

## REAMIT Symposium November 2020 was a success!

On November 5th and 6th 2020, we held the 2nd REAMIT Symposium hosted by our French project partners Valorial, in association with Images and Reseaux.



We saw a total of 167 registered, with a final 121 participants actually attending the Symposium. There were B2B meetings also held throughout the 2 days, 20 out of the 72 meetings were transnational meetings. Across our social media platforms, we saw 46 posts using the hashtag #REAMITSymposium2020 with a total 64 retweets on Twitter.

The Symposium was kicked off by 2 prominent speakers; **Anne-Laure Gassin**, Policy Officer at the **European Commission** focussing on the European strategy on food waste, followed by **Laurence Gouthière** of **ADEME** speaking on 'State of the art on food waste and losses- Diagnosis of food waste & case studies of agri-food companies'.

There were many valuable presentations from members of the REAMIT project, along with representatives from lead partner, **The University of Bedfordshire (UK)**, **Ulster University (UK)**, **Whysor (NL)**, **University College Dublin (IE)** and the **University of Nantes (FR)**. We saw excellent panel discussions on our virtual roundtable with various international speakers - full agenda available here on this link - [Agenda Link](#) . The Symposium was rightfully concluded by **Jean-Michel Buf**, **Regional Councillor and Delegate VP Circular economy of the Pays de La Loire Region** in France. Many participants then virtually dispersed into a fruitful online networking session of B2B meetings, which followed into the 2nd day of the Symposium on the 6th of November 2020.

We would like to thank the team at **Valorial & Images and Reseaux** for hosting this great event and all of their many efforts in making the Symposium a great success.



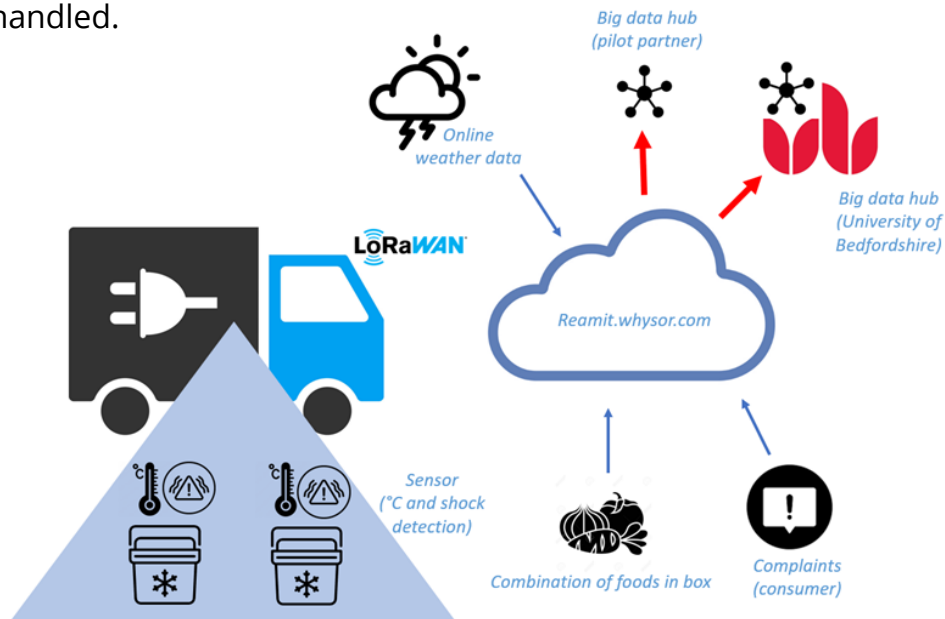


## Update on Dutch Technology Demonstration with an online supermarket

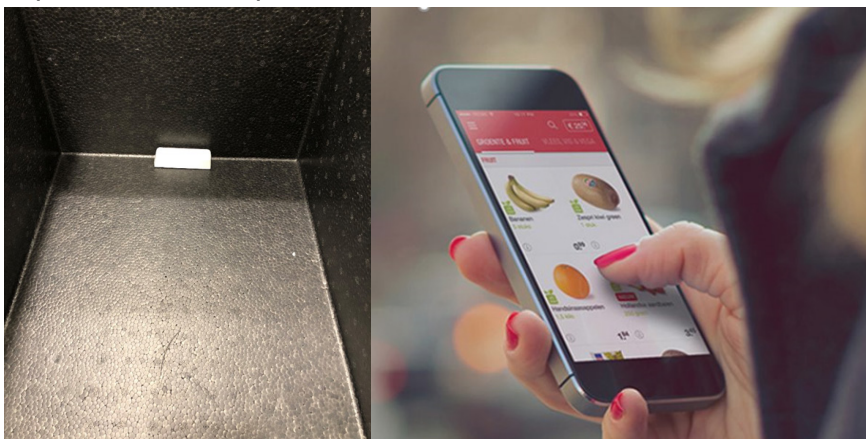
The Dutch pilot partner is an online supermarket who transports groceries (including fresh and frozen foods) from their fulfilment centre to the customer's kitchen. Transport of the goods is with e-trucks in crates (for not cooled goods) and coolboxes.

The aims of this technology demonstration pilot test are:

1. By measuring temperature and humidity inside the coolbox and outside weather condition, we try to make a prediction on the amount of coolpacks that have to be added to each coolbox. We also consider the weather forecast and duration of the time the coolbox is inside the truck. This is how we can set a personalised cooling profile per coolbox.
2. We measure shock detection of the coolbox. E.g. when a truckdriver drives too hard over a speed bump or a coolbox is dropped, the eggs might get broken. The customer will make their complaint about the handling of the goods. By measuring shock detection, we can identify how "rough" the box was handled.



To start this pilot test the University of Bedfordshire purchases 20 sensors who measure temperature, humidity and shock detection. At this point Whysor have calibrated two of these sensors. The sensors are being tested by the pilot partner for validation. After validation and recalibration if necessary, the other 18 sensors are calibrated by Whysor and placed inside the coolboxes by the pilot partner. We expect the first data at the end of December 2020.



# Update on German Technology Demonstration with a producer of fresh fruit & vegetables

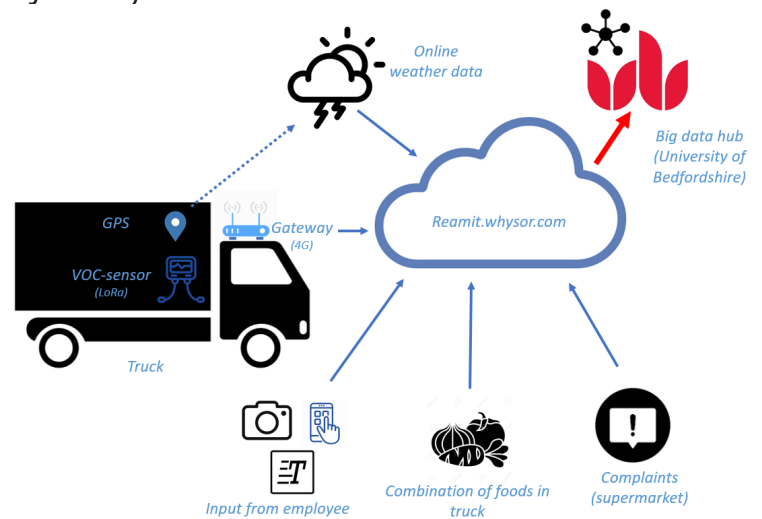
The German pilot partner is a marketer of fresh vegetables, fruits and herbs with offices in the Netherlands and Germany. They transport and store fresh fruits and vegetables from growers, via warehouses to supermarkets.

The aim of this technology demonstration pilot test is:

- To monitor food quality continuously throughout the complete supply chain and take rapid decisions if needed to save food from becoming waste.



To start this pilot test a VOC-sensor was used, to measure volatile organic compounds, CO<sub>2</sub>, temperature, pressure and humidity inside a warehouse and truck. At this point, Whysor delivered this sensor to the pilot partner and the sensor was tested inside the office of the company. At this point, the sensor will be build inside a truck by the pilot partner to start the collection of data. We expect the first data in January 2021.



Congratulations are in order for REAMIT Project Lead, Prof. Ram Ramanathan of the University of Bedfordshire on being ranked highly in the UK for his substantial research in Business Management and Operations Research in the UK.



Rank with no self-citations for Ramakrishnan Ramanathan, University of Bedfordshire. Country: GBR

Subfield	Rank – Single Year 2019 citation	Rank – Career citations
Business and Management	4 out of Top 152 researchers	9 out of top 104
Operations Research	2 out of Top 50	3 out of Top 41
Both OR and Business	1 out of Top 18	1 out of Top 9

Source: Database available at the article Ioannidis JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918.

<https://doi.org/10.1371/journal.pbio.3000918>



## Update from Ulster University on Clostridium Estertheticum trials

Although the practical beginning of the Ulster University trials has been inevitably delayed due to the on-going COVID-19 crisis, work is continuing to find a solution to the Clostridium Estertheticum issue. Firstly, to confirm the incidence and infection points of the bug, a young researcher has been recruited and Clostridium Estertheticum DNA extraction kits are being purchased.

After training and procurement has been completed, the researcher will swab and run the PCR tests at the Coleraine campus of Ulster University. Discussions are currently being held regarding a promising rapid detection solution, this will also be tested once the COVID-19 situation in Northern Ireland begins to clear up.

FreshDetect and LoRaWAN based temperature and humidity sensors have also been obtained. The LoRa sensors will be installed in WD Meats once the situation clears up and the FreshDetect sensors will be trialled with small scale experiments.



*William Duffy of Ulster University, using Freshdetect sensors on cooked chicken*

## Upcoming Events

REAMIT project lead, Prof. Ram Ramanathan will be speaking at the following events, focussing on potential uses of AI in agribusiness logistics & how this applies to REAMIT:

- International Conference on Applications of A.I. & Computational Mathematics in Bangalore (online, 07-11 December 2020)
- 53rd Annual convention of the Operational Research Society of India (online, 17-20 December 2020)

REAMIT Communication lead, Prof. Usha Ramanathan will be presenting her research projects encapsulating 'IoT for quality control during pandemic situation' in 53rd Annual convention of the Operational Research Society of India (online, 17-20 December 2020).

## Spotlight: Prof Usha Ramanathan, Professor of Sustainability and Supply Chains, Nottingham Trent University



Since 2019, Usha has been working in a range of projects in Indian Agriculture sector. This includes agri-food waste avoidance management using solar sun-drying, using excess supply (potential waste) of agri-sector in other industries such as textile and animal feed, and using IoT sensor for precision farming involving Farmagain Agro Private Limited, India.

Her recent case study with one of the leading Indian food and vegetable supply chains, WayCool Foods & Products Pvt Ltd, has been published on the Case Centre. You can read this case in the given link: <https://www.thecasecentre.org/main/products/view?id=172918> This case is dealing with the relationship between agri-producers (farmers) and the supply chain players in the presence of technology.

Currently, Usha is involved in converting these cases into publishable work which will be available to wider audience. You can read her recent work published in 2020 in the link: <https://www.ntu.ac.uk/staff-profiles/business/usha-ramanathan>

## Introducing Gautam Samriya - Research Assistant, Institute of Technology Tralee, Ireland

The REAMIT consortium extends a warm welcome to Gautam Samriya, who has joined IT Tralee in late November 2020. He comes from a background of Electronics and Computer Sciences. Prior to joining the REAMIT project, he has worked in the IT industry in Software Development and Data Analytics for 8+ years. Gautam's role in REAMIT will be mainly on Data Analytics. He believes data analytics and IoT are some of the most needed technologies of the future. The REAMIT project will allow him to contribute towards solving this critical socio-economic problem and dig deeper into these technologies.



Gautam has worked on data analytics projects previously in the Finance and Healthcare industries. He believes the REAMIT project provides a unique opportunity to use data analytics in agribusiness supply chain. By using data analytics, IoT and sensors we could identify the patterns of food wastage and the supply points most vulnerable to loss of food. This information could be used to form strategies and protocols which could proactively mitigate any such future food wastage. This project could have a significant impact not only from an economic perspective, but also from a social perspective.

Aside from analytics, his background in electronics and software engineering will have a great advantage in understanding the technical aspects of the project from end to end and could be quite helpful during project execution. Gautam says he is very thankful to Pat Doody, Gerard Corkery and IT Tralee who provided the opportunity to be a part of this project and looking forward to a great working here.