



HAL
open science

The SK8 project: A scalable institutional architecture for managing and hosting Shiny applications

David Carayon

► **To cite this version:**

David Carayon. The SK8 project: A scalable institutional architecture for managing and hosting Shiny applications. Shiny In Production, Jumping Rivers Ltd, Oct 2024, Newcastle Upon Tyne, United Kingdom. hal-04735290

HAL Id: hal-04735290

<https://hal.inrae.fr/hal-04735290v1>

Submitted on 14 Oct 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - ShareAlike 4.0 International License



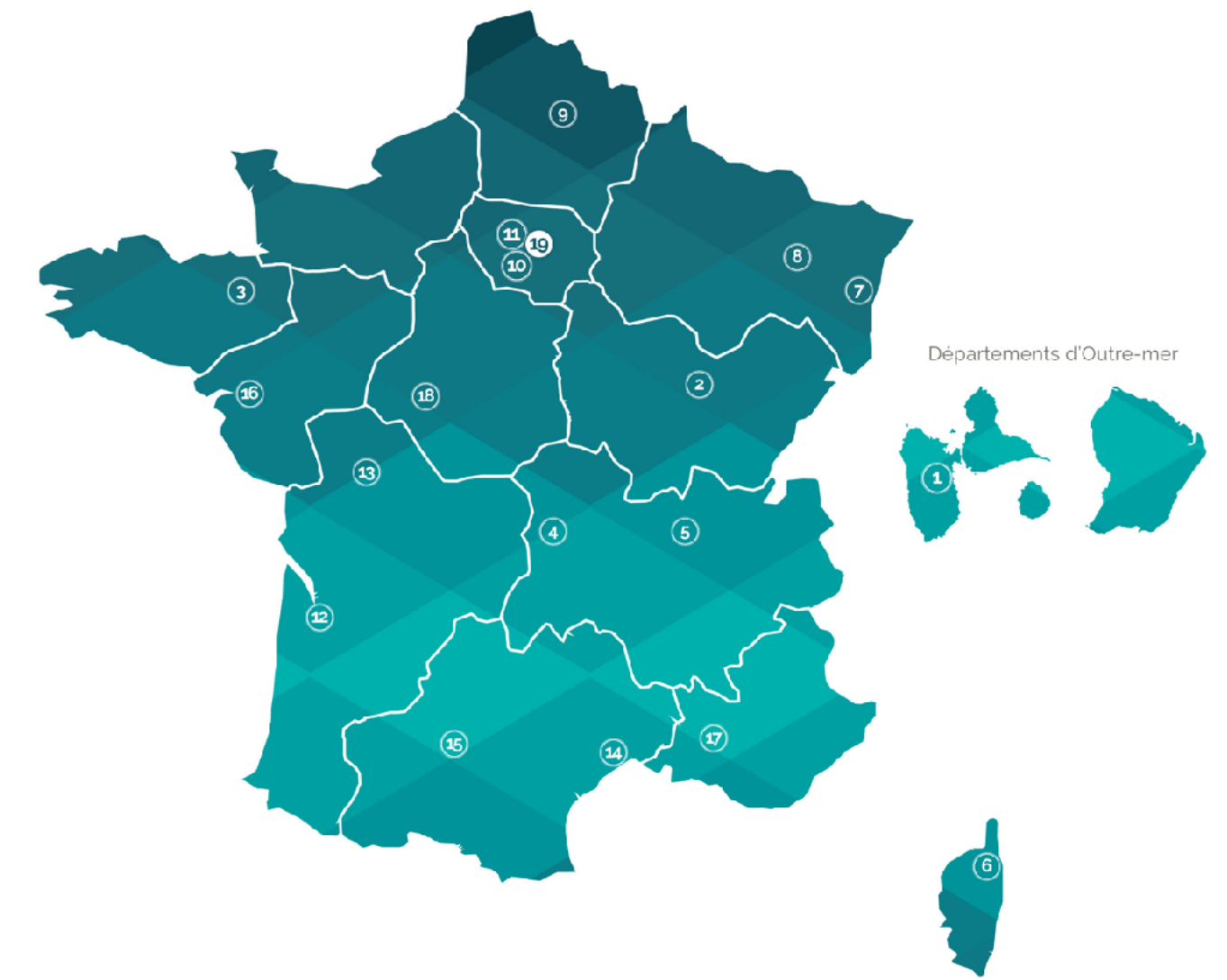
The SK8 project: A scalable institutional architecture for managing and hosting Shiny applications

David CARAYON

Statistician
INRAE (France)

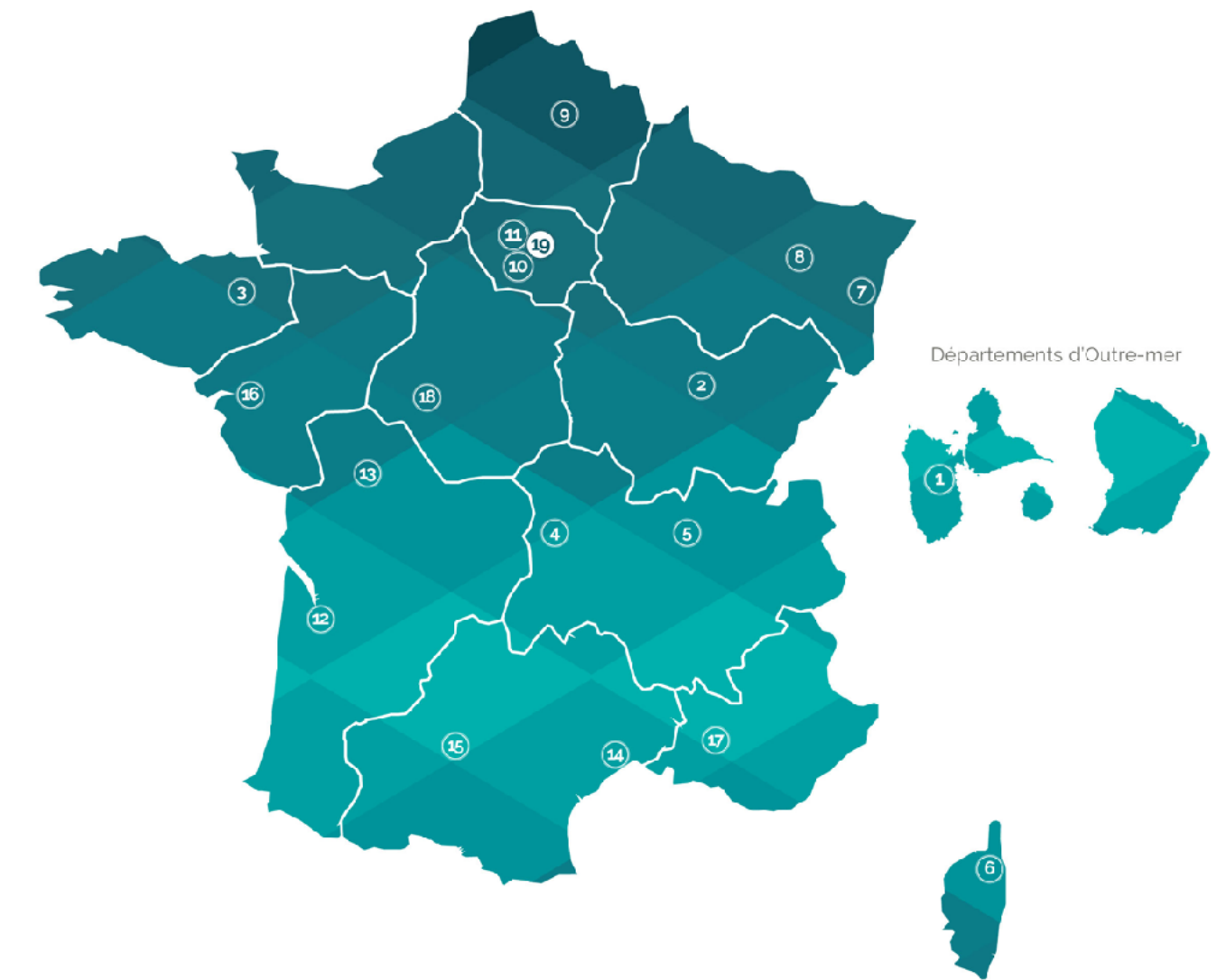
➤ R & Shiny @ INRAE

- French National Research Institute for Agriculture, Food and the Environment
- ~12,000 researchers and engineers



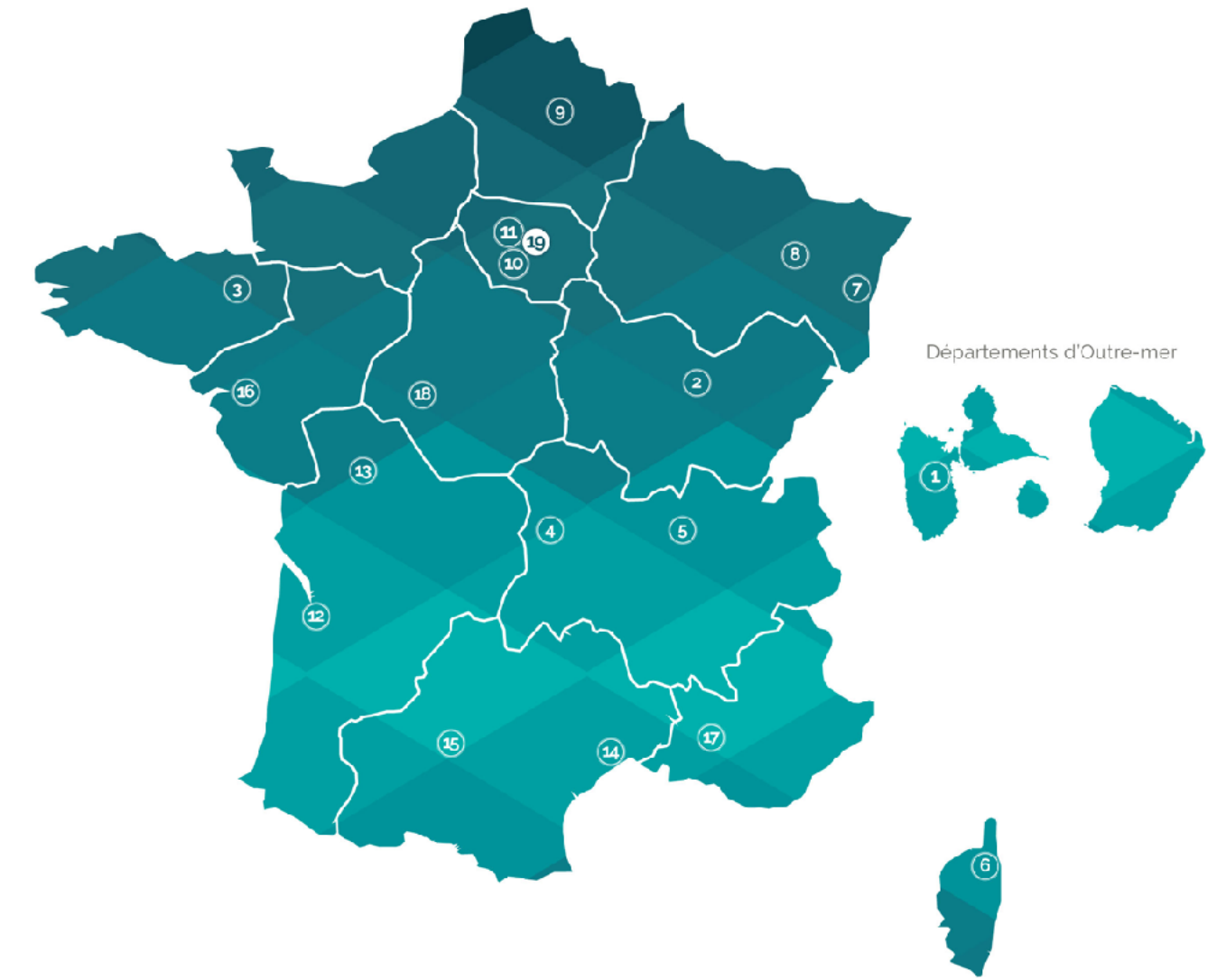
➤ R & Shiny @ INRAE

- French National Research Institute for Agriculture, Food and the Environment
- ~12,000 researchers and engineers
- Shiny used as a powerful tool to simulate, map, visualise and share research while being accessible for non-IT people (statisticians, biologists)



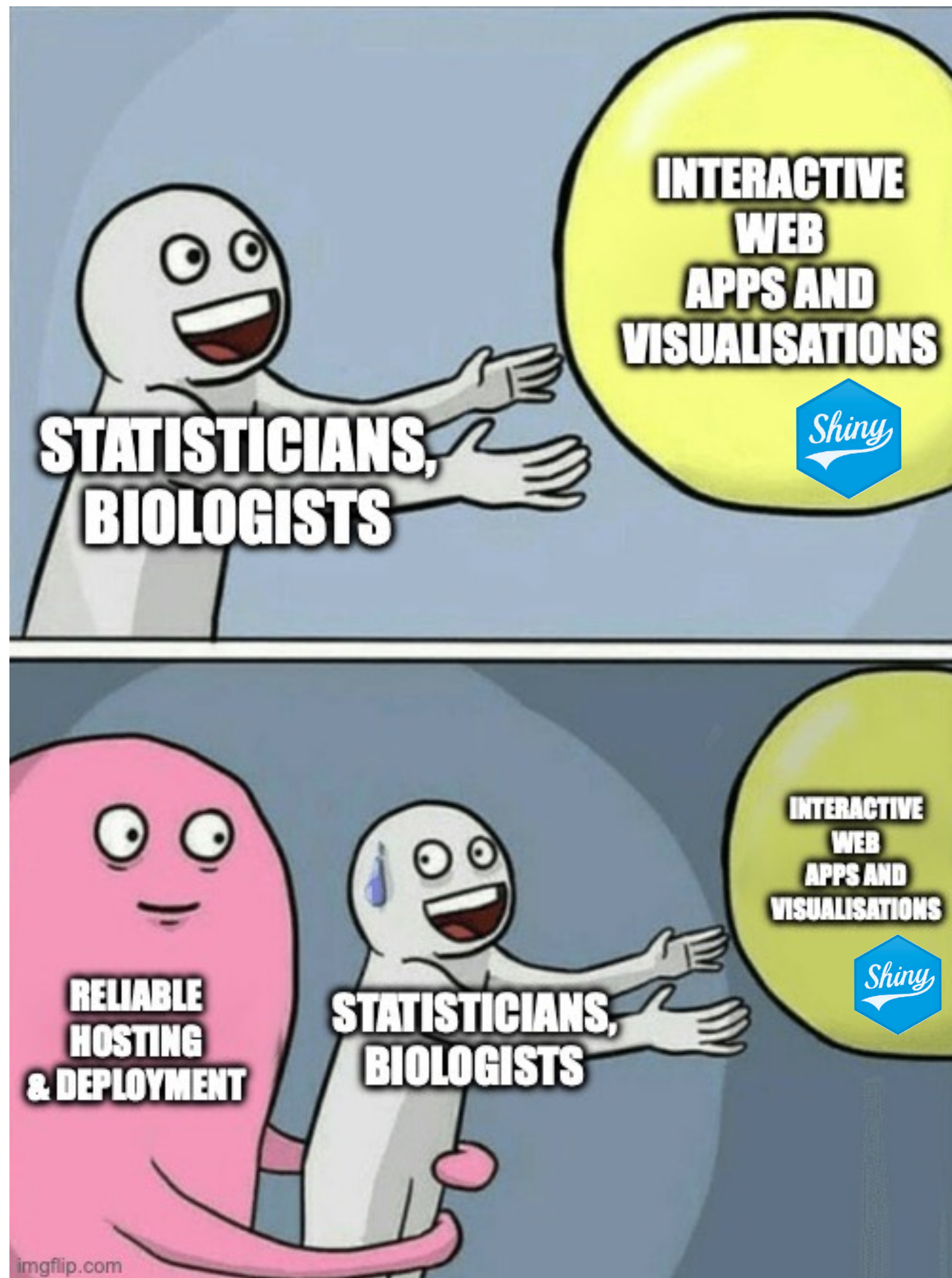
➤ R & Shiny @ INRAE

- French National Research Institute for Agriculture, Food and the Environment
- ~12,000 researchers and engineers
- Shiny used as a powerful tool to simulate, map, visualise and share research while being accessible for non-IT people (statisticians, biologists)
- SK8 team : ~15 engineers from all over France working on Shiny apps deployments
- **Shiny** **K**ubernetes **S**ervice ➔ SK8SS ➔ 

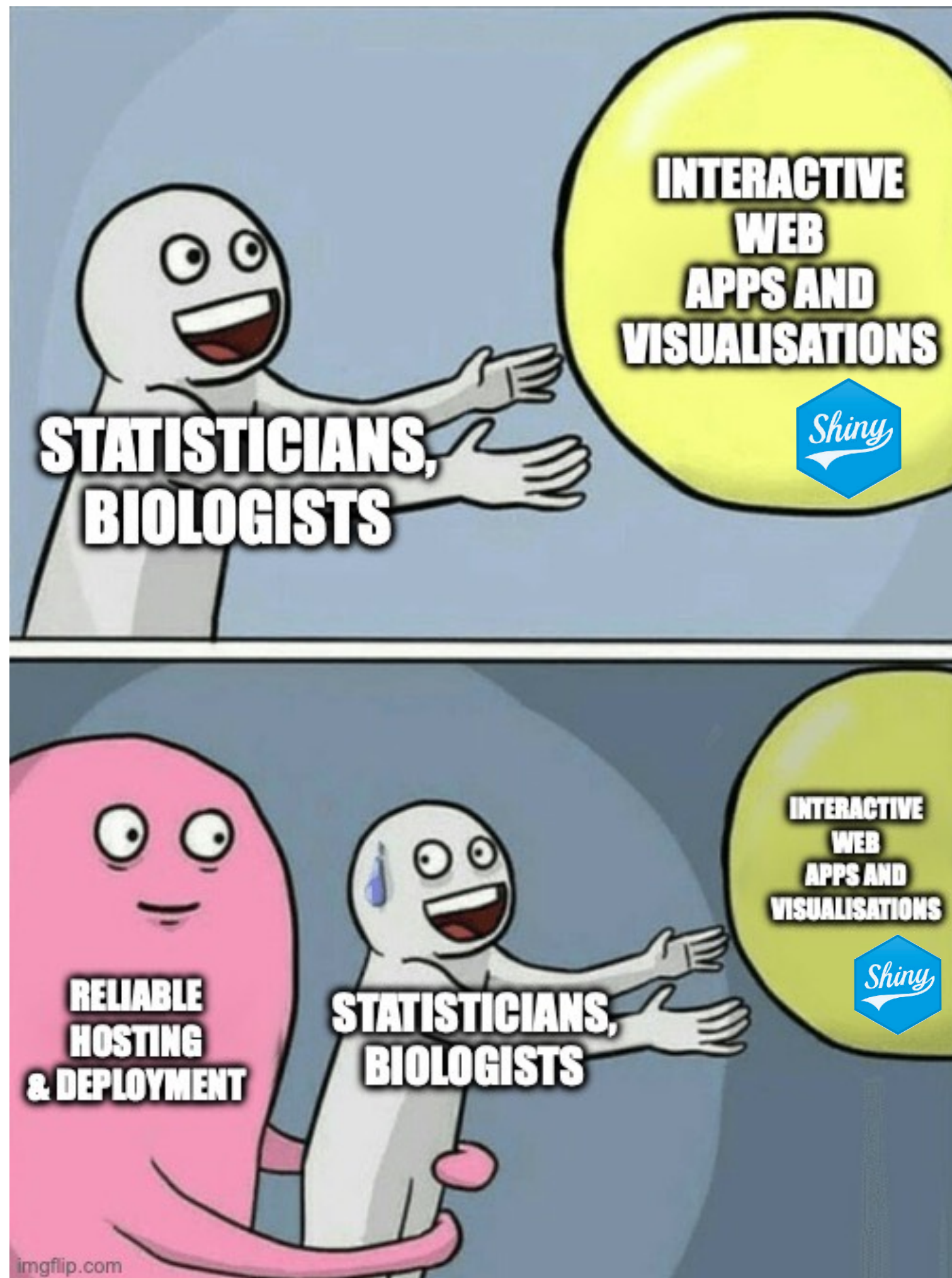


The SK8 🛹 team

➤ The bumps on the road 🚧



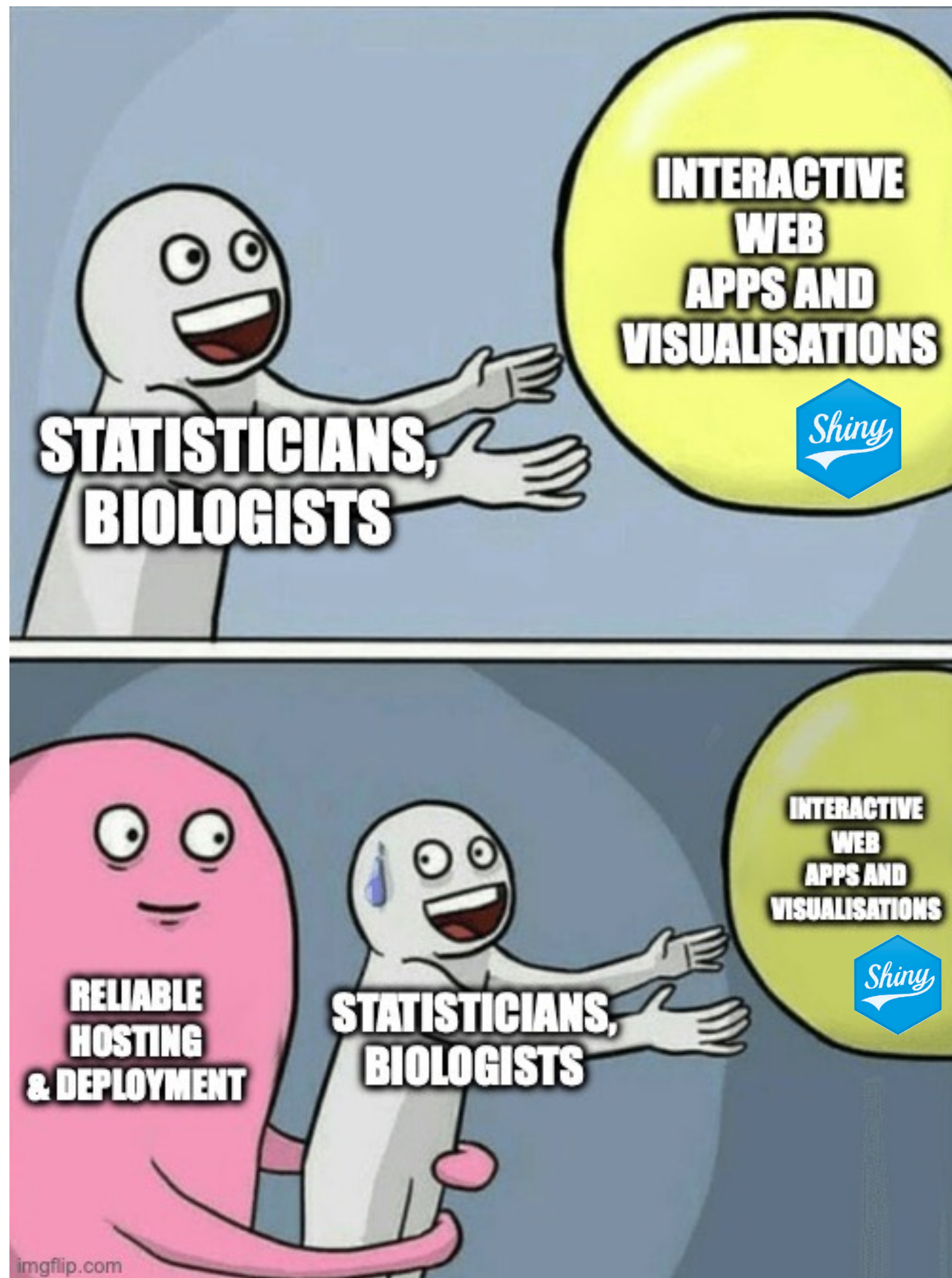
➤ The bumps on the road 🚧



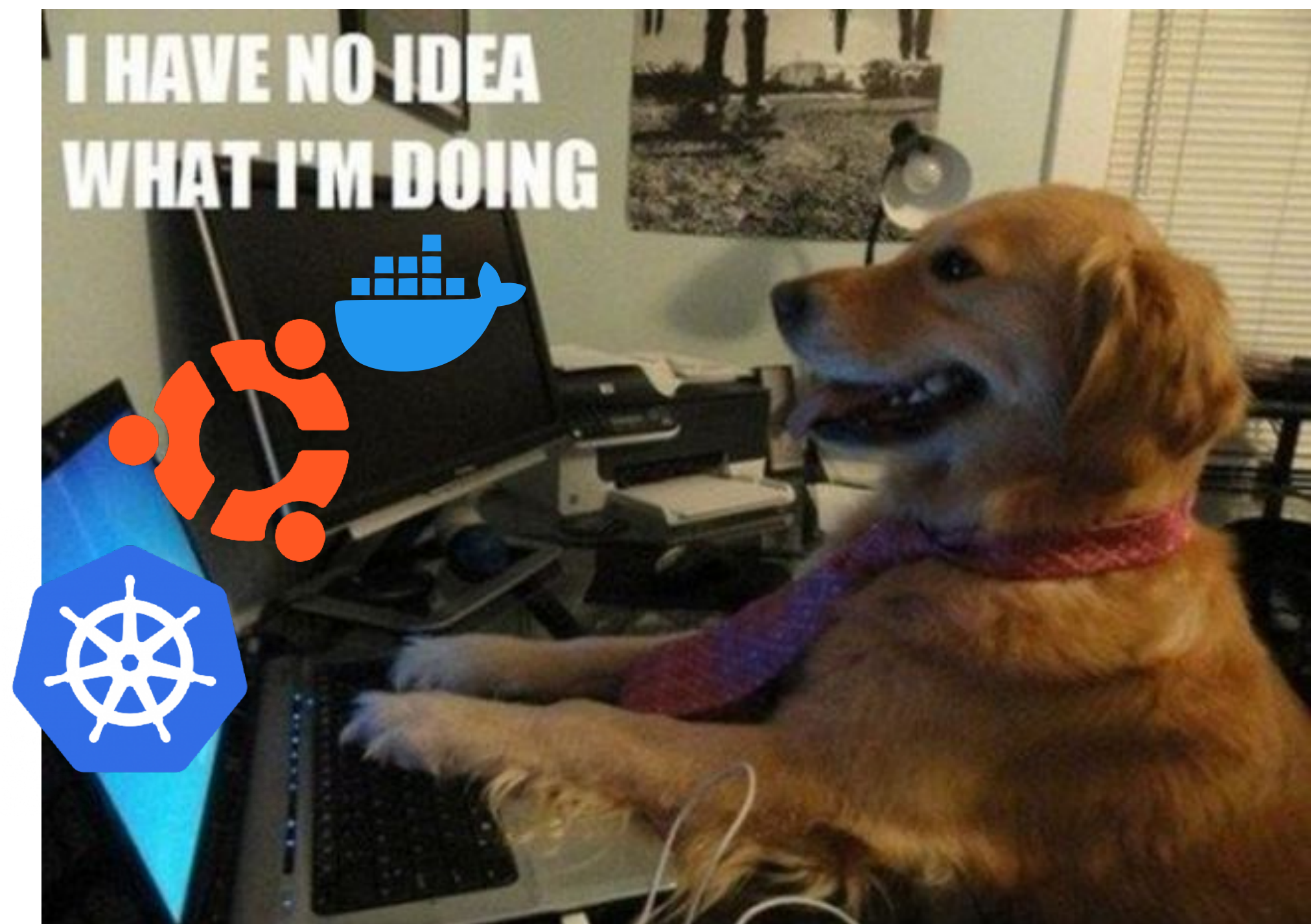
- Paid/Proprietary solutions (Posit, AWS, GCP, etc.) are **not** an option because **public money** and **EU (GDPR)**  **posit**™ Connect  **aws** 



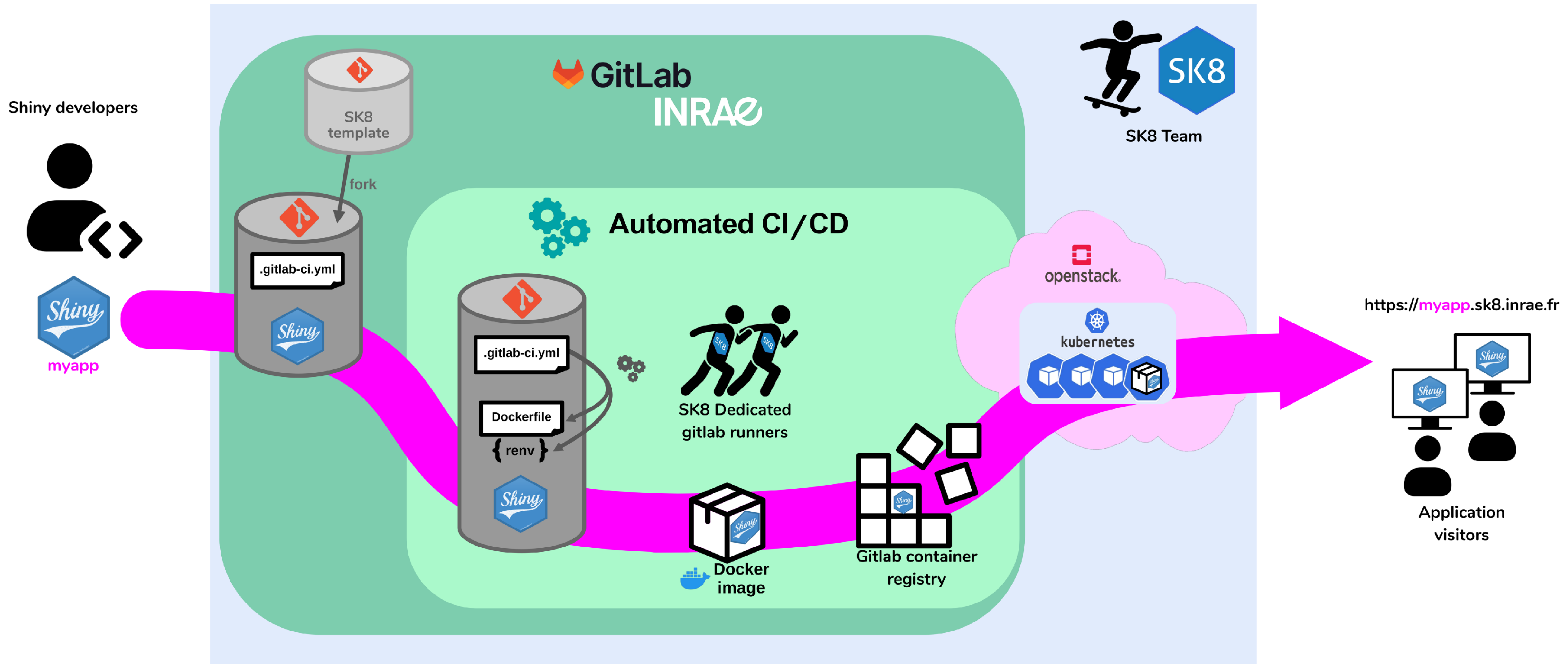
➤ The bumps on the road 🚧



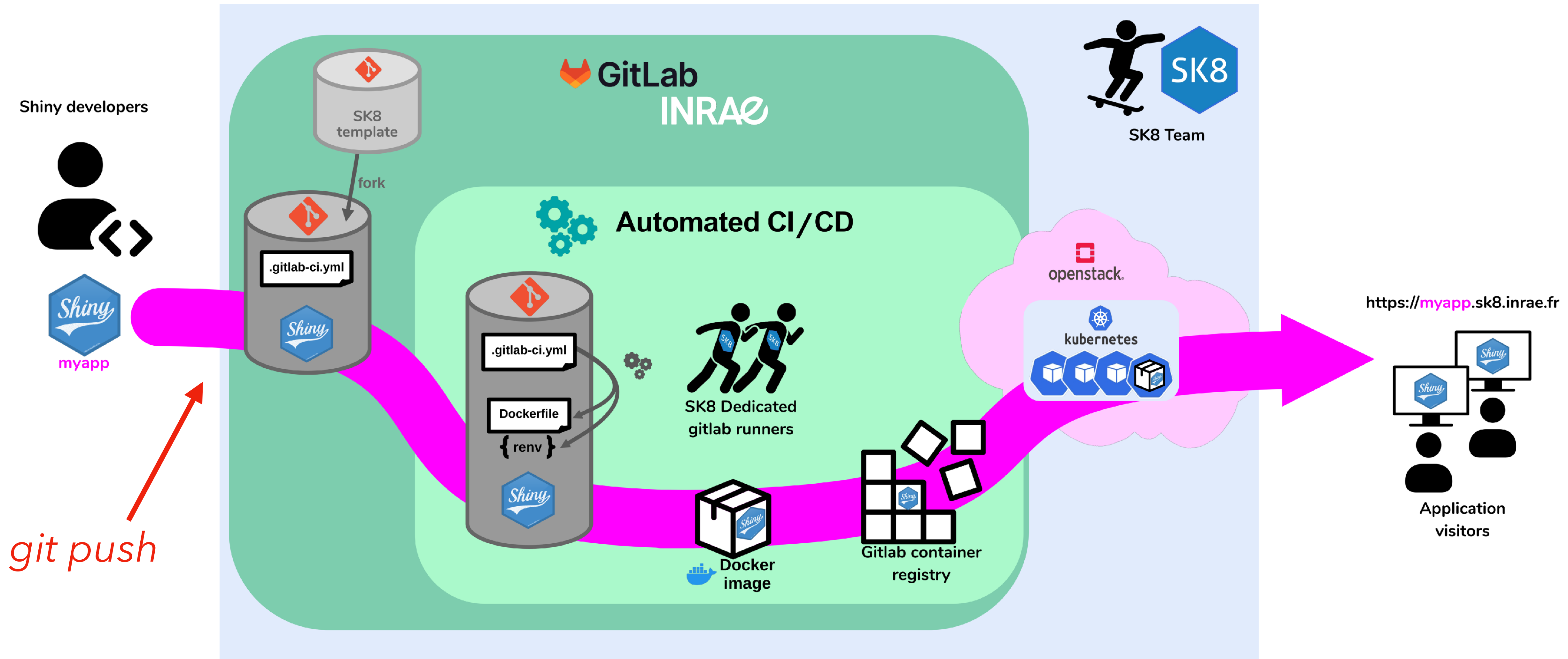
- Paid/Proprietary solutions (Posit, AWS, GCP, etc.) are **not** an option because **public money** and **EU (GDPR)**  **posit**™ Connect  
- Statisticians and biologists are not IT guys



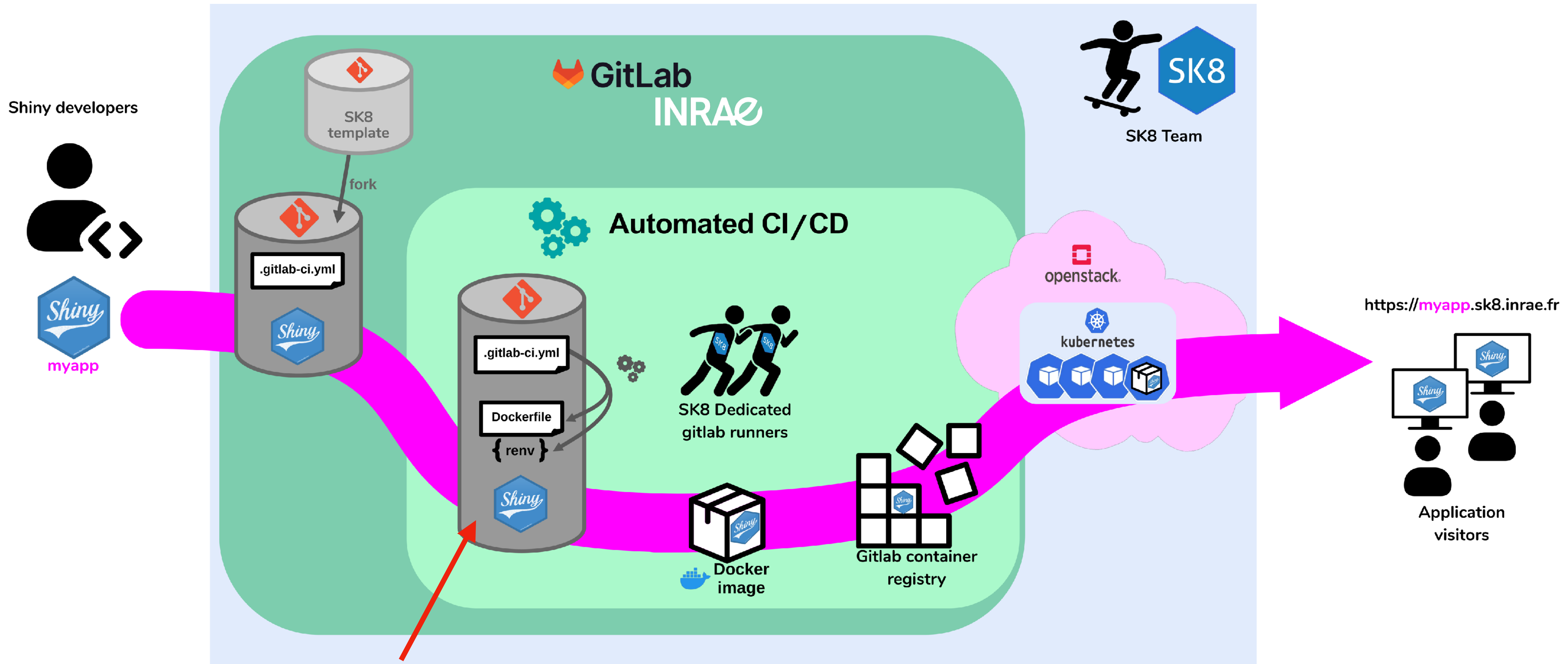
➤ Smoothing the ride 🧠💡



➤ Smoothing the ride 🧠💡

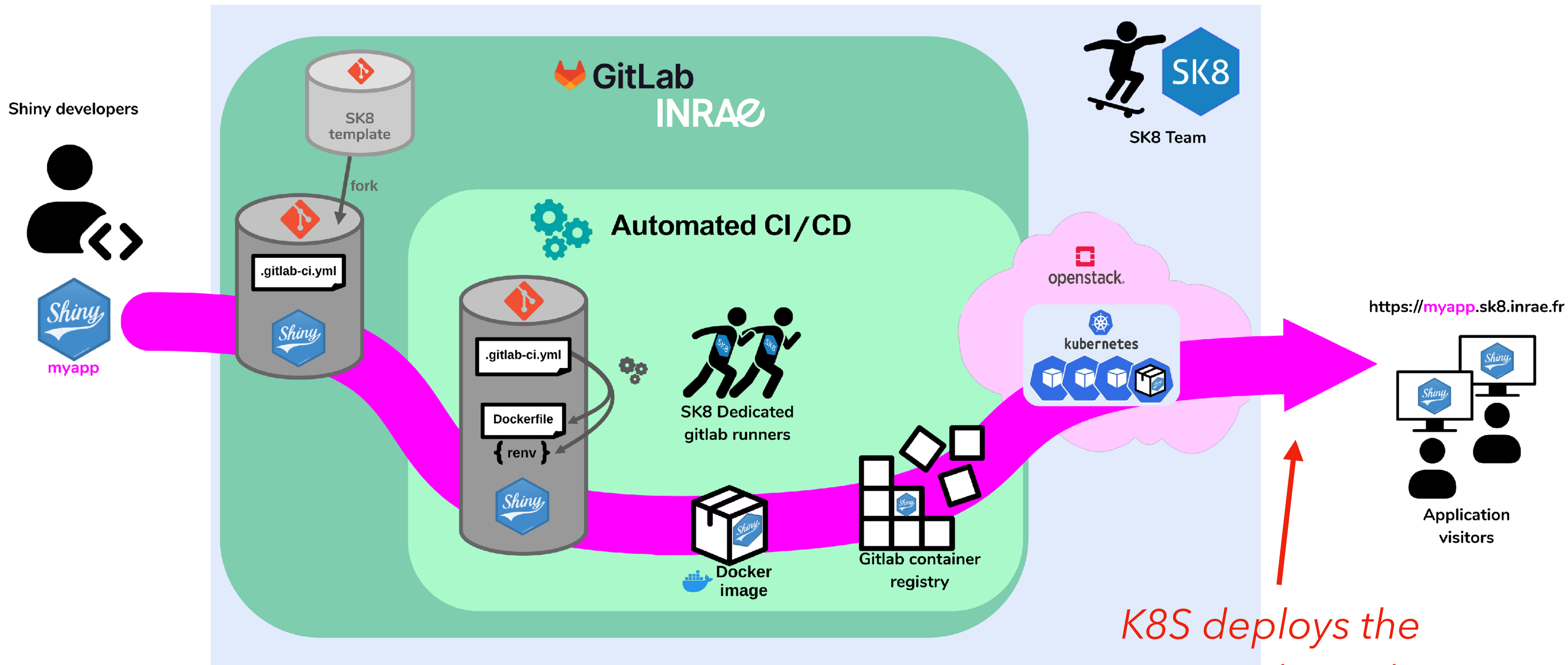


➤ Smoothing the ride 🧠💡



CI/CD : {renv} + {pak}
= Dockerfile

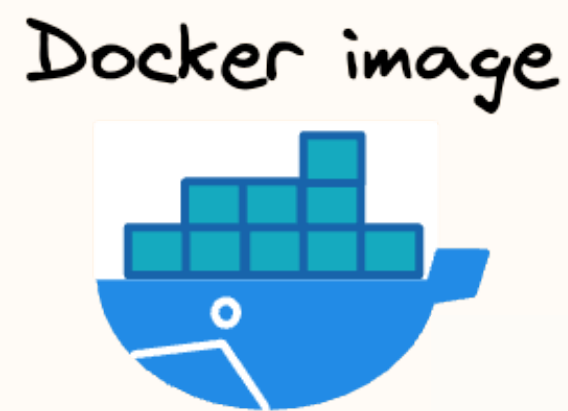
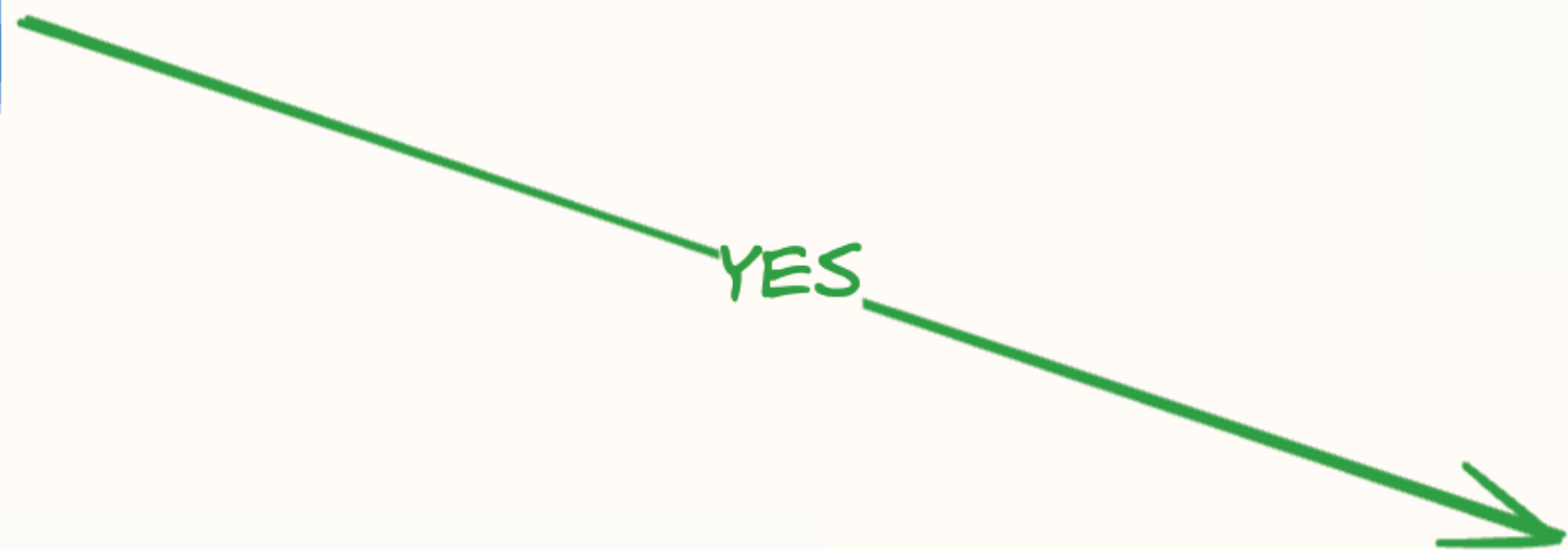
➤ Smoothing the ride 🧠💡



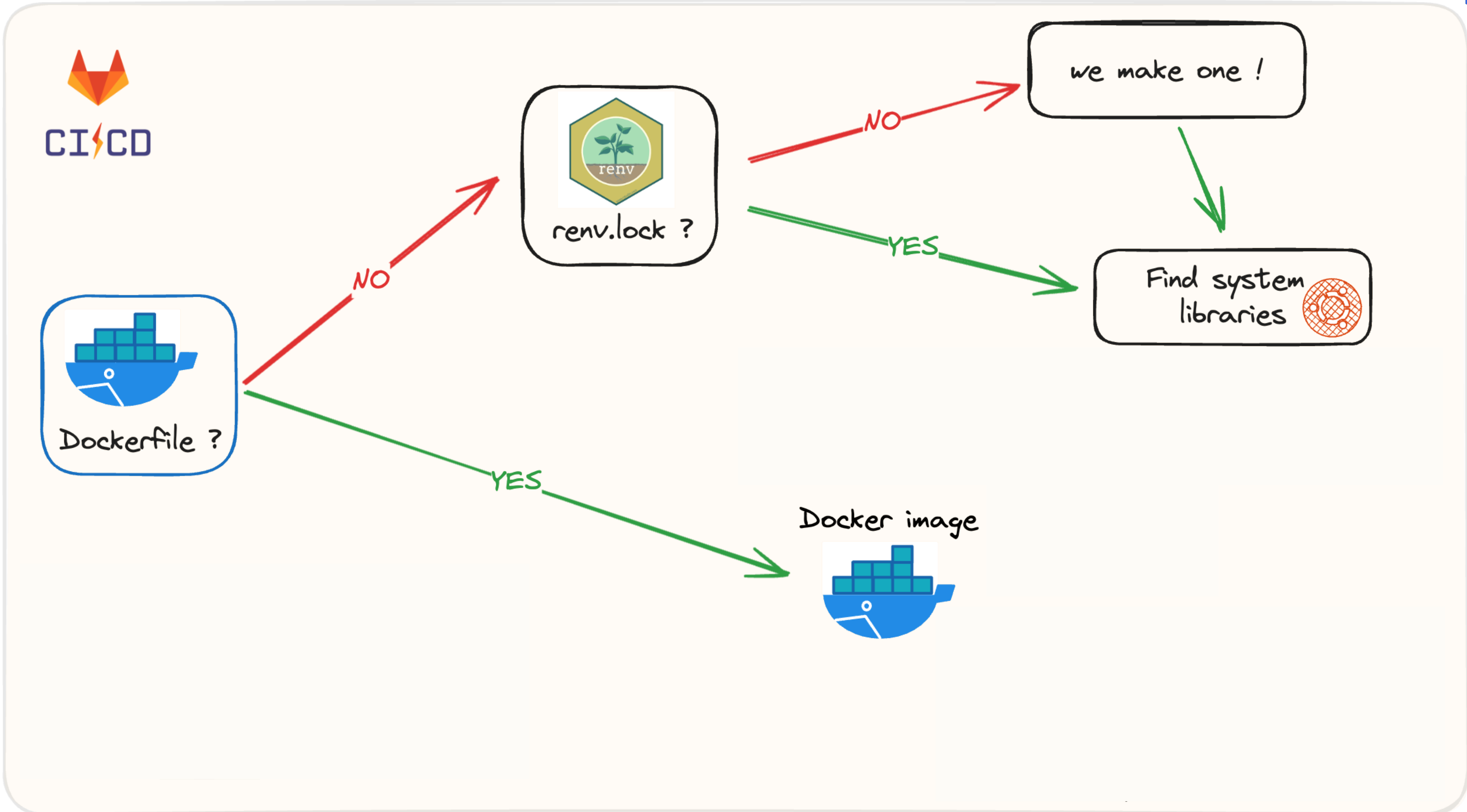
K8S deploys the app to the web



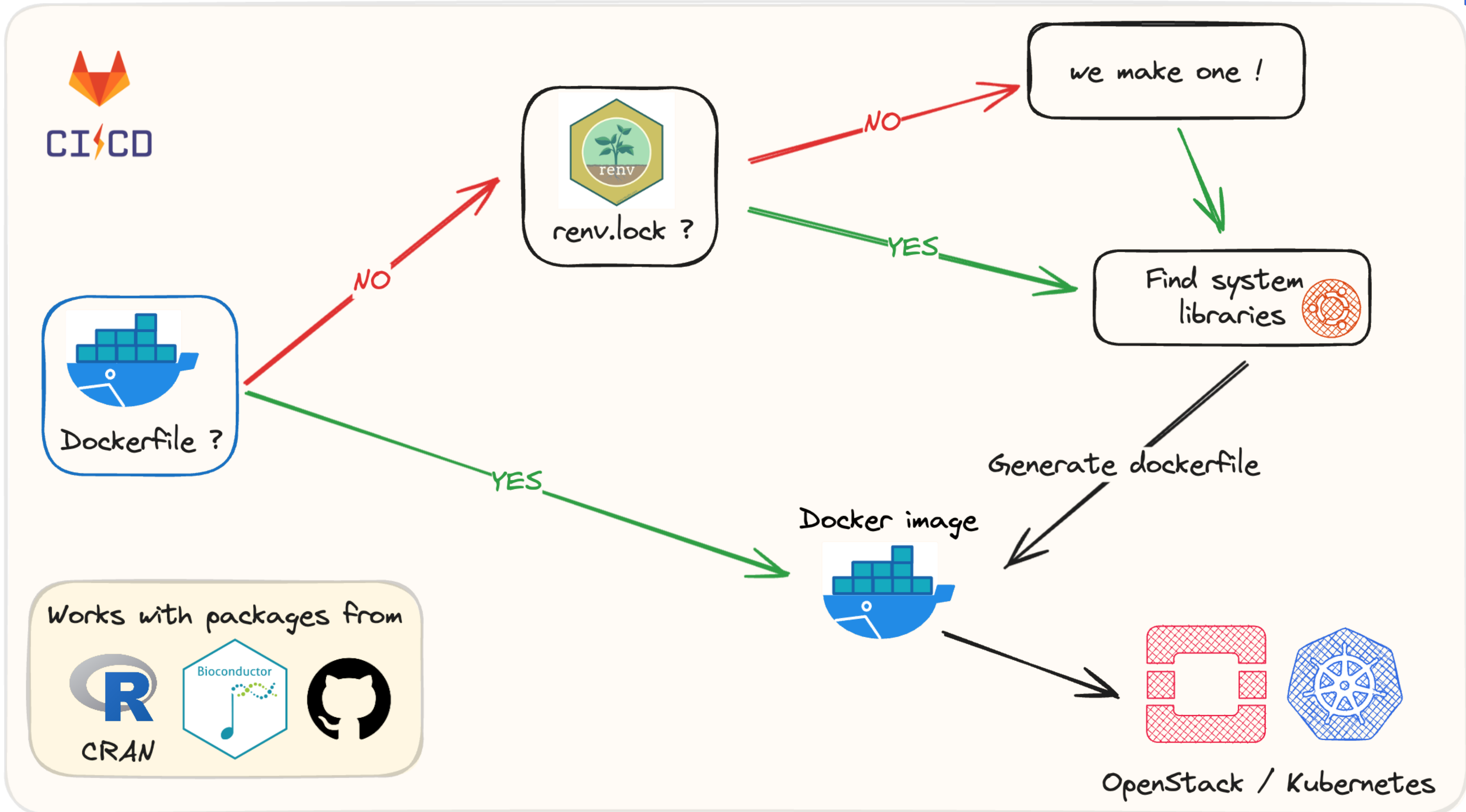
➤ Under the Deck: The Power of SK8Tools



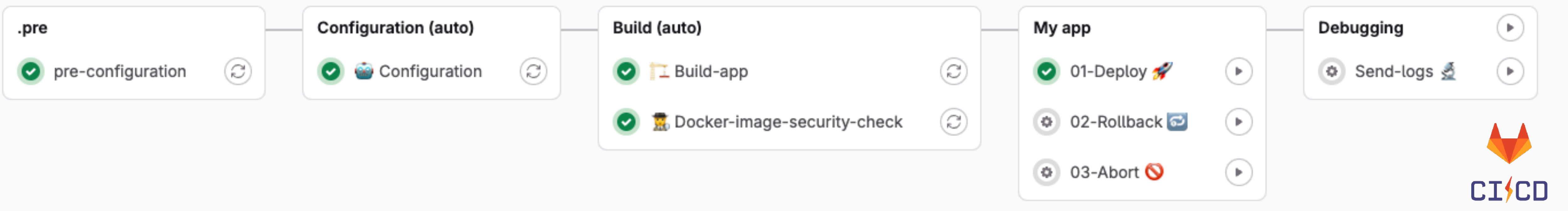
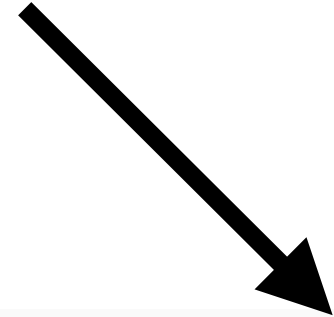
Under the Deck: The Power of SK8Tools



Under the Deck: The Power of SK8Tools



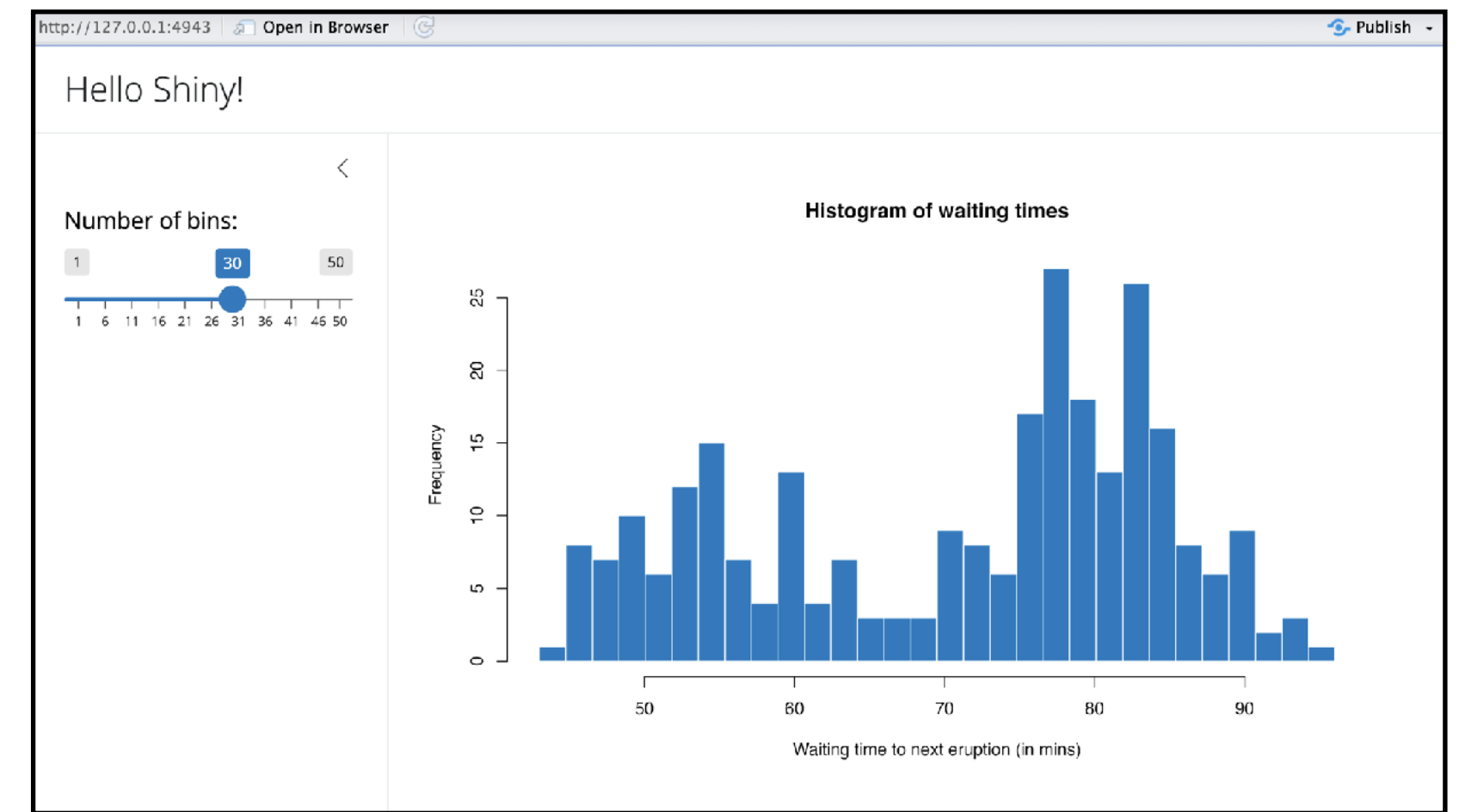
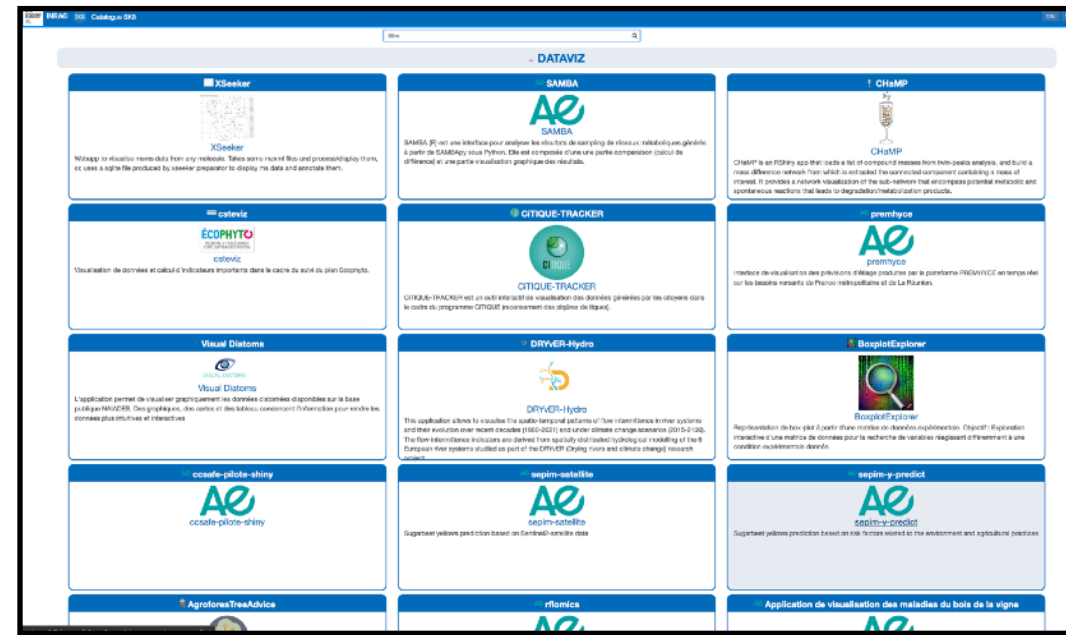
➤ From the user POV



Gitlab automated CI/CD pipeline

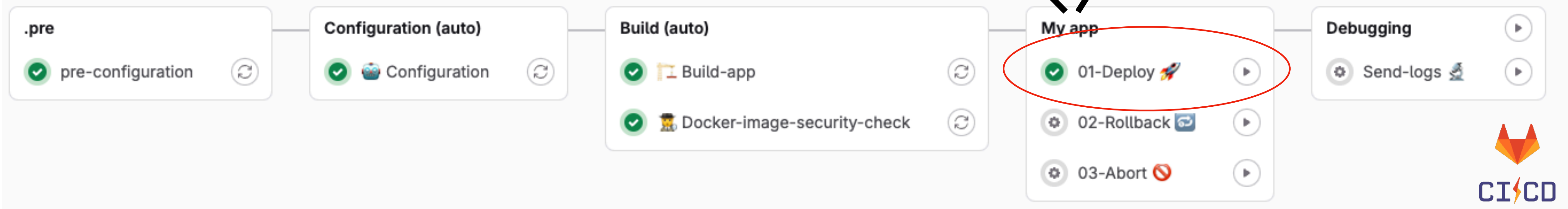
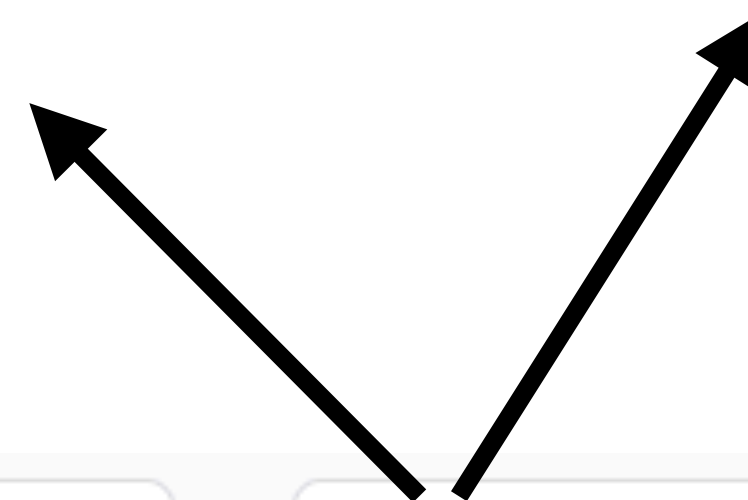
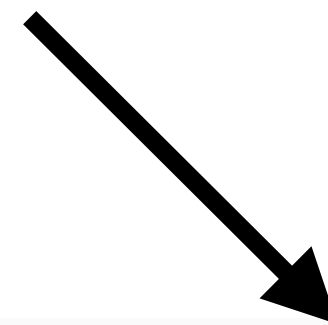


➤ From the user POV



ShinyProxy catalog
shiny.sk8.inrae.fr

<https://myapp.sk8.inrae.fr>



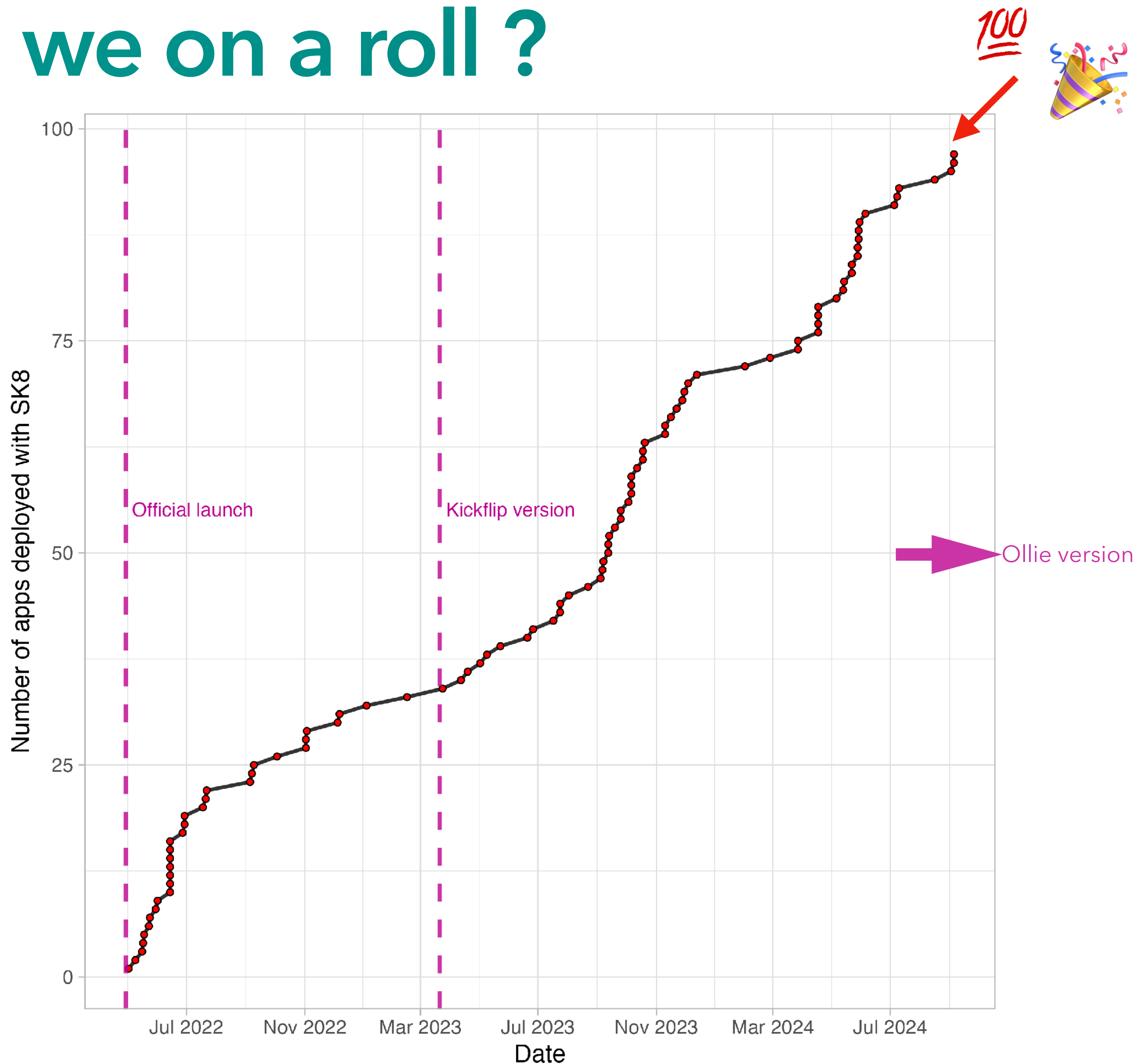
Gitlab automated CI/CD pipeline



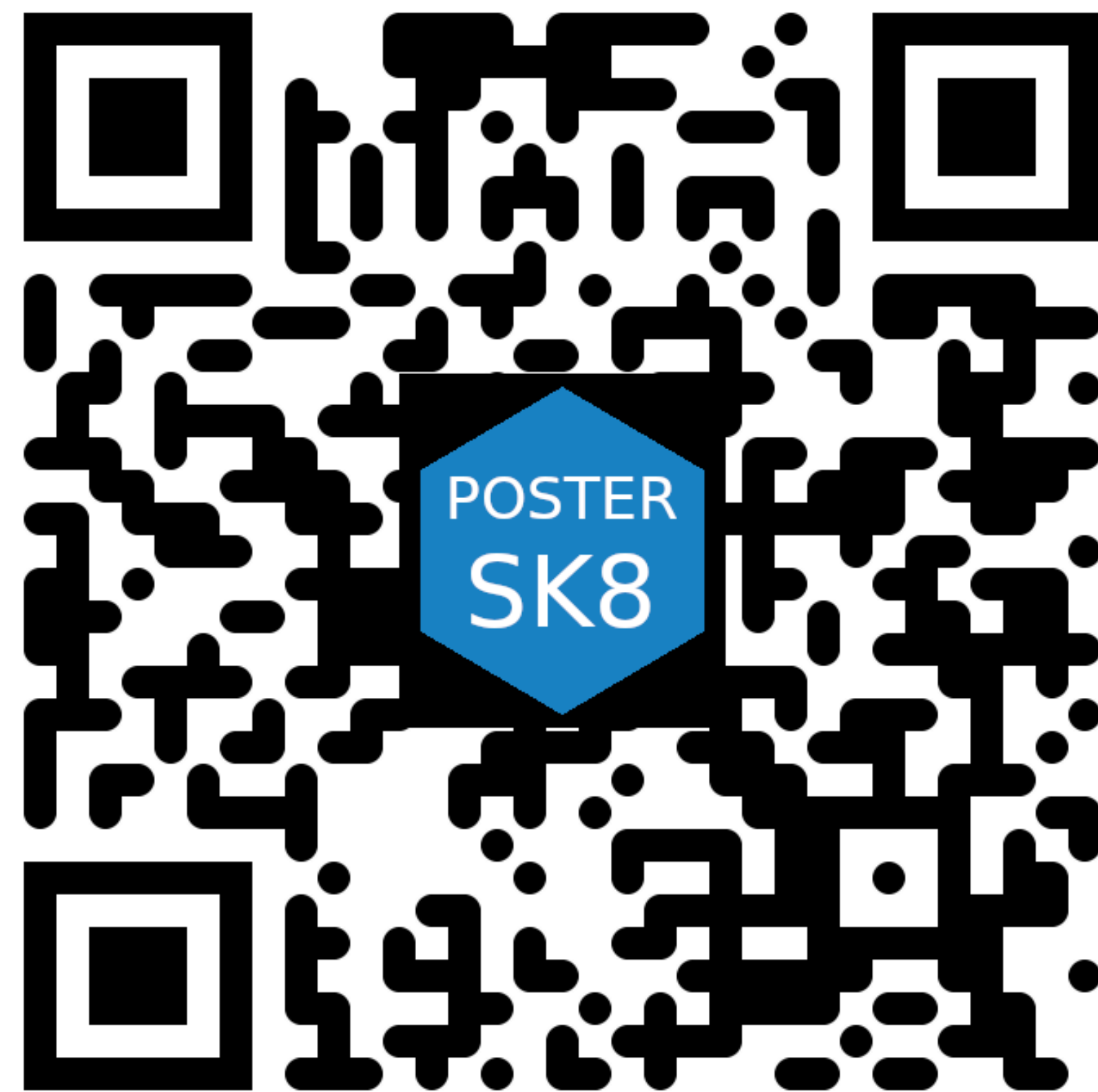
➤ The SK8 project : Are we on a roll ?



LOVIN'



➤ Thank you !



↑ Learn more about SK8 with our English Poster ↑

@ david.carayon@inrae.fr

