



# AI support for network workflow design and implementation

Infoshare: Orchestration solutions for network development - WP6 update

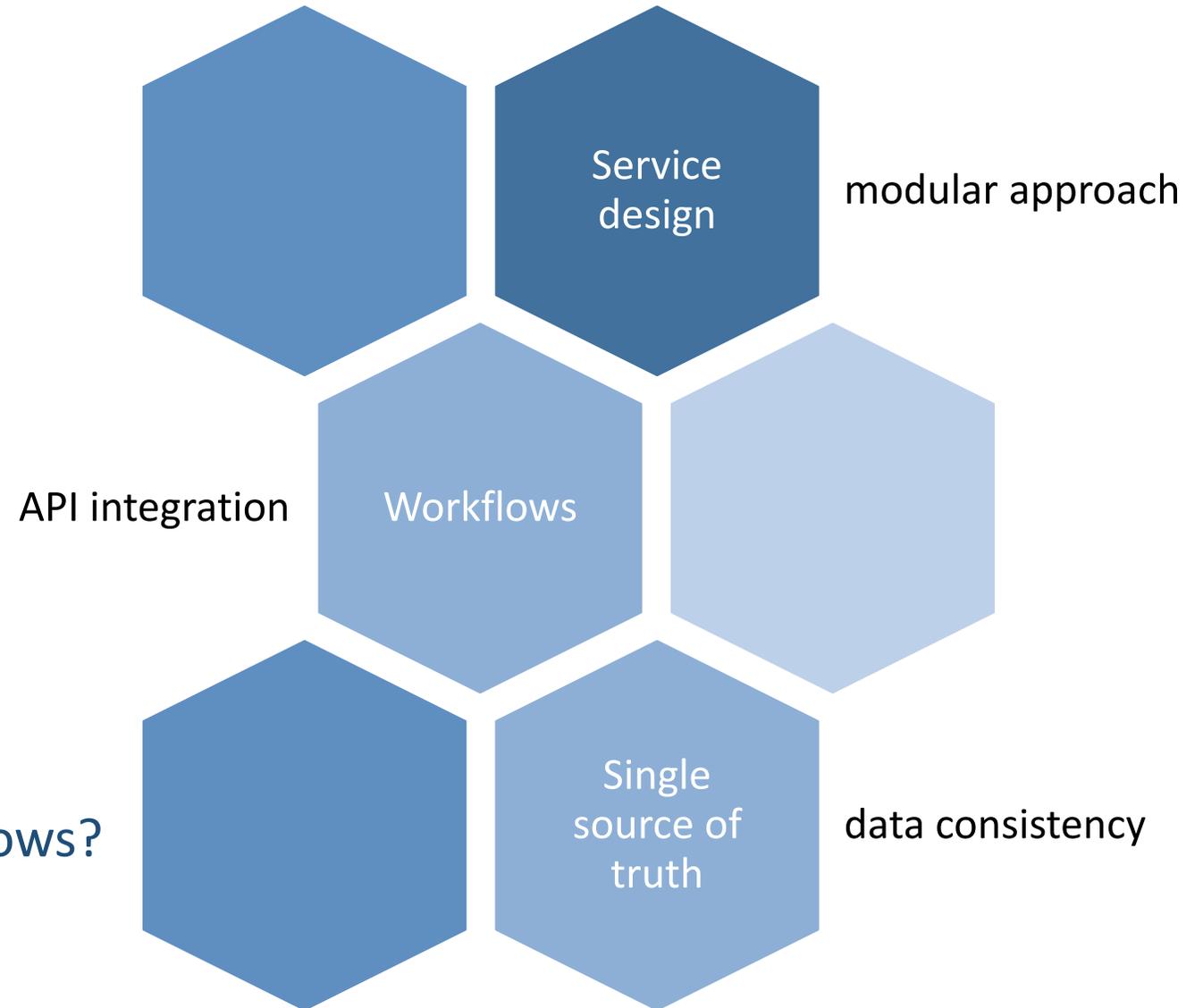
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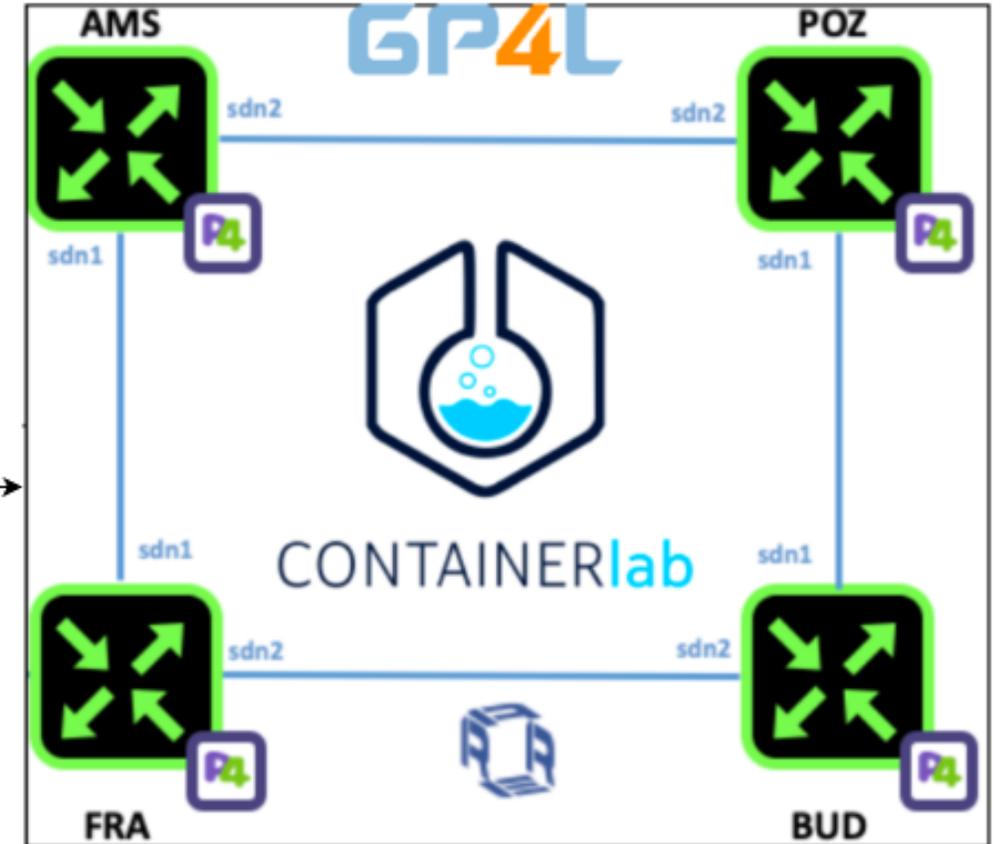
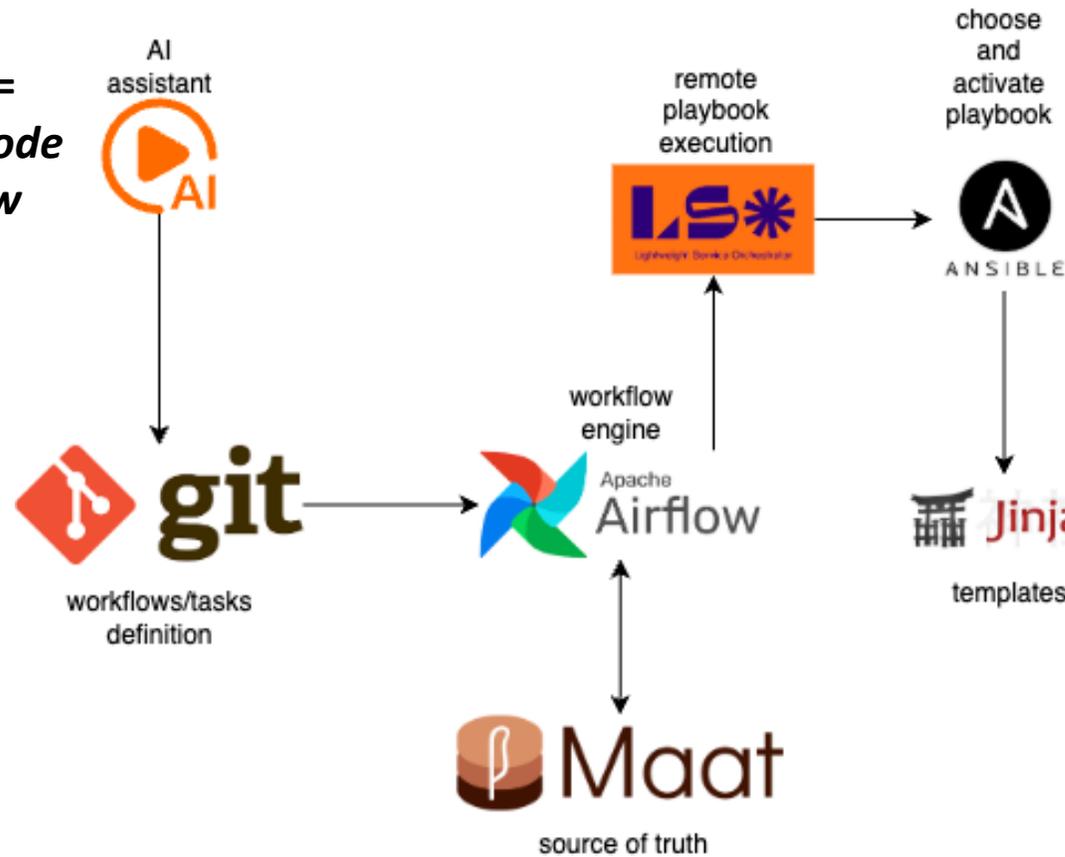
# GÉANT GP4L Labs

- **Orchestration and Automation for Network Services**
- Can AI support the process by designing and implementing service data models and workflows?



# Approach

ChatGPT-4o =  
*interactive code  
and workflow  
designer*



GP4L network  
digital twin

# Goal: Fully AI-supported orchestration workflow design



***Vibe coding*** approach

interactive, iterative conversation with the AI  
zero code is purely manually produced



Standards-compliant

Assistant is instructed to use TM Forum ODA + APIs



Emphasis on scalable solution

Assistant is instructed to provide **reusable, modular, adaptable** workflows

# AI Assistant in Action



THE LOOP: Prompt → AI → draft workflow → test → refine



Phase 1: Design service and workflow blueprint with holistic prompting

Develop a containerized software solution that allows users to create L2 circuits through a simple GUI, orchestrated by Airflow, using Maat as the source of truth, Ansible for device configurations, compliant with TM Forum standards. I want processes that will be easily reusable for other services.



Phase 2: Develop workflow logic task by task with granular prompting

add automatic retries on any HTTP call

# Lessons Learned



## AI is amazing at service design & blueprinting

Excellent intrinsic knowledge of TM Forum ODA and Airflow

- Without any user provided documentation

Needs *guidance on component-specific logic*



## Very good guidance of the development process

Correctly identifies priorities

Can adapt to changes of initial requirements with just a few prompts



## Iterative prompting improves implementation

Provided with the encountered errors it is mostly good at fixing them



## Works best with clear standards and well-documented APIs

Providing JSON schema for data model and API patterns per component works best

# Main takeaways

The more detailed information you provide the more usable the output

- Long input works better, explain everything you have and want

Most of the problems arise in points where the AI hasn't got enough information and starts to "imagine" how things work

- Hallucinations happen when "holes" need to be filled in with smth

One you fall into the rabbit whole you can't get out

- It is almost impossible to make him forget something
- Once he starts to be "delusional" you can't get him back, better start over

# Impact



Ultra fast design



Faster prototyping with all the bells and whistles



Lowers barrier for less experienced automation engineers

No need to know the ins and outs of Airflow beforehand



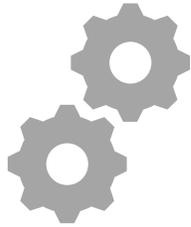
Potential to accelerate service rollout & innovation

Hours versus days

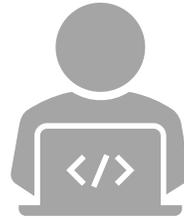


Opens door to AI-assisted **standards-compliant orchestration at scale**

# Looking forward



Using AI agents for dynamic workflows



Multi-service, multi-domain workflows



Adaptive AI that learns from *our* corrections



# Thank You

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