Enterprise-as-a-Service: Cloud in a Box

WHITE PAPER

Abstract

Cloud is now a top consideration for every CXO as it is a platform for change, an engine for exponential growth and the backbone of digitalized enterprises. According to IDC, by 2024, worldwide spending on cloud services, including hardware and software components and managed services opportunities, will surpass $1.0 trillion[1]. Enterprises now view spend on cloud and cloud skills as a necessary investment, not just an operating expense. They aspire to be data-driven organizations powered by cloud platforms, which enable re-imagined business processes and ecosystem-based business models.

This paper explores an enterprise-as-a-service (EaaS) approach that helps maximize the value from cloud by choosing the right-fit cloud deployment, service model and migration options. One that helps enterprises adopt Business 4.0™ levers including mass customization, improving speed-to-market, embracing risk, and leveraging a broader ecosystem to meet the demands of the future.

1. *https://www.idc.com/getdoc.jsp?containerId=prUS46934120*

Why a business-focused, cloud-first strategy matters

Digital enterprises are leveraging digital technologies with cloud as the enabling digital fabric.

A TCS study[2] found that by 2018, as many as 74% of Leaders, 65% of Early Adopters and 62% of Followers had adopted cloud. These numbers of cloud being a factor of success are relevant during the COVID-19 pandemic as well. The enterprises leading in cloud adoption have been more agile and resilient in the face of disruption. TCS COVID-19 Business Impact Survey 2020[3] confirms that most enterprises low on digital capabilities suffered more, in contrast to the ones with a good digital footprint across customer experience, automation, intelligence and cloud.

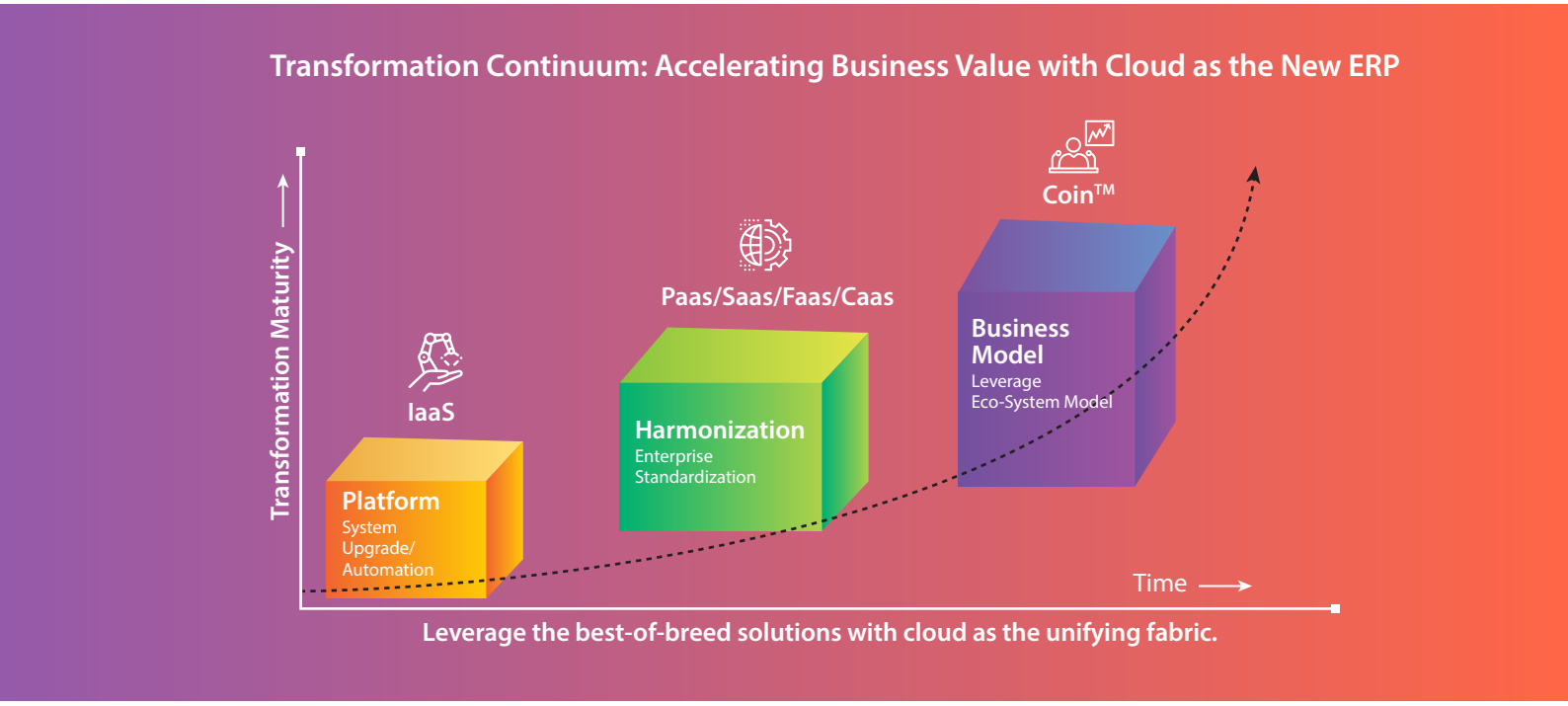

Figure 1: Three stages of cloud-based transformation continuum

2. *https://www.business4.tcs.com/*
3. *https://www.tcs.com/business-impact-survey-2020*

Most of these Business 4.0 leaders had adopted a cloud-first approach for their digital transformation. Some of the key objectives that drive such an approach include (see Figure 2):

- Personalizing customer and employee experiences to drive engagement and growth
- Leveraging latest digital technology such as AI, edge, 5G, IOT and machine learning
- Automating business workflows and jumpstarting enterprise transformation
- Optimizing IT and human costs to bring in operational agility and product innovation
- Ensuring virtual collaboration and monitoring for location independent teams
- Modernizing enterprise IT

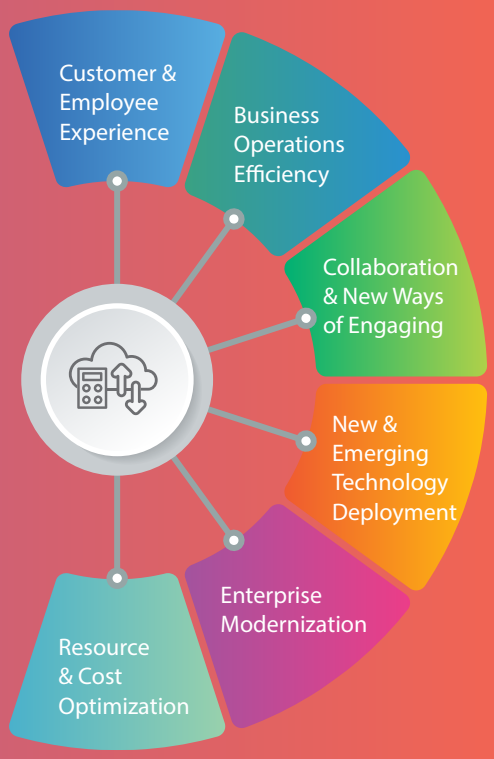

Figure 2: The drivers of cloud adoption

These cloud adoption drivers resonate with Business 4.0™ behaviors that enterprises should adopt to stay ahead in the technology-first business era. For example, an IoT ecosystem that generates burgeoning volumes of data is sustainable only when backed by the limitless storage capacity of cloud. Similarly, many AI-based applications require the cloud's vast number-crunching power to generate and act on insights reinforcing cloud as the enabling digital fabric.

Taking complex cloud decisions

Cloud provides digital enterprises a flexible, configurable, best-of-breed platform enabling them to scale and be ready to meet the demands of the new digital future. Enterprises today must make a host of complex decisions while moving to cloud, including the choice of deployment models, service models and migration options.

Cloud deployment models

There is no one type of deployment model that is right for everyone. Each model (private, public, hybrid, multi-cloud) has its own characteristics. While some are more popular than others, the choice depends on the specific needs of an enterprise (see Figure 3). There are several approaches toward determining the best model for your organization.

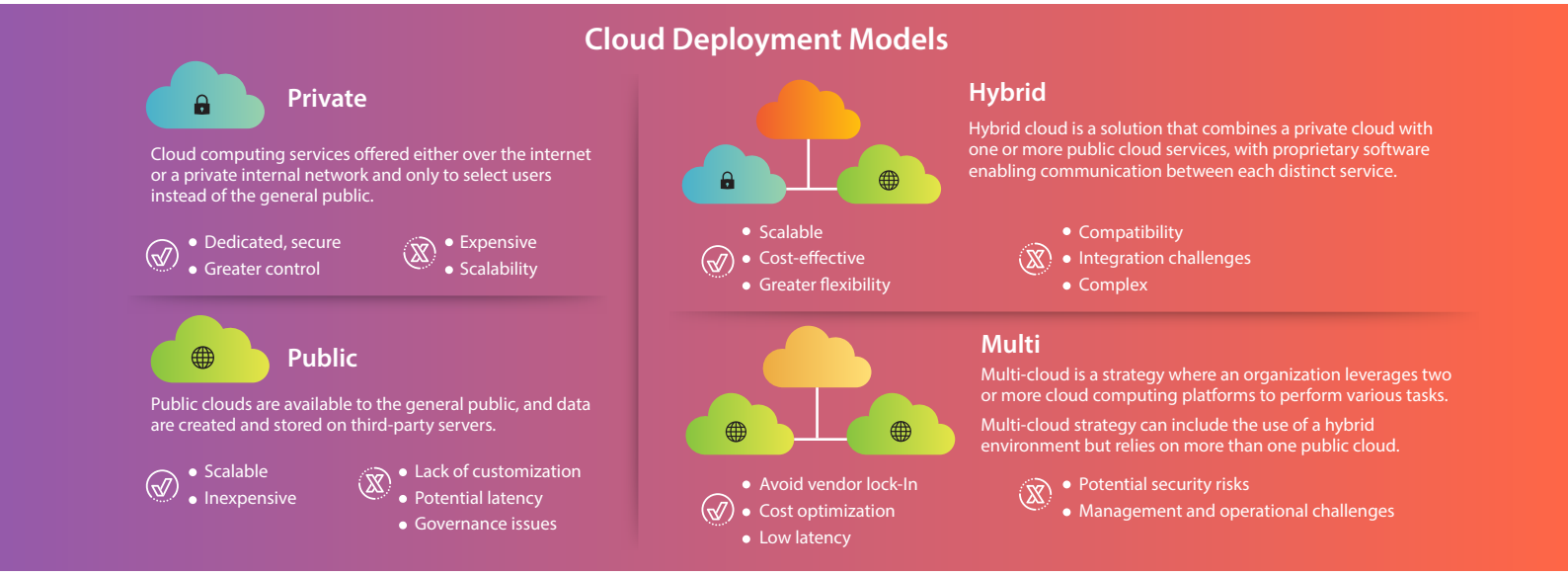

Figure 3: Cloud deployment models have unique characteristics

These include a workload-centric, or a bottoms-up approach, where a workload is analyzed to determine the most suitable cloud computing deployment model. Multiple factors, including technology fit, operational fit, and cost, are factored into making the decision. For example, a high-tech company can consider an electronic design automation (EDA) workload and performance needs while deciding on a deployment.

An organization-centric, or a top down, approach in contrast involves taking a holistic view for determining a cloud computing deployment model that considers business agility and growth, competitive differentiation, operational preference, regulatory requirements and capex-versus-opex preferences. For example, an aero and defense company with a unit serving Department of Defence, will have to address International Traffic in Arms Regulations (ITAR) requirements, alongside their growth and transformation programs.

Cloud service models

There are various cloud service models available: software-as-a-service (SaaS), platform-as-a-service (PaaS), infrastructure-as-a-service (IaaS), function-as-a-service (FaaS) and container-as-a-service (CaaS). Enterprises, based on their business requirements, should choose the appropriate service model. Cloud services can include software, data storage, databases, servers, networks, computing and other services that are accessible on-demand through internet. Each service provides a different level of abstraction (see Figure 4).

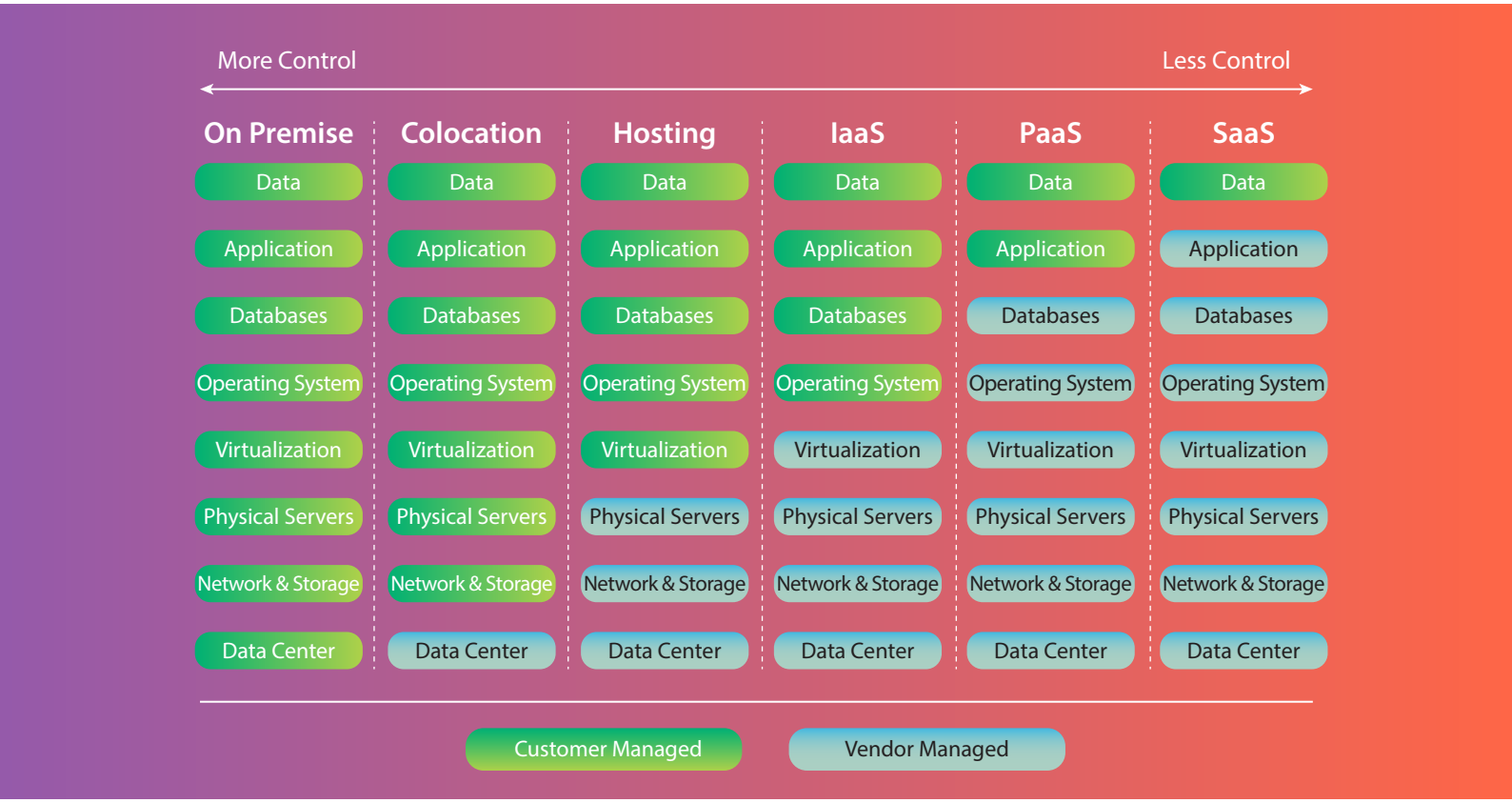

Figure 4: Cloud service models cover a range of functions

Cloud provides industry-wise advantage and each cloud model offers specific features and functionalities. It is crucial for enterprises to understand the pros and cons of different models, and how each of them can be leveraged for various functions to design an optimal strategy.

Cloud migration options

With multiple options available for cloud migration, the process of decision making and moving some or all of an enterprise's digital operations to the cloud can be overwhelming. To select the appropriate strategy, business leaders should clearly define their need, analyze the current state, and outline the immediate, near- and long-term benefits that they seek from cloud transformation (see Figure 5). The one-size-fits-all approach does not work in making these decisions as each enterprise has a unique management thought process, capex bandwidth, savings accrual view, technical debt and agile maturity.

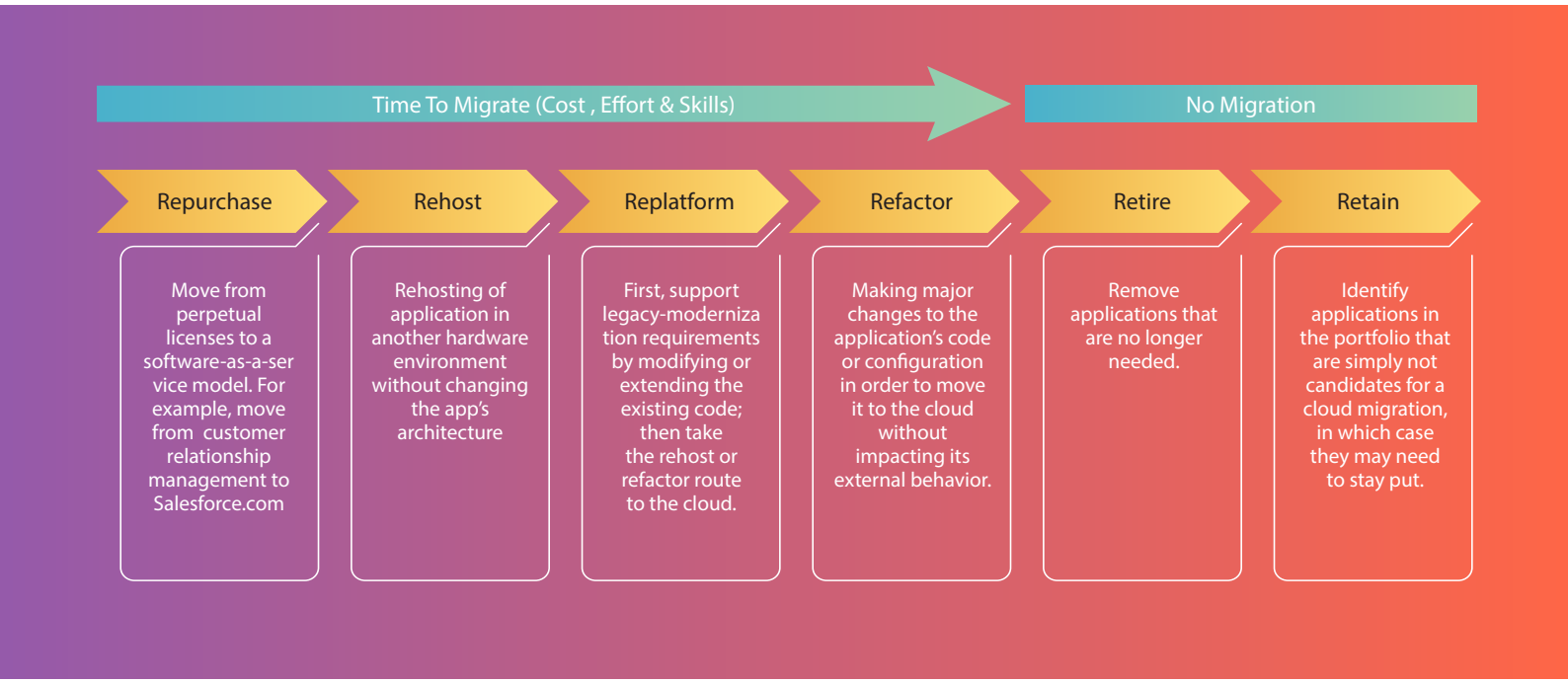

Figure 5. Factors to consider when deciding the cloud migration strategy

Why enterprise-as-a-service

There are various 'as a service' models and deployment options available that make it difficult for enterprises to choose which option to adopt for their business and a specific functional area. To untangle this complex decision-making process, enterprises need to establish a cloud-enabled business and IT vision --a reimagined operating model for each enterprise function. This involves three key steps.

1. Establish a hybrid cloud and multi-cloud strategy with a specific cloud service model.
2. Develop a business-aligned cloud migration and modernization roadmap with defined business case.
3. Establish a cloud business office (CBO), a champion for cloud-enabled transformation management to maintain guardrails and manage realization of cloud value.

To simplify the cloud transformation journey and achieve speed to benefits, organizations should adopt a 'unifying approach' or enterprise-as-a-service (EaaS). This 'cloud in a box' solution maps various industry-specific business functions and processes to a corresponding cloud service model and platforms while recommending an optimal path forward for the enterprise.

Cloud in a box: A differentiated approach

The EaaS approach is an opportunity to leverage decades of investments in digital solutions, cloud-native technology and co-innovation with cloud service providers and other emerging technology providers.

This approach involves industry-specific maps of business functions and processes with recommended cloud service models, along with best-fit deployment model and cloud platforms. It helps cater to individual industry needs through industry variants (for example, manufacturing, healthcare, retail, banking and financial services).

Apart from adopting an EaaS approach, organizations should leverage the business process management (BPM)[4] concept where an enterprise is modelled using related Level 1 business processes such as source to pay, order to cash, record to report, prospect to customer, plan to produce, and hire to retire (see Figure 6). These business processes can be further divided to L2 and L3 sub-processes, which will then be enabled by a digital catalog of use cases and mapped to a best- fit cloud deployment and service model.

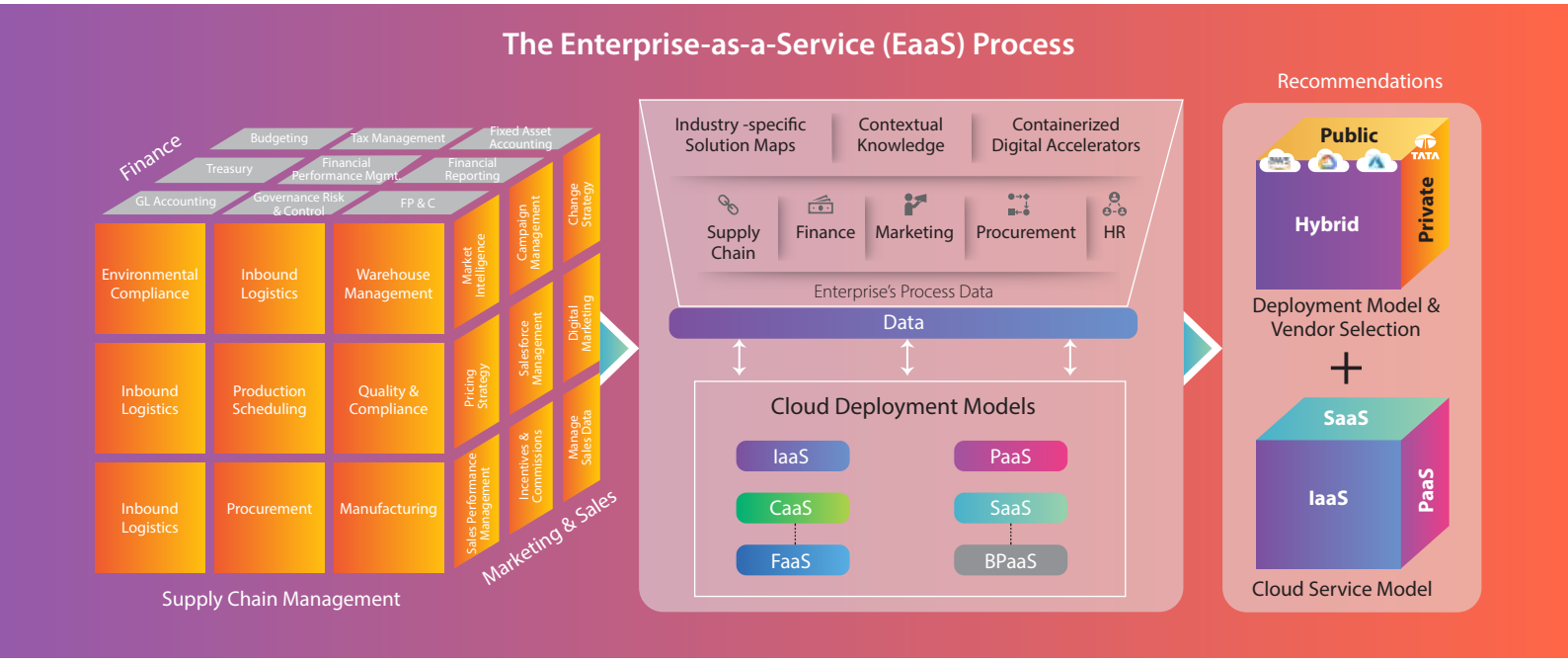

Figure 6. The EaaS process

Ready-to-deploy, best-in-class containerized digital use cases are key enablers for the EaaS approach that can lead to 20-40% faster value realization through shorter planning, design and implementation cycles, better executive and stakeholder alignment. These will help drive perpetual value realization for the organization.

4. *https://bpm.com/what-is-bpm*

For example, the manufacturing industry has various business processes such as plan to produce, hire to retire, record to report, order to cash and prospect to customer (see Figure 7). This approach helps map the underlying L2 business processes such as demand planning, supply planning, environment, health, and safety, quality management to SaaS, IaaS, PaaS and CaaS service models repectively. This mapping can provide a jumpstart to the cloud journey leading to faster realization of cloud benefits.

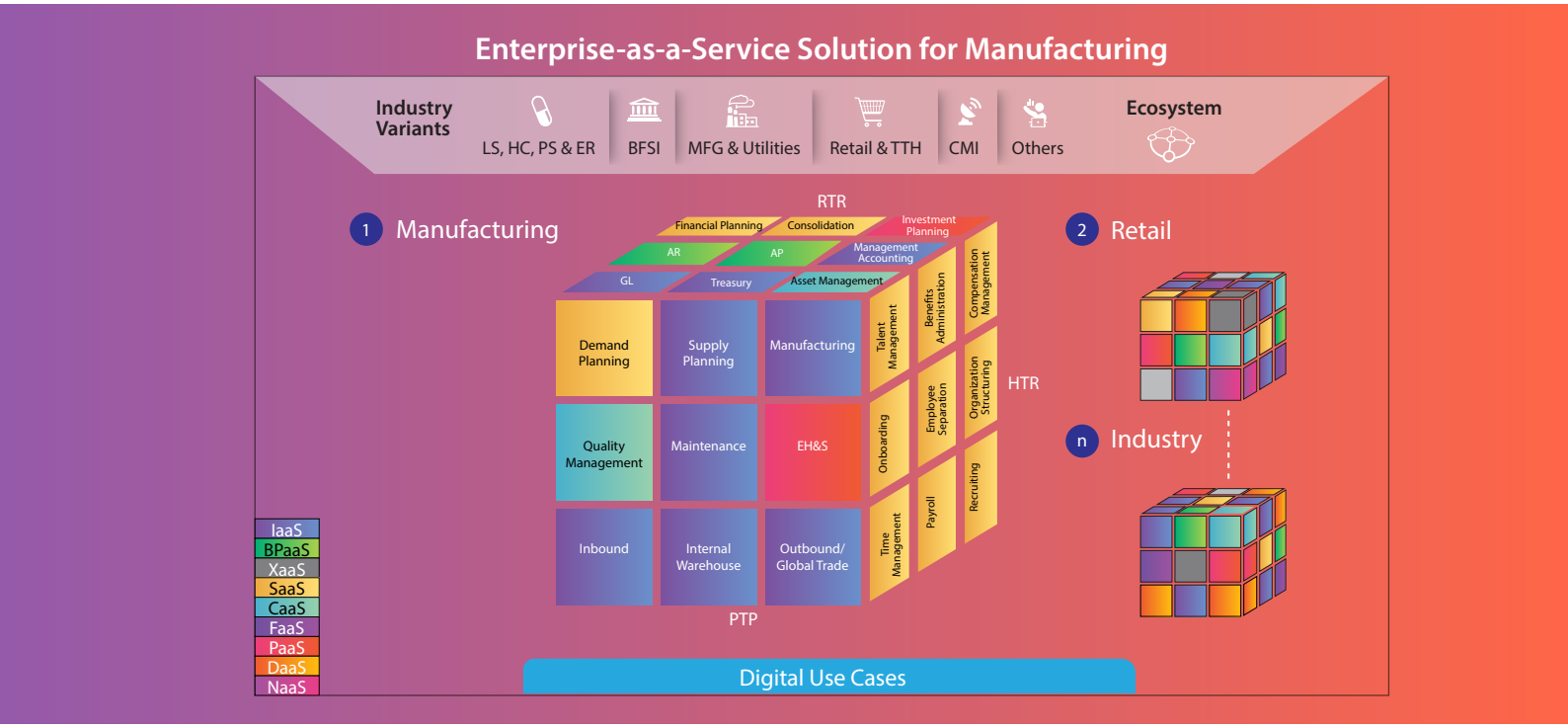

Figure 7. An EaaS model for the manufacturing sector

The Bandwagon of Faster Value

Taking the EaaS approach removes ambiguity by providing an in-depth mapping of cloud service models and solutions which are easily configurable by industry and business. As more and more organizations adopt the EaaS approach, it will help realize greater speed to value and enable them to leverage cloud innovation. Further, the system integrators, managed service providers and cloud service providers have a huge opportunity to embrace this model and provide value added strategy.

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