



European Open-Source Report 2022

October 2022

Content

Market

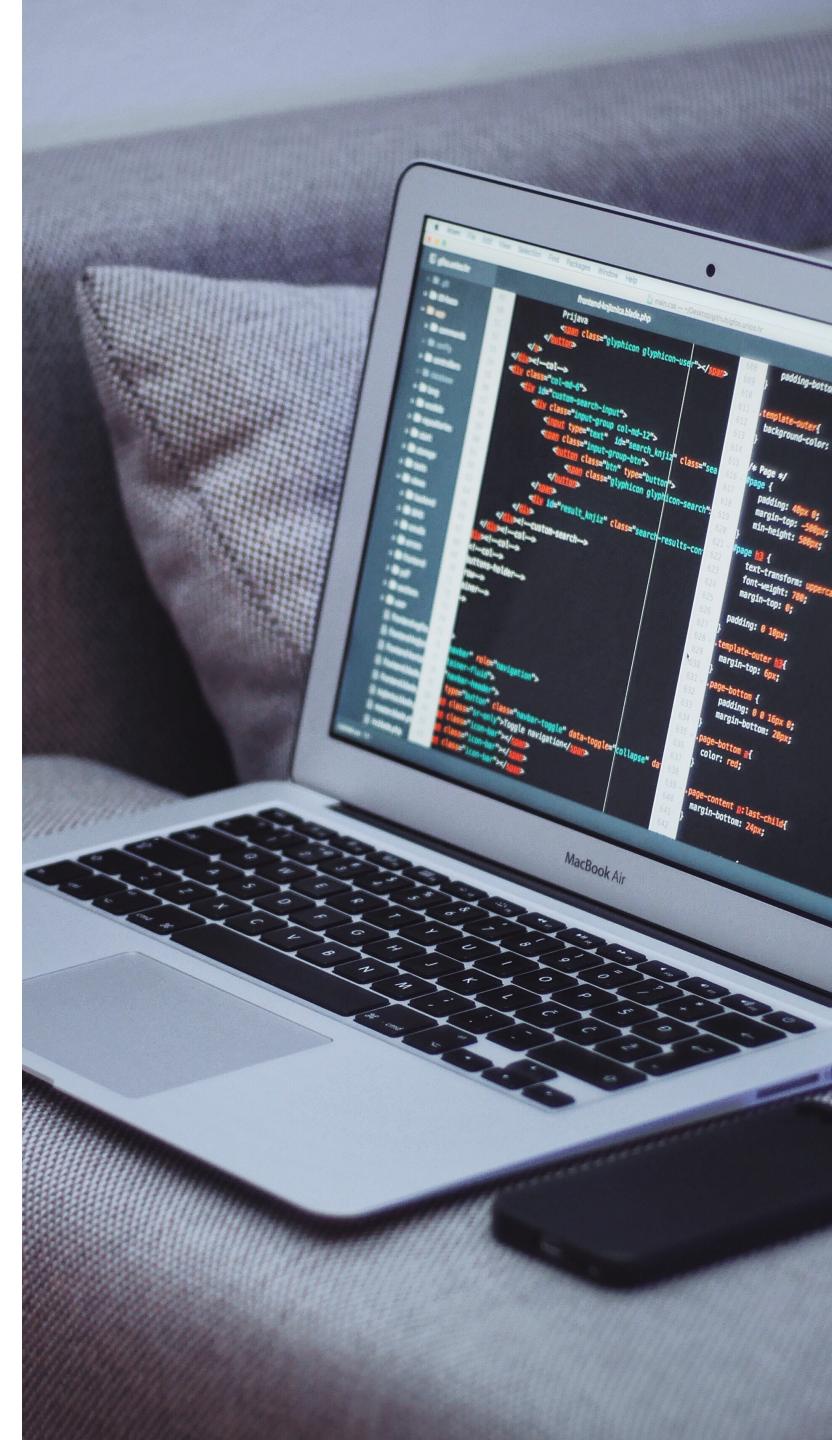
Definition, trajectory & key players

Business Models

Commercialising open source

Investors

Key players, market opportunity



Foreword

Open source: Europe's bright star

The movement behind open-source software (OSS) began in the 1980s, but right now we're seeing a turning point: OSS is about to take over the enterprise software category. Why? The decentralized and open approach that enables rapid experimentation simply has proven to be far superior to relying on (and waiting for) proprietary technology.

According to studies, 80% of IT leaders expect to increase their use of enterprise open-source software for emerging technologies like AI, IoT, serverless computing, or containers. In fact, it is estimated that by the end of 2022, 65% of all software used by businesses will be open source.

It's no wonder that the 2022 market size of open-source software services is predicted to be \$32.5B with a CAGR of 24.2% up until 2025 and with an estimated market size of \$65B in 2025.

Adoption is driven by:

- An increased **sensitivity to price** amongst enterprises
- A need for **differentiation** that can be achieved **through software/technology customization**
- A need to **avoid vendor lock-in**, so that enterprises have more control over their technology
- The **accelerating pace of innovation** where self-organizing processes as pioneered with open-source communities are needed to keep up development cycles

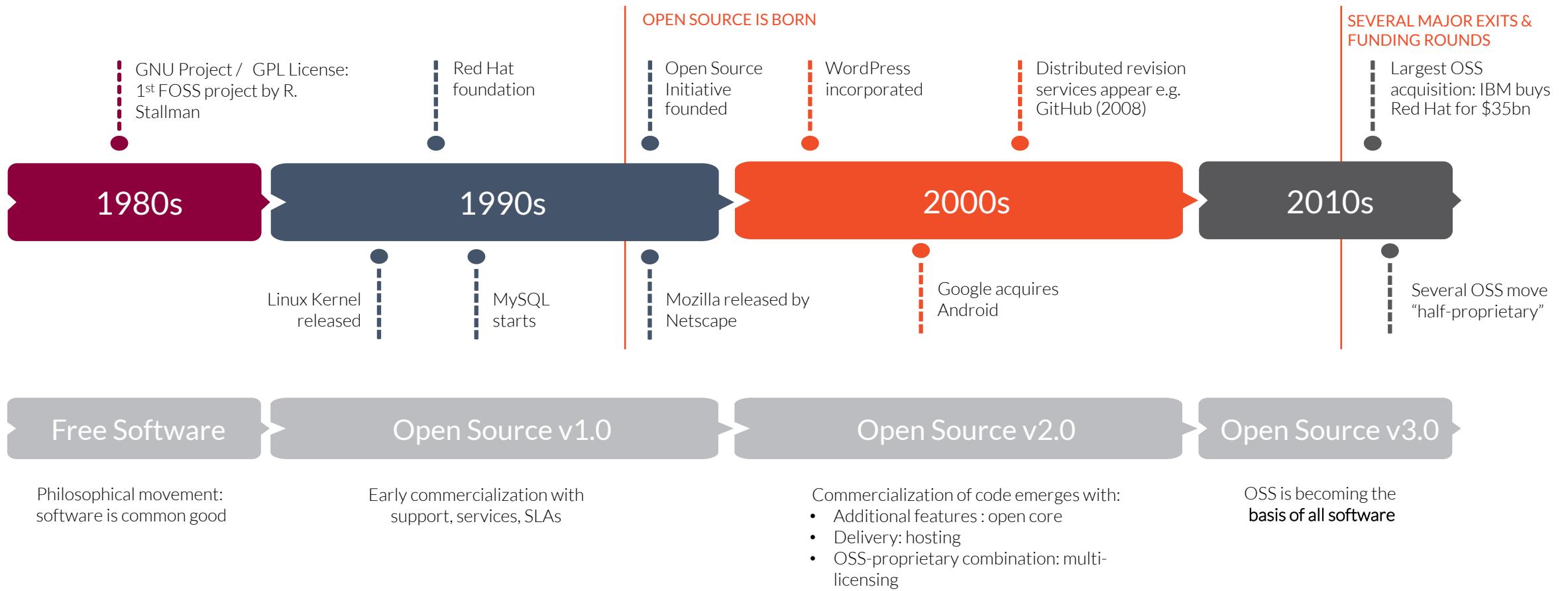
This is in addition to the growing strength of the open-source community, where the number of developers is on the rise, e.g. GitHub users grew by 24% to 73M in 2021. Furthermore, the rise of commercial open-source software (COSS) has given the technology the means to go mainstream. Just think of WordPress's 41% market share or Android's more than 2.8B users (+75% market share).

This report will explore what this boom means for the European start up and venture capital ecosystem.

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A (very) brief history

The open-source movement matured and reached a commercialization tipping point in ~2018



The spectrum of openness

There are various movements and definitions enabling a varying degree of freedoms

	FREE SOFTWARE	OPEN-SOURCE (OSS)	FREEWARE	PUBLIC DOMAIN
DEFINITION	"Free" to do what you want with it, not the price	Open means more than access to the source code	No cost, but what you can do is restricted by creator	Belongs to the public as a whole
PHILOSOPHY	Social movement	Development methodology	Marketing goals	Copyright disclaimed
RULES	<u>Four Freedoms</u>	<u>Open Software Initiative</u>	-	<u>Creative Common Org.</u>
FREE (COST)	Depends	Depends	Yes	Yes
COPYRIGHT LAW	Yes	Yes	Yes	No
EXAMPLES	 	 	 	

OSS projects that are commercialized are known as Commercial Open-Source Software (COSS).

European COSS companies

Selection of highest funded companies (firms that received a minimum of \$5M VC)

FUNDING

> \$100M



\$20M - \$100M



\$10 - \$20M



\$5M - \$10M



Selected early-stage COSS companies

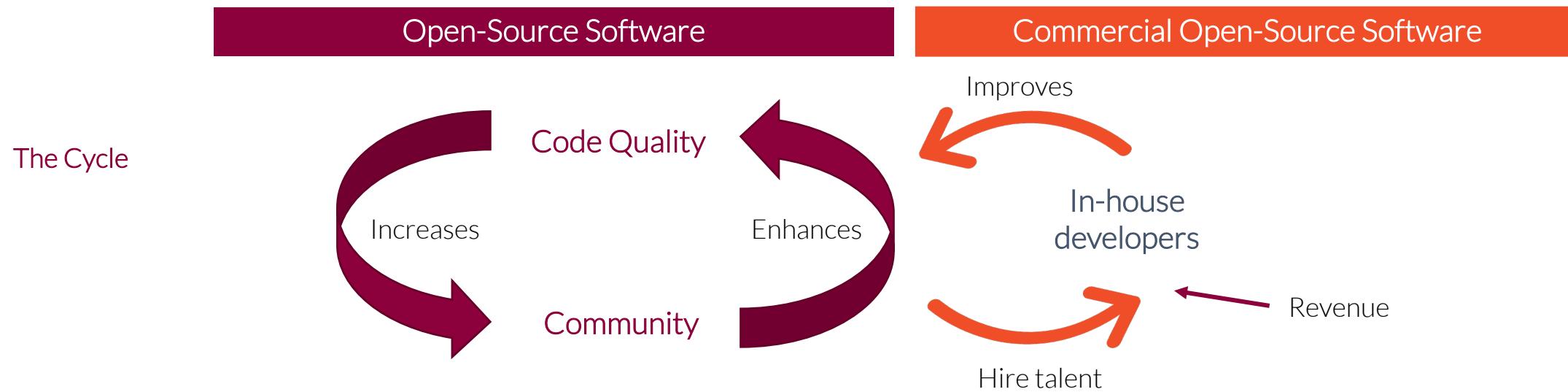
Promising European COSS landscape (selection of companies with less than \$6M funding)



BUSI NESS MODELS

The OSS & COSS cycles

Interconnected COSS & OSS cycles can power exponential, capital-efficient adoption rates and growth



Characteristics

- Benefits from positive sum game & network effects
- Open code = downstream virality with more potential users in the long run
- Exceptional software quality due to nature of feedback and reviews
- Decentralised nature leads to software being a “trusted brand”
- Reinforces the open-source software cycle by improving the base code quality
- Fast and cheap client acquisition due to community adoption.
- Superior access to talent from the open-source community
- Less R&D costs due to the nature of open-source software

Public COSS champions

Numerous success cases display commercial success of open-source companies

Ordered by company valuation¹

	 mongoDB [®]	 GitLab	 elastic ³	 CONFLUENT	 HashiCorp	 CLOUDERA ⁴
Current EV	\$18.9B	\$18.3B	\$18.3B	\$6.6B	\$6.2B	\$4.7B
IPO (Year)	\$1.2B ('17)	\$15B ('21)	\$4.9B ('18)	\$10B ('18)	\$14B ('21)	\$2B ('17)
EV/Rev ²	19x	26x	8x	13x	14x	5.1x
<hr/>						
	 RAPID7	 DigitalOcean	 INSTRUCTURE	 SUSE	 JFrog	 Progress [*]
Current EV	\$4B	\$3.6B	\$3.3B	\$3.1B	\$2.18B	\$1.95B
IPO (Year)	\$0.9B ('15)	\$4.1B ('21)	\$2.7B ('21)	\$5B ('21)	\$4B ('20)	\$0.3B ('01)
EV/Rev ²	8.2x	7.6x	8.8x	6.1x	7.9x	4.1x
<hr/>						
	 Qt	 ForgeRock	 fastly	 Couchbase	 KALTURA	 wanDISCO
Current EV	\$1.68B	\$1.67B	\$1.4B	\$0.6B	\$0.2B	\$0.2B
IPO (Year)	\$0.12B ('16)	\$1.98B ('21)	\$1.45B ('19)	\$1.2B ('21)	\$1.24B ('21)	\$0.3B ('13)
EV/Rev ²	11.6x	7.4x	3.9x	3.8x	1.1x	26.9x

Permissive licences continue to rise

These licences tell the world the conditions under which they can use an open-source project

Permissive Licence

Only minimal restrictions or requirements for the distribution or modification of the software and permits proprietary derivative works



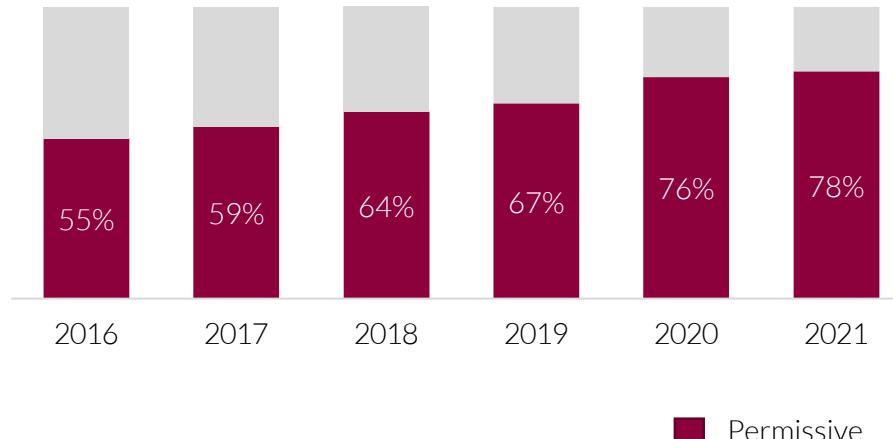
vs.

Copyleft Licence

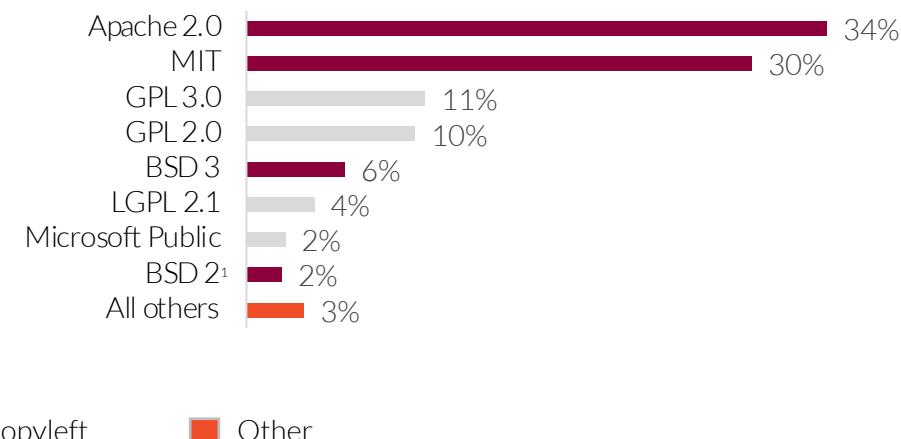
Mandatory to distribute the code and all derived work under the same original license (= free OSS projects cannot be implemented in commercial projects).



OSS Licence Distribution (total 100%)



Total Distribution on Mend



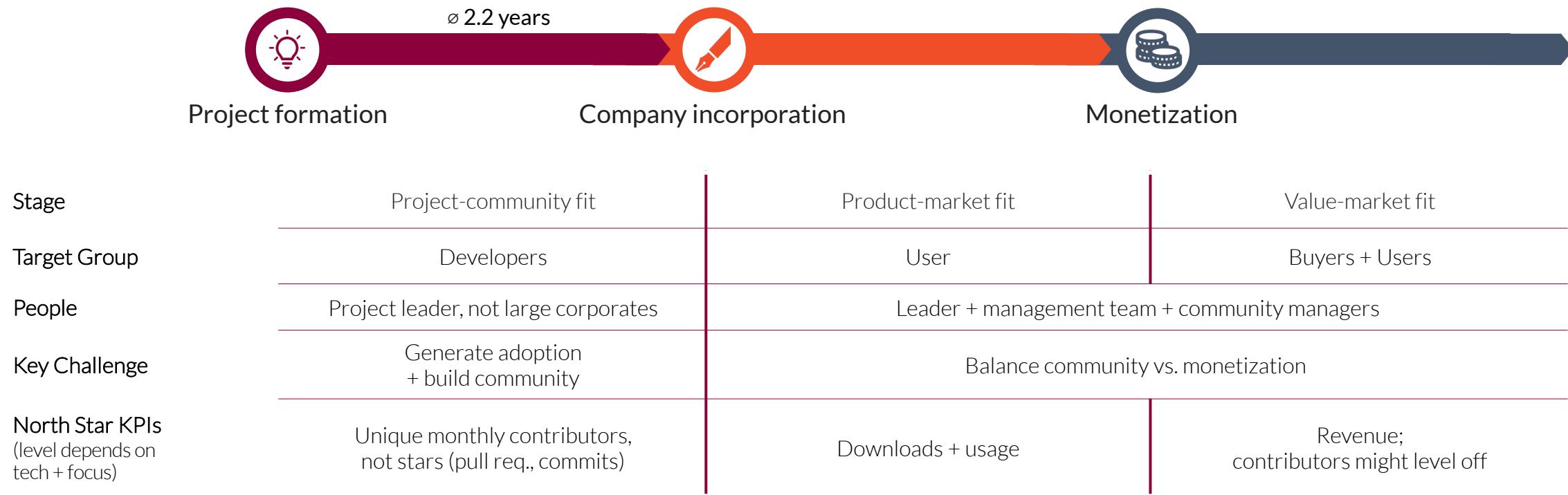
The OSS business models

Five different, yet often combined options to successfully commercialize open source

	Services	Feature-based	Open Core	Paid distribution	Multi-Licensing
The Model	 Projects with & without copyleft  Monetization of services	 Standard permissive OSS projects  Monetization of proprietary features	 Standard permissive OSS projects  Monetization of hosting / SaaS	 Multiple permissive OSS  Monetization of Bundling & Orchestration	 Copyleft license (code cannot be used for commercial purposes)  Proprietary Code → Acquisition & monetization of a copyleft-exempt license
Description	Services incl. SLA, support etc. (can be recurring)	Various degrees of free OSS vs. proprietary	Hosting-as-a-service	Combination of multi-vendor OSS projects	Open code, commercial requires special license
Challenges	<ul style="list-style-type: none"> Scalability problems Potential conflict of support vs. code quality 	<ul style="list-style-type: none"> Dual focus needed for product-market fit & code basis Deciding on free core features 	<ul style="list-style-type: none"> Risk of “forking” from cloud providers if offered without additional lock-in 	<ul style="list-style-type: none"> Defensibility, if layer of orchestration is too small 	<ul style="list-style-type: none"> License In ≠ License Out Low acceptance in developer community Not pure “OSS”
Examples	   	   	   	   	   
Primary revenue source					

The lifetime of COSS companies

“Typical” trajectory from open source to project to commercialized solutions

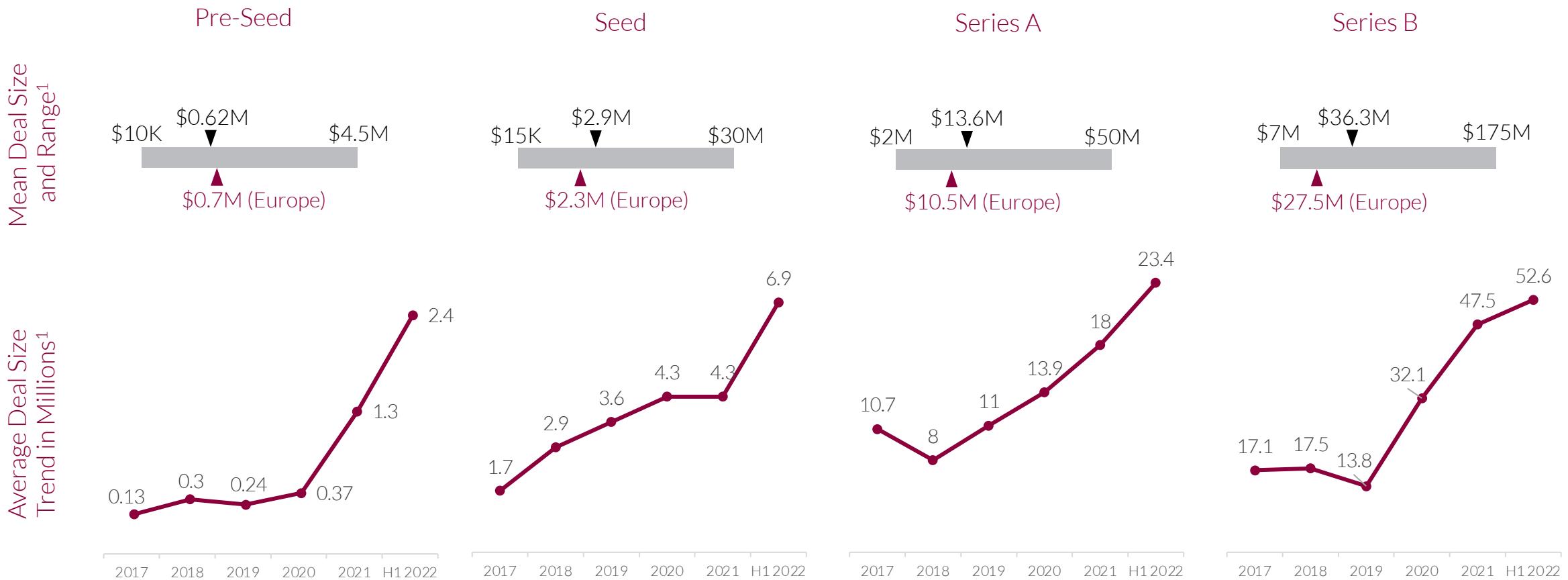


NB: Some companies may start as commercial company and open-source the code later (e.g. Kubermatic). The historic research is based on a small sample of companies throughout the last 20 years, a time that has been influenced by mega trends such as cloud computing.

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OSS global venture capital distribution

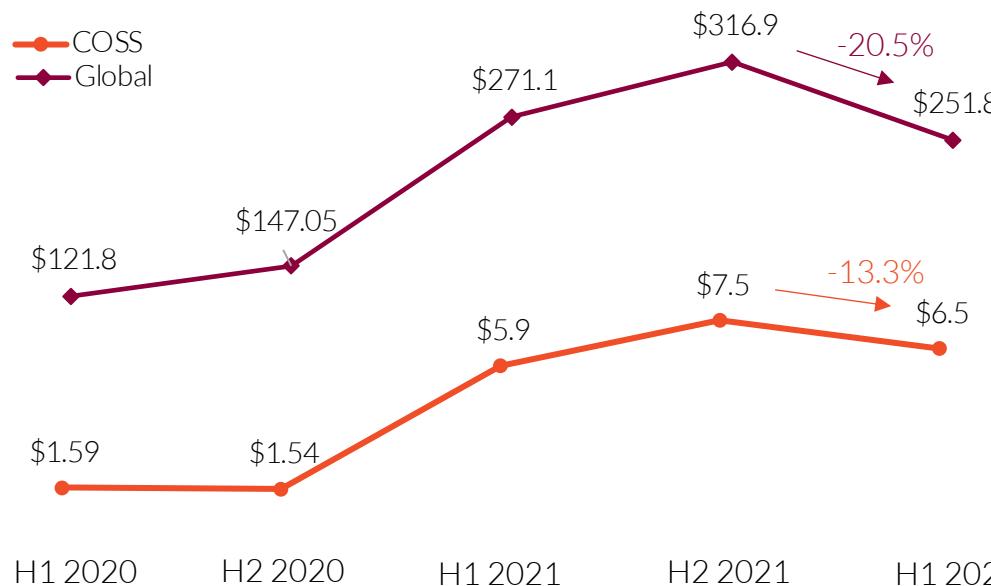
Round sizes are increasing with European funding still lagging behind in later rounds



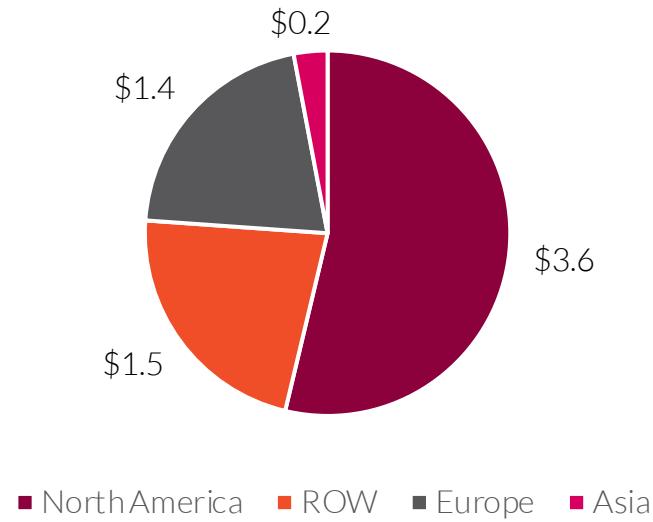
OSS global venture capital distribution

COSS sees 35% less decline in investments compared to overall market

Annual Growth of COSS & Global Investments (in Billions)¹



COSS Investments by Region (in Billions)
2020 to H1 2022



Investors in European OSS companies

More than 73 funds invested in European COSS (+25% since last year)

SAMPLE OF FUNDS

Pre-Seed



Seed



Series A



Multistage



Conclusion

Every company is fuelled by open source

Technology continues to drive innovation at every company. Open source technologies are the next step in enterprise evolution. According to a market survey, **82% of enterprise IT leaders choose to work with open source vendors.**

The shift to mass adoption has been accelerated by price sensitivity, fear of vendor lock-in and ease of customization. This shift means that many companies are able to keep up with the latest innovations, adopt technologies quickly, and keep pace with their customers' needs.

As more companies adopt open source technologies there is even greater potential for start-ups in this area to become the next wave of European unicorns.

In fact, many commercial open-source software companies will now start to disrupt the established SaaS players in the market.

The unique open-source ecosystem is ideal for accelerating the pace of innovation. Developers can tailor collaborative projects to their needs, and the increased speed at which code can be distributed has a positive impact across all industries. In fact, open-source software has proven to be a natural way to keep up with increasingly fast production cycles while making sure the quality is high.

Bearing all this in mind, it is no wonder that many venture capital firms have turned their attention to the new generation of founders in this space. It is a market ripe for investing and an industry that seems more resilient throughout difficult macro-economic environment.

Open source founders, we want to connect with you.
Send us your pitch deck and let's schedule a call.
<https://nautacapital.com/contact/>

THANK YOU.

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