

FINOS

Fintech
Open Source
Foundation

FINOS, the catalyst for Open Source in the Financial Services industry

FINOS OS in Finance Meetup
3/16/22

FINOS Community in Numbers

PLATINUM

 **accenture**

BMO 

Goldman Sachs

GitHub

J.P.Morgan

Morgan Stanley

NOMURA



GOLD

 **Capital One**

 **Fannie Mae**

HSBC 

 **IHS Markit**

intel.

 **NatWest**

 **redhat**

REFINITIV 

 **SUSE**

 **SYMPHONY**

 **Tradeweb**



 **WhiteSource**

SILVER

 **Adaptive**

 **armory**

 **BNY MELLON**

CANONICAL

 **CloudBees.**

 **CloudLinux**

 **CodeThink**

 **Cosaic**

 **databricks**

Digital Asset

 **diffblue**
AI for Code

 **epam**



 **genesis**
Code Less, Do More™

 **GitLab**

 **GLUE42**

 **Itau**

 **MIRANTIS**

SCOTT LOGIC
ALTOGETHER. SMARTER

 **SMBC**

 **Synechron**
Your Business. Our Technology.

ASSOCIATE

 **air** alliance for innovative regulation

 **AlmaLinux**

CRTA | ACTR
CONVENTION REGULATORY TECHNICAL ASSOCIATION
ASSOCIATION CANADIENNE DE LA TECHNOLOGIE REGLEMENTAIRE

 **EDM Council**

 **InterWork Alliance**



ISDA Safe, Efficient Markets

ISLA INTERNATIONAL SECURITIES LENDING ASSOCIATION

 **mojaloop**
foundation

OpenUK 

15
Active Open Source Projects
and SIGs

32
Incubating Open Source
Projects and SIGs

1000+
Contributors

54
**Corporate and Associate
Members**

Re-defining the Fintech Landscape through the lense of Openness

The **FINOS landscape** provides a birds-eye view of **our 50+ projects & Special Interest Groups** solving challenges across the financial services industry.

Check back regularly as we continue to map the open fintech landscape across the industry.

Consume

landscape.finos.org

Contribute



github.com/finos/finos-landscape



FINOS Flagship Projects

DATA VISUALIZATION



- **Perspective** is an interactive visualization component for large, real-time datasets, used to build reports, dashboards and more, contributed by JP Morgan.



- **Waltz** allows you to visualize and define your organisation's technology landscape. Think of it like a structured Wiki for your architecture.

INTEROPERABILITY



- **FDC3** is an open standard that enables plug-and-play interoperability on the financial desktop.

DATA MODELING



- **Legend** is a data modeling platform and environment open sourced by Goldman Sachs.



- **Morphir** is a multi-language system built on a data format that captures an application's domain model and business logic in a technology agnostic manner

CLOUD



- The **Cloud Service Certification Compliant Financial Infrastructure** project, contributed by JPMorgan, is following an open, code-first, collaborative process to mutualize - among FIs and vendors - the cost of cloud control interpretation and implementation.

FINOS Landscape

Learn more at landscape.finos.org



Contribute:
github.com/finos

FINOS 2021 Highlights

MEMBERS

19 new members joined FINOS in 2021:

PLATINUM



GOLD



Fannie Mae



NatWest



SILVER

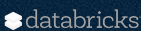


armory

CANONICAL



CloudLinux



Digital Asset



EGAR
NoCode



ASSOCIATE



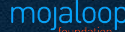
AlmaLinux



EDM Council



ISLA
INTERNATIONAL
SWITCHING & LENDING
ASSOCIATION



mojaloop
foundation

PROJECTS

OSS projects: one new project contributed every month in 2021:



DevOps
Mutualization



FINANCIAL
OBJECTS

Open Standards projects: Community Specification License (FDC3, Currency Reference Data, Open RegTech)

COMMUNITY

New code contributions up 72% YoY

Contributor strength up 32% YoY

State of Open Source in Financial Services Survey (partnership with LF Research, GitHub, Wipro and Scott Logic)

Over 600 attendees at Open Source Strategy Forum (OSSF) London and New York, Fall 2021

Open Source in Finance Podcast (Top #11 Open Source Podcast by Feedspot)

FDC3 Training launched on Nov 9th (in partnership with LF Training)

Banks in FINOS open source (code!) contributions

This is an **unprecedented** and huge milestone for us. Check out the 2021 [FINOS contributor leaderboard!](#)

AUTHOR NAME	ORGANIZATION	CODE			
		Commits	LOC Added	LOC Modified	LOC Deleted
Pierre De Belen	Goldman Sachs & Co. LLC	626	278892	375666	96774
David Watkins	Deutsche Bank AG	368	65511	111886	46375
Attila Mihaly	Morgan Stanley	260	255717	360837	105120
Andrew Stein	JPMorgan & Chase	260	483465	566344	82879
Jessica Woodland-Scott	Deutsche Bank AG	246	30421	42643	12222
An Phi	Goldman Sachs & Co. LLC	226	466378	760298	293920
Robert Moffat	Deutsche Bank AG	209	65965	101731	35766

Unlocking OSS value in financial services

OPEN SOURCE MATURITY ↑

Strategic Value

Adopt **Big Tech's** least kept secret

Promote and influence **de-facto industry standards**

Grow developer adoption on **strategic projects and APIs**

Open Source and the **"platform play"**

Business Org Value

Open Source goes beyond just code:

Fast & efficient response to **client demands**

Concrete and transparent collaboration **with regulators**

Fast iteration with peers on **pan-industry challenges**

Tech Org Value

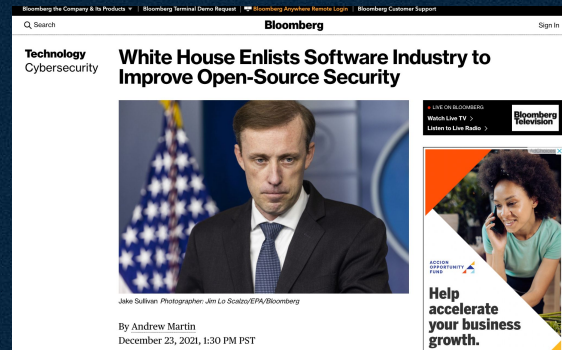
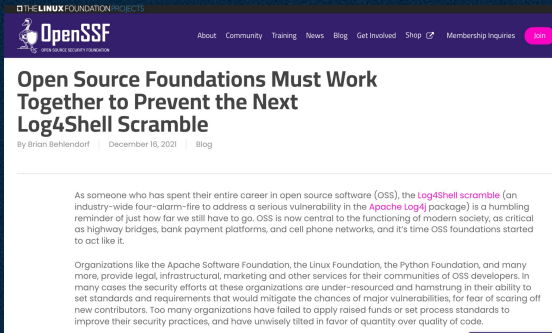
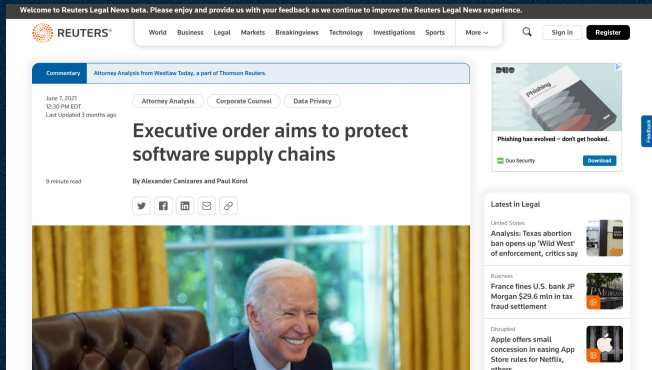
Recruit & Retain by enabling an increasingly efficient OSS workflow

Increase Efficiency by mutualizing non-competitive tech (e.g. reg compliance)

De-Risk Reduce vendor lock-in and obsolescence

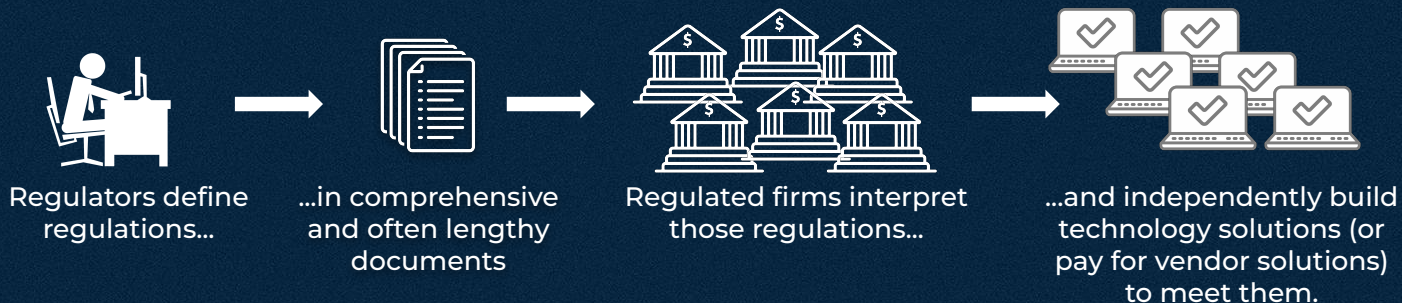


The LF critical role in OSS Supply chain security

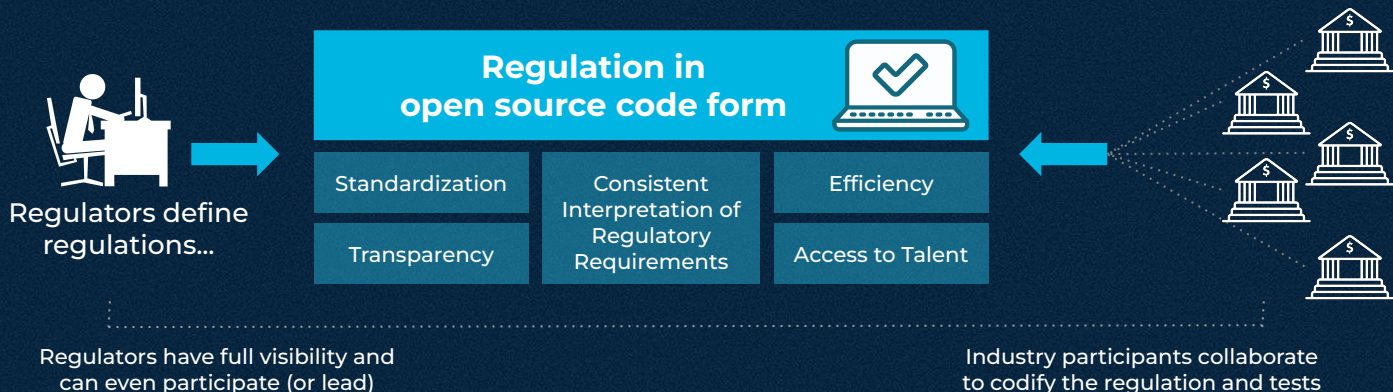


FINOS Open RegTech Initiative

TRADITIONAL MODEL



OPEN SOURCE OPPORTUNITY



Joining forces towards an OSS financial cloud compliance

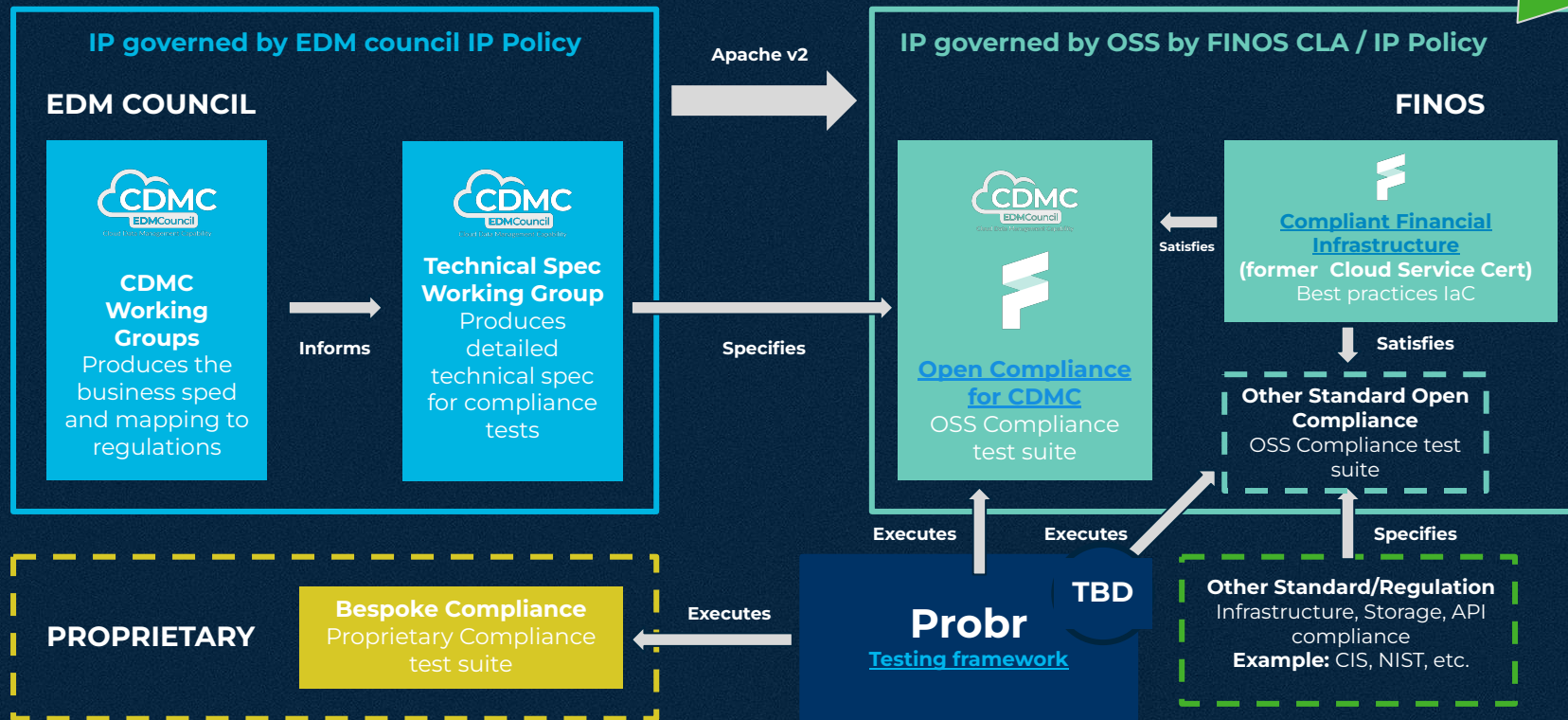


Fintech
Open Source
Foundation

Learn more at
bit.ly/finos-edmc

Enabling CDMC adoption via OSS

We are actively recruiting maintainers for these two formation projects!





FINOS

Eddie Knight, Synechron

Lead Maintainer, Compliant Financial Infrastructure

finos.org

And this is only the beginning...

 Future

INFRASTRUCTURE IS EVERYTHING

Open Source Is Finally Coming to Financial Services

Angela Strange

Share

Open source will catalyze the financial services industry's biggest evolution to date. This evolution will shift the power in this \$25 trillion industry from business executives to developers, not just in fintech companies, but in centuries-old incumbents, as well.

Until very recently, financial services were notoriously hard and expensive to build. Incumbents and startups alike grappled with extensive regulation, inflexible core systems, complex payment architectures, compliance hurdles, fraud, and more.

The Impact of Harnessing Open Source

Drive Standards & Increase Reliability

Open Connectivity

Tap Global Networks

Increase Access/Reduce Costs

The Evolution of Financial Services Building Blocks

Hardware

As a Service

Open Source Platforms

 The Register

SIGN IN

Ransomware Recovery Warranty

 rubrik

Zero Trust Data Security

Learn More

{* SOFTWARE *}

Get FOSS-happy, China tells its financial institutions

Use it, contribute to it, respect its licences – and plan for security emergencies it creates

Simon Sharwood, APAC Editor

Fri 29 Oct 2021 // 01:59 UTC

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China has told its finance sector to embrace free and open source software (FOSS).

An **opinion** from the People's Bank of China and the nation's Central Cyberspace Administration essentially boils down to "go for it".

The document instructs China's financial sector players to use FOSS whenever they feel it is apposite, to contribute to FOSS projects, and to respect the licences under which such software is published. Financial institutions are also encouraged to collaborate with tech companies, universities and other institutions on FOSS efforts.

<https://future.a16z.com/open-source-financial-services/>

https://www.theregister.com/2021/10/29/china_encourages_foss_in_fintech/

FINOS Fintech Open Source Foundation

finos.org 13

...as the industry is living an OSS awakening...

*“...the financial services industry has pioneered things that later became popular in open source, like efficient messaging protocols, microservices, and event streaming, but the **technologies were kept proprietary in banks and only became mainstream when other companies open sourced them.** It would be beneficial to contribute more...”*

CTO, Investment Bank

The **top 5** areas where respondents felt FOSS engagement could improve the Financial Services industry were **AI/ML, Common Workflows, Regulatory Compliance, Cloud, and DevOps**



84% of respondents said **Innovation was the top motivator** for participating in FOSS projects

*“We base our business around things like Linux, and we base our business around platforms like Kubernetes, these kinds of large efforts. And we help finance foundations -- and that's great. **But these projects won't just live on their own.** So not only should we be supporting them through our knowledge and experience, aka opening pull requests [contributing code directly], **but also being able to exert our own opinion in those spaces.**”*

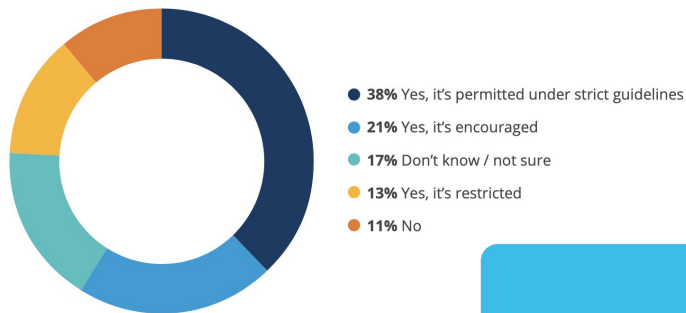
Head of OSPO, Global bank

[Source: FINOS Open Source In Financial Services Survey 2021](#)

...so there's still a long way to go!

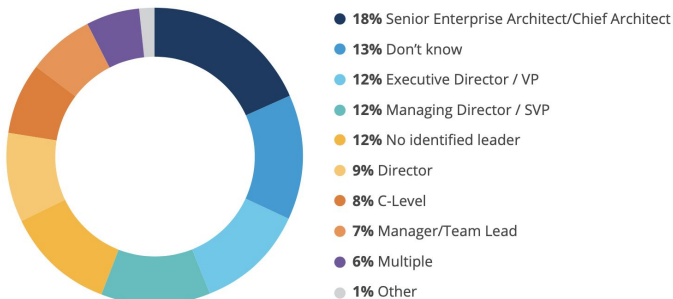
Do you have a policy on consumption?

2021 State of Open Source in Financial Services Survey, May, June, July, 2021
Sample Size = 141

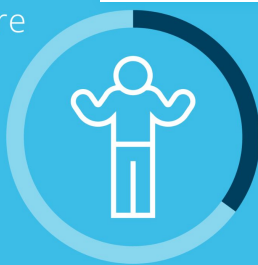


What seniority is your open source leadership?

2021 State of Open Source in Financial Services Survey, May, June, July, 2021
Sample Size = 145



Only 35% of respondents are aware of their being an OSPO in their organization, and 26% could not identify or know who their FOSS leadership was



Open Source Readiness Initiative

Financial services firms face **unique challenges** to collaborate in the open:

Legal & regulatory concerns

Lack of internal policies

Cultural friction

Heavily restricted technology environments

Driving Open Source in Financial Services starts by **enabling safe, compliant open source consumption and contribution**

Meetings

The [Open Source Readiness \(OSR\) Special Interest Group \(SIG\)](#), which meets on a monthly basis, is a venue dedicated to discussing open source readiness challenges for financial services firms. The purpose of the OSR SIG is to agree on the approach to address these challenges, and to set up open source projects to develop solutions.

Resources

[Reference OS Policy](#)

Template for a comprehensive open source software policy for a financial services institution, including sample provisions governing the acquisition and use of OSS, and contribution to OSS projects.

[OS License Compliance Handbook](#)

Reference guide to practical compliance information for the most common open source licenses. Great for engineers and compliance staff operationalizing compliance with third-party license.

[Open Source Maturity Model](#) *New!*

Comprehensive survey and model to evaluate maturity of financial services firms against enterprise consumption, contribution and governance of open source. To be released soon in collaboration with Wipro.

Learn more at finos.org/open-source-readiness

2021 State of Open Source in Financial Services Survey

This report identifies the extent to which the financial services industry is active in open source, understanding of governance, leadership, consumption, contribution, culture, and overall open source aspiration. Key takeaways were:

- **Corporate goals & Individual motivations** are both driving adoption, contribution and participation to open source communities
- Policies are generally **in place to cover consumption** of OSS software but approach (leadership, governance, etc) lags other industries

Download the full report at

finos.org/state-of-open-source-in-financial-services-survey-2021





Cost
Savings



Efficiency



Financial
Inclusion



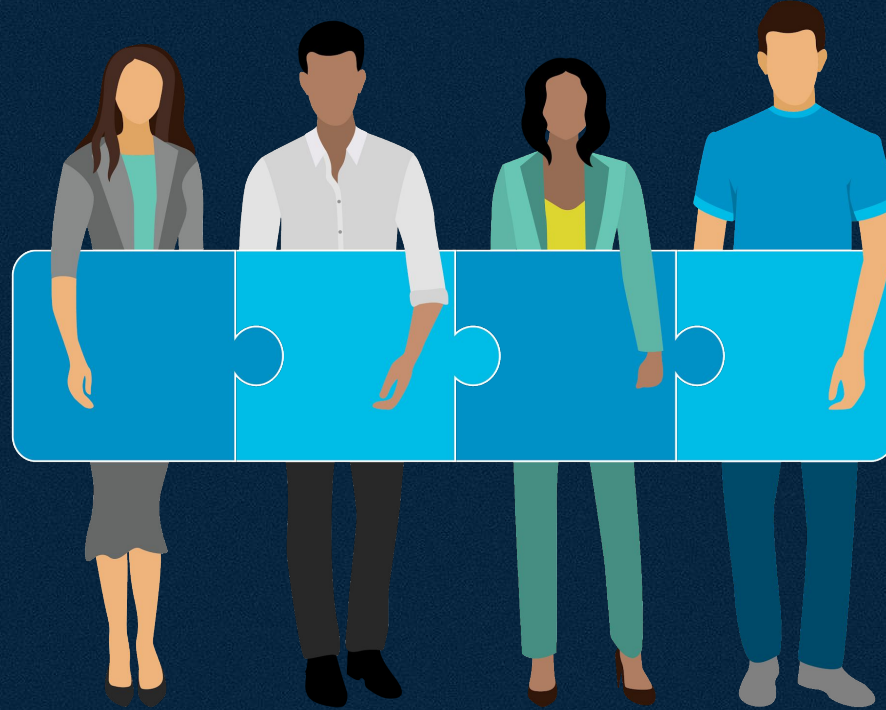
Reuse



Talent



Disrupt



Financial
Institution

(Fin)tech
Vendor

Regulator

Individual

Get Involved

Contribute to Compliant Financial Infrastructure

<https://github.com/finos/compliant-financial-infrastructure>

Join the bi-weekly meeting on Friday at 10AM EST ([Calendar invite](#))

Browse the FINOS GitHub organization for good first issues and help wanted

github.com/finos or landscape.finos.org

Join an upcoming SIG or project meeting

[FINOS Community Calendar](#)

Stay up to date

finos.org/sign-up