

Requirements Document Template

Version	Description of Change	Author	Date
1.		Khaoula El Yaagoubi	04/02/2025
2.	<p>This version of the document is the synthesis of all 4 individual assignments.</p> <p>Glossary was further populated.</p> <p>Additional functional requirements have been listed.</p> <p>All entities, properties and the relationships between entities have been presented.</p> <p>A note about the “commission-fee model” has been added.</p>	<p>Khaoula El Yaagoubi</p> <p>Florence Gravenstein</p> <p>Sophie Dupont</p> <p>Marie-Lou Zhang</p>	06/02/2025
3.	<p>This version focuses on making the distinction between the functionalities that will be part of phase 1 and the functionalities that will be incorporated in later phases, in a more elaborate version of the application.</p>	<p>Khaoula El Yaagoubi</p> <p>Florence Gravenstein</p> <p>Sophie Dupont</p> <p>Marie-Lou Zhang</p>	23/02

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INTRODUCTION

Purpose

This Requirements Document outlines the functional and non-functional requirements for the **Pawsitive** dog-sitting Application, designed to connect dog owners with vetted dogsitters in Belgium.

It serves as a comprehensive guideline for the development team and stakeholders to ensure that the application meets user needs and regulatory compliance.

Scope

This document serves as a comprehensive guideline for the development of a dog-sitting application, detailing user requirements and system interfaces.

It outlines how users, including dog owners and dog sitters, will interact with the app through features like profile management, search functionalities, messaging, booking services, online payment and a rating system.

This document also present how the application will primarily earn money through commission fees, charging a percentage-based fee on each booking made through the platform.

This RD aims to provide clarity and direction for developers and other stakeholders, ensuring the final product meets user needs and complies with regulations.

In this document, we have chosen to make a distinction between the functionalities that will be part of the first version of the application **[phase 1]**, and the functionalities that will be incorporated in **[ulterior phases]**.

Background

N/A

References

- User surveys and interviews conducted with potential users.
- Existing applications for pet care services.

Assumptions and Constraints

Assumptions

- Users will have internet access when using the app
- Users will have access to a mobile device
- The app will be available from anywhere in Brussels (19 communes) **[phase 1]**
- The app will be available from anywhere in Belgium **[ulterior phases]**
- Compliance with local pet care laws in Belgium
- Payconiq will be used ad payment gateway

Constraints

- The application must comply with local laws regarding pet care services in Belgium.
- The application must ensure user data privacy in accordance with relevant regulations (e.g., GDPR).
- The application must be usable on Android **[phase 1]**

- The application must be usable in all web browsers and on iOS and Android [ulterior phases]
- The application must be responsive (suited for different devices and screen sizes)
- The application must support one language: English [phase 1]
- The application must support three languages: French, Dutch, and English [ulterior phases]
- The application must be scalable to accommodate varying user loads.
- The application must be usable in Brussels (19 communes) [phase 1]
- The application must be usable in all Belgium [ulterior phases]
- The application will preferably be deployed on Microsoft Cloud infrastructure.

Document Overview

METHODOLOGY

FUNCTIONAL REQUIREMENTS

Context

The Pawsitive application enables dog owners to create profiles, search for dogsitters based on availability and location, and communicate effectively through instant messaging. It also supports a rating review system and allows online payment.

- The application is the main system (Pawsitive)
- Dog owner (A user who needs dog care services)
- Dog sitter (A user who provides dog care services)
- Administrator (managing system operations)
- Booking system
- Review system
- Payment system

⚠ In a first phase:

- A dog owner can only be a dog owner (i.e.: can't offer dog-sitting services)
- A dog sitter can only be a dog sitter (i.e.: can't request dog sitting services)
- A dog owner can only have one dog
- An admin can also be a dog owner or a dog sitter

User Requirements

User requirements – GROUP 1: Dog Owners

Section/ Requirement ID	Requirement Definition
PHASE 1	
FR1.0.0	Dog owners should be able to download the app from the Play Store and create an account (with email address and password).

Section/ Requirement ID	Requirement Definition
FR1.0.1	Dog owners should be able to log in the application using their e-mail address and a password.
FR1.1.0	Dog owners should be able to create and manage their profiles (incl. picture upload, information about their dogs and contact details).
FR1.1.1	Dog owners should have the possibility to reset their password by clicking on "I forgot my password" on the login screen, which will send a password reset link to their verified email address.
FR1.1.2	Dog owners should be able to make a search based on different criteria's: location (post code), availability, price.
FR1.1.3	Dog owners should be able to filter (=order) the search results based on price, distance, grades.
FR1.1.4	Dog owners should be able to make an online booking.
FR1.1.5	Dog owners should be notified when their dog sitting's request has been accepted by the dog sitter.
FR1.1.6	Dog owners should be able to pay for dog sitting services through the app (Payconiq)
FR1.1.7	Dog owners should be able to report an issue to admin.
FR1.1.8	Dog owners should be able to send a message to dog sitters.
FR1.1.9	Dog owners should be able to leave a review (with a comment) and/or rate the dog sitter (with a grade from 1 to 10).
FR1.1.10	Dog owners should be able to consult the grades and reviews that they received.
FR1.1.11	Dog owners should be able to consult their booking history, including past bookings, payments, status, and reviews.
FR1.1.12	Dog owners should be able to view the public elements of all dog sitters' profiles (grade, reviews, post code, price...)
ULTERIOR PHASES	
FR1.1.13	Dog owners should have the possibility to consult an in-app help section with FAQs and support articles to assist users.
FR1.1.14	Dog owners should be able to set the application in one of 3 offered languages: FR-NL-EN.
FR1.1.15	Dog owners should be able to cancel a booking.

User requirements – GROUP 2: Dog Sitters

Section/ Requirement ID	Requirement Definition
PHASE 1	
FR2.0.0	Dog owners should be able to download the app from the Play Store and create an account (with email address and password).
FR2.0.	Dog sitters should be able to log in the application using their e-mail address and a password.
FR2.1	Dog sitters should be able to create and manage their profiles (including picture upload, availabilities, location...)
FR2.1.1	Dog sitters should have an availability calendar to indicate when they are available for bookings.
FR2.1.2	Dog sitters should be able to accept or decline a booking.
FR2.1.3	Dog sitters should be able to consult whether they have been paid.
FR2.1.4	Dog sitters should be notified when a booking is made.
FR2.1.5	Dog sitters should have the possibility to reset their password by clicking on "I forgot my password" on the login screen, which will send a password reset link to their verified email address.
FR2.1.6	Dog sitters should be able to consult the grades and reviews that they received.
FR2.1.7	Dog sitters should be able to consult the public elements of a dog owner's profile (grade, reviews) and their dog's profile (breed, age...)
FR2.1.8	Dog sitters should be able to consult their booking history, including past bookings, payments, status, and reviews.
ULTERIOR PHASES	
FR2.1.9	Dog sitters should have the possibility to consult an in-app help section with FAQs and support articles to assist users.
FR2.1.10	Dog sitters should be notified when a booking is cancelled.

User requirements – GROUP 3: Administrators

Section/ Requirement ID	Requirement Definition
FR3.0.	Admin should be able to close or suspend an account if needed.
FR3.1	Admin should be able to consult the dog owners and dog sitters' profiles.
FR3.1.1	Admin should be able to monitor the transactions.

Section/ Requirement ID	Requirement Definition
FR3.1.2	Admin should be able to message platform users' when important information needs to be shared.
FR3.1.3	Admin should be able to moderate the comments in the review section (e.g.: erase reviews that are suspicious, vulgar, fake...)
FR3.1.4	Admin should be able to manage the content of the application (FAQs, terms of service...).

User requirements – GROUP 4: Payment

Section/ Requirement ID	Requirement Definition
FR4.0.	The payment system should allow transactions between a dog owner and a dog sitter.
FR4.1.	The payment system should hold the payment until the dog sitter is done with providing the service.

User requirements – GROUP 5: Booking System

Section/ Requirement ID	Requirement Definition
PHASE 1	
FR5.0.	The booking system should allow dog owners to book services from dogsitters.
FR5.1	The booking system should allow both parties to receive a confirmation when the booking is finalized.
ULTERIOR PHASES	
FR5.1.1	The booking system should allow the cancellation of a booking by either party (owner or sitter).
FR5.1.2	The booking system should notify the other party upon booking cancellation.

User requirements – GROUP 6: Review System

Section/ Requirement ID	Requirement Definition
FR5.0.	The review system should allow users to rate (grade) and review (text) each other after a service has been delivered.

Section/ Requirement ID	Requirement Definition
FR5.0.	Reviews and grades should be visible by all users.

Data Flow Diagrams

Refer to the Analysis document.

Logical Data Model/Data Dictionary

Refer to the Analysis document.

OTHER REQUIREMENTS

N/A

Interface Requirements

Hardware Interfaces

PHASE 1:

- The application shall be accessible via Android mobile devices.

ULTERIOR PHASES:

- The application shall be accessible via mobile devices (smartphone and tablet, iOS and Android) and all web browsers when connected to the internet.

Software Interfaces

PHASE 1:

- The application shall interface with e-mail service providers for user authentication, booking confirmation and other operational notifications.
- The application shall interface with Payconiq to allow transactions between dog owners and dog sitters

ULTERIOR PHASES:

- The application shall also interface with social media platforms for user authentication, booking confirmation and other operational notifications.
- The application shall interface with Google Maps to allow geo-localization.

Communications Interfaces

- The application shall support notifications through email and in-app messaging.
- LAN : The app should support connectivity over Wi-Fi networks, ensuring seamless data transmission within local networks
- WAN : The app should support connectivity over cellular networks (3G, 4G, 5G) to ensure users can access the app on-the-go.

Data Conversion

N/A

Requirements

N/A

Hardware/Software Requirements

The application shall run on (Microsoft) cloud-based servers, ensuring scalability and reliability.

Operational Requirements

N/A

Security and Privacy

- The system shall implement user authentication and data encryption to protect user information.
- The system shall utilize strong encryption protocols (e.g., AES-256) to protect sensitive financial data both in transit (when data is being sent over the network) and at rest (when stored on servers).
- The system shall integrate with Payconiq.
- The system shall comply with data protection regulations (e.g., GDPR).

Audit Trail

The application shall maintain logs of user activities, including profile changes, bookings, and messages.

Reliability

The system should ensure 99.9% uptime for application availability.

Recoverability

The system should have the ability to restore user data to the last known good state within 1 hour of failure.

System Availability

The application must be available 24/7, with scheduled maintenance communicated in advance.

General Performance

The application should load within 3 seconds on a standard 4G connection and handle up to 500 simultaneous users.

Capacity

The system should support a minimum of 20 000 registered users.

Data Retention

User data shall be retained for a minimum of 1 year after account deletion, with secure destruction of personal data thereafter.

Error Handling

The application shall provide user-friendly error messages and support for troubleshooting.

Validation Rules

N/A

Conventions/Standards

N/A

Glossary

- **Application:** The software program referred to as the Pawsitive Dog Care Application that connects dog owners with vetted dog sitters.
- **Booking Confirmation:** An in-app notification sent to the dog owner when the dog sitter has accepted the dog sitting service request.
- **Booking:** An arrangement made for dog care services.
- **Booking ID:** Unique identifier for the booking
- **Booking status:**
 - **Available:** state where a dog owner gets the list of results that match their search criteria's for a dog sitter.
 - **Selected:** state where the dog owner chooses one specific dog sitter from the list of available ones by sending a "service request".
 - **Accepted:** state where the dog sitter accepts the dog owner's request.
 - **Refused:** state where the dog sitter refuses the dog owner's request.
 - **Finalized:** state where the dog sitting service has been delivered.
- **Commission fee:** A percentage-based charge applied to each transaction made through the Pawsitive Dog Care Application, where dog owners pay for dog care services provided by dog sitters. This fee is deducted from the total amount paid by the dog owner and is retained by the application as revenue.
- **Demand:** Notion that represents what a dog owner is looking for.
- **Dog Owner:** A user who needs dog care services.
- **Dog Sitter:** A user who provides dog care services.
- **Offer:** Notion that represents what the services offered by a dog sitter (or all the dog sitters).
- **Owner ID:** Unique identifier for the dog owner
- **Payment Gateway:** An external service that facilitates secure online payment transactions between dog owners and dog sitters.
- **Profile:** A user's personal information and preferences within the application.
- **Rating:** A numerical score (between 1 and 10) provided by users (owner and sitter) reflecting their satisfaction with the other party.
- **Review:** Textual feedback provided by users regarding their experiences with each other.
- **Sitter ID:** Unique identifier for the dog sitter.