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« Smart City » public policies : the key role of governance in public value creation

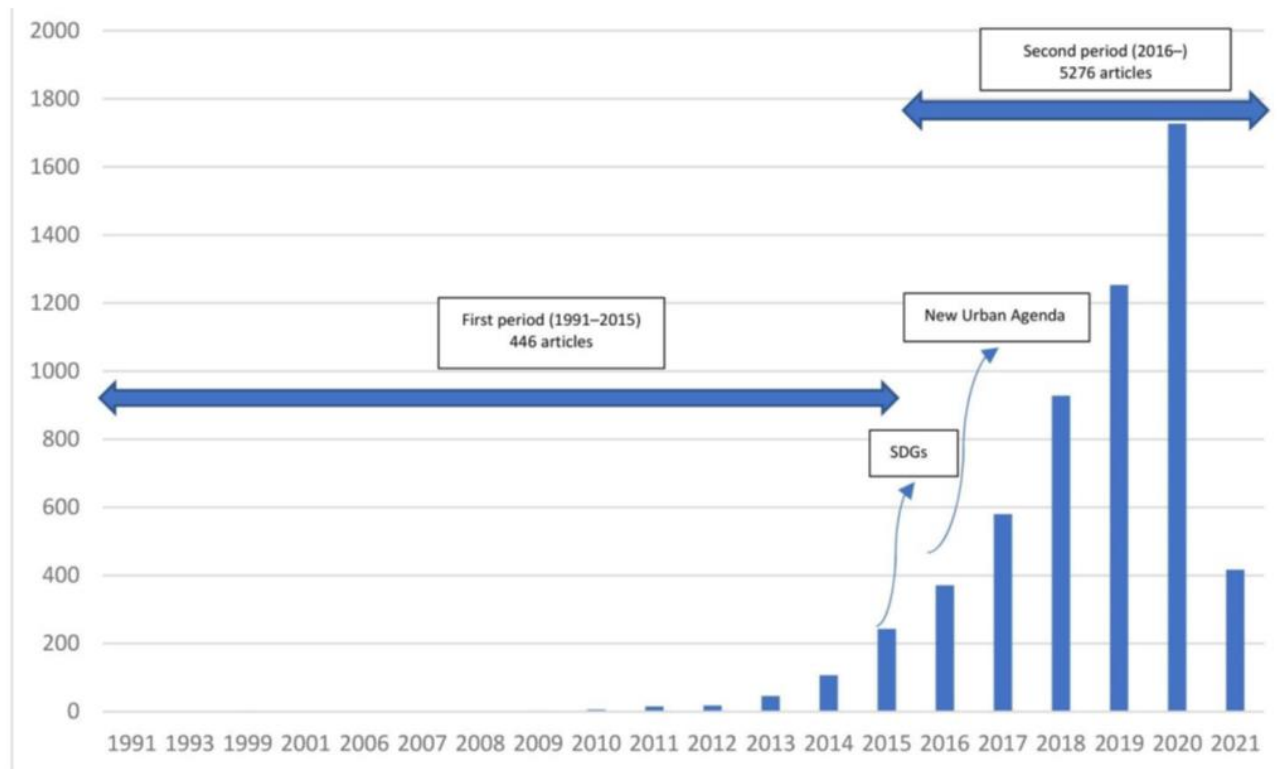
Pascal Frucquet – PhD Student in Management

under the supervision of David Carassus (Prof. IAE Pau-Bayonne),

Didier Chabaud (Prof. IAE Paris-Sorbonne) and Pierre Marin (PhD in Management)



- The « **Smart City** » concept has been spreading all around the world over the last fifteen years : the number of **academic publications** devoted to Smart City **has dramatically increased since 2015** across all disciplines (Sharifi and al. 2021, p.6)



Source : Sharifi et al. (2021)

- ❑ A **great diversity of definitions : more than 100 identified** in the literature (Ruhlandt 2018, p. 12-14 ; Lim and al. 2019, p. 10-12)
- ❑ Two **main common points** :
 - The positioning of **digital technologies and datas** at the service of all the **fields of activity and functions** of urban and territorial management
 - An **ambition to create multi-dimensional value** (Csukas and Szabo (2021)

Fig. 3: Characteristics and factors of a smart city

SMART ECONOMY (Competitiveness) <ul style="list-style-type: none"> ▪ Innovative spirit ▪ Entrepreneurship ▪ Economic image & trademarks ▪ Productivity ▪ Flexibility of labour market ▪ International embeddedness ▪ <i>Ability to transform</i> 	SMART PEOPLE (Social and Human Capital) <ul style="list-style-type: none"> ▪ Level of qualification ▪ Affinity to life long learning ▪ Social and ethnic plurality ▪ Flexibility ▪ Creativity ▪ Cosmopolitanism/Open-mindedness ▪ Participation in public life
SMART GOVERNANCE (Participation) <ul style="list-style-type: none"> ▪ Participation in decision-making ▪ Public and social services ▪ Transparent governance ▪ <i>Political strategies & perspectives</i> 	SMART MOBILITY (Transport and ICT) <ul style="list-style-type: none"> ▪ Local accessibility ▪ (Inter-)national accessibility ▪ Availability of ICT-infrastructure ▪ Sustainable, innovative and safe transport systems
SMART ENVIRONMENT (Natural resources) <ul style="list-style-type: none"> ▪ Attractivity of natural conditions ▪ Pollution ▪ Environmental protection ▪ Sustainable resource management 	SMART LIVING (Quality of life) <ul style="list-style-type: none"> ▪ Cultural facilities ▪ Health conditions ▪ Individual safety ▪ Housing quality ▪ Education facilities ▪ Touristic attractivity ▪ Social cohesion

Source : Giffinger and al. (2007, p.12)

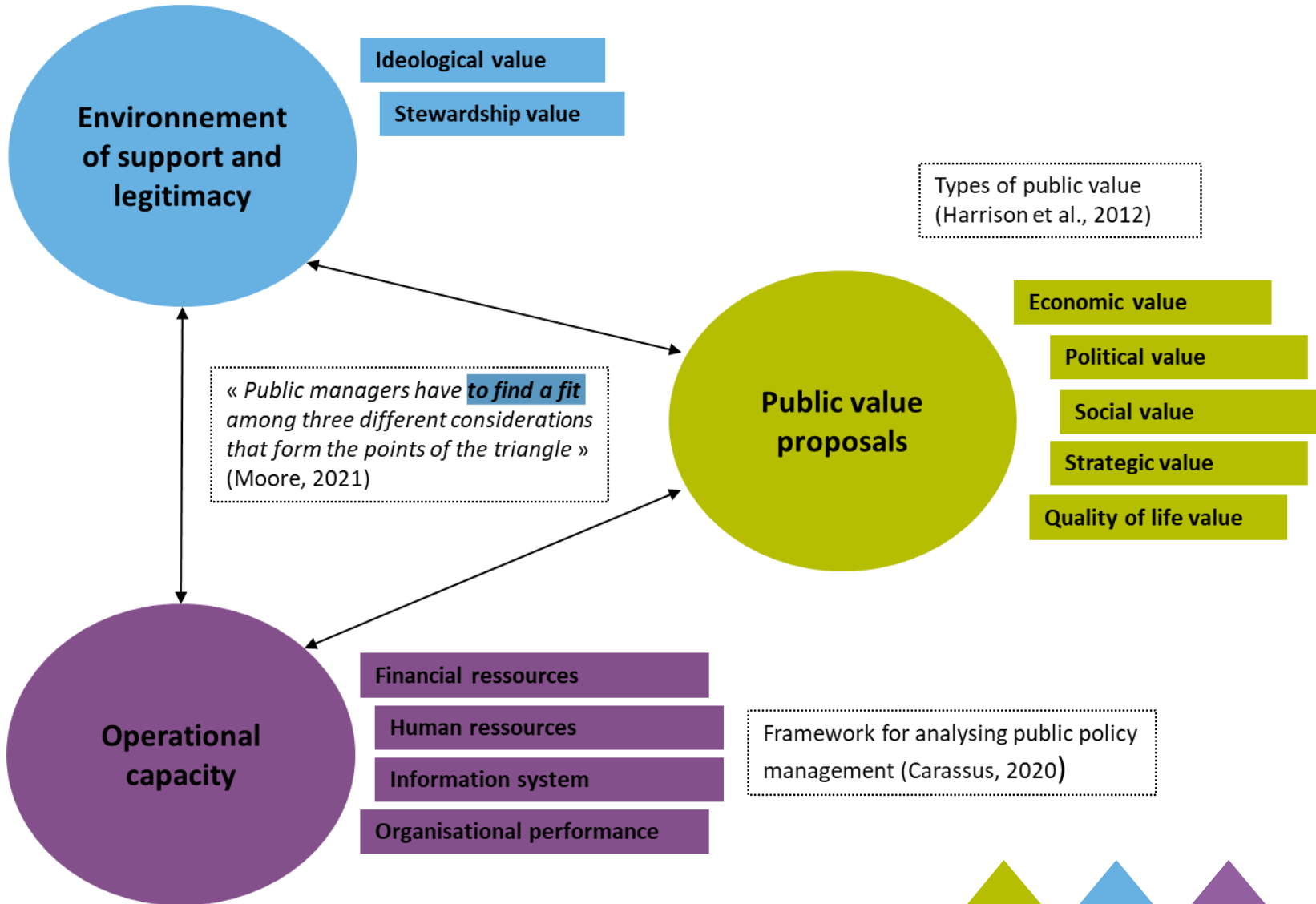
- ❑ The richness and the diversity of the **expected benefits** from Smart Cities led several authors, over the last 10 years, to invite researchers **to address the subject of Smart Cities from the point of view of public value theory** (Rodríguez Bolívar 2019)
- ❑ How can we define **public value** ?

*“A multi-dimensional **construct**, intended for **the community of citizens**, reflecting their **collectively expressed** and **politically mediated** preferences, not only produced through **outcomes** but also through **processes** that generate **trust** or **equity**.”(O’Flynn 2005 ; 2007)*

□ The public value creation potential of Smart Cities

	Csukas et Szabo (2021)	Harrison et al. (2012)	Jørgensen et Bozeman (2007)
Dimensions	Characteristics	Types of public value	Public values
Efficiency	<i>The superior performance of city systems, expressed in products, technologies and processes, and measurable with quantified parameters.</i>	Economic Strategic	Common good Public interest Robustness
Citizen (stakeholder) engagement	<i>Activities that are intended to involve non-elected citizens directly and their groups to the operation of city systems.</i>	Political Social Ideological Stewardship	Dialogue User democracy Citizen involvement Accountability
Quality of life	<i>Activities, directly providing better conditions for the citizens to pursue happiness in their daily life, considering their needs and experience in mind, resulting in wellbeing.</i>	Quality of life	Common good
Social inclusion and equality	<i>Activities, to realize social equality, providing better urban living conditions for all segments of the society, without discrimination.</i>	Social	Social cohesion Protection of minorities
Connectivity	<i>Activities to create information channels in-between humans and non-humans in order to interact with each other.</i>	Economic Social Strategic	Openness Responsiveness Listening to public opinion
Knowledge creation and sharing	<i>Activities that are supporting the accumulation and flow of local urban knowledge inbetween urban stakeholders, contributing to city intelligence.</i>	Economic Strategic	Cooperativeness
Cost reduction	<i>Activities that are specifically intended to replace or substitute an existing solution, to be operated in a less resource-intensive way.</i>	Economic Strategic	Productivity Parsimony
Scalability and transferability	<i>Activities that incorporate features, which makes them easy to extend, replicate and adapt in different contexts.</i>	Economic Strategic	Adaptability Innovation
Environmental impact	<i>Activities, with objectives related to contributing to environmental sustainability.</i>	Quality of life	Sustainability

❑ The « strategic triangle » (Moore, 1995)



- Among the great diversity of definitions **three dichotomies** (Komninos and Mora 2018) emerge from the review of the Smart City literature, **raising the question of governance**

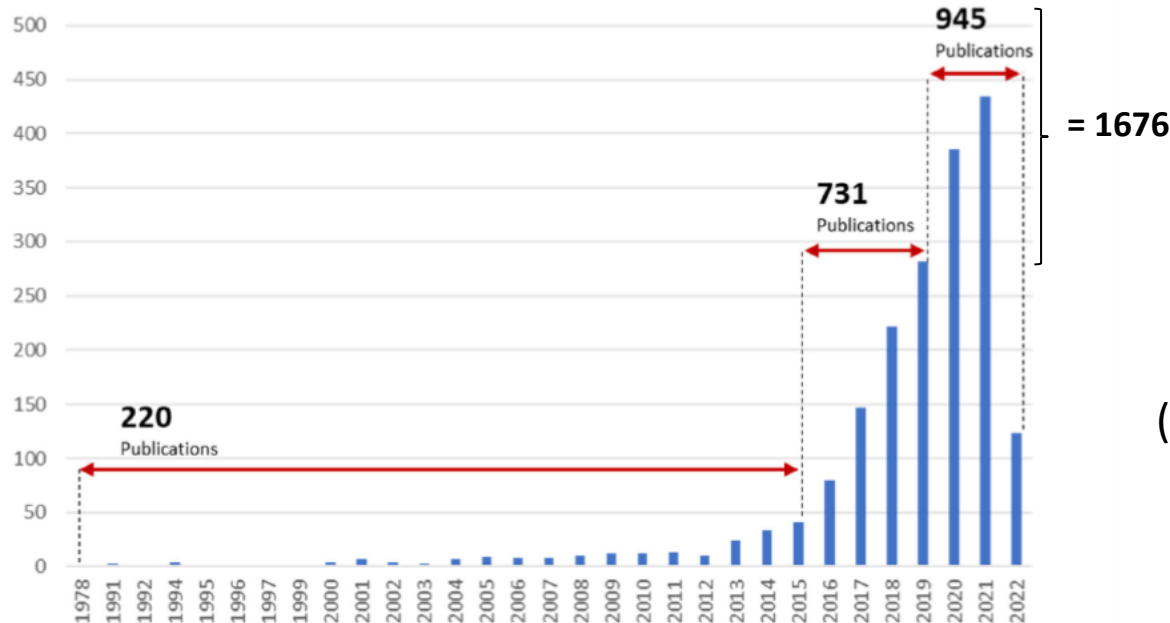
Technology-driven approach vs. Human-driven approach

Data-driven intelligence vs. Collective intelligence

Top-down planning vs. Bottom-up planning

« **Governance** can be defined as **a process of coordination** of actors, social groups and institutions **to achieve goals** that are **discussed and defined collectively**. » (Le Galès, 2006)

- The literature on « **Smart Urban Governance** » has also experienced **a significant increase** over the last years (Allam and al. 2022)



« fragmentation »
 « conceptual swamp »
 (Meijer and Bolívar 2016)

Figure 2. Number of publications on 'Smart Urban Governance' between 1978 and early 2022.

Source : Allan and al. (2022, p. 8)

« **Our current academic understanding of the management and governance of smart cities falls short** since the literature is rather polarized and is dominated by success stories and best practices. For this reason, **there is a need for a research-based understanding of the management and governance of smart cities.** » (Grossi, 2020)

Context

Research
Question

Research
Framework

Methodology

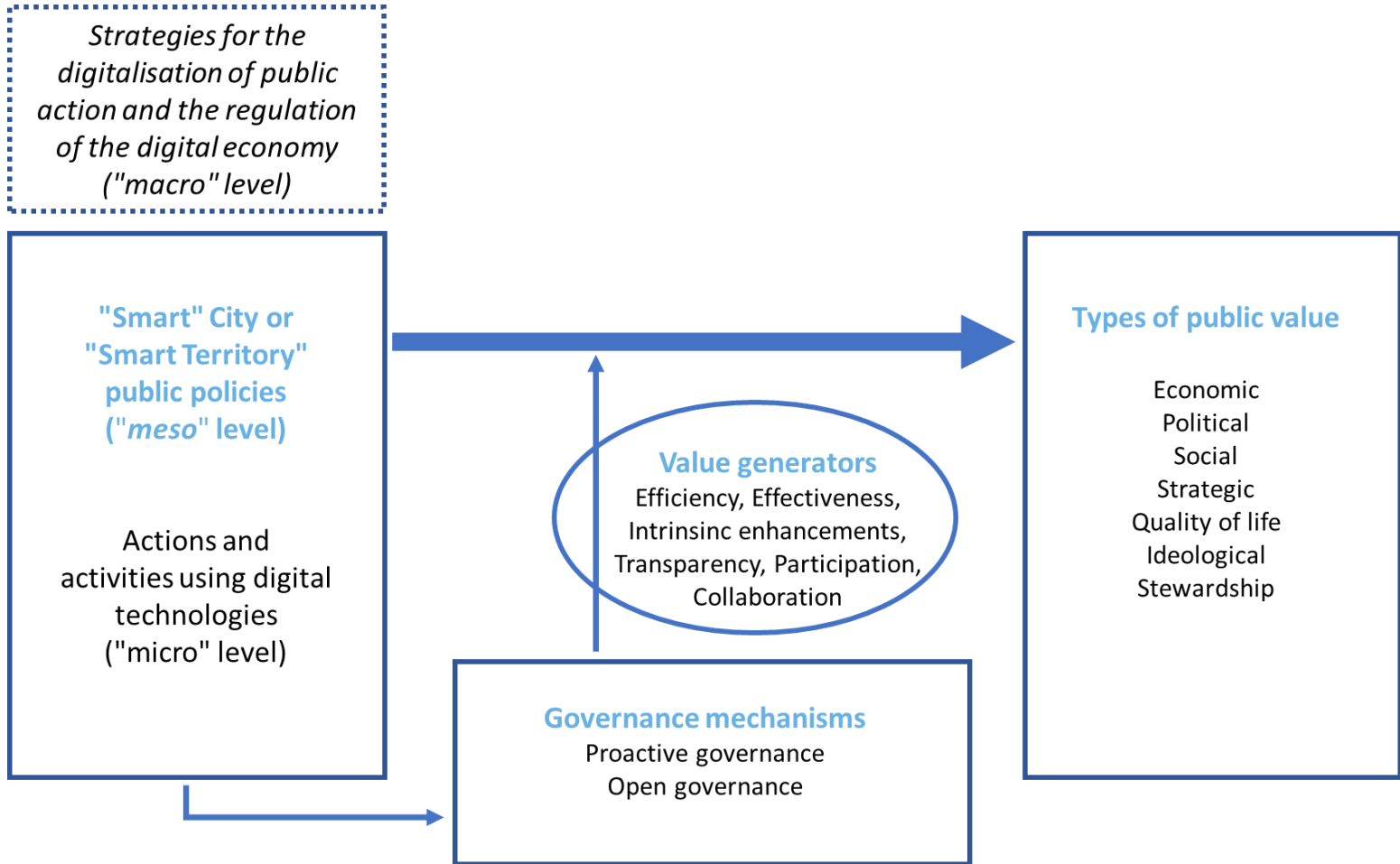
Results

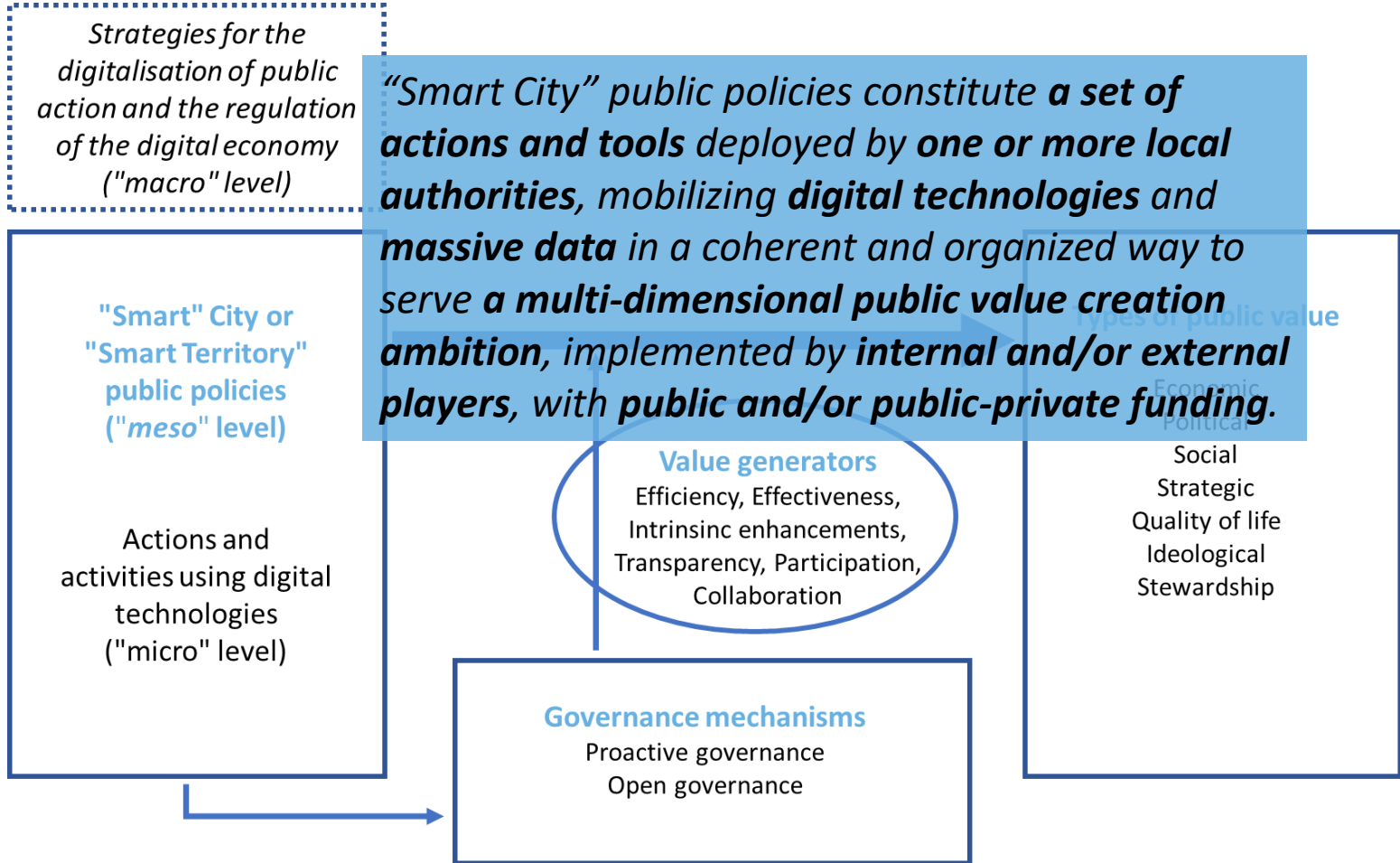
Conclusion

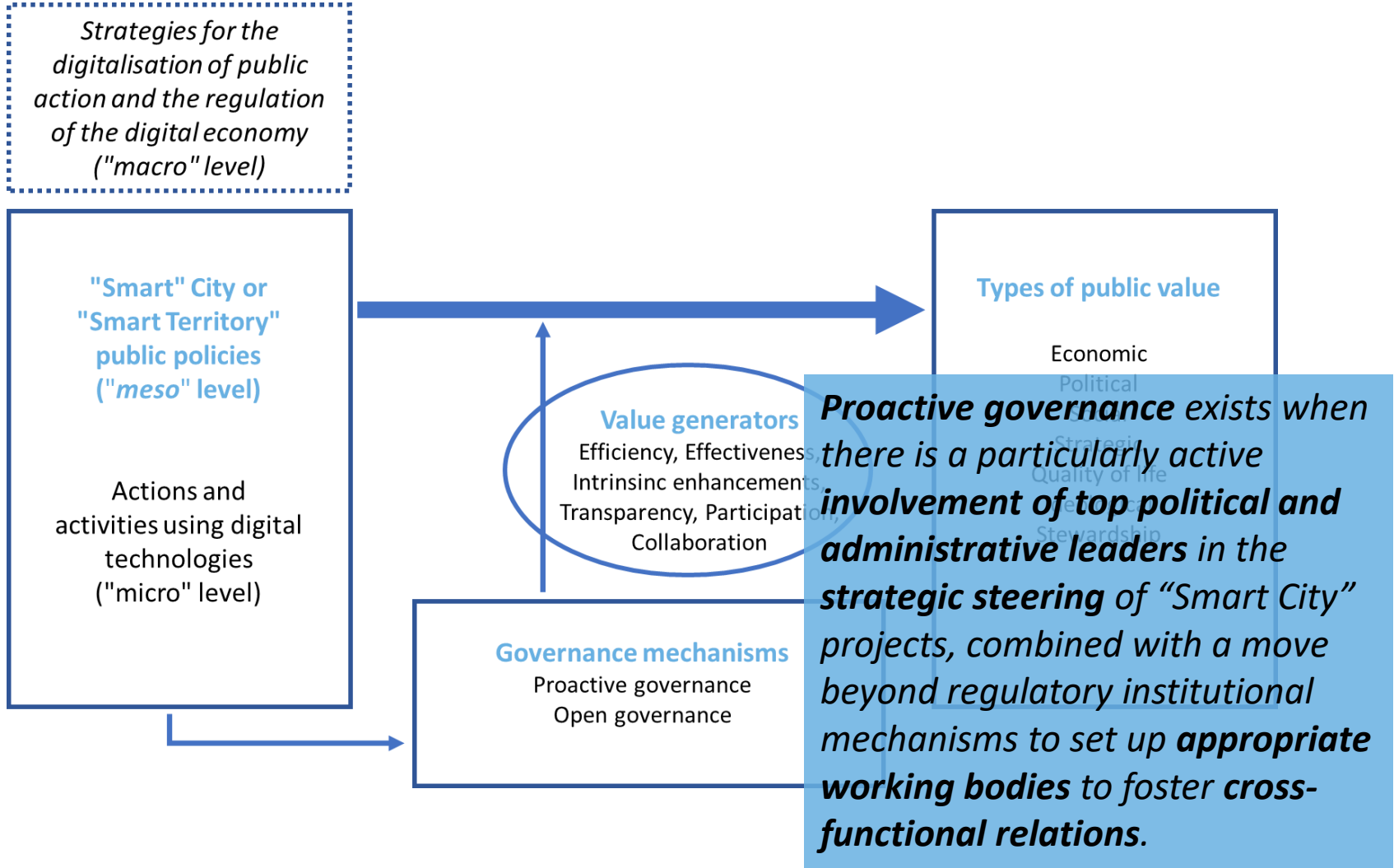


Research Question :

What kind of governance practices should be developed to drive “Smart City” public policies that create public value ?





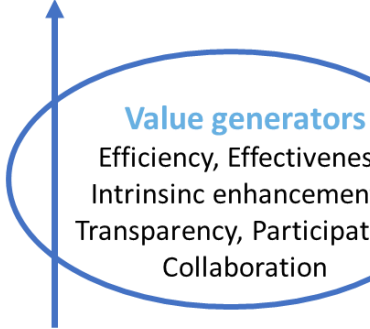




Strategies for the digitalisation of public action and the regulation of the digital economy ("macro" level)

"Smart" City or "Smart Territory" public policies ("meso" level)

Actions and activities using digital technologies ("micro" level)



Types of public value

Open governance is characterized by the implementation of co-construction practices with the stakeholders of "Smart City" policies (local authority agents, economic actors, universities, associations, users, inhabitants), striving to organize a high level of information sharing and advanced involvement in the decision-making processes.

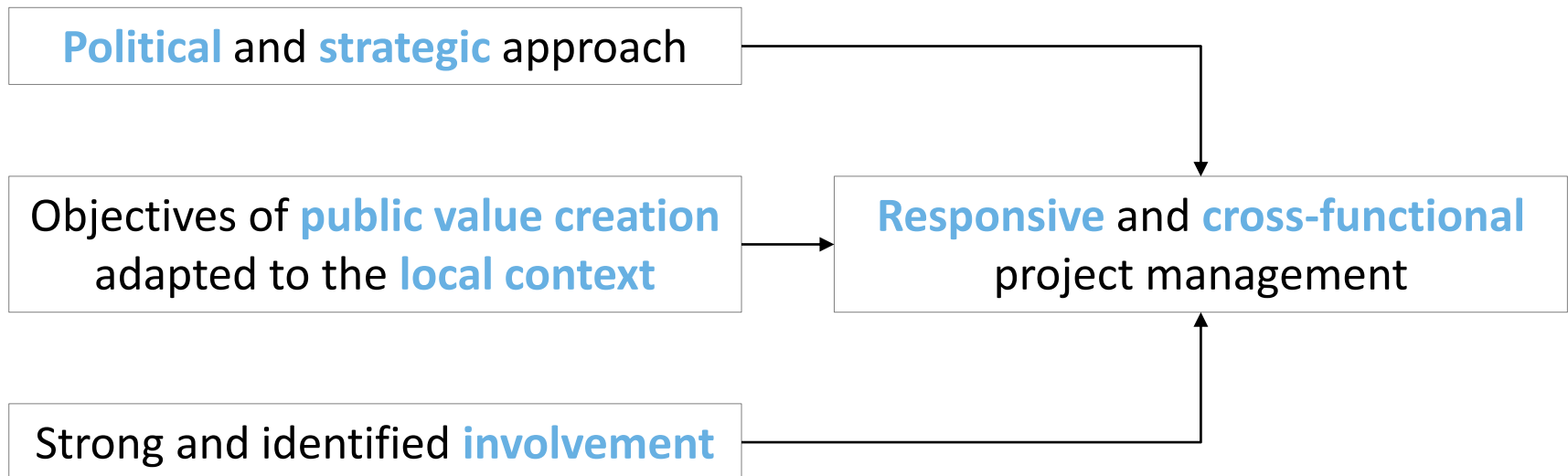


- ❑ An ambition to study the development of « **Smart City** » or « **Smart Territory** » projects by French local authorities :
 - Around **200** in 2021 (Data Publica & KPMG 2021, p.17)
 - A matter of concern for French authorities : Belot (2017), Oural & al. (2018) and an ongoing increase with several **calls for projects**
 - In the daily life of French local authorities, these policies represent a particularly elaborated form of digital transformation of local public action
 - A growing **interest of French management academics**

- ❑ A **longitudinal exploratory qualitative** study over the period 2021-2023 with a selection of **3 case studies** among French local authorities engaged in « Smart City » or « Smart Territory » public policies

- ❑ Almost **50 semi-structured interviews** + **participant observations** with political and administrative leaders, heads of departments, project managers, etc.

□ Result n°1 : the key role of political and administrative leaders



*“We were talking about **strong steering** : **political steering is at the highest level, administrative steering is at the highest level**. So, in the COPIL, we have the Mayor-President, the two vice-presidents, myself, not necessarily the other DGMs. I meet with the General Management CODIR from time to time, depending on what's going on and what I need to do. **The COPIL thus includes players from other departments, as required!**”*
(Deputy General Manager in charge of the “Smart Territory” project)

- ❑ **Result n°2** : Major challenges around the **transformation of organizations** and the **mobilization of local authority teams** in order to develop a **dynamic of internal and external openness**



“So it's both a general culture of “how do we use the data” and “what do we do with it to optimize the Smart City?”; but alongside that, above all, “How do we instill, how do we spread the word internally so that everyone has the reflexes to share data?”

(Deputy Mayor in charge of the “Smart City” policy)

Organizations in **silos**
« **Data attachment** »

« **Data detachment** »
(Courmont 2019, 2021)

« **Re-attachment** » through
service platforms providing
new uses and contributing to
public value creation

❑ **Result n°3** : The need **to renew the human resources management policy** and **to support the transformation of professions**



*"I always say, "Asking a **gardener** to manage his watering with something other than a spanner but with a telephone is **not the same job at all**". So that's what's happening. **For the manager, it is the same**. What we're asking him to do is carry out real water monitoring, to ensure that the plants perform well and to assess the results. So **we're asking him to do something else**."*

(Deputy General Manager in charge of Ecological transition and Urban planning)

- ❑ **Result n°4** : The development of **co-creation practices** (economic development, sustainable IT, new services, co-evaluation, **digital twins**, etc.)



“Our ambition is to turn the digital twin into an urban collaborative platform creating social links and economic value through various material, knowledge and space exchanges on a neighbourhood scale”.

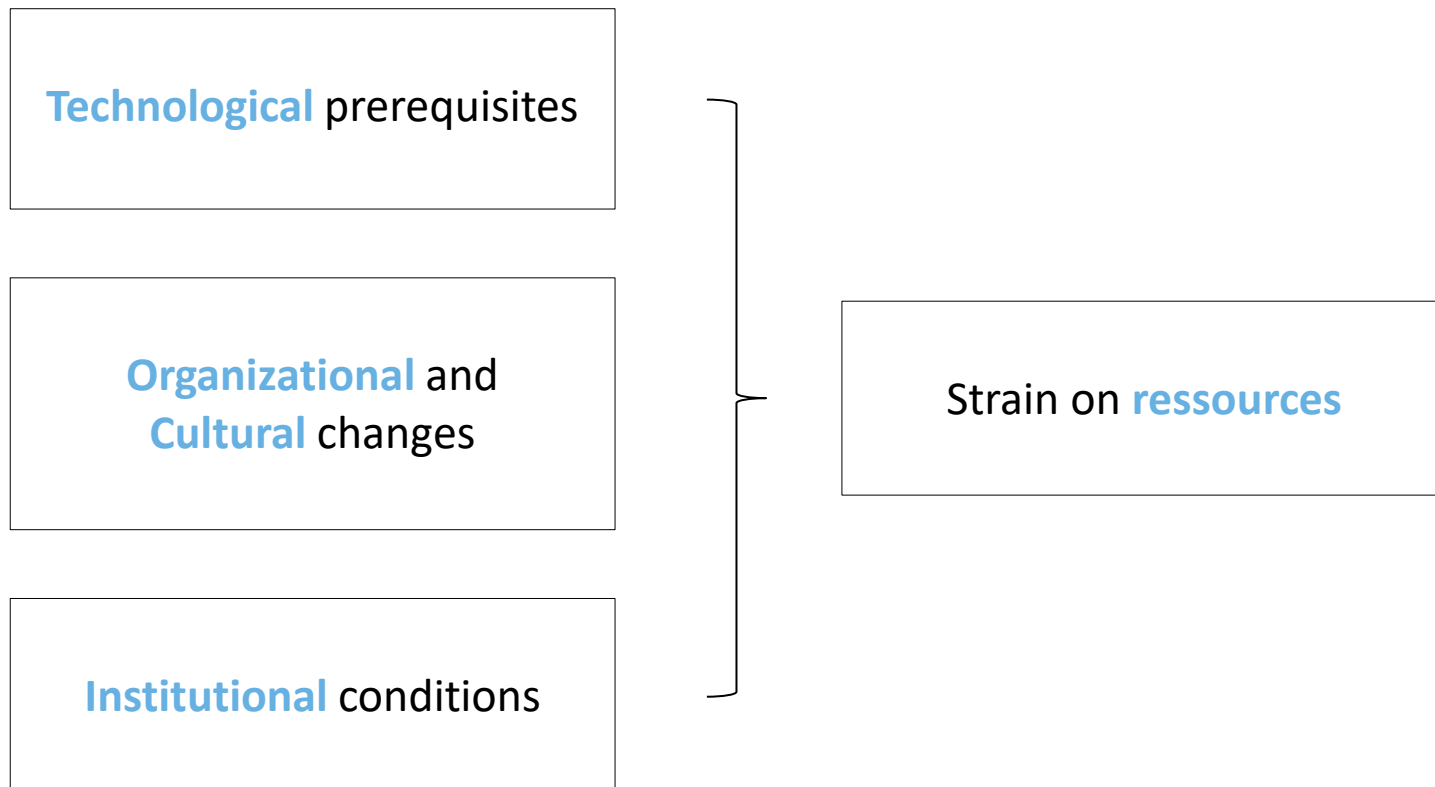
(Deputy General Manager in charge of the “Smart City” policy)



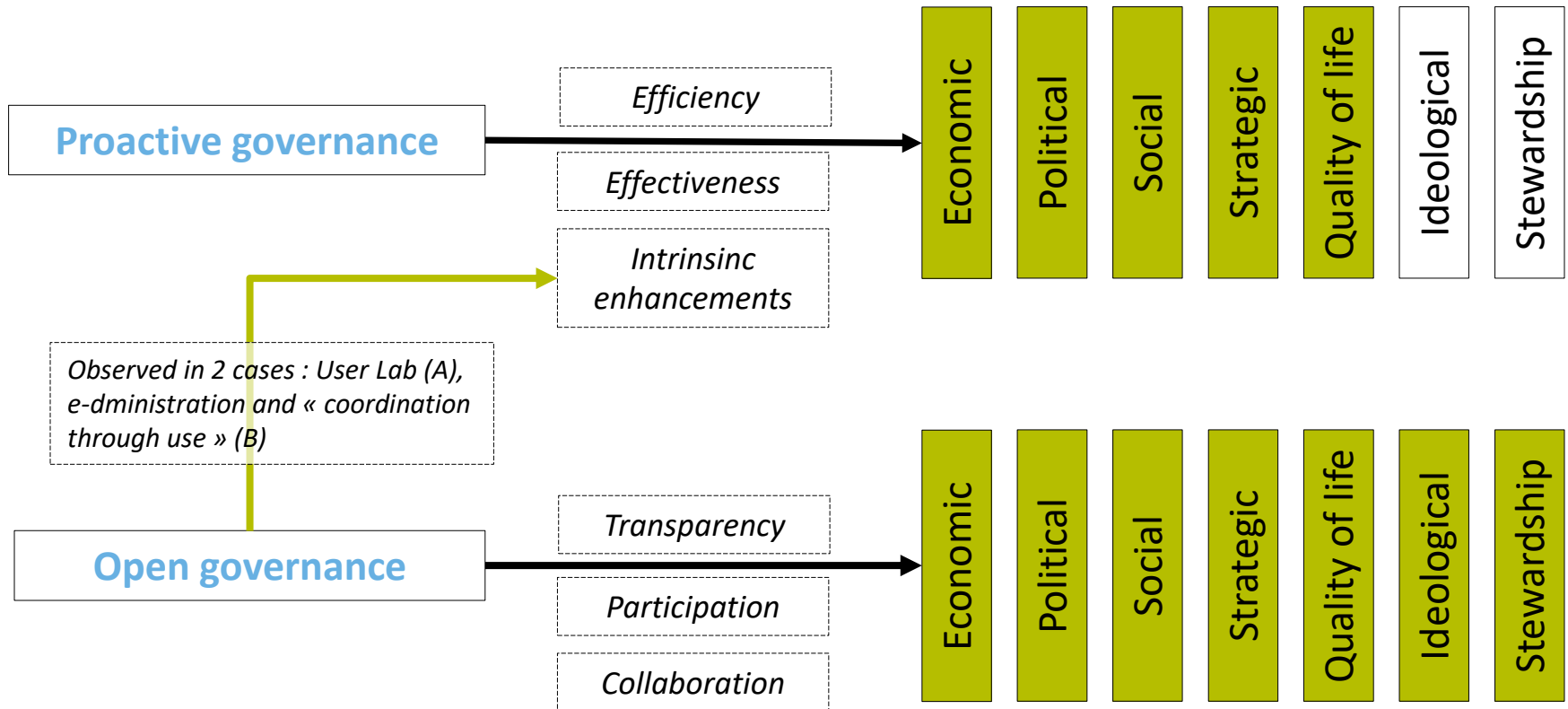
“The digital twin has three objectives : decision-making aid for elected representatives, work support for services, information and consultation tool for residents.”

(Deputy Mayor in charge of the “Smart City” policy)

- **Result n°5** : There is a **phasing** between **proactive governance** and **open governance**, with consequences on the types of public value created



□ **Result n°6 : Open governance offers greater potential for creating public value than proactive governance**



- ❑ To create public value, **“Smart City” public policies** need :
- To be formalized as **public policies in their own right**, as well as the other public policies led by local authorities
 - To question the **objectives of public creation** and not only the technological solutions to be implemented
 - To identify the **resources** to be mobilized, the **partners** to work with, and the **KPI** to evaluate their achievement
 - To **combine proactive and open governance**
 - To be careful to **provide open governance with appropriate resources from the very beginning of the projects** to fully create public value by **synergies** with **stakeholders** and **inhabitants** of the territory



Thank you for your attention

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