



# ***Data & Information Protection - Target state Modernisation roadmap***

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# Table of Contents

**Executive  
Summary**

**1 Platform Scope**  
Platform scope,  
definition and  
business purpose

**2 Current State**  
Current State  
landscape and  
Key Pain Points

**3 Platform  
Target State**

**4 Roadmap**

**5 Risk Overview  
of Current  
State**

**6 Focus  
Areas**

**Appendices**





# Executive Summary





# Data & Information Protection

*The strategy, process, technology and practice for safe, reliable, trusted and compliant data and information.*

The target state enables BNZ to move faster, operate safer and lead with confidence in a digital first, regulated world.



**Re-use** the capabilities in existing technologies across platforms to uplift Data & Information Protection capability across the enterprise



Define and communicate **standards, patterns & tools** for the enterprise to ensure consistent protection practices and streamline compliance



Apply **DataSecOps** to embed automated Data & Information protection continuously across the lifecycle to ensure protection is built-in rather than added as an afterthought.



## Scope & Context

Effective Data & Information Protection requires deep integration with where data lives and moves – across the entire technology ecosystem, not within the boundaries of any single platform.



## Transformation Approach

An evolution from reactive, siloed cybersecurity practices to a unified model that embeds governance, security, and technology across platforms and teams. Using a technology enabled phase as a bridge, to build the operational maturity needed to achieve enterprise-wide trust, resilience and agility.



Introduce Data & Information Protection **Observability** across the enterprise to gain real-time visibility into sensitive data usage, threat detection and compliance



Introduce **Automation** in detection & response, to rapidly identify and mitigate threats while reducing manual effort and response time.



Look for **efficiency gains in AI** that can improve Data & Information Protection



## Current State - BMI View

BMI is represented in technologies across other platforms in BNZ, rather than in Data & Information Protection itself.



## NAB Alignment

NAB haven't adopted Data & Information Protection as a platform, however the approach is similar in building protection with capabilities from other platforms. BNZ & NAB are targeting similar outcomes across contributing platforms e.g. secure-by-design, proactive risk and threat informed protection.

# Modernisation Roadmap



## Cyber Security Led

*Focused on threat defence, monitoring & incident response*

- Proactive Detection & Response
- Cloud First
- DevSecOps
- Automation
- Platform Consolidation

## Technology Enabled\*

*Embedded protection in platforms & architecture*

- Data governance integration
- Cross-functional strategy
- Executive sponsorship
- Continued compliance

## Enterprise Trust & Resilience

*Unified governance, security & technology with automation and strategic alignment*



\* Technology Enabled - some work in this phase already



# Data & Information Protection

## Challenges & Issues



**Fragmented Foundations & Inconsistent Practices** Legacy tools and siloed operations have led to inconsistent policy enforcement, missing Zero Trust capabilities, and low data protection maturity across the enterprise.



### Governance & Visibility

Fragmented tooling and lack of integration limit end-to-end observability, while gaps in unstructured data protection, retention, and access controls undermine governance and assurance across the data lifecycle.



### Operating Model & Capability Maturity

The organisation lacks a fit-for-purpose model and sufficient capability depth, with fragmented risk ownership, constrained investment, and limited commitment to uplift.



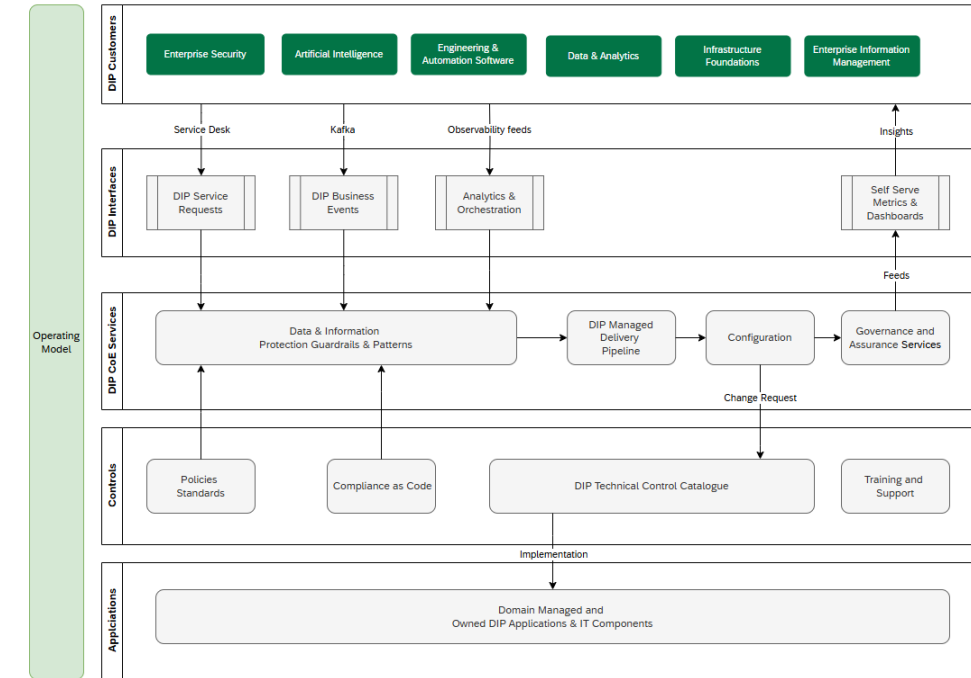
### Culture & Communication

Data & Information Protection uplift is seen as a productivity barrier, with limited business-led dialogue, unclear stewardship roles, and a need for broader communication to build confidence.

## Key Points

- **Interface Layer** Defining how to engage platform support and delivery services.
- **CoE Services Layer** Provides a platform service catalogue for the delivery of configuration changes, recommendations and insights
- **DIP Control Layer** Catalogue of governed risk mitigations, including policies, standards, training and support
- **Application Support Layer** representing the technologies responsible for implementing the configuration changes.

## Target State Overview



## Technical Focus Areas

### Uplift

- **Zero Trust Architecture** – shift from implicit trust to verify every access.
- **Event-driven & Decoupled Systems Security** – strengthening system resilience by securing data, detecting anomalies, and ensuring accuracy amongst platforms.
- **Synthetic Data & Data Simulation** – for testing and training (AI).
- **Data Detection & Response Uplift** – proactive detection and response to threats and breaches.
- **Data Security Posture & Configuration** – automation of capabilities responsible for identifying exposures and misconfiguration across our data assets, and their mitigations.
- **Channel Loss Prevention Uplift** – strengthening breadth and coverage across channels.

### Future focussed

- **AI Readiness** – prepare to safely and effectively adopt and scale AI technologies.
- **Privacy-enhancing technologies** – trusted execution environments to protect sensitive data and code during processing.
- **Post Quantum cryptography** – vulnerability for traditional encryption methods as quantum computing advances.
- **AI Opportunities** – understand how AI can enhance Data & Information protection.
- **Data Sovereignty & cross border compliance** – Enable geo-fencing, data residency, and jurisdiction-aware handling.
- **Resilience against ransomware & data tampering** – confidential computing, immutable storage, air-gapped recovery, tamper-proof logs.





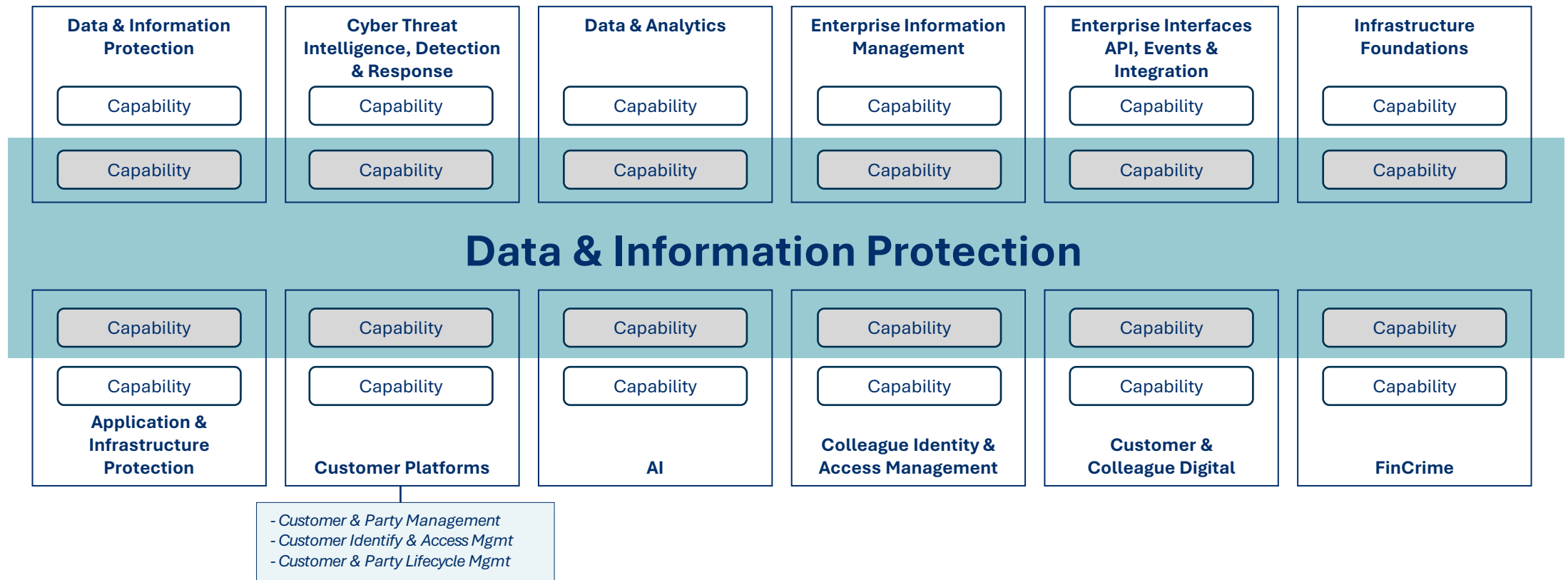
# 1. Platform Scope



# Definition & Platform Context

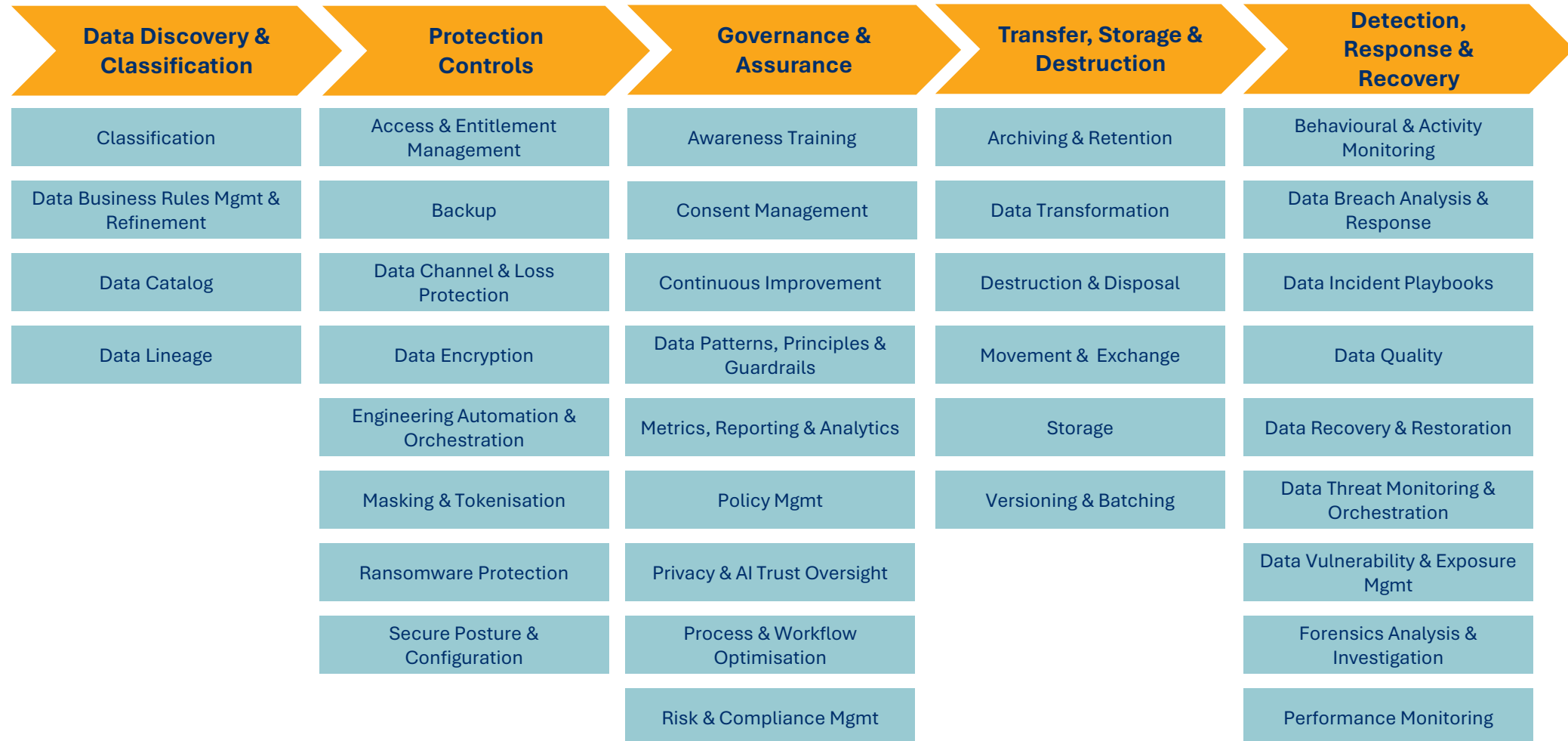
**Data & Information Protection** is the strategy, process, technology and practice for safe, reliable, trusted and compliant data and information.

Effective Data & Information Protection requires deep integration with where data lives and moves – across the entire technology ecosystem, **not within the boundaries of any single platform.**



# Value Chain & Capabilities

The value chain describes the activity and capabilities that allow us to achieve Data & Information Protection at BNZ





# Data & Information Protection Platform Context

The strategy, process and technology for **safe, reliable, trusted** and **compliant** data and information.

- Customer confidence & trust
- Business continuity & resilience
- Compliance & regulator expectations

**Strategic Drivers**  
*the 'why'*



- Customers
- Colleagues
- Party – Prospects, Partners, Regulators, Vendors etc

**Personas**  
*the 'who'*



- Regulations
- Risk Management
- Policies & Standards
- Controls

**Governance**  
*the 'what'*



- Access Enablement
- Protection
- Detection & Response
- Operational resilience

**Security**  
*the 'how'*



All data types

Across the whole lifecycle

Everywhere data  
& information  
lives and moves

Continuously

Through  
automation &  
orchestration

# Data & Information Protection Break Down



## Data Types

All data formats including structured data, unstructured data across operational and analytical systems and processes.



## Data Lifecycle

Protection across the data lifecycle – Capture, Process, Retain, Distribute, Dispose.



## Security Coverage

Protection of data in use, during transmission (in transit) and while stored (at rest), across all environments.



## Risk Informed

Embedded, automated controls to deliver continuous security, assurance to meet compliance obligations and standards.

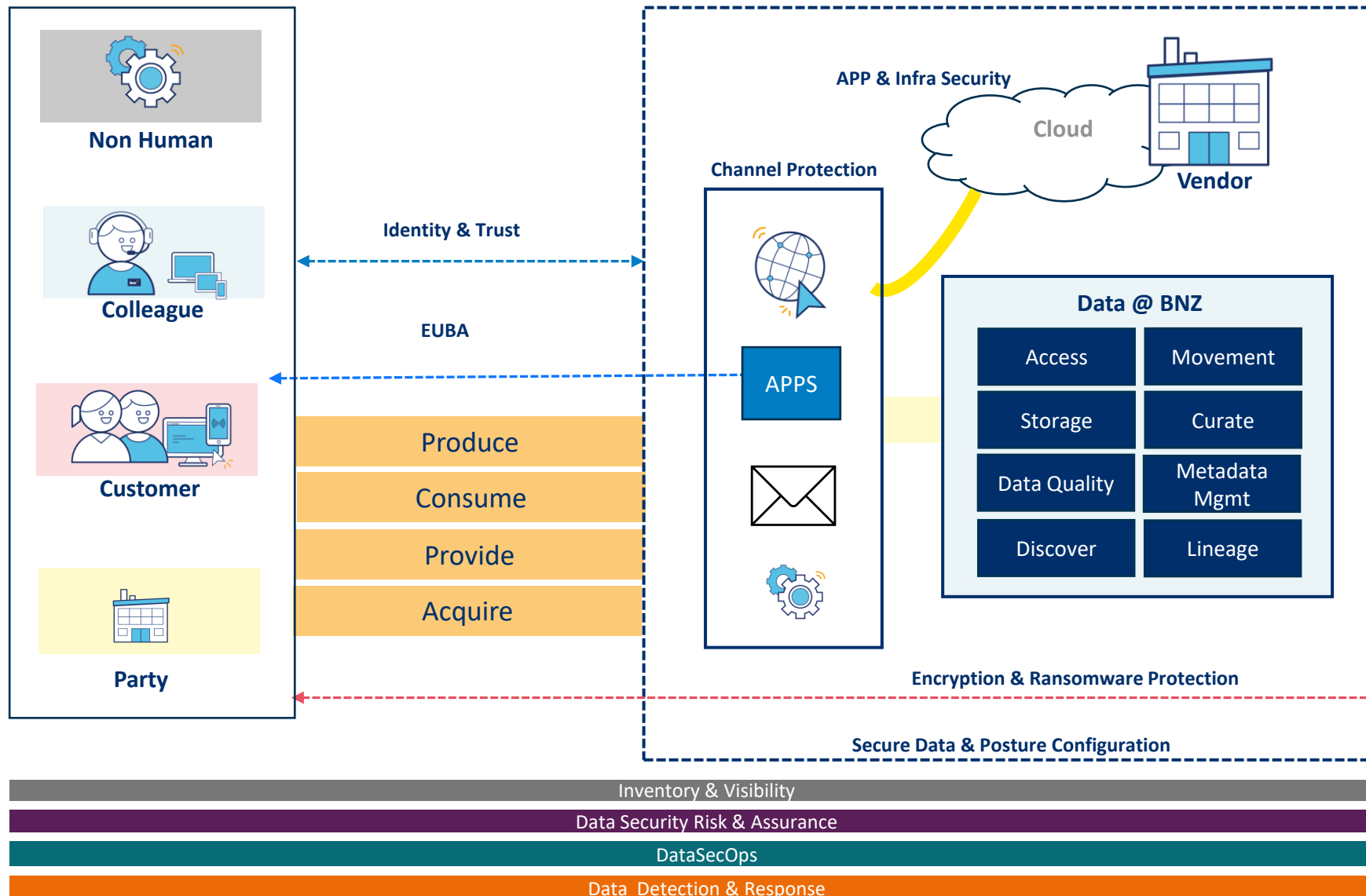


## Resilient Access

Ensuring **appropriate** availability & access to data and information as and when it is required, without compromising its integrity.

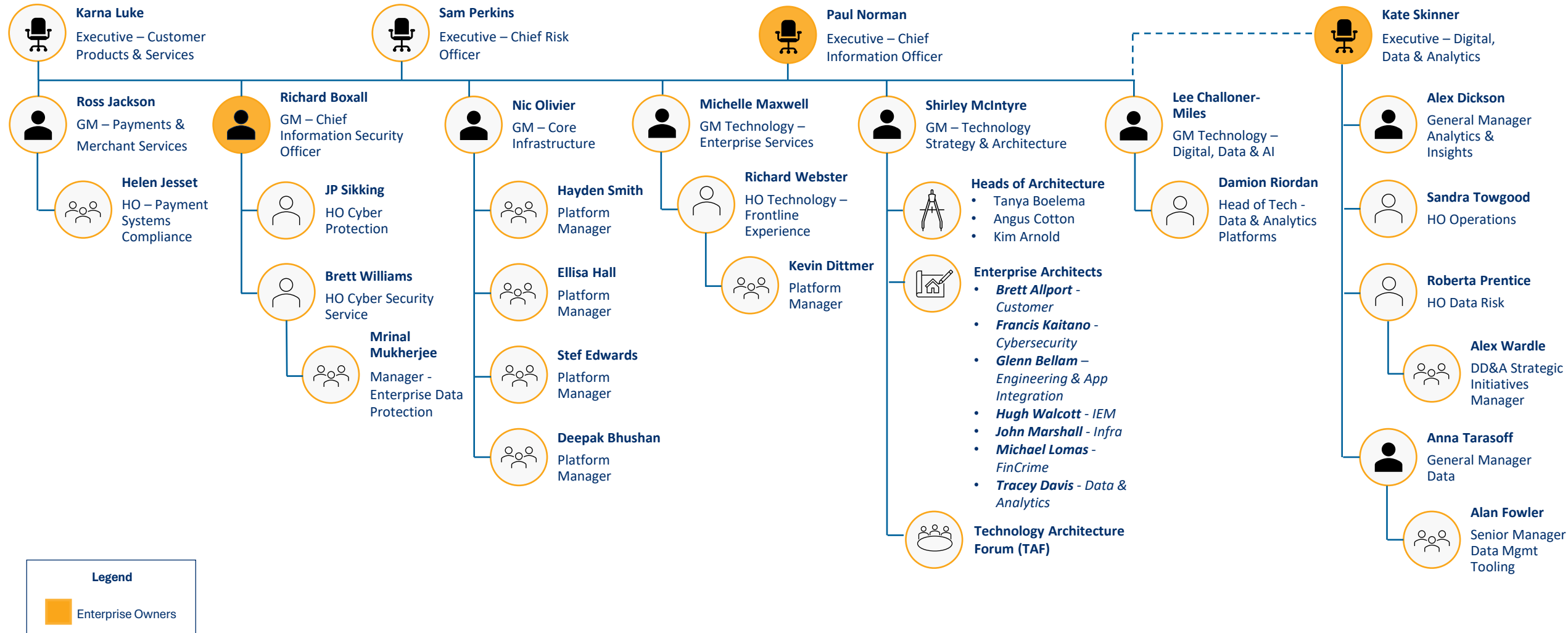


# Security Perspective (The How)



1. **Non Human** - AI, APIs, Microservices, system-system, cloud endpoint APIs, etc.
2. **Party** - Prospects, Partners, Regulatory bodies, vendors, etc
3. **Identity & Trust** covers human, non human entities including secret management, privilege access.
4. **DataSecOps** include Automation of security controls across the DataOps and managed pipelines.
5. Inventory, Visibility, risk, assurance , Detection and Response are continuous and flow through across the journey touchpoints.
6. **User, Entity Behavioural Analytics(EUBA)** covers the insider risk and threats associated with entity and user behavioural aspects for use of data including database activity monitoring.

# Stakeholder Engagement & Accountability







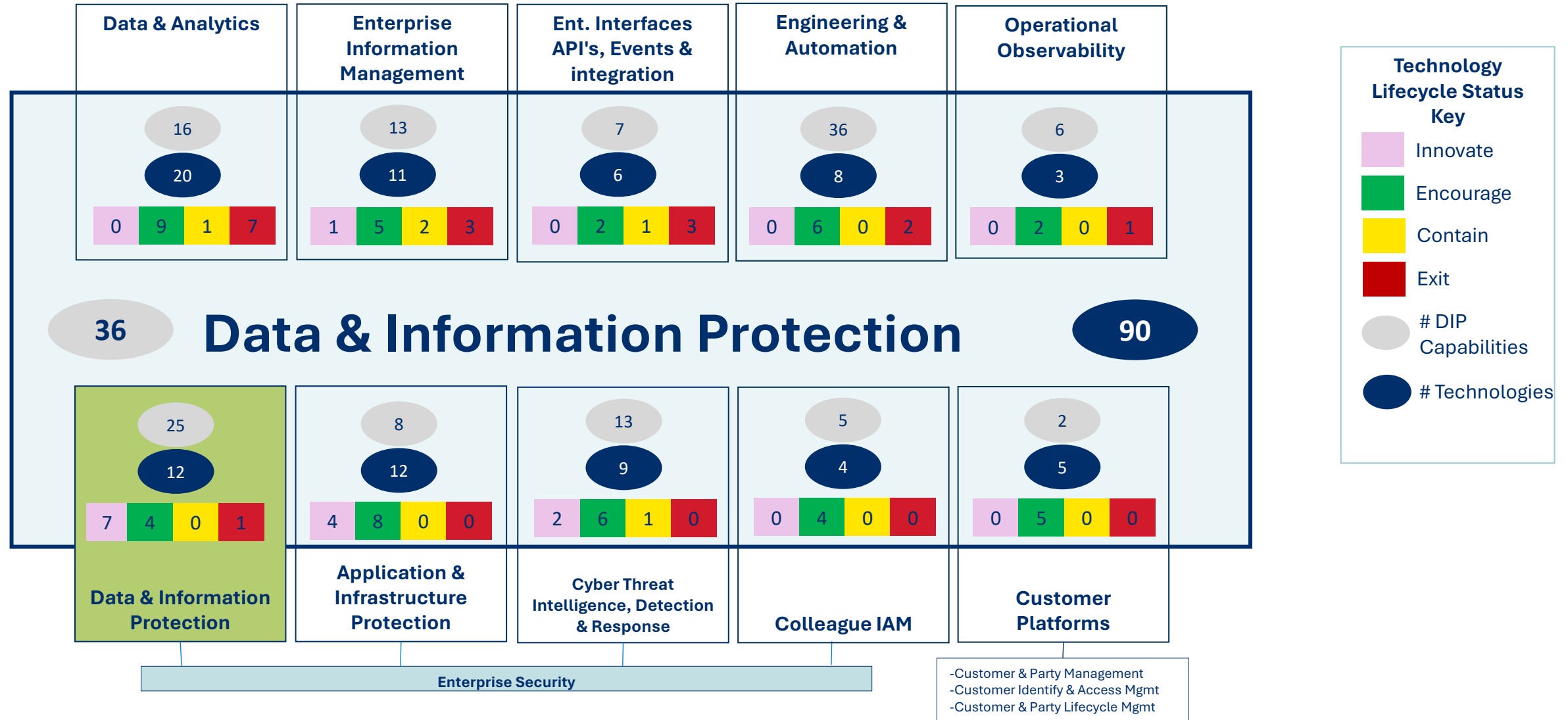
## 2. Current State



# Current State – Overview

In protecting data and information across the entire ecosystem, there are many technologies that contribute to Data & Information Protection.

**Note – this is NOT DONE,**  
there are more technologies  
& platforms to add as we find  
them





# Current State

The technologies across BNZ platforms used to deliver Data & Information Protection today can be visualised by clicking on the [report below](#).

Data & Analytics

Technology

Value Chain

Capabilities

Technologies →

Value Chain & Capabilities	ActiveBatch	Airflow	Alation	Astronomer	BIS Reports	dbtCore	FiveTran	GDW	Hadoop	Informatica BDM	Informatica EDC	ODM	Power BI	SecurDPS	SecurDPS Discovery	Snowflake	Tableau	WhereScape Red	Zelus
<div>Transfer, Storage &amp; Destruction</div>																			
Versioning & Batching																			
Storage																			
Movement & Exchange																			
Destruction & Disposal																			
Data Transformation																			
Archiving & Retention																			
<div>Protection Controls</div>																			
Secure Posture & Configuration																			
Ransomware Protection																			
Masking & Tokenisation																			
Engineering Automation & Orchestration																			
Data Encryption																			
Data Channel & Loss Protection																			
Backup																			
Access & Entitlement Management																			
<div>Governance &amp; Assurance</div>																			
Risk & Compliance Mgmt																			
Process & Workflow Optimisation																			
Privacy & AI Trust Oversight																			
Policy Mgmt																			
Metrics, Reporting & Analytics																			
Data Patterns, Principles & Guardrails																			
Continuous Improvement																			
Consent Management																			
Classification																			
Awareness Training																			
<div>Detection, Response &amp; Recovery</div>																			

# Challenges

The current state challenges highlight the need to co-ordinate the capabilities across the technology tack to delivery unified Data & Information Protection outcomes.

## Fragmented Foundations & Inconsistent Practices

- Legacy tools lack architectural and technical fitness for modern use cases
- Disparate workflows, tools and operating models across domains
- Inconsistent application of policy across technologies
- Lack of standardised protection guardrails and enforcement patterns
- Zero Trust data protection foundational capabilities are missing
- EIM protections are unevenly distributed across systems & lifecycle stages.
- Low maturity enterprise level data detection & response logic.

## Governance & Visibility

- Poor end-to-end observability due to fragmented tooling and context sharing
- Gaps for unstructured data in malware protection (outside O365), document disposal and assurance
- Inadequate performance monitoring and governance of document protections
- Unclear data retention and disposal linked to customer lifecycle events
- Limited integration with data catalogue at design time
- Identity and authorisation gaps: unclear access and role-based controls

## Operating Model & Capability Maturity

- Operating model is not fit for purpose (DataSecOps, automation, policy)
- Capabilities lack breadth and depth to address excessive and emerging risks
- Conflicting understanding of the risks related to data & information protection across the organisation, and the responsibility for mitigation (e.g. RSK-166 & 171)
- Investment in uplift constrained by prioritisation, resources, and funding.
- Change Management issues – e.g. when rolling out DLP and authentication changes
- Achieving the balance between the need to protect and the need to enable
- Lack of investment and commitment to uplift within the organisation

## Culture & Communication

- Perception that Data & Information Protection uplift restricts productivity, leading to push back.
- Technology-led conversations mean we are not leading uplift discussions from the business and customer value perspective
- Lack of data stewardship training and role clarity
- Need for broader communication to build understanding and confidence



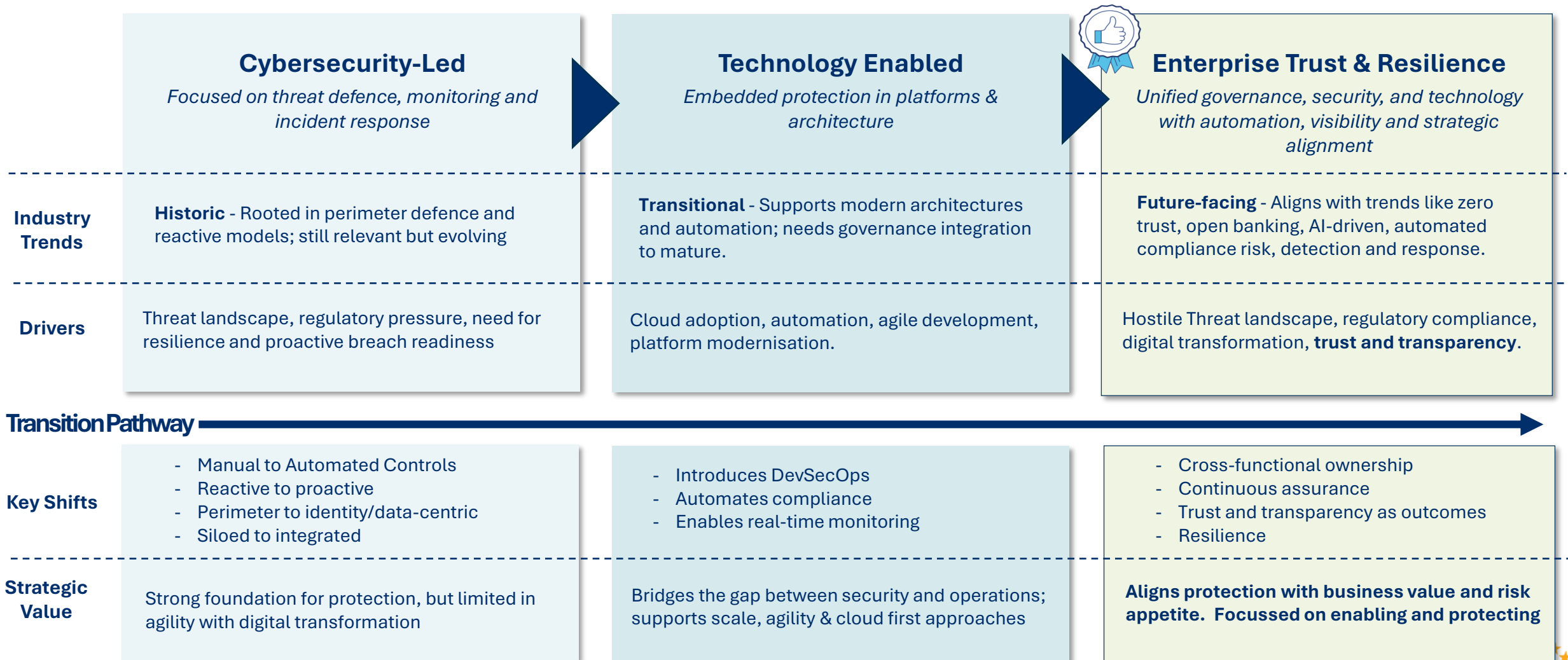


# 3. Platform Target State



# Data & Information Protection Modernisation

From Defence to Confidence: Transforming Data & Information Protection into Enterprise Trust & Resilience.





# Operating Model Shifts

From Defence to Confidence: Transforming Data & Information Protection into Enterprise Trust & Resilience.

	From	To
<b>Customer Centricity</b>	Internal focus on protecting systems and data	External focus on earning trust through transparency and ethical data use
<b>Governance Shift</b>	Isolated within technology/security, with limited visibility across the enterprise	Involve the whole business in trust and resilience, not just technology teams
<b>Strategic Alignment</b>	Security focused on protecting assets and meeting compliance	Trust and resilience part of business strategy and innovation
<b>Scope Expansion</b>	Focus on technical threats, like malware and unauthorised access	Beyond technical threats, to include disruptions, ethics and privacy
<b>Leadership involvement</b>	CISO/Security teams lead, with limited business input	Shared accountability across senior leaders
<b>Cultural Transformation</b>	Security is seen as a blocker or compliance checkbox	Build a culture where everyone trusts, values and protects data & information
<b>Capability Enhancement</b>	Reliance on traditional tools like firewalls, antivirus and access controls	Expand to use advanced tools like data lineage and digital ethics frameworks
<b>Architecture Evolution</b>	Security is added after systems are built (“bolt-on”)	Select and design systems with trust and resilience from the start
<b>Redefined Metrics</b>	Metrics focus on technical indicators (e.g. number of incidents, patching rates)	Measure trust and resilience, not just technical issues



# Uplift Themes



## Zero Trust by design

Ensure access is granted only when identity, context, and risk are verified—minimising exposure and strengthening resilience.



## Continuous Compliance

Embed automated governance and monitoring to maintain real-time assurance and reduce reliance on manual audits.



## Privacy First Architecture

Design systems with privacy embedded from the outset, ensuring responsible data use and regulatory alignment.



## Secure Data Usage

Enable secure data processing and analytics without compromising sensitive information - unlocking value while protecting trust.



## Culture & Capability

Foster a security-aware culture through training, leadership alignment, and integration into operating models.



## DataSecOps Driven

Use practices which embed automated security, trust, compliance, workflows and guardrails by design and continuously into every stage of the data lifecycle.



## Exceptional Colleague Experiences

Delivering premium user experience, where data and information protection is applied 'just in time', lowering friction and toil.



# Data & Information Protection – BNZ Vision

Enabling BNZ to move faster, operate safer and lead with confidence in a digital first, regulated world.

## From Siloed to Orchestrated Governance

- Implement **federated governance** with shared standards and automation tools—empowering platform teams with guardrails, not gates.
- Establish a **Centre of Enablement** to co-ordinate enterprise-wide protection, trust and resilience

## From Independent to Collaborative Delivery

- Shift to an **enterprise shared responsibility model**, enabling teams to own protection outcomes with the right support.
- **Equip and incentivise teams** to prioritise secure configuration and data protection outcomes – not just functional delivery.

## From Reactive to Proactive Control

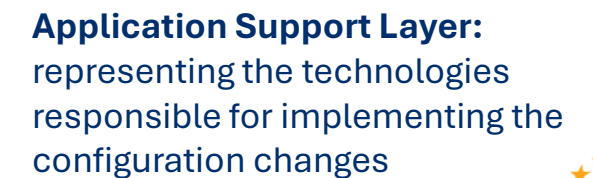
- Embed **automated protection** into the **design and deployment lifecycle**—ensuring controls are integrated from the start, not retrofitted.
- Introduce **automated response workflows** to detect and act on anomalies across platforms.

## From Tech Uplift to Secure-by-Design

- Leverage existing investment in **cyber**, **cloud transformation** and **data platform modernisation** to embed native protection capabilities.
- Make data protection a **default part of platform engineering**, not an afterthought.

## From Cyber-centric to Enterprise Enablement

- Build a **policy translation layer** to convert business protection needs into scalable, platform-specific enforcement.
- Enable **cross-platform visibility and orchestration** to align protection with enterprise priorities and delivery pipelines.







# 4. Roadmap





# Indicative Roadmap

Indicating the actions needed to evolve our operating model from cybersecurity-led to a trust and resilience driven enterprise approach.

	FY26	FY27	FY28	FY29+
<b>Establish cross-functional governance</b>	Form a cross-functional steering group including security, risk, legal, data and business leaders			
	Align governance with enterprise risk and strategic planning			
	Define clear roles and shared accountability across leadership			
<b>Redesign Strategy &amp; Architecture</b>	Update strategy to embed trust, ethics, and resilience as core principles			
	Apply trust-by-design and resilience-by-design in architecture and solution development			
	Align architecture decision with business outcomes and stakeholder expectations			
<b>Build Foundation &amp; Scale Capabilities</b>	Re-use existing (and invest, where required) tools for privacy engineering, data lineage, trust scoring & resilience modelling			
	Develop secure-by-design & zero trust architectures			
	Enable proactive risk sensing and adaptive response capabilities			
<b>Create a Centre of Enablement (CoE)</b>	Establish CoE to drive adoption and capability uplift across teams			
	Provide toolkits, frameworks, and best practices for trust and resilience			
	Act as a hub for training, coaching and community building			
<b>Modernise Policies &amp; Processes</b>	Revise policies to reflect trust, privacy and resilience goals			
	Embed trust into business continuity, incident response, and third-party risk management			
	Ensure procurement and vendor onboarding include trust and privacy criteria			
<b>Drive Cultural &amp; Behavioural Change</b>	Promote a culture of transparency, accountability and ethical data use			
	Launch training and awareness programs on data stewardship and trust			
	Recognise and reward behaviours that support enterprise trust and resilience			
<b>Define &amp; Track Metrics</b>	Introduce KPIs for trust, data integrity, resilience maturity, and stakeholder confidence			
	Use dashboards to monitor and communicate performance across the enterprise			
	Link metrics to business value and strategic outcomes			



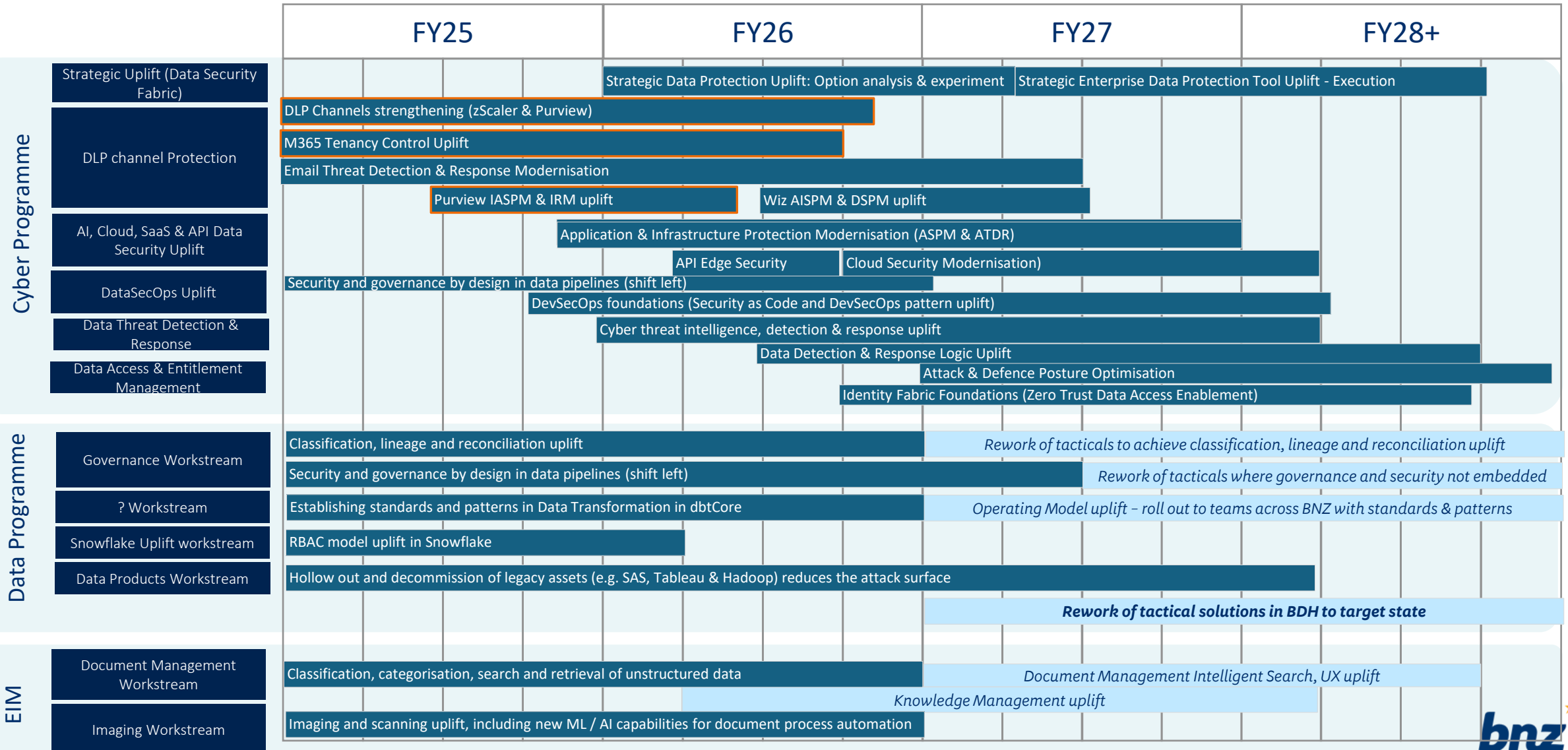
# Planned Uplift Roadmap

Investment in other platforms that contribute to Data & Information Protection uplift.

Future investment

Current investment

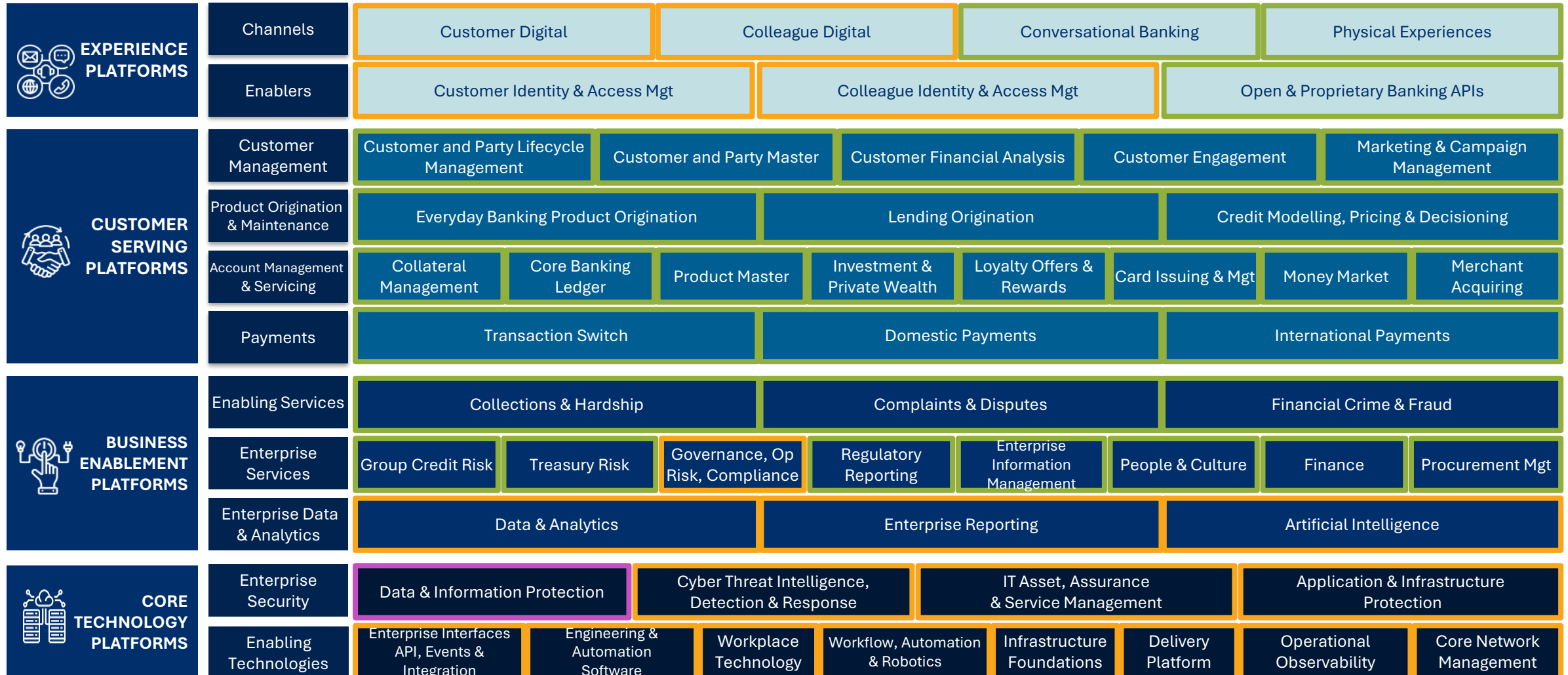
Revision of Approach Required



# Platforms @ BNZ

A key theme of the bank's [Technology Strategy](#) is to adopt a [platform mindset](#) that will help transform the bank with our Intentional Modernisation approach.

Platform in scope is highlighted in **plum**, Up-stream dependencies are highlighted **lime**, Down-stream dependencies are highlighted **orange**.



# NAB Alignment

NAB haven't adopted Data & Information Protection as a platform, however the approach is similar. NAB includes the higher level BIAN capabilities for Data & Information Protection into other platforms while BNZ aggregates lower level capabilities into Data & Information Protection. BNZ & NAB are targeting similar outcomes across contributing platforms e.g. secure-by-design, proactive risk and threat informed protection.

- NAB have instead built the (higher level) BIAN capabilities that cover Data & Information Protection into other platforms, such as:  
Storage & Data Protection, Data Archiving & Records Management  
Governance, Compliance & Risk (breach reporting)  
Workflow Process Automation  
Security Services

**It could be useful to map the lower level capabilities in BNZ Data & Information Protection to the higher level BIAN capabilities and draw out the similarities and differences further.**

The Data & Information Protection at BNZ does not neatly align to NAB's definition of platform – while it has a well defined capability boundary it is an aggregation, the proposal is an aggregate of technologies that sit in other platforms. The responsibility for technology within the platform is therefore challenging, because on it's own Data & Information Protection won't have any technologies.

**NAB's Data Protection Team** are still taking the cyber centric approach for the next 12 -18 months. Overall, **we align on capabilities and outcomes.**

**A further question to ask and answer - Why is Data & Information a platform at BNZ, but not for NAB?**

**Consulted:**

- John Roome @ NAB
- Sam Siggins Lead Domain Architect – Data Security
- Karan Narad – Head Of Data Security



# Strategic Alignment

This target state is architected in alignment with BNZ Strategic Ambition through Technology Themes and Intentions.



## Modernise and Simplify

**Objective:** Intentional simplification and modernisation.

### Approach

- **Getting the Basics Right:** Significantly reduced tool landscape, functional overlap and complexity.
- **Laying the Right Foundations:** Modernise and build missing capabilities required to deliver value stream and target state.
- **Fit for purpose capabilities:** Enable capabilities that are fit for purpose guided by the TSA and the reference blueprint.



## Agile and Adaptable

Leveraging **Engineering & DataSecOps** approaches to ensure that the bank is positioned to build and deploy controls y with minimal manual steps by **automating and orchestrating security using context** to invoke the right testing and remediation.

- Shift from reactive to proactive Data & Information Protection.
- Embed and automate detection & response.
- Data & Information Protection as an enabler - Guardrails, not gates



## Platform Mindset

We will deliver a composable, well-architected, engineered, and automated platform.

- Simplify by aggregating data & information protection capabilities across existing platforms, rather than a platform on its own.
- Extend capability coverage to have breadth, depth and reach across all the BNZ distributed environments



## Resilient, Secure and Safe

Deliver capabilities which enables:

- Shifting from reactive to proactive Data & Information Protection
- Adaptive Posture Refinement.
- Close to real-time security observability.
- Compliance and Secure by design.



## Deeply Digital

- Manual touch points will be limited with **flow through automation favoured**.
- Just in time access to data delivering exceptional colleague experiences.
- Use of automation and orchestrations consistently across the DIP ecosystem.





# 5. Risk Overview of Current State



# Current State – Business Risk

The following GRACE risks are impacted by the Data & Information Protection Platform.

Risk Summary	TSA Impact Description	TSA Impact to Risk Profile
<p><b>RSK- 171: Cyber Compromise Risk</b></p> <p>There is a risk that information systems containing customer, employee or business data lose their confidentiality, integrity, or availability. Due, but not limited to, inappropriate or excessive access to systems or data; malware or ransomware attack; espionage, hacktivism or supply chain breach; inadequate patch and vulnerability management; malicious insider intent or human error; compromised credentials; insecure coding practices; unauthorised asset or environment changes; lack of asset ownership; insecure service configuration; third party compromise; sophisticated use of artificial intelligence by threat actors; and asset currency.</p>	<p>This TSA is responsible for building and delivering the key foundational capabilities and controls for enabling to mitigate this risk and managing the need for having the ability to proactively detect, respond and contain cyber compromises.</p> <p>Current capabilities are rudimentary and requires significant uplift in order to transition to a fit for purpose target state which is fit for purpose to reduce the residual risk.</p>	<p>Direct Risk Buydown</p>
<p><b>RSK-166 Data Loss</b></p> <p>This risk focuses on unauthorised access to BNZ data in electronic or physical format (customer, employee and any intellectual property) resulting in loss or disclosure of BNZ confidential information.</p>	<p>Capabilities and controls delivered through the target state directly impacts our ability to proactively detect, respond and contain any risks, threats, and breaches associated with data breaches. Current capabilities are rudimentary and require significant uplift in order to transition to a fit for purpose target state which is fit for purpose to reduce the residual risk.</p>	<p>Directly Impacts Risk Mitigation</p>
<p><b>RSK-158 IT System Failure</b></p> <p>The risk focuses on the failure to properly manage BNZ Information Technology (IT) assets (infrastructure, applications and systems) and effectively respond to IT incidents resulting in service outages and disruptions.</p>	<p>Cyber incidents, such as <b>Denial of Services (Volumetric) and Ransomware</b> attacks, are on the rise and usually result in system failure and outages when they occur. The TSA contributes to minimisation of this risk delivering autonomic cyber defence capabilities which are fit for purpose to mitigate our exposure to cyber threats.</p> <p>Modernisation will also result in simplification and optimisation of tools, reducing the number of technologies and environments to manage and maintain.</p>	<p>Directly Impacts Risk Mitigation</p>

# Current State – Business Risk

The following GRACE risks are impacted by the Data & Information Protection Platform.

Risk Summary	TSA Impact Description	TSA Impact to Risk Profile
<p><b>RSK-1300 Data Management Risk</b></p> <p>Data management risk is the risk that data / information / records is incorrect (incomplete, inaccurate, inaccurately transformed), or is incorrectly used (inappropriate use, unethical use, use breaching confidentiality or privacy, outputs not fit for purpose, incorrectly disposed).</p>	<p>The TSA positively impacts Data Risk 4 - Inappropriate or unethical use of data (incorrect use of data). Reducing overcollection, through appropriate classification and enabling appropriate retention and disposal. Through reduced opportunity for unauthorised manipulation and alteration of data and in applying appropriate protection (masking/tokenisation etc) for sensitive data. The observability in the target state allows identification and resolution, where overcollection occurs and where sensitive data is found to be unprotected.</p>	<p>Direct Risk Buydown</p>
<p><b>RSK-1288 Issuing and Acquiring Compliance Risk</b></p> <p>There is a risk of failure to:</p> <ul style="list-style-type: none"> <li>• Comply with Payment Card Industry Data Security (PCI DSS) and its encompassing requirements</li> <li>• Comply with Card Scheme requirements (issuing &amp; acquiring), including transaction processing, authorisation &amp; settlement requirements, interchange, transaction recording and record keeping (Card Schemes - Visa, Mastercard, Amex, UnionPay and Alipay).</li> <li>• Comply with Payments NZ Industry rules and procedures</li> <li>• Manage appropriately merchant acquiring customer and exposure risk, <i>excluding the management of merchant product/systems and fraud risk</i></li> </ul>	<p>Capabilities and controls delivered through the target state directly impacts our ability to proactively deliver the control efficacy required to meet with the PCI DSS data security requirements and to reduce the residual risk of non compliance. Capabilities delivered will also enhance our abilities to protect customer and card payments data.</p>	<p>Directly Impacts Risk Mitigation</p>





# 6. Focus Areas



# Technical Focus Areas

To support the move towards the proposed target state, the following focus areas have been identified as relevant, either as foundational enabling aspects or unknown areas that would require further refinement.

## Zero-Trust Architecture

*Shift an identity & trust based architecture – dynamic and risk based access*

- **Verify every access** no user or device is trusted by default, even inside the network
- **Enforce least privilege** Grant only the minimum access needed for each request
- **Continuously validate trust** monitor and re-authenticate dynamically
- **Secure across boundaries** apply consistent controls across cloud, on-prem and hybrid

## Event-driven and decoupled systems security

*Enhancing resilience by securing service interactions, protecting data, detecting anomalies and maintaining accuracy*

- **Limit breach impact** Decoupled systems isolate vulnerabilities
- **Enable real-time alerts** Event-driven models that allows instant threat detection
- **Enforces Zero-Trust-** Each service manages its own access controls
- **Boosts Resilience** Systems recover independently and securely

## Synthetic Data & Data Simulation

*Agentic AI to generate synthetic data for testing & training?*

- **Protect privacy** Generate realistic data without exposing sensitive info
- **Enable safe testing** support secure testing and training without using prod data
- **Speed up development** remove data access barriers, allow faster innovation and prototyping
- **Improve security validation** simulate edge cases to test and strengthen data protection controls

## Data Detection & Response Uplift

*Proactive detection & response to threats and breaches*

- **Proactively identify threats** Advanced analytics/AI to detect suspicious activity before damage occurs
- **Accelerate incident response** Enables rapid containment and remediation of breaches
- **Improved visibility** Enhanced monitoring across data flows, endpoints and cloud environments
- **Support continuous protection** Integrate with security ops for real-time threat management

## Data Security Posture & Configuration

*Automation of capabilities responsible for identifying exposures and misconfiguration across data assets, and their mitigations*

- **Automate exposure detection** Continuously scan for misconfiguration & vulnerabilities across data assets
- **Prioritises risk mitigation** Flags high risk issues and recommends target remediation actions
- **Improves visibility** Centralised insight into data security posture across environments
- **Policy enforcement** Aligns config with security policy & compliance standards

## Channel Loss Prevention

*Strengthening breadth and coverage across channels*

- **Expand Coverage** Strengthens monitoring across all communication and data transfer channels
- **Detect Data Leakage** Identify unauthorised or accidental data exfiltration in real time
- **Apply consistent controls** Enforces data protection policies across email, web, cloud and endpoint channels
- **Reduces insider risk** Monitors user behaviour to prevent intentional or unintentional data loss



# Future Focus Areas

In addition to current focus areas, the following future-focussed areas are emerging considerations that may not require immediate action but warrant ongoing attention and strategic foresight.

## AI Readiness

*\* Will be covered in AI TSA*

*Prepare to safely and effectively adopt and scale AI technologies*

- **Establish data governance** Ensure integrity, privacy and security in AI systems
- **Enable risk monitoring** continuously audit AI deployments for potential threats
- **Promote ethical AI use** train stakeholders on responsible AI practices
- **Build scalable infrastructure** distributed, fault tolerant systems that maintain data integrity and availability under load

## AI Opportunities

*Understand how AI can enhance Data & Information Protection*

- **Detect threats early** identify anomalies and suspicious behaviour in real-time
- **Classify sensitive data** automate tagging and access control based on risk
- **Protect privacy** enable techniques like synthetic data and differential privacy
- **Predict risks** anticipate vulnerabilities through behavioural and historic analysis

## Privacy-enhancing technologies

*Trusted execution environments to protect sensitive data and code during processing*

- **Secures data in use** protect sensitive data during processing, not just at rest or in transit
- **Isolates execution** runs code in secure, tamper-resistant environments
- **Prevents unauthorised access** blocking external threats from accessing protected workloads
- **Supports compliance** enables secure processing aligned with privacy regulations.

## Post Quantum cryptography

*As quantum computing advances, traditional encryption methods may become vulnerable*

- **Prepare for Quantum threats** anticipate future risks to current encryption methods
- **Secure Long-term Data** protect sensitive data that must remain confidential for decades
- **Enable cryptographic transition** support migration to quantum-resistant algorithms
- **Maintain compliance** align with emerging standards for post-quantum security

## Data sovereignty & cross border compliance

*Architect to account for data residency, support geo-fencing and enable jurisdiction aware data handling*

- **Data residency** ensure data is stored and processed within approved jurisdictions
- **Enable geo fencing** restrict data access and movement based on geographic boundaries
- **Implement jurisdiction awareness** adapt data handling to comply with local laws and regs
- **Mitigates legal risk** reduces exposure to cross-border data transfer violations

## Resilience against ransomware & data tampering

*Confidential computing, immutable storage, air-gapped backups and recovery architecture. Blockchain for tamper-evident logs*

- **Prevent alteration** through **confidential computing**, immutable storage to block unauthorised changes.
- **Ensure recovery** Maintain attested backups and resilient recovery architecture.
- **Detect tampering** leverage blockchain for tamper-evident logging and audit trails.
- **Browser as the last mile:** Bolstering browser protection to mitigate against browser driven data and AI threats.

# Next Steps

To support the move towards the proposed target state, the following next steps are recommended.

## Data & Information Protection as a platform?

*Consider whether D&IP as a sub-platform of Security is appropriate? Or if Data & Information Protection as a platform is appropriate at all?*

- The target state demonstrates how DIP is delivered outside of a specific platform.
- Does BNZ have the scale and investment to support dropping the platform in alignment with NAB?
- The apps within the current DIP platform can be collapsed into existing platforms – may drive slight changes to naming & boundaries of existing platforms

## Operating Model

*A more holistic and strategic focus, requires significant operating model change*

- RACI to clarify roles, boundaries and responsibilities.
- Building the capacity to enable an engineering centric operating model, right sized to deliver DataSecOps .
- Who owns the blueprint for delivering the uplift and the ongoing currency?

## Exec Buy in

*Commitment & investment is required from BNZ leaders*

- Cross-functional leadership – CIO, DD&A, legal, risk and business. Governance is integrated into enterprise risk and strategic planning
- Overarching accountability for the existing Excessive data risks e.g.: RSK- 166, 171, RKS 1288, etc.
- Approach for driving investments to deliver the target state uplift and outcomes.

## Principles, Practices & Patterns

*The foundations and scaffolding for Data & Information Protection uplift*

- Defining the structure for core enabling tools.
- Establishment of patterns and guardrails for enabling coherence.
- Codification and standardisation of guardrails, standards and policies.
- Automation and Orchestration of controls and workflows.





# ***Appendices***



# Value Chain & Capability Definitions

	Capability	Description
<b>Data Discovery &amp; Classification</b> Processes and tools that help identify, catalog, and classify data based on its sensitivity, criticality, and business value. This enables appropriate protection and governance measures to be applied.	Classification	Categorising data and information assets based on sensitivity and criticality to apply appropriate protection measures
	Data Business Rules Mgmt & Refinement	Managing and refining business logic applied to data and information assets, for example data transformation or metadata used for data protection.
	Data Catalog	Centralized inventory of data and information assets to support discovery, governance, and access control.
	Data Lineage	Tracking the origin, movement, and transformation of data and information assets across systems.
<b>Protection Controls</b> Technical and procedural safeguards that prevent unauthorised access, disclosure, alteration, or destruction of data. These include encryption, access controls, and secure configurations.	Access & Entitlement Management	Controlling who can access data and what actions they can perform.
	Backup	Creating periodic copies of data to recover in case of loss or corruption.
	Data Channel & Loss Protection	Preventing unauthorized and unintentional data transmission and leakage.
	Data Encryption	Securing data by converting it into unreadable format without proper keys.
	Engineering Automation & Orchestration	Automating and embedding security, responses and workflows.
	Masking & Tokenisation	Obscuring sensitive data to reduce exposure risk during processing or testing.
	Ransomware Protection	Defending against malicious software that encrypts data for ransom.
	Secure Posture & Configuration	Ensuring systems are securely configured to prevent vulnerabilities.
<b>Governance &amp; Assurance</b> Policies, roles, oversight mechanisms, and continuous improvement practices that ensure data protection is embedded in organisational culture and aligned with regulatory and business requirements	Awareness Training	Educating staff on data protection policies and practices.
	Consent Management	Ensuring that individuals have control over how their personal data is collected, used, shared, and retained
	Continuous Improvement	Iteratively enhancing data protection capabilities.
	Data Patterns, Principles & Guardrails	Defining consistent rules and standards for data usage and protection.
	Metrics, Reporting & Analytics	Measuring and analysing data protection performance.
	Policy Mgmt	Defining and enforcing rules for data security and privacy.
	Privacy & AI Trust Oversight	Ensuring responsible use of personal data and AI systems.
	Process & Workflow Optimisation	Framework for ensuring the ongoing improvement of data protection processes and workflows for efficiencies and completeness.
	Risk & Compliance Mgmt	Monitoring and managing risks to meet regulatory requirements.

# Value Chain & Capability Definitions Cont...

	Capability	Description
<b>Transfer, Storage &amp; Destruction</b> Controls and practices that govern how data is securely stored, moved, retained, and ultimately disposed of, ensuring lifecycle integrity and compliance with legal and operational standards.	Archiving & Retention	Preserving data for legal, regulatory, or operational needs.
	Data Transformation	Modifying data formats securely during processing.
	Destruction & Disposal	Securely eliminating data that is no longer needed.
	Movement & Exchange	Securing data as it moves(in motion) or as it is exchanged between different parties with varying risk or trust levels.
	Storage	Securely maintaining data in physical or cloud environments.
	Versioning & Batching	Managing data changes and grouping for efficient processing.
<b>Detection, Response &amp; Recovery</b> Capabilities that enable the organization to detect threats, respond to incidents, and recover from data breaches or system failures, minimizing impact and restoring normal operations.	Behavioural & Activity Monitoring	Observing user and system behaviour to detect anomalies.
	Data Breach Analysis & Response	Investigating and mitigating data breaches.
	Data Incident Playbooks	Predefined procedures for responding to data security incidents.
	Data Quality	Observing that information is accurate, complete, and consistent—making it easier to detect anomalies, prevent breaches, and enforce access controls effectively.
	Data Recovery & Restoration	Restoring data after loss or compromise.
	Data Threat Monitoring & Orchestration	Identifying and coordinating responses to threats.
	Data Vulnerability & Exposure Mgmt	Identifying and mitigating weaknesses in data systems.
	Forensics Analysis & Investigation	Examining incidents to understand root causes and impacts.
	Performance Monitoring	Tracking system performance to detect potential security issues.

# Stakeholder Engagement

Date	Stakeholders	Description
25/8/25	Rodger Donaldson, Paul Dudding	Data platform architects run through & updates
26/8/25	Shirley McIntyre, Tanya Boelema, Ann Tiatia	GM Tech Strategy & Architecture, HoA engagement
27/8/25	Dan Williams, Grace Shin, Dan Dove, Rebecca Mursell, Alan Fowler	Key DD&A people in data engineering, data risk, data governance
27/8/25	David Grant	DD&A Advanced Analytics – high level sharing
28/8/25	Anna Tarasoff, Roberta Prentice, Alex Dickson	DD&A GMs & data risk
29/8/25	Lee Challoner-Miles	GM Data, Digital & AI
1/9/25	Nic Olivier	GM briefing – short run through exec pack
1/9/25	Kim Arnold	HoA engagement
5/9/25	Richard Boxall, Brett Williams, Mrinal Mukherjee	CISO, HO and Product Manager
5/9/25	Damion Riordan, Deb Gill, Jane Eagle, Haseeb Quazi, Dave Dyer	DAP LT
8/9/25	Sandra Towgood, Alex Wardle	DD&A leaders
12/9/25	Mrinal Mukherjee, Diego McCormic, Karl Lellman, Red Hanlon	Cyber Data Protection Team & Security Architects
15/9/25	Hayden Smith, Oliver Jennings, Bianca Collor, Francois Herbert	Engineering HO and Product Managers
16/9/25	Kate Skinner	Exec briefing
23/9/25	Cross Domain (Strategy & Architecture, DD&A, Cyber and Core) GMs	Workshop with the key cross functional GMs to discuss and clarify Operating Model, Boundaries and Approach.



# User Perspective

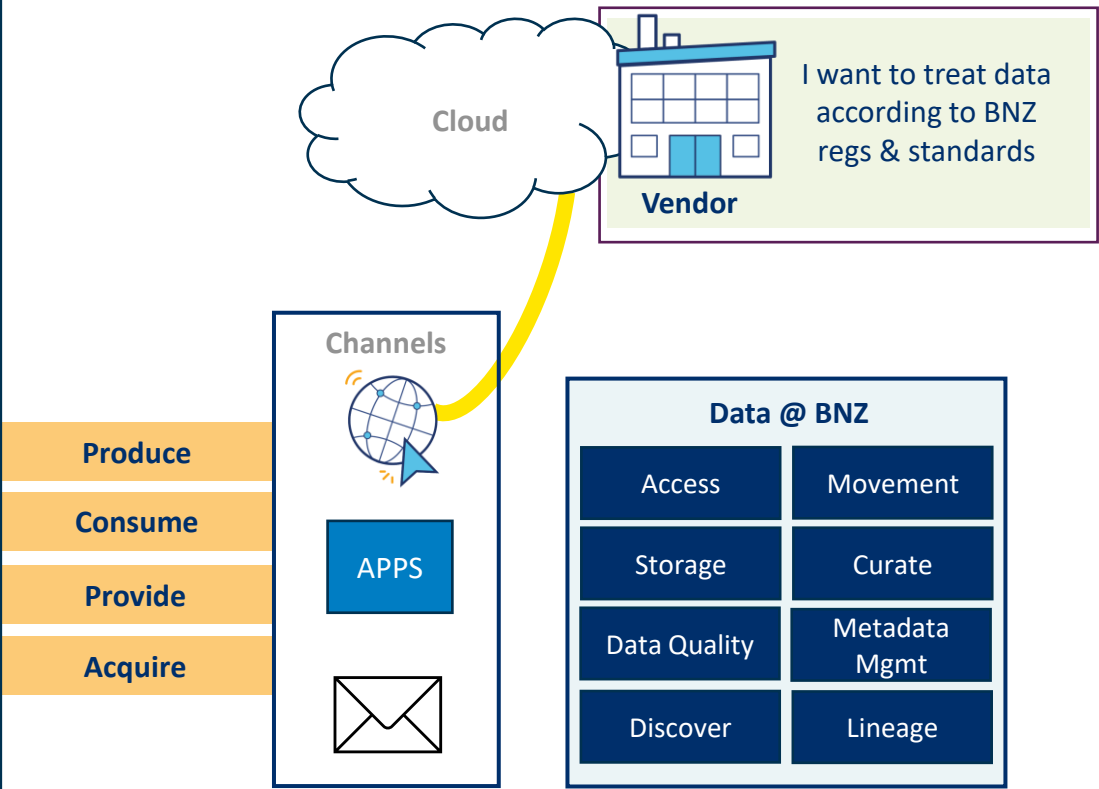
- I want it to “just work”
- I want it to be easy to do the right thing
- I want to know the data is secure
- I have an obligation to treat data securely



- I want it to “just work”
- I want to trust my bank
- I need guidance in how to keep my data safe
- I want to know that the data I produce, provide and access is secure



- I want to have agreement with BNZ as to how data is accessed and used
- I want easy and secure ways to access data
- I want easy & secure ways to acquire and provide data

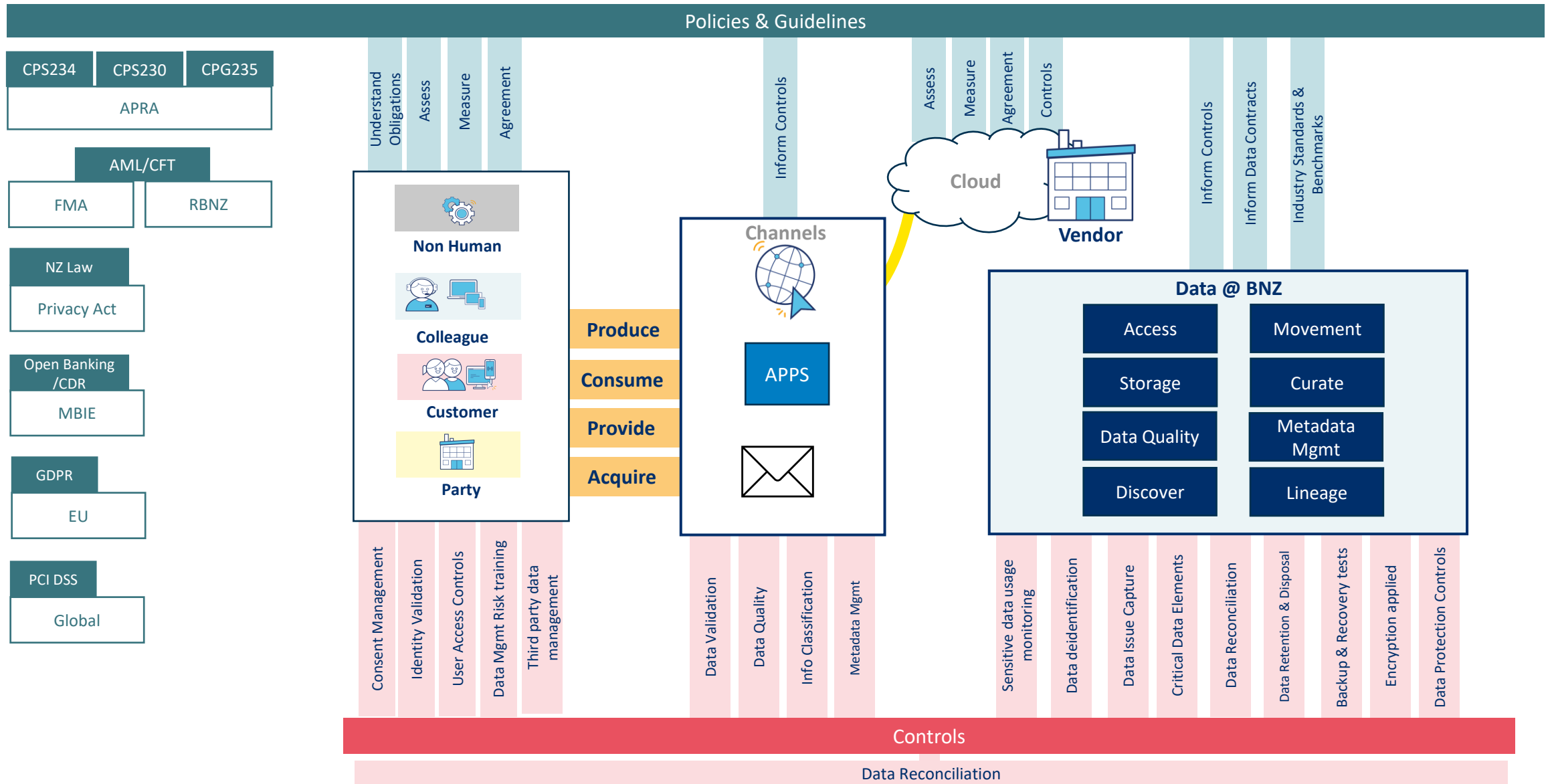


Data Capture	
Produce	Create data & information
Consume	Use data for business value

Data Distribution	
Provide	Supply data or information that has already been created
Acquire	Acquire data that is already created

*\*Party - Prospects, Partners, Regulatory bodies, vendors, etc. Note that vendor is called out explicitly here, because the governance of a vendor is different to other parties – per the next slide.*

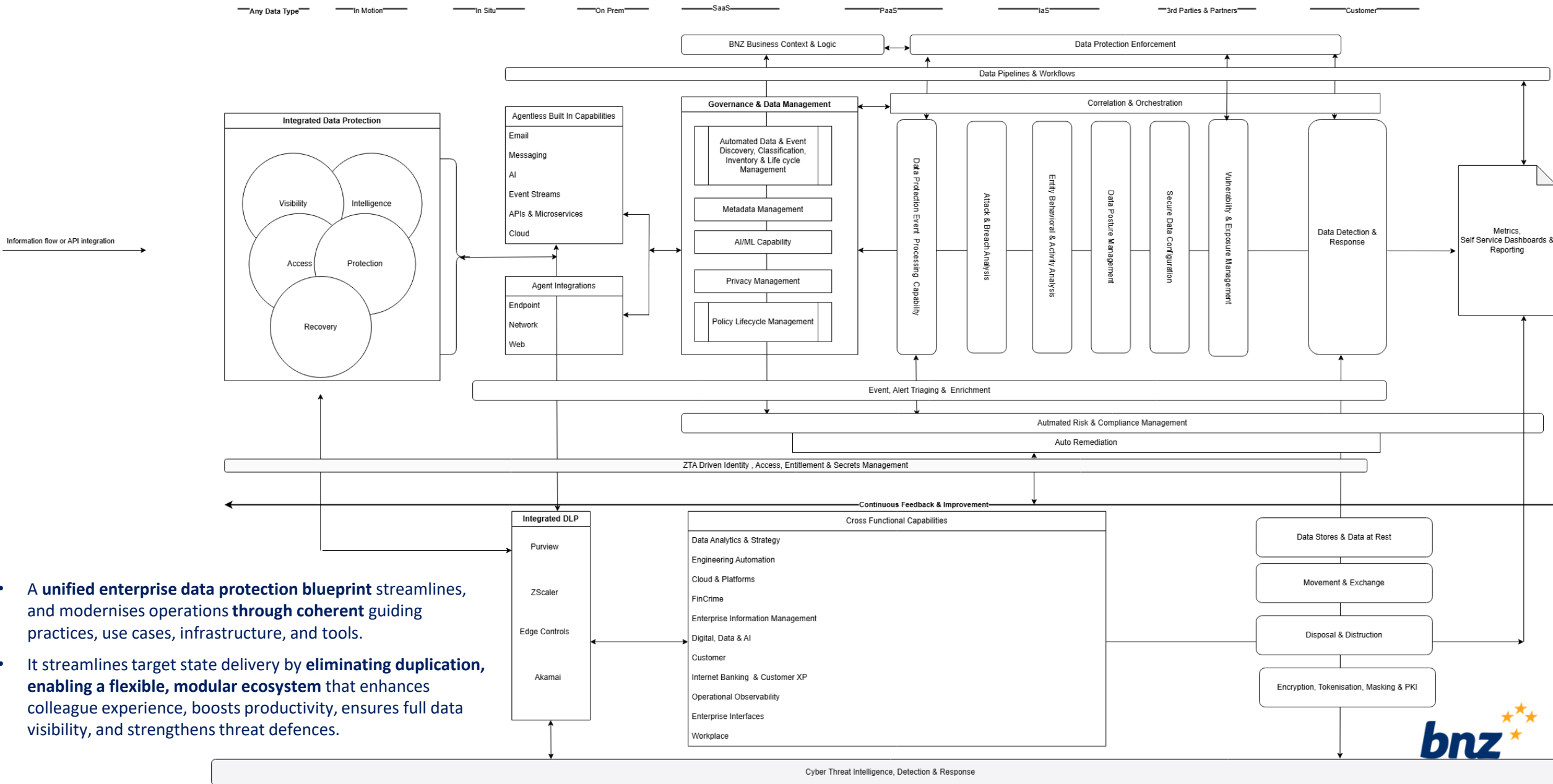
# Governance Perspective





# Data & Information Protection Blueprint

This diagram depicts blueprint of how the different components of the ecosystem must mould together to deliver desired ecosystem.



- A unified enterprise data protection blueprint streamlines, and modernises operations through coherent guiding practices, use cases, infrastructure, and tools.
- It streamlines target state delivery by eliminating duplication, enabling a flexible, modular ecosystem that enhances colleague experience, boosts productivity, ensures full data visibility, and strengthens threat defences.





# ***SAA Pack***



# Data & Information Protection Platform Context

The strategy, process and technology for **safe, reliable, trusted** and **compliant** data and information.

- Customer confidence & trust
- Business continuity & resilience
- Compliance & regulator expectations

**Strategic Drivers**  
*the 'why'*



- Customers
- Colleagues
- Party – Prospects, Partners, Regulators, Vendors etc

**Personas**  
*the 'who'*



- Regulations
- Risk Management
- Policies & Standards
- Controls

**Governance**  
*the 'what'*



- Access Enablement
- Protection
- Detection & Response
- Operational resilience

**Security**  
*the 'how'*



All data types

Across the whole lifecycle

Everywhere data  
& information  
lives and moves

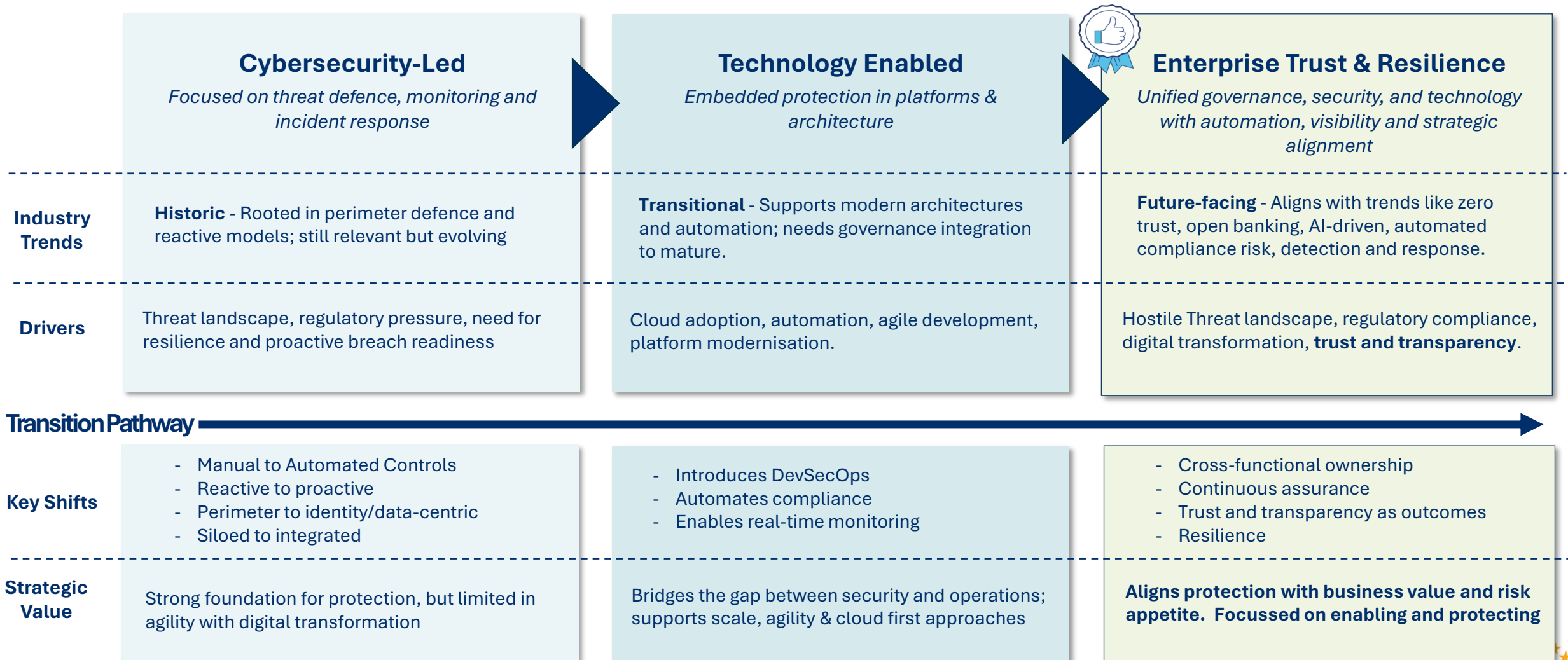
Continuously

Through  
automation &  
orchestration



# Data & Information Protection Modernisation

*From Defence to Confidence: Transforming Data & Information Protection into Enterprise Trust & Resilience*



# Data & Information Protection – BNZ Vision

Enabling BNZ to move faster, operate safer and lead with confidence in a digital first, regulated world.

## From Siloed to Orchestrated Governance

- Implement **federated governance** with shared standards and automation tools—empowering platform teams with guardrails, not gates.
- Establish a **Centre of Enablement** to co-ordinate enterprise-wide protection, trust and resilience

## From Independent to Collaborative Delivery

- Shift to an **enterprise shared responsibility model**, enabling teams to own protection outcomes with the right support.
- **Equip and incentivise teams** to prioritise secure configuration and data protection outcomes – not just functional delivery.

## From Reactive to Proactive Control

- Embed **automated protection** into the **design and deployment lifecycle**—ensuring controls are integrated from the start, not retrofitted.
- Introduce **automated response workflows** to detect and act on anomalies across platforms.

## From Tech Uplift to Secure-by-Design

- Leverage existing investment in **cyber**, **cloud transformation** and **data platform modernisation** to embed native protection capabilities.
- Make data protection a **default part of platform engineering**, not an afterthought.

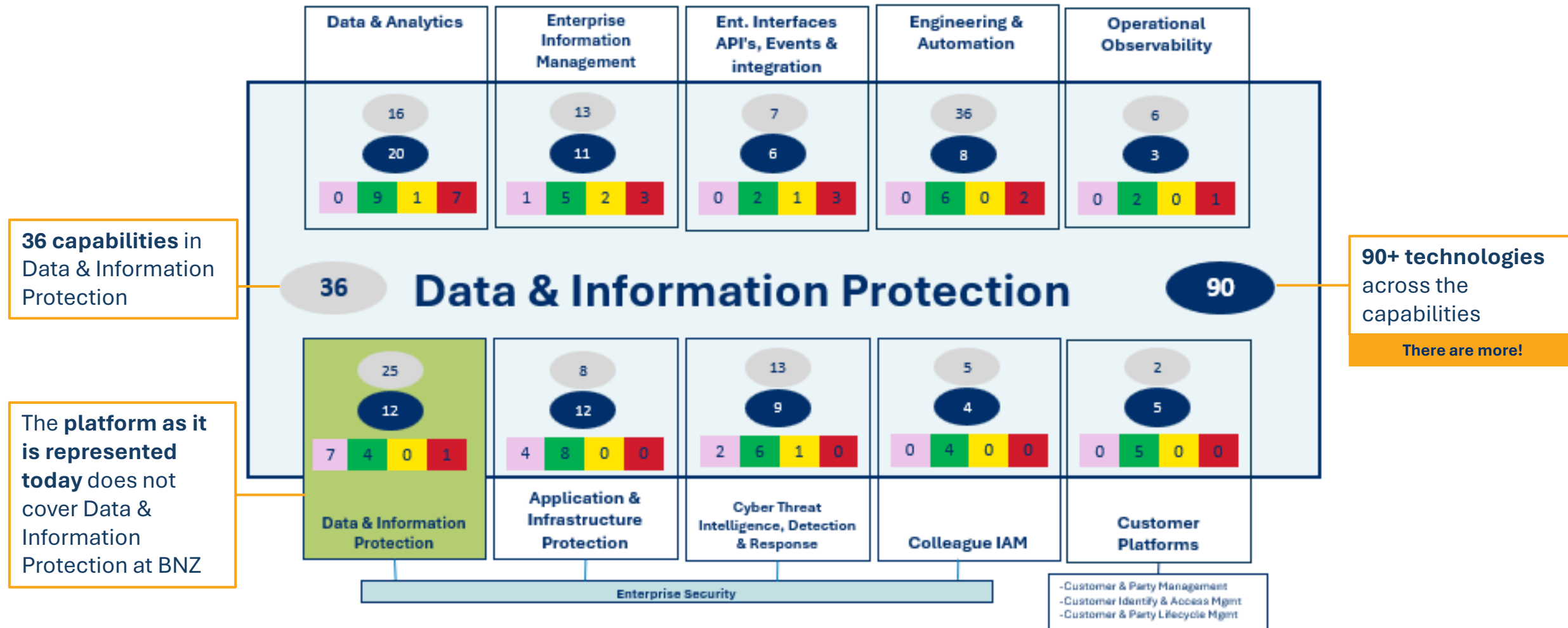
## From Cyber-centric to Enterprise Enablement

- Build a **policy translation layer** to convert business protection needs into scalable, platform-specific enforcement.
- Enable **cross-platform visibility and orchestration** to align protection with enterprise priorities and delivery pipelines.



# Current State Overview

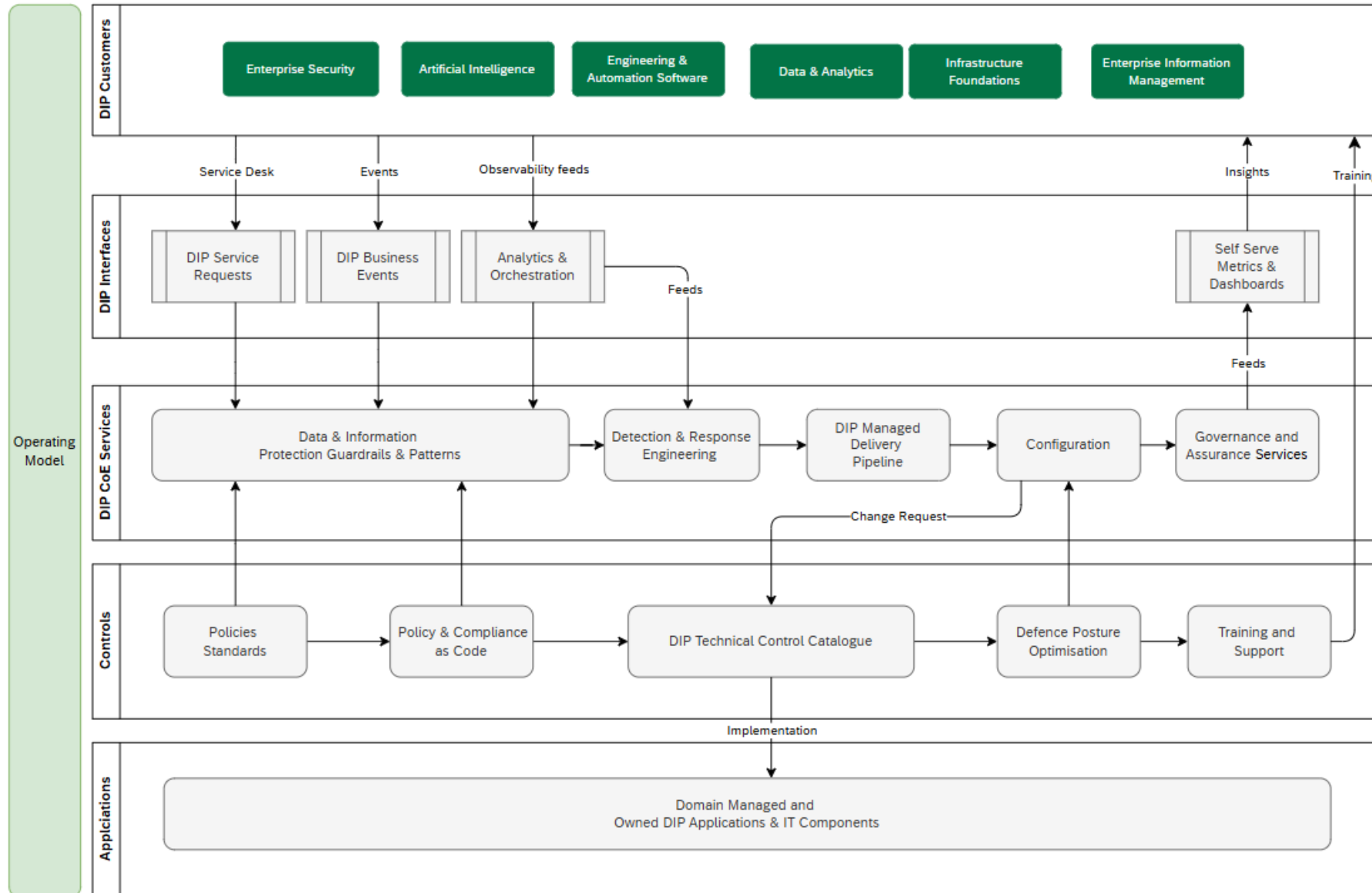
Data & Information Protection capability coverage is achieved across **many platforms & technologies**.



# Current State Challenges

- ➔ **Fragmented and inconsistent protection** – Data protection efforts are not co-ordinated, making it hard to know what is protected across the ecosystem.
- ➔ **Legacy systems and limited capability** – Outdated technologies and complex data flows hinder our ability to protect data effectively.
- ➔ **Disparate standards and guidance** – There is no unified approach across cyber, tech, and governance, leaving teams without clear direction
- ➔ **Reactive rather than proactive** – We often respond to issues after they occur, with limited tools to detect and prevent risks early.
- ➔ **Compliance and change challenges** – We retain more data than needed, struggle to meet compliance confidently, and face resistance when improving protection.

# Target State - Conceptual



**Customer Layer:** Platform owners who, through training and insights, can access DIP services via the interface layer.

**Interface Layer:** Defining how to engage data and information protection platform support and delivery services.

**CoE Services Layer:** Defines the services available, from prepared patterns, guardrails, to the delivery of configuration changes, recommendations and insights

**DIP Control Layer:** Catalogue of governed risk mitigations, including policies, standards, training and support.

**Application Support Layer:** representing the technologies responsible for implementing the configuration changes



# Data & Information Protection - Key Messages Recap

*Enabling BNZ to move faster, operate safer and lead with confidence in a digital first, regulated world.*



## Leadership commitment drives success

- Long-term value in Data & Information Protection comes from sustained leadership, smart investment and visible sponsorship



## Enterprise Shared Responsibility

- Beyond cyber – everyone plays a role. Data Protection spans strategy, tech, and operations – wherever data lives and moves



## Drivers for change

- Proactive, data-centric protection replaces reactive cybersecurity.
- End-to-end observability enables smarter compliance and threat response
- Co-ordinated execution delivers scalable, consistent outcomes



## Five Platform Transformations

From	To
Siloed	Orchestrated Governance
Independent	Collaborative Delivery
Reactive	Automated & Proactive controls
Technology-led platform uplift	Secure-by-design
Cyber-centric	Enterprise-aligned





# ***Exec Pack***



# Data & Information Protection

*The strategy, process, technology and practice for safe, reliable, trusted and compliant data and information.*

The target state enables BNZ to move faster, operate safer and lead with confidence in a digital first, regulated world.



**Re-use** the capabilities in existing technologies across platforms to uplift Data & Information Protection capability across the enterprise



Define and communicate **standards, patterns & tools** for the enterprise to ensure consistent protection practices and streamline compliance



Apply **DataSecOps** to embed automated Data & Information protection continuously across the lifecycle to ensure protection is built-in rather than added as an afterthought.



## Scope & Context

Effective Data & Information Protection requires deep integration with where data lives and moves – across the entire technology ecosystem, not within the boundaries of any single platform.



## Transformation Approach

An evolution from reactive, siloed cybersecurity practices to a unified model that embeds governance, security, and technology across platforms and teams. Using a technology enabled phase as a bridge, to build the operational maturity needed to achieve enterprise-wide trust, resilience and agility.



Introduce Data & Information Protection **Observability** across the enterprise to gain real-time visibility into sensitive data usage, threat detection and compliance



Introduce **Automation** in detection & response, to rapidly identify and mitigate threats while reducing manual effort and response time.



Look for **efficiency gains in AI** that can improve Data & Information Protection



## Current State - BMI View

BMI is represented in technologies across other platforms in BNZ, rather than in Data & Information Protection itself.



## NAB Alignment

NAB haven't adopted Data & Information Protection as a platform, however the approach is similar in building protection with capabilities from other platforms. BNZ & NAB are targeting similar outcomes across contributing platforms e.g. secure-by-design, proactive risk and threat informed protection.

# Modernisation Roadmap



## Cyber Security Led

*Focused on threat defence, monitoring & incident response*

- Proactive Detection & Response
- Cloud First
- DevSecOps
- Automation
- Platform Consolidation



## Technology Enabled\*

*Embedded protection in platforms & architecture*

- Data governance integration
- Cross-functional strategy
- Executive sponsorship
- Continued compliance



## Enterprise Trust & Resilience

*Unified governance, security & technology with automation and strategic alignment*



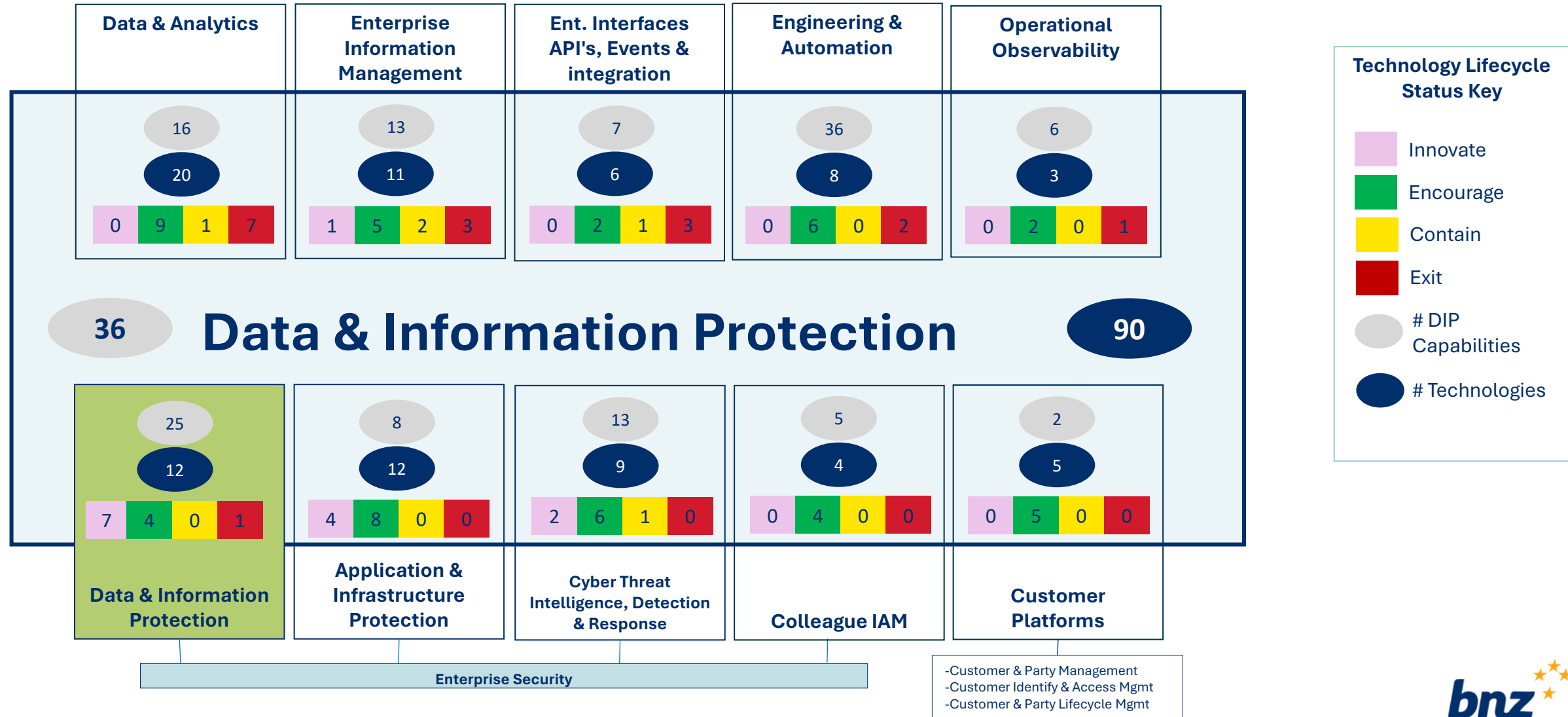
*\* Technology Enabled - some work in this phase already*








# Current State – Broader view

In protecting data and information across the entire ecosystem, there are many technologies that contribute to Data & Information Protection.

**Note** – there are more technologies & platforms



# Challenges & Issues

-  **Fragmented and inconsistent protection** – Data protection efforts are not co-ordinated, making it hard to know what is protected across the ecosystem.
-  **Legacy systems and limited capability** – Outdated technologies and complex data flows hinder our ability to protect data effectively.
-  **Fragmented standards and guidance** – There's no unified approach across cyber, tech, and governance, leaving teams without clear direction
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# Recap - Key Messages

*Enabling BNZ to move faster, operate safer and lead with confidence in a digital first, regulated world*



## Leadership commitment is essential for success

- Achieving this requires executive buy-in, sustained commitment, and targeted investment to drive meaningful change and deliver long-term value.



## Data & Information Protection is an enterprise shared responsibility

- For delivering the strategy, process, technology and practice for safe, reliable, trusted and compliant data and information.
- Across many technologies & platforms – wherever data is being used, lives and moves.
- Thus going **beyond being seen as a cyber only responsibility**.



## Drivers for change

- **Evolution toward proactive, data-centric protection** that addresses broader information risks and obligations. The current Cybersecurity focus is effective, but reactive with limited agility.
- **End-to-end observability** is essential to understand how we meet compliance obligations, identify gaps, detect threats, and target uplift where it delivers the greatest value.
- **Co-ordinated execution** is key to achieving consistent, scalable outcomes. Fragmented delivery across technologies and teams limits effectiveness.



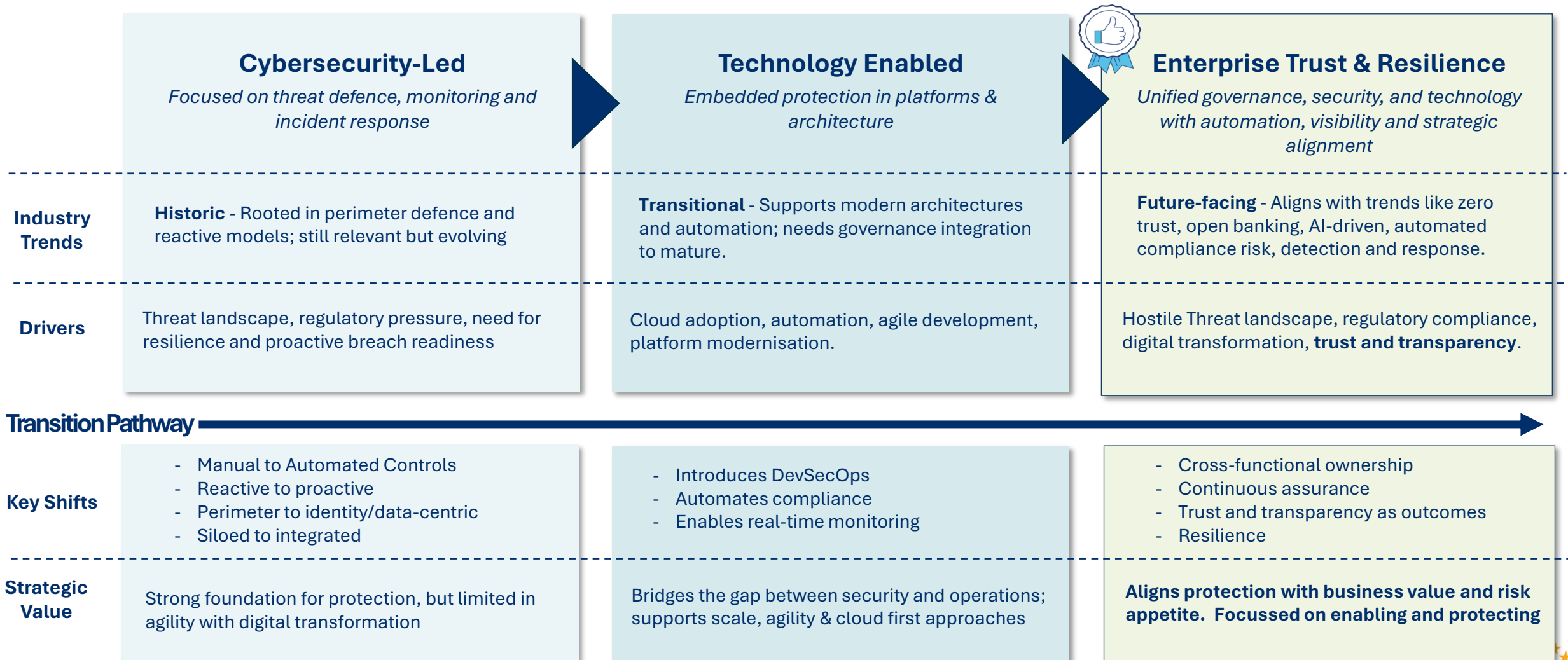
## Transformation

- Siloed to **Orchestrated Governance and Assurance**
- Blind spots to **continuous visibility**
- Independent to **Collaborative Delivery**
- Reactive to **Automated & Proactive Controls**
- Utilising existing **investment in technology and programmes** (where possible).
- Cyber centric to **Enterprise Alignment through a shared responsibility operating model**.



# Data & Information Protection Modernisation

*From Defence to Confidence: Transforming Data & Information Protection into Enterprise Trust & Resilience*



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## From Independent to Collaborative Delivery

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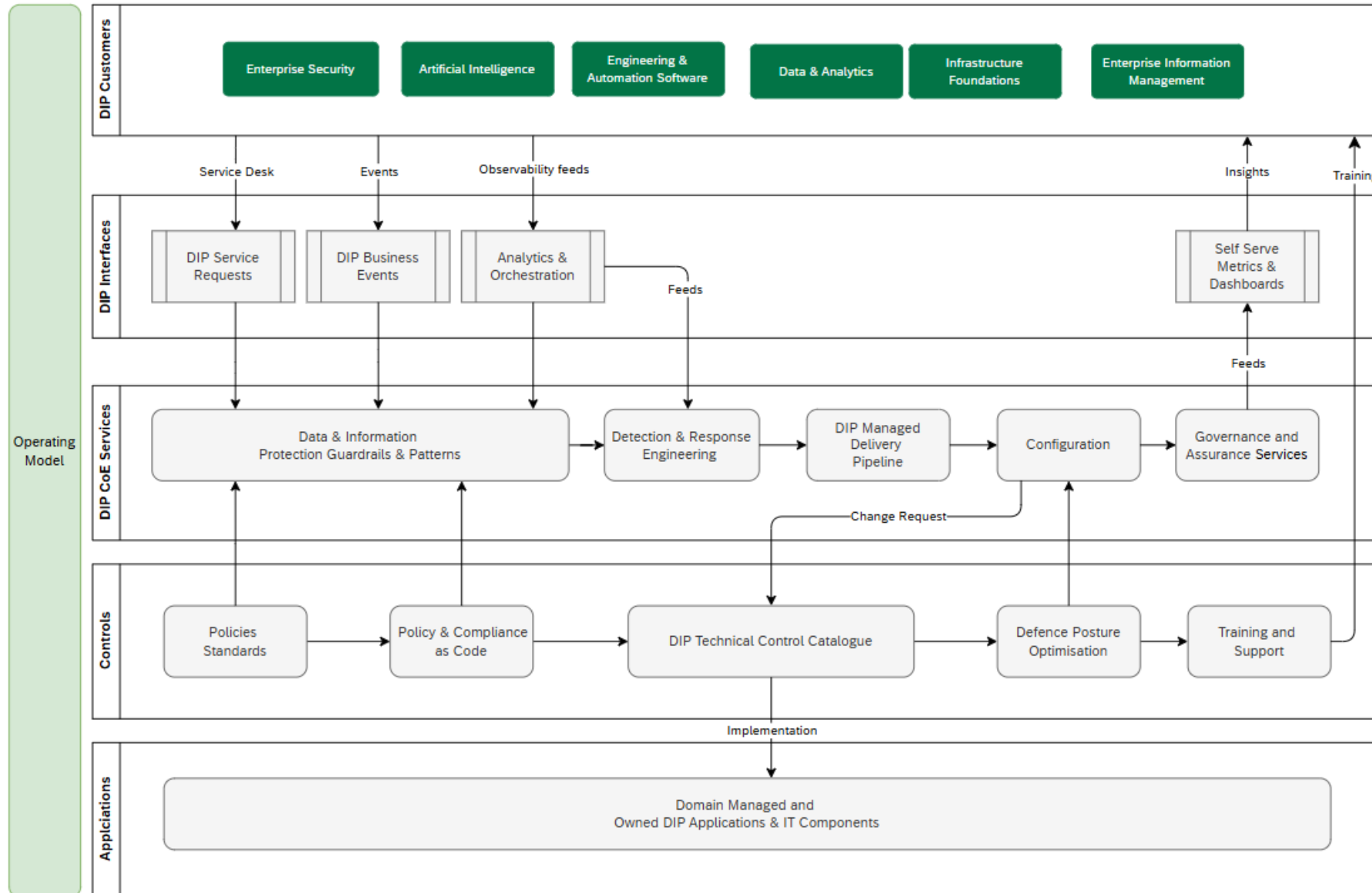
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- Leverage existing investment in **cyber**, **cloud transformation** and **data platform modernisation** to embed native protection capabilities.
- Make data protection a **default part of platform engineering**, not an afterthought.

## From Cyber-centric to Enterprise Enablement

- Build a **policy translation layer** to convert business protection needs into scalable, platform-specific enforcement.
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# Feedback Themes

*In sharing in more detail with GMs and DD&A teams, feedback is showing up in these areas:*



**Yes! – Enterprise trust and resilience** is what we want to be targeting for BNZ, it is the right approach.



It is great direction and **very ambitious**, how do we break it down and roadmap the journey so it is achievable? Keep in mind the practicalities of achieving it.



Leadership involvement – how will the **shared accountability** show up practically? We see challenges in that today, where an issue pops up we need to make sure that the accountability is clear



**Centre of Enablement** - Practically, where would CoE sit? Who would be the key areas that need to be involved. And, should it be called Centre of Enablement, or something else?



The **balance** between the need to protect and the need to enable is important, we must get that right.



While we don't have CoE now, **how do we solve for gaps** like synthetic test data, with an enterprise approach **in the meantime?**



