

The People Side Of Improvement **Success Factors for Sustainable Change**

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Is Your Equipment Capacity Glass “Half Full” or “Half Empty”?

Think back to your college days. At the beginning of a semester, you decided you wanted to earn an “A” in your engineering class. On the first day of class, you were told that a 93% average was required to get an “A” and you were given the points that quizzes and tests were worth. As the semester progressed, you did not score well on a test and two quizzes. As a result, your total points fell below the number required for an “A” and you received a “B”. Reflecting back on the semester...you could have added points by earning extra credit and skipping a few parties to study harder. Had you managed your total points by taking a “glass half empty” approach (i.e., the points that were missing or still needed), you would have improved your chances for an “A” in the class.

Like grades earned for a college class, availability and utilization formulae have mathematical elements that can be dissected to understand how to “improve your score” and achieve your production goals. Let’s “do the math” to better understand how these variables relate to equipment capacity, improvement opportunities and management philosophy.

Before we begin dissecting availability and utilization ratios, it is important to acknowledge some basic truths about equipment capacity and opportunity:

- At any point in time, equipment is either “running” or “not running”.
- Mines and plants emphasize the “running” state and often overlook opportunities to better manage the “not running” state (worth millions of dollars to the bottom line).
- Availability ratios represent the percent of time equipment was available to operations (i.e., glass half full), not opportunities to decrease time spent “not running”.
- Utilization ratios represent time that equipment was used by operations (i.e., glass half full), not opportunities to decrease time spent “not running”.
- Embedded variables in both formulae give clues about improvement opportunities.

Availability example: If availability is 93%, you report the 93% (glass half full). However, **the 93% will not give you any information about opportunities to increase the 93%**. By default, you know that the equipment was down 7% of the time for maintenance, **but you don’t report the 7%** (glass half empty). Your improvement potential is hidden in the 7%, not the 93%. If you don’t understand the variables in the 7%, how can achievable targets and improvement goals be set for maintenance?

Utilization example: If utilization is 87%, you report the 87% (glass half full). However, **the 87% will not give you any information about opportunities to increase the 87%**. By default, you know that the equipment was down 6% (93% minus 87%) of the time because operations did not use it, **but you don’t report the 6%** (glass half empty). Your improvement potential is hidden in the 6%, not the 87%. If you don’t understand the variables in the 6%, how can achievable targets and improvement goals be set for operations?

In summary, the power to identify hidden equipment capacity and improvement opportunities for maintenance and operations resides in the embedded variables in availability and utilization formulae. If these variables are quantified, optimum values can be established for availability and

utilization, and “budget reasonableness” checks can be performed before budgeted production goals are finalized. A “glass half empty” management approach is worth significantly more than a “glass half full” approach when capturing hidden equipment capacity and taking control of what you already have control over.

Thought for the month:

Adopt a “glass half empty” management approach to maximize production and ROI on mobile fleets and plant equipment.

Kay Sever, CMC, CQIA implements improvement programs and management development programs for mines, plants and service organizations. Her approach balances commonly used tools and methods with a focus on value creation and the “people side of improvement”. Kay works with every organizational level and department to find the highest dollar opportunities and remove barriers that prevent sustainable change. She helps management teams lead improvement and better execute the budget, capital approvals, incentive plans, communications, etc. See MiningOpportunity.com for details on her services and contact information. Look for the mining edition of her first book “Building An Opportunity Culture – Addressing the Barriers That Steal Profits and Prevent Sustainable Change”, available on her website under Products/Books. **NEW Management Training Program – “Opportunity Fundamentals – Equipment, Cost and Culture”** – starting in August. See Kay’s website for details.