



# HACKATHON

THE GROCERY FIGHT CLUB

BY SONAE

PREPARED FOR

PORTO, MAY 2019

[BITHACKATHON.SONAE.PT](http://BITHACKATHON.SONAE.PT)

ORGANIZED BY:



## WELCOME WORDS

*Hello! Welcome to the Grocery Fight club!*

*We are very excited to have you with us! We've been working hard in the last couple of weeks with our partners and tech communities in order to create a creative environment for you to think and build the future of retail. Feel free to push your brain to the limit with our APIs and datasets and bring new retail experiences to life. While doing that, meet other creative minds, retail experts and tech mentors... and most importantly, don't forget to have fun!*

*Let the games begin!*

Miguel Águas

Executive Board Member and CIO at SonaeMC

# ABOUT BIT HACKATHON

The shape of retail customer journeys is being highly disrupted by technology. Whether we're talking of eCommerce or physical stores, there are several opportunities to improve these experiences. As a result, we've been cooperating with different partners to improve our customers' shopping experience, regardless of where they are. This 24 hours' hackathon is another step forward to a new retail experience, and we believe you can make a difference!

Explore one of our challenges or surprise us with something completely unexpected.

We can't wait to see what you'll come up with.

## Challenges:

- **Phigital Experience** - Imagine a better customer journey leveraging Continente's APIs from browsing catalogues to checkout enabling interactions with physical touchpoints.
- **Product Recognition** - Identify products that are in Continente's product catalogue using information shared through Continente's APIs and image recognition capabilities.
- **Augmented Information** - Empower customers through a basket that is augmented with relevant information generated automatically as health indexes or recipes.
- **Knowledge Behind Data** - Show-off the data scientist in you and discover new information behind all the data. Take it a step further and pair it with an insightful visualisation model.
- **Product Data Enrichment** - We have our product catalogue and we own data about our products. However, to provide a better experience, sometimes that data isn't enough. How can we enrich that data? Can we collect it elsewhere? Can we crowdsource it from customers?
- **Voice for everything** - Voice is increasingly becoming a viable instrument for performing all sorts of actions. Bearing this in mind, how can we incorporate voice on our customer journey and offer a better experience?
- **Tailored Digital Experiences** - Develop our portfolio digital relevance through the creation of new or enhanced experiences, built upon existing digital products or by creating your own. Sonae MC portfolio includes not only Continente but also Bagga, Dr.Wells, Go Natural, Make Notes, Note!, Wells and ZU.
- **Surprise** - Do you believe you have a brand-new idea in the retail field worth developing? We trust you. Make it happen and impress us!

## TERMS AND CONDITIONS

This guide explains some crucial points of the terms and conditions. We highly recommend you to read the full document so that you don't get surprised by anything that happens during the day.

The regulations can be found at the BIT Hackathon website: <https://bithackathon.sonae.pt/BITHackathonTermsConditions.pdf>

### Communication

The official communication channel for Bit Hackathon will be a slack workspace created for the purpose. After your registration, you received an invitation to the slack workspace. You must make sure that all the teams members join. If you haven't received the invitation yet, please reach out to us ASAP, as all the important announcements will be made there.

Slack Workspace URL: <https://bithackathonworkspace.slack.com>

## LOCATION

The event will happen at

**Fundação Dr. António Cupertino de Miranda**

Avenida da Boavista 4245, 4100-140 Porto

You can either reach the venue by car or by bus from Casa da Música.

# AGENDA

## **Day 1 - Thursday, May 30th Time**

13:30 Check-in

14:00 Opening Session

15:00 Let the games begin! The clock is ticking...

You'll be visited by mentors during the afternoon.

20:00 Dinner (Checkpoint)\*

## **Day 2 - Friday, May 31st Time**

08:30 Breakfast (Checkpoint)\*

12:00 Lunch

13:00 Intermediate evaluation

15:00 TIME's UP! Deadline to submit presentations

16:00 Showtime! It's your time to shine!

17:30 Deliberation... or should we say Investment time!?

18:00 And the winner is \*\*\*\*\*

18:30 Farewell

\* It is not mandatory for all team members to be at the venue throughout the whole duration of the hackathon, but at least one team member must be present during each checkpoint on the agenda.

## EVALUATION

The evaluation will be completely transparent through the Blockchain platform Taikai. The Taikai platform will allow participants, intermediate judges and final judges to invest KAI tokens in the best projects. Participant's voting power will be smaller when compared to the jury because they will have less tokens. In the end, the project with more tokens will be the winner.

During the competition there will be two moments of evaluation:

1. **Intermediate evaluation:** There will be around 26 teams competing at this event and only 15 spots available to pitch on stage. The 15 selected teams will be chosen through a process of pre-evaluation by intermediate judges.
2. **Final Presentations:** The top 15 teams from the previous stage will have the opportunity to present the project to the final jury and participants. The presentation is limited to 4 minutes. The 15 finalists will only be known when called on stage during final presentations. Please stay tuned to the stage announcements, because you can be one of them.

## INTERMEDIATE EVALUATION

The pre-evaluation will be done 100% on the Taikai platform.

You must publish your project on the platform **until 1:00pm, Friday 31st may**. It's the beginning of the evaluation by the intermediate judges. Although the deadline for final submissions is at 3:00pm, and you can still make changes until then, make sure you have a well documented project page published by **1:00pm**, because that's what the intermediate judges will see. Feel free to add links and/or videos to show your demo. It's important to show the work done, because it is not just about the idea/concept.

## FINAL PRESENTATIONS

All the teams must publish their final project page on Taikai until **3:00pm, Friday 31st may**. This is a hard deadline and the platform won't allow you to publish updates after that. It's the page where judges and other participants will go to vote for you, so make it shine.

Since you can be one of the 15 finalists to pitch on stage, you must also submit your PowerPoint slides within the same deadline: **3:00pm, Friday 31st may**.

**The presentation file must be sent on Slack to Rafael Pires within the deadline, using the following format:**

**[TeamNumber]\_[TeamName].pptx | Ex. 00\_Staff.pptx.**

The presentation will be launched from our computer. If you want to do a live demo with your computer in the middle of the presentation, there will be a table and an HDMI cable on stage. We'll be able to switch the signal, between demo and slides. If this is the case, please contact us so we can check everything. Keep in mind, you will only have 4 minutes for the presentation.

Please pay attention to all the presentations. Even if you are not one of the selected teams, you still have an important role since you can also invest in the best projects.

The winner will be the team with the more Kai tokens collected from intermediate judges, final judges and participants.

## MENTORS

- Antonio Ferreira - Expertise: Retail | SonaeMC
- Cristiano Xavier - Expertise: Retail | SonaeMC | BIT
- Ernesto Costa - Expertise: APIs | SonaeMC | BIT
- Flavio Saraiva - Expertise: APIs | SonaeMC | BIT
- João Riqueza - Expertise: APIs | SonaeMC | BIT
- João Rodrigues - Expertise: Data Science & Datasets | SonaeMC | BIT
- Joel Pacheco - Expertise: Retail | SonaeMC | BIT
- Mafalda Barros - Expertise: Retail | SonaeMC | BIT
- Paula Melo - Expertise: Retail | SonaeMC
- Paulo Castro - Expertise: Retail | SonaeMC
- Pedro Oliveira - Expertise: Retail | SonaeMC | BIT
- Rui Quintino - Expertise: AI & Analytics | devscope
- Tiago Carvalho - Expertise: Data Science & Datasets | SonaeMC | BIT

## INTERMEDIARY JURY

- André Freitas - Software Engineer at Beyond Pricing
- Joana Raquel Silva - Data Scientist at Fraunhofer Portugal
- João Riqueza - Delivery Area Manager at SonaeMC | Bit
- Leonid Kholkin - Team Lead at DSPT
- Mário Ribeiro Alves - Founder & CEO at TAIKAI
- Marta Torneiro - Co-organizer at DevOps Porto / Delivery Manager at Blip.pt
- Nuno Moniz - Invited Professor at DCC-FCUP / Postdoc Fellow at INESC TEC
- Paulo Cunha - CEO at Velocidi
- Raquel Ribeiro - Assistant Professor of Computational Sciences at Minerva Schools (KGI)
- Ricardo Lobo - Founder & Coordinator at LCD - Laboratório de Criação Digital
- Rui Mendes - Founder at DSPT
- Tauan Bernardo - Founder & Director at Viva Lab
- Tiago Carvalho - Data Science Team Lead at SonaeMC | Bit

List with pictures available on the website at: <https://bithackathon.sonae.pt/>



## JURY

- Ademar Aguiar - Professor at FEUP / Founder at Coding for Social Impact
- Bruno Mourão - Head of IT Strategy & Architecture at Sonae MC | BIT
- Daniela Seixas - Founder & CEO at Tonic App
- Gabriela Castro - Head of Strategic Business Development at Sonae MC
- Gonçalo Gaiolas - VP of Digital at OutSystems
- João Ricardo Moreira - Board Member at NOS
- José Tribolet - Full Professor at IST / President at INESC
- Luis Filipe Reis - CEO at Sonae FS / Sonae Fashion (S&F)
- Paula Panarra - General Manager at Microsoft

List with pictures available on the website at: <https://bithackathon.sonae.pt/>

## DATA

For this competition, we have prepared interesting datasets for you to work upon. These data sets include:

- **Sales:** The transactions that have been made online and at the stores (including as location, transaction value, client number and item purchased)
- **Payments:** Information regarding the payments that have been made (including cancelation of sales and returns of items)
- **Checkouts:** Information regarding checkouts at the physical stores (such as how long the checkout took and number of items).
- **Stocks:** Historical data of stocks at each store by product
- **Audit Data:** Contains all the data related to the audits done on the self-scan customers

The dataset metadata can be found here: [http://bit.ly/bithackathon19\\_datasets](http://bit.ly/bithackathon19_datasets)

Note: The data has been anonymized with several anonymization techniques. Some data might be older.

The data can be accessed, for example, through the Azure Data Studio. You can find an example here [http://bit.ly/bithackathon19\\_dataaccess](http://bit.ly/bithackathon19_dataaccess).

# API

Besides the dataset, two API's will be available for prototype development: The continente online and the continente loyalty card API.

**Continente online:** With this API you can browse all the products that are available on Continente online, including product images. You can also authenticate users and look up the order history and add products to the basket.

**Continente loyalty card:** On this API you can find what are the current vouchers / promotions that a client can use.

## Accessing The API

The access to the API is done through the SONAE developer portal. We have setup a special portal on this link: <https://sonae-bithackathon2019.apigee.io/>

In order to access the API you will have to:

1. Register on the portal
2. Confirm your e-mail address
3. Login to the portal, click on your e-mail address on the top right corner
4. Select "Apps", create the profile for your app and select which API you will be using
5. After an app is create, you can consult the keys to access the API

The complete API documentation can be found here: <https://sonae-bithackathon2019.apigee.io/apis>

# MICROSOFT TOOLS

## The IoT board

Microsoft made available a limited number of AZ3166 boards. These kits are based on the MxChip AZ3166 IoT Development Board, which provides an especially nice starting point for cloud-enabling your hardware projects:

- It includes a number of sensors, saving you a lot of time in prototyping (and making the hardware immediately useful);
- It has built-in support (and Arduino libraries) to securely connect to Azure IoT Hub over Wi-Fi and let you instantly send data to the cloud for real-time processing and storage;
- It can send sensor data to the cloud immediately — track motion, monitor temperature and humidity, or have your users press a button to signal your cloud application;
- It can receive control messages from a cloud app (and display messages, turn on lights, play sounds...);
- There is a VS Code extension to provide a seamless development experience.

Disclaimer: There is a limited number of kits — first come, first served. To claim your kit, you need to be working on a project that takes advantage of this resource. One kit per team — no exceptions, sorry, we want to make sure as many teams as possible have access.

## Microsoft Azure Pass

Microsoft is offering one \$100 Azure Pass per team so you can try Azure for free. No credit card required.

In order to access your pass, ask Rafael Pires on Slack, and he'll send you your code.

## Useful links from Microsoft:

- If you're new to Azure, there's a set of starter tutorials: <https://azure.microsoft.com/en-us/get-started/>
- MxChip IoT Developer Kit Get Started page: <https://microsoft.github.io/azure-iot-developer-kit/docs/get-started/>
- A great community tutorial showing how to connect IoT Hub to Azure Functions: <https://medium.com/medialesson/iothubtrigger-azure-function-and-azure-iot-hub-e45ea819e6b5>
- Hands-on Azure IoT with Node.js and the MXChip: <https://azure.microsoft.com/da-dk/resources/videos/connect-2018-hands-on-azure-iot-with-node-js-and-the-mxchip/>
- Azure Cognitive Services are available as a free trial: <https://azure.microsoft.com/en-us/try/cognitive-services/>