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1. INTRODUCTION

“Why May Replication (Not) Be Happening?” is a report published by the European Commission (EC). Its conclusion is striking: ‘Replication is like a quest for the Holy Grail: Everyone is searching but on one seems to be able to find it’ (Vandervyvere, 2017, p. 6; IRIS project, Gothenburg, 2019). As such, it seems that the hypothesis suggested by urban scholar Ayona Datta makes entirely sense regarding the deadlock of replication panacea in the policy-making of smart cities: ‘The “urban” is not “science”. It cannot be measured, *replicated*, and forecast like other sciences. The urban is an imaginary, a relationship between multiple spaces and scales from the personal to the global, a site of politics and governance. The urban is much more than “science”’ (2018, p. 1).

Wisely influenced by the research and policy findings conducted by the Urban Transformations ESRC (Economic and Social Research Council) Programme at the University of Oxford (Calzada & Keith, 2018), we have anticipated this cleavage between the ‘smart’ policy urgencies and the early-entrepreneurial-research-discoveries at the beginning of Replicate project to deconstruct the highly-technocratic smart city policy agenda (Calzada & Cobo, 2015). We initiated methodological advancements that could foster fruitful learning in and among cities by avoiding (and presumably overcoming) replicability as a techno-deterministic principle based on so-called *solutionism*. Not only are (smart) cities not mechanical machines (Amin & Thrift, 2017; Ratti & Claudel, 2016), but their internal implementations are directly and proportionally dependent on stakeholders interacting in a unique fashion with a dense set of power relationships (Calzada, 2018; Calzada & Cowie, 2017; Calzada & Keith, 2018). How should such a complex task called *Replication* be approached (European Commission, 2017)?

Back in 2016, we started planting the seed of ‘City-to-City-Learning Programme’ (#City2CityLearning) for its implementation during 2019 in collaboration with three lighthouse cities (San Sebastian, Florence, and Bristol) alongside three fellow cities (Essen, Nilüfer, and Lausanne)—replacing the former nomenclature and the hierarchical position of the follower cities. In doing so, we have intensively encouraged a fertile dialogue connecting stakeholders—regardless of their lighthouse or fellow city consideration—working either in one or even sometimes in several smart policy sectors: energy, mobility, and ICT. Furthermore, this experimental approach has resulted in a productive multidirectional conversation loop among stakeholders in the six cities. It goes without saying that we have examined the important and unique related multi-stakeholder framework in each city through the Penta Helix (including actors interacting in the public, private, civic society, academic, and entrepreneurial/activism domains of cities; Calzada & Cowie, 2017).

In the first three years of the project, covering 2016–2018, the three lighthouse cities focused entirely on their pilot implementations of three smart city sectors (energy, mobility, and ICT). Alongside these implementations, the WP8 (led by the University of Oxford) suggested reverting the rationale for the mainstream approach (preliminarily designed by EC policy-makers) stemming from a monodirectional and mechanic-driven replicability logic. By contrast, the Replicate project has been gradually empowering the former follower cities (now already officially and institutionally fellow cities; SCIS, 2019) by putting them at the same level as the lighthouse cities through a multidirectional learning cycle. Until 2019, WP8 Replication carried out fieldwork research alongside the lighthouse cities’ implementations in three fellow cities for those early three years: (i) to conduct critical factors’ assessment and (ii) to map out the unique composition of stakeholders by following the Penta Helix policy framework. Thereafter, the City-to-City-

Learning Programme has set the scene to establish a prolific common ground among the six Replicate cities without any hierarchical or functional distinctions. The stakeholders fostered a shared participatory *agora* and a co-operative platform directly among Replicate stakeholders (regardless of their city of reference). Funnily thus, and most importantly, the Replicate project curated and warmed-up this programme with the active participation of the representative and strategic stakeholders of the six Replicate cities by experimenting alternatively the complex task of replication through a multi-directional learning loop stemming from an open innovation approach.



Ultimately, this programme was designed to assist fellow cities in formulating their own replication plans. Judging from the successful experience and objective results—more than 150 registered participants and almost 300 offline views—we firmly believe this is worth further exploration by the EC new Horizon Europe Framework Programme: how to develop new forms of policy incentives for more participatory policy design as well as monitoring, feedback/assessment, and learning loops that utilise the characteristics of digital transformations in smart cities among a vast and nuanced democratic representation of stakeholders' plurality and diversity (DigiTranScope, 2019).

REPLICATE
RENAISSANCE OF PLACE WITH INNOVATIVE CITIZEN AND TECHNOLOGY

Co-funded by the Horizon 2020 Framework Programme of the European Union

City to City Learning 2019

SAN SEBASTIÁN	ESSEN	FLORENCE	LAUSANNE	BRISTOL	NILÜFER
February 5th	March 21st	May 7th	July 9th	September 26th	November 20th

#City2CityLearning

- City-To-City-Learning Programme as the key activity for sharing participative environment through 6 webinars
- 6 networking events during 2019 delivered through webinars that will connect the 6 cities involved in Replicate
 - ✓ Adaptability
 - ✓ Scalability
 - ✓ Singularity

Replicate EU lighthouse project (#ReplicateEU) is working on its Replication main activity entitled 'City-to-City-Learning' Programme (#City2CityLearning) led by the University of Oxford with the participation of the lighthouse (San Sebastian, Florence, and Bristol) and follower/fellow (Essen, Lausanne, and Nilüfer) cities and their related multistakeholder framework that would take place during the whole year 2019.

Within this #City2CityLearning programme a wide range of activities will be shared among stakeholders in the aforementioned cities in internal sessions via webinars. Further information: www.replicate-project.eu/city2citylearning

2. POLICY CONTEXT: EU-SCC-H2020-LIGHTHOUSE PROJECTS

According to a preliminary benchmarking's findings, there are several preliminary take-aways in the function of replication among smart cities in the Smart Cities and Communities (SCC) H2020 framework programme (European Commission, 2010):

1. The H2020 institutional framework is based on the rationale that cities achieve more when they collaborate. The lighthouse projects share technical learning, spread the risk of investing in new technology, and use their scale to drive down costs through joint procurement. Technologies tested as part of the H2020 SCC Lighthouse programme can then be implemented on a wider scale at a vastly reduced cost per unit. Evidence suggests that joint procurement can generate massive cost savings for cities bold enough to embrace inter-city cooperation. For example, following a 2001 reorganisation of regional procurement in Austria, city authorities achieved savings of 30% and an administrative workload reduction of 60% (European Commission, 2017).
2. At present, the 14 Lighthouse projects—Growsmarter, Remourban, Triangulum, Replicate, Sharing Cities, SmartenCity, Smarter Together, My Smart Life, Ruggedised, IRIS, Matchup, Stardust, Making City, and CityExchange—involve 46 lighthouse and 70 fellow cities across Europe (SCIS, 2019).
3. Beyond ongoing technical implementations, sooner than later, they might demonstrate the innovative potential of smart city technologies by allowing citizens to avoid turbulent (and often obscure) extractivist algorithmic governance practices (Lane, 2019; Lanier, 2018; Van Der Zwan, Van Doorn, Duivesteyn, & Pepping, 2018; Wired, 2018). Consequently, local authorities are already experimenting with various data governance models as a result of the General Data Protection Regulation (GDPR), which took effect in May 2018 (Buttarelli, 2018; Calzada, 2019; European Commission, 2019). The current European digital economy is increasingly characterised by pervasive processes of datafication with citizens' behaviour transformed into bits of information collected by private big companies (Sadowski, 2019).
4. The future seems to belong to European cities and regions that genuinely embrace agile methodologies such as the city-to-city learning programme, attempting to fulfil the promise of smart cities (Calzada, 2018; Coletta, Evans, Heaphy, & Kitchin, 2018). However, new social, institutional, and political transitions are still required to understand the European city-regions that face new challenges while avoiding the algorithmic control of big corporations (Gillespie, 2010; Graham, Kitchin, Mattern, & Shaw, 2019; Zuboff, 2019).



3. FINAL REMARK

Against the general backdrop of the EU lighthouse cities' challenges in the ongoing H2020 programme, the way Replicate function was designed could have misled several important aspects about how cities should approach this complex and necessary task to increase the replication potential among European cities. The following list of methodological is worth considering, subject to work implemented from the University of Oxford: (i) We researched the singularity of each city (strategic aim and contextual factors) through the 'Critical Factors' Assessment' methodology, with (ii) scalability depending on the composition of multistakeholders' policy scheme, such as their interdependence and power relations (examined through the Penta Helix policy framework), (iii) adaptability of the given smart action (contrasting feasibility and potential impact) facilitated through this City-to-City-Learning Programme and, ultimately, (iv) the replicability after the multidirectional learning loop among stakeholders through each fellow city's action-driven formulation, completing their own replication plans tailored by their strategic and operational needs.

Once the programme has come to its end, we have gradually made the content publicly available outside the Replicate project's scope. Here you can access to the whole content of the programme in Open Access: www.replicate-project.eu/city2citylearning. Please share alike through #City2CityLearning and #ReplicateEU to expand this learning loop beyond Replicate project. We believe you could make the best of the programme!

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