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**WHAT:** Alignment between Tech Ops job tasks & training documents.

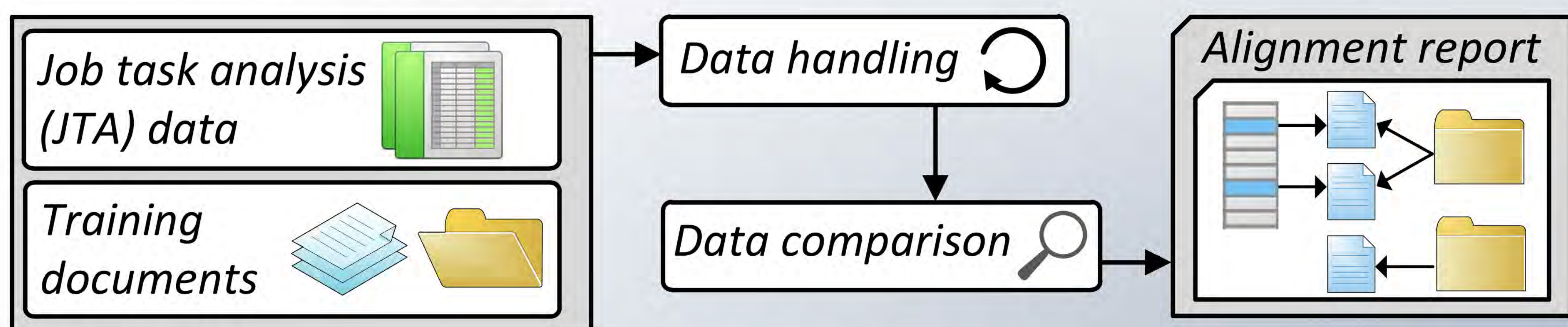
The Tech Ops training curriculum needs to cover all job tasks to be considered aligned. Identifying potential problems can be difficult because there are

- Hundreds of courses and thousands of documents in the training curriculum
- 12,837 job tasks in the current Tech Ops job task analysis (JTA) data

**GOALS:** Provide recommendations for an alignment analysis approach.

The FAA could benefit from a tool that enables the analyst to

- Identify job tasks of interest
- Identify training documents of interest
- Generate reports showing what documents are aligned and not aligned



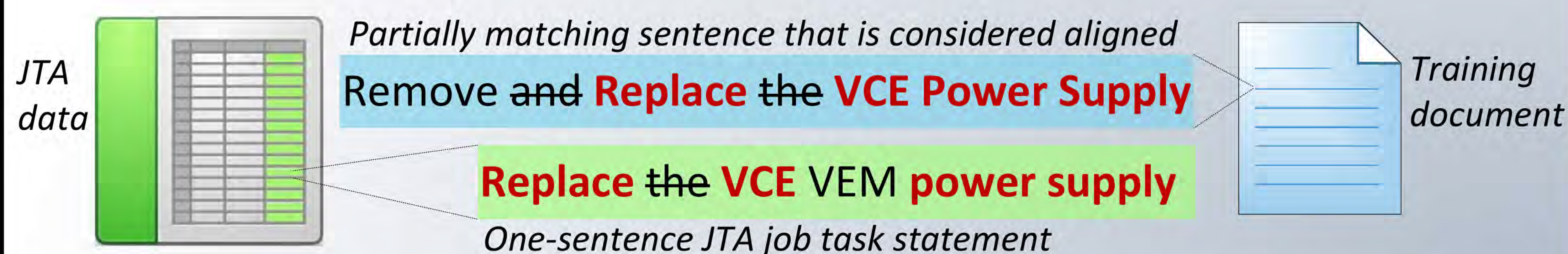
**HOW:** Identify measures & methods of a text-search approach.

Text in a document can match a job task statement exactly or partially, where

- Exactly matching text reflects the highest degree of alignment
- Partially matching text with at least one matching verb *and* one matching noun reflects minimally acceptable alignment
- For partially matching text, correct spelling and ordering of words is desired

We identified ways of identifying partially matching text that is relevant, such as

- Replacing acronyms, initialisms, and abbreviations with their spelled-out forms
- Removing relatively unimportant words (e.g. "the," "and")
- Identifying similar words (e.g. synonyms, words with the same root)



**WHY:** Improving quality of instruction and training efficiency.

The recommended text-search approach for analyzing alignment could

- Improve quality of instruction by identifying potentially outdated training documents that should be updated
- Reduce training time by identifying potentially irrelevant training materials that should be removed

**IMPACT:** Reducing the need for manual effort in alignment analyses.

Currently, analyzing alignment could require significant manual effort. The recommended approach automates parts of an alignment analysis.

Future work should

- Implement a prototype that supports the recommended approach
- Explore ways of analyzing training documents that are not text based