

# BT Transition to BAU

## Overview Document: BT Major Release Deployment Framework

**Version: 1.0 FINAL** (HURINGA REFERENCE DOCUMENT)

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# Overview and Context | Purpose of this Document

This document details the deployment framework that developed by the BT Deployment Services team to ensure a consistent approach to the planning and execution of BT major release cutovers. The Deployment Services team is a BT function that will not endure beyond BT, and as such, the purpose of this document is to:

- **Serve as a transition artefact** – a “how-to” support guide for major release deployment planning at IR. This will be available beyond the life of the BT programme for reference by IR’s enduring release and deployment function(s).
- **Define the explicit processes** for planning, rehearsing, and executing the Deployment & Cutover of a BT major release.
- **Document implicit/tacit knowledge** accumulated by the BT Deployment Services team across 5+ years of involvement with BT and 6 major release deployment & cutover cycles.

**This document is split into four topic areas:**

#	Topic	Overview
1a	High level deployment framework	Introduces the three phases of deployment that guide the planning and execution process, as well the granular set of tasks that underpin each phase.
1b	Detailed deployment framework	Focuses on each granular tasks associated with the high level deployment framework and provides a number of topic areas, key questions to answer, and further considerations.
2	Deployment capabilities	Provides a high level view of the different capabilities and skillsets required; (a) within the BT Deployment Services team, and (b) more broadly within the BT programme or IR organisation, to reliably plan for and execute the deployment & cutover of a BT major release.
3	Deployment sizing framework	Introduces a guide for sizing the deployment/cutover footprint of a release. This is to reflect that BT major release cutovers are exceptionally large and complex, and that these types of events are much less likely once the BT-led transition from Heritage to START has completed.

**NOTE** this document captures current state processes and knowledge as it relates to the Deployment Services team in a BT context. In referencing this please, please note:

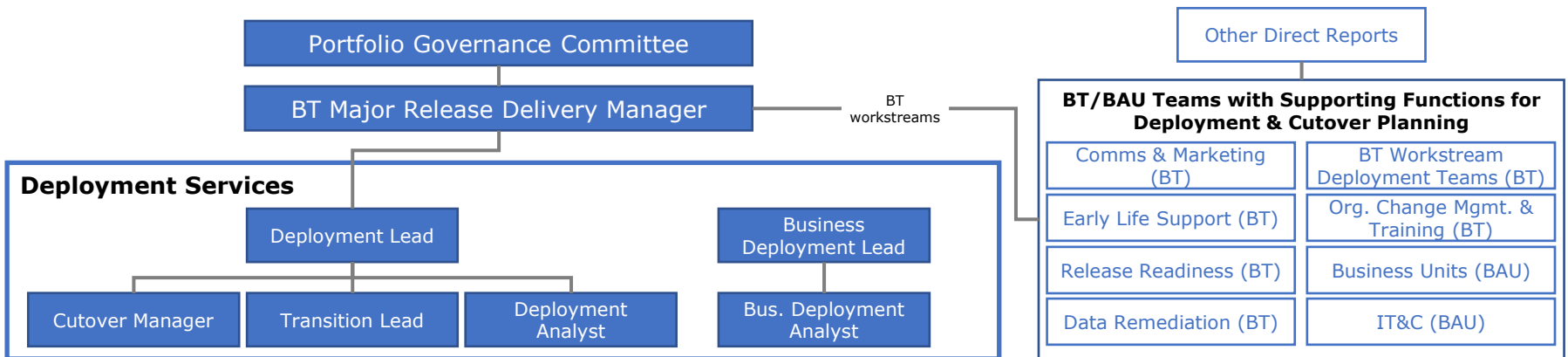
- This document DOES NOT detail the roles and responsibilities of other BT/BAU teams that are required to support the deployment and cutover planning – e.g. org change management and training, data purification, release readiness, hypercare & early life support.
- This document should not be used as an official IR framework for deployment and cutover planning, but rather as a tool to supplement quality and right-sized deployment & cutover processes.

# Overview & Context | BT Deployment Services Team

The Deployment Services team is a BT function that was established during Stage 1 of IR’s Business Transformation programme. Throughout the course of BT, Deployment Services has been responsible for:

1. Leading the integrated deployment & cutover activities associated with each BT major release. This broadly covers three domains:
  - **Business deployment planning** – ensuring impacted business units understand and execute tasks required of them to; (a) successfully prepare for a BT major release to be deployed to IR’s production environment, and (b) transition through the disruptive cutover period and adjust to new ways of working following go-live.
  - **Technical deployment** – ensuring all system code/configuration changes and data changes required to deploy a BT major release to IR’s technology production environment have been planned for and are validated.
  - **Integrated deployment planning** – ensuring; (a) a fully integrated cutover plan with correct sequencing and dependencies between all business and technical deployment tasks, (b) stakeholder groups active in the cutover understand in detail the deployment tasks assigned to them and have been involved in at least one rehearsal of the integrated cutover plan, (c) any areas of overlap/dependency in the cutover plan between different groups or systems have been thoroughly workshopped and planned with input from all relevant stakeholder groups.
  
2. Assuming the role of ‘Cutover Control’ during major release cutovers – i.e. the integrator function that owns the master cutover plan, orchestrates the various teams involved through cutover, and facilitates triage and resolution of cutover issues.

## BT Deployment Services Team within a BT Major Release Deployment Structure:



# Overview & Context | Characteristics of a BT Major Release

During the BT Programme the Deployment Services team have been responsible for the deployment planning & cutover execution for START major releases. As such, the BT Deployment Framework detailed in this document has been developed in response to the deployment and cutover characteristic associated with the START major releases – as detailed in the boxes below.

## Characteristics of a BT START Major Release

1. Migrating tax and social policy products from IR's sunseting Heritage platforms (e.g. FIRST and other Heritage satellite systems), to IR's enduring Core Tax & Social Policy solution – i.e. START. Included in this:
  - Extract / Transform / Load of Heritage data into START, and reconciliation to verify that data has been accurately converted.
  - Crown Revenue reconciliation to verify that revenue associated with the migrated products has been unaffected by data conversion and continues to reconcile.
  - System upgrades required to shift the ownership of tax & social policy products from IR's Heritage platform to the enduring START Core Tax & Social Policy solution.
  - System co-existence processing dependencies that must be completed during cutover – as well as managing dependencies with partnering organisations that are disrupted by cutover (e.g. file exchanges).
2. An outage to IR's core systems (e.g. FIRST, START) and channels (e.g. myIR, Contact Centre, Gateway Services) to ensure a stable production environment necessary for data migration to run uninterrupted. These outages have spanned one or more business days and have had significant impact to customer and business stakeholder groups.
3. Legislative change that is built into the deployed system/channel upgrades. The effective date for legislation often dictates when the major release must be deployed and go-live – as well as detailed contingency 'plan B' for enforcing legislative changes if the technical solution is not ready to go-live in time.



## BT Examples

### START Stage 1

- Migrated to START: GST
- Go-live: February 2017
- Duration: 3 days

### START Release 2

- Migrated to START: Withholding tax, Gaming Machine Duty, Fringe Benefit Tax
- Go-live: April 2018
- Duration: 3.5 days

### START Release 3

- Migrated to START: Income Tax, WffTC
- Go-live: April 2019
- Duration: 7.5 days

### START Release 4

- Migrated to START: KiwiSaver, Student Loans, PAYE
- Go-live: April 2020
- Duration: 7 days

### START Stage 4, Release 1

- Migrated to START: PPL, Unclaimed Money, Duties, NZ Foreign Trusts
- Go-live: February 2021

**NOTE** that START major release cutovers have been highly complex and long running. Most START releases beyond BT should have a significantly smaller cutover footprint for which many of the processes in this documented Deployment Framework will either not be required or at least require a significantly scaled effort. Section 4 of this document provides a framework to guide the right sizing of this Deployment Framework for future post-BT releases that will likely have significantly simpler cutovers.

# 1. BT Deployment Framework

## a. Overview

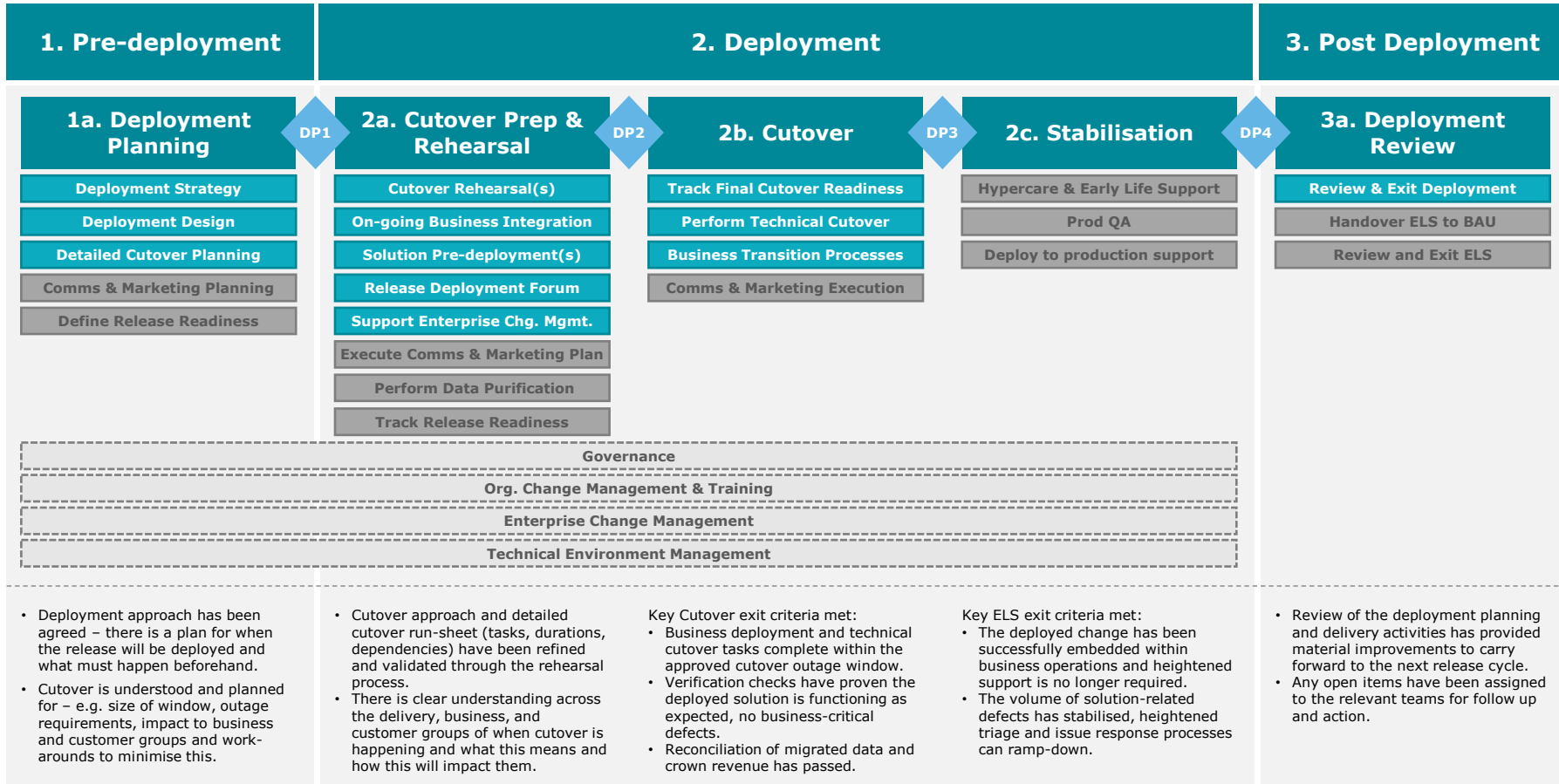
**This Section Covers:** The high level end-to-end process for planning and implementing the deployment of a BT major release cutover.

# BT Deployment Framework

## The Phases and Activities Required in Deploying a BT Major Release

The BT Deployment Framework captures the end-to-end set of deployment-related activities that must be completed for any given BT major release.

Each deployment phase and respective set of activities is underpinned by a subset of artefacts, topic areas, and key questions & considerations. These are overviewed on the following slides, and then in detail in section 1b of this document.



### Key

Deployment activities that have been the responsibility of BT Deployment Services. This framework documents these tasks in detail.

Deployment activities that have been the responsibility of other BT workstreams or BAU units. Detail on these tasks are not included in this deployment framework.

'Wrap-around' functions required to support and/or guide the deployment planning and implementation of a BT major release. Details on these tasks are not included in this deployment framework.

# BT Deployment Framework | Overview

## Pre-deployment Phase

### 1. Pre-deployment

### 2. Deployment

### 3. Post-deployment

#### Purpose & Structure

The purpose of the **Pre-deployment** phase is to identify the technical and business requirements necessary to successfully deploy a release, and to develop an approach and plan for how these requirements will be delivered. This up-front period of deployment planning and design enables the detailed cutover plan to be built and subsequently rehearsed and validated during the 'Deployment' phase. For BT Major Releases, the pre-deployment phase comprises two sub-phases:

1. **Deployment Strategy & Approach.** Defines at a high level how the changes (business and/or technical) associated with a release will be transitioned to the production environment, with consideration given to:
  - What is being deployed – i.e. the scope of the release. There may be technical system/data changes, business process changes, legislative changes, amongst others. The strategy needs to identify the areas of deployment complexity and risk and establish an approach to manage this risk and allow the successful deployment of the release.
  - When to deploy – i.e. cutover window options analysis. This is typically driven by the scope of change, complexity of change being deployed, and forecasted cutover runtime. BT Major Release cutovers require system and channel downtime to deploy. Outage windows should not conflict with key customer and business events.
  - How to prove the deployment plan – what level of testing (i.e. deployment rehearsals) is required to build confidence in the deployment approach and cutover plan?
2. **Detailed Deployment Design.** Extending the high-level deployment strategy and deployment approach plans into a more detailed and executable plan. This involves the following for BT major releases:
  - Product transition plans, which detail how business processing and customer events will be reliably transitioned through a period of disruption during the cutover window. Transition plans are almost definitely required for those tax and social policy products that are in scope of the release. Transition plans for other products may also be required if their BAU schedule is impacted by a system and/or channel outage required for cutover.
  - Cutover task planning – Details the granular set of tasks and people required to deploy technical system/data changes and/or support business transition through the cutover period. This is captured in an integrated cutover run-sheet that also identifies dependencies between tasks as well as expected runtimes and critical path duration.

#### Artefacts & Events

Artefact / Event	Purpose
<i>(artefact)</i> Deployment Strategy and Approach	Describes at a high level how changes will be deployed to production, providing enough detail to guide detailed deployment planning and inform impacts on other workstreams within the release.
<i>(artefact)</i> Deployment Readiness Framework	Describes the readiness process and criteria that will be used to track the readiness of the release for deployment.
<i>(artefact)</i> Cutover Approach	Describes the high-level cutover sequencing for both roll-forward and rollback scenarios, cutover entry and exit criteria, and cutover management practices.
<i>(artefact)</i> Business Deployment Approach	Describes the high-level business activity required to: prepare for cutover, transition through the cutover period, and support post go-live tasks.
<i>(artefact)</i> ELS approach	Details how the solution will be supported during the solution stabilisation period in the days/weeks following go-live. <i>NB: This is out of scope for Deployment Services.</i>
<i>(artefact)</i> Comms & marketing plan	Identify stakeholder groups, high-level comms content, comms timings and events/milestones that may trigger comms, and channels for distribution. <i>NB: This is out of scope for Deployment Services.</i>
Deployment Readiness Checkpoint 1	Are we ready to proceed with rehearsing the cutover?
<i>(artefact)</i> Cutover Implementation Plan	Detailed run-sheet that includes all technical and business tasks for action during cutover to properly implement the business & technical changes.
<i>(artefact)</i> Business verification scenario list	Business scenarios required to validate solution functionality during cutover.
<i>(artefact)</i> Product Transition & Business Deployment Plan	Defining the ramp-down sequencing necessary to reliably transition product processing through the cutover window.
<i>(artefact)</i> Cutover People Roster	Detailed log of cutover task owners and time commitments through the cutover window.

# BT Deployment Framework | Overview

## Deployment Phase

1. Pre-deployment

2. Deployment

3. Post-deployment

### Purpose & Structure

The purpose of the **Deployment** phase is to action the detailed deployment plan – by first rehearsing, refining, and validating the detailed plan before then using this plan to deploy the release to IR's production environment.

For larger releases the deployment phase is typically coupled with a period of enterprise change control – whereby other change activity is prevented OR minimised and closely monitored, in order to ensure a consistent and stable environment for the eventual production deployment.

The deployment phase comprises three sub-phases:

- 1. Cutover Rehearsal(s) & Preparation.** Practising of the detailed deployment run-sheets under production-like conditions, including:
  - Deploying technical changes to the QUAL / staging environment (i.e. the 'n-1' environment on the path to production)
  - Using the same people that will be involved for the production cutover
  - Making use of the deployment practices and rituals that will be used for production cutover (e.g. issue management, comms, task tracking, etc.)

Multiple fully integrated rehearsals are required for longer running, complex, high risk cutovers – such as the BT major releases. This is necessary in order to fully validate and prove the complex cutover plan prior to attempting to cutover in the production environment.

- 2. Cutover.** The period of deploying technical changes to the production environment and/or transitioning business processes to the new solution. Typically comprises a standard pattern of events:

- Ramp-down business activity and system processing → shut-down systems, channels, and business/customer activity → deploy and verify system and data changes → receive approval to go-live → start-up system, channel and business/customer activity → complete any business/system catch-up processing.

- 3. Stabilisation/ELS.** A time limited period of enhanced support immediately following cutover when system stability issues and business transition challenges are most likely. ELS is typically supplemental to existing BAU support process.

The ELS period for BT major releases has not been managed by the BT Deployment Services team. As such, go-live approval and system / channel start-up have typically serves as a handover point from the Deployment Services team to the ELS team.

### Artefacts & Events

#### Artefact / Event

#### Purpose

(*event*) Deployment Integration Forum

Regular meeting to maintain alignment of planning and progress, discuss key risks and issues, track readiness, and socialise relevant deployment artefacts amongst those workstreams directly involved in the release deployment.

(*event*) Enterprise Change Control

Enforcing a period of reduced change or no change in order to maintain environment stability in the lead-up to production cutover.

(*artefact*) Cutover rehearsal plan and run-sheet

Confirm scope of cutover rehearsal, and adapting production cutover schedule accordingly.

(*event*) Cutover rehearsal

Practising the execution of the cutover run-sheet in order to validate if cutover exit criteria can be met with the cutover plan as it currently stands, or if further refinement and updates are required.

(*artefact*) Cutover rehearsal exit report

Describes the outcome of the dress rehearsal lessons learned, if the objectives were achieved and makes a recommendation if another dress rehearsal is required.

Deployment Readiness Checkpoint #2

Are we ready to proceed with deploying the release to IR's production environment?

(*event*) Production Cutover

Dedicated window during which all elements of the new solution are deployed to production – i.e. technical system and data updates, transition of business processes etc.

(*artefact*) Go-live decision report

Describes the outcome of cutover and details the results of each exit criteria.

Deployment Readiness Checkpoint #3

Are we ready to go-live with the deployed release and re-open IR's core systems and channels?

(*event*) ELS

Heightened monitoring and support while the solution stabilises across technical and/or business domains.

*NB: This is out of scope for Deployment Services.*



# BT Deployment Framework | Overview

## Post-Deployment Phase

1. Pre-deployment

2. Deployment

3. Post-deployment

### Purpose & Structure

The purpose of the **Post-deployment** phase is to formally acknowledge the completion of all deployment activity, and to exit the deployment phase. The post-deployment phase is typically split between:

1. **Deployment/Cutover close-out.** This typically involves a series of deployment retrospectives with the relevant technical and business deployment groups that were involved throughout the deployment planning, rehearsal, and cutover phases. These sessions focus on identifying:
  - What went well and should be continued in future releases?
  - What could have been planned/managed/implemented better and should be stopped or done differently in future?
2. **ELS exit and close-out.** Formal exit of the ELS phase will require proof of a number of stabilisation exit criteria being met, such as:
  - No open significant issues (i.e. sev 1 / sev 2) associated with the deployed changes.
  - Other open defects are under control – i.e. sev 3/4 defects have been remediated or there is an action plan to resolve these.
  - Solution stability – i.e. technical and business service levels are being met and there is confidence in BAU support structures being able to sustain this.
  - Handover complete – i.e. technical and business knowledge has been transferred to respective BAU units.

### Artefacts & Events

#### Artefact

#### Purpose

*(artefact)* Deployment Close-out Report

Describes the key lessons learned from the Readiness, Deployment Planning and Cutover stages of a release and how those lessons will be turned into improvements for future deployment approaches.

*(artefact)* ELS Exit Report

Describes the outcome of ELS, documents and proves that exit criteria have been met, and details any open issues and their resolution plan.

Deployment Readiness Checkpoint #4

Are we ready to exit the intensive support and fully transition support of the deployed release to BAU support processes.

# 1. BT Deployment Framework

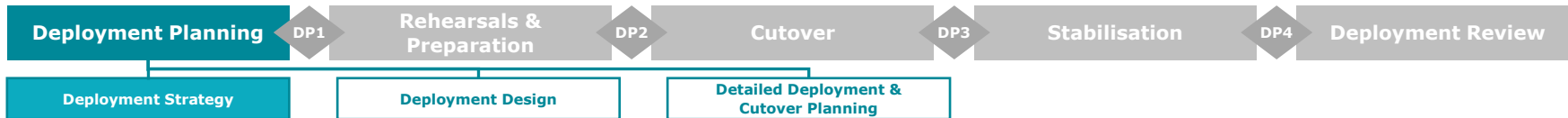
## b. Detailed Considerations

**This Section Covers:** A detailed breakdown of the high level Deployment Framework presented in section 1a. For each GREEN deployment activity on the Deployment Framework one-pager:

- What topic areas should be explored in in completing this activity? And per topic area:
  - What key question(s) must be answered?
  - Based on best practice and lessons learned from previous BT Major Releases, what are the key areas that should be considered in answering these key question(s)?
  - Examples of relevant deliverables or artefacts that have been produced by the BT Deployment Services team.

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations

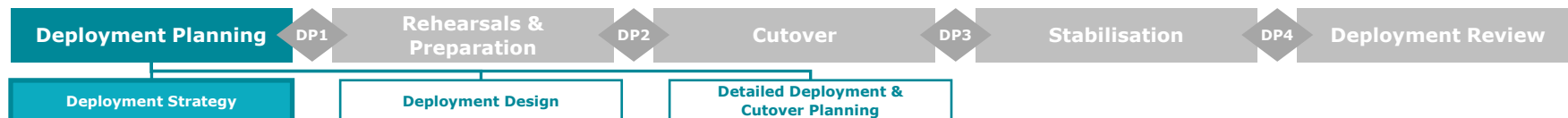


**Deployment Strategy Phase** | The strategy is the starting point for planning the deployment of a release. The Deployment Strategy is informed by inputs relevant to the release and provides just enough guidance on how the deployment will be completed – to inform more detailed deployment planning that will be defined in later deployment deliverables.

Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Release scope	<p><b>KEY QUESTION</b>   What’s in scope for change with the release, how will this influence cutover planning?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Systems/Channels.</b> What systems/channels are having changes deployed to them, do these changes require a full outage to implement, and if so does this have a downstream impact to other systems/channels/services also being unavailable during the change window? (e.g. an outage to START would also require myIR, Gateway Services, and Contact Centre to be offline).</li> <li>• <b>Legislation.</b> Are there any legislative changes coupled with the release, if so what is the effective date for the new legislation or is there potential to influence this? Are system changes required to support new legislation, if so must the system changes be in place by this date or is the change less-tightly coupled to the effective date? What is the contingency plan for meeting legislative requirements if system changes are not ready to be deployed by the legislative effective date?</li> <li>• <b>Data migration.</b> What products are in scope for migration, what are the key cyclic business events associated with these products? These will need to be considered in determining when to cutover.</li> <li>• <b>External changes.</b> Are changes required to system(s) of one or more partnering agencies/organisations or customer groups? Can the deployment and go-live of changes IR-side be decoupled from external partner-led changes? If not, how will this external delivery risk (and dependency) be managed?</li> <li>• <b>People.</b> Which units/roles will be required to support deployment planning and how will they be managed – i.e. roles and responsibilities during deployment planning and deployment phases. Which vendors must be engaged?</li> </ul>	n/a, Release scope is used to provide context in the Deployment Strategy. Typically scope will lead to deployment-related challenges that will require a strategic response to be thought through – e.g. what is changing, how do we transition this change from ‘old’ to ‘new’ through the cutover period.
Cutover outages and impact to business operations & customer events / expectations	<p><b>KEY QUESTION</b>   What is the likely duration of cutover and any associated system/channel disruptions? Do these outages cause impact to business and/or customer groups and if so how can this be minimised?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Cutover sequence &amp; duration.</b> What is the high-level sequence of tasks that must be completed during the cutover window? Based on early analysis what is the expected runtime for completing each task?</li> <li>• <b>Cutover disruption &amp; options to minimise.</b> What options are there to minimise business and customer impact caused by system/channel outages for cutover? Options include:               <ul style="list-style-type: none"> <li>○ <u>Re-sequencing.</u> Condensing the cutover window by shifting long running cutover tasks to run in parallel.</li> <li>○ <u>Pre-deploy viable technical components.</u> Explore options to pre-deploy applicable components of the solution – particularly if this reduces the runtime or technical risk associated with the main production cutover window. Pre-deployments typically involve components that can be deployed to production in a silent state and are then activated during the main production cutover window.</li> </ul> </li> </ul>	<p><b>“Major Release Deployment, High Level Cutover Block Diagram”.</b></p> <p>An early draft of the high level plan cutover plan that provides an indicative view of task sequencing, run time, associated system &amp; channel outages.</p>

# BT Deployment Framework

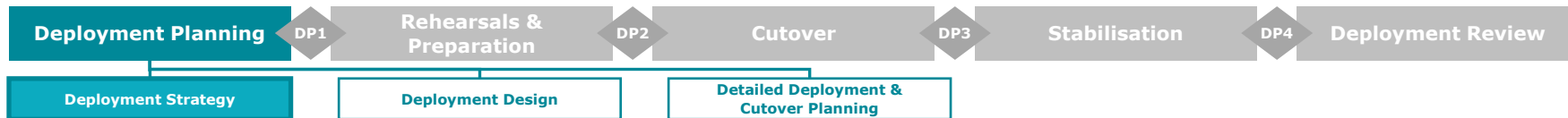
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Cutover window options assessment	<p><b>KEY QUESTION  </b> When should the release be deployed to production?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Cyclic Events.</b> Many IR events run on monthly or annual cadences. These times coincide with periods of higher business processing and customer activity (e.g. Returns filing and associated payments) and should be avoided for disruptive cutover events that require system/channel outages.                             <ul style="list-style-type: none"> <li>○ <u>Crown reporting.</u> Typically runs the first 7 business days of the calendar month.</li> <li>○ <u>Employer deduction payments.</u> Due by the 20<sup>th</sup> of each month, extra payment due the 5<sup>th</sup> for large employers.</li> <li>○ <u>Customer disbursements.</u> Social policy products such as Child Support, Working for Families, and Paid Parental Leave pay customers on weekly or fortnightly basis. These payments may need to be rescheduled to avoid any payment runs coinciding with a disruptive cutover window.</li> <li>○ <u>Peak season processing periods:</u> Families Peak season runs Feb-March. Income Tax peak season runs March – May. System/Channel outages due to cutover over these time will need to give special consideration for how business workload and customer activity might be impacted. April is also the beginning of the new tax year and often coincides with legislative changes coming into effect.</li> <li>○ <u>Volumes Analysis.</u> How do customer volumes vary across key channels (e.g. myIR – login volumes and web requests, Gateway Services, Contact Centre call volumes). Cutover outages should coincide with lower volume periods to minimise customer disruption.</li> </ul> </li> <li>• <b>Minimising impact of cutover outages:</b> Can cutover be completed outside of business hours, for example:                             <ul style="list-style-type: none"> <li>○ <u>Overnight:</u> Contact Centre shuts from 8pm – this is typically the last dependency for core system access.</li> <li>○ <u>Weekend:</u> Contact Centre runs through to 1pm Saturday and re-opens 8am Monday. This is typically the last dependency for core system access (though consideration must also be given to the peak season periods and whether there is any planned overtime work scheduled for Saturday and/or Sunday).</li> <li>○ <u>Extended public holiday weekend:</u> Contact Centre and front of house are shut for public holidays, and sometimes Saturday too if the public holiday falls on that day.</li> <li>○ <u>Customer exemptions:</u> If a disruptive cutover is near to, or contends with, a key filing and payment date, then late filing/payment penalties may need to be relaxed to avoid unfair customer penalties.</li> </ul> </li> <li>• <b>Approval.</b> Who is required to approve any system/channel/business outage, and approve the cutover window?</li> <li>• <b>Contingency.</b> What’s the back-up date for deploying changes?</li> </ul>	<p><b>“Major Release Deployment, Cutover Window Recommendation – Analysis”.</b> Documented analysis to identify the most suitable window to run the production cutover event. Analysis to determine the ‘most suitable window’ often balances minimising business &amp; customer impact against meeting delivery deadlines. This analysis is used to receive formal governance approval of the cutover window.</p> <p><b>“Major Release Deployment, Cutover Window Recommendation – Governance Paper”.</b> This is an example of an executive-level paper that was presented to IR Governance (EPPC or PGC) in seeking approval for a recommended window of time in which to run a BT major release cutover.</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
High level Product transition approaches	<p><b>KEY QUESTION  </b> How will operational processes transition through the cutover outage with minimal impact?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Products migrating to new system/platform.</b> These typically need to be ramped down to a quiet point prior to cutover to support their successful migration – what associated processes must be stopped prior to cutover, and by when?</li> <li>• <b>Other products/events overlapping with cutover.</b> Products may not be in scope for change or migration to new system, however they have key business processing or customer activity that overlaps with cutover. Does this need to be rescheduled to avoid the cutover outage (e.g. weekly/fortnightly customer payments)?</li> </ul>	<p><b>“Major Release Deployment, Product Transition Approaches”.</b> An early draft on how key products and associated business or customer events will transition through cutover outage (NB: to be refined during ‘Deployment Design’ activity).</p>
Managing Contention with the Enterprise Release Plan	<p><b>KEY QUESTION  </b> Are there other initiatives with similar delivery timeframes that contend with one another and introduce constraints.</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Identify contention between different releases.</b> Are there other approved releases following a similar delivery timeline, if so what types of constraints does this introduce:               <ul style="list-style-type: none"> <li>○ <u>Environment limitations.</u> Are there separate pathways to production for each release, or must they pass through the same non-production environments prior to deploying to production? If different pathways are not possible then how will separate code bases between the two releases be managed? If technical contention can’t be worked around then is there a need to reschedule one of the initiatives?</li> <li>○ <u>Resource limitations.</u> Are key technical or business SMEs or vendors occupied with other releases?</li> </ul> </li> <li>• <b>Maintaining a view of other releases.</b> How will progress with other releases be monitored to ensure their risk / issues / schedule delays don’t have a downstream impact.</li> </ul>	<p>n/a, Requires interfacing with Enterprise Change and Release function, as well as any other programmes of work that are delivery change at the same time.</p>
Lessons learned from previous releases	<p><b>KEY QUESTION  </b> How can the deployment &amp; cutover planning, rehearsal, and delivery be improved based on previous experience?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• What insight has been gained from similar releases in the past – both for items that; 1) went well and should continue, and 2) caused issues and should be improved or avoided?</li> </ul>	<p>n/a, typically covered as a section in the Deployment Strategy.</p>
Strategic Response to Deployment Planning	<p><b>KEY QUESTION  </b> What principals and guiding approaches should be agreed to direct the subsequent more detailed levels of deployment planning?</p>	<p><b>“Major Release Deployment, Deployment Strategy”.</b> High level document that sets the strategic direction for further deployment planning and implementation of the release(s).</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations

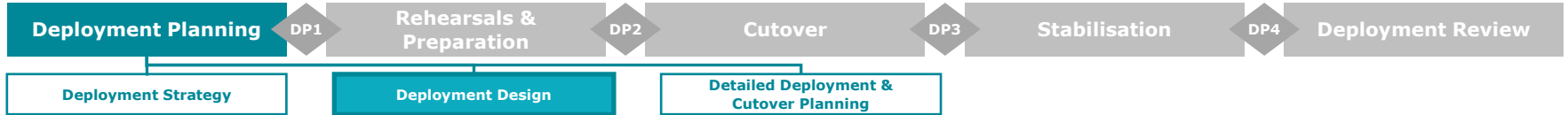


**Deployment Design Phase** | The purpose of the design phase is to build out the direction-setting approach established in the Deployment Strategy into actionable deployment approaches and plans. These set the high level approach for proving the cutover process, demonstrating readiness to proceed with cutover, and how the cutover event itself will be run and managed.

Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Deployment Approach	<p><b>KEY QUESTION</b>   How will the end-to-end deployment cycle be planned, managed, and executed to prove readiness for cutover, and best position the release for a successful implementation?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Approach to proving cutover.</b> How will cutover be rehearsed prior to the production deployment?                             <ul style="list-style-type: none"> <li>◦ <u>Number of rehearsals.</u> e.g. a single deployment to QUAL (suitable for small/medium sized releases) vs. multiple mock go-live cutover rehearsals (suitable for larger releases with more complex change that will require rehearsals to prove the end-to-end cutover process).</li> <li>◦ <u>Simulating production-like conditions.</u> Should cutover rehearsals be performed under production-like conditions – e.g. running 24/7, performing all technical cutover tasks as well as cutover management &amp; comms practices?</li> <li>◦ <u>Outcomes.</u> What must be achieved during each cutover rehearsal to prove readiness for production cutover?</li> <li>◦ <u>Schedule for rehearsals.</u> When will rehearsals be performed. Scheduling must factor in other delivery items (e.g. testing), people availability, and environment availability.</li> </ul> </li> <li>• <b>Technical environment management.</b> How will non-prod environments be managed to support cutover rehearsals, including:                             <ul style="list-style-type: none"> <li>◦ <u>Data Refreshes.</u> Which environments must be refreshed with unscrambled production data to enable cutover data processing tasks to be accurately rehearsed (e.g. data migration &amp; reconciliation)?</li> <li>◦ <u>Data Refresh Snapshots.</u> When should these snapshots be sourced from production – i.e. are there any relevant business/customer events that run prior to production cutover and materially change datasets that are in scope of the release? Snapshots may need to run following these events to ensure cutover tasks are rehearsed on data that will best reflect it’s state at the time of production cutover.</li> <li>◦ <u>Pathway to production.</u> Which non-production environment will code be progressed through? Are these environments available to use and reflective of the production environment, or is there contention with other initiatives or BAU activity?</li> </ul> </li> <li>• <b>Roll-out options.</b> How will the release be deployed to the business and how will technical changes be deployed?                             <ul style="list-style-type: none"> <li>◦ <u>Business Roll-out:</u> Phased approach (e.g. progressive rollout to different business units) vs big-bang approach?</li> <li>◦ <u>Technical Deployment:</u> De-risk production cutover window by pre-deploying viable technical components, or deploy all technical changes during a single cutover window?</li> </ul> </li> <li>• <b>Deployment Management.</b> How will the end-to-end deployment cycle be managed?                             <ul style="list-style-type: none"> <li>◦ <u>Management model.</u> Federated model (e.g. central integrator &amp; management function with workstreams / functional groups reporting into) vs. centralised single unit vs. hybrid model.</li> <li>◦ <u>Roles &amp; Responsibilities.</u> What are the requirements of each unit (for federated model) or role (for centralised model) to support deployment? How do roles, responsibilities, and reporting lines vary between the different deployment phases (i.e. planning → rehearsals → final preparation → cutover)?</li> </ul> </li> <li>• <b>Approach to Deployment Readiness.</b> Is there an overarching readiness framework (e.g. separately assessing readiness across business, customer, and programme domains)?, and at what point in the release cycle are readiness assessments required? How will readiness assessments differ between major releases vs. any minor/pre-deployment releases? What governance is required for readiness reporting and deciding to; (a) enter the cutover and, (b) exit the cutover window or rollback? What roles and responsibilities are required for readiness assessments?</li> </ul>	<p><b>“Major Release Deployment, Environment and Cutover Approach”.</b> Details how the deployment will be managed, rehearsed, and proven prior to production cutover. (NB: typically also details the production cutover approach – refer to next page).</p> <p><b>“Major Release Deployment, Environment Data Refresh Plan for Cutover Rehearsals”</b> Details which environments will be refreshed, timing of refreshes and production snapshots, and details of administrative change request &amp; approval activity. This is typically accompanied with environment bookings via the Environment Usage Dashboard.</p> <p><b>Release checkpoint plan and readiness assessment framework.</b> NOTE this was not owned by BT Deployment.</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Cutover Approach	<p><b>KEY QUESTION  </b> How will the production cutover be sequenced, managed, and controlled to best position the release for a successful go-live?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Cutover sequence &amp; execution.</b> What is the high-level sequence of cutover tasks and their indicative runtimes:               <ul style="list-style-type: none"> <li>○ Are there areas of high risk in the cutover schedule (e.g. long-running tasks and associated system outages, complex migration/reconciliation tasks), how will these be mitigated through the deployment approach (e.g. multiple rehearsals)?</li> <li>○ Are there key milestones through cutover? These are often progress checkpoints that are tied to the outcome of major cutover tasks that feed into the go-live decision (e.g. data migration or financial reconciliations).</li> <li>○ Who is required to implement each component of the cutover sequence – is it an outsourced service that requires vendor support or is it managed internally to IR?</li> </ul> </li> <li>• <b>People planning &amp; logistics.</b> How will cutover resources be planned and engaged. Are there HR requirements to consider (e.g. after-hours work or long-running shifts?), what support arrangements will be required for after-hours work (e.g. transport and/or accommodation arrangements, health &amp; safety arrangements)?</li> <li>• <b>Cutover Management Practices.</b> Who will be responsible for the Cutover Control function, and what practices are required to ensure cutover is run in a controlled manner?               <ul style="list-style-type: none"> <li>○ <u>Task initiation.</u> How will cutover task doers be instructed to begin their cutover task? How/when will they provide updates back to Cutover Control on progress, issues, and completion of their action(s)?</li> <li>○ <u>Cutover location.</u> Will cutover be performed on-site in an office space, completed remotely, or a hybrid mix between the two? How will cutover control practices be enforced across these two different modes of working?</li> <li>○ <u>Progress Checkpoints.</u> How frequently will the cutover team come together to provide an update on progress of the integrated cutover schedule? Who must attend these updates?</li> <li>○ <u>Cutover Update Communications.</u> How will updates on cutover progress be communicated (e.g. 2 hourly, twice daily), and through what channels (e.g. email, conference calls, messaging application)?</li> <li>○ <u>Issue Management.</u> What is the process for triaging and resolving cutover issues? What are the thresholds for escalating to programme leadership / executive leadership?</li> <li>○ <u>Integration with BAU Functions.</u> What Service Management functions should be included in cutover progress and issue updates for visibility and support purposes (e.g. Major Incidents, Enterprise Change, Service Desk / desktop support)?</li> <li>○ <u>Supporting tools.</u> For each cutover management practice, what tool(s) supporting tools will be used and are they easy and secure to access for IR staff and vendors involved in cutover?</li> </ul> </li> <li>• <b>Cutover entry criteria.</b> What cutover readiness items must be completed as part of the final release readiness assessment to gain formal approval to proceed with the production cutover?</li> <li>• <b>Cutover exit criteria.</b> What specific criteria must be met to prove cutover was successful and the go-live decision can be endorsed?</li> </ul>	<p><b>“Major Release Deployment, Deployment and Cutover Approach”.</b> Details the controls that will be used to manage the cutover window (NB: typically combined with the deployment approach referenced on the previous slide).</p> <p><b>“Major Release Deployment, High Level Cutover Block Diagram”.</b> Further iteration of the early draft that was produced during the Deployment Strategy phase. This updated view informs some of the topic areas covered in the cutover approach – e.g. cutover risk areas, milestones, people/support requirements (NB: to be further refined during the detailed cutover planning phase).</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations

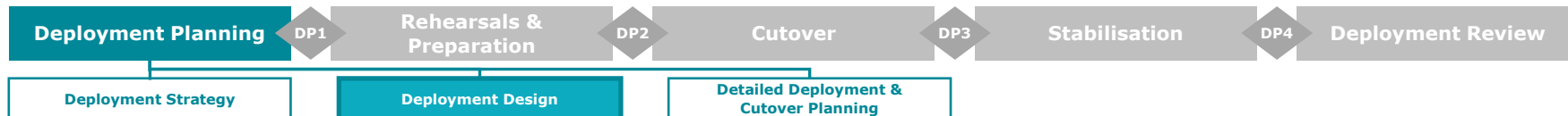


Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Shutdown / start-up approach  <i>(continued on the following page)</i>	<p><b>KEY QUESTION  </b> What systems &amp; channels must be shut to enable the cutover to proceed under stable conditions?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Shutdown &amp; outage requirements:</b> Is there a need to take systems/channels offline to deploy the change?                             <ul style="list-style-type: none"> <li>○ <u>Channel vs. System shutdown.</u> Is there a need to stagger the shutdown of channels (e.g. myIR) and systems (e.g. START) to ensure any in-flight business or customer activity has time to pass through and store in their respective back-end system OR can in-flight transactions be reliably held, allowing for a simpler shutdown in which channels and systems are shutdown in parallel?</li> <li>○ <u>Data conversion.</u> For products that are being migrated between systems, is there a need to stop relevant BAU processing in the day(s) leading up to cutover to allow the data to reach a stable, quiet point prior to data migration? If so, is user lock-out required to support this ramp-down period?</li> <li>○ <u>Broadcasting outages internally in the lead-up to cutover.</u> How will system and channel outages be communicated to IR business units – e.g. Process Integrity Snapshots, Service Alert widget on IR intranet homepage, Featured News articles, Executive email, integration forums, START broadcast messages?</li> <li>○ <u>Broadcasting outages externally during the cutover.</u> How will customer impacting outage be communicated? Who will draft these messages and ensure they deployed to their appropriate channel?                                     <ul style="list-style-type: none"> <li>○ Contact Centre – outage message applied to 0800 numbers.</li> <li>○ myIR – outage splash page on myIR login page, xIAMS maintenance mode applied (only used if myIR must be opened for PIV activity during cutover and specific users must be whitelisted for access).</li> <li>○ Gateway Services – outage Splash page applied to production URLs.</li> <li>○ IRD website – Outage banner applied to IR SiteCore website.</li> <li>○ What other channels can be used to communicate the outage – e.g. Outage banners applied to IR website, Service Outage page on IR website, marketing campaigns (radio/TV), social channels, Account Management team liaising with key external partners (e.g. other government agencies, banks, tax bodies etc.)?</li> </ul> </li> <li>○ <u>External interfaces.</u> Can these remain online but in an idle state (e.g. accept and hold files/messages from externals) or must they be shut completely? If so which external partners and specific interfaces are impacted and how will shutdown be run in a controlled manner to ensure final messages/files are confirmed as being sent and received by the respective parties? What should the external agencies do on their end to hold messages?</li> <li>○ <u>Outage start time.</u> Can system/channel outages be deferred to start outside of business hours (e.g. 5pm, or 8pm if accounting for Contact Centre) or are there technical dependencies that require the outage to begin earlier in the day?</li> </ul> </li> </ul>	<p><b>“Major Release Deployment, Cutover Shutdown-Startup Block Diagrams”.</b> High-level view of the sequence in which key channels and systems will shutdown and start-up, noting:</p> <ul style="list-style-type: none"> <li>• This is often detailed in the Deployment &amp; Cutover Approach given it’s relevance to the cutover event.</li> <li>• This is a first draft that will be refined during the detailed cutover planning phase.</li> </ul> <p><b>“Major Release Deployment, Shutdown and Start-up Approach for IR Partnering Organisations”.</b> This approach document overviews those external organisations that share information via a digital interface with IR. Awareness of the timing of these exchanges is necessary for cutovers with outages that will result in disruption. Planning may be required to arrange out-of-cycle exchanges prior to and following cutover.</p>



# BT Deployment Framework

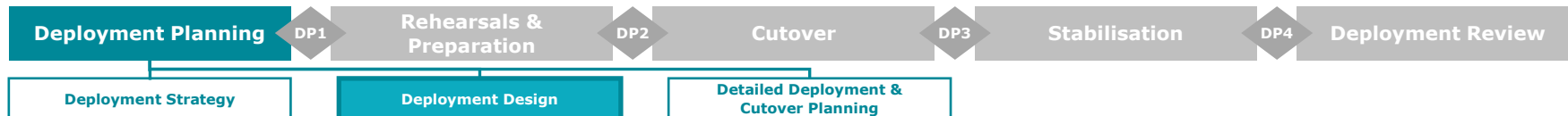
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Shutdown / start-up approach  <i>(continued from previous page)</i>	<p><b>KEY QUESTION  </b> What systems &amp; channels must be shut to enable the cutover to proceed under stable conditions?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Start-up.</b> How to successfully bring systems and channels back online and verify full service availability?               <ul style="list-style-type: none"> <li>○ <u>Sequencing.</u> Is there a specific system start-up sequence that must be followed to avoid unintended errors? E.g. Core systems brought up before channels.</li> <li>○ <u>Verifying start-up.</u> Are any checks required to prove that system/channel start-up completed successfully? E.g. confirming login to relevant systems, monitoring relevant B2B inbound/outbound B2B messaging and file exchanges.</li> <li>○ <u>Soft go-live.</u> Is there an opportunity to bring systems online prior to the communicated start-up? This provides time for the cutover team to run their own verification checks in the live production environment, while also monitoring low levels of external activity. A soft launch is typically only possible if the cutover runs ahead of schedule and start-up can run earlier than expected OR if the added time this approach would add to the shutdown period is approved ahead of cutover.</li> <li>○ <u>Contingency planning.</u> If cutover delays are encountered, does the cutover schedule allow for system/channel start-up to be deferred without significant impact to business and customer groups? If start-up is scheduled for outside of business hours then this typically provides contingency where the start-up is delayed.</li> <li>○ <u>Handover to ELS and ProdQA teams.</u> At what point in the start-up approach is cutover considered completed and can the handover to the ELS support team commence?</li> </ul> </li> </ul>	<i>(Refer to previous slide)</i>

# BT Deployment Framework

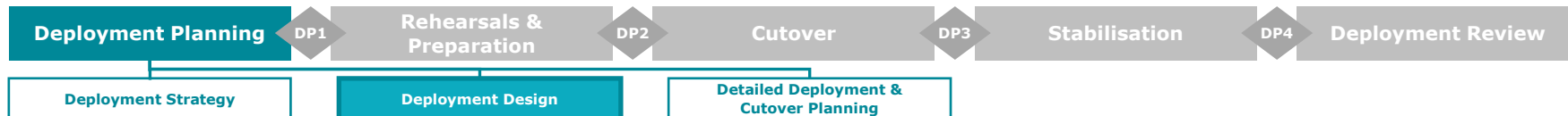
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Rollback approach	<p><b>KEY QUESTION  </b> What would cause a rollback during the cutover window and how would this be sequenced, managed, and potentially rehearsed to ensure rollback to a stable recovery point is possible?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Scope.</b> What technical changes must be restored to their pre-cutover state? Consideration to both code/config changes applied to system and data changes.</li> <li>• <b>Rollback triggers.</b> What issues would trigger rollback, as opposed to taking a fix and roll-forward approach?               <ul style="list-style-type: none"> <li>○ <u>Runtime.</u> Cutover is delayed and can't be complete within an acceptable timeframe.</li> <li>○ <u>Migration/data issues.</u> Data migration and/or reconciliation results do not pass, and the variance isn't accepted (e.g. root cause of variance unknown) or can't be resolved within the cutover window.</li> <li>○ <u>Major functional issues.</u> Business critical functions are not working correctly and will result in unacceptable business consequences and reputational harm to IR if go-live proceeds.</li> </ul> </li> <li>• <b>Rehearsal approach.</b> How should rollback be rehearsed (e.g. it may be a simple exercise that is proven through regular environment refresh tasks)? What elements of rollback scope should be rehearsed (i.e. focus on areas of complexity, areas that are untested, or the full scope of rollback)?</li> <li>• <b>Rollback Roles &amp; Responsibilities.</b> Rollback governance / decision makers, integrated rollback schedule execution, technical rollback task ownership, issuing of comms/marketing.</li> <li>• <b>Rollback Comms:</b> Key rollback messaging, business &amp; customer groups to engage, channels for distributing rollback comms (e.g. website, Account/Relationship Managers, internal channels).</li> <li>• <b>Interplay with policy contingency approach.</b> What solution changes would need to be deployed as part of a rollback scenario in order to provide a minimum level of functionality to support any legislative requirements that were coupled to the production cutover window?</li> <li>• <b>Back-up go-live window.</b> If rollback was triggered, then when could the cutover be re-attempted? Must consider windows with minimal business/customer disruption, and enough separation from the initial cutover window to complete root causes analysis, remediate issues, and re-test / re-rehearse.</li> </ul>	<p><b>"Major Release Deployment, High Level Rollback Block Diagram".</b> Similar to the cutover block diagram, this details the high level sequencing of tasks required to rollback the production changes deployed during a cutover.</p> <p>Also refer to the rollback section of the "BT Major Release Deployment, Deployment and Cutover Approach".</p>
Contingency approach	<p><b>KEY QUESTION  </b> What are the backup go-live dates if the baseline/target go-live date is no longer achievable OR rollback is triggered during an attempted cutover?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>What other suitable cutover windows exist?</b> Identifying windows of lower customer/business activity and confirming if these contend with other IR programme delivery milestones (or if this contention can be removed).</li> <li>• <b>Legislative dependencies &amp; minimum solution requirements.</b> Are there legislative changes associated with the release? If so, consideration should be given to:               <ul style="list-style-type: none"> <li>○ <u>Contingency solution.</u> In the event that the core solution does not pass final readiness assessments to deploy to production OR if rollback is required during the cutover window then what is the minimum viable contingency solution that would need to be deployed to ensure IR can meet all new legislative requirements?</li> <li>○ Is the contingency solution a series of manual work-arounds, or would system changes be required?</li> <li>○ <u>Monitoring the need for contingency.</u> If a contingency solution requires system changes then how will this additional build and test activity be built into the delivery schedule, what triggers the need to start build/test?</li> </ul> </li> </ul>	<p>n/a, this is typically detailed in the deployment strategy, however refer to:</p> <p><b>"Major Release Deployment, Go-live Contingency Planning"</b> for a specific paper that was created for the final BT major release (S4.1.R2).</p>

# BT Deployment Framework

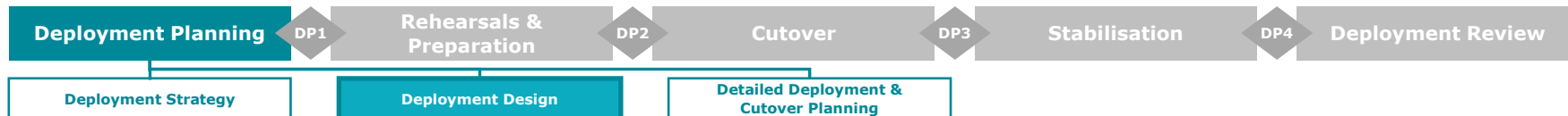
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Business Deployment Approach	<p><b>KEY QUESTION  </b> How will relevant business units be transitioned through the period of disruptive deployment / cutover activity, and how will they be engaged to plan and execute relevant cutover ramp-down and start-up tasks?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Identify impacted business units.</b> Deployment impact may be consolidated to a relatively small cutover window, or could span more broadly across the deployment preparation phase.</li> <li>• <b>Identify types of impact and business response required.</b> Common deployment-related impacts on business operations may include:               <ul style="list-style-type: none"> <li>○ <u>Cutover outages.</u> One or more key systems or channels need to be down during business hours, resulting in:                   <ul style="list-style-type: none"> <li>▪ a work-around being required in order for impacted business units to continue to work (e.g. access to read-only systems), OR</li> <li>▪ agreement on alternative work being completed during the cutover outage window (e.g. training in preparation for new system changes).</li> </ul> </li> <li>○ <u>Data migration.</u> This may require longer-running business involvement in order to support data clean-up tasks necessary to support a clean and stable data migration process, or to prioritise and work-through back-logged work items that are in scope for conversion. Consideration should be given to:                   <ul style="list-style-type: none"> <li>▪ What specific items require ramp-down focus?</li> <li>▪ Which business units are responsible for these items? Who will engage with these units and monitor progress?</li> <li>▪ Other than the start of cutover, is there a drop-dead time for completing this data processing?</li> <li>▪ If ramp-down doesn't fully complete, then what manual data migration work is required, and by when would this need to be completed post-cutover?</li> </ul> </li> <li>○ <u>Shifting business events.</u> Some events may coincide with the cutover outage window and need to be rescheduled to avoid customer impact and reputational damage to IR – e.g. Working for Families weekly payments. The relevant business unit(s) need to be engaged to agree the shift in time for such events, and rescheduling of necessary preparation/processing tasks to enable this.</li> </ul> </li> <li>• <b>Identify Transition requirements.</b> Any cutover related outages may require the timing of other business event(s) to be adjusted to avoid this disruption.</li> </ul>	<p><b>“Major Release Deployment, Business Deployment Traffic Light Diagram”.</b> High level illustration of when key services and systems will be shutdown in preparation for cutover, and brought back online for go-live (NB: this is refined during the detail cutover planning phase).</p>
Early Life Support Approach	<ul style="list-style-type: none"> <li>• <b>Business support</b> – additional support to the business to ensure they’re able to get up to speed as quickly as possible with the new solution and continue to meet the needs of customers and service providers, who are also getting used to a new solution. Additional support in this area includes deskside support, additional service desk people to help with extra calls, urgent knowledge base articles.</li> <li>• <b>Technical support</b> - This is where additional people are added into the standard system support processes to provide solution specific knowledge and extra capacity to match the increase in support requirements. In general this support uses existing processes but with additional people who have the technical knowledge of the new solution.</li> </ul> <p><b>NB:</b> Early Life Support was not a responsibility of BT Deployment Services</p>	<ul style="list-style-type: none"> <li>• n/a, Early Life Support was not the responsibility of BT Deployment Services</li> </ul>

# BT Deployment Framework

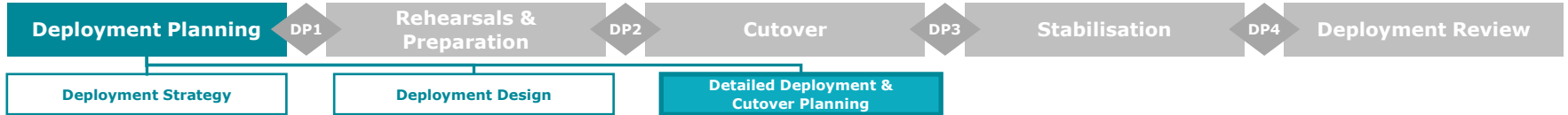
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Comms & Marketing approach	<p><b>KEY QUESTION  </b> How and when will cutover updates be communicated to relevant stakeholder groups?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Target audiences.</b> Which customers and stakeholders must be informed of the release and associated cutover? E.g. customers split by relevant segments (e.g. Tax professionals, Employers, businesses, individuals), internal business units, vendors, partnering agencies &amp; organisations, general public).</li> <li>• <b>Content of comms &amp; marketing.</b> Is there a subset of key messages that can be used to guide comms to external groups, and likewise for internal groups? Any specific impacts must also be captured and included in appropriate comms – e.g. shutdown of information shares with partnering agencies, shifting payment dates for WfF customers, unavailability of core systems for business processing, etc.</li> <li>• <b>Timing of comms &amp; marketing.</b> When should comms material be distributed to impacted stakeholder groups, and how does this timing differ for internal groups and external groups? What triggers comms material to be issued – e.g. successful stage-gate assessment point, successful completion of a cutover rehearsal etc. If there are multiple releases of comms then how will detail of cutover increase?</li> <li>• <b>Channels for distributing comms &amp; marketing.</b> Which channels will be used to distribute key messages, and how does this vary between:               <ul style="list-style-type: none"> <li>○ <u>Internal messaging</u> – e.g. Snapshots, Intranet home page &amp; service alert widget, People Leader briefs, email groups, Yammer.</li> <li>○ <u>External messaging</u> – e.g. IR website, pre-recorded Contact Centre message, Front of House posters, customer correspondence (e.g. email and letters), social channels, IR Account Managers, Ministerial briefing notes, Commissioner/Executive email to key stakeholders.</li> </ul> </li> <li>• <b>Contingency comms &amp; marketing.</b> How will comms be managed through contingency scenarios – e.g. pre-prepared material for rollback, delayed go-live – either due to cutover being deferred, or cutover runs but needs more time to complete, so communicated go-live times need to be updated on relevant channels (e.g. IR website).</li> <li>• <b>Content creation.</b> Who is responsible for drafting comms &amp; marketing content?</li> <li>• <b>Approval.</b> Who is responsible for approving comms &amp; marketing material prior to distribution?</li> </ul> <p><b>NB:</b> Comms and Marketing was not the responsibility of BT Deployment Services, however, the deployment team did interface with the Comms and Marketing team to ensure they understood key dates and customer/business impacts associated with each major release cutover.</p>	<p><b>“Cutover Communications Strategy &amp; Plan”</b> identifies target audiences that must be engaged about the release and cutover, key messages to distribute, and timing of the distribution.</p> <p><b>NB:</b> This deliverable was owned by the BT OCMT team. The BT Deployment team provided input with key dates and timings, however it was not the responsibility of this team.</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations

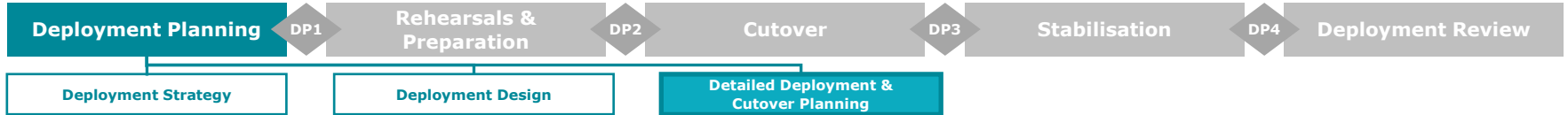


**Detailed Cutover Planning Phase |** The purpose of the detailed cutover planning phase is to extend the high-level approach from the design phase into a detailed cutover plan and run-sheet that will be used to orchestrate the cutover. Building the cutover run-sheet typically involves workshoping with a number of technical and business stakeholders to ensure the detailed tasks and associated dependencies have been accurately captured in the master plan.

Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Cutover run-sheets  <i>(continued on the following page)</i>	<p><b>KEY QUESTION  </b> How will the step-by-step detail for executing all cutover related tasks be logged and tracked?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Integrated cutover run-sheet.</b> Captures at a high level all tasks that must be completed to ensure a successful cutover. There are four main categories of tasks:               <ol style="list-style-type: none"> <li>1. <u>Pre-cutover dependencies:</u> Tasks that must be completed in the lead-in to the official cutover window (e.g. technical pre-deployments, business &amp; technical ramp-down activities, internal &amp; external comms, decision gate(s) for proceeding to production cutover).</li> <li>2. <u>Cutover tasks:</u> All tasks required to deploy the solution and manage the cutover window. Covers business deployment tasks, technical cutover tasks, and support domains (e.g. comms). Each entry in the cutover run-sheet represents a unique task and should include:                   <ul style="list-style-type: none"> <li>o A brief description of what the task is.</li> <li>o Scheduled start-time, forecast duration, and scheduled stop time.</li> <li>o Dependencies to any other cutover tasks (both upstream predecessors and downstream successors).</li> <li>o Task Owner who will be performing the task, and who their back-up person is.</li> </ul> </li> <li>3. <u>Cutover milestones:</u> All points within the cutover run-sheet that represent a stage-gate to proceed with the next set of tasks within the cutover run-sheet. Cutover milestones for BT major releases include:                   <ul style="list-style-type: none"> <li>o Sign-off of data reconciliation and converted data verification results.</li> <li>o Sign-off of crown reconciliation results.</li> <li>o Completion of BPiV.</li> <li>o Go/No-go decision point.</li> </ul> </li> <li>4. <u>Cutover checkpoints / meetings:</u> Pre-arranged meeting where the cutover team discuss current progress &amp; issues, and whether any adjustments to the cutover schedule are required.</li> </ol> </li> <li>• <b>Cutover block diagram.</b> Provides a simplified one-page view of the cutover run-sheet (i.e. key tasks, runtimes, and sequencing). This is a useful aid for cutover planning workshops when the integrated cutover run-sheet may be too detailed to facilitate productive conversation.</li> <li>• <b>Critical path tolerances.</b> By how many hours can the critical path slip before the cutover window (and associated system/channel outages) exceeds the designated cutover window. What is the drop-dead point in the cutover window to call a rollback decision and at what point in the cutover schedule must recovery points for data and/or code be established?</li> </ul> <p><i>NB: Topic area is continued on the following page.</i></p>	<p><b>“Major Release Deployment, Integrated Cutover Runsheet”.</b> Run-sheet that provides a high level view of all technical and business tasks required to execute the end-to-end cutover. Designed to be used by the Cutover Control Team and align with the detailed workstream schedules.</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations

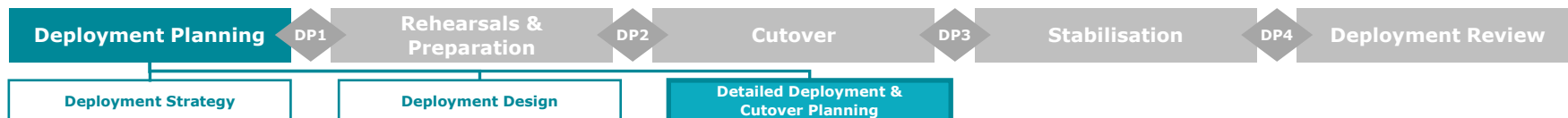


**Detailed Cutover Planning Phase |** The purpose of the detailed cutover planning phase is to extend the high-level approach from the design phase into a detailed cutover plan and run-sheet that will be used to orchestrate the cutover. Building the cutover run-sheet typically involves workshoping with a number of technical and business stakeholders to ensure the detailed tasks and associated dependencies have been accurately captured in the master plan.

Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Cutover run-sheets  <i>(continued from previous page)</i>	<p><b>KEY QUESTION  </b> How will the step-by-step detail for executing all cutover related tasks be logged and tracked?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Detailed workstream run-sheets.</b> Captures at a detailed level the cutover tasks for a particular workstream and provides enough detail &amp; instruction for the task owner to execute their task(s):               <ul style="list-style-type: none"> <li>○ <u>Owners</u>. Who is responsible for each workstream run-sheet? Close working relationship is needed with these people to ensure detailed plans are correctly built and incorporated into the integrated cutover run-sheet.</li> <li>○ <u>Dependencies</u>. Are there any cross-workstream or cross-system dependencies? These are often areas of complexity and require detailed planning that involves all relevant workstreams.</li> </ul> </li> <li>• <b>Restricted User Access.</b> During cutover does system/channel access need to be restricted to individuals/teams supporting cutover?</li> </ul>	<p><b>“Major Release Deployment, Workstream Deployment Runsheet - CDC Example”.</b> Detailed cutover run-sheets that detail at a granular level the technical implementation steps that are required to deploy change for a specific system. Designed to be used by the task doers implementing the technical change, with key events and milestones rolling up to the integrated cutover schedule.</p>

# BT Deployment Framework

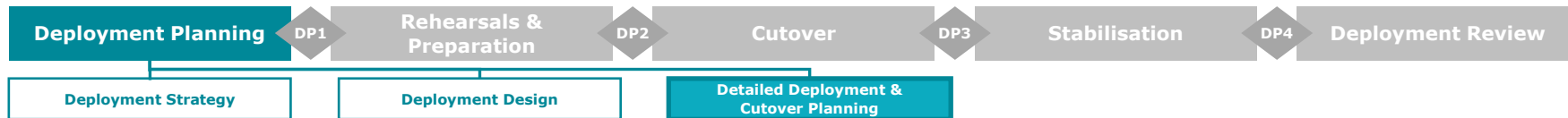
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
<p>Building the integrated cutover run-sheet</p> <p><i>(continued on the following page)</i></p>	<p><b>KEY QUESTION  </b> What tasks, dependencies, and milestones need to be captured in the master integrated run-sheet?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Decision Gate.</b> Meeting where go-live committee agrees that cutover can proceed. System/channel shut-down and distribution of cutover comms is dependent on this approval. The lead-time needed for these tasks should partly inform when this decision should be made – e.g. if multiple days are required to complete the ramp-down of a specific product(s) to support it’s migration, then timing of the cutover approval must factor this in.</li> <li>• <b>Shutdown of systems, channels, and business activity.</b> Consideration should be given to progressive channel/system shutdown to allow final transactions to pass to the back-end; monitoring of channels (e.g. B2B) to confirm receipt of final files/messages; shutdown of any external partner systems if they need to stop sending files; switching off monitoring &amp; placing START servers to maintenance mode to avoid security alerts during cutover; applying relevant outage messages for customer channels; whitelisting access to relevant systems; disabling SMS &amp; email alerts from START; publishing a START broadcast message; issuing comms to impacted agencies and partner organisations once shutdown has been completed and reminding them of any upcoming cutover related obligations.</li> <li>• <b>Batch processing.</b> Consideration should be given to the scope of final system batch processing – including any out of cycle job runs and disabling of irrelevant jobs that can be delayed until after the cutover; interfaces (internally between IR systems, or external to IR needed to stay online to support final batch processing).</li> <li>• <b>Technical system(s) upgrade.</b> Consideration should be given to pre-upgrade back-ups of code/config &amp; data to ensure a reliable rollback point; disabling of automated START back-ups through the cutover; which systems/channels are in scope for upgrade and any dependencies between them?</li> <li>• <b>Data migration.</b> How to source data extracts (e.g. are firewall changes required to enable transfer from the conversion environment to production?); what is required to ensure data extracts are fully up to date before taking them; independent balance reports to support reconciliation; verification checks by business SMEs.</li> <li>• <b>Post conversion data processing.</b> What processing can be completed via batch-job as opposed to run manually by developers or SMEs? Any manual ‘house keeping’ tasks may require system access.</li> <li>• <b>Business Verification (BPIV).</b> Verifying that key business scenarios are functioning as intended. Consideration should be given to whether any BAU files must be retained or generated to support core business processes required for verifying relevant business scenarios. Systems and channels will need to be brought online to enable business scenarios to be run – how will access be restricted to only those performing the BPIV scenarios.               <ul style="list-style-type: none"> <li>○ <u>Core Systems</u>: START security controls</li> <li>○ <u>myIR</u>: Maintenance Mode</li> <li>○ <u>Contact Centre</u>: n/a, technical components to be enabled for small windows of time.</li> </ul> </li> </ul> <p><i>NB: Topic area is continued on the following page.</i></p>	<p><b>“Major Release Deployment, Integrated Cutover Runsheet”.</b> Cutover run-sheets for START major releases are structured chronologically and include all core cutover tasks detailed within the key considerations area.</p> <p><b>“Major Release Deployment, Cutover User Access List”.</b> Master list of user IDs that require access to a system during a specific window of the cutover. Access can be to more than one system, and access to different systems is administered by different technical SMEs.</p> <p><b>“Major Release Deployment, Shutdown and Start-up Approach for IR Partnering Organisations”.</b> This should be used to determine which partnering agencies have file/message exchanges that are impacted by cutover outages to core systems or channels. From there, out of cycle exchanges prior to and following cutover may need to be arranged to minimise the disruption to these exchanges and any subsequent processing.</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations

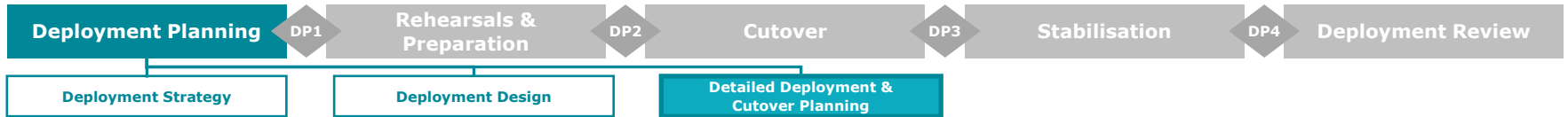


Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Building the integrated cutover run-sheet  <i>(continued from previous page)</i>	<p><b>KEY QUESTION  </b> What tasks, dependencies, and milestones need to be captured in the master integrated run-sheet?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Go / No-go decision.</b> What milestones/inputs are required to inform this decision?</li> <li>• <b>Start-up.</b> What cutover processing must complete prior to start-up &amp; what can run in parallel to start-up; what must be up and operational before the first nightly batch stream commences; what engagement with externals is required to support channel start-up (e.g. confirming messages); how must system and channel start-up be sequenced to avoid unintended start-up errors; verifying successful start-up of relevant interfaces (i.e. those that were paused, shut, or changed through cutover); processing of any backlogged transactions held either by IR or external agencies through cutover, re-enabling automated DB back-ups and removing servers from maintenance mode?</li> </ul>	<i>n/a – refer previous page.</i>



# BT Deployment Framework

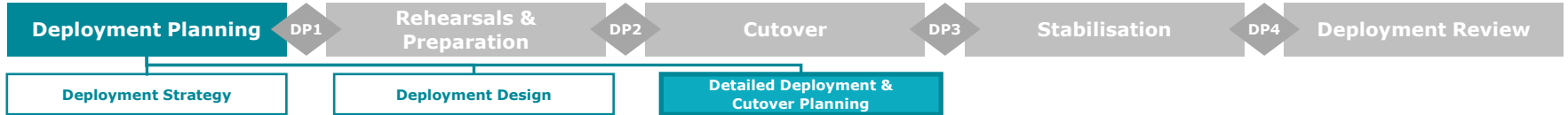
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Cutover verification plans	<p><b>KEY QUESTION  </b> What activity is required to verify that the deployment has been successful?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Pre-cutover environment smoke-testing:</b> <ul style="list-style-type: none"> <li>○ What technical changes can be verified ahead of time (e.g. connectivity tests for external end-points, confirmation of storage requirements, certificate renewals)?</li> </ul> </li> <li>• <b>Technical Post-Implementation Verification (TPIV):</b> <ul style="list-style-type: none"> <li>○ For each system with technical changes, what checks can be performed during the cutover window to verify that the technical deployment of those changes were successful?</li> </ul> </li> <li>• <b>Business Post-Implementation Verification (BPIV):</b> <ul style="list-style-type: none"> <li>○ Ensure scope is reviewed with a holistic approach across both functional areas and systems to ensure sufficient coverage is achieved with minimal scenarios, e.g. what key regression checks should be verified, what scenarios / business processes are in scope for change and definitely need to be verified before go-live?</li> <li>○ Analyse both Business and Customer impacts of each proposed scenario to ensure the BPIV scope will avoid any 'showstoppers' on day-one. BPIV scenarios should be focussed on those that are business critical for day 1 of go-live, other less critical scenarios should be tracked as ProdQA tasks following go-live.</li> <li>○ Identify business resources to execute BPIV scenarios, and technical resources to support issue resolution. Both groups will require access to relevant systems during the BPIV window of cutover.</li> </ul> </li> </ul>	<p><b>"Major Release Deployment, BPIV Approach"</b>. Details the verification steps pre/during/post cutover and how these were run for BT major release cutovers.</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Detailed product transition plans	<p><b>KEY QUESTION  </b> Are schedule changes required to any BAU events and/or operational processing (either by staff or system batch job) to transition these through the disruptive cutover outage period OR to ramp-down a specific product to a stable point prior to cutover, to support it's successful migration to a new system?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Cyclic business events.</b> Which business events (and associated back-end system processing) may be impacted by the cutover outage and require a change in schedule? Consideration should be given to:               <ul style="list-style-type: none"> <li>○ <u>Products in scope for migration that must be ramped down.</u> How much time is required for in-flight work items to be processed through to completion? Across this ramp-down period, how will system and business-user processing progressively ramp-down to position the system and data at a quiet point for data extraction? For example:                   <ul style="list-style-type: none"> <li>▪ Manual business tasks. E.g. scanning or refund/payment processing that must be complete by a certain time prior to cutover commencing to ensure they are fully processed before cutover outages are enforced.</li> <li>▪ System processing. E.g. daily / weekly / monthly jobs that either must not be run any later than a given time to avoid WIP build-up OR must be run out-of-cycle before cutover begins to clear WIP items.</li> </ul> </li> <li>○ <u>Other products conflicting with the cutover window that must be re-scheduled.</u> Are there key events with customer-impacting implications if they are not re-scheduled clear of the cutover outage window? E.g. payments for social policy products – Working for Families, Child Support etc.</li> </ul> </li> <li>• <b>Key business stakeholders.</b> Who are the relevant business teams needed to; a) provide input the each transition approach, b) required to support the actual execution of these approaches, and c) provide endorsement from a business perspective? How will these groups be involved through the rehearsals, and how their tasks will be tracked in the lead-up to cutover?</li> <li>• <b>Comms.</b> Do the product transition approaches cause additional business and/or customer impact by changing event dates? If so, what comms are required:               <ul style="list-style-type: none"> <li>○ Externally to impacted customer groups</li> <li>○ Internally to impacted business units</li> </ul> </li> </ul>	<p><b>“Major Release Deployment, Product Transition Approaches”.</b></p> <p>These plans detail how the administration of specific products will:</p> <ul style="list-style-type: none"> <li>• Ramp down to a quiet point prior to cutover (if they need to be brought to a quiet point to support migration to a new system)</li> <li>• Operationalised following go-live e.g. when the ‘firsts’ of key processing jobs run.</li> <li>• Have key business or customer events rescheduled to avoid conflicting with system and channel outages for cutover (e.g. processing &amp; issuing customer disbursements).</li> </ul>

# BT Deployment Framework

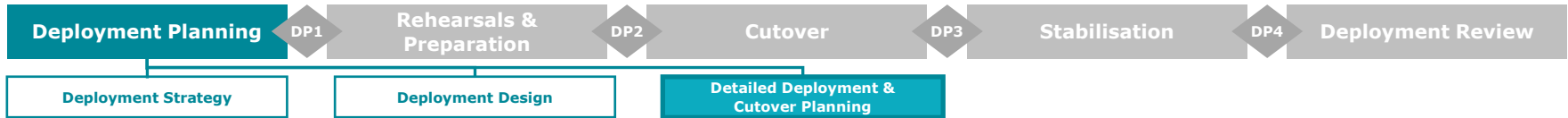
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Detailed Rollback planning	<p><b>KEY QUESTION  </b> If go-live criteria are not met during cutover and rollback is required then what is the sequence of technical rollback tasks, system co-ex processing / catch-up processing, and verification checks that are needed to fully rollback systems and data to a pre-cutover state?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>High priority rollback scope.</b> What rollback tasks must be completed before core systems/channels re-open:               <ul style="list-style-type: none"> <li>○ <u>Technical rollback.</u> Code/config rollback for each system that has had technical changes deployed during the cutover window. Data rollback for any datasets that have had data updates applied during the cutover window.</li> <li>○ <u>Business tasks.</u> Information redacted.</li> <li>○ <u>Support tasks.</u> E.g. issuing rollback comms to internal and external stakeholder groups.</li> </ul> </li> <li>• <b>Lower priority rollback scope.</b> Are there any technical/business rollback items that don't need to be completed before core system/channel re-opening? If so, these should be deferred to simplify the immediate rollback focus to those business critical systems and datasets.</li> <li>• <b>Post rollback catch-up processing / re-processing.</b> Was any processing held through the cutover window that must either be; a) re-processed in a different way due to rollback, or b) be processed as a priority to enable upcoming business events to run correctly? The product transition plans often result in items being held in the days/week leading into cutover, these held items often needs to be processed as a priority following system/channel start-up.</li> <li>• <b>Establishing rollback points in the cutover / roll-forward schedule.</b> Which systems require back-ups to enable rollback vs. systems that will be manually rolled back. Any required back-ups must be scheduled into the cutover schedule, with consideration given to:               <ul style="list-style-type: none"> <li>○ <u>Ownership.</u> Who is responsible for this back-up activity? Many outsourced services will require the respective vendor to take the back-up.</li> <li>○ <u>Establishing logical data recovery points.</u> If data back-ups are required across multiple systems, is there a need to ensure data is synced between these systems (i.e. no in-flight transactions) prior to taking back-ups?</li> </ul> </li> <li>• <b>Minimum rollback window.</b> How much time is required to complete rollback of the high priority scope and complete system/channel start-up? This should inform the drop-dead point in the cutover schedule for making a rollback decision – if rollback begins beyond this then then system/channel start-up will be delayed beyond the communicated start-up time.</li> <li>• <b>Rollback checkpoints.</b> Is there a need to assess rollback at multiple points through the cutover schedule, or is a single decision expected at the drop-dead time? If multiple checkpoints are required then how does the rollback schedule grow and evolve between these checkpoints?</li> <li>• <b>Rollback verification.</b> How will rollback be proven successful? Consideration should be given to:               <ul style="list-style-type: none"> <li>○ <u>Technical rollback PIV.</u> TPIV checks required at a system-level as part of any technical deployment.</li> <li>○ <u>Business verification scenarios.</u> Business scenarios that are critical to day-1 operations – similar to BPIV but testing end-to-end business processes with the rolled back solution.</li> </ul> </li> </ul>	<p><b>“Major Release Deployment, Integrated Rollback Runsheet”.</b> Schedule containing all business and technical steps required to rollback an attempted cutover that failed to meet go-live criteria.</p>

# BT Deployment Framework

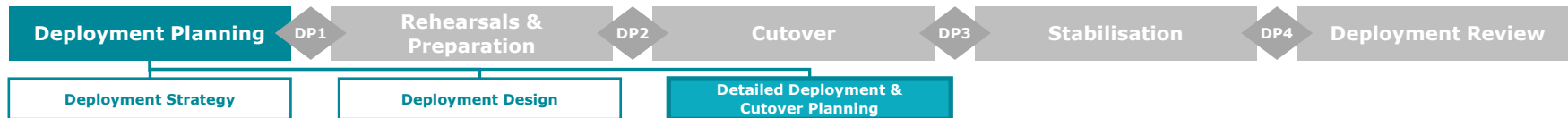
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Logistics Planning	<p><b>KEY QUESTION  </b> What arrangements are needed to support any irregular working hours that that are required through the cutover window?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Arrangements for after-hours work.</b> If cutover runs outside of standard business hours, must consider:               <ul style="list-style-type: none"> <li>○ <u>Accommodation requirements.</u> If Hotel rooms are required for out-of-town individuals to support cutover (e.g. cutover run on-site at Wellington Asteron Centre), or are working irregular / night time hours and need to remain close to the cutover site for quick response to any high priority cutover issues as they emerge. Rydges hotel has been used for previous BT major release cutover.</li> <li>○ <u>Transport requirements.</u> People working after-hours may need transport arrangements to get home at the end of their shift, this is usually supported one of two ways:                   <ul style="list-style-type: none"> <li>▪ Pre-paid taxi card,</li> <li>▪ Arranging car park access across L2 and L3 of the Asteron building.</li> </ul> </li> <li>○ <u>Health and Safety.</u> Ensuring a Fire Warden and First Aid rep are on-sight throughout the cutover period and where one or more individuals are on-sight for cutover purposes (i.e. there may be some quiet after-hours where cutover tasks are either being performed remotely or cutover has stood down for the night. Fire Warden and First Aid training should be arranged if additional coverage is required.</li> <li>○ <u>After-hours Security.</u> Using a buddy system for after-hours taxi pick-ups and travelling to the hotel – i.e. no one should have to go outside on their own.</li> </ul> </li> <li>• <b>Arrangements for office-based cutover:</b> If cutover is to be run/hosted from IR office space, must consider:               <ul style="list-style-type: none"> <li>○ <u>Central Control Centre.</u> Where will this be based, do any room bookings need to be made?</li> <li>○ <u>Shared spaces / cutover hubs.</u> Is a shared space required for complex tasks that require a lot of individuals and desk space / work stations (e.g. BPIV, data verification)?</li> </ul> </li> <li>• <b>Arrangements for remote cutover:</b> If cutover is to be run remotely then ensure all necessary arrangements are in place to keep the team connected through the cutover period, and that everyone is equipped with their necessary remote working permissions. Consideration should be given to:               <ul style="list-style-type: none"> <li>○ <u>Cutover Control.</u> Providing a virtual replacement to the Cutover Control room (e.g. Microsoft Teams group) where cutover progress updates and issues are published and accessible to anyone involved in cutover.</li> <li>○ <u>Virtual collaboration groups.</u> Ensuring any complex tasks that require interaction between different groups have an online collaboration space to do so (e.g. dedicated Microsoft Teams group). This is often required to so people can share screens and talk through any issues in real time.</li> <li>○ <u>System remote access.</u> Ensuring that technical teams have remote access to the systems/tools/environments required for them to perform their technical implementation tasks. All remote access requirements should be confirmed prior to the cutover window, however on-call support from the IR Service Desk should also be arranged to ensure any remote access issues encountered during cutover can be resolved under urgency.</li> <li>○ <u>Calendar invites.</u> Any cutover meetings must be accompanied with a dial-in option.</li> <li>○ <u>Vendor access.</u> Vendors involved in cutover must able to access IR’s remote working tools from their own network.</li> </ul> </li> </ul>	<p><b>“Major Release Deployment, Cutover People Roster”.</b> Master list of each individual required to support one or more cutover task. Includes details of accommodation and/or taxi requirements per individual.</p> <p><b>“Major Release Deployment, Cutover Information Pack”.</b> General information on cutover administration, health and safety plans, and on-site/off-site working arrangements.</p>

# BT Deployment Framework

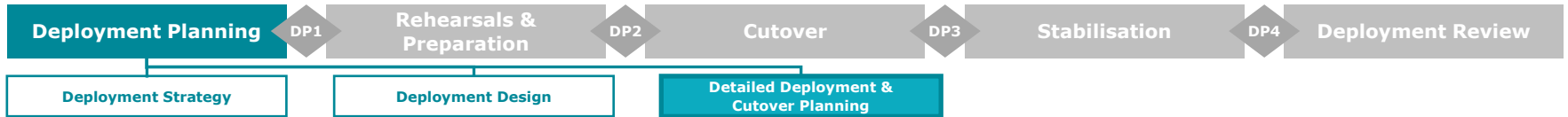
## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
<p>People Planning (IR staff, contractors, vendors)</p>	<p><b>KEY QUESTION  </b> Who is required during the cutover period, and at what points during the cutover window?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Identifying who is required to support cutover.</b> People are most likely required for cutover to; (a) provide technical implementation skills to deploy the new solution, (b) are from the business and required to complete ramp-down processing in the lead-in to cutover, (c) are a system expert and need to be available to provide on-call support, (d) are part of the release leadership team and need to be available for issue escalation and go-live approval. Key resource groups to consider include:               <ul style="list-style-type: none"> <li>○ <u>Project/Programme members.</u> Those involved in the design/build/test of the solution and are required to implement and/or verify the solution.</li> <li>○ <u>System SMEs.</u> May be required to support system/channel shutdown, as well as deploying change relevant to their system.</li> <li>○ <u>Relevant Business Units.</u> Required to support ramp-down of transaction processing in the lead-in to cutover, and will need to be engaged to support any post go-live manual processing / catch-up processing / or work-arounds due to unexpected cutover issues.</li> <li>○ <u>IT Service Management Support Groups.</u> BAU support required to facilitate unplanned/emergency change, major incidents, desktop support issues (e.g. Service Management Tower – Change, MIM, Service Desk).</li> <li>○ <u>Vendors.</u> Key vendors are often required to perform technical cutover tasks, to monitor the infrastructure/platform/ service that they provide to IR, and provide on-call support for triage and resolution of technical issues.</li> <li>○ <u>Release Management.</u> To support the triage and management of high severity issues that may risk rollback or impact cutover critical path duration.</li> <li>○ <u>External agencies / organisations.</u> Needed to support the channel shutdown process (e.g. sending and receiving of B2B messages or files during shutdown and start-up). May also be required to deploy equivalent technical changes to their systems if required as part of the solution.</li> <li>○ <u>Governance/ Go-Live Committee.</u> Group responsible to approve major decisions relating to cutover (e.g. go-live and rollback decisions).</li> </ul> </li> <li>• <b>Confirming when people are required through the cutover window.</b> Should have people roster that details hour-by-hour who is required to support cutover. This register should also detail:               <ul style="list-style-type: none"> <li>○ Where each person will be (e.g. on-site vs remote)</li> <li>○ Whether they're required for a specific task, or in an on-call support role</li> <li>○ Contact details (e.g. phone, email, desk location)</li> <li>○ An appropriate back-up person should they become unavailable for unforeseen circumstances</li> </ul>               The Cutover roster should then be used to drive some of the logistics planning detailed on the previous slide (e.g. accommodation requirements, transport requirements, who has Fire Warden / First Aid training).             </li> </ul>	<p><b>“Major Release Deployment, Cutover People Roster”.</b> As detailed on the previous page.</p>

# BT Deployment Framework

## Deployment Planning Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Developing cutover / go-live comms and marketing material	<p><b>KEY QUESTION  </b> What key messages must be communicated to each of the internal and external stakeholder groups identified in the comms plan?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Comms issued pre-cutover</b> <ul style="list-style-type: none"> <li>○ Key changes/enhancements associated with the release</li> <li>○ General timing of cutover – i.e. timing of the shutdown, cutover, and start-up periods</li> <li>○ Per stakeholder group, any impacts that are specific to them (e.g. ramp-down of a product for data migration may require an external information share to be shutdown prior to the advertised outage period)</li> <li>○ Who to contact / where to look (e.g. IR website) for further information.</li> </ul> </li> <li>• <b>Comms issues post go-live.</b> Have pre-drafted comms with key go-live messages ready to distribute for different scenarios/outcomes from the cutover window.               <ul style="list-style-type: none"> <li>○ <u>Go-live was successful and ran to plan.</u></li> <li>○ <u>Go-live successful, but with known issues.</u> The impact of these issues should be communicated to impacted stakeholder groups – i.e. what this means for them, and whether any adjustments are required on their end.</li> <li>○ <u>Go-live successful, but delayed.</u> Meaning that system/channel start-up begin at a later time that was communicated. This often requires pre-drafted, pre-approved comms ready to publish to key channels (e.g. IR website banner and service outage page, myIR outage splash page) to ensure these service outage details contain the updated start-up time.</li> <li>○ <u>Go-live unsuccessful and rollback required.</u> Messaging should be kept simple (i.e. no need to detail reasons why rollback was actioned). Further detailed comms would be required once a new cutover window is identified, however further analysis and decision making would be required before these comms were ready to draft and distribute.</li> </ul> </li> <li>• <b>Approval process.</b> Who is required to review and approve comms material prior to distribution? The deployment team typically provides input and early review given they understand the nuances of the cutover shutdown process, however formal approval is typically required at the Manager/Sponsor/Executive lead.</li> <li>• <b>Timing for distributing comms.</b> As comms are drafted the target release date and channel should also be agreed.</li> </ul>	<p><b>Detailed Cutover Comms (Internal) and Marketing (external) plans.</b> Cutover-related comms to distribute to relevant stakeholder groups both in the lead-up to, during cutover, and following go-live.</p> <p><b>NB:</b> These deliverables were owned by the BT OCMT and Marketing Teams. The BT Deployment Team provided input to these plans (e.g. dates and times for key cutover events) only.</p> <p><b>“Major Release Deployment, Splash page example”.</b> HTML file that is applied to relevant URLs to block customer access to eServices, Gateway Services, and External Portals.</p>

# BT Deployment Framework

## Rehearsal(s) & Preparation Phase | Key Questions & Considerations



**Rehearsal & Preparation Phase** | The purpose of the rehearsal phase is to validate the deployment and cutover plan by completing one or more practice runs of the cutover schedule. Refinements and lessons learned will be made to the cutover approach, master schedule, and cutover management practices as a result of rehearsals. The outputs from this phase inform the official governance approval to proceed with the production cutover event.

Topic Areas	Key Question & Areas for Consideration
Planning for Cutover Rehearsals	<p><b>KEY QUESTION</b>   How can cutover rehearsals be planned to ensure they simulate production cutover conditions as closely as possible?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Planning for production-like rehearsals.</b> Cutover rehearsals should be planned to be as like-for-like with the production cutover as possible. Give consideration to:               <ul style="list-style-type: none"> <li>○ <u>People</u>. Anyone required for production cutover (i.e. cutover task owners, support roles, management) should be practising their role during the rehearsal(s). If more than one rehearsal is planned then consider giving the back-up resources an opportunity to practice their task(s).</li> <li>○ <u>Governance</u>. The go-live decision making process should be rehearsed with the go-live committee members.</li> <li>○ <u>Non-production environments</u>. Rehearsal of technical cutover tasks should occur in the 'n-1' non-production environment – i.e. one environment removed from production. Special consideration should be given to:                   <ul style="list-style-type: none"> <li>▪ <u>Performance considerations</u>. The 'n-1' non-production environment should ideally have a similar performance level to production in order to give an accurate indication of runtimes. If there is a difference in environment specifications then there needs to be a reliable method for calculating production runtimes based cutover performance in the 'n-1' non-production environment.</li> <li>▪ <u>Availability</u>. Environments must be booked for cutover rehearsals, and should not be shared with other groups (like testing) for the duration of the rehearsal. This is necessary to preserve the integrity of data in these environments.</li> </ul> </li> <li>○ <u>Cutover Management Practices</u>. The processes and enabling tools for these should be ready to make use of during the rehearsals and includes:                   <ul style="list-style-type: none"> <li>▪ Task initiation, issue management, and communicating cutover updates.</li> <li>▪ Single point of contact for Cutover Control team (e.g. shared Email Inbox, control room).</li> <li>▪ Establishing communication channels and distribution lists for issuing progress updates throughout the rehearsal.</li> <li>▪ Integrated run-sheet with updated details that reflect the rehearsal conditions.</li> </ul> </li> <li>○ <u>Purpose</u>. The purpose of a rehearsal is to prove that cutover tasks and processes will run successfully in the production environment within the allocated window. What outcomes must be achieved during the rehearsal to realise this? E.g. Successfully meeting go-live criteria.</li> <li>○ <u>Hours of Operation</u>. Will the rehearsal run 24/7, extended business hours, business hours?</li> </ul> </li> <li>• <b>Constraints and work-arounds.</b> If specific cutover tasks can't be performed – e.g. due to a technical constraint associated with the 'n-1' non-production environment – then what can be done to realistically simulate them as best possible? For example:               <ul style="list-style-type: none"> <li>○ <u>Paper-based cutover tasks</u>. If a cutover activity can't be performed as an actual task (e.g. shutdown/start-up) then paper-based walk-throughs should be arranged in which the cutover task, the respective up/down-stream dependencies, and run times are reviewed by the relevant people.</li> <li>○ <u>People availability</u>. If people aren't available during the rehearsal window then make use of their back-up. This then becomes a training opportunity for the back-up people.</li> <li>○ <u>Required Provisions</u>. Some cutover tasks may not be ready to be fully/accurately completed at the time of rehearsal. If so, how might this compromise the intended outcomes of the rehearsal and what arrangements / work-arounds can be made?</li> </ul> </li> </ul>

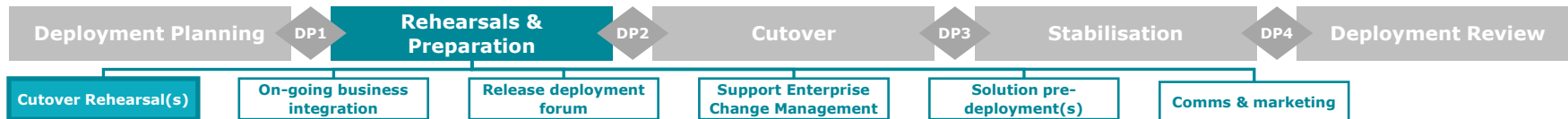
**NB:** Rehearsal artefacts have not been referenced due to their similarity to Cutover artefacts. Refer to the Cutover section of the Framework for details of these artefacts.





# BT Deployment Framework

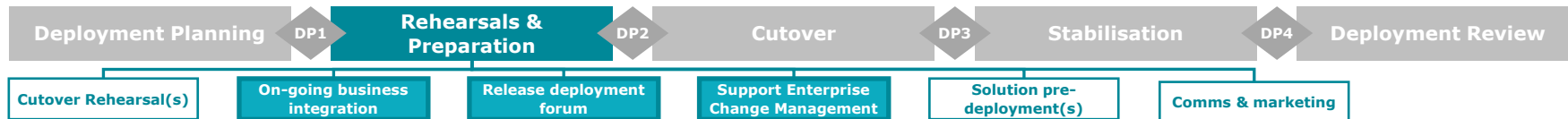
## Rehearsal(s) & Preparation Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration
Review cutover rehearsal	<p><b>KEY QUESTION  </b> Based on cutover rehearsal results; what improvements/refinements must be made to the production cutover approach &amp; run-sheet in order to best position the production cutover for a successful go-live?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Source feedback.</b> Lessons learnt sessions with all key workstreams to identify areas of improvement for either the next rehearsal or deployment to production. Key topics to explore include:                             <ul style="list-style-type: none"> <li>○ What went well and we should continue doing?</li> <li>○ What didn't go well and either needs to be stopped or improved, or substituted by something new? Specifically this should focus on cutover issues and how these can be prevented in subsequent rehearsals / the production cutover.</li> <li>○ Run-sheet: Were runtimes and task dependencies accurate?</li> <li>○ Cutover verification: Review scope after each rehearsal and amend as required.</li> </ul> </li> <li>• <b>Apply corrections to cutover approach and plan.</b> Feedback and lessons learned must result in material changes to the cutover approach and run-sheet. This may require further cutover design workshops to revisit and refine certain parts of the cutover schedule.</li> <li>• <b>Review impacts.</b> Are there material changes to the cutover schedule that will influence; (a) expected runtimes and associated system/channel outages, or (b) the content of any comms material that already been published to internal or external groups, or has been drafted and ready to publish?</li> </ul>
Rehearse rollback	<p><b>KEY QUESTION  </b> Is there a need to rehearse and validate the rollback schedule prior to the production cutover?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Scope of rehearsal.</b> What elements of the rollback schedule could or should be rehearsed? Consideration should be given to:                             <ul style="list-style-type: none"> <li>○ Elements of rollback that have not been tested prior, or not tested/actioned in recent history, and therefore are higher risk of failing.</li> <li>○ Elements of rollback that are complex – e.g. technical dependencies between the rollback of two separate systems.</li> <li>○ The end-to-end rollback scope – if necessary to prove that it can complete within a specific window (i.e. the minimum rollback window)</li> <li>○ Consideration should be given to each of the main components of the BT rollback pattern:                                     <ul style="list-style-type: none"> <li>▪ Technical rollback of system code/config changes and database restores.</li> <li>▪ Rollback verification – i.e. regression testing business critical scenarios to validate correct pre-cutover functionality.</li> <li>▪ Catch-up data processing – any data processing that would need to complete as a priority under rollback to allow key BAU events to run to schedule.</li> </ul> </li> </ul> </li> <li>• <b>Outcomes.</b> What are the expected outcomes of the rehearsal – e.g. prove a technical rollback process, prove runtime, prove that rollback schedule is correctly integrated with proper dependencies?</li> <li>• <b>Limitations.</b> How might rollback testing constrain the scope of testing and outcomes that can be proven? Consideration should be given to:                             <ul style="list-style-type: none"> <li>○ If people and/or environment bookings limit the window for rollback testing, what components of rollback should be tested as a priority?</li> <li>○ Do the non-production environments have the correct cross-system integration to enable a full rollback test?</li> <li>○ Will other release activities (e.g. testing) limit the time available to test rollback?</li> </ul> </li> <li>• <b>People.</b> Who is required to support rollback, and do these people at all differ from the roll-forward / cutover roster?</li> </ul>

# BT Deployment Framework

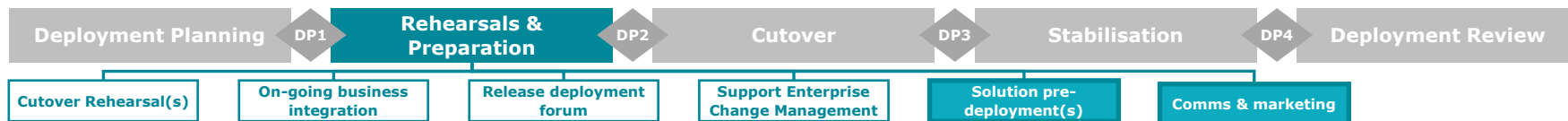
## Rehearsal(s) & Preparation Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration
Close-out rehearsal(s) & finalise cutover plan	<p><b>KEY QUESTION  </b> Has the cutover rehearsal(s) validated all cutover readiness criteria necessary to give the release go-live committee confidence in endorsing the decision to proceed with the production cutover?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Have rehearsals proven production cutover is well positioned to succeed?</b> Has the cutover rehearsal process proven the following:                             <ul style="list-style-type: none"> <li>○ <u>The integrated schedule is accurate &amp; complete.</u> All cutover tasks required to deploy the new solution have been identified and successfully rehearsed – including verifying any dependencies between tasks.</li> <li>○ <u>Cutover runtime and associated system/channel outages confirmed.</u> Is this consistent with the previously approved cutover outage window?</li> <li>○ <u>Cutover exit criteria successfully met during rehearsals.</u> E.g. sign-off of data conversion &amp; crown reconciliation results, business critical BPIV scenarios successfully validated, cutover runtime &amp; associated outages confirmed as completing within the approved window?</li> <li>○ If cutover rehearsals have not met these criteria then additional supplementary rehearsals may need to be scheduled to prove all necessary outcomes prior to receiving approval to proceed with production cutover.</li> </ul> </li> </ul>
On-going business integration	<p><b>KEY QUESTION  </b> Are relevant business stakeholders receiving the necessary updates on deployment progress in order to manage their own set of cutover readiness tasks, and are they being engaged in a timely manner where business input is needed to inform a change in cutover approach?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Transition approach updates.</b> How have product transitions changed as a result of cutover rehearsals? Who from business must be consulted to agree on proposed changes?</li> <li>• <b>Cutover updates.</b> How has cutover schedule changed as a result of the cutover rehearsal(s), what is material impact of this to business?</li> <li>• <b>On-going updates and communication.</b> Who from the business must the deployment team regularly engage with to share progress updates, monitor business readiness (e.g. progress with burndown tasks), and work through issues as they arise? What frequency of updates makes sense, and what's the best way to engage?</li> </ul>
Release deployment forum	<p><b>KEY QUESTION  </b> Is an integration forum necessary to regularly engage the different groups involved in the cutover planning &amp; implementation?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Audience.</b> Who to involve (e.g. workstream deployment leads / workstream leads / key vendors / business representatives).</li> <li>• <b>Frequency.</b> How often does it make sense to run the integration forum? Typically weekly, with more frequent checkpoints as go-live nears?</li> <li>• <b>Agenda.</b> Is there a standard list of topics to cover – e.g. risks and issues, readiness tracking, cutover walk-throughs, roundtable updates?</li> </ul>
Support Enterprise Change Management	<p><b>KEY QUESTION  </b> How might other change / other releases introduce unintended environment contention with your changes? Is there a need to support Enterprise Change and Release team impact assess other proposed changes?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Change Boards.</b> Providing coverage across both non-production and production change approval boards.</li> <li>• <b>Change Control.</b> Is there need for a change freeze or heightened change awareness period in order to maintain environment stability in the lead-up to deployment?                             <ul style="list-style-type: none"> <li>○ How many days/weeks out should this be enforced prior to and following cutover?</li> <li>○ Are there exemptions to this period? E.g. security patching, emergency change, P1/P2 incident fixes?</li> </ul> </li> </ul>

# BT Deployment Framework

## Rehearsal(s) & Preparation Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration
Pre-deploy viable solution components	<p><b>KEY QUESTION  </b> Are any components of the release capable of being pre-deployed to production ahead of the main cutover window? If so, does it make sense to do so (i.e. to remove complexity and risk from cutover) and who will be responsible for each pre-deployment?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Pre-deployment impact confirmed as minimal.</b> Can the solution be pre-deployed in a dormant state, only to be activated during the production cutover window? The dormant solution must not impact on current state business processes or technical services.</li> <li>• <b>Pre-deployment window.</b> When does it makes sense to deploy the change, and is an outage required to deploy the change? If so cutover may need to be deferred to outside of business hours – e.g. overnight or during a weekend period. If an outage is required, what services will be impacted, who will be impacted, and what level of comms and stakeholder engagement will be necessary to communicate the impact?</li> <li>• <b>Solution readiness confirmed.</b> Testing has been completed and test-exit approved?</li> <li>• <b>Deployment readiness confirmed.</b> Deployment resources confirmed (incl. vendors if needed), cutover validated through rehearsal / deployment to QUAL, environment smoke testing complete etc. A readiness checklist similar to that used for the main production cutover window can be used to track, confirm, and report on readiness.</li> <li>• <b>Change Management.</b> Change request raised and approved by the Change Approval Board.</li> </ul>
Execute comms & marketing plan	<p><b>KEY QUESTION  </b> Are we on track to distribute comms to the agreed timings/milestones established in the cutover comms plan?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Changes in cutover approach as a result of cutover rehearsals.</b> Is there a need to review and amend any pre-drafted cutover comms material based on changes to the cutover approach that have resulted from cutover rehearsal lessons learnt? E.g. Changes to the shutdown/start-up times, additional business ramp-down/deployment tasks identified. Who is needed to support these reviews and updates:               <ul style="list-style-type: none"> <li>○ <u>Deployment team.</u> Reviewing any pre-drafted comms material to confirm existing content is still accurate, or identifying areas that require updating based on changes to the cutover approach.</li> <li>○ <u>Comms &amp; marketing.</u> Applying relevant updates to any pre-drafted comms material, creating any new comms material as identified by the deployment team, maintaining the master source of comms material and owning any further executive review and approval processes prior to distribution.</li> <li>○ <u>Consistency of language.</u> Ensuring internal comms and external marketing groups are integrated and using consistent dates, times, and messaging.</li> </ul> </li> <li>• <b>Distribution of cutover comms.</b> Ensure we remain on track to distribute cutover comms to the agreed timings / release milestones. Consideration should be given to:               <ul style="list-style-type: none"> <li>○ <u>Sequencing.</u> Comms are typically distributed to internal audiences first, and followed by external groups.</li> <li>○ <u>Means of distribution.</u> Who from IR must be engaged to support the distribution of comms – e.g. Account Management Team for communicating with partnering agencies/organisations, CTO for key vendors, Commissioner for Ministerial briefing(s) and engaging with other public agency CEs etc.</li> </ul> </li> </ul>

# BT Deployment Framework

## Cutover Phase | Key Questions & Considerations

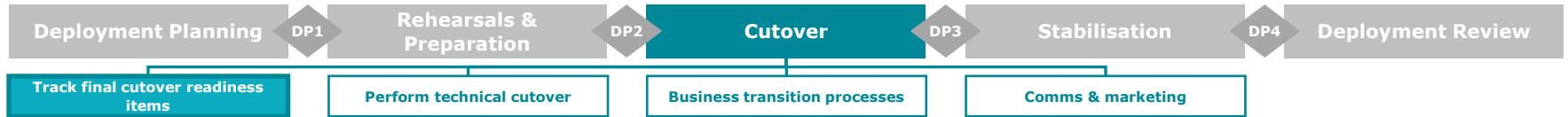


**Cutover Phase** | Cutover involves deploying the technical changes to the relevant systems and channels in IR’s Production environment, as well as activating any new ways of working that ultimately lead to the release being deployed to the business. If cutover runs across during business hours/days then it is typically accompanied by interim business transition processes that aim to minimise the impact of the cutover outage to business operations.

Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Track final cutover readiness  <i>(continued on the following page)</i>	<p><b>KEY QUESTION</b>   Have all final preparation and readiness tasks being completed ahead of the production cutover window? Across the readiness topic areas covered below, have all identified actions being confirmed prior to the release’s go-live decision point?</p> <p><b>1. PEOPLE</b></p> <ul style="list-style-type: none"> <li>• <b>Availability confirmed.</b> All people required to support cutover are confirmed. Includes cutover task owners, business/technical support groups, programme/release management group for escalation, sponsor/executive group for go-live approval, vendors / service providers, and other external agencies/organisations that must be involved through cutover. Each person has been engaged through the cutover rehearsal(s) and so understands the cutover practices and expectations.</li> <li>• <b>On-site requirements accurately logged.</b> If cutover is to be run on-site as opposed to remotely then there is a on-sight hours for each individual are accurately logged in the cutover roster.</li> </ul> <p><b>2. CUTOVER SCHEDULES</b></p> <ul style="list-style-type: none"> <li>• <b>Detailed technical run-sheets finalised:</b> <ul style="list-style-type: none"> <li>○ All tasks and their respective runtimes and dependencies are captured in the integrated cutover run-sheet.</li> <li>○ Walk-throughs for detailed technical run-sheets have been completed with relevant technical experts and cutover task doers, these details are accurately captured in the integrated run-sheet.</li> </ul> </li> <li>• <b>Rollback run-sheet finalised.</b> Detailed rollback tasks are included in each workstream run-sheet. These have been reviewed through detailed walk-throughs and are accurately captured in the integrated run-sheet.</li> </ul> <p><b>3. CHANGE AND RELEASE MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>• <b>Production CAB approval.</b> All production change requests have been raised and approved by the Production Change Approval Board (CAB).</li> <li>• <b>Change controls.</b> Enterprise Change and Release have been engaged to support cutover though:                     <ul style="list-style-type: none"> <li>○ <u>Enforcing change freeze.</u> All unrelated changes are on hold during the cutover window, with change freeze potentially extending days/weeks either side of cutover to ensure environment stability.</li> <li>○ <u>Supporting unplanned change.</u> The process, roles, and responsibilities are confirmed for deploying unplanned changes (necessary to support cutover) during the production cutover window.</li> </ul> </li> <li>• <b>Vendor Service Requests.</b> Vendor support for cutover has been raised and accepted through standard IR channels. Work has been budgeted for and POs are in place to enable payment.</li> </ul> <p><b>4. ENVIRONMENT CHECKS</b></p> <ul style="list-style-type: none"> <li>• <b>Smoke testing.</b> Any pre-cutover smoke testing has been completed and validated (e.g. database storage checks, telnet connectivity tests, certificate renewals).</li> <li>• <b>Access controls.</b> Cutover user access controls to relevant systems have been confirmed. Support is in place to ensure unplanned additional access can be provisioned, and any access issues can be triaged and resolved quickly.</li> </ul>	<p><b>“Major Release Deployment, Cutover Readiness Checklist”.</b> Master list of all items/actions that must be completed in preparation for the production cutover event to begin. Each task is assigned an owner and expected due date, and updates are tracked by the Cutover Control Team.</p> <p><b>Change Request(s).</b> ServiceNow Change Ticket that details the changes being deployed to Production, the expected runtime &amp; associated outages, and other deployment-related information. Used to support the Change Team with managing change at an Enterprise scale. Refer to CHG0080113 in Service Now for an example ticket.</p> <p><b>Vendor Service Requests.</b> A subset of the change request process in which non-standard service requests are raised with any relevant vendor. Refer to RITM0206321 in Service Now for a worked example.</p>

# BT Deployment Framework

## Cutover Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Track final cutover readiness  <i>(continued from previous slide)</i>	<p><b>5. LOGISTICS</b> (readiness tasks are largely dependent on whether cutover is run on-site or remotely):</p> <ul style="list-style-type: none"> <li>• <b>After-hours arrangements confirmed.</b> Accommodation and transport requirements have been arranged.</li> <li>• <b>Health and Safety arrangements.</b> There is Fire Warden and First Aid coverage throughout the cutover window.</li> <li>• <b>Cutover location.</b> Location confirmed – including floor/room/desk space bookings and after-hours building access.</li> <li>• <b>Calendar bookings.</b> Cutover milestones/checkpoints and updates have been booked in relevant calendars.</li> <li>• <b>Cutover update comms &amp; distribution lists.</b> Comms distribution lists have been carried forward from the cutover rehearsals, other people know how to access request to cutover comms.</li> </ul> <p><b>6. COMMS &amp; MARKETING</b></p> <ul style="list-style-type: none"> <li>• <b>Go-live comms drafted, approved, ready to issue through the cutover window.</b> Pre-drafted comms are ready to distribute through the cutover window and cover multiple scenarios:               <ul style="list-style-type: none"> <li>○ We go-live as planned</li> <li>○ We go-live but with a delayed start-up</li> <li>○ We failed to go-live and had to rollback to current state systems and business processes.</li> </ul> </li> <li>• <b>Business deployment snapshots.</b> Drafted and ready to issue as per business deployment plan.</li> <li>• <b>Pre-cutover comms distributed and/or ready to publish.</b> Any relevant marketing material has been posted (e.g. heads-ups notification banners and service update page on IR website, myIR carousel, myIR splash page drafted and ready to publish at the time of cutover shutdown, front of house posters are ready to display if business shutdown is required).</li> </ul> <p><b>7. BUSINESS READINESS FOR CUTOVER</b></p> <ul style="list-style-type: none"> <li>• Burndown work has been completed, or is on-track to complete before cutover begins. Where an issue has occurred an agreed work-around has been developed that involved both business and technical cutover teams.</li> <li>• Business users required for cutover understand what they will be doing and when, they also know who to report to during the cutover window.</li> <li>• Business units understand their focus/priority areas following go-live – e.g. supporting manual catch-up processing from cutover, preparing for next business event, etc.</li> <li>• Business integration points have been identified and will be updated through the cutover window.</li> <li>• Business units understand what work can progress through the cutover window and are equipped to do so.</li> </ul> <p><b>8. OUTSTANDING ACTIONS FROM CUTOVER REHEARSALS</b></p> <p>Was there anything that needed to be re-tested / re-validated due to issues encountered during the cutover rehearsals?</p>	<i>n/a, refer to previous page.</i>

# BT Deployment Framework

## Cutover Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Execute the run-sheet	<p><b>KEY QUESTION  </b> What variations to the cutover run-sheet have occurred, what response is required to avoid compromising the go-live?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Executing the Cutover run-sheet:</b> <ul style="list-style-type: none"> <li>○ <u>Ramp-down</u>. Have ramp-down tasks been completed as expected, or were there unforeseen errors that require a work-around to be implemented pre/during/post-cutover? Will this impact data conversion?</li> <li>○ <u>System/Channel shutdown</u>. Have all pre-shutdown checks completed as planned? (e.g. final files / messages / transactions processed to back-end systems)? Have simple access checks been run to validate key systems and channels have been properly disabled? Once shutdown completes, has this been communicated to relevant technical contacts of impacted organisations?</li> <li>○ <u>Overnight batch</u>. Have required integrations remained online to support batch processing? If unexpected errors arise, can they be fixed during the batch window or must they be deferred to a later point in cutover or following go-live? If errors result, is there a need for annual business intervention following go-live?</li> <li>○ <u>Upgrade stream</u>. Have all pre-dependent tasks been completed prior to running the upgrade? Have TPIV checks confirmed that the technical upgrade/deployment ran as expected without unintended issues?</li> <li>○ <u>Conversion</u>. Have final heritage/legacy data updates been tracked to completion prior to beginning the data extract process? Have all required independent balance reports been run and passed to the conversion team to support their reconciliation process?</li> <li>○ <u>Post-conversion processing</u>. Are there any critical jobs that must run to completion before allowing users in the system?</li> <li>○ <u>BPIV</u>. Have all identified scenarios successfully been completed without issues? Where open issues, does a resolution plan exist and business work-around scenarios been agreed with business owners?</li> <li>○ <u>Governance</u>. Have all go-live exit criteria been met? If not, is there confidence that issues can be resolved in time to complete cutover within the approved window? Is there a need to request more time to complete cutover and what's the business and customer impact of this? Is there a need to seek approval for rollback?</li> <li>○ <u>System/Channel start-up</u>. Has each system/channel/interface been confirmed as working correctly – including connectivity testing with relevant partner agencies and organisations? (NB: relevant agencies/organisations are typically those that have deployed system/channel changes during the cutover too, if no external change then typically no need to liaise directly with external partners and can instead monitor network traffic).</li> <li>○ <u>Transition to ELS</u>. What cutover issues remain open? What's the impact to business ops or customer experience, and what's the timeline to resolve (e.g. by when must a resolution be in place to prevent an escalating issue)?</li> </ul> </li> <li>• <b>Track Critical Path</b> <ul style="list-style-type: none"> <li>○ Are tasks on the critical path running ahead of schedule? Can downstream tasks be brought forward and start earlier than planned – and are the right people available to support this?</li> <li>○ Are tasks on the critical path running behind schedule? What are the downstream impacts to the cutover schedule and key milestones? Can cutover still be completed within the approved window? Do people with downstream tasks need contacting to inform them their planned start will be delayed?</li> </ul> </li> </ul>	<p><b>“Major Release Deployment, Cutover Go-live Decision Paper”</b>. Executive briefing pack summarising the results of the cutover and recommendation for making the go-live decision.</p> <p><b>“Major Release Deployment, Cutover-to-ELS Handover Pack”</b>. Summary of non-critical cutover issues that remain open at the end of cutover, and are to be handed to the ELS team to track to completion.</p>

# BT Deployment Framework

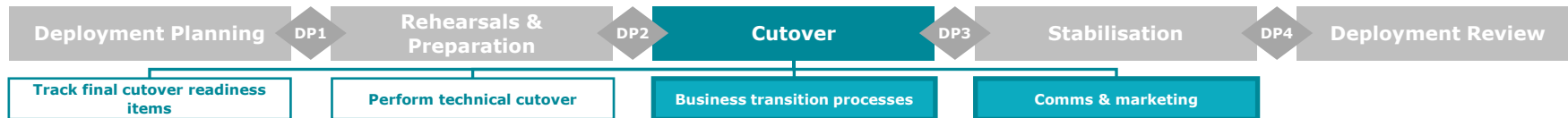
## Cutover Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Cutover issue management	<p><b>KEY QUESTION  </b> What cutover issues have arisen, what is the required response to avoid compromising go-live?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• Who needs engaging to support the triage and resolution of each cutover issue?</li> <li>• For high risk areas, is there 24/7 resource coverage to support issue triage?</li> <li>• What's the issue severity and cutover impact – e.g. exit criteria at risk, delay to schedule, business-critical functionality is not correct? This should inform urgency to resolve and whether escalation is required or not.</li> <li>• Is there a fix or work-around ready to apply?</li> <li>• Is there any residual issue for go-live (e.g. temporarily out-dated or quarantined data, an approved manual business work-around required etc.), if so what must be communicated to the business and potentially customers?</li> <li>• Is an unplanned change required in order to resolve the issue? If so, who must be involved to support the change?</li> </ul>	<p><b>“Major Release Deployment, Cutover Issue Register”.</b> Spreadsheet detailing each issue reported to cutover control during cutover. Also includes detail on root cause analysis and resolution.</p>
Cutover Control Comms & Progress Updates	<p><b>KEY QUESTION  </b> Is the cutover comms plan being adhered to, and is there a need for any out-of-cycle comms?</p> <p><b>KEY CONSIDERATIONS:</b></p> <p><b>Communicating Updates:</b></p> <ul style="list-style-type: none"> <li>• Is there a standard message format for each type of comms? E.g. tasks completed since last update, update on open issues, whether we're tracking ahead or behind of schedule.</li> <li>• Is there a need for an out-of-cycle update to communicate a major milestone accomplishment or major issue?</li> </ul> <p><b>Initiating &amp; Tracking Cutover Tasks:</b></p> <ul style="list-style-type: none"> <li>• Cutover tasks are typically initiated via email from Cutover Control to the task doer. If multiple tasks must be kicked-off at the same time then task initiation emails should be pre-drafted so they're ready to be quickly send at the appropriate time.</li> <li>• How will people be reminded of upcoming cutover task responsibilities? E.g. issuing reminder email x-hrs prior to beginning, and asking for email confirmation.</li> <li>• Are there delays in schedule that need to be communicated to task owners with upcoming cutover tasks? This could be via email or phone call depending on the urgency.</li> </ul>	<p><b>“Major Release Deployment, Cutover Comms Examples”</b> which provides worked examples of the different types of comms and comms channels that are used by the BT Deployment team during a major release cutover.</p>
Manage people and logistics	<p><b>KEY QUESTION  </b> What adjustments, if any, are required to the cutover people plan?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• Are adjustments to transport, accommodation, or after-hours working arrangements needed? A dedicated co-ordinator should be nominated to handle the associated planning.</li> <li>• If there has been changes in timing of the cutover schedule then are there any calendar invites that must be updated with accurate times?</li> <li>• Do back-up resources need to be called in due to unplanned / unexpected absences?</li> </ul>	n/a

# BT Deployment Framework

## Cutover Phase | Key Questions & Considerations



Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Ramp-down processing	<p><b>KEY QUESTION  </b> Was the business ramp-down plan able to run as expected, have issues/delays resulted that now require work-arounds to be agreed and planned for?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Milestone tracking and business integration.</b> Are business ramp-down tasks being tracked through the integrated cutover run-sheet? What's the line of communication between the cutover control team and the business unit(s) supporting ramp-down? I.e. through the business deployment role.</li> <li>• <b>Exception management:</b> What is the impact to cutover if business burndown tasks can't be completed to their schedule time? Are any adjustments required to tasks within the cutover plan, is there an action for the business to complete this post-cutover or not? Who must be involved to support triage and next steps? E.g. Conversion team, Business SMEs, Business Deployment, Business Unit Lead(s).</li> </ul>	n/a
BCP	<p><b>KEY QUESTION  </b> Are there business critical work items that relevant business units should be progressing, even while the core system is down for cutover?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• Have any reports or data extracts been generated and sent to relevant business units enable them to work under BCP conditions?</li> </ul>	n/a
Go-live Catch-up processing	<p><b>KEY QUESTION  </b> Is there a need for the business to support any unplanned processing tasks that were a result of cutover issues? E.g. cutover processes errored and require one-off business action to manually process errored items.</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Post-cutover adjustments.</b> How does this change the priority of tasks, and by when must these new tasks be completed (e.g. to ensure adherence to SLAs, or completion prior to relevant business events)?</li> <li>• <b>Enabling information.</b> Do relevant business teams have access to the necessary information to complete these unplanned tasks?</li> </ul>	n/a
Issuing go-live comms & marketing material	<p><b>KEY QUESTION  </b> Is comms and marketing engaged through the cutover period and updating content based on updates resulting from cutover issues?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• Are any final amendments required to go-live comms before issuing to internal and external groups? E.g. unexpected cutover issues require a specific work-around to be detailed, or a change to the time of system/channel start-up etc?</li> <li>• Are channel teams on standby to enable updated messaging to be published quickly across the relevant channels? E.g. IR website (outage banners and service update page), myIR login page (Splash page outage message).</li> <li>• Do we have the right coverage of comms out to partnering agencies and organisations – i.e. messaging delivered at both the executive level and to the technical teams supporting cutover.</li> </ul>	n/a – OCMT and Marketing managed comms plans. Not owned by BT Deployment.



# BT Deployment Framework

## Deployment Review Phase | Key Questions & Considerations



**Stabilisation** | The Stabilisation phase provides heightened support to the deployed solution across the Hyper Care and Early Life Support periods that follow go-live. This involves daily issue triage, defect prioritisation, and rollout of defect fixes. For major releases it also includes an on-site present (i.e. blue shirt support crew) across IR offices to help staff onboard and familiarise with the deployed solution. The Deployment Services team have not supported Stabilisation during BT major release deployments – this topic is out of scope for the Deployment Services team to transition to IR’s enduring BAU model.

Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
	n/a, BT Deployment Services were not responsible for hypercare or early life support.	n/a

# BT Deployment Framework

## Deployment Review Phase | Key Questions & Considerations



### Review & Exit Deployment Phase

**Deployment Review** | The purpose of this phase is to close-out the release and confirm that all associated deployment requirements have been met. Central to this close-out is to reflect and seek feedback on each prior phase of the deployment cycle, and develop a set of deployment focussed recommendations that should be carried forward to future releases.

Topic Areas	Key Question & Areas for Consideration	Huringa Artefact(s)
Post-implementation lessons learned sessions	<p><b>KEY QUESTION</b>   What deployment planning and cutover lessons learned need to be carried forward to the next release?</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Source feedback.</b> Lessons learnt sessions with all key cutover workstreams/groups to identify areas of improvement to be applied for future releases. Key topics to explore include:               <ul style="list-style-type: none"> <li>○ What went well and should we continue doing?</li> <li>○ What didn't go so well and we should either stop doing, improve the way we're doing it, or start doing something new?</li> </ul> </li> <li>• Consideration should be given to the entire deployment lifecycle – i.e. deployment planning through to stabilisation.</li> </ul>	n/a, refer to lessons learnt section of <b>"Major Release Deployment, Cutover Close Out Report"</b> .
Document deployment exit	<p><b>KEY QUESTION</b>   n/a, action to document lessons learnt &amp; actions for improving deployment of the next release.</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Document outcomes</b> of the release deployment, including:               <ul style="list-style-type: none"> <li>○ Cutover task review: analysis of cutover tasks that either ran significantly faster or slower than planned, reasons as to why, and corrections that can be made to future releases to improve runtime forecasting.</li> <li>○ Cutover issues review: root cause analysis for issues encountered during production cutover and corrections that can be carried forward to future releases to avoid the same issues repeating.</li> <li>○ Deployment lessons learnt: Lessons learnt across the deployment cycle with recommendations for; what should carry forward to future releases, what should stop with the current release, what new things should be explored in future releases.</li> </ul> </li> </ul>	<b>"Major Release Deployment, Cutover Close Out Report"</b> . Documented results from the production cutover run (e.g. run-time of tasks, issues encountered), as well as lessons learnt across the deployment cycle and recommended improvements to carry forward to the next release.
Archive deployment artefacts	<p><b>KEY QUESTION</b>   n/a</p> <p><b>KEY CONSIDERATIONS:</b></p> <ul style="list-style-type: none"> <li>• <b>Consolidate and store all deployment artefacts.</b> These should be stored in a central, accessible repository (e.g. SharePoint) and should be used as reference material during the deployment planning and implementation of future releases.</li> <li>• A navigation document may be needed to detail the purpose of each deployment artefact and how it fits in the context of the end-to-end deployment release cycle.</li> </ul>	n/a - all artefacts listed in this framework to be stored in a single, secure location that can be accessed for reference during future releases if needed.

## 2. Deployment Capabilities

**This Section Covers:** The skillsets and tasks across business and/or technical domains that are required to plan for and execute a BT major release cutover.

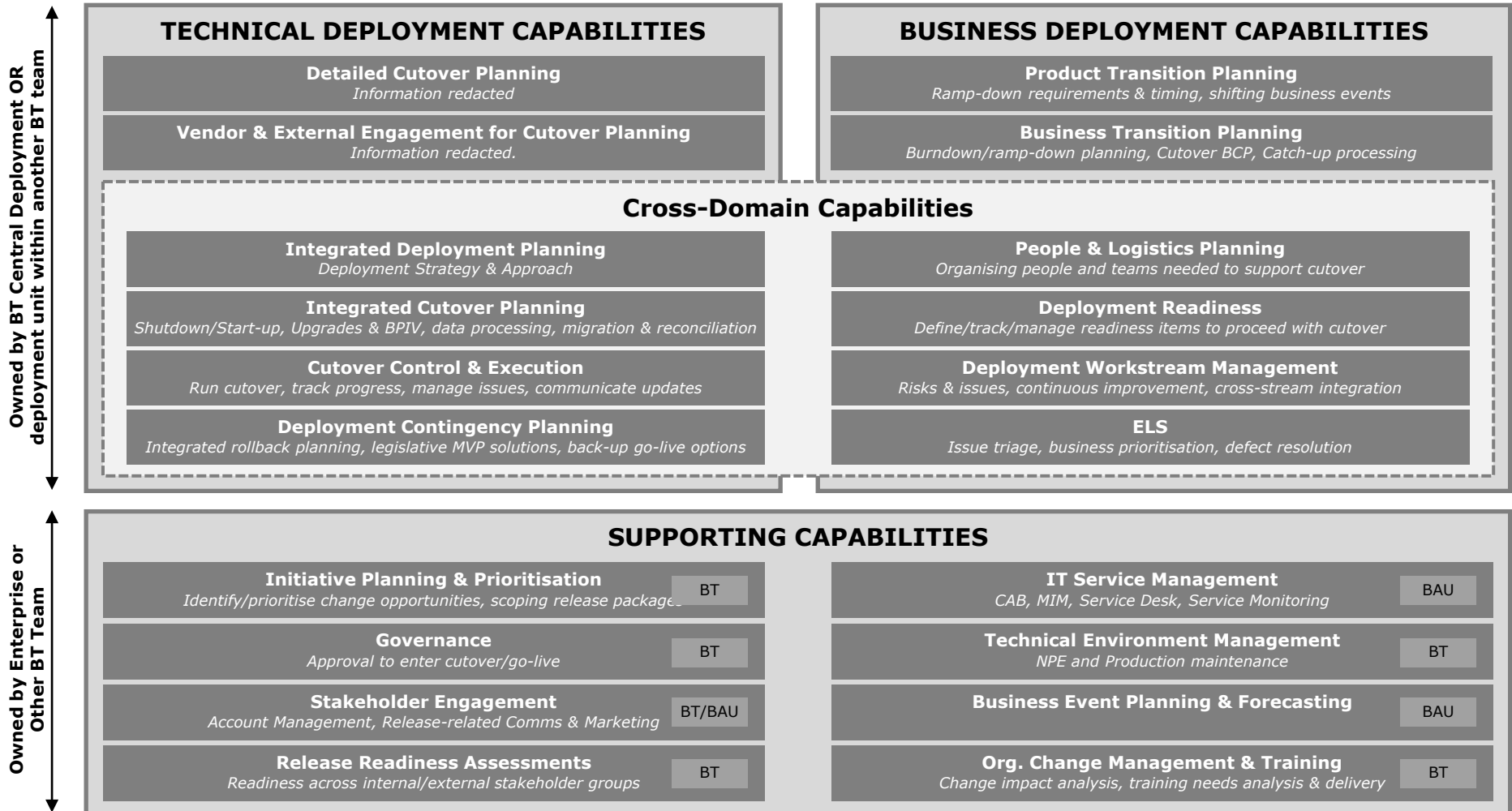
# BT Deployment Capabilities

## Skillsets to enable successful deployment planning & cutover execution

Two domains of capabilities are required of a Deployment team to end-to-end plan and execute the deployment and cutover tasks of a release:

- **Technical Capabilities:** Required to plan and implement the technical system/channel/data changes.
- **Business Capabilities:** Required to plan the business transition activities required to support cutover to the new solution.

Many capabilities incorporate elements of both domains. The team structure/model adopted by the BT programme also included a number of supporting functions/capabilities which, while not part of the BT Deployment team, were still required in some capacity to support the deployment of a BT START major release.



## 3. Deployment Sizing Framework

**This Section Covers:** A framework for sizing the deployment and cutover associated with a release, and recommendations for down-sizing the BT Deployment Framework for smaller sized releases.

# Right-sizing Deployment & Cutover Effort

## BT Major Releases vs Other Releases

The BT Deployment Framework and associated activities, artefacts, and events have been developed by the Deployment Services Team for the purpose of guiding the deployment planning, preparation, and cutover of BT major releases. These cutover events are complex, long-running, and disruptive. The deployment framework reflects this through a number of detailed planning and rehearsal activities that serve to validate the cutover approach, and build confidence that the cutover outcome will be 'go-live' as opposed to 'rollback'.

However, very few releases are as large scale and complex as BT major releases. This will be particularly true for IR once the BT delivery is complete and the organisation has fully transitioned to the enduring core tax and solution policy solution that the BT programme implemented. At this point IR's Change and Release model is expected to shift to deliver smaller scale and more frequent releases (in contrast to the approximately once-yearly BT major releases). To avoid over-investment in deployment planning for smaller scale releases, the deployment framework (and associated activities, artefacts, and events) must be capable of being right-sized to reflect the relative cutover size and risk profile associated with smaller releases.

### Areas of High Cutover Risk Associated with BT Major Releases

- Large volume data migration, and associated reconciliation of business data and crown accounts.
- Long running cutover window – i.e. 3-7 days – with associated outages resulting in:
  - Disruption to core business functions caused by core system outages.
  - Large customer impact caused by outage to key channels – e.g. myIR, Contact Centre, Front of House.
- Co-existence dependencies between systems on the Heritage and NSP platforms.

**LARGE cutover risk profile caused by long running, disruptive, and complex cutover**

### Controls for Managing High Risk Profile for BT Major Release Cutovers

- Dedicated deployment team with 8-12 month lead time to plan and validate the production cutover.
- Multiple cutover dress rehearsals to validate the plan.
- Enterprise change freeze to support production stability in the lead-up to cutover.
- Extensive external comms to customer segments and partners to communicate cutover outage and associated impacts.
- Detailed cutover planning across multiple technical, business, and external groups – with on-going revision and refinement required.

**LARGE investment in risk mitigation controls required to provide assurance of successful cutover**

### Question

IR releases, and their associated cutover events, are expected to be smaller scale and less complex beyond the final BT major release. How does the BT Deployment Framework scale to allow these cutovers to be sufficiently planned and proven without significant over-investment that the Deployment Framework for BT Major Releases would result in?

# Right-sizing Deployment & Cutover Effort

## Cutover & Deployment Sizing Matrix

The risk profile associated with a cutover is the primary input for determining the amount of planning, validating, and preparing that is necessary to prove readiness for cutover and ultimately receive formal approval to proceed with deploying the change.

The greater a cutover risk profile is:

- The greater likelihood there is of issues arising during cutover that result in a 'rollback' as opposed to a 'go-live' decision.
- The greater the reputational damage to IR of failing to successfully go-live at the planned and communicated milestone date.
- The more time and/or effort is required to plan and prepare for a reattempt of the cutover.

The sizing matrix below can be used to determine cutover risk by considering a combination of:

- **How disruptive the cutover is** – greater disruption leads to more business and customer impact.
- **How complex the cutover is** – greater complexity increases the likelihood of business critical issues arising during the time-pressured cutover window.

The sizing matrix is ultimately an extension of the BT Deployment Framework. It should be used to right-size the level of cutover and deployment planning and preparation. As with the deployment framework it focuses specifically on cutover impacts and does not consider the broader change impacts associated with each release. As such, it should not be used to inform the planning of other release elements outside of deployment & cutover (e.g. org. change management and training, testing etc).

		Cutover Complexity			
		Negligible Complexity	Low Complexity	Medium Complexity	High Complexity
Cutover Disruption	Negligible Disruption	Standard P3/P4 break-fix	Small Risk Profile	Small Risk Profile	N/A
	Low Disruption	Small Risk Profile	Small Risk Profile	Medium Risk Profile	N/A
	Medium Disruption	Small Risk Profile	Medium Risk Profile	Medium Risk Profile	Large Risk Profile
	High Disruption	N/A	N/A	Large Risk Profile	Large Risk Profile

### Examples of Different Sized Releases

- **Large:** BT major release cutovers, START major version upgrades.
- **Medium:** Launching a new product in START (e.g. small business cashflow scheme)
- **Small:** Minor functional or technical enhancements from production support backlog.

# Right-sizing Deployment & Cutover Effort

## Inputs to Deployment & Cutover Sizing Matrix

The table below defines negligible (standard) / small / medium and large impact measures across both the **Cutover Disruption** and **Cutover Complexity** domain that are used to assess the cutover risk profile.

Each cutover domain comprises a number of categories. The highest rating category determines the impact score for that respective domain.

Cutover complexity comprises a set of categories covering both technical and business elements, however they are not assessed separately – i.e. high technical complexity and low business impact still results in a 'high impact' score for cutover complexity and vice versa.

		Cutover Disruption			Cutover Complexity – Technical				Cutover Complexity – Business		
		Type of disruption	Duration	# Systems & channels	Migration	Type of change	Cross-system dependencies	External dependencies	Business Events	Business Processing	Legislation
Deployment/Cutover Impact	Negligible/ Standard	No outage or reduced service	< 1 hr	One or more systems / channels	No	Fix to existing functionality	None	None	No impact	Not required	No
	Low Impact	Reduced service	1 to 4 hrs	One or more systems / channels	No	Standard change or minor enhancement to one or more systems	Minimal	None	No impact	Not required	No
	Medium Impact	Reduced service with minor outage	4 to 24 hrs	One or more business critical systems / channels	No	Major functional or non-functional upgrades to one or more systems	Loosely coupled dependencies	Changes to one external system or channel.	Impact to regular business events (weekly / monthly) & re-scheduling required	Ramp-down of business activities not required, minimal impact to business processing	Yes
	High Impact	Major outage	24 hrs+	Multiple business critical systems / channels	Yes. Migration of business and/or financial data required.	Major functional and/or non-functional upgrades to three or more systems.	Tightly coupled dependencies	Changes to multiple external systems / channels.	Impact to key annual business events & re-scheduling required	Ramp-down of business activities required, major impact to business processing during cutover	Yes



# Deployment Artefacts per Deployment Size / Category

## Summary View

	Deployment & Cutover Risk Profile			
Deployment Artefact	Break/Fix	Small	Medium	Large
Deployment Strategy and Approach	X	X	LITE	✓
Deployment Readiness Framework	X	X	LITE	✓
Cutover Approach	X	X	LITE	✓ Product Transition Approach(es) Shutdown / Start-up Approach Rollback Approach
Business Deployment Approach	X	LITE*	✓	✓
ELS approach	X	LITE	✓	✓
Comms & marketing plan	LITE	LITE	✓	✓
Cutover Implementation Plan / Run-sheet	LITE	✓	✓	✓
Business verification (BPIV) plan	LITE <i>Incl. in Cutover Imp Plan</i>	LITE	✓	✓
Business Deployment Plan	LITE*	✓*	✓	✓
Cutover People Roster	X	LITE	✓	✓
Cutover Checkpoint - go/no go decision	X	X	✓	✓

# Deployment Artefacts per Deployment Size / Category

## Summary View

Deployment & Cutover Risk Profile				
Deployment Artefact	Break/Fix	Small	Medium	Large
Deployment Integration Forum	X	X	LITE	✓
Implement Change Freeze	X	X	LITE	✓
Cutover Rehearsal	✓ 1 rehearsal (i.e. deploy to QUAL)	✓ 1 rehearsal (i.e. deploy to QUAL)	✓ Up to 2 rehearsals	✓ Up to 3 rehearsals
Cutover Rehearsal Exit Report (Lessons Learnt)	X	X	✓	✓
Production Cutover	✓	✓	✓	✓
Go-live decision report	X	X	✓	✓
Deployment Exit Report & Lessons Learned	X	X	✓	✓
ELS	LITE	✓	✓	✓
ELS Exit Report	X	X	✓	✓