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Rethinking collaborative practices in urban processes in Algeria

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Abstract. This article presents new strategies to address disparities in urban planning in Algeria, aiming to advance towards a more sustainable urbanism characterised by cooperative, consultative and transparent practices. It highlights the crucial role of information and communication technologies (ICT) in transitioning from a deeply rooted technocratic culture since independence to a more comprehensive and interdisciplinary culture.

This research explores the imperative for a change in practices and the importance of experimentation. It underscores the impact of urban information culture on citizen participation in urban initiatives. The article also addresses the concept of cyber-democracy and the role of ICT in enhancing civic engagement in the urban decision-making process.

Through a qualitative approach, the focus is on developing information-culture skills among citizens and introducing cyber-democracy as a catalyst for transformative governance.

Contents:

1. Introduction

Urban planning is an essential component of city growth and development, holding particular significance in the context of rapid urbanisation. However, numerous researchers (e.g., Belguidoum, 2008, 2010; Bekkouche, 2013; Youssfi, 2016; Souami, 2017) argue that urban planning effectiveness in Algeria is often hindered by a complex set of challenges and dysfunctions. In this article, we delve into the critical issues impeding the coordination, communication and sustainability of urban planning in Algeria.

One of the most glaring problems we have identified is the lack of alignment between deliberation and decision-making within a convoluted sequence of procedures (Blatrix, 2000). As pointed out by Stéphanie Wojcik (2005), urban consultation fails to empower the residents or the Communal Popular Assemblies (APC). Despite appearing integrated into the decision-making process, consultation often lacks binding power and remains a non-decisive element. Public inquiries often result in the approval of urban development projects prepared by local decision-makers, and neighborhood councils provide only advisory opinions. This situation illustrates a political consensus in conventional public activities (APC), resulting in the formalisation of pre-determined decisions.

Furthermore, our previous research has highlighted a striking disconnect between official rhetoric and actual practices in the field of urban planning in Algeria (Hadj Smaha, 2022). Legislations and official statements advocate for sustainability but, on the ground, urban production often exhibits contradictions characterised by a "mass urbanism" that neglects sustainable aspects (Béchar, 2015). This leads to a situation in which issues of communication and coordination are intricately linked to the approach to urban planning and the underlying implementation processes.

The aim of this work is to identify actionable pathways to reduce these inconsistencies and promote more sustainable urban planning characterised by enhanced cooperation, genuine consultation and reinforced transparency. We will also address the role of Information and Communication Technologies (ICT) in transitioning from a technicist culture established by early post-independence governments to a more comprehensive and interdisciplinary culture. The fundamental question we will tackle is the articulation between citizen participation and the decision-making process and how ICT can facilitate this alignment.

2. Methodology

As part of this research, we adopted a qualitative approach based on a comprehensive paradigm to deeply explore the challenges of urban planning in Algeria and identify pathways for future improvements. We selected this qualitative approach due to the exploratory nature of our study, which aimed to elucidate the social dynamics, perspectives and challenges associated with urban planning.

This approach employs various research methods, including direct and participant observations, as well as document analysis. It is important to note that our observations were conducted within the framework of our professional practice as architects (over eight years in a territorial collectivity), allowing us to attend meetings and working sessions involving various urban stakeholders. The analysed documents include regulatory texts, urban planning frameworks and meeting reports and thus provide insights into both formal governance structures and actual practices.

Our dual role as researchers and architects positions us in close proximity to field actors and the challenges they face in their professional daily lives. The participatory observation of communication dynamics among urban stakeholders, along with the analysis of the existing governance model, is at the core of our *action research* approach. This methodology involves immersion in the studied context, fostering a deeper understanding of interactions and issues. In this case, action research is justified by our commitment to combining analysis and intervention, leveraging our expertise to identify dysfunctions and propose avenues for improvement.

3. Towards a change in urban practices

The need for a shift towards "sustainable" urbanism
According to Da Cunha et al. (2007), the essential role of the concept of sustainable urbanism is to ensure the quality of urban life and express an awareness of the social and environmental risks that affect urban spaces. In Algeria, we observe a situation that might seem extreme, similar to that described by Jean-Jacques Deluz (2008): "There are two things in urban planning and architecture that are evident to any perceptive individual: on one hand, there is unanimous agreement on a widespread sense of futility in new neighborhoods, and on the other, there is an inability to change anything about it."

The task is to propose recommendations, not for a new typology or technique to be standardised solely on energy- and environmental performance, but based on the principles of sustainable urbanism, where social and environmental concerns are context-dependent and specific to the socio-urban environment. As explained by Émelianoff (2007), "sustainable urbanism is essentially experimental. The significance of national and local contexts and cultures does not allow for the application of a single framework, but this does not preclude the construction of pilot neighborhoods serving as prototypes."

What is change?
In the literature, various definitions of the concept of change can be found, which vary depending on the context and the field of application. According to Yatchinnowsky (1999), any change is a process: between the initial state and the final state, there is a path to be traversed. Nouiga (2003) believes that real change is the result of the unconscious learning of new mental and behavioural actions. This learning involves the system in its entirety, often through a reconstruction of reality.

Moutot (2010) defines change as a voluntary challenge to the existing state in operational (practices), managerial (management style and tools), contractual (results), cultural (customer culture), and strategic (purposes and objectives) dimensions.

Autissier (2010) distinguishes between two types of change: the change of rupture or continuity and the change of negotiated or imposed change management. Our definition of change aligns more with that of Khainnar (2016). He distinguishes two types of urban actors who create, lead and manage two types of change by acting on two registers of the city.
In this sense:
- On the one hand, there are urban actors as initiators who act on the "designable" register of the city by initiating episodic changes.
- On the other hand, there are urban actors as recipients who act on the "liveable" register of the city by triggering continuous-situated changes.

Initiators and episodic change
We define urban actors as initiators – that is, as all technical bodies and administrative bodies that are legitimate to conceive, act, and intervene in urban projects (elected officials, decisionmakers, architects, urban planners, technicians, etc.).

Episodic change is described as "prescribed", meaning its dynamics are initiated by leaders (Cordelier & Montagnac-Marie, 2008). Leadership then drives it either imperatively or with some flexibility for actors to achieve the expected outcomes. In both cases, there is a discontinuity with the past, aiming for better adaptation to the environment and greater internal harmony (Rasamoely, 2016).

Changes of this type generally fit into a deliberate strategy (Mintzberg et al., 1985), more in a logic of disruption with existing programmes and rules, i.e., "doing it differently", rather than a logic of modification and continuity, i.e., "doing more". In other words, in the context of this disruptive change, modifications manifest as a set of actions at multiple levels:
- A change in the objectives of urban action, such as moving away from a purely urbanistic vision as the sole objective of urban intervention and greater human integration
- A change in the tools to involve residents more in urban decision-making (various citizen participation mechanisms: urban workshops, public meetings, online procedures, etc.)
- A change in institutional frameworks through the enactment of laws encouraging and strengthening citizen participation

Recipients and continuous-situated change
By urban actors as recipients, we refer to residents, users, beneficiaries of various services, as well as all actors other than professionals contributing to urban interventions. Unlike episodic change, which is designed to disrupt the function, continuous-situated change should be seen as a continuous process that aligns with permanence and daily life (Weick & Quinn, 1999). In the same vein, according to Autissier (2010), it involves being in a situation of proposing actions and progress for improvement. "Interest in a project grows with the desire to take actions to make things happen," he says.
Khainnar (2016) highlights two realities:
- The need to rehabilitate the role of everyday actors in change through their situated practices.
- The need to mobilize situational lenses to account for changes brought about by everyday actors in their action contexts.

It is these everyday actors who drive change. The microchanges that occur continuously are rooted in daily practices and deserve to be examined from within (Tsoukas & Chia, 2002). The goal is to

identify the different mechanisms (cognitive, social and cultural) that contribute to amplifying this kind of change. These continuous and context-specific feedback loops could offer valuable insights to urban actors in their roles as initiators, enabling them to adapt and contextualise urban interventions. This is a process that requires implicit learning. Mintzberg et al. (2002) asserts that "the constant adjustment of work practices and social practices is the very essence of change. The spontaneous nature is evident in the fact that change is constructed as actors face, in their daily work, opportunities and unexpected events."

4. Showcase projects: a breach for a gradual transition?

Our analysis is based on a qualitative approach, combining direct and participant observations during professional events, as well as the analysis of official documents related to urban planning in Algeria. As part of this research, we attended numerous national conferences on housing and urban planning, where we observed how socio-environmental concerns are primarily highlighted through experimental projects incorporating concepts such as sustainable neighbourhoods and eco-districts. These concepts, however, remain largely theoretical, taught in universities as reference models, but are gradually being introduced into actual urban production.

Our study identified several key projects, including the new cities of "Bouinan" and "Sidi Abdellah", the Bay of Algiers development, and the experimental eco-district of "Diar el Djenane". Most of these initiatives are implemented within the framework of the *Algiers 2029 Master Plan for Urban Development (PDAU)*, which aims to promote urban sustainability under the slogan "Algiers, eco-metropolis of the Mediterranean and garden city". This plan focuses on restructuring urban spaces, creating green areas and improving infrastructure to address environmental and social challenges in the capital.

However, these "showcase projects", which often seem driven by a public relations strategy rather than a genuine structural transformation, remain highly concentrated around Algiers. This centralisation contradicts the guidelines of the National Spatial Planning Scheme (SNAT 2030), which aims to relieve congestion in the central coastal area and promote a more balanced territorial distribution towards the country's interior. The SNAT 2030 advocates for a better distribution of urban hubs and the strengthening of intermediate cities, but this ambition struggles to materialise due to the lack of decentralised planning and the exclusion of local actors from the decision-making process.

Based on these observations, we have outlined several possible courses of action to support a gradual transition towards a more sustainable and inclusive urban model:

- **Option 1:** Expanding experimental, pilot and demonstration projects aligned with a sustainable development strategy, initiated by public authorities. These initiatives could gradually shift urban planning and construction practices, influencing mindsets toward a greater consideration of the common good and environmental concerns. However, to avoid deepening existing urban inequalities, it is crucial that these transformations be extended across all neighbourhoods, rather than being confined to a few privileged areas.

- **Option 2:** Increasing the involvement of local stakeholders, particularly elected officials and citizens, in decision-making processes regarding urban planning. This approach would ensure a balance between public regulation and citizen engagement, thus reinforcing the quality of living environments and the coherence of urban projects, whether public or private.

- **Option 3:** A combination of the previous two options, investing in pilot projects while promoting a participatory governance model. This dual approach would allow both the experimentation of new urban models and the familiarisation of different actors with a more inclusive and collaborative decision-making process.

This gradual transition involves several key actions:
- Initiating a shift in urban planning practices, progressively reversing the current trend characterised by rigid, centralised decision-making.
- Raising awareness and familiarising urban stakeholders with a more collaborative approach, fostering constant interaction between the public sector, private actors, and citizens.

By promoting new urban planning practices, it becomes possible to introduce a more integrated vision of the relationships between actors, institutions and territories, while rethinking how to

manage urban spaces to meet the challenges of the 21st century.

5. Experimentation: a demonstration for learning

In the context of urban development and planning, we have observed that executive power, under the authority of the wali (governor), holds a monopoly and full decision-making authority. This leads us to believe that significant changes in the rigid habits of decentralised services are still a distant hope.

However, if we follow the same logic that decisions made at the top of the hierarchy (ministry/ government) are implemented by decentralised services, it is reasonable to expect that launching experimental projects, rather than conventional ones, would likely be welcomed by these services, despite the effort required.

In the capital city, we observe the use of experimentation for new urban planning approaches through a few projects labelled as "sustainable" being launched within the framework of sustainable urban development policy. It would be conceivable, even desirable, to generalise this policy to each wilaya (province) by allocating funds to finance such experimental sustainable development programmes, with the aim of familiarisation and, most importantly, learning.

While we can discuss and identify many shortcomings in these Algerian experimental models, it remains the case that foreign urban production methods are still being questioned. As explained by Émelianoff (2007), the term "sustainable" encompasses very diverse experiences depending on national approaches to sustainable development.

In the Algerian context, urban planning in general has shown its limitations. Whether in policy or in urban production methods, we cannot deny the benefits of experimenting with new urban production processes, whose primary goal is to raise awareness and demonstrate the possibility of reconciling the three dimensions of sustainable development.

Let us recall that the numerous sustainable neighbourhoods and eco-districts that emerged in Northern Europe in the 1990s went through the same experimental approach with the aim of gradually changing urban planning practices to incorporate social and environmental dimensions.

However, in the Algerian case, we cannot currently categorise these projects as "sustainable".

As explained by Zaki and Barthel (2011), this concept refers to a system of control, evaluation or certification of the concept; yet, we do not find such systems in any of these operations.

The exchange of knowledge and know-how is valuable. We are not seeking to reproduce models of sustainable neighbourhoods to justify copying solutions. Instead, the goal is to encourage the experimental approach that highlights new urban production practices while integrating socioenvironmental dimensions and, most importantly, considering the specific characteristics of each territory. This experimentation could be valuable for its pedagogical aspect.

6. Toward a neighbourhood-scale vision

The logic of the "neighbourhood project" in urban planning and production in Algeria is on the decline due to the support of ad-hoc projects by public authorities under the pretext of urgency. Many housing and infrastructure projects completed within short timelines often result from a random site-selection process (commission chaired by the secretary-general of the wilaya, delegated by the wali), without any harmony or holistic vision at the neighbourhood level. As Bechar (2015) asserts, the absence of this notion also prevails, especially around existing neighbourhoods, where individualistic behaviour and disorganised development reign.

With these vast construction projects for large residential complexes, featuring a few scattered accompanying facilities, it is possible to imagine that at least some of these projects could serve as a "laboratory". Our experience shows that current operations follow a punctual and time-staggered process. In other words, each organisation initiates its own project individually, with its own study. A notable example is the accompanying facilities. The Directorate of Public Facilities (DEP), for instance, often waits for the completion of residential complexes before issuing calls for bids for architectural and public facilities studies. The Directorate of Urban Planning, Architecture and Construction (DUAC), on the other hand, waits for the completion of public facilities before intervening in urban planning, often with its own plans that differ from the initial variant. In summary, neighbourhood projects are merely the outcomes of numerous ad-hoc projects, and they are rarely designed at a neighbourhood scale.

It is conceivable that these complexes could be produced with co-development and co-management

formulas, where everything is integrated into a single operation. This would result in a neighbourhood project perceived as a coherent set of unified, integrated operations within the city, including functional diversity (residential, educational, cultural, healthcare, commercial, administrative) and planned with the participation of all stakeholders involved in its development and implementation, as opposed to the current approach.

The financing of these pilot projects could be based on public funds, much like the financing of current social housing, or through contributions from beneficiaries, as is already the case for participatory and assisted housing (LPA). Of course, these neighbourhood projects (launched as a single operation) should be framed from the start of their programming by involving relevant urban actors, elected officials, project managers and the benefiting citizens.

The main objective here is to learn coordination among different actors in a common project. Although it is initiated from the top of the hierarchy, we would, in the first instance, achieve a neighbourhood project that is nevertheless co-developed and co-managed with the participation of relevant actors, which would in itself be an innovation that needs to be experimented with, locally, in its implementation methods.

7. Coordination between public and private actions

The issue of urban projects is not limited to their planning or implementation; it also encompasses the management of these existing projects and future projects once completed. We have observed that municipal services responsible for these tasks have shown limitations in terms of resources and expertise, human and material resources, as well as a lack of interest and involvement from public authorities and elected officials.

Many current urban improvement programmes primarily focus on upgrading outdoor spaces and renovating facades, without consulting residents. However, these programmes could be a valuable demonstration and learning exercise if they were oriented differently. In pilot neighbourhoods, we can envision rehabilitation, compliance and completion operations for constructions, while also including a precise action plan, technical assistance, and collaboration between municipal and/or decentralised services, professionals and residents through working sessions involving all

stakeholders. Of course, it may seem challenging to implement because residents are on site; however, this proximity can generate greater motivation and involvement from them to make a positive impact on their neighbourhood.

Larger-scale operations, such as urban renewal projects, could even be considered if the initial experiments prove successful.

The goal of these experiments is to change these individualistic practices, which lead to urban disorder and mediocre built environments, toward a logic of consultation and cooperation between services and citizens. This approach seems more than necessary for raising awareness about urban realities and the social and environmental issues associated with them in the medium term.

8. The social and environmental context: an urban issue specific to each territory

During urban project studies, the importance of regional disparities in Algeria should be taken into account. It is important to understand the realities of the social and environmental context and to integrate them within the specific local context.

Initially, this integration could take place within the framework of learning, first at the scale of experimental neighbourhoods. The cross-cutting nature advocated for their implementation, based on consultation, would involve professionals from various fields alongside traditional urban actors. This would promote a dynamic approach that considers the three dimensions of sustainable development in urban practices. Through tailored planning processes for each territory, an effort can be made to better meet the needs of its residents while respecting the environment. The goal here is to (re)learn to plan according to the local context, leveraging its potential and accommodating its constraints.

9. Perspectives: building the sustainable city differently

9.1. Urban information literacy: a necessity for inhabitants

What is information literacy? This concept remains challenging to define, as its objectives and contents may vary depending on the approaches (Serres, 2007). We rely on the work of Serres (2008), who

attempted to gather translations of definitions of the concept in question, based on works from the English-speaking world.

In 1989, the first official definition appeared in the United States, in the final report of the American Library Association's Presidential Committee on Information Literacy: "Being competent in the use of information means that one can recognize when an information need arises and is capable of finding the appropriate information, evaluating it, and using it" (translated by Paulette Bernhard). This definition was further developed a few years later in the report of the Ocotillo Information Literacy Group in 1995: "Information literacy could be defined as a set of skills that allow an individual to survive and succeed in the Information Society...a set of skills for identifying, locating, evaluating, and using information found in a problem-solving process."

We also find this conception in the large terminological dictionary of the Quebec Office of the French Language (OQLF) in 2002, defining information literacy as: "a set of skills for recognizing the existence of an information need, identifying the appropriate information, finding it, evaluating it, and using it in relation to a given situation, with a perspective of problem-solving...Information literacy allows us, through these skills, to survive and succeed in the information society, especially through mastering the technologies providing access to this information."

We attempt here to reflect on its significant scope and see how it applies to the fields of urban production and management (especially from the citizens' perspective and their participation in decision-making processes).

Smail Khainnar (2014) identifies three historical conceptions of information literacy: the economic conception (focused on monitoring and economic intelligence), the librarian conception (centred on survival skills in the information society), and the civic conception (linked to democratic engagement and citizenship) (Le Deuff, 2007). It is this third conception that supports the analysis of mechanisms enabling the development and relevance of information literacy in the digital age. This civic and critical approach is echoed in the definition proposed by Shapiro and Hughes (1996), who argue:

- Information literacy should be conceived as a new liberal art that includes both the use of computers and access to information as well as critical reflection on the nature of information itself, its technical infrastructure, as well as its impact and social, cultural, and even philosophical context.

- These elements are considered as essential to the mental structure of the educated individual in the modern information age as the basic trivium of the liberal arts (grammar, logic, and rhetoric) was essential to an educated person in medieval society (Shapiro et al., 1996).

This ambitious definition highlights the multidimensional nature of information literacy, underscoring its importance not only as a technical skill but also as a cultural and civic competence.

9.2. The levels of information literacy: a stratification between skills, knowledge, critical thinking and self-reflection

Mastering Information Access:

According to Juanals (2003), this first level focuses on acquiring all methods and techniques related to information research and processing. This includes various processes, from recognising information needs to satisfying them, involving the identification, evaluation, processing, archiving and reuse of information. The purpose of this first level is the appropriation and technical mastery of information, with the aim of promoting the improvement and creativity of information usage.

Intellectual mastery of information:

According to Serres (2009), this second level is based on a true didactics of information. It emphasises the contextualisation of information. It consists of knowledge, concepts, terminology, principles and issues related to information, enabling its understanding in its complexity, across its entire spectrum and in the diversity of its meanings. The goal of this level is the dissemination of a genuine culture, in terms of knowledge and understanding of information.

Critical reflection:

According to Khainnar (2014), "the focus here would be on the critical dimensions of manipulated information". The objective of this third level is evidently political, with the aim of educating an informed and enlightened actor about the risks of information, as well as the digital hegemony, be it info-pollution, advertising invasion or privacy risks.

Self-critical reflection:

This fourth level, added to the previous three, encompasses them all. This meta-level of reflexivity aims to develop a clear and self-critical perspective on information behaviours and usages, as well as on the new dependencies that information technologies generate.

In summary, having a comprehensive information literacy means understanding the environment, tools and informational practices. Actively participating in the planning and development of one's urban area involves the ability to recognise information needs, identify and locate relevant information, evaluate it, and use it to solve problems. "This is not a small matter because not everyone is equal when facing this complex informational world, which, beyond procedural mastery of digital tools, requires other types of skills (intellectual, reflective, etc.) to survive" (Khainnar, 2014). Today, this information literacy is still underdeveloped in the urban project approach.

The resident, as a stakeholder in urban projects, can influence decision-making based on their level of involvement. This is closely related to their information literacy. This refers not only to the ability to access urban information but also to the possession of the power to make effective decisions. Access to information is not an end in itself; the challenge is to create the necessary conditions for residents to consume information while actively participating in the urban environment. An actor necessarily has access to knowledge and, therefore, information, responsibility, and joint decision-making.

10. Cyber-democracy and its components: towards a renewal of governance?

Given the necessity for a renewal of governance (Jouve, 2003) and a redefinition of democracy, numerous researchers (Loader, 1997; Rodota, 1999; Levy, 2002) have explored the impact of technology on society, its organisation, power and politics.

The concept of electronic democracy (Rodota, 1999) was developed by researchers from various countries based on the observation that significant changes in how individuals in a society communicate and access information were affecting citizens' relationships with the state, power and society itself (Vedel, 2007).

We will not dwell on the definition of this broad concept here. Nevertheless, it is worth providing an overview of cyberdemocracy, which is an important aspect in this work and could address our issue.

The concept of cyberdemocracy, also known as electronic democracy or terms like "digital democracy" and "e-participation,"is defined as "an extension and transformation of participation in democratic societies and consultative processes through information and communication technologies (ICT)" (Saebø et al., 2008). This concept requires adopting a new mindset, placing the citizen at the centre of decision-making processes, and establishing regular dialogue between local authorities and citizens to ensure the sustainable development of cities.

E-participation encompasses tools and technologies aimed at putting information, debates, and initiatives from participatory democracy mechanisms online. For example, these are e-district councils, e-municipal councils, as well as websites or web pages containing information about development projects and gathering public input through various response methods (e-polls, online referendums, forums, etc.). While participation, at least in most cases in France, retains an advisory nature, it has found its place on the Internet through diverse information and communication tools for citizens. In fact, during the regional congress of local authorities in 2008, Himmelsbach estimated that electronic consultation tools not only offered local authorities the possibility of closer and more effective collaboration with citizens but also improved and streamlined work methods and modernised administrations.

The use of ICT allows public authorities to go beyond traditional consultation on urban projects and establish a new civic culture, although Internet access remains limited for certain population groups. "Young people tend to use such tools more often, which can provide a response to the dissatisfaction some feel with traditional political approaches" (Himmelsbach, 2008). It would be desirable for the state, through its local authorities, to invest more in ICT so that the entire population can actively participate in shaping and developing the city.

Figure 1 perfectly illustrates the process to be implemented, where the citizen is at the heart of decision-making processes.

Clearly, cyberdemocracy and online consultation cannot exist without good access to electronic information. The decisions and plans of authorities must be known to citizens and interest groups so that they can debate or contest what does not satisfy them.

We must emphasise that the role of citizens must be defined carefully to ensure that they understand when, how and where they can participate and which

bodies they can consult for more information (Clift, 2000, *Top Ten EDemocracy…*).

Furthermore, discussion groups should provide clear, concise and precise information to guide their members in the right direction and encourage meaningful discussions that can lead to notable impacts (Cain et al., 2001).

In this regard, the clarity and understanding of information are essential elements to consider. For example, the PLUiH document does not seem to be accessible to the average citizen. This legally "binding" document should be accessible and understandable to as many people as possible, although it is an "expert" document.

To build trust between citizens and various urban actors, certain recommendations can be announced:

- Systematic information on future projects and all public meetings should be provided through online announcements.
- Information must be accessible, authentic, and clear in terms of context and presentation.
- Online representation and consultation systems should be created that ensure ease of access and navigation on these platforms and websites.
- Education on Internet use should be offered to officials, online workers, and citizens in general.
- Successful international models of cyberdemocracy and its components should

be explored with a view to adapting them to our context.

According to Lenihan (2002), it is essential to remember that cyberconsultation and all other components of cyberdemocracy must "emphasize the importance of debate, compromise, and collective work. The processes must be designed to promote discussion, learning, negotiation, and compromise while remaining open, inclusive, and accountable."

11. Conclusions

In conclusion, this work summarises the recommendations and their objectives in a schematic form (Fig. 2).

Our first argument asserts that residents can only influence urban planning decision-making if they possess a comprehensive information culture. They must be able to recognise their informational needs, find the appropriate information, evaluate it, and use it in a problem-solving perspective. We believe that, if this ability were more widespread, the authorities would likely change their governance practices.

Our second line of thinking, which complements and integrates with information culture, is the concept of cyberdemocracy. It represents an
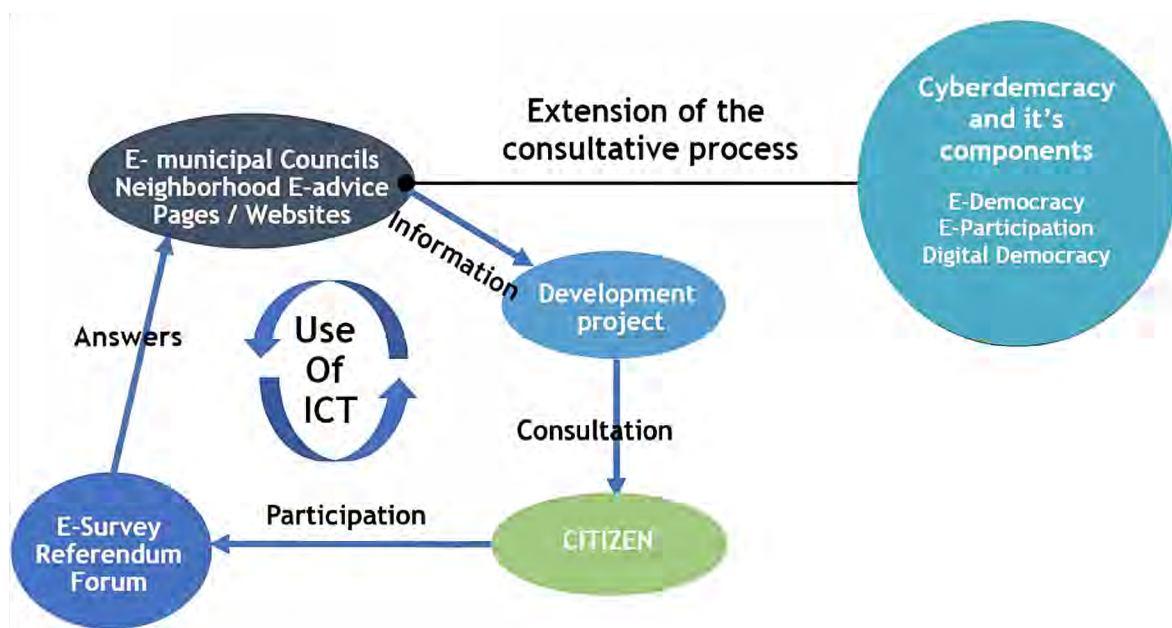

Fig. 1. Representation of the process of implementing cyberdemocracy / e-democracy - functions and tools
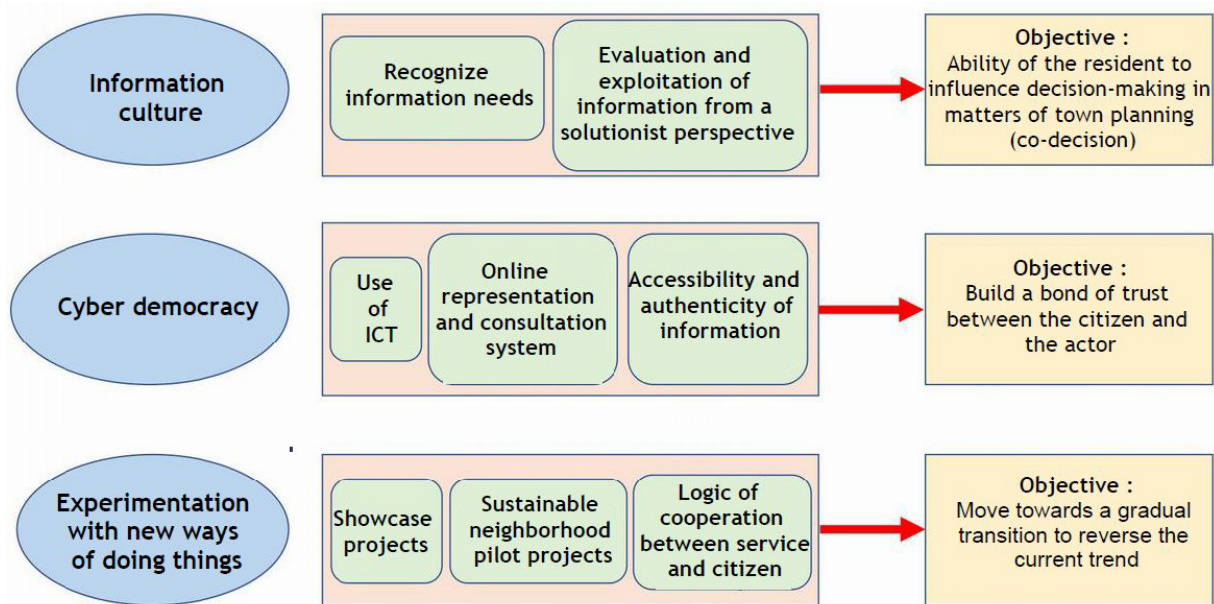Source: author, 2022

Fig. 2. Summary of recommendations and their objectives
Source: author, 2022

extension and even transformation of consultative processes through information and communication technologies (ICT) by putting information, debates and initiatives from participatory democracy mechanisms online. We consider ICT as a decision support tool and, therefore, an "accelerator of projects" that simplifies traditional working methods and modernises administration. The goal is to build a bond of trust between citizens and various urban actors.

We have also presented other technical lines of thinking, such as the experimentation approach, which needs to be encouraged to facilitate a gradual and educational transition.

This would help reverse the current trend that questions the role of project management but would also acclimatise mindsets to the possibility of moving towards a collaborative approach.

References

Alexander, J.H., & Grubbs, J.W. (2003). Wired government: information technology, external public organizations, and cyberdemocracy. *Public Administration and Management: An Interactive Journal*, 8(3). (Accessed: 5 February 2003).

Autissier, D. (2010). La gestion du changement, dans la fonction publique française: Le projet RGPP (Change management in the French civil service: The RGPP project - in French). *Paper presented at the Conférence KSAP-ENA sur la modernisation de l'administration et le développement de la gestion publique*, Varsovie.

Bachar, K. (2005). L'intégration des dimensions environnementale et sociale dans les pratiques urbaines en Algérie/Enjeux et perspectives (Integration of environmental and social dimensions in urban practices in Algeria/Issues and perspectives – in French). PhD Thesis, Université du Maine, France. Available at: https://theses.hal.science/tel-01264701.

Bailleul, H. (2015). Médiation des projets urbains: une fabrique urbaine augmentée? (Mediation of urban projects: an augmented urban fabric? - in French). In: Bailleul, H., & Bulot, T. (eds.), *Urbanités et territoires numériques: approche interdisciplinaire* (Urbanities and digital territories: interdisciplinary approach – in French). Editions Modulaires Européennes. Available at: https://univ-rennes2.hal.science/hal-01622283.

Barthel, P.A., & Zaki, L. (2011). Les holdings d'aménagement, nouvelles vitrines techniques de l'action urbaine au Maroc: les cas d'Al Omrane et de CDG Développement (Development holdings, new technical showcases for urban action in Morocco: the cases of Al Omrane and CDG Développement -in French). In: Zaki L.,

L'action urbaine au Maghreb. Enjeux professionnels et politiques (Urban action in the Maghreb. Professional and political issues – in French). Karthala, 172-192.

Bekkouche, A. (2013). *L'urbanisme en Algérie. Échec des instruments ou instruments de l'échec?* (Urban planning in Algeria. Failure of instruments or instruments of failure? - in French). Sous la direction de Rachid Sidi Boumedine. *Les Alternatives Urbaines*, Alger. DOI: https://doi.org/10.4000/insaniyat.14747.

Blatrix, C. (2000). La démocratie participative, de mai 68 aux mobilisations anti-TGV. Processus de consolidation d'institutions sociales émergentes (Participatory democracy, from May 68 to anti-TGV mobilizations. Process of consolidation of emerging social institutions - in French). *Science politique, Université Panthéon-Sorbonne - Paris 1*. Available at: https://theses.hal.science/tel-00723560v1.

Cordelier, B., & Montagnac-Marie, H. (2008). Conduire le changement organisationnel? (Leading organizational change? - in French). *Communication et organisation*, 33. DOI: https://doi.org/10.4000/communicationorganisation.409.

Da Cunha, A., Guinand, S., & Bonnard, Y. (2007). Vers un urbanisme durable (Towards sustainable urban planning - in French). *Vues sur la ville*: 3-7

Deluz, J-J. (2008). Réflexions sur l'architecture (Réflexions on architecture - in French). *Barzakh Ed*, Alger.

Émelianoff, C. (2007). Les quartiers durables en Europe, un tournant urbanistique? (Sustainable neighborhoods in Europe, an urban planning turning point? - in French). *Revue URBIA, Les cahiers du développement urbain durable,* 4: 11-30. Available at: https://www.unil.ch/ouvdd/home/menuinst/nos-editions/urbia/numero-4--juin-2007.html.

Hadj Smaha, L. (2022). Processus communicationnel et pratiques collaboratives pour un urbanisme durable (Communicational processes and collaborative practices for sustainable urban planning - in French). PhD Thesis, Université Polytechnique Hauts-de-France. Available at: https://theses.hal.science/tel-04029863.

Information Literacy Committee. (1995). Information Literacy. Ocotillo Report, 94, Arizona, USA, Maricopa Center for Learning and Instruction (MCLI).

Januals, B. (2003). *Culture de l'information, du livre numérique* (Information culture, digital book – in French). Paris, Hermès.

Jouve, B. (2003). Gouvernance métropolitaine: vers un programme de recherche comparatif (Metropolitan governance: towards a comparative research program - in French). *Politique et Sociétés*, 22(1): 119-142. DOI: https://doi.org/10.7202/006580ar.

Khainnar, S. (2014). La culture communicationnelle à l'ère du numérique: est-ce possible? (Communicational culture in the digital age: is it possible? – in French). Actes du colloque international organisé au Havre les 11, 12 et 13 juin 2014. 455-465. Actes Ed KLOG. ISBN: 979-10-92272-02-4.

Khainnar, S. (2016). Changer l'humain pour humaniser le changement urbain: Quel rôle de la communication urbaine pour mieux manager l'habitant? (Changing humans to humanize urban change: What role for urban communication to better manage the inhabitant? - in French). *Communication & management*, 13(2): 73-89. DOI: https://doi.org/10.3917/comma.132.0073.

Le Deuff, O. (2007). La culture de l'information: Quelles littératies" pour quelles conceptions de l'information? (Information culture: Which literacies" for which conceptions of information? - in French). Vie colloque ISKO France, 7-8 juin 2007, Toulouse, IUT de l'Université Paul Sabatier. Available at: https://archivesic.ccsd.cnrs.fr/sic_00286184/fr/.

Lenihan, D.G. (2002). Realigning Governance: From Egovernment to E-democracy. OECD document PUMA/RD/(2002).

Mintzberg, H., Ahlstrand, B., & Lampel, J. (2002). Transformer l'entreprise (Transforming the enterprise - in French). Dans Jacob, R., Rondeau, A, et Luc, D. Transformer l'organisation (Revue Gestion, collection Racine du savoir.) Montréal, 71-90.

Moutot, J-M. (2010). Guide méthodologique de la conduite du changement (Methodological guide for change management - in French). Paris, Dunod.

Nouiga, M. (2003). La conduite du changement par la qualité dans un contexte socioculturel, essai de modélisation systémique et application à l'entreprise marocaine (Change management through quality in a sociocultural context, systemic modeling essay and application to Moroccan companies - in French). PhD Thesis. École nationale Arts et métiers ParisTech, France. Available at: https://theses.hal.science/tel-00005705/.

Robinson, G. (2003). *Rapport sur la cyberdémocratie* (Report on cyberdemocracy – in French). Université de Moncton.

Rodotà, S. (1999). *La démocratie électronique, de nouveaux concepts et expériences politiques* (Electronic democracy, new political concepts and experiences - in French). Éditions Apogée, Rennes.

Sæbø, Ø., Rose, J., & Flak, L. (2008). The Shape of Eparticipation: Characterizing an Emerging Research Area. *Government Information Quarterly*, 25: 400-428. DOI: https://doi.org/10.1016/j.giq.2007.04.007.

Serres, A. (2007). Questions autour de la culture informationnelle (Questions about information culture - in French). *The Canadian Journal of Information and Library Science*, 31(1): 69-85. Available: https://hal.science/sic_00363239v1.

Shapiro, J.J., & Shelley, K. (1996). Information Literacy as a Liberal Art. Educom Review 31(2).

Trimo D Rasamoely. (2016). Le changement continu et ses leviers: données théoriques et étude de cas (Continuous change and its levers: theoretical data and case study - in French). Master's Thesis. Université du Québec en Outaouais.

Vedel, T. (2007). La démocratie électronique – Les usages politiques de l'Internet (Electronic democracy - Political uses of the Internet - in French). Regards sur l'actualité.

Wojcik, S. (2005). Délibération électronique et démocratie locale. Le cas des forums municipaux des régions Aquitaine, Languedoc-Roussillon et Midi-Pyrénées (Electronic deliberation and local democracy. The case of municipal forums in Aquitaine, Languedoc-Roussillon and Midi-Pyrénées regions - in French). Science politique, Université des Sciences Sociales de Toulouse.

Yatchinnowsky, A. (1999). *L'approche systémique pour gérer l'incertitude et la complexité* (The systemic approach to managing uncertainty and complexity - in French). ESF, Paris.