Bill's Building Blocks

Fast and Reliable

The event was to begin at 8:00am on a Friday in the Metropolitan Opera House at Lincoln Center. There was no way I was going to get there by train on time. My plan was to take the NJ Transit 7:26am into New York Penn Station, catch the MTA 1 Train uptown, check-in, and hope to be in my seat no later than 8:50am. But, unable to sleep I awoke early, found parking to be easy, and walked right onto the express, double-decker 6:48am that was running a couple of minutes late that skipped all the stations from Maplewood to Penn Station. I waited just two minutes for a seat on the 1 Train to 66th Street, breezed through registration, followed the crowd, and was in my assigned seat at 8:06am to listen to the introduction of the first speaker! The trip home was more normal including standing on the subway, long delays at Penn Station, a late departure, and a NJ Transit train car with doors that would not close, arriving home an hour late.

Commuting is a repetitive process: Plan, leave, park and ticket and ride, arrive. A supply chain is a repetitive process: PLAN, SOURCE, MAKE, DELIVER. Ideally, the commuting and supply chain processes are high velocity, low variability. This means they are fast and reliable. The variability of each process step determines the predictability, the repeatability, and reliability of the outcome. The serial nature of the process steps exacerbates the variability of the customer's experience with the end-to-end process even though the customer has no concept of its upstream complexity.

Process step velocity is improved three ways: 1) Eliminate steps, 2) Shorten the longest step by minimizing queue time and/or automating the step, and 3) Convert serial steps into parallel steps. In the commuting example, an Uber pickup eliminates parking. Buying a train ticket on-line during the Uber ride both minimizes ticketing queue time and places formerly serial tasks in parallel.

Process step variability is improved by: 1) Rank ordering variances, 2) Eliminating the root cause of the largest variance, 3) Eliminating the root cause of the next largest variance, etc. In the return commute, late Penn Station departures are caused by Amtrak priority over NJ Transit for tunnel access and siding assignment; this is a capacity and scheduling issue. Faulty door closures on older cars is a maintenance issue. Signaling issues causing random delays are the result of an aging system operated in a harsh environment. Unfortunately, none of these are easy or inexpensive to fix. Reliable performance will not improve until such issues are addressed.

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