

*Allume  
Paris*

**Il est grand temps de rallumer les étoiles**

---

**It is high time to rekindle the stars**

*Les Mamelles de Tirésias* by  
Guillaume Apollinaire, 1917



# Executive Summary

Our proposal is to create an app, Allume Paris, which allows users to scan street signs throughout the city to unlock augmented reality characters that entertain and educate users about their own historical significance as well as that of the surrounding area.

The biological inspiration of this proposal is the phenomenon of neural plasticity and the establishment of neural networks. As Paris's streets provide a platform to transmit information, much like neural circuits, gamers will establish connections throughout the city upon scanning street signs.

The application combines previous endeavors like augmented reality, interactive exploration, and public

history into an individualized game that encourages exploration.

By partnering with museums and the City of Paris, we plan to create this app so that Paris continues on as the museum city in a novel and energizing way.

## A gamified way of learning that animates the city

# The Team



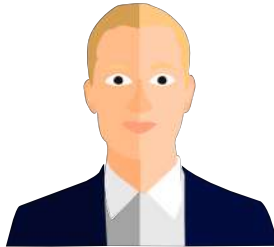
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1

# THE OPPORTUNITY



# Paris – the museum city



# How can we truly engage with the history of Paris?

With 129 museums, Paris is aptly called the museum city. Yet, it appears its residents have all but forgotten the rich history embedded within Paris's infrastructure. Boulevard Saint Germain maintains utility, yet few pedestrians reflect on the eponymous saint, a bishop of Paris, who devoted his life to the poor. Though people visit museums to sustain culture and engage with history, they forget the culture and history that surrounds them – found throughout the city thanks to the namesakes of different streets.

Parisians' routinized lives make it easy for citizens to disengage from their surroundings. Urban routines



bring about problems unique to city life. Studies support mental health detriments stemming from urbanization, primarily thanks to an increased presence of stressors like pollution, overcrowding, and social isolation (Srivastava 2009).

There is a need for people to find ways to explore the city beyond the circuits they live in and recognize the history that lives in the streets.

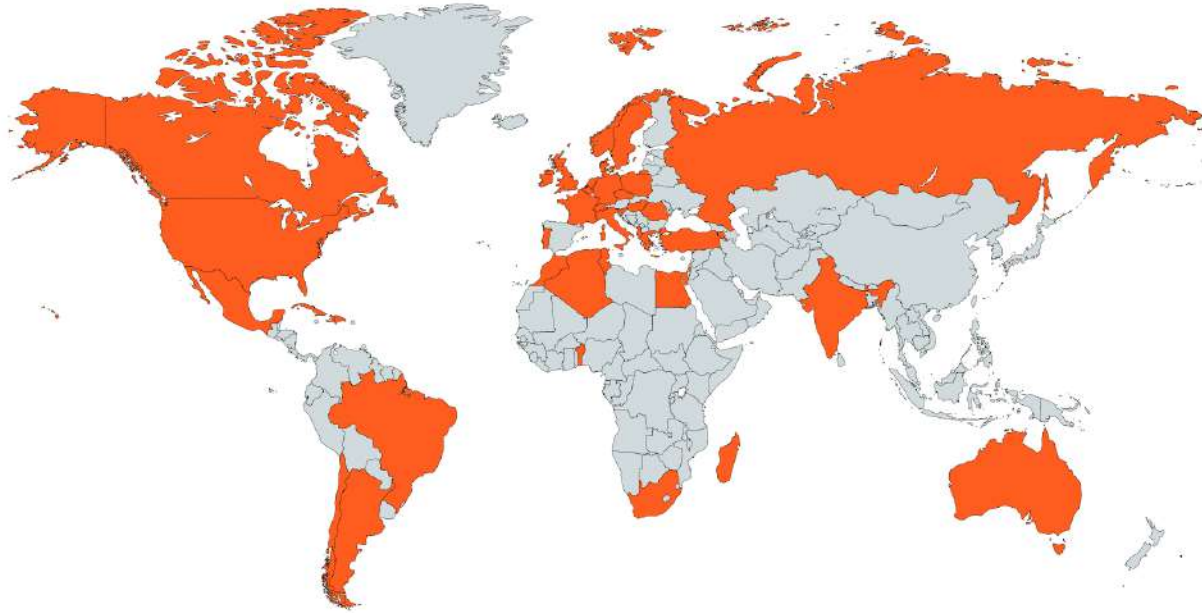
## Finding the history within its streets





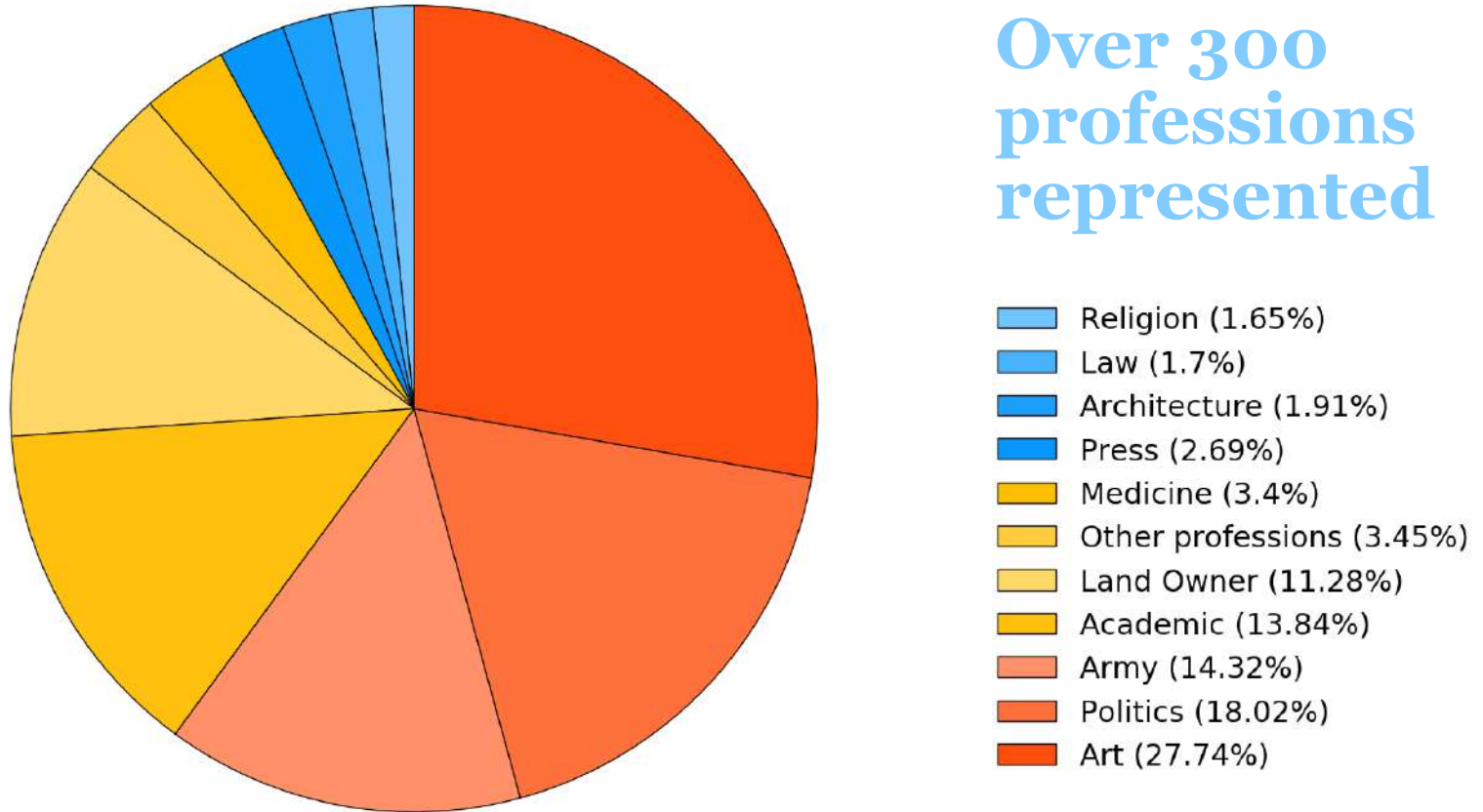
**After whom are Paris'  
streets named?**

## The nationalities represented

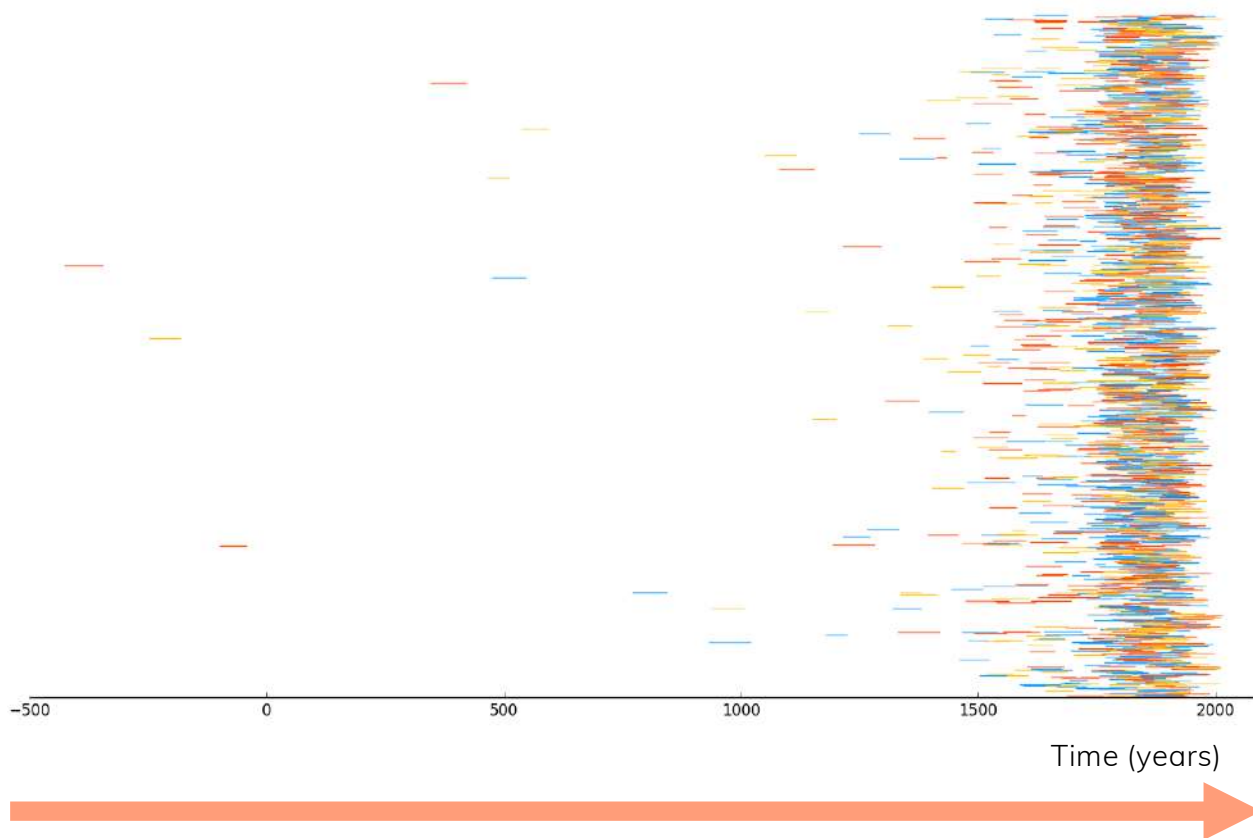


Database: OpenDataParis  
Data mining: Harvard Summer School

## Over 300 professions represented



# Over 20 centuries lived



Paris creates a pattern of 5000 streets, offering incredible potential for our project. We created a database to shed light on the unique history living within the streets of Paris.

In the graph to the left, each line represents the lifespan of an individual who has a street named after them. We found that the majority were named after people who were alive in the past 500 years. One of the oldest individuals after whom a street is named is Julius Caesar.

# Turning the city into a museum



As the United Nation presented in its World Urbanization Prospects report in 2014, two thirds of the world's population will live in cities by 2050. Thus, it is important to critically think about how we can prevent a sense of stagnancy and disengagement from developing in urban environments. We have to think of new ways for people to engage with their cities, which aligns with the United Nation's 11<sup>th</sup> Sustainable Development Goal (SDG): to make cities inclusive, safe, resilient, and sustainable, and to protect and safeguard the world's cultural and natural heritage.

Through our project, we address three SDGs: good health, quality education, and sustainable cities and communities through the development of an app that offers a unique, innovative, and fun way to engage with the city. Paris yields enormous learning opportunities and lends itself wonderfully to offer new connections with its residents.

**Our aim is to  
let the city  
speak for  
itself**





2

ALLUME  
PARIS

# The Concept

Allume Paris is an app that compels pedestrians to interact with their historically significant surroundings. Capitalizing on the rich history integrated with the streets of Paris, the app's basic premise is to gamify the city.

Users scan street signs named after historical figures, at which point augmented reality characters of each street's namesake appear. These characters interact with users during a short animation in which they describe themselves as well as the cultural significance of the area in which the user scanned the sign.







Pietro D

**Street Collection**

**Survey Completed**

**Previous Circuit**

**History Quests**

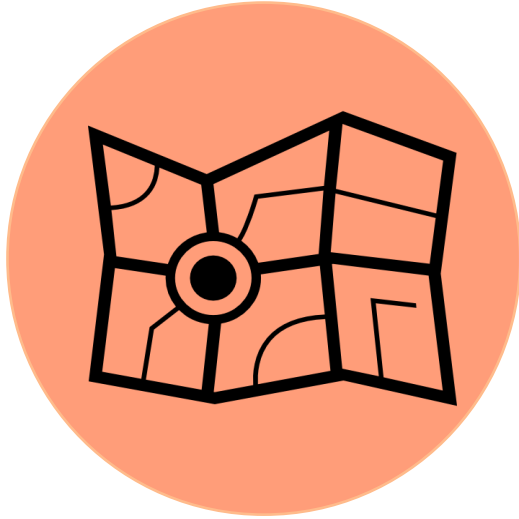


looking for a street?.. 0<



SCAN  
STREET SIGN

# Components of Allume Paris



**MAP** As users progress through the game and unlock characters of different streets by scanning their signs, the street will illuminate on their map of Paris. Eventually, their city will again be full of light.

**CIRCUITS** Users can accomplish different circuits of streets, ranging from a circuit based on the profession of the character (artist, poet, etc.) to the path that Ernest Hemingway took through Paris. In addition, there will be special circuits based on events going on in Paris, such as the Tour de France, which will give users badges.

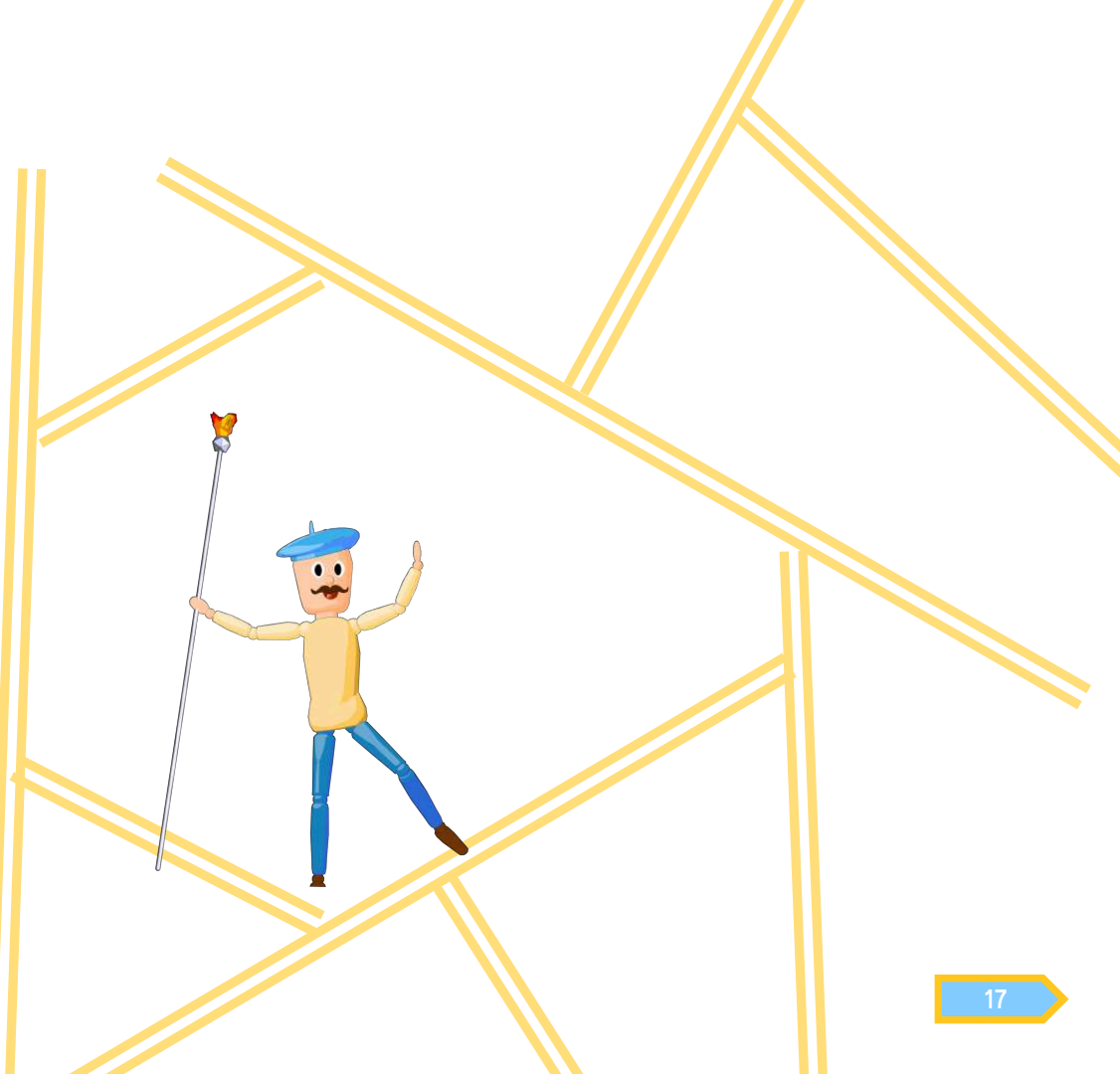


# Circuits

Thematic circuits will enhance learning opportunities within the city and connect Paris' network of streets in a novel way. These paths will be based on certain themes, such as the professions of the people streets were named after.

Circuits are reinforced by the augmented reality characters who encourage the user to direct him/herself towards the next street within the circuit.

Users who complete an entire circuit are rewarded with different trophies and badges.





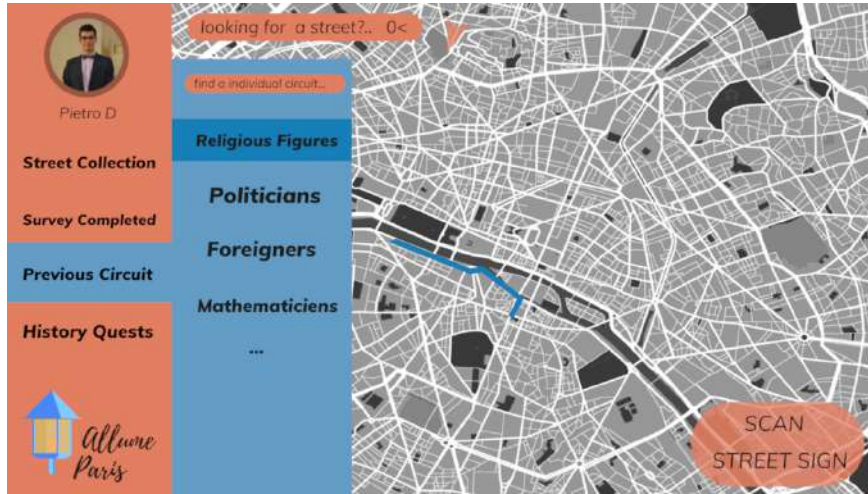
# Religious Figures Circuit

A potential circuit that we will create is a series of streets named after individuals with religious backgrounds. For example, a religious circuit could consist of: Saint-Jacques, Saint Michel, Saint Germain, Mazarin, Saint Honoré, Saint Anne, and Richelieu.

Most of these individuals are saints, some were also involved in politics, and one of them is a woman. The circuit is, therefore, remarkable in terms of its diversity. Its location, right at the heart of the city, offers a different perspective and experience in a traditionally touristy area.



# Religious Figures Circuit



When a user is playing a circuit, they will explore a specific path of streets. The more street signs a user scans, the more the path on the user's interface will light up, allowing gamers a sense of achievement.



# Who plays Allume Paris?



**THE CURIOUS PARISIAN** will be attracted to Allume Paris because it offers a way for citizens to actively explore their city in a new way and learn about its history.



**THE STUDENT** will use Allume Paris as a useful tool in learning the history of Paris in conjunction with material presented to them in class. Allume Paris also appeals to the age demographic of students as a challenge-oriented, mobile game they can enjoy with friends.



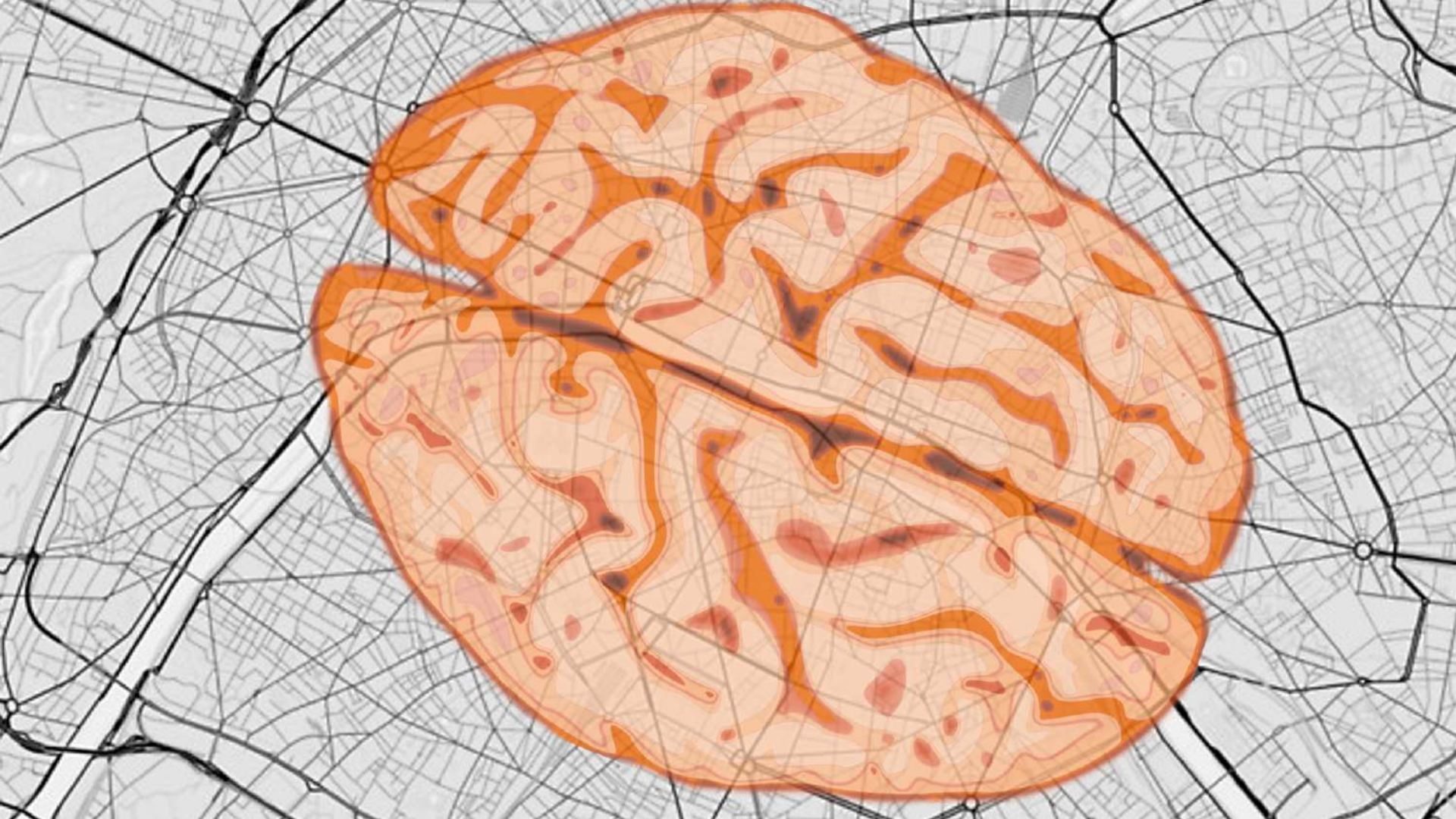
**THE TOURIST** benefits from Allume Paris because they are free to roam around the city in a unique way, distinct from guided tours due to their individual choice in deciding paths throughout the city.



3

# BIOLOGICAL INSPIRATION





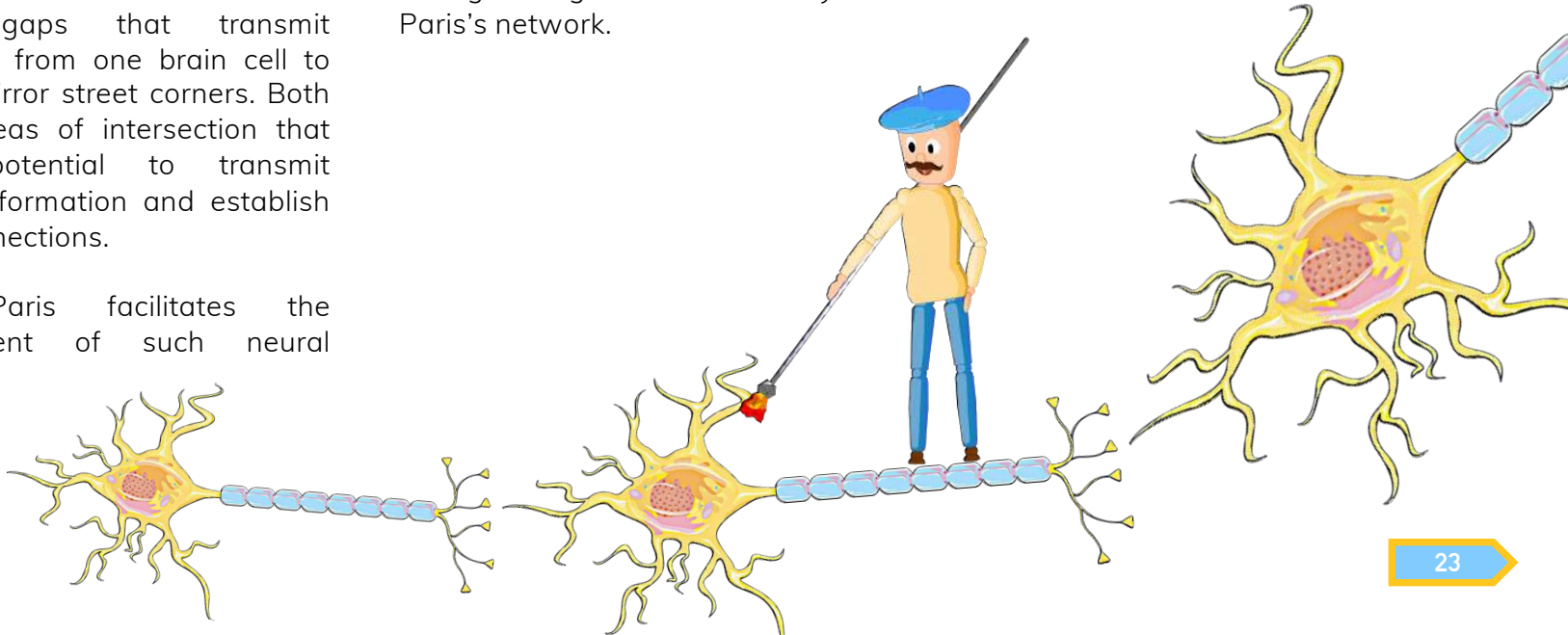


# Allume Paris Models Neural Plasticity

Paris's network of streets functions similarly to neural circuitry. The streets, as neurons, transmit information and are structured to facilitate connectivity. Synaptic connections between neurons (specific gaps that transmit information from one brain cell to another) mirror street corners. Both present areas of intersection that contain potential to transmit valuable information and establish lasting connections.

Allume Paris facilitates the establishment of such neural

connections throughout the network of Paris's streets. As users play the game and accomplish different circuits throughout the city of Paris, they will simultaneously be strengthening the connectivity of Paris's network.

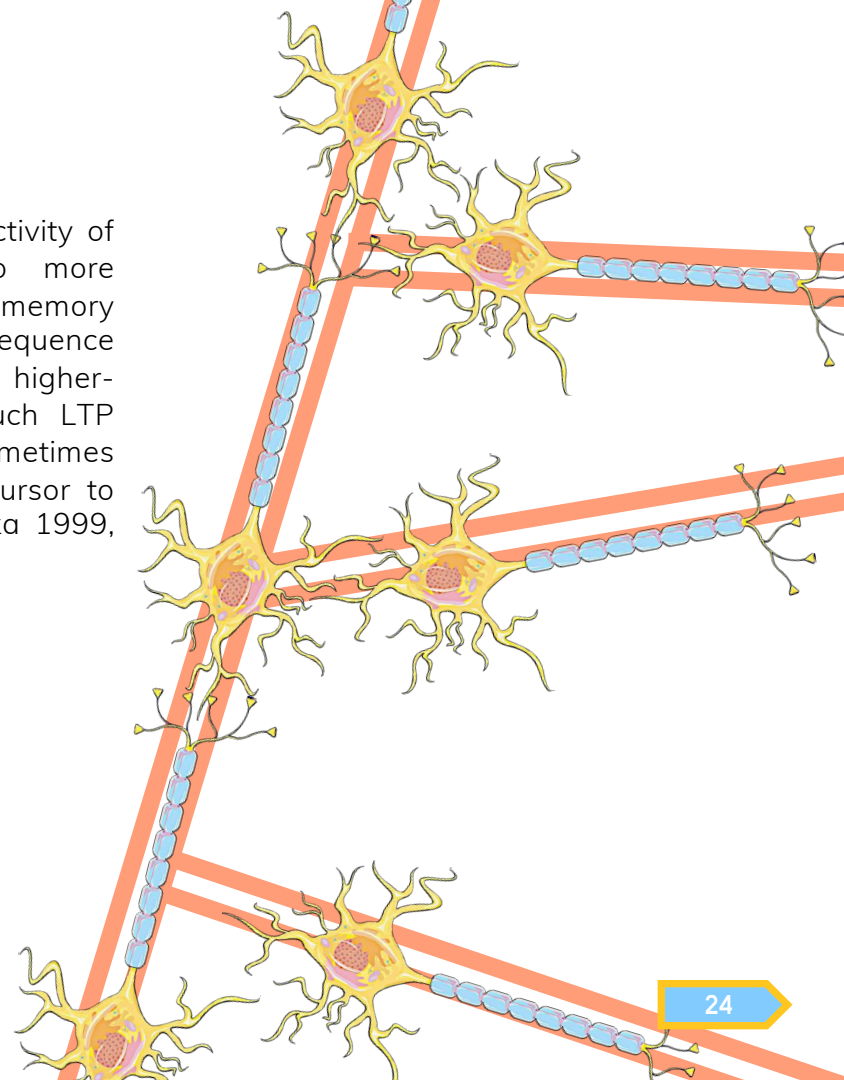


# Neural Plasticity

Humans' neural networks are dynamic, either continually developing complexity or atrophying. Such changes are studied through the field of neural plasticity.

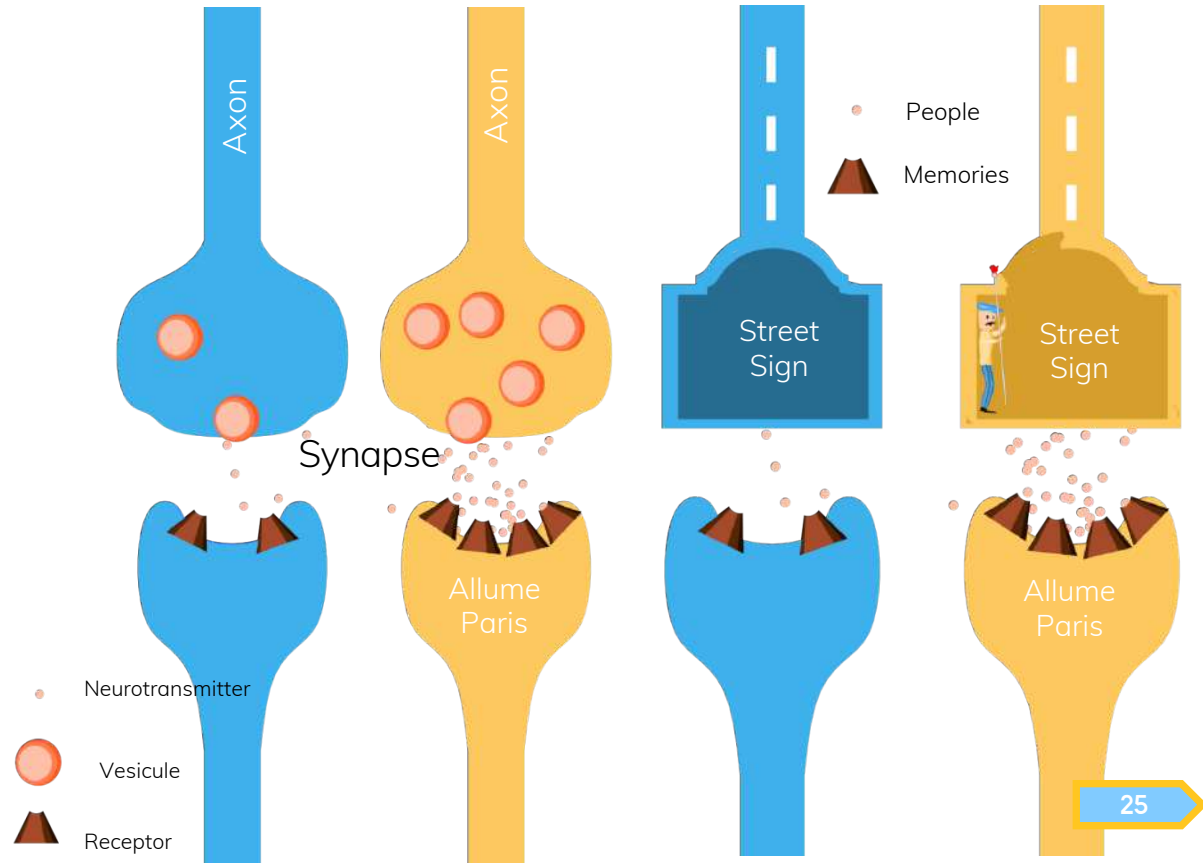
Synaptic plasticity, a subset within the field, explores phenomena surrounding the development of synaptic connection networks following repeated stimulation. Long-term potentiation (LTP) is the most widely accepted experimental model for how synaptic connections are established, strengthened, and maintained in order to create and store memories (Malenka 1999).

LTP – an enhanced connectivity of synapses that leads to more efficient cognition and memory formation – occurs after a sequence of synapses experience higher-than-normal activation. Such LTP usually lasts minutes, sometimes hours, and acts as a precursor to long term memory (Malenka 1999, Nicoll 2013).



# Drawing Parallels

AllumeParis induces a permanent change throughout Paris' streets. Much like the biological response of gene transcription or novel protein synthesis in order to maintain lasting memories, once Allume Paris establishes users' network of connectivity, those users will take on roles beyond the scope of the app and provide lasting improvements for the city. Users will discover novel cafes, parks, museums, galleries, opportunities for civic contribution, city-wide events, and cultural happenings. Allume Paris provides a connected network upon which users can establish lasting impact. As users modify their lifestyles thanks to connections created through the application, they alter Paris' neural network in a significant, lasting way.





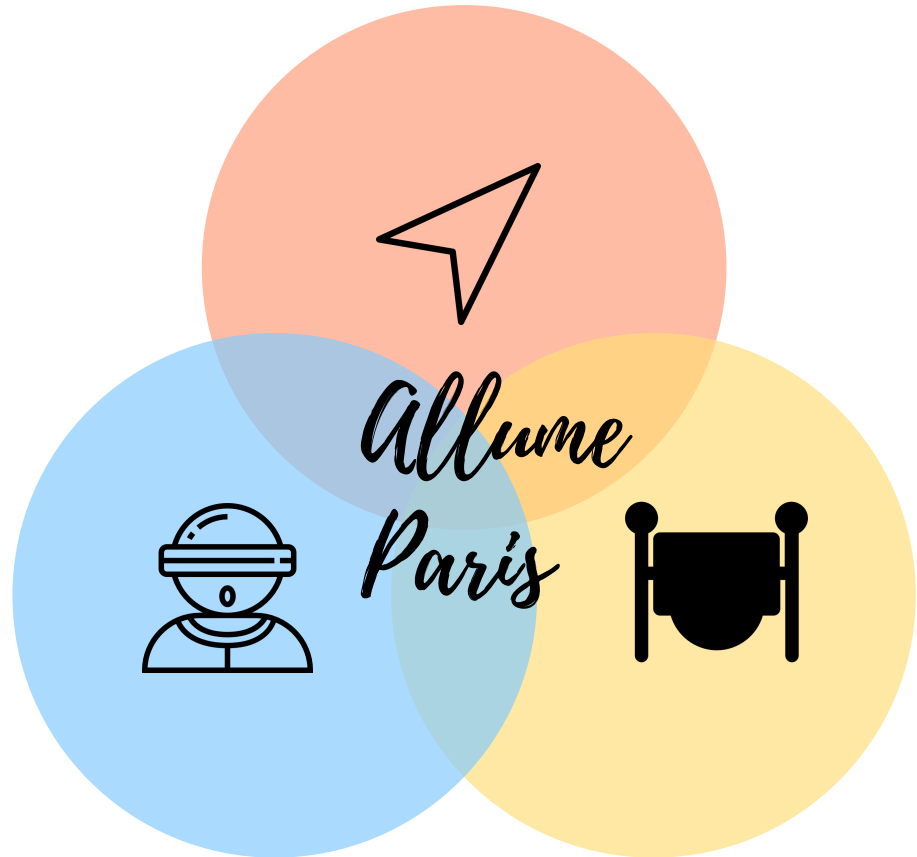
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**PREVIOUS  
APPROACHES**

# Previous Approaches

In this section, we look at precedents to Allume Paris in three different categories: interactive exploration, augmented reality, and public history. Allume Paris looks to capitalize on the unique facets of each field, as their success demonstrates the opportunity for an integrative endeavor.

As our app aims to combine these three key components, we consider previous approaches in those separate fields, identify their strengths, and then analyze how our project is innovative and can work off our predecessors.





# Interactive Exploration

## THE SITUATIONISTS + DÉRIVE

From 1957 to 1972, there was an organization in Europe called the Situationist International (SI), consisting of intellectuals, political theorists, and avant-garde artists. Situationists heavily emphasized the idea of psychogeography (the emotional impact that places can have on people) and the need to “drift” in urban environments to alleviate social alienation and the suffocating nature of capitalist societies (Tate).

Although the SI has since disbanded, their concept of psychogeography has maintained interest as can be seen through the urban exploration app Dérive. In this



game, users are given different tasks every three minutes, requiring users to interact with the city in a new way. This aims to enhance the emotional connection that people have to their physical location and alleviate potential negative effects of living in an urban city, following the same routine.

### Strengths

- Serendipitous exploration of the city facilitated by app
- User creation of own task cards and interaction with each other through groups

# Interactive Exploration

## GEOCACHING

With over 2 million geocaches worldwide, geocaching has become a global sensation. People are able to make or find geocaches in their area using a geolocation app to navigate their discovery. Geocaches vary in difficulty and once found, people log their names in a logbook, sometimes exchanging trinkets. (Geocaching)

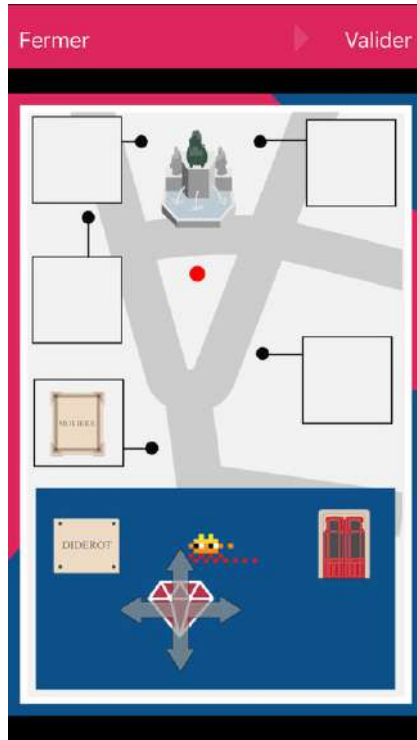
This game has reached its massive success thanks to its simple concept design and engaging premise. It has compelled users to explore their local area in novel ways.

### Strengths

- Mission-oriented activity
- Exploration of new areas



# Interactive Exploration



## PARIS ENIGME

Paris Enigme was developed by the city of Paris for Euro 2016 in an effort to encourage novel exploration of the city (Furet 2016).

The development of this app demonstrates how the government of Paris hopes to encourage tourists to unconventionally explore the city. The shortfall of Paris Enigme is its limited offer of only two circuits – between Opéra and Concorde.

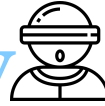
Paris Enigme allows a pre-downloadable package so data is not required. The app contains features such as puzzles, virtual reality, and observation games.

### Strengths

- Downloadable packs for tourists that don't require data
- Paris-specific, interactive games that provide educational, cultural facts



# Augmented Reality



## POKÉMON GO

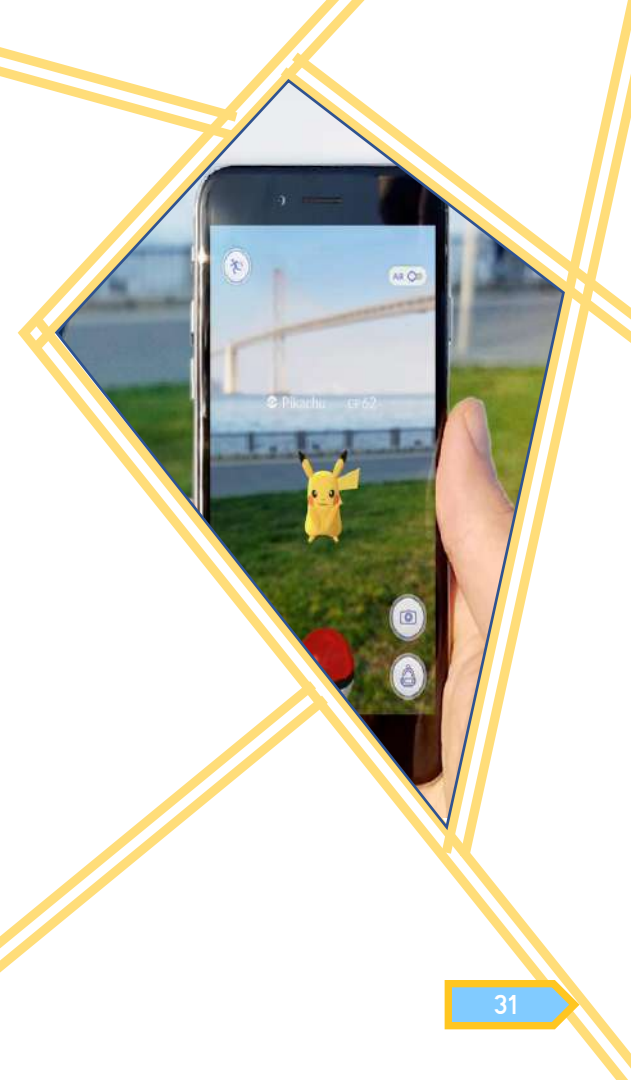
A year after its launch, Pokémon Go is now the most-downloaded game of all time. Rooted in Augmented Reality, the gamified platform compels users to scour their cities for characters revealed on-screen upon discovery. With over 750 million downloads, a peak Daily Active Users (DAU) figure of over 28 million, and current DAU of 5 million, the app is unquestionably one of the most viral, pervasive, and global games in history (Niantic 2017, Smith 2017). The success of the app also stemmed from the addictive “catch ‘em all” incentives that the game features, and tapping into the nostalgia of a generation that grew up playing

Pokémon, whose characters now shared users’ streets and appeared on-screen. The app incentivizes users to explore local areas, and has dramatically increased activity across myriad demographics.

With industry giants announcing their intentions to make AR widespread, like Facebook’s F8 introduction of their camera-based AR platform and Apple’s newly-developed ARKit for iOS11, the AR market is on the brink of explosion, begging for entrants (Merel 2017).

### Strengths

- Entertainment from AR
- Increased pedestrian activity





# Public History

## BLUE PLAQUES OF LONDON

London has a long-standing program to educate residents about its history through 900+ “blue plaques.” These plaques highlight buildings where notable individuals lived.

These markers are then collated in an application that connects plaques to create circuits. The resulting “treasure hunts” incentivize users to complete circuits.

## FREEDOM TRAIL OF BOSTON

Similarly, the Freedom Trail is a walking trail in Boston that marks 16 locations important to the history of the United States.

## HISTOIRE DE PARIS PLAQUES

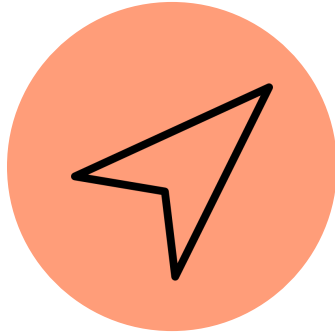
Paris has made similar efforts to identify important landmarks throughout the city with its “Starck Oars” – plaques designed to engage citizens and impart the history of Paris. The Mairie de Paris has sought to modernize these plaques for eight years but has yet to find the right platform or implement advancements to the program.

### Strengths

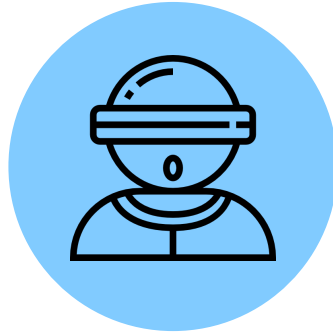
- Based on pedestrianism
- Public engagement with history (Available to wide range of people)



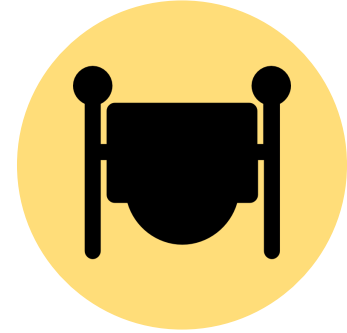
# How Allume Paris Fits In



Allume Paris differs from Dérive and Geocaching through its provision of an engaging, educational experience in addition to an explorative game. It is more extensive than Paris Enigme, as Allume Paris covers the entire area of Paris.



Pokémon Go and Allume Paris are similar in their encouragement of city-wide roaming, gamifying the entire municipality. However, Allume Paris builds on the gamified, augmented reality platform to provide an educational experience. Users go to a given area not just to interact with a character but to learn about the area's history.



Public history initiatives are an important precedent that demonstrates how Allume Paris can take advantage of the history within city streets. By adding the component of augmented reality, we hope to gamify and modernize public history and make it a more entertaining, interactive experience.



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# BUSINESS PLAN

# Business Plan

**1. Research & Development Phase**

**2. Launching of the App**

**3. Add-On Features**

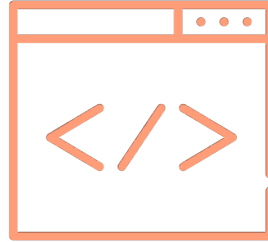
**4. Implementation in New Cities**



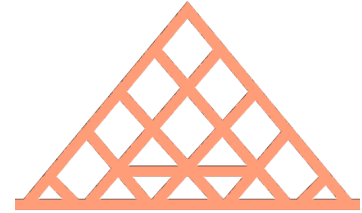
# 1. R&D: Key Partners



The **Mairie de Paris** would be a valuable partner in Allume Paris' development, particularly with respect to the variety of events happening in Paris, such as the Tour de France and potential 2024 Olympics. Allume Paris provides an individualized marketing opportunity for the Mairie. As a dynamic, lively city, Paris would benefit from advertising within the app.

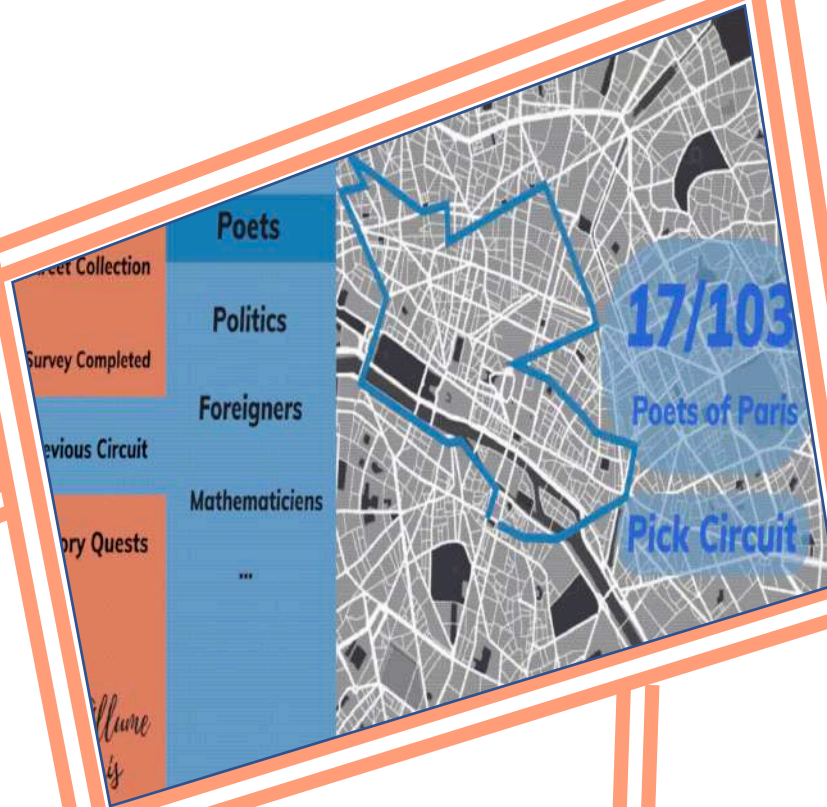


**Professional coders** will be hired to program the application. We will also seek contributions from **students** of schools of design and coding to create augmented reality characters featured in the app. By including students in the app's development process, we will actively involve the community in the creative process of revitalizing Paris.



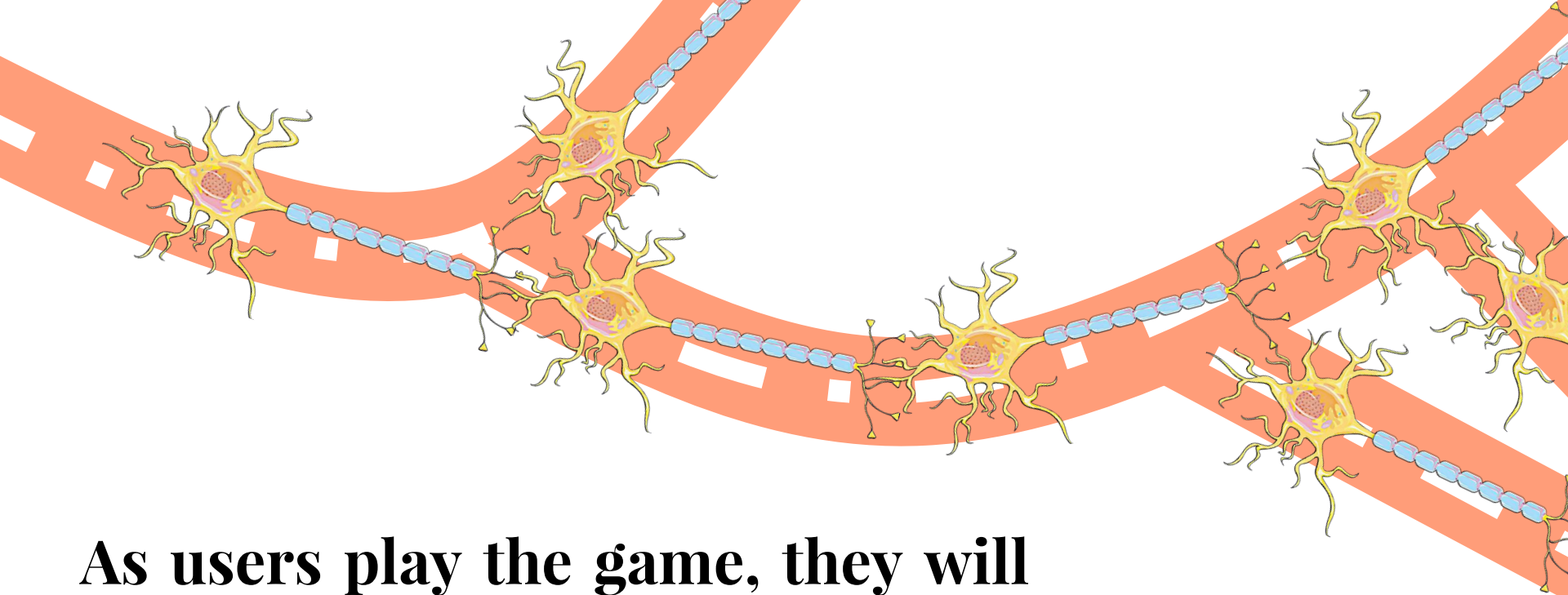
To guarantee the accuracy of our characters and their historical dialogue, we will partner with **museums**. We hope to partner with the Louvre to collect information on artists, Cité des Sciences et de l'Industrie for scientists, and Musée Carnavalet for the general history of Paris.

# 1. R&D: Circuits

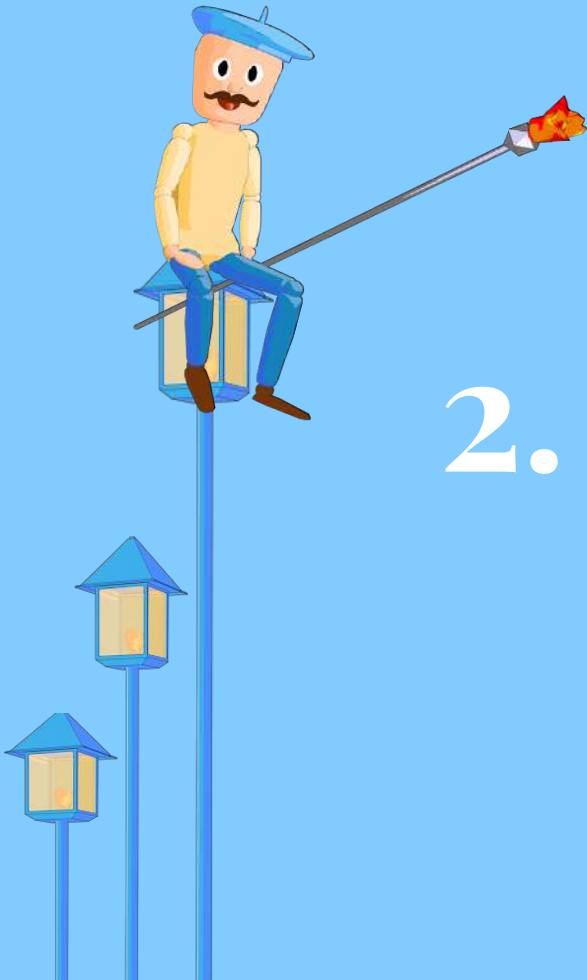


Once the basic infrastructure of our app is set, we will have to work on the development of different circuits that users can play. We will offer different circuits based on profession, such as a circuit for the streets in Paris named after poets. With the completion of each circuit, players will be awarded a trophy to add to the gamified element of our app.

When special events happen in Paris, such as the Tour de France, we will also create unique circuits offered for a limited time that users can accomplish.



**As users play the game, they will strengthen new circuits in their brain, in the same way that they explore new circuits of Paris.**



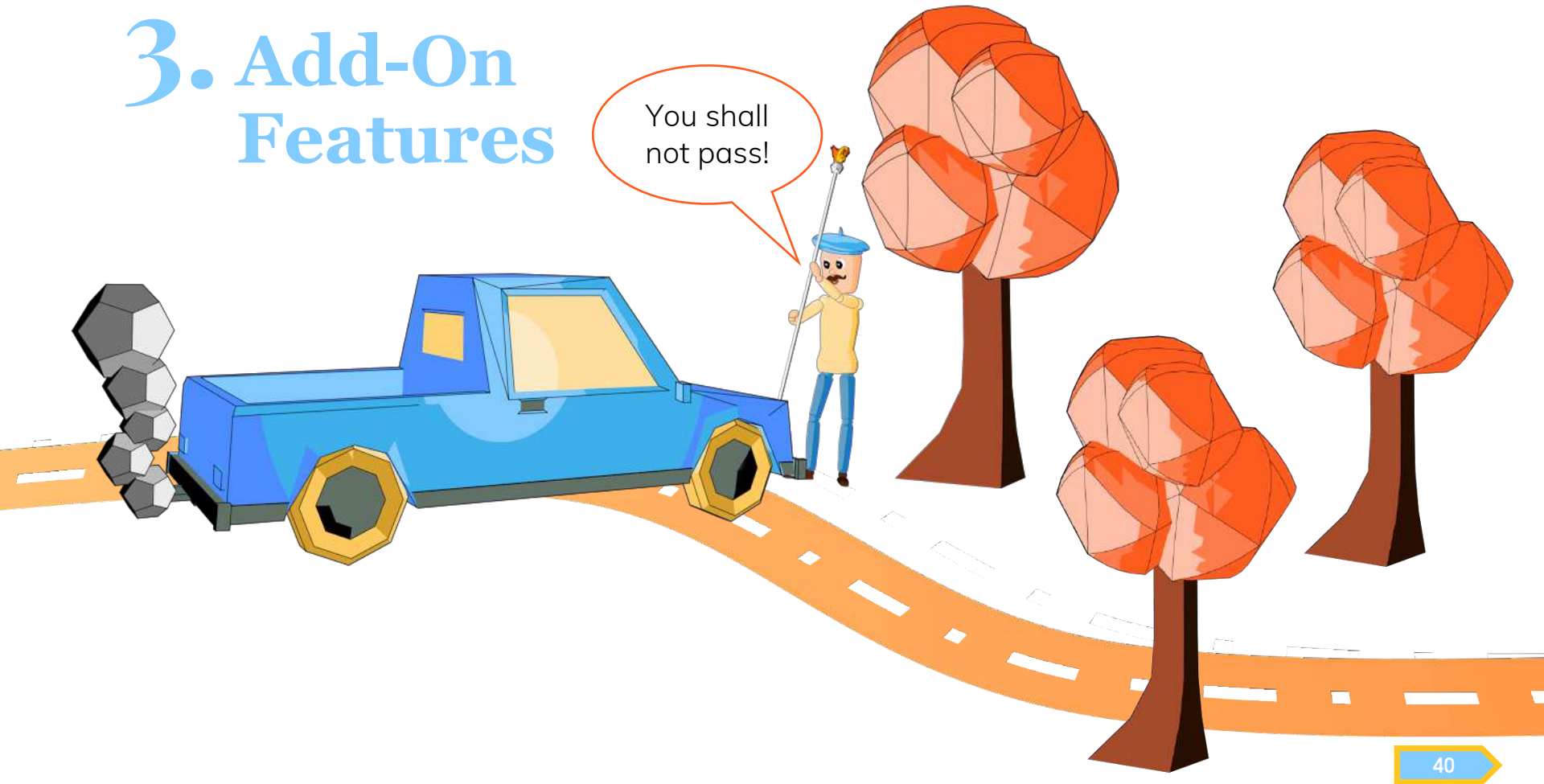
## 2. Launch Events & Early Assessments

To gain publicity for this app, we plan to hold launch events throughout the city of Paris in strategic locations where we can promote the app to pedestrians. At the event, we plan to work with a school of theater to have actors and actresses dress up as specific characters, such as Saint Germain, the bishop, and enact their biographies in their respective streets.

Through this, people will be able to learn about and download the app. Following the launch, during the first three months, we will closely monitor the project and continue to modify the app accordingly.



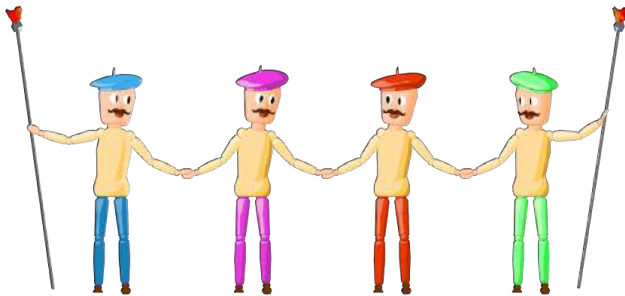
### 3. Add-On Features



### 3. Add-Ons: Street Closures

A potential future development for Allume Paris is to work with the Mairie de Paris and Paris Respire, an initiative to reduce air pollution by pedestrianizing the Champs-Élysées and surrounding streets once per month, to develop street festivals that would work in conjunction with the app.

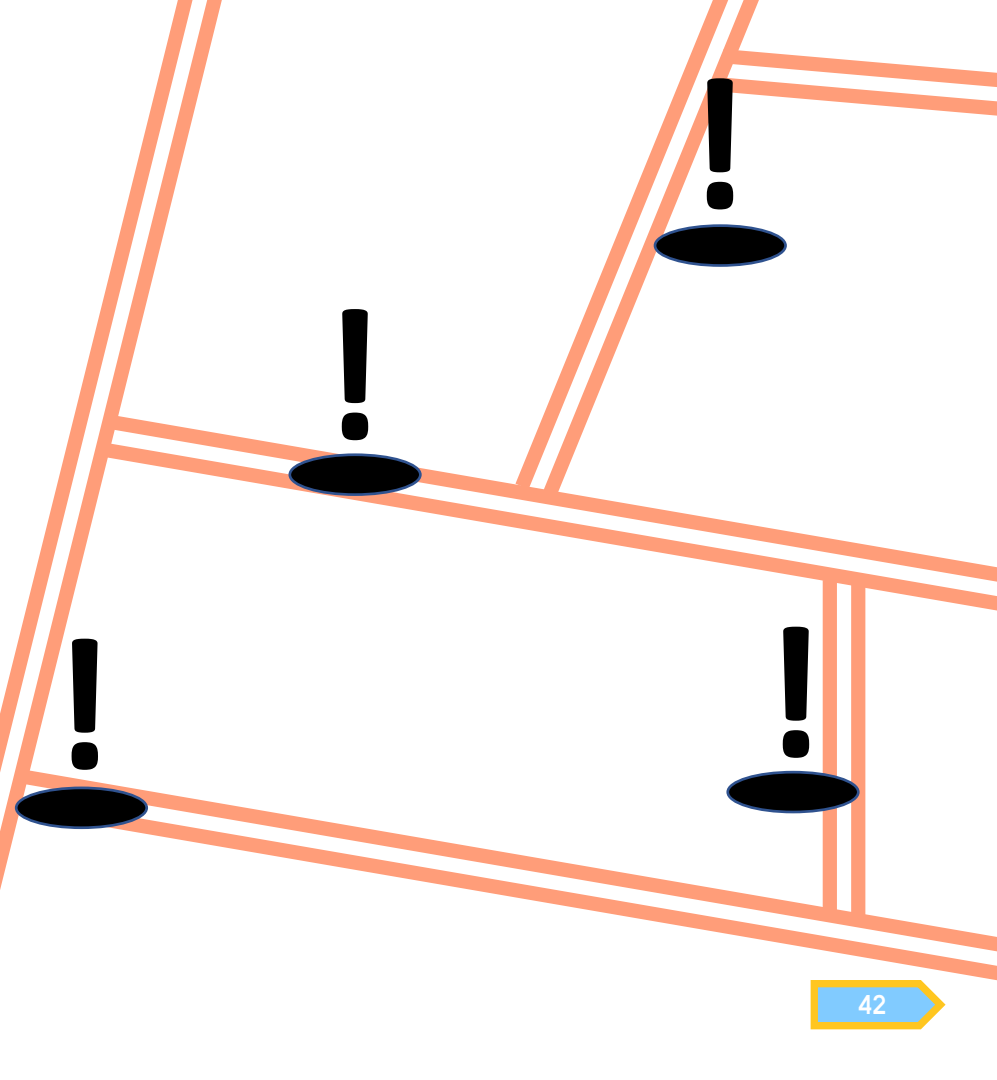
We could have street closures once a month in a specific arrondissement and organize a special festival, in partnership with the residents of the given arrondissement, to highlight the area's culture. In addition, gamers would have a special circuit they could accomplish to unlock trophies.



### 3. Add-Ons: Surveys

Another possible add-on to our app is “Survey Quests” that would allow users to provide direct feedback to the government on developments they’d like to see in certain arrondissements. For example, a survey quest might ask users what they would like to see in an empty space.

By accomplishing these survey quests, gamers would get additional points or badges and also have the opportunity to connect to the government.





# 4. Implement in other cities



With Allume Paris's simple but engaging game design, it is easy to see how this app could be implemented in other cities as well. Some target cities could be London and Mumbai, as they also have streets named after people.

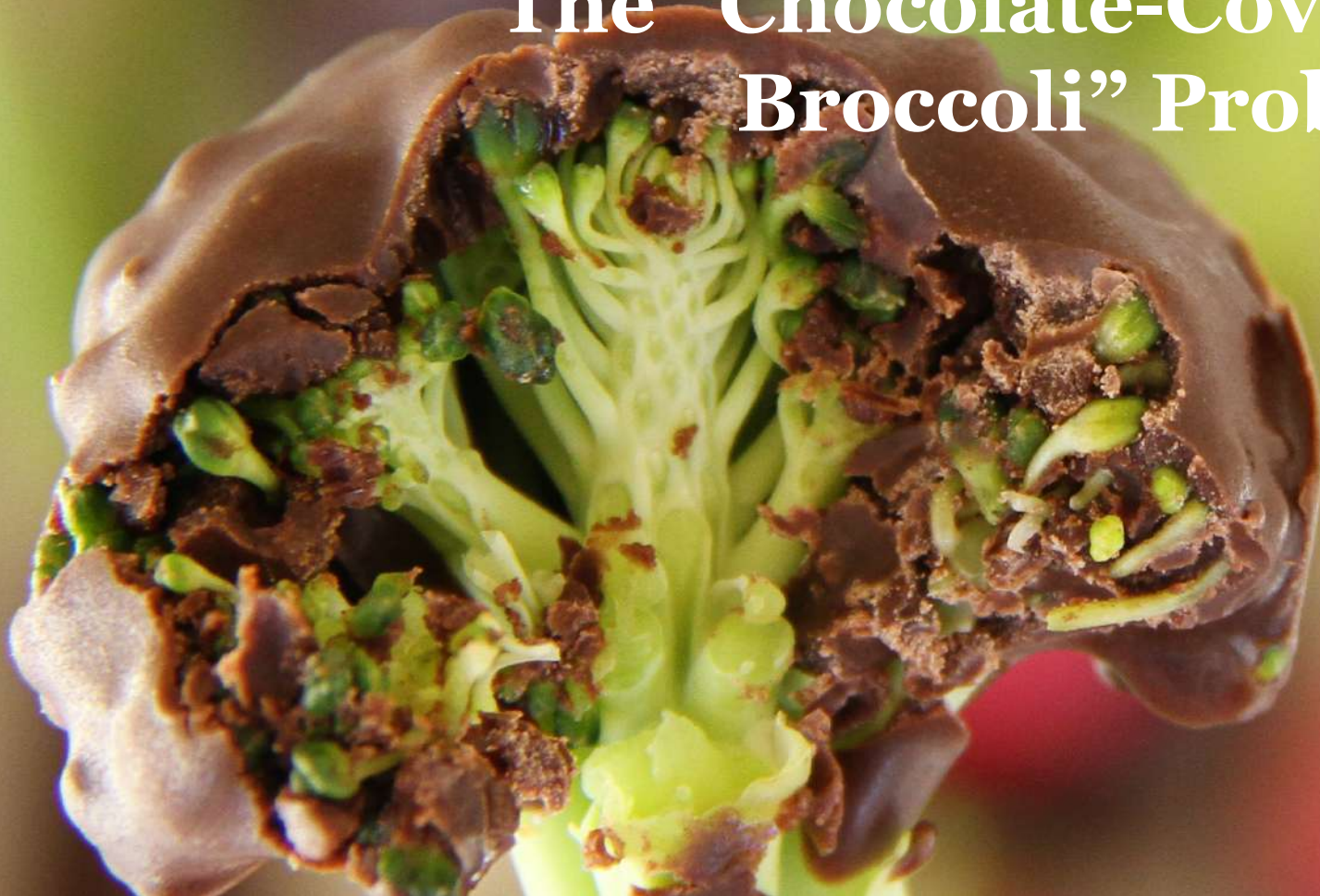




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# ASSESSMENT PLAN

# The “Chocolate-Covered Broccoli” Problem



# Challenges with Edutainment

“Chocolate-covered broccoli,” as coined by Brenda Laurel in her piece *Utopian Entrepreneur*, alludes to the idea that edutainment games, which seek to combine education and entertainment, often fail to provide users with actual fun (Smith 2017). Instead, they will “coat” their games with an engaging element, only to have users realize once they’ve begun playing, that in fact it’s simply just an educational tool.

Allume Paris strives to be different by providing a game to users that is entertaining the whole way through. Ensuring that users are having a genuinely fun experience with the game will be one of our key assessments.



# Evaluation Measures

Business endeavors are often compared to the market share, customer activity, and revenue streams of similar competitors. As our app is an integration of augmented reality and tour guides, it resides in a niche market of its own.

However, there are comparable benchmarks established by competitors that encompass key aspects of our application. The application will certainly not become as pervasive as PokémonGo, since PokémonGo had a much wider target audience through its global platform.

Thus, an analysis of our daily active user (DAU) would instead be compared to a smaller-scale application meant for use in the city, like Paris Enigme. We would compare our DAU figure to Paris Enigme as a benchmark goal for the platform.





NOW,  
GO EXPLORE!



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