

ebbitts Food Traceability Scenario



Mrs. Hanson is a quality-aware consumer now standing at the refrigerated counter in the local supermarket looking for a package with four cutlets. She discovers that there are three different variants of the product and that they are priced very differently. She asks an employee in the store about the differences in the three packages of cutlet and he answers "I don't know what the difference is, but try to beep them for their history". Mrs. Hanson takes out her iPhone 7 (which comes with an RFID reader), holds it over the first package of meat and pushes the button 'Beep RFID'. The screen now

displays a list of the entire value chain that the product has gone through in its lifecycle, including transportation and retail. The list includes a timestamp for each step in the chain and a green

marker is shown on each line if all requirements about storage temperature and storage time in the given step of the process are kept within the limits.



Mrs. Hanson now beeps the second package, which is 40 percent more expensive than the other two, and from the screen on the iPhone it appears that this product has the label "Special Quality". By clicking the Farm icon it now appears that the meat is from a pig grown at a farm called 'John's Pig Enterprise' and that it is from their special production. She further learns that the meat has genes which imply slower growth of the pig but better taste of the meat. From the production log it appears that the animal of this special production has had 30 percent more space than traditional bulk produced pigs, has been fed ecological feedstuff (no GMOs) and has been given no antibiotics.

All together Mrs. Hanson has now spent one and a half minute investigating the meat packages and she chooses the expensive one.

Mrs. Hanson is very excited about this new possibility and asks the employee in the store how they use all this information themselves. He explains that the store just has installed a brand new optimisation system on their ICT platform. It automatically collects historical information for all meat packages delivered to the store. The system immediately loads all log data regarding timestamps for the steps since slaughter and detailed information about storage conditions during the production chain since slaughter. Based on this information the optimisation system calculates a quality parameter and an expiry date. The quality parameter is used to set the price of the product. The system also ensures the store proper price reductions on meat with a calculated quality parameter below the agreed level.



A few days later the Hanson family visits the best steakhouse in town to celebrate a birthday. The restaurant is very keen about the quality of their meat, which also is reflected in the price level. When the family has got their table, they discover that the traditional menu card of paper has been changed with an iPad-looking device. On the device there is an overview of the different types of menus in the restaurant, but there are no prices! When clicking one of the menus on the screen, a new screen appears with an overview of the meat currently available in the kitchen for this dish.

Each variant of the menu has its individual price (varying more than 100 percent) depending on the chosen meat. Mrs. Hanson chooses a piece of fillet from a Chevrolet calf which has been grown with ecological feed and has never been treated with antibiotics. The fillet has hung 90 days after slaughter in the Meat Processers special facility for maturing meat. It is a very expensive choice but Mrs. Hanson is willing to pay the price for good quality. Her husband on the other hand is more concerned about his money and he wants the cheapest version of the menu and does not care

about the breed of the calf, ecological feed or ethical issues. He just checks that the calf has not received any antibiotics and then he orders.

When the Hansons return home after their dinner, they discover that the headline story in the news is about a potential food scandal. It turns out that a feed mill by accident has made a batch of feedstuff containing a considerable amount of dioxin. Potentially the dioxin could end up in meat all over Europe. But after a few minutes, the minister of food turns up on the screen and calms everybody down: "...yes it is a scandal, but we have the situation under full control" he said. Because of the unique identification system which facilitates full traceability all animals that have eaten the contaminated feedstuff could easily be identified and a complete list of IDs on packages of meat affected could be generated. Thanks to the ICT systems in the supply chain all packages of meat affected could be identified and removed from storage and stores. Luckily the affected meat had not yet reached the counter in any stores.