**Delivery of Digital Products: A quick guide for Group/Product Owners Last update: 08 June 2025**

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<Squad Composition>

Squad composition – Core Members

Group Product Owner (GPO): Lead prioritisation within squad's pipeline

Product Owner (PO): Define product vision, drive the implementation of the product, and communicate with stakeholders to ensure product meets business needs and deliver value

Product Manager (PM): Oversee timely delivery of the product/product enhancement in accordance with the product vision, with efficient resource allocation

Tech Squad Lead: Assess tech feasibility, effort estimation & delivery timeline

Product Designer: Craft seamless member/employer experience by designing flows and interfaces

Developer: Develop product in accordance with user requirements

Squad composition – Support Teams

Researcher: Validate business hypothesis and ideate suitable solutions

Programme Management Office: Oversee the overall product roadmap to ensure delivery of high-value products

Analytics: Rep Assess and monitor product effectiveness through data

Web Content Manager: Provide authoring support for content creation/updates on pre-login pages

Content Designer: Craft seamless member/employer experience with concise language and clear structure

Central Digital Products: Providing authoring support for website Forms

Mobile Platform Management: Work with POs to plan and deliver high-value products, while providing support for mobile-specific changes

</Squad Composition>

<Product Development Lifecycle>

Overview of Product Development Lifecycle: The 8 Stages

1. Registration
2. Prioritisation
3. Research/Ideation
4. Estimation
5. Alignment Checkpoint
6. Approval of Requirements
7. Development Phase
8. Go-live

Registration (Stage 1)

* PMO polls for products in the upcoming cycle + next one year
* For off-cycle products, PO may register via the Digital Products Register (dummy FormSG link) on ad-hoc basis
* GPO submits products list, with first-cut ranking within group
* To update the list of outstanding products and feature backlog that were deferred from the previous cycle
* PO provides product details and requirements for prioritisation and estimation (dummy wiki link)
* Refer to guide for tips on defining problem & desired outcome

Prioritisation (Stage 2)

* PMO evaluates product value based on product details provided, using the prioritisation framework (dummy link to article)
* PMO assesses products' prelim prioritisation within squads based on: a) product value b) timeline c) first-cut ranking provided by groups
* POs may discuss with GPO/PM to re-prioritise if needed

Research/Ideation [Optional stage after prioritisation, if applicable]

* For identified products that may need research or ideation to better define the problem and/or validate business hypothesis

Estimation (Stage 3)

* ITD and DSD teams (i.e. Design, WCM, Analytics) assess feasibility of requirements and effort estimation
* Products are assessed sequentially based on their prioritisation order
* ITD/DSD provide target delivery timeline based on effort estimation
* Products that cannot be delivered in the upcoming cycle will be deferred and re-prioritised in subsequent cycles. POs may seek re-prioritisation if required.

Alignment Checkpoint (Stage 4)

* PO ensures stakeholders (e.g. GD/HOD) are aligned to the latest product direction
* Kick-off meeting for PO/PM/ITD/Design/Analytics to establish product delivery timeline (feature-level) and overall implementation plan (e.g. comms)
* PO provides user stories

Approval of Requirements (Stage 5)

* PO obtains approval via the IT Resource Approval Process (dummy link to article)
* Approval is required before Development work starts
* For 'Reinventing Tomorrow' (RT) projects requiring IT effort >50 man-months, PO needs to seek approval via Resource Approval Committee (RAC) (dummy link to article)

Design Phase (Stage 6)

* Design grooming / Prototyping: Design works with PO to design flows and interfaces
* Usability testing (if required): Designer and Researcher works with PO to ensure that the design prototype meets the expected requirements and functions

Development Phase (Stage 7)

* ITD develops product, and PO performs testing after every sprint review
* PO performs end-to-end testing
* PO ensures that backend systems are also ready for testing and go-live

Go-live (Stage 8)

* Product is deployed for operational use
* PO prepares and performs post-QA

</Product Development Lifecycle>

<Roles & Responsibilities>

Stage 1: Registration

* Goals:
  + Register products
  + First-cut ranking
* Group Product Owner responsibilities:
  + Consolidate upcoming products from POs
  + Lead POs to prioritise products within group
  + Submit list of group's products with first-cut ranking to PMO
* Product Owner responsibilities:
  + Provide list of upcoming products to GPO for consolidation, with required information:
    - Product details to substantiate product value (e.g. business intent, statistics on affected cohort)
    - User requirements (see Deliverables Checklist(dummy link to article))
    - SR link (dummy link to article)
  + NOTE: ITD/DSD will not be able to proceed with estimation if sufficient details are not provided.
  + Work with GPO to prioritise products within group
* Product Manager responsibilities:
  + PO may approach PM for guidance on the registration process / requirements
  + Verify that requirements address the problem statement with squad via the high-level journey map

Stage 2: Prioritisation

* Goal:
  + Prelim prioritisation
  + Reprioritisation (if need)
* Programme Management Office responsibilities:
  + Set prelim prioritisation for products within squads based on: a) product value (evaluated using prioritisation framework) b) timeline c) first-cut ranking provided by groups
* Product Owner responsibilities:
  + Provide clarifications (e.g. on business intent) to PMO where necessary
  + View prioritisation progress/outcome in DevOps platform (dummy link to guide)
  + Reprioritisation: Work with GPO/PM to reprioritise products within squad to meet business needs
* Group Product Owner responsibilities:
  + Reprioritisation: Coordinate with other GPOs/POs/PMs within squad to reprioritise products
* Product Manager responsibilities:
  + Reprioritisation: Assess reprioritisation, facilitate GPOs/POs within squad to come to consensus on reprioritisation and seek PMO's concurrence

Stage 3: Estimation

* Goals:
  + Effort estimation
  + Establish roadmap
* Tech Squad Lead responsibilities:
  + Assess feasibility of requirements, provide basic effort estimation and target delivery timeline
* Product Designer responsibilities:
  + Assess number of design sprints required
* Web Content Manager responsibilities:
  + Assess impact to web content
* Analytics Rep responsibilities:
  + Assess feasibility of analytics requirements
* Product Owner responsibilities:
  + Provide clarifications to ITD/Design/WCM/Analytics where necessary
  + Engage ITPM for inputs on APIs, batch jobs, timeline etc.
* Programme Management Office responsibilities:
  + Finalise product roadmap and backlog
  + Re-prioritise where necessary

Stage 4: Alignment Checkpoint

* Goals:
  + Align stakeholders
  + Feature-level roadmap
  + User stories
* Product Owner responsibilities:
  + Align stakeholders with the latest product direction
  + Create user stories (US) in DevOps platform (dummy link to US template and How to raise US in DevOps platform guide)
  + Update US DevOps platform link in the CR work item (dummy link to guide)
  + During Kick-Off Meeting: Update squad on:
    - Project background
    - High-level product features
    - Overall implementation plan (e.g., comms & timeline)
* Product Manager responsibilities:
  + Prior to Kick-Off Meeting: Validate that requirements address the problem statement with squad
  + Organise kick-off meeting (attended by PO, PM, Tech Squad Lead, product designer, ITPM, Analytics rep)
  + During Kick-Off Meeting: Update squad on:
    - Timeline of events (e.g. design/dev sprints)
    - Feature-level roadmap (e.g. MVP and subsequent releases, for products that cross multiple cycles)
    - Recap roles & responsibilities for the upcoming phases

Stage 5: Approval of Requirements

* Goal:
  + Obtain AOR
* Product Owner responsibilities:
  + For BAU projects or new projects with ≤ 50 man-months: Obtain AOR via the IT Resource Approval Process
  + For new projects with > 50 man-months: Obtain approval at Resource Approval Committee (RAC)
  + For all projects:
  + Update CR status in DevOps platform to "Project Approved"
  + NOTE: AOR is required before commencement of dev work

Stage 6: Design Phase

* Goals:
  + User flow
  + Prototype
* Design sprint:
  + During Estimation stage, the designer would estimate the no. of sprints required
  + Each sprint cycle consists of:
    - Grooming
    - Prototyping
    - Usability Testing
    - Sprint Review
* Grooming stage
  + Product Owner responsibilities:
    - Map out user flow & confirm scope of entry points
    - Refine user stories
    - Read up on governance matters (dummy link to governance guide) and identify any deviations required
    - Clear content with COM if any
  + Product Manager responsibilities:
    - Organise grooming and sprint meetings
    - Ensure user flow aligns with the product vision
    - Ensure requirements comply with governance standards
  + Product Designer responsibilities:
    - Facilitate user journey mapping sessions
* Prototyping stage
  + Product Designer responsibilities:
    - Create prototype of screens based on user stories
* Usability Testing stage
  + Researcher responsibilities:
    - Establish UT plan
    - Conduct UT
    - Share UT findings with squad
  + Product Owner responsibilities:
    - Provide inputs & concur with UT plan
    - Assess if any design changes should be made
  + Product Designer responsibilities:
    - Make changes to the prototype based on UT findings (if required)
* Sprint Review stage
  + Product Manager responsibilities:
    - Organise meetings, monitor progress & remove impediments
  + Product Designer responsibilities:
    - Demonstrate features delivered during the sprint
    - Provide feedback on sprint experience & areas of improvement
  + Product Owner responsibilities:
    - Provide confirmation on user stories delivered during the sprint
    - Provide feedback on work done, sprint experience & areas of improvement
    - Prepare test scenarios & test accounts for Development Phase

Stage 7: Development Phase Goal: Develop product

* Goals:
  + Develop product
* Design sprint:
  + During Estimation stage, Tech Squad Lead would estimate the no. of sprints required
  + Each sprint cycle consists of:
    - Grooming
    - Development
    - Testing
    - Sprint Review
* Grooming stage
  + Product Manager responsibilities:
    - Organise meetings, monitor progress & timeline, remove impediments
  + Product Owner responsibilities:
    - Finalise user stories including those required for analytics and error handling
    - Confirm with ITPM on backend system dependencies and readiness
  + Tech Squad Lead responsibilities:
    - Plan out sprints and share sprints roadmap (RMP)
    - Create technical user stories including for technical error handling
* Development stage
  + Tech Squad Lead responsibilities:
    - Ensure Developers develop the product in accordance with user stories and prototype
    - Conduct daily stand-up meetings (attended by PO, PM & Developers)
* Testing stage
  + Product Owner responsibilities:
    - Prepare test scenarios & test accounts (Should be prepped ahead of time, to avoid delays in testing)
    - Check in with ITPM to ensure backend systems are ready for testing
    - Perform testing to ensure features function as expected (**End-to-end testing** after the final sprint cycle)
    - Log bugs if any (dummy link to log bugs guide)
  + Tech Squad Lead responsibilities:
    - Provide test environment for PO to conduct testing
    - Ensure bugs are resolved
* Sprint Review stage
  + Tech Squad Lead responsibilities:
    - Show & Tell on what was done in the sprint
    - Provide feedback on sprint experience & areas of improvement
  + Product Owner responsibilities:
    - Provide confirmation on user stories delivered during the sprint
    - Provide feedback on work done, sprint experience & areas of improvement
    - Decide which features (if any) to put in backlog for delivery in subsequent cycles
  + Product Manager responsibilities:
    - Consolidate **product feature backlog** (if any), create CR entries in DevOps platform to prioritise for future pick-up and update PMO

Stage 8: Go-Live

* Product Owner responsibilities:
  + Before Go-Live:
    - Prepare transition approach for go-live (e.g. whether need to down existing forms, identify relevant prod accounts, raise access request, author content changes etc.)
    - Prepare and clear internal/external comms plan
    - Check in with ITPM to ensure backend systems are ready for go-live
    - Prepare post-QA plan (test scenarios & accounts)
  + Go-Live
    - Perform post-QA plan
    - Ensure DevOps platform is updated
    - Log bugs if any (dummy link to log bugs guide)
* Tech Squad Lead responsibilities:
  + Before Go-Live:
    - Prepare runbook and environment for go-live

</Roles & Responsibilities>

<Research and Ideation>

The purpose of research/ideation is to help support the value of the idea(s) by better defining the problem and/or validate the business hypothesis through research/ideation. Only identified idea(s) assessed by DSD-RDA will go through this step.

</Research and Ideation>

Glossary of terms:

* PO: Product Owner
* GPO: Group Product Owner
* PM: Product Manager
* PMO: Programme Management Office
* CR: Change Request
* SR: Service Request
* UR: User Requirement
* UT: Usability Testing
* ITPM: IT Project Management