KNIME Strengths

Flexibility (without the need to code)

- Full user control with workflows: Add, place, connect, configure, execute, and reset nodes.
- Visual Programming (Port types, flow variables, switches, loops, error handling) goes beyond building data pipelines and can be interleaved with code where needed.
- Open source, including extensions contributed by the community (e.g., geospatial and many more, including chemical & life sciences extensions).
- Perform advanced analytics by mixing and matching nodes for statistics, machine learning, visualization, and more.
- Build, administer, and automate a custom ModelOps process to facilitate the continuous delivery of data science (CDDS).

Upskilling on a single platform

- KNIME is a platform that offers building blocks and blueprints to use and adapt to custom needs, not a collection of integrated, big, rigid tools. For example, you can explore data by adding interactive visualizations anywhere in the workflow.
- Once you understand the concept of workflows, you can upskill to any level of sophistication: ETL/ELT, Reports, Dashboards & Data Apps, Automation, AI/ML, Services, CDDS, all without the need to code.
- Plenty of online resources for training. Certification possible.
- Large and active community on KNIME Community Hub, in the forum, and at community-organized events.

Collaboration within teams

- Teams organize themselves and their deployments (within the guardrails provided by IT).
- Workflows are a shared language that everyone in the team can understand. Annotations and comments in the workflow put everything on the same table.
- Code is contained in nodes as small functional blocks that are understandable to non-coders.
- Create a knowledge base for your team, department, or entire organization, e.g., setting standards for data access and routine operations and sharing best practices to enable self-onboarding for new users. (Acknowledged as DataIQ "data-enabling solution of the year")

Collaboration by reuse of business process logic

- Shared components enable to build logic (build as workflow and/or code) once and reuse it within or across teams. On demand components can contain small scripts and be adjusted to meet custom needs.
- Calling deployed workflows enables teams to prepare logic for others without granting access to read the internals. Users send input data and receive results without access to intermediate steps.
- Code node extensions in Java or Python. Programmers provide the building blocks that all workflow builders can mix and match on their own, thus freeing up time on the programmers' side.

No-code Data Apps

- Build flexible Data Apps without a single line of code.
- Combine Input form fields with interactive visualizations and text.
- Run any arbitrary workflow on user interaction.
- Start with a report or a dashboard and extend to a data app as demands grow, without starting again from scratch.

KNIME Roadmap

Governance

- CDDS and Secret Store are already available and work is ongoing to improve governance for large enterprises.
- On the roadmap:
  - More detailed monitoring of execution activity on KNIME Business Hub.
  - Centralized management of Analytics Platform installations via Business Hub.
  - Hybrid execution: Executors running on separate (on-prem or cloud) infrastructure.
  - Connect Business Hub to self-hosted LLMs (also for K-AI).

Onboarding

- Starter perspective and K-AI for search/question answering and workflow snippet building already available.
- Currently working on: Web-based workflow editor in Business Hub, making download of Analytics Platform optional and improving governance.
- On the roadmap: Enhanced (AI supported) report and Data App experience.

Streamlined workflow building

- KNIME's modern user interface is already available, featuring more convenient workflow building, e.g., with the new quick node insertion feature.
- Currently working on: Adopting more nodes to Modern UI with enhanced usability.
- On the roadmap: Continued work with the user community to continuously improve the workflow building experience.

Coding integration

- Python and ECharts visualization editing have already been upgraded to modern user interface and enhanced with K-AI support.
- Currently working on: KNIME's low-code expression language with K-AI support.
- On the roadmap: Improved R and SQL editing, supported by K-AI.
- Build full KNIME node extensions of reusable nodes in Java or Python using your favorite IDE.

Continuous improvement of performance and based on user feedback

- The community contributes feedback to further improve KNIME.