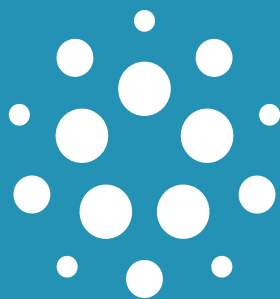


Telefonica



Aura's world

vol. I

AURA STORY BOOK



Telefónica
wants their
customers' trust
to be the
greatest asset

Foreword



Telefónica has a history of more than 95 years of foresight and transformation. A

Company with many years of history that has evolved, adapting to technological advances and the needs of its **more than 350 million customers spread over Latin America and Europe**. Some years ago, **the process of transformation began with the complex task of simplification, adaptation and comprehensive digitalisation of the Company** in order to endow intelligence to the three platforms it already had. Networks and other physical assets of the company (1st platform and the fundamental asset that supports the remaining assets), its unified IT systems (2nd platform), as well as the products and services it offers to its customers (3rd platform).

On the basis of the capabilities provided by these platforms, the **4th Platform** was developed to reinforce Telefónica's capacity to collect, store, analyse and understand customer data in real time and offer them personalised experiences. It is important to highlight that the Company always uses data in a responsible way. The 4th Platform is a cognitive power that works through **Aura, Telefónica's Artificial Intelligence**, which is already established in seven countries and soon to be in two more. Aura is already transforming data into knowledge to deliver personalised experiences to all customers in a natural way, in real time and through multiple channels.

This construction process involved several phases of work spread over time: formulation, conceptualisation, implementation, global launch of Aura, expansion and finally the creation of "Aura as a Platform". **Aura is born as a commitment to ensure principles and values in digital life.** The Company wants their customers' trust to be the greatest asset.

Since 2012, Telefónica has invested approximately €48 billion in this whole process, both in the deployment of networks and other state of the art infrastructures and in integrating all its IT systems or the development of new digital products and services.

Aura is the first evidence of a long-term vision, where Telefónica imagines their customers talking not only with their products and services, but speaking directly to the network and the network answering back to them in real time adapting to their needs. **This is [its vision](#) for the future. A totally digitalised Telefónica with the customer in the centre.** Because they believe that people have spent a lot of time learning to understand technology and it's the time for technology to understand human beings.



Shall we
wake
Aura up?

CHAPTER 1

Aura's reason

1.1 Why was Aura born?

Aura is the natural consequence of **Telefónica's digital transformation**, which has completely evolved the Company's networks, systems and services.

This vision arises, like all great ideas, from a great quest to expand its limits. Telefónica puts its main focus on investigating the era and society of the moment. In this way, **the Company found out users really demanded intuitive technology to let them use what they wanted in real time and in a personalised manner**. To stress its impact, during the [Mobile World Congress 2017](#), Chema Alonso committed to radically transform the way Telefónica related to its customers. The Company announced that it would use the potential of Artificial Intelligence and all internal knowledge to reinvent the relationship with its customers.

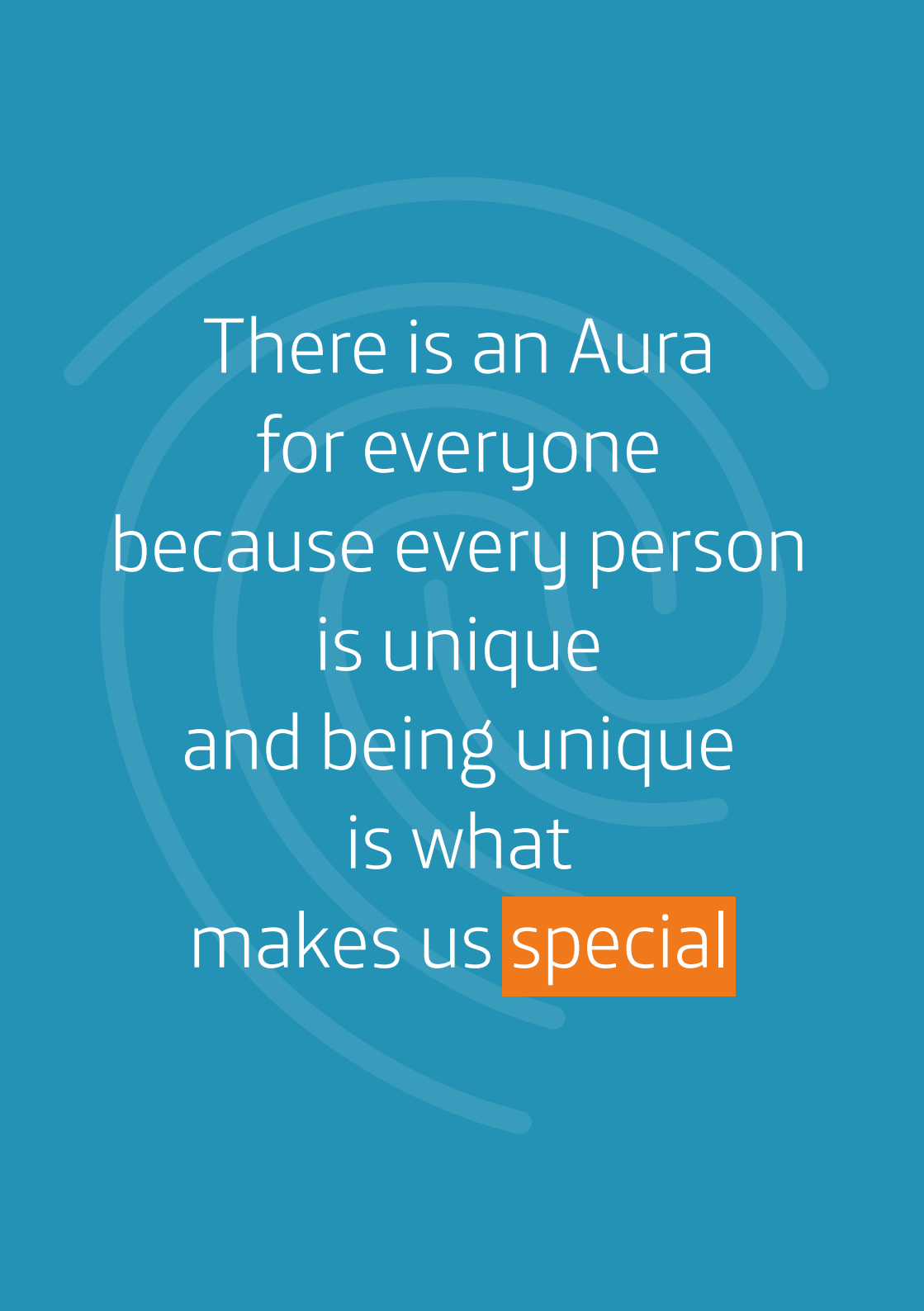
Aura was born to respond to the need of creating a new model of relationship with its customers based on trust, using cognitive modules and Artificial Intelligence. **Aura transforms data into knowledge/insights to offer personalised experiences naturally and easily**. Telefónica thus begins a new stage in its transformation process towards an [onlife telco](#), and becomes the first company in the industry to provide customers the possibility of naturally managing their relationships thanks to Artificial Intelligence.

1.2 What makes Aura different?

During the development process, Telefónica bore in mind that it was necessary to look for the unique value that would make Aura a completely innovative service. Unlike other projects, Aura adapts itself to each user. **This new relationship model means treating customers uniquely and with personalised experiences.**

There is an Aura for everyone because every person is unique and being unique, is what makes us special. In addition, the Company created a new 'front end' to bring the customer all the benefits: immediacy, customisation, context and computational power.

Telefónica wanted to **transform data into knowledge** and place it into its customers' hands so they can know, decide, and act, and so that they can make the most of their relationship with the Company. Aura is capable of determining in its interaction with customers, their intention using semantic mapping, and of building a personalised response adapted to the channel the user is interacting with. Aura also determines the data information available through their personal history with Telefónica and the history of all their interactions with the Company.



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Aura's first steps

2.1 The 4th Platform, the Aura engine

The three existing platforms have produced, and are still producing, a great amount of data, which combined give a 360° view of each user to offer greater relevance to customers. Telefónica analysed these data sources and defined the architecture to work with them, laying the foundations for an intelligent platform.

Until relatively recently, the multinational had based its work on these three platforms. The [first](#) includes the Company's networks and other physical assets. The [second platform](#) encompasses unified IT systems, while the [third platform](#) encompasses all the digital products and services it offers to its customers. However, **the time had come to turn Telefónica into a data-driven Company based on Artificial Intelligence, so the 4th Platform was created.**

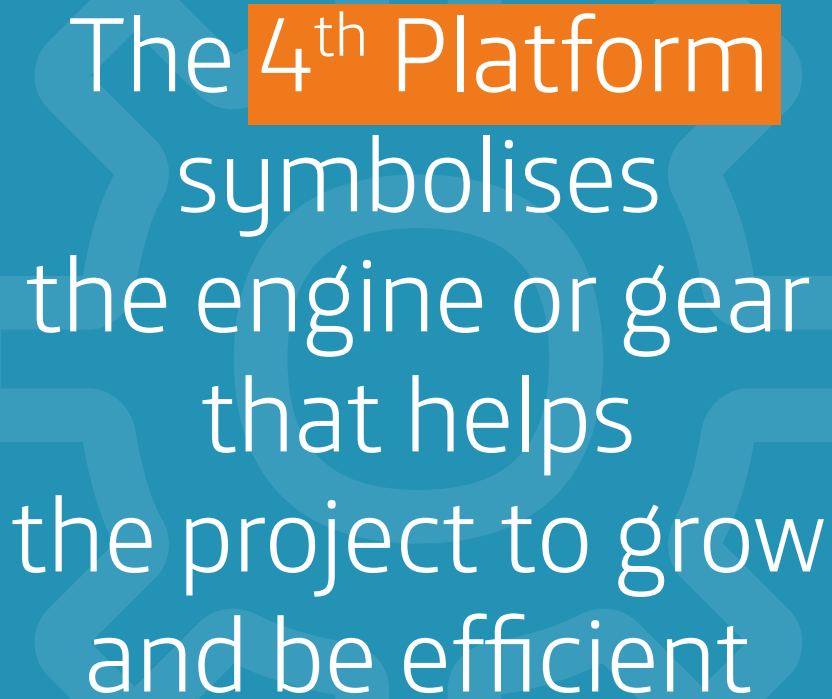
In this way, Aura benefits from the entire process of transformation and digitalisation of the Company. Aura is built on the [4th Platform](#) to efficiently create experiences customised to our customers using data, standard APIs, and applying Artificial Intelligence. All this is possible thanks to the flow of data the other three platforms, in a fragmented manner, have continuously created up until now.

Aura uses [standardised data](#) for the execution of analytical models, for example, in cases of more advanced usage such as predicting when the customer will run out of data, if they have had an unusual consumption on his invoice or to make recommendations. In addition, **APIs** of the 4th Platform are also used, such as billing for access and invoice comprehension cases, or mobile data for use cases around data usage. Another API includes subscribed products in order to understand the contracted products, their conditions and details. Aura makes the most of these APIs to retrieve user data, request for authorisation and authentication mechanisms to identify customers from the 4th Platform, and execute algorithms to provide meaningful information for each customer. **This allows Aura to offer a personalised experience and even proactively anticipate customer requests.**

PL4TFORM

Aura also uses the **consent management** performed by the 4th Platform to identify whether a customer's data can be used and for what specific purpose. The **homogenisation** of these resources throughout the Company allows Aura to grow faster, as synergies are achieved in developments and deployments between operators.

In short, **the 4th Platform offers Aura an overview and enriched view of our customers.** It allows Telefónica's AI to guarantee user authentication, keep data private and secure, establish a universal language and connect with network capabilities. This platform symbolises the engine or gear that helps the project to grow and be efficient. Without the platform and its mission, simplifying the digital life of its customers would be impossible.



The 4th Platform
symbolises
the engine or gear
that helps
the project to grow
and be efficient

Telefónica works with responsible AI Principles

Get to know them!

ENTER HERE

Check the papers
that
Telefónica's experts
have developed
on AI

Don't miss out!

[ENTER HERE](#)

What is there behind Aura?

3.1 How is Artificial Intelligence applied in Aura?

The application of Artificial Intelligence was one of the great challenges for software developers. Aura needed to understand consumers and respond quickly and correctly, under the umbrella of a natural conversation. Aura uses [Cognitive](#) and Artificial Intelligence capabilities, such as **Natural Language Processing** (NLP), to interpret users' messages and, taking the context into account, map them to semantic intentions that end up on an action or response, which usually uses the available 4th Platform APIs to retrieve data or execute actions on the network.

But Aura not only responds to questions posed by users, but in some cases is constantly working with **Machine Learning algorithms** to learn the language of people and build a closer experience. For example, Aura can recommend the best products adapted to the user's profile, based on the data generated by the use of services.

3.2 Technology flows

The mission of the Aura technology platform is to help put users in touch with the Telefónica systems that process their data. To do this, **Aura must, first of all, be able to understand the user**, that is, it needs language-processing tools to allow users to express themselves naturally. That is achieved through capabilities that turn voice into text and extract the intention from it (users' sentence is classified and assigned to an intention from a predetermined set from which the system has been trained) and associated entities (items within the sentence that provide data to resolve that intention).

Secondly, Aura **must be able to understand the data**, that is, it needs analytical models that, by means of automatic learning, extract information from the data collected in the Telefónica systems and then provide users with the most advanced use cases. This data is information about service elements or information produced by users, whether in their interaction with Aura itself or with other Telefónica systems.

And finally, Aura **must be able to connect the two previous fronts**, language recognition and data intelligence efficiently. In other words, Aura needs tools that allow it to decide at any time what may interest the user and what is the best way to provide that information. This factor must be able to relate what the user wants with the information extracted by the analytical modules; to contextualise the user's situation; to decide at each moment which information is the most adequate.

This includes resolution modules, query modules and intelligent suggestion modules that work as actuators, and make the decision as to what needs to be done to solve the use case.

3.3 What can customers do with Aura?

Telefónica was able to make the complexities of the Company invisible, so that customers could enjoy its services more quickly and easily.

They can resolve **issues of traditionally telco domains**, such as understanding their contracted products and services, inquiring about details of their latest invoices, data left to be consumed, managing their connectivity at home, making video calls, etc. Artificial Intelligence provides Telefónica with the necessary tools to manage data so customers can easily interact with it.

While Aura's specific services may differ by country, virtually all customers can ask questions about their contracted products and services, also including real-time technical support, invoice verification or claims. Aura is also the best option to get the most out of TV, with the ability to search for content (movies, series, programmes) and play them on the TV, request recommendations, or perform actions such as switching channels or playing from the beginning.

Aura is not an app, nor is it a channel. Aura, by definition, is a cognitive product integrated into multiple channels, something we will see in the next chapter, where Aura will explain in which of those channels it is present within the [seven countries](#) where it is available: Spain, United Kingdom, Brazil, Chile, Germany, Argentina and now in Ecuador. It will soon be launched in Colombia and Uruguay.



Aura
is **not** an app,
nor is it a channel

“Home as a Computer”,
a new prospect
for connected homes
with Movistar Home

Discover more!

ENTER HERE

Aura is in
constant evolution
with more features and
will be available in
more countries
to enrich Telefónica's
customers' experience
with the Company

Check where Aura is available!

ENTER HERE

CHAPTER 4

What is Aura like?

4.1 A new model of relationship

A relationship is something that evolves. For this reason, Telefónica wanted to apply Artificial Intelligence to the network because it knows that the way to reach customers is by building a path of trust and establishing a new relationship model together. Because every relationship is personal, **Aura adapts and personalises that relationship with each of our customers.** Personalisation requires trust because it implies knowing the personal circumstances of each customer. Aura aims to be useful and transparent for people in their relationship with Telefónica.

The value proposition use cases were synthesised into **4 "superpowers"**:



Simplify

Make complex processes easy.



Empower

Give absolute control to customers on their data in an easy and transparent way, and in real time.



Enrich

Improve customers' lives through personalised responses.



Discover

Unleash the power of personal data, turning data into value.

4.2 Features



Natural language

Aura learns the language of people so that customers do not have to learn the language of machines.



Real time

Aura helps customers to manage their digital lives with us in real time.



Availability

Aura is and will be available in several channels: mobile applications, social networks, web pages and via some virtual assistants.



Simplicity

With Aura, customers can interact naturally and intuitively via voice or text.



Personalised

Aura transforms the history of data generated within the Telefónica environment into information, to offer personalised experiences to each customer, in a transparent and secure manner.



Aura
is gender-neutral
and lacks
physical appearance

4.3 Personality

During the development of Aura, the internal User Experience (UX) research team gave priority to the topic related to the [personality](#) of the Artificial Intelligence. They devoted a year to different research activities in order to create a personality that would be pleasant for users while respecting Telefónica's values. In this way, users would be willing to interact with the Artificial Intelligence. After several studies, five rules were defined to apply in the creation of Aura's personality in order to achieve the best user experience:

Aura is an Artificial Being

For this reason, Aura does not identify itself as a human being, but always expresses itself from its condition of Artificial Being. **Therefore, it is gender-neutral and lacks physical appearance.** Artificial Intelligence should be neither female nor male, nor should it transmit anything that implies one or the other. Aura must use neutral language without adjectives or expressions that indicate gender. And keeping up its artificial identity, the Artificial Intelligence was created and, therefore, **has no biological family**. So it is not paternalistic, but **helpful** to the user.

Relationships and feelings of Aura are virtual

Love, affection and hatred are human feelings that Artificial Intelligence should not express. However, although an artificial being cannot experience these emotions, they must be reflected in the system with ingenious responses to more personal issues.

Aura is more rational than emotional

In all the studies conducted by the UX team, users concluded that they prioritise rationality over emotion when choosing both personality attributes and archetypes.

Aura talks about sensitive issues with neutrality and intelligence

Issues that may become sensitive, such as politics or religion, among others, are exclusively human. For this reason, **Aura, like other Virtual Assistants, is neutral and, therefore, avoids taking stances.** But Aura demonstrates it understands what it is told, that it has objective knowledge of the content, and can skilfully dodge the question, appealing, for example, to its artificial condition.

Aura shows ingenuity in relation to likes and dislikes

Unlike the previous aspects of its identity, when it comes to tastes, users do demand greater humanisation from Aura. **They value that it includes certain “winks” that show that Aura has its own more or less human preferences,** although without leaving aside its condition of being artificial.

Although the personality of Artificial Intelligence has not been considered a priority in the development of these technologies, literature and users demonstrate that there are some elements that must be acknowledged in order to provide the best experience for users.



4.4 Tone of voice

On the one hand, there is no single Aura voice. There is no single Aura voice. **Aura uses the default native voice of each device.** The voice may change depending on the device type (mobile, tablet, PC), the operating system (iOS, Android, Windows), the operating system version, and the device-maker. It also changes depending on the language the device is configured in.

On the other hand, **Aura has no gender**, so the voice may be male or female. Besides, it **must be genuine**. Telefónica's Artificial Intelligence uses **ingenuity and intelligent humour**; it can also be more creative in its answers or more functional.

In addition, Aura **must adapt the tone to the topic of each question**. The tone varies depending on the customer's type of question. There are questions related to Aura's identity; frequently asked questions specific to the channel the user is talking to Aura on; questions that lead to error; functional questions about products or services; subjects unknown by Aura because it currently does not have the ability to ask or answer.

Aura must **adapt**
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to the topic
of each question



OK, Aura

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