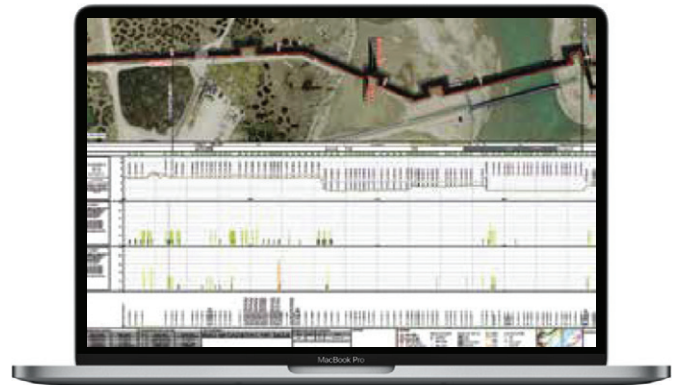# SOFTWARE & TECHNOLOGY: TURBOROUTE

EN Data Solutions, a sector of ENTRUST Solutions Group, enables functionality to generate accurate alignment sheets for pipeline operations, leveraging digital records for improved situational awareness.

Some pipeline operators still rely on out-of-date, incomplete, and inaccurate as-built alignment sheets. TurboRoute's automated alignment sheet generation provides a critical view of pipeline assets on demand to support key operational decisions.

MAXIMIZE SITUATIONAL AWARENESS, OPTIMIZE DATA VISUALIZATION

- Up-to-date alignment sheets ensure accurate representation of pipeline assets
- Multi-template capabilities for multiple stakeholders
- Automated sheet production

OUR APPROACH

EN Data Solutions' TurboRoute is a report generator. Unlike most reporting tools, the software doesn't produce tabular reports. Instead, it generates map-based, graphical reports as digital alignment sheets. Since they are derived from the latest, up-to-date information in a company's geospatial system, TurboRoute alignment sheets are as current as the latest data entry.

TurboRoute's alignment sheets are driven by graphical templates. Using this simple, powerful interface, GIS analysts may also define the template that, in turn, determines the layout of a digital alignment sheet.

EN DATA SOLUTIONS

The desktop version of TurboRoute includes interactive tools for batch alignment sheet production, suitable for use by most small- and mid-sized companies. For companies operating thousands of miles of pipelines, fully automated sheet production via the TurboRoute TurboPy add-on further maximizes sheet production.

TurboRoute runs inside of Esri®'s world-leading desktop GIS, ArcMap. The tool consumes any data source accessible to ArcMap: shapefiles, CADD drawings, geodatabase feature classes, Portal or ArcGIS Online feature layers, imagery, and digital terrain layers. In addition, TurboRoute easily connects to external tabular sources, including relational database tables. The platform also has powerful built-in data processing functionality, enabling users to project offline features onto the centerline of a pipeline.

EN DATA SOLUTIONS DELIVERS:

Designed to support the regulatory compliance demands of operations, engineering, and integrity for pipeline assets, TurboRoute ensures that all map products, including alignment sheets, are fully in sync with an operator's GIS database as the system of record. Key advantages of the EN Data Solutions TurboRoute platform include:

- **Built-in processing functionality:** Creates unprecedented data flexibility.
- **Enhanced data integration:** Increases compatibility with completely unstructured data sources, along with structured industry standard databases like ISAT, PODSTM, APDM and UPDM.
- **Customizable data visualization:** Offers capability to generate multiple templates and provide different stakeholders with a fit-for-purpose view of their data.

I. Select Data Elements
- Identify pipeline centerline polyline
- Select data elements (GIS & Tabular) you want on the alignment sheets

II. Design your template
- Specify alignment sheet bands
- Determine data layers to appear in each band
- Define summary table queries
- Title block & other sheet marginalia elements

III. Build sheets footprints
- Based on template scale & target map length for each sheet, TurboRoute automatically generates optimum alignment sheet footprints for each line

IV. Print sheets
- One or more sheets, interactively, or in a batch

AUTOMATION
V. Define Change Detection Features
- Select which data elements are to be tracked for change management

AUTOMATION
VI. Define Change Detection Features
- Use TurboPy to track data updates and inserts in the relevant source data tables
- Automatically generate updated alignment sheets when a data change is detected