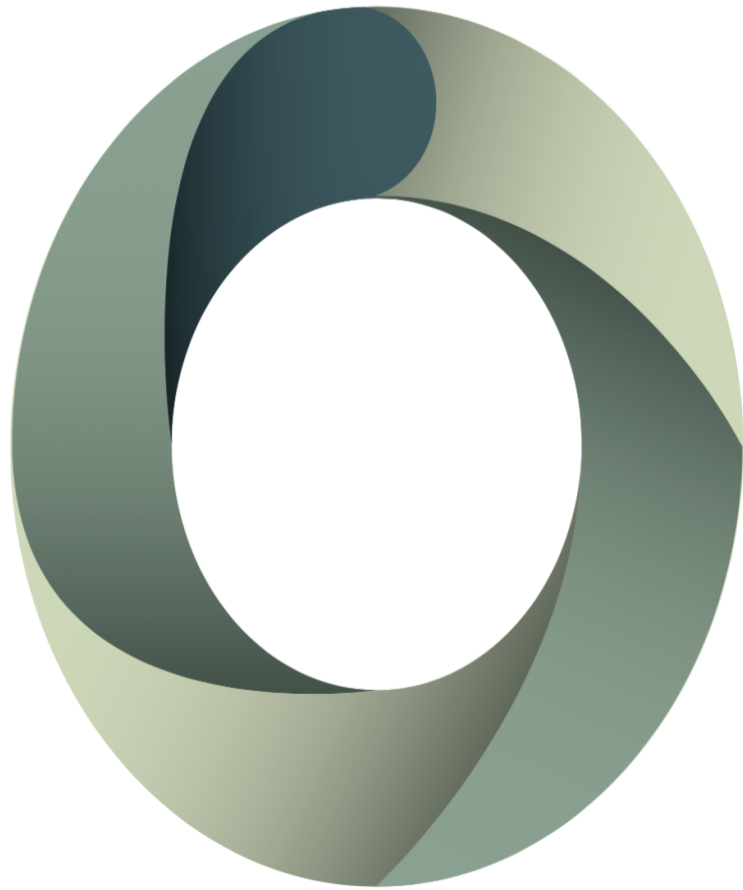# OPEN SOURCE FUNDING

Hello everyone, I'm here to talk about a topic that Wes mentioned yesterday, the funding in Open Source.

WHO?

My name is Maciek and I'm a core developer of the PyPy project.

PyPy is alternative Python implementation that speeds things up, but this talk is about more than just pypy.

FUNDING

I've been doing fundraising work for the PyPy project for a while now. Most recently we've got 200k USD from the mozilla foundation to implement python 3.5. I try quite hard to live of open source.

```
import requests
requests.get('https://google.com')
print(r.text)
```

But let's look at something else. How would you scrape contents of google.com? As this is a python conference, I would look at something like that.

- requests
- python

Obviously, I'm using at least the package itself, "requests" and python interpreter, both of which I got for free.

- 24 other packages
- gcc, clang, etc.

But if we look under the hood, there are 24 direct dependencies and countless ones that are indirect plus tons of C libraries, all of them that are good and don't cost a penny

pip install requests
Oh, but almost forgot, how do we get hold of requests?

- pip
- openssl
- PyPI server infrastructure
- readthedocs
- ...

That opens the whole can of works of things we need to have in order to install and run it, not to mention know how to use

WE ALL RELY ON OPEN SOURCE

So the fact of life is that we all rely on tons of open source.
Explicitly or implicitly

Let's disgress a little. This is a place how I sometimes drive to work, a bunch of roads

This is a tgv train in France.

INFRASTRUCTURE

Those are both examples of infrastructure - things that some people paid for and now can be used by everybody

IT COSTS MONEY TO CREATE AND MORE IMPORTANTLY, MAINTAIN

It creates money/time to create and maintain Open Source. Sometimes lots of time. Our society increasingly relies on this.

OPEN SOURCE IS EVERYWHERE

Software is eating the world. But more importantly Open Source is eating the world. It's everywhere, it cleans your trash, it drives your ambulances, it guards you while you sleep. Note that this world is not how Free Software movement has seen it but it did win.

FUNDING FOR OPEN SOURCE

So to start of I would say it's perfectly ok to get paid for Open Source. It creates strange incentives, but even if you're a complete volunteer it means you have resources to be a volunteer.

PREVAILING MODELS FOR FUNDING OPEN SOURCE

I'm going to describe the prevailing models for funding open source and problems associated with them. Additionally different projects have different ways of monetization or none at all.

LARGE COMPANIES (OR PATRONAGE)

This is in a sense boring one - project just happens to be open source. An example is V8 JS engine, chrome or firefox. No funding problems, but also no community direction. Another example is when large company is merely tolerating someone working on open source during company time.

R&D FUNDING

This is a less explored avenue, but nonetheless tried.

EU GAVE ABOUT 1MLN EUROS FOR PYPY

PyPy alone got 1 mln euros from the EU research program

PAPERWORK....

paperwork is the biggest downside, tons of reports etc.

CROWD FUNDING

Often noted avenue is crowd funding. Crowd funding really did not work for us - individuals don't contribute much money and from companies it goes from marketing budget at best. The expectations are also incredibly high. It has worked for other people but I can't speak for them

One option that did work for us is commercial contracts. People use PyPy, so why not offer to improve PyPy to fit their usecases better? I run a small company called baroquesoftware that does exactly that

ENGINEERING BUDGET

The good part is that it comes out of engineering budget, not marketing. Engineering budget is much easier to come by.

STRANGE INCENTIVES

The worst part is that it creates strange incentives - you have to do your job well, but not good enough

DEAD END JOB

a lot of open source software gets created by people who have nothing better to do - they are a sysadmin somewhere uninteresting and have tons of spare time.

SOFTWARE AS A SERVICE

a good example of this is sentry - business model attached to open source that works.

SOME PROJECTS ARE NOT FUNDABLE

The list of options has one problem - it caters towards various niches which does not really attack the main problem.

OPEN SOURCE IS SAVING BILLIONS

Companies like facebook won't exist without Open Source software. It lowers the costs of entering the market and saves billions of dollars in infrastructure.

PYPY IS SAVING MILLIONS

PyPy alone saved people millions of dollars. How do we convert this to sustainable development?

OS - JUST BETTER

It's maybe worth noting that Open Source won because it's better. Most of the users, especially commercial ones don't care about software freedoms - it's just a cost effective solution.

YOUR COMPANY USES OPEN SOURCE

In fact, just because you're at this conference, likely means that your company uses Open Source software.

FUND OPEN SOURCE

You can help! One thing to start would be to convince your employer that it's cost effective to contract open source people available for contracting.

WE NEED TO FIND ANSWERS HOW TO FUND OUR INFRASTRUCTURE

I'm sorry I don't have proper answers but we need to somehow make a plan - we have a growing body of digital infrastructure that does not have a plausable funding story.

THANKS!

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