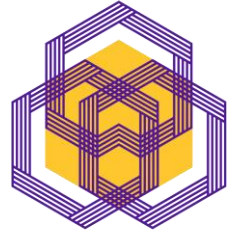


3Os and IP awareness raising for collaborative ecosystems



ZOOM

# THE ROLE OF OPEN SOURCE PROGRAM OFFICES IN THE KNOWLEDGE VALORISATION OF OPEN SOFTWARE, OPEN HARDWARE AND OPEN DATA (3Os)

*Elisa Morganti – Hub Innovazione Trentino Foundation*  
*Veronica Barchetti*  
*Milena Bigatto*



Funded by the  
European Union

# MODULE CONTENT

## 1. WHY?

The importance of Open Assets through cases studies

## 2. How?

The role of intermediaries. Introduction of Open Source Program Offices (OSPOs)

## 3. What?

OSPOs Service Portfolio



**ZOOM**

# **1. THE IMPORTANCE OF OPEN ASSETS**

## **CASES STUDIES**

*"Open source breaks down the barriers between companies and enables a level of collaboration and innovation that simply isn't possible in a proprietary world.*

*This leads to better solutions, greater choice, and ultimately, a fairer marketplace."*

*Jim Whitehurst, Former CEO of Red Hat*

*"Data is the new electricity." - Satya Nadella*

*Satya Nadella, the CEO of Microsoft*

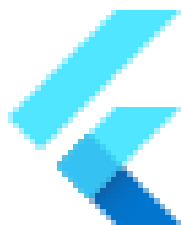
*"Open hardware gives you the freedom to control your technology."*

*Bunnie Huang, renowned hacker, engineer, and entrepreneur*





# Google





# kubernetes

Open-source container orchestration platform

## Business Model:

- **It does not directly generate revenue**
- **Managed Kubernetes Services:** Customers pay for resources consumed by their clusters on the cloud provider's infrastructure.
- **Enterprise Support and Consulting:** Revenue comes from service contracts and subscriptions.
- **Managed Kubernetes Solutions:** Revenue is generated through subscription fees or usage-based pricing.

*Product around Kubernetes have a valuation today in trillion of US dollar and investment in terms of billion dollar (Source: Amanda Brocks)*

## Corporate Support:

- Google established an **Open Source Program Office (OSPO)** to support developers in using open source effectively and adhering to licenses.
- The OSPO acted as the **primary point of contact** for developers with questions about licenses and other open source matters.
- The early focus of the OSPO expanded to include **managing Google's relationships with external development communities** of projects the company used and depended on.
- For further information, individuals can visit <https://opensource.google/>.

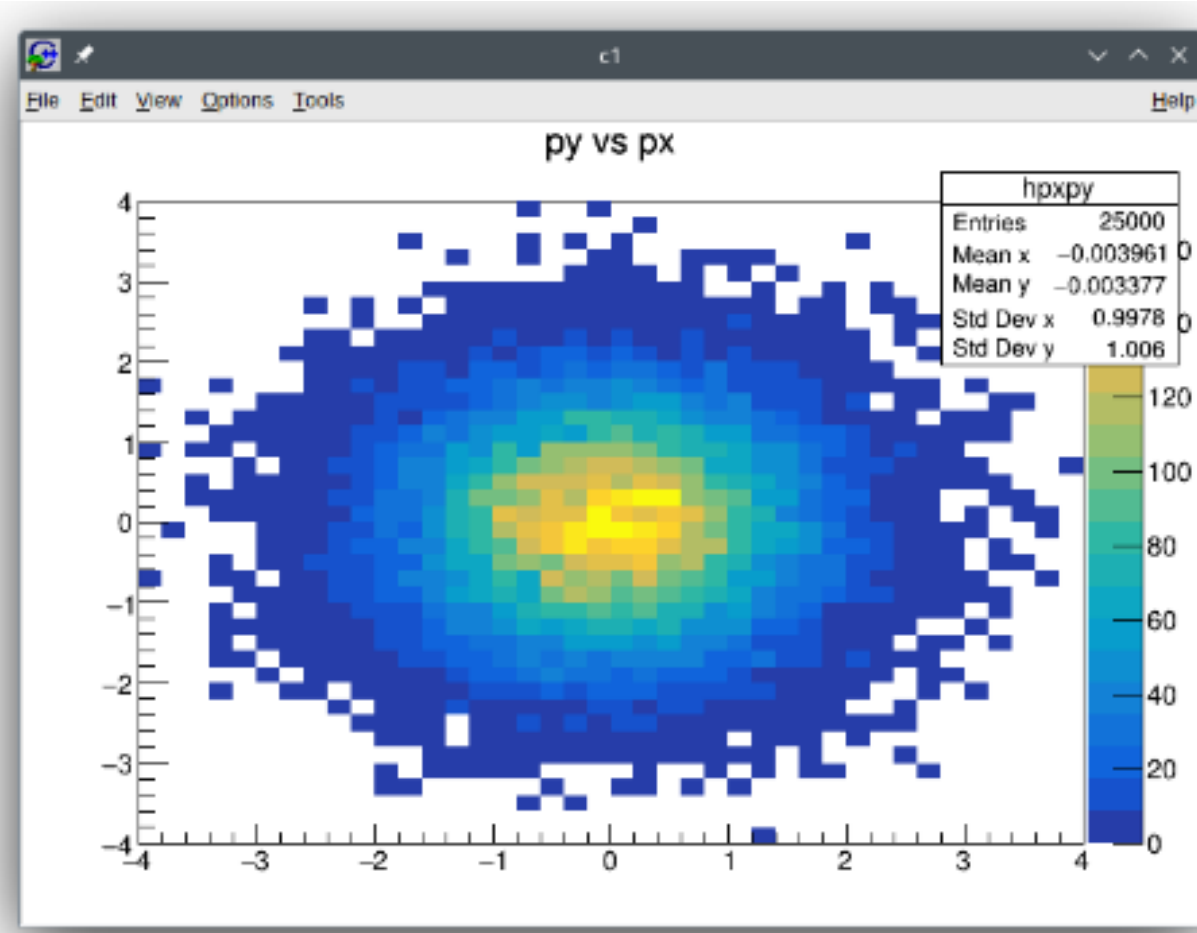


*We saw the OSPO as a vital way to enable developer productivity and excellence  
Chris Di Bono, key figure at Google, who coined the term “OSPO”*

About ROOT

About ROOT

- Save data
- Access data
- Mine data
- Publish Results
- Interactive or E
- Integration wit
- License
- Versioning
- Project Founde
- Team
- Previous Devel
- Publications by
- Cite us
- ROOT Logos
- Reporting Secu
- Legal



- Use ROOT within other languages ROOT provides a set of bindings in order to seamlessly integrate with existing languages such as Python and R.

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- ROOT open source project developed at CERN
- It provides a comprehensive toolkit for analyzing and visualizing large datasets, catering to various scientific fields like particle physics, astronomy, and medical imaging



Source: ROOT website

## Business Model:

- ROOT itself isn't a money-making entity, however
- its widespread adoption has led to the emergence of various business models:
  - Support and Consulting Services
  - Training and Education
  - Custom Development
  - Integration with Commercial Solutions
  - Collaborative Research and Development
  - Contributions to the Ecosystem

*ROOT proves valuable to CERN by facilitating scientific progress, promoting collaboration, and fostering innovation in line with the organization's core values*

- The Technology Transfer Office manages ROOT's **open-source ecosystem**:
  - Overseeing community contributions and code quality.
  - Setting strategic development direction.
- They **foster collaboration** through:
  - Workshops, conferences, and online forums.
- OSPO **promotes adoption and training**:
  - Providing documentation, tutorials, and training resources.
- **Ensuring legal compliance** involves:
  - Managing licensing & intellectual property.
  - Addressing legal concerns related to open-source.

*The OSPO plays a crucial role in ROOT's success by fostering user adoption and ensuring legal compliance, vital aspects for a thriving open-source project.*

## **2. THE ROLE OF INTERMEDIARIES**

*An **Open Source Program Office (OSPO)**  
is the center of gravity for an  
organisation's open source operations and structure.*

*This can include training developers, ensuring legal  
compliance, engaging with and building communities, and  
defining policies that govern code usage, distribution, selection,  
auditing and more.*

*<[https:// todogroup.org/ blog/ ospo- definition/](https://todogroup.org/blog/ospo-definition/) >.*

# WHO CAN BE AN OSPO?

- R&D units in a company
- Legal departments
- TTO Universities
- IP Consultancies
- Licencies agencies
- Public/Private organisation fostering innovation

## OSPO TARGET CUSTOMERS



**Centralized OSPO:** A dedicated team with full-time staff responsible for all aspects of open-source management.

**Decentralized OSPO:** Responsibilities are distributed across different departments, often involving representatives from legal, engineering, and other relevant teams.

**Hybrid OSPO:** A combination of centralized and decentralized elements, with a core team handling key aspects and other departments contributing specific expertise.



COMCAST

**RIT** | Rochester Institute of Technology



**EU OSPO  
Joint Research Centre**

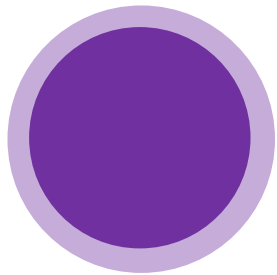


GOV.UK

# 3. SERVICE PORTFOLIO

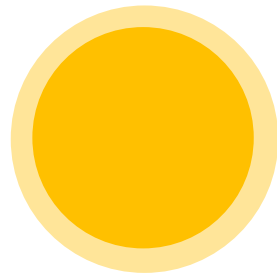
# HOW TO STRUCTURE OSPOs OFFER

The proposed methodology is divided in 4 main pillars



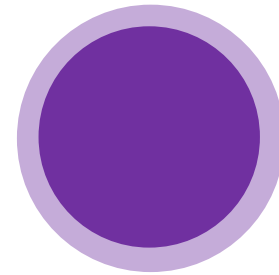
## Service portfolio

Service Taxonomy  
Analysis of **as-is** and **to-be** services



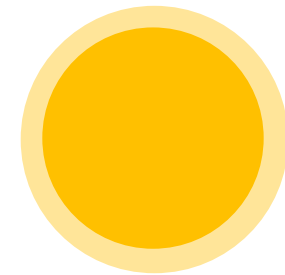
## Customer Journey

Needs, activities and pain points for academic researchers and SMEs



## Service matrix

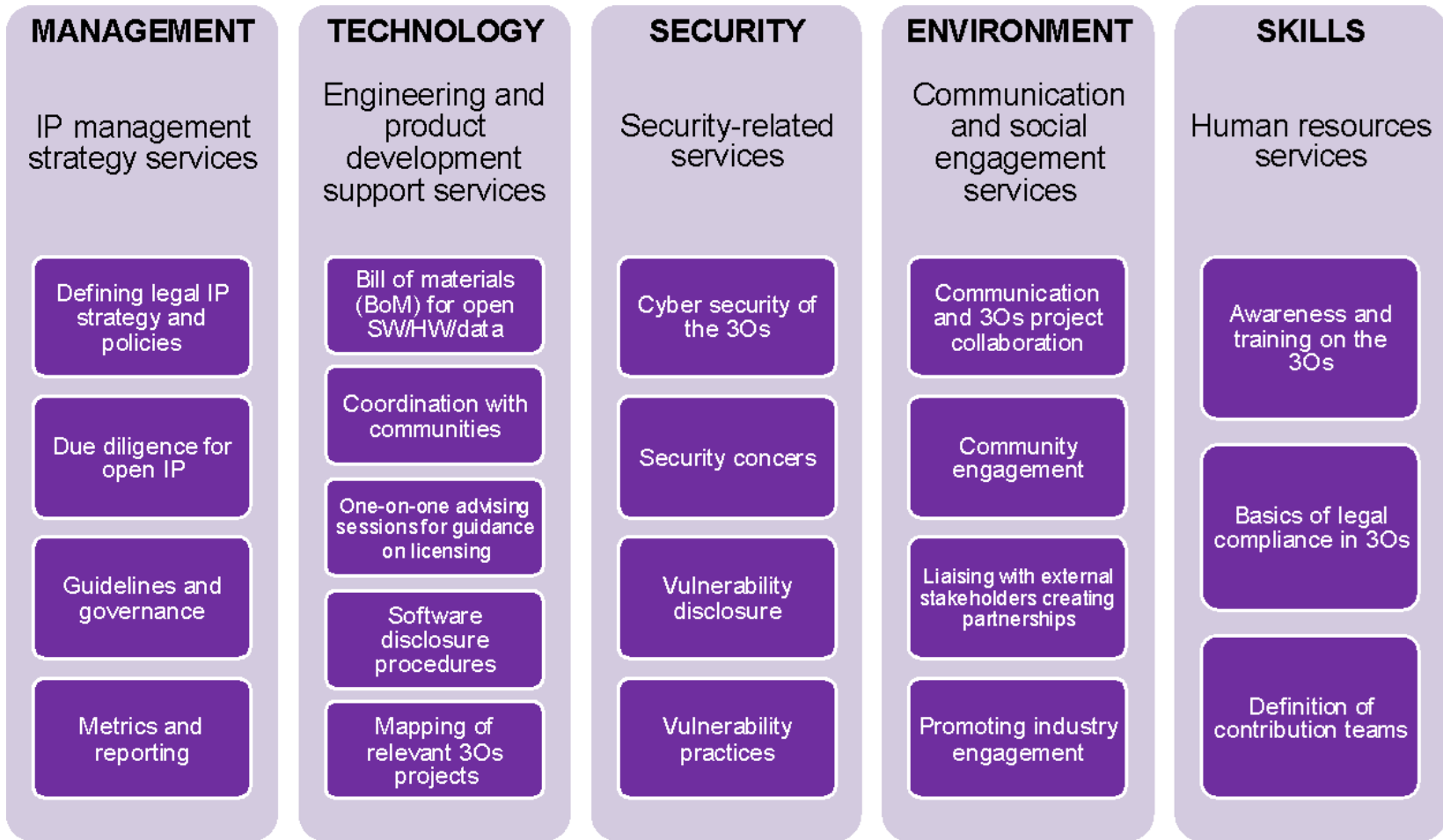
5x5 matrix mapping services in the customer journey



## Service pipeline

A Service pipeline is typically associated with a specific customer and equipped with a timeline, in order to be able to measure progress and performance.

# SERVICE PORTFOLIO



In the guidelines:

- Description of services
- Service analysis table with taxonomy

	Category	Service	Description of the service as-is or to-be	Timeline for implementation of to be services
MANAGEMENT	IP management strategy services-management	Legal IP strategy and policies	<i>Describe the service as you are offering it or your plan to implement it (if relevant)</i>	
		Due diligence for Open IP		
		Metrics and reporting		
		Guidelines and governance		
TECHNOLOGY	Engineering and product development support services - Technology	Bill of Materials for open software/hardware/data		
		Coordination with communities		
		One-to-one advising sessions for guidance on licensing		

# CUSTOMER JOURNEY

**Customer profile**



**Researcher**

**Scenario**  
 Researchers are typically aware of the opportunities for open licensing in light of the requirements for transparency, reproducibility and simplicity. Moreover, research in some cases builds on previous IP deployed in open licence and the researchers are favourable to contribute to the global community. However, there is lack of knowledge and/or understanding regarding:

- the variety of open licences in open software
- inbound/outbound licence management, rights and duties
- licensing strategies for open hardware
- the role of trustworthiness in both open software or open hardware solutions
- managing agreements for data, and/or the implications of intellectual property.

Journey Map	Observation →	Awareness →	Adoption →	Contribution →	Exploitation
<b>Needs</b>	Understand benefits and challenges in open assets	Understand risk and benefits balance Understand the IP policy of his/her organization Learn about open assets advantages and disadvantages Understand licences importance	Learn about compliance related to the developed asset Learn about asset specific business potential Understand duties and regulation	Create a customised IP strategy Interest in evidences of success stories Apply the proper Understand licence based on the IP strategy	Engage with open communities Define business models with open assets
<b>Activities</b>	Look on the web	Ask TTOs support, engage with open communities	Use Open assets produced by others Engage with open communities Ask for legal advice Structure a Business strategy	Is producing open assets Engage with open communities Participate in conferences and sectoral events	Engage with open communities Ask TTOs or experts in business planning
<b>Pain points</b>	Lack of Knowledge Lack of mindset	Lack of technical Lack of legal knowledge	Lack of knowledge about availability of open solutions Limited experience with risk in 3Os Lack of trust	Choose the right licence to use, Lack of trust Lack of trust	Ecosystem building Burden to manage communities Right attitude towards exploitation

Academic researcher

In the guidelines:

- Similar journey for SMEs

**Customer profile**



**SMEs**

**Scenario**  
 SMEs are often interested in open licensing in the open software sector with the potential to increase the value of their business and assets. However, SMEs generally do not have the resources or expertise to manage the legal and commercial aspects of open licensing. Therefore, SMEs often seek support from external organizations and communities to help them understand the opportunities and challenges of open licensing and to develop a strategy for open licensing.

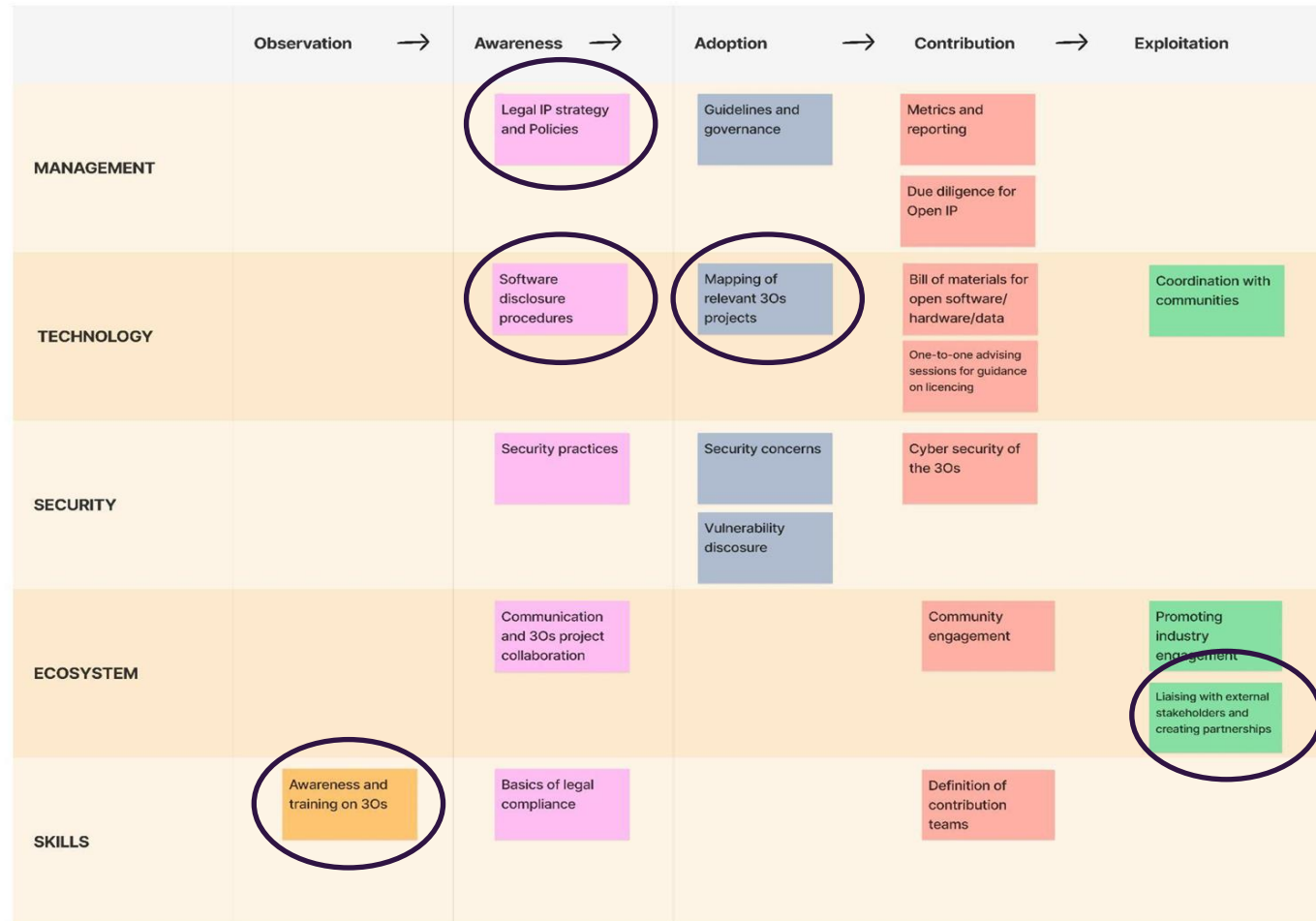
Journey Map	Awareness →	Evaluation →	Adoption →	Implementation →	Expansion
<b>Needs</b>	Understand legal and business aspects Understand risks and benefits balance Understand the IP policy of his/her organization Learn about open assets advantages and disadvantages Understand licences importance	Understand risk and benefits balance Understand the IP policy of his/her organization Learn about open assets advantages and disadvantages Understand licences importance	Learn about compliance related to the developed asset Learn about asset specific business potential Understand duties and regulation	Create a customised IP strategy Interest in evidences of success stories Apply the proper Understand licence based on the IP strategy	Engage with open communities Define business models with open assets
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# SERVICE PIPELINE

Mapping of offered services on the customer journey

	Observation →	Awareness →	Adoption →	Contribution →	Exploitation
<b>MANAGEMENT</b>		Legal IP strategy and Policies	Guidelines and governance	Metrics and reporting Due diligence for Open IP	
<b>TECHNOLOGY</b>		Software disclosure procedures	Mapping of relevant 3Os projects	Bill of materials for open software/hardware/data One-to-one advising sessions for guidance on licencing	Coordination with communities
<b>SECURITY</b>		Security practices	Security concerns Vulnerability disclosure	Cyber security of the 3Os	
<b>ECOSYSTEM</b>		Communication and 3Os project collaboration		Community engagement	Promoting industry engagement Liaising with external stakeholders and creating partnerships
<b>SKILLS</b>	Awareness and training on 3Os	Basics of legal compliance		Definition of contribution teams	

# SERVICE PIPELINE



Mapping of offered services on the customer journey

*Specific case:  
PhD in Computer Science, exploring the role of AI  
in developing open software solutions*

- Awareness raising in the 3Os
- Legal IP strategy and policies
- Software disclosure procedures
- Mapping of relevant 3Os projects
- Liaising with external stakeholders and creating partnerships

# ADDITIONAL MATERIAL

## Additional resources:

- **OSPO Landscape** (todogroup.org)
- **OSPO Alliance** (ospo-alliance.org)
- **TODO Group OSPO Career Path:** [<https://github.com/todogroup/ospo-career-path>]
- **A guide to setting up your Open Source Program Office (OSPO) for success:** [<https://opensource.com/article/20/5/open-source-program-office>]
- **Projects related to the OSPO Alliance:** OSPO Alliance · GitLab (ow2.org)
- **EC Open Source Programme Office** | Joinup (europa.eu)
- **OSPO by LINUX Foundation:** LFR\_LFAID\_Deep\_Dive\_Open\_Source\_Program\_Offices\_081922.pdf (hubspotusercontent-na1.net)
- **The History and Future of OSPOs** - Why they exist and role they play - <https://www.youtube.com/watch?v=TAg0bKQQiok> - Nithya A. Ruff, Chair, Linux Foundation Board, Head, Amazon Open Source Program Office
- **OSPO by redhat:** <https://www.redhat.com/en/blog/what-does-open-source-program-office-do>
- **Study of the impact of Open Source for the European Commission:** [Open Source Study - OpenForum Europe](#)

# SECTION 1

## ADDITIONAL EDUCATION MATERIALS

Guidelines: How to setup an OSPO?  
Interview to John Whelan from Trinity College Dublin OSPO



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THANK YOU