



# Callbots, an automated 24/7 customer service with natural language processing

## **White Paper**

Everything you need to know about implementing a conversational phone robot: challenges, measuring its performance, and understanding its impact.



## Callbots, a new ally for contact centers

Consumers are often said to use their phones less and less to contact customer services. Yet phone calls remain their **preferred channel**.

Talking is three times faster than typing and allows you to do other things at the same time. Calling is **quicker, more convenient, and more natural**, meeting the consumer's **need for instant** information or problem-solving.

In 2021, **60% of consumers contacted customer services by phone**, compared to 56% by email, and 15 to 25% via digital channels such as live chat, instant messaging, or social media<sup>1</sup>. However, **wait times** can be very long, and handling customer requests over the phone is **costly** for companies.

**Callbots**, conversational robots that can be reached via a phone number, can **automate recurring requests** to improve the customer experience and keep costs down. This type of virtual switchboard is often deployed by companies with large numbers of incoming calls, such as in the insurance, transport, or e-commerce sectors. Although not widely used yet, callbots are far more effective than IVR (Interactive Voice Response), and **interest among large companies, SMEs, and public organizations is growing**.



Natural language processing, speech recognition, and synthesis technologies have improved considerably in recent years. It is now possible to **understand as many people as possible** (expressions and different turns-of-phrase, accents, grammatical errors, digressions, etc.), and create more or less complex **scenarios** to automate **repetitive calls**.

## About us

Dydu publishes a natural language processing solution to create smart conversational robots (chatbots, callbots, voicebots) and has been working with large companies, SMEs, and public organizations for more than 12 years.

Find out more: [www.dydu.ai](http://www.dydu.ai)





# Contents

<b>1. Why should you implement a callbot?</b>	5
A. The challenges of a quality customer relationship	5
B. Easily identifiable use cases and scenarios	7
C. A focus on MACSF and ANFR 's callbots	9
D. Multiple benefits and a simple ROI calculation	11
<b>2. How do callbots work?</b>	13
A. Callbots, a powerful automation tool	13
B. Many features for a real conversational experience	14
<b>3. How do you deploy a callbot?</b>	
A. Define your callbot project	15
B. Deploy the callbot methodically	15
C. Next steps	16
	18



# Why should you implement a callbot?

## A. The challenges of a quality customer service

Callbots meet several challenges for both customers and companies.

### For customers

60% of customers expect quality customer services to provide **“quick problem-solving”**, and 40% **“24/7 availability”**<sup>2</sup>.

Customer services have improved in recent years by reducing caller wait times. However, depending on the time of year or how urgent the call is, consumers still often have to **wait a long time**, or even **call several times**.

Callers then become increasingly **frustrated** when they are directed to the wrong person and forced to repeat themselves. 10 to 20% of customer service loops misdirect users, which is far from negligible.

Finally, consumers tend to **prefer self-care solutions** for quicker results. 72% would rather solve a problem themselves<sup>3</sup>.

<sup>2</sup> Zendesk, 2020 customer experience trends

<sup>3</sup> Forrester, 2017



## For companies

Consumers often send the same message through different channels if they don't get an answer quickly enough. It is estimated that they go through an average of 3.9 different channels to reach customer services<sup>4</sup>.

These multiple requests are a real problem for companies.

Businesses don't always have the necessary resources, and face high turnover rates and rising costs due to the increased number and length of calls.

They may also lose out on sales opportunities if their advisors are not available to take calls.

## A few figures

- Contact centers receive **1 billion** requests each year in France<sup>5</sup>
- The average cost to handle a phone call in a contact center in France is **3 to 6€**<sup>6</sup>
- Agents spend **40%** of their time on tasks with no added value: data input, unproductive phone calls, reports, etc.<sup>7</sup>
- The annual turnover rate in contact centers in France is estimated between **18 to 25%**<sup>8</sup>
- **93%** of customer service and marketing professionals think a voice service is useful for customers<sup>9</sup>



## B. Callbots: easily identifiable use cases and scenarios

Callbots can understand requests phrased by customers in their own words, and answer automatically using speech synthesis. They can **handle phone calls from beginning to end or partially**, by qualifying and transferring them to a human operator when necessary.

Callbots make sense as a **complementary tool or to partially replace call centers**. The processes and scripts often already exist, so it is fairly easy to define the bot's use case(s) and customer journey scenarios.

Callbots can be used for a wide range of situations if you:

- need to **manage a large number of calls**, especially when they exceed your existing resources: handle or replace overflow calls during the day, provide continuity of service outside working hours, etc.
- can define **recurring scenarios** (e.g., pre-sales, order follow-up, claims, etc.) in your customer journey.





## The 4 main scenario types



### **DECLARATION**

Incident, claim, contract, or order



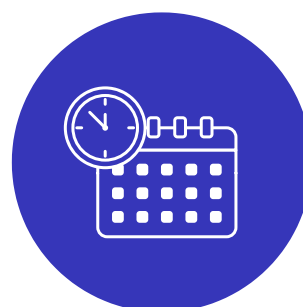
### **INFORMATION REQUEST**

Open hours, bank account balance, status of an order/delivery or claim



### **QUALIFICATION**

Reason for the call to direct the user to the right department, retrieval of information to identify and/or authenticate the user



### **APPOINTMENT SCHEDULING**

List of available slots, vocal confirmation of appointment, adding the appointment to calendar, and confirmation by SMS





## C. A focus on MACSF and ANFR's callbots



### MACSF, an insurance provider for healthcare professionals

Deployment of a callbot in December 2018, available only during non-business hours.

Challenges: improve the customer experience by offering a new service at these times and increase the number of policyholders.

Use cases:

- Capture leads by asking them to pre-fill information
- Make a claim

If the customer's request is urgent, the callbot may transfer the call to an open unit so that it can be handled immediately. If not, an advisor pulls up the information collected the day before and calls the customer back to conclude and validate their request.

**1 400 à 3 500** calls per month, depending on the period

**7,2** interactions per dialog

**7%** failed dialogs only

MACSF was awarded the **Argus d'or** – a prize for the **best innovative initiatives in insurance** – in April 2019 for its callbot in the “customer relationship management” category.





## ANFR, National Frequency Agency

Callbot deployment in May 2021 to report DTT reception problems, available 24/7.

Challenges: reduce costs by reducing the number of calls to advisors (by automating certain responses) and the length of these calls by qualifying them in advance.

Use cases:

- Manage claims by creating an incident ticket with a reference number
- Follow-up requests using the reference number

Depending on the user's answers, the callbot can either respond directly and end the call or transfer them to an operator.

**8 600**

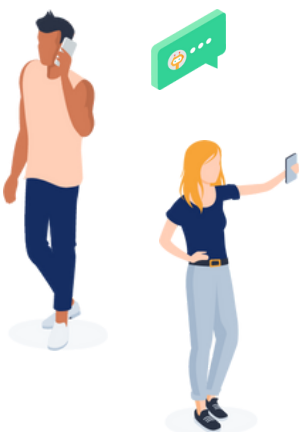
calls per month, including more than 8 interactions on average

**80%**

of calls are qualified by the callbot

**58%**

of calls are transferred to an operator





## D. Multiple benefits and a simple ROI calculation

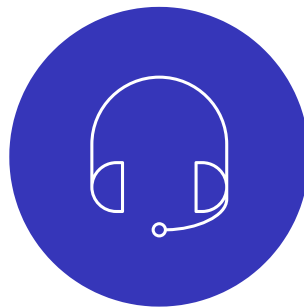
By automating certain simple tasks and qualifying requests, a callbot generates **benefits for both the customer and the department/company implementing it.**

### Benefits of a callbot for stakeholders:



#### CUSTOMERS

- **Easy** to access
- **Elimination** of **waiting** times
- **Quicker problem-solving** by automating certain tasks
- A better experience with more **efficient customer service**, available at all times



#### CUSTOMER SERVICE

- **Decrease of number** and **length** of calls to advisors
- Improved advisor **productivity** with the transfer of pre-collected data
- Less repetitive day-to-day tasks and higher advisor **satisfaction**
- Reduced **risks of transferring** calls to the wrong department



#### COMPANY

- **Extended service** outside of working hours
- Capture potential **sales and new contracts** when advisors cannot answer calls (non-working hours, peak times, lack of resources)
- **Optimized costs**
- Improved **brand image**



## ROI calculation

The return on investment is never exactly the same. It varies depending on the use cases, number of calls, business sector, etc. But overall, **the ROI is easy to calculate** using two criteria:

- Company **data on the number** and length of calls, types of calls, processes required, time, and cost per processing type (agents, phone, etc.)
- Callbot deployment **use case**

You can calculate your ROI based on cost avoidance simulations (percentage of calls handled by the chatbot, percentage of processes managed by the chatbot) and **financial simulations** (optimized phone bill time, optimized agent time, recovery of lost calls, the capture of new orders, etc.).

These gains then need to be considered in relation to the cost of the solution. The cost of a callbot project varies depending on the volume of use (often with a sliding price scale). **It is an affordable solution, even for SMEs.**

A callbot usually becomes **profitable within 3 to 5 months**, which can easily be quantified by analyzing the right data. We also recommend assessing the **incremental revenue** (additional sales and contracts generated by the callbot multiplied by the average cart).





# How does a callbot work?

## A. Callbots, powerful automation tools

There is nothing new about IVR (Interactive Voice Response), where you press buttons on your phone after listening to the menu options. But it does not provide a **real conversational experience**.

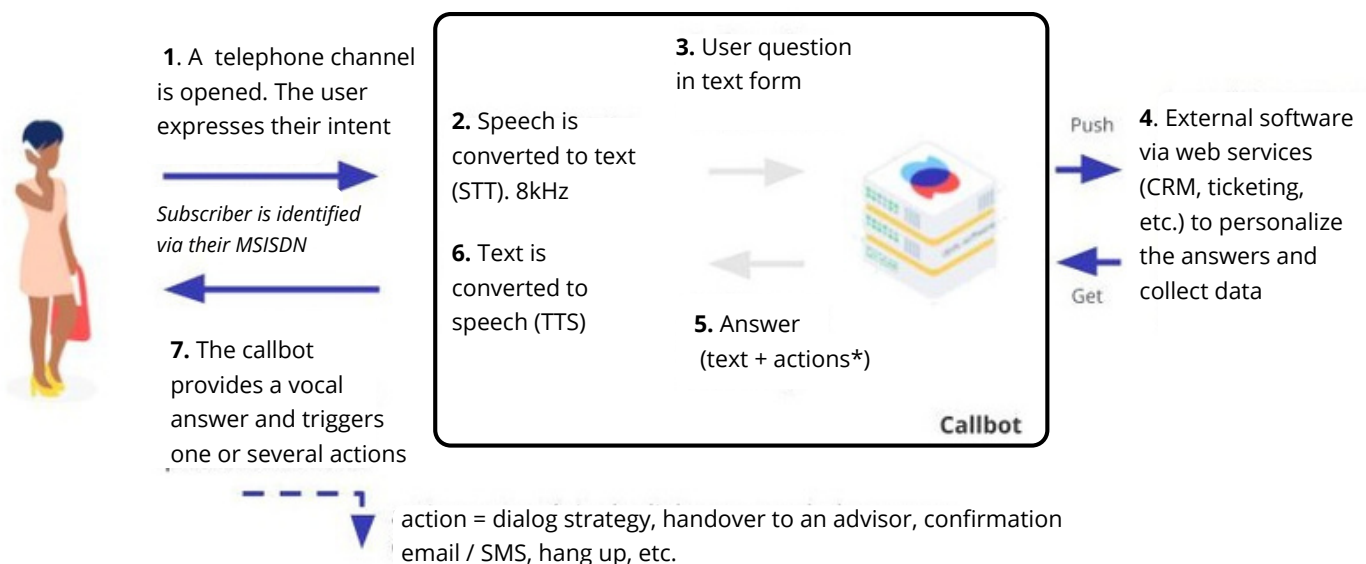
From a technical standpoint, callbots function like chatbots, but with two additional components: **speech recognition and speech synthesis**.

### The **Natural Language**

**Processing** (NLP) engine enables callbots to analyze and understand spoken language, including pauses, expressions, and more or less long turns-of-phrase that are used in speech.

Callbots don't require keyword answers (e.g., "yes", "no", "sign-up") to understand the user's intent.

## HOW A CALLBOT WORKS



Callbots are built with a **knowledge base** and **conversational strategy**. They are connected to the company's **information system** and other software and apps. They can **handle more complex scenarios** than IVR and carry out actions such as creating a ticket, sending a confirmation email or text, adding appointments to a calendar, etc. for an **improved omnichannel customer experience**. A lot of these scenarios can be automated from beginning to end, making callbots a more **cost-effective** solution.

## B. Many features for a real conversational experience



### **CONVERSATION MANAGEMENT**

- **Quick and smooth conversations:** callbots understand users and provide quick answers, with little delay, to ensure that the conversation is as smooth and natural as possible.
  - **Natural language comprehension:** different pronunciations, proper names, numbers, dates, and times (translation into parameters to query a calendar)
  - **Conversational strategy:** sequence of several questions on the same topic, context, history, digressions, small talk, etc.



### **CONNECTION WITH INFORMATION SYSTEMS**

- **User authentication** using their phone number: the callbot retrieves the data, confirms the user's identity by asking for their first and last name and personalizes the conversation.
- **Carrying out actions on company software:** the callbot can schedule appointments, report a claim or incident, trigger an SMS or an email, etc. E.g.: To schedule an appointment, the callbot checks available times (only a selection, not all of them), chooses a relevant slot (the user can request another, and ask for "later" or "earlier"), provides vocal confirmation of the appointment, sends SMS confirmation and adds the appointment to a calendar.



## AUDIO RECORDING AND TRANSCRIPTION TO LISTEN BACK / READ OVER LATER

- **Analysis of conversations**
- **Continual improvement** of the bot
- **CRM enrichment with additional information:** the elements analyzed increase customer knowledge and satisfaction and contribute to decision-making
- A better **understanding of customer needs** and **pain points**

# How do you deploy a callbot?

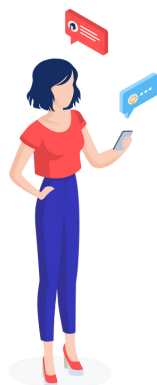
## A. Define your project

Before launching a callbot project, you need to clearly **define the objectives**, and **end-users' profiles**, as well as your customers' **needs** and those of your department managers and agents.

This will help define the conversational robot's scope and its use case(s).

You also need to outline the **organization of the project plan**, the **expected ROI**, the callbot's role in your **customer journey**, and any **technical prerequisites**.

Make sure to address any questions with the software publisher during the sales stage. E.g.: "How many simultaneous calls should be expected?", "At what times can the callbot be reached?", "Should parts of the conversation be sent to an advisor?" or "How does the callbot fit in with our existing IVR?".





## A. Deploy the callbot methodically

### User journey and data

Before building the bot's knowledge base, you need to **establish your user journey and what data** you want to obtain. Create a **flowchart** for each use case to establish your customers' phone journey.

This flowchart should include the text spoken by the bot, expected answers, decision trees (and all possible branches), interconnections (and the values to be transmitted and retrieved), as well as potential handovers to agents (in which situations and with what information).

### Building the knowledge base

The callbot's **knowledge articles** and **spoken messages**, as per your approved flowchart, are then added to your solution's back-office. Depending on which publisher you choose, your knowledge base will be created by the publisher's AI experts or by your employees. Remember to add alternative phrases and synonyms to **maximize the bot's understanding**.

### Voice design

Depending on the Text to Speech (voice synthesis component that converts text into speech) provider, you can choose a **standard voice** from a catalog, or create a **personalized voice**.





More and more companies **define their own voice identity** as they would a logo, slogan, or style guide. This voice identity should be used for all vocal services to optimize the customer experience.

In some cases, you need **to add SSML** (Speech Synthesis Markup Language) tags to the knowledge articles for the Text to Speech engine **to specify punctuation or pronunciations**. These tags allow to add pauses, read numbers or letters separately, read dates and times, provide elocution instructions (e.g., read more slowly), manage blanks in the conversation, and automatically prompt the user. However, more and more TTS engines produce natural voices that don't require any tags.

### **Test & learn and release**

This step involves **testing the callbot's voice** over the phone on a limited panel. If possible, the test panel members should be quite different (age, gender, accent, etc.) and use a wide range of phrases to test the bot's understanding. The conversations generated during these tests help to adjust the knowledge articles, spoken phrases, variables, and tags if necessary.

Once the acceptance phase has been completed, the company can **integrate the callbot into its phone and IT infrastructure** to redirect calls from its customers and prospective customers to the bot's number. In the beginning, the callbot can be deployed for a few hours at a time or during non-working hours while it becomes more efficient.



## Callbot management and development

Depending on the callbot software publisher and your in-house skills, you can **manage your callbot** (dashboard and analytics), **improve its understanding** (by adding phrases, listening back, or re-reading conversations) and **update its spoken messages** autonomously.

Make sure that the publisher you choose provides support for the first few weeks after the release.

## A. Next steps

Telephony is becoming an **ecosystem of complementary solutions** to improve agent **productivity**, service **management**, and the customer **experience**.

### Automation of processes

When connected to **third-party process automation technologies** (DPA), such as RPA (Robotic Process Automation), callbots can handle **even more complex scenarios** and automate even more tasks: e.g., create a contract, fill out a claim form, edit customer account details in the CRM, IS or ticketing tool, etc.

Callbots capture user data, while the automation solution communicates with the company's apps to create, complete or modify documents, fields, forms, or web pages. **Transactions are automated from end to end**, but human operators are required to create processes and monitor the callbot's activity.



## Data intelligence: better customer knowledge

Call centers already have a lot of quantitative indicators, but you can **take things a step further by analyzing the customers' language and emotions.**

All calls via a callbot are recorded and made available in audio or text form. It is possible to **analyze and identify the main keywords** that generate **engagement** in a conversation, and therefore more calls. This "call tracking" is particularly useful for businesses that use phone calls as their main sales channel.

More and more **sentiment analysis** technologies have emerged over the past few years.

Although still recent, they try to identify the **emotional tone in a user's words**, or even **voice**, to interpret attitudes, opinions, or emotions expressed through all communication channels, including callbots.

The aim is to **manage your reputation** (by monitoring everything that is said about your brand) and to **better know your customers to predict and/or influence their behavior** (analysis of email, chat, and phone conversations).

Data has become a key tool to improve the customer relationship. When used properly, data can **boost sales** and optimize **productivity.**





## Conclusion

According to the chatbot observatory on self-care, one-third of marketing and customer service professionals reported an **increase in spending on customer relationship management and self-care tools**. This extra budget could cover 15 to 50% of customer requests.

Just like chatbots, callbots are **not intended to replace advisors**, but to **lighten their workload**. Humans play an essential role in the customer relationship. Bots are **complementary tools** so that advisors can focus on more rewarding tasks. Although technologies are evolving rapidly and use cases are becoming more complex, it isn't in the interest of companies to let robots manage their entire customer relationship. For example, if a customer calls to terminate their subscription, it's useful for the company to understand why, offer an alternative, and try to retain them... 80% of marketing and customer service professionals think that bots **help agents respond to customers more efficiently**, and 73% think that they will create **new jobs**.

When deployed methodically, callbots help improve the customer experience on the phone, increase productivity, and reduce costs. And this **profitable solution isn't only for large companies!** Interest among SMEs and public organizations is also growing.

To ensure that your callbot project is successful, we recommend choosing a software publisher with **real expertise**, that provides **tailored support** for your organization. It's worth noting that French and European solutions will be able to provide the necessary support for companies with strict data security requirements.

Dydu, a natural language processing software publisher, and creator of chatbots, callbots and voicebots.



## Get in touch!

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