Cloud Computing for Consumer Products Industry Series – 1

Cloud Computing is one of the most frequently used buzzword across industry segments and there is substantial increase in the adoption of the same. Cloud computing leads to shift in the way the organizations view their IT Investments and technology infrastructure. Cloud computing will help the organization by addressing the ever growing IT needs and demands in a cost effective way. With cloud computing, managing the IT infrastructure has become more easy and manageable by leveraging the true experts.

This paper will focus on the potential Cloud Computing opportunities for Consumer Products Industry across the CPG value chain.
About the Author

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**Introduction**

Businesses, large and small, are realizing the importance and potential of cloud computing in terms of easing business transactions without having to spend much on additional IT infrastructure, time, effort and manpower. The fact that most of the transactions in almost any form can be executed online has made cloud computing very popular.

Web (or Internet) is the core on the concept of cloud computing, and is the Web that is referred as 'Cloud'. This provides business application to be serviced online through a web browser or a client application. The software and data are stored on servers not on the customer site, but out on the Internet with the service provider. Cloud computing provides immense value, cost savings, efficiency and simplicity for organizations.

CPG companies, being leaders in outsourcing and new technology adoption are increasingly moving to cloud for specific services. Cloud computing for consumer products industry will be described and addressed in series of whitepapers and the main theme of this Series-1 is to explain the possibility of leveraging cloud services across the CPG value chain. Series-2 will cover the various details such as cloud computing terminologies, risks, challenges, pitfalls, advantages and disadvantages in cloud services.

**How Cloud computing can be leveraged across CPG value chain?**

Cloud computing present organizations with a different model of operation, which is one that takes advantage of the maturity of web applications and networks and the rising interoperability of computing systems to provide IT services.

Cloud providers specialize in particular applications and services, and this expertise allows them in efficiently manage maintenance, backups, disaster recovery, upgrades and migrations and failover functions. As a result, consumers of cloud services may see increased reliability, even as costs decline due to economies of scale and other production factors.

With cloud computing, organizations can monitor current needs and make on-the-fly adjustments to increase or decrease requirements, capacity and accommodate spikes in demand without paying for unused capacity during slower times. Aside from the potential to lower costs, organizations gain the flexibility of being able to respond quickly to requests for new services and requirements by purchasing them from the cloud.

From a Consumer Products Industry perspective, Cloud Computing plays a vital role across the CPG value chain and there are enough opportunities for adopting cloud services thus realizing the value.

The following figure depicts the high-level functions and processes in a CPG company and the various functions that can be operated in a cloud model and non-cloud model (firewall installation).
Business benefits out of SOA adoption may sound music to one’s ear, but account of failed SOA projects is equally
dismal. This diagram also represents the ideal scenario of cloud computing adoption in a CPG organization. Figure 1 is an
illustration of the potential and possibility of cloud computing that might vary depending on the size of the
company, geographical spread, language dependencies, current technology stack in use, investments already
made in the functions, CIO priorities and so on. However, it represents the extent possibility of cloud computing
adoption thus making organization agile, scalable and robust in an ever-demanding environment.

CPG companies being a leader in outsourcing and adoption to new technologies would have already invested very
heavily in multiple technologies and products for addressing the various functional, business and domain
requirements across the CPG value chain. However, this section provides the snapshot of leveraging cloud services
across the value chain (and not by functions for simplicity perspective) and relevant cloud computing experience of
TCS across the value chain. The following figure provides the snapshot of CPG value chain.

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**Figure 1: Potential Cloud Services across CPG Functions**

**Figure 2: Snapshot of CPG value chain**
**Strategic Planning and Demand Creation**

There are sufficient opportunities in providing Cloud services in Strategic planning and Demand creation area. Complete organization planning and Demand creation can be executed in a cloud model.

Following sections brief on the various sub-areas within Strategic Planning, Demand Creation and the potential of adopting cloud services in the sub-areas.

**Human Capital Management**

Human Capital Management is one of the non-core areas of a CPG Company. This sub-area predominantly takes care of hiring processes, benefits, payroll, payroll taxation and retirement processes. This area being non-core is a potential candidate for adopting cloud services.

For a large Brewery organization, TCS is carrying out ‘Hire to Retire’ processes in a cloud-computing service model and thus delivered huge cost savings to customer along with high operational improvements and 60% reduction in turnaround time.

**Consumer Segmentation**

Is a very important area for CPG companies and most of the companies are interested to know more about the consumers. CPG companies are making huge investments in this area and most of it can be serviced through cloud.

A cloud based analytics service can deliver efficient analytics on customer segmentation, market basket and coupon services for the customer. TCS has robust scalable cloud based ‘Analytics Platform’ and it is delivering analytics services for Global BFS customers. Though TCS has not delivered Customer Segmentation projects in Cloud Services for a CPG Company, it is investing heavily in-line with the CPG market trend.

**Demand Sensing Repository**

It is an interesting area and can be delivered partially in a cloud model as an analytics service rather than out forecasting and demand management service. For a Global Market Research company, TCS is carrying out analytics on Demand management and Demand sensing by leveraging scan based trading through a combination of Cloud and Knowledge services.

**Merchandizing Advisory Services**

CPG companies are increasingly taking part in helping the High Frequency Stores (HFS) especially in the emerging markets by providing Planogramming services. This will provide Mutual Trust and Win-Win Situation for HFS and CPG companies; this will lead to the maximization of the wallet share of the consumer for the CPG companies. Apart from the same, most of the CPG companies take soft copies of the planogram of all the stores (of the retailers) they have serviced for further analysis.

This provides a huge opportunity for CPG companies to leverage cloud services as the number of stores increase and the Planogramming of the existing stores might change. TCS has built a robust Mobile based Merchandizing advisory solution, which has been piloted in in-house TCS Stores and with a leading Global CPG Company. This solution is currently being redesigned for Cloud and it will be available for Global CPG companies.

**Enterprise Collaboration**

There is a huge opportunity for leveraging cloud services in this area. This will help the customers by providing a platform for their employees to collaborate better and effectively. This in-turn will help the employees to share their best practices across the organization thus making the organization more agile and nimble. TCS has built an Enterprise Collaboration platform called as ‘KnoMe’ and it is deployed for a Global Household and Personal Care Company.
New Product Development and Introduction (NPDI)

NPDI is a key core area to CPG Companies where there is a need to perform intensive Research and provide innovative products in the market. Being a core function, most of the CPG companies may not outsource much work in this area.

However, there are pockets of areas where there is an opportunity for leveraging cloud services. CPG Companies listen to specific forums, groups, blogs and communities on feedback on their earlier products. This requires huge analysis of a large textual database for mining the textual data from the web.

TCS has built a ‘Text Miner’ Solution, which helps companies in mining the textual data from Web and from internal ERP systems. This solution will provide meaningful insights into the data thus providing the organization to act on the data.

For a leading Consumer Electronics company, TCS had deployed the Text Miner solution and helped the customer’s R&D department to know and correct mistakes, bugs and product flaws, gain market share and mind share of the consumers. TCS is currently re-architecting the ‘Text Miner’ solution to deploy for making it available for its customers as a Cloud service.

Supply Chain Management

This is one of the most critical aspects in any organization. Most of the organization has invested heavily in Supply Chain and will be investing to make the Supply chain more robust and scalable. CPG Companies can look at adopting Cloud services in Supply Chain.

Supply Chain Network Design

It is difficult to build an end-to-end product encompassing the complete Supply Chain Design processes in a cloud environment; however, pockets of the required solution can be built and deployed in cloud. This area can be ported to Cloud and all of the Design Operations and Services, Plant Layouts and Design can be provided in Cloud. For a leading Chemical Distribution Company, TCS had delivered the Supply chain design, plant design, layouts and network design in Knowledge services fashion.

Strategic Sourcing, Contracts and Procure to Pay

This is the most preferred in cloud by most of the organizations and is reasonably serviced through cloud. This process is not core to CPG Companies and most of the CPG Companies either outsource it or adopt cloud services. For a leading food company in UK, TCS is providing the end-to-end Sourcing, Procurement, Contracts and Payments in a cloud model, which has delivered huge operational efficiency and cost savings to the customer.

Manufacturing

This is the core to any CPG Company and few of the companies have leveraged Contract Manufacturing Model. The potential and possibility of adopting cloud services (IT part of the manufacturing) is less and the impact of doing so has to be understood carefully.

Manufacturing Execution Systems

As the CPG companies grow by acquisition, there is a high probability that the Manufacturing Execution Systems (MES) may not be same across companies and may not be standardized across the globe. If MES is standardized and processes are streamlined across the plants, then CPG Companies can explore the possibility of Cloud based services for MES.
For a leading Household and Personal Care company, TCS has recommended this model of ‘MES in Cloud’ and completed the MES standardization program across the globe in all plants.

**Digital Manufacturing and Simulation**
There is a huge need by CPG Companies to simulate their manufacturing processes and plant automation processes. TCS has invested in Digital Manufacturing and Simulation by building a lab, which will help customers in addressing their needs for bringing in efficiency and innovation in the Manufacturing processes. This lab also helps customer by simulating the products, machine design and plant design and so on. This lab is available as cloud services to TCS customers for simulation and machine design purposes.

**Sales and Marketing**
Sales and Marketing is important for a CPG Company. This area is considered as Core to CPG companies and huge technology and infrastructure investments are being made in this area.

**Sales Force Automation (SFA) and Retail Execution**
SFA and Retail Execution is a critical component of sales function and there is a huge focus on this from the CPG Companies. Most parts of this area can be built in cloud and it can be more useful for the CPG Companies and its ever-growing sales force.

TCS has built mobility based SFA and Retail Execution solution for couple of its global consumer electronics companies, which will help in providing the sales force the right data at the right time. This also helps in gathering the data from the store personnel, promotion performance data and competitor data. TCS is currently in the process of re-architecting the platform for Cloud based services.

**Trade Promotion Services**
Most of the CPG companies are investing very heavily in Trade Promotion and on optimization services. 58% of the leading CPG Companies are investing or planning to invest in TPM in the next one or two years. Since this is core to CPG companies and because of the complexities involved, it may not be easy to port it in cloud. However, few of the segments of TPM can be definitely serviced through Cloud.

TCS has rich experience and expertise in delivering TPM and TPO services to its customers, but it does not have the solution in Cloud. However, TCS has partnered with leading TPM and TPO solution providers for providing services to its customers.

**Listening Platform**
This is one of the important areas where most of the CPG companies are investing or planning to invest in future. This area will have huge impact amongst the Consumer Community and with the CPG companies. TCS is currently building a Listening platform, which will be available as a cloud service to its customers.

**CRM**
CRM is not a key area for a CPG (or FMCG) company as like Retail or Telecom; however, it is an important area for consumer electronics micro-vertical within CPG. TCS has planned investments in this area and has partnered with leading CRM solution providers for providing services to CPG customers.
Massive Data Center versus Cloud Computing

SIT operations are a crucial part of most organizational operations. Organizations rely on information systems to run their operations and the main concern in any organization is Business Continuity. If a system becomes unavailable, company operations may be impaired or stopped completely. It is necessary to provide a reliable infrastructure for IT operations, in order to minimize any disruption.

Today, most of the organizations including CPG companies are making considerable investments in managing the data centers across the globe. Most of the Global 2000 have more than four or five data centers. This results in huge labor, cost, time, effort and money in addition to resulting in global warming.

CPG companies rather than operating more data centers can look at possibility of leveraging cloud services to minimize the cost of running the data center. Companies with large batch-oriented tasks can get their results as quickly as their programs can scale. This elasticity of resource availability, without paying a premium for large scale, is unheard in the history of IT before. The economies of scale of very large-scale data center combined with ‘pay-as-you-go’ resource usage have praised the rise of cloud computing.

It is now attractive to deploy an innovative new Internet service on a third party Internet data center rather on an own infrastructure, and to gracefully scale its resources as it grows or declines in popularity and revenue. Expanding and shrinking daily in response to normal diurnal patterns can lower costs even further.

Cloud computing transfers the risk of over-provisioning or under-provisioning to the cloud computing provider, who mitigates the risk through statistical multiplexing over a much larger set of users and offers relatively low prices due to better utilization through the economy of purchasing at a larger scale. Economic model that quantifies the key buy versus pay-as-you-go decision, offers a spectrum to classify Cloud computing providers.

Conclusion

Innovators are looking beyond on how the cloud can alter the role of IT department and experimenting new ways on cloud, which will affect the organization more broadly.

Though the buzz gets louder about cloud computing, it is worth to note that, not all the CIO’s are excited about cloud services because of its own pitfalls and disadvantages. However, it is always good to innovate incrementally, which minimizes the risk of budget-busting experiment.

It is advisable to try prototyping applications in a rapidly provisioned, web-based environment to define what cloud computing means for the organization. For non-mission-critical data, it is required to evaluate cloud-based storage instead of buying more.

It is suggested to work with Corporate Finance team for examining new financial models to determine if the cloud really offers the savings that are often promised. Before adopting cloud-based services, CPG companies should create a business case with well-defined thoughts along with financial and risk calculation worksheet. CIO’s should also start collaborating with other parts of the business to explore whether new cloud-based capabilities are compatible with the existing architecture, and create value rather costly complexity.
About Tata Consultancy Services
Tata Consultancy Services is an IT services, business solutions and outsourcing organization that delivers real results to global businesses, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled services delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development.

A part of the Tata Group, India’s largest industrial conglomerate, TCS has over 160,000 of the world’s best trained IT consultants in 42 countries. The Company generated consolidated revenues of over US $6.3 billion for fiscal year ended 31 March 2010 and is listed on the National Stock Exchange and Bombay Stock Exchange in India. For more information, visit us at www.tcs.com

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