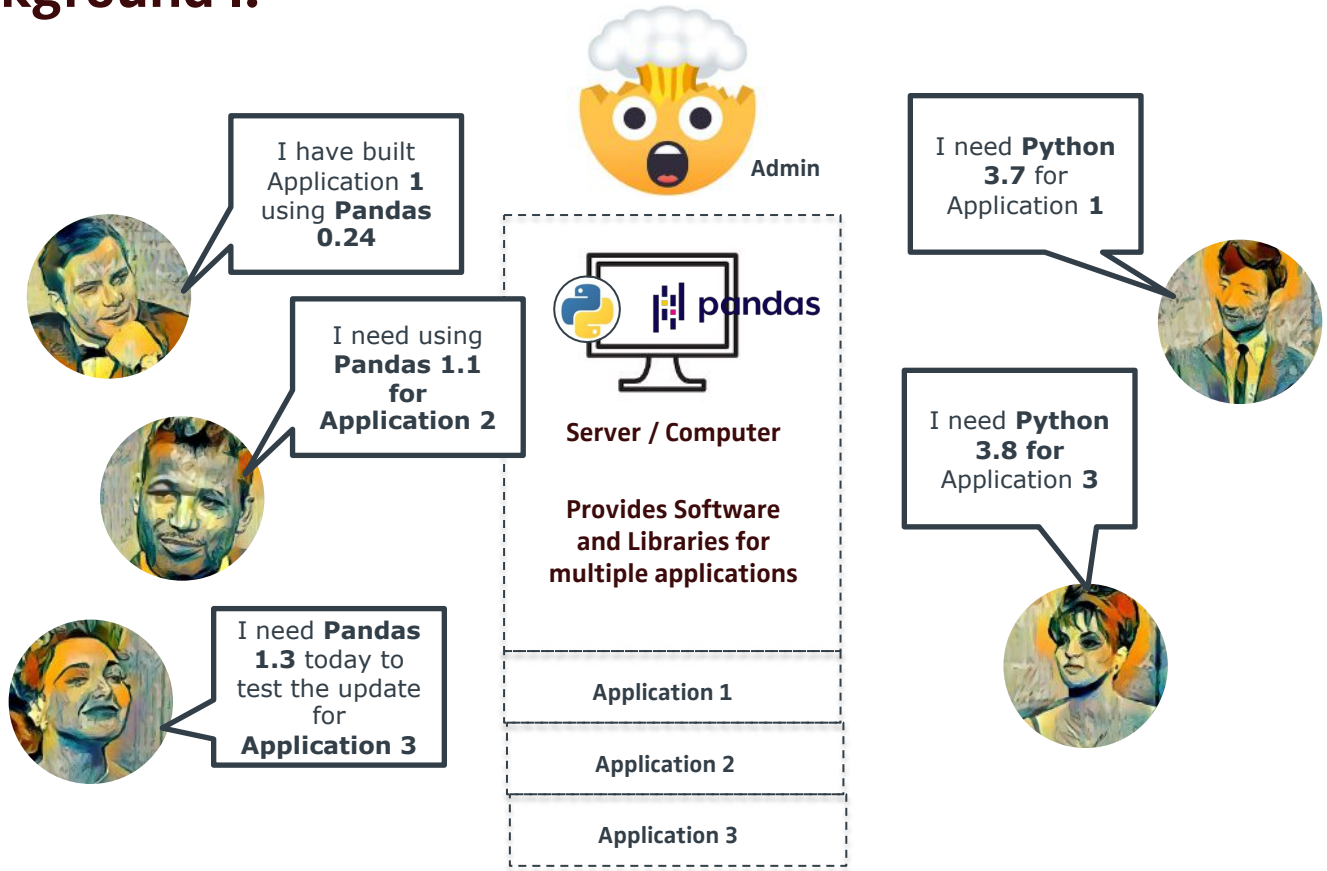
Python Environments

Agenda

- Definition
- Background
- Lösungsversprechen
- conda
- pip
- Shell / Umgebungsvariablen
- Python Lookups
- Q&A

Background I.



What Are Environments?

- Sandboxes
- Isolate dependencies from each other

What Are Environments?

- Mental Model: Paralleluniversen

Solution: Environments

Solution: paradigma

Environments are installed at
C:\Users\Sascha\.conda\envs\

Python is installed at
C:\Users\Sascha\.conda\envs\envdemo\python.exe

Libraries for the project are installed in directories in
C:\Users\Sascha\.conda\envs\envdemo\...

When running Python in your environment, Python looks for the libraries in directories relative to its own location i.e. sibling directories

Admin

Server / Computer

Application 1

Uses Environment
Python 3.7,…

pandas

Application 2

Application 3

I need **Python 3.7** for Application **1**

I need **Python 3.8 for** Application **3**

OSS Operational Model

Anyone

code contribution

bug report

feature request

Download for use

Repository

- Public
- Program code
- Project Management
- Code Review
- Documentation
- Interaction

Maintainers

Steering

Core Developers

Review, provide feedback and decide on code contributions, bug reports, prioritize feature requests.
Contribute as anyone else

KÖNIGSWEG

Background II. Dependencies

Independent decision on codebase

Our codebase for Pandas 1.3 works seamlessly with NumPy 1.8 or later Matplotlib >2.1<3

pandas

programmed in

Does not reinvent the wheel but "Builds on the Shoulders of Giants"

Independent decision on codebase

Uses NumPy for numerical operations, i.e. matrices

NumPy

Relies for plotting on

Uses NumPy

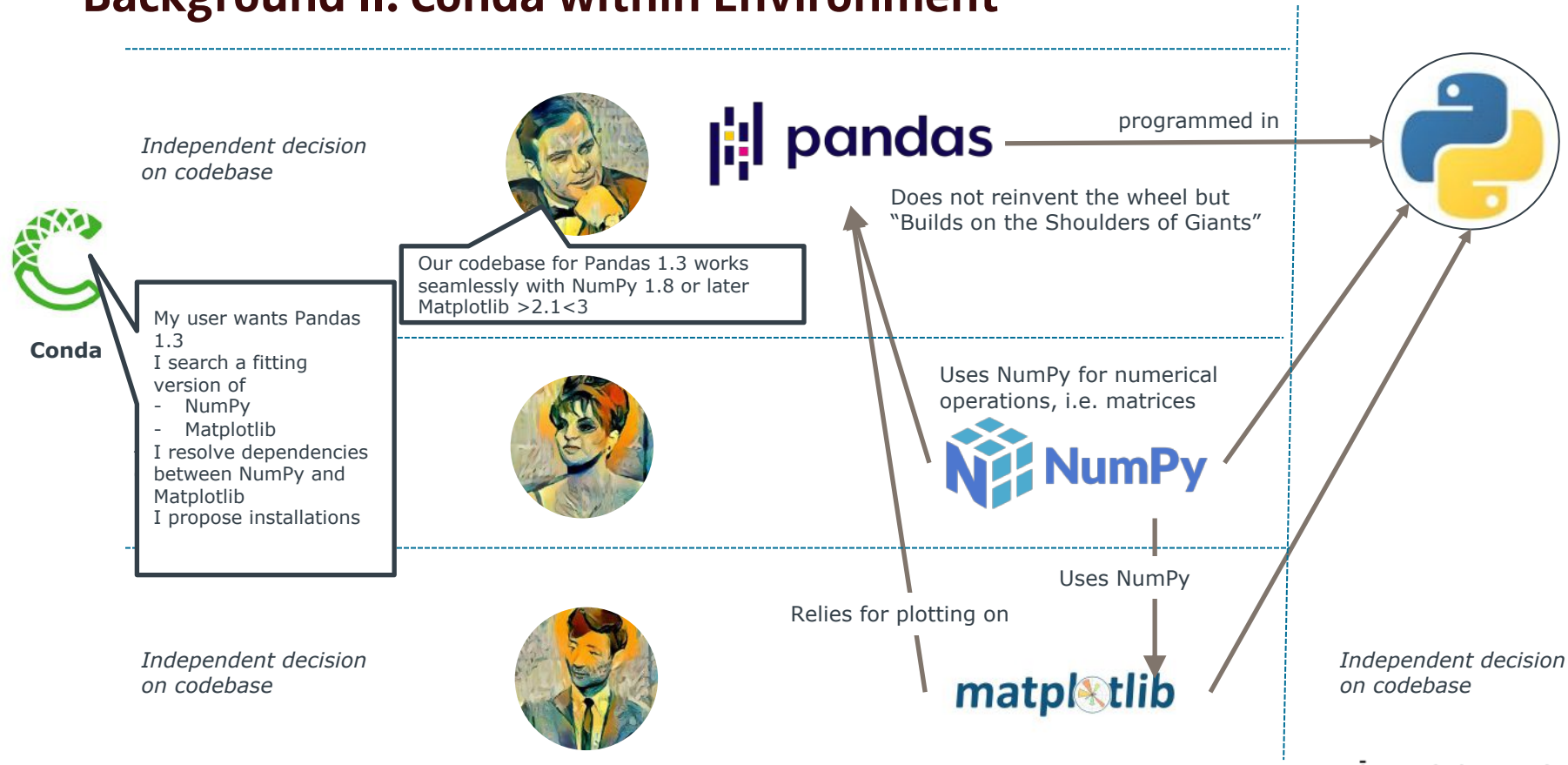
Independent decision on codebase

matplotlib

Independent decision on codebase

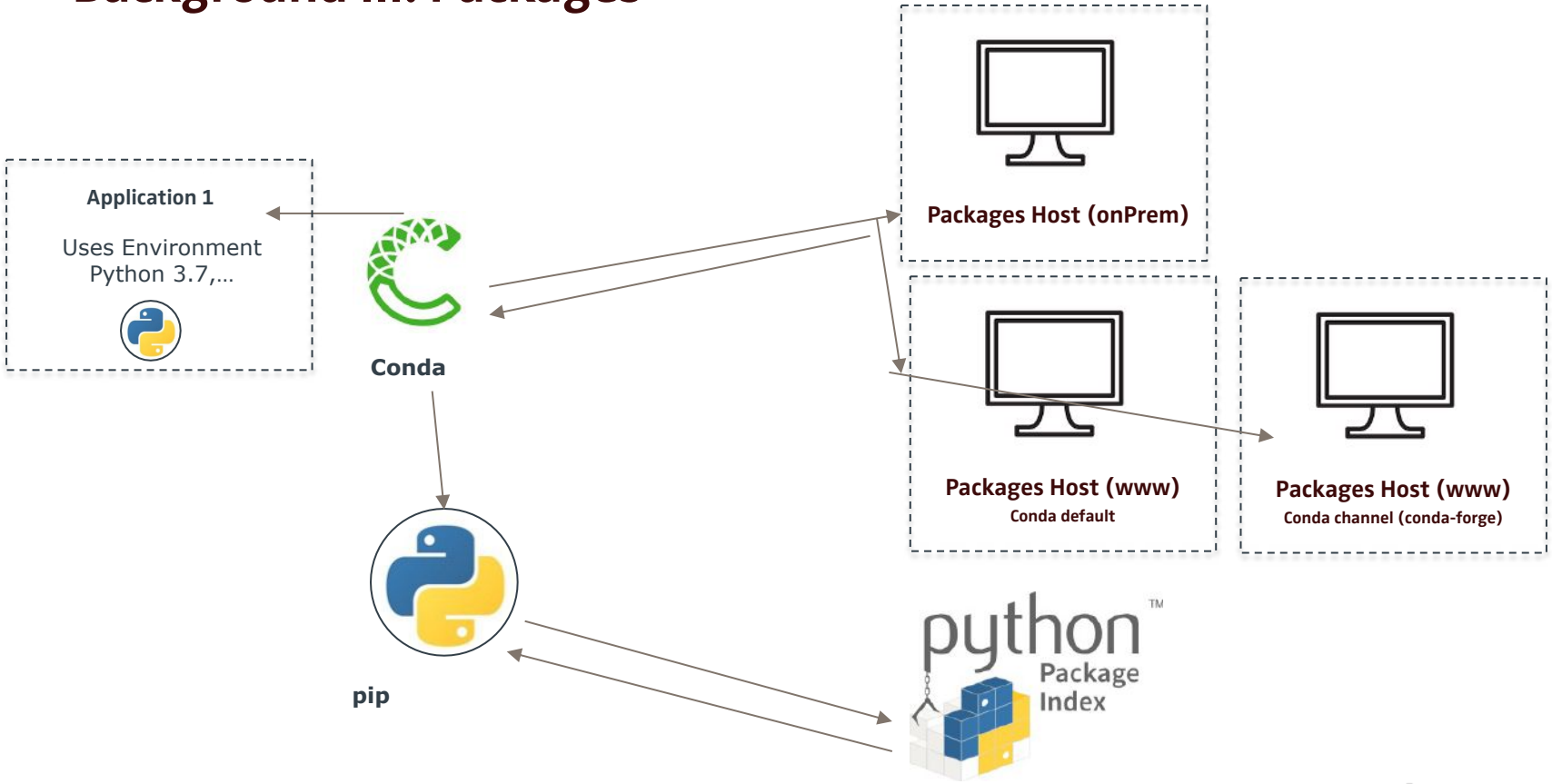
KŌNIGSWEG

Background II. Conda within Environment



KŌNIGSWEG

Background III. Packages



What Are Environments?

- Sandboxes
- Isolated dependencies from each other
- Environment variables
- Config files in many places
- Management with conda, pip,...
- Reproducibility
- IDE
- Environment clones to try new stuff

Q&A

- ...