

## Redesign of Credit Underwriting Process

A project I completed prior to any training in User Experience or User Interface design.

**Client:** Rent Application.net, a software startup offering landlords and property managers online rental applications and tenant screening. One screening method is a credit report, which documents a person's financial reliability. This report contains a person's payment history on financial obligations like student loans, mortgages, credit cards, etc.

**My Role:** I began working at this company as a customer support manager, and in the small start up environment took on this project in a product design and product management role.

**Team members:** startup founder, who oversaw the project from a distance, and a freelance Python developer who built the web application.

### Background:

In order to obtain credit reports, property owners must verify their identity and prove a legitimate need to view this sensitive information. The verification process is known as credit underwriting and is reviewed by a credit reporting agency. The credit reporting agency provides the report results to Rent Application, and the results are displayed in the website UI.

As it is today, the underwriting process involves multiple forms: one online basic information form, scanned copies of a mortgage statement, photo ID or a realtor's license, a signed authorization form, a site inspection of the owner's property or business must be completed, and possibly a copy of a recent phone bill.

The complicated nature of this process meant that myself and other Rent Application customer support staff were spending hours every week guiding users through these forms, ultimately losing many potential customers due to the frustrating, confusing nature of the process. I saw this process as a pain point for users, a loss of revenue for a small business and inefficient use of human resources.

geographic considerations, a "virtual" physical inspection is authorized. Information collected is used only to maintain compliance with the FCRA, public law 91508.

Please take a moment to assist us. (Inspectors contact information)

Your Company Name: \_\_\_\_\_

Your Company Address: \_\_\_\_\_

Your Company Phone: \_\_\_\_\_ Your Name/Title \_\_\_\_\_

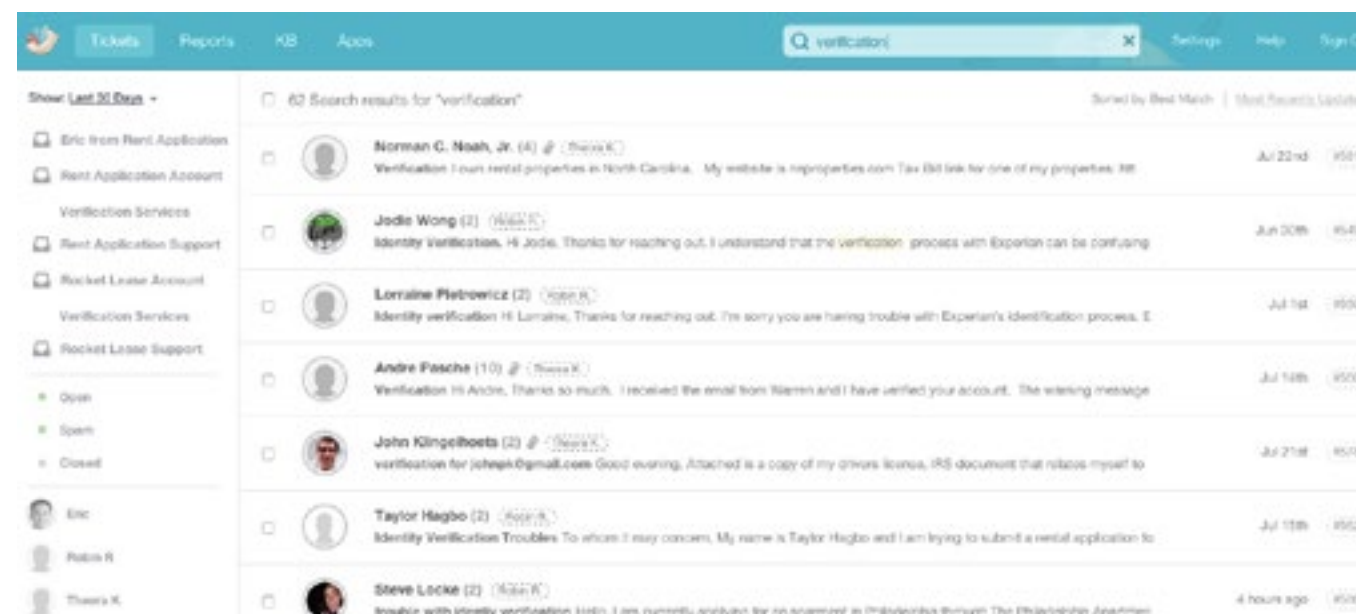
What is the nature of your relationship with the company? (i.e. client, vendor, former tenant, business acquaintance, etc)

I can verify that:

1. Can you verify the nature of the company's business? Yes\_\_\_ No\_\_\_  
If yes, please specify. \_\_\_\_\_
2. Is the company located at the exact address listed above? Yes\_\_\_ No\_\_\_  
If no, please explain any discrepancy. \_\_\_\_\_
3. Is the address a commercial building, private residence, apartment, storefront or house converted for business use? please indicate type of facility \_\_\_\_\_
4. If operating out of a residence, is the office separated from the living quarters with a lockable door? Yes\_\_\_ No\_\_\_
5. Is the company's name listed on a permanent (cannot be moved) sign? Yes\_\_\_ No\_\_\_  
Does the name on the sign match the name listed above? Yes\_\_\_ No\_\_\_  
If no, what is the exact name listed on the sign? \_\_\_\_\_

Above: snapshot of the existing paper site inspection form.

Below: customer requests for help with the credit underwriting process



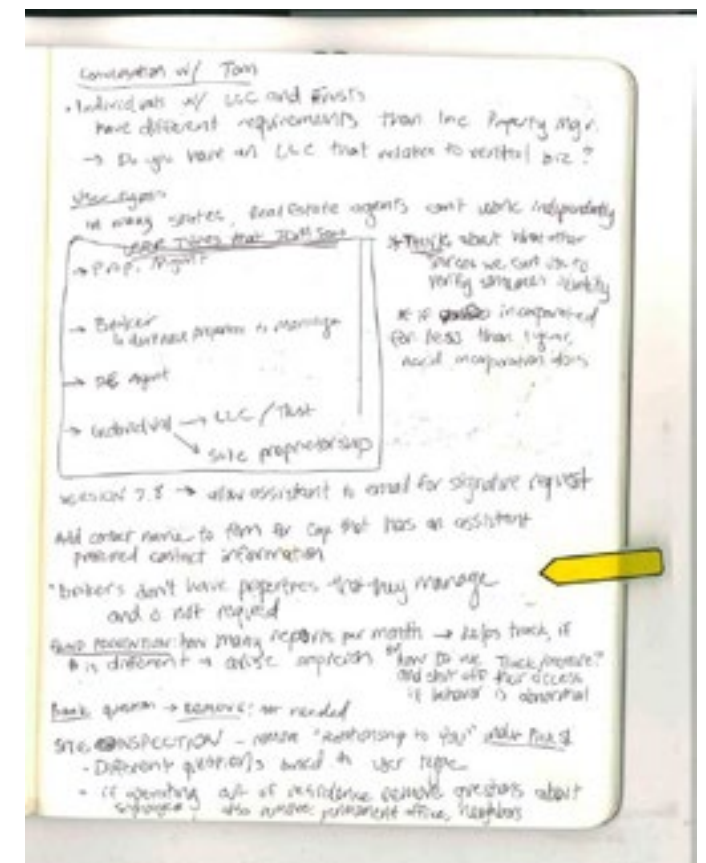
## Research

Through my responsibilities as a customer support manager, I assisted 10-20 customers per week via email over the course of three months. I would gather each customer's information and pass it along to the credit reporting agency for processing. I learned that different types of property lessors needed to provide different kinds of information to the credit bureau.

Using ticket tracking, I estimated that of all the users who began the process, only 20-30% of users actually completed the verification process.

Additionally, I interviewed the owner of a credit reporting agency who has 7 years of experience with the underwriting process. He was able to answer many of my questions about the process, provide additional insight and guidance during the project.

Below: interview notes.



## User Types

In order to better understand how to serve each type of landlord or property owner, I broke apart what was needed from each one and recognized a few consistent challenges among those user groups.

### 1) Rental Company

*an LLC or incorporation with several properties, having been in business for at least two years.*

#### Information and documents needed:

- X Basic Information
- X Site Inspection Form
- X Articles of Incorporation or Secretary of State Listing
- X Phone Bill (conditional)

Familiarity with the underwriting process



Computer and Technological Savvy



Patience for / Commitment to the process



Organizational Resources



### 2) Real Estate Agent

*a licensed agent working under a broker to find tenants for properties owned by someone else.*

#### Information and documents needed:

- X Basic Information
- X Site Inspection Form
- X Copy of RE License
- X Copy of Drivers License
- X Credit Authorization form
- X Phone bill (conditional)

Familiarity with the underwriting process



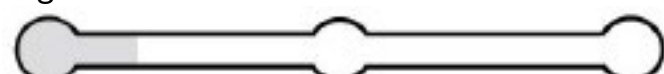
Computer and Technological Savvy



Patience for / Commitment to the process



Organizational Resources



### 3) Real Estate Broker

*a licensed broker managing a real estate firm, generally with real estate agents in employ.*

#### Information and documents needed:

- X Basic Information
- X Site Inspection Form
- X Articles of Incorporation for RE firm
- X Phone bill (conditional)

Familiarity with the underwriting process



Computer and Technological Savvy



Patience for/ Commitment to the Process



Organizational Resources



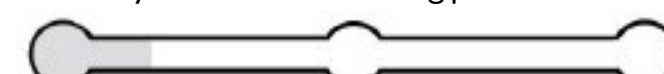
### 4) Individual Property Owner

*(Sole Proprietorship) an individual or family owning one or more rental properties without being incorporated.*

#### Information and documents needed:

- X Basic Information
- X Site Inspection Form
- X Copy of Drivers License
- X Proof of ownership of at least one property (tax statement, mortgage document, etc)
- X Credit Authorization Form
- X Phone bill (conditional)

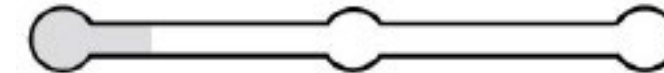
Familiarity with the underwriting process



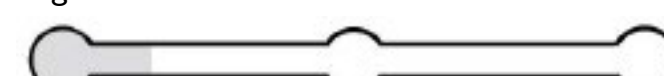
Computer and Technological Savvy



Patience for/ Commitment to the Process



Organizational Resources

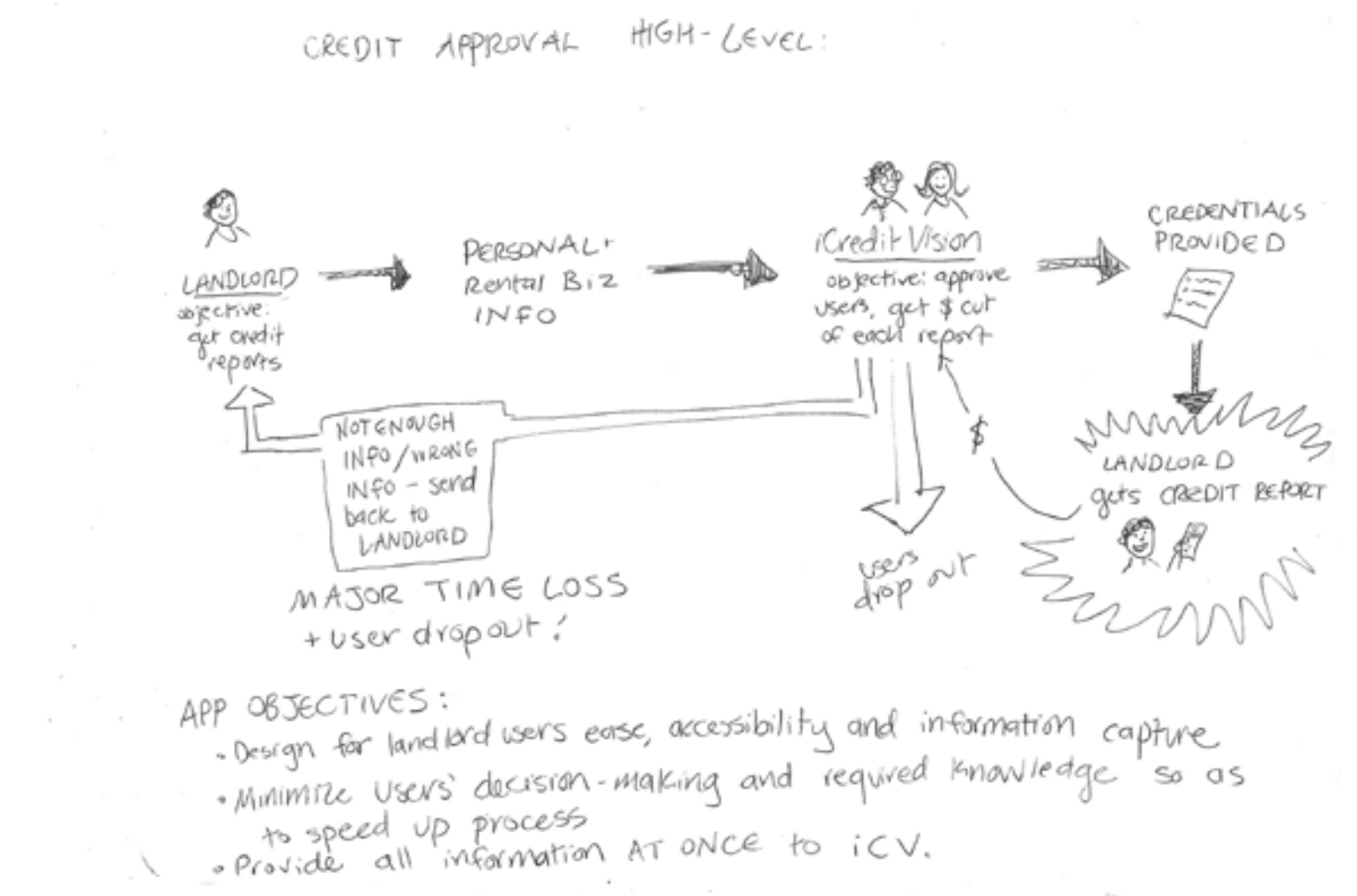


**Goals for project**

With these personas and user research finished, I came up with a high-level set of intentions for the project:

1. Design for Rent Application user's ease, learnability and information capture.
2. Minimize user's decision-making and required knowledge so as to speed up the process.
3. Provide users' information to the credit reporting agency in one bundle.

Top right: user journey for existing credit underwriting process.



**Prototype**

To address these objectives, I designed a single form that changes based on user's input information and self-selected user-type. These types are mutually exclusive and are generally recognized by members of this industry.

Below right: I used Basalmiq to make a clickable prototype. The first step was to self-select their user type.

I made four total prototypes based on each user type, which adjusted for the differences in required information. Each prototype had a 4 or 5 page form.

Rent Application User@gmail.com

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How would you describe yourself?

Individual Property Owner

Real Estate Agent or Broker

I work under the license of a managing broker

I do not work under the license of a managing broker

Licensed Real Estate Company - owner, manager or broker

I don't fall into any of these categories

Are you looking to rent a property? Sign up as an applicant <<here>>

No, I'm just not sure what I am.

If this icon is selected, make the "I work under" radio button active.  
If radio button selected, send to "Agent under Broker" path  
If not selected, send to "RE Agent" path

Selection of this icon leads to "Real Estate Co" Path

support@rentapplication.net



### Individual Property Owner Path

Once the users identified their type, they filled out an information form and watched their progress across a thermometer bar at the top.

Right: Individual property owner basic information page. Yellow bubbles are annotations for the developer.

**Individual Property Owner**

Progress: Basic Information | Site Inspection | Upload Documents | Authorize | Sign and Send

My Applications  
My Payments  
Verification Status  
Settings  
FAQ  
Video Guides  
support@rentapplication.net

User@ gmail.com

First Name Middle Initial Last Name  
Phone Number 000-000-0000  
Email  
Your current home Address Previous address if at current location less than 1 year  
Address Line 2 Address Line 2  
City, State Zip City, State Zip

When did you become a property owner? 1979  
What state do you file taxes in? AK AL AZ AR CA

Do you have a separate business office?  
 Yes, outside of my home  No, I do business in my home  
Address Line 1 Address Line 2 City, State Zip

*This phone number must be searchable in the White or Yellow pages and be associated with your name.*

Speech bubble to appear upon entry of phone number field. Use entered number to search for connection to username or business address. If phone number does not match up in search, add "copy of phone bill" upload button on "individual property owner upload" page.

If text entered in "Previous Address" field, then "Address Line 2" "City, State" and "Zip" field become active.

different than current home address? Provide that address for us please

Speech bubble to appear on mouse over of "Separate Business Office"

If "Yes, outside of my home" box is selected, address fields appear.

## Site Inspection Form

The site inspection form, which had been a major hurdle for users previously, was now a simple two-step form.

On the first step of the form, the user indicates who they will use to inspect their office (a means of confirming the legitimacy of the rental business). The user will also provide some information about the inspector.

To proceed, the user would state “the site inspector is here with me” or “site inspector is not here, let’s come back to this”. The web app would save the information and proceed accordingly.

If the site inspector was present, the app would proceed to the second step, where the site inspector was instructed to take over and answer questions about the rental office.

Unnecessary questions (such as asking an individual rental owner whether they had corporate signage outside their office) were removed completely based on user type and self-reported information.



# Site Inspection Form



User@gmail.com

To maintain compliance with the Fair Credit Reporting Act (FCRA), we are required to perform a physical inspection on all companies and individuals who wish to view credit reports. Since Rent Application can't come check out your property in person, we need you to ask someone unbiased to do this on our behalf. Information collected is used only to maintain compliance with the FCRA, public law 91508.

## Pick a Site Inspector

Vendor ▾  
Client  
Gardener  
Maintenance  
Supplier

**WARNING:** This person may NOT be related to you, share a last name, share ownership, work for you or with you or be a "friend" or "neighbor". You are required by law to use a professional acquaintance such as one of the options listed below.

Display speech bubble upon mouse over of "vendor" drop down menu.

Name

Title and Company

Relationship to You, <<Name>>

Contact Info

It is best to use one of the terms we listed above, i.e. "client", "vendor" etc.

Display speech bubble upon mouse over of "relationship to you" field.

Use the Inspector Name field to populate everywhere else it says <<Name>> on this page.

## Build and Iterate

The founder of Rent Application hired a developer and asked me to project manage and collaborate with him. The developer was in Argentina, so we communicated via Slack, email and Trello boards.

We worked in short development sprints, and each cycle I would review and test what the developer had created. Often I would also have a co-worker walk through the app to provide some external feedback. I planned to do user testing later on in the development timeline. I iterated on my prototypes each cycle and would suggest changes and updates. I generally would mock up these changes in Photoshop using screenshots of the web application. After about six months, we had an app with all basic functionality (able to save, upload documents, view help tips, clean and responsive UI, etc).

*Right: the final "select User Type" page.*

The screenshot shows a web browser window with the URL `creditapproval.rentapplication.net/applications/form/type/`. The page title is "Rent Application" and the user is logged in as `theora+test4.21@rentapplication.net dashboard`. The main heading is "How would you describe yourself?".

The form contains the following options:

- Individual Property Owner** (with a person icon)
- Licensed Real Estate Company - Owner, Manager, Broker** (with a building icon)
- Real Estate Agent or Broker** (with a clipboard icon)
  - I work under the Managing Broker's license**
  - I work under my own license**
- I don't fall into any of these categories** (with a question mark icon)
  - I'm looking to apply for a rental property**
  - I'm confused and need help**

A "Need Help?" button is visible in the bottom right corner.



## Final Designs

Above right: the Basic information Page in its final design, with a tool tip shown.

The phone number field would be cross checked with a nationwide phone directory API. If there was a name and phone number match, the web applicaiton would remove the requirement for a copy of the user's phone bill.

## Results

The project was killed just before planned usability testing.

- Rent Application was able to begin offering credit reports from Experian, which did not require landlords to be underwritten in this way.
- The site is still live at [creditapproval.rentapplication.net](http://creditapproval.rentapplication.net) (requires creation of a free account).

Below right: the final Pick a Site Inspector page

### Tell us some information about yourself and your rental properties

Progress: Basic Information (selected), Site Inspection, Upload Documents, Authorization, Sign and Send

Realty PLUS

Your name\*

Bob

A Strange

manager

Phone number\*

333-333-3333

Email\*

theora+test4.21a@rentapplication.net

Company Structure\*

I work under the license of another Managing Broker or Real Estate Agent

**The phone number must be searchable in the White or Yellow pages and be associated with your name**

Need Help?

Rent Application

theora+test4.21c@rentapplication.net dashboard

### Pick a site inspector

Progress: Basic Information, Site Inspection (selected), Upload Documents, Sign and Send

#### Pick Site Inspector

To maintain compliance with the Fair Credit Reporting Act (FCRA), ACRAnet is required to perform a physical inspection on all applicants' office spaces for membership. When an actual site inspection is impossible due to logistic or geographic considerations, a 'virtual' site inspection is authorized. Information collected is used only to maintain compliance with the FCRA, public law 91508.

Vendor (i.e., Flooring Company Rep)

Name

Title Company

Relationship to you

Contact info

Click here to sign

Need Help?