

# **BHP WAIO Mine Planning Integration from 5YP to Execution.**

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## **ABSTRACT**

The mine planning process for BHP Western Australia Iron Ore covers the Life of Asset (LOA), 5 Year Plan (5YP), 2 Year Plan (2YP), 3 Month Schedule (3MS) and Weekly Schedule (WKS). It follows a top down approach that requires the generation and handover of multiple outputs across all the planning horizons to guarantee that the critical guidance is cascaded from the long-term plan to execution. The use of four different types of mining software to enable the whole mine planning process created a major challenge as the applications were not designed for integration.

The planning handover from long term to execution required extensive data transformation, manual processing, and re-work to produce a format compatible with the next application receiving the inputs. This issue not only affected the efficiency of the process but generated a real risk to the whole planning cycle as it had the potential to lead to errors when creating inputs, parameters and, miscalculation of fleet capacity and requirements. It also had the potential to cause lost and/or off-spec tonnes through mining in the wrong area, not mining the right grades at the right time, mistiming the opening of new pits or pre-strip work.

As an organisation, we addressed the issue by creating the End to End Project with the intent to:

- Improve the current planning integration process by reducing the number of applications used to create the mine plans.
- Generate a single haul network model from 5YP to WKS
- Embed the reserving process and standard blending rules across all planning horizons.
- Standard naming conventions and output files from 5YP to execution.
- Migrate data into the cloud and generate automated dashboards for reporting.

The E2E project has transformed the way BHP WAIO integrate the mine plans. The new platform helps us to identify planning issues at any horizon in a timely manner, take proactive steps to reduce their impact before execution and thus, help to keep costs sustainable. Other benefits include the swift adaptation of plans, minimised disruptions of the supply chain, reduction of grade variability and better alignment with the business plan.