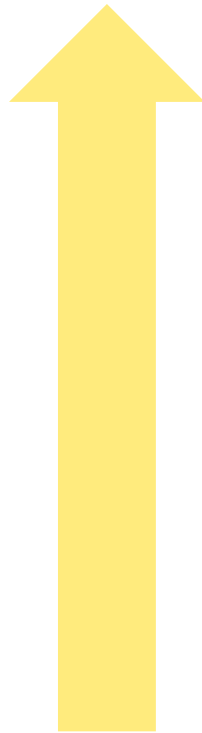


Using, Customizing, and Governing GenAI

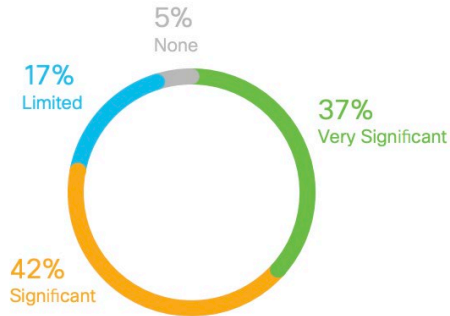
Michael Berthold

Desire to Apply GenAI ... battles Pressure to Govern It



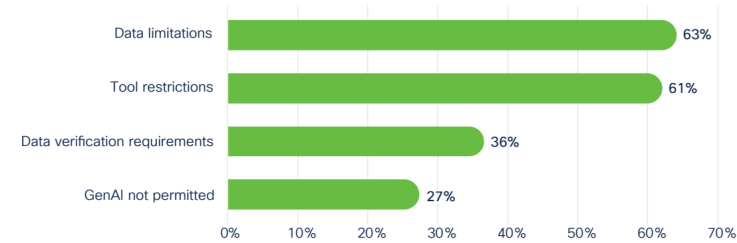
Drive up GenAI adoption

79% perceive significant value from GenAI adoption¹



Drive down GenAI risk

27% of organization have an outright ban on GenAI usage¹



source: [Cisco 2024 Data Privacy Study](#)

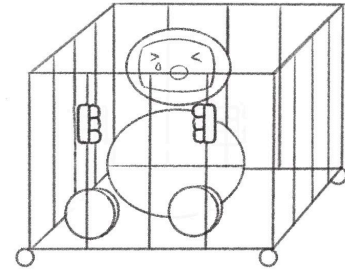
GenAI - Opportunities and Risks

- + Massive impact on “mundane” tasks
 - + Creating new content
 - + Optimizing existing content
 - + Gathering & summarizing information
- + Broad userbase & applicability
 - + Experimenting with different models
 - + Exploring data & information
 - + Applying large scale models easily
 - + Integrated into daily work everywhere
- Need for (quality) checking
 - Copyright
 - Sloppy/faulty quality
 - Unethical outcomes
 - Fake outcomes
- Governance requirements
 - Which AI?
 - Privacy / confidential data leakage
 - Skyrocketing consumption
 - Regulation & risk management

Positive impact is blocked...

...by fear

If GenAI can't be trusted...
...what can we do?



Agenda

- Stuff
Data Science and GenAI
- GenAI to Assist & Explain
- Using & Customizing GenAI
- Managing and Governing GenAI
- Summary

GenAI and Data Science

Assist & Explain

- Help workflow builders
- Teach data science skills

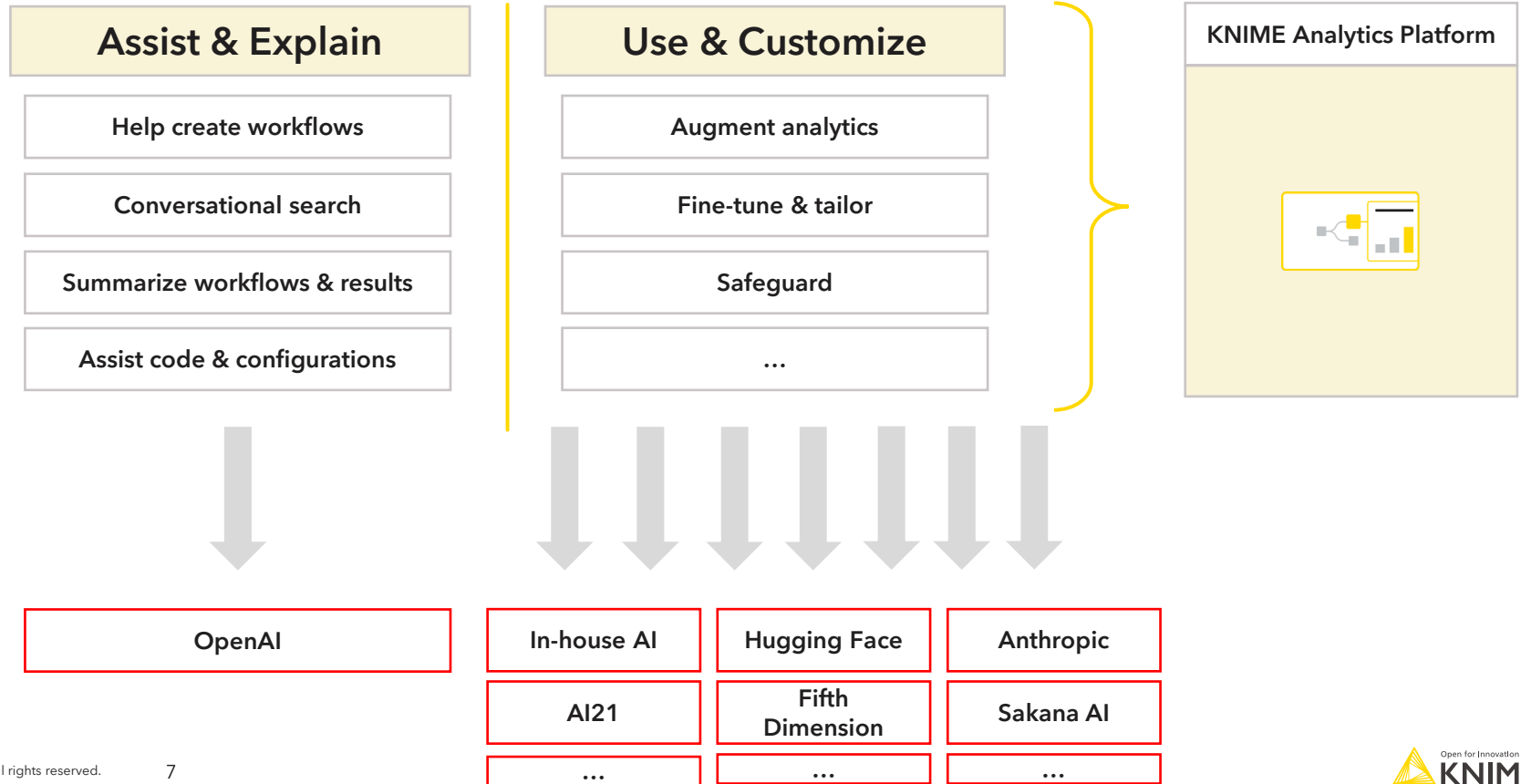
Use & Customize

- Augment analytics with GenAI
- Augment GenAI with analytics

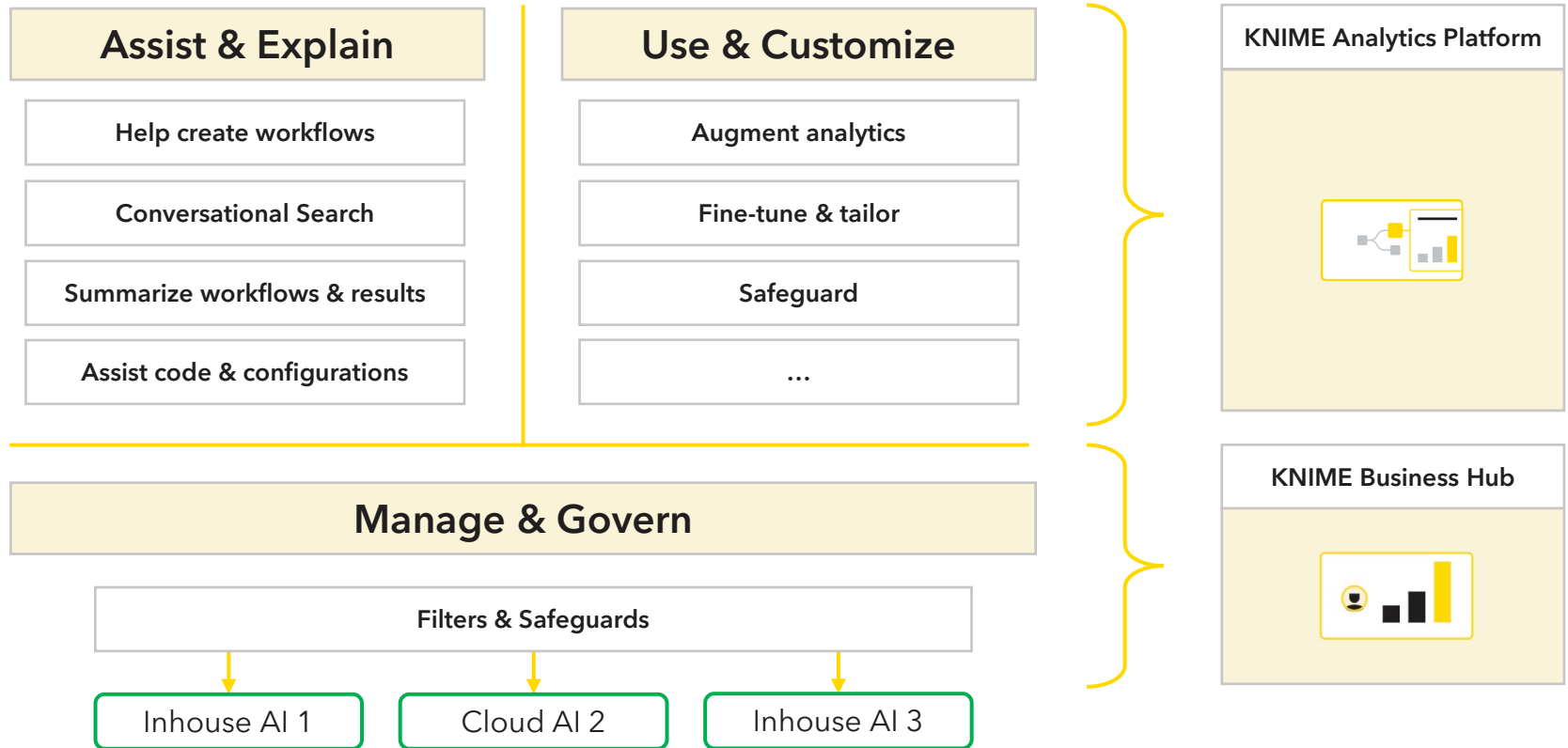
Manage & Govern

- Safeguard GenAI
- Govern usage

GenAI for everybody: Flexibility



GenAI in the Enterprise: Flexibility & Governance



Agenda

KNIME and GenAI

GenAI to Assist & Explain

Using & Customizing GenAI

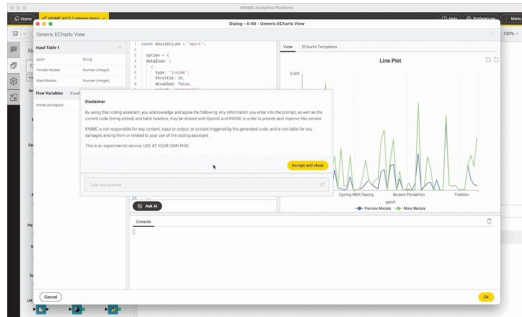
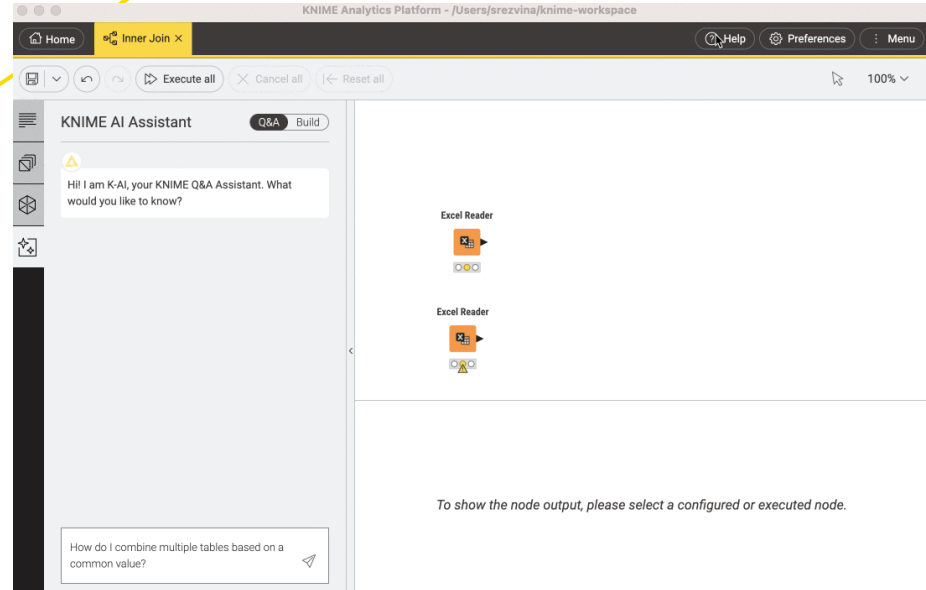
Managing and Governing GenAI

Summary

Assisting and Explaining

K-AI: Q&A and Build mode

- Assist & Explain
- Help create workflows
- Conversational search
- Summarize workflows & results
- Assist code & configurations



Copilots for Python, eCharts
[tbdev: R, SQL, ...]

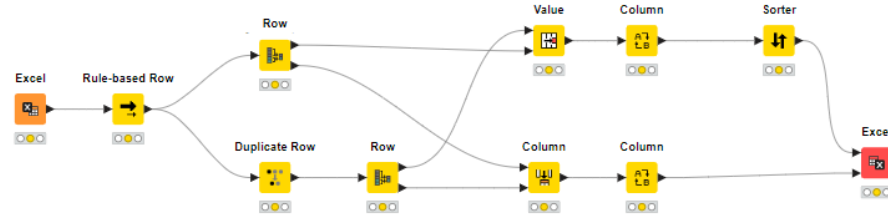
Explaining Workflows

GenAI Workflow Explainer

Summarize workflows using

Workflow

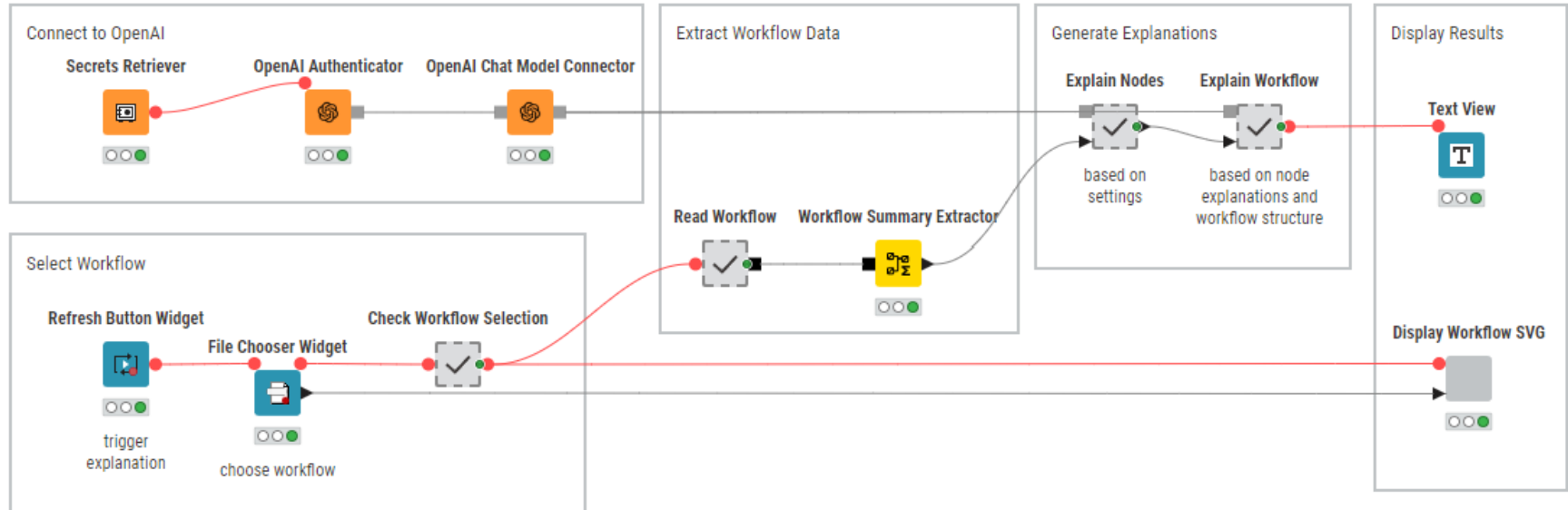
- Building a Simple Classifier
- Combine Clean and Summarize Spreadsheet Data
- Countif and Sumif**
- Data Blending
- Non-standard format Spreadsheets
- Visual Analysis of Sales Data



The workflow reads data from an Excel file containing Olympic athlete information, filters rows based on specific criteria, aggregates data, removes duplicate rows, performs value lookup, appends columns, renames columns, sorts the data, and finally writes the processed data to a new Excel file.

The use-case of this workflow is data transformation or ETL (Extract, Transform, Load). It involves cleaning, filtering, aggregating, and restructuring the data to prepare it for further analysis or reporting. The workflow aims to process and organize the Olympic athlete data for better understanding and analysis.

Explaining Workflows ... Using Workflows



Agenda

KNIME and GenAI

GenAI to Assist & Explain

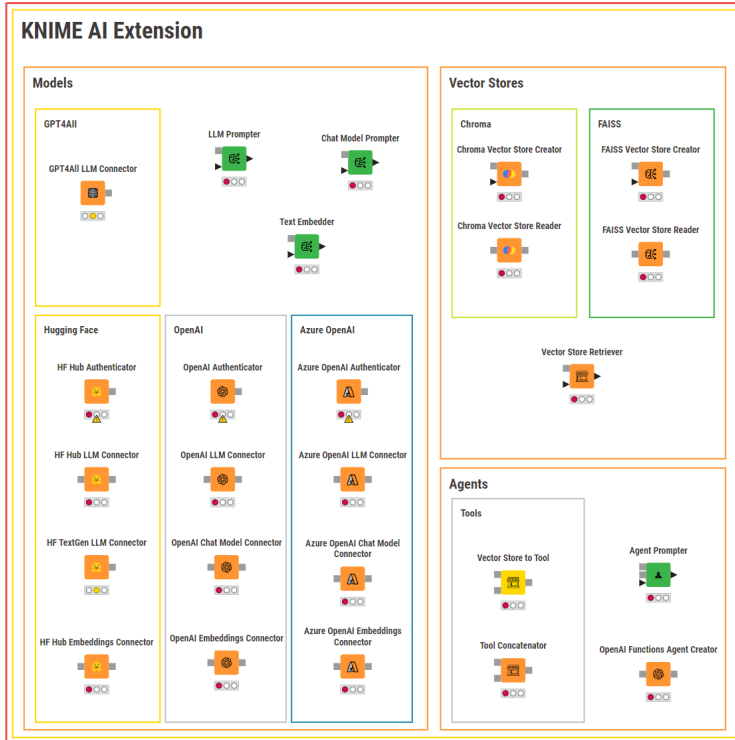
Using & Customizing GenAI

Managing and Governing GenAI

Summary

Using and Customizing

GenAI Extensions



Use & Customize

Augment Analytics

Fine-tune & Tailor

Safeguard

...

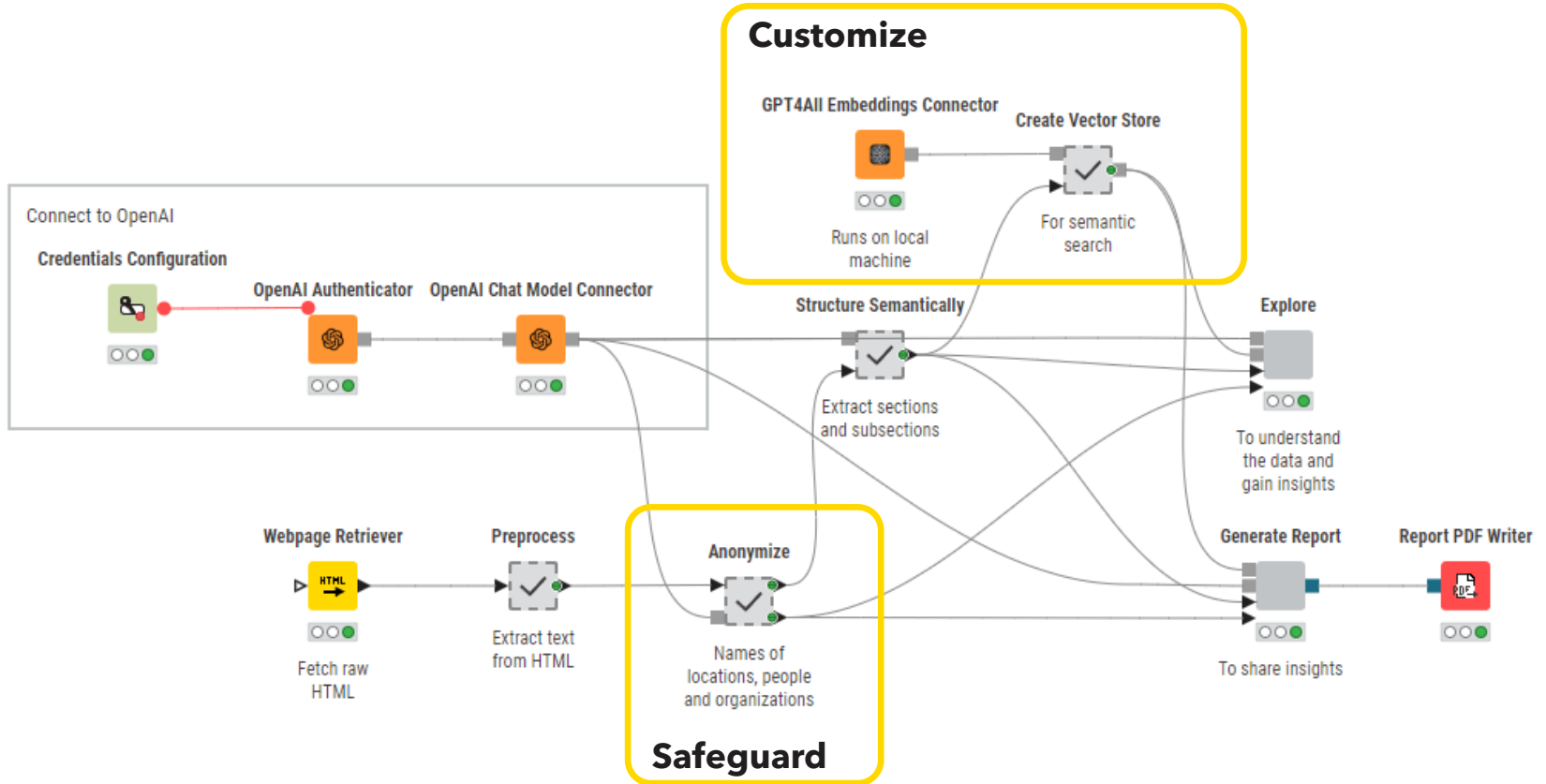
Public space

AI Extension Example Workflows

Home

- 1) Large Language Models
- 2) Chat Model
- 3) Vector Stores
- 4) Agents

Using the AI Extension: Mix & Match Analytics and GenAI



Agenda

KNIME and GenAI

GenAI to Assist & Explain

Using & Customizing GenAI

Managing and Governing GenAI

Summary

Managing and Governance

The image shows a screenshot of the KNIME Business Hub administration interface. The top navigation bar includes the KNIME logo, the word "Hub", and a search bar. A "Register AI model" button is visible in the top right. The main content area is titled "AI models" and contains a table with the following data:

Name	Model
rf_model2	huggingface/knime_workflow

On the left, there is a sidebar menu with options: License, Users, Teams, Execution resources, and AI models. Below the table, a large yellow arrow points down to the text "Filters & Safeguards".

On the right, a "K-AI Dashboard" is displayed. It features a "Conversations" section with a "Slice and dice by conversation attributes" option. Below this, there are filters for "K-AI view selection" (Users, Conversations, Cost, All Dimensions), "Start Date", "End Date", and "Granularity" (set to Daily). A yellow "Apply time range" button is present. The dashboard shows three key metrics:

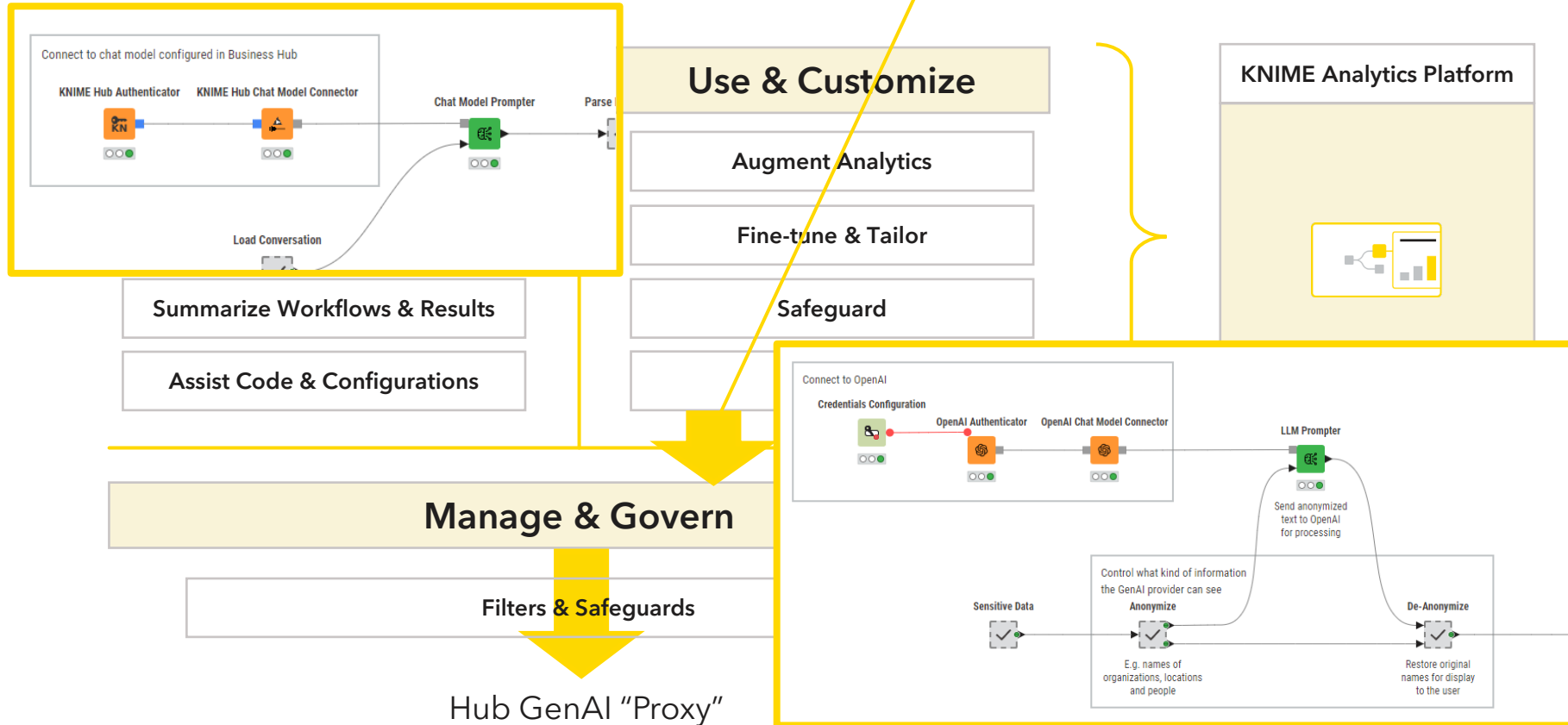
- 4 Prompts per conversation
- 15507 #Prompts
- 4011 #Unique conversations

At the bottom of the dashboard is a stacked area chart titled "Metrics split by K-AI mode" showing the number of prompts over time from February 17 to March 10. The legend includes "User Prompts" (blue), "build" (green), "echarts" (yellow), "python" (orange), and "qa" (red).

Hub GenAI "Proxy"

Managing and Governance

Hub GenAI Connector



Managing and Governance

Assist & Explain

Help create Workflows

Conversational Search

Summarize Workflows & Results

Assist Code & Configurations

Use & Cust

Augment Ana

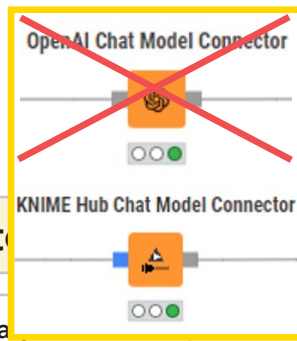
Fine-tune & Tailor

Safeguard

...

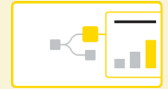
Manage & Govern

Filters & Safeguards



- Hub AP Customizations
- Shared Components

Anonymized Customer Data



KNIME Business Hub



Agenda

KNIME and GenAI

GenAI to Assist & Explain

Using & Customizing GenAI

Managing and Governing GenAI

Summary

One Environment to Balance Innovation & Control

KNIME Analytics Platform

Drive up GenAI adoption

Increase number of expert developing GenAI apps & services

- Low-code lowers barrier to entry
- Low-code increases efficiency
- Open source to integrate new tech

Increase number of end users leveraging GenAI

- Deploy to 1000s of end users
- GenAI support upskills into data science

KNIME Business Hub

Drive down GenAI risk

Create a transparent GenAI governance framework

- Restrict to approved LLM models
- Guardrail how & which data is shared
- Protect against bias, hallucinations, fake outputs

Validate & Deploy GenAI solutions at scale

- CDDS to test, validate & deploy models
- Monitor consumption & audit logs
- Document workflows for compliance

