# NAVIGATE YOUR DIGITAL TRANSFORMATION WITH CLOUD

## CONSUMER PACKAGED GOODS, RETAIL AND LOGISTICS INDUSTRY VIEW

Infosys Knowledge Institute

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# INTRODUCTION

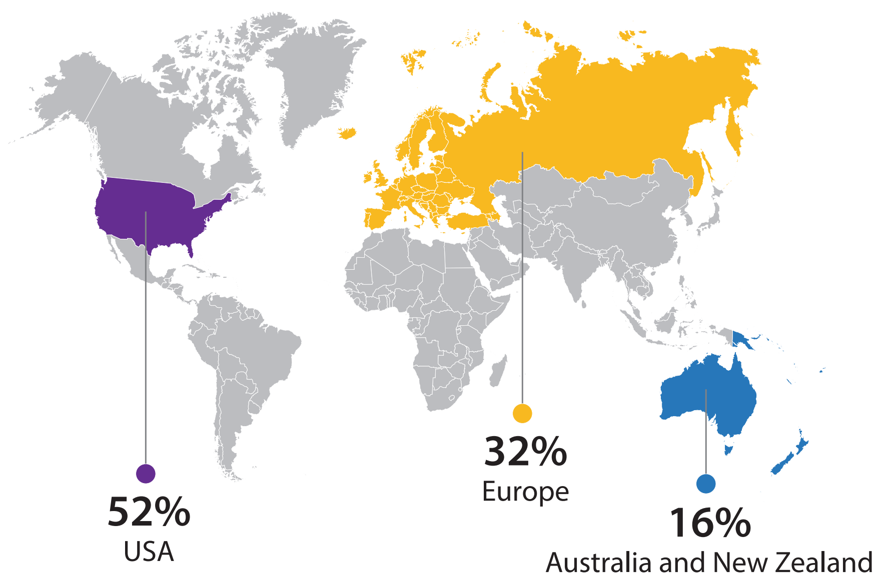
The cloud promises to deliver several significant benefits including reduced costs, increased scalability, flexibility, and agility, leading to improved business performance.

The Consumer Packaged Goods, Retail and Logistics (CRL) industry is in the midst of exciting changes as the consumer wields power. The CRL sector is dealing with a spurt in omnichannel sales, savvier and socially-conscious consumers, and pressure to improve shrinking margins.

A common theme across the three segments is the push to digitize the business to keep pace with market demands. The digital transformation goes beyond mere automation and involves integrating complex ecosystems, implementing advanced analytics-based applications, and engaging customers. At the core of these changes is the desire to significantly enhance customer experience by focusing on improvements to convenience, personalization, efficiency, and relationships.

The cloud is an integral part of digitization and technology rejuvenation efforts ushering CRL enterprises into a new era of hyper performance. Cloud promises to deliver several significant benefits including reduced costs, increased scalability, flexibility, and agility, leading to improved business performance.

**Figure 1: Respondent geographies**




Infosys recently conducted a survey of 167 executives from CRL organizations with over USD 1 billion in revenues across the United States, Europe, Australia and New Zealand (ANZ). The respondents were CXOs and senior executives involved in cloud initiatives representing both technology and business functions.

The survey sought an understanding of current and future cloud initiatives in respondent organizations. It delved into both strategic and implementation angles to get a comprehensive picture. This report discusses the insights we gathered from participants representing the CRL industry.


## Types of enterprise players

It's essential to understand the intensity of cloud adoption as well as plans over the next three years to gain a comprehensive view of an enterprise's cloud initiative intentions. Infosys' analysis of the responses led to the classification of four types of enterprises.

| | Torchbearers 48% | Pathfinders 20% | Defenders 22% | Aspirants 10% |
|---|---|---|---|---|
| **What are the characteristics of this cluster?** | Enterprises with high adoption of cloud across functions, and seek to be fully integrated and a cloud-first organization | Enterprises with moderate cloud adoption, and actively seek to derive more business value from the cloud | Enterprises that understand the importance of cloud, but have a siloed approach and unsure about how to derive business value from the cloud | Enterprises with low adoption of cloud across functions, and mostly have a tactical approach towards the cloud |
| **Do they have an enterprise-wide strategy?** | Yes, and it is strictly adhered to or serves as a guideline | Yes, and it mainly serves as a guideline with some adhering to it strictly | Yes, and it is strictly adhered to or serves as a guideline | Yes, and it mainly serves as a guideline |
| **What drives them to adopt cloud programs?** | 1. Emerging technologies<br>2. Competition<br>3. Evolving customer needs | 1. IT cost reduction<br>2. Evolving customer needs<br>3. Emerging technologies | 1. Emerging technologies<br>2. IT cost reduction<br>3. Data security | 1. Competition<br>2. Data security<br>3. Evolving customer needs |
| **What are the expected outcomes from cloud programs?** | 1. Enhanced customer experience<br>2. Standardize and integrate technology landscape<br>3. Drive innovation for competitive advantage | 1. Standardize and integrate technology landscape,<br>2. Enhance mobility and collaboration<br>3. Enhanced customer experience | 1. Standardize and integrate technology landscape<br>2. Enhanced customer experience<br>3. Enhance mobility and collaboration | 1. Enhance mobility and collaboration<br>2. Enhanced customer experience<br>3. Drive innovation for competitive advantage |

## Understanding the drivers and expectations from cloud initiatives

The top three reasons driving CRL enterprises towards the cloud are a desire to: exploit the potential of emerging technologies, stay ahead of the competition, and address evolving customer needs. The CRL industry today is dictated by savvy yet fickle customers, thereby intensifying competition. Enterprises recognize the role emerging technologies can play in keeping them ahead of the game.

While these drivers are strategic, however, the drivers that accelerate decision-making are mostly operational and include the need for data security and scalability on-demand. The pace of decision-making is also significantly influenced by the requirement to handle evolving customer demands. The US respondents were unequivocal in expressing their desire to address changing customer demands with cloud solutions whereas European respondents reacted similarly for capitalizing on what emerging technologies had to offer.

### Figure 2: Cloud adoption drivers and their significance on decision-making

| | Key drivers | Significance |
|---|---|---|
| Emerging technologies and opportunities provided by them | 53% | 1%, 6%, 23%, 28%, 42% |
| Competitive activity | 51% | 1%, 4%, 2%, 21%, 25%, 47% |
| Evolving end customer needs | 49% | 1%, 2%, 20%, 37%, 40% |
| Reduction in overall IT costs by leveraging pay per use models | 44% | 1%, 3%, 7%, 19%, 32%, 38% |
| Keeping up with the latest data security mechanisms (cyber security, disaster recovery, etc.) | 44% | 1%, 7%, 14%, 30%, 49% |
| Scale on-demand based on changing business needs | 41% | 3%, 20%, 32%, 45% |
| Need for high levels of availability and resilience in systems/processes | 37% | 2%, 3%, 25%, 33%, 38% |
| Changing partner/supplier ecosystem | 31% | 2%, 6%, 24%, 37%, 31% |
| Bringing in industry/domain specific cloud SaaS solutions | 19% | 6%, 19%, 22%, 53% |

1 2 3 4 5 6 7

Least significant — Most significant

CRL enterprises expect cloud initiatives to deliver improved customer experiences, standardized and integrated technology landscape, and enhanced mobility and collaboration organization-wide. More than half of the surveyed enterprises target to realize these outcomes within a year. A significant number plan to build the cloud as a foundation to enable digital transformation within a year. The expected outcomes reflect the business and IT priorities.

Most of the Torchbearer enterprises aim to realize the expected outcomes under a year. Forty-one percent of U.S. and 50 percent of European respondents look to deliver enhanced experiences to customers in the next six months.

## Figure 3: Key expected outcomes and timeframes for achieving them

| | Key strategy outcomes | Time frame: Immediate (0-1 year) | Time frame: Mid term (1-2 years) | Time frame: Long term (> 2 years) |
|---|---|---|---|---|
| Deliver enhanced experiences to customers and other stakeholders | 57% | 69% | 21% | 9% |
| Standardize and integrate technology landscape across the organization | 54% | 58% | 25% | 16% |
| Enhance mobility and collaboration across the enterprise (access to data, multiple devices, etc.) | 49% | 52% | 30% | 19% |
| Leverage cloud's advanced computing capabilities (high performance, analytics, artificial intelligence, etc.) | 46% | 53% | 34% | 13% |
| Drive innovation that can provide competitive business advantage | 44% | 64% | 23% | 14% |
| Reduced time to market (through rapid development and deployment of applications) | 43% | 52% | 37% | 11% |
| Increase the reach of business (new geographies, new markets, etc.) | 40% | 55% | 30% | 15% |
| Build cloud as a foundation on which organization's digital transformation can be enabled | 38% | 71% | 19% | 10% |
| Adopt new SaaS based/cloud native applications to standardize business processes | 22% | 57% | 30% | 14% |

*Deciding on the right cloud approach was the most expressed concern across Torchbearers, Pathfinders, Defenders, and Aspirants.*

CRL enterprises were apprehensive about the choice of cloud approach (53 percent), availability of internal talent (41percent), and gaining stakeholder confidence around return on investment (39 percent) before launching a cloud program. Deciding on the right cloud approach was the most expressed concern across Torchbearers, Pathfinders, Defenders, and Aspirants. Responses from the U.S. participants echoed the overall views.

Cloud transformation has a far-reaching impact across the enterprise explaining concerns over making the right choices, talent, and delivering regular results for the multiple stakeholders.

## Figure 4: Concerns before launching cloud programs

| | Total | Geography | | |
|---|---|---|---|---|
| | | ANZ | EU | USA |
| **Stakeholder confidence around return on investment** | **39%** | **33%** | **48%** | **35%** |
| **Deciding on the cloud approach to adopt** | **53%** | **59%** | **46%** | **55%** |
| Significant reliance on external solutions providers | 34% | 33% | 38% | 31% |
| **Availability of internal talent to manage transition** | **41%** | **30%** | **50%** | **38%** |
| Alignment between IT and business on the roadmap | 33% | 33% | 31% | 34% |
| Accountability and need for a dedicated team to drive the transition | 32% | 44% | 25% | 31% |
| Organizational readiness and maturity of existing IT landscape | 29% | 41% | 23% | 29% |
| Building the strategic and operational roadmaps | 27% | 41% | 25% | 24% |
| Overcoming post migration challenges | 24% | 33% | 23% | 21% |
| Concerns with respect to enterprise information security | 24% | 33% | 25% | 21% |
| Need to continuously upgrade to new/emerging technologies | 21% | 19% | 21% | 21% |

# UNDERSTANDING CLOUD IMPLEMENTATION EXPERIENCES

While implementing cloud programs, CRL enterprises faced a different set of challenges comprising aligning legacy systems, maintaining service levels during the transition, and obtaining resources with cloud-related skills. U.S. and European respondents echoed the overall view.

**Figure 5: Challenges faced during implementation and their significance**

| | Overall |
|---|---|
| Application refactoring/tweaking to suit cloud architectures | 5.28 |
| Tracking and monitoring systems/processes on cloud | 5.37 |
| Aligning existing legacy systems/architectures and technology environments | 5.58 |
| Resource skillsets with cloud orientation | 5.46 |
| Accurate estimation of time and financial costs involved | 5.42 |
| Pace of execution/implementation of the initiative | 5.38 |
| Deciding on choice of tools/technologies to pick from | 5.37 |
| Maintaining current services levels during transition | 5.47 |
| Lack of high levels of clarity in the execution roadmap | 5.03 |
| Absence of an internal dedicated cloud team to drive the initiative | 5.17 |
| Promoting a culture change within the organization | 5.41 |
| Collaboration/integration with external service providers/stakeholders | 5.39 |
| Navigating existing agreements | 5.20 |

*On the scale of 7*

CRL firms have aggressively adopted cloud programs across all business functions demonstrating the importance of the cloud for their business. The U.S. followed by Europe has been most active in adopting cloud programs especially in End User Productivity areas (91percent).

**Figure 6: Cloud adoption across functions**

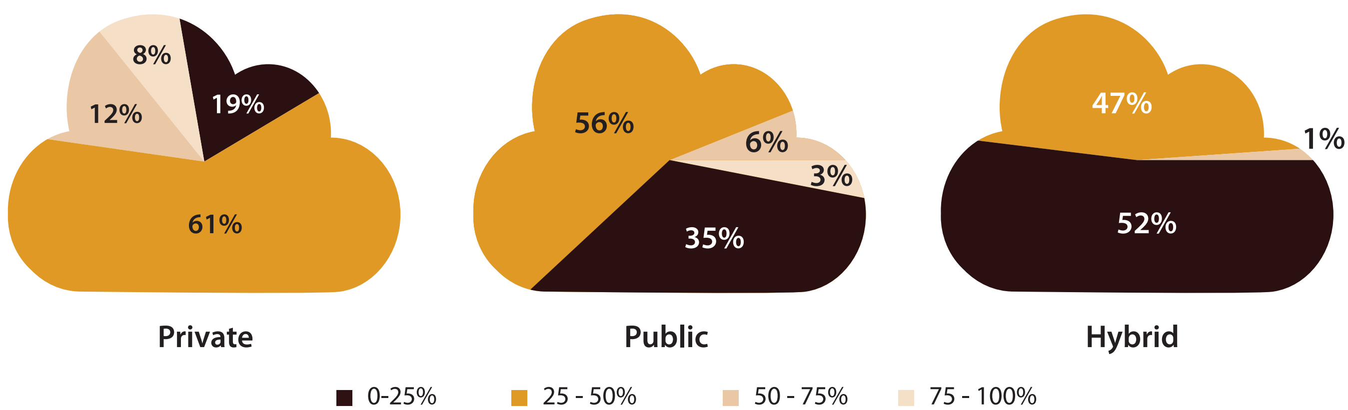
| | Rating | Mean |
|---|---|---|
| Core functions | 6% 7% 29% 24% 28% | 5.45 |
| Business support functions | 7% 11% 20% 27% 31% | 5.56 |
| End user productivity areas | 5% 7% 19% 32% 35% | 5.72 |

1 (Very low adoption) 2 3 4 5 6 7 (Very high adoption)

> *We use a combination of public and private cloud; emphasis is distributed equally on both aspects. The main reason for this is to ensure compliance with the requirements. A key challenge with this method is the additional extent of maintenance that is required.*
>
> *– CXO at a leading retail firm in Australia*

CRL enterprises are using all three cloud models, with private cloud being the most popular choice today. For workloads up to 50 percent, a significant 91 percent have used the public cloud, and another 97 percent have taken to the hybrid cloud. Australia and New Zealand and European respondents were more willing to embrace public clouds for 25 to 50 percent of their workloads. Data security and data management concerns have slowed down the transition to the public and hybrid cloud models, despite their benefits.

**Figure 7: Workload spread across the cloud models**




CRL enterprises have views on what each cloud model could deliver. Enterprises choose the private cloud to take advantage of the cost, standardization, and technology related outcomes. The public cloud was preferred as it offered higher availability of systems, faster pace of upgrading IT landscape, and better alignment with regulatory changes.

Plans for the next three years reflect the experience and progress made with cloud programs so far. 44 percent of U.S. respondents, the highest among the regions, aim for the transformational benefits of the cloud by becoming a fully integrated, cloud-first organization. European respondents were split between becoming a cloud-first organization and adopting everything in a cloud model. On the other hand, Australia and New Zealand respondents aim to build cloud-native applications or become cloud-first organizations.

## The cloud may begin with the boardroom, but it ends with IT leaders

The executive business leadership is actively involved with defining requirements, evaluating, and taking the final decision on external vendors. The executive IT leadership is engaged through the cloud program – from defining requirements to conceiving cloud design and strategy, evaluating and selecting external vendors, and overseeing the execution. IT program leaders are involved in all stages and play a smaller role in choosing external vendors.

External vendors are engaged through all stages of the cloud program. The criteria used to choose external vendors include the effectiveness of the proposed solution, range of services offered, and pricing. The reputation of the solutions provider and past experiences are not ranked as high, showing that enterprises recognize that cloud programs mandate a different set of skills.

## New technologies will have a tangible impact on the cloud

Enterprises believe that new technologies like big data analytics, artificial intelligence and machine learning, and DevOps will add the most value to cloud programs.

**Figure 8: Technologies impacting adoption of the cloud**

| | Overall | Geography | | |
|---|---|---|---|---|
| | | ANZ | EU | USA |
| Big data analytics | 47% | 44% | 49% | 47% |
| Artificial Intelligence/Machine learning | 44% | 41% | 36% | 51% |
| DevOps | 42% | 44% | 38% | 44% |
| Internet of Things (IoT) | 37% | 37% | 30% | 40% |
| Edge computing | 37% | 37% | 42% | 33% |
| Open-source (microservices, APIs) | 35% | 30% | 45% | 30% |
| Containers and Orchestration | 31% | 33% | 26% | 32% |
| Hyperconvergence | 28% | 33% | 34% | 23% |

# NEXT STEPS IN THE CLOUD JOURNEY FOR CRL FIRMS


*Torchbearers, 48% of the respondents, are progressing in the right direction with the goal of becoming a cloud-first organization within a year.*

CRL firms are working towards making the most of the opportunity that cloud programs offer to transform the way business is conducted. While they have a long way to go to exploit the benefits of the cloud fully, however, they have taken the initial steps. Torchbearers, 48% of the respondents, are progressing in the right direction with the goal of becoming a cloud-first organization within a year.

It is evident that CRL enterprises grapple most with expertise, experience, and talent-related issues based on the challenges anticipated before embarking on cloud programs and those faced during its implementation. It is not realistic to expect enterprises to handle such problems internally as a diverse set of skills, knowledge, and experience is required to make cloud programs successful.

At Infosys, we have seen enterprises partnering with proficient external solutions providers get a head start on their cloud transformation programs. A capable partner through sound consulting and implementation skills can steer the cloud programs in the right direction.

## About Infosys Knowledge Institute

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