Second Thought / Espera - Case study

Second Thought Ltd

UPIDS – Unique Product Identity Service

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Principles of food traceability

When it comes to food traceability, it is easy to agree on two basic things: it should not cause too much extra cost and it should be simple.

When talking about traceability with consumers, they often react with "Oh, yet more extra cost for the consumer".

While product labeling must be printed or otherwise physically applied on the product and that cost cannot be avoided, the cost per unit for the unique identity system itself must be extremely low.

But it's even better when the unique product identity can lead to new ways of direct marketing and feedback. That way the marketing department can join in on the expenses as they benefit from the solution as well.

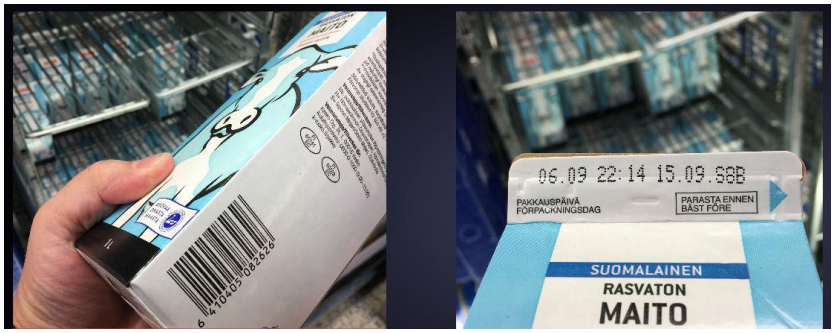
The best results can be achieved when each player benefits from the tracing as improved efficiency, enhanced food safety, better tracing in logistics, more exact FIFO (First In First Out), less food waste, less manual checking of the sell-by-dates, or more automated self-monitoring of service counters and restaurants.

In an ideal world, the traceability ecosystem would work as an efficiency improvement creating savings, and the consumers wouldn't have to pay any extra for it.

With these specifications in mind, Finnish technology startup Second Thought Ltd has developed an ultra-scalable cloud-based SaaS (Software as a Service) solution called UPIDS, which stands for Unique Product Identity Service.

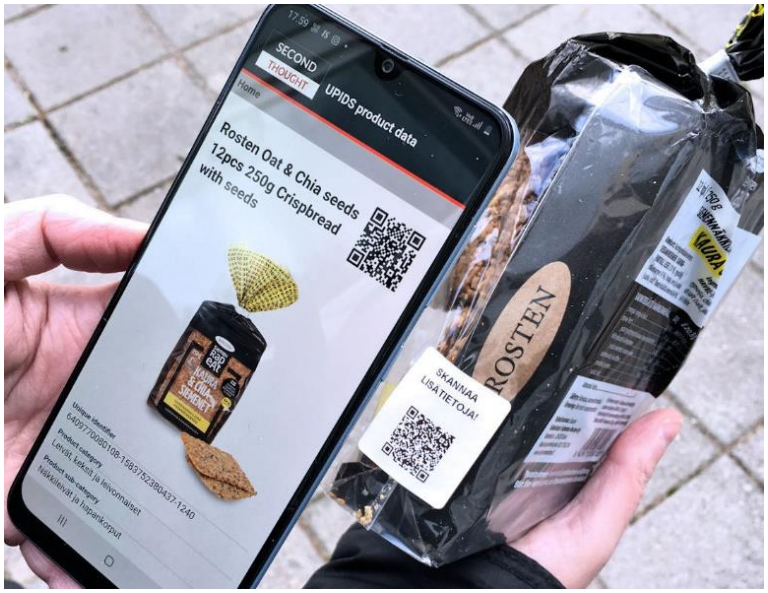
Creating the UPIDS

Second Thought CEO Jani Kasanen has worked as store owner and operator of supermarket-sized grocery stores in Finland for 15 years with his wife, Sanna Kasanen. For a supermarket-sized store, the daily manual check of the short sell-by-dates alone created, on average, 30.000 € of labor costs per year. Mr. Kasanen was already come up with a digital solution for it. As it turned out, no-one had. How could they have, as the sell-by-date data of the stock was not stored digitally at all?



Mr. Kasanen discussed this dilemma with his long-time friend, ex-Nokia/Microsoft software architect Jake Laisi, who eventually came up with the revolutionary idea of UPIDS and how to arrange single unit traceability with real time sell-by-date management. The patent application was filed soon after Second Thought was established in late 2018.

G-TIN, formerly known in Europe as EAN, was developed in 1970. Perhaps the time has come for the next generation? The QR-code was developed in the early 90's, so it's a proven technology. In fact, UPIDS is not tied to any form of labeling code particularly–it can use RFID, GS1-128 or other codes that are long enough.



UPIDS by Second Thought is a system which generates unique identifiers that may be used with any product or asset, of any volume and data associated with the identifier, and it can be changed or amended at any phase of the lifecycle of the product/asset. UPIDS creates a

unique digital identifier for each unit and enables single unit traceability for each single piece of the production run. The data of each unit can be enhanced further on the way.

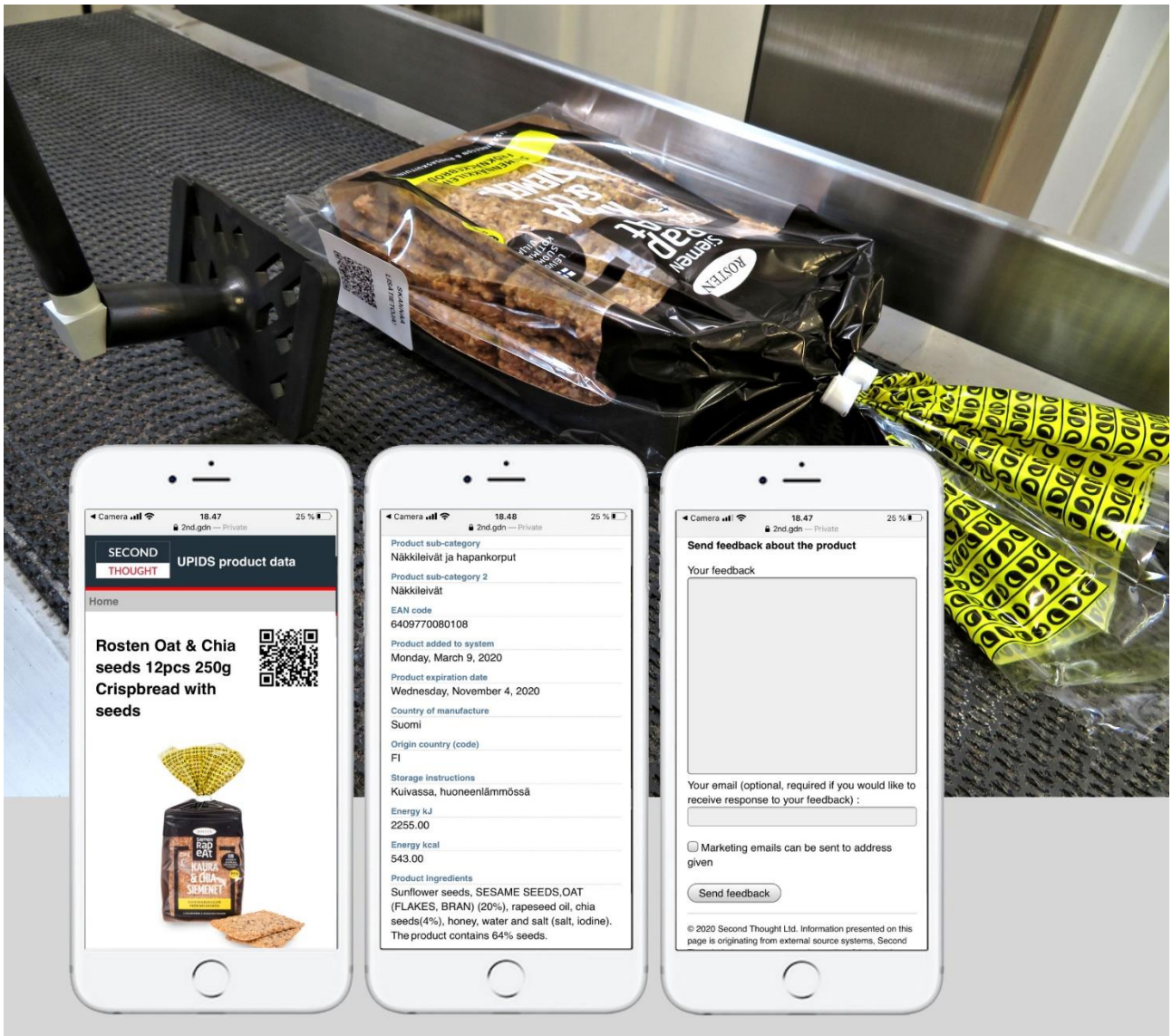
UPIDS in action

Bakery Rosten, founded in 1939 in Turku, Finland, started to use the UPIDS recently on their popular, premium handmade crispbread "Seed Crispies". After 4 years of successful domestic sales, Bakery Rosten is now starting to export crispbread of the Seed Crispies line to several European countries, including Germany.

Premium bread is a great case for single unit traceability. German labeling machine manufacturer Espera is a co-operative partner for UPIDS, which is why it was Espera's labeling machine ES 9300 that was installed on the bread-packing line, after which the bread data was input into the UPIDS system. The QR-code labels are already adorning the sides of bread packages, making each package a unique product, a single unit. Each crispbread package has its own birth certificate and social security number, if you will.

When a consumer scans the QR-code with a smartphone (or other smart device), the code opens up a unique product page from the API server of Second Thought. On the page, a wealth of information is displayed to the consumer.

The screenshots, for example, include a photo of the package, the unique code, product categories, production date, best before-date, country of origin, instructions for storing the bread at home, energy content (kJ & kcal), and the ingredients with allergens in capital letters. The page also includes a feedback form that can be sent directly to Bakery Rosten. The consumer may leave their email address if they would like a reply and they can also opt in for marketing messages from Bakery Rosten if they choose to. When the consumers send feedback, their email to Bakery Rosten automatically includes the unique code of the scanned unit, so in the case of a complaint, the actual production time can be traced.

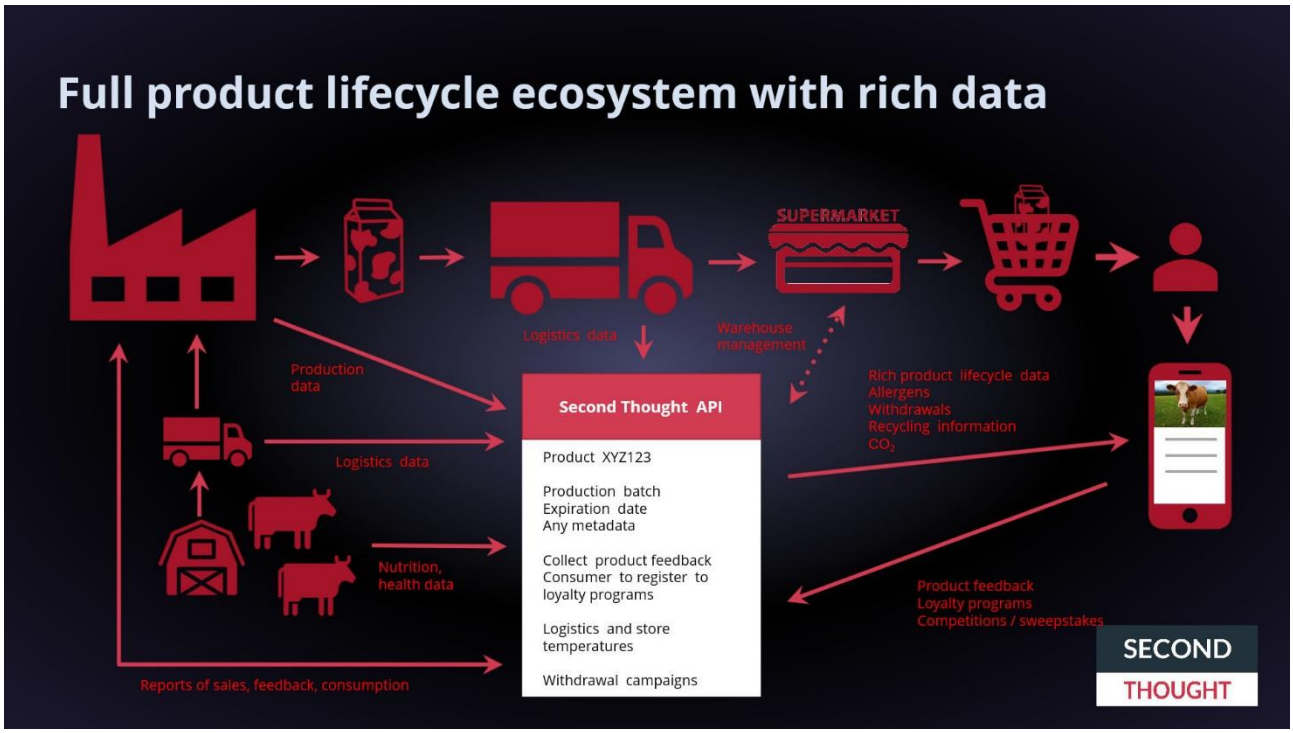


Practically anything reasonable can be stored into the digital product info. The product page can display brand images, a company slogan, origins of the ingredients, batch code, any other professional/industry codes, allergens, lactose, gluten and sugar content, instructions for the disposal of the packaging, links to recipes, deep links to web pages and any other information within reason that the consumer should see. The product page can even be branded for extra charge.

In the theoretical event of a recall of goods, a recall message can be immediately added to the page at the bakery. When the consumer scans the QR-code, they are alerted of the recall.

All this can be achieved with just a unique product identity, without even adding the all around ecosystem of cashier integration, stock and logistics management, ERP-integrations etc. In single unit traceability, the first and most important step is to create and connect a unique product identity.

In addition, when also cartons and pallets are labelled with a cascading code at the factory, the individual units inside can be tracked easily. UPIDS links the identifiers of each lifecycle container, allowing the tracing of manufacturing batches from a single product or vice versa. A cascading code on the pallet has all the included codes collected and shows all the codes of the inner cartons, wholesale units and individual bread bags in them. This system enables highly efficient sales monitoring, warehouse management, logistics optimization and stock management using expiration dates.



Existing Espera customers who have an Espera labeling machine will be happy to know that the UPIDS system can be installed with a normal software update.

UPIDS can also be installed to many other labeler makes. The installation may or may not require a separate Second Thought gateway but should be easy. Please ask.

When purchasing a new labeling machine, please ask for UPIDS Unique Product Identity Service. Second Thought website is www.secondthought.fi . You can also contact Second Thought directly via email: info@secondthought.fi