Creating a Portfolio KPI Report in Project Online

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Raphael Santos
Principal Consultant | Sensei Project Solutions
About your presenter

• Raphael Santos
  – Principal Consultant at Sensei Project Solutions
  – Microsoft Project MVP since 2016
  – Author, blogger, speaker

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About Sensei Project Solutions

- Microsoft’s 2014 PPM Partner of the Year; Finalist for 2015
- 500+ Microsoft PPM Deployments
- 5,000+ Project Managers and Team Members trained
- Global Impact
Enterprise Reporting

Reports & Dashboards

- Executives
  - Project A Status
  - Project B Status
  - Project C Status
  - Project D Status

Data Quality

- Project Manager
  - Project A
    - Timesheets
    - Project Sites
    - Schedules
  - Project B
    - Timesheets
    - Project Sites
    - Schedules
  - Project C
    - Timesheets
    - Project Sites
    - Schedules
  - Project D
    - Timesheets
    - Project Sites
    - Schedules

Project Team
# Displaying KPIs in Project Center

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Start</th>
<th>Finish</th>
<th>Work (h)</th>
<th>% Complete</th>
<th>Remaining Work (h)</th>
<th>Schedule KPI</th>
<th>Work KPI</th>
<th>Owner</th>
<th>Project Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workflow Phase Name: 3 - Planning</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- <strong>Workflow Phase Name: 4 - Execution</strong></td>
<td>1/11/2016</td>
<td>3/8/2019</td>
<td>90,779.24h</td>
<td>76%</td>
<td>770.4h</td>
<td></td>
<td></td>
<td>Ken Huckaby</td>
<td>03 - Execute - Monitor &amp; Control</td>
</tr>
<tr>
<td><strong>Colorado Web Site Content and Feature Update</strong></td>
<td>9/19/2016</td>
<td>6/14/2017</td>
<td>3,382h</td>
<td>92%</td>
<td>266.91h</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gymsum Infrastructure Development R250</strong></td>
<td>4/11/2017</td>
<td>7/14/2017</td>
<td>3,639.25h</td>
<td>87%</td>
<td>585.19h</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Business Import-Export Tracking System R200</strong></td>
<td>8/22/2016</td>
<td>8/18/2017</td>
<td>2,816.5h</td>
<td>76%</td>
<td>770.4h</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Veritas Identity Verification Tool R200</strong></td>
<td>9/6/2016</td>
<td>9/8/2017</td>
<td>2,334.7h</td>
<td>53%</td>
<td>947.44h</td>
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</tr>
<tr>
<td><strong>Hammerhead Software R250</strong></td>
<td>11/7/2016</td>
<td>9/26/2017</td>
<td>3,406h</td>
<td>52%</td>
<td>1,812.53h</td>
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</tr>
<tr>
<td><strong>CIE Champion Software Development R100</strong></td>
<td>11/7/2016</td>
<td>12/5/2017</td>
<td>13,623.32h</td>
<td>38%</td>
<td>7,915.41h</td>
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</tr>
<tr>
<td><strong>Warehouse Inventory Tracking System R200</strong></td>
<td>8/8/2016</td>
<td>1/19/2018</td>
<td>2,538.8h</td>
<td>58%</td>
<td>1,071.2h</td>
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<td></td>
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</tr>
<tr>
<td><strong>New Life System Software R200</strong></td>
<td>10/24/2016</td>
<td>1/24/2018</td>
<td>7,771h</td>
<td>47%</td>
<td>4,650.6h</td>
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</tr>
<tr>
<td><strong>GenWorld Worldwide Database Consolidation</strong></td>
<td>1/3/2017</td>
<td>1/31/2018</td>
<td>7,686h</td>
<td>29%</td>
<td>5,284.71h</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Tacoma System R400 Development</strong></td>
<td>3/27/2017</td>
<td>3/7/2018</td>
<td>2,795h</td>
<td>7%</td>
<td>2,520.07h</td>
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<tr>
<td><strong>Malibu Database Technology R200 Update</strong></td>
<td>4/17/2017</td>
<td>4/6/2018</td>
<td>9,706h</td>
<td>6%</td>
<td>9,114h</td>
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</tr>
<tr>
<td><strong>Venus Program</strong></td>
<td>1/1/2016</td>
<td>4/6/2018</td>
<td>3,331.6h</td>
<td>62%</td>
<td>1,234.91h</td>
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</tr>
<tr>
<td><strong>Tornado Infrastructure Development R200</strong></td>
<td>4/10/2017</td>
<td>4/18/2018</td>
<td>3,248h</td>
<td>4%</td>
<td>3,168h</td>
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<tr>
<td><strong>AA Tenant Renewal R200</strong></td>
<td>11/14/2016</td>
<td>5/3/2018</td>
<td>9,427.07h</td>
<td>35%</td>
<td>6,711.69h</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Cactus Tower Building Project</strong></td>
<td>10/10/2016</td>
<td>5/22/2018</td>
<td>8,338.4h</td>
<td>32%</td>
<td>5,644.4h</td>
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<td></td>
</tr>
<tr>
<td><strong>Product Deployment and Installation R200</strong></td>
<td>4/17/2017</td>
<td>6/22/2018</td>
<td>3,524h</td>
<td>1%</td>
<td>3,505.33h</td>
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<td></td>
</tr>
<tr>
<td><strong>Jupiter Program</strong></td>
<td>12/25/2016</td>
<td>3/8/2019</td>
<td>3,211.6h</td>
<td>18%</td>
<td>2,526.75h</td>
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<tr>
<td><strong>Workflow Phase Name: 5 - Closing</strong></td>
<td>10/6/2014</td>
<td>4/14/2017</td>
<td>71,831.69h</td>
<td>100%</td>
<td>0h</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The great divide

Some challenges when using custom KPIs:

- KPIs should be customized before projects are created in Project Online
- If the metrics are changed, projects have to be republished to recalculate the correct values

So the reports become an option:

- There is no need to create custom KPIs
- If the metrics are changed, changing the report’s configuration is enough to have the correct values displayed
- There are more options for filtering, consolidating and grouping the data
Steps to create the Portfolio KPI report

1. Define KPIs criteria
   – Generally the ‘% of variance’ (schedule, work and costs)
2. Retrieve data from Project Online
   – Using Excel to connect to Odata
3. Manipulate the data using PowerPivot
   – So the custom calculation can be created and managed
4. Build the report
Hands On: Creating a Portfolio KPI Report
Additional Information | Data Connection

- Projects:
  https://<YOURCOMPANYTENANTNAME>.sharepoint.com/sites/pwa/_api/ProjectData/Projects()?$filter=ProjectType ne 7&$select=ProjectId,ProjectName,ProjectOwnerName,EnterpriseProjectTypeName,ProjectStartDate,ProjectFinishDate,ProjectDuration,ProjectCost,ProjectWork,ProjectFinishVariance,ProjectCostVariance,ProjectWorkVariance,ProjectPercentCompleted

- Projects Baselines:
  https://<YOURCOMPANYTENANTNAME>.sharepoint.com/sites/pwa/_api/ProjectData/ProjectBaselines()?$filter=BaselineNumber eq 0 & $select=ProjectId,ProjectBaselineCost,ProjectBaselineDuration,ProjectBaselineWork
Additional Information | Formulas

- Percent of Finish Variance:
  \[=\text{IF}(\text{RELATED(ProjectBaselines[ProjectBaselineFinishDate])}=0, -100, \text{ProjectFinishVariance}/\text{RELATED(ProjectBaselines[ProjectBaselineDuration]})\times 100)\]

- Percent of Cost Variance:
  \[=\text{IF}(\text{RELATED(ProjectBaselines[ProjectBaselineFinishDate])}=0, -100, \text{IF}([\text{ProjectCostVariance}]=0, 0, \text{ProjectCostVariance}/\text{RELATED(ProjectBaselines[ProjectBaselineCost]})\times 100))\]

- Percent of Work Variance:
  \[=\text{IF}(\text{RELATED(ProjectBaselines[ProjectBaselineFinishDate])}=0, -100, \text{IF}([\text{ProjectWorkVariance}]=0, 0, \text{ProjectWorkVariance}/\text{RELATED(ProjectBaselines[ProjectBaselineWork]})\times 100))\]
Additional Information | Useful Links

- Article: How to Create a Portfolio KPI Report in Project Online

- You can also download this PPT slide deck at SlideShare
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