

SPRINGBOARD

EXECUTIVE SUMMARY

6th MAY 2021

TRANSPORTATION SUMMIT

Industry 4.0 Technology
Strategies for Intelligent,
Sustainable Supply Chains

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Introduction

The Consumer Goods Forum hosted a virtual Transportation Summit SpringBoard event on 6th May 2021 in collaboration with Blue Yonder, Cargo Sous Terrain, Equinordic & Vassar Labs, GOH! - Generation of Hydrogen, Hyundai, Federation of Migros Cooperatives, RTI BlockChain, Verkehrshaus Schweiz, and Volvo.

The event unpacked some of the most critical supply chain challenges that our industry is facing today, while diving into industry 4.0 technology strategies for intelligent, sustainable supply chains. Leading service providers in these areas shared their insights and experiences, and discussed how to harness the opportunities these technologies could provide. This Executive Summary offers an overview of the key themes and presentations shared during the Transportation Summit.



 **Himanshu Mehrotra**
Sr. Director,
Solutions Strategy



AI and Machine Learning Based Predictive Visibility and Resolutions

During their session, Himanshu Mehrotra of Blue Yonder delved into the future of consumer industries, sharing use cases that showcase how supply chain solutions can help consumer industry firms be a part of a reimagined future to deliver the right product, through the customer's preferred channel, at the right price. Furthermore, he unpacked the future of logistics and gaining competitive advantage via increased agility, describing how new technology innovations create new ways for logistics professionals to solve problems and make optimal decisions. He shared their unique concept called "Unified Logistics" to describe how companies can leverage these five advanced technology areas to digitise their logistics operations for increased agility.

In addition, participants got the opportunity to discover what a digital control tower can do to make supply chain resilient and agile, by achieving comprehensive visibility to predict disruptions and resolve those disruptions using machine learning and extended collaboration. Finally, Himanshu shared a transportation management success story "Bayer Crop Science, Global Transportation in a Digital World" to illustrate their journey as they integrated Blue Yonder's transportation management solution.

In this eBook by Blue Yonder you'll find seven use cases that showcase how supply chain solutions can help consumer industry firms be a part of a reimagined future to deliver the right product, through the customer's preferred channel, at the right price. [Download the e-book here.](#)



New Technology Innovations Create New Ways for Logistics Professional to Solve Problems and Make Optimal Decisions. Blue Yonder has created a unique concept called "Unified Logistics" to describe how companies can leverage these five advanced technology areas to digitize their logistics operations for increased agility. Learn how to leverage these advanced technologies and the seamless capabilities in logistics planning, optimization and orchestration across transportation, warehousing and labor. [Download the E-Book Unified Logistics.](#)

Discover what a Digital Control Tower can do to make your supply chain resilient.

Make Your supply chains more resilient & agile by achieving comprehensive visibility to predict disruptions and resolve those disruptions using machine learning and extended collaboration: [discover more.](#)



A Transportation Management Success Story: Bayer Crop Science, Global Transportation in a Digital World

This video discusses the next waves of Logistics and Distribution Transformation for Bayer Crop Science. Starting the digital journey several years ago, Bayer implemented Blue Yonder's transportation management solution (TMS). They are continuing to integrate this global TMS with more systems and are also working on attaining last-mile visibility and connecting real-time track and trace of trucks for deliveries. They are in parallel working on B2B connectivity. These are the key major projects across the globe in the four regions. The plan is to get these journeys completed by 2025.

[See the video](#)

Cargo Sous Terrain



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Digital Complete Logistics Systems

Cargo Sous Terrain (CST) is a complete logistics system for the flexible transport of small-component goods. Tunnels connect production and logistics sites with urban centres. Overground, CST distributes the transported goods in environmentally-friendly vehicles, contributing to the reduction of traffic and noise emissions. The first section will connect the Härkingen-Niederbipp region with Zurich from 2031. The rest of the network will be built by 2045.



During their presentation on smart city logistics, Stefan Goldlücke and Beda Viviani of CST shared their contribution on making cities worth living. They delved into overcoming logistics bottlenecks in Switzerland, explaining that connecting all channels creates flexibility. Exploring digital logistics, they highlighted three components of a new infrastructure in Switzerland. On smart cities and intercity logistics, they shared insights into building a new network by 2031, as well as pilot products for integrated, clean city logistics. They went on to discuss their financing timeline and federal law, before concluding with next steps and their offering as the sustainable solution to improve logistics.



Overview movie: The Future of Freight Transport

Equinordic & Vassar Labs



Stephen Leng
Managing Director,
Equinordic UK



Prasad Putta
Managing Director,
Vassar Labs

Product Centric Supply Chain

Stephen Leng of Equinordic and Prasad Putta of Vassar Labs presented their Product Passport project which aims to deliver simpler, more efficient, cross border trading relationships and create intelligence driven intra-company processes. The solution’s ambition is to enable the “product centric” supply chain, by putting the value of digitalisation into the hands of trading partners. Capturing immutable data and events on the Product Passport will simplify the sharing of product provenance and compliance information, and create a digital thread supporting product safety and security.

Outlining the product-centric point of view, the duo shared insights into connecting the supply chain to languages around a focus on the product, managing the end to end lifecycle at the item and product level, the rise of platforms and Blockchain communities, a

digital foundation for automating and simplifying the export to import process, as well as their scope of supply planning to execution.

They also delved into the intelligent farm and seasonal planning and risk assessment, the product passport and each pallet’s digital twin, enabling responsive data-driven trading and operational collaboration, product passport visas, and more. They concluded with points on a passport for the future, highlighting what product passports can deliver, country specific and product type links, and the impact of industry collaboration and innovation in data standardisation and data sharing.



The Product Passport will deliver simpler, more efficient, cross border trading relationships and create intelligence driven intra-company processes.

The aim of solution is to enable the “product centric” supply chain, by putting the value of digitalisation into the hands of trading partners. Capturing immutable data and events on the Product passport will simplify the sharing of product provenance and compliance information, and create a digital thread supporting product safety and security.



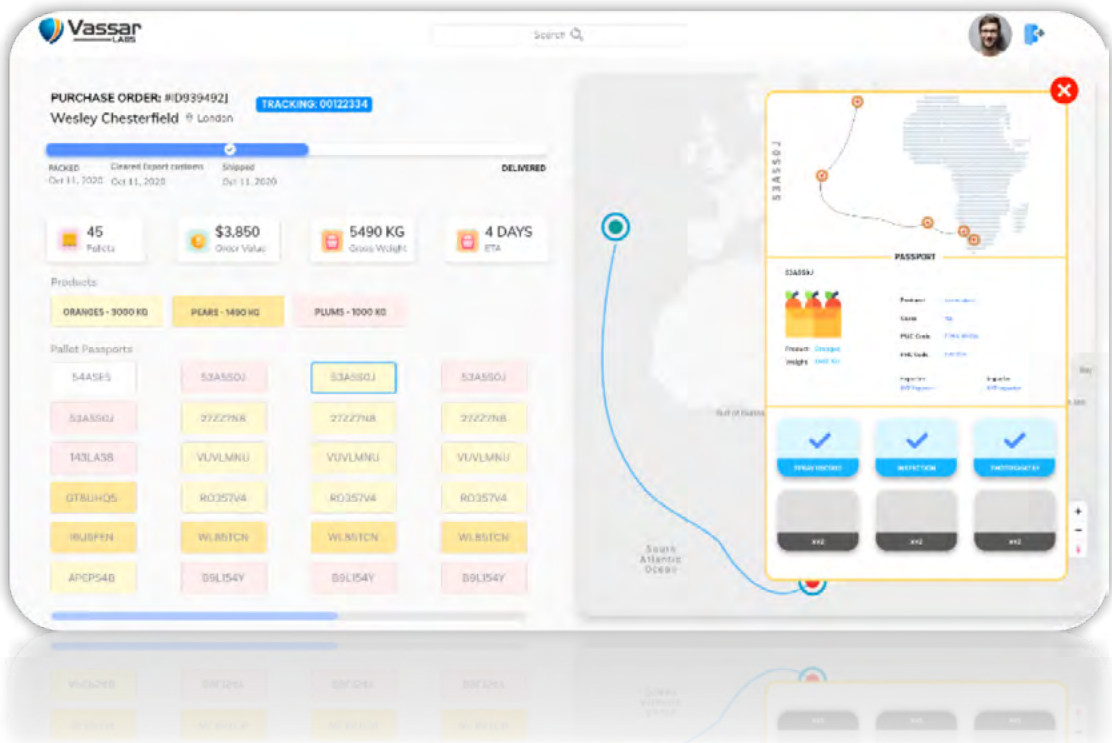
Gives origin details in similar fashion of passports



Details of certifications like Phytosanitary, spray records, clearances, etc.




Enabling traceability from farm to retail pack



GOH! - Generation of Hydrogen



 **Jean-Luc Favre**
President,
Nomads Foundation



 **Jean-François Weber**
Managing Director,
GreenGT



Decarbonisation

From the production of hydrogen by electrolysis (using renewable energy), to storage and distribution via a hydrogen station, everyone’s skills will make possible the running of a 40-tonne truck powered by an electric-hydrogen propulsion. The Generation of Hydrogen (GOH!) team presented the aim of their project, which is to develop a 100% swiss hydrogen value chain for mobility, and to transform the related education system towards the hydrogen industry needs. GOH! is driven by a consortium of five Swiss organisations: **Migros Genève, GreenGT, LARAG, SIG and Nomads Foundation.**

They gave an overview of the project scope, including design and supply of a hydrogen propulsion system, truck assembly, production and distribution of green hydrogen, real-life operation, and upskilling and reskilling.

The team concluded with the Migros case study highlighting how by transporting their goods with the GOH! truck, which emits only water, the company is fulfilling its commitment to reduce its carbon footprint and is making progress towards sustainable logistics. They went on to explain how as a cooperative company, Migros allows its cooperators, employees and customers to grow together in an agile and innovative environment towards a better future.





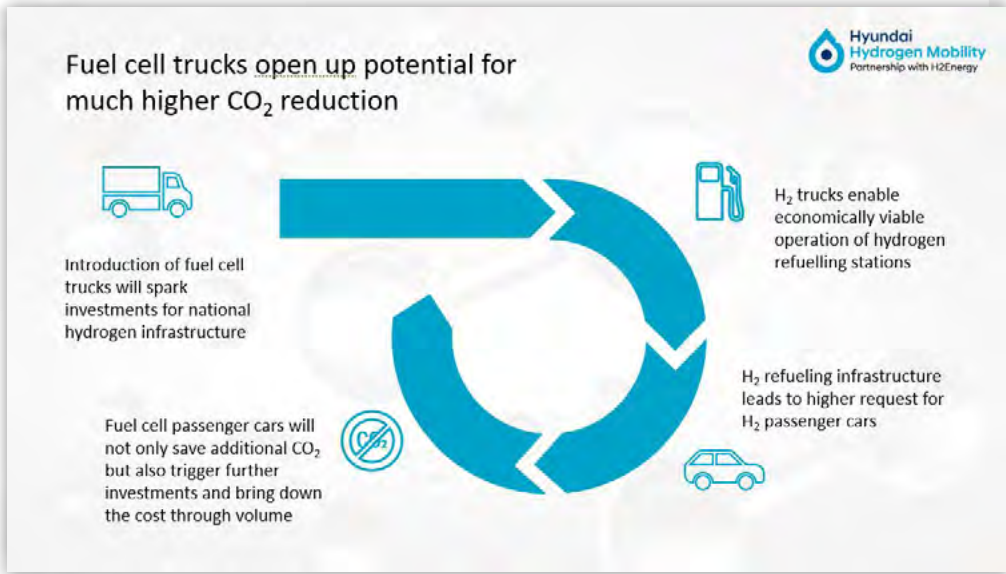
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**Fuel Trucks in Regular Operation:
Learnings of an Early Mover**

In his session titled “Fuel Trucks in Regular Operation: Learnings of an Early Mover”, Mark Freymueller presented the holistic approach that made it possible to establish an ecosystem for FC trucks in Switzerland, allowing their customers to drive over 750’000 km since October 2020. He shared how trucks offer the perfect lever to establish the necessary refueling infrastructure due to their high H2 demand. He went on to explain how in Switzerland, the Hyundai Xcient fuel cell trucks can offer an alternative to diesel trucks in daily operation.

Mark also covered the FCEV Vision 2030 for Hyundai Motor Group, fuel cell as the best fit for heavy duty trucks, and the reasons that drove the decision for Switzerland to serve as the starting point in Europe. He also delved into their holistic approach covering demand and supply, about internalising external cost of traffic, and more, before concluding that it must become more attractive to drive a zero-emission vehicle above diesel trucks.



Federation of Migros Cooperatives



Rainer Deutschmann
Head of Security and Traffic,
Federation of Migros Cooperatives



MIGROS

Decarbonisation Through Digitalisation in Heavy Goods Traffic – An Example From Migros

In his two presentations, Rainer Deutschmann highlighted the development of the hydrogen ecosystem for the operation of H2 trucks in Switzerland and the role of Migros. Switzerland is the first country in the world to build a fully functioning ecosystem to contribute to decarbonisation in freight transport through the use of hydrogen. Together with competitors of the Swiss retail trade, as well as with operators of filling stations, Migros has founded a so-called “Association pro H2-Mobilität Schweiz” (Swiss H2 Mobility Promotion Association) and thus - as in the example of Cargo Sous Terrain - lived out the “coopetition”, the cooperation between competitors.

In his presentation, Rainer Deutschmann also explained how Migros, as the largest retail trade company in Switzerland and considered in 2018 by ISS-Oekom the most sustainable retail trade company in the world, relies on the so-called “multi-tech approach”. Its efforts to decarbonise freight transport are based on a high proportion of rail transport and the use of biogas, electric battery and hydrogen trucks. Together with EMPA, a research institute of the ETZ-Zurich, Migros has developed a CO2 module as part of its transport system “Opex-Tower”, which analyses the concrete routes driven and recorded via the drivers’ mobile phone data. The “Opex Tower” enables Migros to develop its future fleet strategy based on facts.



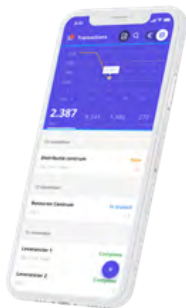
RTI BlockChain



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Load Carrier Administration

Milou Klooster and Yves du Bois, founders of RTI Blockchain presented their independent platform for RTI Registration to simplify internet banking. The platform allows for the elimination of discussions on outstanding balances between users. Data is secured and the decision on what data to share with whom per item shipment lies in the hands of the user.

RTI Blockchain is the independent platform for RTI Registration with the simplicity of internet banking. It allows you and your relations to eliminate the discussion on outstanding balances. Data is secured and you decide which data to share with whom per item shipment. You can directly share with 3rd parties like poolers. We support active usage by your relations to confirm shipments, yet it's not mandatory!





 **Martin Bütikofer**
Director,
Swiss Museum of Transport



A World of Mobility

In his presentation, Martin took the attendees on a virtual video-tour through the Swiss Museum of Transport, Switzerland's most visited museum. He used the words "entertainment" and "education" as the two key goals, combining them into their philosophy: "edutainment".

Martin gave insights into the four big museum halls: Rail, Road, Navigation & Tourism and Aviation & Space Travel, showing some of the interactive highlights and simulations, as well as both historic and modern vehicles and technologies, together with the current special exhibition about Logistics. The film theatre with Switzerland's largest cinema screen, the Planetarium with the giant dome, as well as the multimedia-ride "Swiss Chocolate Adventure", were other attractions presented, along with the Art Museum of Hans Erni and the Red Bull Media World, with its new media technology and Virtual Reality attractions.

He finished off the tour by showing some impressions of past events, meetings and conventions held at the Swiss Museum of Transport – a glimpse into pre- and hopefully post-Covid times.





Reine Alemar
Director,
Transport Development
Volvo Trucks, Sweden



Volvo Group Fully Committed to Hydrogen-based Fuel Cells

Volvo is seeing that the future fossil free Truck transports will be a combination of Battery Electric Trucks and Fuel Cell Electric Trucks for most applications. For some very demanding transports a fossil free internal combustion engine (ICE) will complement the BEV and FCEV.

Heavy duty BEV trucks have been available for sale in many segments since 2020, and are growing in tonnage and range gradually. 2021 BEV for HD are available for regional haulage. For heavy LH transports (+40t), currently the most environmental product is an LNG truck running on Bio-LNG.

FCEV will be based upon a common EV platform with BEV. FCEV is currently under development and high-volume production will start 2025+. It is important that the infrastructure rollout and policies support the shift from fossil transports to fossil-free and that Governments actively support to overcome the “chicken and egg” situation.



About The Consumer Goods Forum

The Consumer Goods Forum (“CGF”) is a global, parity-based industry network that is driven by its members to encourage the global adoption of practices and standards that serves the consumer goods industry worldwide. It brings together the CEOs and senior management of some 400 retailers, manufacturers, service providers, and other stakeholders across 70 countries, and it reflects the diversity of the industry in geography, size, product category and format. Its member companies have combined sales of EUR 3.5 trillion and directly employ nearly 10 million people, with a further 90 million related jobs estimated along the value chain. It is governed by its Board of Directors, which comprises 57 manufacturer and retailer CEOs. For more information, please visit: www.theconsumergoodsforum.com.

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