



Development Bureau

The Government of the Hong Kong Special Administrative Region
of the People's Republic of China

DATA STANDARDISATION REPORT FOR DIGITAL PROJECT DELIVERY SYSTEM (DPDS)

Version 1.0

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1. INTRODUCTION

1.1. Background

The Government is leading the construction industry to make change by implementing “Construction 2.0” advocating “Innovation”, “Professionalisation” and “Revitalisation” to uplift the capacity and sustainability of the industry, increase productivity, enhance regulation and quality assurance, improve site safety and reduce environmental impact.

As a component of the innovation initiative, the Government is actively driving digitalisation of public works throughout the whole project life cycle, covering the planning and design, construction as well as operation and maintenance stages.

Leveraging the success of the Digital Works Supervision System (DWSS) for capital works contracts in the construction stage, the DPDS was introduced and piloted in some consultancies of capital works projects in year 2023-24 with an aim to enhance the delivery and efficiency of the consultancy services.

With overwhelming support from the industry and successful trials in pilot projects, the Government plans to promote the wider adoption of the Digital Project Delivery System (DPDS) in consultancies under the Capital Works Programme.

1.2. Introduction

The adoption of DPDS in consultancies under Capital Works Programme with pre-tender estimates exceeding HK\$15 million should be integrated with the Integrated Capital Works Platform (iCWP) to facilitate data updates.

This document aims at providing the data standard for consolidation to the iCWP to ensure that the data are consistent and clear from different applications. “Consistent” means that the output is reliable, allowing related data to be identified using common terminology and format. “Clear” means that the data is easily understood by those not involved in the data maintenance process.

The data sets defined in this document are required to be transferred from DPDS to the iCWP by means of system-to-system interfaces. The file transfer format of the system-to-system interfaces are described in the relative sections.

1.3. Summary of Data to be interfaced from DPDS to iCWP

The following table depicts the data to be transferred from DPDS to iCWP by means of unmanned system-to-system interfaces.

Category	Data to be Collected
Project Data for Modules – Project Management, Financial Management, and Document Management	<p><u>Document</u></p> <ul style="list-style-type: none"> All approved documents of the Project <p><u>Agreement</u></p> <ul style="list-style-type: none"> Basic information of the consultancy agreement, including the agreement name, subject department, dates, award sum, etc. <p><u>Key Contacts</u></p> <ul style="list-style-type: none"> The name, post, phone number, and email address of the key contact person for the agreement. <p><u>Comments on Deliverables</u></p> <ul style="list-style-type: none"> The dates and duration for the party to give comments and that for the consultant to respond <p><u>Compensation Event</u></p> <ul style="list-style-type: none"> The cost and time implication of the compensation event, implementation date, actual end date, and the status. <p><u>Deliverable</u></p> <ul style="list-style-type: none"> The deliverable name, planned submission date, revised target submission date, actual submission date, deliverable status, count of comments, price of submission etc. <p><u>Early Warning</u></p> <ul style="list-style-type: none"> Description of early warning, name of the initiator, date of notification, type of early warning, mitigation measures, latest status etc. <p><u>Expenditure</u></p> <ul style="list-style-type: none"> Description of the payment item, total chargeable amount, total payment amount, invoice details. <p><u>Meeting</u></p> <ul style="list-style-type: none"> Meeting subject, meeting start date and time, meeting end date and times <p><u>Task</u></p> <ul style="list-style-type: none"> Task name, duration, planned start and end date, actual start and end date, task status <p><u>Time Charge</u></p> <ul style="list-style-type: none"> Description of the time charge event, consultant's name, title, duration, amount etc.

Category	Data to be Collected
Project Data for Visualization	<p><u>Project Management</u></p> <ul style="list-style-type: none"> • Ratio of Overdue in First Revision of Submission • Average Overdue Days in First Revision of Submission • Average Approval Duration of Submission • Average Responding Time of Consultants to Client's Comments • Average Commenting Time of Clients to Consultant's Submissions • Average Number of Revision of Submission • Expenditure Performance • Number of Compensation Events/Additional Services • Ratio of Compensation Events/Additional Services to Tendered total of the Prices • Number of Meetings Held in a Period • Number of Early Warnings • Ratio of Closed Early Warnings <p><u>Financial Management</u></p> <ul style="list-style-type: none"> • Payment Status by Payment Type • Compensation Events/Additional Services Register • Deliverable Submission Status • Time Charge Register

1.4. Structure of this Standardization Report

This Report is to document Data Standardisation Requirements for transmission of data from DPDS to iCWP

This Standardization Report is organized as follows:

Section 1 – Introduction of this standardization report

Section 2 – File Transfer Requirements

Section 3 – Data definitions of Project Management, Financial Management and Document Management modules

Section 4 – Data definitions of Key Performance Index

Section 5 – Data definitions of Select List Fields defined in Section 2 and 3

2. FILE TRANSFER REQUIREMENTS

2.1. File Transfer Protocol

SSH File Transfer Protocol (SFTP), a network protocol used for secure file transfer over an encrypted secure shell. The secure shell (SSH) protocol is a cryptographic network protocol for operating network services securely over the internet.

The required data will be transferred from DPDS to iCWP by using SFTP network protocol via the internet.

2.2. Data Requirements

2.2.1. Data Requirements of Project Management (PM), Financial Management (FM) and Document Management (DM) Modules

The details of the required transaction data are shown in section 3 of this document. It is required to upload the “data changes” from DPDS to iCWP daily.

2.2.2. Folder Management (PM, FM and DM)

The IT contractor of DPDS will be granted with a SFTP account for file transfer of PM, FM and DM modules' data. It is required to register new contract at iCWP by filling the "Contract Registration Form" before uploading the contract data.

The auto file transfer program of DPDS will create a folder for each agreement. The folder name is the same as the agreement no (exclude spaces and special characters). For example, agreement number CE 30/2022 (DS) will have a folder name of CE302022DS. For daily file transfer, the auto file transfer program of DPDS will create the following folders under the relative agreement folder for file transfer.

{ Agreement No} \\ { Date} \\
{ Agreement No} \\ { Date} \\ document \

The ..\{Date}\ folder is used for placing the transaction details and the .md5 file for reconciliation.

The ..\{Date}\document\ folder is used for placing the documents.

Example:

$$\left. \begin{array}{l} \{\text{Agreement No}\} \backslash \{\text{Date}\} \backslash \text{document} \backslash \text{document1.pdf} \\ \hspace{10em} \backslash \text{document} \backslash \text{document2.pdf} \\ \hspace{10em} \vdots \end{array} \right\}$$

All files to be uploaded to iCWP should be put in the “document” folder

$$\left. \begin{array}{l} \{\text{Agreement No}\} \backslash \{\text{Date}\} \text{agreement.csv} \\ \hspace{10em} \backslash \text{deliverable.csv} \\ \vdots \end{array} \right\}$$

The csv files to be uploaded to iCWP

{Agreement No}\{Date}\file_checksum.md5

The last file to be uploaded to indicate that the upload batch is completed.

2.2.3. Data Requirements of Visualization

The details of the required data are shown in section 4 of this document. It is required to upload a batch of SIX months data for all key performance indicators (KPIs) except the register data from DPDS to iCWP daily.

For the register data (i.e. FMS2, FMS3 and FMS4), please upload a full list of the relative KPI data.

For KPI PMS6, system will show the forecast data also. Other than the last six months data, please also upload all the forecast data till the ending month of the project.

- Actual expenditure (last six months)
- Planned expenditure (last six months together with future months till the end of the project)
- Forecast expenditure (Future months till the end of the project)

The data uploading time is from 1:00am to 3:00am. Therefore, the data at iCWP will be updated to Today-1 day daily.

Example of the batch of six months data:

Assumed the data uploading date is **10 July 2022**. The table below shows the batch of files with the most recent file as the first row.

File Batch	Monthly Data	Accumulative Data
Jul 2022	1 Jul 2022 to 9 Jul 2022	Contract starting date to 9 Jul 2022
Jun 2022	1 Jun 2022 to 30 Jun 2022	Contract starting date to 30 Jun 2022
May 2022	1 May2022 to 31 May 2022	Contract starting date to 31 May 2022
Apr 2022	1 Apr 2022 to 30 Apr 2022	Contract starting date to 30 Apr 2022
Mar 2022	1 Mar 2022 to 31 Mar 2022	Contract starting date to 31 Mar 2022
Feb 2022	1 Feb 2022 to 28 Feb 2022	Contract starting date to 28 Feb 2022

2.2.4. Folder Management (Visualization)

The same SFTP account will be used for file transfer of both daily transactions of “PM, FM, DM” and visualization data.

Please put the visualization data under “Agreement” folder. The auto file transfer program of DPDS will upload a batch of six months data in JSON format and a .txt file for reconciliation of the number of files uploaded.

Example:

{Agreement No}\CE302022DS-FMS1-20230430020543184.json \CE302022DS-FMS1-20230430020551585.json ... {Agreement No}\20230430.txt	The JSON files to be uploaded to iCWP
	The .txt file to be uploaded with the total number of JSON files

3. DATA STANDARDIZATION OF PROJECT MANAGEMENT, FINANCIAL MANAGEMENT AND DOCUMENT MANAGEMENT MODULES

The data sets outlined in the following tables will be transferred from DPDS to the iCWP of the Development Bureau, primarily in Comma-separated Values (CSV) format.

3.1. File Transfer List

The exported files for importing into iCWP include the following files:

File / Folder Name	Type	Description
document	Folder	All approved documents should be uploaded to the “document” folder and organized according to their respective folder structures. Checksum of each uploaded document, along with their relative file paths and filenames, should be included in the “file_checksum.md5” file for data integrity verification.
agreement	CSV File	Basic information of the consultancy agreement, including the agreement name, subject department, dates, award sum, etc.
key_contact	CSV File	The name, post, phone number, and email address of the key contact person for the agreement.
deleted_key_contact	CSV File	List of all deleted “key contact” in DPDS
comment	CSV File	The dates and duration for the party to give comments and that for the consultant to respond
deleted_comment	CSV File	List of all deleted “comment” in DPDS
compensation_event	CSV File	The cost and time implication of the compensation event, implementation date, actual end date, and the status.
deleted_compensation_event	CSV File	List of all deleted “compensation event” in DPDS
deliverable	CSV File	The deliverable name, planned submission date, revised target submission date, actual submission date, deliverable status, count of comments, price of submission etc.
deleted_deliverable	CSV File	List of all deleted “deliverable” in DPDS
early_warning	CSV File	Description of early warning, name of the initiator, date of notification, type of early warning, mitigation measures, latest status etc.
deleted_early_warning	CSV File	List of all deleted “early warning” in DPDS
expenditure	CSV File	Description of the payment item, total chargeable amount, total payment amount, invoice details.
deleted_expenditure	CSV File	List of all deleted “expenditure” in DPDS

meeting	CSV File	Meeting subject, meeting start date and time, meeting end date and times
deleted_meeting	CSV File	List of all deleted “meeting” in DPDS
task	CSV File	Task name, duration, planned start and end date, actual start and end date, task status
deleted_task	CSV File	List of all deleted “task” in DPDS
time_charge	CSV File	Description of the time charge event, consultant’s name, title, duration, amount etc.
deleted_time_charge	CSV File	List of all deleted “time_charge” in DPDS
file_checksum	MD5 File	Checksum of each uploaded document, along with their relative file paths and filenames for data integrity verification

Remark:

If there is no data/document update on the date, please upload an empty “file_checksum.md5” file to iCWP.

3.2. Folder Path and Filename Format

Folder path and filename of the SFTP Upload should be named using standardised file naming convention {Agreement No}\{Date}\{Filename}. An example is CE302022DS\YYYY-MM-DD\deliverable.csv

- * Remove special characters and spaces from the agreement no.
- * Use “\” for connection of “Agreement No”, “Date” and “Filename”.

UTF-8 encoding is recommended as the encoding standard for data exchange between DPDS and iCWP. Chinese characters, if any, should adopt latest version of ISO/IEC 10646 and HK SCS for encoding.

We used comma to separate a field. The field data in csv should be quoted. E.g “data1”, “data2”.

We used “|” for separation of multi-values in a field. If field value contains “|”, escape characters is required. E.g. “A|A|B” means A A|B in the field.

The following characters are reserved characters that required special handling in CSV.

Special Character	Adopted Code
Backspace	\b
Form Feed	\f
New Line	\n
Carriage Return	\r
Tab	\t
Double Quote	\"

Backslash	\\
Or	\\

e.g. “He said: \“Hello\”” means He said: “Hello”

3.3. Data Fields and Types of the Exported Files

3.3.1. Agreement

Field	Type	Length	Mandatory	Description	Select List
system_unique_id	Text	256	Yes	Unique record ID in specific DPDS	
project_id	Text	256	Yes	Agreement no.	
project_name	Text	256	Yes	Project name	
department	Text	256	Yes	Department ID	Refer to Section 5.1.4, Department List
commence_date	Date		Yes	<i>starting date</i> of the agreement (DD/MM/YYYY)	
plan_complete_date	Date		Yes	<i>completion date</i> of the agreement (DD/MM/YYYY)	
updated_complete_date	Date			Completion date of the agreement (DD/MM/YYYY)	
currency	Text	256	Yes	“HKD”	
award_sum	Float		Yes	Tendered total of the prices of agreement	
project_status	Text	256	Yes	Project status	Refer to Section 5.1.7, Project Status

Examples: Agreement

Field	Format Sample
system_unique_id	P120214
project_id	CE 30/2022 (DS)
project_name	Construction of Sewage Pumping Station – Design and Construction
department	DSD
commence_date	11/06/2021
plan_complete_date	10/04/2028

updated_complete_date	10/04/2028
currency	HKD
award_sum	7000000
project_status	Design

3.3.2. Key Contact

Suggested to upload the following contacts if the roles are available:

1. The Chief Professional of the agreement from the Department
2. The Senior Professional/Professional of the agreement from the Department
3. The Project Manager of the agreement from the Consultant

Field	Type	Length	Mandatory	Description	Select List
project_id	Text	256	Yes	Agreement no.	
contact_id	Text	256	Yes	Contact ID	
contact_name	Text	256	Yes	Contact name	
post	Text	256	Yes	Position of the contact	
telephone	Text	256	Yes	Office no. or mobile no.	
email	Text	256	Yes	Email address of the contact	

Examples: Key Contact

Field	Format Sample
project_id	CE 58/2021 (CE)
contact_id	C001
contact_name	Alex Lee
post	Chief Engineer
telephone	23456789
email	alexlee@cedd.gov.hk

3.3.3. Deleted Key Contact

All fields are mandatory.

Field	Type	Length	Description
project_id	Text	256	Agreement No.
contact_id	Text	256	Contact ID
deleted_datetime	DateTime		Time of the Items Deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Key Contact

Field	Format Sample
project_id	CE 58/2021 (CE)
contact_id	C001
deleted_datetime	22/07/2022 14:15:00

3.3.4. Comment

Field	Type	Length	Mandatory	Description	Select List
comment_title	Text	256		File name of the comment	
system_unique_id	Text	256	Yes	Unique record ID in the original DPDS	
project_id	Text	256	Yes	Agreement No.	
deliverable_id	Text	256	Yes	Deliverable ID of the document being commented	
comment_id	Text	256	Yes	Record ID of the related comment	
comment_count	Integer		Yes	Equal to document version no.	
client_org	Text	256	Yes	Bureau/Department ID	Refer to Section 5.1.4, Department List
client_dept	Text	256		Division name	
client_role	Text	256		Position of the party who provide comment	
client_id	Text	256		The unique ID of the contact in the original DPDS.	
client_name	Text	256		The name of the party who provide the comment	
submit_date	Date		Yes	Document submission date (DD/MM/YYYY)	
client_response_date	Date		Yes	Department comment date (DD/MM/YYYY)	
consultant_response_date	Date		Yes	Consultant response date (DD/MM/YYYY)	

consultant_response_duration	Integer			Consultant response duration (in days)	
client_response_duration	Integer			Client response duration (in days)	

Formula:

Field	Formula
consultant_response_duration	consultant_response_date – client_response_date
client_response_duration	client_response_date – submit_date

Example: Comment

Field	Format Sample
comment_title	DSD_Special_Duty_08_Nov_2022.pdf
system_unique_id	F1234
project_id	CE 30/2022 (DS)
deliverable_id	01.1
comment_id	C001
comment_count	3
client_org	DSD
client_dept	F01-Special Duty
client_role	Project Co-ordinator
client_id	cwong
client_name	Chris Wong
submit_date	01/06/2022
client_response_date	05/06/2022
consultant_response_date	10/6/2022
consultant_response_duration	5
client_response_duration	4

3.3.5. Deleted Comment

All fields are mandatory.

Field	Type	Length	Description
system_unique_id	Text	256	Unique Record ID in the original DPDS
comment_id	Text	256	Record ID of the related Comment
deleted_datetime	DateTime		Time of the items deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Comment

Field	Format Sample
system_unique_id	F1234
comment_id	C001
deleted_datetime	22/7/2022 14:15:00

3.3.6. Compensation Event

Field	Type	Length	Mandatory	Description	Select List
system_unique_id	Text	256	Yes	Unique record ID in the original DPDS	
project_id	Text	256	Yes	Agreement no.	
ce_id	Text	256	Yes	Compensation event ID	
cost	Float		Yes	Cost implication	
time	Float		Yes	Time implication (days)	
date_of_notification	Date			Date of notification (DD/MM/YYYY)	
implement_date	Date		Yes	Date of implementation (DD/MM/YYYY)	
actual_end_date	Date			Actual end date (DD/MM/YYYY)	
related_deliverable_id	Text	256		Related deliverable ID	
related_task_id	Text	256		Related task ID (accept multiple values in this field)	
related_time_charge_id	Text	256		Related time charge ID (accept multiple values in this field, use “ ” to separate different items)	
ce_status	Text	256		Compensation event status	Refer to Section 5.1.2, Compensation Event Status

Example: Compensation Event

Field	Format Sample
system_unique_id	D9876
project_id	CE 19/2022 (HY)
ce_id	CE001
cost	1000
time	90
date_of_notification	09/06/2022
implement_date	09/06/2022
actual_end_date	09/06/2022
related_deliverable_id	01.1 02.1 03.1
related_task_id	T01 T02 T03
related_time_charge_id	TC001
ce_status	notified

3.3.7. Deleted Compensation Event

All fields are mandatory.

Field	Type	Length	Description
system_unique_id	Text	256	Unique Record ID in the original DPDS
ce_id	Text	256	Compensation Event ID
deleted_datetime	DateTime		Time of the items deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Compensation Event

Field	Format Sample
system_unique_id	D9876
ce_id	C001
deleted_datetime	22/7/2022 14:15:00

3.3.8. Deliverable

Field	Type	Length	Mandatory	Description	Select List
filename	Text	256		File name of the deliverable	
system_unique_id	Text	256	Yes	Unique record ID in the original DPDS	
project_id	Text	256	Yes	Agreement no.	

ce_id	Text	256		Compensation event ID	
deliverable_id	Text	256	Yes	Deliverable ID	
deliverable_name	Text	256	Yes	Deliverable name	
plan_submit_date	Date		Yes	Planned submission date (DD/MM/YYYY)	
revised_target_date	Date		Yes	Revised target submission date (DD/MM/YYYY)	
target_date_history	Text	1024		Historic records of the revised target submission date (DD/MM/YYYY) Use “ ” to separate different items, last updated in the end	
actual_submit_date	Date			Actual submission date (DD/MM/YYYY)	
actual_accept_date	Date			Actual date of approval (DD/MM/YYYY)	
overdue_days	Integer			No. of overdue days	
approval_duration	Integer			Approval duration (days)	
deliverable_status	Text	256	Yes	Deliverable status	Refer to Section 5.1.3, Deliverable Status
comment_count	Integer		Yes	Equal to deliverable version no. (version no. should be integer)	
price_percentage	Float			Percentage of deliverable as stated in activity schedule	
price	Float			Price of submission as per the percentage in activity schedule	
price_adjustment	Float			Adjustment to price, could be a plus or minus to the price	
price_with_adjustment	Float			Adjusted price for invoicing	
payment_id	Text	256		Payment_ID	
parent_deliverable_id	Text	256		Parent file (for splitted files) or folder of the deliverable	

Formula:

Field	Formula
overdue_days (when revised_target_date is null)	(actual_submit_date – plan_submit_date)>=0
overdue_days (when there is revised_target_date)	(actual_submit_date – revised_target_date)>=0
approval_duration	actual_accept_date – actual_submit_date

Remark:

Field	Remark
plan_submit_date	It refers to the planned submission date according to the baseline programme.
revised_target_date	Revised target date, referring to the updated submission date of deliverable, will be added by user according to the project development/ design programme.
target_date_history	History of submission date, including planned submission date, revised target dates, will be logged by the system.

Example: Deliverable

Field	Format Sample
filename	Deliverable.pdf
system_unique_id	F587
project_id	CE 58/2021 (CE)
ce_id	CE001
deliverable_id	01.2
deliverable_name	Progress Report No. 2
plan_submit_date	08/07/2021
revised_target_date	10/07/2021
target_date_history	08/07/2021 10/07/2021
actual_submit_date	13/07/2021
actual_accept_date	31/07/2021
overdue_days	3
approval_duration	18
deliverable_status	accepted
comment_count	1
price_percentage	5%
price	30000
price_adjustment	0
price_with_adjustment	30000

payment_id	P001
parent_deliverable_id	01

3.3.9. Deleted Deliverable

All fields are mandatory.

Field	Type	Length	Description
system_unique_id	Text	256	Unique Record ID in the original DPDS
deliverable_id	Text	256	deliverable ID
deleted_datetime	DateTime		Time of the items deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Deliverable

Field	Format Sample
system_unique_id	F587
deliverable_id	01.2
deleted_datetime	22/07/2022 14:15:00

3.3.10. Early Warning

Field	Type	Length	Mandatory	Description	Select List
system_unique_id	Text	256	Yes	Unique Record ID in the original DPDS	
project_id	Text	256	Yes	Agreement No.	
early_warning_id	Text	256	Yes	Early Warning ID in Early Warning Register	
description	Text	256	Yes	Description of the Early Warning	
initiator	Text	256	Yes	Name of the Initiator	
date_of_notification	Date		Yes	Date of notification (DD/MM/YYYY)	
early_warning_type	Text	256	Yes	Early warning type ID Use “ ” to separate different items Same order as ew_status	Refer to Section 5.1.6, Early Warning Type
mitigating_measures	Text	1024		Mitigating Measures	

action_taken	Text	1024		Action Taken	
ew_status	Text	256	Yes	Early warning status Use “ ” to separate different items same order as early_warning_type	Refer to Section 5.1.5s, Early Warning Status
meeting_id	Text	256		Early warning meeting ID	
date_of_close	Date			The closing date of the early warning (DD/MM/YYYY)	
related_ce_id	Text	256		Related compensation event ID	

Example: Early Warning

Field	Format Sample
system_unique_id	D1177
project_id	CE 19/2022 (HY)
early_warning_id	09
initiator	Chan Tai Man
description	A number of deliverables for Design Phase had been overdue based on the scheduled date for submission specified in the Scope.
date_of_notification	10/02/2022
early_warning_type	EW001 EW002
mitigating_measures	1. recommended to separate the deliverables
action_taken	Three schemes were formulated
ew_status	closed open
meeting_id	EWM05
date_of_close	10/12/2022
related_ce_id	CE001

3.3.11. Deleted Early Warning

All fields are mandatory.

Field	Type	Length	Description
system_unique_id	Text	256	Unique Record ID in the original DPDS
early_warning_id	Text	256	Early Warning ID
deleted_datetime	DateTime		Time of the item deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Early Warning

Field	Format Sample
system_unique_id	D1177
early_warning_id	09
deleted_datetime	22/07/2022 14:15:00

3.3.12. Expenditure

The unbilled data is not required to upload. Please upload the expenditures that are under the status of “billed” or “Settled”.

Field	Type	Length	Mandatory	Description	Select List
system_unique_id	Text	256	Yes	Unique record ID in the original DPDS	
project_id	Text	256	Yes	Agreement no.	
payment_id	Text	256	Yes	Payment ID	
expenditure_description	Text	256	Yes	Description of the payment item	
payment_type	Text	256	Yes	Payment type	Refer to Section 5.1.1, Payment Type
related_deliverable_id	Text	256		Related deliverable ID	
related_task_id	Text	256		Related task ID	
related_time_charge_id	Text	256		Related time charge ID	
total	Float		Yes	Total chargeable amount	
deduct	Float			Deduction – offset the payment amount in invoice	
payment_amount	Float		Yes	Total payment amount	
invoice_date	Date			Invoice date (DD/MM/YYYY)	
invoice_no	Text	256		Invoice number	
invoice_due_date	Date			Invoice due date (DD/MM/YYYY)	
invoice_settle_date	Date			Settlement date (DD/MM/YYYY)	

Example: Expenditure

Field	Format Sample
system_unique_id	D4567
project_id	CE 30/2022 (DS)
payment_id	P010
expenditure_description	Draft Updated Public Consultation and Public Relations Report
payment_type	PT-02
related_deliverable_id	24.1
related_task_id	0.1
related_time_charge_id	TC001
total	80000
deduct	0
payment_amount	80000
invoice_date	11/02/2022
invoice_no	I001
invoice_due_date	21/02/2022
invoice_settle_date	21/03/2022

3.3.13. Deleted Expenditure

All fields are mandatory.

Field	Type	Length	Description
system_unique_id	Text	256	Unique Record ID in the original DPDS
payment_id	Text	256	Payment ID
deleted_datetime	DateTime		Time of the item deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Expenditure

Field	Format Sample
system_unique_id	CE302022DS_D4567
payment_id	P010
deleted_datetime	22/07/2022 14:15:00

3.3.14. Meeting

Meetings under “Open” and “Cancelled” status are not required to be uploaded. Please upload meeting under “Closed” status only.

Field	Type	Length	Mandatory	Description	Select List
system_unique_id	Text	256	Yes	Unique record ID in DPDS (Upload the Closed Meeting Only)	
project_id	Text	256	Yes	Agreement no.	
ce_id	Text	256		Compensation event ID	
meeting_id	Text	256	Yes	Meeting ID	
meeting_subject	Text	256	Yes	Meeting subject	
meeting_start_time	DateTime			Start time of the meeting (DD/MM/YY YY hh:mm:ss)	
meeting_end_time	DateTime			End time of the meeting (DD/MM/YY YY hh:mm:ss)	
remarks	Text	1024		Remarks	
related_time_charge_id	Text	256		Related time charge ID	

Example: Meeting

Field	Format Sample
system_unique_id	D12345
project_id	CE 30/2022 (DS)
ce_id	CE001
meeting_id	EWM01
meeting_subject	EWM No. 1
meeting_start_time	01/06/2022 11:53:00
meeting_end_time	01/06/2022 12:53:00
remarks	Refer to Early Warning 08
related_time_charge_id	TC001

3.3.15. Deleted Meeting

All fields are mandatory.

Field	Type	Length	Description
system_unique_id	Text	256	Unique Record ID in the original DPDS
meeting_id	Text	256	Meeting ID
deleted_datetime	DateTime		Time of the items deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Meeting

Field	Format Sample
system_unique_id	D12345
meeting_id	EWM01
deleted_datetime	22/07/2022 14:15:00

3.3.16. Task

Field	Type	Length	Mandatory	Description	Select List
system_unique_id	Text	256	Yes	Unique record ID in DPDS	
project_id	Text	256	Yes	Agreement / Contract ID	
ce_id	Text	256		Compensation event ID	
task_id	Text	256	Yes	Task ID	
task_name	Text	256	Yes	Task name	
duration	Integer			Task execution duration (Days)	
plan_start_date	Date		Yes	Planned start date (DD/MM/YYYY)	
plan_end_date	Date		Yes	Planned end date (DD/MM/YYYY)	
actual_start_date	Date			Actual start date (DD/MM/YYYY)	
actual_end_date	Date			Actual end date (DD/MM/YYYY)	
predecessors	Text	256		Predecessor task ID list (reference only) Use “ ” to separate different items	

task_status	Text	256	Yes	Task status	Refer to Section 5.1.8, Task Status
price	Float			Price of task as per the percentage in activity schedule	
price_adjustment	Float			Adjustment to price, could be a plus or minus to the price	
price_with_adjustment	Float			Adjusted price for invoicing	
payment_id	Text	256		Payment ID	
remarks	Text	1024		Remarks	
parent_task_id	Text	256		Parent task ID	

Formula:

Field	Formula
duration	actual_end_date – actual_start_date

Example: Task

Field	Format Sample
system_unique_id	D4589
project_id	CE 58/2021 (CE)
ce_id	CE001
task_id	C1.1.3
task_name	Commencement of Works Contract #1
duration	365
plan_start_date	10/12/2022
plan_end_date	10/12/2023
actual_start_date	10/12/2022
actual_end_date	10/12/2023
predecessors	C1.1.1 C1.1.2
task_status	not_start
price	1000
price_adjustment	0
price_with_adjustment	1000
payment_id	P001
remarks	Test Only
parent_task_id	C1.1

3.3.17. Deleted Task

All fields are mandatory.

Field	Type	Length	Description
system_unique_id	Text	256	Unique Record ID in the original DPDS
task_id	Text	256	Task ID
deleted_datetime	DateTime		Time of the item deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Task

Field	Format Sample
system_unique_id	D4589
task_id	C1.1.3
deleted_datetime	22/07/2022 14:15:00

3.3.18. Time Charge

This section only applies to time chargeable projects.

Field	Type	Length	Mandatory	Description	Select List
system_unique_id	Text	256	Yes	Unique record ID in the original DPDS	
project_id	Text	256	Yes	Agreement no.	
ce_id	Text	256		Compensation event ID	
time_charge_id	Text	256	Yes	Time charge ID	
description	Text	256	Yes	Description of the time charge event	
meeting_id	Text	256		Meeting ID	
consultant_name	Text	256		Consultant name	
consultant_title	Text	256		Consultant position title	
consultant_position	Text	256	Yes	Consultant position category	Refer to Section 5.1.10, Position Category
time_charge	Float		Yes	Charges per unit	
duration	Integer		Yes	No. of chargeable units	

unit	Text	256	Yes	Unit (day, hour, minute)	Refer to Section 5.1.9, Unit
amount	Float		Yes	Total charges	
payment_id	Text	256		Payment_ID	

Formula:

Field	Formula
amount	time_charge × duration

Example: Time Charge

Field	Format Sample
system_unique_id	D4237
project_id	CE 58/2021 (CE)
ce_id	CE001
time_charge_id	tc001
description	Structural Design
meeting_id	EWM01
consultant_name	Andrew Li
consultant_title	BIM Specialist
consultant_position	T
time_charge	500
duration	2
unit	hour
amount	1000
payment_id	P001

3.3.19. Deleted Time Charge

All fields are mandatory.

Field	Type	Length	Description
system_unique_id	Text	256	Unique Record ID in the original DPDS
time_charge_id	Text	256	Time Charge ID
deleted_datetime	DateTime		Time of the item deleted (DD/MM/YYYY hh:mm:ss)

Example: Deleted Time Charge

Field	Format Sample
system_unique_id	CE582021CE_D4237
time_charge_id	tc001
deleted_datetime	22/07/2022 14:15:00

3.3.20. File Checksum

This is the file list for reconciliation with the object files listed in tables of “Document” and “Deliverable”.

Field	Type	Length	Description
md5_checksum	Text	256	MD5 Checksum of the File
file_name	Text	256	Related File Names of the Object Files or Relative paths for documents

Example: File Checksum

Please see following sample of MD5 checksum contents.



files.md5

```

2fbfe0daa99066e6cc869af4bcd9788b compensation_event.csv
4f84ef2fcf1cbd5588223431a34cf328 comment.csv
d7580d60502d73a604156830582cba3c document/1119 - Draft Preliminary Review Report.pdf
0bdcedf706cac24990d270d2ea79ca42 deliverable.csv
cbcc44228e3f9b583947cf79d1386ffb early_warning.csv
b315d19c6c6f7d9072158fb0e52fe738 expenditure.csv
a31341bab8f4af560f85621a7b5b1c99 meeting.csv
c0621c54a0f92123b2269d0191720897 task.csv
6d52909955873f05983591e919c117a2 time_charge.csv
16facf6fa1a972f2a40dbd7b5eb1a2e6 deleted_early_warning.csv
065713c1cbc5bf6ae5a40eed0c27b627 deleted_comment.csv
b2474d29f665b544b2ce8599e8c331f8 deleted_compensation_event.csv
59bb4f5d9531cd90c9cddebcdce927a9 deleted_deliverable.csv
0e0d459b1f6f6ddc6639f9147ca5a70a deleted_expenditure.csv
b59c11e4a4067a2dd7f8847e4f20ef90 deleted_meeting.csv
6634dfd39d4d865fd5ff896a138d2ed3 deleted_task.csv
3a76306b914412712c2b07d98fd934da deleted_time_charge.csv

```

4. DATA STANDARDIZATION OF VISUALIZATION

The data sets outlined in the following tables will be transferred from DPDS to the iCWP of the Development Bureau, primarily in JSON (Java Script Object Notation) format.

JSON is an open standard format and data interchange format that uses text to store and transmit data objects consisting of key-value pairs and arrays. It is a common data format with diverse uses in electronic data interchange.

The data sets shall be consolidated into the database of the iCWP; in such a way that these data could be extracted, consolidated, and displayed via Dashboard and different means of visualizations. Drill up / down could be performed to expand /summarise / group data. Reporting and visualization shall be implemented in the Management Information Module.

4.1. File Transfer List

No.	KPI ID	Type	Descriptions
1	PMS1a	JSON File	Ratio of Overdue in First Revision of Submission
2	PMS1b	JSON File	Average Overdue Days in First Revision of Submission
3	PMS2	JSON File	Average Approval Duration of Submission
4	PMS3	JSON File	Average Responding Time of Consultants to Client's Comments
5	PMS4	JSON File	Average Commenting Time of Clients to Consultant's Submissions
6	PMS5	JSON File	Average Number of Revision of Submission
7	PMS6	JSON File	Expenditure Performance
8	PMS7	JSON File	Number of CE/AS
9	PMS8	JSON File	Ratio of Compensation Events/Additional Services to Tendered total of the Prices
10	PMS9	JSON File	Number of Meetings Held in a Period
11	PMS10	JSON File	Number of Early Warnings
12	PMS11	JSON File	Ratio of Closed Early Warnings
13	FMS1	JSON File	Payment Status by Payment Type
14	FMS2	JSON File	Compensation Events/Additional Services Register
15	FMS3	JSON File	Deliverable Submission Status
16	FMS4	JSON File	Time Charge Register
17	{Date}	TXT File	Number of JSON files uploaded to iCWP on the date. The filename should follow the "YYYYMMDD.txt" format, and the file content should contain only a simple integer value. For example, if all "KPI IDs" are uploaded once on that date, the integer value should be 16.

4.2. Filename Format

The filename should follow the standardized naming convention: “Agreement No-KPI ID-Timestamp.json”. For example, a filename could be CE302022DS-PMS1a-YYYYMMDDHHmmssSSS.json.

- * Remove special characters and spaces from the agreement no.
- * Use “-” as separator between “Agreement No”, “KPI ID” and Timestamp.

UTF-8 encoding is recommended as the encoding standard for data exchange between DPDS and iCWP. Chinese characters, if any, should adopt latest version of ISO/IEC 10646 and HK SCS for encoding.

The following characters are reserved characters that required special handling in JSON.

Special Character	Adopted code
Backspace	\b
Form Feed	\f
New Line	\n
Carriage Return	\r
Tab	\t
Double Quote	\"
Backslash	\\

The number of decimal places taken for rounding in this report is 2 d.p.

4.3. Project Management Module

Deliverable Sub-module

4.3.1. Ratio of Overdue in First Revision of Submission

ID	Formula
PMS1a	<p>Number of overdue in the first revision of submission /Total no. of first revision of submission during the period from the agreement starting date to the data uploading date.</p> <p>NOTE: Overdue Submission: Actual submission date > Planned submission date in the latest programme</p> <p>If the planned submission has been overdue and still unable to submit, please use the data uploading date for calculation of the overdue days.</p>

Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS1a", "as_of_date": 20220630, "submission_total": 4, "overdue_doc_count": 1, "overdue_ratio": 0.25, "timestamp": "2022-07-22 05:15:10" }</pre>
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Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
submission_total	Total document count of first revision of submission
overdue_doc_count	Total document count of overdue submission of the first revision of submission
overdue_ratio	Ratio of the overdue submission of the first revision of submission
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.3.2. Average Overdue Days in First Revision of Submission

ID	Formula
PMS1b	Sum of overdue days/Total no. of first revision of submission during the period from the agreement starting date to the data uploading date.
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS1b", "as_of_date": 20220630, "submission_total": 4, "overdue_day_sum": 10, "avg_overdue_day": 2.50, "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
submission_total	Total document count of first revision of submission
overdue_day_sum	Sum of overdue days of submission of the first revision of submission
avg_overdue_day	Average overdue submission days of the first revision of submission
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.3.3. Average Approval Duration of Submission

ID	Formula
PMS2	<p>Sum of approval duration/Total no. of submissions during the period from the agreement starting date to the data uploading date.</p> <p>NOTE: Approval duration of each submission: Approval date of submission - Date of first revision of submission</p> <p>Count all revisions of the approved submissions.</p> <p>Handling of re-approval case If amendment on an approved document is required, DPDS should create a new deliverable with new planned submission date and go through the approval process.</p>
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS2", "as_of_date": 20220630, "approved_total": 4, "approval_day_sum": 21, "approval_day_avg": 5.25, "approval_day_max": 10, "approval_day_min": 1, "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
approved_total	Total count of the approved submissions of deliverables/Tasks
approval_day_sum	Sum of the approval durations of all submissions
approval_day_avg	Average approval durations of all submissions
approval_day_max	Maximum approval durations of submissions in reporting month
approval_day_min	Minimum approval durations of submissions in reporting month
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.3.4. Average Responding Time of Consultants to Department's Comments

ID	Formula
PMS3	<p>Sum of durations (submission date responding to comment from departments - the comment received date) /total no. of responses to departments' comment during the period from the agreement starting date to the data uploading date.</p> <p>NOTE: Submission without prior client's comment should be excluded</p> <p>System should be able to store all the comments response from Departments. The consultants are encouraged to response to comments at once.</p>
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS3", "as_of_date": 20220630, "no_of_submissions": 2, "response_day_sum": 27, "response_count_total": 7, "response_day_avg": 3.86, "response_day_max": 5, "response_day_min": 3, "response_time_breakdown":[{ "submission_id":"submission01", "commenting_parties":[{"party":"EPD", "responding_days":3}, {"party":"EMSD", "responding_days":3}, {"party":"TD", "responding_days":3}, {"party":"CEDD", "responding_days":3}] }, { "submission_id":"submission02", "commenting_parties":[{"party":"EPD", "responding_days":5}, {"party":"EMSD", "responding_days":5}, {"party":"TD", "responding_days":9999}, {"party":"CEDD", "responding_days":5}] }], "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
no_of_submissions	Total no. of submissions responding to departments' comment

response_count_total	Total no. of responses to comments provided by consultant of <u>all</u> submissions
response_day_sum	Sum of durations responding to departments' comment of <u>all</u> submissions by consultant
response_day_avg	Average durations of responding to clients' comment of <u>all</u> submissions
response_day_max	Maximum responding durations responding to departments' comment of submissions <u>in reporting month</u>
response_day_min	Minimum responding durations responding to departments' comment of submissions <u>in reporting month</u>
response_time_breakdown	A list of responding times for each submission
party	Refer to appendix, "Department List"
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

Note:

- "responding_days" of -9999 represents the consultant has not responded to the commenting parties. The calculation of the average responding time will ignore that item.
- $\text{response_day_avg} = (3+3+3+3+5+5+5)/7=3.86$

4.3.5. Average Commenting Time of Commenting Parties to Consultant's Submissions

ID	Formula
PMS4	Sum of duration (comment received date - preceding submission date) / total no. of comments received from clients during the period from the agreement starting date to the data uploading date.
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS4", "as_of_date": 20220630, "num_of_submissions":2, "comment_count_total": 7, "comment_duration_total": 17, "comment_duration_avg": 2.43, "comment_duration_max": 4, "comment_duration_min": 1, "commenting_time_breakdown":[{ "submission_id":"submission01", "commenting_parties":[{"party":"EPD", "commenting_days":3}, {"party":"EMSD", "commenting_days":3.5}, {"party":"TD", "commenting_days":4}, {"party":"CEDD", "commenting_days":3.5}] }] }</pre>

	<pre>] }, { "submission_id": "submission02", "commenting_parties": [{ "party": "EPD", "commenting_days": 1 }, { "party": "EMSD", "commenting_days": 1 }, { "party": "TD", "commenting_days": -9999 }, { "party": "CEDD", "commenting_days": 1 }] }], "timestamp": "2022-07-22 05:15:10" } </pre>
--	--

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
num_of_submissions	Number of submissions in the period
comment_count_total	Total no. of comments received from commenting parties of <u>all</u> submissions
comment_duration_total	Total durations of comments from commenting parties of <u>all</u> submissions
comment_duration_avg	Average durations of comments from commenting parties of <u>all</u> submissions
comment_duration_max	Maximum durations of comments from commenting parties of submissions <u>in reporting month</u>
commenting_time_breakdown	A list of commenting times for each submission
comment_duration_min	Minimum durations of comments from commenting parties of submissions <u>in reporting month</u>
Party	The IDs of the related parties are listed in Department List in Appendix
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

Note:

- "Commenting_days" of -9999 represents the party still not yet responded to the consultant. The calculation of the average commenting time will ignore that item.
- $\text{comment_duration_avg} = (3+3.5+4+3.5+1+1+1)/7=2.43$

4.3.6. Average Number of Revisions of Submission

ID	Formula
PMS5	Sum of revisions in all signed off submissions/Total no. of signed-off submissions during the period from the agreement starting date to the data uploading date. <u>NOTE:</u> Non-approved submission shall be excluded.
Example	{ "agreement_no" : "abcdefg2002", "kpi_id" : "PMS5", "as_of_date" : 20230220, "signed_off_total" : 75, "revision_count_total" : 90, "revision_count_avg" : 1.20, "revision_count_max" : 3.0, "revision_count_min" : 1.0, "timestamp" : "2023-02-20 01:05:53" }

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
signed_off_total	Sum of all signed off submissions
revision_count_total	Sum of revisions of all submissions
revision_count_avg	Average no. of revisions of all submissions
revision_count_max	Maximum no of revisions of submissions
revision_count_min	Minimum no of revisions of submissions
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

Note:

The first submission will be treated as a revision and count as 1

Here is total 75 deliverables which are accepted. 13 of these 75 deliverables have revisions. 2 of them have 2 revisions and 11 of them have 1 revision.

Thus:

Signed_off_Total = 75

Revision_count_total = 62*1 + 11*2 + 2*3 = 90

Revision_count_avg = 90/75 = 1.20

Revision_count_max = 3

Revision_count_min = 1

Cost sub-module

4.3.7. Expenditure Performance

ID	Formula
PMS6	$((\text{Actual expenditure} - \text{Planned expenditure}) / \text{Planned expenditure})$ <p>Note: Both accumulative sum and monthly sum of the target KPI are required. Accumulative sum planned/actual/forecast expenditure during the period from the agreement starting date to the data uploading date. Monthly sum is the planned/actual/forecast expenditure of the relative month</p>
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS6", "as_of_date": 20220630, "acc_planned_expenditure": 2000, "acc_actual_expenditure": 2500, "acc_forecast_expenditure": 3000, "variance_ratio": 0.25, "mthly_planned_expenditure": 300, "mthly_actual_expenditure": 500, "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
acc_planned_expenditure	<p>Planned expenditure shall be based on the payment stated in Activity Schedule.</p> <p>Accumulated planned expenditure refers to the sum of the planned expenditure of each deliverable from the agreement start date to the data uploading date.</p>
acc_actual_expenditure	<p>Actual expenditure includes commitment in Activity Schedule (e.g. submission/Acceptance of Deliverable payment) and Additional Services (AS)/Compensation Events (CE)</p> <p>Accumulated actual expenditure refers to the sum of the committed actual expenditure of each deliverables/AS/CE from the agreement start date to the data uploading date.</p>

acc_forecast_expenditure	Forecast expenditure shall be based on the payment stated in Activity Schedule and updated by additional services or compensation events Accumulated actual expenditure refers to the sum the forecast expenditure of each deliverables/AS/CE from the agreement start date to the data uploading date.
variance_ratio	$((\text{Actual expenditure} - \text{Planned expenditure}) / \text{Planned expenditure})$
mthly_planned_expenditure	Planned expenditure of the relative month that stated in Activity Schedule
mthly_actual_expenditure	Actual committed expenditure of the relative month.
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

Compensation Event (CE) / Additional Services (AS) Sub-module

4.3.8. Number of CE of AS

ID	Formula
PMS7	Monthly count of the number of CE or AS
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS7", "start_date": 20220601, "end_date": 20220630, "ceas_count": 2, "ceas_id_list": ["ce001", "ce002"], "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
start_date	Start date of the relative month
end_date	End date of the relative month
ceas_count	Sum of compensation events / additional services of the relative month
ceas_id_list	Compensation event / additional services id list of the relative month
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.3.9. Ratio of Compensation Events (CE) or Additional Services (AS) to Tendered total of the Prices

ID	Formula
PMS8	<p>Total cost implication of CE or AS / Tendered total of the Prices as per agreement awarded</p> <p>Note: Both accumulative sum and monthly sum of the target KPI are required Accumulative sum of the cost of all CE/AS from contract start to the data uploading date Monthly sum of the cost of the CE/AS of the relative month</p>
Example	<pre>{ "agreement_no":"abcdefg2002", "kpi_id":"PMS8", "as_of_date":20220630, "acc_total_ceas_sum":2000, "awarded_sum":5000, "acc_ceas_ratio":0.4, "ceas_list":[{"id":"CE001", "cost":500,"ratio":0.1}, {"id":"CE002", "cost":1500,"ratio":0.3}], "timestamp":"2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
acc_total_ceas_sum	Accumulative sum of all compensation events/additional service from the contract starting date
awarded_sum	Tendered total of the Prices
acc_ceas_ratio	The ratio of the sum of compensation events/additional services to the Tendered total of the Prices
ceas_list	The cost and ratio of each compensation event/additional service in full list as of the relative month
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

Meeting Sub-module

4.3.10. Number of Meetings Held in a Period

Meeting under “Open” and “Cancelled” status are not required to upload. Please upload meeting under “Closed” status only.

ID	Formula
PMS9	Count of number of meetings held in a period
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS9", "start_date": 20220601, "end_date": 20220630, "meeting_count": 4, "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
start_date	Start date of the relative month
end_date	End date of the relative month
meeting_count	The total number of meetings held in the relative month
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

Early Warnings Sub-module

4.3.11. Number of Early Warnings

ID	Formula
PMS10	Count of number of Early Warnings
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "PMS10", "as_of_date": 20220630, "ew_count": 2, "ew_id_list": [{ "id": "EW001", "date": 20220315 }, { </pre>

	<pre> "id": "EW002", "date": 20220510 }], "timestamp": "2022-07-22 05:15:10" } </pre>
--	--

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
ew_count	Total count of Early Warnings from the contract starting date
ew_id_list	The ID list of all Early Warnings
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.3.12. Rate of Closed Early Warnings

ID	Formula
PMS11	Demonstrate the proportion of closed/open early warnings during the period from the contract starting date to the data uploading date.
Example	<pre> { "agreement_no": "abcdefg2002", "kpi_id": "PMS11", "as_of_date": 20220630, "ew_count": 4, "ew_closed": 2, "ew_closed_ratio": 0.5, "ew_closed_id_list": [{ "id": "EW001", "date": 20220315 }, { "id": "EW002", "date": 20220510 }], "timestamp": "2022-07-22 05:15:10" } </pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
as_of_date	Month-end date or data uploading date
ew_count	Total number of early warnings

ew_closed	Total number of closed early warnings
ew_closed_ratio	The ratio of closed early warnings to the total number of early warnings
ew_closed_id_list	The closed Early Warning list
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.4. Financial Management Module

4.4.1. Payment Status by Payment Type

ID	Formula
FMS1	<p>Actual Payment (refer to appendix, “Payment Type”)</p> <p>*Note Both accumulative sum and monthly sum of the target KPI are required: Accumulative sum of the actual payment during the period from the contract start to data uploading date. Monthly sum of the actual payment by each payment type of the relative month</p>
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "FMS1", "start_date": 20220601, "end_date": 20220630, "acc_actual_payment": 30000, "acc_actual_payment_list": [{ "payment_type": "PT_01", "mthly_payment": 2000 }, { "payment_type": "PT_05", "mthly_payment": 500 }, { "payment_type": "PT_07", "mthly_payment": 800 }], "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
start_date	Start date of the relative month

end_date	End date of the relative month
acc_actual_payment	Accumulative sum of payment of the agreement
acc_actual_payment_list payment_type	The list of Payments. Please refer to the types listed in Select List (Appendix)
acc_actual_payment_list mthly_payment	The total actual payment of the payment type of the relative month
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.4.2. Compensation Events / Additional Services Register

ID	Formula
FMS2	Register of additional services or compensation events
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "FMS2", "ceas_list": [{ "ceas_id": "efghijk3046", "planned_start": 20220101, "planned_end": 20220331, "actual_start": 20220301, "actual_end": 20220630, "ceas_status": "accepted", "ceas_title": "Digital Projects for xxx Platform", "ceas_cost": 300, "ceas_deliverables": ["Deliverable A", "Deliverable B"] }, { "ceas_id": "efghijk3047", "planned_start": 20220101, "planned_end": 20220331, "actual_start": 20220301, "actual_end": 20220630, "ceas_status": "accepted", "ceas_title": "Digital Projects for xxx Platform", "ceas_cost": 300, "ceas_deliverables": ["Deliverable A", "Deliverable B"] }], "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
planned_start	Planned start date of CE/AS
planned_end	Planned end date of CE/AS
actual_start	Actual start date of CE/AS
actual_end	Actual end date of CE/AS
ceas_status	Project status of CE/AS
ceas_title	The title of CE/AS
ceas_cost	The cost of CE/AS
ceas_deliverables	The deliverables of the relative CE/AS
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.4.3. Deliverable Submission Status

ID	Formula
FMS3	Monitor the deliverable submission status, include the non-payment/non-milestone deliverables
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "FMS3", "deliverables": [{ "deliverable_name": "Deliverable 1", "plan_submit_date": 20220301, "target_date": 20220430, "actual_submit_date": 20220301, "actual_finish_date": 20220430, "submission_status": "accepted" }, { "deliverable_name": "Deliverable 2", "plan_submit_date": 20220301, "target_date": 20220430, "actual_submit_date": 20220301, "actual_finish_date": 20220430, "submission_status": "accepted" }], "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
deliverable_name	Document name of the deliverables/Tasks
plan_submit_date	Planned submission date of the relative deliverable
target_date	Target completion date of the relative deliverable
actual_submit_date	Actual submission date of the relative deliverable
actual_finish_date	Actual finished date of the relative deliverable
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

4.4.4. Time Charge Register

ID	Formula
FMS4	Register of all representative and related time charge
Example	<pre>{ "agreement_no": "abcdefg2002", "kpi_id": "FMS4", "time_charge": [{ "charge_date": 20210301, "task_desc": "Consultancy service", "uom": "Day", "unit_rate": 2000, "no_of_unit": 1, "charge_tot": 2000 }, { "charge_date": 20210306, "task_desc": "Consultancy service", "uom": "Hour", "unit_rate": 1000, "no_of_unit": 2, "charge_tot": 2000 }], "timestamp": "2022-07-22 05:15:10" }</pre>

Attribute/key	Detailed descriptions
agreement_no	Consultancy agreement no.
kpi_id	ID of the Key Performance Index
charge_date	The on duty date of the consultant
task_desc	Description of the task
uom	Unit of measure
unit_rate	Charge rate per unit

no_of_unit	Number of units provided by the consultant
charge_tot	The total charges of the service provided by the consultant
timestamp	YYYY-MM-DD HH:mm:ss (24 hrs)

5. APPENDIX

5.1. Select List

Some of the data fields in Section 3 (Data Standardization of Project Management, Financial Management and Document Management Modules) and Section 4 (Data Standardization of Visualization) are defined as “Select List”. The values of each “Select List” are defined in this section.

Each “Select List” shows the “ID” and the display name of each option in the list.

- “ID” is the expected value uploaded from Department’s DPDS. The value of “ID” is case sensitive.
- “Display name” is the value will be displayed in DEVB’s iCWP dashboard

5.1.1. Payment Type

ID	Display Name	Descriptions
PT_01	On Commencement	Upon signing of Agreement
PT_02	Submission/Acceptance of Deliverable	Submission/Acceptance of Deliverable
PT_03	Regular payment	At the end of each month/quarter after the commencement of the Phase
PT_04	Remuneration for employment of RSS	Remuneration of the Consultant for employment of Resident site Staff
PT_05	Supervision On Cost	The Consultants are paid for provision and management of the RSS
PT_06	Reimbursement Expense/Service Contract	The Consultants are reimbursed by the Employer out-of-pocket expenses actually and properly incurred as per the Agreement
PT_07	CPI	Adjustment proportion to Consumer Price Index (CPI)
PT_08	Split Payment	Split payment usually co-exists with PT-02: Acceptance of Deliverable.
PT_09	Advance Payment	Advance payment will be applied when it is compromised to pay before the delivery of deliverables.
PT_10	Pay-back	Pay-back serves as a system to deal with, mostly advance payment, the payment returning.

PT_11	Deducted Payment	Deducted payment is a type of payment which concerns change in scope. It could be considered as the reversal of additional service.
PT_12	On Completion	Completion of all duties and delivery of all deliverables in the Phase to the satisfaction of the Employer

5.1.2. Compensation Event Status

ID	Display Name
notified	Notified
accepted	Accepted
rejected	Rejected
started	Started
completed	Completed

5.1.3. Deliverable Status

ID	Display Name
not_start	Not Start
working	Working
submitted	Submitted
accepted	Accepted

5.1.4. Department List

ID	Display Name
AFCD	Agriculture, Fisheries and Conservation Department
ASD	Architectural Services Department
BD	Buildings Department
GEO	Geotechnical Engineering Office, Civil Engineering and Development Department
CEDD	Civil Engineering and Development Department (excl. GEO)
DSD	Drainage Services Department
EMSD	Electrical & Mechanical Services Department
EPD	Environmental Protection Department
FSD	Fire Services Department
FEHD	Food and Environmental Hygiene Department

GPA	Government Property Agency
HEALTHD	Department of Health
HyD	Highways Department
HAD	Home Affairs Department
HKPF	Hong Kong Police Force
HD	Housing Department
LD	Labour Department
LandsD	Lands Department
LCSD	Leisure and Cultural Services Department
MD	Marine Department
PlanD	Planning Department
TD	Transport Department
WSD	Water Supplies Department
MTRC	MTR Corporation Limited
KMB	Kowloon Motor Bus company
CLP	CLP Power Hong Kong Limited
HKCGC	The Hong Kong and China Gas Company Limited

5.1.5. Early Warning Status

ID	Display Name
open	Open
closed	Closed

5.1.6. Early Warning Type

ID	Display Name
EW001	An increase of the total of the prices
EW002	A delay to completion
EW003	A change to the accepted programme
EW004	A delay for meeting a key date
EW005	An issue that might impair the usefulness of the services to the employer
EW006	An issue that might affect the work of the employer, an employer's contractor or another consultant
EW007	The Consultant may also give an early warning on any other matter which could increase his total cost

5.1.7. Project Status

ID	Display Name
PS001	Investigation
PS002	Feasibility Study
PS003	Review
PS004	Design
PS005	Tender
PS006	Construction

5.1.8. Task Status

ID	Display Name
not_start	Not yet started
started	Started
completed	Completed

5.1.9. Unit

ID	Display Name
day	Day
hour	Hour
min	Minutes

5.1.10. Position Category

ID	Display Name
PD	Partner/Director
CP	Chief Professional
SP	Senior Professional
P	Professional
AP	Assistant Professional
T	Technical