



Whitepaper

APR Mastery: Cognizant's Methodology for Modernization Excellence—Series III



“Navigating IT Modernization: Comprehensive Assessment for Strategic IT Transformation”

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Application portfolio rationalization is an essential component of any IT modernization strategy and is a critical first step before cloud migration and application modernization. While cloud migration can offer many benefits, it is not always the right solution for every organization or application. Application rationalization is necessary to determine which applications are suitable for the cloud, to address any underlying issues and to ensure that organizations are making the most of their cloud migration and modernization investments.

APR can help organizations identify the applications that need to be modernized and prioritize their modernization efforts. By streamlining the application portfolio, organizations can free up resources, reduce costs and ensure that their modernization efforts and IT investments are aligned with business goals. Application modernization is critical for organizations that want to remain competitive and agile in today's rapidly changing business landscape, and APR is a key part of achieving that goal.

Cognizant's exclusive execution methodology

Cognizant's application portfolio rationalization uses a proven methodological approach, as shown in Figure 1. In the first pass, the APR Preparation phase, we establish a baseline application inventory and designate stakeholders from both the customer's side and Cognizant to review and validate the data. Steps include tool procurement (Cognizant's proprietary or third-party: Depends on customer expectations/agreement), installation, access provisioning and sprint planning for APR execution.

During pass two, the application assessment phase, the sprint plan to be executed is based on POD formation and collected detailed data, analysis, and qualified opportunities reviewed with customer stakeholders for baselining. In pass three, the Deep-dive phase, we identify the target state and the business case and summarize benefits in terms of ROI (return on investment) and VOI (value of investment) with and implementation roadmap.

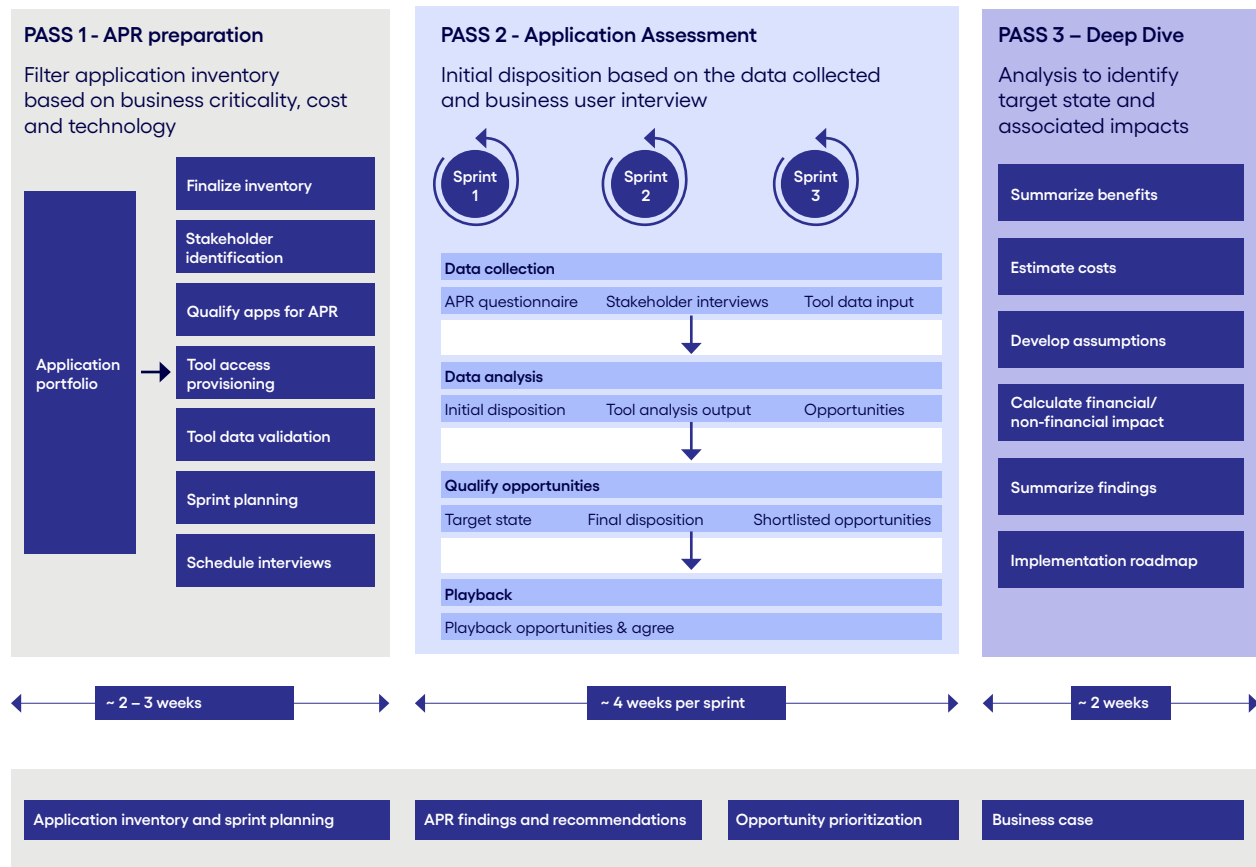


Figure 1

Cognizant's point of view (PoV) on APR exclusive execution methodology

It's detailing a multi-pass model that includes preparation, assessment, and deep-dive phases through a multi-pass APR Exec. Model as depicted in Figure 2.

PASS 1 (Filtering the portfolio)

The application inventory is filtered based on cost/technology, business criticality and other characteristics (no discovery or analysis performed). This helps qualify the assets to be considered or not considered for a rationalization study.

- **Inputs:** Application inventory, organizational structure, geography spread and other application attributes
- **Activities:** Identify application owners, SMEs and team mapping; obtain access to respective SharePoint; request application data; customize the questionnaire template
- **Key deliverables:** Data collection schedule, overall engagement plan, customized weights for the parameters

PASS 2 (Application assessment)

In this phase of the assessment, detailed data collection using predefined key data collection templates for parameters such as business criticality, risk to business, technical health, IT operations, total cost of ownership, risk, resource allocation, etc. are leveraged for further analysis. Important considerations during the initial phase are:

- Surveying and interviewing to collect data for the strategic, functional/capability and financial aspects of the applications in scope
- Understanding the business context of the applications and evaluating them against required future capabilities to provide guidance on where the application portfolio should be
- Categorize applications based on initial assessment and analysis/conversations with client to classify into these categories:
 - Category 2.1 – Must discard or replace
 - Category 2.2 – Further investigation required
 - Category 2.3 – Retain

This pass can be driven through a multi-sprint approach depending on the size and scale of the portfolio

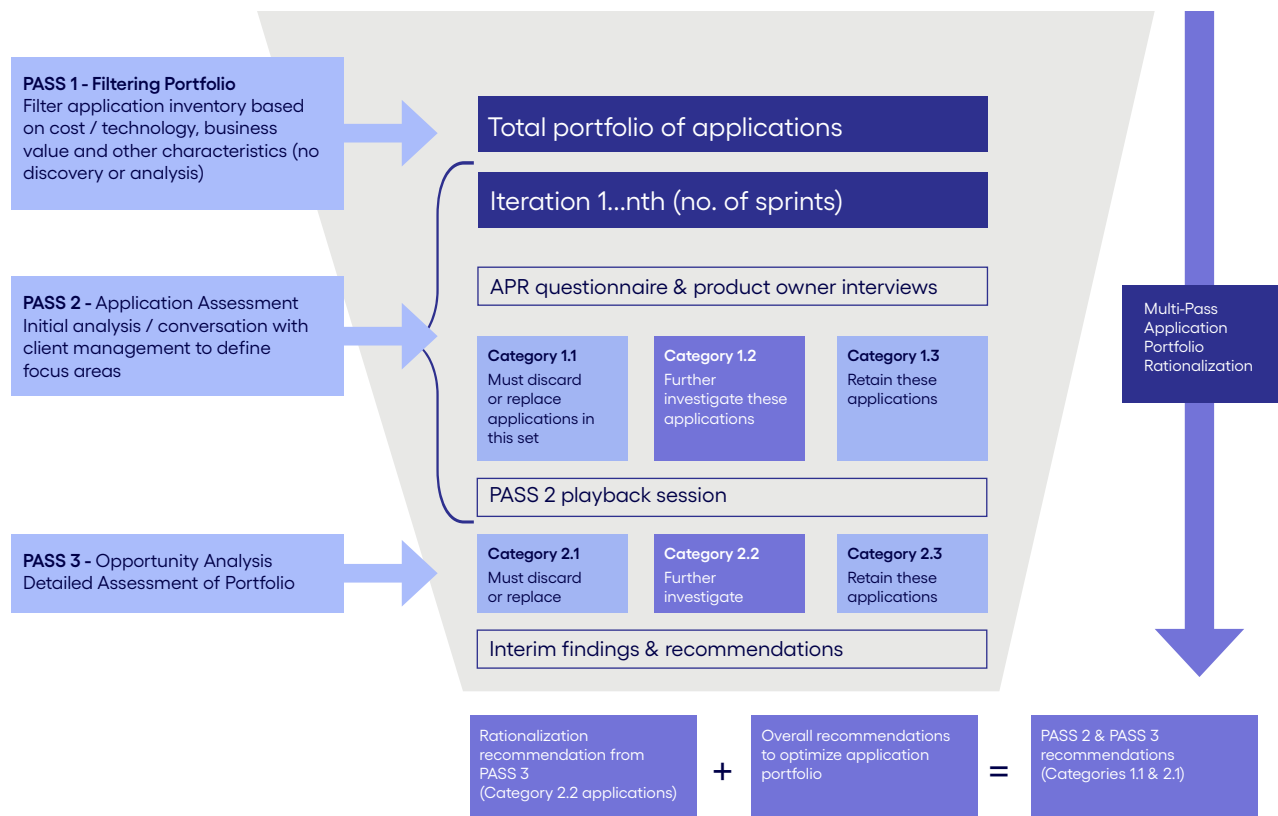


Figure 2

PASS 3 (Opportunity Analysis)

The next phase of assessment is a multidimensional analysis based on the outcome of phase II (Category 2.2). For example, applications clustered by business function, technology such as databases or platforms, etc. on which a multitude of analytical techniques are used to make specific recommendations / solutions / options. Disposition decisions/recommendations made at the application level or at the cluster level, as appropriate. For those applications that fall under the investigate category (3.2 further investigate), further analysis can be done to arrive at possible solutions.

- **Category 3.1** - Must discard or replace
- **Category 3.2** - Further investigate
- **Category 3.3** - Retain these applications

Overall recommendations to optimize the application portfolio is the collective recommendation from Pass 1 (Cat 1.x), Pass 2 (Cat 2.x) and the candidate opportunities identified to prioritize for further detailed analysis during Pass 3.

Measurable benefits of application portfolio rationalization:

The main goal of application portfolio rationalization (APR) is to improve efficiency, reduce costs and align the applications with the organization's strategic goals. There are several metrics that can be used to measure the effectiveness of the application portfolio rationalization process, including the listed metrics. Organizations can evaluate their application portfolio and make informed decisions for their modernization and migration strategy:

- 1. Cost:** This metric measures the total cost of ownership (TCO) of an application. It includes factor such as the cost of licensing, hardware, maintenance, etc.
 - Lower costs: By eliminating redundant or unnecessary applications, organizations can reduce costs associated with licensing, maintenance and support. They can also reduce costs associated with managing and maintaining a complex IT infrastructure.
- 2. Business value:** This metric measures the contribution of an application to the organization's strategic objectives. It can be measured by factors such as revenue generated, costs saved and customer satisfaction.
 - Improved business agility: By aligning the application portfolio with the business' strategic goals, APR can help organizations respond faster to changes in the market or business environment.
- 3. Technical debt/operational efficiency:** This metric measures the cost of maintaining an application over its lifecycle. It includes factors such as software updates, hardware upgrades and maintenance costs.
 - Reduce technical/functional/operational debts: Organizations can reduce the number of incidents (technical debts such as compromised code quality, operational debts such as lack of process and tools, and service requests (functional debts due to lack of functional capability), which in turn reduce the OpEx pertain to applications.
- 4. Complexity:** This metric measures the complexity of an application and its impact on the organization's IT Infrastructure. It can be measured by factors such as the number of interfaces, number of users and level of customization.
 - Reduce complexity: APR can help organizations reduce complexity by consolidating redundant apps, eliminating outdated apps and streamlining processes. This can lead to a more efficient and streamlined IT Infrastructure.
 - Improved user satisfaction: By reducing complexity and improving application performance, application portfolio rationalization can improve user satisfaction and productivity.

- 5. Risks:** This metric measures the risk associated with an application, including security risks, compliance risks and operational risks.
- Enhanced risk management: Rationalizing the application portfolio can help organizations reduce risks associated with outdated or unsupported applications and associated technologies. It can also help improve compliance and security by identifying and addressing vulnerabilities in the IT infrastructure.
- 6. App maturity:** This metric measures the age of an application and its relevance to the current business environment. It includes factors such as the ages of the application code, hardware and software.

Cognizant brings potential outcomes to customers across industries

Here are a few examples of how Cognizant uncovered opportunities through application portfolio rationalization from the low- to high-range/scale (number of applications) with the appropriate business case for application modernization and cloud migration across industry customers. See Figure 3.



An American multinational corporation (1700+ apps | 4 Regions)

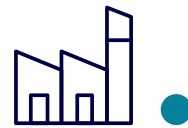
23% - Early Cloud migration (Re-host/Re-platform) to realize quick benefits

10% - Near Term Modernization Candidates - Best suited for Re-platform (PaaS adoption) ROM estimation for fixing **Cloud blockers (95k - Tech. Debts)** and **OSS vulnerabilities (6.4k)** for the **240 bespoke apps**



A leading independent oil and gas company in UK (260+ apps | UK Regions)

Opportunities to reduce IT cost by **£11.9M over 5 years** from a baseline spend of **£8.5M per year (25% saving)**



A large manufacturing Company in US (450+ apps across Regions)

Cost Benefit of **~\$12M** from decommissioned modernization opportunity | **~40% cost reduction** on overall application portfolio



Large media company in Europe (600+ apps | 5 geo. regions)

60+ & 20+ apps – Short & long term decommissioning | 4 year Operational Transformation strategy with **\$18M benefit**



Large home appliances manufacturer in Europe (~1000 apps | 5 geo. regions)

Cost benefits of **~19M Euros** | Higher transparency of apps landscape in terms of business alignment



Large apparel retailer in US (~160 apps | global region)

10+ & 20+ apps – Short & long term decommissioning | Redundant functionalities highlighted for 8 applications

● High-range/scale (No. of apps)

● Mid-range/scale (No. of apps)

● Low-range/scale (No. of apps)

Figure 3

Cognizant's accelerators

C-MAP – Cloud Migration and Modernization solution, driven by the Cognizant Modernization Acceleration Platform (CMAP) platform is a comprehensive suite of solutions, backed by an open architecture platform. It helps customers modernize core legacy applications to power and accelerate their digital transformation journey.

Through this platform-driven approach, we enable our customers to:

- Discover modernization and cloud migration opportunities
- Strategize and execute to cover application portfolio analysis and application categorization
- Prescribe treatment strategies
- Arrive at a modernization roadmap that ensures smart cash flow management and the ability to meet a customer's end state objectives

The assessment is enabled by the Cognizant Modernization Acceleration platform, which is a unified and comprehensive modernization platform that defines and orchestrates our clients' modernization strategy and execution, with contextual solutions leveraging proprietary IPs and partner tools across the modernization life cycle. The platform supports both online and offline assessments.

In the online assessment, we use partner tools like Device 42, Microfocus and Flexera to gather technology stack and application characteristics and help accelerate the entire assessment process and timeline. Offline assessment is done using the platform where we enter data manually.

“Compared with a manual application portfolio rationalization analysis, C-MAP accelerates the turnaround time by 60 to 70%”

Application portfolio rationalization – success stories

Multinational conglomerate company in US

Challenges

- Large heterogeneous portfolio of 8,093 applications across portfolios and five geographical regions. Some were being used but had an unclear support structure and no potential maintenance model in place.
- Legacy technology landscape and overlapping apps slowing the company's digital journey.
- Datacenter to be shut down and no clear roadmap for the existing apps, grappled with lift and shift option.

Key objectives

- Application portfolio rationalization
- Predictable cost savings and efficiencies
- Technology enablement and modernization
- Spend management through cloud migration

Cognizant solution/approach

- Scoping priority apps: Categorized application inventory based on region (APAC, EMEA, LATAM, North America and Global) and mapped to prioritize the applications already in cloud migration initiatives (1,707 apps)
- Tool-based approach: Leveraged CAST HL tool for survey and code scan for custom apps
- Leveraged Cognizant APR framework for rationalization assessment of 10 to 12 weeks: Derived business and technology value through quantitative (tool-based), CAST Highlight (software health, cloud readiness, open-source safety) and qualitative SME's input
- Map applications to 6R disposition/cloud migration strategy
- Identify and recommend potential opportunities for modernization
- Setup and feed this information into Alphabet platform for ongoing portfolio management as a service

Business outcomes

- 23% – Early cloud adopters - Cloud migration (Re-host/Re-platform) to realize quick benefits
- 10% – Near Term Modernization Candidates - Best suited for Re-platform (PaaS adoption)
- 49% – Apps - Longer Term Modernization Candidates - Re-architect, Refactor & Rehost (23% of COTs/ Vendor apps) before cloud movement
- 10% – Pursue later - Retain applications
- 8% – Retire/Consolidate/Replace with other apps
- ROM estimation for fixing cloud blockers (\$95k in technical debts) and OSS vulnerabilities (6.4k) for the 240 bespoke apps

World's leading data, insights and media consulting company in UK

Challenges

- Application adaptability to accommodate the business transformation
- Presence of diversified geographical location
- Working with multilingual SMEs

Key objectives

- Optimize application footprint across five geographic regions in 20+ countries with 656 applications across four different lines of business
- Provide the ability to prioritize with clear traceability to the strategic agenda
- Define a business-aligned portfolio that enables operational agility and flexibility

Cognizant solution/approach

- Prioritized application inventory based on business criticality
- Customized data collection adapted to business needs
- Performed application analysis to derive the business value and technical value
- Four-quadrant analysis and mapping based on scores
- High-level cloud migration opportunities for the portfolio
- Identified potential business opportunities with cost/benefit analysis
- Synchronize business and technical value in coming up with transformation themes

Business outcomes

- Defined 4Rs strategy for the applications, further 3Rs for cloud adoption. Created business transformation themes with cost/benefit analysis.
- Recommended immediate decommission plan for 60+ applications, 20+ applications in long-term
- Four-year operational transformation strategy with \$23.2M benefit
- Prioritize business opportunities with cost benefit analysis of \$50.5M

In conclusion, Cognizant's APR execution methodology is a critical component of IT modernization strategies, serving as a foundational step prior to cloud migration and application modernization. Through a structured multi-pass approach, it enables organizations to assess, prioritize, and streamline their application portfolios, aligning IT investments with business objectives. This process not only prepares applications for cloud suitability but also addresses underlying issues to maximize the benefits of cloud migration and modernization investments. Ultimately, APR positions organizations to remain competitive and agile in the ever-evolving business landscape



Cognizant helps engineer modern businesses by helping to modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. To see how Cognizant is improving everyday life, visit them at www.cognizant.com or across their socials @cognizant.

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