# SAS Club 2023

## Der Business Analytics Club für SAS User

Wien, SAS Office Trabrennstraße
19. Oktober 2023

Gerhard Svolba, Phillip Manschek, Jens-Ole Harden,
Michael Weberberger (Premedia), Florian Stammer

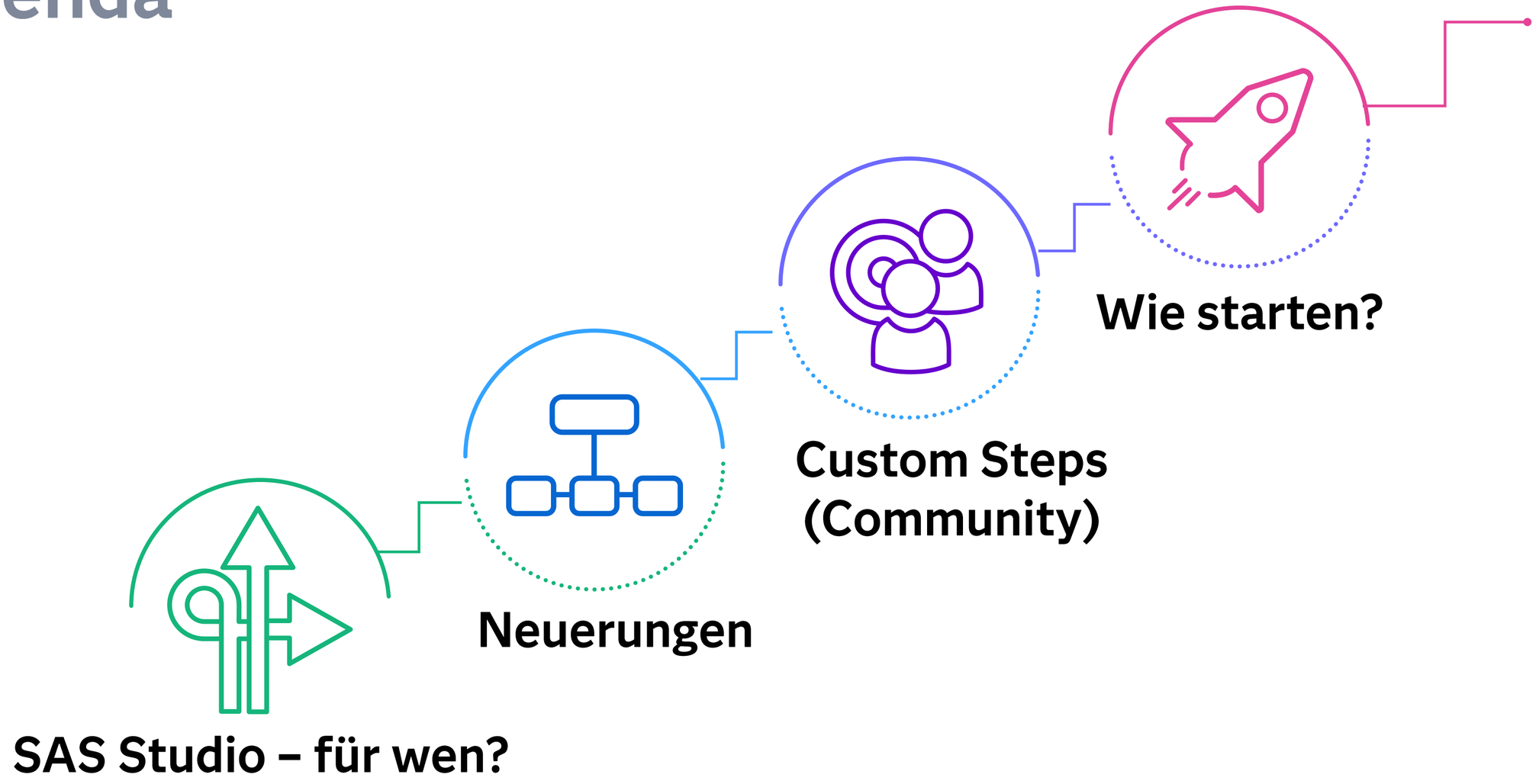
# Agenda

| | |
|---|---|
| 14:15 - 14:20 Uhr | Begrüßung / Intro / News<br>Gerhard Svolba, SAS |
| 14:20 - 14:50 Uhr | Es geht auch anders! - Erstellung analytischer Modelle mit SAS Viya<br>Gerhard Svolba, SAS |
| 14:50 - 15:20 Uhr | SAS und Generative AI - Überblick, Entwicklungen und Anwendungsbeispiele aus dem Marketing<br>Michael Weberberger, Premedia // Florian Stammer & Gerhard Svolba, SAS |
| 15:20 - 15:35 Uhr | Die SAS Explore Konferenz in Las Vegas - Ein Vor-Ort Bericht<br>Gerhard Svolba, SAS |
| 15:35 - 15:55 Uhr | PAUSE |
| 15:55 - 16:25 Uhr | Fuzzy Matching von Steuernummern in externen Datenquellen mit SAS<br>Mihai Paunescu, Bundesministerium für Finanzen |
| 16:25 - 16:50 Uhr | SAS Studio Analyst und die Erweiterungsmöglichkeiten mit Custom Steps<br>Phillip Manschek, SAS |
| 16:50 - 17:15 Uhr | SAS Tipps und Tricks Session<br>Jens Ole Harden, SAS |
| ab 17:15 Uhr | Gemütliches Get-Together mit Buffet |

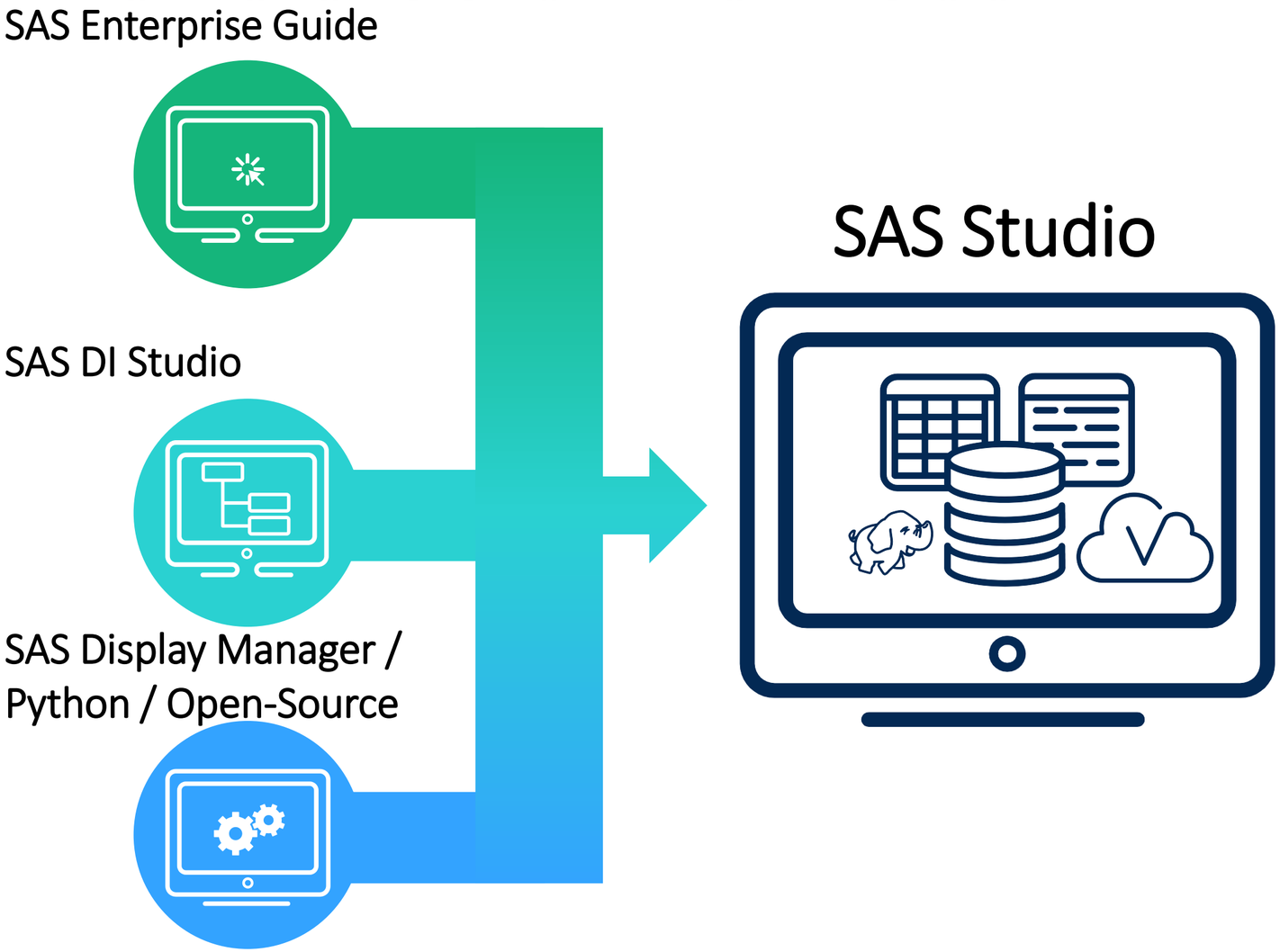
# SAS Studio Analyst und die Erweiterungsmöglichkeiten mit Custom Steps

Phillip Manschek, SAS

# Agenda

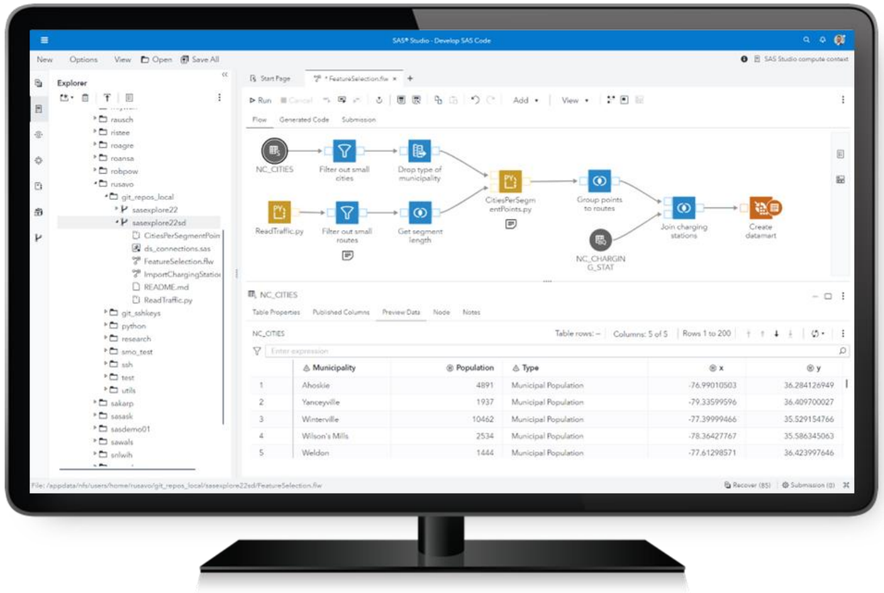


# SAS Studio - Kernidee




- **Ein zentrales Web-Interface für alle Daten-Pipelines**
- **Vereinfachte Zusammenarbeit von Analysten, Data Scientists und Data Engineers**
- **Vollintegriert in das Daten- und Entwicklungsökosystem (Lineage, Git, Erweiterungsmöglichkeiten, Scheduling, ...)**

# SAS Viya Integrated Development Environment




- Access 80+ On-prem and Cloud data sources
- Use SAS & Python to get the best from both
- Build Flows – single pane of glass of your data pipelines
- Create your own transformations with Custom Steps
- Collaborate and enable CI/CD with Git integration
- Leverage advanced Orchestration & Scheduling

# SAS Studio

## Anwendungsgebiete

**Cloud first Strategie**

# SAS Studio

## Anwendungsgebiete

**Cloud first Strategie**

**Kombination von Sprachen**

# SAS Studio

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**Cloud first Strategie**

**Erweiterbarkeit “data apps”**

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**ETL**

# SAS Studio

## Anwendungsgebiete

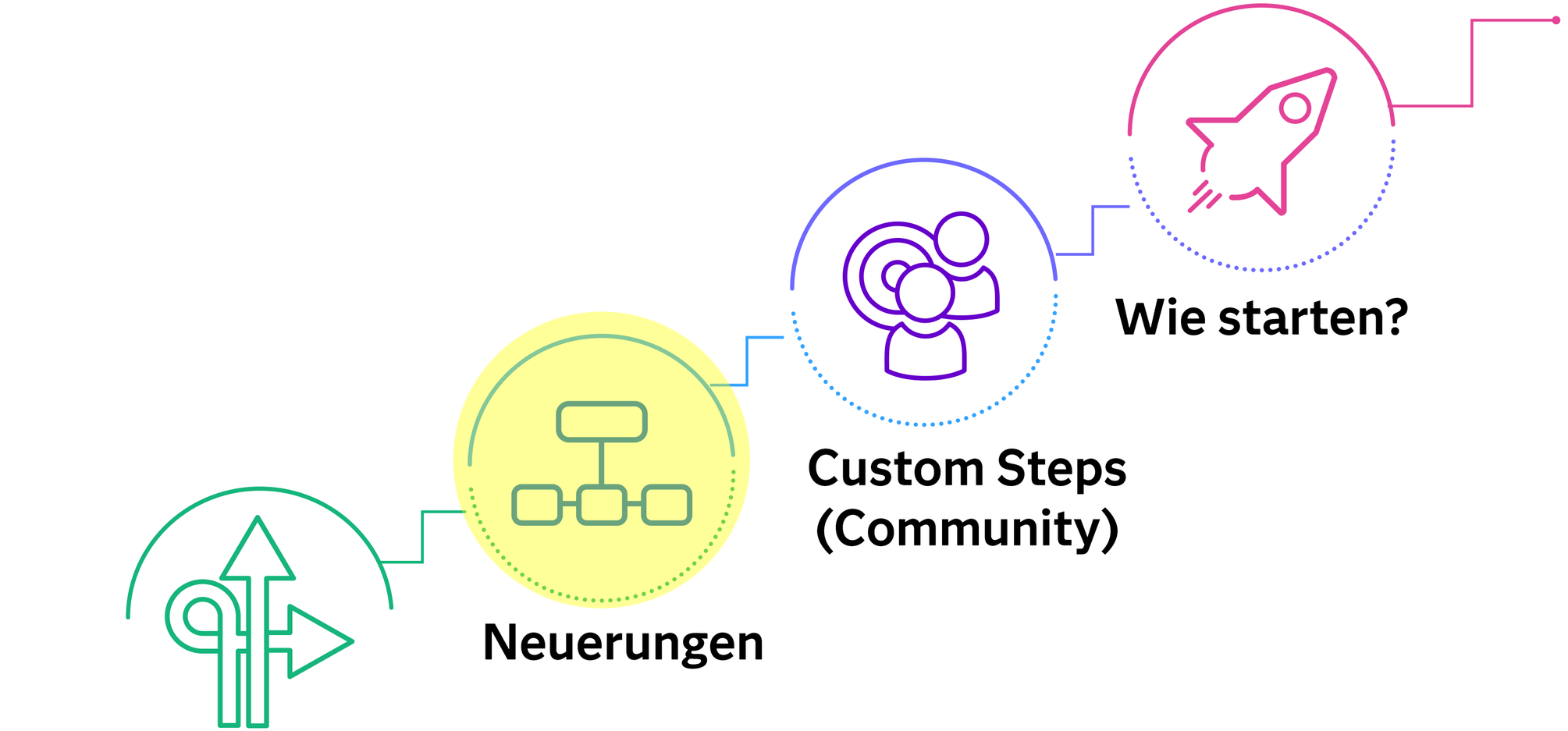
**Cloud first Strategie**

**Erweiterbarkeit “data apps”**

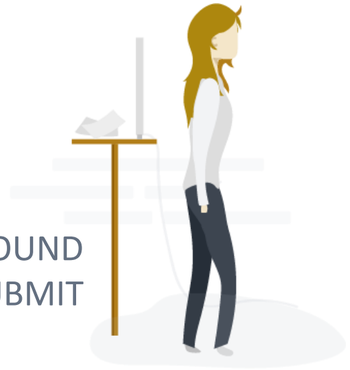
**Geänderte Arbeitsweisen**

**Kombination von Sprachen**

**ETL**



# What's new in Studio vs EG/DI



BACKGROUND SUBMIT

CUSTOM STEPS WITH VISUAL DESIGNER

PYTHON INTEGRATION

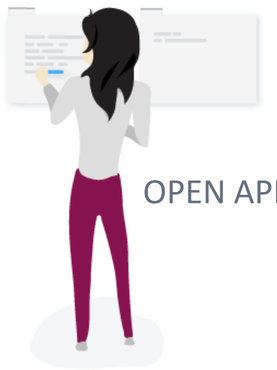
GIT AND CI/CD

BETTER IT COMPLIANCE

ADVANCED DATA QUALITY TRANSFORMATIONS

ONE LINEAGE

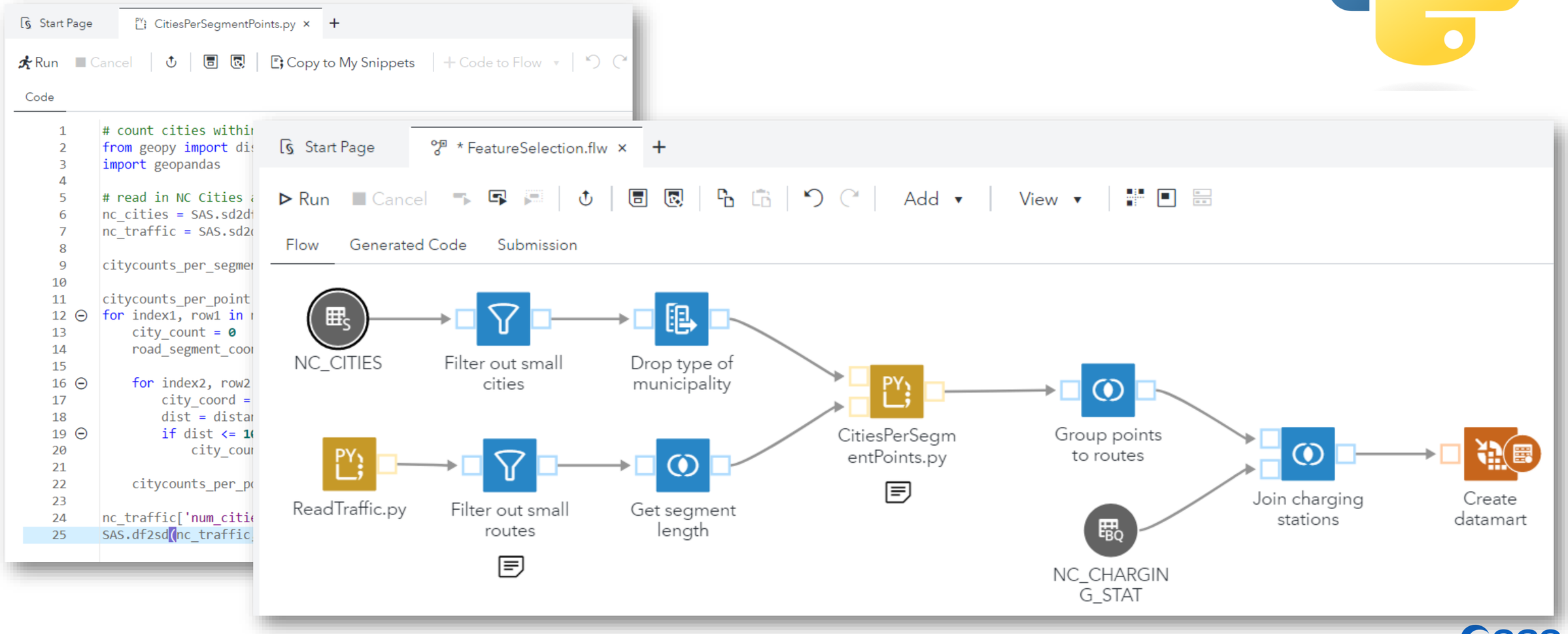
CENTRALIZED SCHEDULING



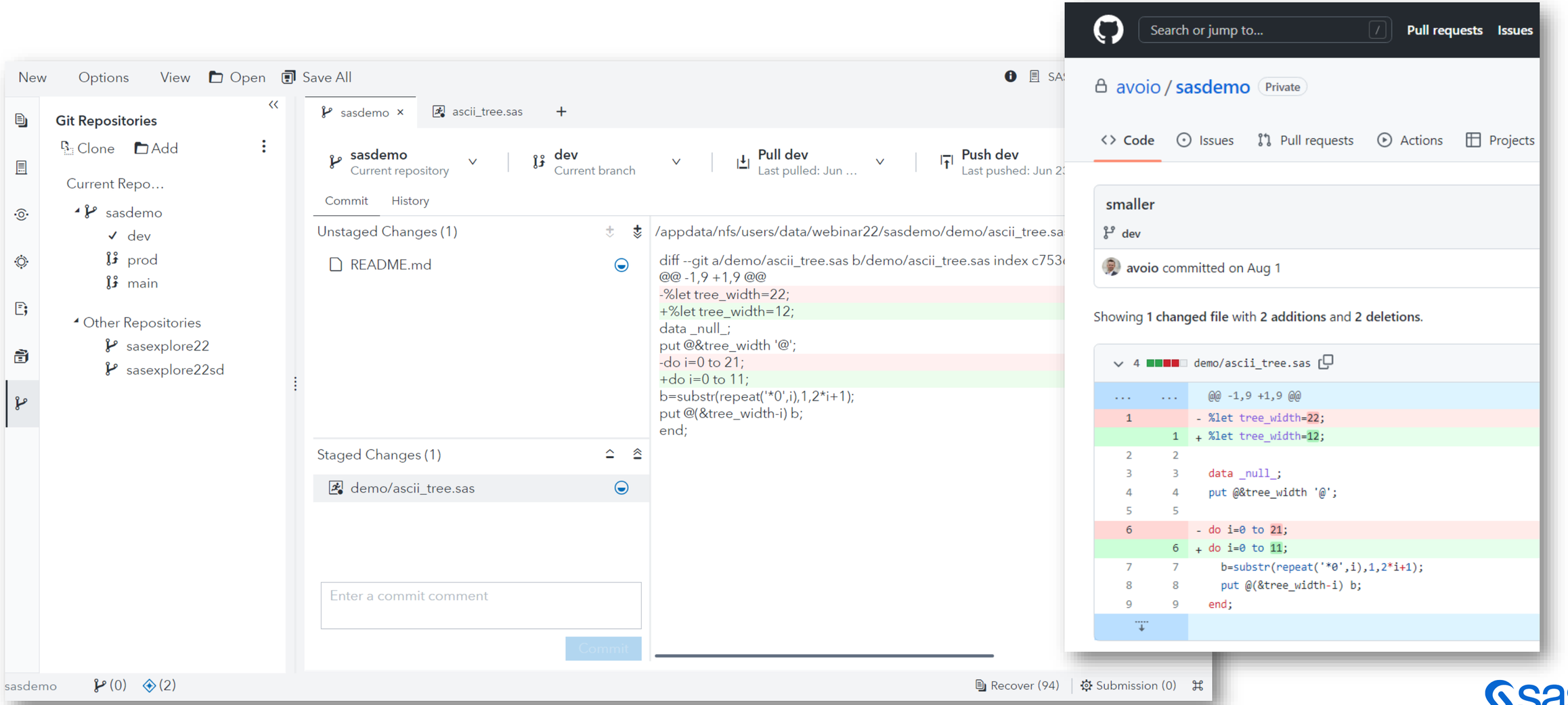
OPEN APIs

ELT TRANSFORMATIONS

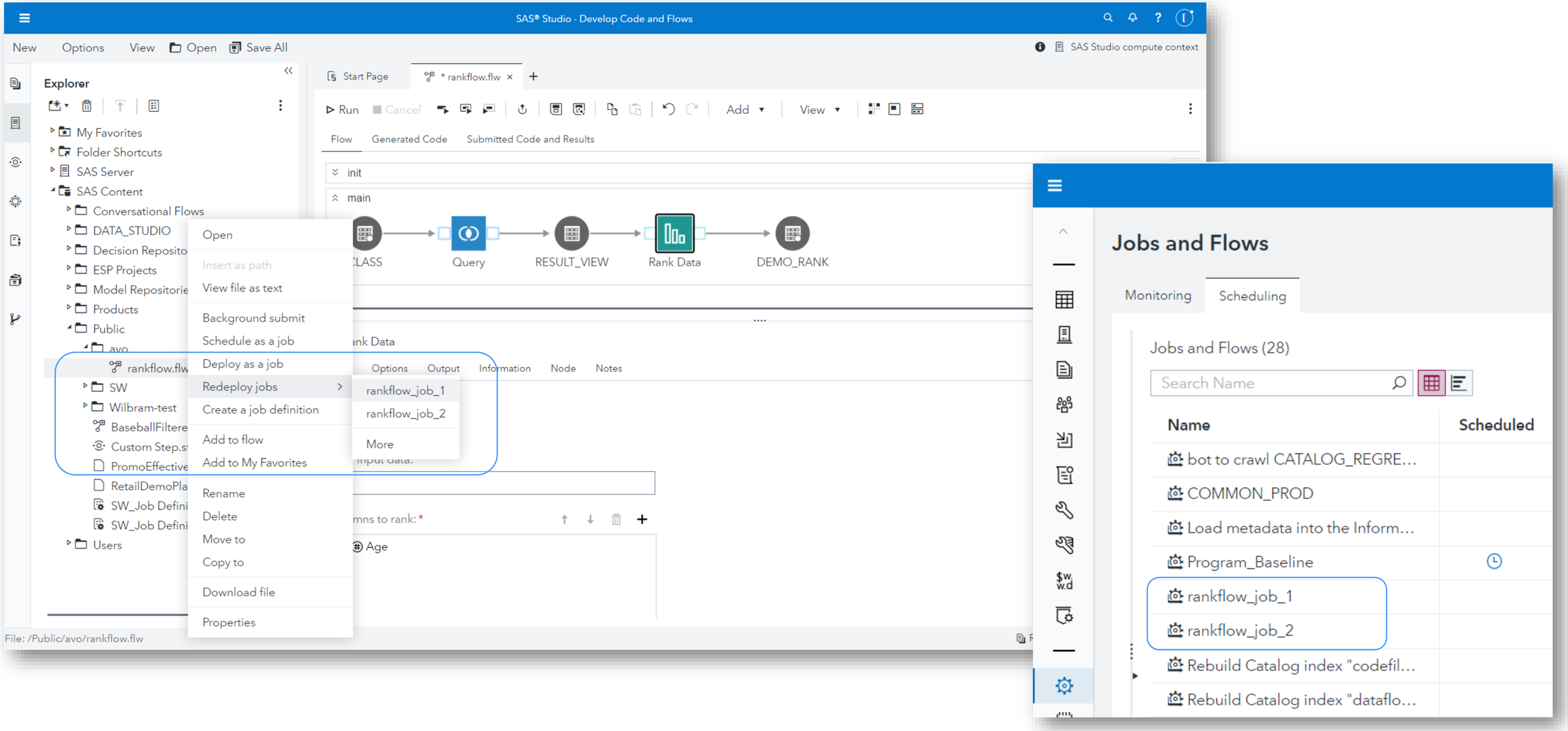
# SAS Studio – Python integration



# SAS Studio – Git integration

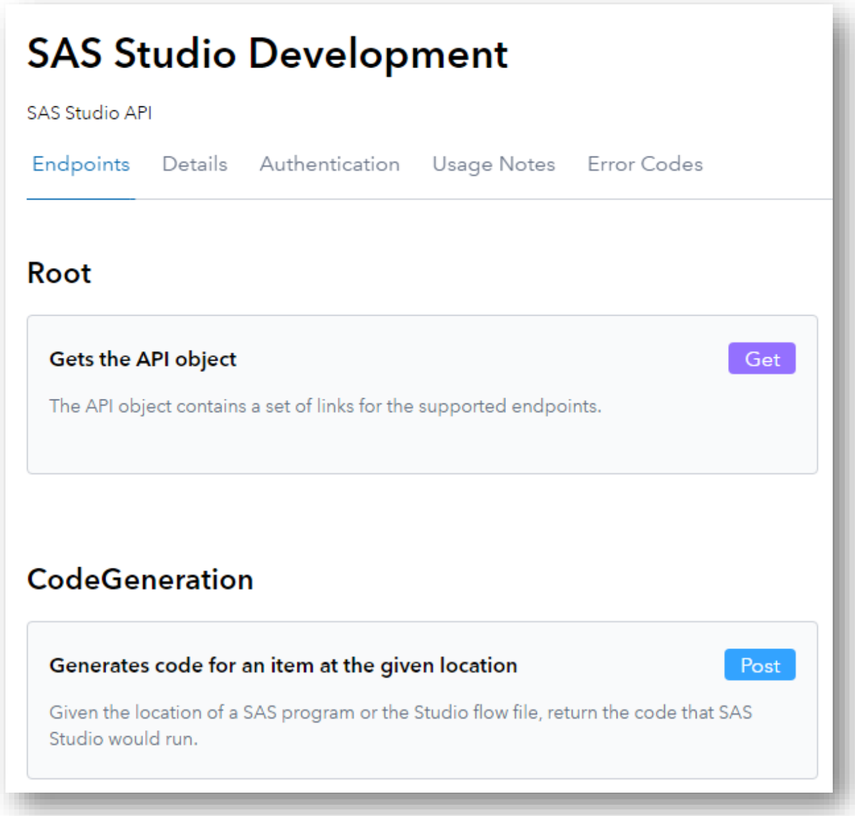


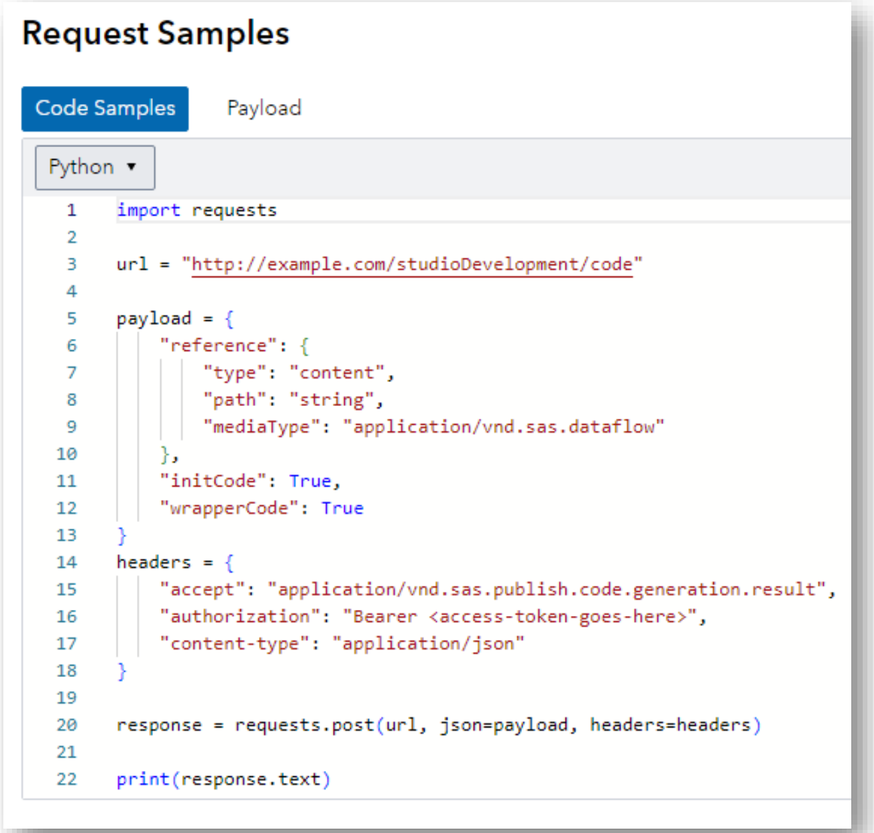
# SAS Studio – Deployment als job



# SAS Studio - API

## New open API endpoint for Code Generation for Flows and Programs



# SAS Studio – laufend neue Steps

## Transform Data

- Transpose Data
- Union Rows
- Rank Data
- Select Random Sample

## Visualize

- Bar Chart
- Line Chart, Bar-Line Chart
- Box Plot
- Scatter Plot

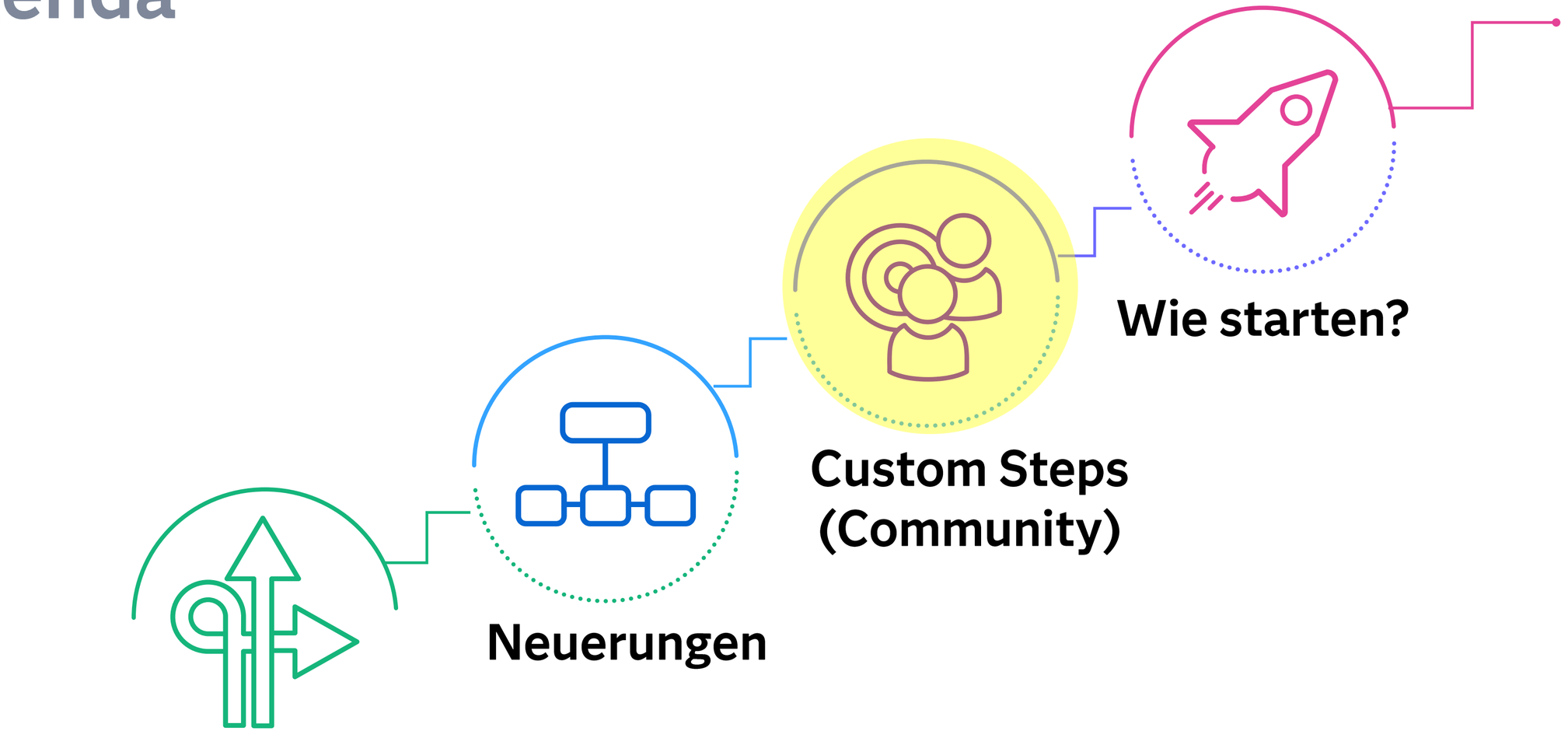
## Refine & Enrich

- Mask Data
- Remove Duplicates
- Geocode Data
- Verify with Loqate

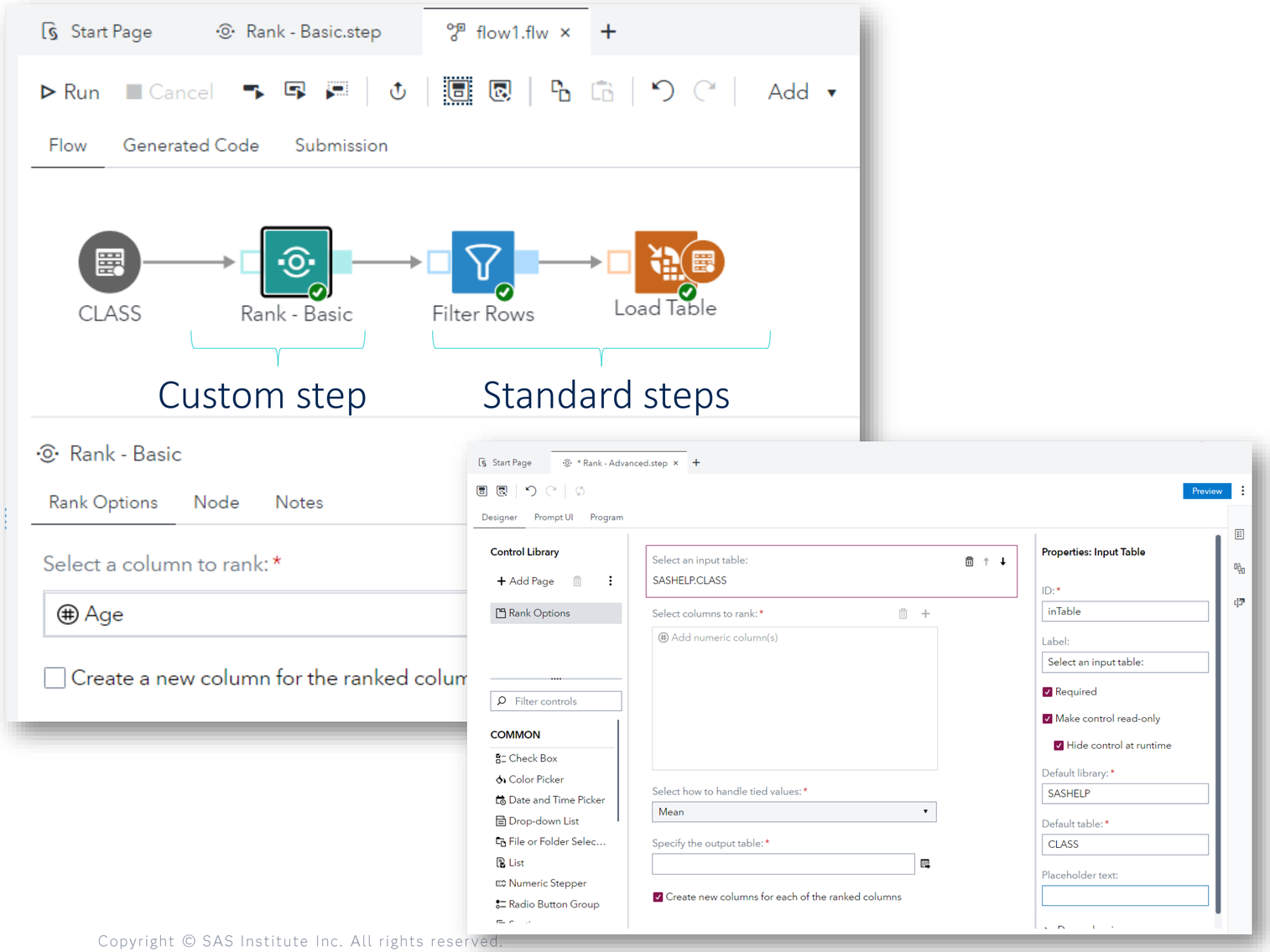
## Run Statistics

- Summary Statistics
- One-Way Frequencies
- Table Analysis
- Distribution Analysis

# Agenda



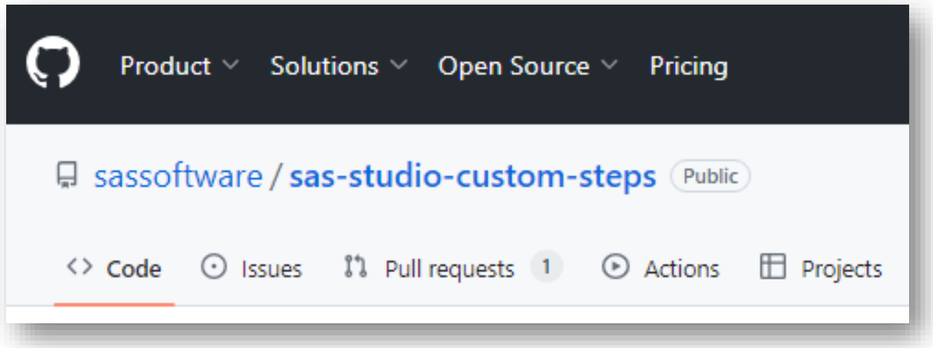
# Design your own Steps with “Custom Steps”




1. Date Picker Control
2. Color Picker Control
3. Read-only & hidden table/column selector controls
4. Column exclusion
5. Versioning with Git

# Enjoy the work from the community!

## sas-studio-custom-steps GitHub repository




46

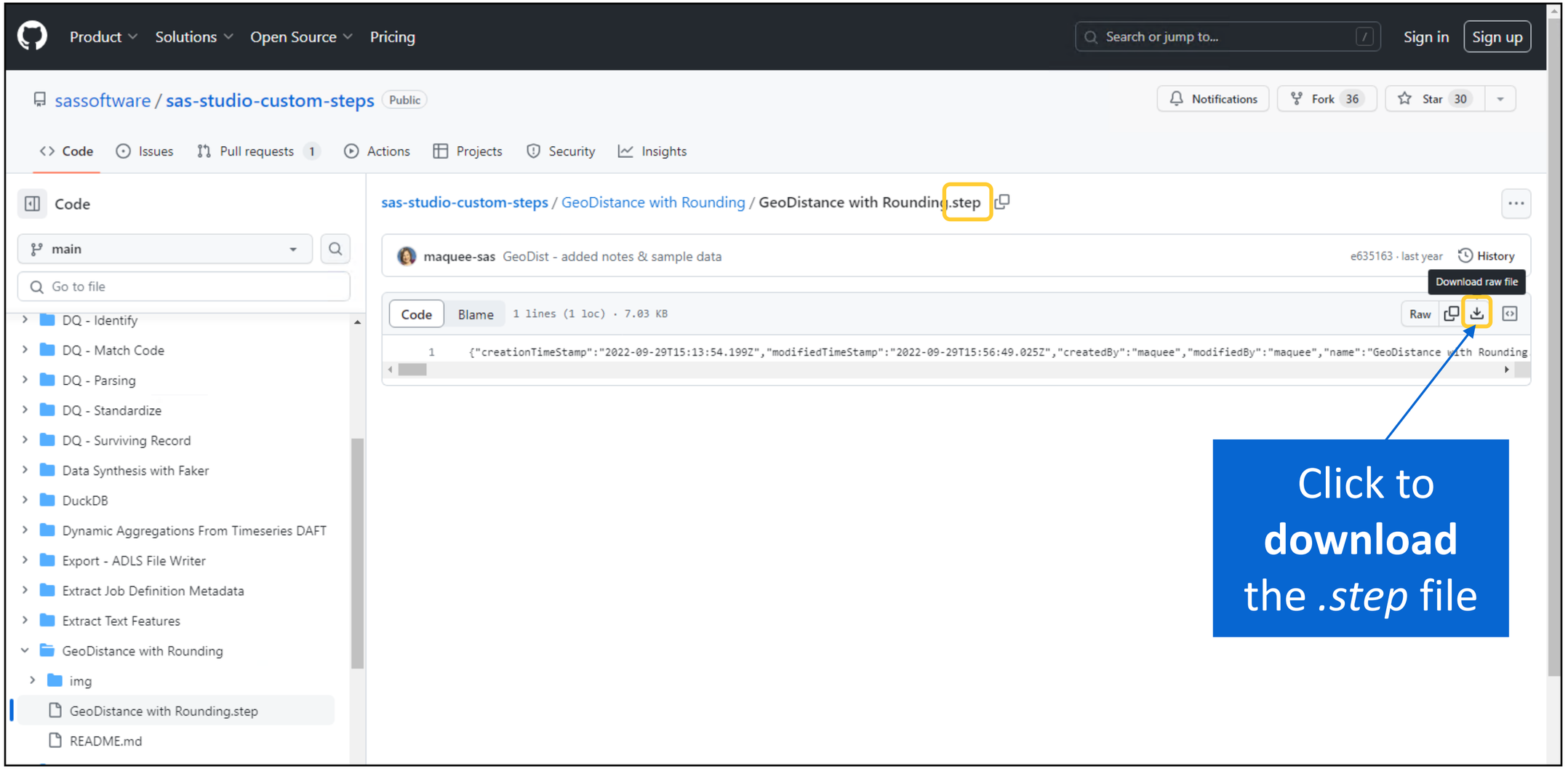
New steps

15

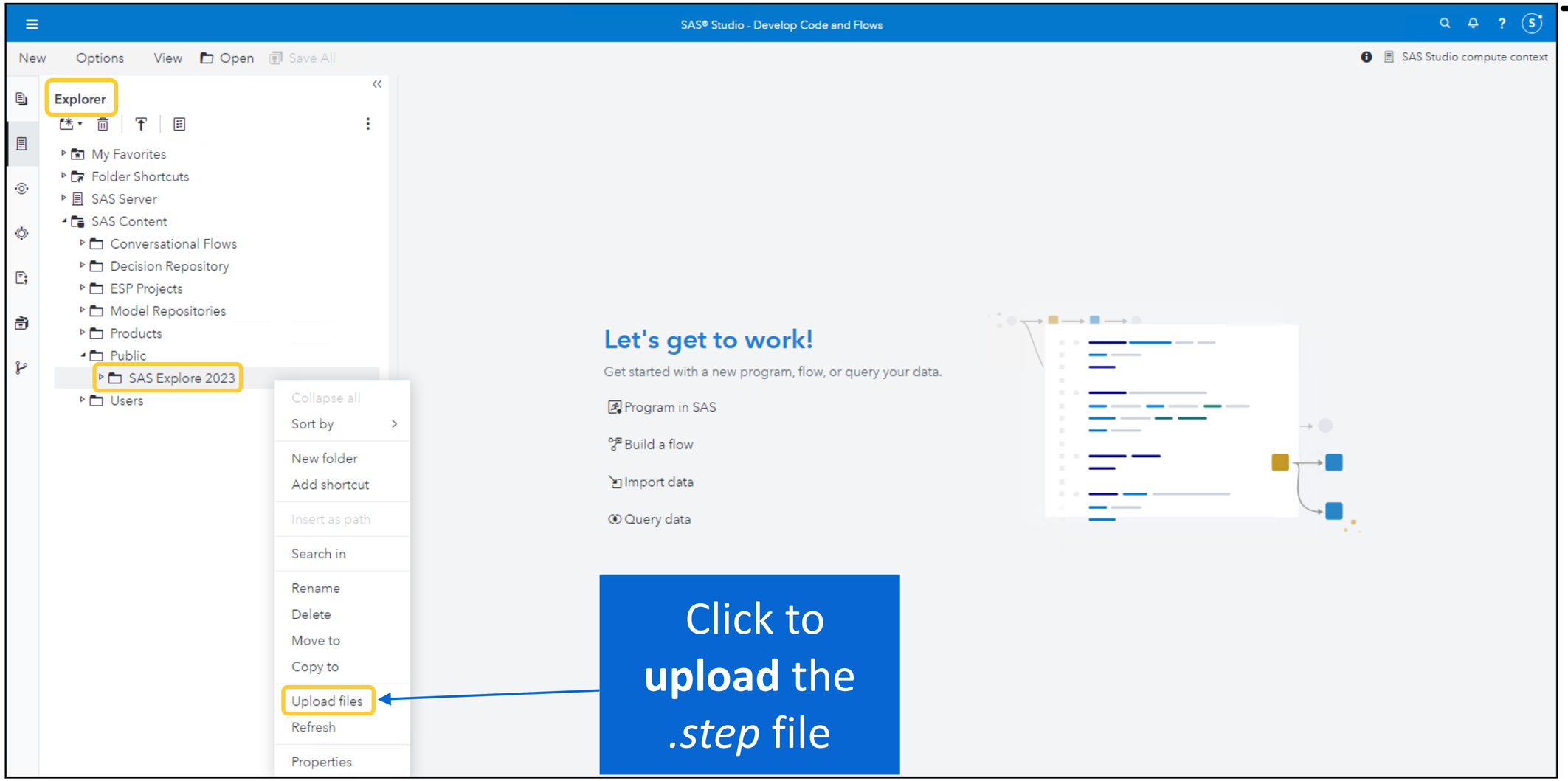
Contributors

| | | |
|---|---|---|
| Import - ADLS File Reader | Added missing version update to Custom Step About tab | 3 months ago |
| Import - Data Ingestion Auto Pilot DI... | Update README.md | last month |
| Import - Extract Table from PDF | changing to accomodate Wilbram's feedback, take 2 | 4 months ago |
| Import - Google Sheets | Implement Feedback | 6 months ago |
| Import - HTML Table | Update Import - HTML Table.step | last month |
| Lookup | Merge branch 'main' of github.com:torbenjuul/sas-studio-custom-steps | last year |
| NLP - Extract Rule Configuration | NLP - Extract Rule Configuration: minor code cleanup | 3 weeks ago |
| NLP - Identify Language | NLP - Identify Language : reference to CAS action | 6 months ago |
| NLP - Predefined Sentiment Analysis | WH feedback - minor correction | 4 months ago |
| NLP - Profile Text | Renamed NLP - Profile Text folder name plus minor edits | 6 months ago |
| NLP - Score Text Classifier | Post WH Friday Feedback | 5 months ago |
| NLP - Train Text Classifier | Post WH Friday Feedback | 5 months ago |
| Python Virtual environments | Renamed as per standard | 10 months ago |
| R Runner | Update README.md | 5 days ago |
| Rank Columns - Starter template | First Public Release to Public | last year |
| SCD Loader | Cleaned up code i SCD Loader | last year |
| Send SMTP Email | updated code to clear macro | 4 months ago |
| Send Teams Message | Add Changes to README | 2 months ago |
| Surrogate Key Generator | Spelling | last year |
| Synthetic Data Generation | PR #80 bullet formatting | last week |

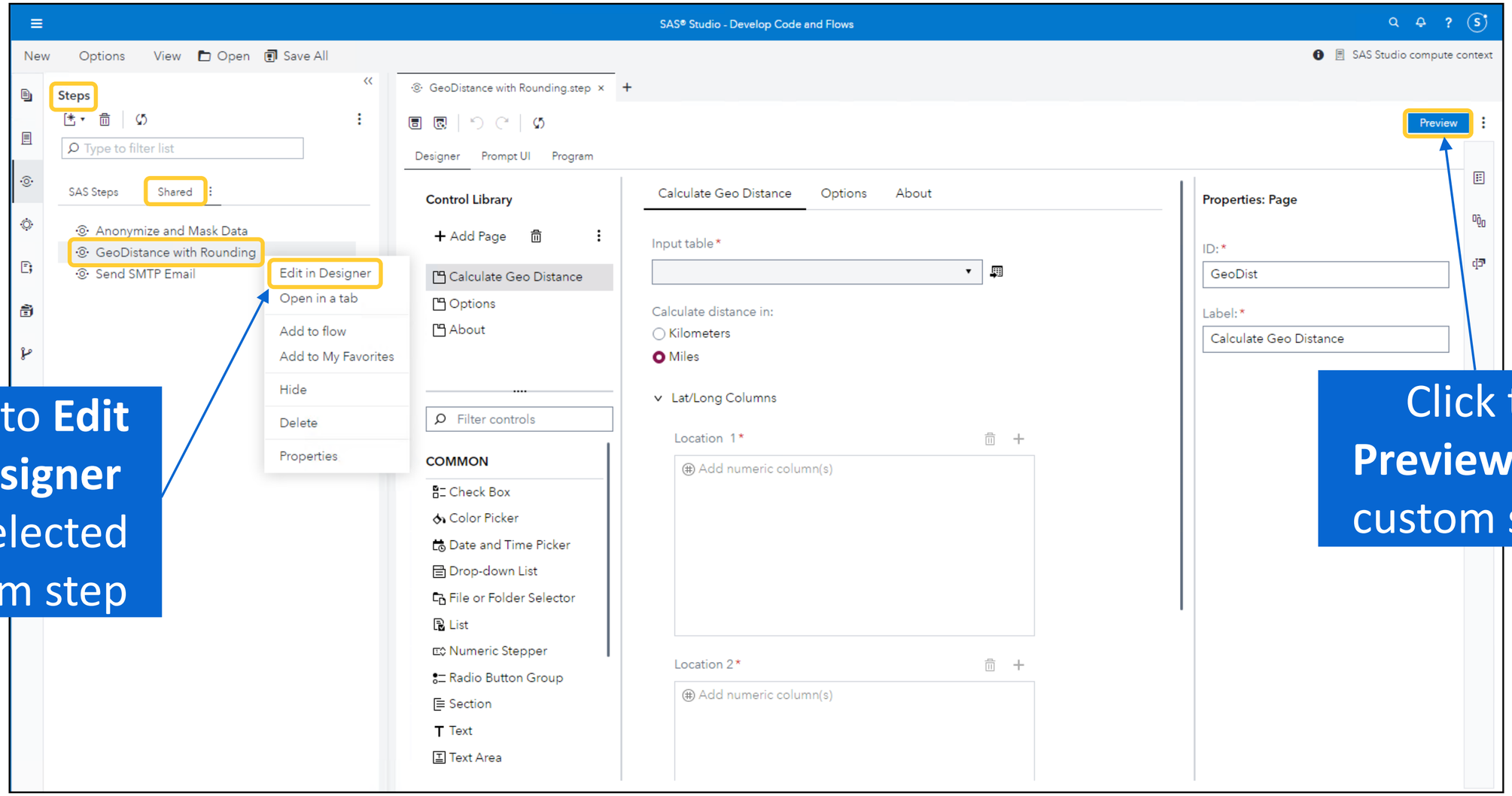
# Download Individual Custom Step



# Upload a Custom Step



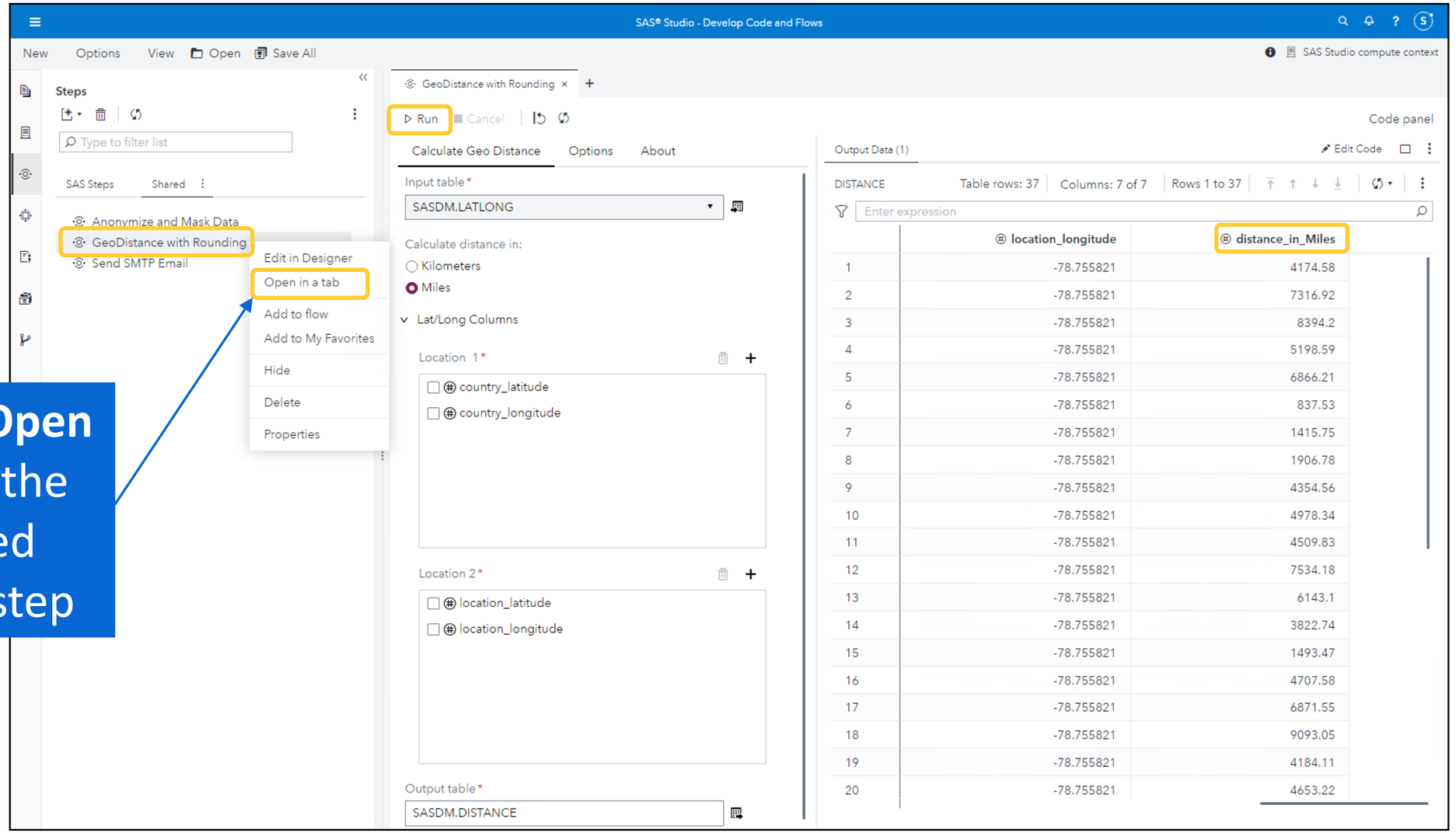
# Preview Custom Step in Designer




Click to **Edit in Designer** the selected custom step

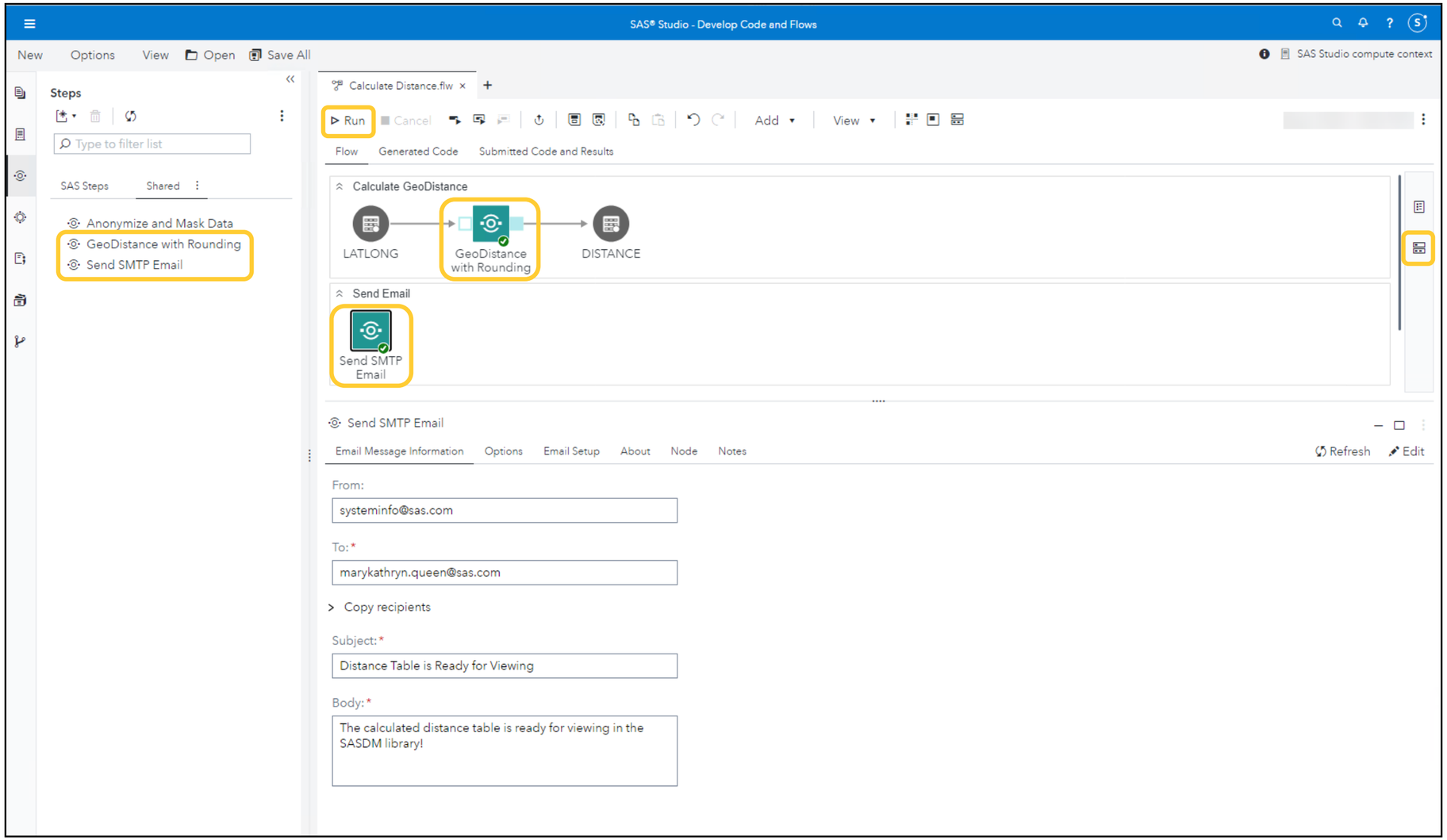
Click to **Preview** the custom step

# Run a Custom Step in Stand-Alone Mode

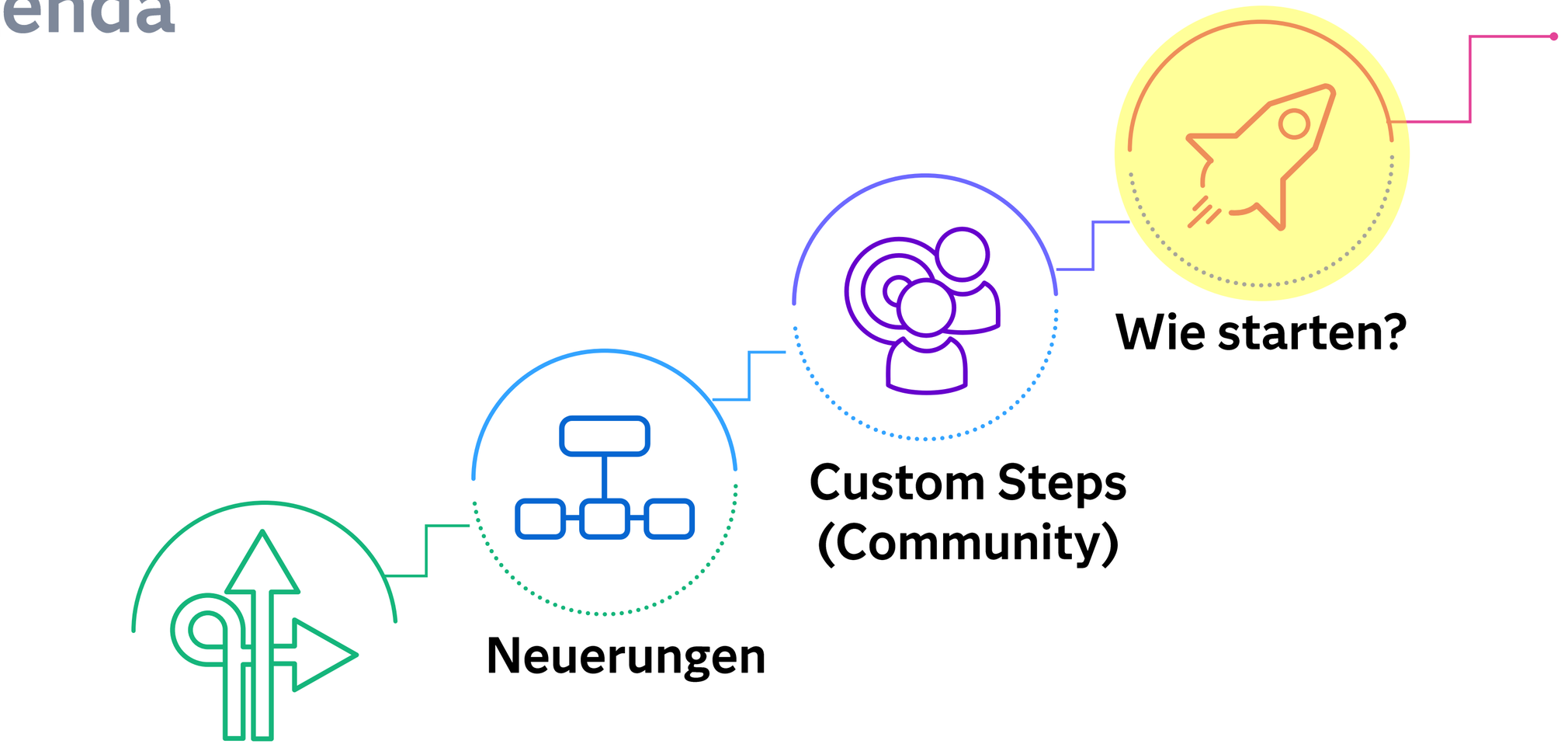



Click to **Open in a tab** the selected custom step

# Use Custom Steps in a SAS® Studio Flow

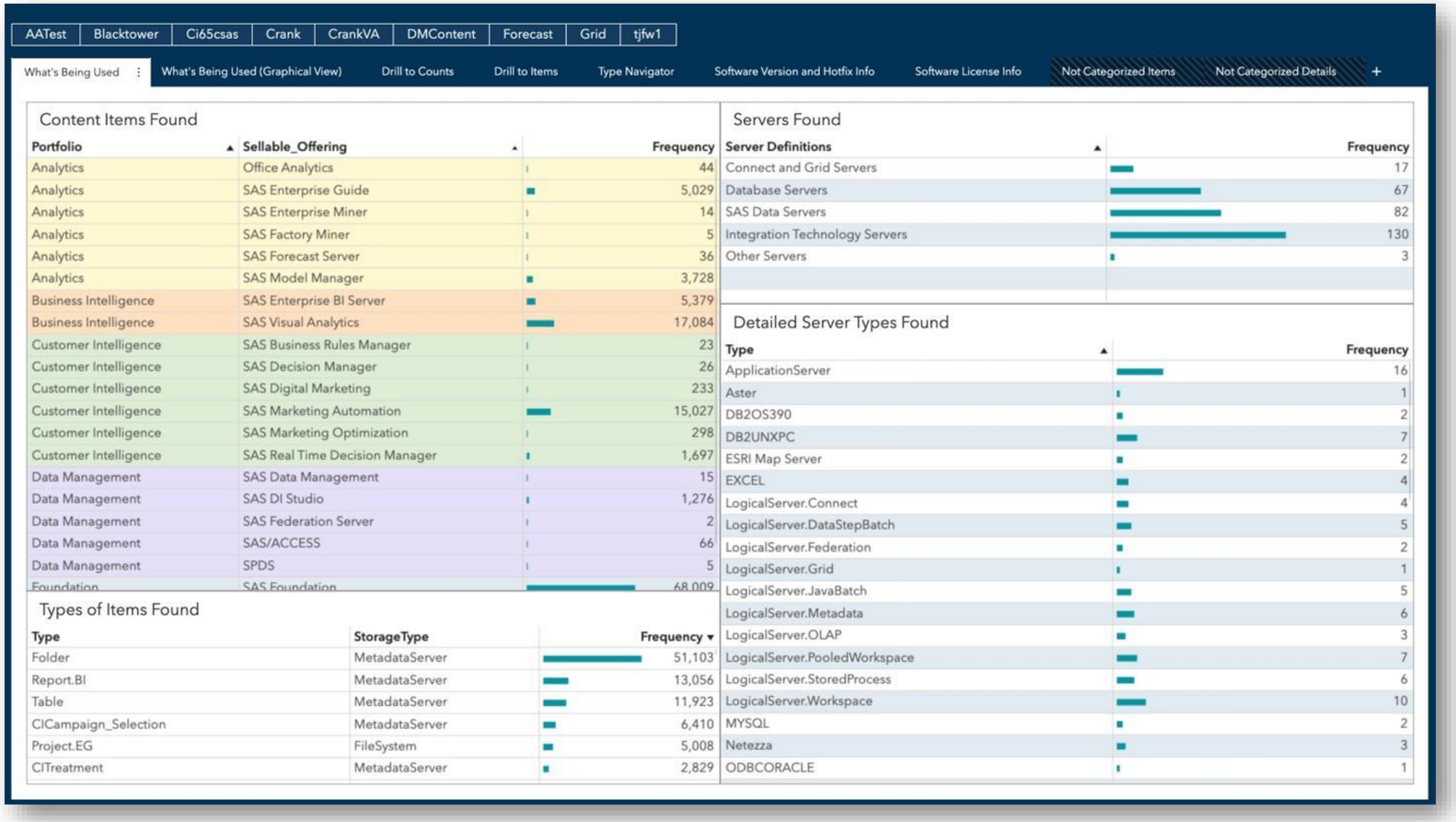


# Agenda



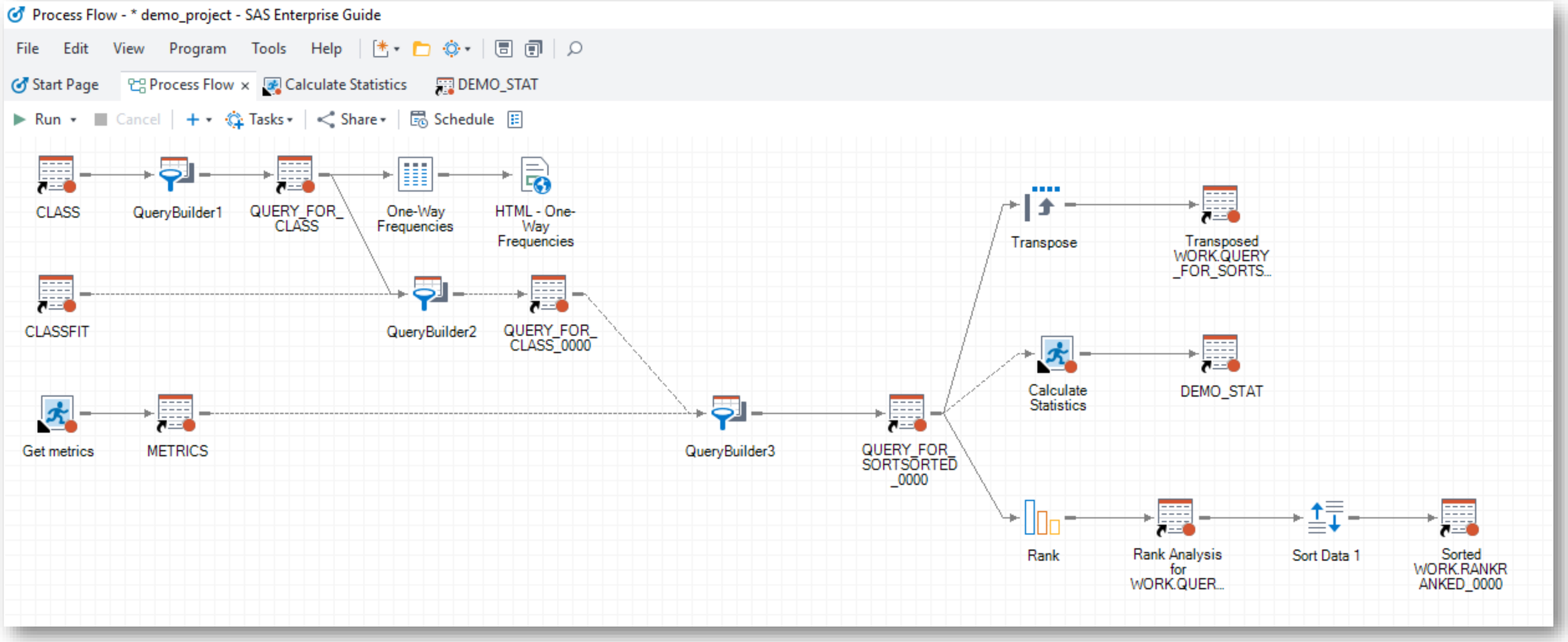
# SAS 9 Content Assessment

A collection of applications to estimate the state and readiness of SAS 9 system for migration



# Automated migration

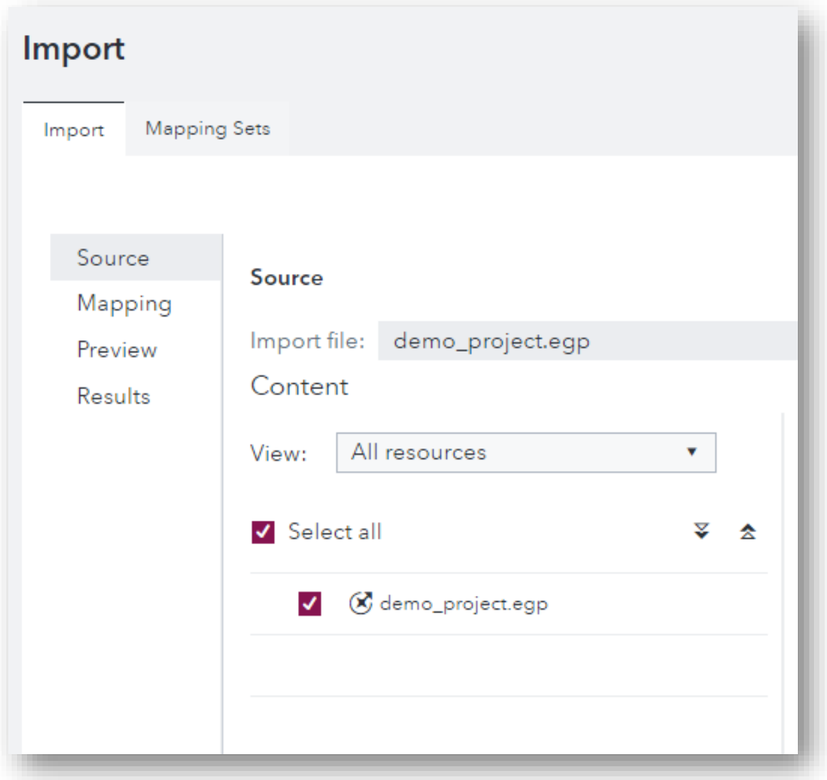
## Export



# Automated migration

## Import

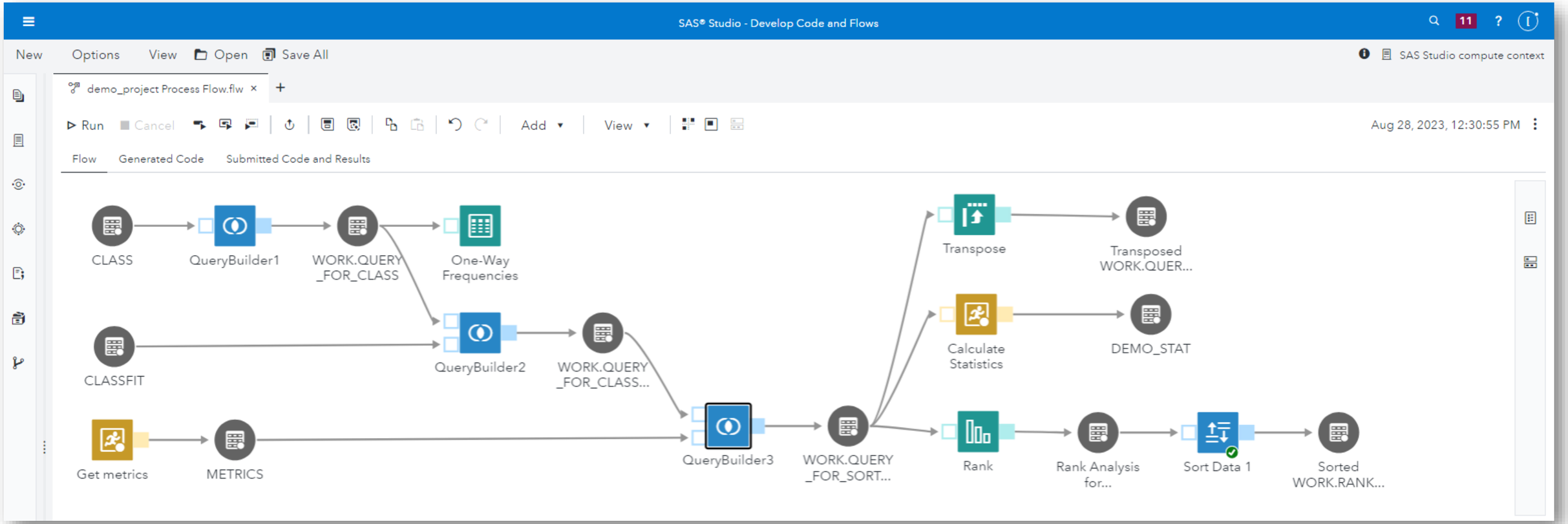
### SAS Environment Manager




### Command Line Utility (CLI)

# Automated migration

## Compare, refactor, run



# What's Coming?

## More Steps

Data Visualization, Data Quality Steps, Look Up

## New UI

Revamped User Interface with new data viewer, data connection browser

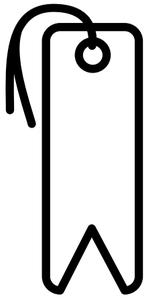
## More Custom Steps

Extended controls, SAS Tasks Conversion

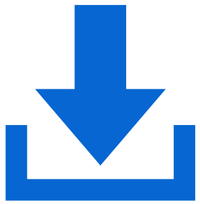
## More Integration

With SAS Information Catalog, Data Quality, Model Studio/Manager, Intelligent Decisioning, In-Database

# Resources




[GitHub Repository for Sharing SAS® Studio Custom Steps]



[Download ALL Custom Steps from the GitHub Repository]

[SAS Community Articles on Custom Steps]

[Custom Step Documentation]

# Closing Remarks

- Download Section der SAS Clubs
  - https://github.com/gerhard1050/DACH-SASUserGroups/tree/SAS-Club
- Playlist Viya-Verse von David Weik
  - https://www.youtube.com/@DavidWeik/playlists
- Ask-the-expert
  - https://www.sas.com/de_de/learn/ask-the-expert-webinars.html
- Einladungen zum SAS-Club