Oemof
Workshop Week

Setup of oemof

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Session 1

RLI, 16.09.2019

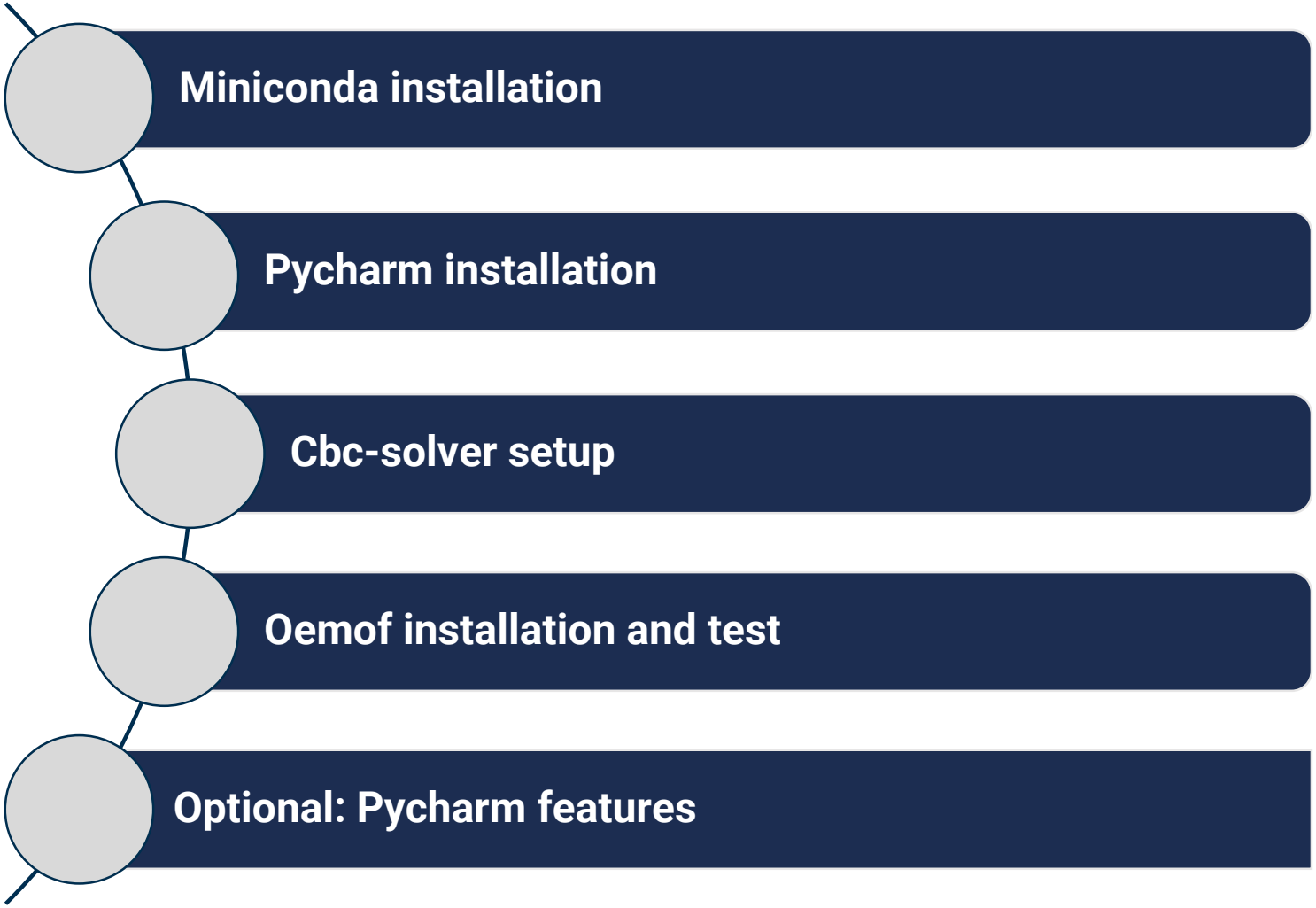
oemof
['ø:mɔf]

Aim of this session

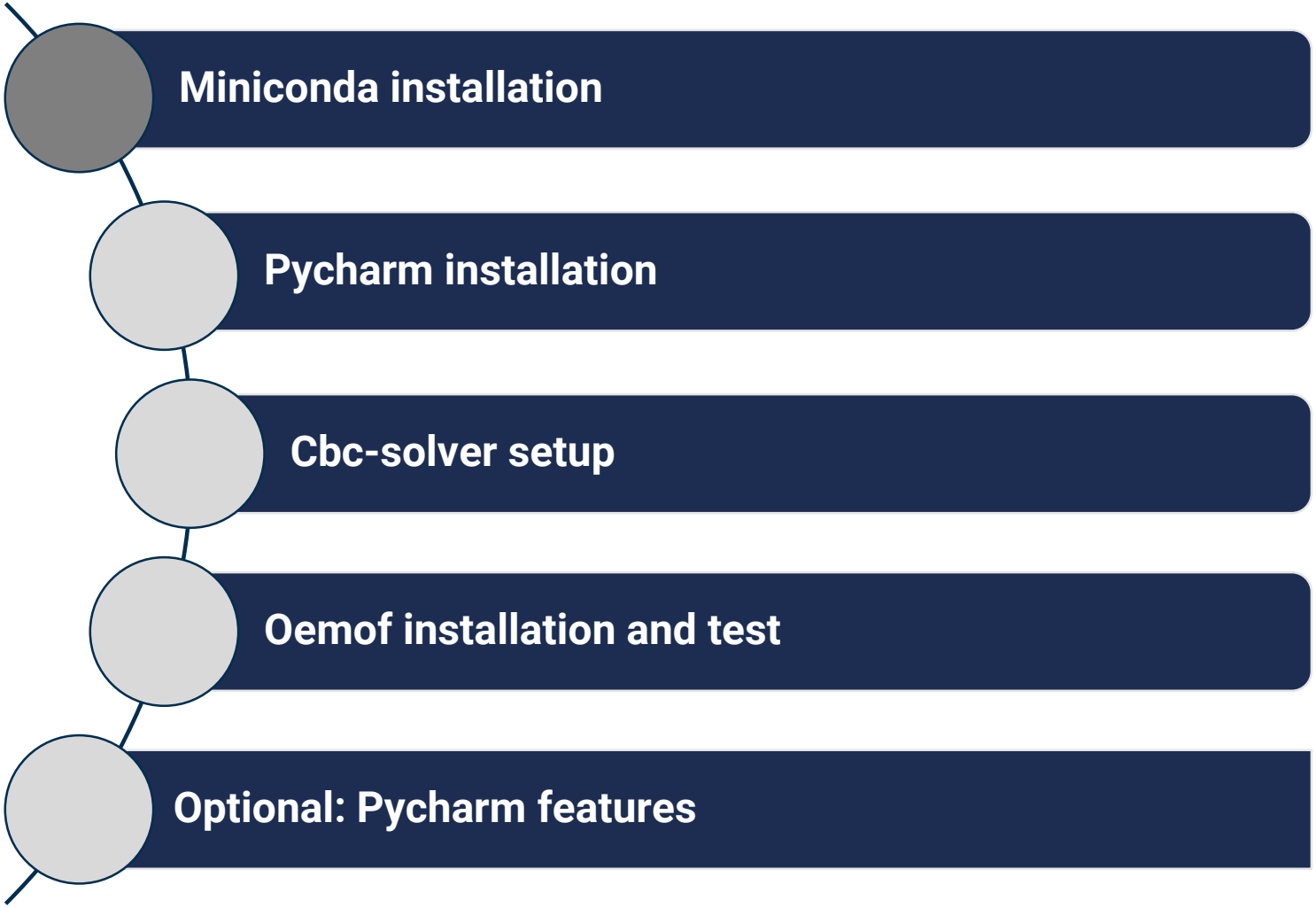
Setup of all necessary programms and tools for this workshop

All workshop contents at: https://github.com/smartie2076/oemof_workshop

Agenda of this session



Agenda of this session



Installation of miniconda

- Installing miniconda*
  - Installation of python3 on OS
  - Provides tool for generating virtual environments, which makes package use during programming transperent
  - Provides a terminal for the execution of python scripts („Anaconda prompt“)

- https://docs.conda.io/en/latest/miniconda.html
  - Choose according to OS, and Python 3.X

*(alternative: virtualenv)

New virtual environments with Anaconda Prompt

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- Open Anaconda Prompt
- List all existing environments with:

```
conda env list
```

- Create environment with specific name and python version with:

```
conda create -n [env_name] python=X.X
```

- Activate environment:

```
activate [env_name]
```

- Now, only packages specifically installed for your env_name are active. Install from requirements.txt:

```
pip install -r requirements.txt
```

Todays agenda

Installing Pycharm

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- Pycharm...
  - Is a GUI for programming
  - Can process, validate and highlight many file and programming styles
  - Includes file versioning and git features

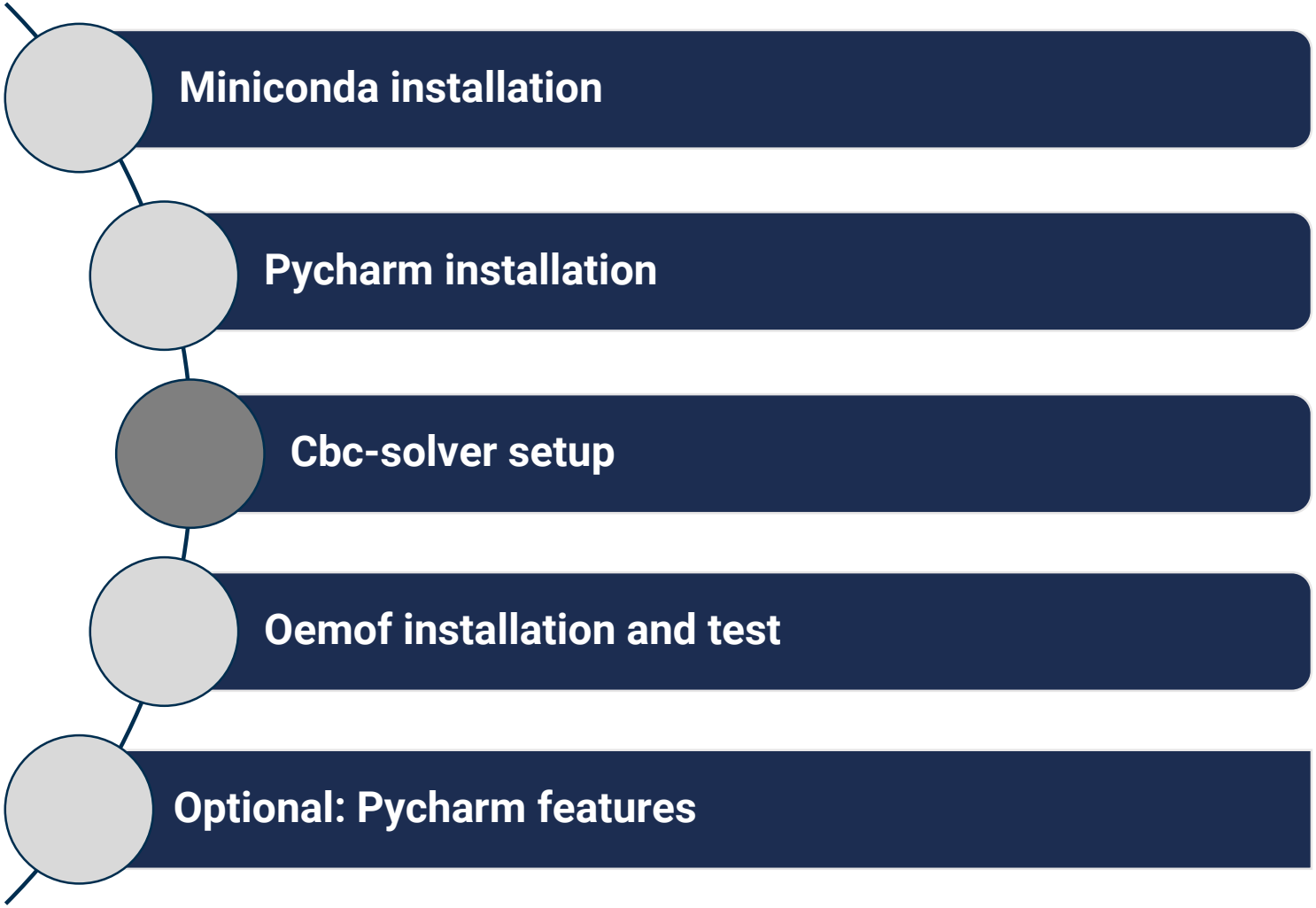
- To use pycharm with the version control system git (recommended), install:

  https://git-scm.com/download

- Install from:
  https://www.jetbrains.com/pycharm/download/

Logo from: JetBrains - https://www.jetbrains.com/company/press/,
Gemeinfrei, https://commons.wikimedia.org/w/index.php?curid=53185677

Agenda of this session



Installation of cbc-solver (Windows)

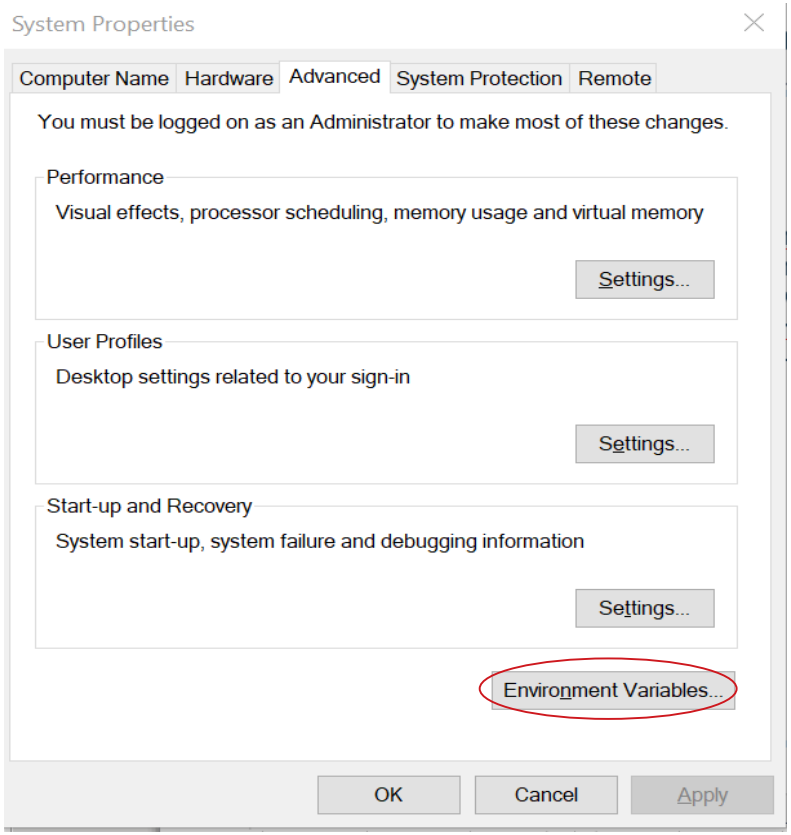
- Recommended solver for oemof is coin-or-cbc*: https://projects.coin-or.org/Cbc
- Download cbc-solver:
  - 64bit: http://ampl.com/dl/open/cbc/cbc-win64.zip
  - 32bit: http://ampl.com/dl/open/cbc/cbc-win32.zip
- Unzip into chosen path
- Add solver path to system environment variables, as described on following slides

  → Local admin rights required

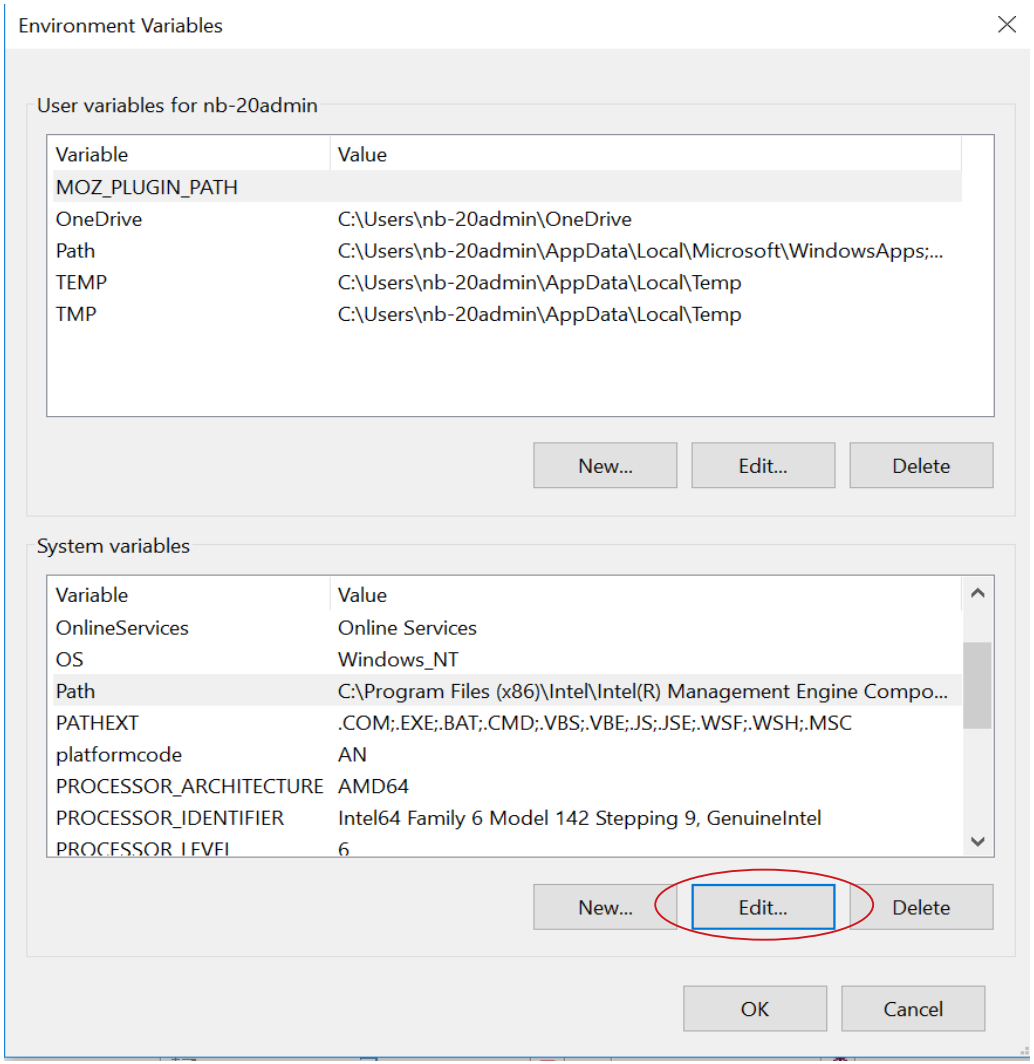
*(alternatives: CPLEX, Gurobi, GLPK)

Windows: Add to system environment variables (I)

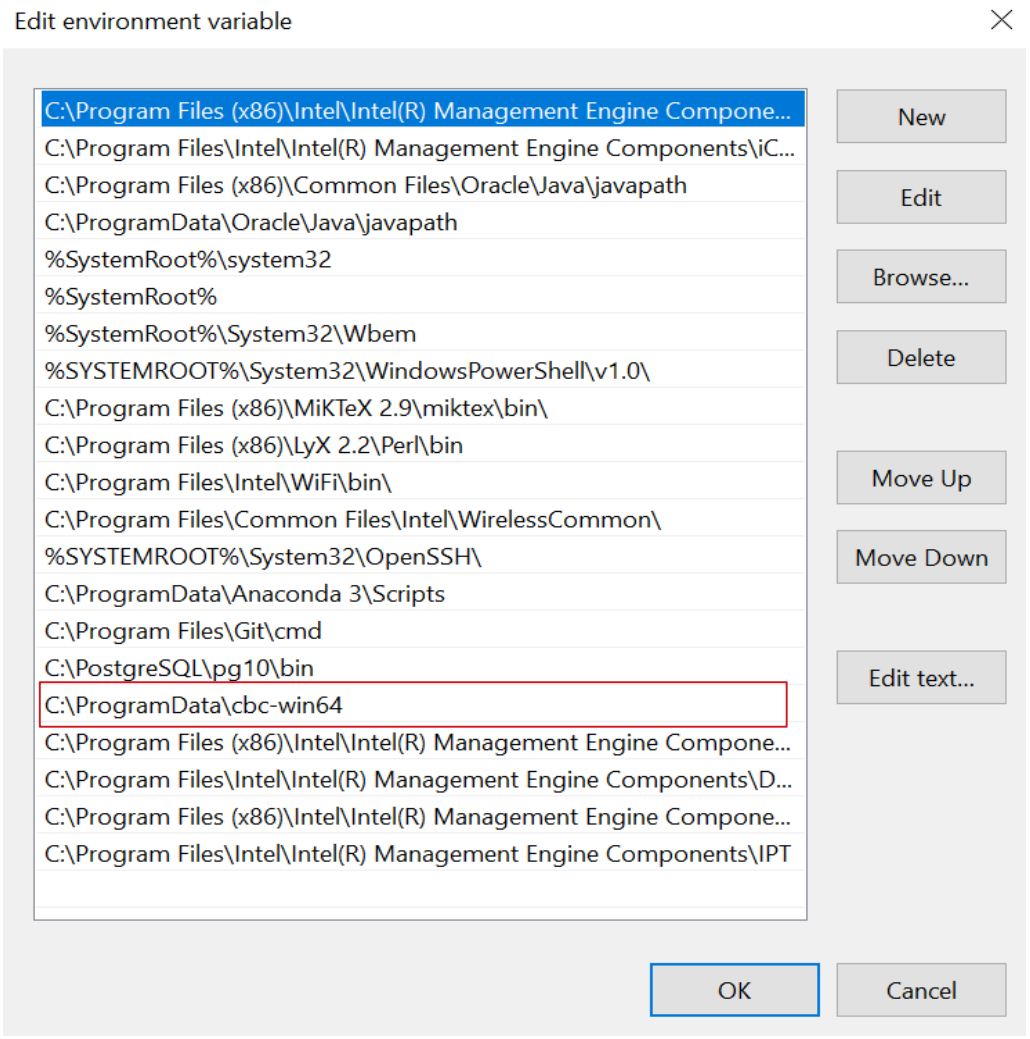
- Open “System Properties” --> ”Advanced”--> “Environment Variables”



Windows: Add to system environment variables (II)



Windows: Add to system environment variables (III)



Installation of cbc-solver (Linux)

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- Open terminal and execute:

```
sudo apt-get install coinor-cbc
```

Agenda of this session

Oemof installation

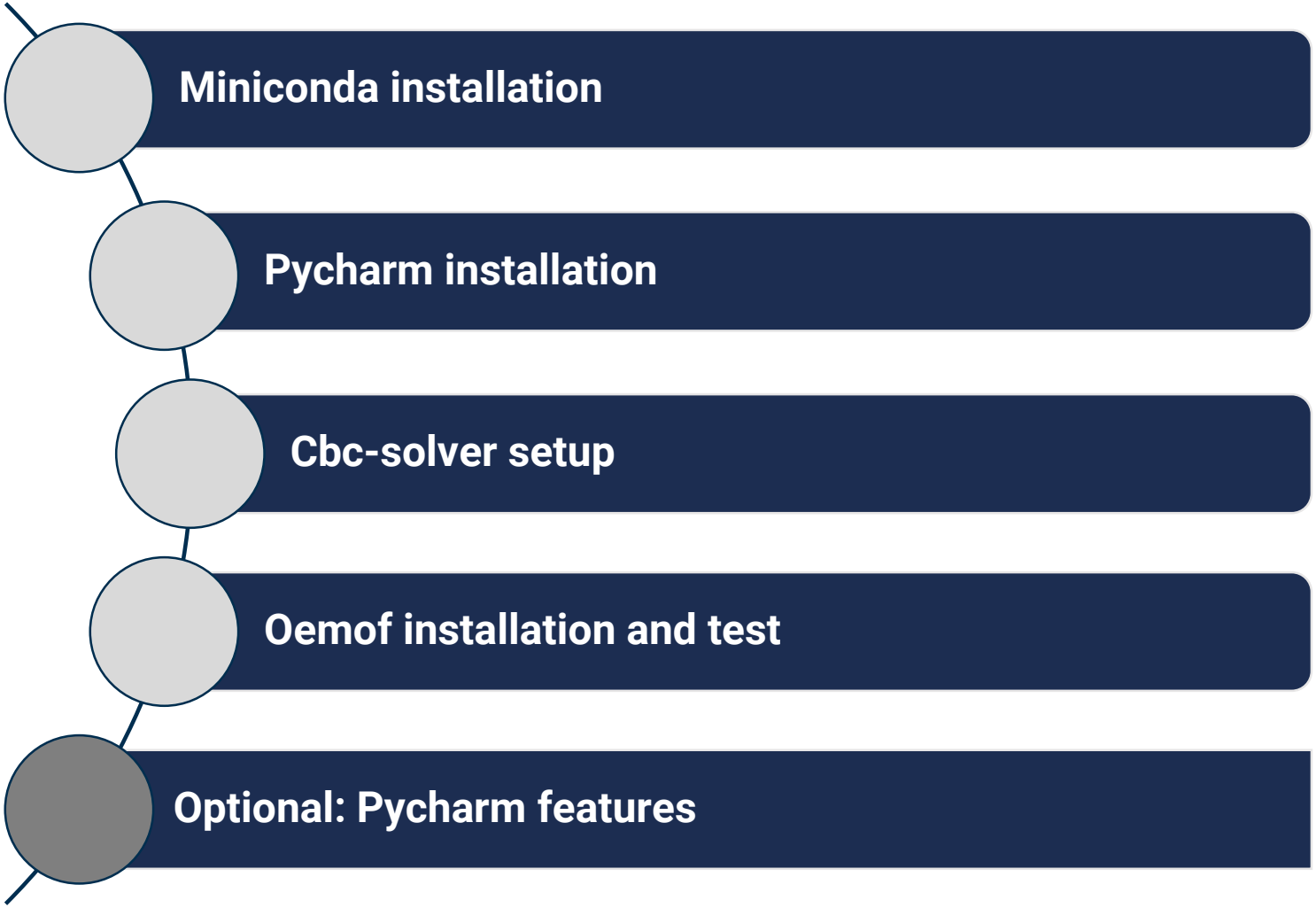
- Installation via anaconda prompt:

```
activate [env_name]
pip3 install oemof
```

- Testing oemof installation:

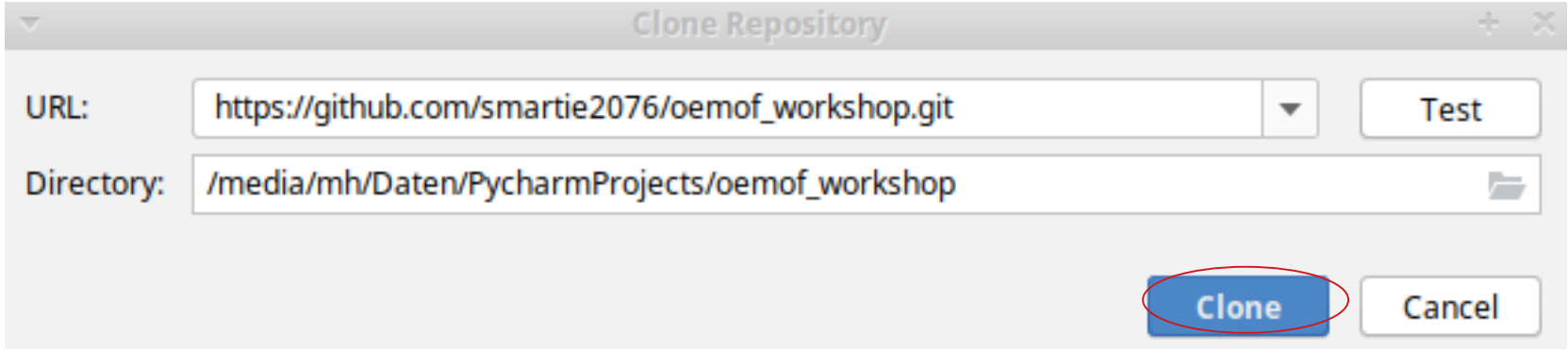
```
oemof_installation_test
```

Agenda of this session



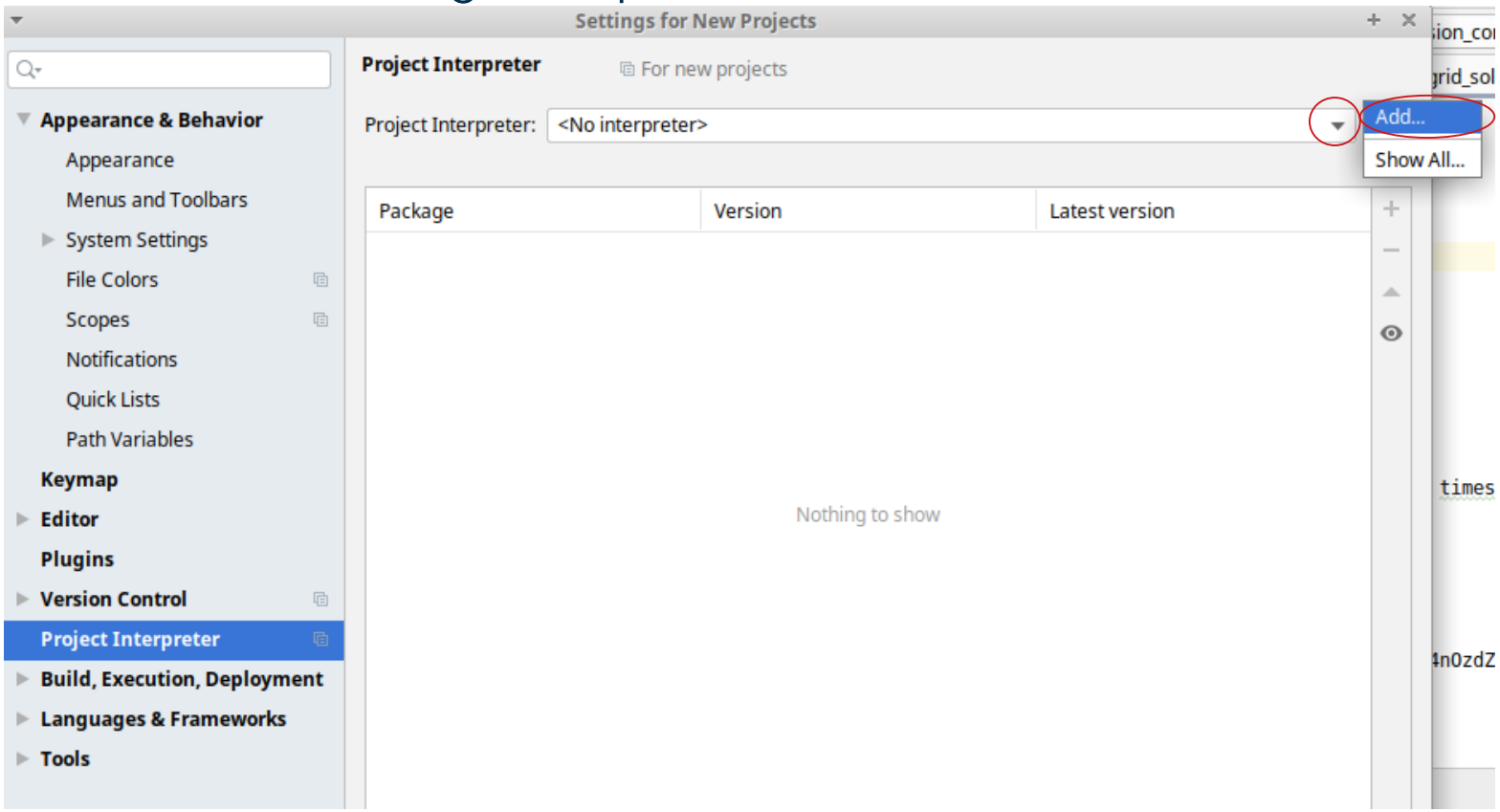
Create a pycharm project: Clone git reprository

- Install gitbash from https://git-scm.com/download/win
- Start pycharm and copy link to git reprository and insert, choose path:



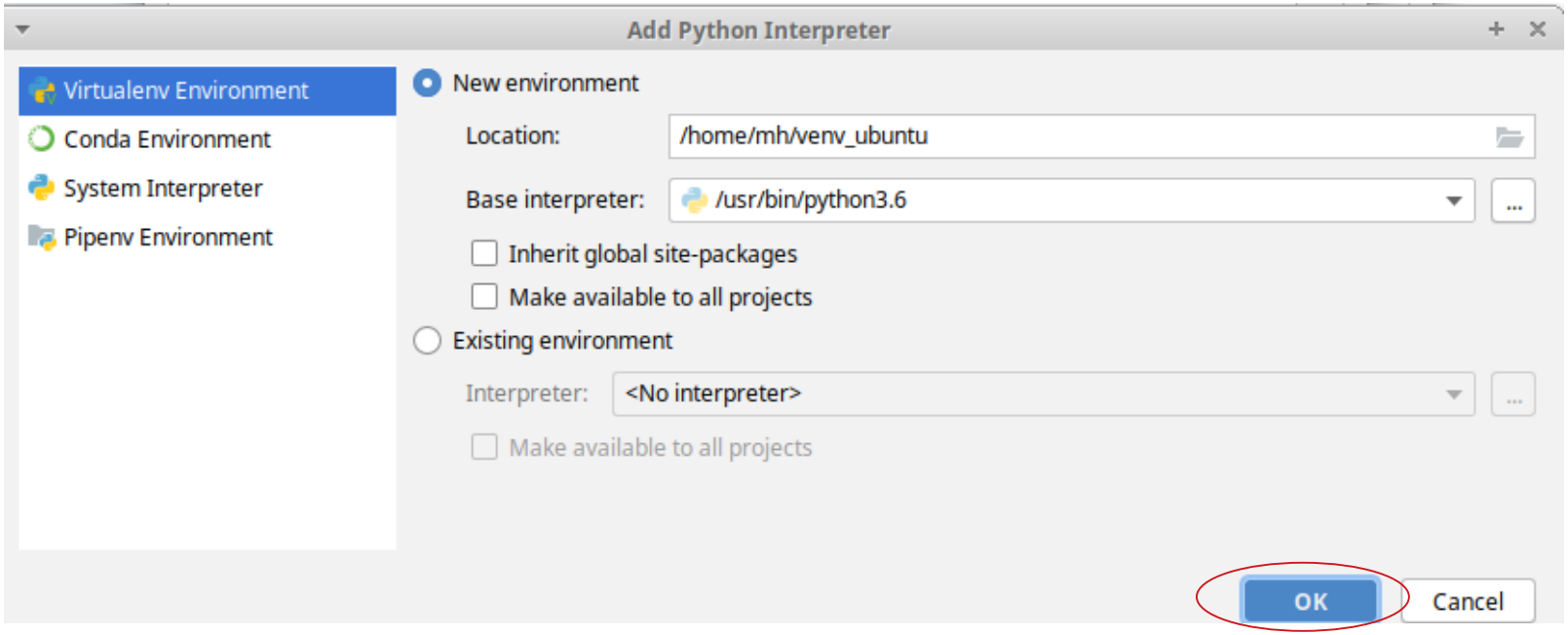
Setup of a project interpreter (I)

- File → Settings → Project: [your project] →Project interpreter
- Choose existing interpreter or create new:



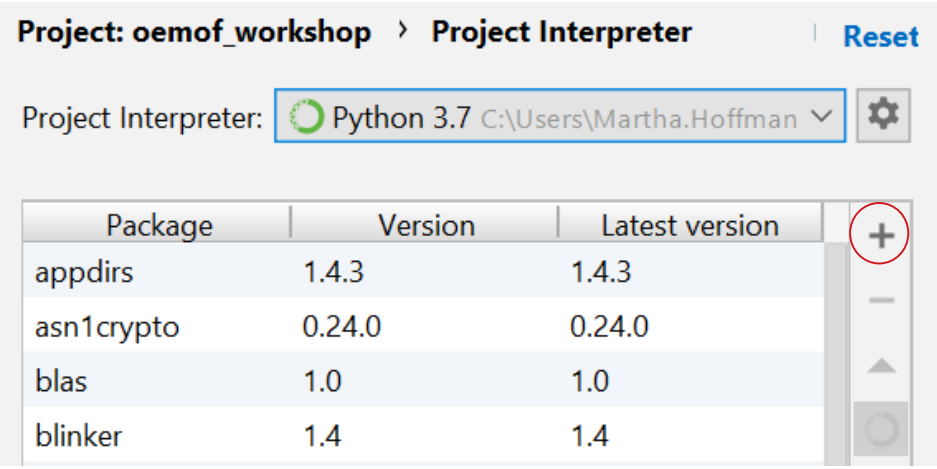
Setup of a project interpreter (II)

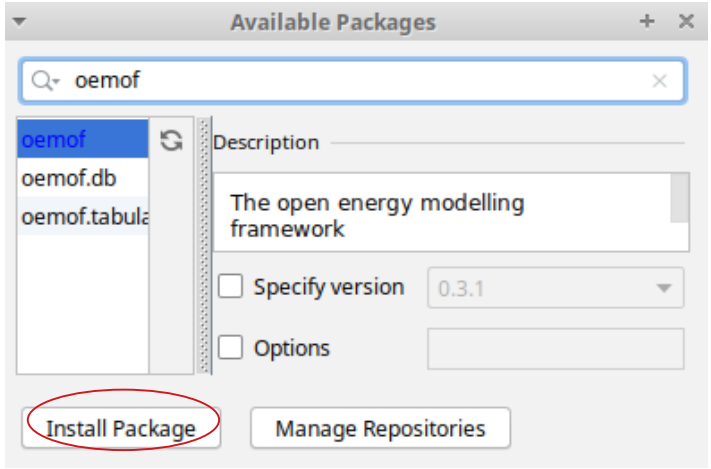
- Add interpreter with your package management tool (virtualenv/miniconda)
- Choose location, environment name and python version



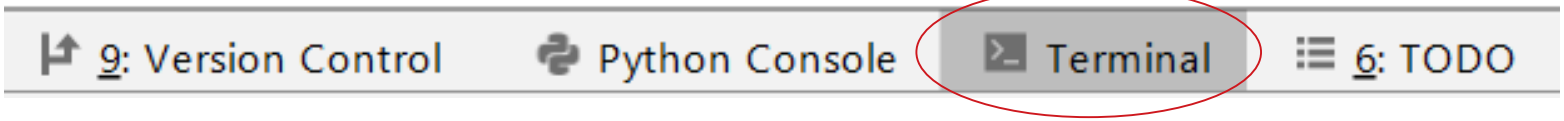
Installation of packages

- Installation via pycharm in your specific project:
  File → Settings → Project: [your project] →Project interpreter





- Alternative: Use pycharm terminal to install packages manually or with requirements.txt



THANK YOU FOR YOUR ATTENTION !

How to follow Oemof's activities?

Website: https://oemof.org/
Github: https://github.com/oemof
Or join our mailing list!

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