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PM Ops Excellence Hack

Solution Design Document

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# 1. Executive Summary

Project Managers currently invest significant time and effort in manually preparing weekly Project Status Reports (PSRs), often leading to inconsistent formatting, delays, and redundancy, despite the latest project data being available in Virtuoso, a centralized repository. This document outlines a high-level solution design for automating PSR generation, allowing standardized, timely, and efficient reporting with minimal manual intervention.

# 2. Problem Statement

* Manual preparation of PSRs leads to inconsistent formats across projects.
* Project Managers are burdened with repetitive data entry, formatting, and editing tasks.
* Despite having centralized project data in Virtuoso, no automated mechanism exists to generate standardized PSRs.
* The current process involves manual export of data from Virtuoso, structuring in Word/PowerPoint, and final review before stakeholder distribution, resulting in inefficiency and delays.

# 3. Objectives

* Automate extraction and transformation of project data from Virtuoso into a standardized PSR format.
* Ensure consistency in reporting across all projects.
* Minimize manual interventions by Project Managers.
* Reduce turnaround time for preparing and distributing PSRs.
* Enable rapid editing, review, and sharing capabilities.

# 4. Solution Overview

The proposed solution centres on developing an automated PSR generation system that integrates directly with Virtuoso, transforming raw project data into polished, stakeholder-ready reports in Word and PowerPoint formats. The system will be configurable to accommodate organization branding, reporting templates, and specific data requirements while maintaining overall standardization.

# 5. Key Components

## 5.1 Data Integration Layer

* Connects to Virtuoso via secure APIs to fetch latest project data, including milestones, risks, issues, progress metrics, and financials (
* Supports scheduled or on-demand data retrieval.
* Ensures data consistency, integrity, and freshness.

***Note - For Hackathon purpose will use the exported Virtuoso report to pull the data.***

## 5.2 Transformation and Business Logic Engine

* Maps Virtuoso data fields to standardized PSR sections (e.g., project summary, status indicators, RAG status, action items).
* Applies business rules for data presentation, including thresholding for risk/status colors, automated comment generation, and summarization.
* Supports custom logic for specific projects or reporting needs as required.

## 5.3 Template Management System

* Hosts a library of organization-approved PSR templates for Word and PowerPoint at a central place.
* Enforces template consistency (fonts, colors, layout, logos).
* Allows for periodic template updates and version control.

## 5.4 Report Generation Module

* Populates standardized templates with transformed Virtuoso data.
* Generates editable Word and PowerPoint reports.
* Implements formatting best practices (tables, charts, visual indicators).
* Supports report customization by Project Managers, where exceptions are needed.

## 5.5 Review and Distribution Workflow

* Facilitates automated notifications to Project Managers for report preview and approval.
* Supports collaborative editing, comments, and change tracking.
* Enables seamless report distribution to stakeholders via email, shared folders, or integrated systems.

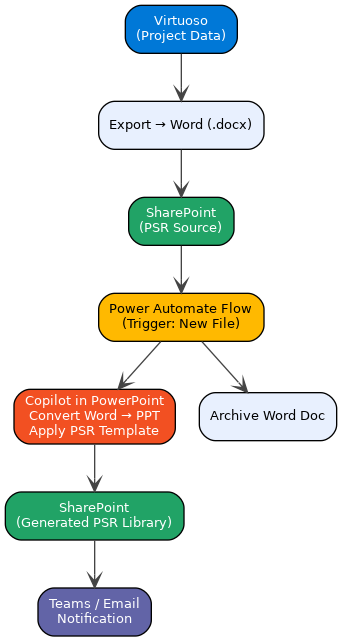
***Note – Out of Scope for Hackathon***

## 5.6 Audit and Logging

* Tracks report generation events, edits, approvals, and distribution history.
* Supports compliance and traceability requirements.

***Note – Out of Scope for Hackathon***

# 6. High-Level Architecture – Flow Diagram



## Flow – Virtuoso → Word (.doc) → SharePoint → Copilot (PPT)

1. Data Extraction from Virtuoso
   * Automate extraction of project-level data from Virtuoso.
   * Save it as a structured Word (.doc/.docx) file (e.g., pre-formatted with sections like Summary, Risks, Milestones, KPIs).
   * Store this doc in a designated SharePoint library.
2. Trigger (Power Automate)
   * When a new Word doc lands in SharePoint, Power Automate detects it.
   * Power Automate then invokes Copilot in PowerPoint.
3. Generate PSR Deck (M365 Copilot in PowerPoint)
   * Open the Word doc inside PowerPoint.
   * Copilot prompt: “Create a Project Status Report deck using this Word file. Apply corporate PSR template (PSR\_Template.potx). Create 1 slide per section and include a summary overview.”
   * Copilot automatically maps document structure into slides.

*Microsoft documents this scenario: “Copilot in PowerPoint can generate a presentation directly from a Word document using the template”.*

1. Template & Branding Enforcement
   * Store a corporate PSR PowerPoint Template (.potx) in the same SharePoint library.
   * Copilot automatically applies this template when generating slides.

# 7. Key Solution Features

## 7.1 Standardized Reporting

Ensures all PSRs across projects adhere to a uniform format, enhancing comparability and professionalism.

## 7.2 Automated Data Population

Eliminates manual data entry by extracting real-time information directly from Virtuoso.

## 7.3 Customizable Templates

Allows for organization-wide branding and tailored reporting requirements, while preserving overall consistency.

## 7.4 Editable Outputs

Provides editable reports in Word and PowerPoint, enabling Project Managers to make necessary adjustments prior to distribution.

## 7.5 Integrated Review and Distribution

Streamlines the review process and automates distribution to relevant stakeholders, minimizing bottlenecks.

## 7.6 Audit Trail

Maintains a log of report creation, edits, and sharing activity for compliance and future reference.

# 8. User Roles & Access Control

* Project Managers: Initiate report generation, review, and amend reports as needed.
* Stakeholders: Receive finalized PSRs for project updates.
* Administrators: Manage templates, configure system settings, oversee audit trails.

# 9. Risks & Mitigations

* Data Quality Issues: Implement validation checks and flag anomalies during data extraction.
* User Adoption Resistance: Provide thorough training and demonstrate time-saving benefits.
* Template Over-customization: Enforce template governance and approval workflow.
* Integration Failures: Design robust APIs and backup processes for data retrieval.
* Security Concerns: Ensure role-based access, data encryption, and compliance with organizational policies.

# 11. Benefits

* Consistency: Standardized format across projects enhances clarity and comparability.
* Efficiency: Substantial reduction in manual effort and turnaround time.
* Accuracy: Direct extraction from Virtuoso minimizes errors from manual entry.
* Scalability: Supports reporting needs for projects of all sizes with little incremental effort.
* Traceability: Built-in audit trail strengthens compliance.

# 12. Conclusion

Automating PSR generation leverages existing investments in Virtuoso to deliver timely, accurate, and standardized project reporting, freeing up Project Managers to focus on value-added activities. Through robust integration, data transformation, and template automation, this solution transforms the current labor-intensive process into a modern, efficient workflow, ultimately improving project visibility and stakeholder satisfaction.