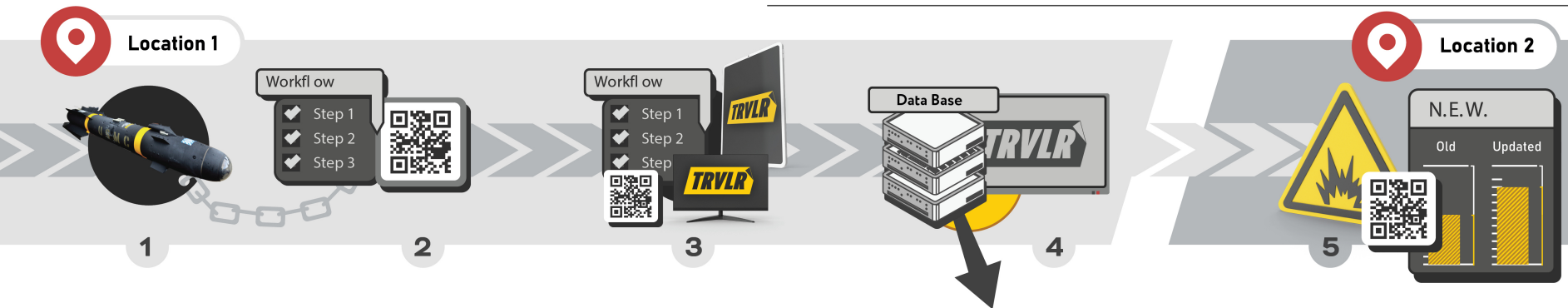# TRVLR

Testing faster, safer, and with more accuracy

The TRVLR workflow engine tracks user-defined workflows throughout the execution process, and seamlessly provides metrics and visualizations to encourage data-driven decisions to enhance performance, safety, and reliability.

TRVLR captures reliable, actionable data to provide operational insights, enhanced safety, and measurable improvements, while also adding test context for later analysis. It ensures smarter, more informed decision making through high-quality verified data.

Location 1 — **Location 2**

Workflow: Step 1, Step 2, Step 3

Workflow: Step 1, Step 2, Step

Data Base — TRVLR

N.E.W. — Old / Updated

1 — 2 — 3 — 4 — 5

1 A tracking barcode is assigned, and workflows are assigned depending on desired testing.

2 Workflows provide a detailed checklist to guide testers through the process, and track SUT location at all times.

3 User-entered data is captured during step execution to capture results, provide near real-time updates, and remove manual record-keeping. Simultaneously, process-related metadata is transparently recorded without human effort.

4 Data is used during testing to inform stakeholders on progress, update information displays in test areas, and ensure safety protocols are followed.

5 Data on completed tests is leveraged to provide operational insights, including how long each process takes, personnel and skill sets required, and test equipment used.

Potential Data-Driven Insights

"Workflows that use x-ray machine 4 often require repeated x-rays. Is something wrong with that machine?"

"Workflows get bottlenecked before thermal test. Do we need to increase capacity?"

"Several of our tests require AMMO-45 certification. Do we need to train more personnel?"

"According to execution metrics the Shaker Table ran for 6,000 hours last year"

GEEKS AND **NERDS**.COM

Key Highlights

Workflow Tracking and Process Control

Configurable workflows provide step-by-step guidance. Steps can be as simple as a single action with a checkbox to show completion, to complex actions that include photographic evidence and subject matter expert approval. Collected information is stored within the TRVLR database to create a complete and auditable record with clean data that can be easily consumed by artificial intelligence and machine learning algorithms.

Version Controlled Processes

Workflows are version controlled and locked to prevent unauthorized changes. As a process evolves, a complete change history is retained for historical purposes. When new process steps are introduced, the TRVLR system provides a sign-off system for change approval. On approval, workflows are immediately updated to ensure users always have the latest version.

Safety Auditing

Safety audits can be inserted into planned and active workflows, and audit results are permanently stored in the TRVLR database. Future plans include coordination with yellow book data to ensure N.E.W. accuracy, and monitor factors such as storage requirements. This will allow alerts when a user attempts to scan an SUT into a restricted area, and ensuring up to date certifications for handling hazardous materials.

Up-to-Date Reporting

TRVLR provides information radiators for at a glance monitoring of all SUTs. This can include status displays of what is in testing and where, and what tests remain.

Net Explosive Weight Tracking

When an SUT is scanned into a new area, such as a test area or an ammo magazine, TRVLR automatically updates a display showing the area's Net Explosive Weight (NEW). Each area's NEW is recorded in the TRVLR database to ensure thresholds are not exceeded, and to limit chances of human error in tracking and updating.

Historical Test Records

When a test is complete, TRVLR uses collected information to aid the test reporting phase by providing a detailed record of each step, including how, when, and by whom it was completed. Built-in notifications help testers focus more on testing and less on administrative tasks.

Data-Driven Insights

Metadata collected by TRVLR can generate actionable insights into workflow performance and efficiency. Metadata stored within the TRVLR database can be leveraged to analyze test equipment utilization, identify scheduling bottlenecks, and assess capabilities.

Metadata regarding all aspects of test execution can be analyzed to provide extensive insight into operations. This can include:

- Process bottlenecks.
- Personnel needed
- Test equipment utilization
- Impact of equipment failure
- Capital equipment investment needs
- Facilities utilization

Involvement

Engineered By

GAN
GEEKS AND NERDS

Built For

UNITED STATES ARMY
RTC
REDSTONE TEST CENTER

Contact Us

Business Development
BD@GeeksAndNerds.com