



Center for Civic  
Engagement

A Citizen Powered Municipal Immune System

Connor Bitter, Yvenna Chen and Ivan Cornut  
Harvard Summer School

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Adam Tanaka

Cover Photo by Ed Gregory



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# Abstract

Though the city of Paris has many innovation labs and a large-scale participatory budget funding system, citizens who cannot afford the monetary or time cost associated with these options are left without an opportunity to participate in their city. The Center for Civic Engagement is our attempt at engaging more citizens in social change. Ultimately, we aim to establish a municipal immune system in which citizens act as innate immune cells that directly combat the problems -- "pathogens" -- that they detect.

We envision a new branch of the Mayor's Office helping to facilitate small-scale social projects through local outreach, engagement and logistical support, with the goal to empower citizens to create change themselves. The CCE would have "lymph node" offices throughout Paris to create a physical presence in many geographical neighborhoods.

We propose pilots of the CCE in three focus arrondissements, with the ability to expand the network to the entire city and beyond. Deployment would take around a year and a half, with assessment of projects and of the organization itself conducted continuously with surveys and interviews.



# Introduction



Innovation and start-up culture is now well established in Paris. Startup ecosystems are thriving with many incubators and accelerators (see “Helpful Definitions”<sup>1</sup>), and the city now has the innovation at the level of a 21st century Smart City. It can support a variety of companies and organizations, from environmental not-for-profits to social change start-ups, and even has a vast infrastructure for attracting international investment into the city.<sup>2</sup> Paris engages the private, public and not-for-profit sectors in an impressive fashion.

Unfortunately, even with the unprecedented investment in innovation and start-up ecosystems, an entire sector has been, until now, left out of the discussion: the civic sector

made of independent citizens. Even after passing the largest participatory budget in the history of municipal government,<sup>3</sup> Paris can still venture further in encouraging citizens to create social change on their own, apart from starting companies or organizations to solve their city’s problems. And though these formal organizations can serve a great purpose, they are often inaccessible to many groups within the city, especially those that cannot afford the cost associated with large-scale undertakings within the innovation community.

So, while the current model is great for the innovation sector, Paris’s independent citizens are not able to produce social change on their own.

## Helpful Definitions

*Incubators:* a company or organization that works with new companies on a flexible timeframe to help them take off the ground

*Accelerators:* a company or organization that works with already-established on a set timeframe to help them grow

How can Paris get citizens engaged in their own community? It must empower them to create change on their own, without having to navigate the complex web of bureaucracy and red tape that comes with creating a formal organization. People have ideas, and they are

ready to act on them. But right now, there is a lack of encouragement and practicality to turn these ideas into action.

We're proposing the creation of the Center for Civic Engagement (CCE), an agency tasked with enabling citizens to make self-directed social innovations in their communities.

## What is Social Innovation?

Even though the term "Social Innovation" is becoming a buzzword that is increasingly difficult to define, a widely accepted definition is simply that social innovation is the creation of ideas that enact social change; that is, ideas that simultaneously meet social needs and create new social relationships or collaborations.<sup>4</sup> Social change is the goal, whereas social innovation is the strategy for achieving the goal. What we propose as a tactic to enact this strategy is to encourage civic sector social innovation.

## Why the Civic Sector?

The civic sector is, in essence, the sector comprised of ordinary citizens doing work outside the context of public or private sector interests. It comprises those who work for free or volunteer, working together towards some common goal.

Tapping into this sector has numerous advantages over working with other sectors. The sector has little official organization, enabling people to take on initiatives spontaneously and without the added pressures of creating or entering a formal organization. It also allows for small-scale initiatives that do not necessarily have any "tangible" returns (in the private sector, financial returns; in the public sector, political/electoral returns), as would be sought after in private or public realms. Finally, it is accessible to every citizen regardless of social or economic class.

In the next section, we'll explore the current situation for getting involved in Paris and further reinforce the importance of engaging citizens.





## Biological Inspiration

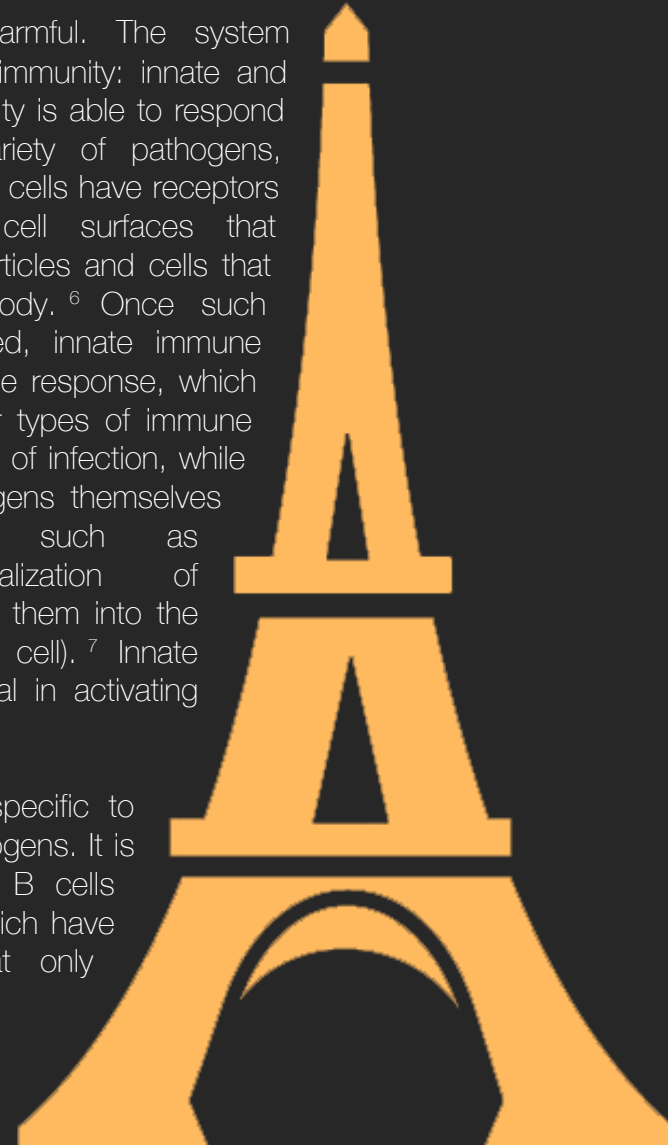
One novel way of thinking about the city, and a fundamental inspiration for the development of our proposal, is through the connection between biology and urbanism. Because the city is made up of life, in the form of individual citizens, biology and life can be applied on a much larger scale to the entire city. If we regard citizens as cells – the fundamental units of life, together, citizens create a living organism in the form of a city. Like a living organism, the city grows, changes, has a metabolism, and develops an immune system to attack pathogenic problems.

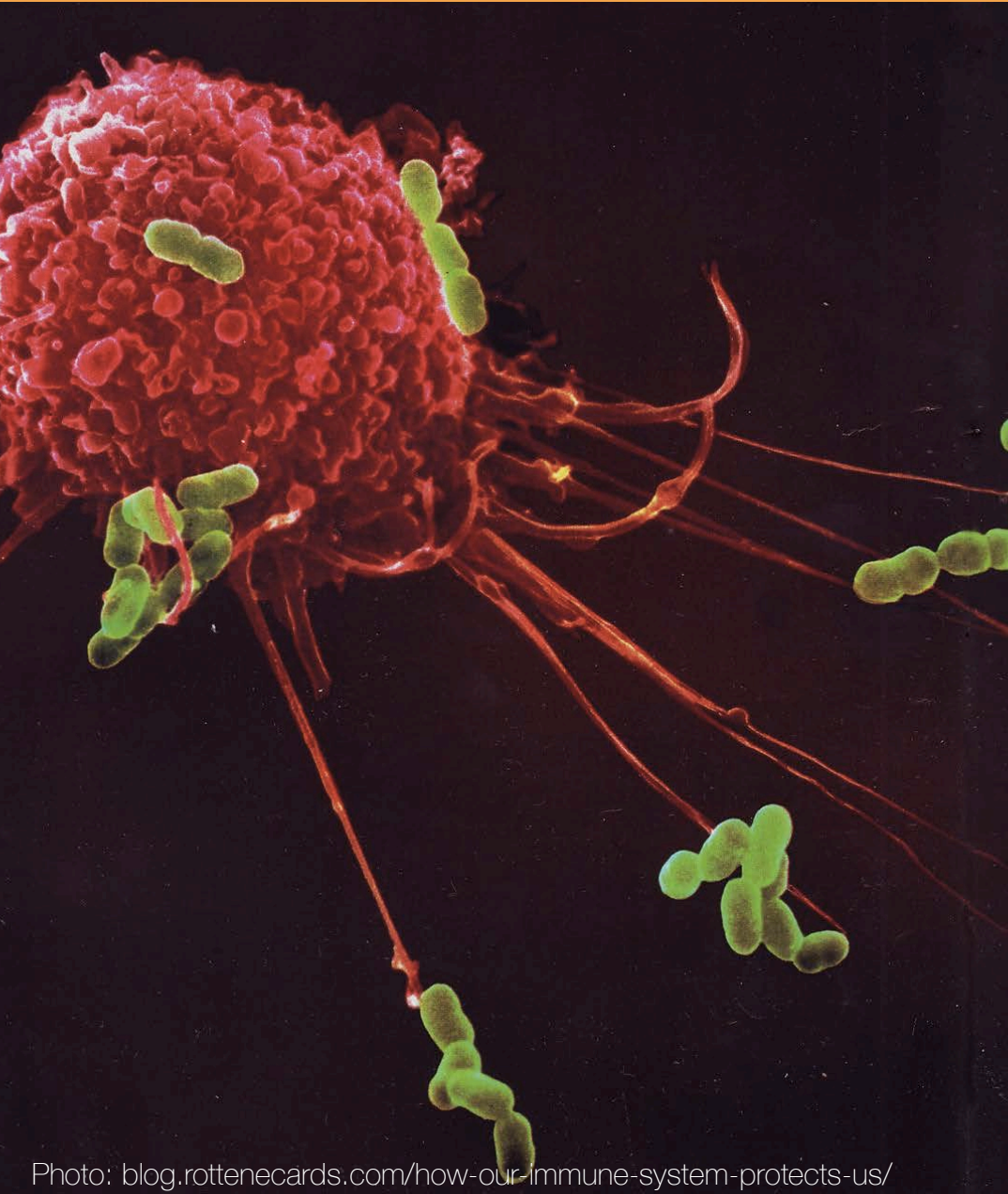
How does the city develop an immune system, and how does it improve this system through evolution? We drew upon principles of the immune system for inspiration in creating a system for the city to eliminate problems, or “pathogens.” In order to fully understand the workings behind our proposal for the Center for Civic Engagement, we must first establish a basic knowledge of the human immune system and how it acts as an inspiration for our proposal.

In the human body, the immune system is responsible for fending off infections, bacteria, viruses, and other pathogens

that are potentially harmful. The system includes two types of immunity: innate and adaptive.<sup>5</sup> Innate immunity is able to respond quickly to a wide variety of pathogens, because innate immune cells have receptors expressed on their cell surfaces that recognize almost all particles and cells that are foreign to the body.<sup>6</sup> Once such pathogens are detected, innate immune cells activate an immune response, which recruits a host of other types of immune cells to arrive at the site of infection, while also fighting the pathogens themselves through processes such as phagocytosis (neutralization of pathogens by engulfing them into the body of the immune cell).<sup>7</sup> Innate immune cells are critical in activating adaptive immunity.

Adaptive immunity is specific to individual types of pathogens. It is primarily comprised of B cells and T cells, both of which have specific receptors that only





immune response.<sup>8</sup> B cells respond by producing antibodies that bind to the antigen and render it harmless, while T cells carry out a range of functions, including killing infected cells and recruiting other immune cells.<sup>9</sup> Because of its pathogen-specific nature, adaptive immunity is critical to the development of an immunological memory, a system in which the immune system requires less time and fewer resources to combat a pathogen that it has previously encountered.<sup>10</sup>

Although innate immune cells can quickly combat a wide range of pathogens, they act on a small, local scale. However, they are capable of triggering adaptive immune responses that act throughout the body. Additionally, over time, their actions collectively bring about large systematic adaptations through the formation of an immunological memory.

We will continue to draw from this inspiration to present a holistic perspective of the CCE.

Photo: [blog.rottenecards.com/how-our-immune-system-protects-us/](http://blog.rottenecards.com/how-our-immune-system-protects-us/)



# Current Situation

Photo: Ryan McGuire

## Where do citizens go with social change ideas today?

This is a difficult question to answer – especially for citizens. Generally, people with ideas for social change would be encouraged to go to publicly or privately funded social change incubators; a large majority of these incubators are located in the 1st, 2nd, 10th, 11th, and 12th arrondissements.<sup>11</sup> Apart from this, some undertakings may be proposed directly to the city (e.g. planting flowers or other plants in public spaces),<sup>12</sup> though most social change projects would not have direct support from the municipality. We have yet to find evidence that citizens may apply directly to the city for funding small-scale projects apart from the participatory budget, which generally focuses on larger projects to be taken on by the government.

## Participatory Budget

The participatory budget provides the opportunity for citizens to get funding for their own projects, or to propose projects that the city will engage in. To do so, one would go to the

Mairie de Paris website and follow the “Madame Mayor, I have an idea” link.

The participatory budget page has received 5115 proposals to date.<sup>13</sup> The website encourages citizens to first search the database of proposals for similar ideas. If a similar idea has not yet been proposed, the citizen can file a proposal, which will then undergo a three week period of discussion, during which other citizens can provide online feedback. After an



Mairie de Paris Participatory Budget Logo

amount of time defined by the city, the Mayor's Office produces a short list for citizens to again vote upon. Projects that receive the largest number of votes at this stage will be funded and implemented.

## Large-Scale Projects Favored

This online approach makes it difficult for small-scale projects to garner support, because ideas are dependent on how widely relatable they are to the general public of Paris. If they act on a scale too small for comments from other

Parisians who do not live in the specific neighborhood, then they will likely not have power to gain votes and support from citizens and the Mayor's office. Consequently, in the 2014-2015 period, the city and voting citizens selected nine projects that required a total of 20 million euros in funding, the smallest of which

cost one million euros.<sup>14</sup> Most of these nine projects were environmental projects that would be implemented around the city, including creating vegetation walls, establishing "learning gardens" in primary schools, and installing mobile rubbish collection stations to encourage recycling.<sup>15</sup> Instead, small projects such as renovating the Place de Victor Hugo, or installing tables and chairs on the Avenue de Flanders have more difficulty gaining enough support to be selected to benefit from the Participatory Budget.<sup>16</sup>

In contrast, most of the projects that the CCE will help to implement will act on a very local scale and will not require funding that is nearly as large as one million euros. Just as how innate immune cells combat pathogens on a local scale, in specific tissues or organs, citizens will be able to solve small-scale problems that affect their street, building, or neighborhood.

## Underutilized

The first round of participatory budget funding went out in 2014, though it may not have had the outreach that was expected. Though there were 5115 submissions for proposals, less than 1% of residents voted on the final submissions.<sup>17</sup>



## Innovation Sector

The City of Paris boasts the existence of 42 incubators, 12 accelerators and 26 co-working spaces, with many more spaces expected to be opened soon, including an incubator with the capability of hosting 1000 startups in one building.<sup>18</sup> These spaces host businesses ranging from student projects to multi-million dollar international companies.

## Problems with Current Paris Model

Firstly (and perhaps most importantly), not having an approachable organization to intake and work through ideas from engaged citizens discourages social innovation. Some citizens may feel intimidated or overwhelmed when applying to the government for funding through the participatory budget, but many of these citizens do not have access to other means of obtaining support for their ideas.

Secondly, many innovation labs and incubators to which most citizens would be encouraged to apply are not easily

accessible. Besides being centralized in only a few well-off arrondissements, many would not be affordable for most citizens trying to start small-scale projects. For example, the *Creatis* social innovation lab charges 650€ per month, and La Ruche social entrepreneurship centre is an exorbitant 155€ per day.<sup>19, 20</sup>

Finally, there is little incentive to attempt small-scale projects on one's own merit: starting a business or organization takes far too long for many social projects, and the costs far outweigh the benefits. Simply put, there is very little reason why any one citizen would take up a project on their own.



## Innovation Sector = Adaptive Immunity

We can draw parallels between the private innovation sector and the adaptive immune system. Compared to innate immunity, the adaptive immune system's way of fighting infections is more "expensive," both biologically and on an urban level. In the body, production of specific antibodies to specific pathogens takes both time and a large amount of resources (in terms of the number of B cells and the amount of proteins and cellular energy required).<sup>21</sup> In the city, the government or private companies would act similar to adaptive immune cells, which resolve the problem for the pathogen's initial detectors, the citizens. This is not only expensive for the citizens themselves, but it is also a process that takes a tremendous amount of time and resources, both of which are often not available to citizens, especially if the problem needs urgent addressing and if funding is limited.

Rather than recruiting the adaptive immune system to combat every problem identified by citizens, what the CCE would aim to do (and what we will outline later in our proposal) is to activate "innate immune responses" led by citizens, which will act on a local scale and will require less time and resources. Over time, these innate immune

responses will cause changes in adaptive immunity and build up an adaptive immunological memory to enable the system to better fight off subsequent infections.

## Other Approaches

### Boston/Philadelphia Office of New Urban Mechanics

The Mayor's Offices in Boston and Philadelphia have a division of New Urban Mechanics, a civic innovation group dedicated to Research & Development projects that benefit citizens. They help to identify problems and connect public and private entities to create solutions. The Boston and Philadelphia offices network together to share their experiences and resources.

Boston's New Urban Mechanics receives input via email from Boston residents and encourages citizens to cooperate with the mayor's office to resolve the problems that they identify.<sup>22</sup> Since its creation in 2010, it has been successful in conducting experiments and piloting around 40 projects that they think would improve the city.<sup>23</sup>

In Philadelphia, New Urban Mechanics has supported large projects such as FastFWD, a platform funded by Bloomberg Philanthropies that streamlines the process through which civic entrepreneurs can propose ideas to improve the local government, and the Civic Design Challenge, which gave four selected artists/designers a total of \$20 000 to implement new ideas for improving public spaces.<sup>24</sup>

Although such projects may require a large amount of funding, time, research and piloting, they can be implemented because these offices operate directly out of the Mayor's Offices, allowing them to bypass much of the



Photo retrieved from: <https://www.youtube.com/watch?v=rNL03-CJv7o>

red tape often associated with these projects. The New Urban Mechanics serves as a great example of what the CCE aims to achieve: establishing an office directly connected to the Mairie de Paris to override the complex political layers of the city, and receiving input from citizens on the projects to focus on. However, we would remain independent from direct control by the public sector, give citizens the power to initiate projects (rather than leading the projects ourselves), and welcome more small-scale projects that are manageable by individual citizens.

## 596 Acres

596 Acres is a non-profit organization under the Fund for the City of New York that helps citizens to identify underutilized land lots around the city and works with citizens to repurpose these vacant lots into community gardens and other types of spaces.<sup>25</sup>

This organization's grounded approach to rethinking public space is also similar to (and an inspiration for) what our organization aims to do. We aim to simplify the process of communicating with the government for citizens, so that they can create change directly on their streets and in their neighborhoods as they see fit. However, rather than



focusing on identifying and repurposing unused spaces in Paris, we will broadly accept all different types of proposals that solve a wide range of citizen-identified problems. Because our office would be housed directly under the mayor, this structure keeps us from being limited to one type of issue, and gives us flexibility to help citizens to implement all types of solutions as they see fit.

## The Street Plans Collaborative

Founded in 2009 and based in New York and Florida, the Street Plans Collaborative is a privately owned urban-planning firm that helps its clients and partners to create “high-quality public spaces”. Similar to our center, the SPC uses tactical urbanism methodologies to design and implement projects (see next section for definitions and examples on tactical urbanism).<sup>26</sup> Organizationally, on the other hand, it is much more complex than the CCE, because it is comprised of approximately 60 independent collaborating companies, each of whom specializes in one topic in urban planning and design.<sup>27</sup> However, we believe that since citizens often know best about the problems that affect them, they can come up with better-informed, simpler solutions without the help from individual consulting firms or urban design companies.



Retrieved from: <http://596acres.org/en/news/2014/08/>

A top-down view of a desk with a spiral notebook, a pen, a watercolor palette, a small potted plant, and a water bottle. The entire image is overlaid with a semi-transparent teal color.

# Example Projects

## Tactical Urbanism

## The Hamburg Urinators

The streets of Hamburg are plagued with a wet, smelly problem. As one of the hubs of nightlife in Germany, Hamburg has seen its fair share of rowdy drunkenness, and with drunkenness comes the byproduct -- public urination.

How can citizens stop drunken partiers from urinating on the walls and public street furniture in the middle of the night? Rather than relying on the government, which would have not only cost the city a significant amount of resources and police involvement, but also may not have been effective because of the widespread and secret nature of the problem, the citizens of the St. Pauli neighbourhood got together informally and came up with their own simple yet ingenious solution. They looked to the paint that coats the hulls of ships to make the surface liquid-resistant, and realized that applying it to the bottoms of walls and on street furniture would discourage public urinators because it would splash the pee right back at the offenders<sup>28</sup>.

Although the relatively high cost of the liquid-resistant paint has limited the number of walls that citizens could coat in the neighbourhood, the few surfaces that have been covered

has already drastically decreased the frequency of public urination.<sup>29</sup> This is because the citizens went on to place warning signs about the paint on many walls in the neighbourhood, and although not all these walls are coated with the paint, the signs themselves and the uncertainty about whether or not a wall was coated have been enough to discourage people from urinating on walls in the neighbourhood.<sup>30</sup>

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**Tactical urbanism projects are citizen-driven, small, relatively inexpensive, and can be quickly implemented.**

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St. Pauli's quick and efficient approach to solving the problem of public urination serves as a prime example of tactical urbanism, a method of solving urban problems by completing small-scale and realistic goals. Tactical urbanism projects are citizen-driven, small, relatively inexpensive, and can be quickly implemented. Some are permanent, such as

Before



After



# Center For Civic Engagement



Photo: Mark Hogan

the aforementioned project in St. Pauli, which also means that such projects must obtain permission from the governing body of the region before proceeding with the implementation phase.

The CCE embraces the idea that small-scale projects build cities and drive localities. This case shows just that.

## Park(ing) Day

Some tactical urbanism projects are temporary, making their implementation simpler and less controlled by the bureaucracy. The most famous temporary project is Park(ing) Day. During the third weekend of each September, citizens transform parking spaces into green spaces used for leisure to show that public space can be used creatively and to encourage citizens to think of innovative ways of using public space<sup>31</sup>. Although it only lasts for one weekend every year, the movement has gained enormous popularity and spread to cities worldwide, including to Paris.

Projects like Park(ing) Day would be easily adopted by the CCE and passed on to citizens. This one's already been done in Paris – it's time to encourage more creativity!

A large crowd of people is gathered, with a police officer in the foreground. The scene is dimly lit with a blue tint, and bokeh light effects are visible in the background. The text is overlaid in white on the left side of the image.

# Empowering Citizens: A New Method

## So, what is the CCE?

The Center for Civic Engagement is our attempt at engaging individual citizens in social innovation. It would be an independent organization with connections to the Mayor's Office that would allow the inhabitants to launch projects. Its goal would be to provide logistical support and allow citizens to empower themselves in implementing solutions to problems they see in the city. The CCE will have physical locations throughout the city that will allow participants to interact with experts and fellow community members.

One of the main challenges of widespread civic engagement is the powerlessness citizens may feel due to their social background, the complex workings of city administrations or the overwhelming scale of the problems they encounter. This center would help to bypass these difficulties by offering help with small-scale, cheap and citizen-driven projects.

The CCE will operate by communicating directly with the Mayor's Office in Paris, allowing it to hopefully bypass much of the working complexities of the municipal government. It will, however, remain independent from the influence of the

government to make it, ultimately, a citizen-driven organization based in the civic sector. It will provide the following main services to citizens hoping to create or change things in their neighbourhoods:

- Expert mentorship or advice
- Assistance navigating bureaucratic systems and gaining approval for projects that require it
- Connections to public and private sector entities
- Small amounts of seed funding based on the project

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**Each CCE building will become a centralized place where citizens can go with their ideas and come away with the inspiration, permission and tools they need to create solutions themselves.**

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Each CCE building will become a centralized place where citizens can go with their ideas and come away with the inspiration, permission and tools they need to create solutions themselves. Whether a person comes in with only a complaint or a complex, well-thought-out project, we will help them get closer to achieving a solution.

## Small Scale Change

Rather than large projects such as the ones currently approved for Participatory Budget funding, we're seeking small scale, locally driven projects. Think painting murals on walls or adding benches to public spaces rather than large undertakings, such as erecting buildings or making large infrastructural changes. Indeed, small and local responses are characteristic of the innate immune response, such that citizens would act as innate immune cells to target problems in their local neighborhoods.

## Power to the People

In her paper "More Inclusive Governance in the Digital Age," Harvard Kennedy School Fellow Hollie Gilman argues that governments need to develop a new structure of governance that is more inclusive and involves more sectors



Photo: <http://blog.zacscy.com/2014/09/13/hands-up/>



than solely the public sector. Currently, citizens vote for their representatives in the public sector, and that is where their

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**“Inclusive governance must both build the structures for citizens to have meaningful participation in governance as well as strengthen citizens’ ability to participate in such structures” –Harvard Kennedy School Fellow Hollie Gilman**

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involvement in governance ends. However, as Gilman points out, “Inclusive governance must both build the structures for citizens to have meaningful participation in governance as well as strengthen citizens’ ability to participate in such structures”.<sup>32</sup> Our proposal would fulfill exactly the purpose of building connections between the public and civic sectors and including the people in governance that Gilman argues we need.

How do we know that the people would be interested in shaping their city? There exist examples of citizen enthusiasm in participating in city governance. Talking Transition was a social experiment conducted in 2013 on the citizens of New York City.<sup>33</sup> As part of the project, a physical tent was installed, where citizens could fill out forms expressing their opinions and ideas for the newly elected mayor.<sup>34</sup> Over the course of two weeks, about 15 000 citizens visited the tent to offer their feedback to the city government, making this project one of New York’s largest public opinion surveys in history.<sup>35</sup> Examples such as this highlights the civic sector’s willingness to engage with the government to influence changes in their city, and our center would streamline this process by acting as the liaison between the civic and public sectors in urban improvement projects.

We’re focusing on an organic, citizen driven, bottom-up approach to building cities. This is, after all, what the participatory budget is meant for – empowering citizens to make their own change.

This approach is inspired by the method through which the innate immune system solves the problems that it detects for itself. Rather than outsourcing the power to ideate and

implement solutions to the adaptive immune system, the quickest and most efficient way to fight the infection is for innate immune cells to directly attack antigens as soon as they detect the antigens, through processes such as phagocytosis.

Similarly, our proposal would empower citizens to resolve the problems that they detect by directly and locally implementing their own solutions. This saves time, and can require the least amount of resources from external sources such as the government or private companies. Indeed, if we consider the human body's immune system, innate immunity is the front-line of attack that is fast, efficient, and simple but elegant. It is time to reactivate the city's innate immunity by giving the power back to individual citizens to improve their city with their own solutions.

## Targeted Audience

The goal of our centers is to, in the end, empower citizens to make their own change where other sectors have failed them. We seek to allow the civic sector to make the change that the other sectors have not. To do so, it is important to target those populations that are most likely to benefit from a

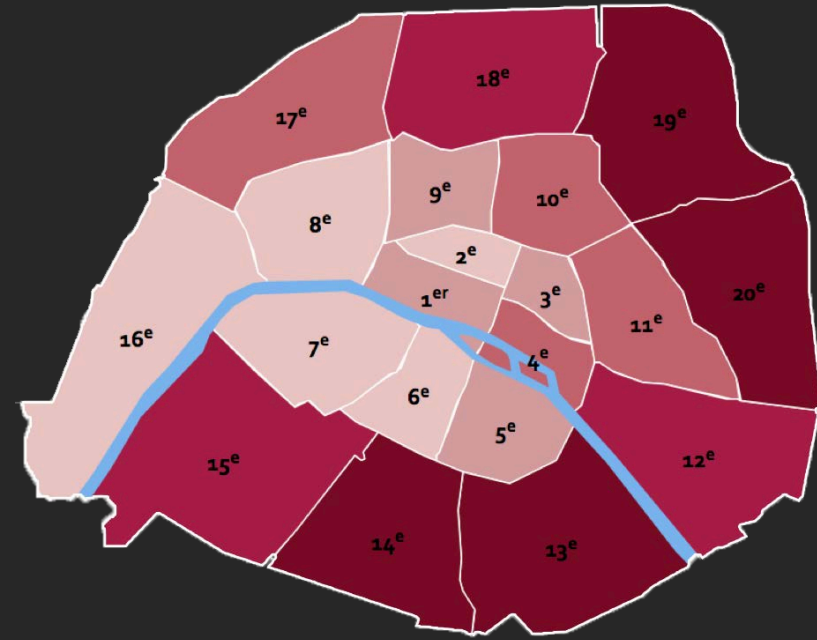


Figure 1: Social Housing Density by Arrondissement, Paris 2013. Source: [http://www.apur.org/dataviz/logement\\_social/index.html#](http://www.apur.org/dataviz/logement_social/index.html#)

new approach to civic engagement, both those currently without any current options to get engaged and those likely to take action themselves.

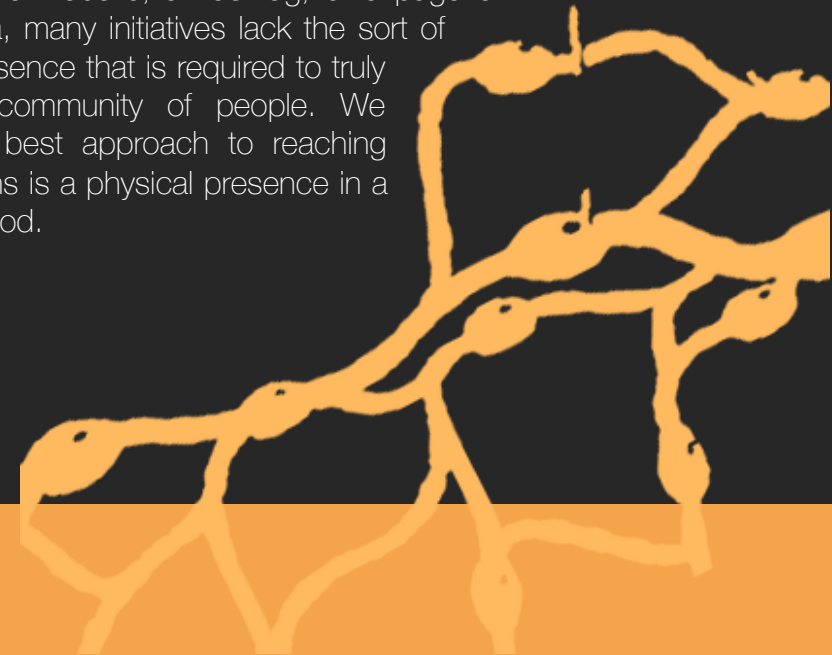
One of our key target populations is that of those who cannot make use of the current innovation sector. The most obvious subset of this population is that of low-income citizens. These citizens would not be able to afford the fees associated with use of innovation sector entities such as incubators or Fab-Labs, nor would they be likely to have the time to take on large-scale projects.

A second key target population (which often overlaps with the low-income population) is immigrants. Despite nearly 15% of the population being comprised of immigrants<sup>36</sup>, newcomers are still discriminated against in their communities.<sup>37</sup> We hope that better community integration will help eliminate discrimination based on immigration, culture, and (presumably) ethnic background. Focusing our efforts on a growing population such as that of immigrants looks towards the future, where France expects to house a larger population of immigrants and have a more diverse demographic.

Lastly, the program will target people living in social housing units. Social housing units comprise a large and growing portion of the total number of dwellings in Paris and provide a unique opportunity to foster community and civic engagement.<sup>38</sup> Each social housing development has the ability to become its own community; people living in close proximity will often share similar goals for – and problems with – their current situation and could work together to better their shared spaces. It is also true that the populations of our other target audiences often live in social housing, making it an obvious sector on which we should focus.

## Network of Nodes

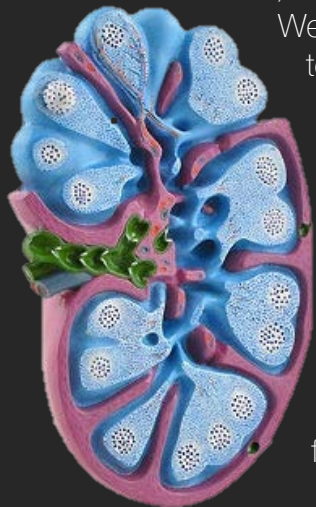
Often today we see a large focus on digital deployment. Whether it's a website, a hashtag, or a page on social media, many initiatives lack the sort of physical presence that is required to truly engage a community of people. We believe the best approach to reaching out to citizens is a physical presence in a neighbourhood.



To do this, we're proposing the installation of Centers for Civic Engagement across the city. Having a local presence creates more of a sense of community, and we simply believe this can't be done from a few offices inside l'Hotel de Ville. This approach also allows the installation of staff that is familiar with each community, again making the center feel more organic and local.

The inspiration behind this physical network of offices lies with the lymphatic system and its network of lymph nodes. Each individual office will act as a space that concentrates citizens, similar to how lymph nodes concentrate white blood cells, and help individuals to form connections.

We believe that when people come together in the same space, share their ideas, and perhaps even find others who have the same concerns about the city, connections form. Ultimately, we hope that our offices will encourage citizens from the same neighbourhood to work on the same project together.



Additionally, just as how lymph nodes filter white blood cells to strengthen the

immune system, our offices will help citizens brainstorm solutions for problems and provide them with support and resources, such that when citizens leave the office, they leave more prepared to make a positive change in their city than when they came in.

Finally, our network of “node” offices will communicate with one another to allow for strong systematic responses, similar to the collaboration between lymph nodes. Each office would learn from all other nodes, as in the lymphatic system.

## Nodes

Each community hub, or Node, would be a semi-autonomous entity entirely focused on its arrondissement. Though part of the larger Center for Civic Engagement, each physical space would be tailored to its unique locality; we want to create genuine, adaptive spaces in each neighbourhood to ensure proper integration and practicality.

Each Node may look and feel completely different based on the needs of the community. A Node in the 5<sup>th</sup> arrondissement, for example, might include a lot of co-working spaces for university students, whereas a Node in

the 18<sup>th</sup> arrondissement might be more culturally oriented to better integrate the target community.

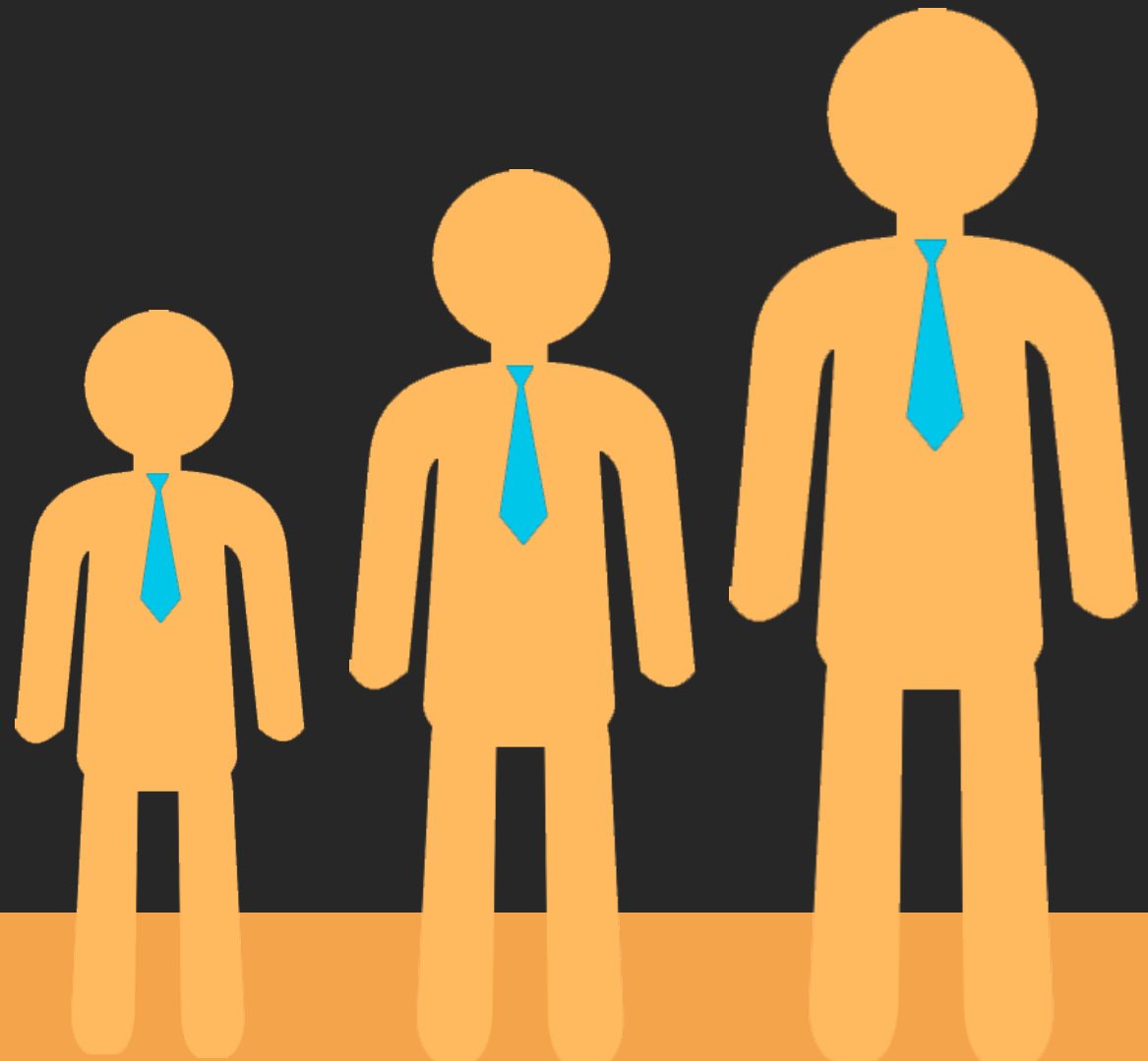
Generally, each Node would be the point of contact for residents in the area. Nodes would be staffed by employees knowledgeable about (or, hopefully, from) the neighbourhoods they represent. It might include co-working spaces or other innovation technologies depending on what is required by the community, but the exact layout and format would be up to the individual office.

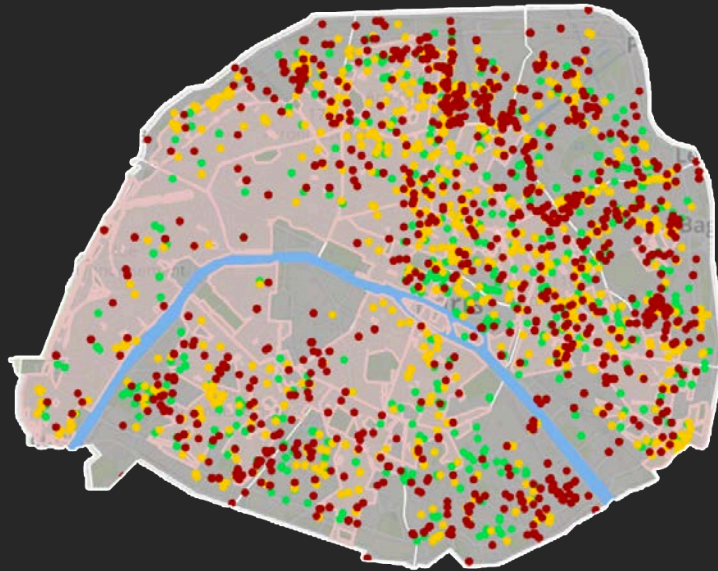
The goal of the Node is to be the facilitator for change in the community. Ideally, citizens with ideas spend little time at the Node and most of their time out in the community, bettering their neighbourhoods on their own with the encouragement of the CEC. Staff of the CEC could help them formulate the specifics of their project ideas or even help to come up with solutions to local problems, but the citizens would be the ones creating and enacting the change; we're encouraging the Do-It-Yourself approach.

## Rotating Experts

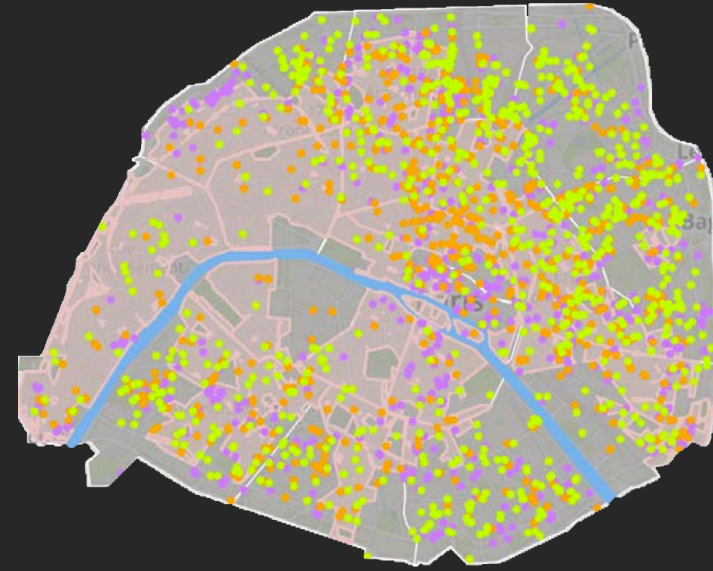
The Nodal Network would have a team of experts that would rotate through the centers based on the needs of specific projects. These experts would either be employees of the

city or citizens recruited from the neighbourhoods they are serving. Experts could range from urban planners to artists to doctors depending on the project and it's scope.





Green - Simply Purchased  
Red - Newly Built Dwellings  
Goldenrod - Renovated Buildings  
Pink Perimeter - Areas identified with a lack of social housing



Green - Social Housing  
Purple - Social Community Use Buildings  
Orange - Cheaper Social Housing for Young People  
Pink Perimeter - Areas identified with a lack of social housing

## New Investment in Social Housing in Paris, 2001–2013.

Source: [http://www.apur.org/dataviz/logement\\_social/onglet.html](http://www.apur.org/dataviz/logement_social/onglet.html)

## Locations

Nodes would be spread out throughout the city, strategically placed to best serve our target audiences. To do this, we've determined seven metrics by which to measure different districts in the city, all of which relate to reaching the largest number of people within our target audience (and beyond). In rating the metrics, we also took into consideration the practicality of being able to help citizens: we focus on populations that are more likely to become civically engaged as well as those populations that the public sector can easily help empower to create change in their community (e.g. those in social housing).

Our metrics are, in order of precedence:

- 1) Areas with high social housing
- 2) Areas with low-income
- 3) Areas with disabled or elderly people
- 4) Areas with high population density
- 5) Areas with growing professional populations
- 6) Areas with growing numbers of large families
- 7) Areas without much innovation sector infrastructure

Metric 1 is that of practicality: the government owns a large portion of social housing, therefore making it simpler to

obtain permission for citizens to make changes. Metrics 2, 3 and 6 are related to ensuring the greatest impact of our Nodes: low-income people have the most obvious benefit from a free or low-cost focus to solving small-scale problems, whereas disabled, elderly and young people stand to benefit most from small scale projects (e.g. parks or accessibility initiatives). Metric 4 is to simply balance having a lot of people physically located around the node, whereas metric 7 ensures that the CEC does not encroach on the effective area of the current innovation infrastructure (which may in some cases be redundant).

We have located three focus districts that encompass these locational targets: the 13<sup>th</sup> arrondissement, the 19<sup>th</sup> arrondissement and the 20<sup>th</sup> arrondissement. Specifically, all of these districts have high proportions of social housing, along with high percentages of people living under the poverty line and higher than average population densities and populations of elderly and disabled persons (See Tables 1 and 2).

<u>Arr.</u>	<u>2013</u>	<u>Rank</u>	<u>2001</u>	<u>Change</u>
1	8.6	12	4.2	4.4
2	4.8	16	1.6	3.2
3	6.2	14	2.8	3.4
4	12	9	5.9	6.1
5	8.1	13	6.2	1.9
6	3	18	1.8	1.2
7	1.3	20	0.8	0.5
8	2.7	19	0.6	2.1
9	5.9	15	2	3.9
10	11.7	11	7.7	4
11	12.1	8	8.1	4
12	19.5	6	13.1	6.4
13	35.2	2	29.8	5.4
14	24.1	4	19.6	4.5
15	15.9	7	11.1	4.8
16	3.7	17	1.7	2
17	11.8	10	8.8	3
18	20	5	15.2	4.8
19	37.3	1	32	5.3
20	31.2	3	25.2	6

Table 1: Social Housing By Arrondissement. Target Arrondissements in Blue. Other notables in Orange. Data source: [www.apur.org/dataviz/logement\\_social/index.html](http://www.apur.org/dataviz/logement_social/index.html)

These districts have some of the highest concentrations of social housing and have seen large investment into new and renovated social buildings in the areas. They are also districts with historically high immigration numbers, which is reflected by their current immigrant population (which is significantly higher than the rest of Paris (See Table 1)).

<u>Arr.</u>	<u>Total Population Trend</u>	<u>Population Under Poverty Line</u>	<u>75+ Population Trend</u>
13	5.80%	13.00%	18.30%
19	8.10%	20.50%	20.20%
20	7.10%	17.50%	8.50%
Paris Average	5.50%	11.90%	6.80%

<u>Arr.</u>	<u>Large Family (3+) Trend</u>	<u>Professionals Trend</u>	<u>Percent Population Disabled</u>
13	7.90%	7.30%	0.80%
19	13.60%	6.7%	0.80%
20	12.50%	8.3%	0.70%
Paris Average	11.00%	7.70%	0.50%

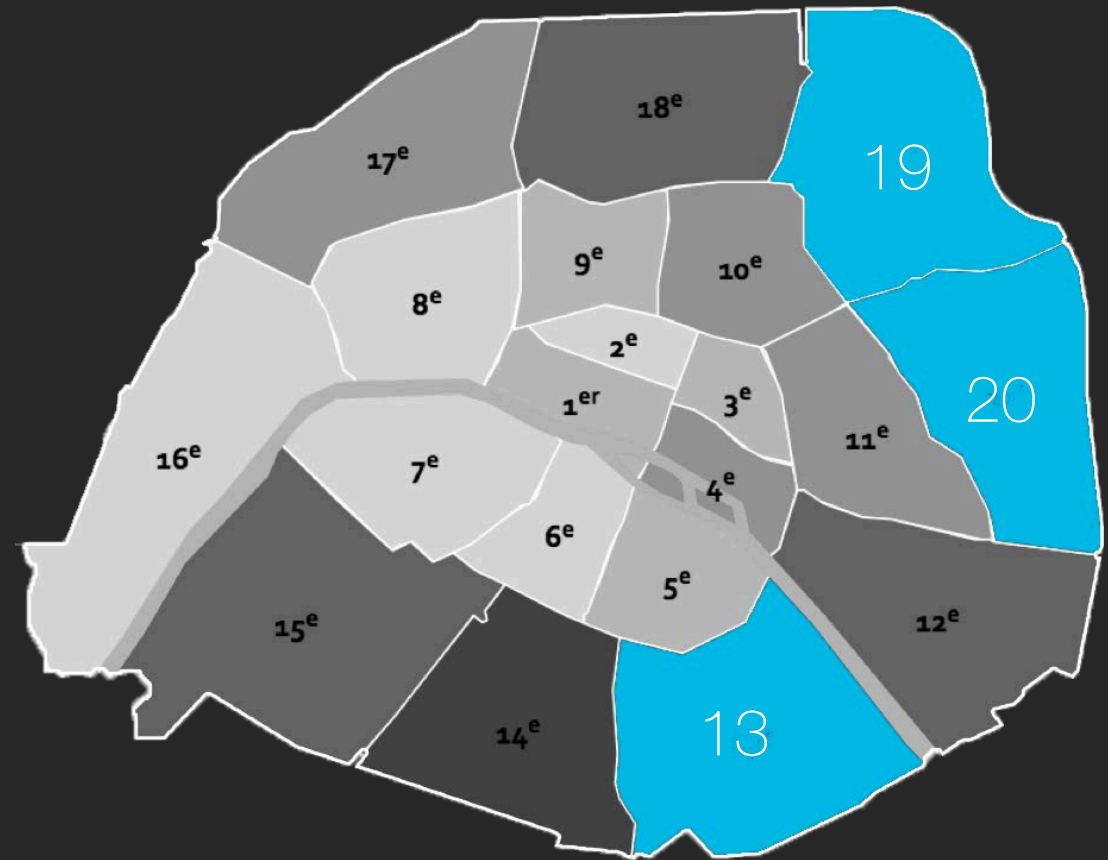
Table 2: Target Arrondissements' Statistics, Paris 2013. Orange: Higher than Paris Average. Source: <http://www.apur.org/en/study/social-database-about-paris-social-identity-files-20th-district-2>



20<sup>th</sup> Arrondissement: High social housing density with large immigrant population and population living under the poverty line.

19<sup>th</sup> Arrondissement: Rapidly aging population with high social housing density and a trend towards larger families.

13<sup>th</sup> Arrondissement: High population of disabled persons along with an aging population.



## Pilot Arrondissements



# Sample Case

Paris, compared to many other cities in developed countries, lacks ease of accessibility for individuals with disabilities. In 2005, France passed a law that required the city of Paris to become wheelchair accessible by 2015.<sup>39</sup> Now that the deadline has arrived, Paris continues to be in denial of the law and wheelchair inaccessible.

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**Making an entire city handicap accessible is an enormous project. Instead of pressuring the government of Paris to solve the problem, give the power to the citizens.**

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In Paris's public transportation system, the Metro line 14 is the only metro line that is fully wheelchair accessible at all stations.<sup>40</sup> Only a minority of metro stations on other lines is

wheelchair accessible. Stations that lead to major tourist attractions are usually accessible, but this system fails to accommodate for people living between tourist attractions.<sup>41</sup>

Some RER stations are only accessible with a prior-made reservation for assistance, which is inconvenient for physically disabled people, because if they do not plan out their public transit schedules and make a reservation in advance, they will not have access to these RER stations.<sup>42</sup>

Compared to the Metro and RER systems, the bus system is the most accessible, so disabled people must often rely on buses.<sup>43</sup> Buses are equipped with a ramp that can connect the bus platform to the sidewalk, and all buses have sound messages that announce the name of the next stop to help visually impaired citizens.<sup>44</sup> A third of buses have a digital display of the next stop to help hearing-impaired individuals.<sup>45</sup>

Aside from public transportation, many public buildings in Paris are also not accessible for disabled citizens. Because Paris prioritizes maintaining the appearance of its historical buildings, including many hotels, museums, and restaurants, many such buildings are not wheelchair accessible as stairs

often lead up to the entrance.<sup>46</sup> Some ATMs are also not accessible because they are located up a flight of stairs.<sup>47</sup>

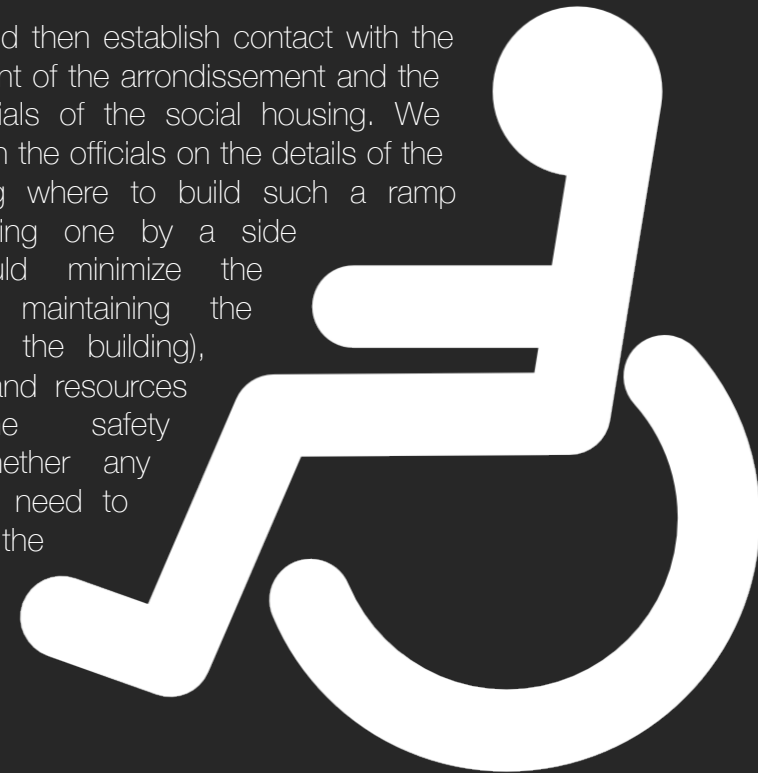
Making an entire city handicap accessible is an enormous project. It calls for major changes to the infrastructure of the city, which in a city like Paris is an even greater challenge due to Paris's complex political structure, and its concern with preserving its culture by maintaining the original appearance of its historical architecture.

Perhaps, instead of pressuring the government of Paris to embark on as big a project as making an entire city wheelchair accessible, a better strategy might be to make the city accessible through small-scale changes. Just as breaking up a large project into smaller components make it more manageable, perhaps breaking up the challenge of making a city accessible and converting it into tactical urbanism-inspired projects is a more efficient method of tackling this problem. Indeed, our proposed organization could pave the way for disabled citizens to recreate a handicap accessible city of Paris.

For example, if a social housing building has a few steps leading up to the entrance, the entire building would become inaccessible to physically handicapped people even if the

inside of the building is equipped with elevators and doorways wide enough to allow the passage of standard wheelchairs. In the case that a physically disabled person and his or her family would like to move into this building, they could go to a Center for Civic Engagement office close to the location of the social housing and ask the office to look into possibilities of building a simple ramp up to the front entrance.

Our office would then establish contact with the local government of the arrondissement and the managing officials of the social housing. We would work with the officials on the details of the case, including where to build such a ramp (perhaps building one by a side entrance would minimize the concerns of maintaining the appearance of the building), the materials and resources needed, the safety limitations, whether any other changes need to be made to the building, etc.



# Center For Civic Engagement

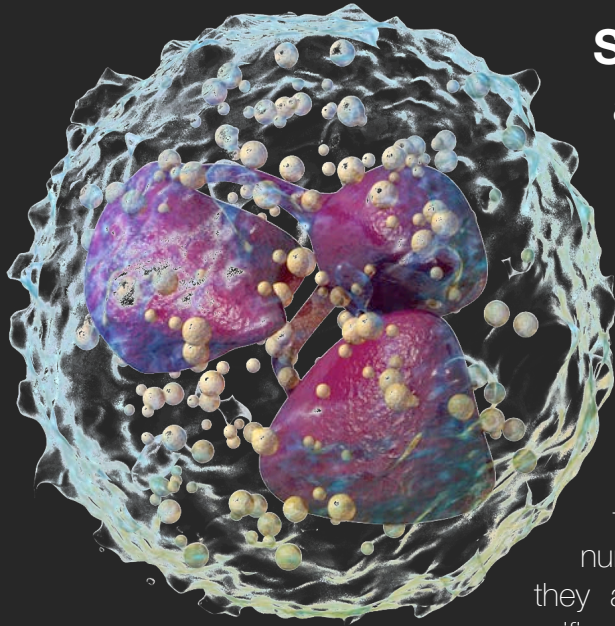


Photo: Top HD Gallery

Once we obtain formal approval from the overseeing officials, and get funding from either the government or through other means, we would communicate the results of these negotiations with the disabled individual and his or her family.

The initial proposers of the projects would then spearhead its implementation. With the funding that we help them obtain, citizens would then secure the equipment, materials, and workers needed to build the ramp. The building process, because it would be simple and small-scale, would only take a day, thus minimizing the amount of time and energy that the project leaders need to spend. Ultimately, the completion of the project would make the entire social housing building physically accessible for not only the handicapped person himself, but for anyone who would like to move into the building after him or her.

# Deployment: Twelve-Step Plan



**Step 1** September - October 2015: Establish relationship with and gain approval from the government of Paris and the governing body of each target arrondissement – 13th, 19th, and 20th – in which we plan to pilot our organization.

This is analogous to the beginnings of the development of the immune system in the fetus. Just like the development of our center, the process of immune system development includes multiple steps. Indeed, the innate immune system undergoes most of its development in the first six years of life, but does not become fully mature until teenagehood.<sup>48</sup> The stages of development involves many complex interactions between cells, proteins, and the environment, just as the creation of our proposed organization would involve citizens, governments, experts, funding sources, etc. Many innate immune cells increase in number during prenatal development and after birth as they are exposed to and interact with high levels of specific proteins.<sup>49</sup> For example, the presence of GA 31 before birth leads to exponential increase of neutrophils such that by birth neutrophils would have become the dominant white blood cell type.<sup>50</sup>



Photo: Blausen.com staff. "Blausen gallery 2014". Wikiversity

Photo: SciTech Daily staff. "T cells kill a cancer cell". Retrieved from [scitechdaily.com/preprogrammed-immune-cells-can-fight-specific-pathogens](http://scitechdaily.com/preprogrammed-immune-cells-can-fight-specific-pathogens)

## LYMPHATIC SYSTEM

The tonsils, adenoids, spleen and thymus are all part of the lymphatic system.

**Tonsils:**  
A large cluster of lymphatic cells found in the pharynx.

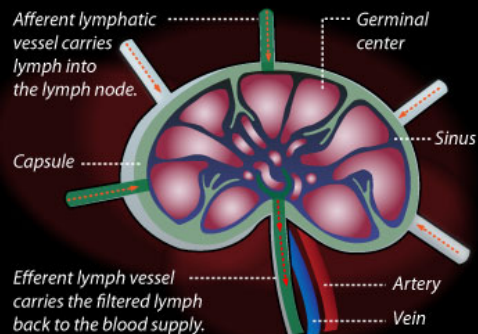
**Thymus:**  
This organ is where T-cells mature. T-cells help destroy infected or cancerous cells.

**Lymph nodes:**  
Produce and store cells that fight infection and disease. There are 600 to 700 lymph nodes in the human body.

**Spleen:**  
The largest lymphatic organ in the body contains white blood cells that fight infection or disease.

## LYMPH NODES

These small oval structures are an important component of the body's immune system and help in fighting infections. They function as filters of lymph, catching any debris or cells present in the lymph.



## Step 2 November - December 2015: Create our center, directly connected to the Mairie de Paris.

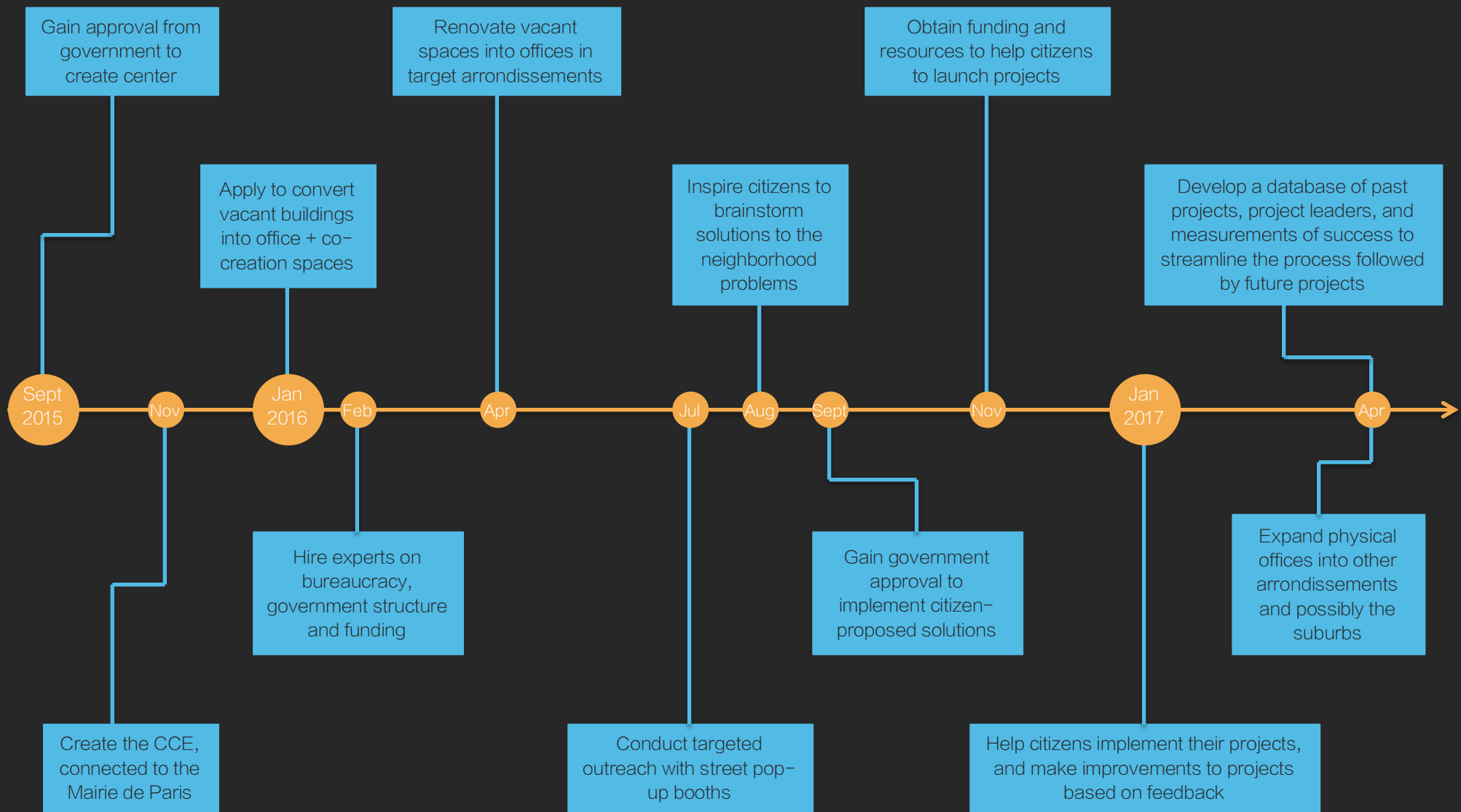
Our physical network of offices – including a central office and arrondissement-specific offices – are inspired by the lymphatic system. The lymphatic system transports lymph, which contains white blood cells, throughout the body and to sites of infection as an integral part of the immune system.<sup>51</sup> Our central office, which would be located near or in l'Hotel de Ville – where the Mairie de Paris is housed – for convenience, would act like the spleen, the largest lymph organ in the body.<sup>52</sup> It produces white blood cells to send to infected areas.

## Step 3 January 2016: Find empty buildings in pilot arrondissements and apply to use them to convert to office and co-creation spaces.

These physical offices would be analogous to lymph nodes. The white blood cells – which in our case are the citizens – act as one of the first lines of attack to combat the foreign invaders.<sup>53</sup> These spaces in specific arrondissements would also serve as a co-creation space where connections are made between citizens, just as how lymph nodes are where white blood cells are concentrated and filtered, such that they leave the nodes more ready to neutralize pathogens as part of the immune system.



# Center For Civic Engagement

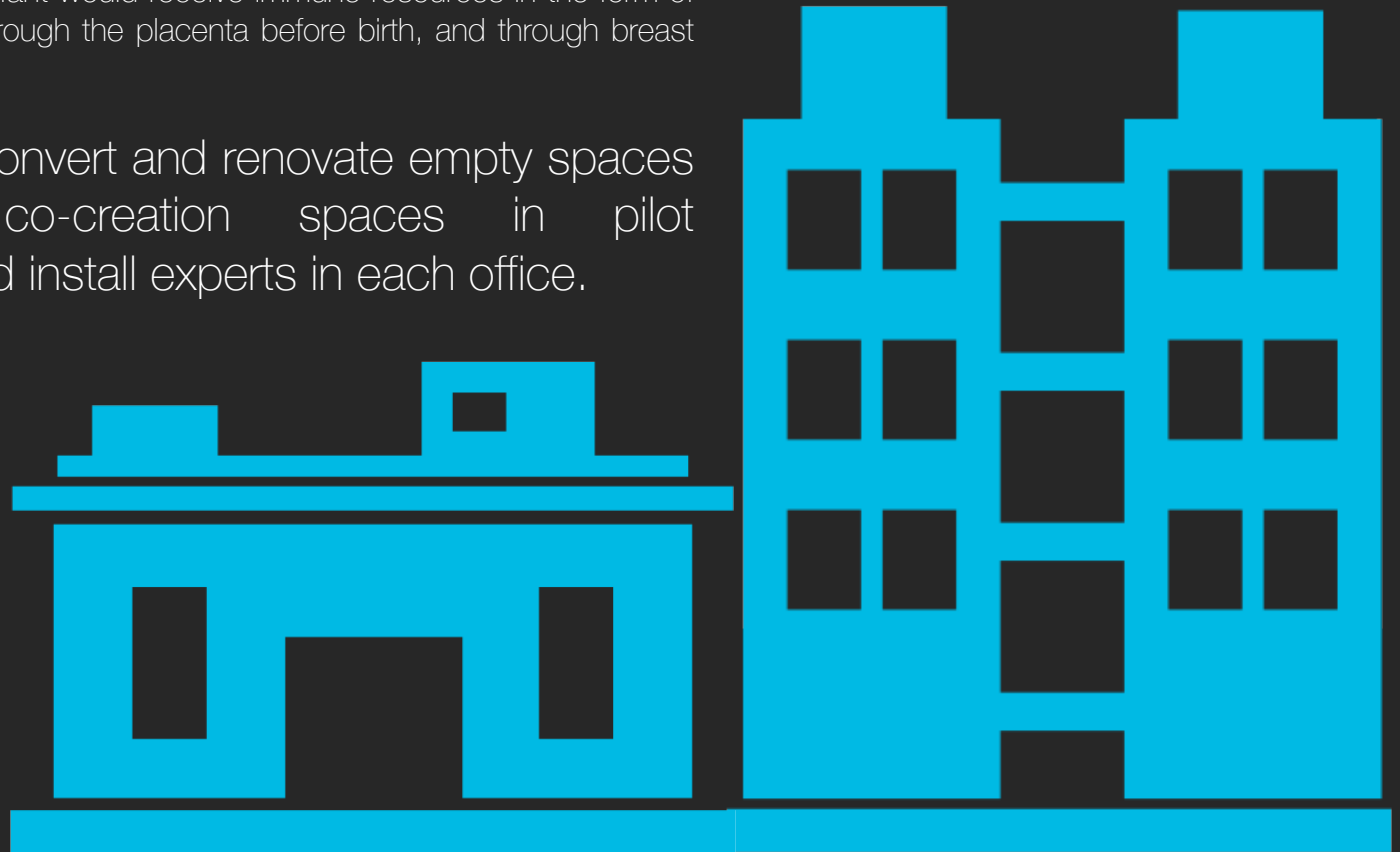


**Step 4** February - March 2016: Hire or have government provide us with experts on the city administration, government structure, participatory budget, sources of funding, etc. Additionally, hire experts on tactical urbanism and urban design.

Because we would have strong connections to the Mairie de Paris, we would also hope to receive resources and expertise from them, similar to how an infant would receive immune resources in the form of antibodies from the mother, through the placenta before birth, and through breast milk after birth.<sup>54</sup>

**Step 5** April - June 2016: Convert and renovate empty spaces to office and co-creation spaces in pilot arrondissements, and install experts in each office.

In this step, we would be preparing the “lymph nodes” to begin concentrating and filtering “white blood cells,” and to connect with one another so that they can efficiently share information and expertise.



**Step 6** July 2016: Conduct targeted outreach to citizens by setting up pop-up stands on the streets and in neighborhoods. Have office staff or volunteers at these stands hand out information about our organization, answer questions, and record input by citizens with whom they speak. Budget-permitting, use vans to act as mobile outreach units that drive around pilot arrondissements to inform citizens of our mission.



In the immune system, macrophages are mobile surveyors across the lymphatic system, such that when they detect pathogens, they travel back to lymph nodes to trigger immune responses. Our pop-up stands and vans would behave like macrophages to strengthen the pathogen-sensitivity of the lymphatic and immune systems.

**Step 7** August 2016: Start to receive complaints about problems in the neighbourhood, and inspire citizens to come up with solutions.

This step is analogous to the detection step of an immune response, when surface proteins on innate immune cells detect pathogens foreign to the body and trigger an attack on the pathogen.



Photo: Benh Lieu Song

**Step 8** September - October 2016: Communicate with the government and obtain approval to implement citizen-proposed solutions in the city. Poll the opinion of neighbours on the proposal and make sure that the community supports the project. Clarify limitations and guidelines for projects with the government and the community.

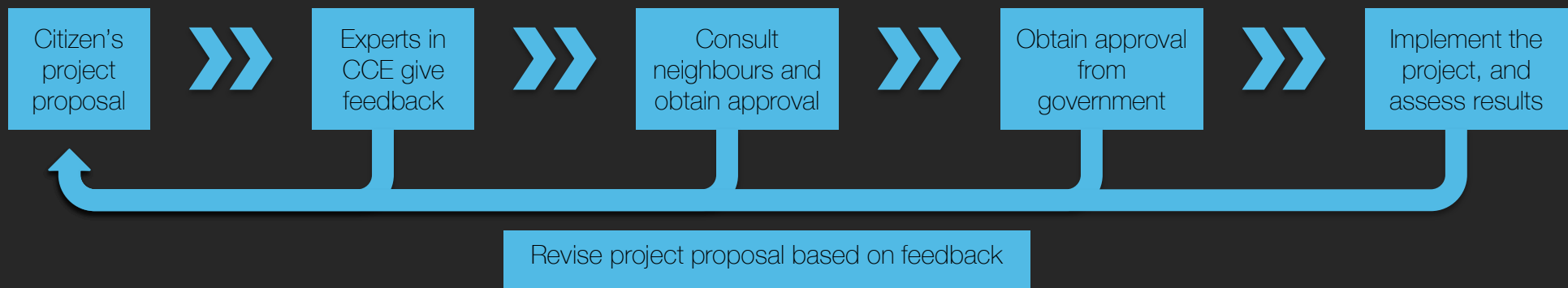
This step acts as a checkpoint for the organism -- the city of Paris -- to try to ensure that the immune response mounted is towards actually harmful pathogens, not native cells that are falsely recognized as foreign cells. Ideas that need major improvement would be selected against because they would not gain approval from the government and surrounding citizens.

**Step 9** November - December 2016: Apply for funding from the participatory budget or from other budget sources, and obtain other resources (materials, workers, etc.) if necessary.

Essentially, in this step, we are amassing the proteins and other resources necessary to initiate an immune response.

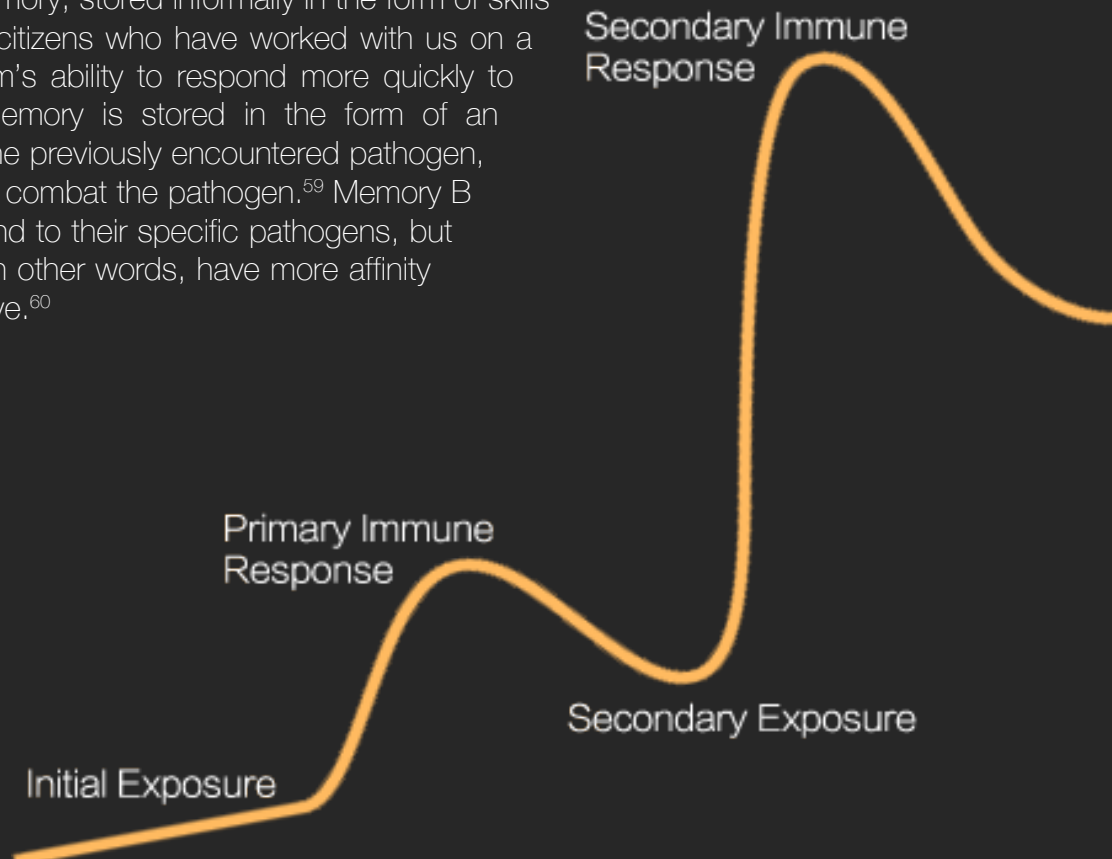
**Step 10** January - March 2017: Aid citizens in implementing their solutions into the city, track the progress and results of the implementation process, and make adjustments to citizen's proposals as necessary.

This process is similar to chemotactic chase, a process in which immune cells, specifically white blood cells or phagocytes, "chase" bacteria in order to eliminate them through phagocytosis. As bacteria move, they leave a trail of proteins and chemicals that white blood cells can follow through the process of chemotaxis.<sup>55</sup> These white blood cells move up the concentration gradient of the chemical released by bacteria or other pathogens – called "chemoattractants" – and follow their trail to pursue the bacteria.<sup>56</sup> In this process, one part of the white blood cell protrudes itself towards the source of the chemical released by the pathogen and then pulls the rest of the cell forward.<sup>57</sup> It is able to constantly update its trajectory as the path taken by the bacteria changes, just like how we would help participating citizens to make improvements to their proposals based on external feedback as circumstances change or as new information emerge.



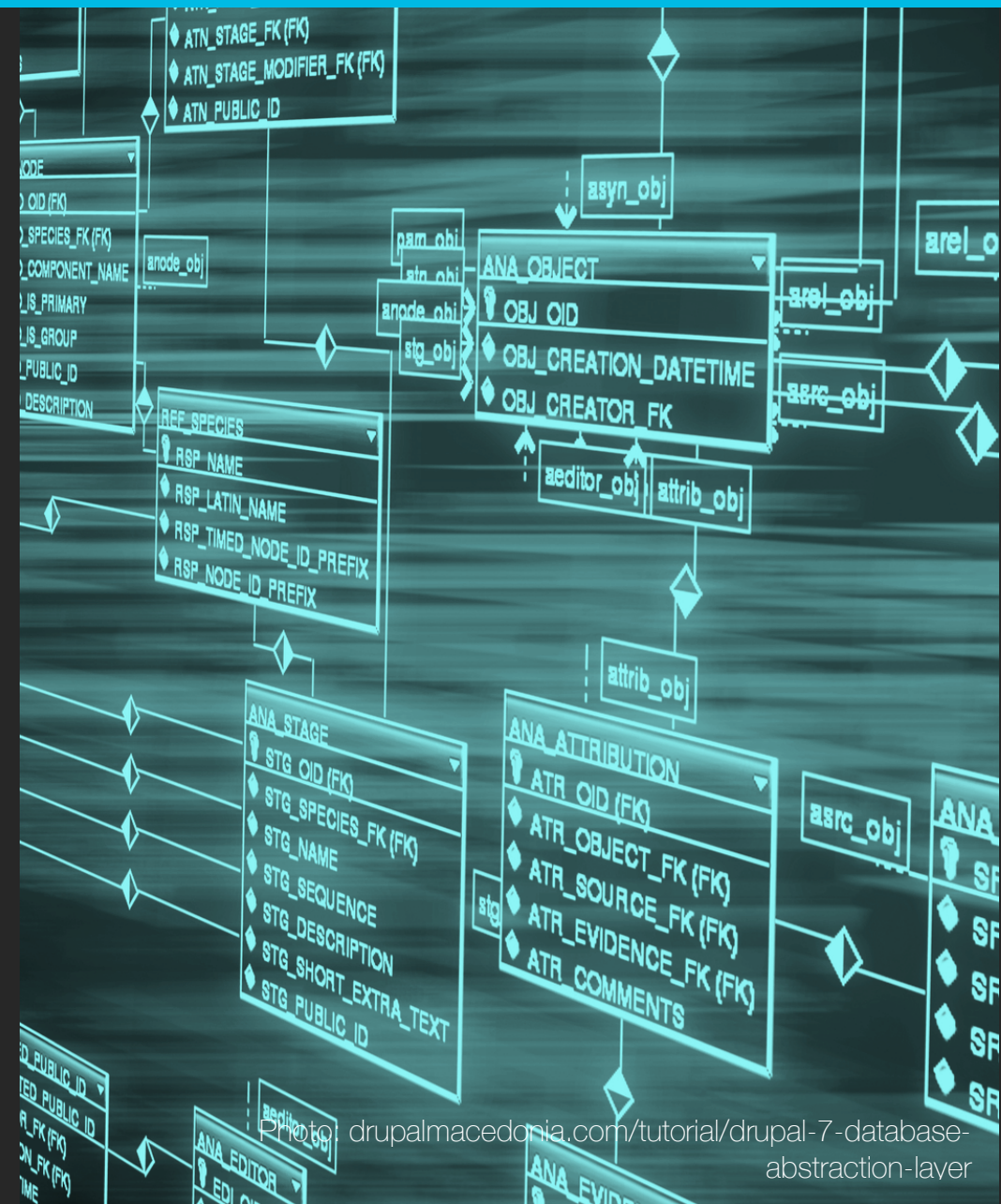
**Step 11** April 2017 and on: Repeat steps 7 to 10, expanding into other arrondissements and creating office spaces there as we take in more proposals, establish more connections, and develop streamlined methods of solving certain types of common problems or implementing certain types of project proposals.

This signifies the establishment of an immunological memory, stored informally in the form of skills and memory gained by our employees and individual citizens who have worked with us on a solution. Immunological memory is the immune system's ability to respond more quickly to pathogens that it has encountered before.<sup>58</sup> This memory is stored in the form of an increased number of lymphocytes that are specific to the previously encountered pathogen, and the presence of antibodies that have been used to combat the pathogen.<sup>59</sup> Memory B cells not only increase in the frequency that they respond to their specific pathogens, but they also produce antibodies that bind more readily – in other words, have more affinity – to the surfaces of the pathogens and are more effective.<sup>60</sup>



**Step 12** Once the organization have helped enough projects to take off, create a database of past projects, contact information of citizens who headed the projects, the challenges they faced, the process of implementation, and a measure of success.

This is the establishment of a formal immunological memory in the form of a database. It allows the organism, which in this case is the city of Paris (with the help of our organization), to remember fast and previously-proven effective ways to mount immune responses to previously-experienced problems. In well-established immunological memory, in the case of a secondary and subsequent infection by a pathogen, memory lymphocytes but not native lymphocytes are responsible for mounting an attack. In fact, memory T and B cells, which are large components of immunological memory, prevent the activation of native immune cells when they activate to combat their target pathogen.<sup>61</sup>



[drupal-macedonia.com/tutorial/drupal-7-database-abstraction-layer](http://drupal-macedonia.com/tutorial/drupal-7-database-abstraction-layer)



# Follow-Up and Assessment





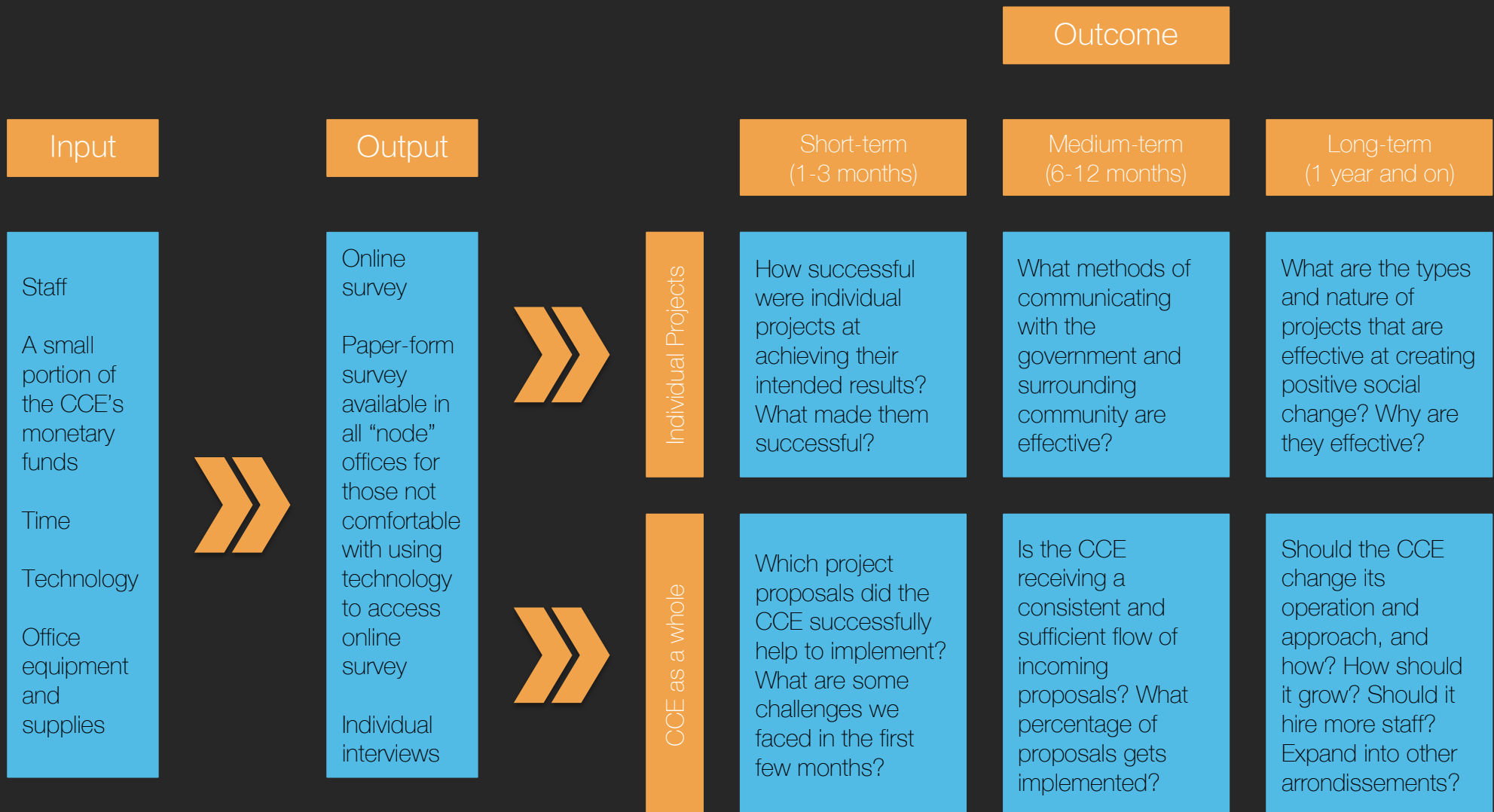
## Purpose and Goals

The assessment plan is composed of two layers: one that aims to determine the effectiveness of individual, citizen-led projects, and one that examines the progress that the organization has made. The CCE intends to use the gathered data to advise us on how we proceed as an organization, and to help us learn about how to implement successful citizen-driven projects.

We have used a logic model (outlined on the next page) to develop an assessment plan that follows the course of inputting resources to receiving the expected outcomes.

## Communication of Results

To communicate the results of our assessment data to the citizens, government agencies, and other entities connected to the CCE, we will publish and send bi-annual reports of the data and how they have influenced the operation of the CCE. The report will include a summary of the data, the conclusions that can be drawn from it, and the changes (if any) they inspire in the organization and the implementation process of individual projects.



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