



RAPPORT -

Internship report - Clément Muth

Internship performed

From 05/04/2022 to 11/08/2022

At Azinove

Internship supervisor : Clément Muth

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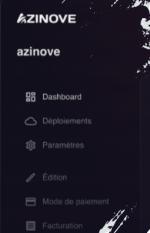
Information :

words (underlined) are clickable links to a source. (the links are also in section 5).
words (in blue) correspond to the important words.

INTRODUCTION

gence web
comme les autres.

merçant ou une entreprise ? Vous avez besoin d'un site web
à la pointe de la technologie ? Faites appelle à Azinove, on a



In the third and second year at Epitech, each student does an internship in a company for a period of four to six months. As I was starting a start-up company offering a web marketing service, I decided to do my internship in my company in order to advance my project and grow my technical, marketing and commercial knowledge and continue my entrepreneurial experience.

I started my internship at Azinove which offers an ecosystem of tools to create a website quickly and easily with the latest technologies on the market.

The best way to create something new

Rencontrez l'équipe d'Azinove

 <p>Clément Muth Founder & CTO in</p>	 <p>Patrick Eiermann Founder & CEO tw in</p>	 <p>Auguste Thomann Photographe tw in</p>
 <p>Yann Simon Développeur Full Stack</p>		

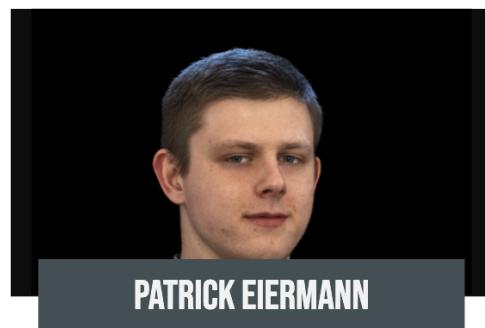
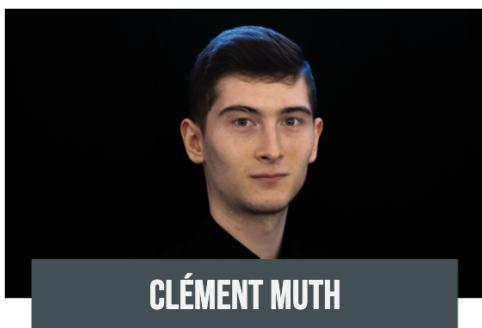
My main activity during this internship was firstly, the development of Azinove's main tools. In a second time, testing our tools through the development of 2 clients' websites and finally, an entrepreneurial and commercial work.



2.1 General Presentation

Azinove is a **SaaS¹** company that allows the acquisition of a state-of-the-art website. By ordering from Azinove, the customer will not only receive a website with the best performances, but also a whole set of tools that will allow to follow, modify, secure and maintain his website with very affordable rates. These are websites created to measure for the customer.

Azinove was created by Clément Muth (CTO/CPO) and Patrick Eiermann (CEO/CMO)



Patrick Eiermann is currently the **CEO²** (Chief Executive Officer) of Azinove. He is in charge of the commercial side of the business and is responsible for the communication with Azinove's different customers, as well as the financial side of the start-up.

Clément Muth is the **CPO³** (Chief Product Officer) and is therefore responsible for the products and services offered by the start-up. My role is to plan the product, manage it and explain to the rest of the team the needs and objectives of the product.

I am also the **CTO⁴** (Chief Technology Officer) and take care of the development and management of Azinove's products.

2.2 The history of Azinove

2021 :

Azinove started its activity on March 15, 2021 in Strasbourg.

Creation of the alpha version of a [landing page⁵](#) and implementation of the ecosystem.

2022 :

Azinove progresses in the development of its ecosystem and starts its activity with customers. The company also evolves on the [entrepreneurial](#) level by joining the [Pépite Etena](#) organization.

FUTUR :

Azinove aims to continue its [growth](#) and to further develop its services.

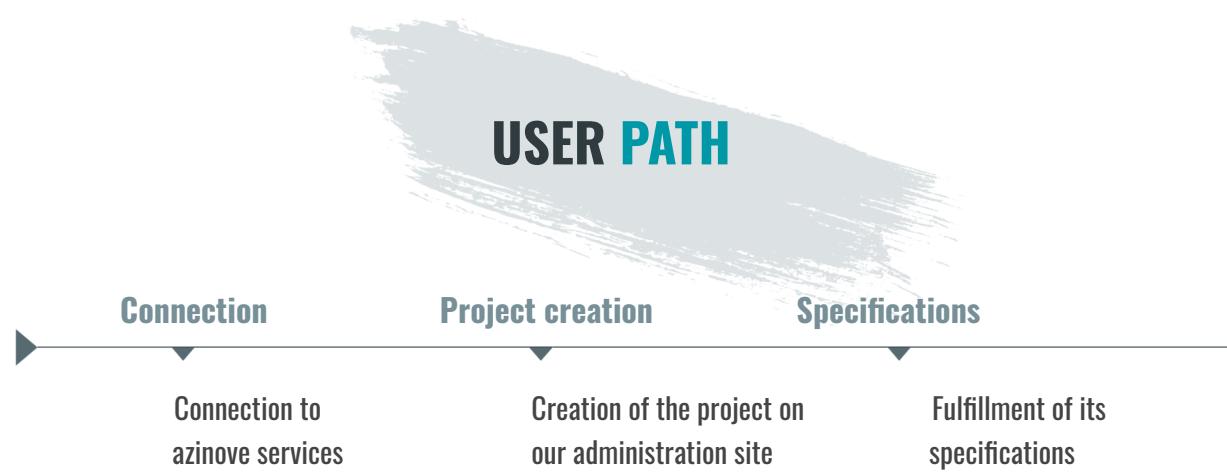
Azinove was created to complete, simplify and accelerate the services offered in the world of digital development. Its added value is to bring an ecosystem of tools allowing a customer to create his website in the best conditions and in the shortest time possible using the latest technologies on the market.

2.3 Activity Market and Business model

Azinove stands out on the market above all thanks to its **simplicity** of use and the **speed** with which a customer can start his digital activity. Its priority is to go to the essentials, and to accompany its customers to the end.

This speed and simplicity is based on fundamental points:

A quick and easy user **path**⁵



These **specifications**⁶ are said to be intelligent because they adapt to the client in order to ask relevant questions and always get to the point. As soon as the client has completed it, he will know the price and the working time of his project.

Azinove has no direct competition. Indeed, communication agencies only offer website

development and related services such as [SEO⁷](#) management, maintenance or [market research⁸](#).

In addition to the speed and simplicity of use of our services to create a website and our various project management tools, Azinove puts a point of honor on the environmental aspect through several pillars.



The strong points of using recent technologies such as [nextjs⁹](#) is that you can optimize the time and workload. Indeed, Azinove has a development engine that takes care of an important part of the development of a website. Just as technology seeks to become faster and more efficient, we can create much lighter and faster sites.

In parallel, Azinove offers an important functionality that makes the coalition between a [CMS¹⁰](#) and a [framework¹¹](#). The page editor allows customers to modify pages of their site from their client space. Unlike a [CMS](#), no data is stored in the database, all information is instantly modified in the source code of the website. The choice is the interest of not storing all this information in databases is not to make an

overconsumption of **storage space** and in parallel, to avoid a consequent **network cost** during the loading of each page.

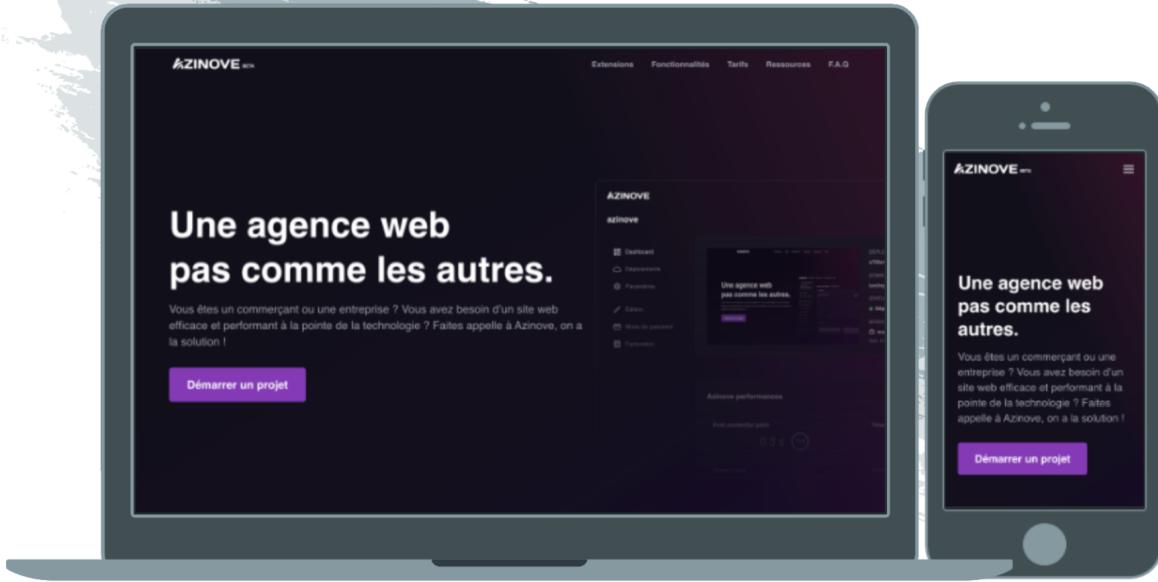
Finally, Azinove proposes hosting companies such as **Vercel¹²** (Vercel) or **Firebase¹³** (Google) which are implementing initiatives to be carbon neutral and have commitments such as the use of renewable energy.

“Google has been carbon neutral since 2007 and is committed to using 100% renewable energy (24/7) by 2030”.



In order to get customers and build a reputation, Azinove sets up advertising campaigns on different social networks. A punctual and relevant presence is important in order to create a community, but it requires a lot of time. Besides that, Azinove's marketing plan is mainly based on word of mouth and recommendations from current customers.

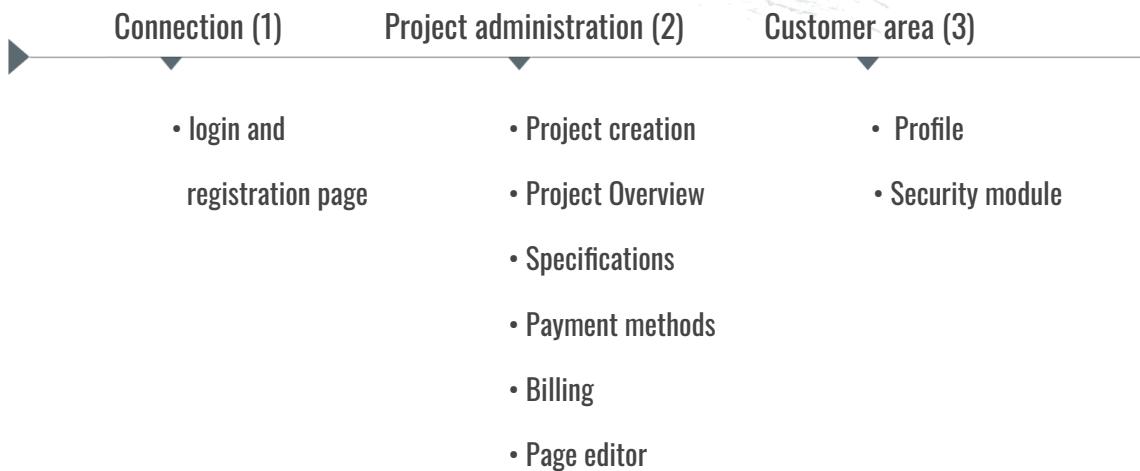
WORK DONE



At the beginning of my internship, Azinove had a [landing page](#) and a [prototype project administration site](#).

In order for the beginning to go well and be productive, the first work I did was to set up a global roadmap of the process.

MY ROADMAP



1. The first step of my work was to allow our customers to connect to our services. These different services are divided into several **sub-domains¹⁴** according to the nomenclature:



The objective of this connection system was not only to allow users to connect, but also to be synchronized between all our different services so that we don't have to identify ourselves on each of them.

The difficulty in this system is the communication of **user sessions¹⁵** between these different subdomains.

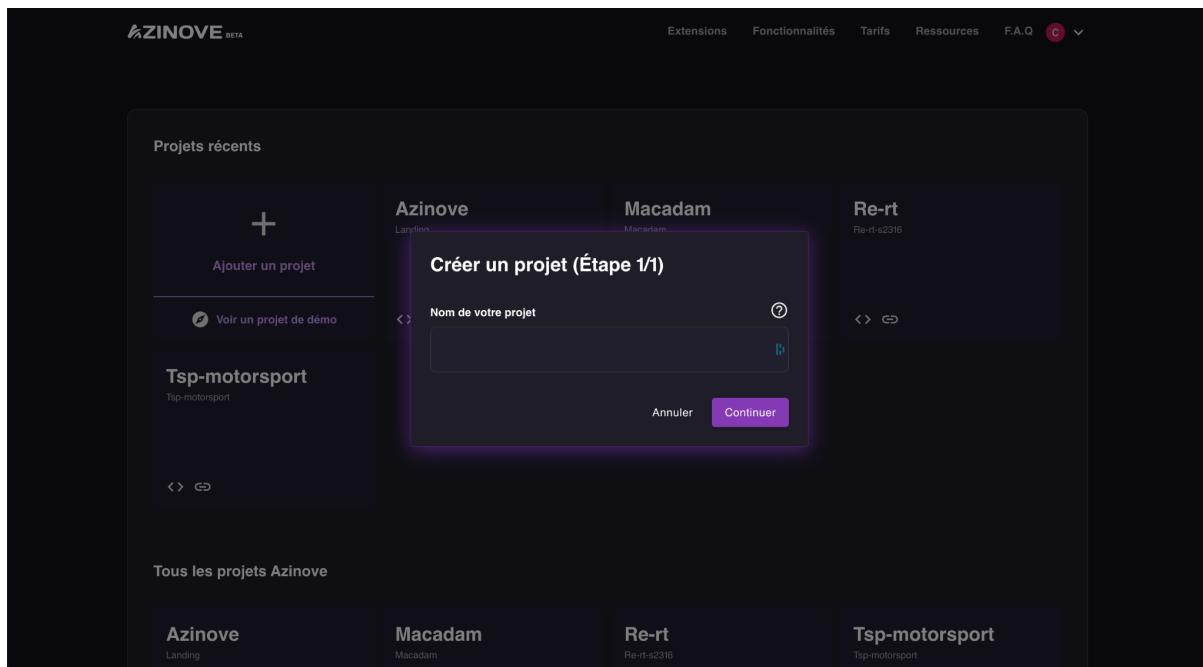
Indeed, first of all we must pay attention to all the security flaws that this type of communication can bring, but also a fundamental point of web security which is the **CORS¹⁶** principle (Cross-Origin-Resource-Sharing).

This CORS principle allows restricted resources of a site to be retrieved by a third party site outside the domain from which the first resource was served.

These restrictions are more flexible with subdomains, and thanks to the use of cookies and a protocol I developed, I was able to synchronize the user session across all subdomains and thus allow users to be connected everywhere at once.

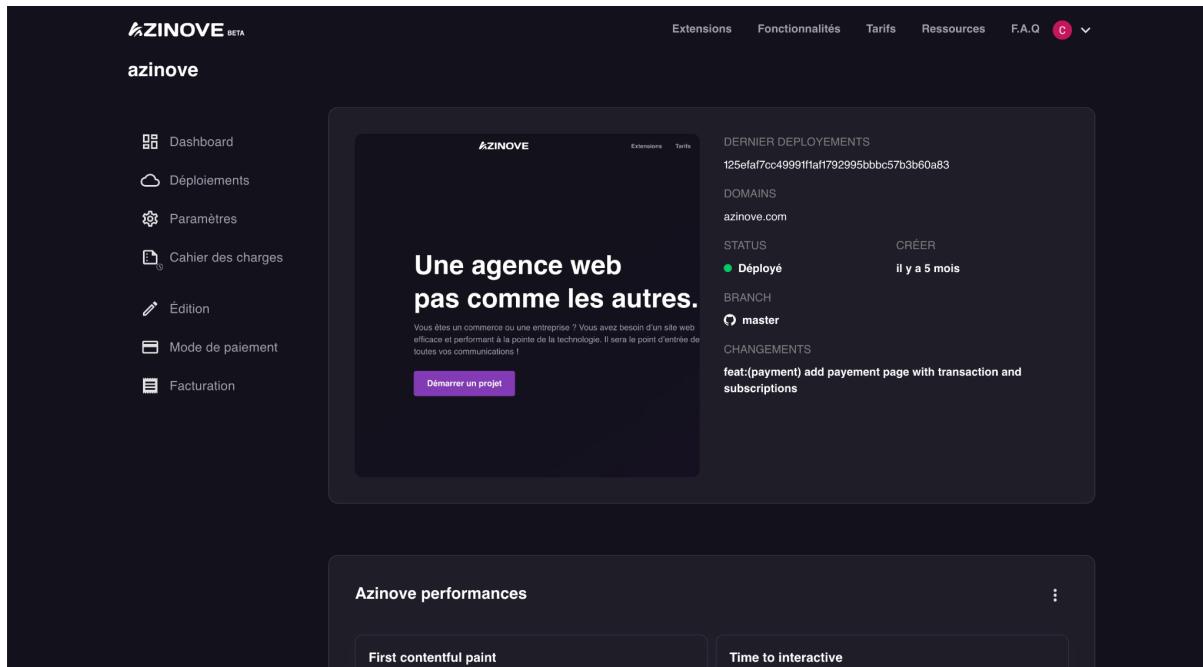
2. Once the login page was finished, I started to develop the main part of my internship. The goal of the project administration site is to provide a site to create and manage projects.

The first part was to create the project creation form.



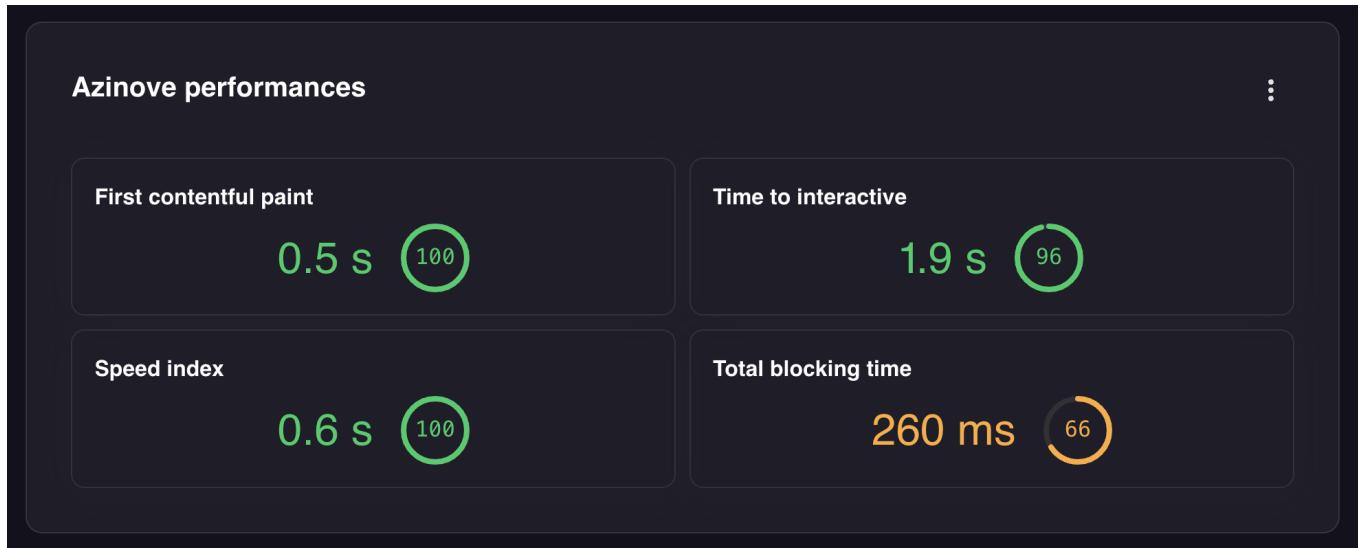
The next step was to develop all the tools necessary for the smooth running of the client's project.

So I set up the dashboard



Allowing customers to quickly view basic project information comme par exemple :

- Domain
- Last change on the development of its site
- The overall performance of its site



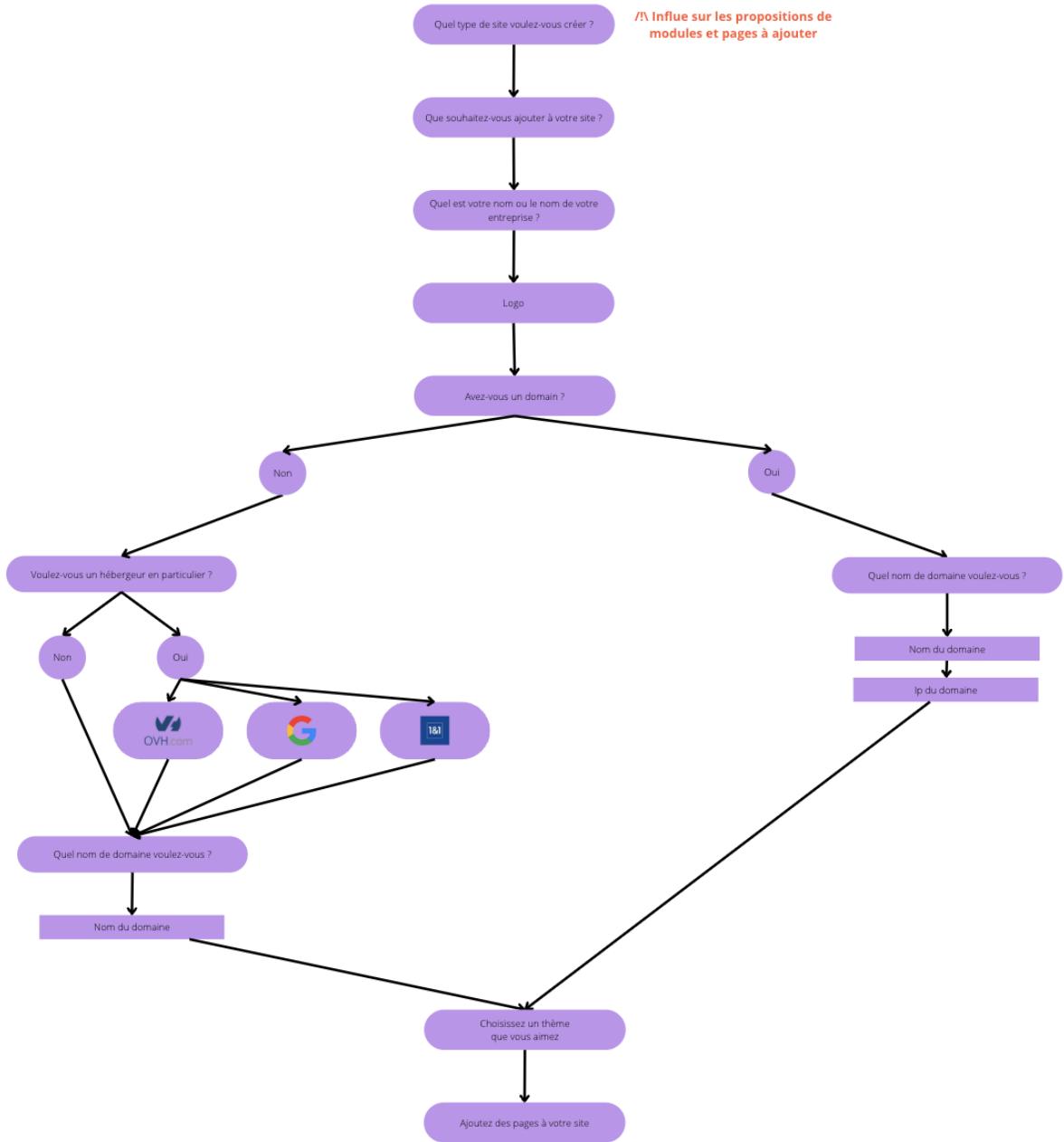
Then I followed my thread of progress and developed our specifications.

These specifications are a very important part of my work and I had to make them as efficient as possible. Few of Azinove's indirect competitors have IT specifications. It had to be as simple and relevant as possible in order to mark an additional domain in front of this competition.

I thus made a long study and research in order to understand the fundamental points of a specification, what could make it relevant and effective, and especially to establish the questions which we will need during the development of the project in question.

During my research, I realized the effectiveness of the QCM¹⁷ and quick question forms.

So I set up a **decision tree**¹⁸ to preview each question and each possible result. (This tree only covers a part of the specifications, it is not complete)



The strength of this method is that it allowed me to anticipate all types of projects and therefore to be able to establish a price and a working time.

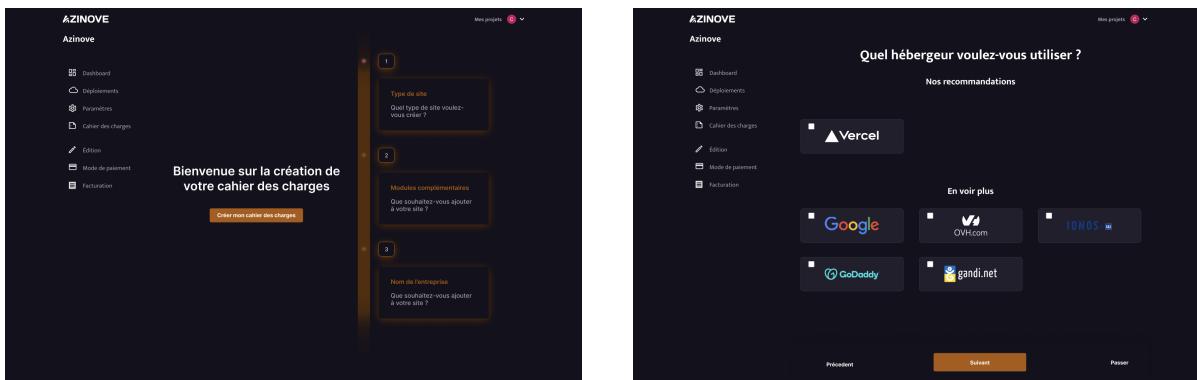
This led me to one of my business tasks, which is to set up a price list.



This price list was established in collaboration with my partner and is based on several criteria:

- The average development time
- The number of people in charge of development
- The complexity of the request

This price list allowed me to complete my specifications and to start marketing our solution to potential customers.



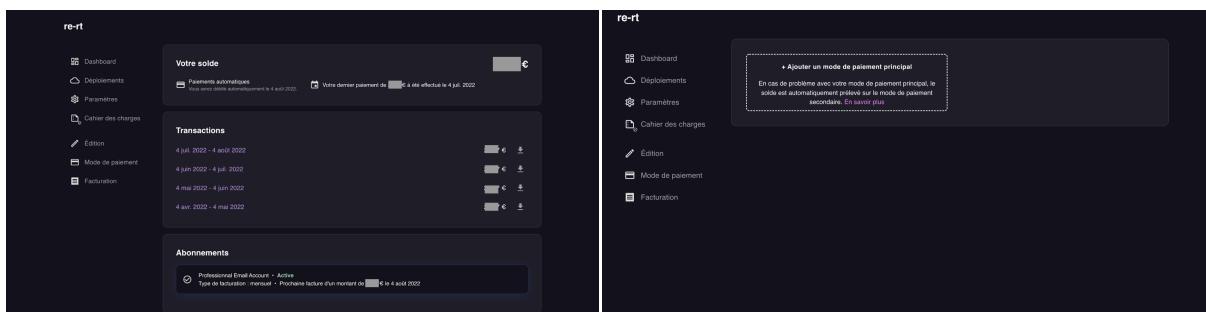
The next step in my roadmap was to create a page that would allow clients to have an overview of all of its [transactions¹⁹](#) and actions related to its project.

Before I could create this page, I had to determine how and with which tool customers would generate transactions.

So I scoured the payment services market and decided to use the [Stripe](#) ecosystem.

Stripe is a suite of [APIs²⁰](#) offering payment processing and e-commerce solutions.

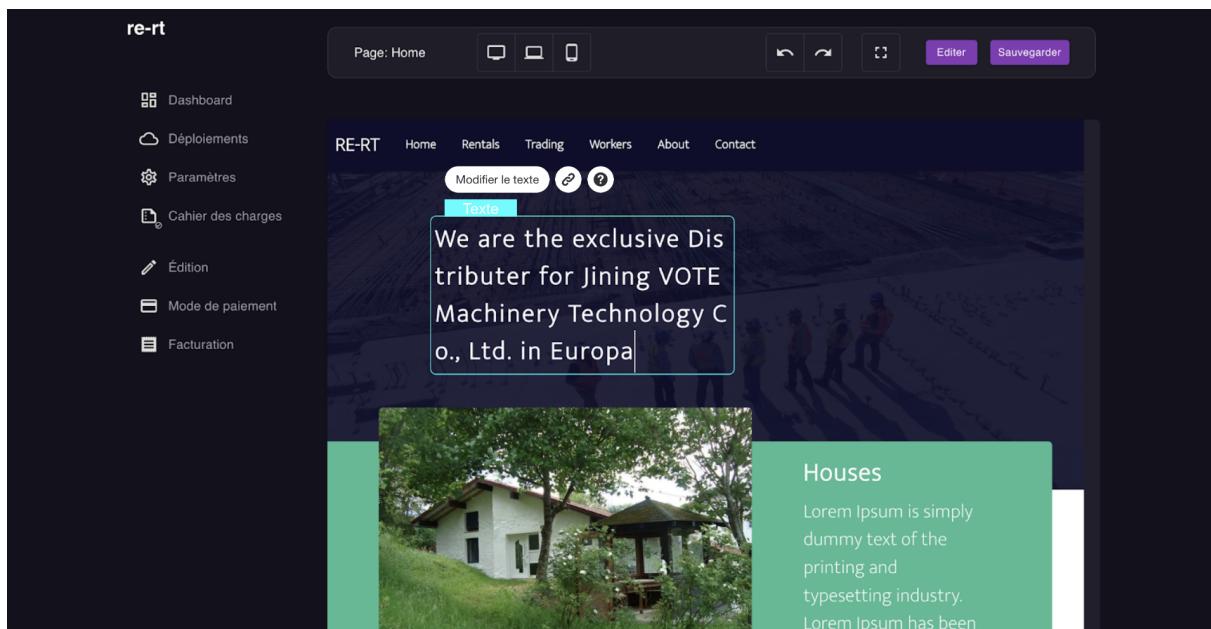
That's when I set up the transaction page as well as a page allowing customers to add/remove their payment methods used on their project



The next step on the project administration site is to set up a prototype of the page editor.

This part is the most important in terms of research and work because it is one of our main value propositions.

Much of the work time was spent researching a method of editing source code via a website. Once I had a clear idea and a solid base of ideas, I developed the alpha version of the page editor.

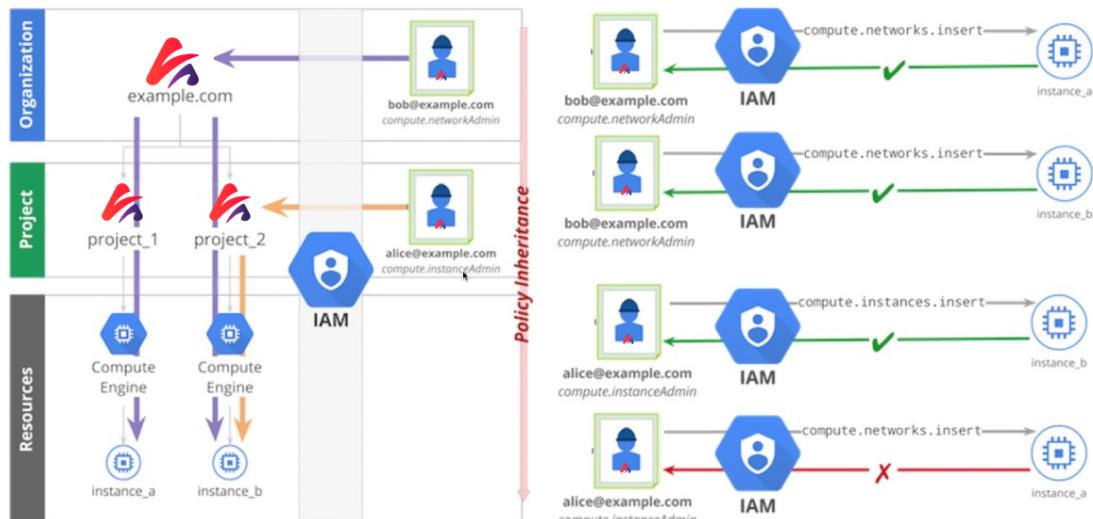


This way, customers can edit the textual content of their site at any time without causing conflicts to the developers.

To finish my work on the project administration, I thought that in the future we would develop modules touching several domains like graphics, accounting or security. With so

many modules on several domains, it is necessary to have the people to use them. I was in charge of developing an **IAM** (Identity and Access Management) system so that the project owner could add collaborators and assign them specific roles.

Indeed, the client does not necessarily want his designer to have access to the modules concerning the transactions and the means of payment. This system required a lot of attention to detail because it must be solid and secure, otherwise it would jeopardize the very security of Azinove and our customers.



At this point, the last part of my work on Azinove's services is the development of the client profile site.

The initial objective of this site in our tools is to provide a place where the customer can find all the global and precise information on his account and on all his projects.

Administer all of their payment methods, the status of their projects or the security of

their account.

At the time of my internship, this part was not a priority. I was in charge of displaying the basic information of the customer and of setting up one of the most important parts which is a security module.

Indeed, Azinove offers a lot of services that involve sensitive information such as money transactions, bank cards etc... So, I think it's important to provide customers with all the necessary security tools so that they can manage and secure their Azinove account.

So I developed a module that allows me to list all the devices on which the customer is connected, but also the browser and the location of the connection.

AZINOVE BETA

Mes Projets C ▾

Appareils sur lesquels vous êtes connecté

You êtes actuellement connecté à votre compte Azinove sur ces appareils.

 Pixel 6

Android - Google

France, Ostwald
12 avr.

[Plus de détails](#)

 Mac - Apple

France, Ostwald
 Cet appareil

[Plus de détails](#)

 **Android - Google**

France, Ostwald
Connecté depuis le 12 avr. 2022

Les positions sont approximatives et basées sur une adresse IP. [En savoir plus](#)

Navigateurs sur lesquels vous êtes connecté

 Chrome
Mobile

So I finished my technology roadmap on Azinove's services. At that time, Azinove was ready to welcome customers ready to test our services.

That's how we met two of our customers. Tsp-motorsport and Macadam.

Tsp-motorsport is a German car agency that offers car reprogramming services. The aim of their website was to highlight their work, but above all to create a simulation of the improvements that their work brings to each car they offer. The workload for this website was consequent because indeed, he proposes a reprogramming on approximately all the models of all the marks of cars.

So I started my second website with a big challenge. To create a website with about 20.000 pages and to create a simulation representing the increase in performance over a period of one month.

Macadam's site is less voluminous in terms of workload because he only wanted a showcase site that would highlight his work. His site is still not finished at the moment.

I got a very good result from this second client because thanks to the engine I developed and all the work previously done, I was able to meet the deadline for the site. Also this customer was very satisfied with our services and impressed with their speed and quality. Indeed to put this customer feedback in context, tsp-motorsport was not at its first communication agency. It was his third attempt to create his website and none of his previous ones ended with a satisfactory result. The first communication agency he used never finished his order because of the number of pages and the workload, and the

second one took too much time.

I was able to see the efficiency of my work.

It is on these last tasks that I finished my work on the technological part of my internship.

The second and big part of it concerns the entrepreneurship and commercial field.

Indeed, during this period, we built a file including a version of our business plan because our goal was to join [1Kubator](#) which is a French incubator in order to obtain a legal support to write our contracts or to help us on the aspect of the intellectual protection, but also to obtain a financial help in order to accelerate our development and to increase our workforce within the company.

Unfortunately, our application was [rejected](#) because at that time we were not able to explain our project with accuracy and simplicity. The jury did not understand our objective and our reason for living.

After a time of reflection following this refusal, we questioned ourselves and thought differently.

We turned to the [Pépite Etena](#) organization, which accompanies us on our entrepreneurial journey and helps us with many aspects

Indeed, at Pépite Etena, we benefit from courses on many subjects in the field of entrepreneurship, but also on innovation and legal issues. We meet other student entrepreneurs and we grow with them.



CONCLUSION

So today we find ourselves with a Beta version of our services that already welcomes some customers. I managed to respect the roadmap and the time I had estimated for each task. I was able to see with our two customers that our services were working very well and that they bring them a real advantage.

This customer satisfaction allows us to extend our popularity, and thus to obtain some additional customers in the automotive field thanks to word of mouth.

I remember that entrepreneurship is not a simple notion, we made mistakes and had failures, but we learned a lot and we evolved thanks to them. Today we are well surrounded thanks to Pépite Etena, and the profit we made during these 6 months have finally allowed us to have a chartered accountant to manage our expenses and income. Until now, it was very difficult to advance in good conditions because we are above all students, so the project was financed 100% by our means. Moreover, we had no knowledge in the legal, economic or marketing fields. We had to learn and evolve over

time. We are fortunate to have a set of clients who are willing to help us improve our services.

In terms of technology, it was very difficult to move forward because it was not about reproduction, but mostly about innovation. Choices have to be careful and thoughtful, because they would jeopardize the company.

Nevertheless, this internship was very rewarding and made a perfect junction with my previous internship at AirCampus. I was able to put into practice all the knowledge I gained there. Today, these new skills will allow me to pursue our goals and continue to grow our startup, and continue to really simplify and help companies to digitalize.



GLOSSARY AND DEFINITIONS

Software as a Service (SaaS)

a cloud software delivery model in which the cloud software provider develops and maintains cloud application software

The CPO Chief Product Officer
is in charge of the product
and the solution aspect.



The CEO Chief Executive Officer
is the person who runs a company,
is the person who runs a company

The CTO is the person in charge
of the technology division

A specification is a document
that must be respected when designing a project.



The landing page corresponds to
the page of a website whose
precise role is to recover
information or conversion
to an action such as a purchase

Search engine optimization,,
techniques that aim to improve the positioning
of a page, a site or a web application in the
results page of a search engine.

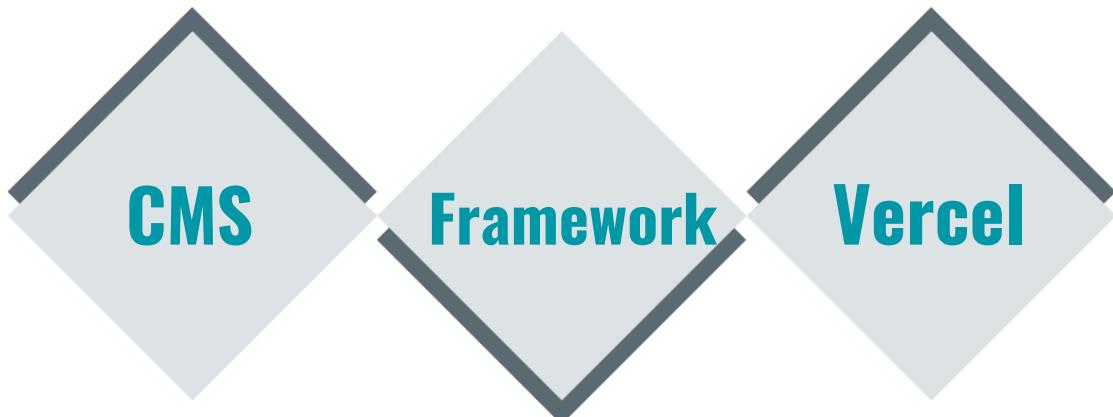
Next.js is a free framework and
open source framework based on the
React JavaScript library and on Node.js technology.



marketing operations activity designed to analyze,
understand and measure the actual functioning of the forces at work
forces at work in a market.

Program to create a website,
without using any programming code.

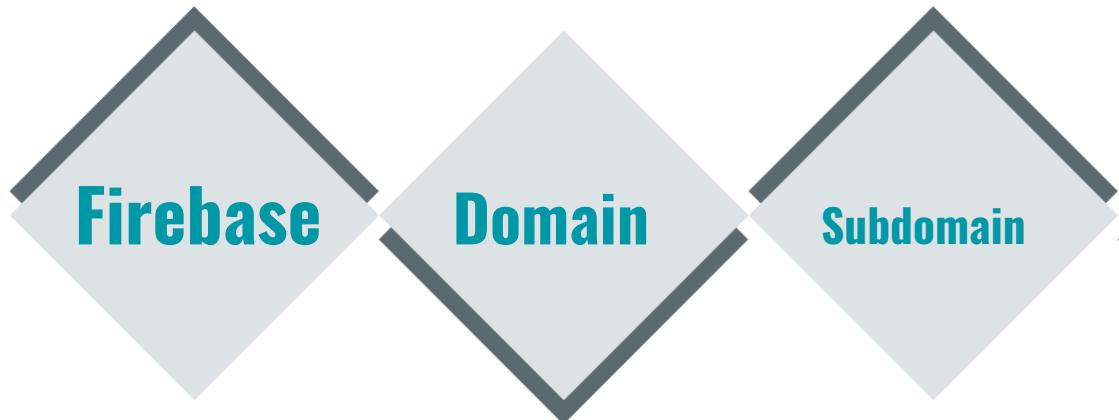
Vercel is a computer company
which developed nextjs
and which provides a hosting solution



A coherent set of structural software components
which is used to create the foundations as well as the broad outlines of
of all or part of a software program, i.e. an
architecture.

Firebase is a set of hosting services
for any type of application.

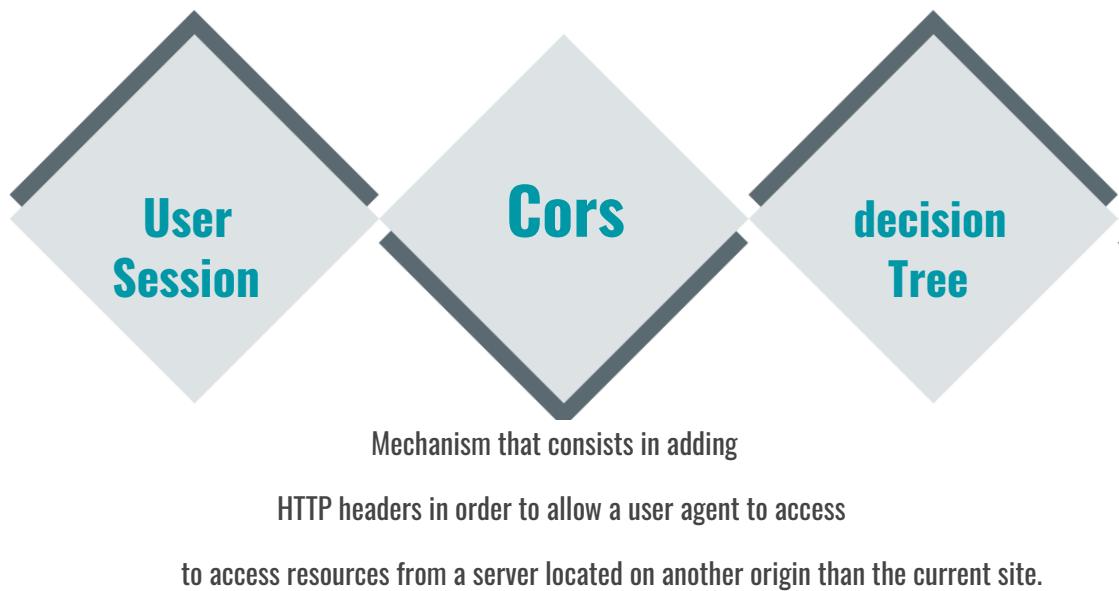
A sub-domain is a domain
belonging to a larger domain.



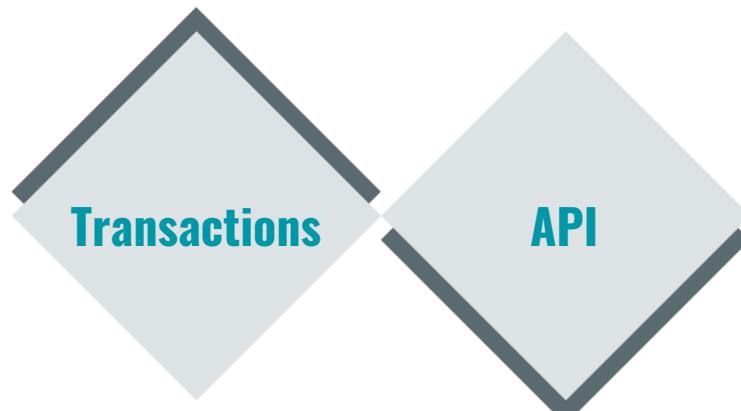
A domain name is, in the Domain Name System, an identifier for an Internet domain.
domain name system, an Internet domain identifier.

A session is an individual visit,
initiated by a user.

decision support tool representing a
set of choices in the graphic form of a tree.



Contract between a buyer and a seller.



Application programming interface or application programming interface is a standardized set of classes, methods, functions and constants that serves as a front end through which software provides services to other software.