



OERu's FOSS Next Generation Digital Learning Environment (NGDLE)

For Executive Leadership Teams

Dave Lane, OER Foundation



Learning on the internet

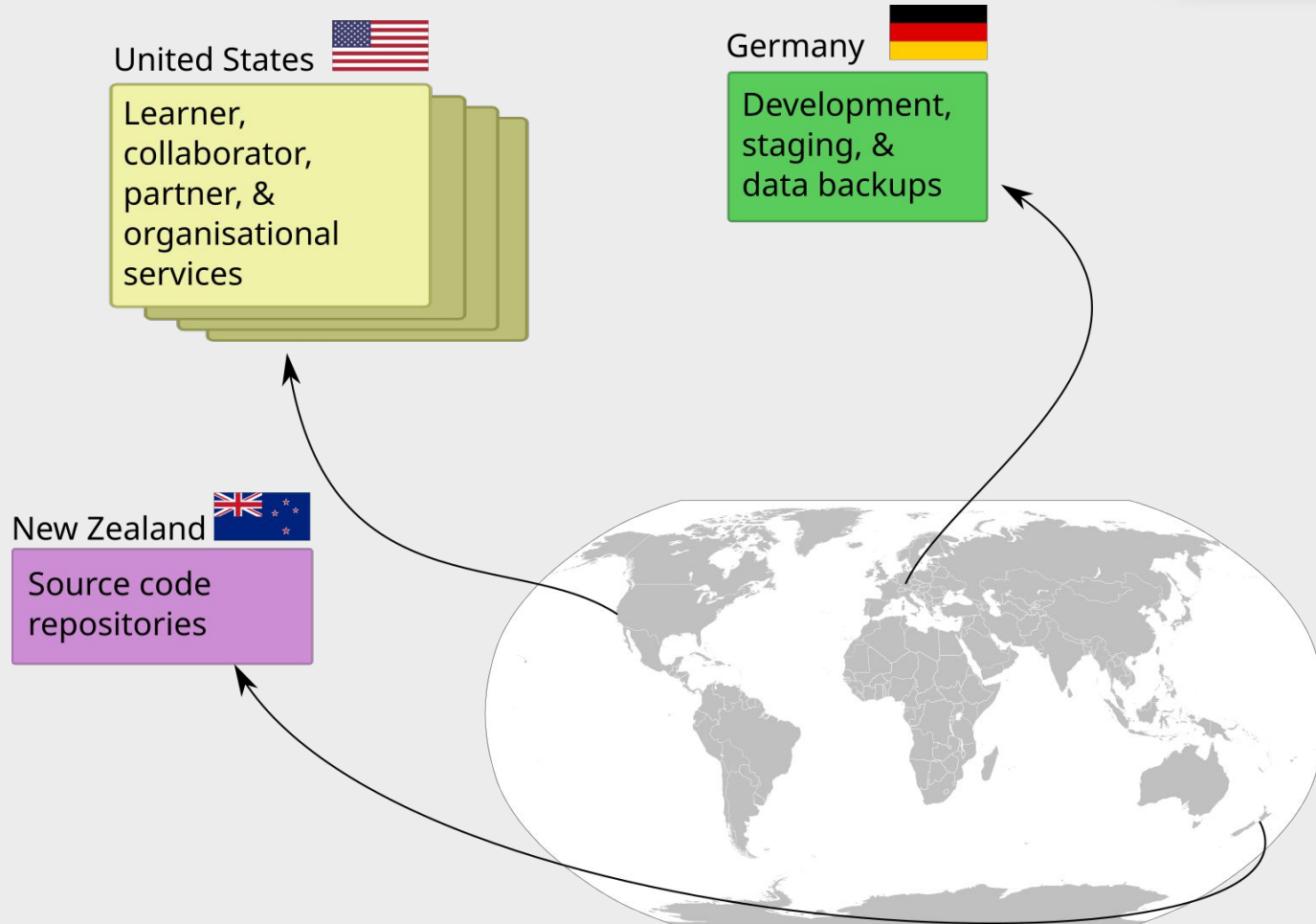


- Best way of supporting learners to develop digital and other learning literacies?

Use *the same technologies* they need to build digital fluencies for learning.

- Learning on the internet
 - is less constrained than via an LMS
 - enables collaborative content creation (even across institutions)
 - learners control their own work (data sovereignty)
 - learners *use* the technologies and practices of the *real* digital world

OERu's global infrastructure



Globe [image credit](#)

Learner-facing 'Tech Wheel'



Our FOSS NGDLE tech mix

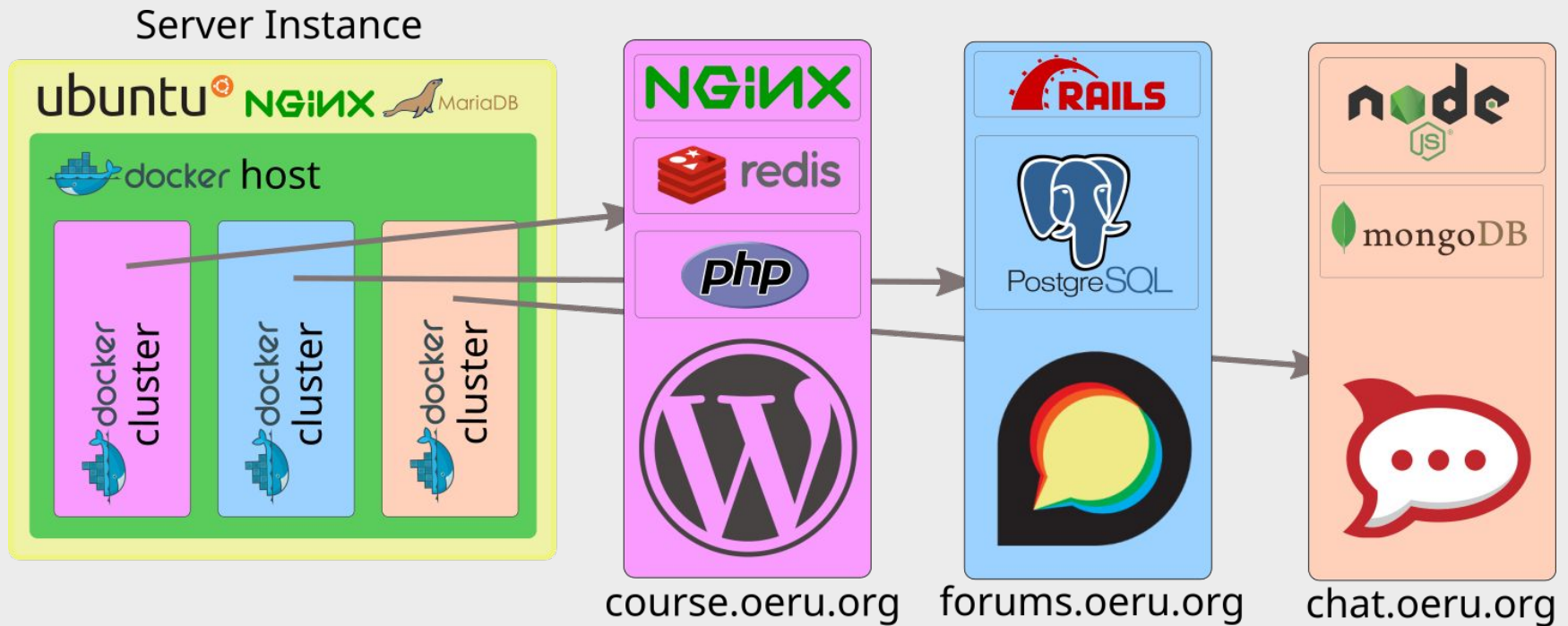


Benefits of diversity




- Diversity makes digital ecosystems more resilient
- Our digital ecosystem is diverse, both in terms of actual software and hardware, but even more critically, with regard to suppliers.
- We have voluntary dependences on a broad range of open communities or commodity service providers, rather than contractual dependencies on a few proprietary corporations.
- We are, to the extent we want to be, *technologically self-reliant*.
- We can be *agents of natural selection* in our digital world.
- The challenge: diversity can create complexity.

Docker: indispensable



Docker: writing recipes



Using  docker to manage FOSS complexity



Docker: share & replicate



tech.oeru.org

The OERu tech-transfer blog providing howtos & overviews of our Docker recipes & our custom FOSS code.



git.oeru.org

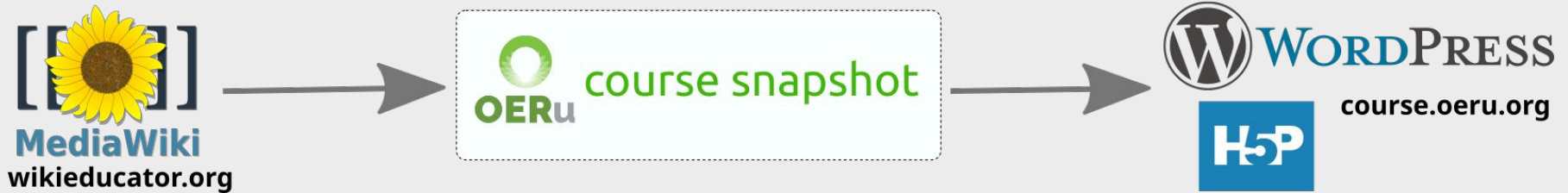
The OERu software repository for others to use, adapt, contribute to, & learn from our FOSS code.



Strategic development 1



Automating Courseware Deployment



Harvesting Distributed Learner Interaction



Strategic development 2



Improving Learner Usability



Automating Learner Administration



Cost & return on investment



- *Annual* IT costs
 - Fixed costs: infrastructure @ ~ NZ\$6000 + 1 Full time IT person
 - Per-learner: ~NZ\$0 variable cost
 - Proprietary software licenses cost: ~NZ\$250 (Zoom)
- ROI maximised by
 - investing in targeted strategic software development
 - sharing maintenance with FOSS communities
- Four tech selection criteria
 - commodity hosting
 - FOSS for SaaS
 - No per-seat cost component
 - account for internal staff time in TCO



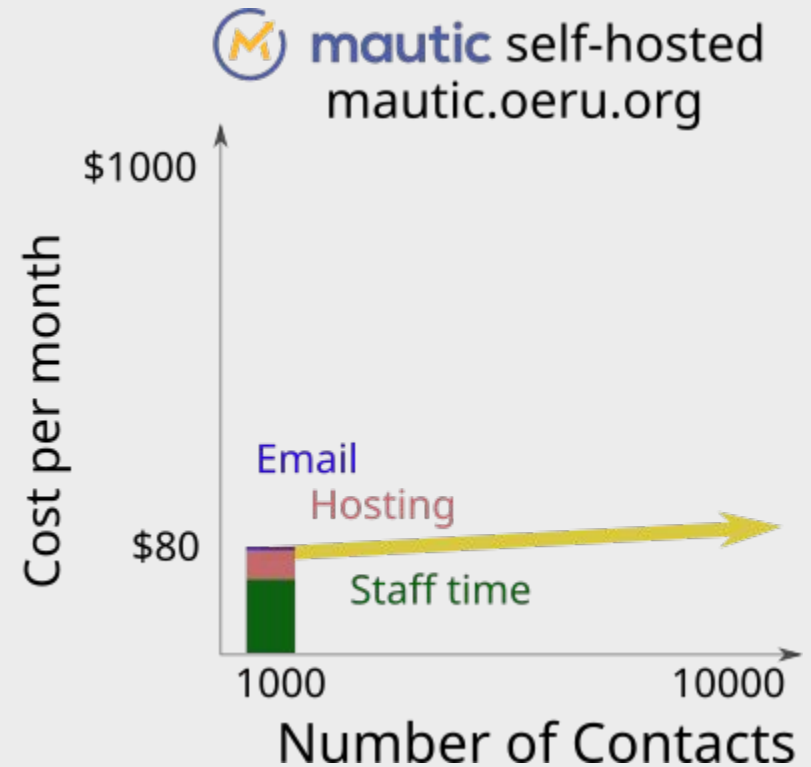
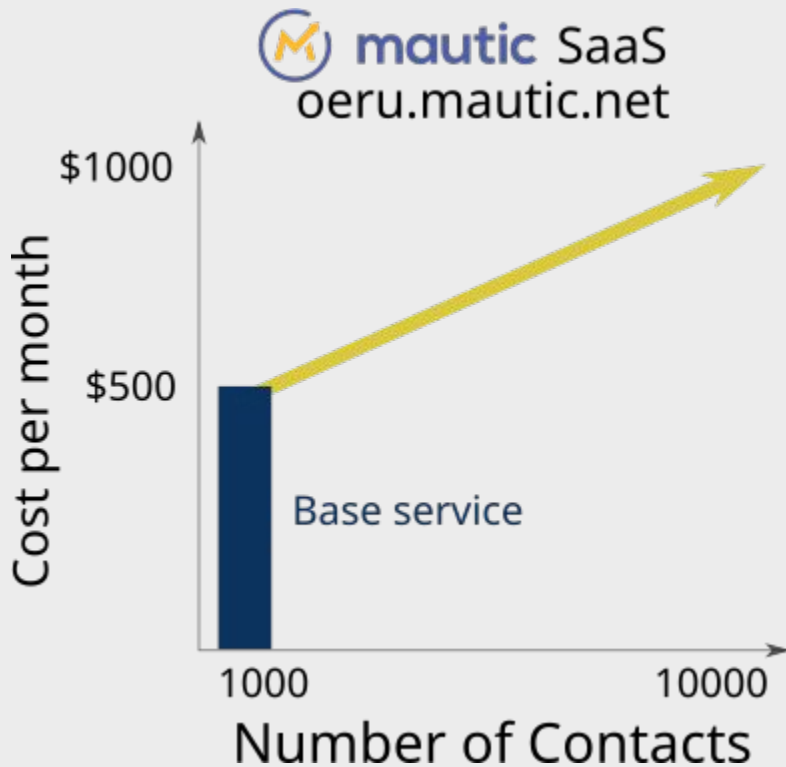
Case study: Mautic



Mautic emails sent (2019)



Mautic cost comparison



Advantages for learners



Our NGDLE has multiple advantages for learners

- Ability to navigate own way through their learning
- Development of self-directed skills
- Cost savings (e.g. textbooks)
- Variety of dynamic, open materials (potentially in different languages)
- All courses are 'mobile-friendly'
- Enables lifelong learning
- Learners
 - control their own data during *and after* study
 - are never forced to waive rights to use technology (no 'I ACCEPT')

Pedagogical opportunities



Opportunities for teaching staff and learning designers include

- Identifying, modifying, and developing resources
- Building digital literacy skills including
 - wiki writing
 - web writing
 - using FOSS tools
 - finding open content
- Understanding open licences and the use of OER
- Embracing opportunities for collaboration and innovation
- Enabling cost efficiencies
- Experiencing and applying 'free-range learning'

Conclusion



The OERu's NGDLE offers

- the opportunity to pioneer new approaches
 - Building a rich infrastructure for learners and collaborators
 - Implementing a FOSS end-to-end service
 - Potential to scale up to facilitate learners across the world
- Advantages - both technological and pedagogical
- Incredible cost-effectiveness and adaptability

Our NGDLE experience challenges the status quo for IT infrastructure used by most HE institutions.

It demonstrates the viability of a new, *open* approach.

More info: **OERu.org**

This talk online: **oer.nz/ngdle19**

Our FOSS code: **git.oeru.org**

Tech blog: **tech.oeru.org**



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License. Icons proudly borrowed from Font Awesome.