**Rentlo[[1]](#footnote-1)**

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**Vision**

# Introduction

## Purpose of the vision document

The main objective of this vision document for Rentlo is to reach a consensus between the different stakeholders on the essential and secondary required functionalities that will be included in the application to meet the needs, as well as a general outline of the current (problem) situation and the solution. Another objective is to create a common reference document. For the development team, this document will provide a better understanding of the application to be developed.

## Scope of the project

Rentlo is a new paid community platform facilitating the rental of property between owners and potential tenants. Tenants can only rent for personal use and not in the exercise of their profession. In order to do this, Rentlo software will allow the computerisation of the rental process for any type of property by putting the operations enabling this process online on the internet.

Rentlo allows visitors to search for any type of property and registered members to carry out a rental. Registered members can also place an advertisement for their own property to rent with the amount requested and the rental conditions (e.g. deposit).

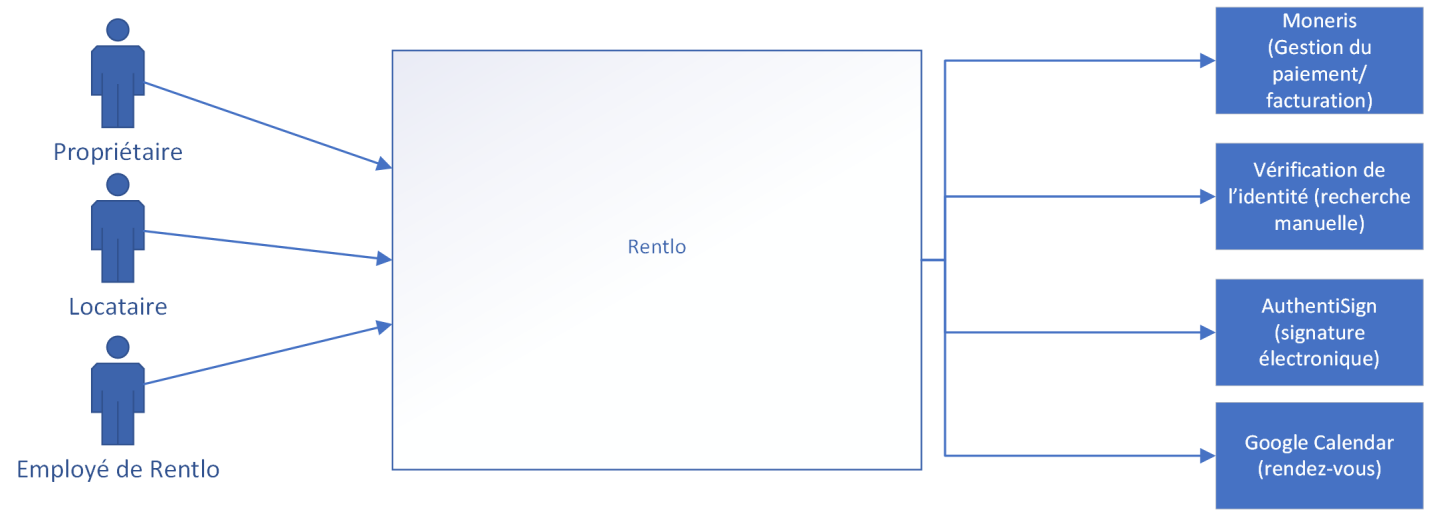
A registration process with identity verification is required to become a member. Identity identification consists of a manual verification by a Rentlo employee of a piece of identification provided at registration.

Members wishing to rent a property posted on Rentlo will have access to a rental contract. The rental contract is generated by Rentlo according to the terms of the advertisement but the electronic signature process is managed by a third party (AuthentiSign).

Rentlo allows tenants to make the rental but interacts with the online payment solution Moneris to take the credit card payment and provide the invoice including taxes.

Rentlo includes reservation and account management. This means that Rentlo manages the availability of the property according to the times indicated by the owner and then according to the rental periods requested by the tenants. Of course, Rentlo must also manage all the information relating to users and their advertisements.

Rentlo allows for the allocation of comments and an evaluation score for the tenant and the owner at the end of each rental contract, this evaluation is displayed for every logged-in member.



## Definitions, acronyms and abbreviations

|  |  |
| --- | --- |
| Good | A physical object that can be exchanged between two people. |
| Owner | A person who owns a property and wishes to rent it to another person. |
| Tenant | A person who wishes to rent the property from a landlord |
| Rental | An exchange of property between a tenant and a landlord |
| Commission | Percentage of the rental price received by Rentlo |
| Rental contract | Agreement between owner and tenant |
| Prices | Price (including commission) per day proposed by the owner for his offer to rent the property |
| Rental conditions | A set of rules and agreements to be respected by the tenant and the landlord indicated in the rental agreement. |
| Note | Tenant's or landlord's evaluation score at the end of the rental contract |
| Visitor | A non-authenticated user |
| Member | A user with a verified profile can place rental ads or rent a property. |

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# Positioning

## Business Opportunity

Rentlo's business opportunity is to enable the reduction of the ecological footprint and save money for its future users. Rentlo facilitates the reuse of properties already owned by the owners, otherwise tenants would have to purchase a new property, creating unnecessary expenses and the production of sometimes unnecessary goods. To do so, Rentlo intends to take advantage of the growing popularity of the sharing economy by exploiting a pool of owners who wish to make the possession of one or more of their properties profitable, a market that is little or not targeted by other competitors. Rentlo will make a profit by charging a percentage on the amount of each rental made through the site.

## Problem statement:

|  |  |
| --- | --- |
| The issue of | From an owner's perspective :   * He does not use his property enough to make it profitable (e.g. in view of its infrequent use, it would have been cheaper for him to rent the property, and over time the resale price falls, resulting in an investment in an unprofitable property). * Unused property is sleeping capital * Difficulty in reaching people who might want to rent his property and make it profitable for him * From the point of view of a person looking to rent a property: * Difficulty in finding a property to rent near home/travel destination * The process of renting goods between individuals is not secure and not traceable or documented (Cash Transaction) * No centralised platform for renting all types of property |
| Affects who and what | The community of owners offering a property for rent.  Potential tenants who would prefer to rent rather than buy a property for infrequent use.  The government who cannot collect tax on rental income: usually a rental between individuals will be in cash, and may represent untraceable income and therefore a difference in income tax.  The environment, since the difficulty of dividing property between owner and tenant forces the purchase of more and more new properties; it also means overproduction and depletion of natural resources. |
| Whose impact is | An unsecured rental process.  A loss of time in finding the property to rent due to extensive searches.  A slow rental process due to the steps necessary to finalise the rental and carried out through email exchanges.  The risk of being assaulted by the potential tenant / owner because the payment is made in cash.  The difficulty of finding a specific property to rent.  A loss of money due to the difficulty of assessing the rental price of a property in relation to the competition/similar property.  A loss of income opportunity due to the non-letting of the property, or even a loss of money if the property is damaged if not used.  Over-consumption of goods that are used only occasionally but whose manufacturing, sales or maintenance processes require resources with high ecological consequences. |
| A good solution would be | A transactional platform that:   * Connects landlords with potential tenants. * Offers visibility to landlords and a diversity of products to tenants. * Eliminates the need for cash, makes money transfers traceable and facilitates income tax audits. * Reassures stakeholders of their security during property delivery appointments since the identity of the parties is known. * Allows owners and tenants to rent properties with greater confidence by verifying the identity of both parties involved and establishing a secure process (contract). |

## Product positioning

|  |  |
| --- | --- |
| For | *Landlords and tenants* |
| Who | *Wish to make a profit from a property they already own by renting it out to a third party*  *Want to save money by renting a property instead of buying it* |
| Rentlo | *Is a transactional platform facilitating the sharing economy* |
| What | *Brings the owner of a property into contact with a potential clientele of tenants.*  *Offers visibility to owners and a diversity of products to tenants.*  *Makes the rental process more reliable by enabling owners and tenants to carry out a secure rental via identity verification of the parties involved and the establishment of a secure process (contract, meeting places, secure payment).* |
| In contrast to | *Kijiji and other sites of sales/exchanges of goods*  *LensRentals - audiovisual rental site only*  *Turo - car rental site only* |
| Our product | *Takes charge of the transaction between the 2 parties by managing the payment and the lease contract for all types of leased property.* |

# Descriptions of stakeholders and users

## Target Market

Rentlo targets the general public in Montreal initially, and eventually in Quebec, with perhaps wealthier individuals who own property, and others who are more modest or have an ecological approach, and who wish to rent rather than buy.

In view of the current trend to develop the sharing economy and due to the launch of Rentlo in a densely populated city of two million people, stable growth is expected.

## 

## Speakers' summary

|  |  |  |
| --- | --- | --- |
| ***Name*** | ***Description*** | ***Responsibilities*** |
| *Guillaume* | *There is no one to resource the needs of tenants and the existing rental process. He frequently rents gardening tools and camping equipment from private individuals on advertisement sites such as Kijiji, Craigslist, Letgo or by reference.* | *Compare the efficiency of finding a property to rent using Rentlo versus the current process.* |
| *Sara* | *Resource person as owner for the aspects of property rentals between private individuals, she owns evening dresses that she rents from time to time via ad sites such as Kijiji, Craigslist, Letgo or by reference.* | *Compare the efficiency of renting your property using Rentlo versus the current process.* |
| *Government* | *Revenu Québec/Revenu Canada* | *Imposes the taxation rules and can audit an individual who makes more than $30,000 in income for the payment of GST and QST.*  *Provides the requirements for reporting earned income.*  *Can trace people's income and ensure the right follow-up in the event of a tax audit (as is the case with Uber)* |
| *François (Attorney)* | *Legal counsel for Rentlo* | *Drafting the rental contract templates to be used by Rentlo* |
| *Moneris Business Solution Agent (Desjardins)* | *Third party used for payment* | *Provides support for the non-subscription formula for Desjardins Moneris payment.*  *Provides support for a payment terminal to allow a credit card imprint for the guarantee deposit.*  *Provides the technical details of the payment interface for integration with Rentlo.* |
| *AuthentiSign Technical Agent* | *Third party used for the electronic signature* | *Provides technical details of the digital signature interface for integration with AuthentiSign.* |
| *Project Manager* | *Project Manager* | *Monitors the progress of the project*  *Takes decisions pertaining to funding* |
| *CEO (Amine)* | *Developer and founder, partial backer* | *Provides technical support, customer service and site administration requirements.*  *Participates in the definition of needs.*  *Develops the first version of the platform*  *Acceptance of the product* |
| *windows azure technical support agent* | *HOST* | *The application, services and database are hosted in the cloud via Windows Azure.*  *Provides support for a web interface (Windows azure manager) for security, administration, monitoring and statistics.*  *Provides the technical requirements for the compatibility of the application with the Azure platform.* |
| *Mathieu and Vincent* | *Testers* | *Provides the requirements for the testability of the application.*  *Tests the first version of the software*  *Acceptance of the product* |
| *Marie* | *Financial backer* | *Acceptance of the product*  *Provides part of the start-up capital for Rentlo* |
| *David* | *Member of the development team* | *Resource person for software development*  *Provides requirements for maintainability of the application* |

## User summary

The different user roles of future Rentlo employees are represented by the same person wearing several hats as a super-user since Rentlo is not hiring any employees at the moment and all these roles will be assumed by the same person.

|  |  |  |  |
| --- | --- | --- | --- |
| ***Name*** | ***Description*** | ***Responsibilities*** | ***Speakers*** |
| Visitor | Visitors to the Rentlo site (not authenticated) | *Consult rental offers on Rentlo* | *Guillaume* |
| Tenant | Tenant | *Create a profile*  *Consult rental offers on Rentlo*  *Take advantage of a rental offer on Rentlo*  *Rate a member* | *Guillaume* |
| Owner | Owner | *Create a profile*  *Renting of property(ies) on Rentlo*  *Rate a member* | *Sara* |
| Director | Future site administrator | *Administering the site (role management, user management, ad management)* | *Amine* |
| Technical support agent | Employee in the future technical support department | *Provide assistance to site members with technical problems* | *Amine* |
| Customer Service Agent | Employee in the future customer service department | *Resolving conflicts during a rental (e.g. deciding whether or not to pay a deposit)*  *Check the IDs scanned by members via the site's administration interface.* | *Amine* |

## User environment

The user interacts with the Rentlo website via an internet browser from his/her computer/cell phone or any public computer. A Rentlo prototype is currently available for the most popular browsers (Chrome, IE, Mozilla Firefox, Edge: www.rentlo.org).

Rentlo will also be available via the Apple Store or the Google Play Store as a hybrid application for Apple and Android mobile devices respectively.

The Moneris payment solution (from Desjardins) will be integrated into Rentlo to allow payment by credit card and virtual fingerprinting to allow the deposit amount to be blocked.

The AuthentiSign signing solution will be integrated into Rentlo to allow the contract to be signed between the owner and the tenant. A PDF document will be emailed for signature when the rental is finalised.

The Rentlo solution with all its components (API, Services, Database and web client), will be hosted on the Windows Azure platform.

## Key stakeholder and user needs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **Needs** | **Priority** | **Preoccupations** | **Current solution** | **Proposed solution** |
| B01  B01 | Generating income for the owner of Rentlo | Review | Rentlo must be profitable enough to pay its employees and cover its maintenance and development costs. | None (non-existent solution) | Levy a percentage on the amount of each rental made on the site |
| B02  B02 | Management of members | Review | Be able to manage members, add, modify a member's information. | None (non-existent solution) | A member's data is added/modified to the database via Rentlo. |
| B03 | Ad management | Review | Visibility, additions, modifications and deletion of rental ads. | Use of Kijiji ad sites, Craigslist, simple personal site, word of mouth, flyers/posters. | Rentals of all types of properties are recorded and displayed on Rentlo. |
| B04 | Specification of the price of the property to be rented | Important | Renting one's property at a price that is too low or too high compared to the competition. | Search on the sites of ads on a similar ad for the same or a similar property. | A quick search of the property via the database of the centralised Rentlo platform with the name provides the entire list of ads with suggested prices. |
| B05 | Find a property for rent nearby and rent it out. | Important | Loss of time to find the placement of the rental property | Search for the property for rent on the advertisement sites, contact the owner to get the location and availability. | The rental advertisements are saved with the addresses, a postcode search with a configurable perimeter is provided on Rentlo. |
| B06 | Verification of the identity of the tenant/owner. | Essential | Loss of time in case the audit failed/risk of fraud  Assault at appointment and unidentified culprit | Meet the tenant to get a copy of his ID or via email and reply to the email before confirmation of the rental. | Rentlo provides a registration process with identity verification to become a member.  Each member must scan his or her identity document and deposit the scanned file as well as confirm on honour that it is indeed him or her on the site for validation by a customer agent. In the event of conflicts, Rentlo can therefore identify the parties involved. |
| B07 | Guarantee your property/silver. | Essential | Theft of the property, compensation  Lost time  Drawing up a contract | Use of the guarantee deposit (cheque), | Rentlo allows owners to rent their properties reliably by drawing up a contract: As soon as the rental is confirmed (payment is made) a pre-filled contract is sent to the owner and the tenant. The contract contains the information that has been sent by the owner and the tenant which is the name, surname, address, description of the rented property, rental price, amount of deposit, condition of the property, condition of the rental and date of return. |

## Alternatives and Competition

* + 1. *Kijiji*

Kijiji is an ad site for the sale or exchange of goods (usually second-hand). Its main strength is its dominant position in the Quebec market for person-to-person commerce. There are rental ads on Kijiji, but they are generally real estate. Moreover, Kijiji has a different positioning from Rentlo since it is only an advertising platform: there is no contract or payment via the site. Kijiji only makes the contact, while Rentlo facilitates the entire rental process.

* + 1. *Turo*

Turo is a "car-sharing" platform, which therefore allows an individual to rent his own vehicle, or to hire one. Turo is quite similar to Rentlo, since the rental process and payment is done via their site, however Rentlo is not limited to car rental and will appeal to a much wider audience thanks to its wide range of choices.

* + 1. LensRentals

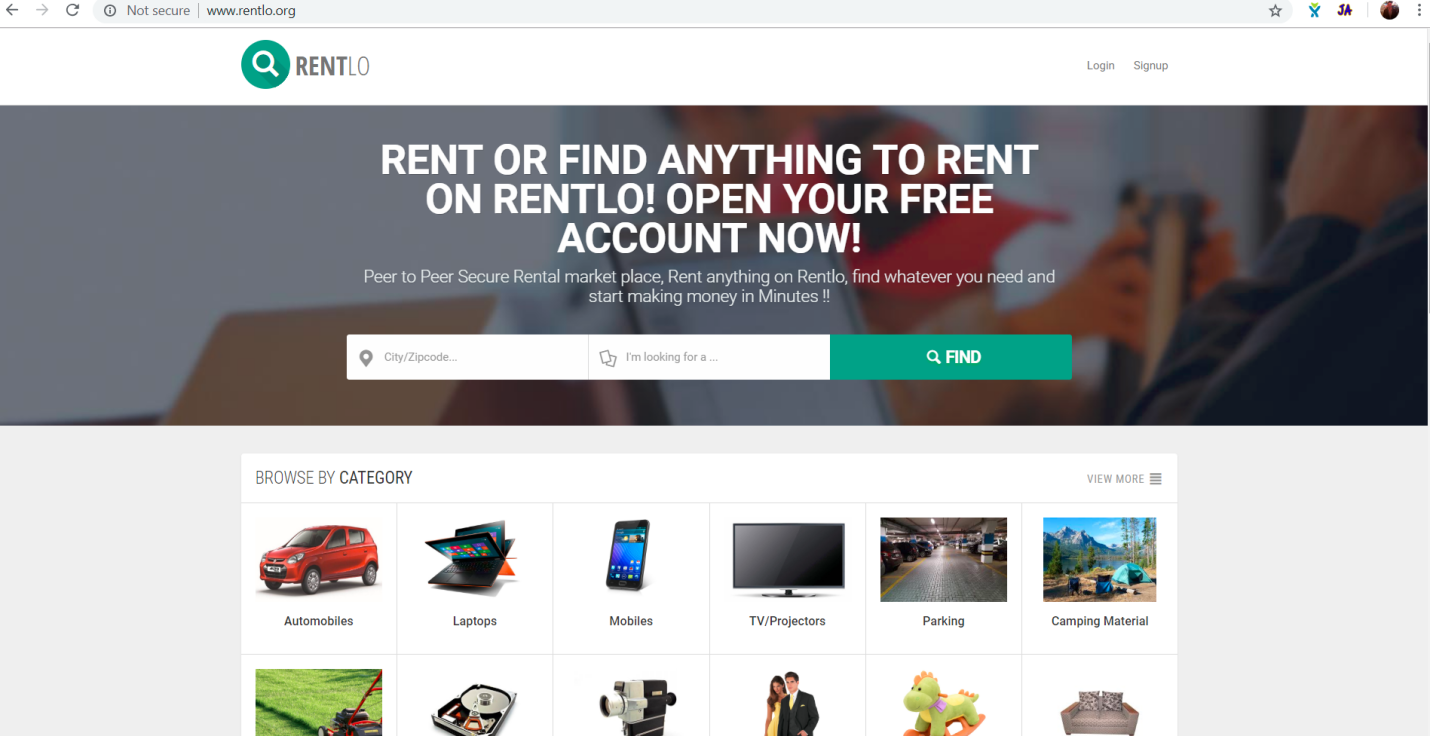
LensRentals is an audiovisual equipment rental company, which has the particularity of finding its customers mainly online. It is therefore an alternative for Rentlo tenants, but not for owners.

* + 1. *Classic professional/personal rental*

Classic renting via a professional often involves a trip to that professional, and having to compare the offers of several professionals, all with different websites, in order to decide which property to rent. Often these professionals are specialised in a single category of goods (e.g. cars, construction equipment, suits), which further multiplies the number of contacts for the individual..

# Product overview

## Product Perspective



## Main advantages

**Table 4-1 Rentlo System**

|  |  |
| --- | --- |
| **Benefits for the client** | **Corresponding characteristics** |
| B01 : Generating income for the owner of Rentlo | CAR01, CAR10, CAR11 |
| B02 : Member management | CAR04, CAR05, CAR13, CAR14, CAR17 |
| B03 : Advertisement management | CAR02, CAR03, CAR06 |
| B04 : Specification of the price of the property to be rented | CAR06 |
| B05 : Find a property to rent nearby and rent it out. | CAR02, CAR03, CAR07. |
| B06 : Verification of the identity of the tenant. | CAR05, CAR12, CAR13, CAR14, CAR15, CAR16, CAR17 |
| B07 : Securing your property/money | CAR08, CAR09, CAR11, CAR15 |

## Hypothesis and dependencies

**HYP01:** Rentlo is a website and its users will need to access computers connected to the Internet (minimum speed of 10 mbps) with a compatible browser.

**HYP02:** The Moneris payment solution will be available

**HYP03:**The AuthentiSign digital signature solution will be available.

## Cost and price forecasts

Rentlo will be accessible free of charge for consultation, rental and for posting of advertisements by members.

However, a rental service fee will be charged depending on the type of property and the rental price. CAR01 specifies how the fee will be charged by Rentlo.

## Licensing and implementation

**LIC01:** No licence will be required for the software, as it will be operated by the project sponsor, according to the SAAS model, and will remain the owner of the code.

**INS01:** The software will be rolled out on a cloud platform and offered on the SAAS model. For this reason, the implementation must be able to be carried out on a continuous Lowis to enable maintenance to be carried out without compromising the users.

# Product characteristics

**CAR01 : Generating income**

The Software must enable you to define the amount of fee to be charged as a percentage of the rental price per product category. The fee must be clearly displayed when the owner places an advertisement on the site. The fee is subject to change without notice, shall be clearly displayed on the website and must be agreed upon by the owner of the rental property when it is displayed.

**CAR02 : Browse properties available for rent**

The software must enable access to the properties displayed for rent by all visitors browsing the website. The properties must be displayed by category or by geographical proximity. Information on the property must be available for consultation, such as price, a picture of the property, the availability status (date of availability of the property, maximum date required for the return of the property), the geographical location of the property (or preferred meeting-point), the name of the owner.

**CAR03 : Search in the list of properties available for rental**

The software should allow all visitors to search for available properties using a search tool that allows them to search within the property description and also to choose additional search attributes such as price, availability status, location and maximum distance from the current location as well as the minimum rating assigned to the owner.

**CAR04 : Register as a member / Edit information / Delete account**

The software must allow a visiting user to create and edit a profile to become a registered user. It must also be possible to edit and delete his or her profile and all data saved. The registration process must allow for the recording of member information such as name, address, telephone number, age and gender, email address, password and the electronic submission of proof of identity in the form of a snapshot of a valid proof of identity.

**CAR05 : Identity verification**

The software must enable a Rentlo employee to receive, view and verify information about a member's identity. This information refers to an identity document scanned by the member who has just registered on the website, as well as the certificate on honour that he is indeed the holder of this identity document. This information is uploaded via a form in Rentlo. The software must also allow the member to be "approved", i.e. to become a "verified" member, who can therefore rent a property as a tenant or owner. The ID expiry date is added to the member's account manually by an employee during verification and Rentlo sends a notification before the expiry date so that the member can provide a new ID. An expired ID must result in an automatic account suspension by the software.

**CAR06 : Place/Edit/Delete a property rental advertisement**

The software must allow a verified member to place, edit and delete an advertisement for the rental of a property. The placement of an advertisement must allow the classification of the property, the addition of a description and information such as the price, the possible rental period, the required security deposit and others.

**CAR07 : Renting a property**

The software must allow a verified member to pre-book a property via an advertisement. This is for the member to click on the "rent" button of the advertisement. The software must then grant him access to the menu for the signature of the contract and the payment.

**CAR08 : Contract creation and signature**

The software should create a rental contract Lowed on the information in the advertisement, the potential owner and landlord and the current date. The contract thus generated is immediately transmitted to the tenant and landlord for electronic signature. The software will be integrated with AuthentiSign to support electronic signature support by the tenant and landlord. The software changes the availability status of the advertisement (unavailable) and gives access to the payment menu to the tenant when the contract is signed.

**CAR09 : Security deposit**

The software must hold the security deposit amount specified in the contract when a tenant makes a rental and must return this amount when the rental is terminated without claim

**CAR10 : Making payment for a rental**

The software must allow a verified member who has made a deposit for an ad he has selected to pay for the rental (amount for the owner as well as Rentlo's taxes and fees) via a third party (Moneris). Once this payment has been validated by Moneris, the software must make the property unavailable on its ad. Rentlo must not keep any information on the member's credit card and to do so will need to be able to communicate with a third party who will take care of making the transfers between the parties.

**CAR11 : Billing / Receipt**

The software must provide a rental confirmation and the invoice generated by Moneris by email to the tenant and a rental receipt to the landlord.

**CAR12 : Management of the appointment booking between tenant and owner (for the exchange)**

The software must allow the owner to make a time slot available for the collection of the property and the tenant to confirm the time at which the property will be collected.

**CAR13 : Leave a note and comments on the landlord and tenant**

The software should send an e-mail to the parties following the rental and allow the tenant and the owner to note and comment on various points, the quality of the property on rental and return, etc.

Negative ratings and comments will be moderated by a Rentlo employee following a conflict resolution process, and a positive evaluation is required for the landlord to continue to place ads on Rentlo.

**CAR14 : Conflict / grievance management**

The software must enable a tenant to submit a complaint against a landlord for a poor quality or inaccurate property for example. A landlord can make a complaint about a rental for a stolen or damaged property. The software must also allow tracking and resolution by a Rentlo employee.

**CAR15 : Claim resolution / security deposit**

The software should enable Rentlo to manage claims for stolen or damaged property by charging the Tenant from the security deposit.

**CAR16 : Generating reports**

The software must be able to generate reports about the owners. Some reports can be accessed online by members, others, for example, on income generated from the rental of property can be submitted to the government for tax purposes.

**CAR17 : Profile management**

The software should allow an administrator to manually suspend a user for non-compliance. It must also allow a profile to be viewed and modified to facilitate troubleshooting. The software may also block a profile for non-payment, incorrect payment information, fraud, theft, etc. The software must also make it possible to consult information on a member to judge its reliability, such as meeting pick-up appointments.

# Constraints

**CONT01 : Multi-platform support**

The website must be developed with html5, and be "responsive" as well as simple to convert to a hybrid Android/Apple application.

**CONT02 : Web Security**

The website must be accessible via https protocol with SSL connections.

**CONT03 : Proprietary Technology**

Rentlo must use proprietary .NET and Azure technologies for long term support.

**CONT04 : Encryption**

Rentlo must ensure the encryption of its members' sensitive personal data (identification documents, contact information, etc.).

**CONT05 : Interface Languages**

All of Rentlo's interfaces must be available in both French and English in order to meet the requirements of the Office de la langue française de Québec.

# Quality ranges

The quality of this Rentlo is very important. This software is going to be used by Internet users of all ages and categories who are considered potential customers from the moment they visit the site, so it must provide a simple, user-friendly, attractive and intuitive interface. The software must be fast to perform the search for ads with a short response time. It must also be available 24 hours a day with an availability rate of at least 99.5%.

In line with the ISO 25000 quality model, the quality ranges will be here :

1. Quality of Operation
   1. Effectiveness
   2. Efficiency

As Rentlo is aimed at the general public, it is vital that it operates efficiently over time: users from the general public are more sensitive to any minor inconvenience than professionals when they have expenses to incur.

* 1. Satisfaction
  2. Operational reliability

Since Rentlo is a website, issues of operational safety are governed by the website's rules of use, and are fairly limited.

* 1. Context Comprehensiveness

1. Product Quality
   1. Performance Efficiency

Rentlo has to be efficient in time when searching for ads for a property by name/address/postal code. For the other resources we can have lower quality ranges and be more greedy.

* 1. Functional suitability
  2. Compatibility

In addition to compatibility with the main web browsers and interoperability with a Microsoft Azure dataLowe, Rentlo has an obligation to coexist with the Moneris payment service.

* 1. Usability

Rentlo must provide a user-friendly and intuitive interface as it will be used by Internet users of all categories. The user experience must be a priority.

* 1. Reliability

Rentlo will probably not be very mature when it is launched, but its availability is paramount: Rentlo must be available 24 hours a day, with an availability rate of at least 99.5%.

Fault tolerance and recoverability are secondary in the first instance.

* 1. Security

Rentlo does not directly manage the website's payment service, but does have sensitive data (identification documents, locations, telephone/email addresses) that must be protected as much as possible. Nevertheless, here we choose to prioritise efficiency and usability, which have negative impacts on security.

* 1. Maintainability
  2. Portability

# Attributes of characteristics

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Features*** | ***Status*** | ***Profit*** | ***Effort*** | ***Risk*** | ***Stability*** | ***Priority*** |
| CAR01 : Generating income | Approved | High | Medium | Medium | High | Review |
| CAR02 : View properties available for rent | Approved | High | Medium | Medium | High | Review |
| CAR03 : Search in the list of properties available for rent | Approved | High | Medium | Medium | High | Important |
| CAR04 : Register as a member / Edit information / Delete your account | Approved | High | Medium | Medium | High | Review |
| CAR05 : Identity Check | Proposé | High | High | High | Low | Important |
| CAR06 : Place / Edit / Delete an ad for property rental | Approved | High | Medium | Medium | High | Review |
| CAR07 : Renting a property | Approved | High | High | High | Low | Review |
| CAR08 : Creation and signing of contracts | Approved | High | Medium | High | High | Important |
| CAR09 : Deposit for a rental | Proposé | Medium | Medium | High | High | Useful |
| CAR10 : Making payment for a rental | Approved | High | Medium | High | High | Review |
| CAR11 : Invoicing / Receipt | Proposé | Medium | Medium | Low | Medium | Review |
| CAR12 : Management of the appointment booking between tenant and owner (for the exchange) | Proposé | High | High | Medium | Low | Useful |
| CAR13 : Leave a note and comments on the landlord and tenant | Approved | High | Low | Low | High | Important |
| CAR14 : Conflict / grievance management | Approved | High | Medium | High | Low | Review |
| CAR15 : Claim resolution / security deposit | Approved | Medium | Medium | High | Low | Important |
| CAR16 : Report creation | Proposé | Medium | Low | Medium | Low | Useful |
| CAR17 : Profile management | Approved | Medium | Medium | Medium | Medium | Important |

# Other product requirements

## Applicable standards

**NA01:** Rentlo must comply with web standards (defined by the W3C) and web service standards applicable in the .Net environment and HTTPS communication standards.

## System requirements

**ES01:** The system is to be developed using .net (C#) technologies and microservice architecture.

**ES02:** The web interface will be developed as a SPA (single page application) with Angular JS, Bootstrap, Html5 and Less technologies.

**ES03:** The web interface must consume web services via a Web API.

**ES04:** Windows Azure Bus must be used for communication between the different services available.

**ES05:** Rentlo must use an SQL dataLowe.

## Performance requirements

**EP01:** The main page of the website must be fully loaded in less than 5 seconds (Lowed on a 10mbps internet connection).

**EP02:** The property search page should return results in less than 2 seconds.

**EP03:** The content of an ad must be fully loaded in less than 2 seconds (Lowed on a 10mbps internet connection).

**EP04:** The rental completion process should not take more than 10 seconds between the user's final confirmation and the time the system finalises it (taking payment, withholding the deposit, booking the property).

## Environmental requirements

Not applicable

# Documentation requirements

## User's manual

Not applicable

## Online help

**ED01:** As this is a website, Rentlo must provide a Frequently Asked Questions (FAQ) section to help users make better use of the tool. The FAQ section should be accessible from each page of the site.

## Installation and Configuration Guides and Reading File

Not applicable

## Labelling and packaging

Not applicable

**Appendices**

# A Characteristic Attributes

This appendix describes each of the types of attributes that stakeholders identified and associated with each of the software features described in Section 8 of this document.

Status

|  |  |
| --- | --- |
| Suggested | *This status indicates that the feature has been proposed to the various stakeholders.* |
| Approved | *This report indicates that the feature has been approved by the various stakeholders.* |
| Incorporated | *This report indicates that the feature has been incorporated into a previous iteration.* |

Profit

|  |  |
| --- | --- |
| High | *Important feature. Failure will result in the software not meeting the needs of the stakeholders.* |
| Medium | *Important feature. Failure may cause a delay in the implementation of the software.* |
| Low | *Useful/desirable feature. Failure is not significant.* |

Effort

|  |  |
| --- | --- |
| High | *This level implies an effort of more than 8 working days.* |
| Medium | *This level implies an effort of between 4 and 8 working days.* |
| Low | *This level implies an effort of up to 3 working days.* |

Risk

|  |  |
| --- | --- |
| High | *This level of risk indicates that this feature is difficult to implement because it is very complex or because many other features are dependent. It is critical and failure can jeopardise the project.* |
| Medium | *This level of risk indicates that this characteristic needs more thought or that some other characteristics are dependent. The failure of this characteristic may significantly harm the project, but it does not compromise it.* |
| Low | *This level of risk indicates that this characteristic requires little thought. The failure of this characteristic does not harm the project.* |

Stability

|  |  |
| --- | --- |
| High | *This level of stability indicates that the feature is very well understood by the development team. In addition, it is a feature that has very little room to change over the course of the project.* |
| Medium | *This level of stability indicates that the feature is well understood by the development team. It is a feature that is likely to change somewhat over the course of the project.* |
| Low | *This level of stability indicates that the feature is poorly understood by the development team. It is a feature that is likely to change over the course of the project.* |

Priority

|  |  |
| --- | --- |
| Review | *This level of priority indicates that the feature is essential for the project. This characteristic must be implemented early and validated for stakeholders. It is a feature that must be present in the software to meet the needs of the stakeholders.* |
| Important | *This priority level indicates that the feature is important for the project. It is a feature that must be present in the software to meet the needs of the practitioners.* |
| Useful | *This level of priority indicates that the feature is of little importance to the project. It is a useful feature in the eyes of stakeholders, but non-implementation will not lead to dissatisfaction.* |

1. This template is taken, adapted and translated from Appendix B of Leffingwell, D., Widrig, D., Managing Software Requirements - A Use Case Approach, Pearson Education, 2003. Please note that revision of the translation of the guidelines within each section is ongoing. [↑](#footnote-ref-1)