



LOCATION

Republic of Zambia

GOALS

Improved Loading
Efficiencies

RESULTS

Additional revenue
equivalent to \$2.46M
USD, per annum

Modular Mining's Performance Assurance Team Helps African Copper Mine Manage Payload in Real Time

For nearly all mining companies, maximizing profits is a top priority. One way that mines can achieve their profitability goal is through effective payload management. By gaining real-time visibility into equipment payload data, mines can avoid under- or overloading trucks, have an accurate accounting of the material being moved at any given time, and optimize the utilization of their existing equipment fleet.

Problem

A mining concern in Zambia recently approached Modular Mining for help in identifying opportunities to improve loading efficiency. In response, members of Modular Mining's Africa-based Performance Assurance (PA) team sat down with mine personnel to gain an understanding of the mine's challenges and develop a mutually-agreed-upon corrective course of action.

The PA team worked on site to review and evaluate the mine's loading processes and procedures. They identified an opportunity to improve payload accuracy by implementing the payload feature of the already-installed DISPATCH® Fleet Management System (FMS).

Resolution

To enable the flow of data between the equipment units and the FMS, the PA team updated the version of the DISPATCH System and installed and configured the applicable ModularReady® truck payload interfaces. In addition, a set of custom-developed Loading Efficiency reports and Payload Dashboards afforded operations personnel and mine management greater insight into payload accuracy, operator efficiency, and equipment performance.

Results

To establish a baseline for analysis, 2018 data was collected from June 21 - August 20, and again from August 21 - September 9; with and without the PA team's changes in place, respectively. Analysis of the before-and-after data revealed that loading efficiency increased significantly in the 12 months following implementation and configuration of the FMS' payload functionality.

Production of material moved in areas outside of the pit (ex-pit), increased by more than 14%; an amount that equates to nearly \$2.5 million USD of additional revenue, per annum.

The realized benefits are summarized in the following graphs:

- Payload distribution improved by 23%

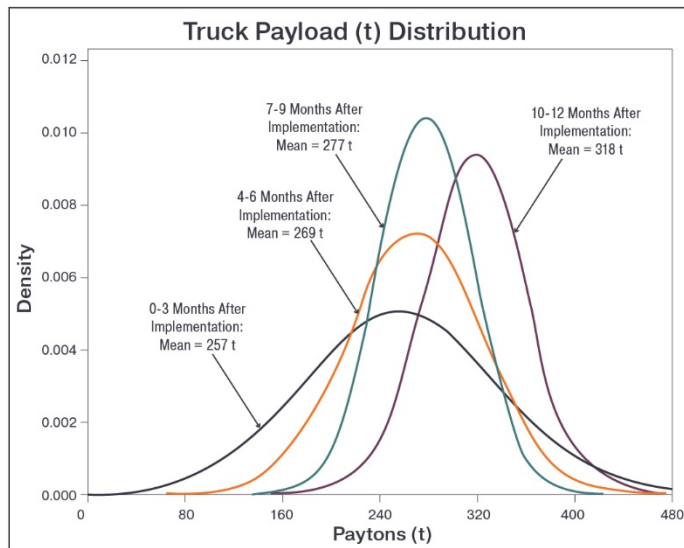


Figure 1: Payload Analysis – Data Source: DISPATCH FMS

- Payload reporting accuracy improved by 30%

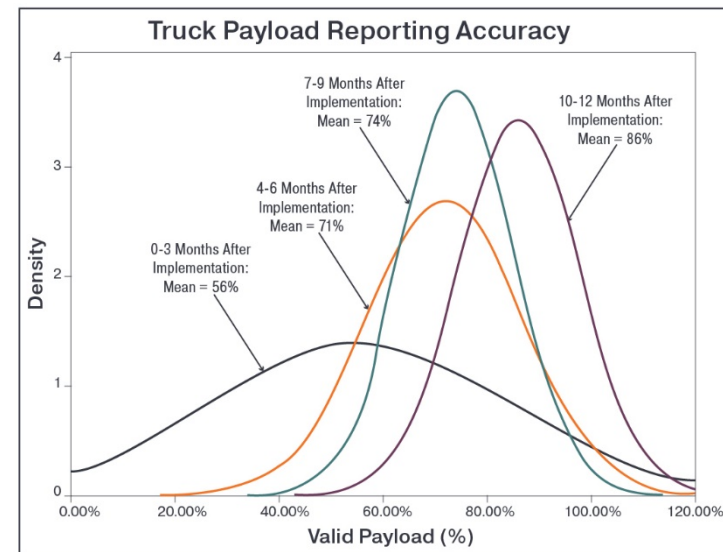


Figure 2: Payload Reporting Analysis – Data Source: DISPATCH FMS

- Tons Kilometre Per Hour (TKPH) improved by 22.4%

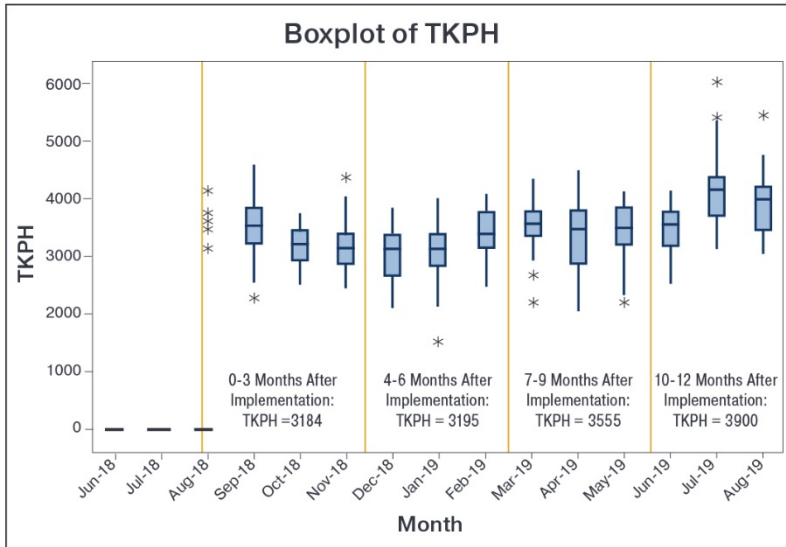


Figure 3: TKPH Analysis – Data Source: DISPATCH FMS

- Daily Ex-pit production improved by 4.15%

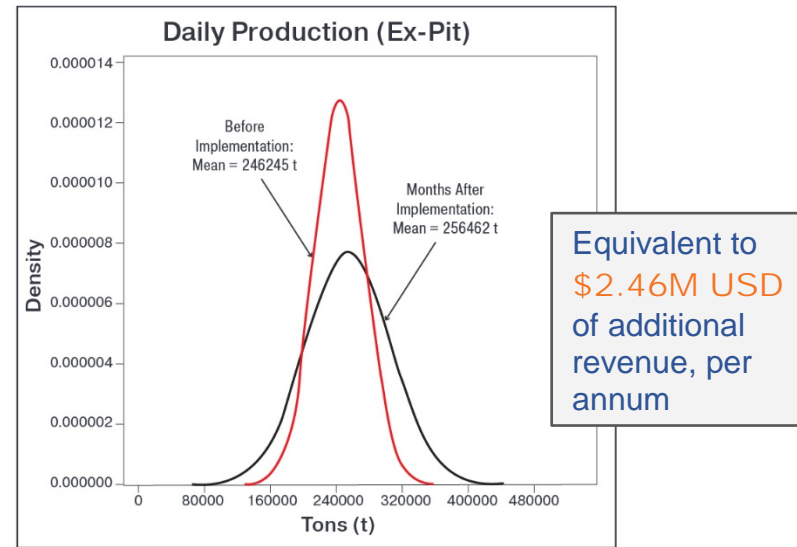


Figure 4: Daily Ex-Pit Production – Data Source: DISPATCH FMS

Legal Notice

The contents of these materials are protected by federal and international intellectual property laws. No portion of these materials may be reprinted, republished, modified, reproduced, sold, or distributed in any form without the express written consent of Modular Mining Systems, Inc. Modular® and DISPATCH® are trademarks and/or registered trademarks and the sole and exclusive property of Modular Mining Systems, Inc. These materials, including third-party information, are provided for information purposes only. Actual specifications may vary from those documented in these materials. Consult your local Modular Mining office for further details.

Modular Mining Systems, Inc.
3289 E. Hemisphere Loop
Tucson, AZ 85706-5028 | USA
Phone: (520) 746-9127 | Fax: (520) 889-5790
www.modularmining.com
© 2020 Modular Mining. All rights reserved | CS_VIU_USA_EN-LT