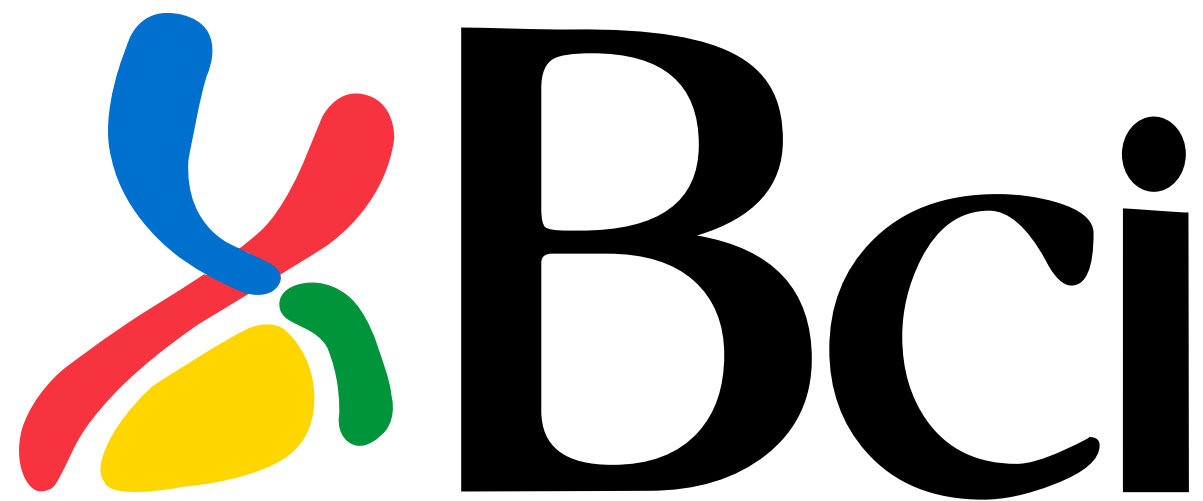


MACH

Innovation for the banking
model of the future





Through innovative approaches and cutting-edge technology, Globant offers BCI solutions to help create and develop good ideas and turn them into reality. Success consists in impregnating processes, strategies, and products with an innovative gene.

Banco de Crédito e Inversiones (BCI) is a Chilean bank specializing in savings & deposits, securities brokerage, asset management, and insurance. Considered one of the most important banks in the country, it was founded in 1937 in order to support small and medium enterprises.

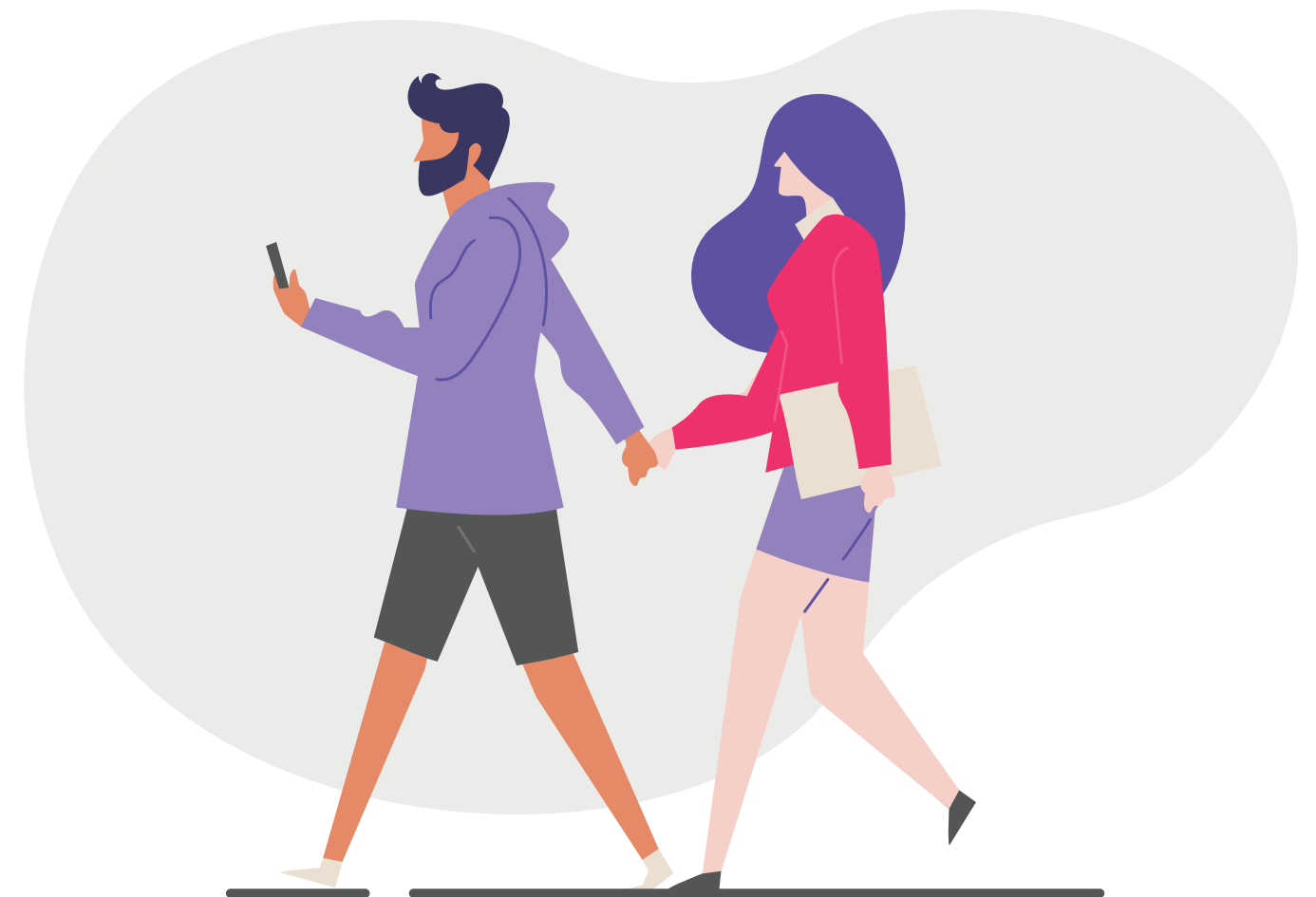
Fast-forward to 2016, there was a need in the country to boost the banking sector, targeting new generations and unbanked population.

The goal

Breaking paradigms is everyday currency in order to reach unbanked population, who might already be disappointed with the traditional banking model; due to long and tiresome queues to complete a simple payment or procedure, excessive requirements to open an account, or just feel that don't have a stable income. They don't trust credit cards so they can't subscribe to online services, such as Spotify and Netflix, they can't shop at Amazon or eBay.

And the few that do have the most basic of bank accounts are charged fees for wire transfers, to check their balance and even to do purchases; furthermore, a portion of the target market was constituted by small entrepreneurs that were charged fees for every transaction they carried out with credit or debit cards.

MACH aims to democratize payments, an app that is free and available for everyone.



Innovation and development

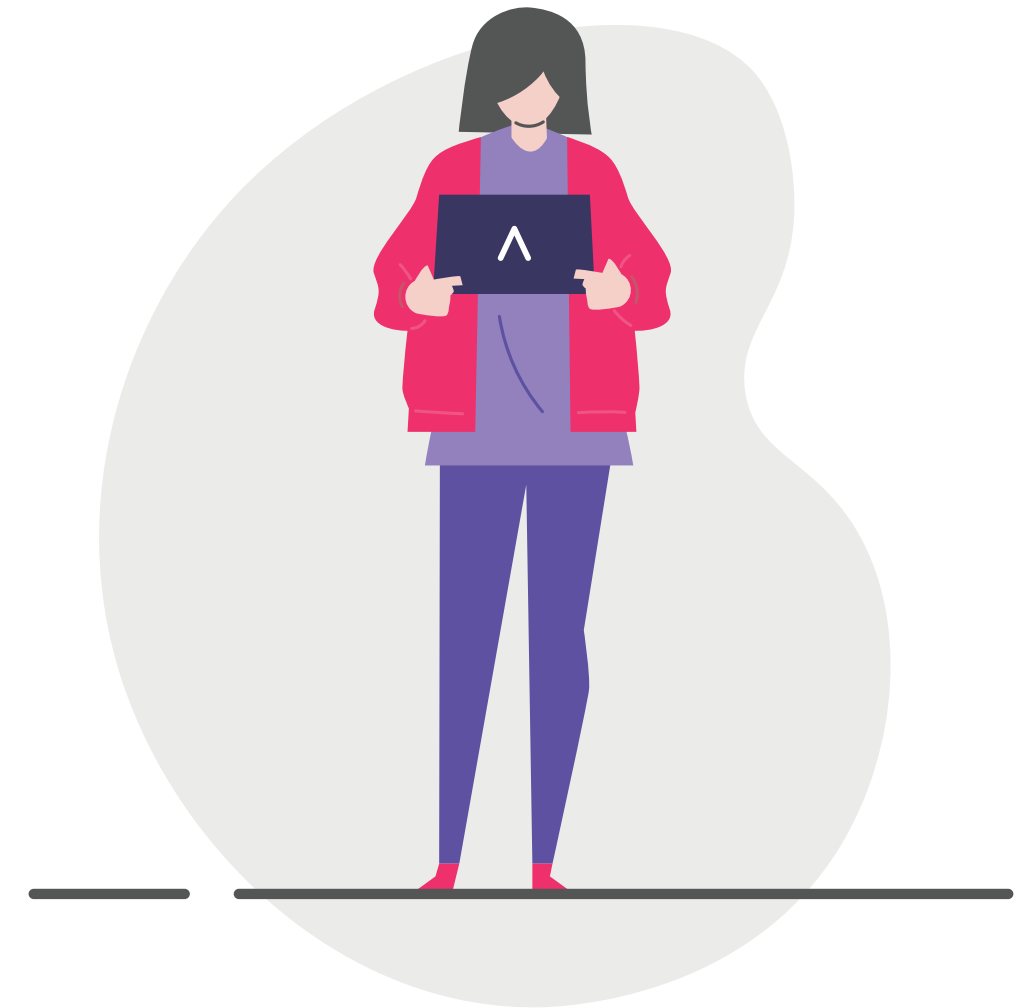
Innovation is MACH's distinguishing feature, which sets it apart from conventional banks and places it on the road to become a new kind of financial service solution.

MACH needed an agile team that would offer their users an unprecedented innovation for a bank model of the future. Globant provided professionals from different studios in order to build an app specially designed for those who have difficulties accessing traditional banking solutions.

Product Acceleration Studio proposed and implemented a structure that allowed for an organized way to track team effort and improve team focus towards vision and strategy. We use people-centered product management practices to identify user needs and craft effective, measurable solutions. From problem discovery through product launch, we enable the right solutions to be designed and delivered.

Globant proposed autonomous and multidisciplinary teams that work under the following premises: commitment to business and deadlines controlled agile processes and technological innovation, adaptability, and quick response to the business unexpected changes. The team does not only interpret and implement requirements but adds value using our experience on a solution, product, and business as a whole.

We work alongside the product owner and product development, transforming business requirements and roadmaps in a list of specifications; shortening the gap between what clients need and get, helping generate and achieve business value. Ensuring the critical liaison between product, UX and engineering team, doing backlog refinement, and oversee the execution of the product plan.





Mobile Studio helped to build a high-level mobile application and in a very short time, using the best industry standards. The first version of the app was launched in August 2017, only 6 months after the start of its construction.

From the point of view of experience, the UX team's biggest challenge was to speak the same language with the users, approaching them, looking to what they like and don't, what they do and what they need from a financial app.

To start the research the UX Studio team focused on the Universities where they performed several tests like 1 on 1 interviews, preference test, focus groups, and usability testing.

With all of this, Globant's team defined that the core design would be Simplicity in language and visual design. MACH is a straightforward solution that helps customers to manage their money, to be in contact with friends, and to get their first credit card all in just one place in a social and fun way. The team discovered that users don't want

input long accounts numbers or complete several text fields, so they designed MACH in a way that the user that wants to transfer money, could just choose the contact, type the amount, and send. Users could even use emojis to communicate with friends within the app.

The UX team goal was to make MACH as user-friendly as any other app such as Whatsapp or Instagram so users would enjoy using it as much as Social Media.

As an aside, at no point did Globant have access to the bank's customers real data while developing the app. Big Data Studio was in charge of data-warehouse and integration with digital marketing. They designed and developed a solution able to process big quantities of data at high speed. MACH enables its team to store, process and extract key indicators for decision making in real time. The latter was a key factor in the growth of the platform reaching more than 500,000 users after just one year from its launch.

CloudOps Studio worked with pipelines and cloud environments. They designed the cloud infrastructure for Backend and Big Data environments with High Availability and Reliability best practices. Also, they designed the Continuous Integration / Continuous Delivery (CI/CD) environment for Frontend and Automation which helps developers speed up their deployed and tests in a systematic way.

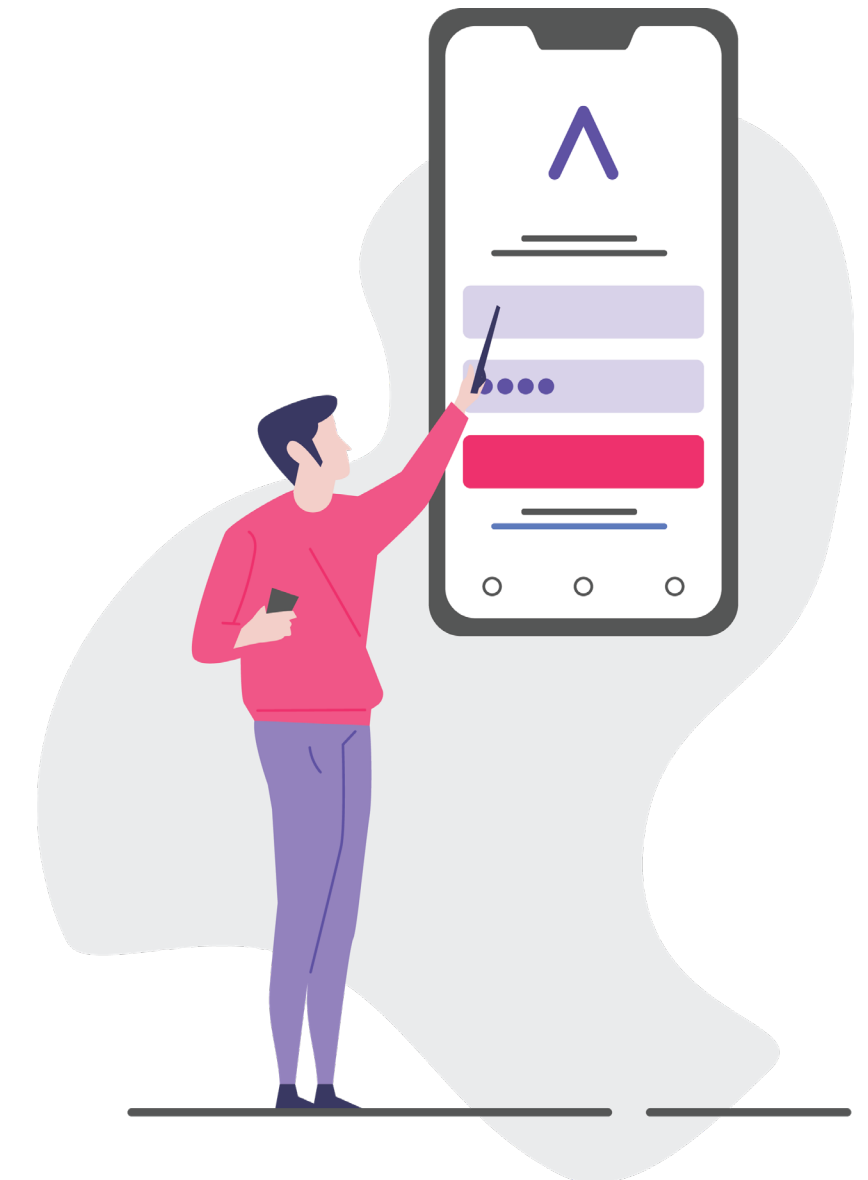
Quality Engineering Studio is in charge of the Continuous Delivery of the App. The development process is tightly integrated with quality assurance. Each stage of the development has its quality assurance counterpart. Every deploy in each environment executes the automated tests with a continuous integration pipeline. The team uses virtual cell phones with Amazon Device Farm. For functional manual testing, they use real cell phones and mirroring tools for the efficient collection of evidence.

Continuous Delivery Architecture is implemented in AWS CloudFormation, with four environments for iOS and Android Platforms. It includes automatic visual reports on S3 web site. Both platforms have smoke and regression test.

The Scalable Platform studio team wanted to support a long-term vision of the microservices architecture where short and long-term goals were considered. This allows the team to reach a great balance between developers, team and business expectations. Direction and decisions are highly based on the developer satisfaction over their code. This means that **technical debt** is properly handled, long-term design is considered and tools that support delivery flows are constantly improved. Some features that supported this vision are:

Flexible authentication: In a payment platform, verifying if a user is allowed to do an operation is something that it is done all the time. And more important, is to provide mechanisms that enable users to access features. Personal Id, email, phone, and other verifications were implemented to enable MACH users to access features. The key point was to relate features and validation processes by mixing and matching as needed.

End 2 End API testing: Besides having an automation team, the team at Globant enabled API e2e testing tools/commands that help engineers test their development or local code in distributed microservices. We are currently improving this tools to move from *Continuous Delivery* to *Continuous Deployment*.



Some challenges

MACH offers payments without fees to the other app users and an international prepaid credit card, that enables them to shop online for any product or service.

In six months, Globant developed an MVP (Minimum Viable Product) and in order to gain early feedback, it was tested in different Chilean universities, which lead to changes and adjustments both in performance and usability. To address poor connectivity from the wireless service provider, the number of calls to the backend was enhanced, balance information was cached and to ease anxiety it showed the time and date when it was last updated; a retry policy was implemented to avoid payment failure at service timeouts.

User experience adjustments were implemented and allowed the customer to understand if the problems were due to a connectivity problem or because actually, something went wrong. From then onwards new and existing features (account creation at sign-up, credit card request, etc.) were designed and built with an asynchronous logic to help the request be solved with acceptable delays and not get lost in the way.



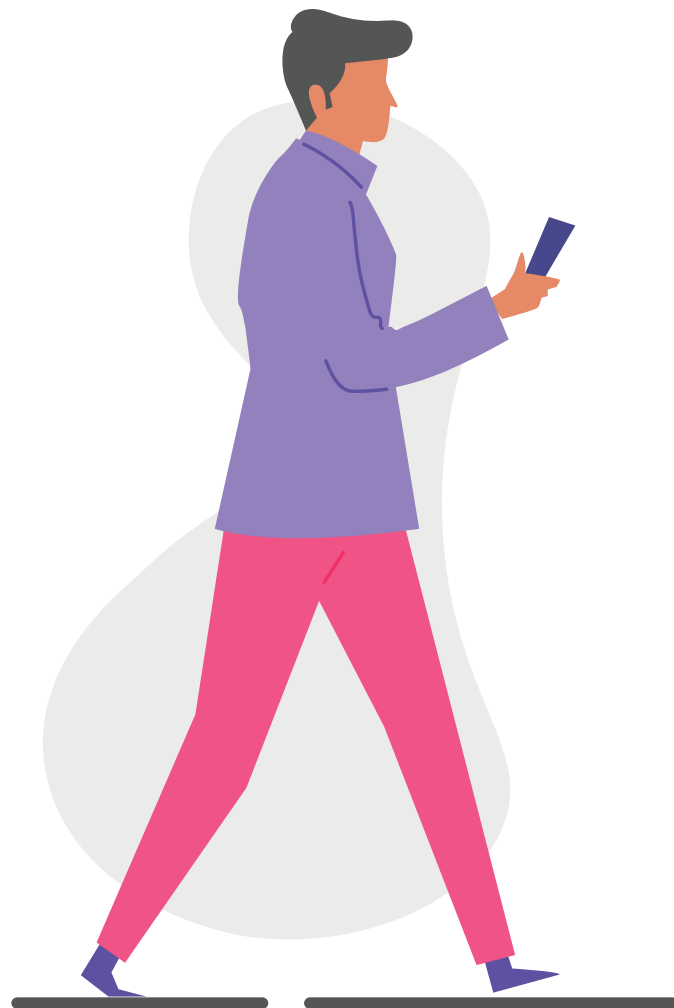
Takeaways

The team at Globant built a high-level mobile application in a reduced period of time using the best industry standards. The first version of MACH was launched just 6 months, currently is the best financial app in the Chilean mobile stores.

MACH is the first solution in Chile to allow the customer's total control of their account from a mobile phone, plus free payments, collections, withdrawals, and top-ups. It is the best-valued financial app in Chile with 810k accounts; rated 4,7/4,7 stars in App Store and Play Store.

Studios involved





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