

# Transition strategy discussion – Session 4C

For combined Business and Technical Focus group members

- Portal Consolidation (PC)
- Industry Data Exchange (IDX)
- Integrated Roadmap

17 Aug 2023

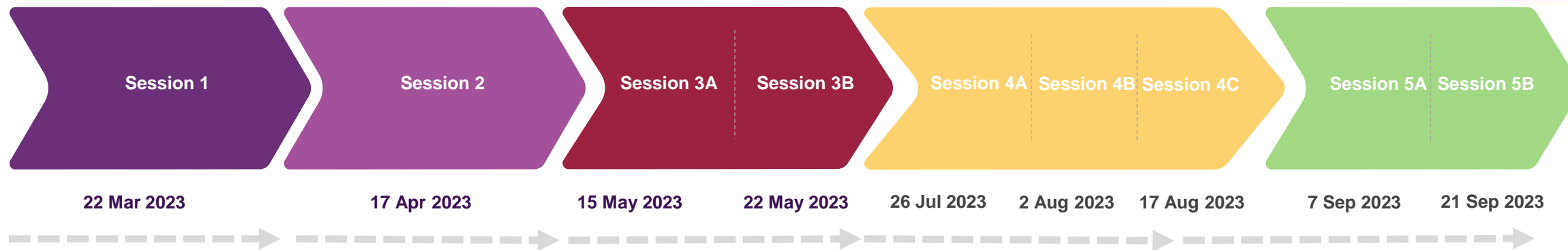


We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

**We pay respect to their Elders  
Past and present.**

# 1. Introduction

# Industry Consultation timeline



Session	Introduction – IDX, IDAM & PC	Discovery Workshops – IDAM and PC	Target State Discussion	Transition Strategy	Conclusions and Business Case
Agenda	<ul style="list-style-type: none"> <li>Introduce initiatives</li> <li>Outline workshop plan</li> </ul>	<ul style="list-style-type: none"> <li>Pain points and benefits</li> <li>Survey</li> </ul>	<ul style="list-style-type: none"> <li>Concept walkthrough</li> <li>Survey</li> </ul>	<ul style="list-style-type: none"> <li>Transition Strategy</li> <li>Impacts &amp; Benefits</li> <li>Survey</li> </ul>	<ul style="list-style-type: none"> <li>Walkthrough of draft</li> <li>Assessment and completion</li> </ul>
Audience					

**Legend:** Business Focus Group Technical Focus Group All interested stakeholders who nominated to Focus Groups

# Objective of today's session

AEMO is working with the [FaSI Focus Group](#) to prepare a business case to determine feasibility of implementing Foundational and Strategic initiatives IDAM, IDX and Portal Consolidation. An industry and AEMO aligned position on conceptual transition strategy and roadmap are key inputs to the business case.

## This workshop aims to:

- PC**
- Close out of actions, review, and validation of transition roadmap
  - Seek in principle agreement (vote)

- IDX**
- Investment phasing overview and considerations
  - Walkthrough of transition options and implications
  - Sequencing and bundling review (vote)
  - Sunset period options (vote)

- Integrated Roadmap**
- Outline overlay of the three initiatives against the broader industry timeline
  - Review and assess

## The ask of participants:

- Are there any material gaps or concerns or further impacts to the proposed transition strategy?
- Review the outcome of actions on PC (raised in session 4B) and validate the roadmap via voting

- Consider investment phasing in tranche definition
- Consider transition options and implications
- Leveraging material from session 4A pack:
  - Provide views on sequencing and bundling
  - Provide views on sunset timelines

- Leveraging material from session 4A pack:
  - Identify any material considerations in the overlaid timeline noting the phased investment approach
  - Provide views on the integrated roadmap against transition objectives, risks and principles

# Agenda



#	Time	Topic
1	9:30-10:00 AM	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Consultation update</li> <li>• Session objectives</li> <li>• Actions &amp; feedback from previous workshops</li> <li>• Investment phasing overview and considerations</li> </ul>
2	10:00 AM-10:30 AM	<b>Transition strategy – Portal Consolidation</b> <ul style="list-style-type: none"> <li>• Review and assessment (vote)</li> </ul>
	10:30-10:40 AM	BREAK
3	10:40 AM-12:15 PM	<b>Transition strategy – Industry Data Exchange (IDX):</b> <ul style="list-style-type: none"> <li>• Walkthrough of transition scenarios and implications</li> </ul>
	12:15-12:45 PM	BREAK
	12:45-1:45 PM	<b>Transition strategy – Industry Data Exchange (IDX) continued:</b> <ul style="list-style-type: none"> <li>• Sequencing and bundling review (vote)</li> <li>• Sunset period options (vote)</li> </ul>
4	1:45-3:15 PM	<b>Integrated transition roadmap &amp; Risk analysis</b> <ul style="list-style-type: none"> <li>• Overlay of the three initiatives against the broader industry timeline</li> <li>• Review and assessment (vote)</li> </ul>
	3:15-3:30 PM	BREAK
5	3:30-4:00 PM	<b>Update on consultation on business case</b>
6	4:00-4:30 PM	<b>Next steps &amp; close</b>

## Supporting materials:

- Appendix A: Competition law meeting protocol
- Appendix B: IDAM Alignment Check-in Results
- Appendix C: NEM Reform Initiative vs IDX Project
- Appendix D: Benefits Framework

*"Please note that this meeting will be recorded by AEMO and may be accessed and used by AEMO for the purpose of compiling minutes. By attending the meeting, you consent to AEMO recording the meeting and using the record for this purpose. No other recording of the meeting is permitted"*

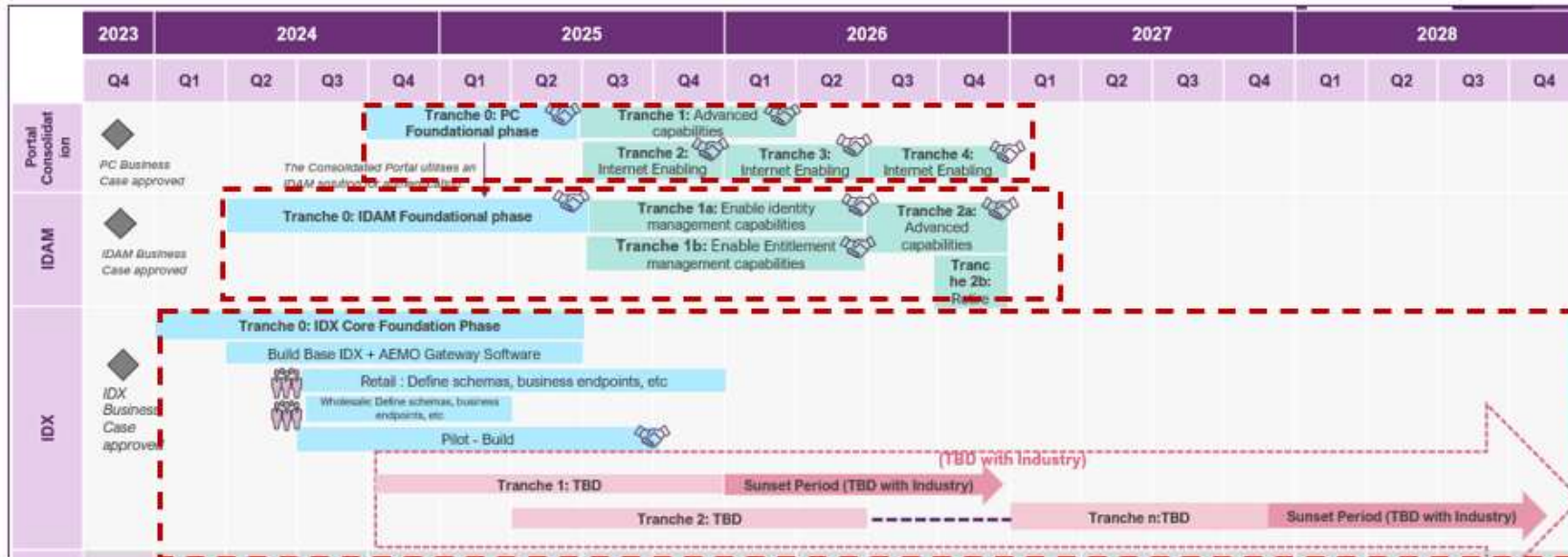
# Actions from transition strategy workshops – 4A & 4B

Topic	Action ( Session 4A)	Raised By	Owner	Status
IDAM	Segregate participant administrator access -admin role and user role.	Greg Daley	AEMO	Closed
IDAM	To assess a capability to enable entitlement management capabilities (tranche 2) for Organisations at an Org level once a participant finishes progressive migration (tranche 1) to realise IDAM benefits earlier	Olivia Fleming, Yvonne Tuckett, Mark Riley	AEMO	Closed
IDAM	A roadmap of actions from participants will be appreciated as well.	Atif Munir	AEMO	Closed
IDX	AEMO Gateway Software Use cases -Put simple diagrams	Mark Riley	AEMO	Closed
IDX	AEMO Gateway Software: Number of questions raised in relation to the AEMO Gateway software.	Numerous participants	AEMO	Closed
IDX	Transition Approach User cases - Put simple diagrams for different approaches like Market-centric, value based, etc	Mark Riley	AEMO	To be presented in 4C
ALL	Strawman Roadmap : Overlay rule change activities with initiatives (demonstrating industry testing phases)	Helen Vassos	AEMO	To be presented in 4C
ALL	It would be great if the roadmap/strawman would indicate the market testing or industry testing periods	Yvonne Tuckett	AEMO	To be presented in 4C

Topic	Action (Session 4b)	Raised By	Owner	Status
IDAM	We prefer to use our own elevated access for segregation of admin and user role. Will this be supported?	Olivia Fleming	AEMO	Open
IDAM	Can we get a list of the entitlements we consider to be privileged so we can cross check our processes?	Olivia Fleming	AEMO	Open
IDX	Isolate data exchange mechanism and payload format - consider this into the business case (introduce new protocols but keep aseXML)	Greg Daly	AEMO	Open
IDX	Our preference is that the AEMO IDX natively supports schema transformation and allows participants to transact using either aseXML or JSON via the IDX API. This would enable AEMO to enforce a short sunset on the legacy ftp and API channels while allowing industry to have a longer sunset period for aseXML.	Ausgrid and Plus ES	AEMO	To be presented in 4C
PC	Participants raised concerns around security for moving portals to the internet.	Chris Murphy, Mark Riley	AEMO	Open
All	Package up latest target state packs (and other relevant materials) and share with industry	Mark Riley, Christine Ward	AEMO	Closed

# Investment Phasing and Considerations

- Step 1: Define Tranches and sequences for each initiative
- Step 2: Develop Integrated roadmap; tranches allocated to timeline
- Step 3: Tranches identified for inclusion in first investment phase



- For each initiative AEMO is seeking input from participants on the logical tranches to include in the phased investment case
- Tranches excluded from the phased investment case will be the subject of subsequent investment case(s).



# 2. Transition strategy – Portal Consolidation

Industry Feedback and Actions

Survey Results

Portal Consolidation Transition Sequencing

Portal Consolidation Strawman Roadmap

Next Steps

# Industry Feedback and Actions from Session 4b

AEMO presented a transition strategy for Portal Consolidation along with a strawman roadmap during Session 4B. The following is a summary of the discussion

1

AEMO requested industry to vote on the web applications that should be internet enabled



AEMO has consolidated the response received from each organisation and will present the results of the poll in subsequent slides. AEMO has included this into the transition sequencing and roadmap.

2

AEMO requested industry to sequence/prioritise web applications for being internet enabled



AEMO has consolidated the response received from each organisation and will present the results of the poll in subsequent slides. AEMO has included this into the transition sequencing and roadmap.

3

Participants raised concerns around security for making web applications internet enabled.



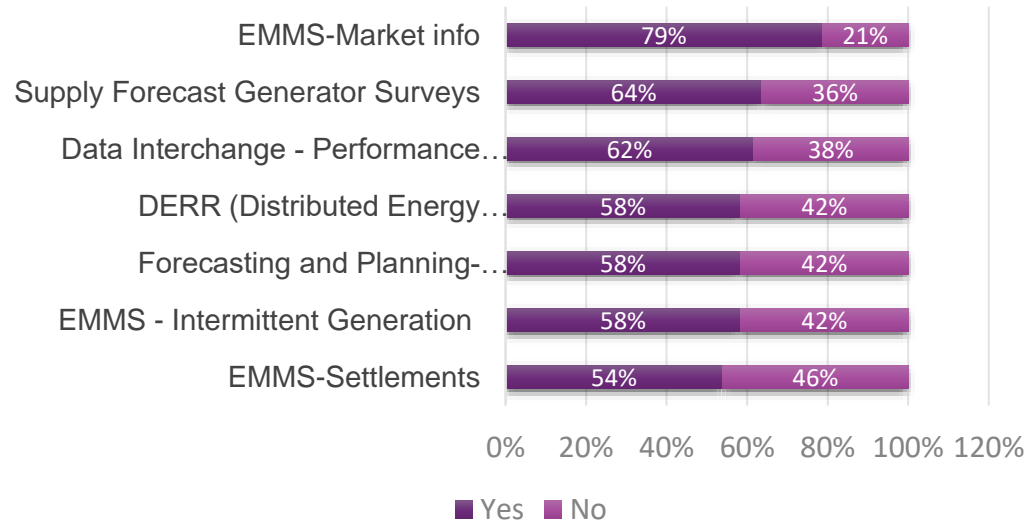
The target state architecture has been put together with the principle of Zero-Trust architecture. During design phase, security requirements/ considerations will be further discussed with the Industry and If required, tranche definitions will be revised.

# Action 1 - Survey Results

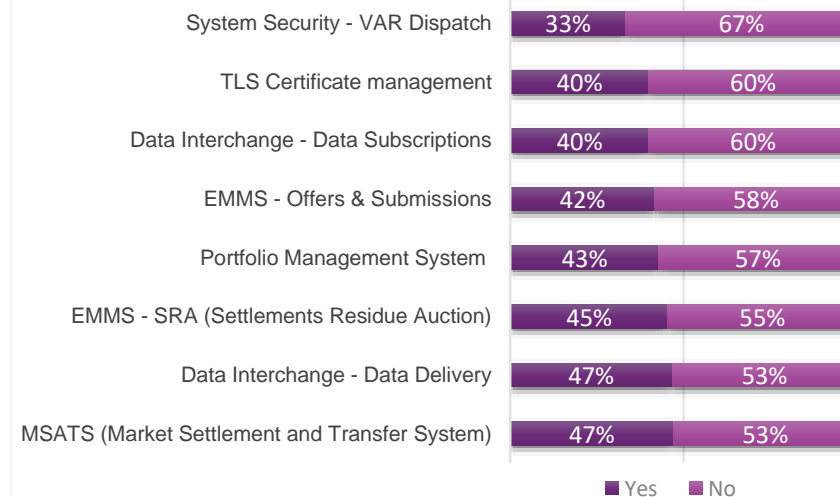
## Do you support the internet-enabling of the following existing NEM web-application?

For each web application, we have consolidated the responses received from different organisations, considering one vote per organisation where we had multiple representatives voting from the same organisation.

### Yes > 50%



### Yes < 50%

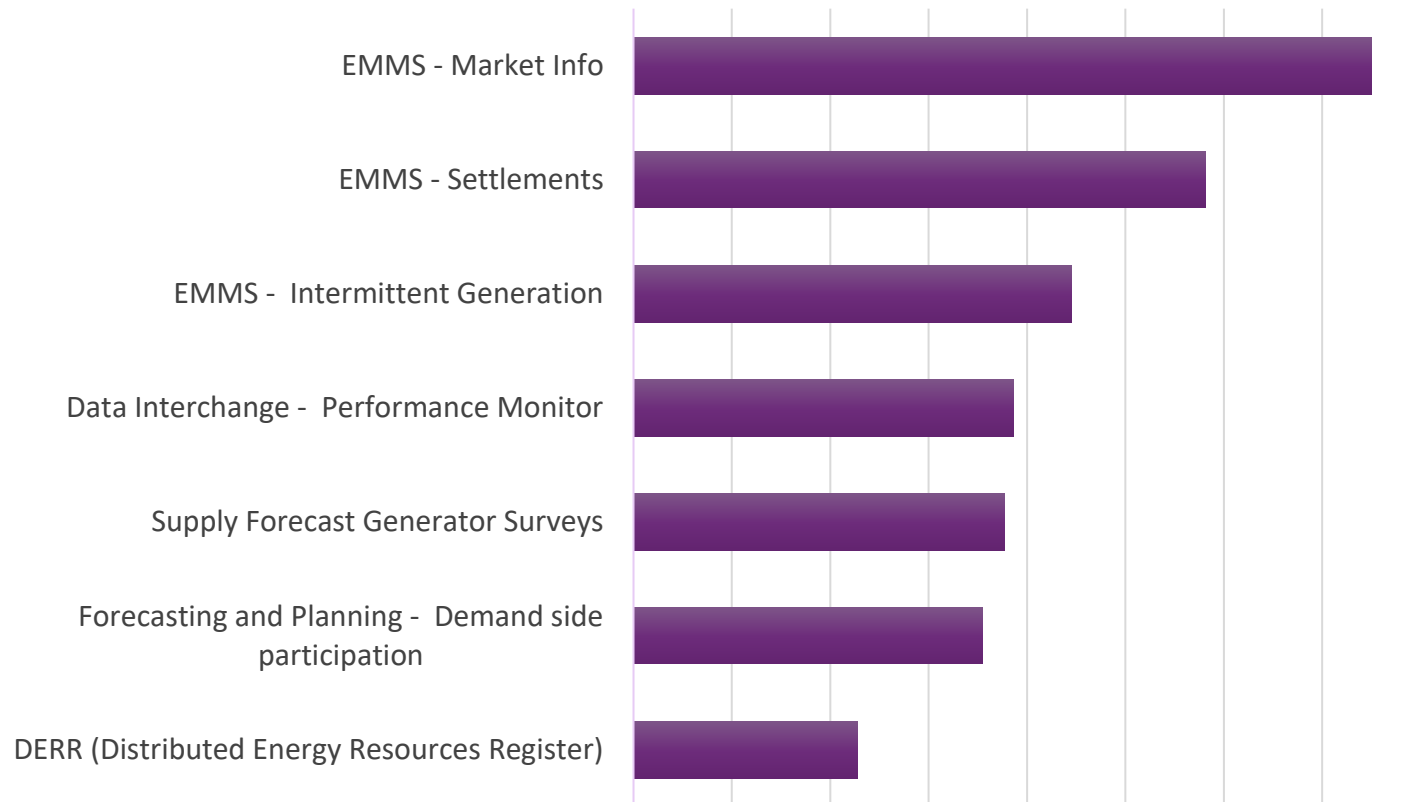


Votes which indicated a web application was not relevant to their business, have not been considered in this analysis. Web applications which received more than 50% "Yes" votes have been included in the tranche definitions.

# Action 2 - Survey Results

Of the list of applications, what should be the sequence/Priority of these web applications moved to the consolidated framework?

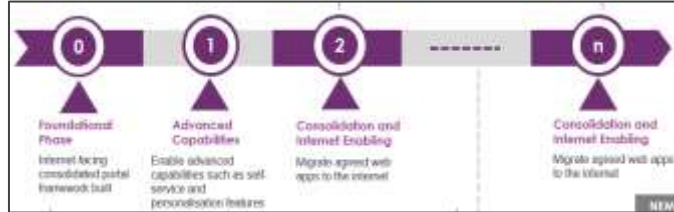
## Industry Sequencing of Web Applications



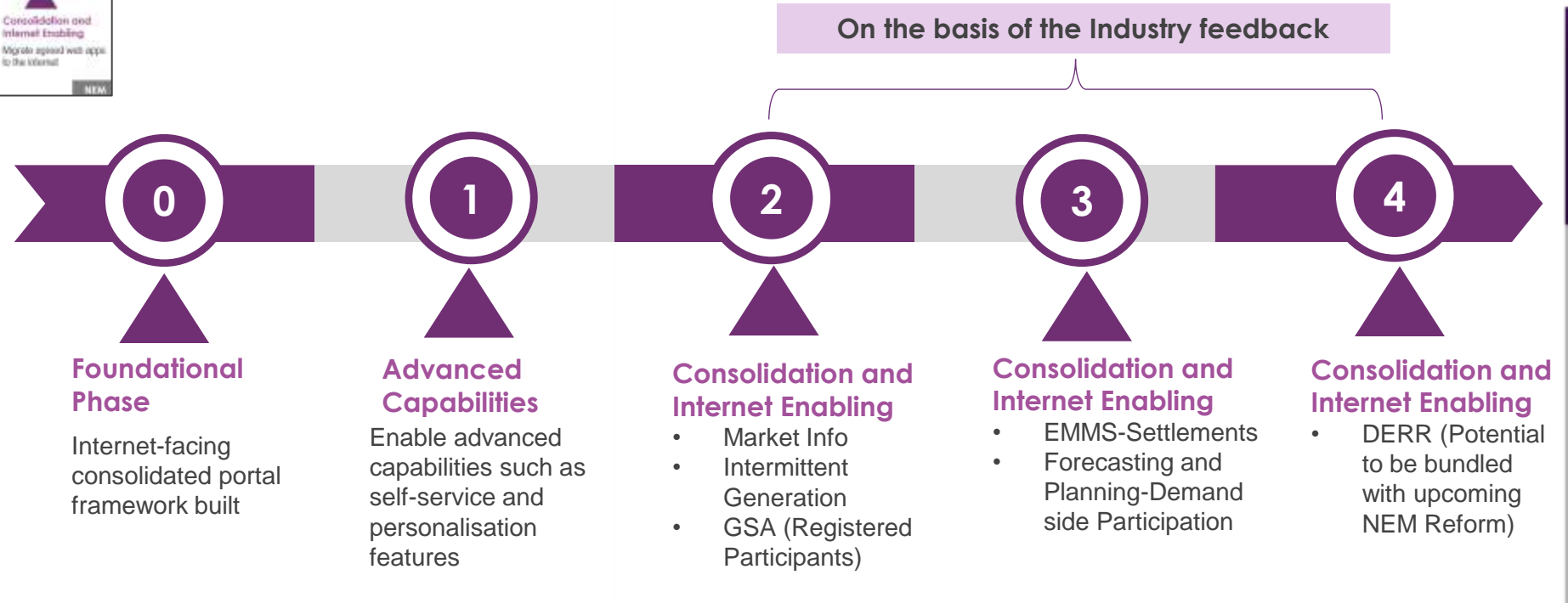
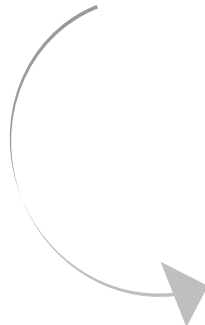
For each web application, we have consolidated the responses received from different organisations, considering one vote per organisation where we had multiple representatives voting from the same organisation.

Web applications which received more than 50% "Yes" have been included in the sequencing.

# Portal Consolidation Transition Tranches Overview



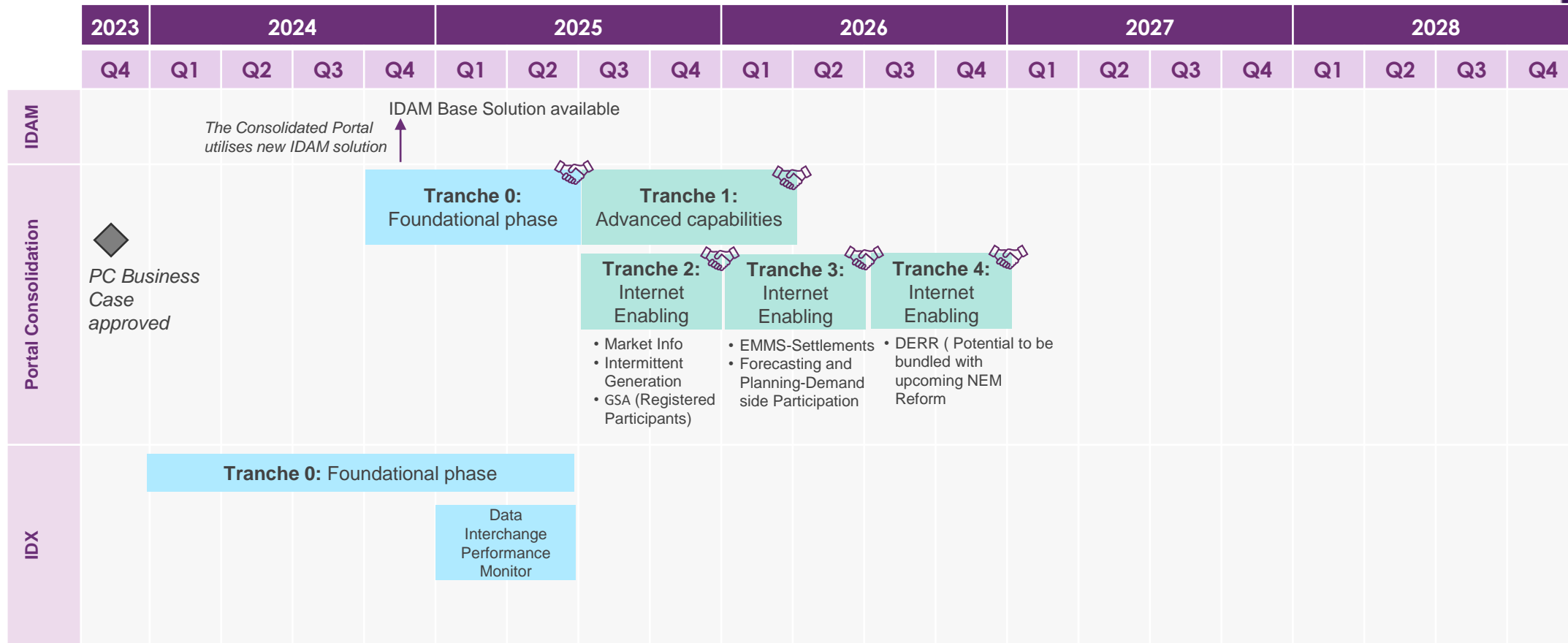
Presented during session 4B



**Upcoming NEM Reform initiatives.**  
(Data Interchange-Performance Monitor will be addressed by IDX)

Web applications which received more than 50% “Yes” vote for moving to the internet, have been included in tranches 2-4.

# Portal Consolidation Strawman Roadmap



Foundational Tranches - based on the assumed timeline

AEMO proposed activities

Industry Testing

Milestone

- Post Business Case, AEMO will continue to work with Industry to validate, confirm and where appropriate update the roadmap  
*Changing sequencing does not have a significant impact on the business case*
- Note: Data Interchange Performance Monitor will be remediated by IDX

# Portal Consolidation - Next Steps



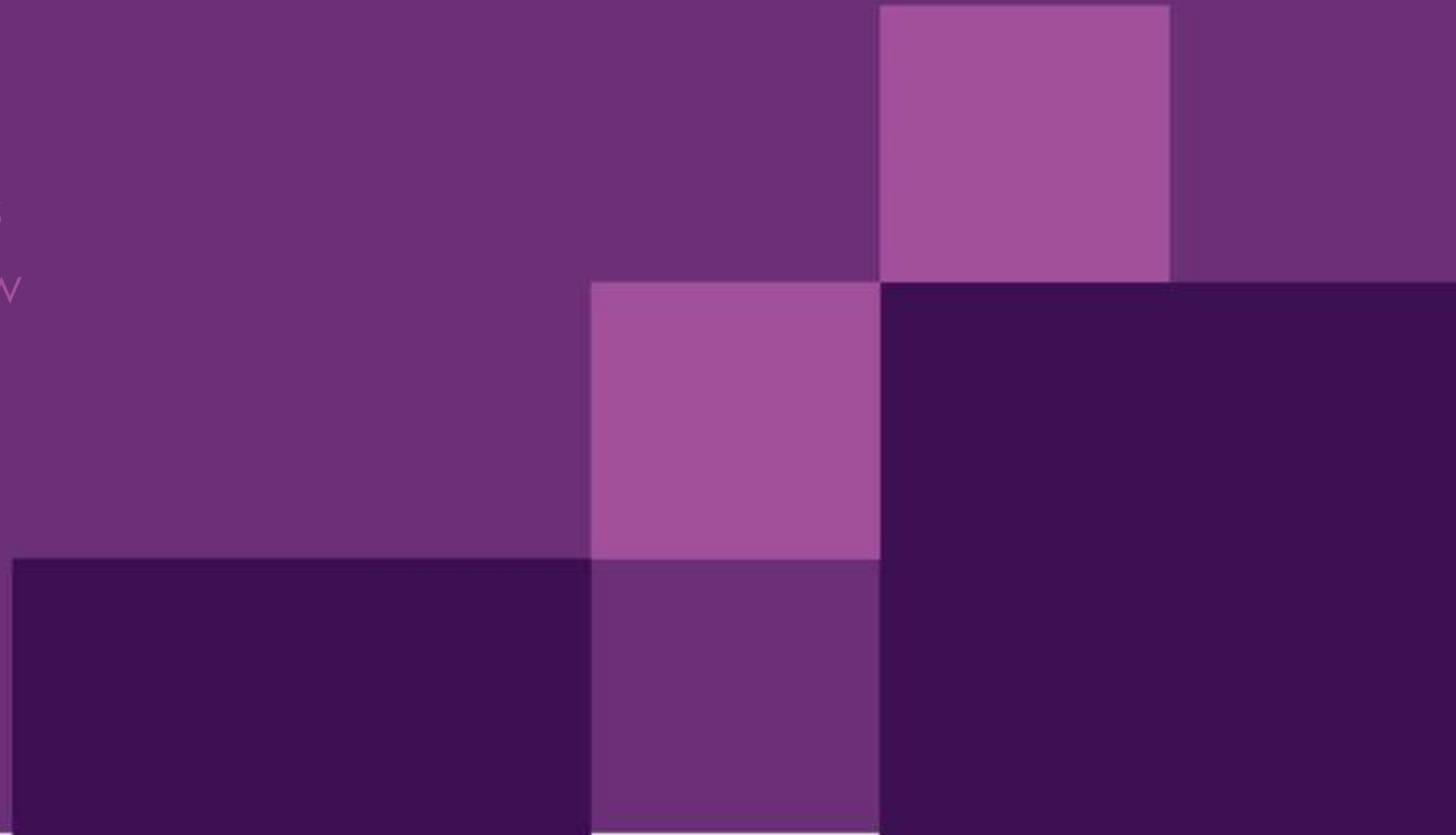
- AEMO seeks in-principle agreement with the Focus Group with the intent to finalise Portal Consolidation **Transition tranches and sequencing** ahead of the Business Case workshop.
- A consensus position is sought with the industry. Where there are diverging views, these will be acknowledged.

AEMO welcomes any feedback from the Technical and Business Focus Groups to [NEMReform@aemo.com.au](mailto:NEMReform@aemo.com.au).

# 3. Transition strategy – Industry Data Exchange



Industry Feedback and Actions  
IDX Transition Strategy Overview





# Industry Feedback and Actions from Session 4b

AEMO presented a transition strategy for Industry Data Exchange along with a strawman roadmap during Session 4B. The following is a summary of the discussion

1

Provide additional reference material to assist participants assess transition approach

2

Isolate data exchange mechanism and payload format - consider this into the Business Case (introduce new protocols but keep aseXML)

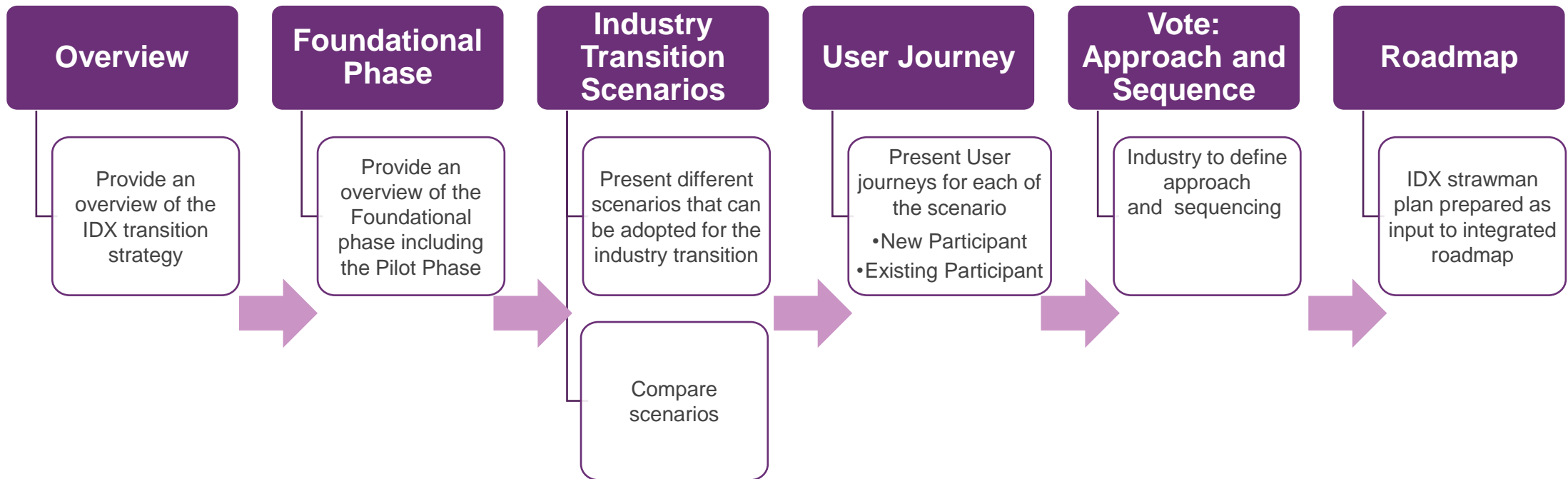
3

Our preference is that the AEMO IDX natively supports schema transformation and allows participants to transact using either aseXML or JSON via the IDX API. This would enable AEMO to enforce a short sunset on the legacy ftp and API channels while allowing industry to have a longer sunset period for aseXML.

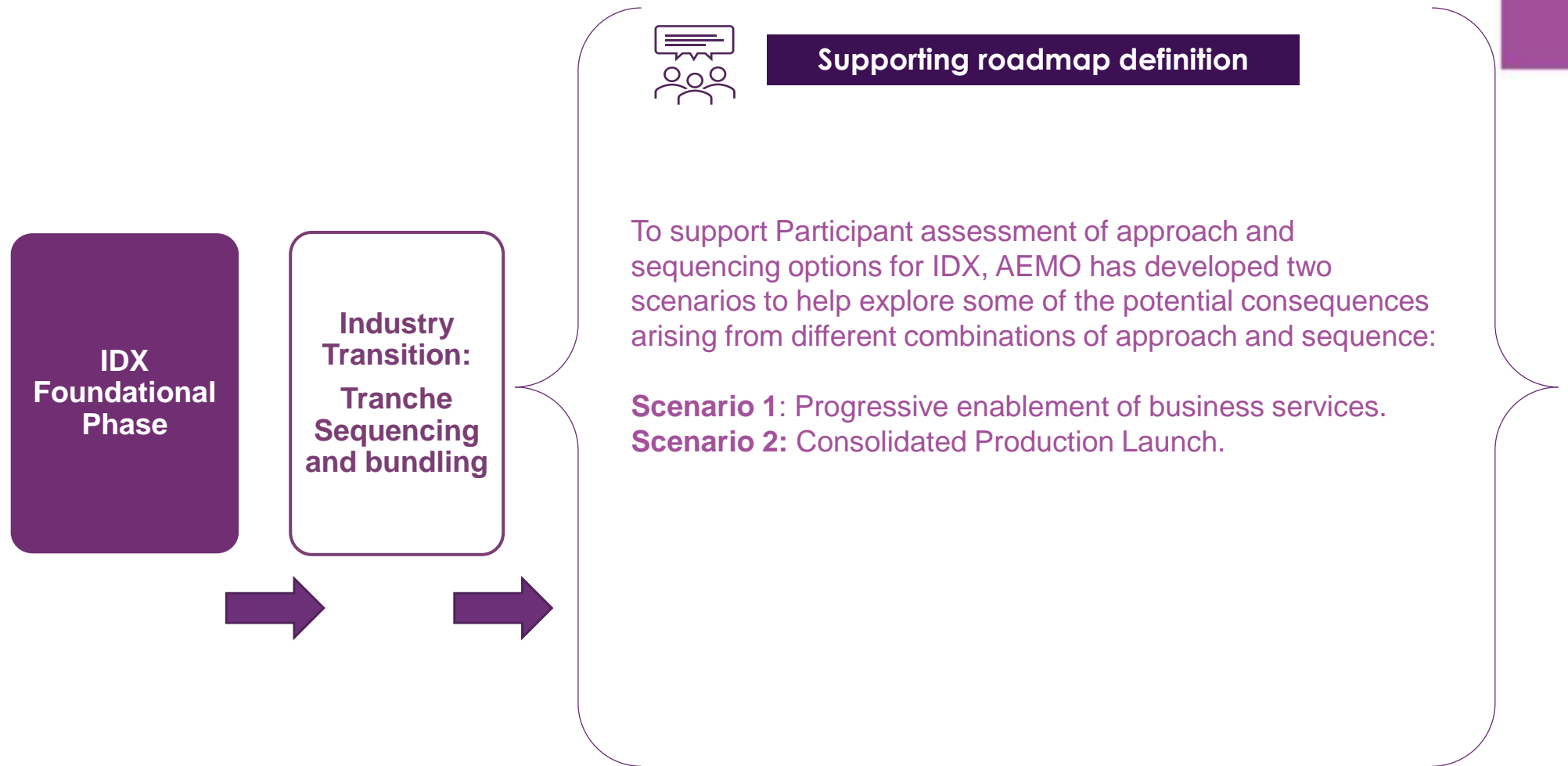


AEMO has created supporting material and will present them in subsequent slides

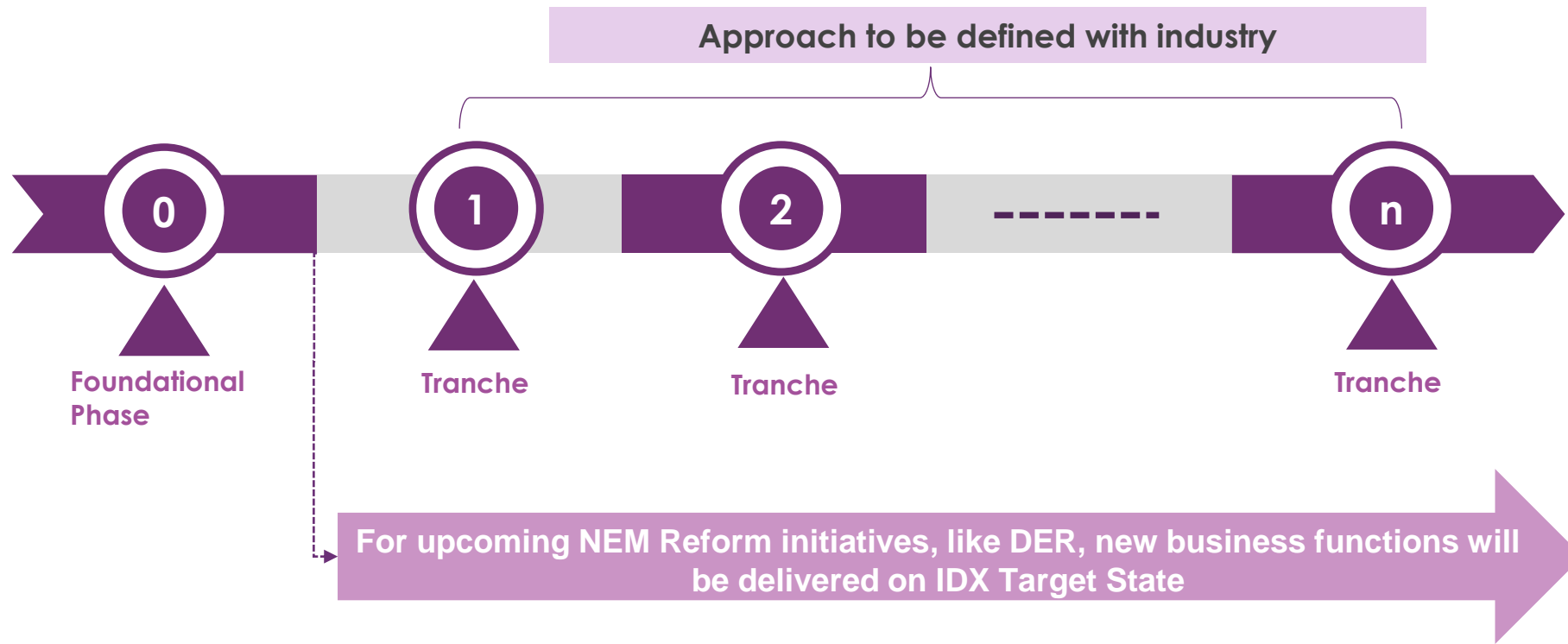
# IDX Workshop approach



# IDX Transition Strategy Overview



# IDX Transition Tranches Overview



# IDX Transition – Tranche 0



The IDX Foundation Phase is the keystone of the IDX transition strategy, providing a vital backbone to all subsequent tranches. AEMO sees the Industry working group representation for developing both Business and Systems artifacts.

## Tranche 0

## Tranche n

### Foundational Phase

#### Scope of work for Business Working Group(s)

<b>Working Groups Formation</b>	Setup of working bodies, e.g., Business Technical Working Group(s).
<b>Stakeholder Consultation</b>	A strategic plan for engaging and updating all stakeholders on IDX benefits and progression.
<b>Enquiry Services</b>	Identify business services to pilot and rollout IDX enquiry services based on Industry value.
<b>Transition Roadmap</b>	A comprehensive plan detailing key IDX transition milestones and deliverables.
<b>Data Governance</b>	Establishment of data standards to ensure quality, security, and compliance.
<b>Procedural consultation</b>	Undertake where required Procedural consultation and change.
<b>Data Visualisation &amp; Insights</b>	Outline of data insight and visualisation scope and use cases in IDX.
<b>SLAs</b>	Define service level agreements to establish the level of service expected during and after the transition.

#### Scope of work for Technical Working Group(s)

<b>Standardisation</b>	Define protocols, message exchange patterns, & channel definitions to streamline data exchange.
<b>Decision Trees</b>	Develop decision trees for Target State data exchange patterns, channels and protocols.
<b>AEMO Gateway Software</b>	Capture Industry requirements including supporting backend connects and participant integration needs.
<b>Payload Formats &amp; Schemas</b>	Develop target state payload formats (e.g., JSON, AEMO CSV) and transformations.
<b>Interoperability</b>	Establishing payload and protocol interoperability and approach to schema updates.
<b>Event Notifications</b>	Define a standard pattern and event metadata approach for outbound event notifications.
<b>Endpoints Definition</b>	Define business-specific endpoints and devise a strategic rollout plan based on business function.
<b>Data Catalogue</b>	Create a data catalogue to index, manage, and retrieve data assets within the IDX environment.
<b>NFR Requirements</b>	Agree to non-functional requirements to meet SLAs developed by the business working group.

### Pilot

### What does the Industry need to do?

- Contribute subject matter expertise to working groups.
- Aid in developing core patterns, protocols and payloads.
- Ensure requirements reflect practical, operational nuances.
- Collaborate actively in both Retail and Wholesale segments.
- Engagement on cutover and testing approach.
- IDX Roadmap definition.

# IDX Transition – Tranche 0



IDX Tranche zero shall include a pilot to validate IDX patterns and the AEMO Gateway software through low-risk, non-disruptive use case implementations, ensuring seamless integration and functionality.

## Tranche 0

## Tranche n

### Foundational Phase

### Pilot

#### Pilot Scope

**Purpose** Validate distinct use cases for each IDX target state pattern and AEMO Gateway software.

To be selected by pilot participants. AEMO proposes preliminary use cases, but they are open for refinement during Foundation Phase.

#### Recommended Use Cases for Implementation

#### Pilot Business Functions

- NMID Synchronous Services - Leveraging GraphQL API to enhance real-time data accessibility.
- NEM Wholesale Outbound Delivery - Focusing on the MTPASA to streamline wholesale data delivery.
- NEM Asynchronous Business Function - A NEM asynchronous data exchange business function used by a broad number of Participants in the retail sector.
- Large File Delivery - Delivering comprehensive MSATS Snapshot Reports, ensuring data integrity and efficient transfer.

**Participation** Optional. Participants to elect whether to implement the AEMO Gateway software.

**Entry Criteria** Ensure readiness of Foundation Phase artefacts, AEMO Gateway software, and AEMO IDX technical capabilities before pilot commencement.

**Execution** Carry out the pilot, collect data, and analyse results.

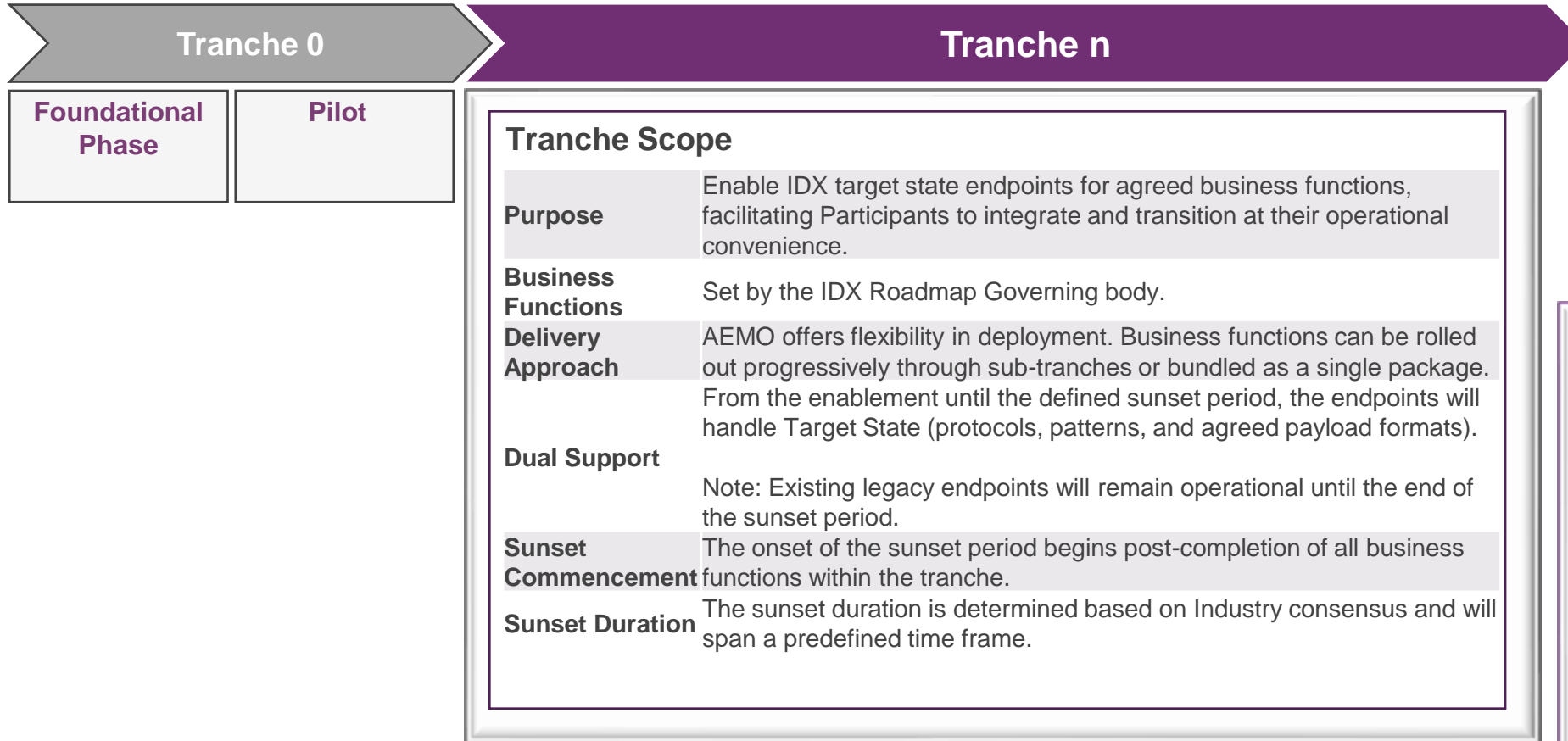
**Feedback Loop** AEMO and pilot Participants share findings, ensuring iterative improvement.

#### What does the Industry need to do?

- Participation is optional yet encouraged for diverse representation; for example, aim for a mix, e.g., x retailers, y DNSPs.
- Choose if to implement AEMO Gateway software.
- Agree on pilot business functions and success metrics.
- Attend IDX working groups to understand the specifics of the new endpoint, patterns, protocols and payloads.
- Set up participant pilot capability.
- Conduct pilot; share findings with IDX working group(s).

# IDX Transition – Tranche n

Tranches represent structured, phased deployments within the IDX transition journey. Each tranche comprises business functions agreed upon with Industry, allowing for a gradual and manageable shift to the IDX target state.



- ### What does the Industry need to do?
- Determine when/how to perform the transition of business functions in Tranche.
  - Choose if to implement AEMO Gateway software.
  - Make changes in their gateway and potentially the market systems behind it.
  - Review/modify business processes to align with new business function endpoints.
  - Undertake a transition process where business functions are enabled.
  - Operationalise business function.

# Industry Transition Phase Scenarios

Tranche Approaches

Transition Tranches – Scenario 1

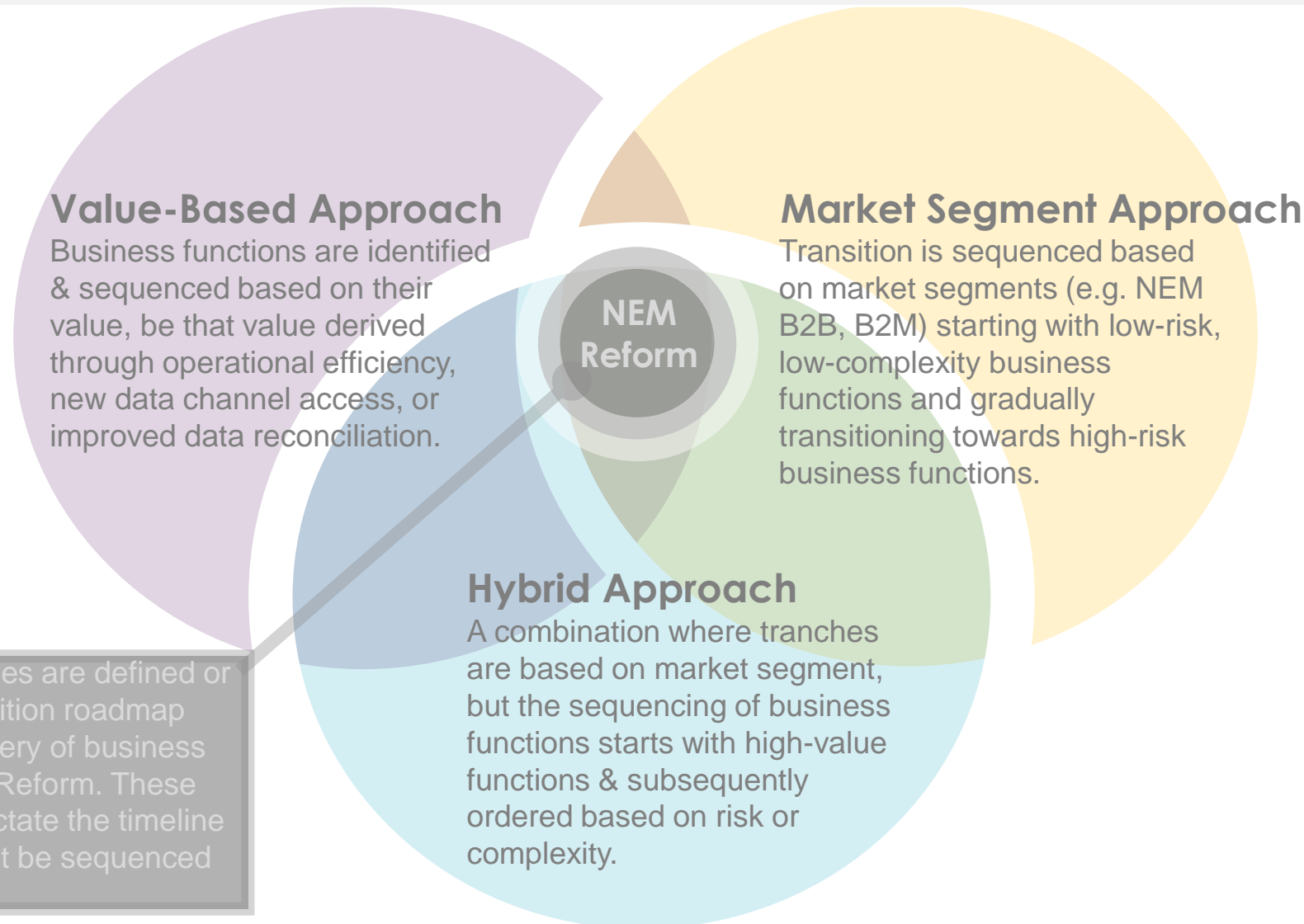
Transition Tranches – Scenario 2



# Exploring Tranche Approaches

Picking up from the 4a session, our task is collaboratively determining the sequencing of the IDX transition tranches. The following slides will explore the details of sequencing and bundling, shedding light on their implications. For a better understanding, we'll illustrate two Market Segment Approach scenarios:

- Scenario 1: Progressive enablement of the business function.
- Scenario 2: Consolidated Production Launch.

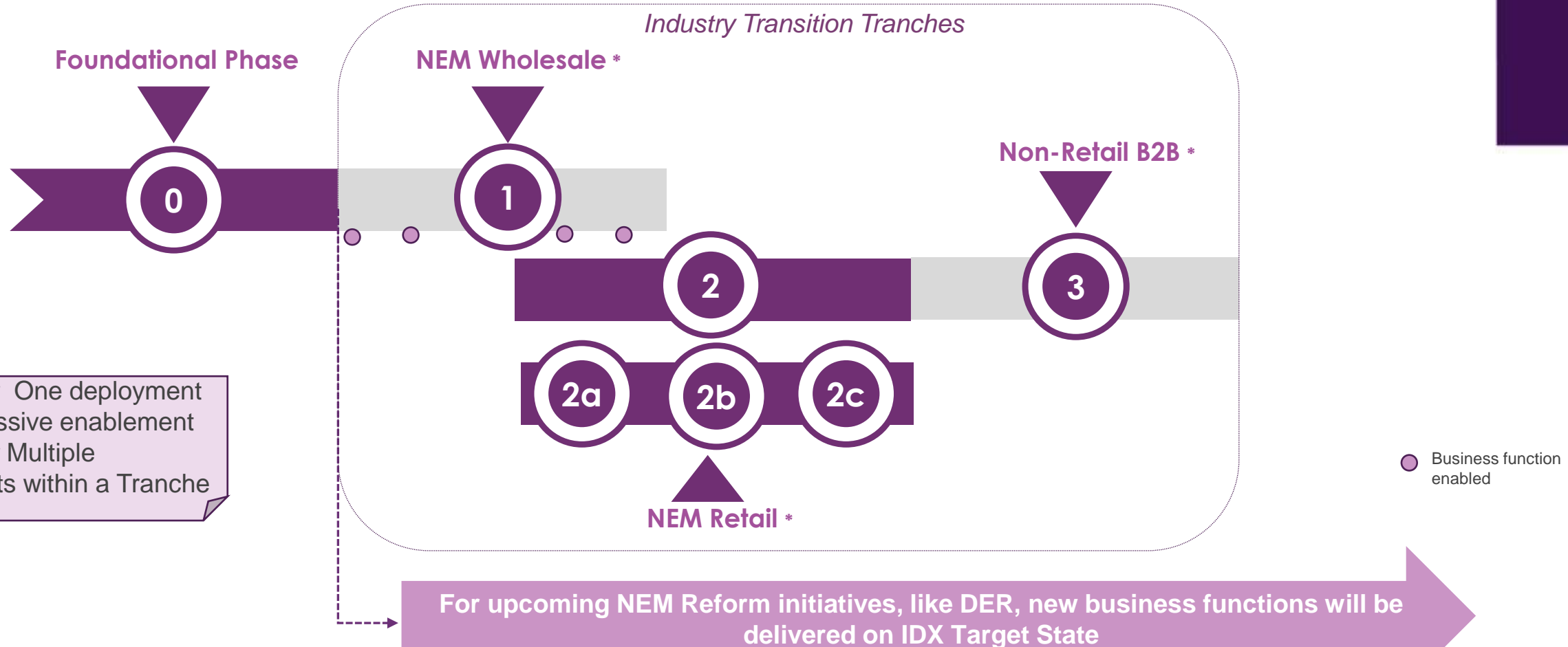


Regardless of how tranches are defined or sequenced, the IDX transition roadmap **must** accommodate delivery of business functions driven by NEM Reform. These Rules-based initiatives dictate the timeline IDX-scoped services must be sequenced into.

# IDX Transition Tranches: Scenario 1

## Progressive enablement of the business functions

In this scenario, Participants can adopt a new business function endpoint as soon as AEMO enables it. They have the flexibility to integrate and transition whenever it suits their operations. However, those needing a series of functions to support a complete end-to-end business process must wait until all relevant functions are released within a tranche.

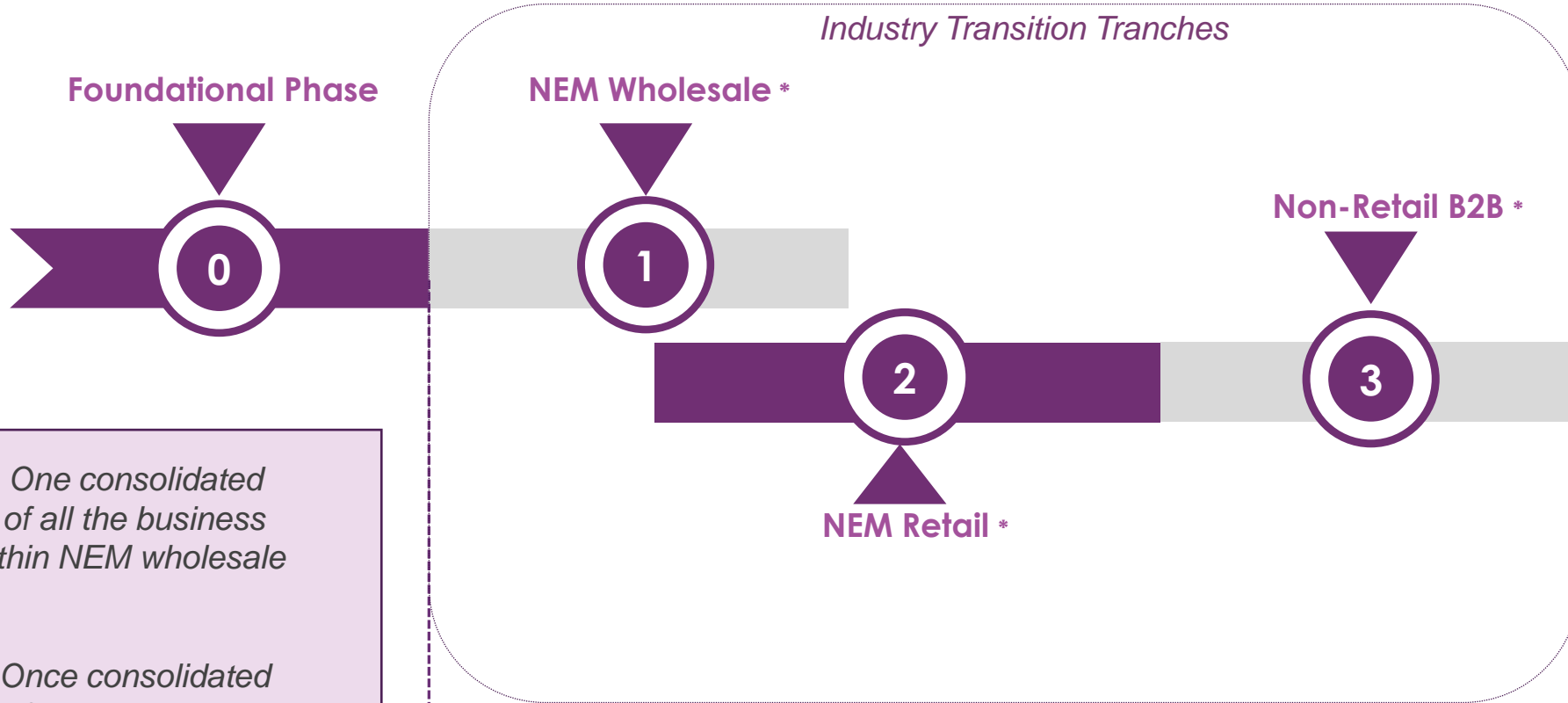


\*Tranche definition is only for illustrative purposes. The tranche bundling and sequencing will be determined with participants in the subsequent slides.

# IDX Transition Tranches: Scenario 2

## Consolidated Production Launch

In this approach, all business functions in a tranche are activated simultaneously. Participants then chart their own transition path, deciding on the sequence and grouping of functions. They have the flexibility to transition any or all functions anytime before the sunset period concludes.



**Tranche 1:** One consolidated deployment of all the business functions within NEM wholesale Tranche

**Tranche 2:** Once consolidated deployment of all the business functions within NEM Retail Tranche

For upcoming NEM Reform initiatives, like DER, new business functions will be delivered on IDX Target State

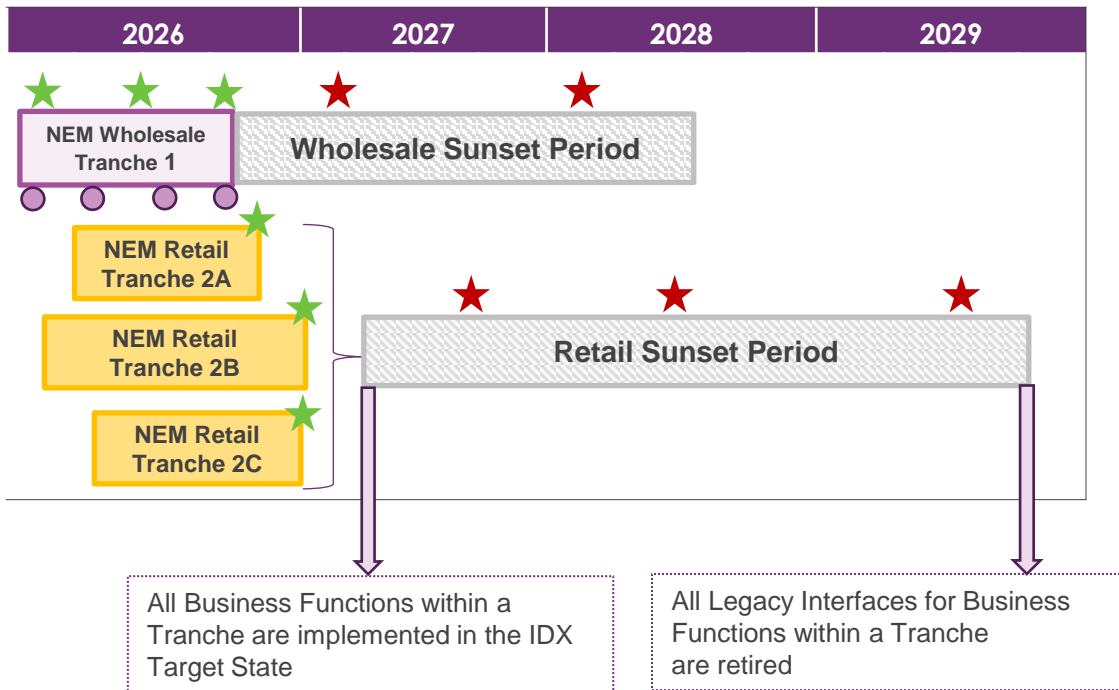
\*Tranche definition is only for illustrative purposes. The tranche bundling and sequencing will be determined with participants in the subsequent slides.

# A Participant Transition: Scenario 1 and Scenario 2

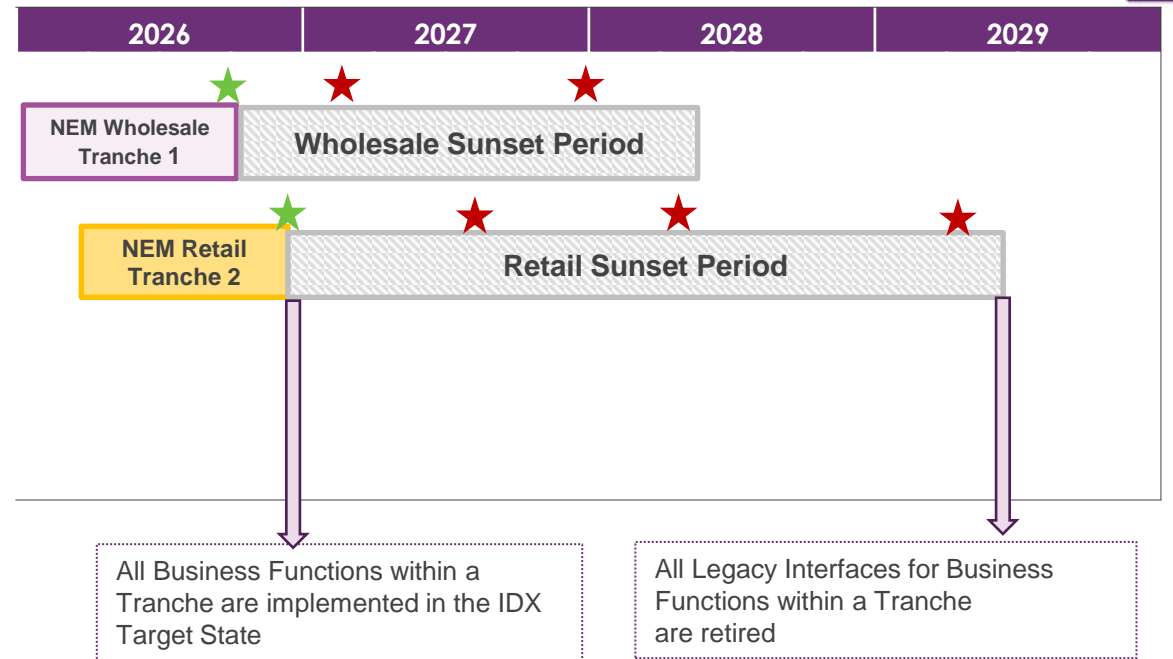
**Scenario 1:** To facilitate the transition of early adopters, Participants who have identified value ahead of a broader transition, sequencing and bundling of tranches and business functions will be necessary to define in collaboration with the industry.

**Scenario 2:** All Participants can progressively transition some or all business functions at any time before the end of the sunset period. Therefore providing flexibility to Participants in defining the transition sequencing and bundling that meet their organisational needs.

## Scenario 1: Progressive enablement of the business function






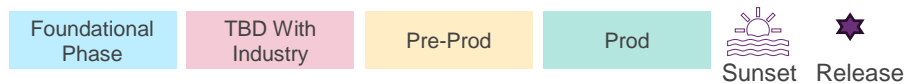
## Scenario 2: Consolidated Production Launch



# IDX Transition Tranches – Comparing Scenarios

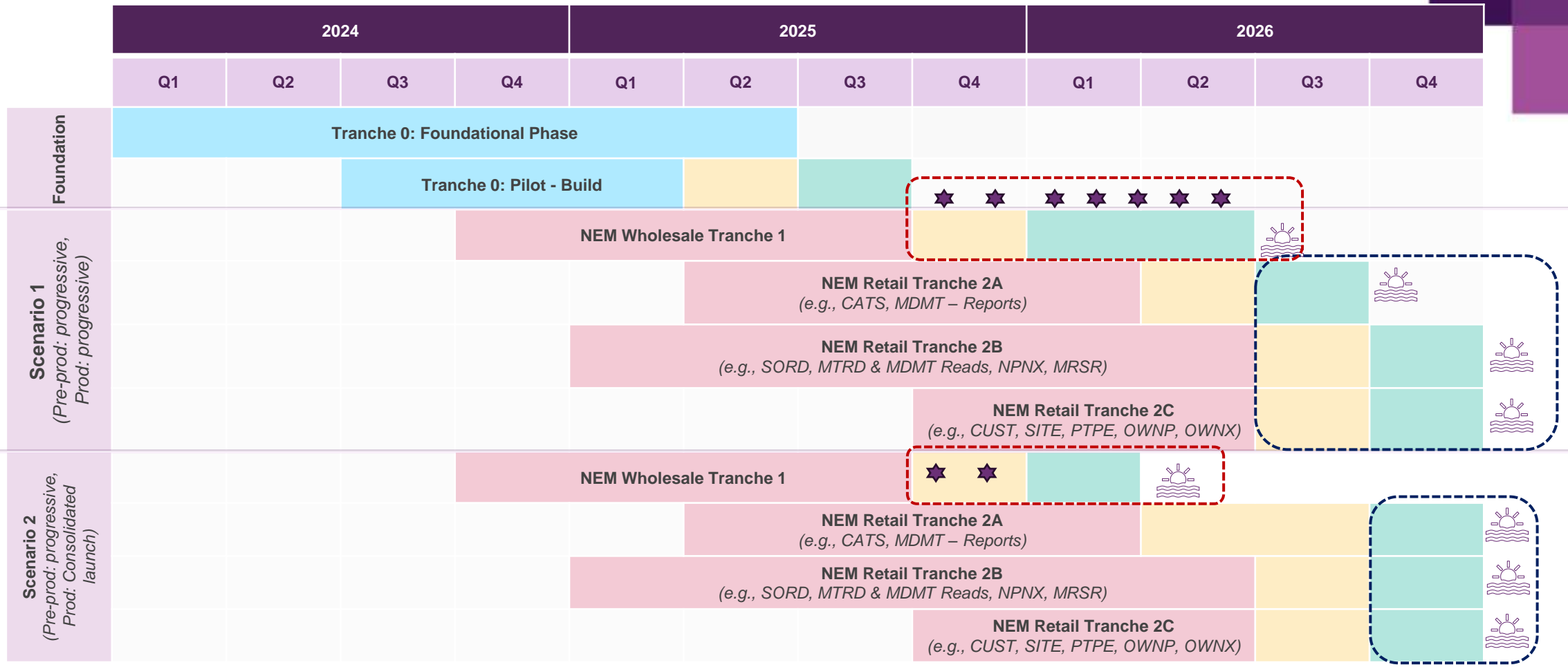
	2024				2025				2026			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Foundation	Tranche 0: Foundational Phase											
			Tranche 0: Pilot - Build									

Scenario 1 (Pre-prod: progressive, Prod: progressive)				NEM Wholesale Tranche 1				★	★	★	★	★	★		
					NEM Retail Tranche 2A (e.g., CATS, MDMT – Reports)										
					NEM Retail Tranche 2B (e.g., SORD, MTRD & MDMT Reads, NPNX, MRSR)										
						NEM Retail Tranche 2C (e.g., CUST, SITE, PTPE, OWINP, OWINX)									

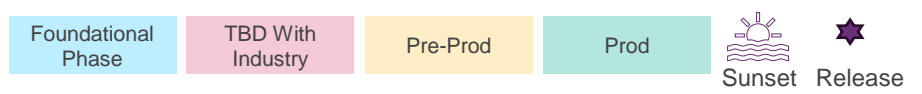


\* Indicative timeline

# IDX Transition Tranches – Comparing Scenarios



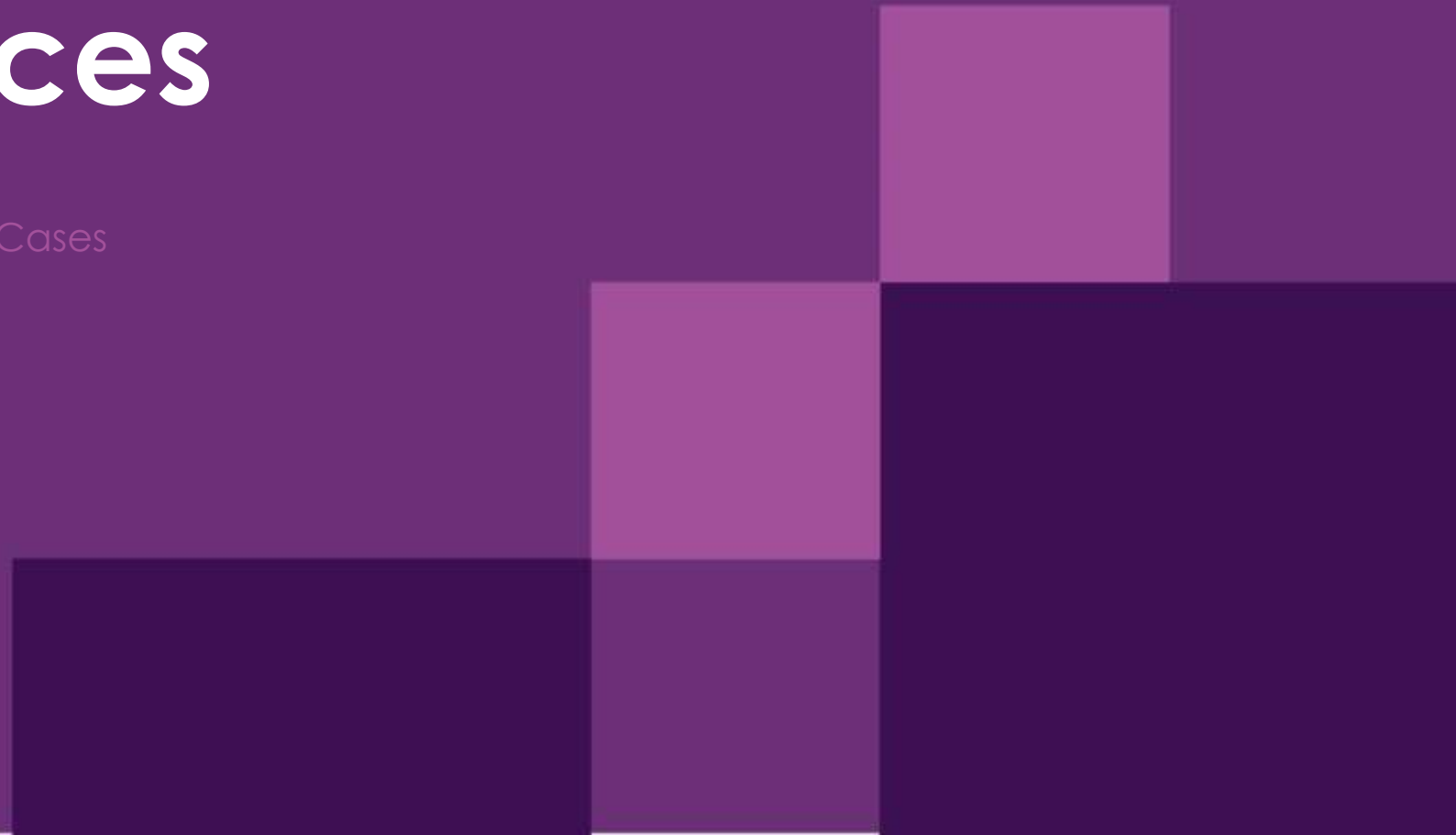
Would your organisation prioritise the transition of an **enabled business function** before AEMO enables the entire suite of business functions within a tranche or would you wait for AEMO to enable **all** the business functions within in a Tranche?



\* Indicative timeline

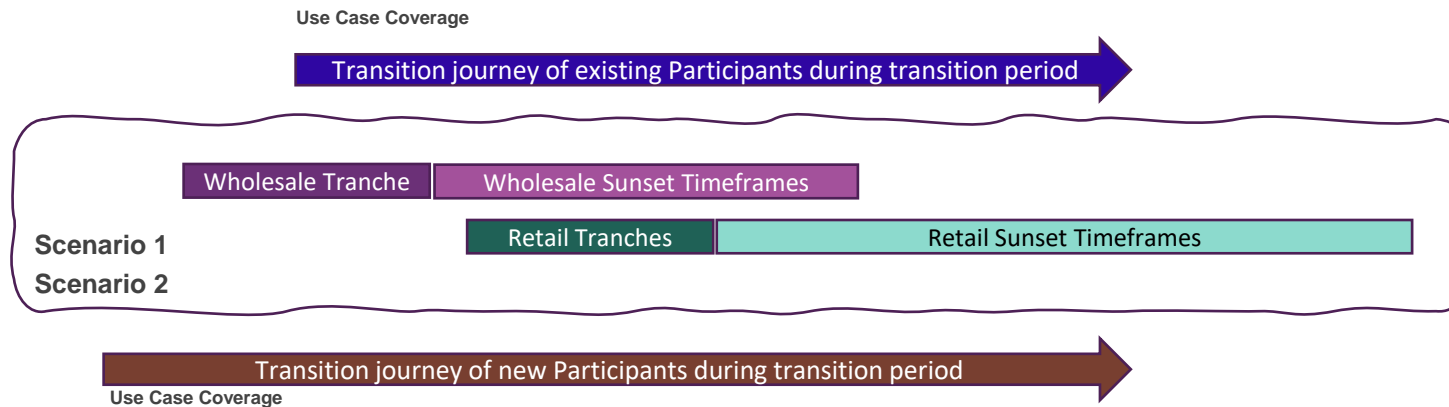
# User Journey: Transition consequences

Transition Consequences- Industry Use Cases



# Transition Consequences- Industry Use Cases

Next, we will present Industry use case views of how Participants could transition from the current state to the IDX Target State. We will provide a step-by-step sequence for **New** and **Current** Participants transitioning to the IDX target state, covering NEM Wholesale and NEM Retail scenarios.



**Note:** These use cases and definition of tranches are for illustrative purposes only. The actual tranches and details will be determined in consultation with the Industry.

We'll discuss two distinct perspectives – the transition journey of new and current Participants for:

- Scenario 1: demonstrating the need for Industry to define the sequence/bundling of business functions into multiple tranches/sub-tranches.
- Scenario 2: demonstrating each Participant's flexibility in defining the transition sequencing and bundling that meet its organisational needs.

We'll also discuss a use case to illustrate the transition journey of existing Participants where AEMO supports IDX API using either JSON or aseXML payload during the transition period. This would allow participants to adopt IDX Protocols earlier and complete the payload transition within the sunset period.





# We're on a break

Workshop begins 12:30 PM AEST



# Vote - Business Function Sequencing



Q: What approach should be taken to defining the IDX tranches:

- Value-Based Approach
- Market Segment Approach
- Hybrid Approach
- Other

**Sequencing will be on the basis of the approach selected**

Q: For approaches which require business service sequencing:

Participants to rank the existing business functions on the next slide, in order of priority for transition.

Q: For approaches not requiring business service sequencing: Please rank the tranches in the order of transition

Note: Slides 39 and 40 will further ask questions about Sunset Strategy.

# Vote - Business Function Sequencing



Market Segment	#	Business Function	Sub-Type
NEM Wholesale	1	Ancillary Service	Ancillary Service Contract Data
	2	Constraints	Constraint library definitions
			Constraint invocations
	3	Current Day Trading	Bids
			Dispatch
			Market Notices
			P5MIN
			Pre-Dispatch
	4	Plant Operations	PD PASA
			ST PASA
			Voltage instructions
	5	Forecasting	Demand Forecasts
			Wind Generation Forecasts
			Solar Generation Forecasts
	6	Market Suspensions & Administrative Price Events	Market Suspensions & Administrative Price Events
	7	Network	Network
	8	Participant Registration	Participant Registration
	9	Prudentials	Prudentials
	10	Settlements	Billing
Metering Data			
Settlement Data			
11	Residue Auction data	Offers	
		Auction outcomes	
12	MT PASA	MT PASA Input Data	
		MT PASA Solution Data	
13	Other Markets	Gas Supply Hub	
		Gas Bulletin Board	

Market Segment	#	Business Function	Sub-Type
Retail B2M	14	CATS	Change Requests
			Reports
	15	NMID - Real time Lookup	NMID Real time Lookup
NMID - Batched			NMID for multiple NMI Lookup
16	Meter Data Reports (MDMT)	Meter Data RM Reports	
Retail B2M & B2B	17	Meter Reads (MTRD & MDMT)	MDMT Meter Reads
B2B	18	Service Orders (SORD)	MTRD Meter Reads to AEMO
			B2B MTRD Meter Reads
			Metering Service Works
			Re-energisation
			De-energisation
	19	Customer Details & Site Access Notifications (CUST & SITE)	Special Reads
			Other Service Orders
			Customer Details Request & Notifications
	20	One Way Notifications (OWNP & OWNX)	Life Support Request & Notifications
			Site Access Request & Notifications
Shared Fuse Notification			
Notice of Metering Works			
Meter Fault & Issue Notification			
Planned Interruption Notification			
21	Remote Services (MRSR)	Network Tariff Notification	
		Meter Exchange Notification	
22	Notified Parties (NPNX)	Remote Service Request & Response	
23	Peer-to-Peer (PTPE)	Notified Parties	
24	Other Markets (HSMD, FLTS etc)	Peer-to-Peer via Hub	
		High Speed Monitoring	
		Faults & Outages	

**Note:** This list of Business Functions is indicative and for the purposes of developing the business cases only.

# Transition Strategy: Sunset Timeframe

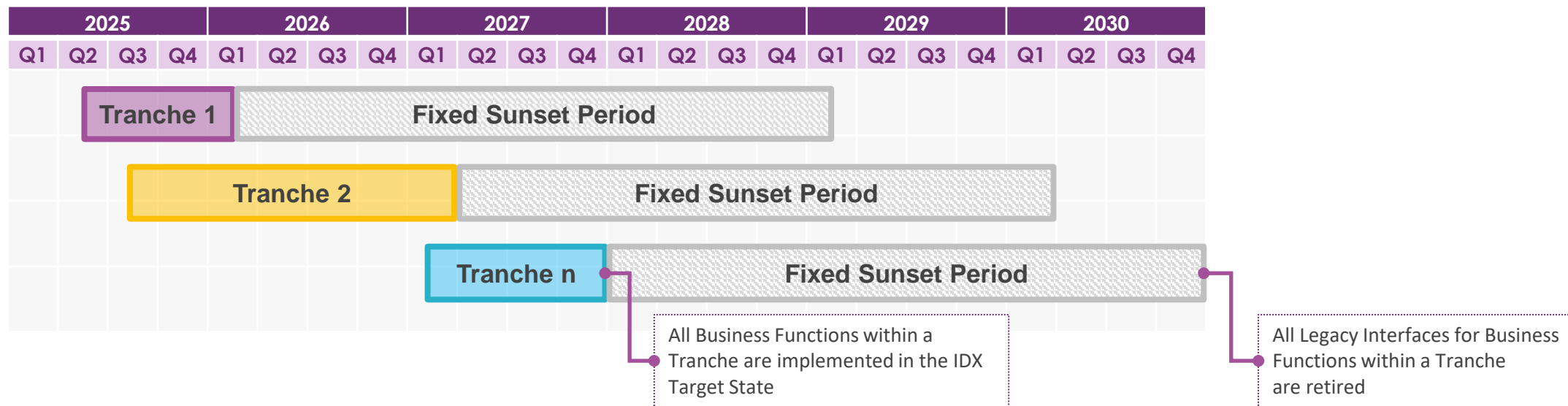
Sunset Strategy

Sunset Strategy Duration-NEM Wholesale

Sunset Strategy Duration-NEM Retail

# Sunset Strategy

By clearly defining the retirement timeline for legacy interfaces, the IDX Sunset Strategy shall timebox the transition process, encourage timely migration, and provide participants with certainty when their transition programs need to be finalised.

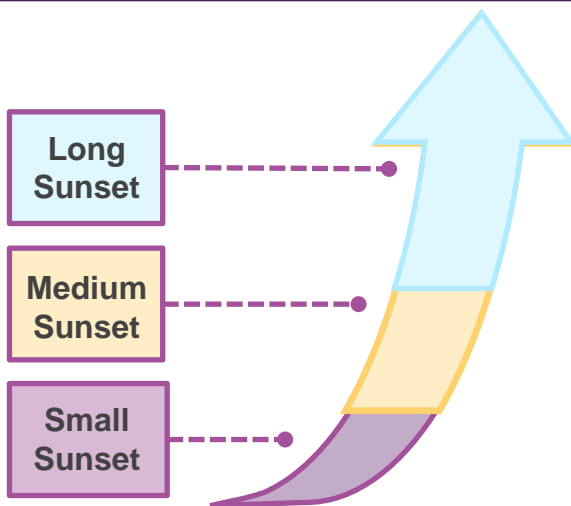


AEMO's initial approach dictates the sunsetting of all legacy interfaces upon a tranche's completion to reduce complexity and sustained operational costs. However, this strategy will be reassessed after incorporating insights from this Focus Group's IDX strawman roadmap exercise. A revised approach, considering industry feedback, will be presented in our next session.

# Sunset Strategy Duration – NEM Wholesale

Today, we seek your input on how long AEMO should support legacy and target state interfaces for transitioned business functions. The objective is to help develop the IDX business case, not to finalise decisions. Your views will assist us in understanding cost attribution and potential timelines.

## AEMO annual cost to support legacy IDX



The costs are a simple representation, but we expect the cost to be significantly higher with a longer sunset duration as the number of business functions moves into the new IDX environment; AEMO has to support both Legacy and new IDX patterns until sunset.

During the sunset phase, the management of regulatory change to a business function will significantly increase implementation and support costs as change will need to be managed by AEMO in both the legacy and target state patterns.

AEMO assumes that where tranches are Market Segment based, the sunset timeframe may be variable to reflect the complexity of the transition tasks.

For NEM Wholesale, AEMO proposes the following sunset timeframes:

NEM Wholesale Sunset Approach	Timeframe
Long Sunset	3 years
Medium Sunset	2 years
Short Sunset	1 years



For NEM Wholesale, should AEMO assume a:

- (a) Long Sunset,
- (b) Medium Sunset,
- (c) Short Sunset?

# Sunset Strategy Duration – NEM Retail

AEMO assumes that where tranches are Market Segment based, the sunset timeframe may be variable to reflect the complexity of the transition tasks.

For NEM Retail, AEMO proposes the following sunset timeframes:

NEM Retail Sunset Approach	Timeframe
Long Sunset	7 years
Medium Sunset	5 years
Short Sunset	3 years

For NEM Retail tranches, should AEMO assume a:

- (a) Long Sunset,
- (b) Medium Sunset,
- (c) Short Sunset?

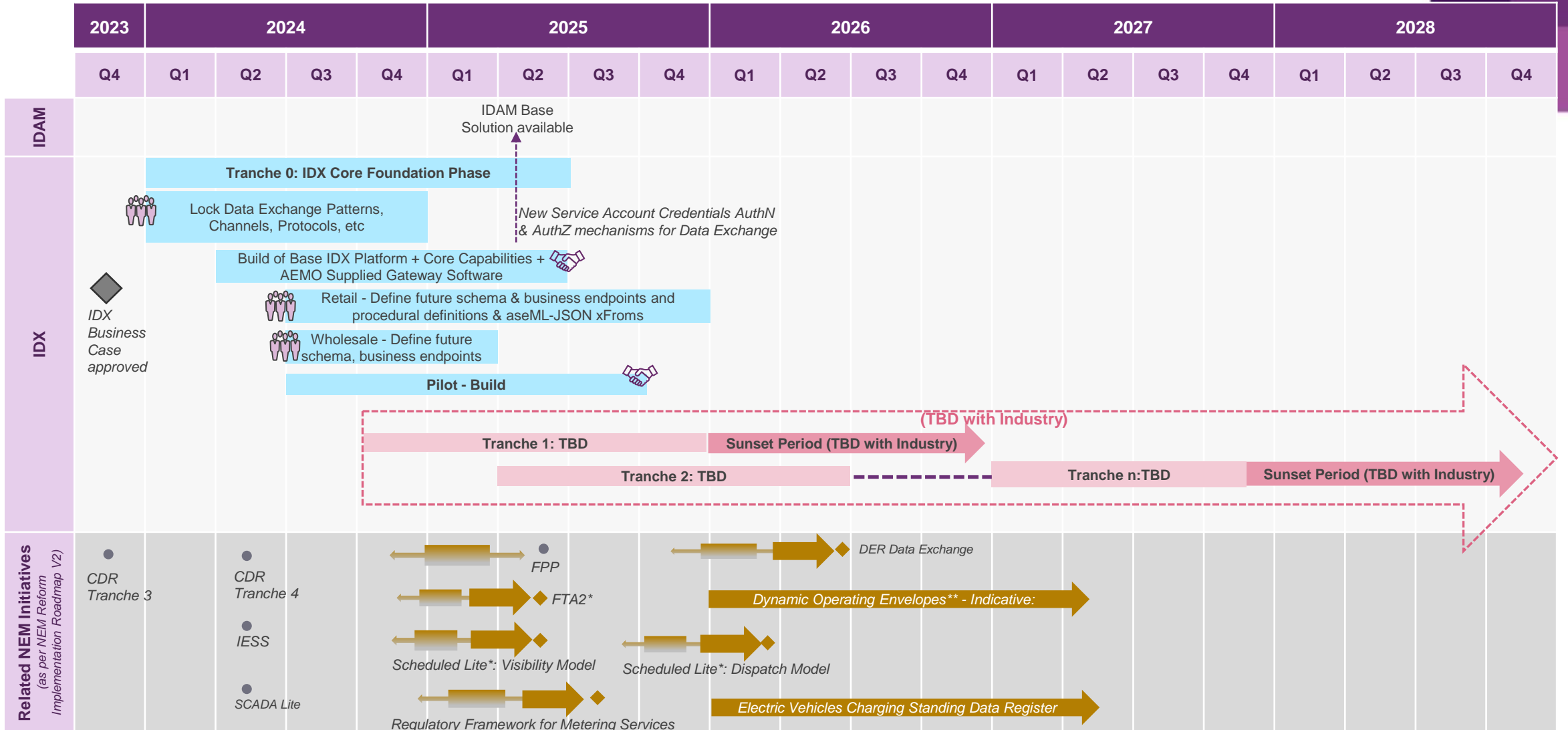


# IDX Strawman Transition Roadmap

IDX Strawman Roadmap-Scenario 1



# IDX Strawman Roadmap



Foundational Tranches - based on the assumed timeline | TBD With Industry | Industry Testing | T3A Milestone | \*\* New Service | Working group | Committed effective date | Estimated effective date | Industry testing and trials

\* Indicative timeline likely to be pushed out from what is assumed within V2 NEM Reform Roadmap

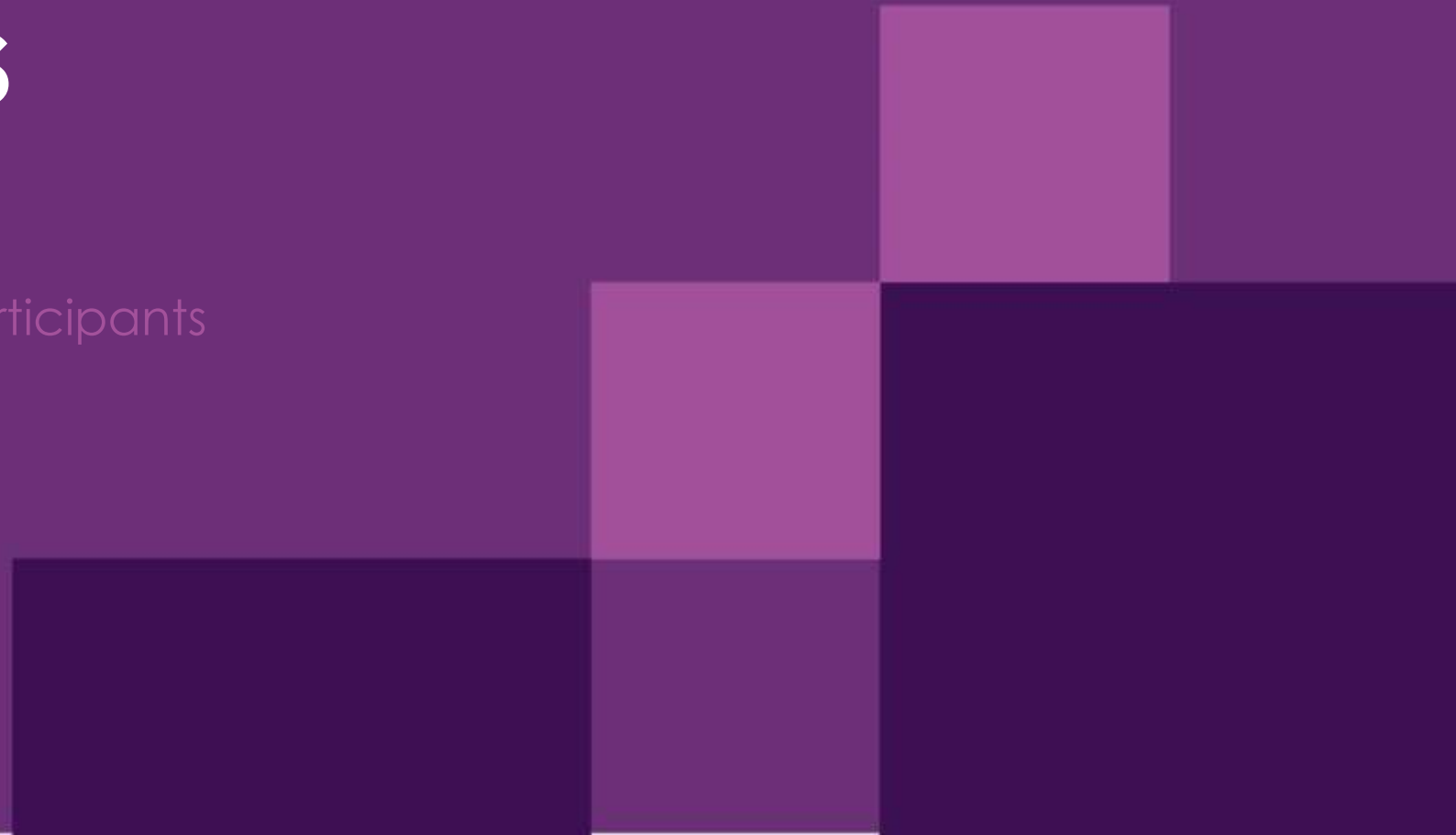
Timelines for the related NEM Reforms have been taken from V2 of NEM Reform Implementation Roadmap

# IDX Benefits

Industry Benefits Ranked by participants

IDX Benefits

IDX Next Steps



# IDX: Industry Benefits Ranked by Participants

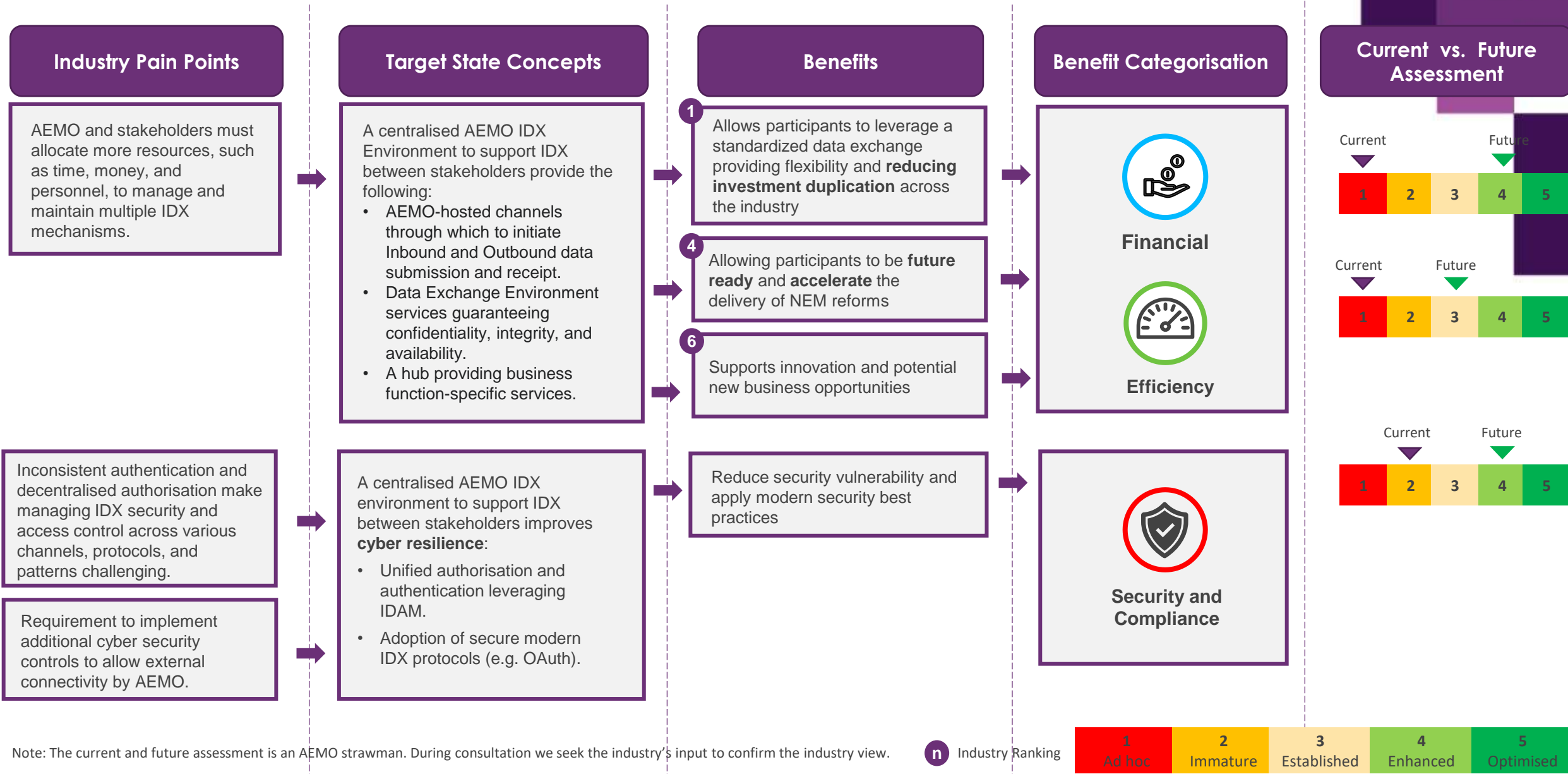


The IDX Industry benefits were ranked by Participants during the Industry Consultation.

Ranking based in order of prioritisation by Industry

Ranking	Benefit	Justification/Measure	Categorisation
1	Allows participants to leverage a standardized data exchange, <b>reducing investment duplication</b> across the industry.	Result in lower costs to participants and ultimately consumer in the long term. Cost reduction areas could be in technology infrastructure, operational costs, etc.	Efficiency
2	A <b>scalable system</b> which will enable participants to make <b>timely and informed decision making</b> helping them <b>optimise operations</b> and <b>reduce</b> operational risks	Result in lower cost when expanding technology landscape. Do to modular and scalable design, it will assist Participants decision making process due to system modularity and transparency.	Efficiency & User Experience
3	<b>Improved transparency</b> of future maintenance costs for data exchange systems	Provides a degree of certainty for participants to identify and manage costs.	Financial
4	Allowing participants to be <b>future ready</b> and <b>accelerate</b> the delivery of NEM reforms and reduce efforts in establishing DER specific frameworks	Allow participants to manage the energy transition in the most operational efficient and cost-efficient way.	Efficiency & Financial
5	Allows participants to <b>plan their own migration strategy</b>	Provides participants with for participants to move at their own pace.	Efficiency
6	Supports <b>innovation</b> and potential new business opportunities	Enhances opportunities for new and innovative business models.	Efficiency
7	<b>Reduces barriers of entry</b> for new participants by <b>reducing integrational and transactional costs</b>	Reduces systemic barriers that would otherwise reduce future service innovation and lessen market competition.	Financial
8	Improved documentation to for participants will <b>improve user experience</b> and <b>reduce calls to Support Hub</b>	Reduce errors and re-work by participants and AEMO.	Efficiency & User Experience

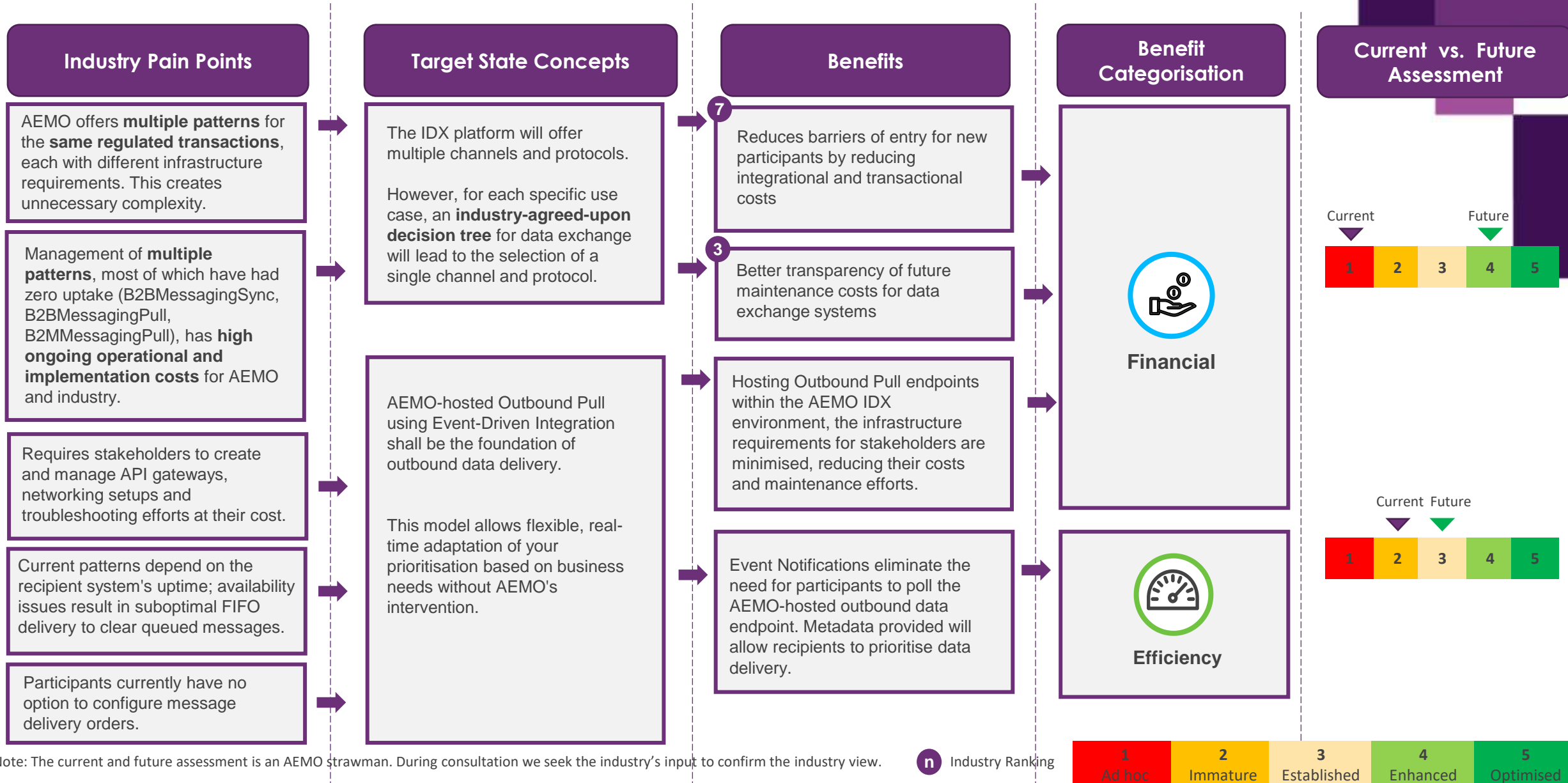
# IDX – AEMO IDX Environment (1 of 3)



Note: The current and future assessment is an AEMO strawman. During consultation we seek the industry's input to confirm the industry view.

n Industry Ranking

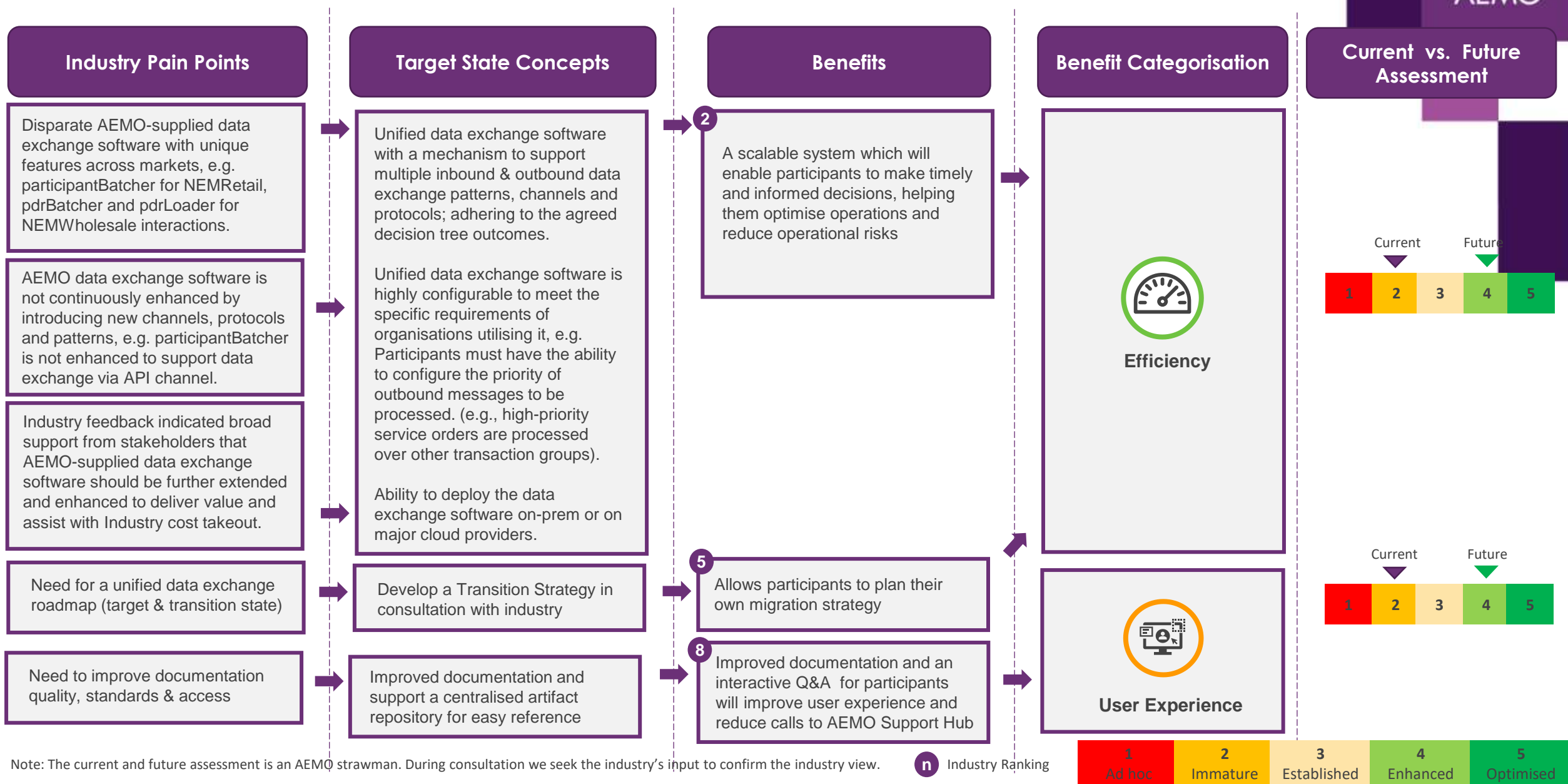
# IDX – Decision Trees and Outbound Data (2 of 3)



Note: The current and future assessment is an AEMO strawman. During consultation we seek the industry's input to confirm the industry view.

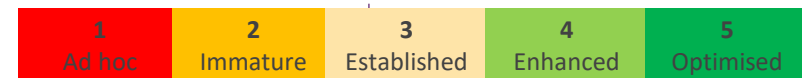
n Industry Ranking

# IDX – AEMO Supplied Data Exchange Software (3 of 3)



Note: The current and future assessment is an AEMO strawman. During consultation we seek the industry's input to confirm the industry view.

**n** Industry Ranking



# IDX- Next Steps



- AEMO seeks in-principle agreement with the Focus Group with the intent to finalise **IDX Transition tranches and sequencing** ahead of the Business Case workshop.
- A consensus position is sought with the industry. Where there are diverging views, these will be acknowledged.

AEMO welcomes any feedback from the Technical and Business Focus Groups to [NEMReform@aemo.com.au](mailto:NEMReform@aemo.com.au).

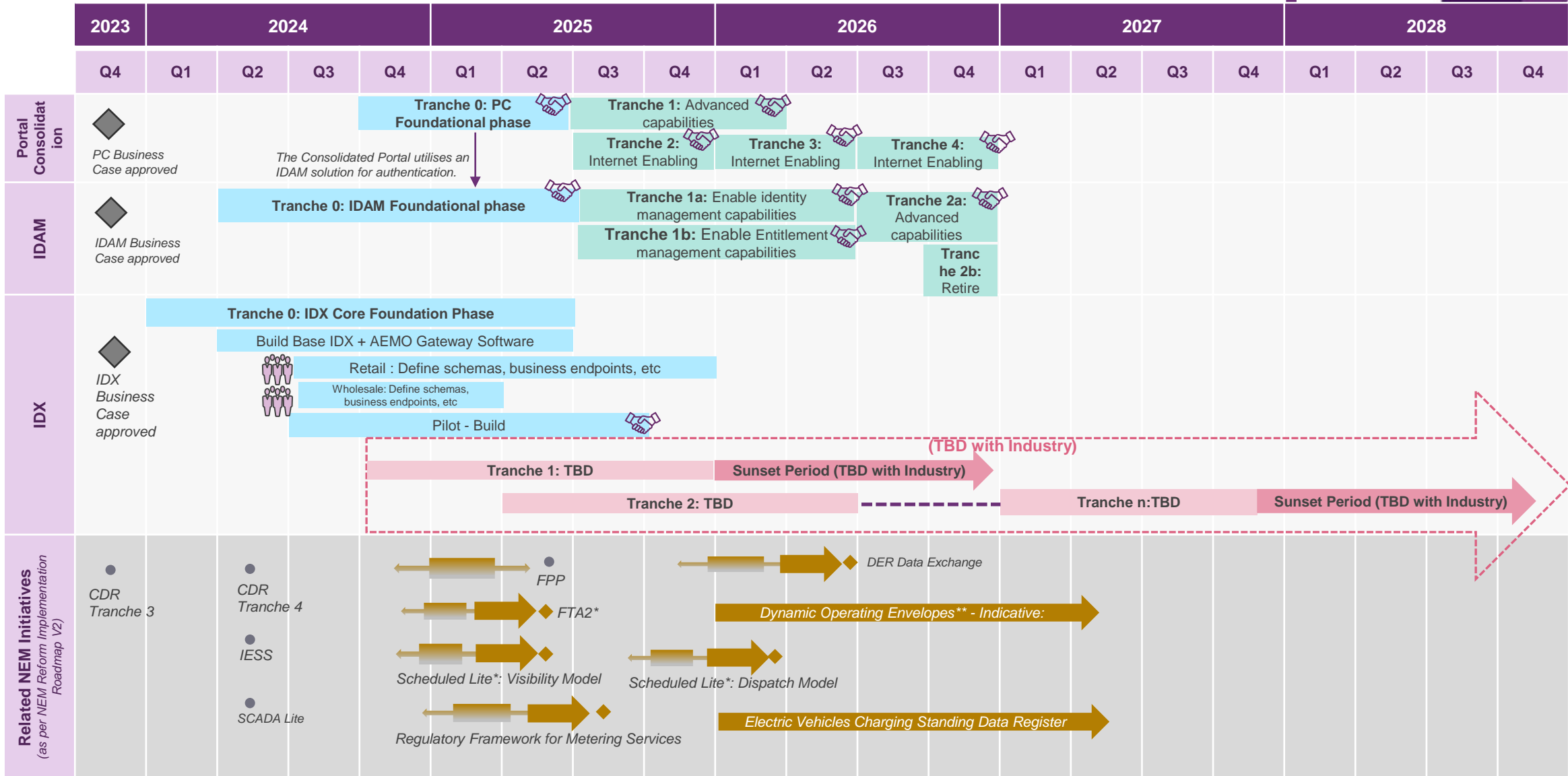
# 4. Integrated transition roadmap & Risk analysis



Consolidated Strawman Roadmap  
Validating the Roadmap



# Consolidated Strawman Roadmap



Foundational Tranches - based on the assumed timeline
TBD With Industry
🤝 Industry Testing
 ⬛ T3A Milestone
 \*\* New Service
 👥 Working group
 ● Committed effective date
 ◆ Estimated effective date
 ➡ Industry testing and trials

Timelines for the related NEM Reforms have been taken from V2 of NEM Reform Implementation Roadmap

\* Indicative timeline likely to be pushed out from what is assumed within V2 NEM Reform Roadmap

# Validating the Roadmap

Have all business services been addressed for each market?

Are the tranches for each initiative agreed and understood?

Have we adhered to guard rails (principles), or identified reasons for variation?

Have we considered contention or dependencies with other industry initiatives?

Are there any material impacts or benefits arising from the roadmap?

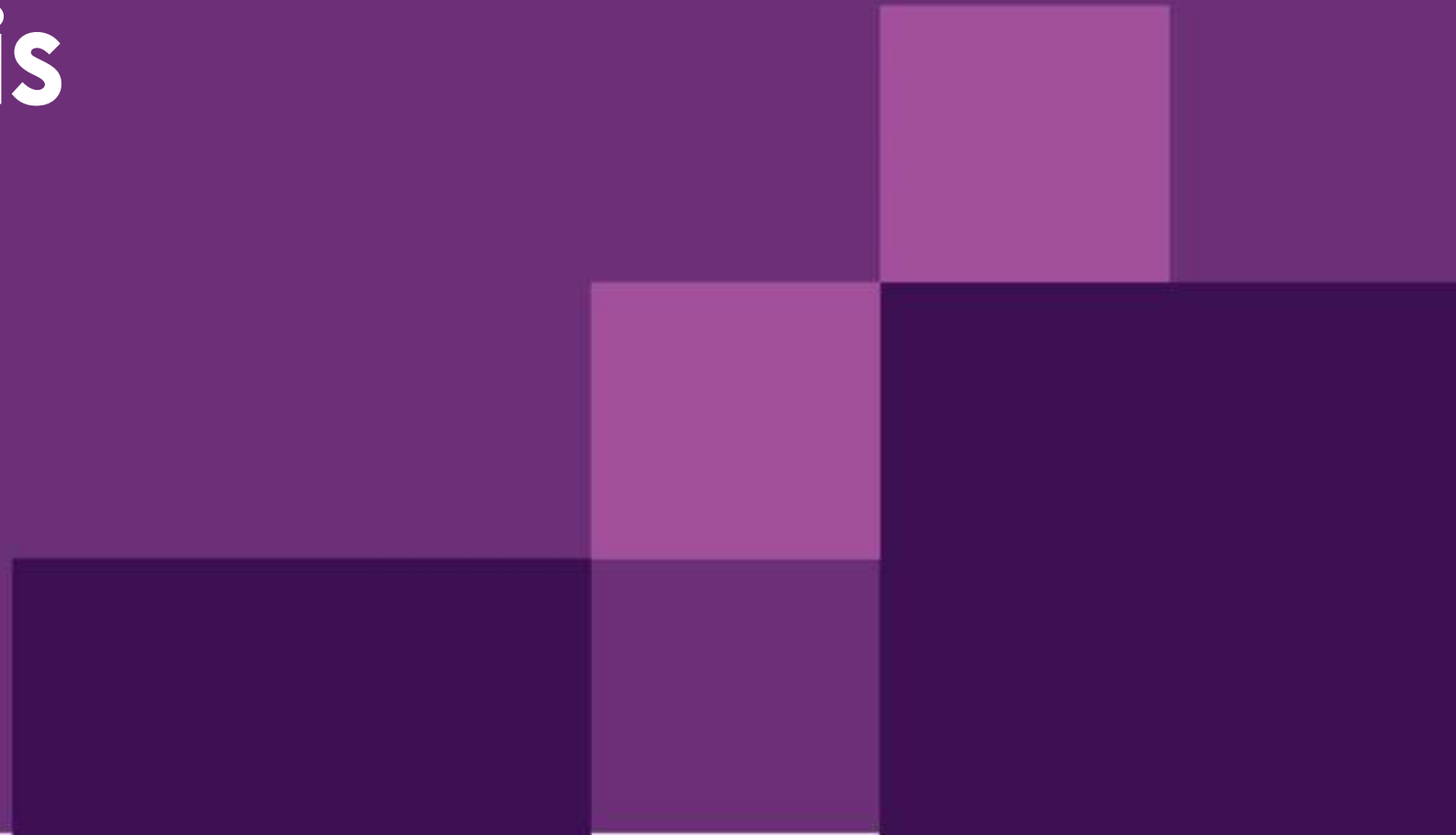
# Phased Investment

- 1.** Review of the roadmap by initiative; consideration of which Tranches logically make sense for inclusion in the first phased investment (and as such will form the basis of the Business Case).
- 2.** AEMO will package up a scope statement supported by the Transition Roadmap with an overlay to show which tranches are in scope for the Business Case
- 3.** AEMO and Participants will assess costs and benefits associated with the phased investment business case (costing template to be provided post this workshop, described in later slides).

# Risk Analysis

Risk Assessment

Risk Assessment Matrix



# Risk Assessment – Tranche 3A

Risk assessment analysis focuses on the risks on transition and achieving the target state of tranche 3A initiatives.

Risk #	Risk Description	Rating	Potential Mitigants
1	<p>If target state IDX/IDAM/PC is not established as a foundation before embarking on subsequence and other future reforms:</p> <p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• New market services proposed by NEM2025 and subsequent program may be compromised due to lack of identified fit for purpose capability.</li> <li>• Additional work will be required to identify an alternate approach to SOCI compliance for existing services.</li> </ul>	High Impact	<ul style="list-style-type: none"> <li>• AEMO develop principles for transition to underpin and enable the approach to definition of a transition roadmap that minimises impacts and risk to achieve the objectives</li> <li>• AEMO ensure the rationale for a target state is fully considered to balance implementation cost against whole of life costs, benefits and security considerations</li> </ul>
2	<p>If legacy NEM and/or other market services across IDX/IDAM/PC do not transition to target state:</p> <p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• Participants and AEMO will still have multiple authentication, integrations patterns and portals with associated cost and complexity.</li> <li>• The benefits associated with security, adaptability and user experience will not be realised in full and can compromise the benefits.</li> </ul>	Medium Impact	<ul style="list-style-type: none"> <li>• Ensure whole of life costs and benefits are considered as part of business case</li> <li>• Assess options to mitigate industry transition impacts to enable migration of legacy services</li> <li>• Assess approach to change in non-NEM markets as part of Transition Strategy</li> </ul>
3	<p>If elements of legacy IDX/IDAM/PC frameworks not aligned with target state principles and the current state must be retained or supported (such as aseXML for retail B2M and B2B transactions):</p> <p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• Benefits proposed in target state may be compromised including those relating to minimising the impact of future policy or regulatory change</li> </ul>	Low Impact	<ul style="list-style-type: none"> <li>• Assess options to leverage AEMO supplied software to mitigate transition impacts to participants (for example, allow participants a longer opt in transition to enable the switch from aseXML to JSON)</li> <li>• Rationalise requirements to support backwards compatibility where practical and possible</li> </ul>


# Risk Assessment – Tranche 3A (con.t)

Risk assessment analysis focuses on the risks of transition and achieving the target state of tranche 3A initiatives.

Risk #	Risk Description	Rating	Potential Mitigants
4	<p><b>Strategy and Roadmap:</b> The transition strategy and roadmap does not align to the industry’s requirements and addressed the industry’s concerns.</p> <p><b>Impact</b></p> <ul style="list-style-type: none"> <li>The industry will not have enough context required to make informed decisions on their investment and readiness for their internal delivery plan.</li> </ul>	High Impact	<ul style="list-style-type: none"> <li>Develop a robust and detailed transition strategy and roadmap, aligning industry’s requirements with considerations of industry’s concerns.</li> <li>Provide the industry with transition strategy and the roadmap and sufficient lead time to develop their internal delivery plan and make informed investment decisions.</li> </ul>
5	<p><b>Communication:</b> The transition strategy and roadmap are not clearly articulated to the industry leading to misunderstanding and/or misinformation.</p> <p><b>Impact</b></p> <ul style="list-style-type: none"> <li>Some participants may experience disruptions to their operations if they are unable to meet the milestones of the transition roadmap.</li> <li>AEMO may need to extend systems sunset timelines to accommodate participants who have not been able to transition incurring higher costs.</li> <li>The industry may experience a delay or failure to achieve the target state.</li> </ul>	Medium Impact	<ul style="list-style-type: none"> <li>Develop a communication strategy and engage the industry with regular cadence to ensure the industry understands the transition strategy and is able to implement.</li> <li>Create a open 2 way communication channel for participants to raise concerns during and before the transition period.</li> </ul>
6	<p><b>AEMO Readiness at Go-Live:</b> Identity and access management, industry data exchange and portals are negatively impacted due to AEMO readiness once Go-Live leading to technical challenges. This can include compatibility issues, data migration issues, software bug etc.</p> <p><b>Impact</b></p> <ul style="list-style-type: none"> <li>May cause disruptions to identity and access management operations, industry data exchange operations and/or portal operations.</li> </ul>	High Impact	<ul style="list-style-type: none"> <li>Develop a mitigation plan and ensure participant readiness at each transition phase which addresses potential technical challenges including testing, risk assessment, etc.</li> </ul>

# Risk Assessment – Tranche 3A (con.t)

Risk assessment analysis focuses on the risks of transition and achieving the target state of tranche 3A initiatives.

Risk #	Risk Description	Rating	Potential Mitigants
7	<p><b>Ineffective Change Management:</b> The transition strategy requires changes in organisational and industry culture, workflows, employee behaviour, etc. Individual participant organisation’s ineffective change management can include lack of training programs, performance metrics, and/or incentives aligned to the objectives of the target state.</p> <p><b>Impact</b></p> <ul style="list-style-type: none"> <li>• May lead to lack of or delayed of adoption by the participant organisation as a whole and by individuals within the participants’ organisation</li> <li>• May lead to cost overruns and delays due to rework, unexpected challenges relating to resources or technology.</li> </ul>		<ul style="list-style-type: none"> <li>• AEMO provide a transition strategy and roadmap including the change and impact on the industry.</li> <li>• Participant organisations develop a comprehensive change management plan including objectives, scope, timeline, communication strategy, stakeholder engagement, training and approach to managing resistance and concerns etc.</li> <li>• Establish transparent and consistent communication channels between AEMO and the industry to keep all stakeholders informed.</li> <li>• Participant organisation invest in change leadership and employee engagement to equip leaders with knowledge and tools to manage change for their organisation.</li> </ul>

# Risk Assessment Matrix

1. LIKELIHOOD	Likelihood	Probability	Qualitative Description
	Almost Certain	>90%	Will occur in most circumstances
	Likely	51% - 90%	Can be expected to occur in most circumstances
	Possible	11% - 50%	May occur, but not expected in most circumstances
	Unlikely	1% - 10%	Conceivable, but unlikely to occur
	Rare	<1%	Will only occur in exceptional circumstances

1 - LIKELIHOOD	2 - CONSEQUENCE					
	Immaterial	Minor	Moderate	Major	Extreme	
	Almost Certain	Medium	Medium	High	Critical	Critical
	Likely	Low	Medium	High	Critical	Critical
	Possible	Low	Medium	High	High	Critical
	Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High	

2. CONSEQUENCE	Project Delivery				Project Budget	Project Scope	Consequence of the Risk
	<b>Extreme</b>	Project will not deliver in time to comply with Regulatory Commitments or materially impact Market Participants.			Cost impact is greater than 30% of the project budget	Will not deliver on the significant components of the project, and directly impact Regulatory Commitments or Market Participants	The project delivery impact of delays to Regulatory or Market Participant Commitments; Extreme excessive costs; scope impact of a solution that does not materially meet the agreed outcomes and affects Regulatory or Market Participant Commitments.
	<b>Major</b>	Project delivers late with major impact to the AEMO business with medium impact to regulatory commitments and/or market participants			Cost impact between 20% to 30% of project budget	Will not deliver on the significant components of the project	Project Delivery path critically impacted and schedule contingency is exhausted with business implication (impeding relationships and trust); Major excess costs over project budget; scope impact of a solution that has a material impact on the agreed outcomes.
	<b>Moderate</b>	Project delivers late with moderate impact to the AEMO business with low impact to regulatory commitments and/or market participants			Cost impact between 10% and 20% of the project budget	Will deliver all significant components of the project; but will require work arounds or compromises	Project Delivery path critically impacted and schedule contingency is exhausted with no business implication; Moderate excess costs over project budget; significant components of the scoped solution provided, but work arounds or compromises are required.
	<b>Minor</b>	Project delivers late with low impact to the AEMO business			Cost impact between 5% and 10% of the project budget	Will deliver all significant components of the project	Project Delivery path is negatively impacted but there is contingency available to absorb; Minor excess costs over project budget; all significant scoped components of the solution will be delivered.
	<b>Immaterial</b>	Negligible or no impact on timelines			Cost impact to project less than 5% of the project budget	No material impact to the intended project scope	Negligible or no impact on Project Delivery Schedule; Minimal excess costs over project budget.



# 5. Update on consultation on business case

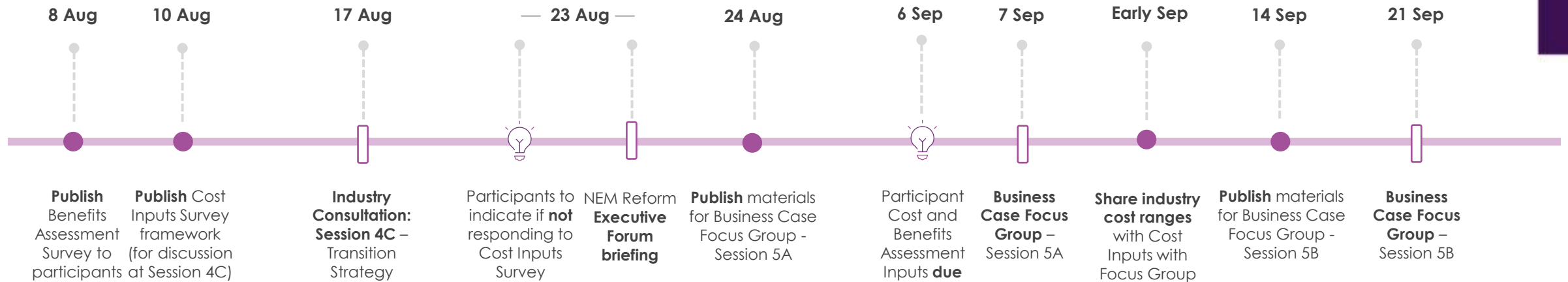
Business Case Timelines

Case for a change

Industry Cost input Framework

# Industry Business Case - Engagement Timeline

AEMO has committed to reviewing the business case with industry before any funding decision is made. A consensus position will be sought. Below outlines the timeline with the Focus Group for business case inputs.



**Legend:**

- AEMO publishes materials
- Feedback due
- Forum/workshop

# Case for change



## Reactive & Fragmented Technology

Platforms were established independently across NEM services utilising multiple now aged technologies which are both highly customised and end of life.



## Evolving Market Needs




Market change continues with new Consumer needs represented by Energy Transition and other initiatives requiring new market services to be deployed.



## Regulatory Requirements

Legislative reforms such as SOCI continue to evolve to manage the security and resiliency of Australia's critical infrastructure.

## Key Challenges

-  **Fragmented Industry Data Exchange**  
Current protocols lack support for evolving services, drive increase tactical spend to support change, maintenance cost, whilst reducing agility to adapt.
-  **Aged Identity and Authorisation Platform**  
Security posture must be strengthened to address susceptibility to cyber-attacks by state and cyber criminals and provide support for new regulatory obligations.
-  **Inconsistent Portal Services**  
Multiple distinct Portals offer inconsistent user experience, require multiple credentials to access services and do not provide a foundation to support new services



## Security Vulnerability on Critical Infrastructure

The inexorable march of technological advancement underscores the need for heightened vigilance. Security vulnerabilities are on the rise, and critical infrastructure remains a prime target for cyber criminals. It is imperative to adopt proactive measures to protect Australia's energy services and uphold national security.

# Addressing challenges strategically



## Energy Market Investment

Investment expenditure has been earmarked to support NEM Reform and the transition to a modern energy system. We are at a pivotal juncture: whether to allocate these resources **strategically** to provide a secure and fit-for-purpose technology foundation to deliver better consumer outcomes, or to take a **tactical, reactive and fragmented** approach, which carries the inherent risk of heightened complexity and increasing implementation and operational expenses.

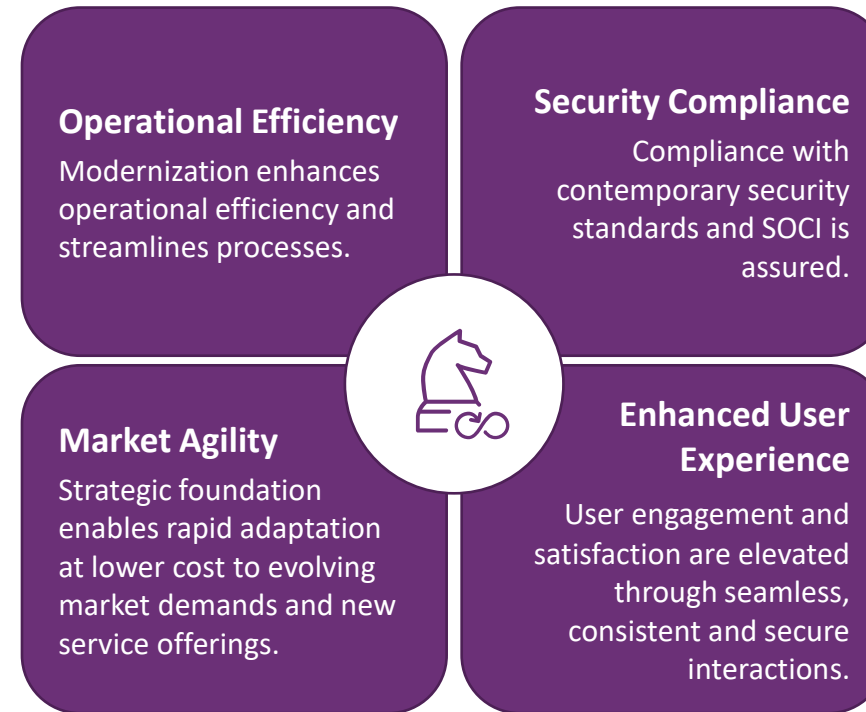


## Long Glide Path

The strategic allocation of investment will facilitate the acceleration of upcoming reforms, for example DER, Scheduled Lite, while establishing a resilient foundation to ensure compliance with SOCI regulations. This includes fortifying infrastructure and implementing scalable technology to enhance the security of the energy market.

The provision of transitional support capability over an extended sunset timeframe provides participants the **flexibility** to opt-in to new capabilities, enabling them to effectively manage their transition within a timeframe that aligns with their individual priorities.

Addressing these pivotal challenges is a means to optimise security and operations. It positions the industry at the forefront of *market adaptability* and *innovation* within the dynamic energy landscape.



# Industry Cost Input Framework

## Industry Cost Input Template Example

- The Industry Cost Input template is consistent across IDAM, IDX and PC.
- Within the Template, there are 4 tabs: 1 for Participant Instructions and Disclaimer and 3 for each initiative respectively.



### Identity and Access Management - Industry Cost Input 2023

*Please refer to slides 28-33 of the Transition Strategy 4A pack for tranche details*

#### Required Cost Input

Implementation Cost	Tranche 0	Tranche 1a	Tranche 1b	Tranche 2a	Tranche 2b	Assumptions
Total Implementation Cost	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]

Operational Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Assumptions
Total Operational Cost	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]

#### Minimum Requirement

- Implementation Cost by Tranche
- Operational Cost by financial Year 1 to Year 5

#### Optional Cost Input

Implementation Costs						
Cost Sub-Category	Tranche 0	Tranche 1a	Tranche 1b	Tranche 2a	Tranche 2b	Assumptions
Develop/Configuration (incl. unit testing)	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]
Testing (incl. system integration, industry testing etc.)	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]
Unfronr purchase of hardware (on-prem/cloud)						
Software (incl. initial license purchase)						
Project Implementation Overhead (incl. project management, change management, deployment, governance)	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]

Operational Costs						
Cost Sub-Category	Year 1	Year 2	Year 3	Year 4	Year 5	Assumptions
Hardware (on-prem/cloud) (if applicable)	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]
Software (incl. initial license purchase)	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]
Software (incl. maintenance)	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]
Support (labour)	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]

#### Optional Cost Input

The purpose of the Optional Cost Input section is to assist Participants develop the total of Implementation and Operational Costs.

We welcome Participants to share their financial estimates for the Optional Cost inputs.

#### Operational Cost Savings (if any)

Cost Category	Year 1	Year 2	Year 3	Year 4	Year 5	Assumptions
Cost Category A	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]
Cost Category B	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]
Cost Category C	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]
Cost Category D	\$ -	\$ -	\$ -	\$ -	\$ -	[Text]

#### Operational Cost Savings

We welcome Participants to share their financial projects for Operational Cost Savings.

This section is optional.

# 6. Next steps & close

# Proposed actions

Activity	Responsibility	Timing
Confirm if NOT wishing to completing Cost Inputs Survey	Focus Group members	23 August
Cost Inputs and Benefits survey due	Focus Group members	6 September

See you next at:

**7 September for Session 5A:** Business case discussion for Business and Technical focus groups

# Please reach out



[NEMReform@aemo.com.au](mailto:NEMReform@aemo.com.au)



[AEMO | NEM Reform Foundational & Strategic Initiatives Focus Group](#)





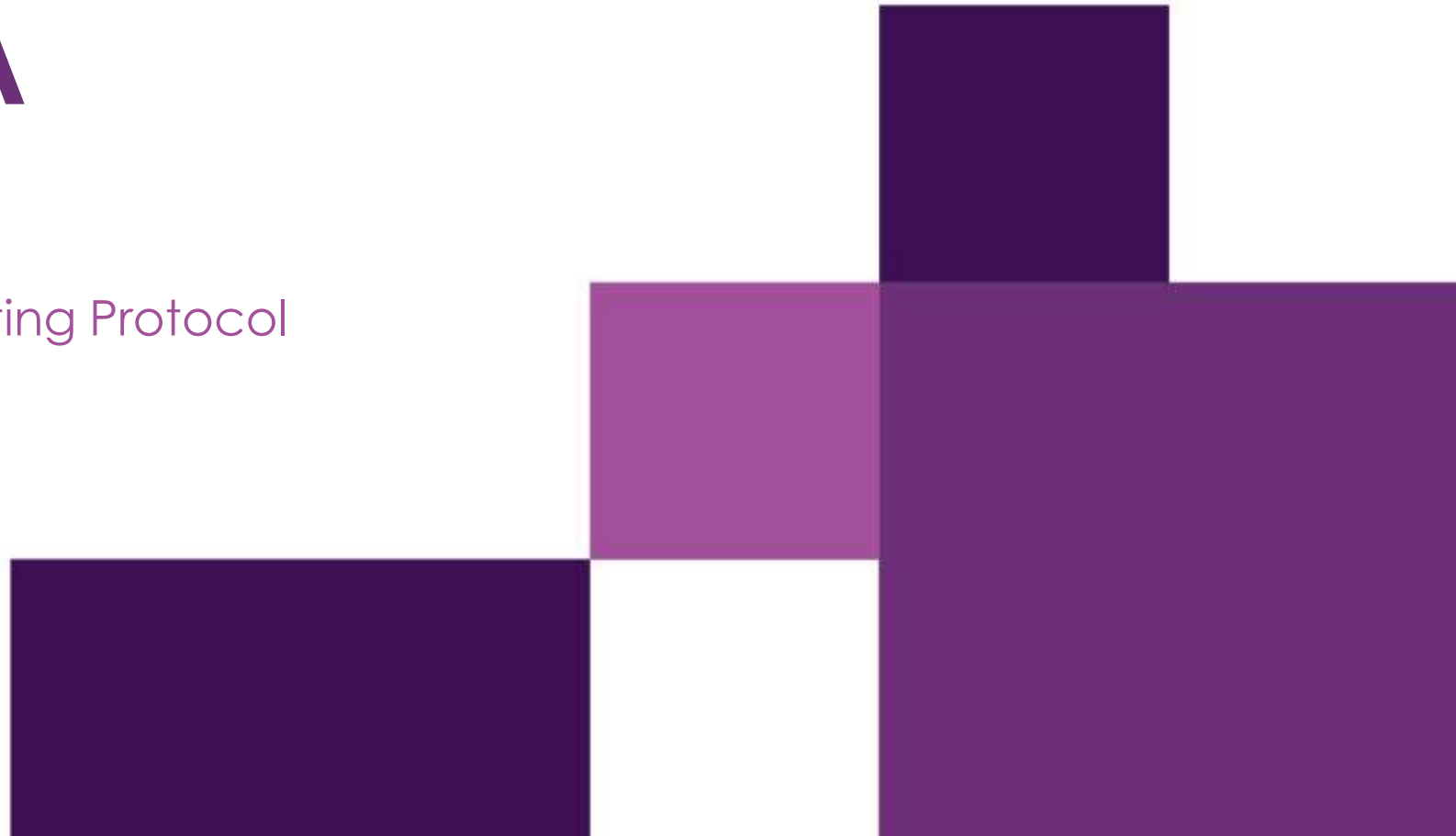


For more information visit

[aemo.com.au](http://aemo.com.au)

# Appendix A

AEMO Competition Law - Meeting Protocol



# AEMO Competition Law - Meeting Protocol



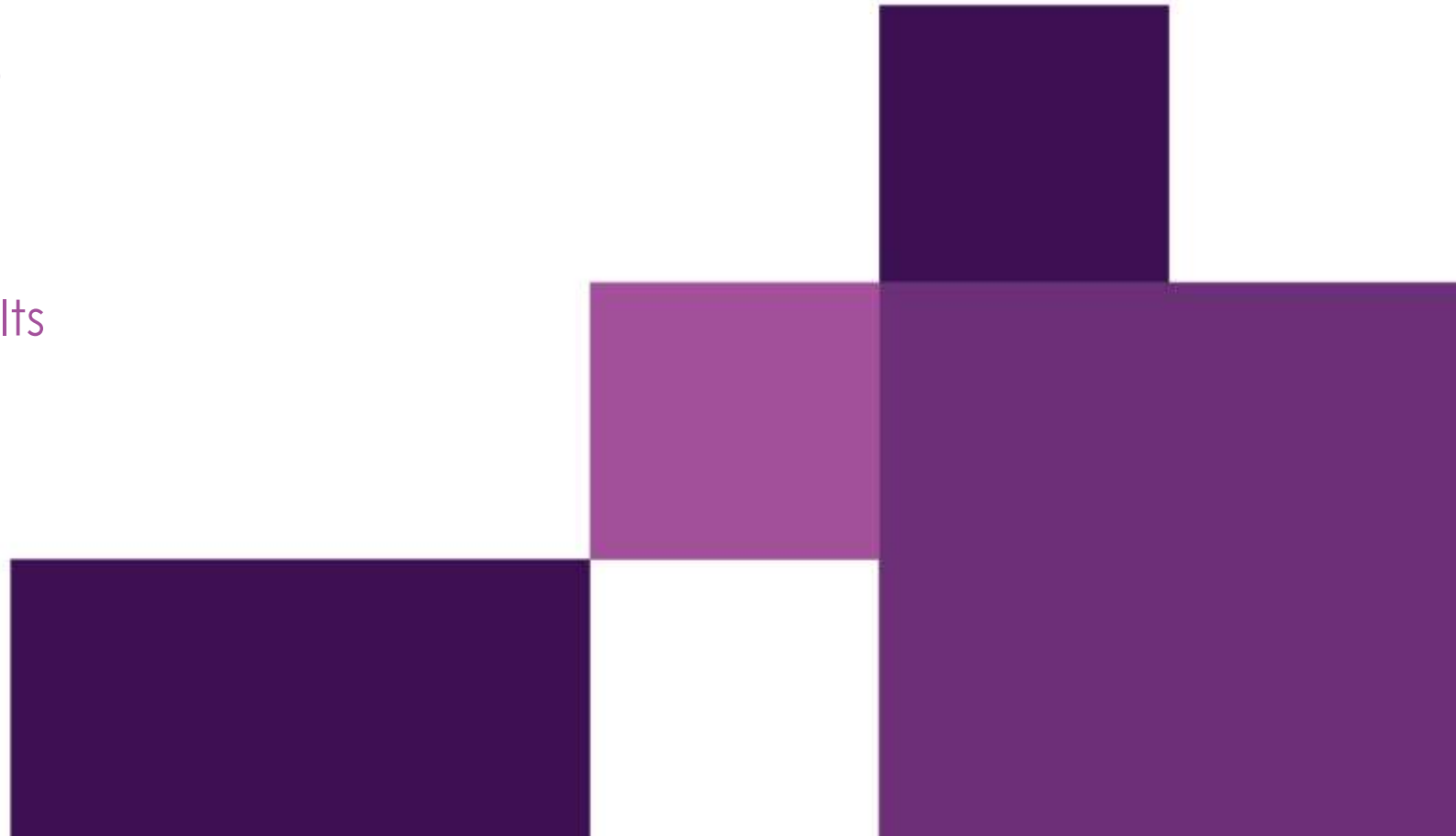
AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA). In any dealings with AEMO, all participants agree to adhere to the CCA at all times and to comply with appropriate protocols where required to do so.

AEMO has developed meeting protocols to support compliance with the CCA in working groups and other forums with energy stakeholders. Before attending, participants should confirm the application of the appropriate meeting protocol.

Please visit: <https://aemo.com.au/en/consultations/industry-forums-and-working-groups>

# Appendix B

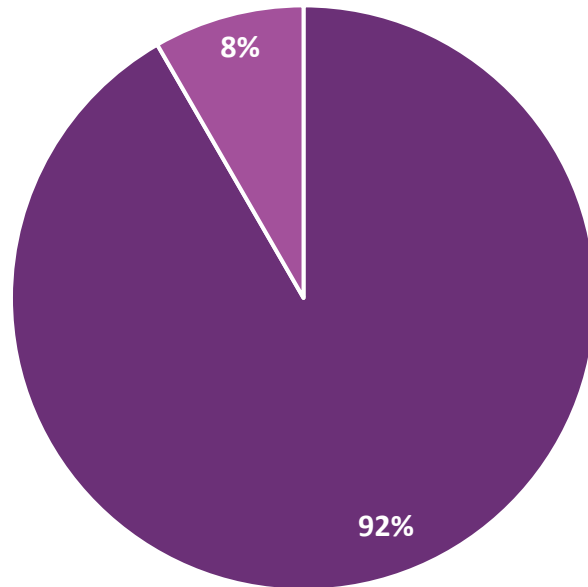
IDAM Alignment Check-in Results



# IDAM Transition Strategy Alignment Check-in

Participant alignment check-in: reflecting on the objectives for this workshop, are you aligned with the key principles and Transition tranches and sequencing for IDAM?

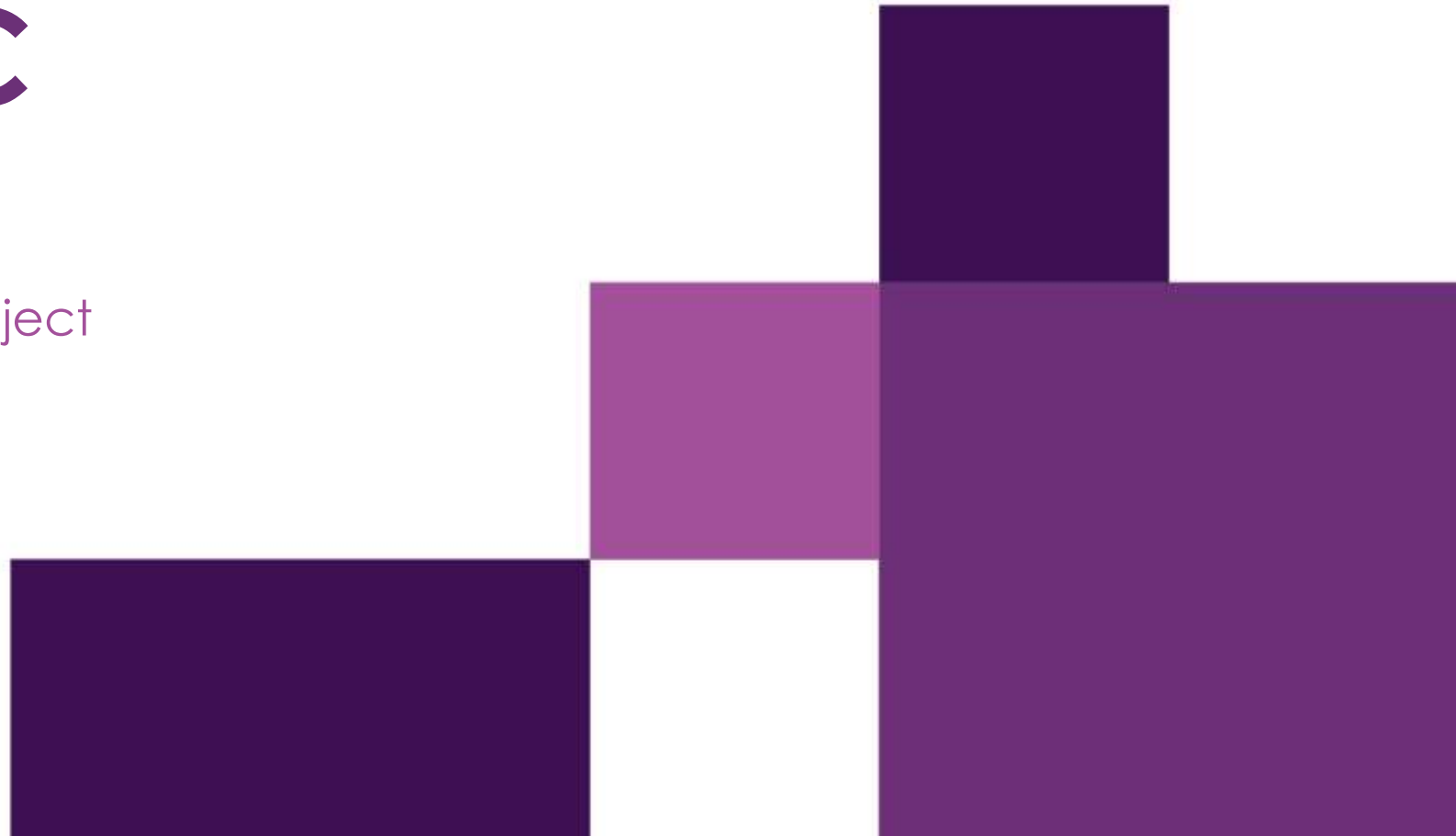
We have normalised the responses, considering the number of unique organisations (one vote per organisation where we had multiple representatives voting from the same organisation)



■ Yes% ■ No%

# Appendix C

NEM Reform Initiative vs IDX Project

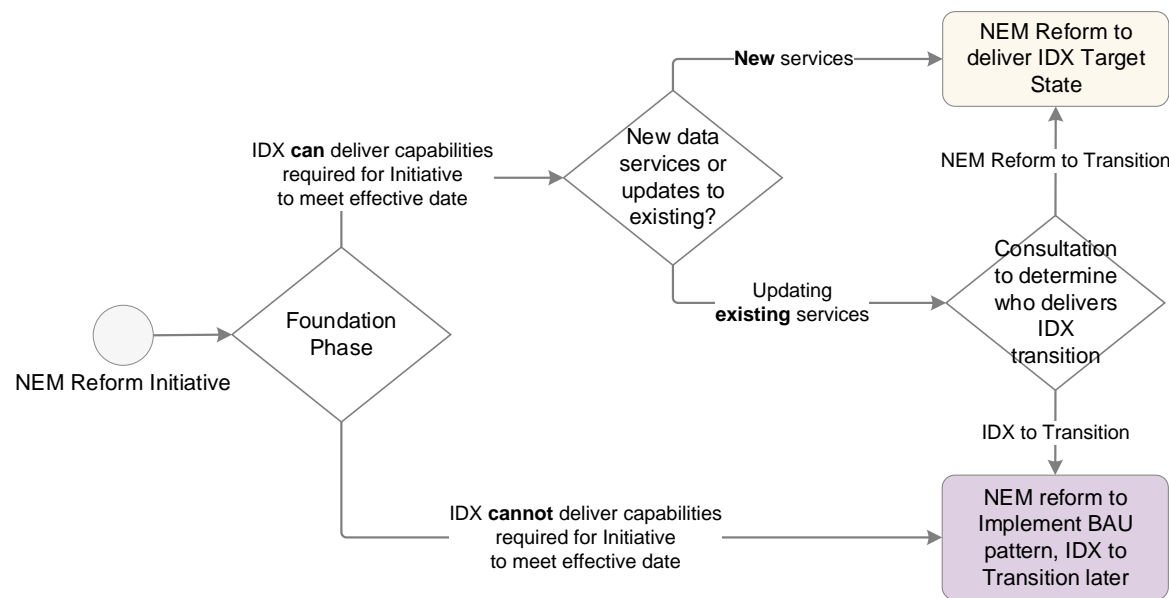


# NEM Reform Initiative vs. IDX Project

Critical to the definition of transition scope is determining whether the IDX project or a NEM Reform initiative should handle the transition of a business function to the target state. Factors influencing this include the IDX foundational phase readiness, the nature of the NEM Reform, and business function sequencing within IDX.

Three Key Factors determine whether the transition of business functions is part of the scope of a NEM Reform Initiative or the IDX Project:

1. The timeline of the IDX foundation phase.
2. The nature of the NEM Reform initiative, does it implement new vs. update existing business functions?
3. Industry consultation to determine on an intuitive by initiative bases, if the Reform initiative should implement existing business functions.



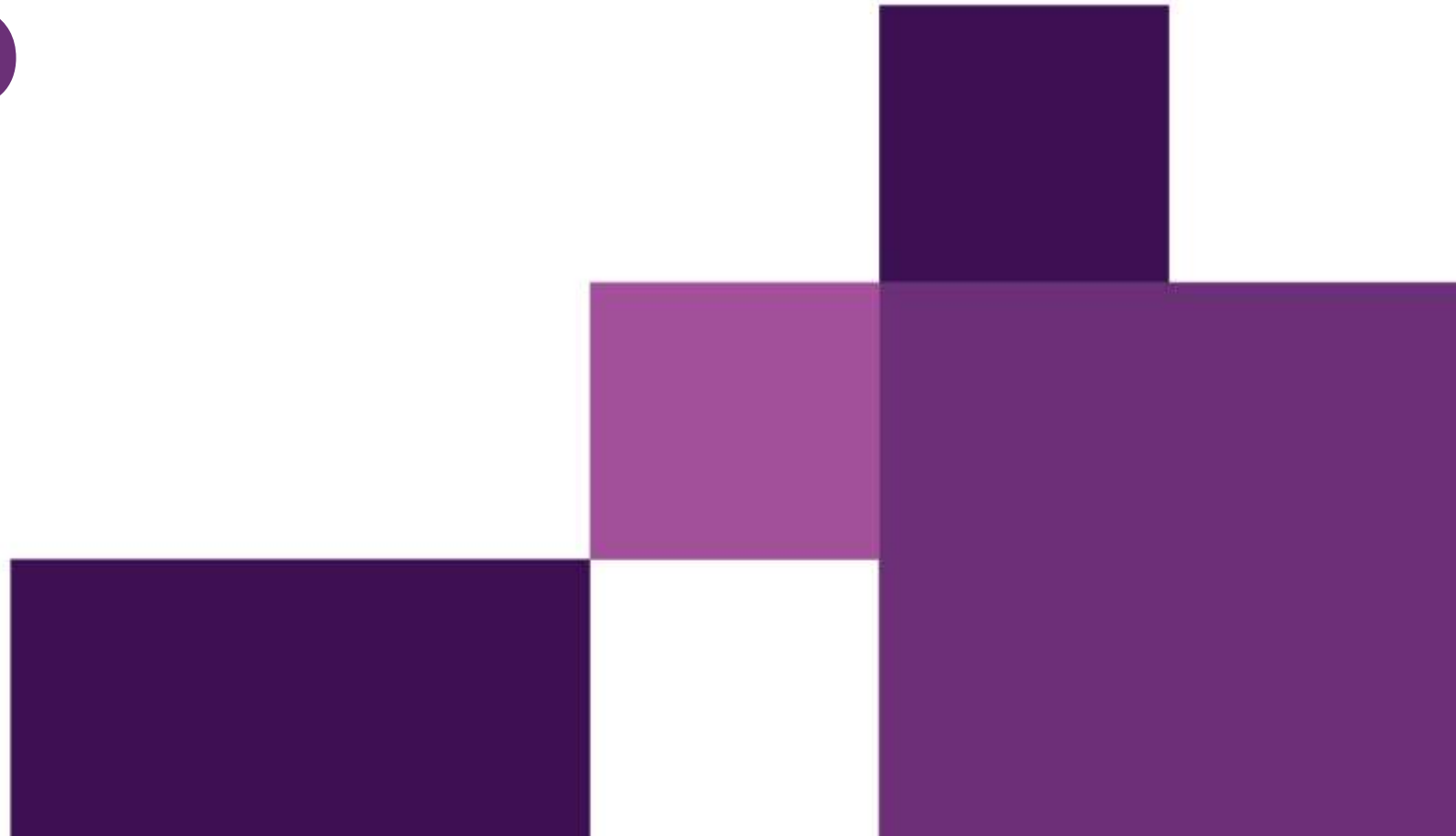
Decision Points:

- If the IDX foundation phase **can** deliver the required capabilities in time, then the decision depends on the nature of the NEM Reform initiative:
- If the Reform initiative introduces **new** business functions, it must implement the Target State.
- If the Reform initiative updates **existing** business functions, the decision as to which program, IDX Transition or the NEM Reform Initiative, transitions the business functions to the IDX target state.
- If, through **consultation**, it is determined that the existing business functions will not be materially updated due to the Reform initiative, then the IDX program will transition the business function to the Target State.
- If consultation determines that the existing business functions will be materially updated due to the Reform initiative, then the transition to the target state will be incorporated within the scope of the NEM Reform initiative.
- If the IDX foundation phase **cannot** deliver its capabilities in time for the Reform initiative's effective date, the initiative must implement the current (BAU) pattern. The IDX program will later transition the business function to the Target State.

Note: This decision-making process should be viewed as a guide. Each NEM Reform initiative will require careful consideration, and this guidelines should be applied flexibly.

# Appendix D

Benefits Framework



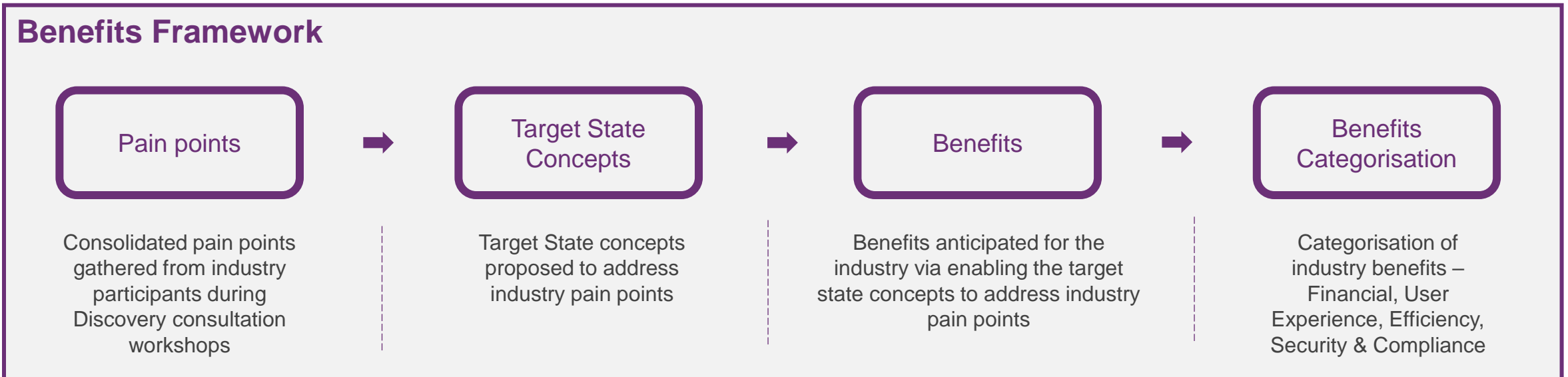


# We hear you: Pain points, Target State and Benefits

*Through industry consultation we have identified pain points. The target state concepts aim to address these pain points, and further, identify qualitative benefits associated with enabling the target state*

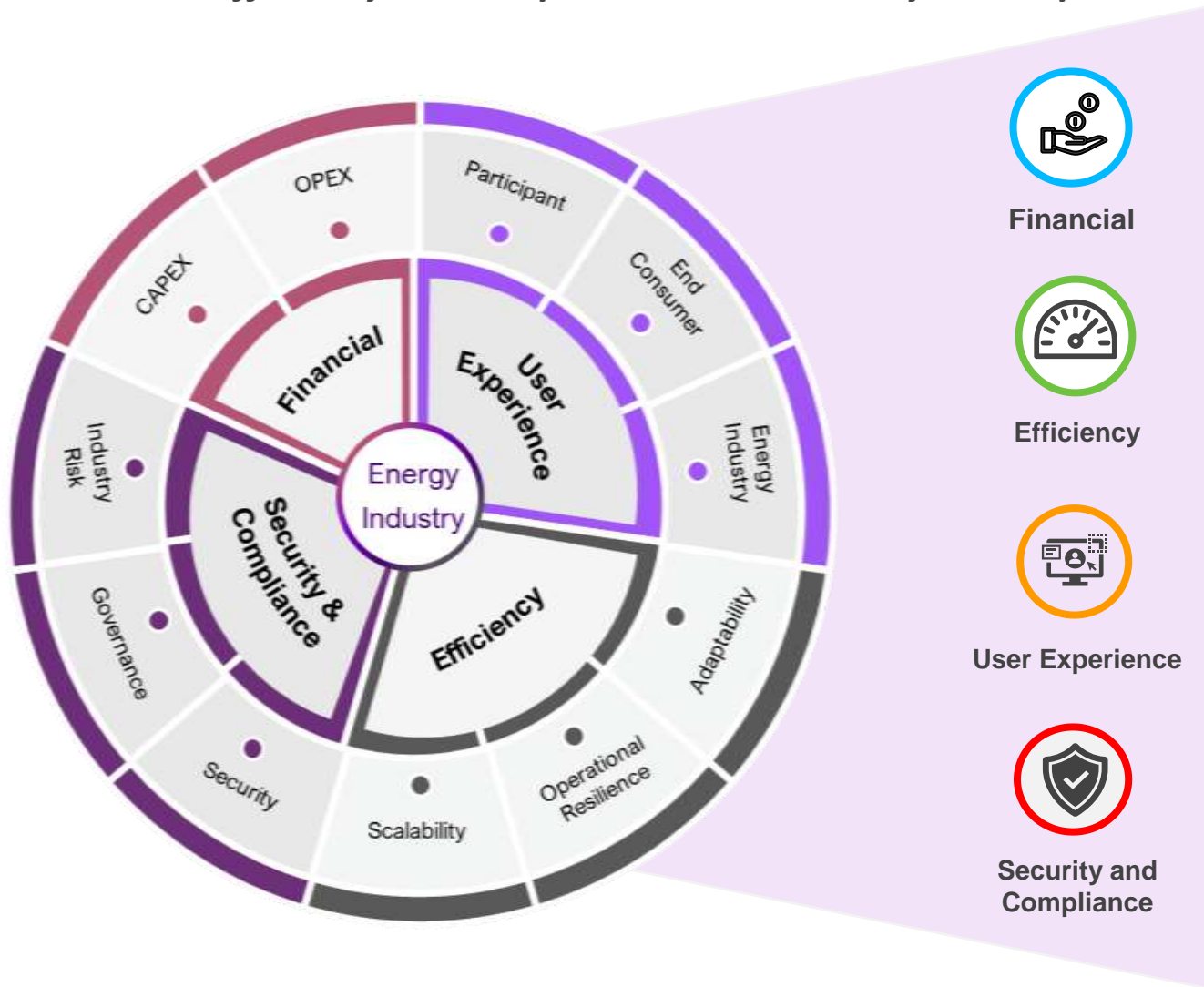
## Approach and Benefits Framework

- Industry pain points were solicited during consultations held in 2021 (IDX) and 2023 (IDAM & PC), and these formed a basis for formulating Target State Concepts to address these pain points.
- Benefits were identified by the industry (on addressing the pain points), and ranked in order of priority based on the survey responses provided by participants.
- The following framework has been used to map the Target State Concepts to the ranked industry benefits, and an assessment made on the relative value of those benefits (current vs. future) with the enablement of Target State capabilities associated with the IDX, IDAM and PC initiatives



# We hear you: Benefits Categorisation

Industry Benefits derived from the Target State Concepts enabled will be classified into 4 categories – **Financial, Efficiency, User Experience and Security & Compliance**



The **Benefit Categorisations** are applied to help assess the qualitative value of the proposed Target State Concepts.

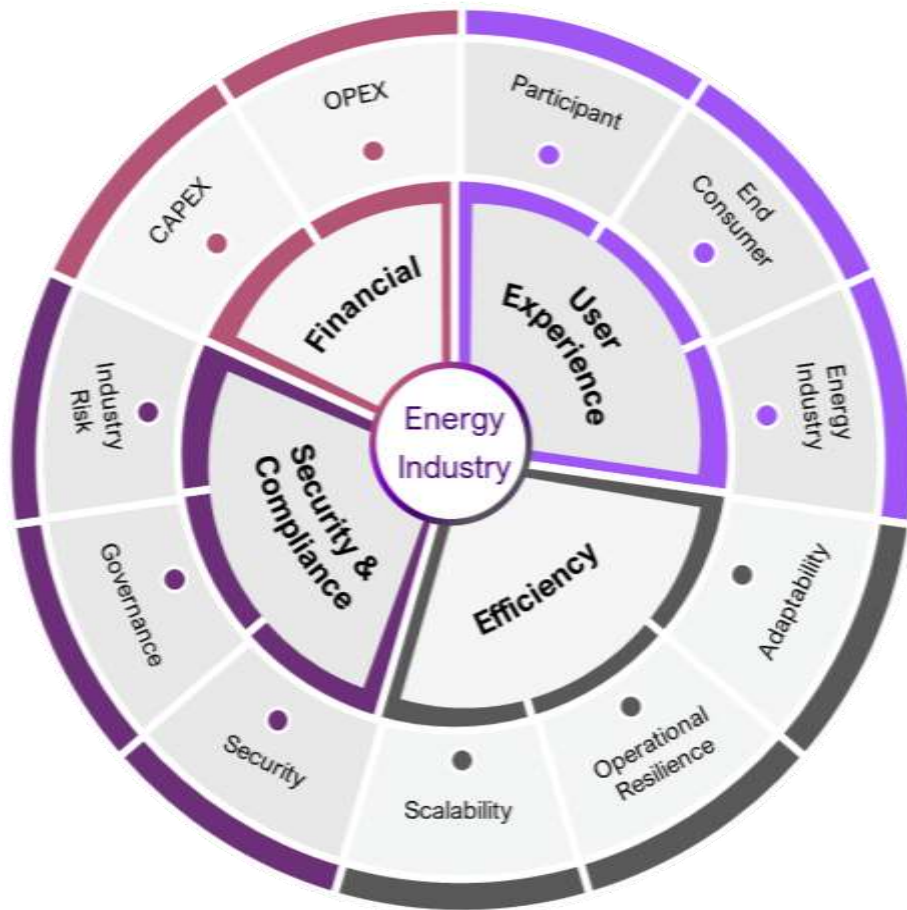
Benefits will be assessed **independent** of costs.

Benefits will be assessed by taking a:

- **Current State** view where the Target State capabilities are not implemented
- vs.
- **Future State** view where the Target State capabilities are implemented using a phased approach and benefits are anticipated over the longer term

# We hear you: Benefits Categorisation

Industry Benefits derived from the Target State Concepts enabled will be classified into 4 categories – Financial, User Experience, Efficiency and Security & Compliance



When considering **Benefits Categorisation**, it is important to note the following points:

- Categorisations apply to IDAM, IDX and PC initiatives
- Benefits are *subjective* and will be presented *qualitatively*
- Benefits can be realized at any point during the Transition Strategy or in the future
- Each initiative may not encompass all benefits outlined in the framework, or to the same degree

To measure the **Benefit Impact** associated with the enablement of Target State concepts:

- An assessment of the **current state** (BaU) will be applied, followed by
- A projection of the **future state** based on the implementation of the target state concepts

The following scale will be used to measure the current state and future state:



These ratings are *qualitative* in nature and represent a strawman assessment of the relative value of the benefits, considering the target state concepts presented to resolve industry pain points.

AEMO would seek to solicit feedback from industry on this assessment to reach consensus on the value of these qualitative benefits.