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Examining Open Source Adoption in Capital Markets

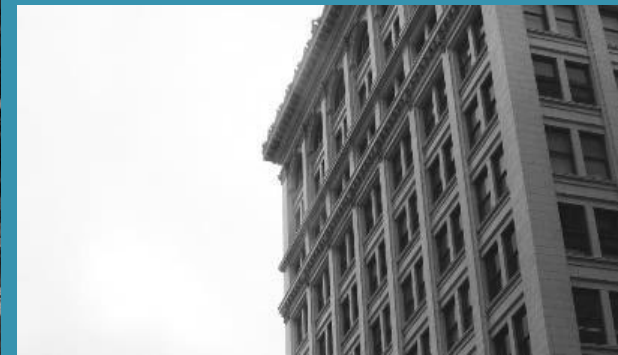
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About Aite Group

Aite Group delivers research and guidance to leading institutions and technology providers across the global financial services industry. With expertise in banking, payments, insurance, wealth management, and the capital markets, we guide financial institutions, technology providers, and consulting firms worldwide. We are dedicated to helping our clients make smarter decisions, faster, to strengthen and grow their business.



Overview

1 The context of our research

2 Adoption hotspots

3 Challenges

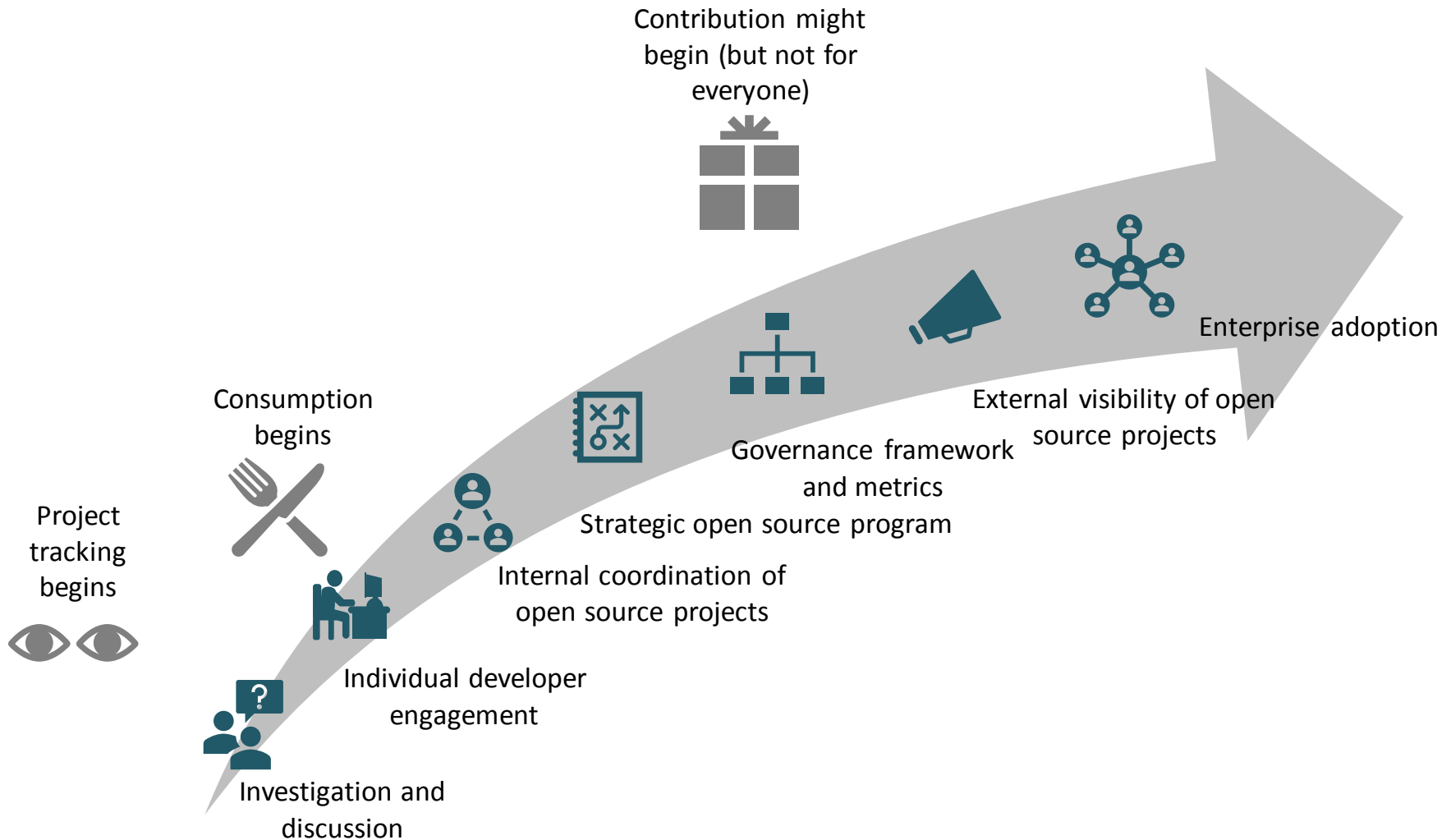
4 Key takeaways



Taking the temperature of industry adoption



Aite Group's maturity curve for open source adoption/engagement



An example of a firm on the more mature end of the curve

Individual developer-led projects



Developer interest and engagement



Track, contribute, or consume?



Scrutiny of IP and security



Strategic enterprise-level projects



Correlation with business goals



Map to existing projects



Assessment of required resources



Contribute or consume?



Source: Aite Group

What firms are keeping an eye on

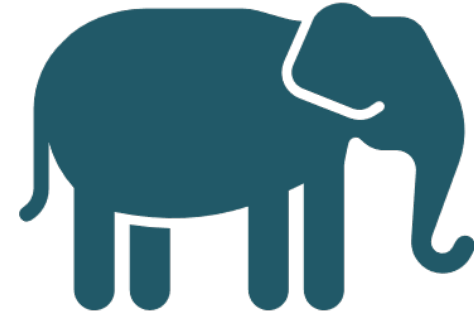
- Tracking the dependencies – to ensure firms know the people that are providing stewardship to the project.
- Examining the code – to determine quality and how well the open source library matches the firm's philosophy of how to build code.
- The relevance of what the project is trying to solve – to avoid repurposing and the challenges inherent in altering code that may not be fit for purpose.
- How the code may interact with existing hardware – especially important for front-office application development.

The size of the firm can impact adoption



Smaller firms:

- Generally better able to coordinate internally.
- May face less direct regulatory oversight – ergo less reputational risk/fear around tech.



Larger firms:

- Have larger budgets for technology overall and for experienced staff.
- Face more scrutiny externally; hence are likely to be more risk averse around tech.
- Heavily siloed in terms of technology, operations, and business lines.

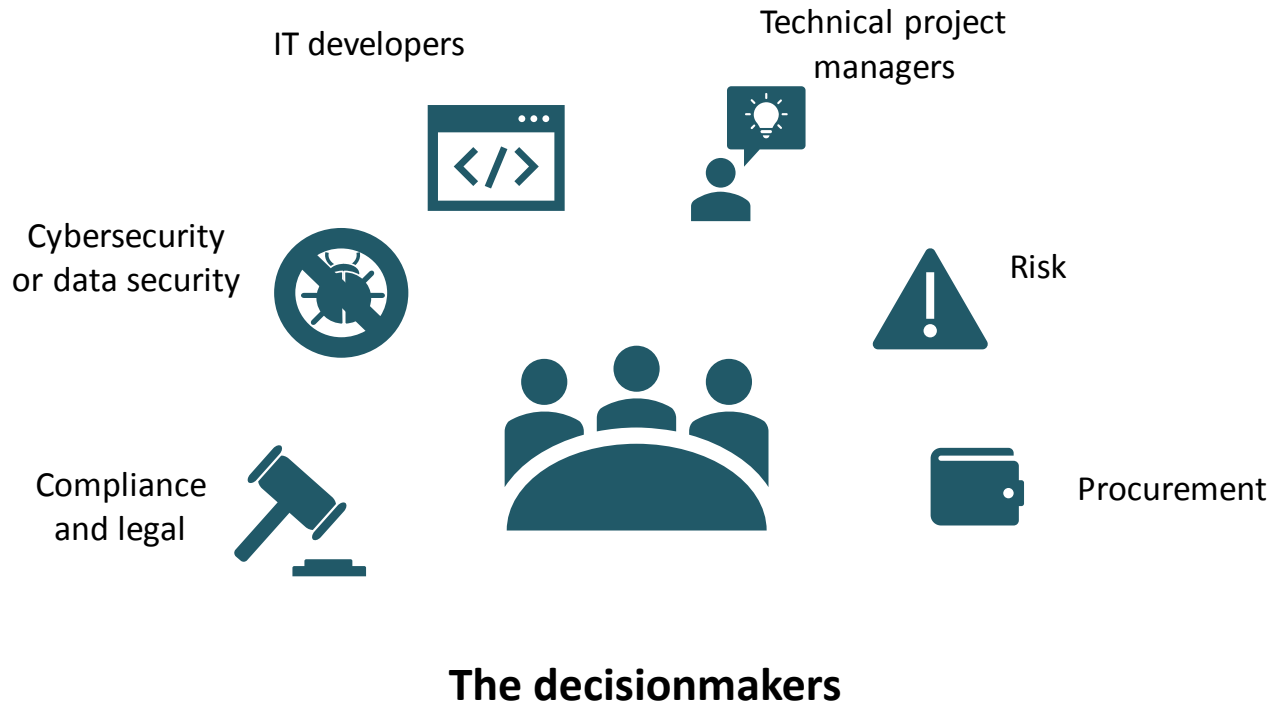
A vintage-style stopwatch with a metal ring and a textured crown is centered in the image. The background is a collage of various US dollar bills, including \$100, \$50, \$20, and \$5 bills, with portraits of Benjamin Franklin and Abraham Lincoln. The text "The benefits firms are experiencing" is overlaid in white, sans-serif font across the stopwatch's face.

The benefits firms are experiencing

The current picture

- Tooling improvements over recent years have meant that firms are better able to engage in development and also better able to monitor compliance
- There are more choices in the manner in which to engage in the community
- Open source and the community are helping firms to find and attract experienced tech talent – “uber engineers”
- Knowledge of open source can provide a barometer of developer compatibility with the firm
- Even firms that don't use open source for proprietary projects are consuming it via vendor and third party software

Those with a seat at the steering committee table





Hotspots for adoption

Innovation is happening from the bottom up



“Our business unit and its supporting technology team operates relatively independent and siloed. And most business units at our firm operate like that, which gives us a lot of autonomy to decide what we want to use and how we want to build software.”

“Developers are encouraged to use approved, whitelisted OSS, however there is an exception and/or approval process to bring in new OSS.”



“Barring any license concerns, open source is generally accepted to be used internally.”

What factors into the decision?



“Normally it’s about business requirements, technology security, avoiding duplication of effort, and cost.”

“Now that fintech is becoming more of a focal point of our industry, and the role of technology is becoming more central to the value proposition of a lot of the firms, open source is assuming more of an important role. And when a firm is a known contributor to open source, it's always a positive reflection in terms of the firm's reputation.”



Innersourcing is maturing but issues remain

- Numerous firms have innersourcing as a strategic focus for 2019
- Spectrum of open to closed repos across firms – still difficult to maintain open repos
- Still mountains of documentation that needs to be properly tagged with metadata
- Not everyone is using tools like Artifactory or Bitbucket, but those that are find them beneficial
- Intent for innersourcing (properly applied) to fix discoverability



The challenges of
innovating in a corporate
environment

High level challenges to adoption most frequently cited



Legal and regulatory concerns



Inhospitable technical environments



Data security concerns



Bureaucracy around IP ownership



The hurdles to overcome




Fear of ceding competitive advantage




Cultural friction

Growing pains

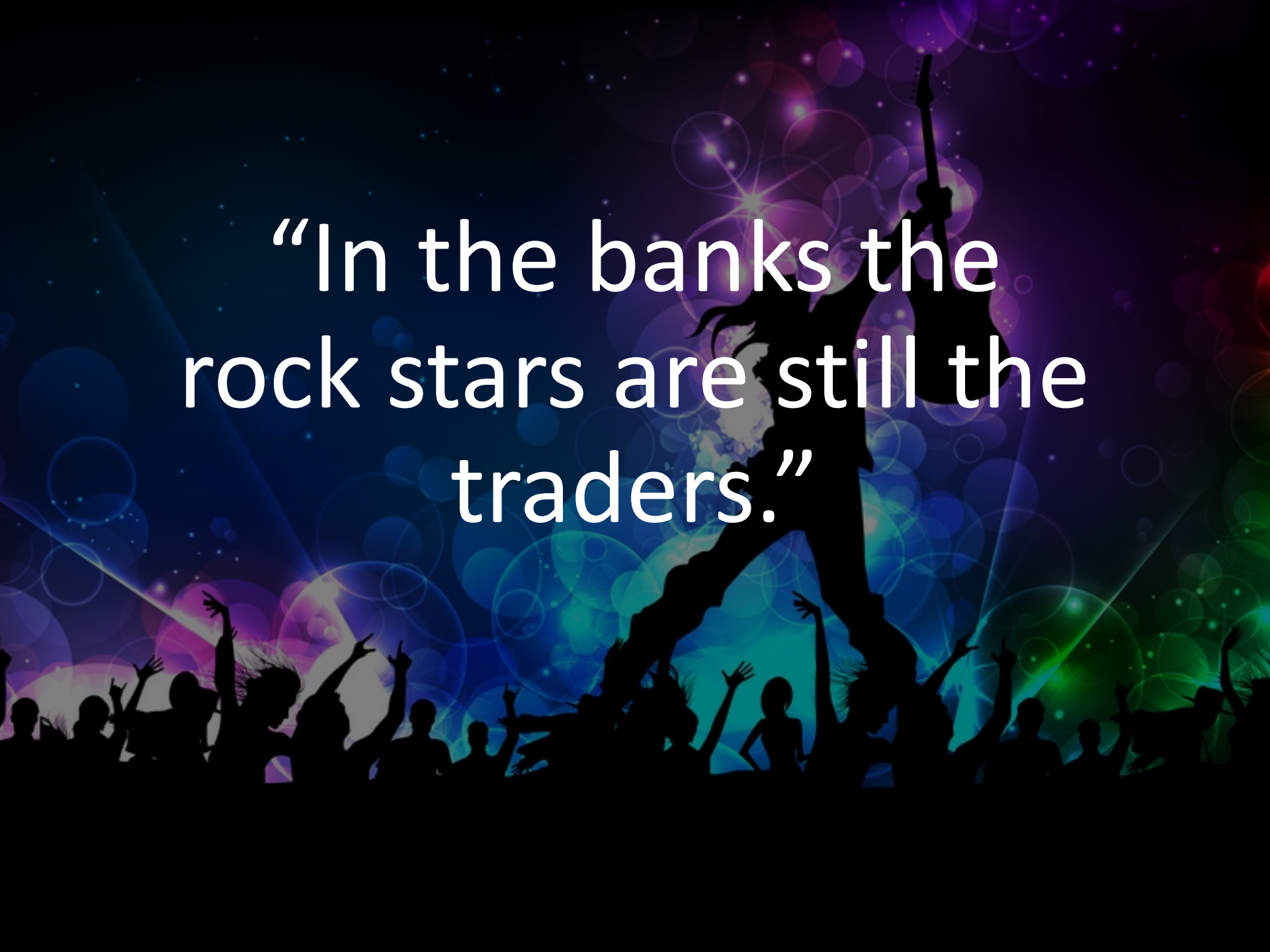


“Doing it at scale is still a challenge. While tooling has improved, we're trying to move the organization into consistency, and that's the natural tension we have inside the company. Where each division wants to operate independently, and differently, and make choices locally versus when you need something more centralized to run an open source project at scale.”

“Being in a regulated industry and the challenges associated with trying to understand exactly what software is in use today is hard and one tool does not bring us all of this info.”



“In the banks the
rock stars are still the
traders.”



The problems caused by a lack of coordination

- Management level visibility of the benefits and hence buy-in to projects beyond limited areas can be hard to attain
- A lack of consistency in approach across business units can mean waste resources and effort
- Operational risk and legal risk around IP can be increased
- Due diligence work requires specialist understanding (easier when centralised with dedicated resources)

Contribution is a trickier proposition



“We cannot contribute back to open source projects. Our firm has very strict policies about intellectual policy. Our lawyers are constantly reminding us about trade secrecy and IP even within the firm.”

“Specific to contributions to projects is that there have to be contributor license agreements (CLAs) in place. That makes contribution much more difficult. Most popular projects have CLAs and this slows down the contribution workflow. There is usually a schedule where you have to notify changes to approved contributors.”





Does all of this require a DNA change?

Lessons learned thus far

- Don't force the issue
- Use tools to track consumption but understand tool limitations
- Use open source communities to find talent
- It's a balancing act between allowing innovation and keeping compliant and coordinated
- Contribution could be a competitive differentiator in future
- Very few management teams are comfortable with sharing that there is open source under the hood – the more firms that do, the more this will change

Word of mouth is still
the most effective
tool





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