**Cloud Service Models**

Computer enabled service practices often change due to the enhancement of information and communication technologies, just like fashion changes over a time in consumer industries. Computing is being transformed to a model consisting of commoditized services, through a “cloud” from which users can access applications anywhere in the world on demand.

Cloud computing users have access to **three types of services:**

* **Software as a Service (SaaS):** It focuses on providing users to run existing on-demand online applications accessed over the Internet. For example, warehouse management systems, and transportation management systems are typical applications.
* **Platform as a Service (Paas):** It allows users to create their own applications using supplier-speciﬁc tools and languages. Typical examples of this category Are Google App Engine, and Microsoft Windows Azure.
* **Infrastructure as a Service (IaaS):** It provides users to run any applications of their own choice on cloud hardware (e.g., network, memory, and storage facilities.) Prominent examples of this category are AmazonEC2, GoGrid and Flexiscale.

The new Cloud-enabled systems enable fundamental and strategic improvements in operations with the following **main impacts:**

* Reducing transportation spending
* Meeting regulatory compliance requirement
* Streamlining process/Customs processes
* Tracking actual landed cost

**The reason** why the companies in the logistic industry must consider cloud computing technology:

* The threat of new competitors is prominent with information technology, making it easier to enter the market.
* The expectations of modern customers are quite high, and they expect the service to be as quick as possible.
* There is always a need for change in management. The traditional information system is rigid and takes a lot of time and money. Cloud computing technologies make it easier to change the management and operational procedures without spending much time and money.
* The process management is made simpler with cloud computing technologies with fewer visibility barriers and enough real-time data to make the operational decision quickly. It also makes it easier to scale the business with minimal waste of time and less cost.

**The advantage** of clouding

* **Real-Time Pricing**: Quickly understanding the price associated with every logistics element of your supply chain allows you to control your costs with finesse. Pricing elements within transportation and warehousing can fluctuate based on any number of factors, such as weather, market conditions or demand. With so much volatility on the fly adjustments can make or break margins.
* **Real-Time Inventory**: The inventory you have on hand is your most direct means of controlling for risks and optimizing costs. Real-time inventory management allows you to maximize your ability to respond to demand fluctuations while holding onto your buffer against emergencies. Data flow from the cloud gives you infinitely more precise control over your inventory levels.
* **Equipment and Utilization Patterns**: Within any repetitive system, pattern recognition is essential to optimization. Cloud-integration allows metrics to be taken and analysed in a myriad of ways to expedite making those patterns apparent within shipping and procurement. From how equipment is utilized to the most frequent freight movement, cloud-based software systems help discover patterns and utilize them to better capitalize on abundance or eliminate wasteful excess.
* **Accurate Merge in Transit Model**: When trying to coordinate the union of a number of components from several suppliers, possibly from all over the world, synchronizing processes is paramount to efficiency. Within certain situations, having processes synchronized down to the hour might be required. Logistics solutions that allow for real-time monitoring through the cloud makes accurate models of merge in transit possible for the first time.
* **Office Resources Flexibility**: Cloud-integrated logistics not only provided more data in real-time, it makes it accessible to your entire team, regardless of location or time. Universal accessibility makes processes that require round the clock oversight far more easily handled. Logistics managers can observe processes in real-time from remote locations and allows immediate resource deployment in case response is needed.

**The benefits** of leveraging cloud computing are:

* **Scale:** The inherent scalability of cloud computing solutions can be extremely beneficial for the logistics sector. These organizations deal with a huge demand shift which can be hard to handle without the right technology in place. With cloud computing solutions, it’s easy to scale up without wasting time, money, or resources. This makes it easy for logistics organizations to enter new markets or launch new services easily and quickly. Cloud scalability helps develop dynamic supply chains.
* **Cost-efficiency**: Cloud-based logistics systems help in managing different aspects of operations in real-time make pricing scalable- hence reducing costs incurred. Companies have the opportunity of having access to current updates on relevant data. Due to the nature that cloud-based logistics operates as a pay-per-use model, it saves the cost of software maintenance and upgrades. Capital expenditure is drastically reduced due to little demand for on-site resources.
* **Onboarding:** Cloud solutions help onboard new trading partners in days instead of weeks. With the onboarding of shippers, carriers, freight brokerages, cloud gives one the flexibility to meet varied customer requests or requirements by enabling any to any integrations and retaining flexible protocol connectivity.
* **Flexibility**: In the logistics sector, the decision to move to the cloud normally stems from a financial perspective. Upfront costs are cheaper; there’s no need for huge investments in IT infrastructure and its upgrades or support requirements. Additionally, it is also quick and easy to add users into the online environment, no matter where they are.



Graphical user interface

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