Sustainability of Open Source Software and Potentials in Developing Countries

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About the presenter

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- Graduated from **Free University of Bozen-Bolzano** in 2013, with majors in **mobile applications development**
- Founded **Refstal Solutions** with focus on providing **IoT** and **Big Data** solutions
- 12 years of work experience in Alto-Adige/Südtirol.

Challenges in Software Development in Developing countries

- Although developing countries hold a lot of potential in software development and research, the **licensing cost** of commercial software, platforms, and online services serve as a hindrance in their widespread adoption.

- The cost factor can also lead to **software piracy** when no suitable alternatives are available **.**

Software Piracy is on the rise

According to data from MUSO.com, software piracy has seen **10%+ increase** during Jan-Aug 2022 vs Jan-Aug 2021.

For example, in Vietnam, 85% of software used is pirated while in Malaysia this percentage is at 51%.

What people think?

- 57% of computer users in the Asia Pacific and Central/Eastern Europe regions confess to having pirated software at least once (BSA: The Software Alliance)

- 83% of unlicensed users in mature markets **don't want to break the law** and are willing to pay for software once they realize their mistake. (Revulytics)

Ghost Piracy

- Act of remotely accessing unlicensed software by employees is described as 'ghost piracy'

- According to BSA, ghost piracy is taking place among design, creative, animation and engineering professionals across Asia.

- This is particularly **increased since the pandemic** and increase in remote working

How Open Source Software can fill the gap

Open source software can be a very useful and viable solution in this regard:

- It can fill up the **need for less costly software** alternatives.
- it can **reduce the adoption of pirated versions** of commercial software by individuals and companies to make up for the cost factor.

How IP laws can help promote open source software in developing countries

- Readily available pirated software in developing countries promotes a **false sense of no costs** involved for using such software.

- This lowers the perceived advantage of open source software

- Strict implementation of Intellectual Property laws in developing countries will indirectly allow people to see how open source software are best economically

What stakeholders think?

- According to a <u>recent survey by Red Hat,</u> of IT leaders, 92% of IT leaders surveyed feel enterprise open source solutions are important to addressing their COVID-related challenges.
- According to <u>IDC AP Software Survey 2022</u>, 39% of organisations in the Asia-Pacific regions want to initiate an open-source software effort with community support.

Factors influencing the acceptance and adoption of open source solutions

- Cost (Free, Standard, Customise), e.g. Odoo CRM
- Functionality
- Features
- Subscription model (Free vs Paid)
- Support (Community, Blog etc.) (e.g. Puppet is a Configuration management tool which is freely available but Puppet Enterprise offering paid support).
- Product life-cycle

Engaging Developing Countries in Open Source

Adoption of open source software in the developing countries, will:
- encourage and engage more programmers from the developing countries to **maintain the open source software and to contribute** to it,

- add to the **sustainability** of various open source projects and thus benefiting open source software development beyond borders.

The Path Ahead

"Lack of skill sets (open-source development skills) and manpower are also key barriers to adoption, along with a lack of live support services," (source: Allan Tan, "What lies ahead for open source in Asia in 2023")

To remedy this, we need a multiple actions in parallel.

The Path Ahead

First step is to:

- **engage, train and support** more developers in the developing countries, such as in Asia.

Often such developers lack means to get support, training and education needed for developing and maintaining open source software

The Path Ahead

In parallel, we need to

- provide **competitive open source alternatives** to widely pirated commercial software

People often use pirated software as they are unaware of free and open source alternatives.

The Path Ahead

While doing so,

- we need to convince governments and stakeholders how the use of pirated software is security risk.

Often pirated software comes bundled with viruses and malware.

The Path Ahead

Lastly,

- we need strict implementation of Intellectual Property (IP) laws

When people will not have access to apparently free pirated software, the licensing fee of proprietary software will push people towards the really free and open source software.

Conclusions

Open source community and the developers in the developing countries can mutually benefit from the adoption of Open Source Software.

- Developers and companies in such countries can get economical alternatives without resorting to piracy or ghost piracy.
- OS community can benefit from engaging developers from the developing countries to maintain the open source software and its sustainability.

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Thank you !

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