# Reducing Service Department Profit Loss Using the Behavioral Engineering Model

*by Janel Peterson and DeAnn Allen*

*Tales from the Field, a monthly column, consists of reports of evidence-based performance improvement practice and advice, presented by graduate students, alumni, and faculty of Boise State University's Instructional and Performance Technology department.*

## The Company

Since 1924, Pierce Homes & RV has grown from a small enterprise into a 27-acre, state-of-the-art facility that employs over 170 people. The mission of this family-owned corporation is to be an industry leader through a tradition of honesty and fairness to customers, employees, and business partners. Three graduate students at Boise State University worked as a team to investigate a performance issue at this organization.

## The Performance Issue

Pierce had hired a consulting company to increase profitability within the RV Service Department. They introduced new scripts, processes, procedures, evaluation tools, and incentive programs. However, since this effort focused solely on the Service Department, these new processes were not consistent with those in other departments. Profitability remained consistently lower than targeted. After reviewing extant, interview, and observational data, the team determined that the performance gap arose from unbilled service hours, most notably within the parts ordering and receiving process, which resulted in technicians spending time on non-billable work and lost-billable opportunities.

## Performance Analysis

Gilbert's (2007) Second Leisurely Theorem compares exemplary to typical performance to measure potential for improving performance [PIP = $(W_{ex})$ / $(W_t)$]. PIPs larger than 1 indicate an opportunity to improve performance. The performance gap associated with technicians' billable hours produced a PIP of 1.37. To determine whether the gap warranted closing, the team further analyzed lost profit opportunities (labor rate x lost billable hours), ultimately calculating a potential loss of approximately $572,000, or 41% of Pierce's overall profit potential. Seizing the lost profit opportunity produced enough benefit to warrant the application of a small amount of resources to increase billable service hours.

## Cause Analysis

After identifying the exemplary performer and the PIP, the HPT practitioners conducted a cause analysis using Gilbert's (2007) Behavioral Engineering Model (BEM). Using Gilbert's recommended troubleshooting sequence, the team focused on the environmental factors first (see Table 1), knowing they could revisit causes arising from the personal repertory (knowledge, capacity and motives) after Pierce first changed the workplace itself.

| | Information | Instrumentation | Motives |
|---|---|---|---|
| **Environmental factors** | **1 Data**<br>• There is a lack of communication between the technicians and the foreman when questions or problems arise<br>• Missing information from the service writers causes technicians to halt their work | **2 Instruments**<br>• There are no formal processes for parts ordering and work rescheduling. | **3 Incentives**<br>• No incentive issues surfaced during the cause analysis. However, an evaluation should be conducted after implementing the interventions to determine if any incentive issues arise. |

*Table 1. Three Environmental Factors of the BEM.*

**Recommendations**

Based on the cause analysis, the team recommended that Pierce close the performance gap by addressing causes arising from a lack of data and instruments. While Pierce will need to apply internal resources to create and document these processes, this should be a low-cost investment with a very good return in the form of increased billable hours. It would also be important to measure the effectiveness of these changes, as new performance issues may arise due to the diffusion of effect (Gilbert, 2007). For example, incentives may need to be revisited if more of the technicians are performing at or near the exemplary level. Pierce's Service & Parts Manager is currently reviewing the findings and recommendations to close the performance gap.

**IPT-Grounded Advice**

Performance analysis helps HPT practitioners specify performance gaps, and the PIP can help them and their clients determine whether the gaps are worth closing. The BEM is a powerful tool for identifying probable causes of performance gaps. It also allows HPT practitioners to identify a range of interventions and their associated investment levels. Together they provide powerful analytical and communication tools that management can use to make prudent decisions about improving workplace performance.

**References**

Gilbert, T. (2007). *Human competence: Engineering worthy performance* (Tribute edition). San Francisco: Pfeiffer.

**Author bios**

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