

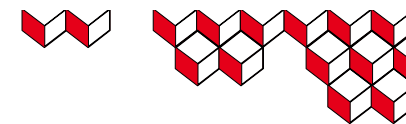
Challenges in software development

CONTEXT

Larger experiments and collaborations → many developers, distributed teams

Increasing data rates and volumes → demanding software requirements

Rapidly evolving technologies (hardware and software)



What it means in practice ?

Develop *and* deploy production-level software applications

Inside large collaborations (many developers, shared codebase)

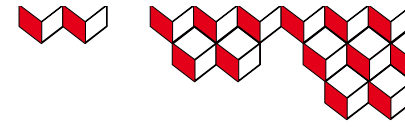
For long-lasting experiments (lifetime of 10–20+ years)

Maintained over long time periods:

- follow platform and library evolutions
- fix bugs
- adapt to new requirements

Running on a variety of hardware architectures

→ Key challenge: producing *reliable, sustainable and portable* software at scale, over decades.



This session ...

The two talks proposed address different aspects of the software development

The first presentation will bring you into a travel describing the typical life of a software developer inside a scientific collaboration

The second presentation is dedicated to a more specific problem: the packaging of software libraries. It is zooming on a specific technology chosen in the context of [Numpex](#) project