Project status checks for AR deployments now take just 5 minutes

A new semi-automated Deployment Status Tracker reduces the impact of human error and balances ownership across stakeholders.

- (RDE TECH DEPLOY) - April 14, 2025 - Site leads, on-site contractors (3PAs), and RDE managers should have access to deployment project workflows that are as intuitive and effective as Amazon's retail websites. A semi-automated Deployment Status Tracker (DST) provides a five-minute workflow to understand exactly which technologies have been deployed where, on a site-wide scale. The DST is currently optimized for drive induction projects.

Until now, site leads for drive induction projects had to depend on third-party tools and tedious manual audits to understand the progress of their project. Different site leads had different (inconsistent) methods for going about these audits, but generally the process was as follows:

1) Before a project starts, copy and paste the "LPN" (license plate number) column on ARRM into a new spreadsheet.

2) After a project ends, copy and paste the "LPN" (license plate number) column on ARRM into a spreadsheet.

3) Use a third-party list comparison tool to compare the two ARRM lists. The output of this tool will be a list of newly inducted drive LPNs as understood by ARRM.

4) Ask the on-site 3PA to manually record the LPNs for drives inducted during deployment.

5) Use a third-party list comparison tool to compare the list generated in step 3 with the contractor's deployment record. If all is well with the project, the two lists will prove identical.

6) Repeat steps 1-5 for each floor of a project.

Accurate progress reports relied heavily on perfect induction/extraction documentation from 3PAs. If a 3PA were to incorrectly record an LPN or skip a record entirely, significant investigation would be necessary to rectify the data set. Simple and reasonable human error had the power to significantly impact project completion dates and potentially project budgets.

With the new Deployment Status Tracker, stakeholders can understand which drives have been inducted without relying on perfect 3PA records. Instead of copying data across spreadsheets, a site lead can upload CSVs straight from ARRM and 3PA records to the Tracker. The Tracker will confirm the number of new drives is as outlined in project goals, and will alert the site lead if ARRM recognizes any drives unrecorded by the 3PA (or vice versa). If there are any discrepancies, the tracker will suggest whether the source was a typo or skipped unit in the 3PA data.

Amazon operations "run more smoothly [when we convert] batch-based, manual work into continuous, automated work," said Scott Dresser, VP of Amazon Robotics. "We develop systems that deliver products to customers in an ergonomically-friendly manner, and our facilities are more collaborative than ever". When the technologies in our facilities are automated, ergonomic, and collaborative, the workflows we use to install those technologies should be as well.

The Deployment Status Tracker was tested at MLI1, during a drive induction project. After the site lead enters project requirements, like the quantity of drives to be inducted to each floor, the tracker asks for a few CSV uploads: the drives recognized by the ARRM portal before deployment, the drives recognized by ARRM after deployment, and the manually recorded drive LPNs as recorded by the on-site 3PA.

At MLI1, the team needed to induct 143 drives to each of floors 2-5. The tracker summary showed that on floor five, only 142 drives were recognized as new by ARRM. In the tracker data table, it flagged the specific LPN (1079496) as being inducted to the AR floor, but not manually recorded. Then, the tracker listed LPN 1039377 as being recorded by contractors, but unseen by ARRM; Similarly, LPN 1079377 was seen by ARRM but was not recorded. The tracker suggests that a recorded drive unseen by ARRM indicates a typo from the contractor, and the similarities between the LPNs further suggests a typo. The contractor needed not fret, though. Because the deployment status tracker caught these errors and provided troubleshooting guidance, the site lead could easily rectify the data without interrupting induction and manually investigating the AR floor.

The Deployment Status Tracker was tested again during a drive induction project at TYS1. "I found that my contractor had forgotten to record LPNs for three drives on A05," said Sofía Martinez, a tech deploy CDE. "Usually, I'd have to take an hour and get creative with data inspection to find those missing LPNs, but the tracker just told me what they were. It took less than five minutes to find and rectify the mistake."

The Deployment Status Tracker is currently in a demo phase best suited for induction projects, and will soon be updated to work for other RDE tech deploy projects. For access to the DST demo file and related sample data, please visit https://amazon.awsapps.com/workdocs-amazon/index.html#/folder/d53338ecb774f6722737e38c7096d62f97e8156bf5014c3f8e65ac10ed160849.

Frequently Asked Questions

Customer FAQ

Question: How can I use the Deployment Status Tracker?

Answer: The Deployment Status Tracker is currently in a demo phase, and can be accessed via Workdocs in an .ipynb (Python notebook) format. The DST can be opened and used in any notebook environment, including Jupyter Notebook, Amazon SageMaker, and Google Colab.

Question: What do I need to use the Deployment Status Tracker for drive induction?

Answer: You'll need to know the site name (Ex. MLI1), and how many units you're looking to induct from each floor of the site. You'll need access to the contractor records of inducted units, and data from ARRM.

Internal FAQ

Question: What projects is the Deployment Status Tracker built for?

Answer: The DST was initially optimized for drive induction projects. It is easily adjusted for extraction projects, and will be further developed to accommodate other tech deploy projects.

Question: Will the Deployment Status Tracker always be in an .ipynb format?

Answer: No! Ideally, the DST will evolve into a web-app with an intuitive UX and mobile compatibility.