

# BUILD RELATIONAL ECOSYSTEMS TO COORDINATE AMIDST UNCERTAINTY

Ina M. Sebastian, Research Scientist
MIT Sloan Center for Information Systems Research (CISR)

Jody Hoffer Gittell, *Professor*Heller School for Social Policy and Management, Brandeis University

Increasingly, companies partner across industries and sectors in fundamentally new ways to solve complex challenges. For example, the Reserve Bank of Australia (RBA) and the government agency Services Australia collaborated to provide real-time emergency relief payments to citizens who had lost their homes and livelihoods in the country's 2020 bush fires. The organizations developed an innovative service to deliver more than AUD\$233 million in disaster recovery payments directly to Australian citizens' bank accounts as the citizens were requesting help from Services Australia online, on the phone, or in a service center. The organizations offered the same service in 2021 to deliver COVID support payments. The service leveraged a real-time payments system called the New Payments Platform (NPP)¹ that was launched in 2018 by an RBA-initiated industry collaboration of thirteen banks.²

Collaborative efforts by organizations in an ecosystem to create new digital solutions like the NPP can benefit participants economically, but such efforts create two coordination challenges: uncertainty and interdependence. Ecosystems must adapt on the fly in response to new information that surfaces emergent opportunities and challenges (e.g., an urgent need to make payments quickly). At the same time, due to participants' interdependence, ecosystem leaders must orchestrate decisions across the ecosystem to ensure communal success. The contemporary challenge for digital leaders is how to effectively coordinate ecosystem collaboration.

In this research briefing, we describe three managerial levers that can help ecosystem leaders manage this challenge. We then describe the ecosystem collaboration to create the NPP and illustrate each managerial lever using examples from the collaboration.

# COORDINATING AMIDST UNCERTAINTY AND INTERDEPENDENCE

Organizational scholars describe relational coordination<sup>3</sup> as the management of relationships and communication within a network of participants. An organization that has high relational coordination has networks with strong relationships—having shared goals, shared knowledge, and mutual respect—that support frequent, timely, accurate, and problem-solving communication. The virtuous cycle of relating and communicating helps networks coordinate on the fly in the face of new information. A rich body of research has shown that high relational coordination results in important performance outcomes for organizations, such as higher quality output; increased efficiency, learning, and innovation; and greater employee engagement and well-being.

Relational coordination research has identified three categories of interventions through which an organization strengthens relationships and communication, which in turn improve performance outcomes (see figure 1)<sup>4</sup>:

- Relational interventions focus on strengthening relationships between people. Examples of this include offering opportunities for people to share their backgrounds and understanding all stakeholders' needs when developing a shared goal.
- Work process interventions focus on improving the work itself by using a formal method to make a process more efficient. An example is employing the lean approach for process improvement, which seeks to deliver products and



<sup>1 &</sup>quot;NPP Roadmap October 2021," New Payments Platform, October 25, 2021, 1.

<sup>2</sup> The description in this research briefing of the development of the NPP and the collaboration of RBA and Services Australia to leverage it is based on I. M. Sebastian, "Reserve Bank of Australia: Collaborating to Build and Leverage the New Payments Platform," MIT Sloan CISR Working Paper No. 456, May 2022.

<sup>3</sup> Jody Hoffer Gittell, one of the co-authors of this briefing, developed Relational Coordination Theory. For more details, see Jody Hoffer Gittell, *Transforming Relationships for High Performance: The Power of Relational Coordination*, (Stanford: Stanford Business Books, 2016).

services rapidly in part by connecting people so they can communicate on the fly.5

• Structural interventions focus on formalizing organizational structures that cut across silos to strengthen relationships and open channels of communication. Examples include shared meetings, rules, and benefits, and a shared technology platform to connect all participants.

As an organization communicates more effectively across silos, it further strengthens relationships (represented by the virtuous cycle between relationships and communication in the figure). More effective coordination can also reinforce an intervention or produce a new one (represented by the reciprocal arrow in the figure).

In our research, we have found that relational coordination is not only key to performance outcomes in organizations but is also a tool to coordinate ecosystem collaborations. During development of the NPP, the platform's founders effectively coordinated ecosystem collaboration, strengthening relationships and communication in the ecosystem.

# **COLLABORATING TO BUILD THE NEW PAYMENTS PLATFORM**

As its nation's central bank, RBA is responsible for regulating payments system policies via the bank's Payments System Board. RBA also participates in the payments system as a bank to more than ninety federal government agencies, annually conducting 350 million transactions with a total value of just under AUD\$1 trillion.6

In 2012, RBA conducted a periodic review of the payments system that included user feedback and concluded that the system was unable to make payments quickly, particularly outside of business hours and on weekends. Based on the findings, RBA set a goal to provide real-time payment services through a new system with 24/7 availability, high speed, simpler addressing of bank accounts, the ability to send information with payments, and open access by banks and non-banks. RBA asked the banking industry to design a way to meet this goal and proposed a timeline and next steps for an industry collaboration.7

To develop a proposal for the request, the industry association Australian Payments Clearing Association (later renamed to Australian Payments Network Limited) formed the Real-Time Payments Committee, made up of executives from seven banks.8 In February 2013 the committee submitted to the Payments System Board a proposal, which was accepted, to develop what would called the New Payments Platform (NPP). A program steering committee was established to ensure continuous coordination between participating banks and RBA.<sup>10</sup>

In 2014, the committee formed the not-for-profit organization New Payments Platform Australia Limited (NPPA) to oversee the further development and operation of the platform. A consortium of thirteen banks agreed to participate in NPPA, becoming the founding members and shareholders of the organization, funding it and making key decisions.

Figure 1: A Model of Relational Coordination

#### **MANAGERIAL LEVERS** RELATIONAL COORDINATION **PERFORMANCE** Higher quality Relationships Relational Improved efficiency interventions Improved learning and innovation **Work Process** interventions Greater employee engagement and Structural interventions Communication well-being

In relational coordination, an organization pursues interventions from three categories to strengthen relationships and communication and thereby improve performance outcomes. Strengthened relationships and communication reinforce the interventions or motivate new ones.

Source: This figure draws on figure 1, "From a linear to dynamic theory of relational coordination," from Bolton, Logan, and Gittell, "Revisiting Relational Coordination: A Systematic Review," 292.

<sup>5</sup> Gittell, Transforming Relationships for High Performance: The Power of Relational Coordination, 221-242.

<sup>6 &</sup>quot;Financial Services," Reserve Bank of Australia.

<sup>7 &</sup>quot;6. Summary of Conclusions and Next Steps," Strategic Review of Innovation in the Payments System: Conclusions—June 2012, Reserve Bank of Australia.

<sup>8 &</sup>quot;New Real-Time Payment Services for Australia," Australian Payments Network, 2012.

<sup>9 &</sup>quot;Strategic Review of Innovation in the Payments System, Real Time Payments Committee Proposed Way Forward," Australian Payments Network,

<sup>10 &</sup>quot;Industry-wide Program to Develop the New Payments Platform Gets Underway," Australian Payments Network, July 1, 2013.

NPPA's mission was to extend the capability of the platform to meet the needs of the Australian payments ecosystem through ensuring safe, reliable, and efficient operations, fair access, and ongoing investment.11 The five major banks, including RBA, each had one voting seat on the NPPA board, and the group of eight smaller shareholders jointly elected four seats.

Through NPPA's board and committees, the banks decided together on how the consortium would make and enforce decisions, such as what future capabilities the platform would have. 12 A priority for NPPA was to ensure that participating banks made changes to their platform access gateways and digital channels on a similar timetable so that every bank account of an Australian consumer, business, and government agency would be reachable. In 2019, NPPA decided to mandate certain capabilities from participating banks to progress on the organization's mission and to ensure performance and functionality of the platform. In 2021, 76 million bank accounts (comprising most retail bank accounts) could make or receive rapid payments via the platform, and more than 105 financial institutions offered payments via the NPP.<sup>13</sup>

# COORDINATING THE NPP ECOSYSTEM **COLLABORATION**

In its strategic objectives, RBA noted the coordination challenge for this ecosystem collaboration:

In large part [the market failures that can hold back innovation in the payments system] consist of coordination problems that make it difficult for industry players to agree to implement an innovation that requires collective effort to succeed.14

#### THE RESERVE BANK OF AUSTRALIA

Relational coordination offers a lens by which to understand the activities that helped the NPP collaboration to successfully navigate uncertainty and interdependencies. The NPP collaboration started off with a relational foundation, with executives working together in industry bodies. But then ecosystem leaders worked to strengthen relationships and communication to manage the coordination challenge. A shared goal, shared knowledge, and mutual respect allowed the platform's founding organizations to communicate effectively, and thereby

respond to challenges as they arose and make decisions that furthered their shared goal.

The efforts of RBA and its collaborators illustrate how use of managerial levers at the ecosystem level can strengthen relational coordination and help ecosystem collaborations solve complex challenges.

Relational intervention: In conducting the payments system review and socializing its insights, RBA framed the complex challenge of building a new payments platform clearly and created a shared goal to address the challenge.

Work process intervention: The collaboration process RBA proposed and the organizations designed strengthened relationships and communication, reinforced the shared goal, increased shared knowledge, and enabled executives across participating organizations to communicate on the fly in a problem-solving way. The process culminated in forming NPPA—the co-governance structure committed to pursuit of the shared goal.

Structural intervention: Mandatory capabilities—established in a joint decision through NPPA—ensured that each interdependent ecosystem participant would make progress toward the shared goal, making more bank accounts available on the platform and achieving greater value for the ecosystem.

## **DESIGNING INTERVENTIONS** FOR RELATIONAL ECOSYSTEMS

We propose to think of multi-organizational collaborations like the one that built the NPP as relational ecosystems and that such collaborations must draw on relational coordination to help lead their efforts. The NPP collaboration demonstrates that a more relational ecosystem—one that leverages relationships and effective communication to respond to uncertainty while supporting interdependence—can be better at tackling complex challenges. A more relational ecosystem creates a space for reciprocal sharing, joint problem solving, and innovation even in the face of power differentials. We know these activities are key to performance: in MIT CISR research, ecosystems that scored higher on shared goals, mutual benefits, and effective information-sharing achieved higher ecosystem market shares than ecosystems that scored lower. 15 Start by identifying the managerial levers you are already using to improve coordination in your organization or ecosystems. Which of these interventions are opportunities to strengthen shared goals, shared knowledge, mutual respect, and the quality of communication?

<sup>11 &</sup>quot;Constitution—NPP Australia Limited," New Payments Platform, October 17, 2019, version 5, page 5.

<sup>12 &</sup>quot;Regulations for New Payments Platform (NPP)," New Payments Platform, February 2022.

<sup>13 &</sup>quot;NPP Roadmap October 2021," New Payments Platform, October 25, 2021, 1.

<sup>14 &</sup>quot;2. Innovation and Efficiency," Strategic Review of Innovation in the Payments System: Conclusions-June 2012, Reserve Bank of Australia.

<sup>15</sup> Ina M. Sebastian, Peter Weill, Stephanie L. Woerner, "Driving Growth in Digital Ecosystems," MIT Sloan Management Review, August 18, 2020. The findings were based on the MIT CISR 2017 Ecosystem Survey (N=158) and interviews in 2018 with forty-eight executives at twenty-four companies and in 2019 with twenty-one executives at thirteen companies.

#### MIT SLOAN CENTER FOR INFORMATION SYSTEMS RESEARCH

Founded in 1974 and grounded in the MIT tradition of rigorous field-based research, MIT CISR helps executives meet the challenge of leading dynamic, global, and information-intensive organizations. We provide the CIO and other digital leaders with insights on topics such as business complexity, data monetization, and the digital workplace. Through research, teaching, and events, the center stimulates interaction among scholars, students, and practitioners. More than seventy five firms sponsor our work and participate in our consortium.

#### **CISR RESEARCH PATRONS**

AlixPartners Avanade Axway, Inc. Collibra Pegasystems Inc.

PricewaterhouseCoopers Standard Bank Group

(South Africa) The Ogilvy Group

#### **CISR SPONSORS**

Allstate Insurance Company

Amcor

**ANZ Banking Group** (Australia)

**Australian Taxation Office** 

AustralianSuper

Banco Bradesco S.A. (Brazil)

Banco do Brasil S.A. Bank of Queensland

**Cabot Corporation** 

(Australia)

BlueScope Steel (Australia) BNP Paribas (France) Bristol-Myers Squibb

CarMax

Caterpillar, Inc. CEMEX (Mexico)

Charles River Laboratories,

Inc.

CIBC (Canada)

Cochlear Limited (Australia)

Commonwealth Superannuation Corp. (Australia)

Credit Suisse (Switzerland) Cuscal Limited (Australia)

**CVS Health** 

DBS Bank Ltd. (Singapore) Doosan Corporation (Korea)

Ferrovial Corporacion, S.A.

(Spain)

Fidelity Investments Fomento Economico Mexicano, S.A.B., de C.V.

General Mills, Inc.

**General Motors Corporation** 

Henkel AG & Co. (Germany)

Hitachi, Ltd. (Japan)

**HSBC Technology & Services** (USA) Inc.

Johnson & Johnson (J&J)

Kaiser Permanente

King & Wood Mallesons

(Australia)

Koç Holding (Turkey)

Mercer

National Australia Bank Ltd.

Nomura Holdings, Inc. (Japan)

Nomura Research Institute, Ltd. Systems Consulting

Division (Japan)

**OECD** 

Pacific Life Insurance

Company

**Pioneer Natural Resources** 

USA Inc.

Posten Norge AS (Norway)

Principal Financial Group

Procter & Gamble

QBE

Raytheon Technologies Reserve Bank of Australia

**Royal Philips** (Netherlands)

Santander UK/Grupo

Santander

SC Global Tubular Solutions

Scentre Group Limited

(Australia)

Schneider Electric Industries

SAS (France)

Scotts Miracle-Gro State Street Corp.

Stockland (Australia)

Suncorp Group (Australia)

**Teck Resources Limited** 

(Canada)

Tetra Pak (Sweden)

Trinity Health

**Truist Financial Corporation** 

**UniSuper Management Pty** 

Ltd (Australia)

**USAA** 

Webster Bank, N.A.

Westpac Banking Corporation

(Australia)

WestRock Company

Wolters Kluwer

**Zoetis Services LLC** 

MIT CISR is funded by Research Patrons and Sponsors, and we gratefully acknowledge their financial support and their many contributions to our work.

Sponsorship and benefits: cisr.mit.edu/community/sponsor-and-patron-benefits

MIT CISR research publications: cisr.mit.edu/research-library



## **MIT Sloan School of Management**

Center for Information Systems Research

245 First Street, E94-15th Floor Cambridge, MA 02142 t 617-253-2348 | e cisr@mit.edu Team | Christine G. Foglia Associate Director, Nils O. Fonstad, Dorothea Gray-Papastathis, Cheryl A. Miller, Ina M. Sebastian, Nick van der Meulen, Peter Weill Chairman, Barbara H. Wixom, Stephanie L. Woerner



