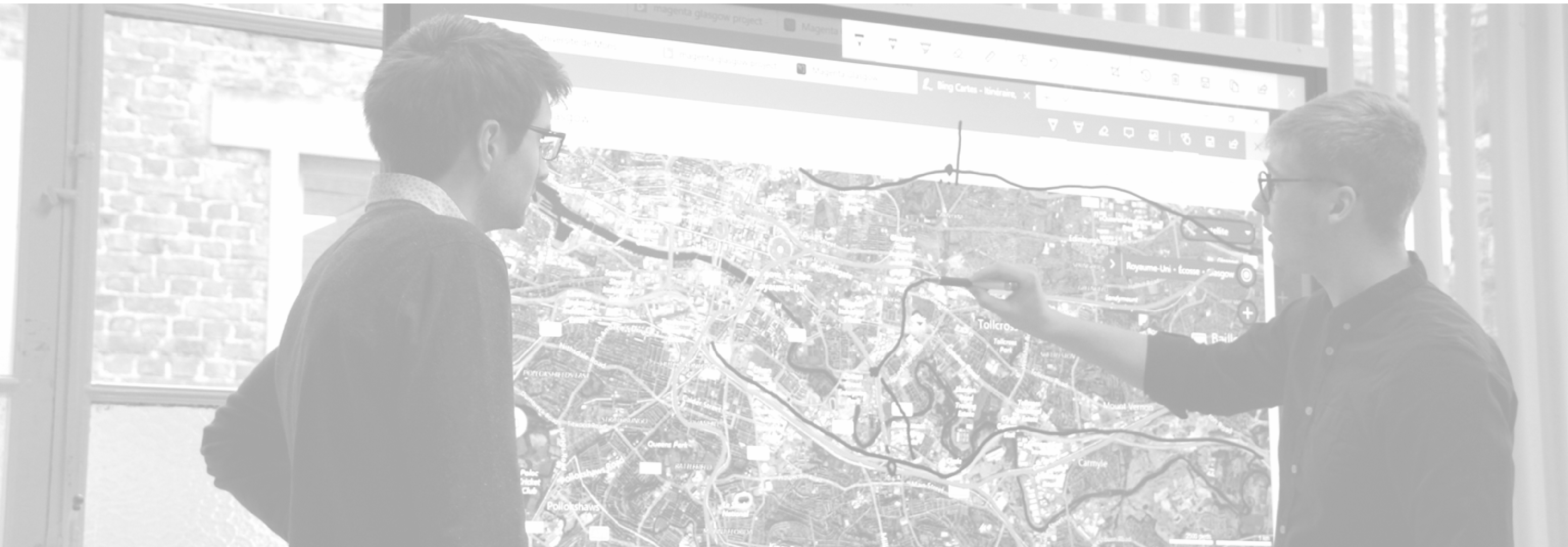


# *De l'ordinateur au smartphone : histoire de la donnée et de la ville.*



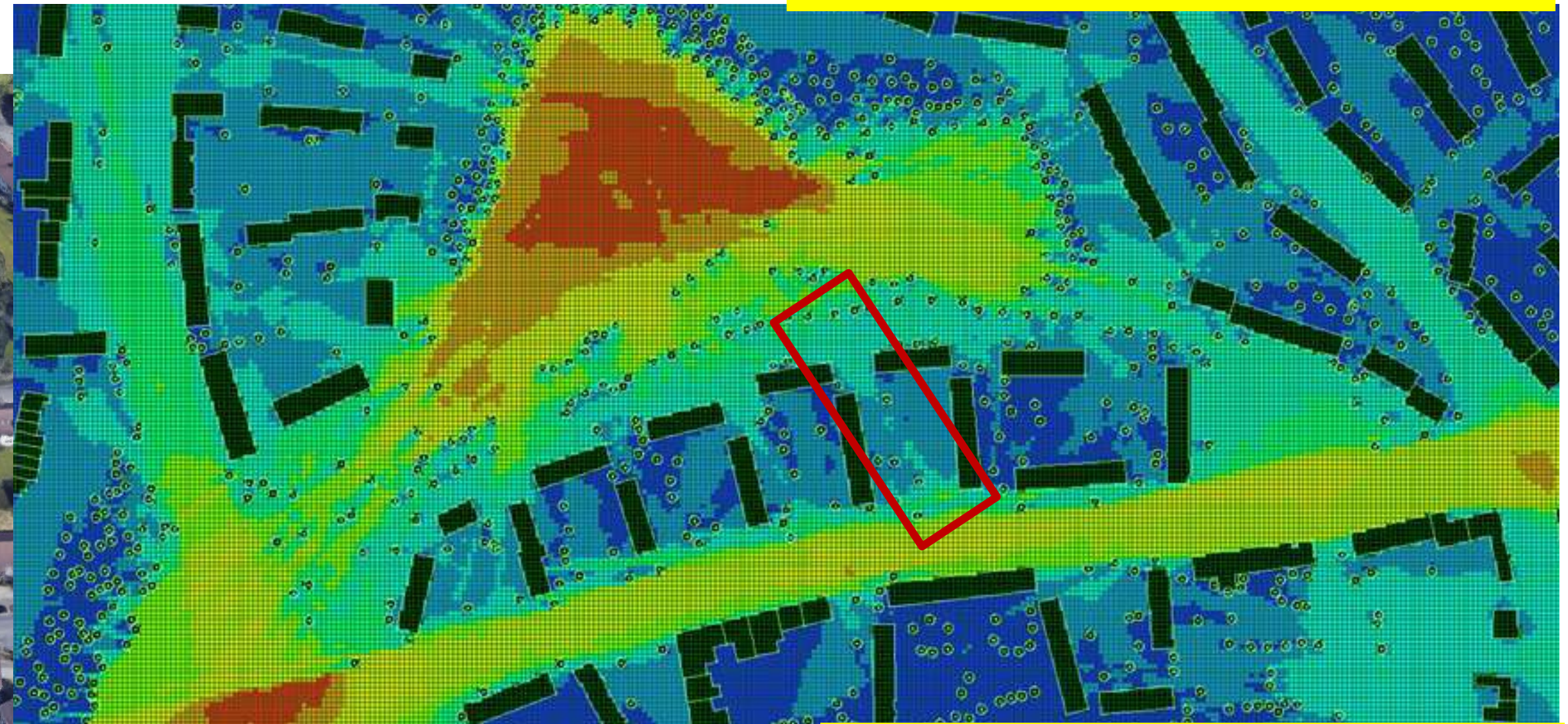
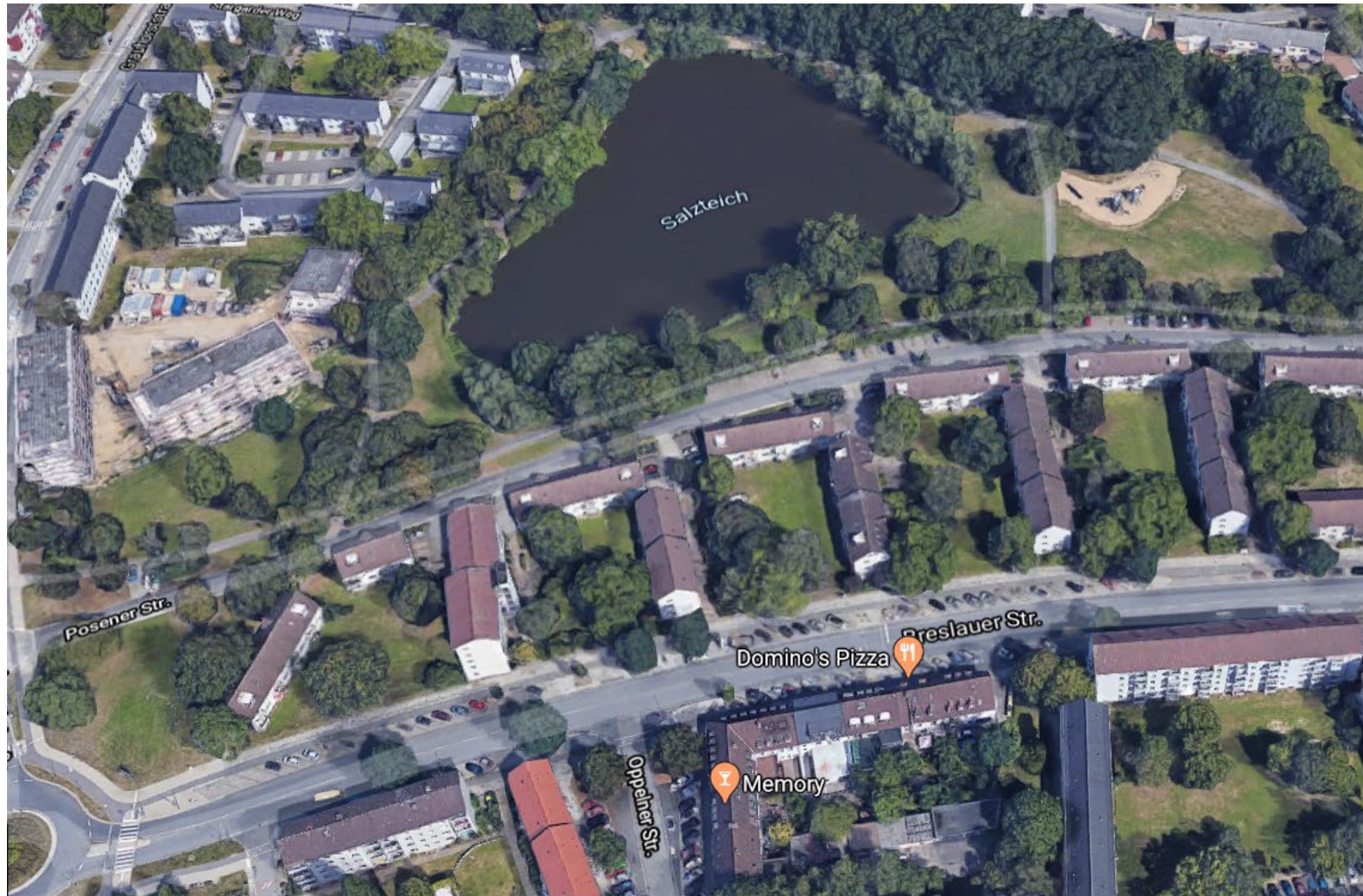


# Simulation

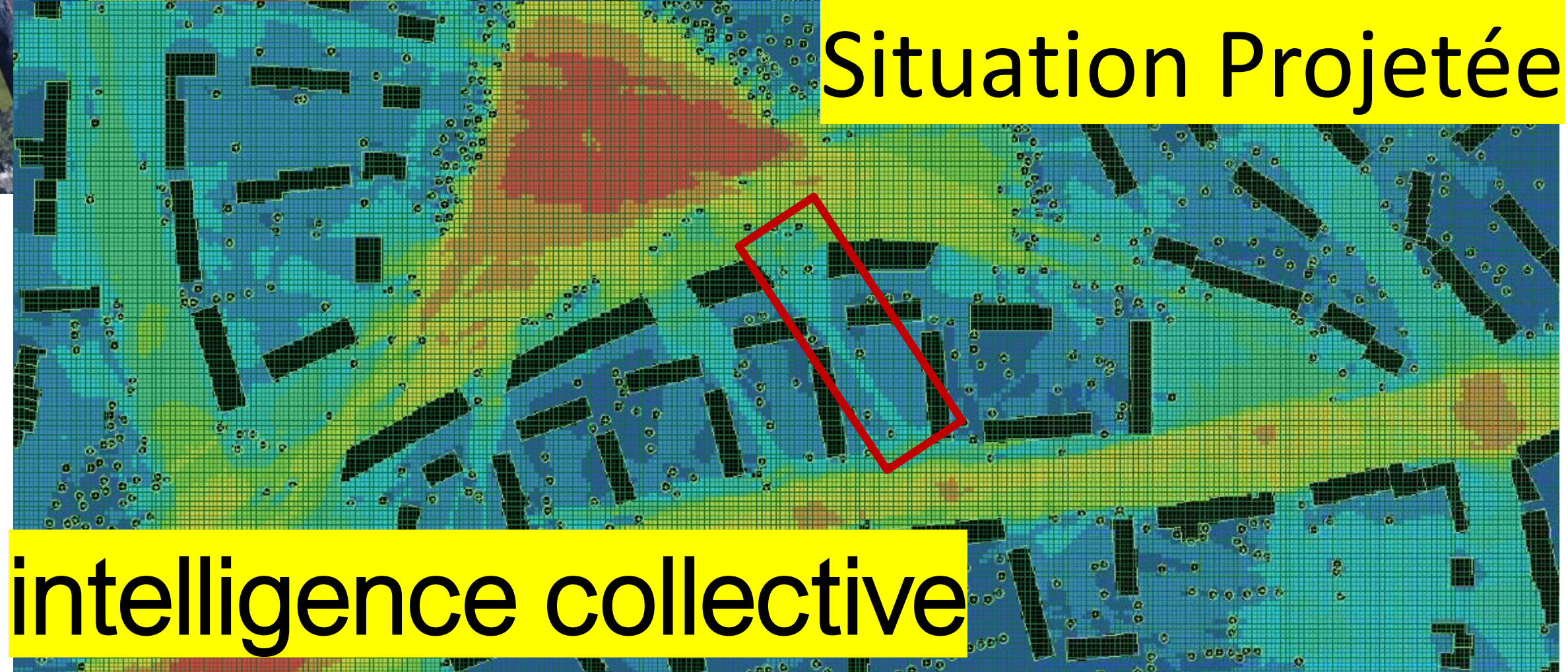
Wolfsburg Urban Vision 2020 Competition

Connectivité

Situation existante



Situation Projetée



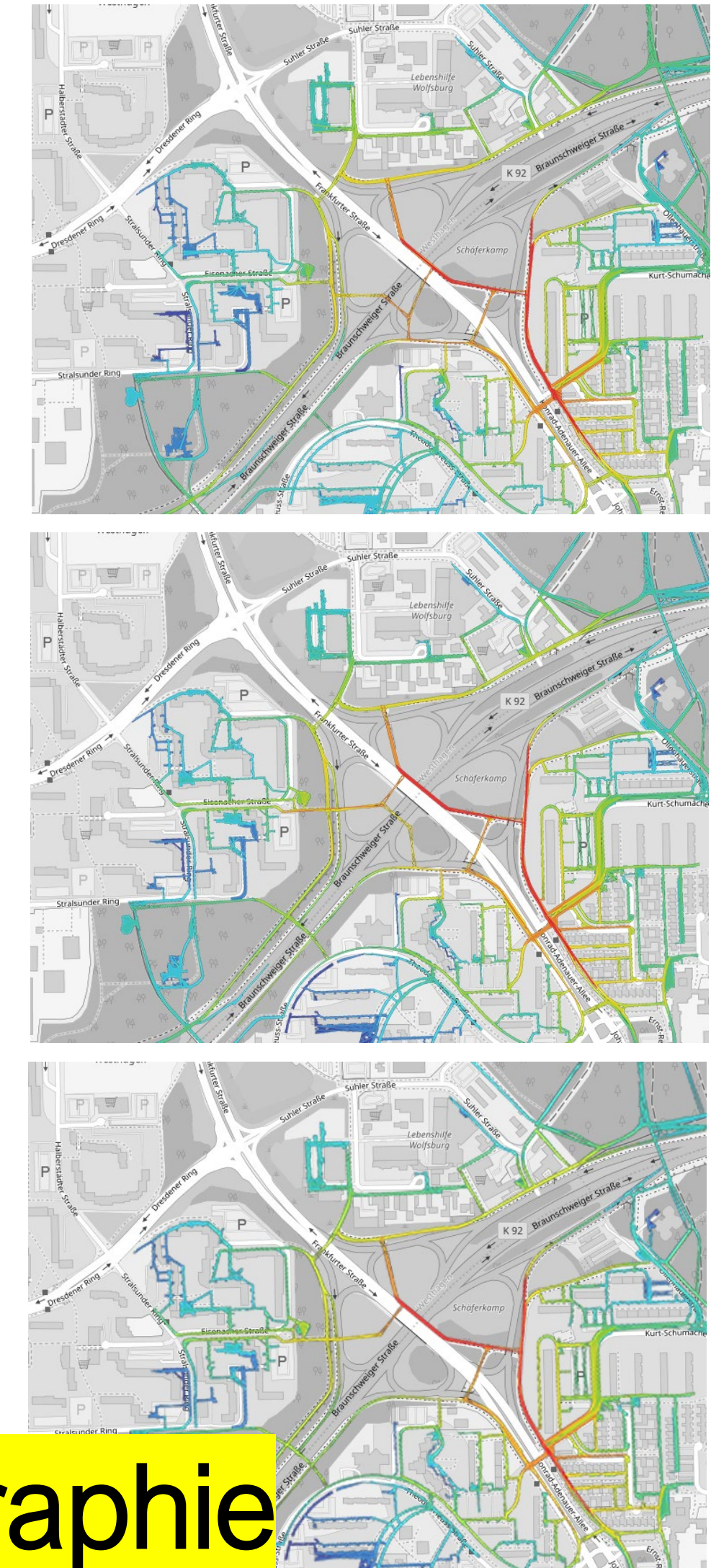
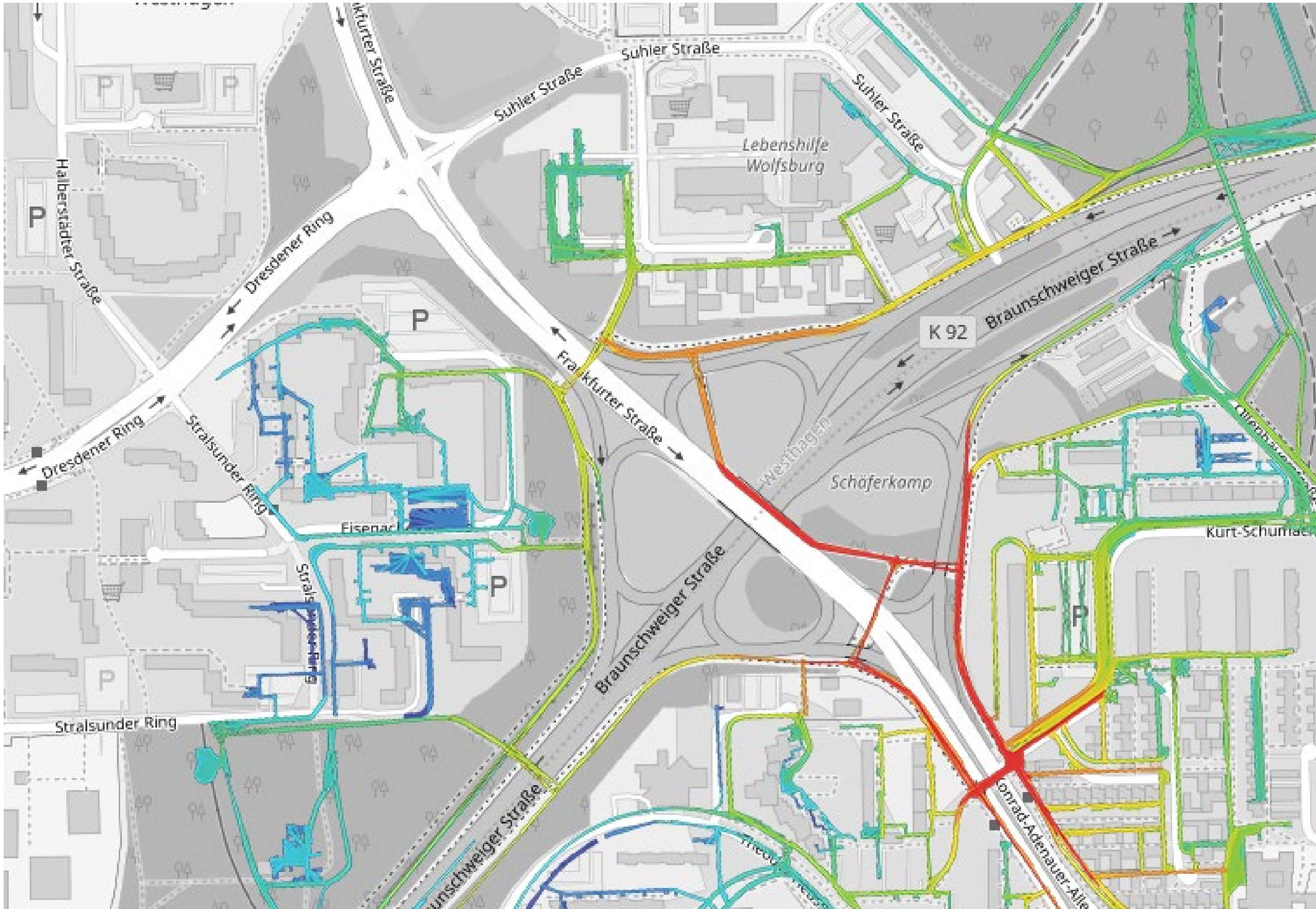
= Données + cartographie + intelligence collective



# Simulation

Wolfsburg Urban Vision 2020 Competition

Connectivités



= Données + intelligence logicielle + cartographie

***La donnée...***

***Définition?***

***Quelle est la différence entre les données et les informations ?***





***La donnée... au  
18e siècle***

---



Table de la loi ET

b\ a	0	1
0	0	0
1	0	1

Table de la loi OU

b\ a	0	1
0	0	1
1	1	1



***La donnée... au  
19e siècle***

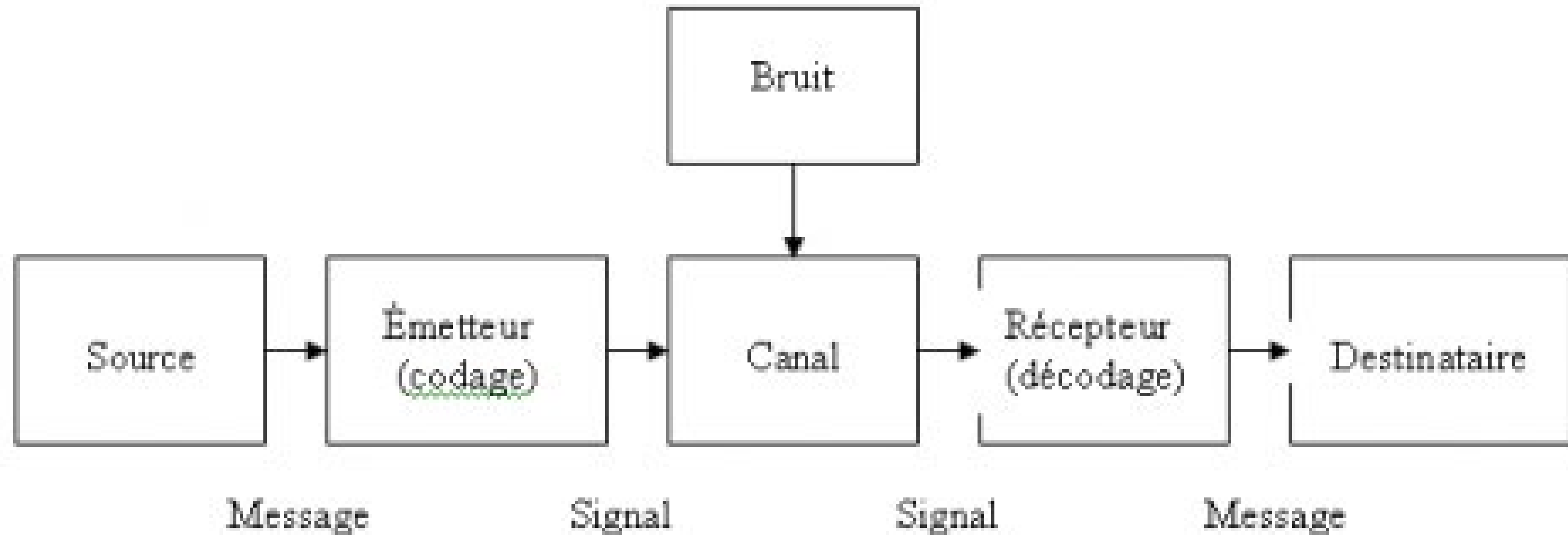




***La donnée... au  
20<sup>e</sup> siècle***

---





- 1) La source d'information énonce un message ...
- 2) ... que l'émetteur va encoder et transformer en signal,
- 3) lequel va être acheminé par le canal,
- 4) puis décodé par le récepteur, qui reconstitue un message à partir du signal
- 5) et le transmet enfin au destinataire.



## La donnée... et 3 lois :

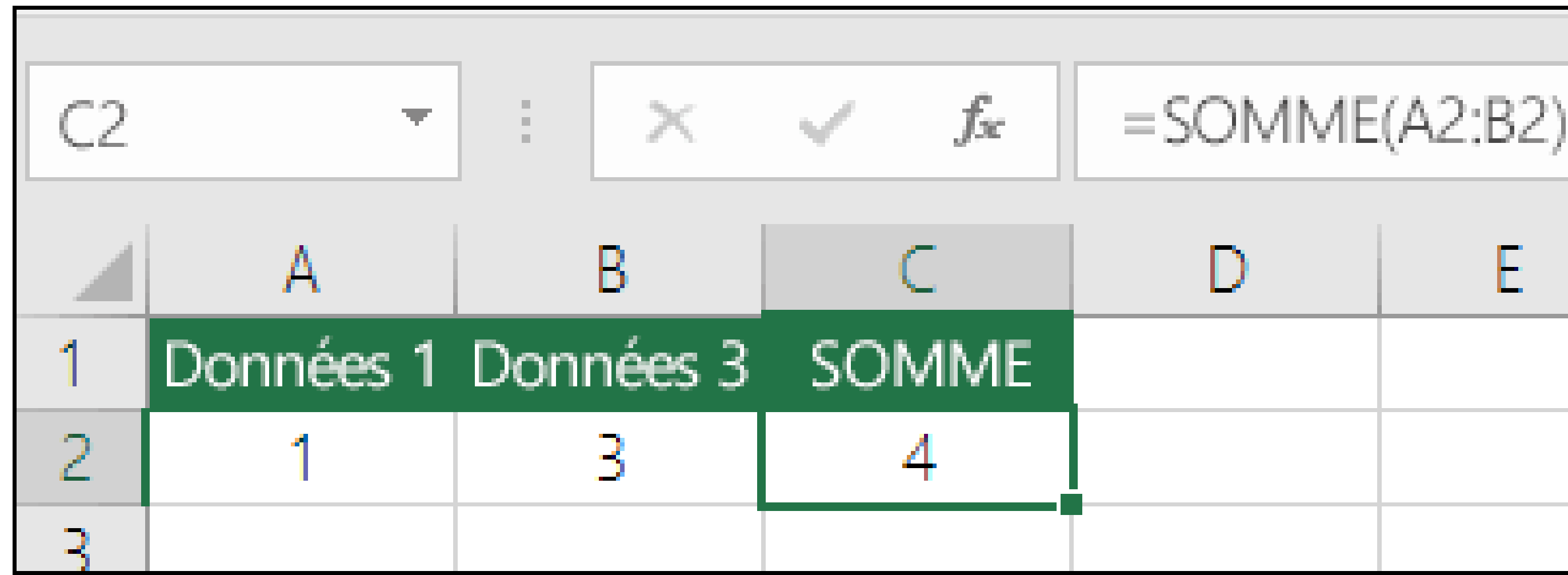
- **L'entropie, concept fondamental de l'information**

*1 donnée + 1 donnée = une information*

*Une information « vaut » plus que les données séparément :*

$$1+1 < \sum (1,1)$$

**Variable aléatoire**



The image shows a screenshot of an Excel spreadsheet. The formula bar at the top displays the formula `=SOMME(A2:B2)`. The spreadsheet grid shows columns A, B, C, D, and E, and rows 1, 2, and 3. Row 1 contains the headers 'Données 1', 'Données 3', and 'SOMME'. Row 2 contains the values '1', '3', and '4'. The cells in row 1 and row 2 are highlighted with a green background.

	A	B	C	D	E
1	Données 1	Données 3	SOMME		
2	1	3	4		
3					



## *La donnée... et 3 lois :*

- ***Le codage, 2<sup>e</sup> loi de l'information***

*Coder = la façon optimale de transmettre un signal*

**Réduire le nombre de lettres ne change pas le signal mais crée des erreurs**

■ Selon une étude de l'Université de Cambridge, l'ordre des lettres dans un mot n'a pas d'importance, la seule chose importante est que la première et la dernière soient à la bonne place. Le reste peut être dans un désordre total et vous pouvez toujours lire sans problème. C'est parce que le cerveau humain ne lit pas chaque lettre elle-même, mais le mot comme un tout.

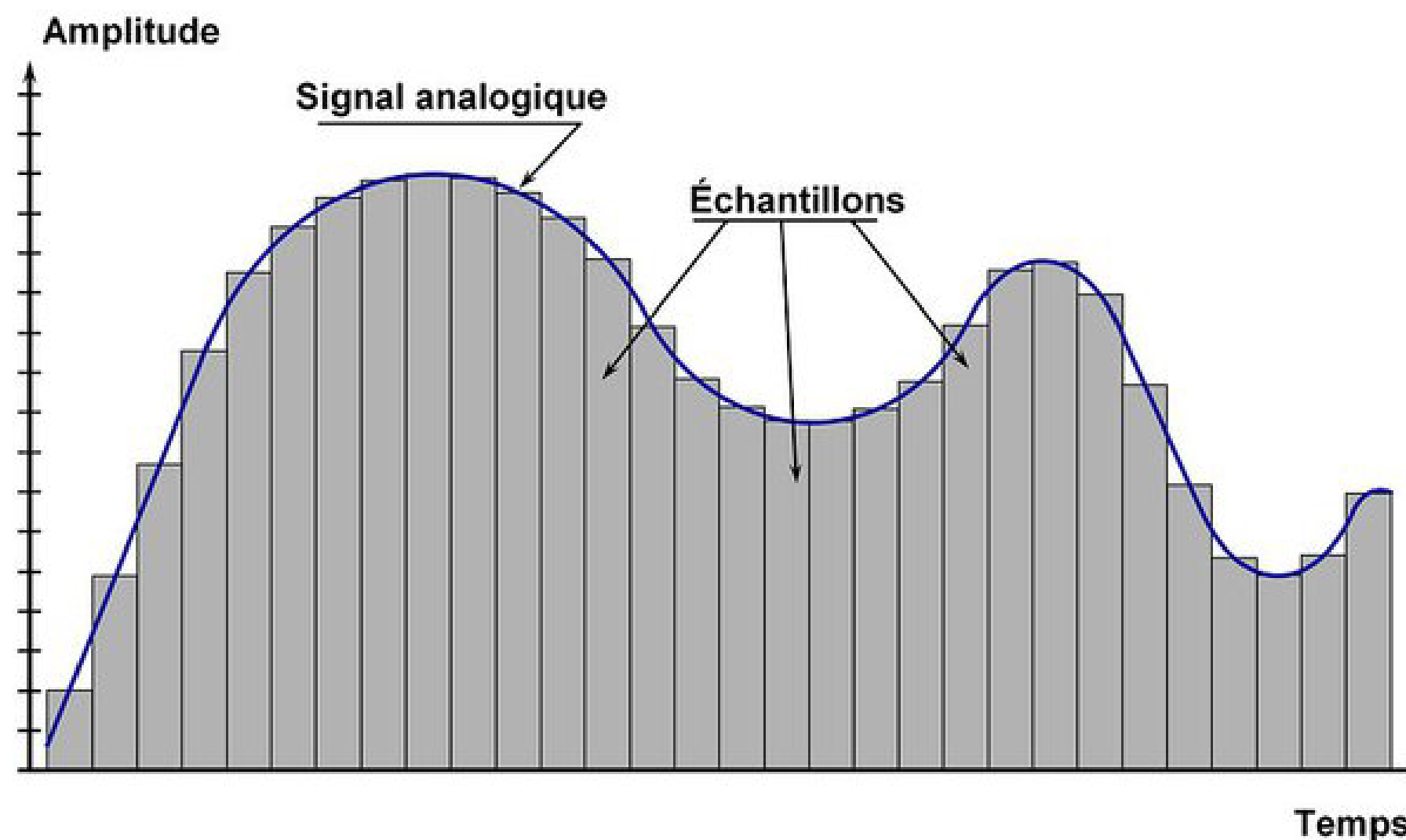
La perdue...



## *La donnée... et 3 lois :*

- ***L'échantillonnage, 3<sup>e</sup> loi de l'information***

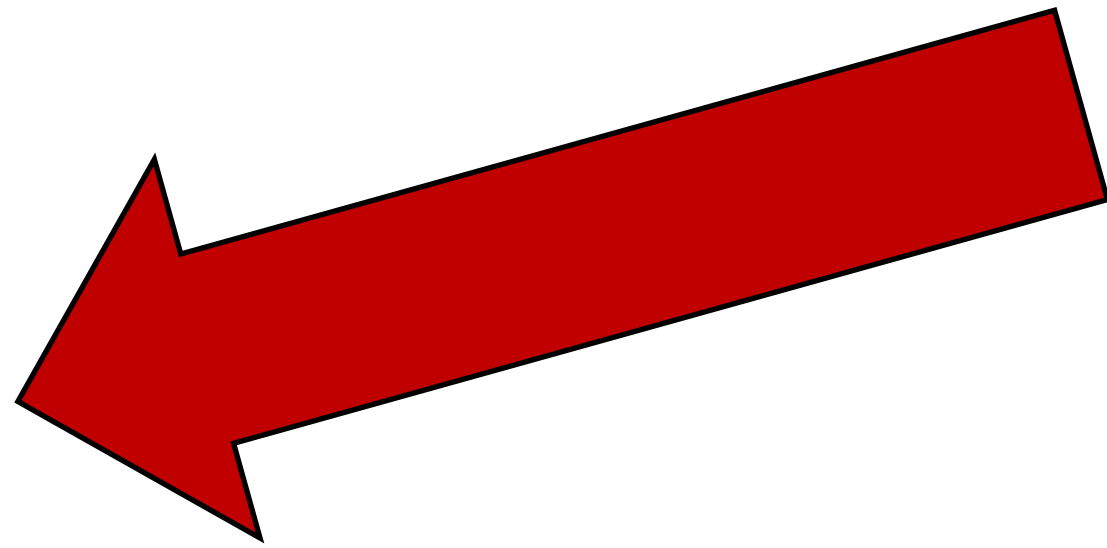
*si l'on échantillonne un signal à une fréquence au moins deux fois supérieure à celles qu'il contient, on pourra le reconstruire exactement, au moins théoriquement.*





## *La donnée... et 3 lois :*

- *Entropie*
- *Codage*
- *Echantillonnage*







$$\rho(t, \lambda, \nu, \alpha) =$$

$$\sum_0^{\infty}$$

$$\int$$

$$*(t, \nu, \lambda - \xi, \lambda_1, \lambda_2, \dots, \lambda_n, \dots, \lambda - \xi)$$

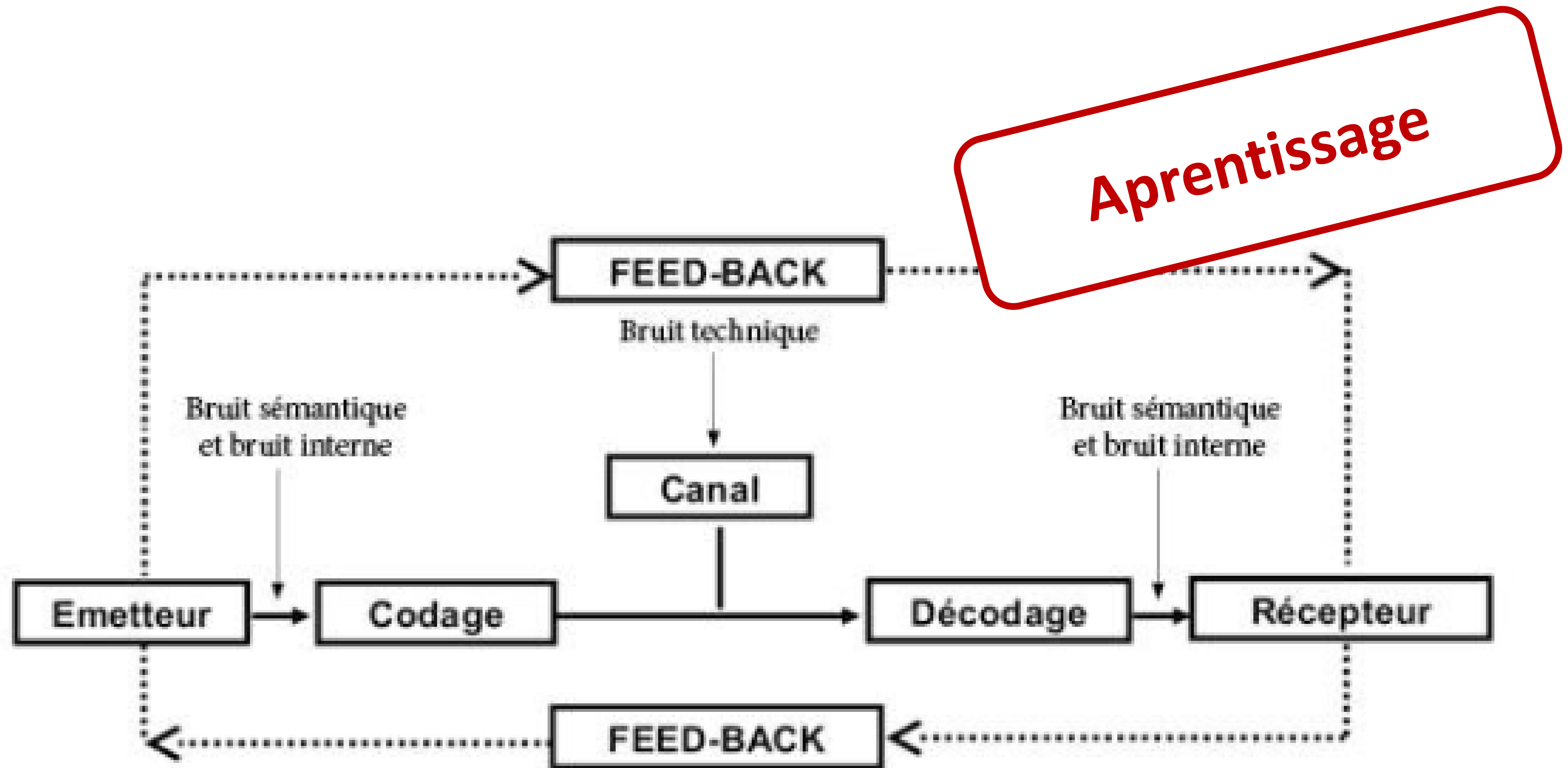
$$\iint H(\xi, \lambda) = \iint H$$

***La donnée... et la cybernétique***

$$F(\xi - \xi, \lambda) \int$$



# La donnée... et l'IA:









***La donnée... et  
l'ordinateur:***

---

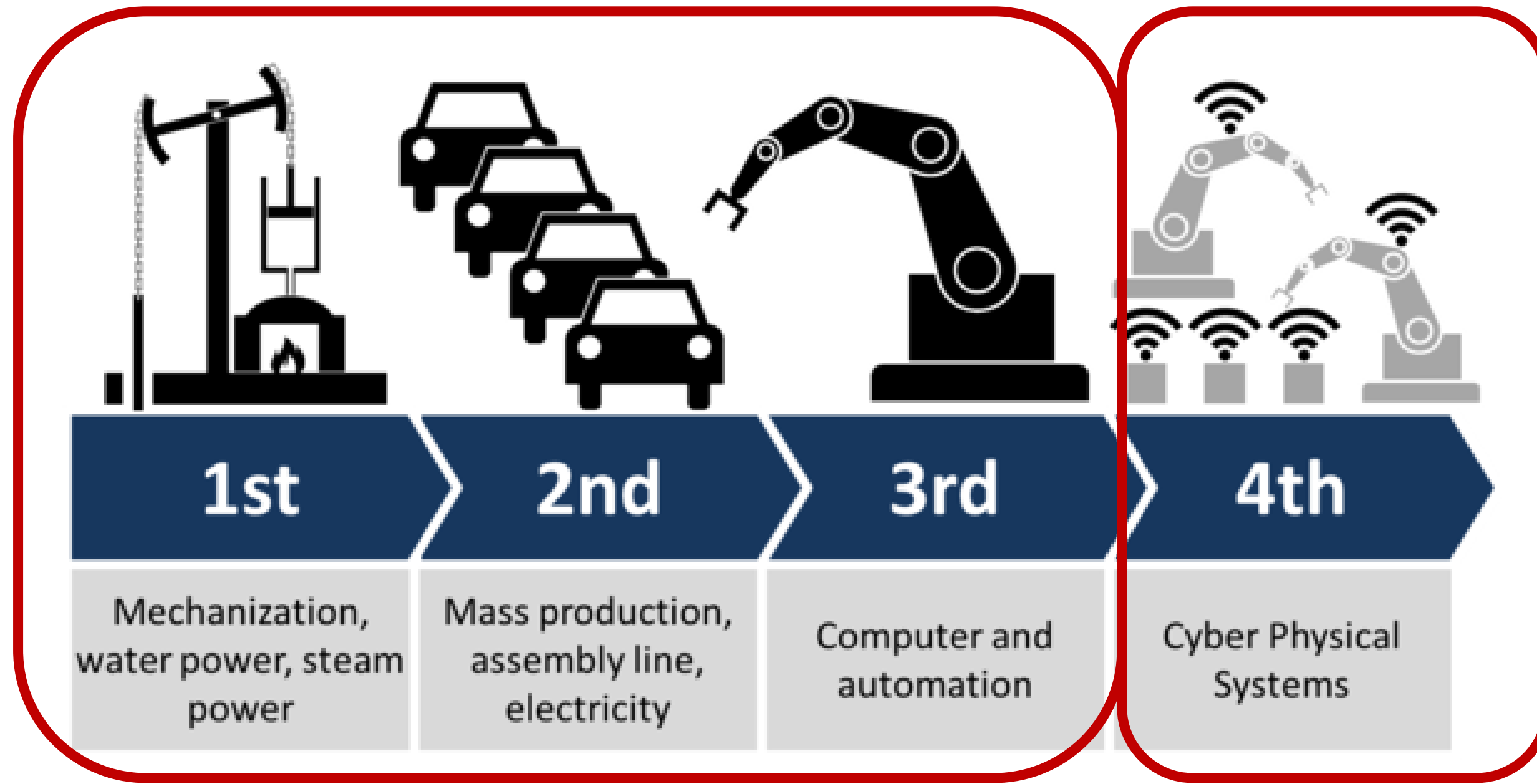


A black and white photograph of a man with glasses, wearing a white shirt and a dark tie, holding a small electronic component (likely a microchip) between his fingers. The image is partially obscured by a large, semi-transparent white circle on the right side, which contains the text. The background is a plain, light-colored wall.

***La donnée... et  
la naissance du  
microprocesseur***

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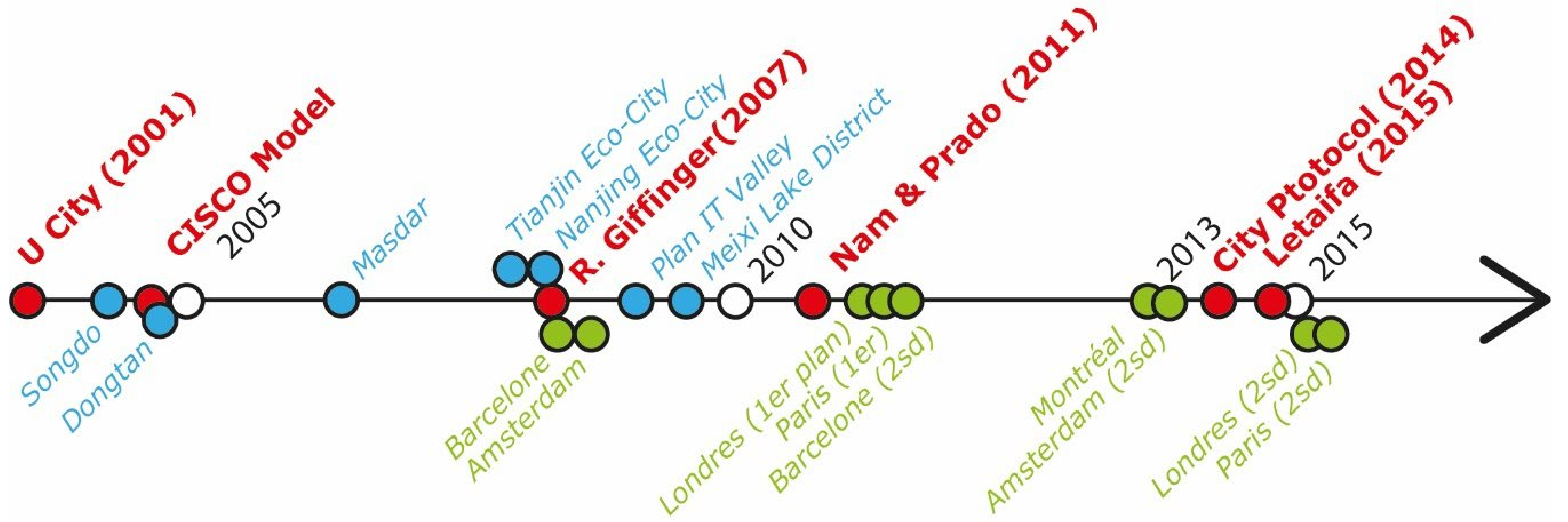




# *Données... et révolutions*

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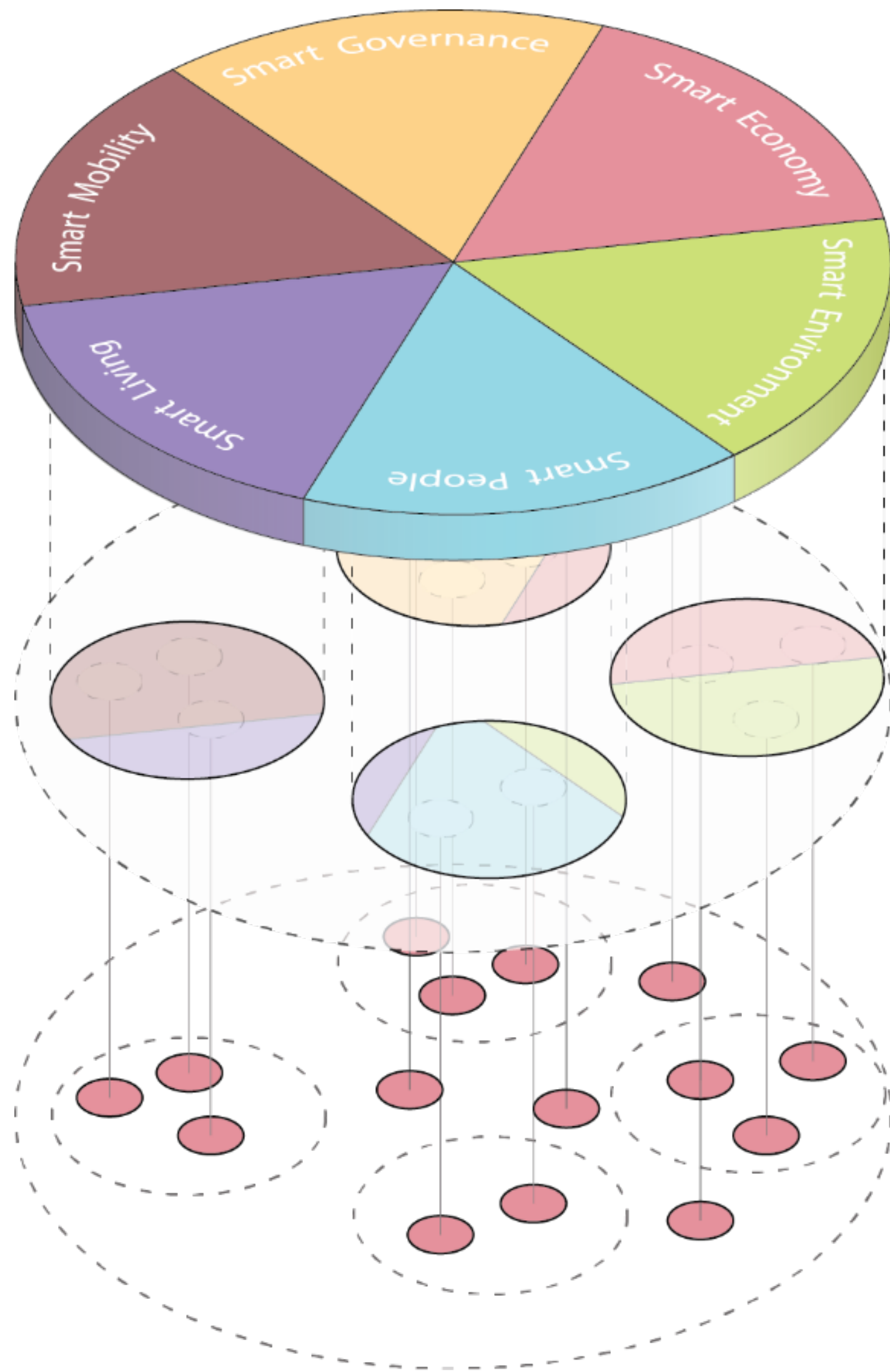
*SONGDO (Corée du sud)  
Source : Urban Hub, 2018*





*Masdar Institute, Photo: Gökçe Günel, March 2014.*





Smart City

Smart City Initiatives

Smart City Projects

**MOBILITY**

**ECONOMY**

**ENVIRONNEMENT**

**LIVING**

**GOVERNANCE**

**PEOPLE**





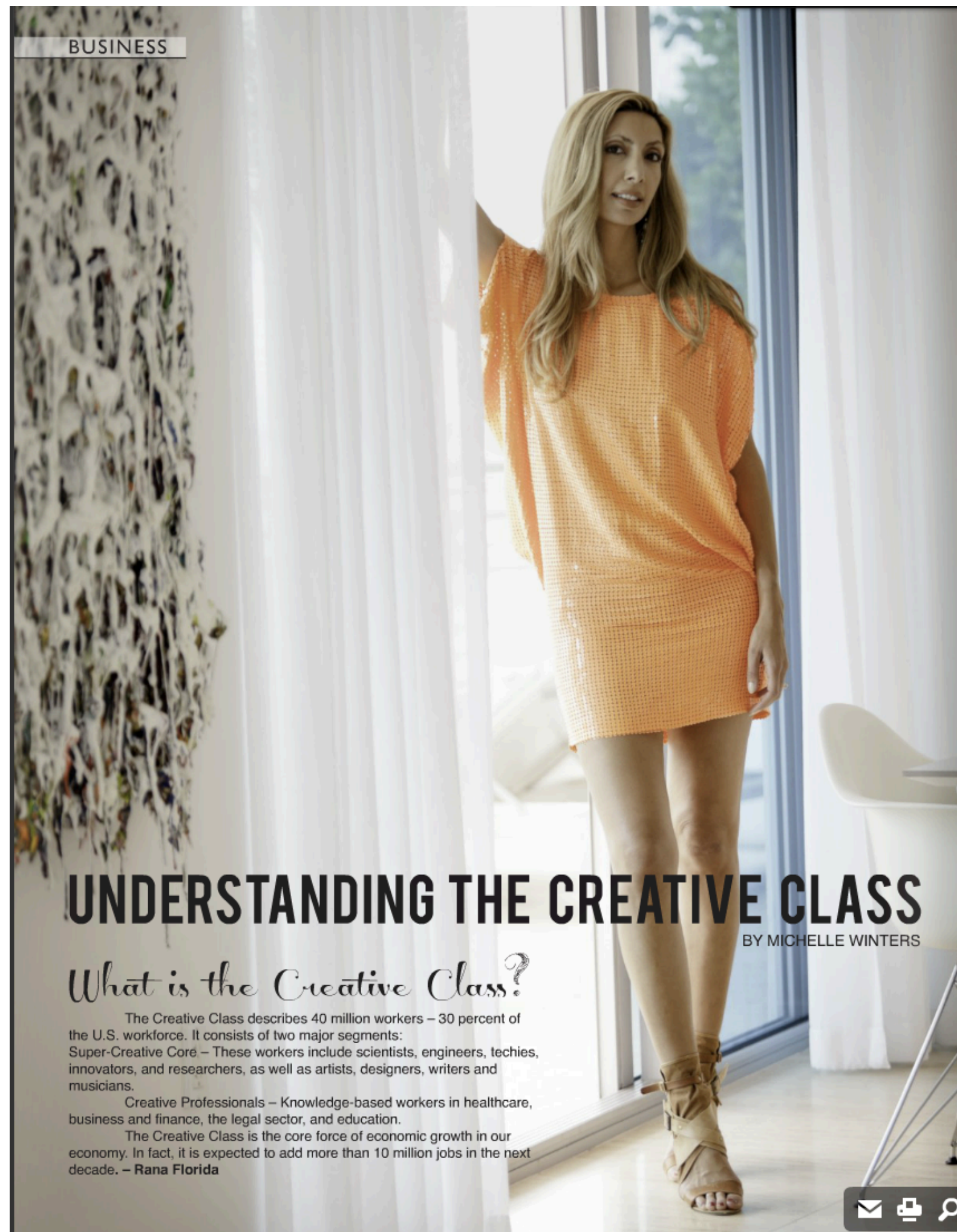
10TH ANNIVERSARY EDITION



# THE RISE OF THE CREATIVE CLASS

Revisited

RICHARD FLORIDA



BUSINESS

## UNDERSTANDING THE CREATIVE CLASS

BY MICHELLE WINTERS

### What is the Creative Class?

The Creative Class describes 40 million workers – 30 percent of the U.S. workforce. It consists of two major segments:  
Super-Creative Core – These workers include scientists, engineers, techies, innovators, and researchers, as well as artists, designers, writers and musicians.

Creative Professionals – Knowledge-based workers in healthcare, business and finance, the legal sector, and education.

The Creative Class is the core force of economic growth in our economy. In fact, it is expected to add more than 10 million jobs in the next decade. – Rana Florida

Raine had the pleasure of meeting Rana Florida, CEO of The Creative Class Group, a unique boutique advisory firm that offers clients insight on not only how to appeal and market to the creative class but also offers strategies that keep their corporate clients ahead of their competitors while leading institutions and cities to greater economic prosperity.

Rana has more than two decades of experience in corporate strategy, communications, marketing and branding. She previously directed global strategic communications for HMSHost, one of the largest airport developers. Prior to that, Rana served as VP of Corporate Communications for Feld Entertainment, the world's largest producer of live shows such as Disney Live.

Richard Florida, entrepreneur and academician, founded the organization. With a Ph.D. from Columbia University, Richard is author of several influential global best sellers, including the award-winning *The Rise of the Creative Class*. Besides writing for many well know publications, Richard is also a senior editor for *The Atlantic* and appears regularly on CNN. Richard also finds time between guest lectures to Harvard University students, to tweet from his Twitter page - one of the 140 most influential Twitter pages in the world, according to *Time Magazine*.

Other team members include: Steven Pedigo and Reham Alexander. Steven serves as the Director of Research and Communications. He is responsible for managing the Creative Class Leadership Program and Reham is the director of global operations and events for Creative Class Group.

**RAINE:** Why did you decide to leave the corporate world and start a business with your husband?

**CREATIVE CLASS:** It was a risky decision at the time because I really enjoyed my work at HMSHost. I had tremendous flexibility, I travelled frequently, I enjoyed working with my colleagues and senior executives and I liked what I was doing. But the market was ripe for an organization that valued creativity. We had an amazing team in place with unique and complimentary skills, but the organization desperately needed a business and marketing focus.

**RAINE:** What are some of the obstacles you faced when you were starting your company?

**CREATIVE CLASS:** I was so used to working in a corporate environment that I didn't know what to do when I needed specialty help. I was so used to calling IT or legal or HR for support, and then all of a sudden, I was in charge of all of those functions. I learned quickly to outsource those functions. My team is focused exclusively on our core mission.

**RAINE:** What would be an ideal client for the Creative Class Group?

**CREATIVE CLASS:** Our clients are global and we work with all sorts of organizations, from Fortune 100 companies to mayor's offices to arts, healthcare, education, and nonprofits around the world. Our ideal client is one that shares our ethos of creativity and diversity.

**RAINE:** How did your company overcome its biggest challenge?

**CREATIVE CLASS:** Most brands can create standard operating procedures and expand quickly into new markets. Our biggest challenge will always be how to expand without compromising our brand.

**RAINE:** Whom would you consider the biggest competitor of the Creative Class Group?

**CREATIVE CLASS:** What we offer is so unique that competition is rare. Our mix of economic development and urban planning expertise, academic credentials, and business and marketing experience separates us from the competition. We are a one-stop shop.

**RAINE:** What has been the most difficult client to attain to date?

**CREATIVE CLASS:** Through press announcements and media interviews, we noticed that FIAT was trying to market cars to the Creative Class. We reached out and offered to collaborate on research, marketing and branding. We have a tremendous amount of data on how to target this consumer and their locational choices. They declined the opportunity. Unfortunately, their branding campaign using Jennifer Lopez as a celebrity endorser and Gucci was a major turn off to the Creative Class. Sales plummeted. We still believe it's a smart car for urbanites and can help shape the campaign.

**RAINE:** The Creative Class Group works with a variety of clients, from well-known brands to whole cities. Name some of your clients and how you implement your services with such different entities.

**CREATIVE CLASS:** We offer a variety of speakers for keynote events. Whether it is a high level board meeting or a major city initiative, we have a roster of great presenters on topics ranging from economic development, creativity, diversity, management, innovation, technology, education and health. We also offer workshops, advisory services, research and marketing and branding.

We collaborated with GSD&M agency executives and senior members of the BMW team to build the "Idea Class" campaign, which was hailed by the agency as "one of its most successful ad campaigns."

We provided architectural and urban planning feedback on the landmark Halifax Central Library Project.

We helped Air Canada increase the visibility of its frequent flier program, Aeroplan, through web sponsorship and feature placements in international and national travel publications.

We counseled Bacardi Dewars' senior marketing team, as well as their agency partners, on the Creative Class and how to target them.

We helped developed the Philips Livable Cities Award, an initiative designed to generate practical, achievable ideas for improving the health and well being of people living in cities. The year long program resulted in more than 450 entries from 29 countries.

We collaborated with Centro de Estudios Superiores de Monterrey Design to create and execute its new Master's in Business Innovation Program for graduate students in Mexico.

**RAINE:** The Creative Class Group currently works with Le Meridien Hotels, a brand under the Starwood Hotel family. How did you end up collaborating with this group of hotels out of so many in the market?

**CREATIVE CLASS:** It was a great fit, as Le Meridien has transformed into a design-led lifestyle brand that embodies culture and creativity. Not only do they have a one of a kind program called the LM100 which celebrates creative minds, but they also are transforming the guest experience through the Hub concept, which includes a wide range of curated contemporary art, a creative atmosphere which encourages dialogue and idea exchange, and signature events which activate the hub and promote ideas and discovery.

**RAINE:** What are some of the unique things you have implemented with Le Meridien Hotels?

**CREATIVE CLASS:** Le Méridien transformed its lobbies, creating a gathering place for creative minds that promotes dialogue, awakens curiosity and stimulates thinking. Our team created the Creative Class library for the lobby, which includes hundreds of books and periodicals. We carefully selected the books based on an analysis of the type of guests that stay there—both old and new titles, in such categories as cities, creativity, design, architecture, art, music, and culture.

The Creative Class Group performed research to help Le



# ***La classe créative...***

## ***Définition?***

- **Intelligente**
- **Universitaire**
- **Engagée**
- **Connectée**
- **... et probablement aisée**





A Think Tank, between City development and the digital World | look to the future because that's where I'm going to spend the rest of my life. (George Burns)

## AMAZON HQ2 : WHAT DOES IT MEANS ABOUT THE URBANITY OF CITIES IN THE DIGITAL ERA ?

« Précédent / Suivant »

numericlandscape / 10 novembre 2017 / Cities, economics, smart, urban planning

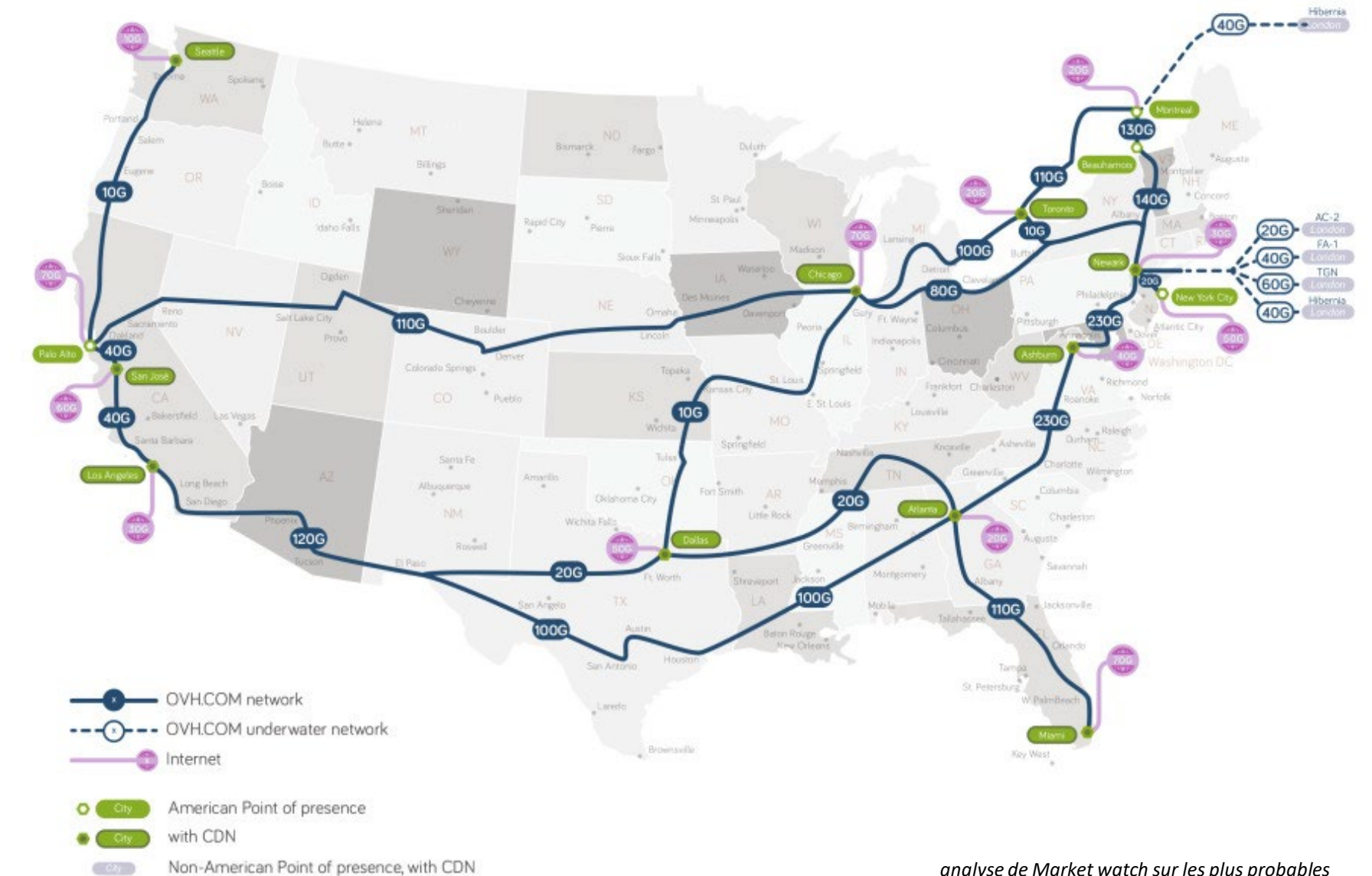


## Possible Amazon HQ2 headquarters amazon



\*Amazon's existing HQ

Source: MarketWatch analysis



analyse de Market watch sur les plus probables localisations du second siège social d'Amazon en Amérique du nord (2018)



*Les données*  
+  
*la classe créative*  
=  
*une ville intelligente*





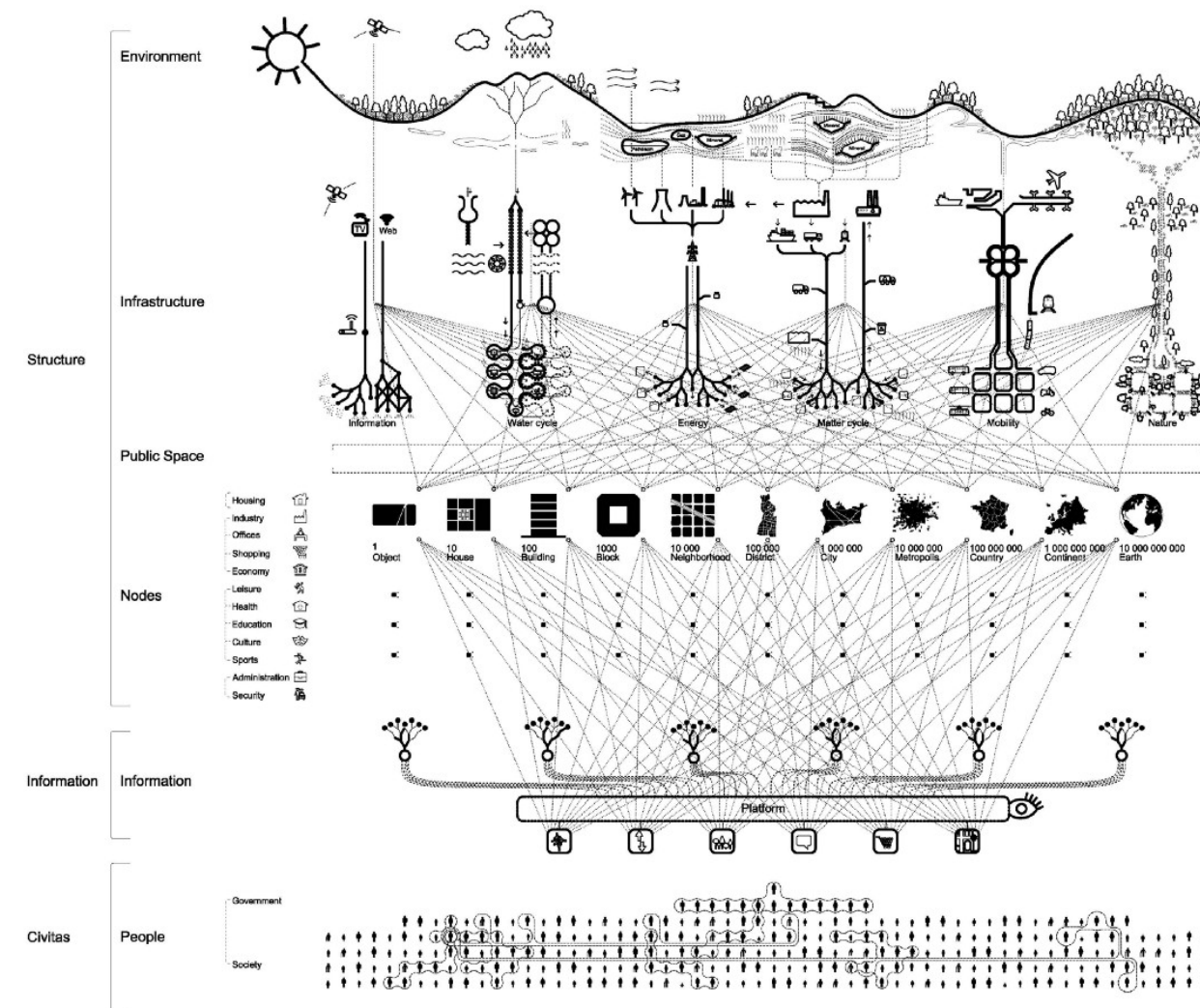
**EVI (LE)**



## ***La ville intelligente aujourd'hui...***

***C'est un système complexe qui répond aux nouveaux paradigmes humains qui sont nécessaires pour la réduction de l'entropie (climat et développement durable) tout en offrant la même qualité de vie.***

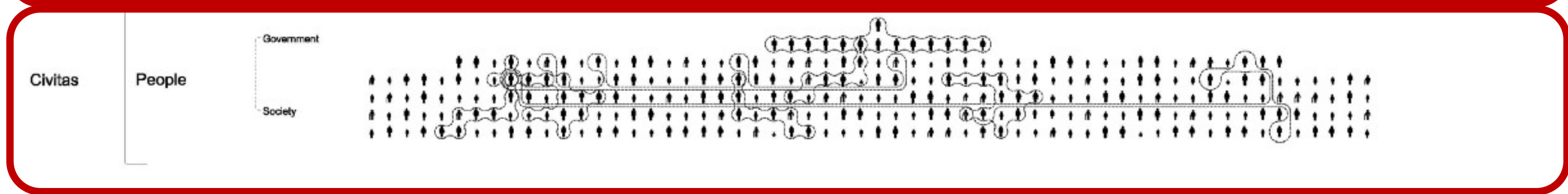
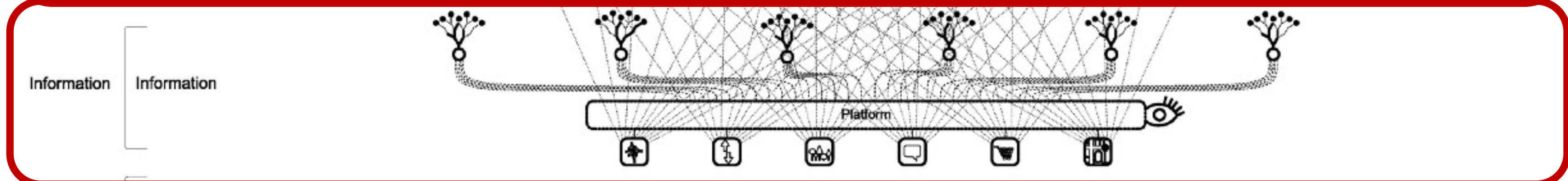
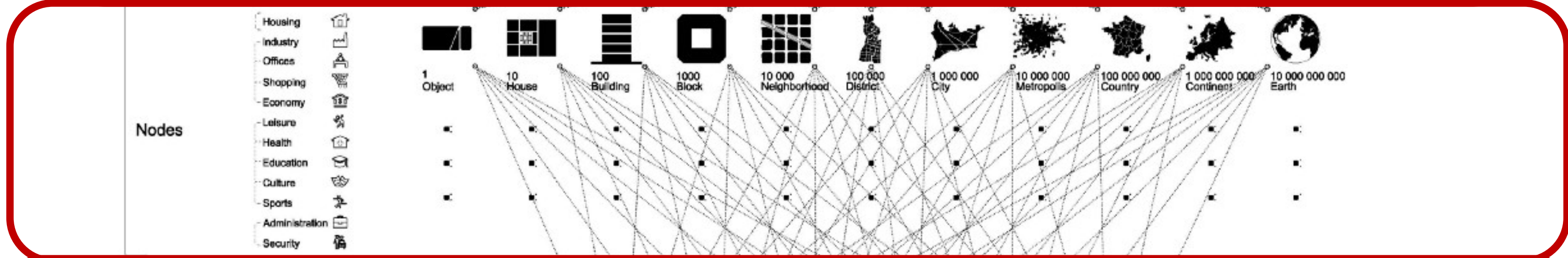
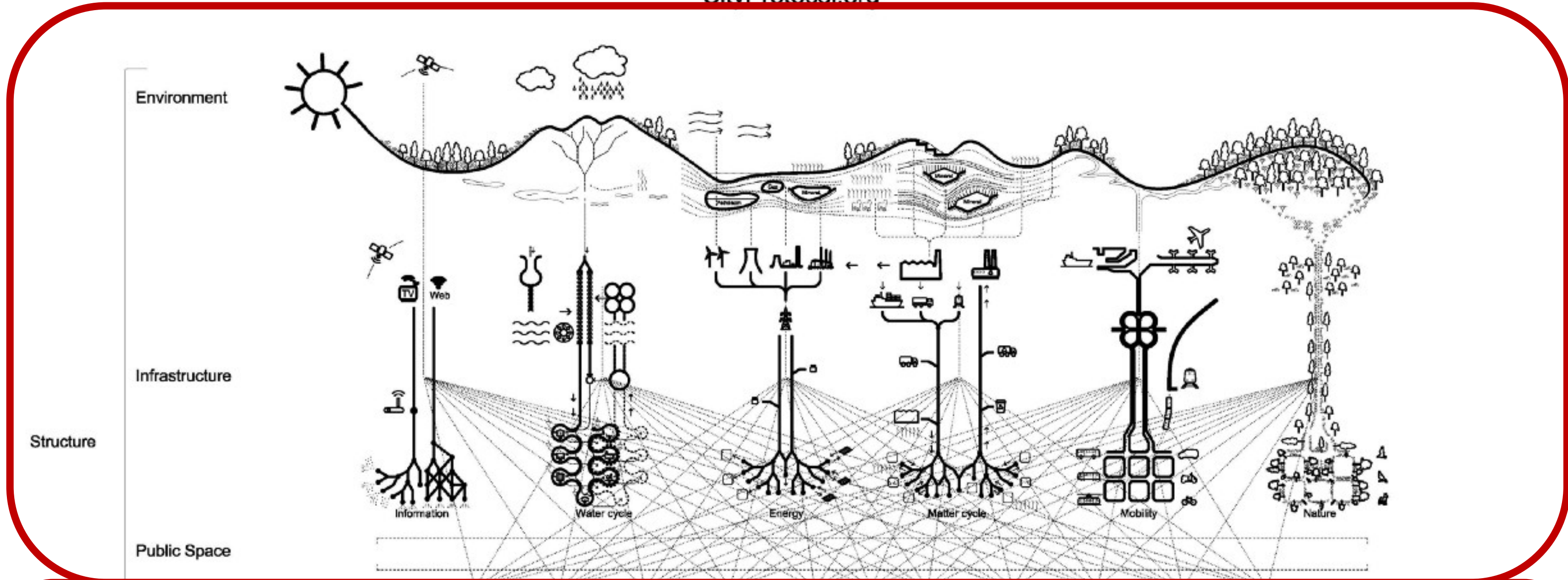




# Données et complexité urbaine

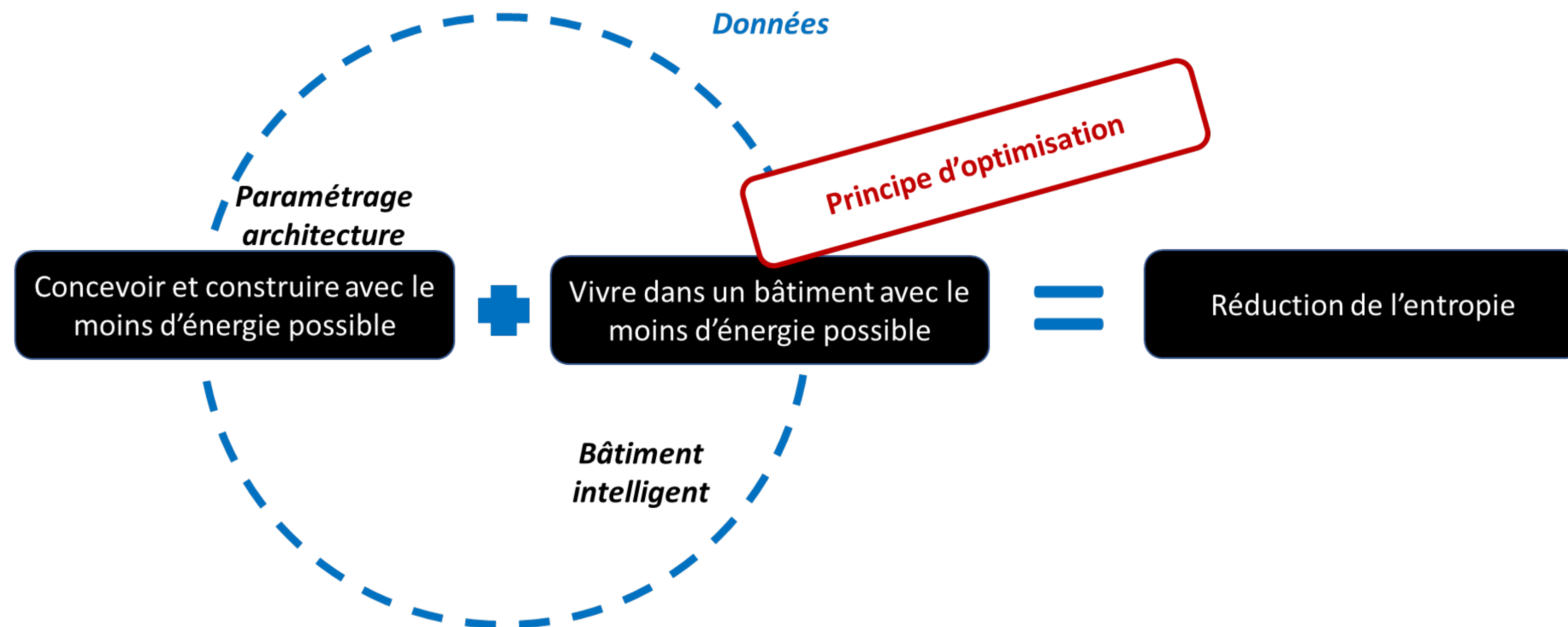








# Un objectif majeur...





***La ville intelligente aujourd'hui...***

***De Leibnitz à Weiner et de Shannon à Jobs***

***La question de la donnée est intimement  
liée aux différentes révolutions industrielles  
qui ont fabriqué le monde d'aujourd'hui.***

***La ville intelligente aujourd'hui...***

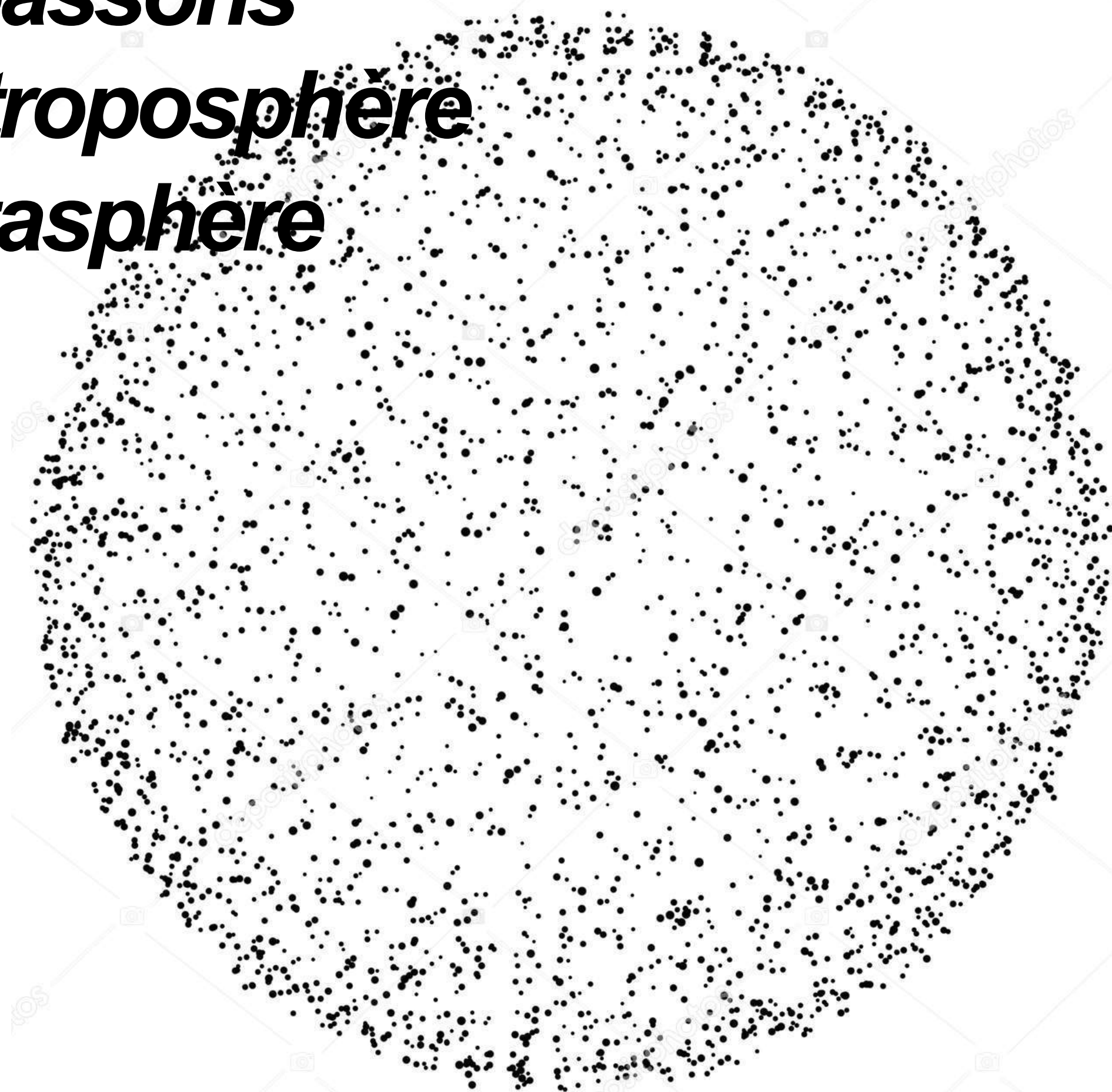
***Faut-il pour autant tout raser pour des raisons écologiques?***

***Le modèle de ville intelligente propose aujourd'hui d'utiliser les données que nous produisons avec nos smartphones pour optimiser nos actions, les rendre moins entropiques.***



***La ville intelligente aujourd'hui...***

***Nous passons  
de l'entroposphère  
à la datasphère***



***Merci de votre attention***

***Vous pouvez me retrouver sur [www.numercilandscap.e.org](http://www.numercilandscap.e.org)***



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[p.simoens@poly-tech.be](mailto:p.simoens@poly-tech.be)

**UMONS**  
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