

KAIZEN RESULTS

Overhaul of big data system aims to redirect up to 462,000 hours to more productive work

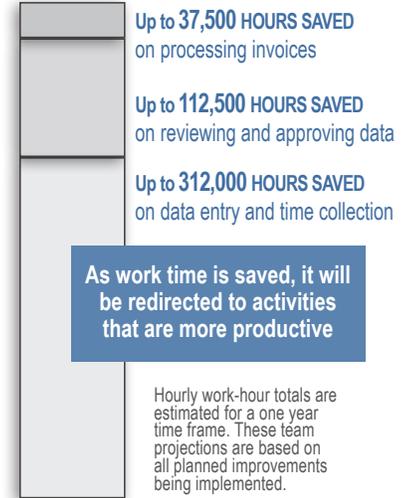
IN BRIEF: ODOT maintains a vast inventory of equipment, parts, and materials. All are tracked, and so are the work activities that involve these inventories. Computers certainly play a role – what began more than 20 years ago as an inventory management system has grown into a mainframe-based Equipment Management and Transportation Management System. In practice, however, the system has been largely manual and paper-based, requiring hours and hours of collation and tabulation by county, district, and central office operations. *But not for long.* During a Kaizen event, an ODOT team mapped out the gargantuan system – and developed a far simpler and smarter process that makes the most of standardization, automation, and people’s work time.

HALF A MILLION HOURS: The team estimates that when all the improvements are in place, including the use of handheld data devices in the field, the process will require up to **462,000 fewer staff hours per year** – allowing for that time to be redirected to **productive work activities** relating to ODOT’s core functions.

FAREWELL, PAPER FORMS: The team found 1,572 paper forms relating to the system. According to team projections, when all the improvements are in place, 99.9% of those forms will be history.

COST SAVINGS: Far less paper and printing will save a projected \$50,000 per year.

When all improvements are in place, the new process will require **up to 462,000 fewer work hours per year**



DETAILS

We are going to amaze you. That’s how ODOT’s “Team Jetsons” began their report-out presentation following its week-long Kaizen event.

It was a bold pronouncement – and entirely accurate. This big team (28 people) took on a big challenge (labor, equipment and materials data management) and developed a breakthrough plan that sets the stage for amazing results.

It all happened in one amazingly productive week. The team streamlined the old process, combined it with other improvements like the standardization of key forms, and topped everything off with technology – recommending the use of a handheld device for real-time data management in the field. The aim is to have all the improvements up and running in a year.

These changes represent an amazing transformation. Over the years, the process had grown complicated, frustrating, and labor-intensive. Different forms in different ODOT districts made it nearly impossible to aggregate data in a meaningful way. And the use of paper-and-pencil tracking in the field, followed later by data entry into a computer, meant that real-time information was nonexistent.

As far as the team’s projected results are concerned, they’re beyond amazing. When all the improvements are in place, in-

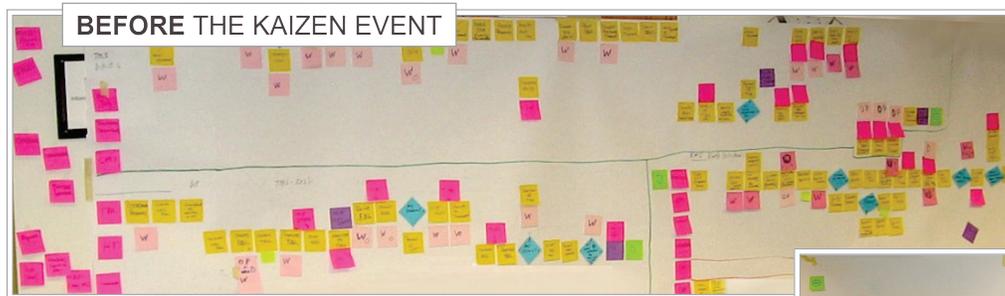


Team members: Back row, left to right: Bill Mason, D10, Storekeeper 2; Jon Leatherman, CO, Accounting/Inventory; Dave Walton, D9, County Manager; Jim Snyder, CO, Cost Accounting; Mark Gnatowski, CO, Equipment Management; Chuck Bernthold, CO Equipment Management; Ray Henry, D10, EMS/TMS Coordinator; Gary Apanasewicz, D4, Auto Tech; Chris Hardesty, D1, BHR; Mark Messick, CO, TMS; Tim Farley, D3, HMA; Raymond Werry, D10, Timekeeper; Shane Jones, D8, HT. Front row, left to right: Becky Bayless, D7, Timekeeper; Kimberly Conklin, D3, County Manager; Carol Schubert, CO, Quality; Daveen Goodman, CO, Quality; Kathy Stepanovsky, D6, EMS/TMS Coordinator; Therese Dyer, CO, Administrator, Cost Accounting; Kim Jenkins, Business Analyst, DoIT; Loretta Kreiger, D3, Timekeeper; Tom Bradford, D5, Roadway Services Manager; Scott Rice, D6, TM; Fred Collier, D12, HT; William Parrish, D10, Auto Tech; Kevin Joy, D11, HT; Jonathan

Continued on the next page

Go to lean.ohio.gov to download this report, view the team’s report-out visuals, see more photos, and read about other Kaizen teams and their results. Please note: This report was published on March 23, 2012. Projected and actual results may have changed since then. Contact LeanOhio or the team contact for the latest information.

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“We had to blow it up and start from scratch.” That’s how one team member described the process of mapping out every step of the current process (left), and then designing an entirely new process (below) based on standardization and automation.



cluding the handhelds, the team estimates that the process will require up to 462,000 *fewer* staff hours per year. The team was conservative in working the numbers and coming up with this projection. It’s based on time savings in three categories:

- Saved: 112,500 hours per year in reviewing and approving data
- Saved: 312,000 hours per year on data entry and time collection
- Saved: 37,500 hours per year processing invoices

This surge in efficiency will allow staff time to be redirected to more productive activities that relate to core ODOT functions – functions that have direct benefits to the motoring public, such as road maintenance and construction projects.

And the good news gets better. With paper forms to be phased out, the team predicts annual savings of \$50,000 – from all that paper and printing that will no longer be necessary.

The changes that fuel these expected results didn’t surface easily. After a Monday spent learning about Kaizen, mixed with a first round of mapping the current process, team members entered the abyss known as Tuesday and early Wednesday. That’s when they developed the process map in detail and analyzed it for delays, duplication, and other forms of waste.

With a big group of 28 people and everyone weighing in at various times, the road got a bit bumpy – but the team stayed on course with its goals and the Kaizen process. As Wednesday morning turned into afternoon, “we moved into that performing stage,” one team member recounted. Individuals began to unify as they sketched out new designs for an improved process. Then teamwork really took hold as a consensus emerged around specific action ideas. The group came up with 68 practical improvement steps, most of which ended up in the team’s final set of implementation plans.

A centerpiece of these plans is the handheld device. When rolled out to the districts, this “computer in your hand” will provide needed information such as work plans, instructions, material and parts lists, project status updates, maps, and much more. It will also be a data-entry mechanism, always available to capture real-time information – such as an update to indicate that a job has been started, then a later update to note completion of the job and the parts and materials that were used. The

information will be automatically transmitted to a central data center, allowing for the kind of data accuracy and timeliness that’s needed to manage a complex operation.

In terms of the impact on the process, the team’s projections are impressive. The group pegged the total number of current paper forms at 1,572 – because so many variations exist throughout the 88 county operations. The team says that when all improvements are in place, 99.9% of these forms will be history. The team also counted up 64 separate points of waste in the old process – and their new process eliminates 63 of these.

The team thoroughly planned implementation. They have plans for forms, equipment and technology, communication, and training. Each plan indicates who does what and when. The plans got underway immediately following the Kaizen event.

After the team’s report-out presentation, Bruce Wyngaard described the project as “transformational” while underscoring the crucial link between having good data and making good decisions. “(Union) members are always concerned about how decisions are made,” said Mr. Wyngaard, who is Associate Executive Director of the Ohio Civil Service Employees Association. “This is truly a big step forward. It’s going to do some remarkable things for the agency over the long run.” ●



At 28 people, this ODOT Kaizen team was big – and so are its resulting improvement plans and projected results.