



ICONET showcases at the 6th International Physical Internet Conference (IPIC) 2019, London 9th to 11th July

The physical internet aims to transform how freight is moved, stored, supplied and used, supporting a more sustainable and efficient system of global logistics. Over three days at Church House, in Westminster, London, presenters and attendees discussed the wide range of technical, organisational, policy and business enabling solutions and strategies that will be required to deliver this vision.



The case for change was made in the opening address by Herald Reuijters, the Director of Investment for Innovative and Sustainable Transport for DG-MOVE at the European Commission, pictured above, who emphasised the need for greater intermodality, and the necessity of shared solutions to make this optimisation of logistics through multi-modal routing a simple and everyday reality.

Reducing risk through collaborative research and development

Helen Wylde from Connected Places Catapult made the case for pre-competitive collaborative research and development, arguing that developing and implementing the physical internet is complex and high risk, with logistics the ‘heartbeat that holds most countries together’ and so together ‘we have got to be able to think it through’. Helen underlined this by saying that commercial enterprises in the transport and logistics sector make gains through the art of thrift and increasing prices through improving service, and that networks as an infrastructure need to be designed and open and shared rather than individually owned. Risk can be therefore reduced through collaborative development and backing the most convincing technologies. Fernando Liesa, Secretary General at ALICE, underlined this synergy between precompetitive research and entrepreneurialism: “We’ll see research and start-ups at this conference – research can give us in Europe the opportunity to exploit the concepts.”



Jaco Voorspuji of GS1 said that whilst there is a need for global data standards, many of the principles required to create seamless protocols already existed, such as ISO standards, and so the challenge is bringing the existing elements together. However, much remains to be determined and Stephan Neugebauer pointed out the need for all upcoming discussions on research programmes to be flexible, as no-one knows where standardisation, regulation and technological frameworks will be in the next decade.

The need for collaboration across sectors and markets was further made clear and gaps were highlighted by the panel in the opening plenary session. Stephan Neugebauer, ETRAC and BMW, said that “we have a system approach – it will not be enough to focus only on the vehicle,” and pointed out the need for pan-European collaboration and standardisation by saying that whilst “we have clear targets for electrification for passenger cars, we need infrastructure for logistics and transport, and we have no European masterplan for charging infrastructure.” Stephan pointed out the mix of pull and push factors required to make transformational change happen – both business case and regulation to accelerate the take up of technology.

Making the sustainable irresistible

The social dimension is a clear catalyst for urban logistics, and Sergio Barbarino, Chairman of ALICE, research fellow at P&G, argued that perhaps paradoxically, freight will be prioritised for cities to become liveable places; “People travel in tubes like worms, whilst the freight gets to see the view.” As several speakers pointed out, the need for collaboration is partly a consequence of today’s diverse and deregulated parcel delivery system, as where twenty years ago a parcel was delivered along with twenty others to the same street, today deliveries are not consolidated. Whilst Sergio pointed out that data sharing remains a barrier to be overcome, he also warned against creating false expectations, (although what is considered necessary may well depend on your choice for dinner); “At P&G we have to make the sustainable irresistible, but nothing needs to be delivered in fifteen minutes unless life-saving or pizza.” Hans Schurmans, Proximus, told how they had re-educated consumers about the benefits of customer

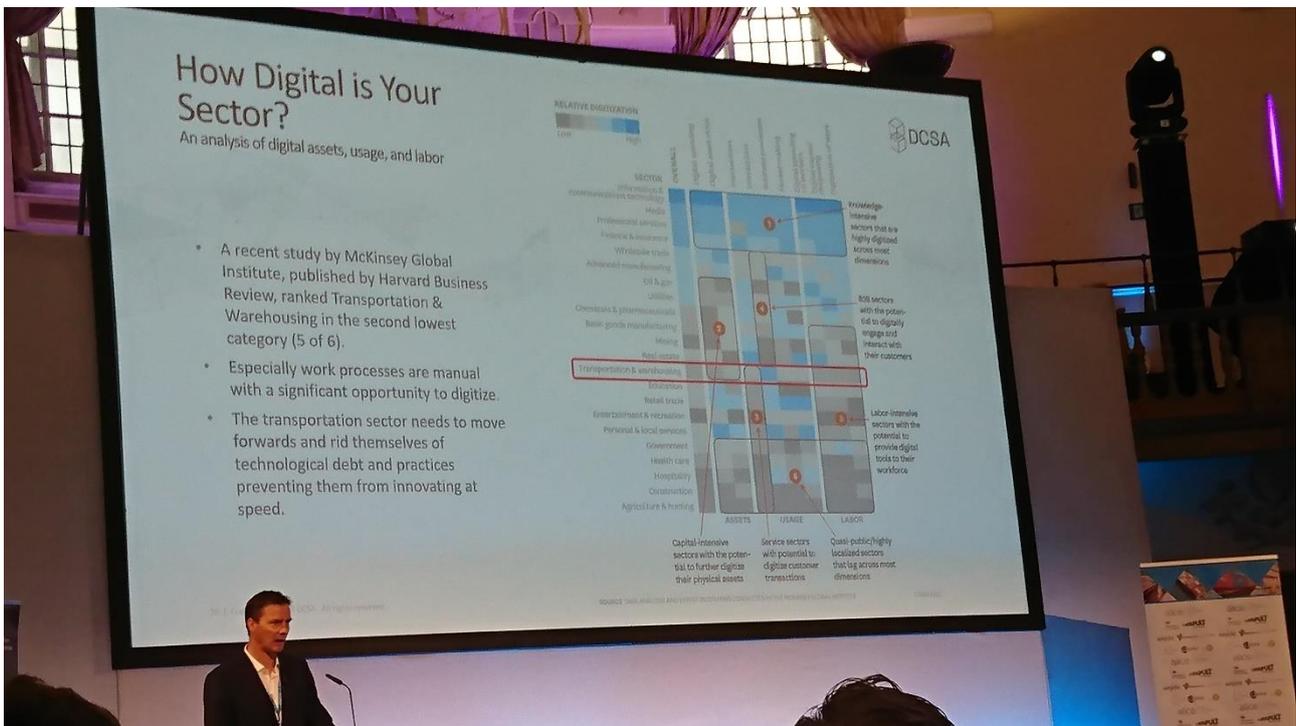


delivery hubs through offering them faster and earlier availability, and through doing so reduced home delivery from 80% to 60%, in the process reducing emissions and rationalising the use of existing warehouses.

Matt Whelan at Ocado Technologies demonstrated the compact automated warehousing solutions that they have devised for the grocery business and are looking to deploy to solutions elsewhere. Elisah Van Kempen of TNO presented the early results of the SOLiD study, and a future built around self-organisation, swarming and hierarchical allocation of robot convenience to achieve automated flowing of parcels through a delivery chain. There was much discussion about the consequences of optimisation of existing capacity. Helen Wylde mentioned sortation hubs that are inactive for twelve hours a day, which could clearly be better used. However, it was acknowledged that rationalisation and automation would have implications for the existing workforce within logistics and transportation businesses.

Software as a Service

Software as a Service has the potential to break through legacy, interoperability and deliver complex problem solving. But it will only do so if such a solution becomes the obvious, superior alternative to existing operational management processes and systems. As Carlo Borghini of Shift2Rail pointed out, “legacy systems which companies are attached to remains the biggest barrier.” Thomas Bagge of the newly founded Digital Container Shipping Association, pictured below, cited a McKinsey study recently published in HBR that found transportation and warehousing lagging behind other sectors in the deployment of digital solutions. Thomas Bagge added that “ICT were the people who brought laptops to people, not enablers of transport.”



Torsten Klimke, DG MOVE, said that a standardised interoperable data layer will be essential, so that operational models can be tested, and robust IoT service solutions designed that can be applied to specific bottlenecks. However, moving to external and shared solutions will mean more rather than less ICT engagement from transport and logistics providers, and in turn, a greater focus on ICT will require a new skillset. Where specialist expertise is required, governments have a role in bringing this to the table,



as highlighted by Michael Ellis, Minister of State at the DfT, who suggested that IoT developers approach national cyber security organisations for practical guidance in addressing the legitimate concerns around sharing data across shared and open third party platforms.

ICONET workshop

ICONET, an event sponsor, ran a project workshop on Thursday morning facilitated by Makis Gerasimos Kouloumbis and Yash Chadha from INLECOM, Claudio Salvadori, NGS Sensors and David Cipres ITAINNOVA (pictured below). A summary of key work to date on the cloud-based Physical Internet framework and platform was presented and followed by an interactive session to make use of the opportunity to discuss the current work with an unparalleled gathering of experts. In particular, they asked the group to consider areas of potential improvement to the simulation models and frameworks as presented and designed for the living labs - the real-world applications that will test the concepts and systems designed. During the discussion on protocols, there was debate around the need to move away from a focus on collecting fixed routing from carriers and transport planners, to allow for a more dynamic approach to consolidation and shared flows.

