



CONTENT SQUARE  
Test UX to increase conversion rate

# Internship Report

# Sylvain Tissier

*FullStack Developer at Content-Square*

Sylvain Tissier (tissie\_s) | Internship report | 2015-03-01 / 2015-08-31

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## General Informations

### Student informations

Name: Sylvain Tissier

Login: tissie\_s

Promotion: 2015

### School information

Name: Epitech Paris

Location: 24 Rue Pasteur, 94270 Le Kremlin-Bicêtre



### Company information

Name: Content-Square

Location: 50 Avenue Montaigne, 75008 Paris



## Part One : Transmitting our work to a newcomer

Une partie destinée à un nouvel arrivant dans la société qui va reprendre / poursuivre / maintenir le projet dans lequel vous avez été impliqué, et à qui il faut décrire le contexte de l'entreprise, du projet, l'architecture générale de celui-ci, le contexte et l'organisation de l'équipe de travail, le tout de façon synthétique.

## What is Content-Square ?

Content-Square is a software editor specialized in Optimizing website and mobile navigation.

We offer a SAAS solution that allow our customers to analyze optimize and personalize the user experience on their website.

Customers can create A/B Tests to try different versions of their website on different type of users and see which one work best.

We also give them access to a huge amount of data about how their users use our customers website by giving them access to Heat-Map charts, Insite Path traffic, and a lot of others chats.

We also offer full recordings of anonymized sessions of navigations.

All of thoses are sortable by using specific critères on their users comportements and informations (like country, gender..)

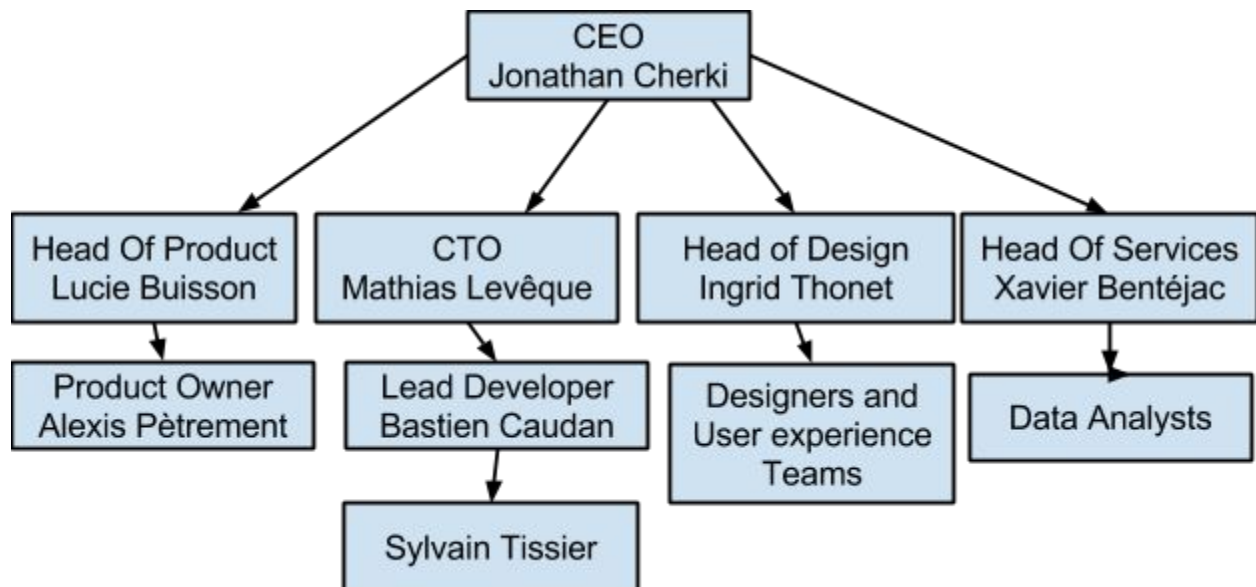
By doing that we help our customers raise their conversions rates and understand what make is customers want to buy or in the contrary what make them leave.



## Content Square Structure

Content Square is a startup based in Paris. It was created in 2009 by Jonathan Cherki. We raised some capital for the first time in 2012.

Today we have close to 50 people working at full time.



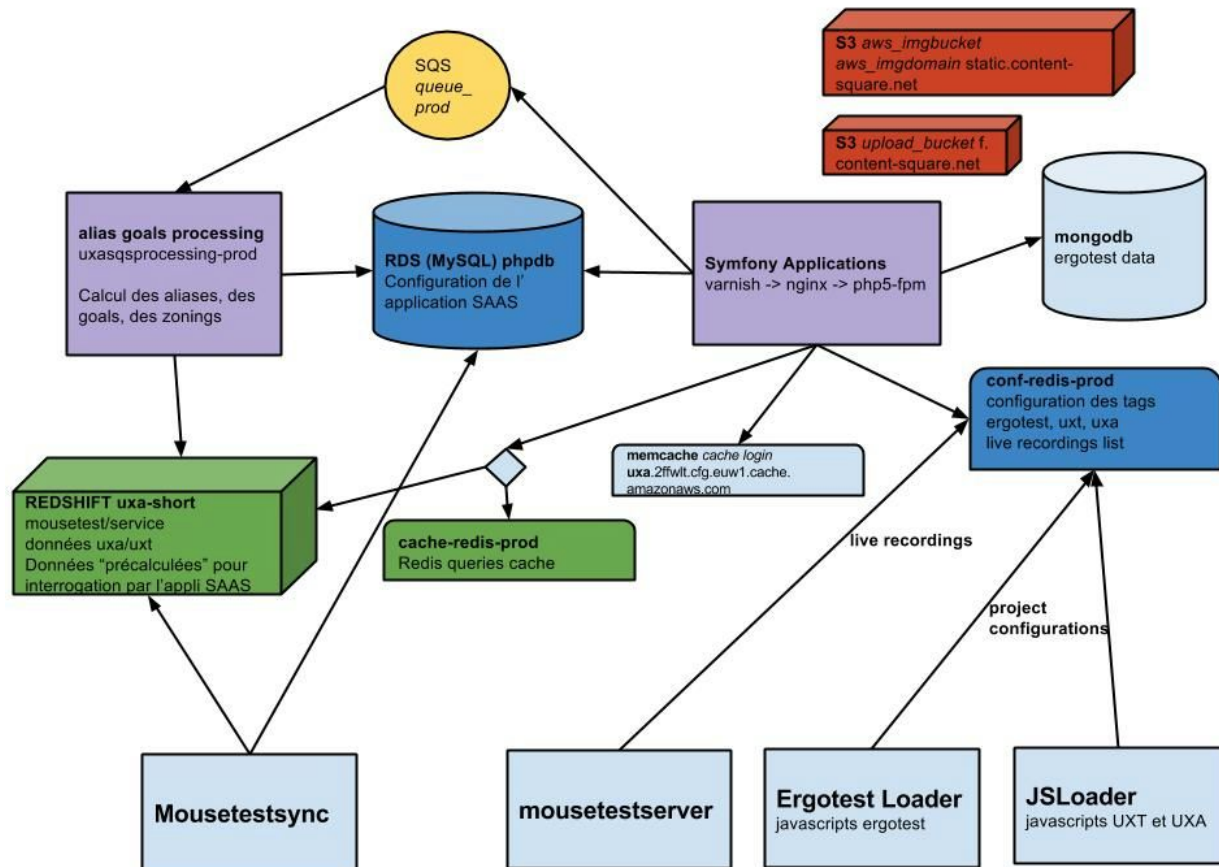
## My Mission

As a Fullstack developer my job had multiples goals :

- Follow the Agile Methodology and good practices to do quality work.
- Build new functionalities for our SAAS solution.
- Build new APIs.
- Integrate the work of my designers co-workers to build a new user experience.
- Add units tests and integrations tests.
- Review the code of my fellow developers.

## Solution's architecture

Because of the needs of our platform we have lots of components in our architecture :



### Data Acquisition:

We give our customer a javascript file to install on their website.

This script is in charge of getting and saving every actions that a user can perform on the website. (move the mouse, write something, click on something..)

### Data Storage:

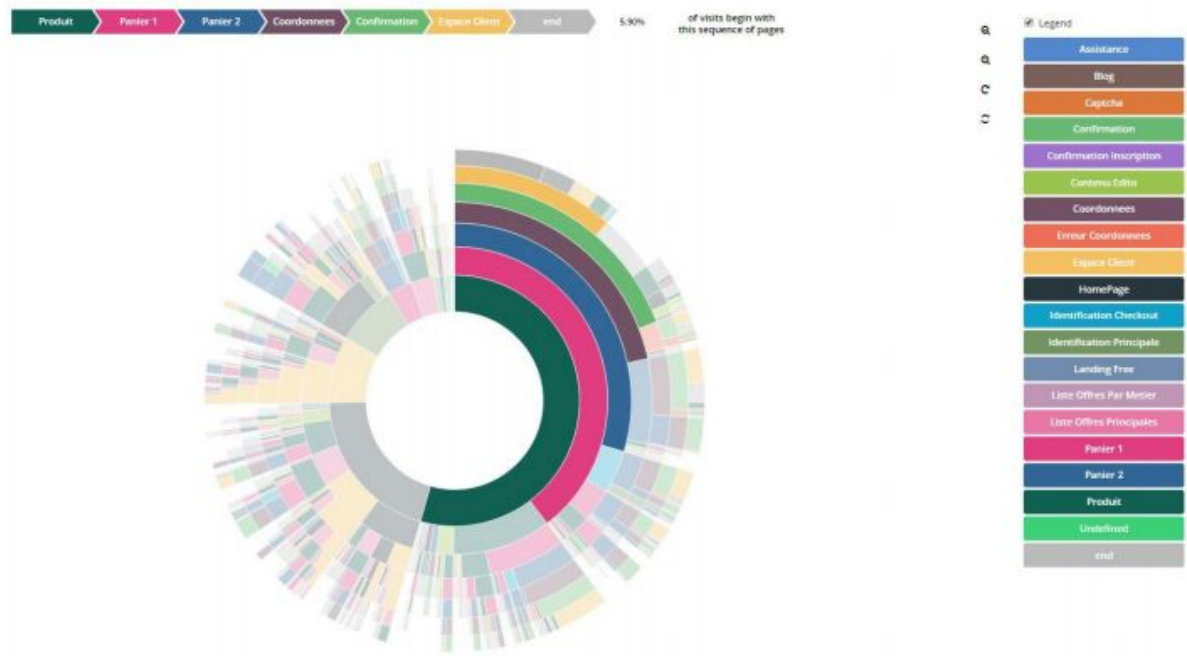
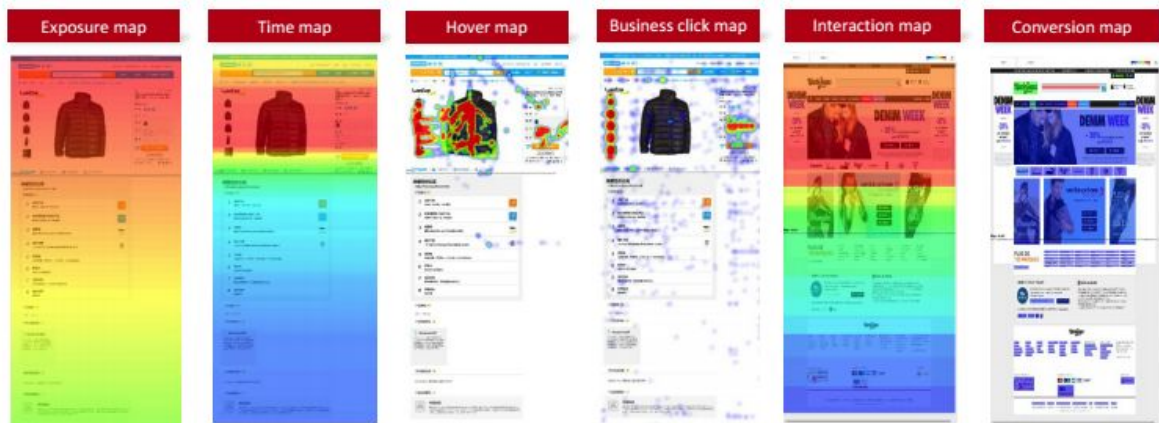
We use multiple instance of Amazon S3 to stock and replicate that data.

## Data Interpretation:

The Back-end team calculate the data we need using Scala and EC2 instances and stock the results in Redshift and MySQL.

## Data Visualization:

Our Front-end solution query and allow us to generates all kind of charts for our user to interpret that data :





## **Performances:**

To give our users a better experience accessing those data, since the calculation needed are slow, we store the results of the query in Redis and the html send by NGINX with Memcache.

## **Development tools**

### **Technologies**

As a part of the “Front-end” team our environment was based on Docker to package all the necessary tools in a single place and using the same versions everywhere.

It contained PHP, NGINX and MySQL. We also have a specific instance of Redshift for each environment.

All development was done for the back-end part using Symfony2 and Doctrine in combination for the front-end part with AngularJS, JQuery, Bootstrap D3js

We use Grunt as a task runner and Bower as a dependency manager.

We use Git as a source code management tool.

### **Methodology**

.Every commit made to the branch must be reviewed by Reviewboard before it can be pushed to the current branch.

We have an automated build system based on Jenkins that runs all our tests (Protractor for the end to end tests, PHPUnit and Karma for unit tests) on each new push to the current branch.

Every successful build triggers a deployment on the future environment.

Puppet and Chef are used to automatically deploy to every environment we use: future, staging, pre-production and production.

## **Agile Methodology:**

### *Scrum:*

- Sprint Planning: Every two weeks, on monday we assign a number of point to each task the Product Owner set for us. We then decide on the perimeter of the sprint
- Retrospective: On the same day as the sprint planning, we review the work done on the last sprint, was was good and need to be continued or what wasn't and need to stop.
- Daily meetings: We share with the rest of the team we have done on our assigned task since the last meeting, what remains to be done and if we encounter any difficulties
- Pair Programming: When the task is deemed dangerous or when we encounter difficulties we join with a co-worker to not lose too much time.

## **Health Reporting and Errors management**

We also have tools for reporting errors (Loggly) and controlling the health of our platform (PagerDuty)

All error reporting by users was managed through ZenDesk.

## Part Two: Asking to join a new project

Une partie destinée à convaincre votre responsable de stage de vous intégrer dans l'équipe d'un nouveau projet qui vous intéresse particulièrement, en vous appuyant sur vos qualités et atouts que vous justifiez par le stage et les projets qui viennent de se terminer, mettant en avant vos réalisations.

Dear Mathias,

I must say, the last six months I just spend working under your management allowed me to learn a lot, and become a much better software engineer.

This experience also allowed me to understand what a startup need to grow rapidly and what can stop that growth.

Working with people more experienced allowed me to improve my skill and the quality of my work as you seen during the course of this internship.

As you seen, I'm greatly concerned by the quality of the product that we sell to our customers.

The page comparator module I developed alone is a perfect example of a feature meeting the set requirements.

Now that the migration of our product as a SAAS application is almost finished, I think it's the perfect timing for us to discuss my next role in your company.

I would like for us to set up a meeting to discuss this in details.

Please let me know the time and date that suit you best.

Best regards,

Sylvain Tissier

## Part Three: Asking for lead on a full project

Une partie destinée à convaincre un haut supérieur hiérarchique (non technique) de vous confier la responsabilité complète d'un projet, de bout en bout, avec des contacts clients. Ici encore, vous allez mettre en avant vos atouts pour une telle mission en justifiant vos capacités au travers des faits de la période de stage.

Dear Jonathan,

As you may have seen during my internship in your company, I'm a perfect fit for working in a team.

My capacity to listen to others and to communicate with them efficiently is a perfect fit for the position of Product Manager I heard you were looking for.

Our session of planning with the rest of the development team is the proof of my abilities to estimates complexity of task and our need to deliver on time.

To add to that, as a software developer I'm perfectly aware of the need for quality and that technicals debts is almost as toxic as financials debts.

I have been used to managing project as a student at Epitech for 5 years, and I know, strong of my recent experience with you, that I can reciprocate that on a whole project to maintain the impossible balance between cost, quality and delay for your company.

I would like us to set up a meeting to discuss more about it.

Please let me know the time and date that suit you best.

Best regards,

Sylvain Tissier

## Glossary

<i>Agile</i> : software development method	<i>Scala</i> : programming language based on Java
<i>Scrum</i> : iterative and incremental agile methodology	<i>PHP</i> : programming language
<i>NGINX</i> : web server (like apache)	<i>Loggly</i> : log management tool
<i>AngularJS</i> Javascript framework	<i>Amazon S3</i> : cloud data store
<i>D3.js</i> charting framework	<i>Amazon EC2</i> : cloud computing
<i>Bootstrap</i> : front-end framework	<i>Redshift</i> : cloud database
<i>JQuery</i> : Javascript Library	<i>MySQL</i> : database