



The smartcard for a healthier child

Almost a third of children in some European countries are overweight or obese, and the problem is getting worse. A Cypriot loyalty card company thinks it has a solution in a new product developed with French and British partners as a EUREKA project.

The media reports of a Spanish 10-year-old who weighed 100kg and a British eight-year-old who weighed 89kg struck a chord in many European countries. Although those children (who weighed between three and four times more than they should) seemed exceptional cases, they were a sign of the times, part of a growing problem worrying health and social workers and schools in many developed countries.

Some 30 percent of three 7-11-year-olds are overweight or obese in Malta, Sicily, Gibraltar, Crete, Spain, Portugal and Italy, some of the latest Eurostat statistics show. About 20 percent of the same age group is overweight or obese in England, Ireland, Cyprus, Sweden and Greece. Obese children are those who health experts consider have reached a body weight likely to have a negative effect on their health. They are susceptible to diseases like diabetes and asthma, interrupted breathing while sleeping, and they generally have more health problems as adults.

As policy-makers worry what can be done about this very 21st-century problem, debates in several European countries has focused on school canteens, places which supply a large part of youngsters' diets. "School meals were a big issue in Cyprus," says George Malekkos, the managing director for Nicosia-based IT company Powersoft Computer

Solutions. "Canteens were not selling food the government wanted them to, which is based on a healthier choice, and charging the right amount is always an issue due to the very little time available when selling to children."

Cypriot school canteens were supposed to be serving from an approved list of menus, but were accused of serving up unhealthy meals, says Malekkos. Many Cypriots wanted to see some of the schools' offerings banned and replaced with healthier options, which gave Malekkos an idea: "I thought why stop children from eating something instead

also to gather statistics to help schools supply combinations of meals which encourage children to eat healthily. "There is high child obesity in Cyprus, for instance, but not in Holland. We want to do what they are doing there," Malekkos says. "With this system, we'll be able to compare."

Powersoft enlisted the help of EUREKA to secure funding for the system's development and persuaded one of its own suppliers, the French company EvolisCardPrinter, as well as Netramedia, based in Northern Ireland, to partner it on the project. After some hurdles to

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Powersoft was experienced in running loyalty card schemes for retailers and Malekkos decided a similar card system could be developed to not only reward youngsters for eating healthily, but

secure funding in all three countries, the trio managed to fund the project and began work in May 2006.

So far, Powersoft has developed a point of sale system into which schools can input their meals and the ingredients of those meals. When a product is scanned



at the cash till, the system recognises it. It also recognises the pupil since he pays for his meal using a special card which activates a digital picture of him on the till screen.

The system is then capable of issuing warnings if a child is buying something which he has an allergy to or something which his parents think he should not eat. The system can also add reward points to his card for healthy choices, which Malekkos thinks could later be exchanged for prizes such as a free visit to a local gym.

Evolis has designed the cards and the partners are hoping the first ones will shortly be printed and circulated in a trial of the product - at St Demetrios School in Nicosia. NetraMedia is creating a webpage which will allow parents access to data about what their children are eating at school and even the possibility of banning their son or daughter from eating a particular food

chocolate bar back or should the till just "suggest" he replace it with a piece of fruit?

"This is why we need to have a meeting with parents," says Malekkos. "We need to see how they feel about it. Both things are in the software. We can either control (stop a child from buying an item) or suggest."

The idea is that gradually licences for the system be sold around the globe and schools using it will send data to a central register where statisticians can use it to track eating trends. "We need to follow trends like if a specific school stops a specific item like cheesecake, is there a big decrease in weight?" says Malekkos. With the involvement of statisticians, the partners have already addressed many data privacy concerns. "We don't need names, addresses or telephone numbers of pupils," says Malekkos. "What we need are weights and the trends of what children buy."

cities, the markets for the card system are vast, with potential buyers ranging from public health and educational authorities and charities to private schools.

Useful comparative results to help crack the obesity problem by improving school menus could be available as soon as three years' time, predicts Malekkos.

The cards will probably enact a beneficial change at the first schools even before there is a lot of data to compare. "They'll show parents they need to be involved in what their children are eating," explains Malekkos. "At the moment, parents are not that involved and they need to check, they need to be informed. If their kid is getting fatter and fatter, they'll realise they have a responsibility to help him."

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item or spending too much.

Now the technology has been developed it is time to tackle the ethical and legal questions of its implementation, acknowledges Malekkos. Would monitoring everything every child eats at school or limiting a child's choice of food and drink at lunchtime be a breach of any human rights legislation? Should a child at the cash till be told to put a

Even ahead of the completion of their pilot, the project has already elicited commercial interest. A group of researchers investigating ways to tackle obesity is interested in buying 20 licences to install the system in schools in Israel, the Netherlands, Spain, the UK and Ireland. With obesity on the rise in places as diverse as the US or even in some Chinese and African

Project participants:
Cyprus, France, UK

Budget: 0.35 MEuro
Duration: 20 months

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