|  |  |
| --- | --- |
| **Schedule Performance for Resources** |  |
| Executive Summary:  This report for each work package, project number and bundle metrics at both the weekly, life to date and at completion. This includes the baseline planned, earned, Level 2 forecast, the Level 3 forecast, SPI ,Variance from the plan, Remaining left to earn and etc.  Key Fields:  The following P6 fields are involved in the report.   |  |  | | --- | --- | |  | Description | | Activity ID | The combination of the Activity ID and Project ID define the key identifier for any activity. They are also used to identify the baseline budget for an activity. | | Project ID | | EPS Path | These fields are used to limit the scope of the projects to only active projects in the BUN node. | | Project Status | | Activity Type | These fields are used to differentiate between Level 2 work packages and Level 3 activities | | CM\_ACTIVITY\_LEVEL | | NR\_LOE\_WORK | This usually hidden field is used only by work packages to identify LOE work. | | WBS Path | This field is used to join Level 3 activities to Level 2 work packages and the first character is used as the PIEPCCC | | CM\_VENDOR | This field is used to determine if the activity is an OPG support activity | | Start | In the approved baseline schedule, the start and finish are used along with the resource level budgeted units to define the plan by day/week/month. | | Finish | | Budgeted Units | | Remaining Early Start | The remaining early start and finish are used along with the resource level remaining labor units to define forecast by day/week/month. | | Remaining Early Finish | | Remaining Units | | Percent Complete Type | To determine the % complete of an activity or work package, the value assigned to Percent Complete Type is used and one of the three % completes. Default is to the Physical % Complete. | | Duration % Complete | | Physical % Complete | | Units % Complete | | Budgeted\_Labor\_Units | The activity level budgeted labor units from the approved baseline is used in calculating the total earned. The activity level budgeted labor units from the current schedule is used in calculating the total progress. | | NR\_EXECUTION\_WINDOWS | These fields are used by the parameters to determine if they meet the filter requirements for execution window and segments. | | NR\_OUTAGE\_SEGMENT | | Resource\_Type | This field, at the resource level, is used to define if the values are labour or non-labour. |   Description:  Below is a quick explanation of how each field is calculated;  Period (Weekly)  Plan (PV) = Level 2 Approved plan in the last completed week  Level 3 Forecast = Level 3 remaining hours that were forecast for the last completed week  Earned (EV) = Level 2 hours earned in the last completed week  Schedule Variance (SV) = Difference between the Earned (EV) and Plan (PV)  SPI = Earned (EV) / Plan (PV)  Cumulative (Life-to-Date)  Plan (PV) = Level 2 Approved plan values up to the end of the last completed week  Earned (EV) = Level 2 earned values up to the end of the last completed week  Schedule Variance (SV) = Difference between the Plan (PV) and Earned (EV) for the life to date  SPI = Earned (EV) / Plan (PV)  %Complete = Shows the percent complete value based off project’s default ‘Percent Complete Type” in P6  At Completion  Plan (PV) = Total approved budgeted labor  EAC Forecast = Total level 2 forecast hours  Level 3 Forecast = Level 3 remaining hours that were forecast for the project  Remain. Left to Earn = Total approved budgeted labor – Level 2 earned LTD  To Earn Ratio = Un-earned amount / Remaining Forecast (Level 2)  The report uses slightly different logic depending on the data needed. An explanation is provided below for each of the data types;  In all cases, the following general filters are applied;   1. [EPS\_Path] begins with “NP|NR|NACT|PDPS” 2. [Project\_Status] = “Active” 3. [NR\_EXECUTION\_WINDOWS\_Val] does not end with C 4. PIEPCCC is determined based on the first character from the field [WBS\_Path], and any PIEPCCC that is not one of 1, 2, 3, 4, 5, 6, 9, Z or NULL is grouped as “Other”.   The NR\_LOE\_WORK\_Val field is used by the EVM Parameter and is calculated as follows;   1. For Level 2 activities/resources, the [NR\_LOE\_WORK\_Val] is calculated from the Level 2 activity. 2. For Level 3 activities/resources, the [NR\_LOE\_WORK\_Val] is determined from the related Level 2 activity    * The Level 3 activity is joined to a Level 2 activity by comparing the Project Number and the first five digits of the WBS\_Path for both levels.    * If the Level 3 activity has a Project Number and WBS\_Path that joins to multiple Level 2 activities then the first work package coded with “LOE” in NR\_LOE\_WORK\_Val is used. Otherwise it is joined to the first Level 2 activity sorted alphabetically.   **EAC Forecast**  The Level 2 forecast data is generated as follows;   1. The following filters are applied to the activities included;    1. [Activity\_Type] = “TT\_WBS”    2. [CM\_Activity\_Level\_Val] = “2.A” 2. The PIEPCCC is determined based on the first character from the field [WBS\_Path]. 3. The time phased breakdown of the [Planned\_Hours] is grouped by work week, using the dates provided in npdw\_rpt.v\_dim\_date or rpt.v\_NR\_WorkWeek.   **Level 3 Forecast**  The Level 3 forecast data is generated as follows;   1. The following filters are applied to the activities included;    1. [Activity\_Type] = “TT\_Task” or “TT\_LOE”    2. [CM\_Activity\_Level\_Val] = “3” or NULL    3. OPG support activities are excluded. If the activity is assigned to a project with an MPL [Vendor] that does not start with “OPG” or “IMS” and has an [CM\_VENDOR\_Val] that starts with “OPG” or “IMS” then it is an OPG support activity.    4. Level 3 activities that correspond to a Level 2 work package with [NR\_LOE\_WORK\_Val] equal to “LOE” are excluded. The connection is made by joining Level 2 activities to Level 3 activities using the combination of the [Project\_ID] and the first 7 characters of the [WBS\_Path]. If a Level 3 activity connects to multiple Level 2 work packages, then if any of the related work packages are “LOE” the Level 3 activity is excluded. 2. The PIEPCCC is determined based on the first character from the field [WBS\_Path]. 3. The time phased breakdown of the [Remaining\_Hours] is grouped by work week, using the dates provided in npdw\_rpt.v\_dim\_date or rpt.v\_NR\_WorkWeek. 4. When a Level 3 activity doesn’t map to an existing Level 2 work package, the data still needs to be displayed so it includes these hours under the “867735##### - Missing L2 WP Data.   Example:    **Plan (Level 2)**  For any snapshot, the approved baseline planned at completion, and planned life to date are calculated as follows;   1. The approved baseline is determined for each project using the rpt.v\_UserBaselineProjectType dataset. For historical snapshots, these values have been saved in the datamart tables.   **NOTE:** **In the case that the same project has multiple approved baselines assigned then the baseline that has the same first 20 characters as the current project ID is assumed to be the ‘true’ approved baseline. Otherwise, the first baseline alphabetically is assumed to be the ‘true’ approved baseline.**   1. The resources and activities are filtered as follows for each project and grouped at the activity level;;    1. [Resource\_Type] = “RT\_Labor” or NULL 2. The baseline activities are joined with the forecast tables for the current week snapshot using the [Activity\_ID and [Project\_ID] fields. Then the following additional filters are applied using the data in the current forecast.   **NOTE: If a baseline activity does not exist in the current forecast data, then it is automatically excluded.**   * 1. [Activity\_Type] = “TT\_WBS”   2. [CM\_Activity\_Level\_Val] = “2.A”  1. The time phased breakdown of the hours is grouped by work week, using the dates provided in rpt.v\_NR\_WorkWeek. For the planned at completion, the total of all work weeks is calculated. For the planned LTD, only those work weeks before or equal to the work week of the selected snapshot date are included.   **Earned (Level 2)**  The earned data is generated using historical snapshots of data, with each snapshot being compared to the one immediately prior as follows;   1. The following filters are applied to the activities in all snapshots included;    1. [Activity\_Type] = “TT\_WBS”    2. [CM\_Activity\_Level\_Val] = “2.A”   **NOTE: The Earned value is calculated at the activity level and not the resource level. Any differences between the resource level budgets and activity level budgets in P6 will data problems.**   1. For each activity found, the approved baseline budget is found by joining on the Activity\_ID and Project Number and the approved baseline calculated as before for each snapshot in history. 2. For each activity with an approved baseline budget, the earned value is calculated using the Percent\_Complete\_Type and one of either the Physical\_Percent\_Complete, Duration\_Percent\_Complete or Units\_Percent\_Complete, multiplied by the approved baseline budget. This provides the earned LTD value for each activity for each snapshot date. 3. The earned LTD values are assigned to a work week or fiscal month based on the snapshot date. The snapshot date is reduced by two days and then matched to the fiscal month for that date or the snapshot date is directly matched to the work week. 4. To calculate the change in the earned value in a specific week, the earned LTD for each activity is compared earned LTD in the snapshot immediately prior for the same activity. The difference is then assigned as the earned for that period.   **NOTE: If an activity has its percent complete decrease over a period or if the approved baseline decreases over a period, then the “Earned” for that period may be negative.** | | |
|  | | |

|  |
| --- |
|  |

|  |  |  |
| --- | --- | --- |
| **Schedule Performance for Resources Table** | | |
| **Column** | **Sub - Column** | **Description** |
| **Program** | **N/A** | Identifies the program name associated with the specified project (i.e NR, DO) |
| **Bundle** | **N/A** | Identifies the bundle name that corresponds with each project (i.e. Balance of Plant, Campus Plan) |
| **Vendor (MPL)** | **N/A** | Identifies the vendor for the specified project. |
| **Description** | **N/A** | Identifies the project number and project name. |
| **This Period**  [Cost calculations are done for the current time period] | **Plan (PV)** | Planned value describes how far along a project is supposed to be at any given point in its schedule. Planned value is the established baseline against which the actual progress of the project is measured. This baseline is often changed to reflect changes that occur as a result of re-evaluations of a project’s scope, cost or schedule. |
| **Earned (EV)** | Earned Value describes the current value of the work that has been completed to date. Planned Value describes how far along the project is supposed to be, whereas Earned Value described how far along the project actually is. |
| **Schedule Variance (SV)** | Schedule Variance is used to determine how far along a project is behind or ahead of schedule budget-wise. A positive variance indicates the project is ahead of schedule, while a negative variance indicates a project is behind schedule. Schedule Variance is calculated as follows: SV = EV-PV |
| **SPI** | This measures how efficiently a project team is using its time. A quotient below 1 may indicate that not enough time was allotted for the specific project, or that time is not being used as efficiently as expected. A quotient above 1 may indicate that too much time was given for this project, or that time is being used more effectively than expected. An SPI that deviates too far from 1 indicates inaccurate planning regarding the time and scope of the project in question. SPI is calculated as follows:  SPI = EV/PV |
| **Cumulative (Life-To-Date)**  [Cost calculations are done for the life of the project, up to the current date] | **Plan (PV)** | Planned value describes how far along a project is supposed to be at any given point in its schedule. Planned value is the established baseline against which the actual progress of the project is measured. This baseline is often changed to reflect changes that occur as a result of re-evaluations of a project’s scope, cost or schedule. |
| **Earned (EV)** | Earned Value describes the current value of the work that has been completed to date. Planned Value describes how far along the project is supposed to be, whereas Earned Value described how far along the project actually is. |
| **Schedule Variance (SV)** | Schedule Variance is used to determine how far along a project is behind or ahead of schedule budget-wise. A positive variance indicates the project is ahead of schedule, while a negative variance indicates a project is behind schedule. Schedule Variance is calculated as follows:  SV = EV-PV |
| **SPI** | This measures how efficiently a project team is using its time. A quotient below 1 may indicate that not enough time was allotted for the specific project, or that time is not being used as efficiently as expected. A quotient above 1 may indicate that too much time was given for this project, or that time is being used more effectively than expected. An SPI that deviates too far from 1 indicates inaccurate planning regarding the time and scope of the project in question. SPI is calculated as follows:  SPI = EV/PV |
|  | **% Complete** | Identifies how far along the project is on track according to the plan. This percent is a ratio of the Cumulative Earned hours (EV) to the At Completion Planned hours (PV), calculated as follows:  %Complete = (Cumulative EV/ At Completion PV) \* 100% |
| **At Completion** | **Plan (PV)** | Planned value describes how far along a project is supposed to be at any given point in its schedule. Planned value is the established baseline against which the actual progress of the project is measured. This baseline is often changed to reflect changes that occur as a result of re-evaluations of a project’s scope, cost or schedule. |
|  | **Remain. Left to Earn** | Identifies the number of hours remaining for the entirety of the project. Calculated as follows:  Remaining Hours = (Life Cycle PV – Cumulative EV) |
|  | **To Earn Ratio** | This measures how efficiently a project team is using its time. A quotient above1 may indicate that not enough time was allotted for the specific project, or that time is not being used as efficiently as expected. A quotient below 1 may indicate that too much time was given for this project, or that time is being used more effectively than expected. Identify the ratio of Remaining to Earn and left to forecast.  To Earn Ratio = Un-earned amount / Remaining Forecast (Level 2) |
|  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | **Drilldowns** | **Description** | **Data Listed** | | The drill down can be accessed by clicking on the “+” icon within the table cells under the following Column:   |  | | --- | | **Line #** | | The table will expand, showing all of the sub-bundles or sub-groups of the selected Project / Bundle. | The expanded table will break down the projects into the individual work packages, allowing the user to identify the PEPCCC element which pertain to the project. | |

|  |
| --- |
| **Report Grouping Data Sources** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Grouping** | **BU** | **Source** | **Field/Description** |
| Not Applicable | - | - | NA |
| Program | All | EPL | **program\_title** |
| Bundle | All | EPL | **bundle\_title** |
| Vendor | All | EPL | **vendor** |
| Unit | All | EPL | **unit\_title** |
| Project | All | EPL | **project\_number** + **project\_desc** |
| PIEPCCC | All | P6 | **PIEPCCC** |
| Execution Window | NR | P6 | *v\_dim\_ExecutionWindow*.**ExecWindowCode** + “–“ + *v\_dim\_ExecutionWindow.***ExecutionWindowName** |
| Work Package | All | P6  or EBX | (**Activity\_ID** or *v\_INV\_TF\_0070\_Vendor\_WP\_Lookup\_Live*.**OPG\_WP**)  + “–“ + **Activity\_Name** |
| RFR Sub-Project | NR | EBX | *v\_INV\_TF\_0070\_Vendor\_WP\_Lookup\_Live*.**Sub\_Project** |
| RFR Custom PIEPCCC | NR | EBX | *v\_INV\_TF\_0070\_Vendor\_WP\_Lookup\_Live*.**descr\_cpiep3c** |
| Area Manager | NR | EBX | *v\_INV\_TF\_0070\_Vendor\_WP\_Lookup\_Live*.**Area\_Manager** |
| Area | NR | EBX | *v\_INV\_TF\_0070\_Vendor\_WP\_Lookup\_Live*.**Area** |
| Project Owner (VP) | All | EPL | **project\_owner** |
| Director (Strat V) | All | EPL | **director\_name** |
| Department Manager (Strat IV) | All | EPL | **department\_manager\_name** |
| Project Manager | All | EPL | **project\_manager\_name** |
| Section Manager (Strat III) | All | EPL | **section\_manager\_name** |
| CSA | All | EPL | **csa\_name** |
| Activity Vendor | NR | P6 | *v\_fact\_0210c\_ActivityL2\_Weekly.***BR\_CM\_VENDOR\_Val** |

|  |  |
| --- | --- |
| **Data Source** | **NPDW\_PROD** - Data Source(s)  Table Views:   * rpt.v\_NR\_WorkWeek * rpt.v\_UserActivityCode1Daily * rpt.v\_UserActivityAttributeDaily * npdw\_rpt.v\_dim\_date * rpt.v\_UserResourceTimePhaseWeekly\_CurrentWeek * rpt.v\_UserActivityCode1Weekly\_CurrentWeek * rpt.v\_UserProjectAttributeWeekly\_CurrentWeek * rpt.v\_UserActivityAttributeWeekly\_Archive * rpt.v\_UserResourceTimePhaseWeekly\_Archive * rpt.v\_UserActivityCode1Weekly\_Archive * rpt.v\_UserProjectAttributeWeekly\_Archive * idbnp\_rpt.v\_dim\_projectmaster   **NPDW\_Report** - Data Source(s)    Table Views:   * NPDW\_Report.sabi.v\_dim\_0250\_SnapshotPeriod * NPDW\_Report.sabi.v\_dim\_0254\_TimePhasePeriod * NPDW\_Report.sabi.v\_fact\_0200c\_ActivityL2\_Daily * NPDW\_Report.sabi.v\_fact\_0200d\_ActivityL3\_Daily * NPDW\_Report.sabi.v\_fact\_0202a\_ResourceTimePhase\_Daily * NPDW\_Report.sabi.v\_fact\_0202f\_ResourceTimePhase\_BL * NPDW\_Report.sabi.v\_fact\_0210c\_ActivityL2\_Weekly * NPDW\_Report.sabi.v\_fact\_0210d\_ActivityL3\_Weekly * NPDW\_Report.sabi.v\_fact\_0212a\_ResourceTimePhase\_Weekly * NPDW\_Report.sabi.v\_fact\_0212f\_ResourceTimePhase\_BL\_Weekly |
| **Achievements** | This report provides the user with an overview of the schedules of various projects. This report allows the user to determine how far on track projects are in terms of following the plan, and whether they are behind or ahead of schedule. |