCC	Notes	Status
Jul-18	Service Provider Performance Measures DSP	All DSP measures are reported as above Target Service Level except for DSP 2.7 Service Availability Test Services. DSP measure 2.17 is below Target Service Level but above Minimum Service Level at 98.42%. This was due to an outage to the User Interface Test (UIT) -B environment on the 6th July following a planned change. Investigation has established the root cause was a product defect. An enduring fix is being pursued. Interim measures have been taken to mitigate reoccurrence (**INC285583**) PM2.1 reported as 100% but core comms were down on 31 July 2018 (INC ending 289437) PM2.4 shows 100% availability, but SSI was down for a period on 2 July 2018 (INC ending 275989) PM7 planned maintenance events showing as 100% but two additional	**INC285583** is related to **PBI109401** which is currently in Pending Status. Target completion date of 30/06/19 ROOT CAUSE: Root Cause was confirmed as the implementation of a change. SOLUTION: To mitigate a reoccurrence of this issue, a longer time frame is to be allocated for post implementation of any change work. As a further mitigating action; documentation is required to be updated to reflect the requirement to manually allocate the default gateway routing to the F5 if it has been rebooted. Investigations during the issue also identified there is a software bug with F5 accepting IPv6 traffic post reboot, which also needs to be addressed. It should be noted that to be classed as unavailable the whole environment must be down – the	Propose to review and close when PBI closed. The Target Completion Date for this Problem Record is now 30th September 2019.	DCC to update Problem Record Status	Open

		unapproved maintenance windows occurred on 3 July and 31 July 2018)	rest of the motorway was not affected. These are 2 unplanned maintenance changes. The specific measure is measuring the planned maintenance success rate. The timescales for notifying of planned maintenance have been reviewed since and are now more in keeping with operational requirements.			

Sep-18	Code Performance Measures	All CPMs except for CPM1, and CPM3 are reported as above Target Service Level. CPM1; percentage On Demand Service Reponses delivered within applicable Target Response Time is reported below Target Service Level at 97.72%. This is above Minimum Service Level. In its explanation the DCC has provided a view across the three Communication Service Provider regions. CSP North CSP Central CSP South 96.16% 97% 98% The contributing issues across all regions is Firmware updates not completing within Target Response Times. A single Communications Hub with a meter and partial firmware image was identified as the root cause for the CSP North performance. Not clear what the root cause of the failure for CSPN is? CSPCS failure due to certificate mis match? Unclear what root cause is? CPM3; percentage future dated Service Responses delivered within the applicable Target Response Time is reported below target at 97.09%. The DCC note that investigations continue under Problem Record ending 6201. The commentary in this report seems to be at odds with the Problem Report,	DCC Problem team are currently investigating issue under **PBI000000113321.** Awaiting CSP Souths Comms Hub Firmware upgrade to resolve the majority of unplanned reboot issues. After the upgrade greater analysis can be completed of any Comms Hubs still suffering with unplanned Reboots as extra logging will be included in the update. The updated Firmware received go from DCC Change team 2/4/19. RCA is still ongoing. CPM3 - PBI6201 - Has been fixed on 28/02/19.	Propose to resolve when PBI closed, issue still ongoing with no ETA as of 24/07	DCC to update Problem Record Status	Open

		which suggest a fix has been identified. Has this been successful?				

Oct-18	Code Performance Measures	All CPMs except for CPM1 are reported as above Target Service Level. CPM1 achieved a Service Level of 96.63% which is below Target but above the Minimum of 96%. The main contributory factor was Firmware Payload for Communication Service Provider (CSP) Central and CSP South. The underlying cause is a certificate mismatch issue for which a fix is reported as planned, but no target date is given. CMP01 (% of On-demand Service Responses delivered within TRT) below Target Service Level at 96.63%; all other CPMs above TSL 96.33% reported in tables. Major Incident Report INC000000337346 – 24th Oct, root cause in report does not match information provided.	DCC Problem team are currently investigating issue under PBI000000113321. Awaiting CSP South Comms Hub Firmware upgrade to resolve the majority of unplanned reboot issues. After the upgrade greater analysis can be completed of any Comms Hubs still suffering with unplanned Reboots as extra logging will be included in the update. The updated Firmware received go from DCC Change team 2/4/19. RCA is still ongoing. **INC000000337346** is related to **PBI111817**, which was Closed on 10th December 2018. ROOT CAUSE: The /opt file system space usage reached 90% in the VoltDB database nodes, which resulted in the VoltDB database switching into read only mode as a failsafe. This was due to general growth of the database, snapshots and log files and was confirmed by the technical Database team at the time of the incident. Capacity monitoring of the /opt file system did not warn early enough due to inappropriate thresholds. Thresholds were set to 90% which was not breached due to VoltDB switching to read only mode. Some of the alerts received during the incidents were not acted upon	Propose to resolve when PBI closed, issue still ongoing with no ETA as of 29/07. Telefonica Problem Management are looking to give timescales on outcome of investigations w/e 04/08	DCC to update Problem Record Status	Open

			appropriately. They were considered to relate to the VoltDB DR replication issue when in fact they were related to the VoltDB production issue.			

Oct-18	Service Provider Performance Measures CSPN	CSPN has failed to meet Performance Measures 1.1 and 1.2 for delivery of Communication Hubs. The report states this was down to a hardware change by the manufacturer for the 420 variant not being ready in time for October deliveries due to issues with test equipment. The report does not detail what the hardware change is, or if previous versions of the variant communication hubs that Service Users may already have installed or hold in stock may be impacted. A number of CSP measures are reported as No Data but there is no explanation provided for this. For example, Performance Measures relating to Power Outage Alerts (Performance Measure 12.2). There are an increased number of Exceptions reported this month, various reasons are provided and as discussed at OPSG_14 we are expecting the DCC to provide further detail about how the exceptions are being applied.	DCC Comms Hub Logistics team to investigate: Internal DCC Reference: REQ000000148918	DCC Comms Hub Logistics team to investigate Internal DCC Reference: REQ000000148918	Update required on DCC investigation	Open

Dec-18	Code Performance Measures	General Observation; Exec Summary; there is no explanation linking these to the sections of the report, which may have been useful for Parties. The table listed at 3.1.4. does not correspond with the number of Incidents listed in the executive summary. Code Performance Measures; CPM 1, 'Percentage of on demand service responses delivered within the applicable target response time' is below minimum target at 83.54%. This is due to a missed target for Performance Measure (PM) 2 'percentage of Category 1 Firmware Payloads completed within the relevant Target Response Time' for both Communication Service Provider Central and South (CSPC&S) and CSP North. The report states the reason for this was 'Service Users submitting multiple requests for the same Global Unique Identifier (GUID) (This applies to 2363 out of the 2870 failures)'. The Report may be re-issued subject to investigation (PBI000000113503), however this Problem Record is not listed in the latest Quarterly Problem Report. CPM3 'Percentage of Alerts delivered within the applicable TRT' is below	DCC Ops Reporting Team to investigate: - The table listed at 3.1.4. does not correspond with the number of Incidents listed in the executive summary - MIM have missed 3 Incidents from their Section - Report will need to be reissued with this updated. - CPM1 query - This was updated in V2.0 of the report and this commentary was removed - CPM3 query - Service Provider Management will need to provide this response. - CPM4 query - Incident Report included in Executive Summary section.	DCC Ops Reporting Team to investigate: Internal DCC Reference: REQ000000148919 MIM Team to update missing incidents INC000000394023, INC000000394440, INC000000415865 and remove one that wasn't closed until January INC000000419894. Service Provider Management to provide CPM3 response.	Update required from DCC investigation	Open

		target at 98.24%. The report states that further review is ongoing. CPM4 “Percentage of Category 1 and 2 Incidents resolved within Target Resolution Time”, is below target at 85.71%. This report states the reason for this is Incident ending 415468, impacting the CSPC&S regions on the 6 December 2018.				

Jan-19	Code Performance Measures	All Code Performance Measures are reported above Target with the exception of; CPM1 “Percentage of OnDemand Service Responses delivered within the applicable Target Response Time” is below Target at 98.57%. This was impacted by failure of the Communication Service Provider Central and South to complete Firmware updates. The DCC reports that actions are ongoing to improve performance. A change was implemented 7 March 2019. Benefits are expected to be seen from the March/April performance reports. CPM4 “Percentage of Incidents which the DCC is responsible for resolving and which fall within Incident Category 1 or 2 that are resolved in accordance with the Incident Management Policy within the Target Resolution Time” is below Minimum Service Level at 75%. The reason is cited as Major Incident 419894. CPM5 “Percentage of Incidents which the DCC is responsible for resolving and which fall within Incident Category 3,4, or 5 that are resolved in accordance with the Incident Management Policy within the Target Resolution Time” is below Target	DCC Ops Reporting Team to investigate: CPM1 - What's the question? CPM4 - Incident Report is included in the Executive Summary CPM5 - What's the question? Latest reports show the aged incidents split to SU responsibility and DCC/SP responsibility	SECAS to provide clarity on DCC queries Internal DCC Reference: REQ000000148919 Clarity required on queries for CPM1 & CPM5	Details provided. Update required from DCC investigation	Open

		Service Level at 87.11%. Having queried this with the DCC, we are informed this is due to a large % of Incidents created by CSP C&S remaining unresolved. The DCC Incident Management team have implemented a new process to deal with CSPC&S Incidents, which will provide more data to aid triage and timely resolution.				

Feb-19	Code Performance Measures	All Code Performance Measures are reported above Target with the exception of; CPM1 “Percentage of OnDemand Service Responses delivered within the applicable Target Response Time” is below Target at 98.57%. This was impacted by the failure of the Communication Service Provider Central and South to complete Firmware updates and this is the third month in a row this has missed target service level. The DCC reports that actions are ongoing to improve performance. A change was implemented 7 March 2019. Benefits are expected to be seen from March/April, therefore we hope for a more up to date explanation at OPSG_20 now the fix has been implemented. In Section 3.1.2, it notes 2 Incidents were excluded as they were ‘Event Monitoring’. We ask the DCC to provide an explanation of What Category of Incidents are captured under Event Monitoring. We note that the number of aged Incidents is increasing month by month. The DCC raised the issue of resolution with Users at the last OPSG meeting and there is an Issues Workshop scheduled for 1 May to better understand root causes.	DCC Ops Reporting Team to investigate: CPM1 - Service Provider Management to update. There was an improved performance in May (still below minimum) and June (above minimum but below target) Section 3.1.2 - Incident Management/Service Provider Management to update. Workshop - Incident Management/Service Management to update.	DCC Ops Reporting Team to investigate: Internal DCC Reference: REQ000000148919 Incident/Service Provider/Service Management to provide necessary feedback	Update required from DCC investigation	Open

Mar-19	Code Performance Measures	CPM1 *"Percentage of OnDemand Service Responses delivered within the applicable Target Response Time"* is below Target at 98.57%. This was impacted by the failure of the CSP Central and South (CSP C&S) and CSP North (CSP N) to complete Firmware updates and this is the fourth month in a row this has missed target service level. The January PMR reported that a change would be implemented in CSP C&S on 7 March 2019 to partially address this issue. Benefits were not expected to be seen until March/April, so may not have affected the PMR measures themselves, however we note that this measure deteriorated in CSP S (92.66% in February, 89.46% in March). We would expect to see a commentary within the paper to state whether the fix has been implemented and if it is working.	DCC Ops Reporting Team to investigate: Internal DCC Reference: REQ000000148919 CPM1 - Service Provider Management to update. There was an improved performance in May (still below minimum) and June (above minimum but below target)	Propose to close based on explanation.	Update required from DCC investigation	Open

May-19	Incident	There is misalignment in key Incidents (Category 2), between the May Operational update presented by the DCC at OPSG and the Category 2 Incidents shown in the PMR. INC000000452354 (14 May) is absent from the PMR as is INC000000456123 (24 May) The PMR doesn't list the dates of the Incidents in the Incident start date/time section, this would be helpful to cross reference. INC000000447372 is in the PMR but was not in the DCC operational update. Please can you confirm the volume of Incidents for May 2019.	DCC Incident Management to investigate: Internal DCC Reference: REQ000000148822	DCC Incident Management to investigate: Internal DCC Reference: REQ000000148822	Update required from DCC investigation	Open
Jun-19	CSP South Contract	PM 12.2 is now at 227.09% (it was 174% last month). Please could you clarify in your explanation that schedule 2.2 is part of the Service Provider contract. Is this calculation different in the C&S contract? For the same PM they are reporting 100%. Or are the calculations the same in both regions but the C&S are reporting the figure as 100% even though, in reality, they are gaining a similarly high figure to the CSP N? Please could you provide clarification?	Internal DCC Reference: REQ000000149848 Supplier management to review 22_08		Update required from DCC investigation	Open

Jun-19	Exceptions CSP South	The number of instances of 'There were no, or incomplete address details provided by the Service User', is the overwhelming majority of exceptions in both CSP C&S. Our understanding is that a change to the DSP system (SCR154) is currently scheduled for release on 27 August 2019. This will enable CSPs to access location information without a modification to the SEC and will reduce/remove the instances of this exception? Is this correct?	Internal DCC Reference: REQ000000149848 Supplier management to review 22_08		Update required from DCC Investigation	Open