

# The Cloud, Virtual Organisations and Transport Logistics

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A VLTN White Paper

Dr. Bill Karakostas

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## **Executive Summary**

The Cloud can break down barriers between collaborating partners in transport logistics, allowing them to operate as a single virtual organisation, to gain economies of scale and other efficiency benefits. In this white paper we explain why Cloud removes concerns and limitations of companies' existing IT and allows deployment and sharing of services across a company's collaborating ecosystem.

## **Are Virtual Organisations the future business model of the transport logistics sector?**

A Virtual Organisation (VO) consists of multiple heterogeneous partners that work towards a common goal. Although its members can be dispersed across different geographical areas and time zones, the VO operates as a single entity.

Today's logistics organisations, together with their customers and partners, need to operate like VOs, to enjoy efficiency and economies of scale benefits. However, neither their current IT, nor most new IT platforms enable direct collaboration, real-time access to data and services from anywhere, and easy sharing of resources, all prerequisites for VOs.

### **The Changing Nature of Transport Logistics**

As demands of customers for more integrated services at even more competitive prices increase, transport logistics is rapidly becoming a more complex business to manage. To meet the challenging customer and market needs, flexible and dynamic collaboration towards the achievement of shared goals is required. Current IT does not lend itself easily to the sharing and collaboration philosophy. However, the Cloud computing movement does as we argue in the rest of this white paper.

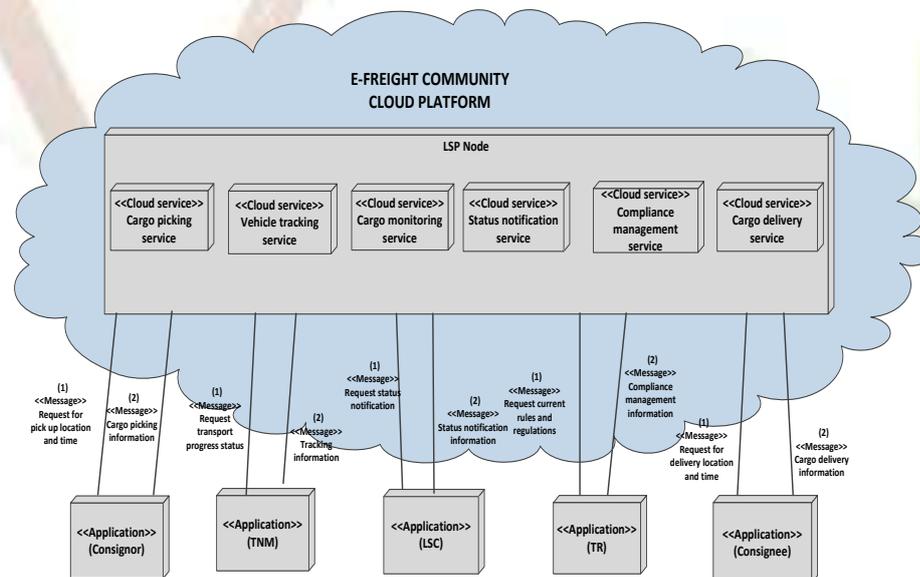
### **What is Cloud Computing**

As the US National Institute of Standards and Technology (NIST) defines it: Cloud Computing is a *“model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications,*

and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction”.

### Cloud for Transport Logistics

The inherent characteristics of the business of transport logistics, drive the need for Cloud-based deployment of services and resources to respond to business opportunities. Following the virtualisation of paper documents, and their replacement with digital copies, a suitable Cloud virtualisation infrastructure can abstract from the current transport logistics services to new virtual ones. This allows the dynamic allocation and re-allocation of services to transport demand as the following diagram illustrates.



In short, Cloud can transform the way you carry out your business processes. The figure above shows how existing and new services of your organisation and of your partners can be shared in a Cloud platform. Concerns about how to deploy the service with your

internal IT, how to secure it and scale it up, etc., are vastly reduced when moving to a Cloud hosted platform.

### **Benefits of a Cloud Solution for Transport Logistics Organisations**

With the use of Cloud technology, inter-partner communications can be set up automatically, based on their roles in the transportation chain. Task dependencies, deadlines and other coordination needs can be picked up and managed by the Cloud platform according to the specific task and role of the participant.

#### **Effective sharing of resources**

Information regarding the transportation process is available and can be accessed in real-time and from anywhere by every member, through the dynamic collaborative network formed by the Cloud. With the effective use of this information, resources can be allocated and reallocated so as to schedule operations in the most efficient way.

#### **Increased flexibility**

The Cloud based VO makes it possible to cope with rapid changes that may arise. Each member of a VO can orchestrate services that suit their current needs and find opportunities to be more flexible and innovative in the way services are combined and deployed.

#### **Detection of problems occurring during the transportation process**

Mistakes can happen frequently during a transportation process. The earlier they are detected, the earlier they can be fixed and thus reduce the cost of the change.

With the use of the Cloud, errors, slippages etc., can be detected much easier automatically by the system and notified to the appropriate participants.

### **Increase market share**

When the collaboration among partners in the transportation chain is improved, the processes can be completed in less time and with less effort. Shippers can acquire their services directly online, instead of going through the logistic provider's sales department. By facilitating self-service procurement, management and billing, partnerships with clients are strengthened.

### **What is the Right Cloud Model for Transport Logistics Organisations?**

The Infrastructure as a Service (IaaS) model is the most common Cloud deployment model in use today. Through this service model, the users of the Cloud platform can deploy IT resources dynamically and, as there is no need to manage data centres and infrastructure, they can focus on managing other important services of their organisation. With careful judgment, an IaaS Cloud model can offer all the above discussed benefits to transport chain VOs. However, it is advisable to use an IaaS provider that understands the unique requirements of transport logistics, rather than a commodity one.

### **Roadmap to Cloud Migration**

Migration to Cloud is a challenging decision that needs to be made only after careful consideration of the IT and business risks involved. In most cases, with a proper migration strategy, the benefits reaped far outweigh the disadvantages. After all, Cloud migration is not an 'all or

nothing' approach. With appropriate support most logistics organisations can identify the business areas and applications for which Cloud migration is an imperative and where there are many 'low hanging fruit' to be picked. Based on such gained experience, a full blown Cloud migration strategy can be drawn next.

For further information regarding topics covered in this white paper, contact [info@vltn.be](mailto:info@vltn.be)

A large, faint, stylized logo for VLTN. The letters 'V' and 'L' are in a dark brown color, while 'T' and 'N' are in a light green color. The logo is positioned in the lower half of the page.