

# Open Source Report

How Open Source contributes to the IT  
sovereignty of the City of Vienna



# 1. Initial point

In an increasingly digitalized and simultaneously uncertain world, public administration faces the challenge of designing their IT systems not only efficiently, but also securely, transparently and in a future-proof manner. Open Source Software (OSS) has proven to be a key component of modern IT infrastructure. Its Open Source code not only allows flexible adaptation to specific requirements, but also promotes innovation, collaboration and independence from individual vendors. For this reason, the City of Vienna has been relying on the use of Open Source Software for years. A corresponding overview can be found at [OSS Digitales Wien](#).

Especially in the European context, the debate around digital sovereignty is gaining importance. While dependence on a few global technology corporations often provide well-developed and integrated solutions, it also carries risks — for example, regarding data protection, control over critical infrastructures, and adherence to European values and standards. Open Source Software supports this with transparency, independence, and flexibility.

**The use of Open Source Software in public administration offers numerous advantages:**

- **Contribution for society:** Open Source software promotes innovation and transparency not only within public administration but also across the whole society. Individuals, startups, or established companies can integrate openly available software into their products.
- **Reduced Vendor-Lock-In:** Public administration remains independent of specific vendors, as software can be used without a contract with a manufacturer. Accordingly, dependency on the vendor is reduced to the provision of security updates.
- **Adaptability:** Since the source code is accessible, specific adaptations and extensions can be made relatively easily to meet the needs of the administration. This is a decisive advantage, especially when integrating into other, larger systems.

**However, there are also challenges which must be considered:**

- **Cost:** Open Source software is not free of charge. Especially in enterprise environments, additional features or pre-configurations may incur licensing costs. These costs can be comparable to those of proprietary software.
- **Employee Know-How:** The City of Vienna's IT department manages various systems, often relying on enterprise support for Open Source software due to limited in-house expertise, which results in additional costs.
- **Limited community size:** Software projects supported by small communities may face the possibility of limited development and insufficient security updates. It is important to weigh this risk during the software selection process, much like assessing a vendor when evaluating licensed solutions.

**Strategic framework conditions for software selection**

Efficient IT operations in the City of Vienna require effective management of four key dependencies. After providing strong departmental IT support, the priorities are **ensuring** Vienna's **flexibility** to meet new needs and reducing reliance on external partners.

- **Software vendors:** Regular updates, scalability, and enterprise support are essential to avoid security-related issues, minimize compatibility problems, and resolve complex questions.
- **Operations:** Cloud solutions and SaaS (Software-as-a-Service) models offer efficiency through standardized infrastructures, but they also increase dependency on the data center operator. It is important that the City of Vienna always retains control over its data.
- **Software ecosystem:** Modern software is almost always used in close integration with other applications. This built-in integration within a comprehensive software ecosystem is a key advantage, but it inevitably leads to

dependencies between the solutions used and tends to favor large providers. Therefore, the City of Vienna aims to use software that is as open and easily integrable as possible.

- **Employee know-how:** In the process of software selection, the expertise of IT specialists and general staff is a significant factor. Specialists tend to prefer products from leading technology companies, as their skills are often aligned with these providers. Conversely, smaller or lesser-known solutions may lack internal familiarity and expertise. This trend extends to employees, who are commonly acquainted with major providers through personal experience, education, or previous employment, thereby shaping their expectations regarding software functionality.

## 2. Open Source in the City of Vienna

Our IT strategy combines Open Source and licensed software to create a flexible and well-integrated IT infrastructure. This dual strategy strengthens our digital infrastructure and ensures transparency, independence, and cost-effectiveness. In addition, the City of Vienna is actively involved in various projects and initiatives — for example, through the association [OSSBIG](#)<sup>1</sup> – to strengthen competitiveness through collaborative co-production and to actively drive innovative solutions, the City of Vienna has established [Open Source Hub Vienna](#) - a central platform that promotes exchange, collaboration, and the further development of Open Source solutions. The hub serves as an innovation engine and contact point for administration, business, and the community.

Additionally, under [OSS Digitales Wien](#), the Open Source products in use are presented transparently. The significance of these activities is also recognized at the European level: the European Commission highlights Vienna in the “[OSS Country Intelligence Report Austria](#)” as a pioneer in Open Source initiatives.

**In general, Open Source software is purposefully used by the City of Vienna when**

- A specific function is needed and should be extended or customized
- It involves market-leading solution
- Reliable support and sufficient IT expertise are available in the market

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<sup>1</sup> OSSBIG – Open Source Software Business Innovation Group

### 3. Current Open Source project

We are already actively implementing a wide range of projects using Open Source systems. This continuously strengthens the digital infrastructure of the City of Vienna, drives current developments forward, and deliberately promotes digital sovereignty. A look into our data center shows the distribution: 3,000 Windows servers and 2,300 Linux servers (including 1,900 Red Hat Enterprise Linux, 200 SUSE Linux Enterprise Server, and 200 Oracle Linux) are currently in use. The trend is increasingly moving toward Linux in the data center.

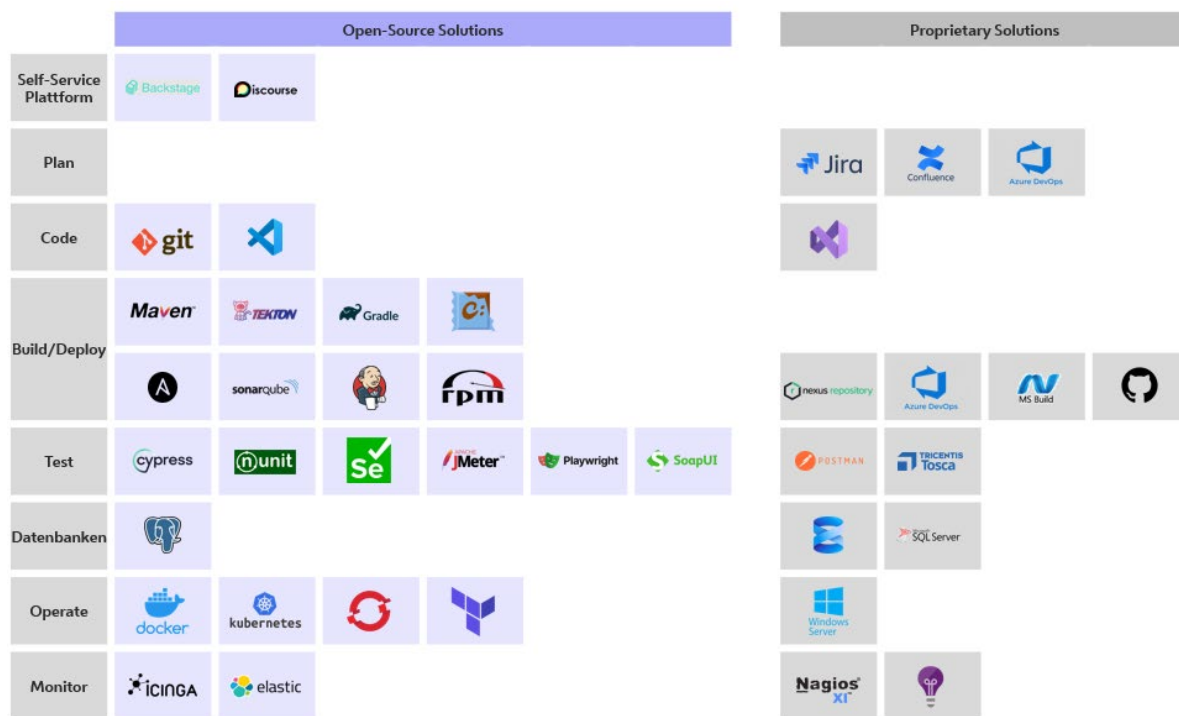
#### Red Hat Innovation Award 2025

The City of Vienna was honored with the Red Hat Innovation Award 2025 for its innovative AI solution "WienKI."

The award recognizes organizations that achieve outstanding success using Open Source technologies. Wien Digital, the IT department of the City of Vienna, developed "WienKI," an assistant that has been available to 70,000 employees of the City of Vienna since 2023 to support them in their daily work.

The following list provides an overview of the largest projects with a significant Open Source component undertaken by the City of Vienna in recent years:

- **Data Center modernization with Red Hat OpenShift:** The City of Vienna's data center was modernized with a Kubernetes-based container infrastructure — over two million euros were invested to enable scalability.
- **Managing documents with Alfresco:** The Open Source platform offers reliable and secure document management. Alfresco is operated on-premises in the City of Vienna's data center. To promote digital sovereignty, the city allocates over one million euros annually. Currently, more than 9,000 licenses are active, and the service is available to all customers of Wien Digital.
- **Open Source in GEO-specialized areas:** In GEO-specific domains, the Open Source tools MapLibre, OpenLayers, Masterportal, GeoServer, and QGIS are used to enable efficient and flexible solutions for processing and visualizing geographic data.
- **Developer Workstation with Open Source components:** The developer workstation of the City of Vienna enables modern software development using established Open Source technologies. Open Source frameworks and libraries are widely used in the DevSecOps (Development, Security, and Operations) area to promote flexibility, security, and innovation.



Overview of DevSecOps Software

## 4. Outlook

The IT of the City of Vienna follows a hybrid strategy that combines Open Source and licensed solutions. Decisions are based on comprehensive Total Cost of Ownership (TCO) analyses, ensuring technological independence and security. Key focus areas include the expansion of API (Application Programming Interfaces) management as a further development of open data initiatives, and the consistent use of on-premise and cloud infrastructure. With Infrastructure as Code (IaC), applications are intended to be made "mobile," allowing them to be shifted between the data center and cloud providers — ensuring that the City of Vienna's IT remains future-proof and efficient.

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