



Business Case Study

Power BI Consulting for an Engineering Client

End-to-End Business Reporting Automation, Providing Real-Time Insights and Periodic Newsletters for Data-Driven Decision Making.

Term of Engagement – 1 Year

Abstract

Our engineering client executed multiple projects in the US, Canada, Singapore, and India. To gauge company performance and growth, ongoing analysis of project management and consultant progress became essential. Initially, tracking relied on Excel and basic Power BI dashboards crafted by internal staff with limited expertise in dashboard building. OpenBI was enlisted to institute a robust data monitoring process and subsequently develop a fully automated reporting mechanism for end-to-end process tracking with touchless data refresh. This case study outlines our journey in delivering significant value to the client, providing them with insightful and easily accessible information. This, in turn, empowered them to make data-driven business decisions with confidence.



01. Power BI Engagement with Engineering Client

Digitizing Data Assets for End-to-End Reporting

OpenBI launched its first pilot project with the engineering client in August 2022, taking charge of two vital existing Power BI dashboards: the Project Management Dashboard and Executive Management Dashboard, previously managed internally. Challenges encompassed data refresh delays, suboptimal report performance, and issues with the user interface/experience, impeding efficient information capture and key insights presentation. OpenBI invested significant efforts to overhaul the dashboard architecture, striving to provide users with insights at their fingertips and enhance report performance. In one year, engagement tenure OpenBI not only automated entire BI reporting requirements, but also helped formulated new ones, including Invoice Reconciliation, Monthly Automated Newsletters, Newsletter Analytics, and HR Analytics.

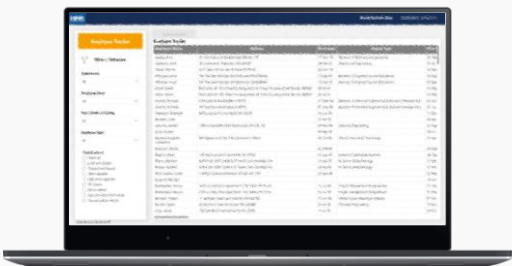
OpenBI – Optimized existing reports and delivered new analytical dashboards.



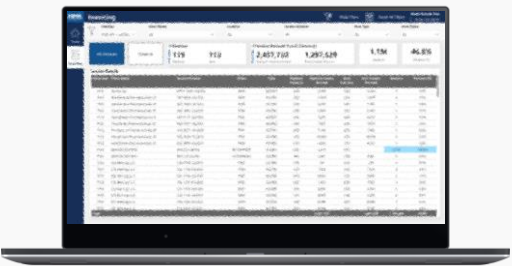
Project Management Dashboard Optimized



Executive Management Dashboard



HR Analytics



Xero Invoice Reconciliation



Monthly Newsletters



Newsletter Analytics

Data Source Automation – Established Custom Connectors to pull live data from source system into Power BI.

Replicon

xero

bamboohr®

Technology Used – Effective usage of technology to drive process automation and deliver key insights.



Data Visualization – Microsoft Power BI



Data Integration - Python



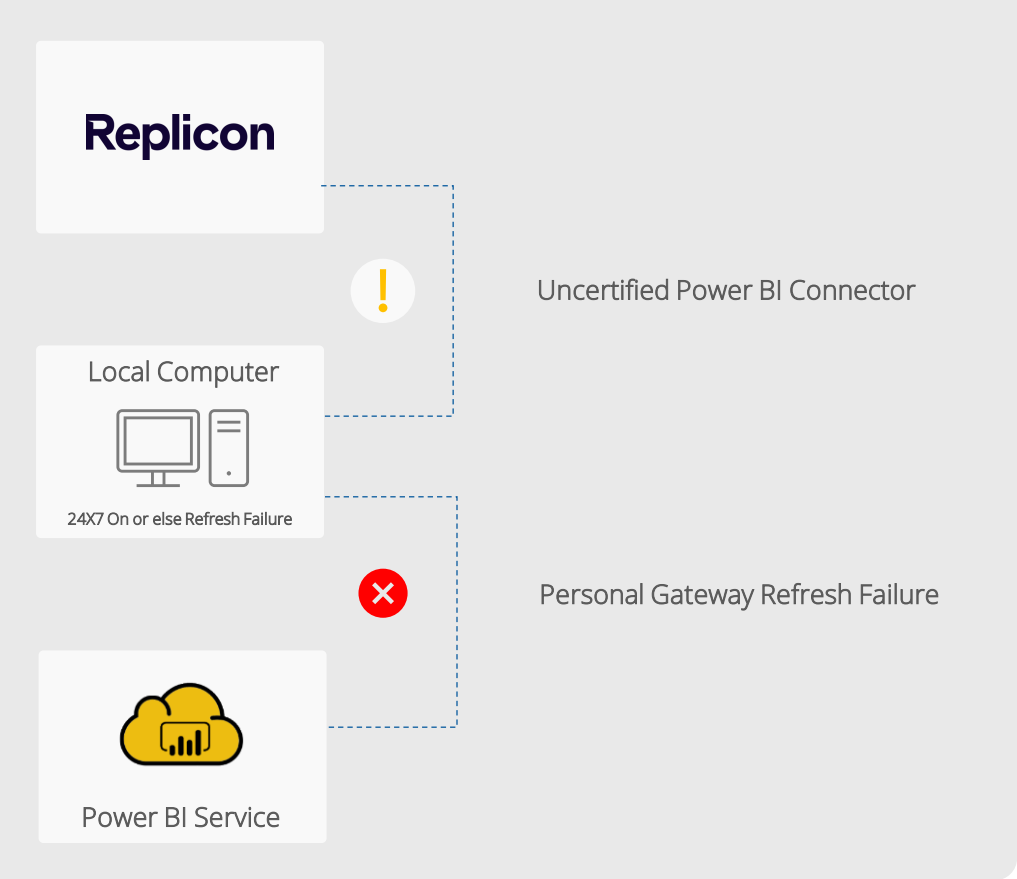
Process Automation – Microsoft Power Automate

02. Solving the Data Challenge

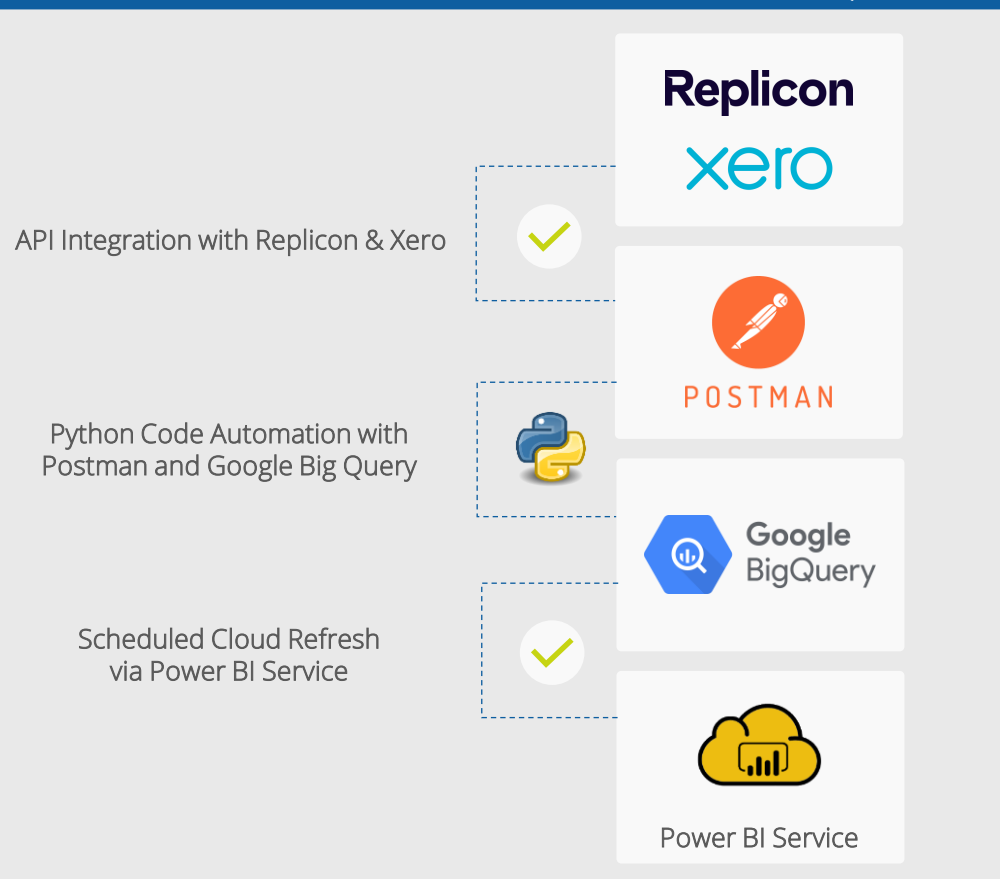
Data Refresh Architecture

Replicon serves as a primary data source for time tracking and revenue information for the client. However, the legacy Power BI architecture relied on an uncertified Replicon Power BI connector, preventing automated cloud refresh. To overcome this, a local computer with a personal gateway was employed, creating dependency issues. Instances of the computer being mistakenly turned off or utilized by multiple users resulted in frequent report refresh failures. Replicon had no near-term plans to certify the Power BI connector to overcome this challenge. Identifying a critical imperative was the need of the hour to replace the uncertified Replicon Power BI connector with a certified one, facilitating a seamless transition of refresh operations to the cloud.

Before – Frequent report refresh failures due to switching off local computer



After – Migration to cloud with touchless refresh



	> 99.99% Report Uptime		< 1 Minute Data Refresh Frequency		< \$10 Annual Cloud Operating Cost		< 6 Months Investment ROI
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	The transition to a cloud solution eliminated reliance on a local computer susceptible to restart and refresh failures. The migration improved report uptime to 99.99%, with the flexibility to maintain data refresh frequency as low as 1 minute.		Vendors in the market priced Replicon Cloud Automation Solution at approximately \$2,000 per month. OpenBI provided the same solution with an annual cloud cost of \$10, achieving a return on investment solely from cloud cost recovery within six months.
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Interconnected Data Architecture Established for the Engineering Client



Single Platform for Analytics – Power BI

Through ongoing innovation, we have developed an automated system enabling the comparison of values across multiple systems. This showcases the strategic advantage of Power BI reporting, capable of analyzing data from diverse sources and presenting it on a unified platform.

Power of Cross Functional Analytics

Today we can cross compare data from any source system to define meaningful KPI's required to monitor organizational performance. For e.g., Revenue vs. Headcount, Productivity vs. Revenue and so on.

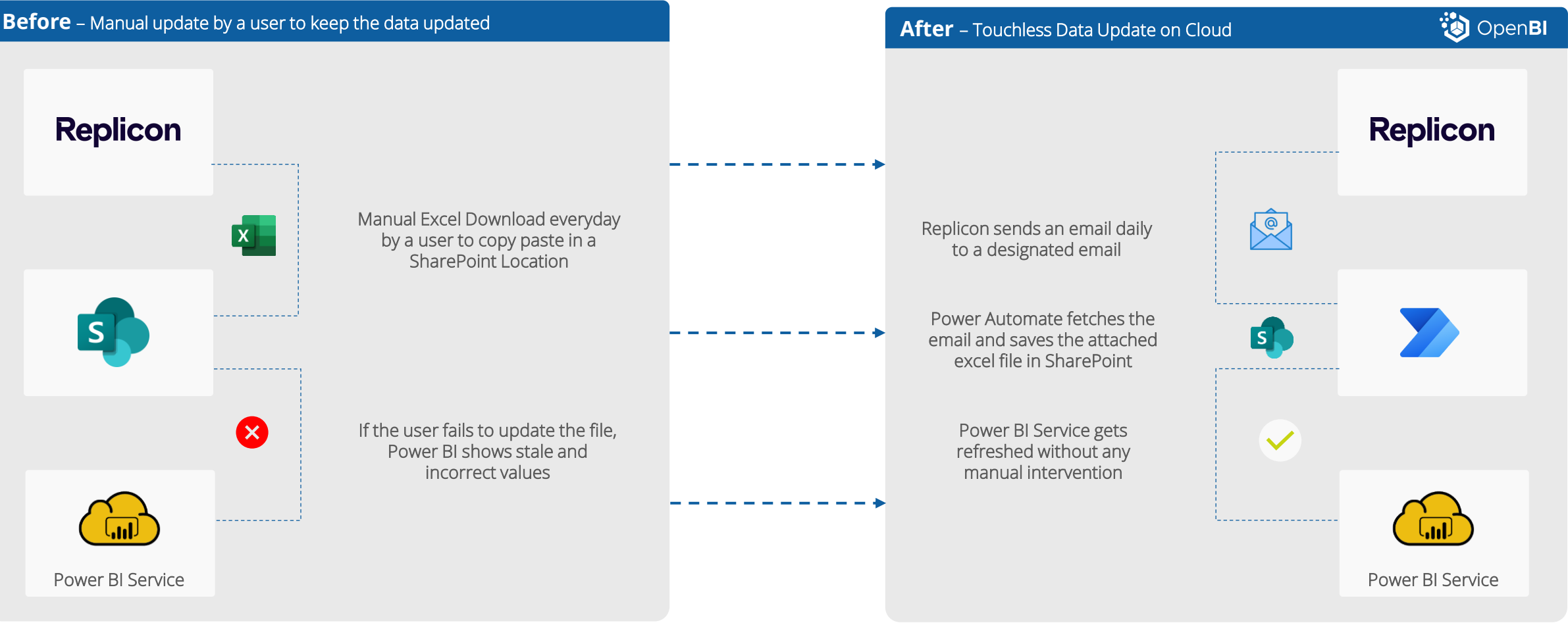
Process Automation & Governance

Power BI has been instrumental in enhancing and validating multiple processes that previously resulted in inaccurate data/ process inefficiency. This has significantly improved overall reporting governance.

03. Process Automations

Process Automations leading to Better Productivity & Insights

OpenBI collaborated with the client to eliminate numerous nonproductive and repetitive manual processes that previously consumed a significant amount of manpower. Mundane tasks, such as the daily update of Excel data from Replicon/Xero, have been streamlined with the implementation of Power Automate. The raw data is autonomously extracted from source systems, undergoes analysis, is translated into a PDF, and is dispatched to customized users via email, all achieved through a fully automated process. The need for crafting monthly PowerPoints to showcase updates is eliminated. This autonomous workflow not only enhances productivity but also ensures the accuracy of data input into the system, thereby elevating the overall quality of reporting.

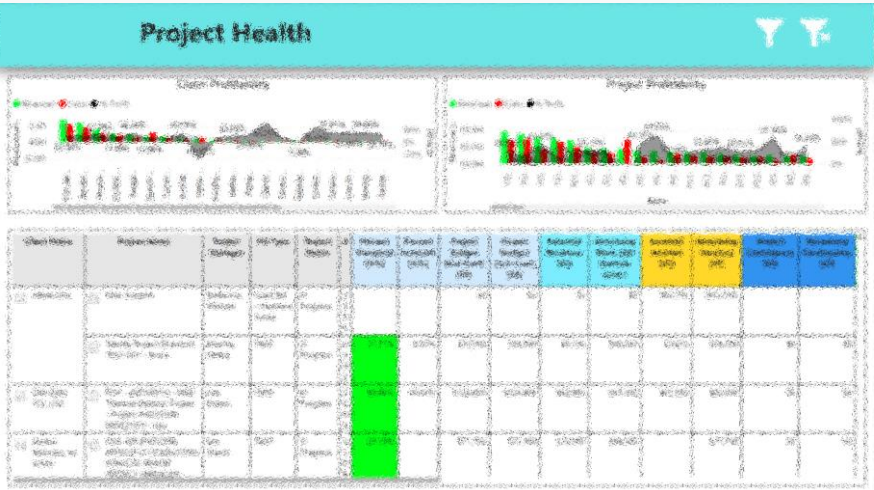


04. Visualizations & Insights

Enhancing User Interface/ Experience and Report Performance

Upon integration with OpenBI, it was noted that each dashboard exhibited divergent structures, inconsistent branding, and suboptimal performance. OpenBI implemented a uniform client branding strategy across all dashboards, standardized navigation and formatting structures, and conducted comprehensive optimizations. In addition to visual enhancements, substantial efforts were directed towards optimizing the report data architecture, refining refresh cycles, and enhancing the DAX structure. This method markedly reduced report loading times and facilitated user access to insights through the standardization of the User Interface and Experience.

Before – Inconsistent designs and irregular object placements



After – Standardized Designs across all Power BI Dashboards

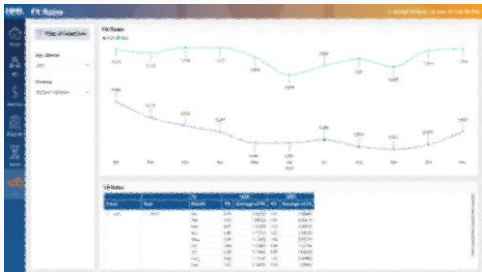


Dynamic Insights on Fingertips

FX Impact



Local Currency to CAD



FX Rates Analysis

Monthly Trends



Revenue Trends



Billability Trends

Analytics

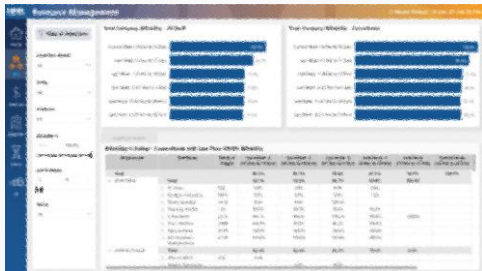


Pareto Analysis



Profitability Matrix

Alerts



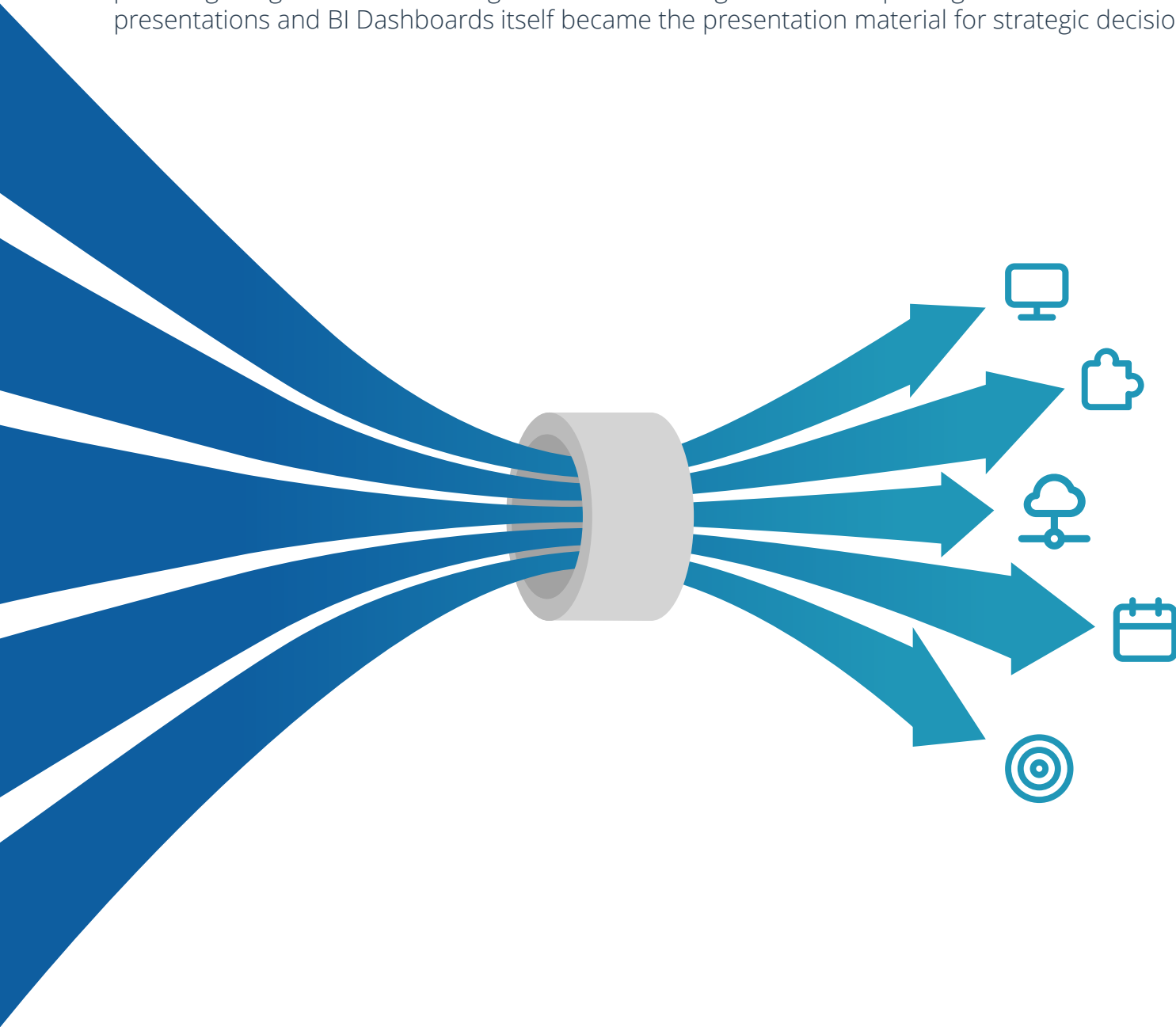
Remaining Week of Supply



Hours Remaining

Conclusion

Over the course of one year, OpenBI has significantly transformed the reporting framework for the client. This transformation includes the integration of streamlined data sources, implementation of process automations, optimization of calculations, and the standardization of visualizations, all aimed at providing insightful and meaningful business intelligence. This reporting architecture eliminated the need of generating PowerPoints for management presentations and BI Dashboards itself became the presentation material for strategic decision making.



- A. Delivered **4** Power BI Dashboards
- B. Delivered **6** Newsletters
- C. CAD **80** Mill Revenue Analyzed
- D. **600k** Manhours Analyzed
- E. **Insights Delivered!**

For more information, contact contact@openbi.ai



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