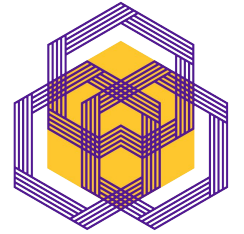


3Os and IP awareness raising for collaborative ecosystems



ZOOM

SYSTEM CUSTOMIZATION & INTEROPERABILITY

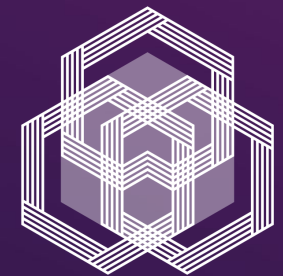
EIT Manufacturing



Funded by the
European Union

AGENDA

- **Introduction**
- **Personalized Products**
- **Complementary Services**
- **Exchange Coordination**
- **Recommendation and tips for businesses to improve their system customization and interoperability**



ZOOM

THE MAIN OBJECTIVES OF THIS COURSE

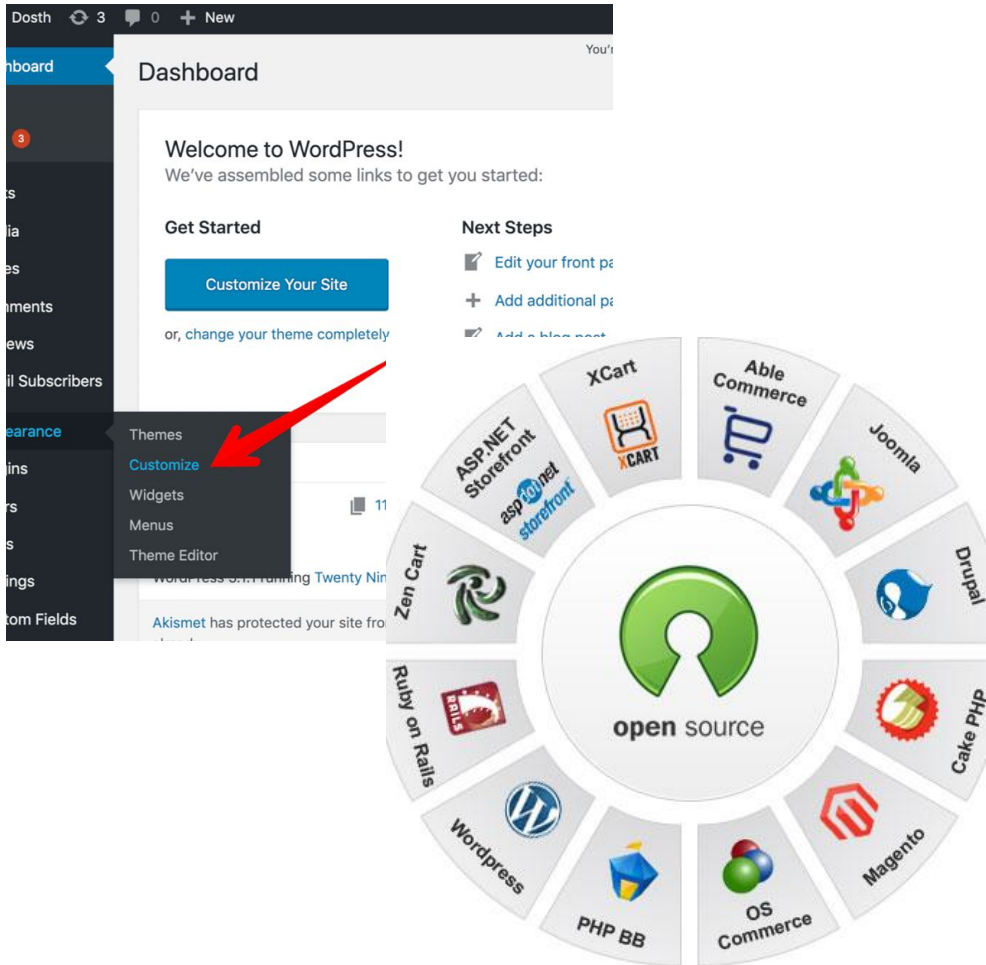
- Importance of system customization and interoperability in the digital economy
- Use of open source solutions to achieve these capabilities
- Provide examples and resources for further learning

SYSTEM CUSTOMISATION AND INTEROPERABILITY



- System customisation is the ability to modify or adapt a system to meet specific requirements or preferences.
- Interoperability is the ability to exchange and use information and services between different systems.
- These capabilities are essential for businesses to create value, differentiate and collaborate in the digital economy.
- Open source solutions can enable businesses to customise their systems and achieve interoperability with other systems using open source software, hardware and data.

PERSONALIZED PRODUCTS AND OPEN SOFTWARE



Customizing with Open Source Content Management System (CMS)

Businesses can use open source CMS like WordPress to tailor website design, performance, and interface using themes, plugins, and widgets.

Enhancing Flexibility with Source Code Access

Open source software, such as WordPress, allows users to access and edit the source code for further customization and flexibility in product development.

PERSONALIZED PRODUCTS AND OPEN SOFTWARE



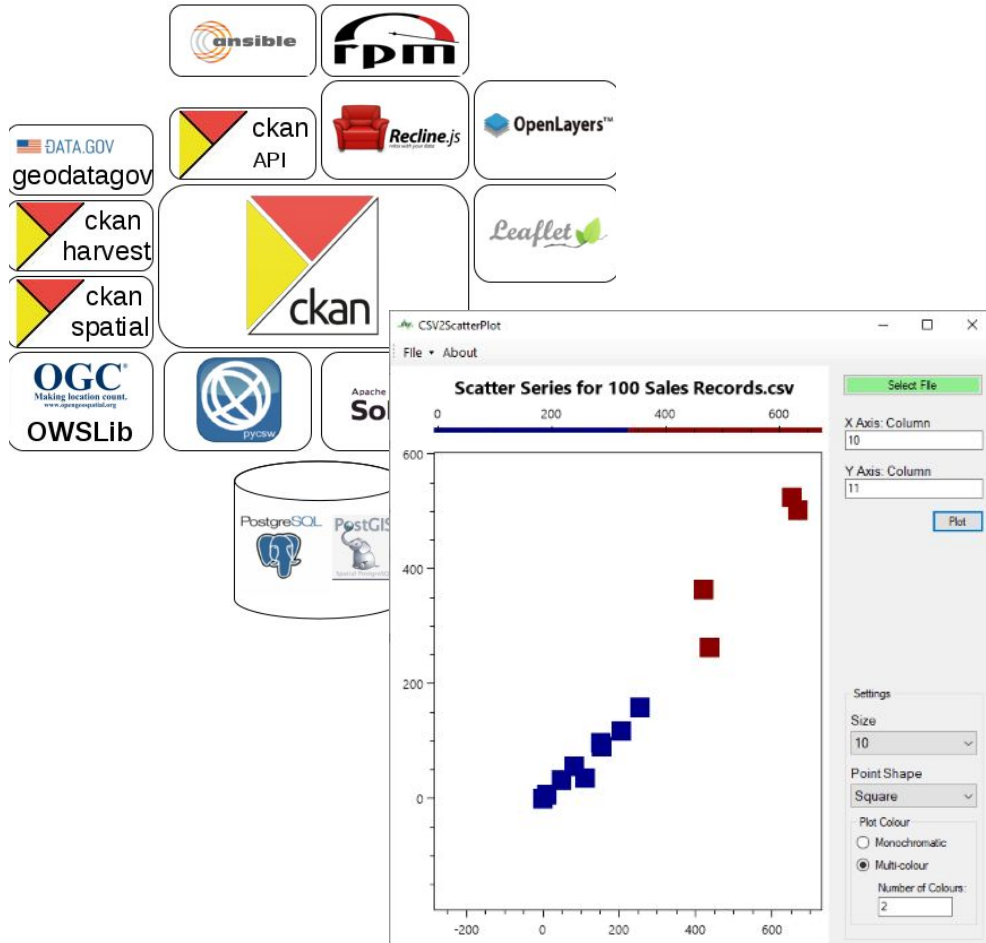
Customized 3D Printing with Ultimaker

Utilize open source 3D printers like Ultimaker to create personalized physical objects. Modify hardware design, software, and materials to meet customer needs.

Adapting to Diverse Customer Preferences

Open hardware enables businesses to cater to changing customer needs. Customers can assemble or modify products to suit their preferences.

PERSONALIZED PRODUCTS AND OPEN DATA



The image displays a collection of logos for various open-source tools and data services. On the left, there are logos for Data.gov, geodatagov, CKAN Harvest, CKAN Spatial, OGC OWSLib, and PostgreSQL/PostGIS. In the center and right, there are logos for Ansible, RPM, CKAN API, Recline.js, OpenLayers, CKAN, Leaflet, and Apache Solr. Overlaid on these logos is a screenshot of a web application titled 'CSV2ScatterPlot'. The application shows a scatter plot of '100 Sales Records.csv' with a color gradient from blue to red. The X-axis is labeled 'Column 10' and the Y-axis is labeled 'Column 11'. The plot shows a positive correlation between the two columns. The application interface includes a 'Select File' button, a 'Plot' button, and settings for 'Size' (10), 'Point Shape' (Square), and 'Plot Colour' (Multi-colour, Number of Colours: 2).

CKAN Data Platform

CKAN enables users to upload, download, share datasets, and create visualizations like charts, maps, graphs, and tables.

Benefits of Open Source Data

Open source data empowers businesses to cater to diverse customer needs by accessing or contributing to relevant data products.

COMPLEMENTARY SERVICES



- Complementary services enhance the value or functionality of another product or service.
- For example, a web hosting service is a complementary service for a website builder software.
- They can be offered by the same provider or by different providers.
- Open source solutions can benefit from complementary services in several ways.

COMPLEMENTARY SERVICES AND OPEN SOFTWARE



Offer support and maintenance services for open source software, including bug fixes, updates, and patches to help customers resolve issues and stay secure.



Provide training and consulting services for open source software, covering installation, configuration, and customization to help customers optimize features and tailor the software to their needs.



Deliver additional services like troubleshooting, performance optimization, and integration support to enhance the value of open source software for customers.

COMPLEMENTARY SERVICES AND OPEN HARDWARE



Businesses can provide support and maintenance services for open source software, including bug fixes and updates, to help customers resolve issues and stay secure.



Businesses can offer training and consulting services for open source software, assisting customers with installation, configuration, and customization to optimize software usage.



Open hardware can complement open source software, providing physical components that work seamlessly with the software, enhancing functionality and compatibility.

COMPLEMENTARY SERVICES AND OPEN DATA



Businesses can provide analysis and visualization services like dashboards, reports, and charts for open source data products.

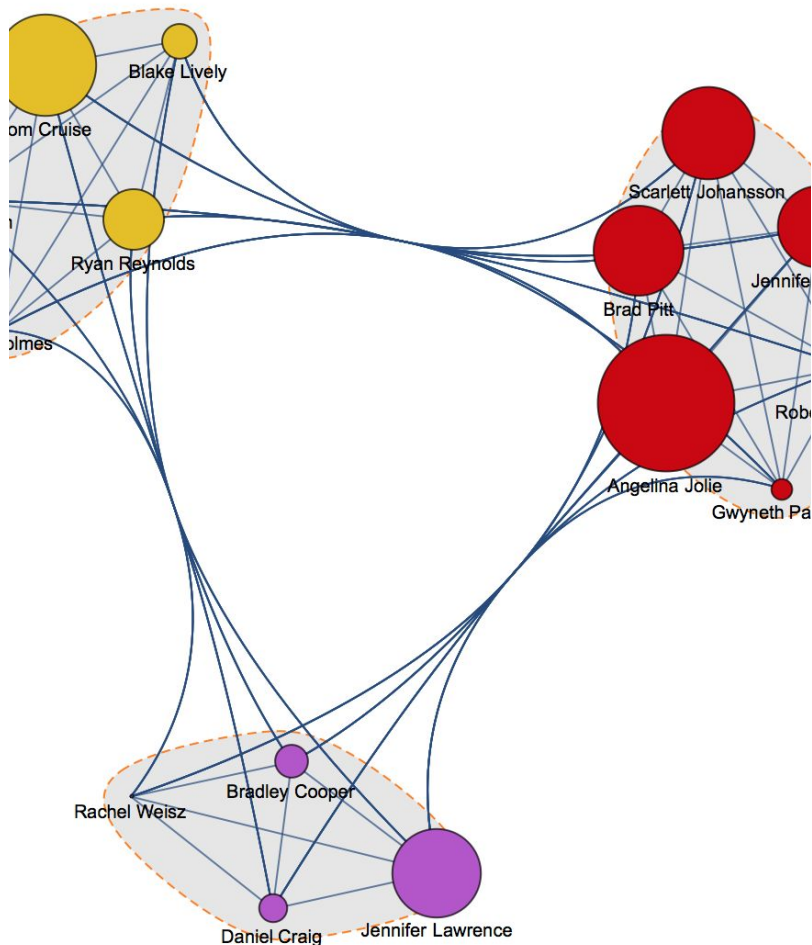


Businesses can offer annotation services such as labeling, tagging, and commenting to enrich and contextualize open source data products.



These services help customers understand, interpret, and communicate data effectively.

EXCHANGE COORDINATION



- Exchange coordination involves managing the exchange of information, resources, and services among different actors in a network or system.
- It can be applied to various domains like business, education, health, and social services.
- Open source software promotes efficient and effective coordination among stakeholders like developers, users, customers, and providers.

EXCHANGE COORDINATION AND OPEN SOURCE SOFTWARE



Open source software enables businesses to coordinate exchanges with suppliers, partners, and customers by enhancing communication, collaboration, and integration between different software systems.



Open source software also allows businesses to build interoperable platforms and networks such as cloud computing, blockchain, and peer-to-peer, enhancing scalability, security, and efficiency in their exchange processes.



Businesses can share and reuse software components like APIs, libraries, and frameworks to reduce development costs, increase compatibility, and improve functionality in their interactions with other actors in the ecosystem.

EXCHANGE COORDINATION AND OPEN HARDWARE



Businesses can connect with sensors, actuators, and devices to collect and transmit data, monitor processes, and optimize operations.



Open source hardware enables the creation of modular systems like robots and drones, aiding in exploration, delivery, and transportation tasks.



Integration with open hardware allows businesses to coordinate exchanges with suppliers, partners, and customers, enhancing collaboration in the ecosystem.

EXCHANGE COORDINATION AND OPEN DATA



Businesses can exchange and combine data with various sources like databases, APIs, and web services to enrich data and gain new insights.



Open source data can be used to create transparent systems like open government, science, and education, promoting accountability, innovation, and participation.



Open data facilitates communication and collaboration among different data sources, enhancing value creation and insights in ecosystems.

KEY TAKEAWAYS

Open source solutions enable businesses to customize products, offer services, and collaborate for increased value creation.

Challenges with open source solutions include quality assurance, security, and legal & ethical issues.

Strategies to overcome challenges include choosing appropriate licenses, engaging with the community, and adopting best practices.

RECOMMENDATION AND TIPS FOR BUSINESSES TO IMPROVE THEIR SYSTEM CUSTOMIZATION AND INTEROPERABILITY

- 1 Choose open source licenses aligned with business objectives and comply with license terms.
- 2 Engage with the open source community by contributing improvements, providing feedback, reporting bugs, and participating in discussions.
- 3 Adopt open standards and best practices for compatibility, quality, security, and reliability of open source solutions.