



# *EU OS: learnings from 1 year advocating for a common Desktop Linux for the public sector*

---

Dr. Robert Riemann

*EU OS Project Lead*

31st January 2025

## EU OS: Why do we do it?

---

## OS to support older Hardware

- With Windows 10 end-of-life, older hardware does not meet requirements for an update on Windows 11 (planned obsolescence of 240 Mio devices).
- With Linux, older (and newer) hardware can be used longer.
  - Schools and universities, libraries, public administration, etc.

## OS to support high regulatory requirements (security, sovereignty, privacy)

- With Windows 10 and 11, connected (cloud) services are difficult to control.
- With open source software like Linux, a high level of control is achievable
  - Government: competition authorities, data protection authorities, courts
  - Embassies, secret services, armed forces, critical infrastructure sector

## Perceived Problems

- During migration two systems must be supported: Windows and Linux
- Expensive migration: cost-saving effects only for large desktop fleets
- Little in-house know-how and small ecosystems: shortage of expertise
- In the absence of role models: many unknowns and risk to fail
- User aversion against new or non-standard software (or change in general)

## Possible Solution

- Synergies between organisations: common approach to Linux and its migration
- Synergies between building blocks: reuse cloud technologies and expertise

## What is EU OS not?

- It is not a project of the European Union, but it should be.
- It is not a new Linux distribution. It is not for private home users.
- It is not a project producing original code. EU OS reuses existing software.

## What is EU OS then?

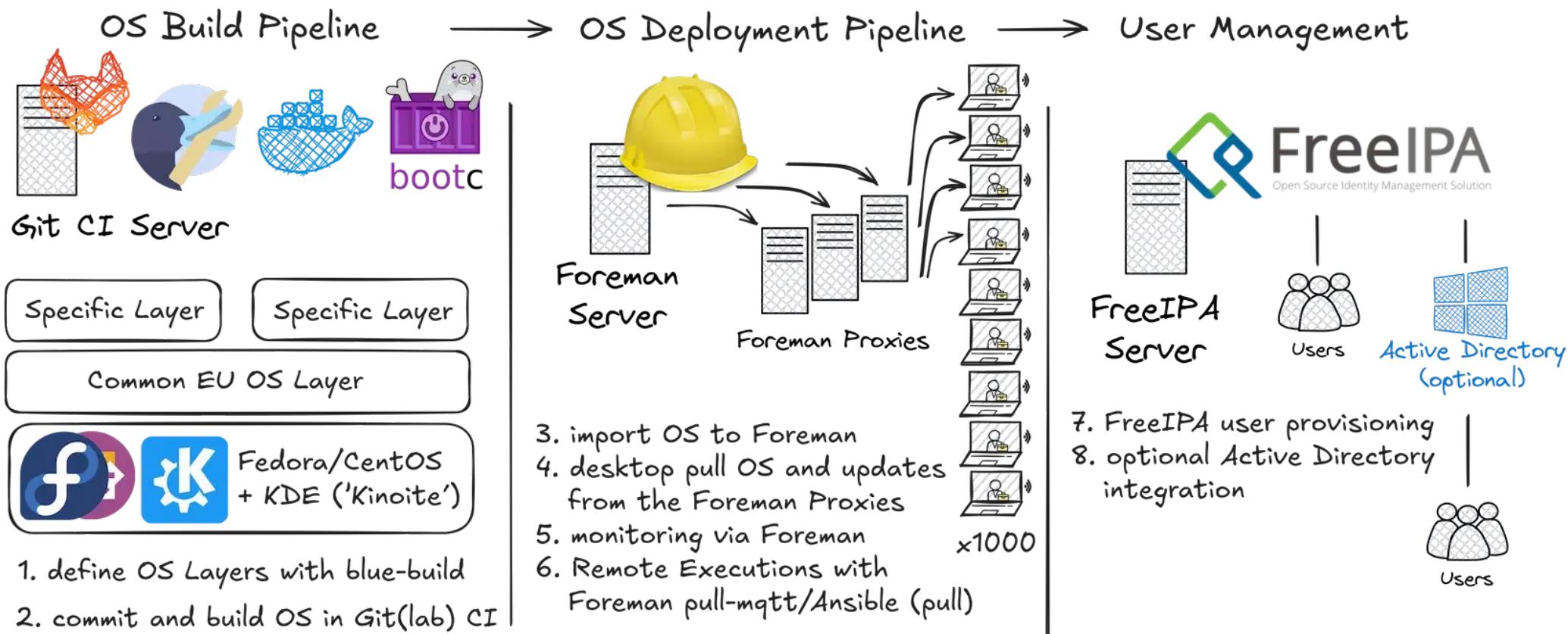
- It is a Proof-of-Concept (PoC) for the deployment of a Fedora-based Linux OS with a KDE Plasma desktop environment and bootable container technology in a typical public sector organisation (corporate environment).
- Private sector organisations with similar requirements may also use EU OS.
- EU OS is also a community and a knowledge data base.

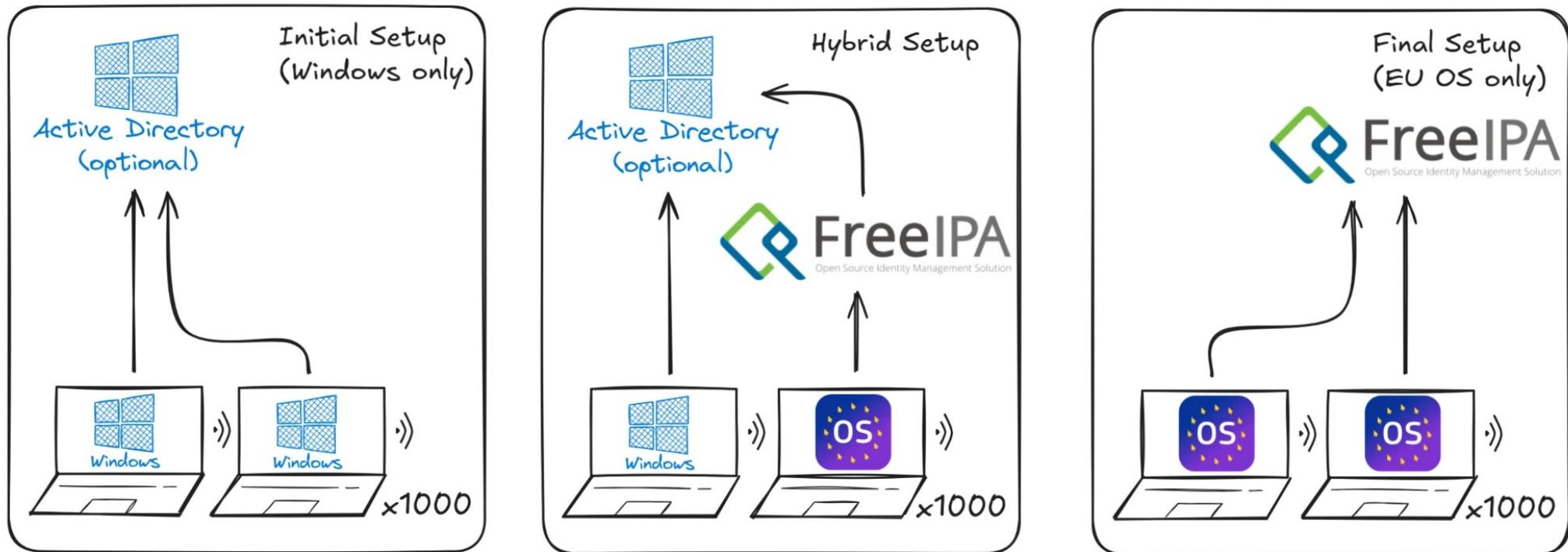
## EU OS: How do we do it?

---

# Map of Linux-on-the-Desktop in the European Public Sector







EU:OS:



Some Public Body

- awareness raising campaign in full swing (social media, personal networks)
  - EU organisations: EDPS, EC DIGIT/CNECT/HR, EC JRC, Eurojust, Europol, EU Parliament, Court, ...
  - International organisations: ICRC, UN, ICC, ICJ
  - EU member states: DINUM , Zendis , Schleswig-Holstein , OSPO , OSPO
- Demo of proof-of-concept in The Hague
- Next: Madrid administration in February
- **on-going feasibility study with pilot comprising ≈ 150 seats running EU OS**

# EU OS: Community Feedback from 2025

---

- boring, but battle-tested (robust)
- enterprise support
- enterprise tools (fleet management, monitoring, etc.)
- compliance/certification/accreditation (supply chain security, testing, hardening, etc.)
- consolidation to one/few Linux distributions (incl. containers, VMs, servers)
- third-party support (think of SAP, SPSS, Matlab or FreeIPA)
- sovereignty and sustainability
- support local economy

Think of countries exchanging software (LaSuite, openDesk, etc.)

- “Launched as a competition under the [Cloud III Dynamic Purchasing System](#) (Cloud III DPS), the tender will allow EU institutions, bodies, offices and agencies to procure sovereign Cloud services over 6 years. The tender establishes a benchmark for how sovereignty is applied in practice to cloud services.”
- “This document defines Sovereignty Objectives relevant for the provision of Cloud services requested in this procedure. [...]” ([version 1.2.1 – Oct. 2025](#))
- Framework doesn't apply, but can inform us.
- Criterion SOV-1: Strategic Sovereignty. ‘[...] It assesses **ownership stability**, governance influence, and alignment with EU strategic priorities.’
- Criterion SOV-5: Supply Chain Sovereignty. ‘[...] **geographical origin**’



**More info:**  
Emiel Brok  
(opensuse)  
on Sun 11:05  
in UA2.118

## EU OS: the big picture

---

# Which Linux Distribution fits Europe best?



- Blog post: [Which Linux Distribution fits Europe best](#) on [Fedora Planet](#) and [Planet openSUSE](#)



Troels Halken

@halken.bsky.social

+ Follow back

And change the name of the project to [#US-IBM-Linux](#), cause that is the right name, as long as Fedora is the choice, however you try to rebrand the facts.

Why are you helping a [#288bn\\$](#) US tech company to get more users & business over a small EU FOSS tech company like Suse without value of SA for EU?

14:05 · 22 Dec 2025

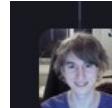


Tris

@tris@chaos.social

@rriemann @alpinelinux is battle-tested in the container space, it wouldn't be bad either if it was using systemd. @postmarketOS might be it. @ariadne thoughts?

22 Dec 2025, 12:25 ·



davidak

@davidak@chaos.social

28 Dec 2025

@rriemann when you want to deploy many systems, how can anything other than nixos even be considered an option?

with it, you can test an exact configuration before deploying, even automatically. nixos does integration tests for its module system. does any other distro do that? and in case of any issue, you can roll back with one command

you can also deploy the exact same configuration many times. i think it would be a nightmare to be responsible for systems without the control nixos offers



2



...

- Consider distributions for corporate use (with a lot of testing before release)
- **Debian** is a community non-profit managed by volunteers
- **Ubuntu** is owned by Canonical Ltd. (revenue 300m\$, 1k staff)
- **OpenSUSE/SLES** is owned by Société Anonyme (revenue 700m\$, 2.5k staff)
- **RedHat** is owned by IBM  
(revenue 4.5B\$, 20k staff (source) of which 13k and 4.5k )
- RedHat competes against **AlmaLinux** Foundation  
(AWS, Azure, Meta, **CERN**, some Japanese companies )
- RedHat competes against **RockyLinux** Foundation  
(AWS, Google, vmware, RISC-V)

- RedHat/Fedora is factor 10 bigger and most developers in the EU work with it.
- Many people overestimate the market share of Ubuntu in the Linux market.
- Source: [my Mastodon poll](#)
- Some explanations from reactions:
  - openSUSE is the choice of SAP, SAP is big (annual rev.  $\approx 40B\$$ )
  - Ubuntu has less paying users



Robert Riemann 

@rriemann@chaos.social

Today I learnt [#suse](#) [#opensuse](#) is about twice as big as [#ubuntu](#) in terms of annual revenue and staff members.

suse: est. 700m\$ with 2.5k staff  
ubuntu: est. 300m\$ with 1k staff

Who would have thought that?

Is it the server business? Has Ubuntu so much more non-paying "customers"?

82% I thought Ubuntu is larger

11% I thought SUSE is larger

7% I knew the facts before

[Refresh](#) · 87 people · 6 days left

## Ownership Stability

cf. fosdem talk: [public product organisation](#)

- non-profit foundation with financial sustainability (for the EU: at best in the EU)
- state-owned

## Current Enterprise-ready Distribution Landscape

- IBM/Redhat is US based, Fedora has no separate legal entity (foundation)
- SUSE Enterprise is EU based, openSUSE has no separate legal entity (foundation)
- AlmaLinux may not be sustainable, is US based, but a foundation
- Ubuntu is UK based; Debian has several legal entities (including non-profit in France), but has no bootc/atomic support

Debian with bootc support; Almalinux/SUSE Foundation in EU would help a lot!



‘Risk management comes at a price, but that cost of strategic autonomy, of sovereignty can also be shared.

Collective investments in resilience are cheaper than everyone building their own fortresses. Shared standards reduce fragmentations. Complementarities are positive sum. And the question for middle powers like Canada is not whether to adapt to the new reality – we must. The question is whether we adapt by simply building higher walls, or whether we can do something more ambitious.’

Source: [independent.co.uk](https://independent.co.uk)

Can we share the cost of (EU) OS with all middle powers?

Which distribution could get broadest support?

Thank you. Questions?

contact: [robert-eu-os@riemann.cc](mailto:robert-eu-os@riemann.cc)

# Backup

## What is already proven?

- Several public sector organisations have migrated to Linux, so that's proven.
  - French Gendarmerie (fleet with 82k seats)
  - Chinese Government (90% of seats in government on Linux, [video](#))
- The European Commission has studied Linux on the desktop already in 2005:
  - 'In general, the Linux platforms that were tested **show a very fair level of usability and compatibility**. An environment based on **Linux is today technically feasible for limited groups** with specific needs. Although there are many other factors that could play a role in the decision in favour of the implementation of an environment based on Linux, the present testing shows that is **not possible** to implement it at this moment in time **on a large scale**. Amongst the most **blocking factors** is the availability of Commission and local **applications**.'
  - 'Apart from this technical evaluation, it must be said that the Commission has a political role to play in ensuring that the competition rules are respected.'

### EU OS wants to proof that ...

- enough **synergies** exist, so that migration to Linux (EU OS) is feasible and economically viable in much more public sector organisations
- a migration is doable in **rather 2 years than 20 years** (check out [use cases](#))
- Linux offers today an alternative to Windows that is **more secure, sovereign, sleek** (efficient/eco-friendly)
- Linux deployments can scale to thousands of users

Hence, EU OS PoC is more about **developing a common vision for and collaboration in digital transformation** than it is about code or technology.



```
user@laptop> sudo bootc status -v
● Booted ostree
  Commit: b23063e41c9e2bd5fe115d78ef376188e ...
  StateRoot: fedora
  Deploy serial: 0
  Staged: no
  Soft-reboot: yes

Rollback ostree
  Commit: 4e2da3123fc1000924ccee67952e8c13e ...
  StateRoot: fedora
  Deploy serial: 0
  Staged: no
  Soft-reboot: no

user@laptop> sudo bootc upgrade

user@laptop> sudo bootc switch registry.code.europa.eu/eu-os/eu-ec/jrc:latest

user@laptop> sudo bootc switch registry.code.icc-cpi.int/icc-os/icc-os:latest

user@laptop> sudo bootc rollback
```

‘Your laptop is a git repo!’



[bootc-dev.github.io](https://bootc-dev.github.io)



```
name: eu-os-demo
base-image: registry.code.europa.eu/eu-os/base
image-version: 2025.10

modules:
- type: default-flatpaks
  configurations:
    - notify: true # notify users
      scope: system
      install:
        - org.mozilla.firefox
        - org.kde.okular

- type: dnf
  repos:
    copr:
      - rriemann/eu-os
  install:
    packages:
      - eu-os-backgrounds
      - plymouth-theme-eu-os
      - freeipa-client

- type: files
  files:
    - source: system
      destination: / # copy files in 'system' to file tree

- type: script
  scripts: [] # list with filenames from folder files/scripts
  snippets:
    - "for h in /home/*; touch /home/$f/.default; done"

- type: systemd
  system:
    enabled:
      - corporate-vpn.service

- type: signing
```

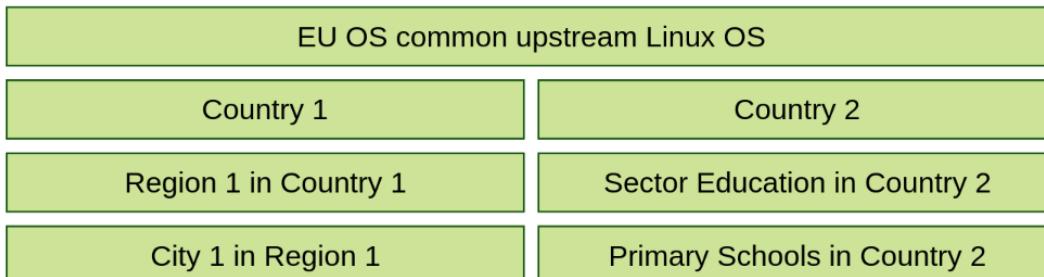


The easiest way to build your  
own desktop Linux images.  
[blue-build.org](http://blue-build.org)

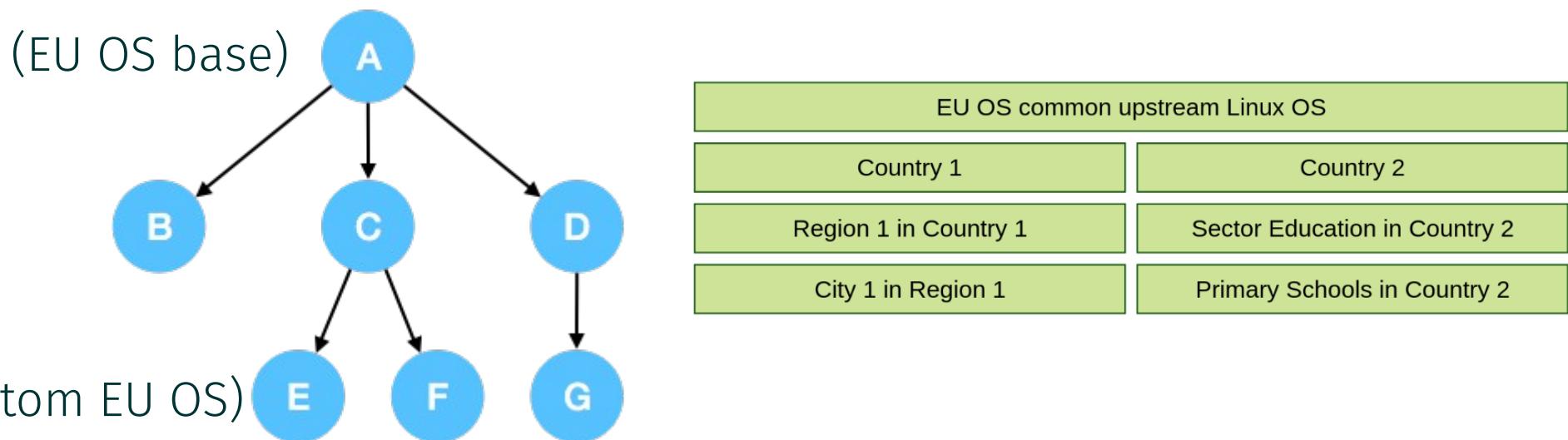
Full Example: EU OS Base Demo

## Based on ...

- open software and open standards: transparency, control, zero-margin costs
- wide-spread container technology (docker): in-house expertise often available
- wide-spread deployment technologies (Gitlab): infrastructure often available
- wide-spread enterprise linux (Fedora, possibly others): existing ecosystem
- hierarchy of shared containers:
  - synergies on many levels (EU, country, region, sector, ...) for building, testing, compliance
  - subsidiarity and flexibility
- Automation tools: scalability for large fleets with many seats (goal: thousands)



- Bootable Containers (bootc) have each one base container to inherit
- Collaboration on the highest (most generic) level possible
- Subsidiarity on the lowest level (custom EU OS variant)



- EU OS community is made up of
  - the project Gitlab <https://gitlab.com/eu-os/>
  - the Matrix chat space with ≈ 170 participants <https://matrix.to/#/#eu-os-space:kde.org>
  - the Fediverse account [@eu\\_os](https://matrix.to/#/#eu-os-space:kde.org) with ≈ 2,6k followers
- EU OS [partnerships](#) with organisations offering pro bono help or a platform
  - French Government [Hackdays in June 2025](#)
  - ATIX/orcharhino <https://orcharhino.com/en/>
  - B1 Systems <https://www.b1-systems.de/en/>
  - GONICUS <https://www.gonicus.de/>
  - international information campaign <https://endof10.org/>
  - pending formalisation: a German public sector agency
- EU OS would like to have more partners from all over Europe!

