Digital Project DELIVERY

LESSONS LEARNED

DPD Offers Data Users More Efficient and Intuitive Information Exchange Throughout a Transportation Asset's Lifecycle

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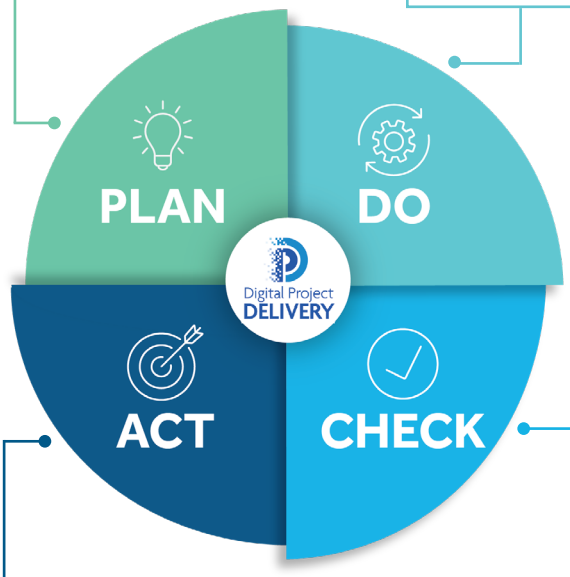
PILOT PROJECTS: LESSONS LEARNED

Ten project teams across seven districts are testing DPD on their projects. Two additional projects completed construction in 2024, yielding important lessons learned (page 2). The DPD leadership team tracks issues that come up during pilot projects, identifies the lessons learned and finds actions to move KYTC incrementally forward. This process follows a cycle commonly applied to change management, called Plan-Do-Check-Act.

PLAN: Project teams identify project objectives, which are documented in Implementation Plans.

DO: Carry out project tests during design & construction.



ACT: KYTC takes actions that are implemented gradually.

CHECK: Evaluate project tests during design & construction.

BENEFITS AND SAVINGS

Pilot projects result in savings by reducing project cost and construction duration. As teams learn how to take advantage of digital information, savings are realized in broader efficiency gains. In early 2025, construction began on a pilot project in District 4 which had early success by avoiding clashes that would have led to construction changes (schedule delays and increased costs). KYTC staff, in partnership with STV Inc., Trimble Inc., and Scotty's Contracting and Stone, will continue Digital Delivery efforts they began in 2021. Watch for more details on this pilot's successes.

FIELD SURVEY TRAINING FOR CONSTRUCTION STAFF

KYTC Construction staff are getting much-needed survey training and support. Because construction survey requires an entirely different skillset and vocabulary than design phase surveying, training is targeted to Section Office staff. They are learning what data is available and how the modern survey tools allow them to conduct more accurate field verification.

KYTC Section Office staff training with their new Trimble TSC7 Field Controller, on their pilot project, with project-specific data.

LESSONS LEARNED: EXCERPTS FROM THE DPD LOG

CHALLENGES	LESSONS LEARNED	ACTIONS	PROJECT
KYTC field staff need survey equipment and training.	Training and support components are vital to successful digital delivery implementation.	• Statewide construction-focused survey support staff appointed. • Repeated training opportunities offered. • Survey equipment upgrade delivered.	• **Logan/Todd** KY 79 Bridges • **Fleming** KY 11/KY 559 Intersection
Construction staff (KYTC and contractor) request 3D model match PDF plansets.	• Digital Delivery goals are shared by key stakeholders of various disciplines. • Users of 3D model data have discipline-specific needs.	• ***DPD subcommittees*** ensure all unique voices are represented and considered when policy change occurs. • KYTC evaluating options for standardization of the level of detail and types of information needed in 3D model data.	**Logan/Todd** KY 79 Bridges
Software solution tested for field staff use of modeling details proved cumbersome.	Section office staff need intuitive software options for making best use of 3D modeled design data.	• Saved views offer intermediate options for construction within some 3D modeling viewing software. • Find and test more software options with heavy input from user groups.	**Logan/Todd** KY 79 Bridges
Design deliverables were unfamiliar to both KYTC field staff and contractor (Except for PDF planset).	• Unless the value, location, and quality expectations are effectively communicated when data is shared, missed opportunity and inefficiency result. Quality metrics heavily depend on end-user needs. • Contracting industry needs increased awareness of digital file potential.	• Initiated targeted communication to KYTC's PD&P staff regarding CAD deliverables' availability and storage location. • Increase coordination with contractors' association and eligible bidders. • Study opportunities for improved surveying processes on construction projects, including associated contract bid items.	**Fleming** KY 11/KY 559 Intersection
Designer was unsure where to prioritize modeling effort.	Design staff need better understanding of construction workflows, especially for projects of differing scale.	• Consultant designer gained construction insight from being contractually available during construction. • KYTC consultant production hour descriptions and level of effort evaluation is underway. Project type may steer detail needs.	**Fleming** KY 11/KY 559 Intersection
Site conditions dictated changes to project scope, but construction staff without CAD proficiency were challenged to capture changes within digital files.	Resource gaps create barriers to KYTC's full use of data, especially between disciplines.	• Consultant designer was contractually available during construction. • As-built solutions are being tested on next pilot projects.	**Fleming** KY 11/KY 559 Intersection

KYTC WOULD LIKE YOUR INPUT!

DPD pilot projects are only one way KYTC is working toward change. Industry representatives offer input through their participation on subcommittees and their responses to specific requests for feedback. Stay in the loop by subscribing to email updates directly. Do you want to help KYTC test Digital Delivery? CLICK HERE.

CONTACT

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