



DESIGNING ECOSYSTEM GOVERNANCE TO GROW VALUE

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Ecosystems are essential to achieving organizations' most challenging strategic goals. In polling of executives attending a recent MIT CISR event,¹ 92 percent of respondents indicated that some or most of their organizations' most challenging strategic goals are shared by others, suggesting that the organizations would benefit from developing or participating in ecosystems. Yet many organizations (in our poll, 66 percent of respondents) look primarily to governance by a single leader—the common approach for companies opening internally developed platforms to external participants—to govern industry-spanning ecosystems developed to achieve such goals.

To identify the governance issues pertinent to ecosystems, we interviewed executives in a variety of industries, asking how successful ecosystems are governed, how governance impacts value from ecosystems,² and how organizations are using recent innovations, such as Web3, to govern ecosystems.³ Our research determined that effective governance of ecosystems, like good corporate governance, is key to growing value. In this briefing, we introduce three governance approaches for digital ecosystems, and discuss when ecosystems should adopt more decentralized governance approaches to grow value.

1 At MIT CISR's Annual Research Forum in November 2023, we asked executives what percentage of their companies' most challenging goals are shared by others (N=73) and how their companies primarily seek to govern the pursuit of industry-spanning shared goals (N=61).

2 Learn more about value from ecosystems in Stephanie L. Woerner, Peter Weill, and Ina M. Sebastian, *Future Ready: The Four Pathways to Capturing Digital Value* (Boston, MA: Harvard Business Review Press, 2022); and Ina M. Sebastian, Peter Weill, and Stephanie L. Woerner, "Driving Growth in Digital Ecosystems," *MIT Sloan Management Review*, August 18, 2020.

3 The authors conducted forty-one interviews with thirty-five executives and seven Web3 experts from fifteen countries—US, Mexico, Australia, New Zealand, Singapore, Malaysia, UK, Germany, Switzerland, Poland, Turkey, Denmark, UAE, Ukraine, and China—in 2023 and January 2024. Industries included financial services, manufacturing, agriculture, ocean shipping, automotive, information technology, and government. The sample comprised twenty-one companies and eight not-for-profit organizations ranging from less than 10 to over 400,000 employees. Interviewee roles included CEO, CIO, chief strategy officer, chief product and supply chain officer, chief data officer, heads of policies and government affairs, engineering, digital assets and blockchain, and researcher.

ECOSYSTEMS: CORE TO BUSINESS STRATEGIES

In our research, organizations saw their most challenging strategic goals, such as serving their customers' end-to-end needs or improving sustainability, as being dependent on the actions of other organizations. They participated in ecosystems to:

- **Grow ecosystem value:** For example, Bayer launched its ForGround platform and created an ecosystem of partners to enable farmers to use regenerative agriculture techniques and receive tradeable carbon credits in return for contributing data.⁴
- **Address shared challenges:** The Australian central bank and twelve other financial institutions jointly established the New Payments Platform (NPP) to improve the efficiency of the Australian payments system through real-time retail payment settlements.⁵
- **Access resources and expertise:** Wolfram Research uses the Cardano Web3 ecosystem to secure funding and expertise for developing innovative AI product offerings.

These organizations led or participated in digital ecosystems that were governed in substantially different ways.

THREE APPROACHES TO ECOSYSTEM GOVERNANCE

Ecosystem governance is key to sustaining trust among participants and growing ecosystem value. It sets priorities, ensures that all ecosystem participants align their behavior to the interests of all other participants, clarifies key decision rights and oversees their implementation, and guides acceptable behavior.

4 "ForGround by Bayer Expands its Regenerative Ag Platform, Collaborates with Three New Companies to Provide Additional Benefits to Farmers," ForGround by Bayer, February 15, 2023.

5 I. M. Sebastian, "Reserve Bank of Australia: Collaborating to Build and Leverage the New Payments Platform," MIT CISR Working Paper No. 456, May 2022.

Executives in our research described three approaches to ecosystem governance that varied along a spectrum, which we named to reflect their governance style: centralized, or “Alpha;” federated, or “Representative;” and decentralized, or “Liquid” (see figure 1). The Alpha, Representative, and Liquid approaches represented 53 percent, 18 percent, and 9 percent, respectively, of executives we interviewed (the remaining 20 percent of interviewees talked about challenges and opportunities of decentralized governance approaches for their organizations). All three governance approaches effectively achieved the ecosystem’s purpose and created value for participants, so long as ecosystem participants trusted the governing authority to make decisions and agreed to their own role in the ecosystem’s governance.

1. Alpha

Alpha governance is the most centralized form of ecosystem governance and the conventional approach adopted by companies building platform businesses. In Alpha governance, a single leader retains core governance decision rights and accountabilities, controls most data created by the ecosystem, secures and operates the platform, and chooses who participates in the ecosystem. For Alpha governance to succeed, participants must trust the dominant organization; they typically do so because of its track record in setting the ecosystem’s strategic direction, investing in its platform, and exposing participants to many customers, which provide new sources of value.

For example, Salesforce’s AppExchange ecosystem offers more than 4,600 apps to over 150,000 Salesforce CRM customers who have installed partner apps more than 12.5 million times.⁶ Salesforce decides which organizations can join its AppExchange ecosystem,⁷ supports the growth of partner businesses, and invests in the development, security, and operation of the underlying Salesforce external developer platform.

2. Representative

In Representative governance, ecosystem participants establish a governing authority, which may start as a steering committee and evolve into a more formal structure, and entrust it with accountability for achieving the ecosystem’s purpose as well as decision rights such as direction setting and dispute resolution. Organizations in our study chose this approach when several ecosystem stakeholders wanted to contribute to setting direction, retain control of data, and did not trust

Alpha governance. Pursuit of participants’ interests were assured through their governance participation and the commitment of the governing authority to prioritize the ecosystem’s purpose over the ambitions of individual participants.

In 2012, the Reserve Bank of Australia (RBA), Australia’s central bank, required the Australian financial sector to propose a real-time national payments system. A consortium of financial services institutions formed a steering committee and, in 2014, established the not-for-profit organization New Payments Platform Australia (NPPA), which governed the design and implementation of the New Payments Platform (NPP) with Representative governance.⁸

The steering committee spent time up front building trust among parties. [It] created a social contract: We each argue strongly for what we think is the right decision, reflecting our own commercial interests, but once we collectively decide on something, we all support it. This enabled organizations to call each other out if they were not behaving as we agreed.

DR. TONY RICHARDS, FORMER HEAD OF PAYMENTS POLICY, RESERVE BANK OF AUSTRALIA⁹

3. Liquid

Liquid governance, the most decentralized of the three approaches, achieves consensus on strategic direction and resolves disagreements using Web3 technology.¹⁰ Decentralized Autonomous Organizations (DAOs) are novel Web3-based decentralized governance entities that solicit and debate proposals from often thousands of ecosystem participants; arrive at consensus using digital voting mechanisms; and execute approved proposals as smart contracts with terms that are transparent for all participants, who retain ownership of their data. Our term draws from the concept of “Liquid democracy,”¹¹ in which the scale and composition of decision-makers varies dynamically depending on the governance decision.

For example, Wolfram Research, a provider of solutions based on Wolfram programming languages and technologies, participates in the Cardano Web3 community to realize

6 “All Apps,” Salesforce AppExchange; “What Is Salesforce?,” Salesforce; and Salesforce AppExchange. All accessed January 31, 2024.

7 “AppExchange ISV Onboarding Guide,” Partner Community, Salesforce AppExchange, accessed February 5, 2024.

8 In February 2022, NPPA merged with Australia’s other domestic payment organizations—BPAY Group and eftpos—to form Australian Payments Plus Limited (AP+), maintaining a consortium model. For detail on the development of the NPP, see Sebastian, “Reserve Bank of Australia: Collaborating to Build and Leverage the New Payments Platform.”

9 Dr. Tony Richards left the Reserve Bank of Australia in December 2021. He is now chair of the Digital Finance Cooperative Research Centre.

10 G. Benedict, I. M. Sebastian, and S. L. Woerner, “Creating Value from Web3: Four Approaches to Adopting Blockchain,” MIT CISR Research Briefing, Vol. XXIII, No. 3, March 2023.

11 Fernando Sanchez, “Governance,” Essential Cardano, July 22, 2022.

ecosystem value by accessing expertise and resources for building generative AI capabilities. Wolfram Research submits proposals to the Cardano DAO; participants then discuss and vote on whether to fund the proposals and incorporate their delivery into the core code of the platform.¹²

Web3 has enabled Wolfram Blockchain Labs to tap investment funds, innovate, and improve product quality at a rate significantly faster than if we had to fight and prioritize within internal business cases and resource allocation processes.

STEPHEN MACURDY, HEAD OF BLOCKCHAIN RESEARCH AND EDUCATION, WOLFRAM RESEARCH

OPPORTUNITIES FOR VALUE FROM DECENTRALIZED GOVERNANCE

Organizations are beginning to explore decentralized governance approaches to grow ecosystem value. In MIT CISR's recent event poll, 21 percent of respondents indicated their organizations primarily pursue Representative governance, 3 percent choose the decentralized Liquid approach, and 3 percent seek to leverage both of those plus the Alpha approach to govern industry-spanning ecosystems. We saw a similar pattern in our interview sample. Web3 provides a first glimpse at hyperscaled governance, but our interviewees viewed Liquid governance mechanisms as currently optimal for only a small number of ecosystem governance scenarios, such as Wolfram Research's access of expertise and investment. Organizations experiment with Liquid governance in

different domains, as recently demonstrated by the the United Nation's pilot to establish a DAO in the public sector.¹³

In our interviews, executives described that effectively decentralizing governance (i.e., moving to Representative or Liquid governance) entails three principles:

1. Developing transparency of logic and actions for consensus formation, which creates confidence in governance
2. Encouraging open participation, which enables broader access to resources and expertise
3. Sharing costs and value, which distributes investments (e.g., infrastructure, data sharing) and benefits (e.g., revenue, IP, compliance) among participants

ECOSYSTEM GOVERNANCE FIT

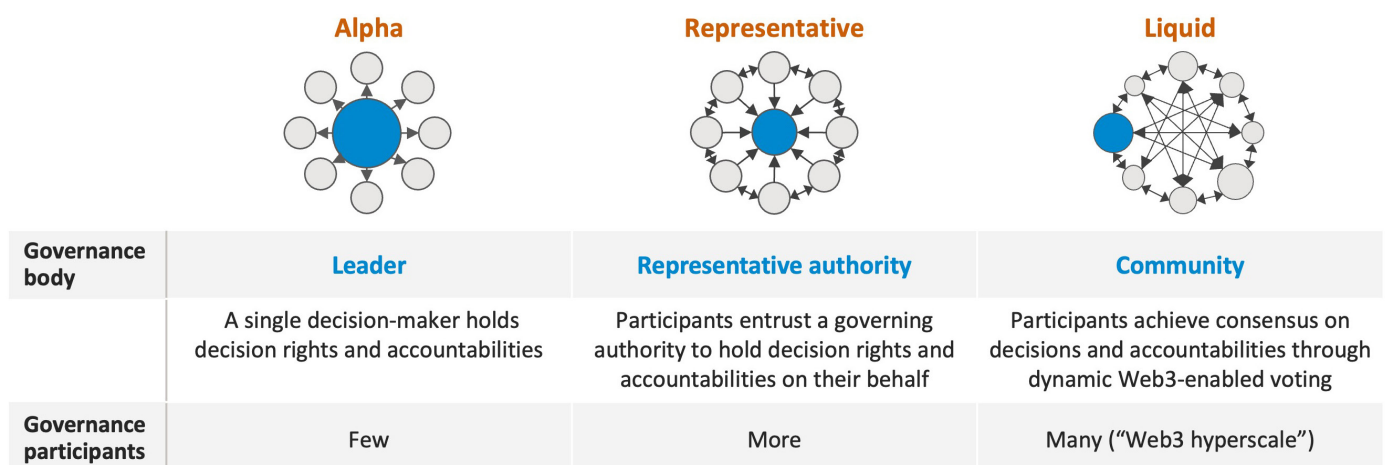
Currently, Representative governance is the best approach to solve shared industry problems. But our research suggests that, as digital leaders turn to ecosystems to achieve their organizations' most challenging strategic goals, there are benefits, in areas such as access to expertise, to experiment with more fully decentralized—i.e., Liquid—governance.

To assess an organization's progress in achieving its strategic goals that depend on ecosystems, we recommend that digital leaders assess the ecosystems' governance, asking questions like whether their governance approach aligns with how the participants want or expect to interact. With a better fit, we expect an ecosystem will see more participants and the generation of more ecosystem value, including access to data, and innovation.

¹² "Project Catalyst: Decentralized Governance in Action," Wolfram Blockchain Labs, accessed January 26, 2024.

¹³ "UN Digital Governance Body to Establish a DAO," Ledger Insights, December 21, 2023.

Figure 1: Three Approaches to Ecosystem Governance



Source: 41 interviews with 35 executives and 7 Web3 experts from 15 countries in 2023 and January 2024.

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MIT CISR helps executives meet the challenge of leading increasingly digital and data-driven organizations. We provide insights on how organizations effectively realize value from approaches such as digital business transformation, data monetization, business ecosystems, and the digital workplace. Founded in 1974 and grounded in MIT's tradition of combining academic knowledge and practical purpose, we work directly with digital leaders, executives, and boards to develop our insights. Our consortium forms a global community that comprises more than seventy five organizations.

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