

Internet of things

Thanks to Combella, Quality Guard's app is online 24/7

With the rise of the Internet of Things, almost every device is connected to the Internet and can be managed via an app. This makes our daily lives much easier, as long as these applications are available 24/7. The many users of Quality Guard's IoT app, be they butchers or restaurant owners, also rely on the app of the same name to guarantee the food safety of their products. A chain in which the hosting of the app on Combella's servers plays an important role. But what exactly does the app do? And how does Combella contribute to the delicious piece of meat you have on your plate?

All the data are always up to date, and available at all times

When, as a company, you have developed a solution that uses a huge amount of data from different sources, how can you make sure that the information is always up to date? By centralising the information and make it available online – 24/7!

That is the strategy the company Quality Guard chose back when they designed their IoT app of the same name. The purpose of the app is to guarantee food safety by collecting information from users and sensors, and by presenting this information in a clear and structured way. All the information is centralised in different databases, which are hosted on Combella's servers, and is available, accurate and served quickly 24/7. The importance of all this is emphasised by the different partners in this project:



Quality Guard, the developer of the solution, Aaltra, the administrator of the iPad application, and Debreuck-Neiryneck, the developer of the back-office software.

Quality Guard: measuring, knowing and acting

Quality Guard is namely an IoT app for iPad, whose purpose is to guarantee food safety wherever consumers can purchase or eat food. They can be bakers, butchers, as well as restaurants and institutional kitchens in hospitals and kindergartens. The app boasts several features:

- Ensuring that tasks get completed: many guidelines and standards have been devised to produce food in a safe environment. Hygiene must be maintained, and some tasks (such as cleaning, refreshing materials, etc.) must be performed regularly. Most companies have insufficient knowledge in-house to know about all these guidelines and follow them. The app provides a list of these tasks and indicates when they have been completed.
- Recording via sensors: the food chain must also be monitored, and food must be stored and prepared at the correct temperature. Quality Guard has developed its own IoT devices, including automatic temperature sensors, automatic humidity monitoring systems and power plugs that allow to automatically turn devices on and off. The data collected by these sensors are then recorded in the app, and the history of the product constitutes a guarantee of food safety.
- Providing information: information on allergens, ingredients and nutritional value can be obtained immediately. In the case of a preparation, this information is calculated based on the recipe. The information can be exported to other software, weighing scales, cash register systems, cash register software, etc.

Quality Guard CEO Wim Van Gierdegom explains why 24/7 availability is so important for their IoT application: "The information on allergens and nutritional values must be available at all times. There is always someone, somewhere, who is eating."



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(Wim Van Gierdegom, CEO of Quality Guard)



Behind the scenes of the app: data validation and management

Huge amounts of data are generated with the Quality Guard solution. And these data must be managed and validated – a task that has been entrusted to the company Debreuck-Neiryndck, which has been developing tailored software for SMEs for 10 years now, and which specialised in integration projects and operations optimisation.

In concrete terms, the company has developed an app where data about products are entered, including the nutritional value and the allergens of the ingredients. In doing so, the app indicates if the manufacturer of the product has validated the data.

That tremendous amount of data must be retrieved and transmitted securely in an efficient manner. The data warehousing is handled by Combell on a single, yet very efficient server with 24/7 monitoring. On the advice of Combell, the solution now uses a Percona database on a Linux server.



Kristof Houwen, Managing Director at Debreuck-Neiryndck, was pleasantly surprised by the efficient collaboration with Combell: “Combell speaks the same language as we do, at both business and technical levels. The presales consultants took the time to discuss the specifications of the server with us. As techies, it is crucial that we can speak in technical terms.”

This intensive consultation led to a solution that was quickly and professionally implemented. Kristof Houwen: “The support team has assisted us all the way; they even helped us with questions about subjects that had nothing to do with Combell’s servers, such as the use of certificates on multiple servers and domains.”

“As techies, it is crucial that we can speak in technical terms”

(Kristof Houwen, Managing Director at Debreuck-Neiryndck)





The IoT app for iPad: the face of Quality Guard

In order to include the many features of the IoT app (recording, information, to-do lists) in a user-friendly interface, the creators went for an iPad app. A tablet is an ideal tool for entering data in a working environment such as a bakery or a butcher's, which do not always have room to install a computer. The development of the app was entrusted to the company Aaltra, which creates user interfaces for complex data.

For Quality Guard, Aaltra managed an iPad app that includes the following features::

- Listing the tasks that need to be carried out, so that everyone knows what they must do and can then check the task off the list once it is complete.
- Creation of recipes, allowing to automatically determine the nutritional value and the ingredients that must be included on the label.
- Entry control, in order to validate products when they enter your company's facilities, which allows to detect possible defects that can be brought to the supplier's attention right away.



A wide range of features and a real challenge, as business manager Aaltra Pieter-Paulus Vertongen explains: "The IoT app combines three different technologies. MySQL server, MS SQL, .NET and Java technologies are used in the background. Different technologies that were on different servers, and which have now been structured by Combell in a more organised way."

Including everything in a user-friendly interface was no bed of roses, but the company has 10 years of experience in the field of Internet of Things applications. "The most



important aspect of the IoT is that enormous amount of data are generated. This abundance of data, plus the real-time aspect, poses a major challenge. The database and the service must also grow in line with the increasing number of users and the growing amount of data, and continue to operate."

24/7 availability is a must for an IoT app

The Quality Guard solution currently has a thousand users. Many of them are bakers or butchers, who start working very early in the morning – often before 4 a.m. On the other hand, many restaurants also use the app. And they work late. So, the app must really be available 24/7.

Pieter-Paulus Vertongen: "The app is very important for the end customer; it is his point of contact with the product. If something goes wrong at the



underlying technical level, people still always get in touch with the manufacturer of the app. Therefore, my biggest nightmare is that our company should provide support 24/7. Fortunately, thanks to the monitoring provided by Combell, we can sleep soundly at night!”

When asked if Pieter-Paulus would recommend Combell's hosting services for hosting (IoT) applications, his answer is definitely yes. “In the past, we have collaborated with other business partners. But Combell is different. The guarantees they include in their Service Level Agreement and their provision of services allowed us to launch the application with full confidence.”

“Combella is different. Their SLA guarantees and their provision of services allowed us to launch the application with full confidence”

(Pieter-Paulus Vertongen, Aaltra)

Searching for a co-operative IoT hosting partner

Wim Van Gierdegom outlines the growth of the app, as well as the reasons why he chose to switch to Combella. “Back when we launched the app, the processes ran on different servers. New servers were added as the app grew, which was not easy to keep a detailed overview. This is why we went in search of a business partner capable of perfectly understanding and mastering the art of hosting

– not just putting a server at our disposal, but also providing us with a correct architecture, seeing what may cause problems over time, and proactively taking the necessary measures. Monitoring is particularly important to us.”

Pieter-Paulus Vertongen from Aaltra already collaborated with Combella in the past. And as soon as Combella and the three partners (Quality Guard, Aaltra and Debreuck-Neiryneck) first met, they all got along right away. Wim Van Gierdegom: “You need to find a company that knows its business, which knows how to guarantee performance.

Communicating with the customer about this is very important; the customer must feel that the hosting provider knows his business inside out. There must be trust, you need to feel that the services are provided to help the customer grow, not to serve the financial interests of the hosting provider”.

Expectations that Combella has been able to meet: “When we ask them a question, they very quickly understand the relevance of the question, what we ask, and why we ask it; there is no need to explain everything every time. That gives us the feeling that they think along with us. When we call them, we do not have the feeling that we disturb them: we know there is always someone who manages and deals with our project”, Wim Van Gierdegom adds.





IoT hosting: make or buy?

The financial aspect also played a role in the decision to switch to Combell. "It is a 'make or buy' decision – will you develop your server structure by yourself or will you invest in infrastructure and expertise? And then, you start making calculations. How much does it cost to hire a full-time IT engineer, who is available 24/7? And, of course, you quickly come to the conclusion that this is not an option."



In summary, the outstanding SLAs that Combell offers for uptime and the speed at which the servers serve the data, as well as the extra service, were both decisive factors in going for Combell. "Combell is a partner, not a supplier. Communication with suppliers is usually one-way: you tell them what you need and they give it to you. With Combell, we want to benefit from the expertise they have, and get a

better service. Both their opinion and their ideas for improvement matter to us, because, together, we can make a better product."

“Combell is a partner, not a supplier”

(Wim Van Gierdegom, CEO at Quality Guard)

Do you have a project you would like to realise? Or do you want to take your existing project to the next level? Let us know! We will be happy to give you advice on the right hosting services, but we will also think along with you. From seed to success, you can always rely on our expertise. Take the right strategic decisions with a little help from our teams!

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