

Beyond real-time

The value of pre-authorized payments from bank accounts

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The changing face of payments

The face of payments in Australia has changed dramatically over the last twenty to thirty years. Payment innovation, greater competition, and regulatory and legislative reform are changing the operational landscape for payment service providers, creating opportunities to disrupt the market share and business model of established providers.

And the pace of change is only set to accelerate as technological advancements continue to revolutionise the way we make, receive and request payments.

As consumers, the way we transact and manage money has evolved, with our

payment preferences shifting to methods that are faster, more convenient and secure.

This change in behaviour has seen cash as a share of payments continue its downward trajectory, falling 10% between 2016-19 to 27% of all payments. Over the same period card-based payments have risen to 63% while automated payment arrangements accounted for 29% of all payments in 2019 [1].

COVID-19 has helped to accelerate this trend. Analysis by Square of purchases made at Square sellers since February 2020 shows that the number of cashless businesses in Australia has increased from 1 in 12 to 1 in 4 in just a year [2].

Consumers expect to be able to shop and pay 24x7x365 without interruption - whether this be by tapping a card in-store, paying a

“The way in which Australians are making payments is changing. **New payment methods are emerging**, often enabled by mobile technology, while transactional use of cash is declining.”

Consumer Payment Behaviour in Australia: Evidence from the 2019 Consumer Payments Survey, Reserve Bank of Australia, September 2020.

bill using digital banking, or transferring money between accounts at different financial institutions. The slightest hint of friction can lead to frustration, cart abandonment, negative customer sentiment – or all these.

The speed and reliability of payments is equally as important to businesses. Slow and/or inefficient payment methods can have a detrimental impact on cash flow, especially for small and scaling businesses, with protracted collection of Accounts Receivable having flow-on impacts for a business's operations elsewhere. Chasing payments and resolving disputes can prevent the efficient allocation of resources – people, time and money – from being deployed to more productive revenue generating initiatives. For businesses the certainty of payments, timing of settlement and reconciliation accuracy can have a value that outweighs the cost of acceptance.

Against this backdrop it's clear to see the value that real-time payments and pre-authorized payments from bank accounts offers to both consumers and businesses. However, the technology, infrastructure and network of connections required to facilitate these payments in Australia is complex.

“ The evolution of the nature and methods for payments will provide **convenience** for consumers and **opportunities** for businesses, but it will also increase **complexity** and **risk**. ”

Scott Farrell, Payments System Review, June 2021.

Real-time payments in Australia



The most significant leap forward in recent years for payments in Australia came with the launch of the New Payments Platform (NPP).

Although real-time payment systems are not a recent payments innovation – the first real-time payments network was launched in Japan back in 1973 [3] – the NPP was a major step forward for payments in Australia, addressing gaps in the payment system that were identified by the Reserve Bank of Australia back in 2012 when the Conclusions of the Strategic Review of Innovation in the Payments System report was published.

Historically moving money between bank accounts in Australia had been a slow process fraught with pain points. The Strategic Review identified areas where improvements could be made to the Australian payments system, addressing gaps that could be solved through innovation and closer cooperation between the regulator and industry participants. Recommendations [4] included:

- Same-day settlement of Direct Entry payments;
- Ability to make real-time retail payments;
- Ability to make and receive low-value payments outside of normal banking hours;
- Ability to send more complete remittance information with payments; and

- Ability to address payments in a relatively simple way.

The foundations

In response to the Strategic Review, and recommendations from the Real-Time Payments Committee, NPP Australia Limited (NPPA) was formed in 2014 to oversee the build, operation and management of a new platform for the real-time clearing and settlement of payments.

The NPP went live in February 2018. It has since grown to include over 105 participating financial institutions and 75 million reachable accounts. In March 2021, over 70 million NPP transactions worth more than \$70 billion were processed via the Platform in a single month [5] (for the number and value of NPP transaction since launch see figure 2).

As a distributed system made up of individual Payment Access Gateways (PAGs), the NPP is a high availability resilient network supporting the exchange of payments and payment messages in real-time, incorporating the:

- **NPP Basic Infrastructure (BI):** Supported by SWIFT, this is the rails on which payment messages are exchanged in real-time between the NPP Participants.
- **PayID Addressing Service:** Provided by NPPA, the service facilitates the simple and efficient addressing of NPP

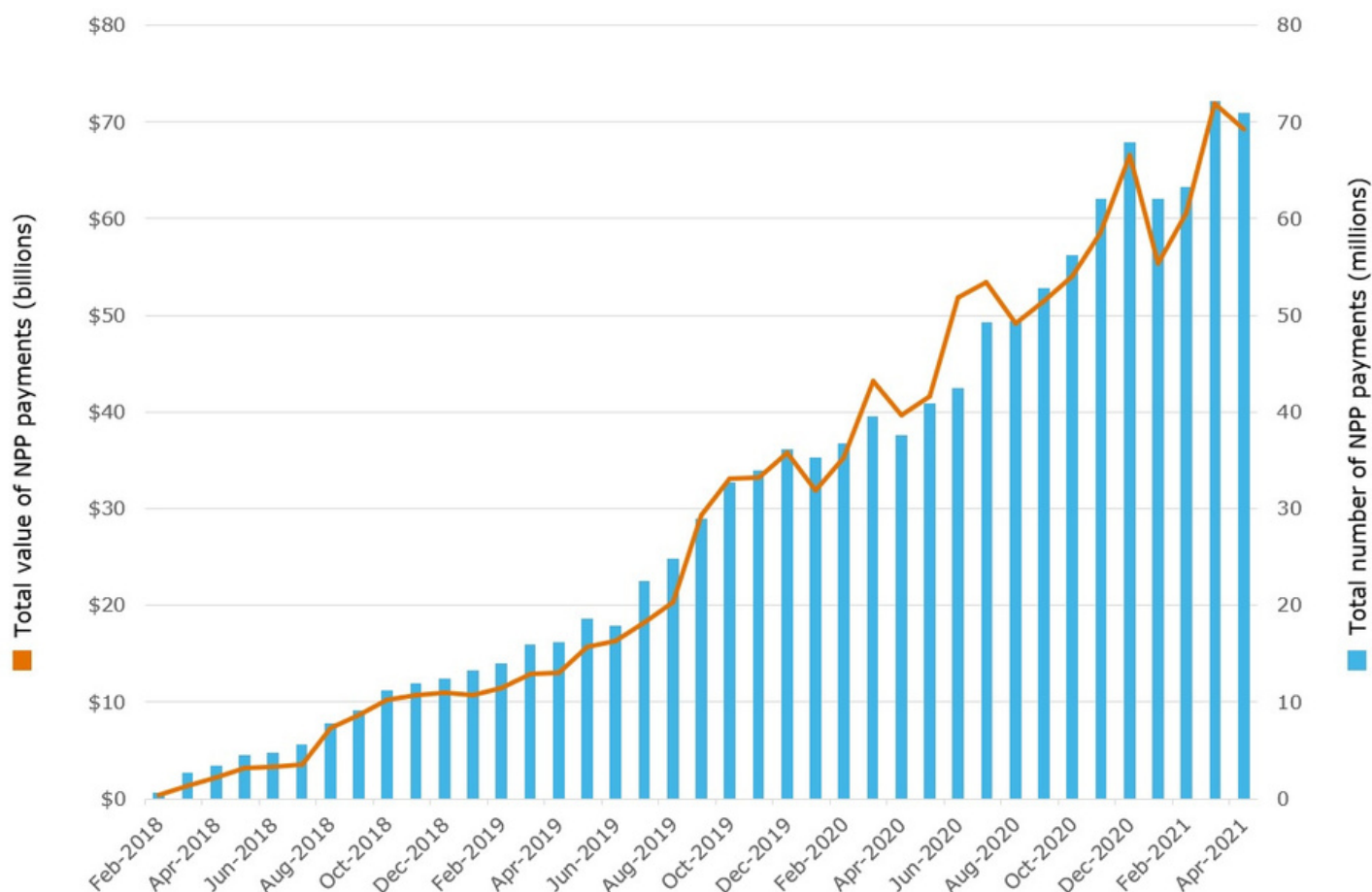


Figure 1 - The growth of real-time payments in Australia
 Source: Reserve Bank of Australia, May 2021

payments using a simple to remember identifier (phone number, email address, business identifier or ABN) that has been linked to an underlying bank account.

- **Fast Settlement Service (FSS):** Provided by the Reserve Bank of Australia, the FSS supports the irrevocable and unconditional settlement of NPP payment between each NPP Participant's Exchange Settlement Account (ESA), ensuring certainty of payment for consumers and businesses.

These foundational components can be built upon by organisations to launch overlay services that are built on top of the Platform to address specific payment need or use cases. Services can then be offered to customers of NPP Participants and Identified

Institutions through commercial arrangements negotiated with participants. The first overlay service to launch on the NPP was Osko by BPAY.

The future

Although the design of the NPP has been deliberately structured to foster payments innovation by providers and participants building on top of the Platform, there is also a place for innovation orchestrated by NPPA itself.

In the biannual NPP roadmap published in October 2020, NPPA highlighted three areas of focus for developing the Platform to ensure it evolves to meet the needs of the industry, consumers and businesses to drive future growth, adoption and usage [6]:

Area of focus	Description	Status
Deliver data-rich message standards	Structured data messages for superannuation, payroll, tax and e-invoicing payments. The capability is enabled by expanding the data contained in the ISO20022 compatible messages, using category purpose codes and messaging guidelines to specify the data elements that need to be included in the payment message.	Live
Enable third-party payment initiation	Pre-authorized payment agreements enabling third-party initiated account-to-account payments. Service to be support through the development of a central Mandate Management Service (MSS) for the storage and retrieval of pre-authorized payment agreements. NPP Participant and Identified Institution will build new capabilities to support the orchestration of payment agreements and payment initiation messages.	In progress
Support international payments	Messaging capabilities that contain information to support the domestic leg of an international payment. The capability will be supported by the inclusion of additional identifiers within the ISO20022 compatible message, including full legal account name and the date of birth of the sender from the country of origination. This information is required by the receiving bank to conduct regulatory due diligence and screening obligations for mitigating financial crime risk.	Coming soon

Table 1 - Areas of focus, NPP roadmap October 2020.

The next phase of growth

Of these initiatives, enabling third-party payment initiation has been the most frequently requested capability for the NPP. It is seen as the service that will drive the next phase of growth for the NPP by making payments invisible, moving them seamlessly into the background for consumers and businesses without sacrificing the transparency or control that is essential for

pre-authorized payment arrangements.

Consumers will have more visibility and control over bill payments, recurring subscriptions and one-off payments. While businesses will benefit from improved reconciliation, cash flow visibility, real-time account validation and confirmation of funds for more efficient back-office operations.

“ Combined with a consumer consent model and complemented by developing open banking capabilities, **PayTo will cornerstone the payment value proposition for merchants well into the future.** ”

Chris Jewell, CEO, Zepto, Say Hello to Instant Direct Debit, May 2021



An international perspective:

The rapid take-up of payment initiation

In the United Kingdom, Payment Initiation Services enabled using Open Banking APIs have seen an increase in use and adoption.

Figures available from the Open Banking Implementation Entity (OBIE) show that the number of services that expand payment choice for businesses and consumers, including payment initiation, grew from zero in December 2018, to 12 in December 2019 and 25 in December 2020 [7]. An estimated 19 of these services (using OBIE data for successful payment initiation API calls) offer payment initiation services to businesses and consumers.

Data submitted to the OBIE since July 2020 shows that the number of successful payment initiations has grown from 0.28 million in July 2020 to 2.14 million in July 2021 [8], compared to a total of 0.3 million for the whole of 2019 [9].

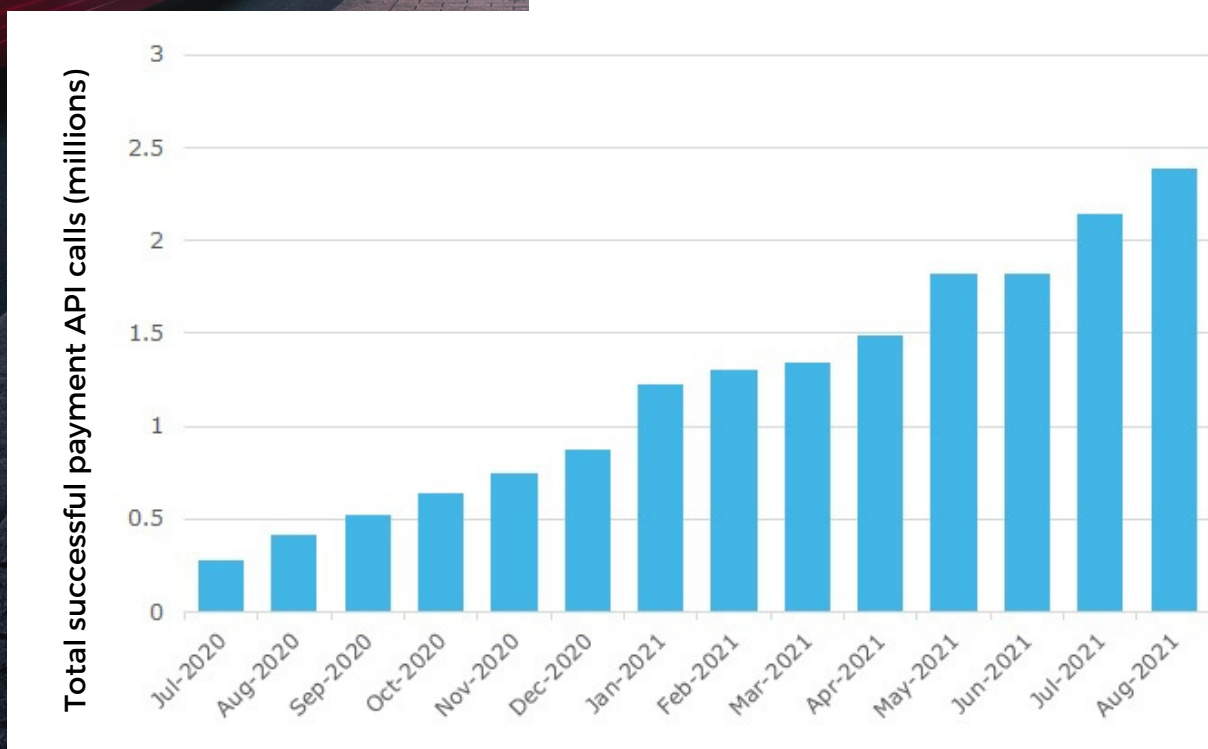


Figure 2: Successful payment API calls by account providers (ASPSPs)
Source: Open Banking Implementation Entity

The NPP and PayTo

PayTo is a new service that will spearhead the use of embedded, pre-authorised payments from bank accounts in Australia. PayTo will be available from mid-2022.

PayTo will enable scenarios where businesses can initiate payments from a customer's account on their behalf, based on a pre-authorised payment agreement that has been approved by the customer through secure digital banking channels. PayTo agreements will offer consumers and businesses a genuine real-time account-to-account payment alternative to direct debit arrangements using the infrastructure of the NPP.

By removing the uncertainty of making and receiving payments from bank accounts, with real-time account validation, funds

verification, and notifications at various stages of the payment, PayTo will remove some of the friction experienced today with delegated payment authority. And when a payment is initiated, PayTo leverages the same NPP payment rails used for real-time NPP payments today, ensuring fast response times, and immediate clearing and settlement of payments for real-time funds availability.

PayTo agreements are a step in the generalised shift towards embedded, real-time payment initiation from the point of commerce interaction - the applications and platforms that consumers and businesses use every day - not just via digital banking channels. PayTo can be used for scheduled, as well as one-off payment scenarios like cloud-based payroll, subscription services, e-invoicing, or even in-store payments.

“ PayTo transactions, formerly known as the Mandated Payments Services, offer a promising way of bridging the gap between where we are today and a world in which we never have to **interrupt our days to stop and pay.** ”

Christian Westerlind Wigstrom, CEO, Monoova, The payments revolution: How we will pay in the afterlife, June 2021.

Unlock the potential

PayTo as a direct debit alternative

Migration of direct debit arrangements to PayTo provides consumers with greater visibility, control and certainty over recurring payment arrangements.

- Visibility of the payment amount, due date and agreement duration through digital banking.
- Control over payment arrangements through digital banking, with the ability to change, suspend or cancel arrangements.
- Certainty that recurring payments will be suspended or cancelled immediately.

Where direct debit payments are accepted, more than 1 in 5 businesses indicate that 25% of these payments get dishonoured [10]. PayTo can help these businesses reduce instances of dishonoured payments in the following ways.

- Real-time account validation at the time that the PayTo agreement is established.
- Real-time funds availability check at the time of payment.
- Real-time notifications at the various stages of a payment.
- Notification of any changes that are made to the PayTo agreement by the consumer.

PayTo enhances visibility of payment for the business, removing the uncertainty around receiving payments with cleared funds available in seconds versus waiting days to discover the outcome of a direct debit.

PayTo agreements can be moved between accounts and financial institutions (future capability). The processes of updating the account linked to a PayTo agreement via

Consumer benefits

- PayTo agreements linked to a bank account are available to view in digital banking channels, improving visibility of upcoming payments.
- PayTo agreements can be viewed and managed in digital banking channels, giving consumers control over authorising, pausing and cancelling upcoming payments.
- PayTo can be set up using BSB and account number or a simple to remember PayID for greater privacy.
- PayTo agreements can be moved by the consumer to other accounts at the same bank or a different financial institution (future capability).



Business benefits

- Real-time account validation when a PayTo agreement is created.
- Real-time funds verification at the time of payment.
- PayTo agreements contain information and data to support easy reconciliation.
- Can be supported by APIs to deliver a seamless process.
- Notifications when a PayTo agreement is paused, changed or cancelled will help maintain customer relationships.
- Centralised, secure storage of PayTo agreements which are readily accessible for dispute resolution.

digital banking (or a business facing interface) will be much simpler than that of having a direct debit updated – reducing the time and hassle for consumers and reducing the operational costs of managing direct debits for businesses.

PayTo and Accounts Receivable

Long and late payments are a significant issue for small and medium sized businesses. An estimated 1 in 3 small business invoices are paid after the standard payment terms of 30 days, with it taking on average 63 days for invoices to be paid [11]. This places small and medium businesses under financial pressure, restricting access to working capital to help grow the business.

Entering into a PayTo agreement at the time of invoicing provides the vendor certainty of payment for the product or service delivered within the timeframe of their standard payment term. Financial incentives could potentially be offered by the vendor for on time or early repayment.

Notifications when a PayTo agreement is paused, changed or cancelled would enable the vendor to proactively follow up with the customer rather than passively waiting to see if and when a payment will be made.

Real-time clearing and settlement of funds at the time of payment ensures that funds are available immediately for reinvestment in the business versus waiting two to three days for funds to clear where other payment methods are used.

As a central repository for pre-authorised payments, the Mandate Management Service (MMS) provides businesses with a documented audit trail of events related to an individual payment agreement which can be used for disputes and investigation.

The PayTo customer journey

From a consumer and business perspective PayTo agreements involve a four-stage process.

Step 1: Creating a PayTo agreement

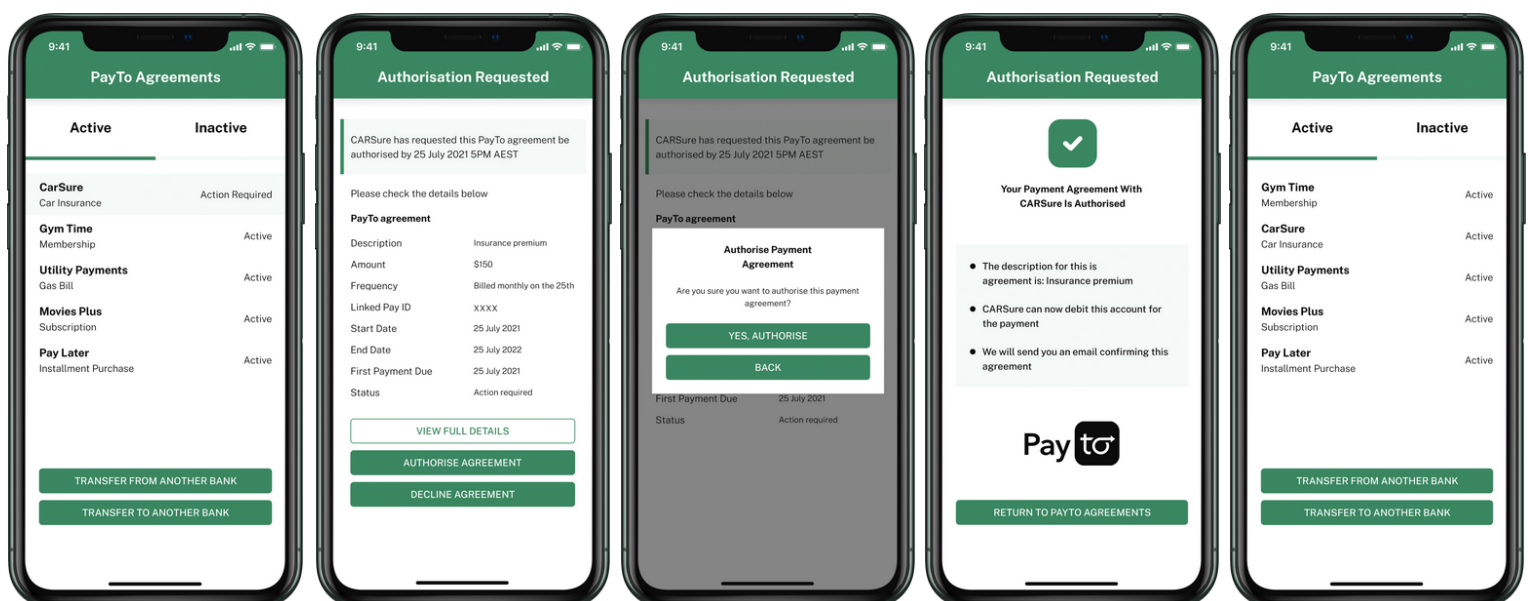
To create a PayTo agreement the following details have to be captured through a secure interface provided by the business (or their payment service provider):

- Name of the payer
- Payer bank account details (this could be BSB and account number or the PayID linked to the account)
- Payment initiator details
- Frequency of payment
- Amount of payments pre-authorized

Step 2: Authorising a PayTo agreement

Authorisation of the PayTo agreement is essential for establishing trust in the PayTo service for both the consumer and the business. Before a PayTo agreement can be updated to 'active' it must be explicitly authorised by the customer through their digital banking channel.

Within digital banking the customer will be able to view details of all the PayTo agreements linked to their bank account – 'active', 'expired' and 'pending'. Authorisation of the PayTo agreement by the customer changes the status from 'pending' to 'active' and the business receives notification that the status of the PayTo agreement has changed.



Images supplied by NPPA

Although establishing a new PayTo agreement is a two-staged process, the advantage of this approach is that it leverages the existing features and security protections of digital banking – fraud prevention and liability allocation. This ensures both the consumer and business can be confident that payments cannot be initiated from an account without the explicit approval of the account owner. This also provides certainty on the part of the business that the customer is the actual account owner from which the payment will be made.

Step 3: Initiating a payment request

Once the PayTo agreement has been authorised no further action is required by the customer.

When payment is due a request is generated by the business and sent to the customer's bank for payment to be made. If the request is valid and matches the PayTo agreement on record in the MMS, the payment request is cleared and settled by the customer's bank to the bank named in the agreement in real-time using the NPP BI and the Reserve Bank of Australia's FSS.

Integration of payment message flows into business systems, using Application Programming Interfaces (APIs) or a portal provided by their Payment Initiation service provider, enables the business to view the payment initiation request at each stage of the payment. This provides the business with real-time visibility of the status of the PayTo agreement.

Step 4: Managing a PayTo agreement

The advantage of PayTo agreements over other payment arrangements, like direct debits, is the flexibility and control that both the consumer and business have over the arrangement.

Consumers can view all the managed payments linked to their account through digital banking, with the ability to cancel, suspend or release a suspended PayTo agreement. Consumers will also be able to change the bank account or PayID that the PayTo agreement is linked to at a future date when this capability is enabled for PayTo.

Likewise, the business has the ability to manage a PayTo agreement from their end. Businesses can change the PayTo agreement status to cancelled, or suspend it, without having to seek customer authorisation. Changes made to the agreed payment terms, for example duration or amount, would require authorisation by the customer before the changes could be applied.

In both instances, changes by either the consumer or business would trigger notifications to the corresponding party, informing them of the change made with a request to authorise the change if this is required. This ensures total transparency, avoiding scenarios where the payment has been cancelled by the consumer and the business is not aware of the change to the arrangement or the consumer attempts to cancel a recurring payment but the payment continues to be debited from their account.



The PayTo ecosystem

Behind the scenes, an interconnected network of PayTo participants facilitates the creation of PayTo agreements and the smooth flow of payment initiation requests.

This ecosystem of participants connects consumers, businesses and their financial institutions, ensuring the real-time exchange of PayTo messages and payment instructions.

When a PayTo agreement is entered into, or when a payment initiation request is raised at the time of payment, a series of message exchanges happens in real-time between the PayTo Users, the NPP and the customer's financial institution facilitating the creation of the PayTo agreement, or initiation of the payment request.

Initiating Participants, like Cuscal, are responsible for providing Payment Initiators with the capabilities required to create, amend, cancel and suspend PayTo agreements and request payments from the

(continued on page 16)

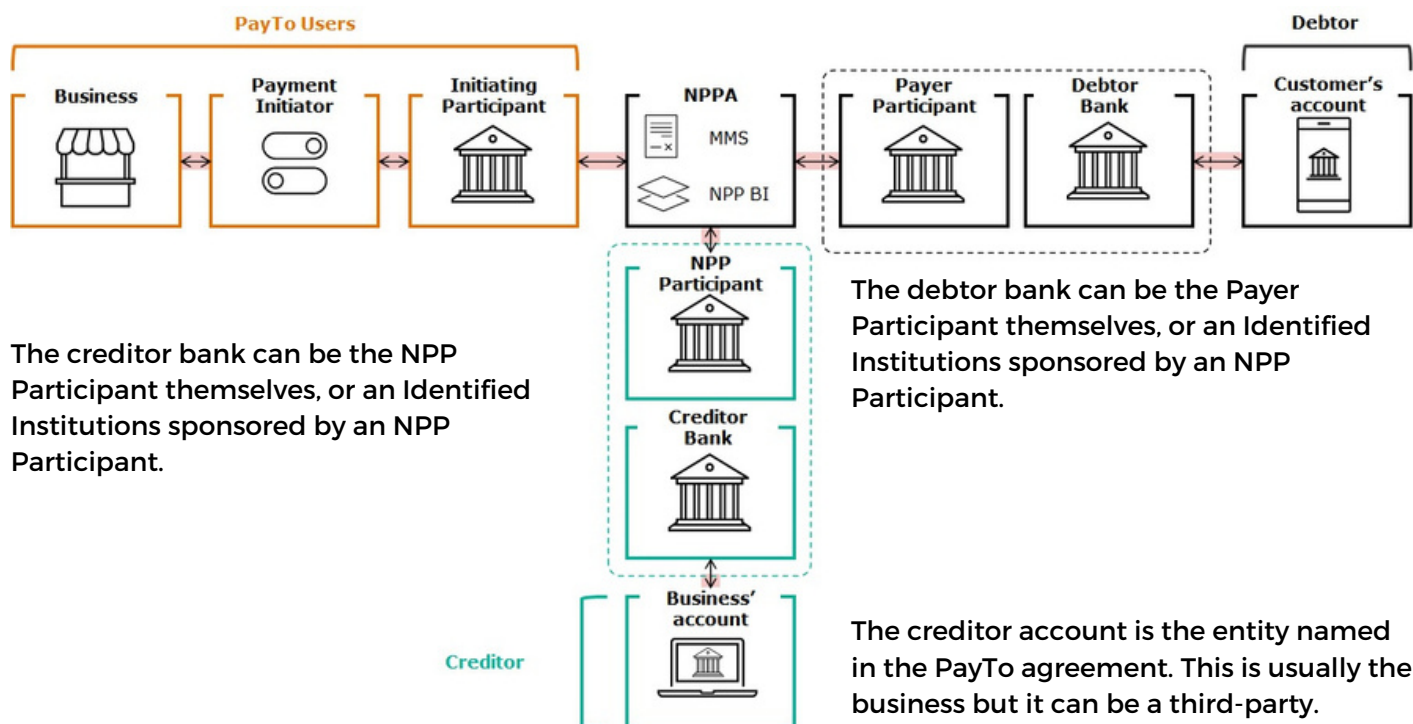


Figure 3 - The PayTo participant ecosystem

Participant	Role in ecosystem
Business (Initiating Party)	<ul style="list-style-type: none"> • Create PayTo agreements • Amend PayTo agreements • Cancel/suspend PayTo agreements • Send ad hoc payment requests
Payment Initiator	<ul style="list-style-type: none"> • Exchange payment messages to/from the business for: <ul style="list-style-type: none"> – PayTo agreements – PayTo notifications • Initiate payment requests
Initiating Participant	<ul style="list-style-type: none"> • Orchestration of PayTo related notifications and messaging on behalf of the Payment Initiator via its NPP PAG • Orchestration and validation of payment initiation requests received from the Payment Initiator via its NPP PAG
NPPA	<ul style="list-style-type: none"> • Operator of the database for the creation, storage and maintenance of PayTo agreement records • Provides the rails on which payment messages are exchanged in real-time between the PAGs of Initiating Participants, Payer Participants and NPP Participants
Payer Participant	<ul style="list-style-type: none"> • Orchestration of PayTo related notifications and messaging on behalf of the debtor bank via its NPP PAG • Orchestration of the clearing and settlement of PayTo payments on behalf of the debtor bank via its NPP PAG
Debtor bank	<ul style="list-style-type: none"> • Receives and processes payment messages to/from customer for: <ul style="list-style-type: none"> – PayTo agreements – PayTo notifications – Payment initiation requests • Clear and settle funds in real-time to the creditor bank
Customer	<ul style="list-style-type: none"> • Authorise PayTo agreements • Amend PayTo agreements • Cancel/suspend PayTo agreements
NPP Participant	<ul style="list-style-type: none"> • Orchestration of the clearing and settlement of PayTo payments on behalf of the creditor bank via its NPP PAG
Creditor bank	<ul style="list-style-type: none"> • Receives cleared funds in real-time from the debtor bank • Makes funds available in real-time to business

Table 2 - Roles and responsibilities of PayTo participants

(continued from page 14)

customer's bank that is associated with a pre-authorised PayTo agreement. An Initiating Participant will also provide message orchestration, enrichment and notification services to Payment Initiators to facilitate the smooth flow of payment initiation requests with Payer Participants.

On the debtor side of the equation, Payer Participants and Identified Institutions have to comply with NPPA business rules for payment initiation, providing assurance that when a PayTo agreement is created (or a valid payment initiation request is received) that these messages will be acted on by the debtor bank.

Sitting in between the Initiating Participant and Payer Participant is the Mandate Management Service (MMS). The MMS is critical to the operation of PayTo, without which pre-authorised payments from bank accounts would not be possible. Owned and operated by the NPPA, the MMS is the centralised database used for the creation, storage, retrieval and maintenance of PayTo agreements. As a secure repository for PayTo agreements, debtor and PayTo Users can query, update, verify and maintain PayTo agreements, as well as download reports and audit data for dispute resolution and investigations.

When a payment initiation request is received by the Initiating Participant from a Payment Initiator the request is validated against the details held in the MMS to ensure that the terms of the request align with the agreed payment terms associated with the PayTo agreement. Where requests are consistent with the details associated with the PayTo agreement in the MMS, the request is sent to the debtor bank for payment to be cleared and settled in real-time with the creditor bank and funds made available to the business.



Why Cuscal

At Cuscal we have been helping clients to access Australia's payment system with innovative solutions for over 50 years. As the leading provider of payments solutions for the Australian financial services sector, we are at the heart of the payments industry.

We've helped more organisations to access the NPP than anyone else, providing wholesale access to the NPP for over half of all connected financial institutions and all of the payment service providers that are live on the Platform today. With the introduction of PayTo we continue to be at the forefront of payments innovation in Australia, collaborating closely with banks, corporates, payment service providers and fintechs on enabling the capabilities that will support pre-authorised payments by third-party initiators from bank accounts using the NPP.

As an existing NPP Participant and now a PayTo Initiating Participant and Payer Participant, we understand the complex series of handshakes that will be required between Participants, the MMS and the Platform to facilitate the flow of PayTo messages and payment initiation instructions. Our services are designed to manage the flow of these messages on behalf of clients, ensuring speed and certainty of messaging response times and the validation of PayTo agreements and payments in real-time.

Leveraging our scale, real-time payments expertise, trusted industry position and technical knowledge of the NPP, we can help your organisation enable PayTo services for your customers. Whether you're a financial institution that offers banking and payment services to customers, a payment service provider that manages payment services for business customers, or an enterprise that makes or receives a large volume of payments, our fast, reliable, secure and compliant service ensures that the payment initiation services you offer your customers will be efficient and frictionless.

Partnering with Cuscal for PayTo services will allow your organisation to unlock the opportunities created by embedded, pre-authorised payments from bank accounts. PayTo will be the next innovation that will change the face of payments in Australia, making it possible to move more payments seamlessly into the background for consumers, businesses and government.

This will lead to better customer experience, better visibility of upcoming payments, faster access to working capital, and reduced cost and uncertainty when managing recurring payments.

While PayTo will be available from mid-2022, the time to prepare is now. For more about how we can help you with PayTo, [contact us online](#) or call 1300 650 501.

References

- [1] Consumer Payment Behaviour in Australia: Evidence from the 2019 Consumer Payments Survey, Reserve Bank of Australia, September 2020.
- [2] Payments and the Pandemic: How COVID-19 Has Transformed Australia's Relationship with Cash, Square, 2021.
- [3] www.zengin-net.jp/en/zengin_net/zengin_system
- [4] Strategic Review of Innovation in the Payments System: Conclusions, Reserve Bank of Australia, June 2012.
- [5] Payments Data C6.1: Direct Entry and NPP – Original Series, Reserve Bank of Australia.
- [6] New Payments Platform Roadmap: Enhancing the platform's capabilities, NPP Australia Limited, October 2020.
- [7] The Open Banking Impact Report 2021, Open Banking Implementation Entity, June 2021.
- [8] API Performance Stats, Open Banking Implementation Entity, July 2021.
- [9] Open Banking February Highlights 2021, Open Banking Implementation Entity, June 2021.
- [10] RFI Commercial Banking Council October 2020.
- [11] Paying the Price. The economic impact of big businesses paying Australian small businesses late, 2019, AlphaBeta.



About the author

Nathan Churchward joined Cuscal in 2014 and leads Cuscal's involvement in the New Payments Platform (NPP) and Consumer Data Right (CDR) both at a product development level, as well as through industry representation and client engagement.

Nathan brings a vast range of experience to Cuscal and our clients with more than 20 years in leadership roles in the banking and payments industry.

Throughout his career Nathan has focused on creating and launching new payment solutions that deliver competitive advantage and enhanced customer experience, in both B2B and B2B2C environments.

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