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# Integrated Earned Value Gantt Chart (EV-Gantt) Tool for Project Portfolio Planning and Monitoring Optimization

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## Abstract

Project portfolio management (PPM), as a way to manage multiple projects, is becoming a key managerial skill needed by most organizations, especially those engaged in multiple projects concurrently. These multiple projects usually have different characteristics and functions, yet most existing project portfolio theories do not provide an efficient planning and monitoring tool at the operational level. This research aims to integrate the two most efficient planning and monitoring tools—namely, earned value analysis and the Gantt chart to develop a new PPM tool named earned value Gantt chart (EV-Gantt) for portfolio planning and monitoring. EV-Gantt was tested through scenario analysis and a pilot run using a portfolio of real cases. Results show that EV-Gantt performed satisfactorily in resource allocation, systematic reporting, and

monitoring enhancement. A standard operating procedure was developed to facilitate implementation of the EV-Gantt tool by engineering managers.

Keywords:

[Earned Value Analysis](#)

[Project Portfolio Management](#)

[Gantt Chart](#)

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## Additional information

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