

Data Standards Body

Noting Paper 291: Workshop for simple Payments Initiation

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1. Overview

1.1. Introduction

The Consumer Data Right (CDR) facilitates secure consent-driven data sharing between designated data holders and accredited third-party data recipients on behalf of consumers.

The [Report of the Inquiry into the Future Directions of the Consumer Data Right](#) (Future Directions Report) was released on 23 December 2020. Within it, a series of recommendations were made for the CDR to support an economy-wide Action Initiation Framework, otherwise known as 'write access', along with a broad and extensible payment instruction framework.

This would empower consumers and businesses to both control their data and authorise, manage, and facilitate payments and other actions securely via the CDR. The independent *CDR Statutory Review* also recognised the importance of action and payment initiation to the CDR for its potential to deliver efficiency and convenience for consumers.

On 30 November 2022 the Government introduced the Treasury Laws Amendment (Consumer Data Right) Bill 2022 into the Parliament which will enable action initiation in the CDR. The legislation provides a pathway for the Minister to bring individual action types, such as payments, into the CDR via a declaration process. This process would be similar to the current designation process for data-sharing. CDR rules would then enliven the obligations for the action type set out in the declaration. The rules would work alongside the data standards prepared by the Data Standards Body, and guidance prepared by the Office of the Australian Information Commissioner. Any subsequent introduction of action types into the CDR is subject to passage of the legislation and further consideration and consultation.

1.2. Purpose of this paper

The purpose of this paper is to outline a consultation plan for community workshops that seek to understand the current business process architectures for action services offered by Data Holders in their existing digital channels. Initial focus will be on understanding payment process flows across a variety of payment schemes and channels.

The first workshop is scheduled for Tuesday, March 7th 2023. Interested participants can register to attend [here](#).

Subsequent workshops will be validated based on the outputs of previous workshops and they will incrementally build out a shared understanding of the commonalities and differences across participants at both the instruction layer and action layer.

The intention is to understand how instructions are currently communicated and then actioned to inform the design of an economy-wide framework for action initiation. This work will also identify the challenges and risks that need to be considered for actions to be integrated within the CDR. This knowledge will then be considered in the preparation of the legislative declaration for payments and general action initiation.

These workshops will help to identify the key building blocks required to support an economy-wide action initiation framework. Data Standards consultation will come after the Treasury declaration and rules development process has concluded which actions will be targeted for the CDR.

Finally, this work is not intended to define the technical data standards and consumer experience data standards, or any obligation dates for specific actions at this time. Consultations leading to standards development will happen at later time.

1.3. Objectives of this paper and consultation schedule

- Understand the current state processes for initiating actions independent on the CDR
- Understand the key design challenges or impediments
- Inform the payments and action initiation legislative declaration
- Develop a high-level reference architecture that describes the solution components for the CDR AIF
- Identify the dependencies that are required to deliver the CDR AIF including normative standards such as FAPI 2.0
- Determine a consultation schedule for data standards consultation
- Determine any further consumer research required
- Input community feedback into Treasury's early-stage rules development
- Identify existing third-party initiation services that the CDR may leverage

By starting this consultation now, the DSB can work with the CDR community to understand the complexities and issues early in the design process to ensure there is sufficient community input and time to develop robust technical and CX data standards that both solve consumer needs and are commercially viable.

2. Introduction to Action Initiation

In June 2021, the DSB released a [noting paper on action initiation](#). This paper introduced the concept of an Instruction Layer which allowed Accredited Action Initiators (AAIs) to act as delegates for the consumer to send instructions to Action Service Providers (ASPs) to request an action be performed by the ASP in their Action Layer.

In terms of operation, it is convenient to think of an AAI as a digital concierge acting on behalf of the consumer. The AAI has been delegated authority by the consumer to send their ASP instructions to act. Once a consumer has provided consent for an AAI to send instructions on their behalf, these instructions may be triggered by a consumer-initiated request (for example making a payment during an eCommerce checkout), data triggers (for example, the AAI identifies that the consumer's salary has been deposited based on the sharing of transaction history), event triggers that require actioning (for example, paying an electricity bill before the due date), or third-party initiated requests (for example, a gym requesting sign up to a monthly gym subscription).

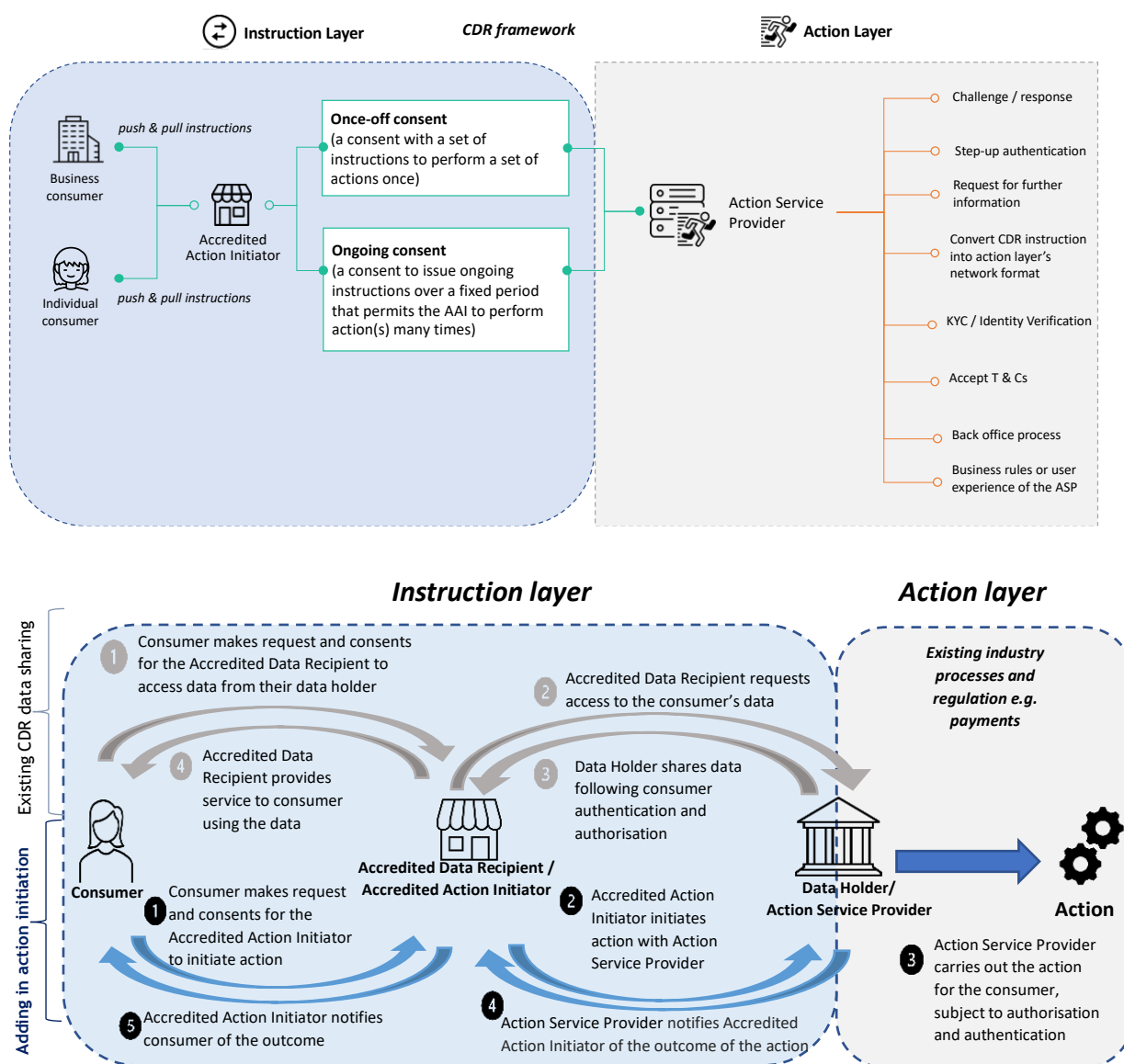


Figure 1: CDR action initiation

The AAI sends instructions on behalf of a consumer which are then processed by the ASP. This is similar to the existing data sharing process whereby the AAI seeks the consent of the consumer. With Action Initiation, the consent is sought for authority to *instruct*. This may be once off, or enduring (e.g., 365 days). An example of a once-off instruction could include updating contact details upon change of address or a one-time payment in an eCommerce checkout. An enduring consent could include the authority to pay bills on time, scheduling payments when a new bill is issued by an energy or telco retailer, account sweeping to maximise interest or adding payees. Often, the authority to instruct will require access to data that is shared by the same ASP (acting as the Data Holder) or other Data Holders (e.g., getting energy billing data).

The instruction to act is not a guarantee the action will complete successfully. Many scenarios may prevent the action being completed: for instance, insufficient funds available to make a payment, an invalid mailing address that cannot be resolved, or protections put in place by the ASP to prevent consumer harm.

3. Modelling the Action Layer

3.1. Purpose of community-led research and workshops

The purpose of initiating workshops is to provide important input into the development of the action initiation framework by understanding the existing process architecture for actions that are performed by prospective ASPs outside of CDR channels. Through a community-led approach, research hypotheses can be tested and validated. The assumptions underpinning the framework will benefit from cross-industry scrutiny whilst the workshops will generate a refinement of the high-level reference architecture. Ensuring that the CDR community has a central voice in validating the action initiation framework will produce viable solutions that focus on real consumer needs that can incorporate the challenges and opportunities for each sector.

By conducting this workshop series early in the design process, the key challenges within and across industries can be explored and identified. This in turn will lead to informed policy and standards development.

Whilst standards and policy are not finalised, these workshops aim to achieve several key objectives:

- Inform policy drafting and understand the key competition and consumer benefits.
- Understand the key obstacles and design problems to solve.
- Describe the standards gaps in the current CDR architecture to determine candidate solutions and targeted future consultations.
- Identify archetypical actions that are informed by the wealth of industry and consumer advocate experience.
- Develop primary requirements for consenting to an action, authorising an instruction, initiating an action, and managing the lifecycle of actions.
- Develop a high-level architecture that describes the framework for action.

3.2. Pre-workshop reading material

In addition to this noting paper, a Miro board will be published closer to the first workshop which will include the workshop agenda and design assets for collaborative ideation.

3.3. Simple payment initiation workshop overview

Workshop registration link: <https://www.eventbrite.com.au/e/dsb-tsy-action-initiation-workshop-01-tickets-481317953957>

Workshop date: March 7th 2023

Workshop time: 1pm AEDT

Simple payment instructions are the types of payments that only involve a consumer and a bank and can be easily mapped to existing CDR mechanisms. These are readily recognisable as the types of payments enabled via Internet Banking web and mobile applications. They are differentiated to more complex payment instructions that involve multiple parties, multiple consumers, or a complex workflow to initiate.

This workshop seeks to understand how simple payments are initiated in existing banking channels. This might be making a payment between a customer's accounts held at one bank, making a domestic transfer to a designated payee (saved payee, BSB, BPAY, or PayID reference), a bill payment (generally this means BPAY). The intention is to document the existing process flows for making these payments. Whilst there are many common elements, many financial institutions have a differentiated process to action a payment instruction given via their digital banking channels.

Activity 1: Simple once-off payment process use cases

Activity 1 focuses on the process design for initiating a simple payment then acting on that instruction. Participants will be divided between different use case streams.

Stream A: Transfer between customer accounts

The simplest form of value transfer is the movement of money between the accounts owned by a single customer held at a single institution. As the money being moved is not leaving the ownership of the customer these are the lowest risk form of payment and, as only one institution is involved, there is no payments network involved so the orchestration of the payment is also simple.

This type of payment initiation is a valuable mechanism for many personal finance use cases such as maximising interest across an account portfolio, management of savings goals, or 'round up' based savings services.

This stream will look at facilitating a payment between two accounts within one bank. This may include financial management and making a payment from a savings account to make a loan repayment, move money into a higher-earning savings account or even pay down a credit card bill. This stream may also consider how money can be transferred between two customers of the same bank.

Stream B: Payment to a registered payee

To reduce the risk of a payment most Australian banks allow for the pre-registration of a list of payees. A payment to one of these payees is inherently less risky as they are demonstrably known to the customer and less likely to be fraudulent or incorrectly entered. For digital wallet solutions, a payee may be represented by an email address or some other reference that is understood within that closed payment network.

Payments of this type cover a variety of payment rails, including NPP, and include payments to accounts held at other institutions. This type of initiation would support a wide variety of use cases but would still be relatively low risk.

This stream will consider the initiation of an instruction to a registered payee identifier. This stream will also consider *how* the payee is registered and may further consider the update and deletion of a registered payee.

Stream C: Payment to an external domestic account

Payments to any specified account, whether articulated by BSB and account number, PayID, or some other form of identifier, are the most broadly useful type of simple payment instruction. As the recipient of the funds is arbitrary these payments are also the highest risk of the simple payment types. Banks have numerous existing mechanisms to quantify and manage this risk for account-to-account payments initiated via their existing channels.

This stream will look at making a once-off external transfer to a domestic payee.

Activity 2: Complications, Issues and Opportunities

Activity 2 layers the complications and negative paths that may occur whilst attempting to make payments. Considerations may include the liability concerns, payment limits, cancellations of an instruction, or refusal to act on the instruction. This activity shall also delve into identifying commonalities across providers and the opportunities for harmonisation within the CDR.

Activity 3: Scheduling recurring simple payments

This activity will look at scheduling a payment in the same way customers do today via their internet banking channels. This could be one of the simple payments that were explored in Activity 1 as a once-off instruction. This activity extends that process design further to consider how a scheduled payment can be established, ceased or varied. In the CDR for example, a payments AAI may set up a short-term scheduled payment to pay an energy bill payment on the due date then ceases the scheduled payment once it is complete.

A scheduled payment is a pre-defined payment instruction lodged with a bank to be executed one or more times in the future on a specific schedule. Most banks offer this capability but the level of configurability and the types of payments that can be scheduled vary considerably between institutions. Any of the preceding simple payment types may possibly be scheduled using these existing mechanisms.

In the context of the CDR, inclusion of scheduled payments would not technically involve payment initiation. It would involve the definition of actions to create, amend, or delete a payment schedule. The resulting payment instructions could be created by the bank according to the defined schedule using existing mechanisms.

3.4. Future payment-focused workshops

Building upon an understanding of simpler retail banking payments, future workshops may cover a number of thematic problem spaces, including:

3.4.1. International payments

This payment type is an account-to-account payment where the recipient account is with an institution outside of Australia. There are a variety of networks via which an international payment can be made, and the account is defined using one of a variety of international standards.

From a technical perspective, this type of instruction is not much more difficult to define than any of the other simple payment types. Due to the additional risks involved such as money laundering, terrorism financing, and breaching of sanctions, these types of payment instruction are complex from a liability and implementation perspective.

International payments differ from domestic payments in that they typically require the exchange of Australian dollars into a foreign currency involving the quoting and consumer's acceptance of an agreed exchange rate along with any applicable fees and charges.

3.4.2. Complex payment instructions

3.4.2.1. Split payments

Split payments cover a variety of use cases including the facility to pay one payee using two separate accounts: commonly two or more credit or debit cards. However split payments also cover use cases where remittance is made to multiple payees under a common payment reference or scheduled payment set. Similarly, banks can offer the facility to direct payments using two or more accounts to a single payee.

CDR enablement of these sorts of payments may offer consumers with choice and flexibility but are likely to include complex workflows.

3.4.2.2. Complex variable recurring payments

Variable recurring payments involve the establishment of an instruction to make a series of future payments for a variable amount. Variable recurring payments could be set up for a variety of use cases including an automated sweeping facility or to pay utility bills that have variable amounts based on usage.

Within the CDR, an AAI could facilitate ongoing subscription payments to merchants (such as a mobile plan or streaming service) to pay bills on time via the consumer's nominated bank account(s).

CDR enablement of these sorts of payments offer significant consumer benefit to automate the transfer of funds (say between accounts, or to a merchant) without the consumer needing to authorise every single transaction. This increases the complexity of payment workflows because there is a need to consider authentication requirements including any exemptions or delegation at instruction time, along with constraints such as payment limits that are encoded into the consent.

3.4.2.3. PayTo

A specific payment initiated under a New Payments Platform (NPP) PayTo mandate, from an instruction perspective, is not much more complex than the instruction for a normal NPP payment.

Simply sending instructions is not what it means to enable PayTo via the CDR, however. For CDR and PayTo to work together the management of the PayTo agreement must also be considered. This increases the complexity significantly for the following reasons:

- The expanded number of participants that will inevitably need to be designated or regulated in some way. PayTo participants are not limited to currently designated banks and there is a variety of levels of engagement, and consumer visibility, of these participants
- PayTo payments cannot be addressed in CDR without dealing with the additional entities involved in the payment and mandate process. Specifically, the initiator role and the payee are active participants in the overall PayTo ecosystem that would need to be aligned with the CDR model
- A PayTo payment requires the existence of a PayTo Agreement. For CDR to enable PayTo, actions related to PayTo Agreements like read, creation, amendment, and revocation would need to be addressed as well as the actual payment initiation action.

3.4.2.4. Point-Of-Sale (POS) payments

Point of sale payments are a multi-party payment involving the consumer and the merchant along with the payer institution (or issuer under scheme terminology) and the payee institution (or acquirer under scheme terminology).

POS payments can include a variety of merchant initiated payment request use cases including online (e.g., ecommerce checkout) and physical payments (e.g., a supermarket checkout).

These sorts of payments may also include the registration of rewards accounts (e.g., FlyBuys or Woolworths Rewards) as well as part-payment using proprietary rewards schemes.

Additionally, there is more complexity compared to simple payment initiation because checkout flows may involve first-time and guest checkouts including establishing a card-on-file style tokenised payment method held by the merchant for faster checkouts in future.

Determining how CDR will enable this payment workflow, even if specifically limited to online checkout, will be complex and will need to align with a variety of existing proprietary and international standards.

3.4.2.5. Proprietary networks

Proprietary payment networks and payment instruments are proliferating globally. Proprietary networks include digital wallet solutions, rewards cards and non-traditional payment schemes. Examples include PayPal, AfterPay (and other BNPL), Apple Pay, Google Pay, WeChat Pay, Alipay, VenMo, Woolworths Rewards, Qantas Rewards, FlyBuys etc.

CDR enablement of these networks might be highly complex and potentially different for each specific network.

3.4.2.6. Buy-now, pay later

Buy Now Pay Later (BNPL) has become a popular method for payment by Australians in recent years. BNPL services allow users to purchase a product or service at a shop or online and pay it back in instalments. Establishing a payment using a BNPL service allows the consumer to take receipt of the

goods or services immediately whilst entering them into a repayment plan independent of the merchant that is selling the consumer their goods or services.

BNPL could be considered a proprietary network, but it is called out separately. The CDR has designated the non-bank lending sector — which includes the BNPL — for inclusion within the CDR. CDR enablement of these payment networks may offer competitive relevance for the BNPL sector whilst offering consumers more choice when making payments through the CDR.

3.4.3. Corporate and institutional payments

Banks that offer corporate and institutional services often provide support for complex payments to meet business needs such as procurement, inventory, and payroll management processes. These workflows are often characterised by complex authorisation processes with multiple approvers, the ability to bundle many payments together, advanced reporting and support for batch submission.

CDR enablement of these processes would be very complex however their inclusion could drive banks to innovate and provide significant advantages to small-to-medium sized enterprises as well as larger institutional and corporate consumers.

3.4.4. Refunds, chargebacks and dispute resolution

Whilst making a payment is often what first comes to mind with payment initiation, reverse payments in the way of refunds and chargebacks offer critical consumer protections. Refunds

A refund is where the consumer has communicated with the merchant where goods or services were acquired to pay back some or all of the money for those goods or services (reasons a consumer requests a refund may include the goods were faulty, not as advertised or not what the consumer wanted). On the other hand, a chargeback is where funds are returned to the consumer's account by initiating a dispute with the financial institution the funds were paid from (reasons consumers initiate chargebacks may include a fraudulent transaction, goods failed to turn up or the merchant the consumer purchased their goods or services from is uncooperative or unwilling to provide a refund). In essence, the main difference between chargebacks and refunds is who the consumer contacts in the first instance to reverse the payment.

CDR enablement of refunds and chargebacks will be fundamental to protecting consumers and will need to be treated as a first-class payment initiation service. That said, the process will involve complex liability questions as well as complex processes that will involve clear design requirements around timeliness, reducing consumer friction and cost.

3.4.5. Complementary and adjacent instructions

Complementary instructions to payment initiation are those actions that support or enhance the initiating of payments. Examples including the managing of payees in a consumer's address book involving the creation, editing and deletion of payees. The CDR already supports reading a consumer's payee list.

Other actions that may complement payment initiation include establishing transaction authorities and signatories, secondary user entitlements and the management of nominated representatives.

Outside of the banking sector, complementary actions in the energy and telecommunications sectors include the management of payment plans such as migration of payment preferences when switching retailers, adding or changing a payment schedule.

Payment adjacent actions are payment-like actions that have some similar considerations to payment initiation but aren't the instruction of making a payment itself. Examples include changing term deposit instructions at maturity, or rolling over a term deposit. Such examples offer simple "general" actions which could be easy to facilitate alongside payment initiation that add consumer value and benefit the design of action initiation within the CDR to ensure a payments-only or payments-centric design approach isn't taken.

There is value in considering the priority and importance of supporting complementary and adjacent actions alongside payment initiation and whether such instructions can be combined with a payment instruction because they change the consumer experience and overall design considerations for action initiation.

3.5. Future general action initiation workshops

Beyond payment initiation, understanding the existing processes for simple and complex general action initiation will involve participant involvement. Many new design problems need to be considered including new customer acquisition and the establishment of a customer relationship along with identity proofing and by extension know-your-customer (KYC) requirements. Complex general action initiation is likely to involve actions with long running processes such as home loan origination that typically takes days to weeks before an application is completed, and a home loan is obtained.

3.5.1. Simple general actions

Simple action instructions involve once-off instructions where the consumer has an established customer relationship with the action service provider.

Managing customer relationship

Managing a customer profile is an action that is offered across most sectors and may involve the update of electronic contact details such as registered email addresses and phone numbers, physical contact details such as home address and mailing address as well as consumer's preferred or display names.

CDR enablement of customer management can offer a truly cross-sectoral use case that is likely to have encounter different processes dependent on the sector the action is instructed in.

Simple product origination

Simple instructions to originate new products involve the opening of new plans or accounts under an existing authenticated customer relationship where there is only one consumer required to originate the product. In energy or telecommunications this could be the opening of a new plan, say a new solar plan, internet, or mobile phone plan. In banking this could include opening a new transactions or savings account.

Simple product management

This stream will look at how a customer may manage their term deposits to rollover their investment or update their maturity instructions. The purpose is to understand how one-

time actions may be initiated within an existing customer context that involve both data sharing and an instruction to change an existing investment. This scenario may consider requirements for a conversational, or multi-step offer before instruction is achieved.

3.5.2. Complex general actions

Complex action instructions involve complex processes that may be commenced without an existing customer relationship, require the switching from one provider to another of one or all services currently provided by another service provider, actions that have multiple parties required to open or establish new accounts, or long running origination processes such as home loan origination.

4. Design questions

In modelling existing processes, the DSB seeks feedback on the following design questions:

1. Whilst this workshop is seeking to model simple payments, what other actions should be prioritised in developing action initiation rules and standards development, and why?
2. Which of these action use cases would you prioritise next?
3. What do you see are the most complex problems that the CDR must design for, or consider, as part of action initiation rules and standards development, and why?
4. Are there any opportunities to leverage existing industry standards for payments or action initiation uses cases, and how do you consider them being utilised?
5. What are the key consumer privacy considerations when designing for payment and action initiation?
6. What are the key consumer protections to consider when designing for payment and action initiation?
7. What are the key security considerations when designing for payment and action initiation?
8. Do you have any other feedback in the early-stage design process for action initiation?