Article Title: Catalysing governance transformations through urban resilience implementation: Lessons from Thessaloniki, Greece

Vangelis Pitidis*, Institute for Global Sustainable Development, University of Warwick, CV4 7AL
Jon Coaffee*, Department of Politics and International Studies, University of Warwick, CV4 7AL

1 Introduction

In the twenty-first century, in response to an array of existential threats, the concept of resilience has risen to prominence in urban studies to address the amplified complexity, uncertainty and accompanying risk contemporary urban environments face, stemming from economic, environmental and socio-political volatility and rapid change (Bourgon, 2009; Chandler, 2014; Duit, Galaz, Eckerberg, & Ebbesson, 2010; McGreavy, 2016; Normandin, Therrien, Pelling, & Paterson, 2018). Under the banner of urban resilience - a concept that has emerged, as an amalgam of previously applied 'resilience' concepts in various scientific disciplines (Alexander, 2013) - urban planners and policy-makers have sought more holistic, integrated and community-centred governance approaches that offer a variety of 'qualities' and 'principles' for confronting this emergent complexity and uncertainty of city life (Meerow, Newell, & Stults, 2016; Moser, Meerow, Arnott, & Jack-Scott, 2019; Normandin, Therrien, Pelling, & Paterson, 2019; Sellberg, Ryan, Borgström, Norström, & Peterson, 2018; Tobin, 1999).

The advancement of urban resilience practices has focused upon the *process* of catalysing such resilience-thinking and has further led to calls for fundamental transformation in traditional urban governance arrangements. Concomitantly, research has consistently emphasised preparedness, adaptability, systemic thinking and residents' ability to access local government and engage in decision-making processes as desirable attributes (Chmutina, Lizarralde, Dainty, & Bosher, 2016; Desouza & Flanery, 2013; Duit, 2016; Pike, Dawley, & Tomaney, 2010; Slack & Côté, 2014). Whilst acknowledging the take up of resilience approaches by city governments across the globe, the evidence that such 'new' governance configurations are actually emerging and producing governance changes as envisioned, is limited. In large part, this is because understanding how urban governance is reshaped or transformed poses great challenges for local governments, as it is a rarely a linear process and is often characterised by a succession of swift and gradual changes (Brunetta & Caldarice, 2019; Hassler & Kohler, 2014; Pizzo, 2015). More fundamentally, to date the vast majority of existing studies of urban resilience governance have been undertaken over a limited frame and illuminated short-term, ad hoc and incremental changes, while also promoting 'business as usual' practices that frequently overlooked issues of social equity and justice, instead of radical transformations (Anguelovski et al., 2016; Fitzgibbons & Mitchell, 2019; Meerow et al., 2019; Ziervogel et al., 2017). In their review of urban resilience governance literature, Coaffee et al (2018) further highlighted that current scholarship specifically lacks longitudinal studies of resilience strategy design and implementation and in particular fails to show the mechanisms by which resilience-thinking becomes 'mainstreamed' or 'institutionalised' across city management as a core governance concern.

In this context, the conceptual question that emerges and underpins this study, relates to *what it might take for resilience-inspired innovations in urban governance to become institutionalised, in ways that transform the mainstream rather than just incorporate new ideas and practices into an established modus operandi?* In exploring this central question, this paper adopts an institutionalist perspective, where urban governance

is used to describe all the processes for the regulation and mobilisation of collective action; from those orchestrated by formal government agencies, to lobby groups, and community campaigns that challenge dominant governance relations (Cars, Healey, Mandanipour, & de Magalhaes, 2002; Coaffee & Clarke, 2015; Healey, 1998, 2006; Le Gales, 1998).

In addressing this question, we utilise results of a long-term study showing how the adoption of resilience policy has reconfigured core governance dynamics in the city of Thessaloniki, Greece. Using an analytical framework adapted from prior studies of urban resilience, we showcase how we were able to track the process of governance change over many years and provide evidence for how the mainstreaming of urban resilience across city operations can be undertaken in situ. In particular we highlight, the processes involved in empowering and responsibilising a wider network of non-governmental institutions and citizens, and breaking of silos within and across the municipal governance apparatus, which as we highlight, are situated in the core of urban resilience discourse. The results of this study, therefore assist not only in the identification of implementation gaps when operationalising resilience policies across space and time, but also in the consolidation of the potential of resilience-thinking to transform urban governance and policymaking across a range of different urban contexts worldwide.

The remainder of this paper is divided into five main sections. First, we advance a critical literature review of prior work on urban resilience, and specifically on institutionalist approaches to governance changes linked to resilience, that highlight the contribution and novelty of this study as well as providing its conceptual framing. Second, we explore the long-held governance structures and relations in Thessaloniki before the beginning of the official resilience project in 2014, where urban managers did not have any familiarity with the theoretical concepts or practical application of urban resilience. Third, we detail an analytical framework through which we tracked changes in the governance relations induced by the resilience policy in the city. Fourth, we present results that assess how resilience was used to mobilise adaptive capacity and shift long held patterns of decision-making, reorganise the traditional governance apparatus, break operational silos, reshape organisational habits, and allow new ideas based on the principles of urban resilience to be mainstreamed. This, as we demonstrate, shows how calls for innovation in governance rub up against a deeply ingrained governance culture and a fractious political landscape showcasing that the institutionalisation of a culture of urban resilience has become a very slow and unsure process. Fifth, we conclude by drawing out policy recommendations for future practice, both locally for Thessaloniki's authorities, and for cities around the world, to utilise funded resilience programmes to *'govern without government'* (Reckhow, Downey, & Sapotichne, 2019) and quickly transform urban governance in direct response to current and future crisis and uncertainty.

2 Background of the study

2.1 The search for urban resilience and adaptive governance

Many initiatives organised through global governance networks promote the importance of city-based resilience whilst a range of private sector and philanthropic organisations have advanced programmes of work and strategic frameworks by which cities can develop capacities to become more resilient. For example, the United Nations has urged the development of operational frameworks for dealing with integrated risks management through the UN Habitat City Resilience Profiling Programme, and enhancing resilient community building in relation to Sustainable Development Goals where Goal 11 promotes inclusive, safe, resilient and sustainable cities. Most notably, major cities throughout the world joined the

(now defunct) 100 Resilient Cities programme pioneered by the Rockefeller Foundation between 2013 and 2019, to develop resilience strategies to face disruptive events and address vulnerabilities that amplify crises and erode coping abilities. The 100RC network conceptualised urban resilience as '*the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience*' (Arup, 2014). Its core mission was '*dedicated to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century*' (Rockefeller Foundation, 2018). Operationally, the work of each city funded by the 100RC programme was centred around a Chief Resilience Officer (CRO), whose role was to work directly with the Chief Executive of a city and pursue collaborations across government, private, and non-profit sectors. As Michael Berkowitz, the former CEO of the 100RC initiative noted, an effective CRO is a person able to '*[...] work across the sectors and silos to coordinate, to connect the dots, to advocate, to keep the resilience issues and resilience perspective in all the decisions that the city is making*' (emphasis added) (cited in Clancy, 2014). In terms of measuring success, each city was encouraged to use an assessment framework and methodology advanced by Rockefeller in collaboration with Arup - the City Resilience Framework (CRF) (Arup, 2014).

More conceptually, resilience has provided a critical lens for viewing the governing of emergent complexity by challenging the existing neoliberal and bureaucratic mode of city operation and illuminating the potential of resilience ideas to catalyse transformational change (Chandler, 2014; Coaffee, 2019). As a result of the call to become more resilient, develop new modes of governing and mobilise reconfigured policy communities required to cope with current and future challenges, has become an imperative for cities across the globe. However, empirical studies show that despite the popularity of resilience, its implementation by municipal authorities often led to business-as-usual approaches neglecting social justice (Anguelovski et al., 2016; Fainstein, 2015; Ziervogel et al., 2017), reinforcing inequalities (Ulbrich, de Albuquerque, & Coaffee, 2019), or consolidating the lock-ins of development paths through fixed trajectories, resulting in a complex and underestimated set of trade-offs across spatial and temporal scales (Chelleri, Waters, Olazabal, & Minucci, 2015). Early evidence show that the transition from resilience as an ambitious strategic objective, to a truly transformational concept for urban governance, is frequently incomplete or even derailed (Fitzgibbons & Mitchell, 2019; Martín et al., 2018; Meerow et al., 2019).

A significant implementation gap (Coaffee & Clarke, 2015) therefore remains between resilience as ambitious objective and the *"demonstrated capacity to govern resilience in practice"* (Wagenaar & Wilkinson, 2015; p.1265) at the urban level. To date most academic studies, utilise resilience as a normative concept to justify proposals for changing policy design and call for stronger collaboration between multiple stakeholders and communities in policymaking processes. Yet, what is required to fully comprehend these complex processes are longitudinal studies of the institutions that provide formal guidelines and informal social practices, which subsequently affect the interaction of different actors within these processes of change. Moreover, tracking how the challenges of collective action are met, and how emerging tensions during pattern shift in governing are dealt with is also fundamental (Bourgon, 2009; Duit, 2016; Coaffee et al 2018). Notably, the implementation of resilience challenges the normal functioning of city administrations by highlighting the need to replace silos with horizontal management (Matyas & Pelling, 2015), take the views of external partners and voices of citizens into account (Henstra, 2012; Mcconnell & Drennan, 2006; Valiquette L'Heureux & Therrien, 2013), and encourage flexible and adaptive processes rather than regular routines that maintain the status quo (Coaffee, 2019; Stark, 2014).

Such accounts focus upon the role of institutions in promoting particular governing arrangements and can be best conceptualised through an institutionalist perspective. Institutionalism represents a broad 'wave' of theorisation and analysis in the social sciences focused on the significance of the institutional context of economic, political and social life. Here, governance is seen in its wider meaning to refer to the modes and practices that mobilise and organise collective action and is concerned with a number of key questions notably: how the 'institutional inheritance' of traditional routines shapes future possibilities; how new 'institutional capacities' get built; how authoritative power, can shape and control outcomes; and how generative power, the power to learn new practices and create new capacities, can be established and mainstreamed (Healey, 2006; Bahadur & Tanner, 2014; Davidson, 2010). The core mission of institutionalism in this context is to recognise how the discourses, practices and cultures of urban governance can be transformed from arrangements characterised by narrow, elite relations, bureaucratic practices, policy silos, sectoral organization and a disengagement between state and civil society, to ones that embraces multiple and diverse relations, that foster developmental and agile practices, embrace innovative and adaptable approaches, system integration, an area/place focus, and greater engagement between state/civil society (Coaffee, 2006; Hynes, Coaffee, Murtonen, Davis, & Fiedrich, 2013).

Furthermore, moving from conventional city governance arrangements to more adaptive and resilient ones is a question of power dynamics and focuses upon what it takes for innovations to be translated into 'mainstream' practices, in ways which transform the mainstream rather than just incorporate new ideas that neutralise threats to established obsolete practices and the various power relations embedded in them (Coaffee & Healey, 2003). This focus on institutions and governing arrangements further highlights the important role of building appropriate relations and trust among urban stakeholders and officials at different administrative levels. Fundamentally, this acknowledges that governing the city increasingly requires a shift away from technical, bureaucratic and incremental ways of working that has led many city governments to become trapped in formalised ways of operating and inevitably limit their future planning possibilities. Contemporary regimes of urban governance, based on old certainties, are often characterised as obdurate and trapped in bureaucratic routines and rigid organisational practices (Brandtner, Höllerer, Meyer, & Kornberger, 2017). Such traditional practices are undermined by the increased uncertainty and complexity of the modern world, affecting the relative roles of different levels of government acting in the city, casting doubt on the utility of existing functions and structures and questioning the legitimate boundaries of public action.

Whilst from a governance perspective we can readily acknowledge that '*the building of urban resilience will be most effective when it involves a mutual and accountable network of civic institutions, agencies and individual citizens working in partnership towards common goals within a common strategy*' (Coaffee, Murakami-Wood, & Rogers, 2008), municipal authorities are undoubtedly struggling with this objective. However, emerging strategic frameworks of urban resilience are successfully challenging the traditional pathways of top-down urban governance delivery, by promoting the idea of adaptive governance or adaptive capacity building, which allows new forms of innovative practice to be increasingly integrated in governing complex and interdependent systems (Redman, 2014; Wilkinson, 2011), encouraging co-productive decision-making with different networks of stakeholders, and leading to more holistic conceptualisations of problems and solutions. This well documented shift towards resilience-thinking in city planning and management further concerns how transformations in urban governance can be mainstreamed within everyday urban practices. Despite its popularity in academic and policy discourses, empirical studies suggest that policymakers and planners struggle to institutionalise resilience and that their

attempts tend to be incremental, ad hoc and reactive (Coaffee & Lee, 2016; Fünfgeld & McEvoy, 2012), highly influenced by culture, tradition and political relations, and the processes through which urban stakeholders along with elected officials plan, manage and finance urban transformations (Slack & Côté, 2014).

2.2   Conceptual Framework

In seeking to plug these gaps in urban resilience policy implementation, this paper analyses the ways in which the application of resilience policies is capable of catalysing urban governance change, by providing a detailed longitudinal investigation of the city of Thessaloniki, Greece. Specifically, the study follows Thessaloniki's resilience journey over a number of years from its early inception in 2014, to the efforts to implement resilience-focused policy, and the completion of the city's participation in the Rockefeller 100 Resilient Cities network, in July 2019. To track this process we advance an analytical framework to track the process of building resilience through the enhancement of the adaptive governance to cope with future urban challenges (Coaffee & Healey, 2003). This framework had three key strands representing the objectives of resilience governance:

- Reorganisation of traditional governance apparatus;
- Mobilisation of adaptive governance capacity;
- Co-production of a shared vision for medium- and long-term urban development.

Against these core objectives, we mapped key criteria that we tracked as well as experiences that emerged in Thessaloniki during our study. Although the development of this analytical framework is detailed in the next section, in broad terms we used adaptive governance to refer to the long-term ability to mobilise resources to adequately confront the impact of both endogenous and exogenous risks and disruptive challenges through the inclusion of multiple forms of knowledge and inclusive, participatory decision-making processes (Matyas & Pelling, 2015). Adaptive governance from this perspective provides an institutionalist approach to social system management. Analytically, our focus lay in tracking the evolution towards a flexible institutional environment that would allow fair access to key governance assets, and would facilitate the establishment of new governing arrangements, able to not only respond rapidly to changes, but also to anticipate them, and hence encourage proactive planning for the future.

2.3   Pre-existing governance structures and institutional practices in the city of Thessaloniki

Tracking transformations in governance dynamics requires an understanding of the existing governance structures and institutional practices that reflect the conventional ways of governing. In the case of Greece, local city governance has undergone systematic change in recent years to create an inherently complex and fluid political landscape with a strong centralised focus, which generated a set of challenges for the operation of Greek municipal authorities (Chardas, 2012). First, the financial and administrative over-dependence of local authorities on state financing has limited their capacity to diversify their funding sources and leverage new public-private partnerships that could maximise the return on the investment (City of Thessaloniki, 2017; CWRA, 2019). As a result, many Greek local authorities are heavily dependent on European Union funding to develop local development projects, with the management of European funds stopping at higher administrative levels, practically stripping the ability of municipalities to allocate funds

locally on projects of their own choice. Therefore, funding implications are a fundamental impediment for the development of urban strategies at the municipal level; a situation that deepened during the austerity programme Greece has followed since 2010.

As in many Western countries, another governance challenge for Thessaloniki was the disjointed and conflicting jurisdictional boundaries across municipalities, regional authorities and central government related to a variety of urban issues, including - but not limited to - disaster risk management and urban planning (City of Thessaloniki, 2017). This complicated operational environment has fostered an institutional alignment of service delivery across interlinked scales via operational silos. Collaboration across administrational scales has also been shaped by fractious local politics, resulting in limited cross-sectoral collaboration and engagement of external urban stakeholders, due to lack of communication and trust. Moreover, at the intra-municipal level, collaboration among the different departments of the Municipality has traditionally been hampered by poor inter-departmental communication and ingrained bureaucratic routines and institutional practices that progressively constrained the competence of the City to produce joint capacities and comprehensive responses to city-wide problems[1].

In terms of wider stakeholder engagement, Thessaloniki has followed the Greek tradition of top-down governance delivery, with very limited or non-existent participation of local community members in decision-making processes. This long existing practice, along with a number of corruption incidents - connected to misallocation of municipal funds[2]- assisted in the cultivation of a profound mistrust amongst the citizenry towards elected officials[3]. As we will show, renewing greater levels of trust has become a time-consuming process, but constitutes one of the key priorities in Thessaloniki's wider resilience work. Such work is highly dependent on co-producing a shared vision for medium and long -term urban development, strengthening of internal community networks and institutions and active integration of citizens from the start of resilience strategy development, and throughout all the stages of its implementation (Coaffee et al., 2018; Normandin, Therrien, Pelling, & Paterson, 2019).

Overall, prior to its participation in the 100RC network, Thessaloniki's urban governance shared the general traits of Greek municipal governments, notably a lack of horizontal communication among municipal departments and other urban stakeholders and misalignment of goals, objectives and outcomes among different projects undertaken by the city. This, in conjunction with the reduced funding the city received as a result of austerity measures, motivated the Mayor, along with other municipal officials, to seek alternative pathways to confronting the challenges of Greece's co-capital that centred upon resilience - a concept and practice largely novel in the city's local governance landscape. The proposal for participation in the 100RC network was a key catalyst in this pursuit.

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[1] This was intensified by the lack of human resources in the City administration, particularly after the beginning of austerity measures, when city officials were expected to do 'more for less' (Chorianopoulos & Tselepi, 2019).

[2] A former mayor, along with two ex-officials, were found guilty for embezzlement of almost 18m euros and were ultimately incarcerated (BBC, 2013).

[3] This mistrust is not only directed towards local officials but also against the state in general, partly reflecting the integral obscurity of administrative jurisdictions.

3 A methodology to track urban governance through resilience action

Methodically, our research goal was to inform the conceptual and policy gaps explored above through a longitudinal study of resilience strategy design and implementation in Thessaloniki, Greece within the context of the Rockefeller foundation-funded 100 Resilient Cities (100RC) network. Thessaloniki provides a representative example of a second-tier European city with limited financial resources and deep structural malfunctions in terms of governance, that sought to utilise external funding to transform existing operational practices and inform its strategic vision for the future. Lessons from Thessaloniki's case can further be utilised by practitioners in other cities facing similar financial or structural governance issues, as an exemplar of how to employ the principles of adaptive governance and resilience to challenge deeply ingrained and ineffective governance traditions and to quickly change current ways of operating.

Whilst there is no agreed international measurement approach for assessing city resilience, there is broad agreement on why we need to measure it. Such agreement focuses on being able to characterise resilience in context and to articulate its key constituents so as to be better able to raise awareness of where interventions might be placed in order to build resilience within organisations and networks (Coaffee & Clarke, 2016). This concentrates additional focus upon allocating resources for resilience in a transparent manner and more broadly to monitor policy performance, as well as to assess the effectiveness of resilience-building policy through comparison of policy goals and targets against outcomes (Prior & Hagmann, 2014; p.4-5). Our methodology and analytical framework specifically builds upon this increasing interest in resilience scholarship to track governance transformations and mainstream resilience practices (Moser et al., 2019; Sellberg et al., 2018; Spaans & Waterhout, 2017). It was also influenced by the 100RC Cities Resilience Framework (CRF), given its use throughout the implementation of the 100RC project in Thessaloniki to monitor change. More explicitly, our analytical framework contrasted CRF criteria with the experiences observed in the case of Thessaloniki during our longitudinal study, reflecting governance culture both before and after the introduction of resilience-thinking as a central organising concept for local governance.

The CRF, designed by the Rockefeller Foundation and the global engineering and design firm, Arup distinguished reflectiveness, resourcefulness, robustness, redundancy, flexibility, integration and inclusiveness as assessed qualities that a resilient city should aspire to. It consisted of a wide and complex set of qualitative and semi-quantitative features dividing urban resilience into four categories (people, place, organisation and knowledge), 12 goals and associated key indicators, 48-54 sub-indicators and 130–150 variables (Rockefeller Foundation, 2015). The CRF attempted to describe a city's most essential systems in terms of four dimensions, each containing three different goals, that reflected the actions cities can take to enhance urban resilience (Table 1).

Table 1: Dimensions and goals of the City Resilience Framework (Arup, 2014)

City Resilience Framework				
Dimensions	**Leadership and strategy**	**Health and wellbeing**	**Economy and society**	**Infrastructure and ecosystems**
Goals	Effective leadership and management	Minimal human vulnerability	Collective identity and community support	Reduced exposure and fragility

Empowered stakeholders	Diverse livelihoods and employment	Comprehensive security and rule of law	Effective provision of critical services
Integrated development planning	Effective safeguards to human health and life	Sustainable economy	Reliable mobility and communications

In our approach, we focused upon breaking down the goals of the first dimension of 'Leadership and Strategy', as this is the one dimension incorporating the vast majority of the governance challenges. Here, we added specific objectives to the 'Leadership and Strategy' goals that reflected the aspirations for governance transformation set by the Municipality.

Table 2: Objectives of the Leadership and Strategy dimension goals

Leadership and Strategy

Goals	Objectives	Resilience Qualities
Effective leadership and management	• Reorganisation of traditional governance apparatus	Robust; Inclusive; Integrated; Flexible
Empowered stakeholders	• Mobilisation adaptive governance capacity	Resourceful; Inclusive; Integrated;
Integrated development planning	• Co-production of a shared vision for medium- and long-term urban development at multiple scales	Reflective; Flexible; Integrated; Inclusive

The objectives we selected emerged from both documentary analysis, focusing on Thessaloniki's Preliminary Resilience Assessment and the Resilience Strategy that followed (City of Thessaloniki, 2016, 2017), and reflections on 30 interviews with City Officials, including the Chief Resilience Officer, members of the Municipality's Resilience office, local citizens and other departmental officers. The interviews took place between 2015 and 2019 with the majority of them lasted for approximately one hour. Data collection and analysis for this study was a dynamic and continuously updated process, almost completely synchronised with the unfolding of Thessaloniki's resilience journey (2014-2019). Data analysis begun during the preparation phase of the interviews, where specific questions were incorporated into the interview process in an attempt to verify hypotheses and assumptions related to the aims and objectives of the study. The interview questions were designed in such a manner so as to understand the current governance situation in the city and capture the initial plans and thoughts of interviewees prior to the beginning of Thessaloniki's resilience journey. The aim of this process was to create a baseline dataset and compare it to the collected data at later stages of the Resilience Strategy implementation. Interviews were recorded and subsequently transcribed and coded, based on the research objectives of the study. Interview

data was validated through comparison with sources of secondary data, such as official published documents (i.e. the Resilience Strategy, official policy reports etc.) and social media posts by key municipal actors and organisations. The longitudinal nature of this study required the same process to be repeated after the conclusion of each series of interviews that took place each year over the study period. The next step of developing our analytical framework emphasised the generation of a representative assessment criteria for tracking governance change induced by resilience-thinking. The criteria we developed took each of the objectives for 'Leadership and Strategy' dimension and suggested specific features that ought to be present in the governance structure of Thessaloniki after the introduction of the resilience initiatives (Table 3). This process was aided by collecting evidence from some of the activities undertaken throughout the implementation of the Resilience Strategy, which depicted the operational and attitudinal changes stimulated by municipal officials engaging with resilience-thinking, and which are capable of shaping a novel and innovative governance delivery future for Thessaloniki.[4].

Table 3: Assessment Criteria for governance change

Objectives	Criteria
Reorganisation of traditional governance apparatus	• Institutional changes in the Municipality's organisation chart • Devolution of responsibilities to smaller scale • Alignment of sectoral plans and institutional projects with the resilience vision of the city
Mobilisation adaptive governance capacity	• Inclusion of citizens and other urban stakeholders in the design of actions • Breaking of cross-sectoral silos • Promotion of inter-departmental coordination
Co-production of a shared vision for medium- and long-term urban development	• Clear understanding of urban resilience content, principles and aims • Raising of awareness towards shocks and stresses • Encouragement of bottom-up activities local governance scales

Using our analytical framework, our governance tracking process begun in 2015 and proceeded through a number of interlinked phases: the City applying for and being accepted into the 100RC network; assessing its initial resiliency capacities; and, devising and implementing strategies to enhance urban resilience. Thessaloniki begun its resilience journey in early 2014 and from the beginning, the city's participation in the 100RC network illuminated a set of challenges for the municipality including, a lack of familiarity with resilience concepts and principles, which were introduced for the first time to the Greek urban management context, growing city-wide fiscal retrenchment, a lack of public confidence in existing governance arrangements, and political mistrust of central government. As one senior local official noted, *'mistrust*

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[4] Relevant resilience 'qualities', were initially derived from the CRF and the definition of urban resilience used in the 100RC network (Table 2).

embedded in the mindset of urban stakeholders was the most important obstacle to overcome from the beginning of the project'.

4   Resilience policy implementation in Thessaloniki

The preparation of Thessaloniki's Resilience Strategy was undertaken in two phases and was focused upon and wider stakeholder engagement and the cultivation of resilience thinking. Figure 1 presents a brief exploration of the stages through which Thessaloniki passed from the beginning of its resilience journey. The first phase of strategy development, from 2015, included the preparation of a Preliminary Resilience Assessment, to identify the main areas of intervention and was concluded in June 2016 (City of Thessaloniki, 2016). Following the publication of the Preliminary Resilience Assessment[5], further diagnostic work was undertaken to advance an overarching Resilience Strategy.

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│                      Early 2014                          │
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│          Application to the Rockefeller Foundation       │
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│                         2014                             │
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│                         2015                             │
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│         Official welcoming to the 2nd cohort of 100RC    │
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│                February 2016 - June 2016                 │
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│ Development of the Preliminary│ Official establishment   │
│ Resilience Assessment         │ of the Resilience Office │
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│                      March 2017                          │
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│          Presentation of the Resilience Strategy         │
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│                 April 2017 - April 2019                  │
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│      Implementation of the Resilience Strategy actions   │
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│ Official completion of the    │ Official cancelling of   │
│ city's participation in the   │ the 100RC network by the │
│ 100RC network                 │ Rockefeller Foundation   │
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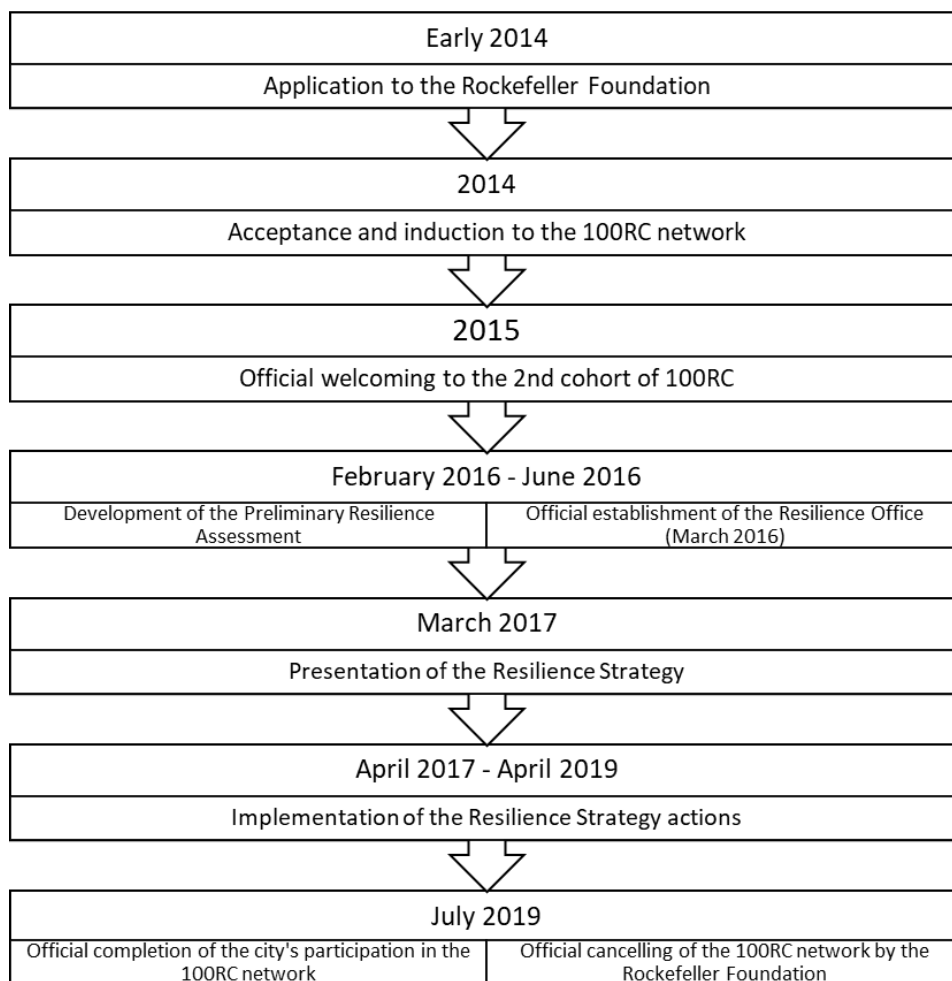
Figure 1: Timeline of the stages Thessaloniki went through in its engagement with resilience ideas (Source: Personal elaboration)

On March 30, 2017 Thessaloniki released its Resilience Strategy *Resilient Thessaloniki: A Strategy for 2030*, the first resilience strategy ever conducted in Greece (City of Thessaloniki, 2017). The Strategy set

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[5] The PRA was essentially a baseline assessment of the city's strengths and weaknesses, as well as a review of the shocks and stresses currently affecting or anticipated to affect the city in the future.

out strategic goals, objectives and actions for short- medium- and long-term urban development, but more fundamentally was seen as *'an attempt to assist in the development of a holistic framework of urban governance, focusing on restructuring the current operational models in the Metropolitan Area, enhancing the city's attractiveness, and facilitating the everyday life of citizens'* (Pitidis, Tapete, Coaffee, Kapetas, & de Albuquerque, 2018, p.3).

This emphasis on generating new ways of governing is now examined through the utilisation of our framework criteria, with particular emphasis on the three key strands of resilience: reorganisation of traditional governance approaches; mobilisation of adaptive capacity; and, the co-production of future visions. This section is concluded by the presentation of governance transformations guided, and directed, by the principles of urban resilience in the city.

4.1 Reorganisation of traditional governance apparatus

One of the early challenges faced by the Municipal authority was to position the overall resilience project, and the newly appointed Chief Resilience Officer (CRO), in the current city governance structure. Instead of allocating the responsibilities for resilience efforts to one of the existing Deputy Mayoral Offices or General Directorate Departments, the Municipality decided to establish a new Department for Urban Resilience. Initially, the newly established Department started operating jointly with the Metropolitan Development Agency of Thessaloniki, becoming the lynchpin governance body between the Metropolitan Development Agency and the Municipal Office. Among the key responsibilities of the Urban Resilience Department was the organising of workshops, working groups and events as well as the pursuit of cross-sectoral partnerships between the city, other public and private institutions and NGOs, and the feeding of existing resilience capabilities into the Preliminary Resilience Assessment of Thessaloniki.

The power and influence of this Department was enhanced as *Resilient Thessaloniki* was being prepared, with appointment of a Deputy Mayor to monitor and organise the Department's activities and act as the de facto Chief Resilience Officer (or Deputy Mayor of Urban Resilience and Development Programmes) alongside a number of resilience officers and interns. Responsibilities of the new Deputy Mayor included, amongst others, monitoring and coordination of the implementation process of the Resilience Strategy as well as supervision of other operational projects run by the Municipality. This involved the alignment of Thessaloniki's current projects and future bids with the city's Resilience Strategy's goals and objectives. Other direct responsibilities importantly, included the promotion of cross-sectoral collaboration and strategic design and interdepartmental coordination of actions with the other Deputy Mayors. Within the wider 100RC network Thessaloniki was the first city to create a Deputy Mayor position for urban resilience[6] with this innovation showcasing the importance placed upon resilience activities and more broadly the powerful role of the Resilient Thessaloniki Strategy in seeking to institutionalise urban resilience in the city.

Whilst, this resilience-driven reorganisation of traditional governance in Thessaloniki underlines the potential of resilience-related policies to stimulate institutional change in governance when strong leadership and well-defined roles are in place, it also led to approaches to generate greater citizen voice in decision-making processes. Here, a significant alteration proposed by the Resilience Strategy was the restructuring of the role of local Boroughs. In the spirit of area decentralisation or 'new localism' (see

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[6] In Greece, mayors can choose the thematic or policy portfolio for their deputy mayors and can appoint deputy mayors from the elected officials of the local council.

Pratchett, 2004; Stoker, 2004), the Municipality of Thessaloniki attempted to restructure the role of the six smaller pre-existing Boroughs that comprised the Municipality of Thessaloniki[7], in order to enhance citizen engagement and aid governance transparency. This sub-local governance reorganisation aimed to increase the responsibilities of the Boroughs and allow them to play an important intermediary role between the municipality and the local residents, and bring government closer to the people. Thessaloniki's overarching Resilience Strategy further introduced a set of activities and pilot projects at the neighbourhood level focused on participatory methods, awareness raising and learning, in order to upgrade the role of Boroughs, decentralise power, and to introduce an innovative and inclusive model of local governance that placed a premium on trust and engagement between local authorities and citizens. As a senior city official noted, *'Today there is definitely a lack of trust between the citizens and the local authorities. We believe that upgrading the role of local Boroughs citizens will feel the Municipality closer to them and will be encouraged to participate in shaping the future of their neighbourhood'*.

However, at the time of writing, this greater decentralisation process is still an incomplete project with changes still required to the city's overarching regulatory framework. This has resulted in the Boroughs being operationally impaired since they possess very limited authority (the power to make decisions and resources lies with the municipality) and consequently, to date, have had a limited impact on governance changes in their jurisdictions. As in prior episodes of area decentralisation elsewhere (Coaffee & Johnston, 2005), mistrust has been a key limiting factor and as such new governance arrangements have failed to reverse entrenched relationships between city and citizens. Many have pointed to the limited communication between the Borough council and the local community regarding the organisation of local neighbourhood assemblies as a central cause of their ineffectiveness. This illuminates that despite the ambitious inception and the dynamic re-introduction of the role of Boroughs, building trust with the local community is a long and time-consuming process. To date, participation in the neighbourhood assemblies has increased, but is still in most cases limited, in spite of the establishment of a meeting calendar with pre-defined agenda facilitated by the Municipality. Whilst, through the introduction of resilience ideas in Thessaloniki, participation in the awareness raising events has been sufficiently high with citizens seemingly eager to learn more about the concept of resilience and how they can more actively get involved in the design and implementation of local development projects, the conduct and organisation of meetings has retained many elements of traditional organisation, where local meetings are dominated by powerful institutional agendas and influential local citizens. This has generated a tension between the desire on the city to formulate rules of engagement and provide strategic direction, and the opposite pressures to devolve some decision-making power to local people.

In Thessaloniki, this endeavour to upgrade the role of Boroughs through advancing the concept of resilience, directly portrays the potential of resilience-thinking to induce transformation in urban governance by promoting increasingly participatory methods that seek to shift traditional patterns of decision-making and strengthen neighbourhood assemblies, but is only in its gestation phase. Early findings suggest that whilst the process has been sufficiently embraced by local residents, mistrust remains a significant obstacle in embedding innovative local governance models.

4.2   Mobilisation of adaptive governance capacity

The first steps towards mobilising adaptive governance capacity in Thessaloniki came through attempts to significantly involve citizens and other urban stakeholders in the development of both the Preliminary

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[7] The municipality of Thessaloniki consists of 6 local Boroughs (A, B, C, D, E and Triandria) the role of which in decision-making has been very limited in the past.

Resilience Assessment (PRA) and the Resilience Strategy. From the start of the development of the PRA, the Resilience Office attempted to engage with city-wide stakeholders to address their views on shocks and stresses for the city and identify the city's strengths and weaknesses at an early stage. This process began in May 2015, shortly after the Thessaloniki's invitation to join the 100RC network, when an Agenda Setting Workshop was organised for thirty representatives of local institutions, including academia, NGOs, private organisations and research centres. During the workshop, participants were initially asked to share their personal understandings of urban resilience definitions and principles, connect their perspectives to the local context of Thessaloniki, and contrast their personal views to the 100RC's definition of resilience. Participants then proceeded with prioritising the most imminent shocks and stresses for the city and encouraged to illuminate lesser-known or less obvious risks that had been overlooked by the Municipality. This workshop, acted as an introduction of the 100RC project to local stakeholders, and a first examination of their views and ideas on the trajectory that the city should follow in the future[8]. The workshop accomplished an early-stage diagnostic of the city's strengths and weaknesses and a city-wide mapping of urban stakeholders and their interdependences.

Similar engagement activities took place throughout the development of the PRA and assisted in the process of defining the main areas of action for the Resilience Strategy. Such activities also included online questionnaire surveys, open workshops in the city centre to attract the participation of local citizens, one-to-one interviews with other urban stakeholders and wide promotion of the project with local and national media[9]. Whilst it would be accurate to say that the development of the PRA, and ultimately the overarching Resilience Strategy, was largely driven by expert coalitions brought together by the Municipality, such activities did provide an opportunity for community knowledge to be fed into the process. However, reflecting on this process, it was observed that the composition of participating citizens did not adequately reflect the various population groups of the city. For instance, despite the fact that people from different backgrounds participated in the online survey, those without access to the internet or with limited familiarity with online technologies were effectively excluded from the process[10]. This helped to exacerbate the thorny issue of equal representation in the pursuit of resilience and did nothing to dispel the mistrust of citizens towards the local authorities, with 40% of the online survey participants characterising their communication with the municipality as ineffective.

Nevertheless, and taking into account that this was the first comprehensive attempt to actively deploy participatory processes in the design of any city-wide strategy, the overall outcome of the process achieved city-wide participation of interested parties and mobilised a range of urban stakeholders to collectively reflect on the urban challenges of Thessaloniki. As one of interviewees eloquently argued *'the development of the PRA has been without a doubt the most important stage of Thessaloniki's resilience journey. Just brining people from different institutions and with different interests in the same table has been a very important and it would be a great success for our city if cross-sectoral collaborations triggered by this project would continue after its termination'.* Traditionally, collaboration among different urban stakeholders - private, public and NGOs - in Thessaloniki had been problematic and resulted in the delivery of actions and operations in silos. The introduction of resilience-thinking and its continuous holistic focus in the design and implementation of the Resilient Strategy, stimulated cross-sectoral collaboration among

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[8] The workshop was supported by ICLEI and the Rockefeller Foundation

[9] In fact, according to the PRA, more than 850 citizens participated in the online survey, while members of four academic institutions and local research centres were contacted to present their perspectives on enhancing urban resilience.

[10] It should be mentioned that activities to further engage local citizens in this process were made by setting up kiosks in different areas of the city.

a diverse array of urban stakeholders operating within the city limits, who did not integrate their efforts effectively in the past.

Facilitating such collaboration on specific projects was further aided by the organisation of workshops that focused upon the integration of the different stakeholder ideas in city management under an approach called the CoLab tool. The CoLab approach was introduced to the city by the 100RC and sought to facilitate multiple stakeholders and partners working together to solve complex urban challenges, and was extensively utilised in Thessaloniki to tackle issues such as urban mobility, urban regeneration, local development. A good example of the tool's utilisation to bring together a diverse array of stakeholders from around the city is portrayed in the three-day international meeting on 'Metro and Urban Development: The Egnatia Street corridor', that took place in the City Hall of Thessaloniki between 11-14 June 2018. With the new underground system planned to be delivered in the near future, considerations around the transformational impact it would have in the city's infrastructure, mobility and everyday life were urgent and pressing. As the city's CRO pointed out' *this new line holds potential for transformational impact – improving traffic congestion but also unlocking economic opportunities for different parts of the city, increasing efficiency and productivity, and creating more value in the land around the infrastructure'* (cited in Dimarelos & Jang, 2018). Inspired by Goal 1 of the Resilience Strategy to 'Shape a thriving and sustainable city with mobility and city systems that serve its people', the CoLab approach brought together more than forty representatives of several urban institutions to discuss innovative solutions to this complex challenge and to identify wider opportunities arising from regenerating a central part of the city[11].

This holistic and problem-driven approach resulted in incremental, yet successful, cross-sectoral coordination of activities among stakeholders used to operating in silos that is markedly enhanced when compared to the pre-resilience governance regimes. The continuation of similar co-produced activities and is key to unlocking greater collaboration amongst stakeholders in the city. Whilst no lasting assumptions can be made on the transformational impact of such activities in driving lasting cross-sectoral collaborations the Resilience Office in Thessaloniki undertook similar initiatives[12] throughout the implementation phase of the Resilience Strategy and continue to promote this approach for planning projects.

4.3 Co-production of a shared vision for medium and long-term urban development

Defining the appropriate scale and context for the application of the Resilience Strategy, as well as fostering a shared vision for short, medium- and long-term urban development, are critical factors for facilitating effective governance. As mentioned above, several engagement activities took place to support municipal authorities in developing a more comprehensive and holistic vision for the resilient future of Thessaloniki. Such activities resulted in the generation of a shared vision for a Resilient Thessaloniki; a vision that has been portrayed in the four goals of the Resilience Strategy:

- Shaping a thriving and sustainable city with mobility and city systems that serve its people;

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[11] Participants included academics, representatives of the Thessaloniki Chamber of Commerce and Industry and the Thessaloniki Chamber of Tradesmen, the Regional and Municipal Antiquities Service of Thessaloniki, the Metropolitan Development Agency of Thessaloniki, research centres and several Municipal Departments. The workshop was also supported by international partners such as Arup, AT Osborne, the British Council Cisco and ESRI.

[12] This includes 28 Labs and 26 workshops organised as well as several informal meetings with stakeholders around the city.

- Co-creating an inclusive city that invests in its human talent;
- Building a dynamic urban economy and responsive city through effective and networked governance;
- Re-discovering the city's relationship with the sea – Integrated Thermaikos Bay.

Notably, the last of these goals has been most visible, driven through urban planning and regeneration efforts. As one senior city official noted '*Thessaloniki is a city that is characterised by its relationship with the sea. Thermaikos Bay is arguably the city's most important asset and needs to be further exploited'*. In order to enhance recent development processes that have seen the area becoming the longest developed waterfront in South-eastern Europe, an integrated strategy for the redevelopment of the waterfront zone was prioritised by both citizens and other urban stakeholders in the Preliminary Resilience Assessment and emerged as a central strand of the Resilience Strategy. Here, the city managed to leverage internal and external resources and, with the support of the World Bank, published a masterplan for the redevelopment of the city's waterfront alongside financial projections and governance arrangements that could facilitate the redevelopment process (Delloite & World Bank, 2018). In this case, the processes put in place during the development of the Resilience Strategy facilitated this redevelopment that showcases the city's collective vision for investing in its relationship with the water and maximising the benefits of its geographic location.

This masterplan and constitutes one of the most important legacies of Thessaloniki's participation to the 100RC network and demonstrates the capacity of resilience as a strategic goal to mobilise resources and produce integrated plans for future development. More broadly, it exemplifies Thessaloniki's aim of embedding resilience in its existing sectoral plans, with the Resilience Strategy being treated as an overarching non-binding strategic directive, with a 10-year implementation horizon. This, if successful, will influence the operational programmes of the city regardless of political administration changes, constituting the first stage in the process of institutionalising resilience-thinking in the city administration[13]. In this context, where there has been a restless search for new governance approaches, the active participation of different departments of the municipality in city-wide projects has not only been encouraged, but also enabled and actualised.

A further example of this type of enhanced collaboration has been the creation the Risk Data Portal for the city of Thessaloniki, an action promoted and implemented by the city's Resilience Office. The portal has been central in enabling local stakeholders to share information for disaster risk prevention and planning. Before the portal, such information was produced by different organisations, research centres or utility companies, and was only partially integrated to the city's preparedness plans, while often its very existence was unknown. The Resilience Office has further attempted to combine the portal development with a participatory mapping activity drawing on a wide range of technological and social media applications that allowed volunteered geographic information (VGI) to be added to official databases by local citizens in an attempt to enhance the resilience of local communities to extreme events. This project now acts as a successful precedent for similar future collaborations to follow, in an attempt to diversify the sources of data used for disaster risk management, concurrently highlighting the emerging significance of VGI in local

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[13] However, with the local government stepping down after May 2019 election results, there is no guarantee for the continuation of the strategy for the continuation of project alignment under the resilience thinking umbrella, despite the currently proven determination until today.

contexts (see de Albuquerque, Eckle, Herfort, & Zipf, 2016; Haworth & Bruce, 2015; Kankanamge et al., 2019).

4.4 Governance transformations induced by the introduction of urban resilience in Thessaloniki

Governance changes catalysed by the introduction of resilience concepts and practices in Thessaloniki provide concrete examples of resilience-thinking implementation in an urban environment previously unfamiliar with such ideas. Through the lens of resilience, the city officials in Thessaloniki attempted to advance innovative ways of delivering urban governance by shifting the traditional patterns of public administration. This process involved moving away from single sector approaches through adopting holistic thinking and creating a shared vision for securing a sustainable and resilient future for the city. In our analysis, we used an analytical framework to track some of these transformations in urban governance inspired by and facilitated through the participation of the city in the 100RC network. This has illuminated areas of progress in advancing more equitable, localised and integrated decision-making but also governance processes that need to be improved in the pursuit of urban resilience. In Table 4, these emerging experiences from our case study are presented against our previously set-out assessment criteria.

Initially, Thessaloniki's governance structures were found to be obdurate, strongly mandated by the national government in terms of funding and operational capacity, starkly top-down, and limited in allowing the participation of citizens and other urban stakeholders in the urban management and decision-making processes. In addition, in the past, cross-departmental and cross-sectoral collaboration, both within the municipality and across different urban stakeholders had proven ineffective, as a result of ingrained bureaucratic routines and institutional practices, as well as lack of trust. These deeply rooted impediments constrained the ability of the Municipality to produce integrated, inclusive and holistic responses to urban challenges. Such locked-in path dependency was further reinforced by financial austerity measures and the subsequent limitations in human and material resources.

It was into this challenging institutional environment that the ideas and practices of resilience were jettisoned in 2014. Most immediately, as far as reorganisation of the city's governance apparatus was concerned, the establishment of a Deputy Mayor position for Urban Resilience constituted a major change in the city's operation, officially recognising resilience as a fundamental semi-constitutional factor of the Municipality's governance structure. It also had the effect of embedding a resilience dimension into different sectoral developmental plans, positioning resilience in the centre of attention for the city's future. The decision of the Mayor to align all individual developmental plans with the actions proposed by the Resilience Strategy further demonstrated the will of the local authority to support resilience building and make a concrete effort to overturn existing problems of traditional governance delivery in the city. Such an endeavour aspired to tackle the 'policy-rich-delivery-poor' reality Thessaloniki, and several other Greek cities, has experienced in development and service delivery and avoid implementation gaps in operationalising resilience in practice (Pitidis et al., 2018). Advancing this strategic vision has also gone hand-in-hand with attempts to devolve power and responsibility to smaller sub-local scales, through reforming the role of Boroughs and re-introducing public opinion as an intermediary level between citizens and the local government. Whist operationally this initiative has shown some success, there is, nevertheless, a need for sustained engagement of local citizens in the process to build up levels of trust that can enable citizen voice to more actively influence decision-making.

Organisationally, in the Municipality, there has further been a drive to mobilise adaptive capacity through the promotion of horizontal coordination among external urban stakeholders and municipal departments. This was set as a key priority by the 100RC network throughout its implementation, as argued a Senior Programme Manager of 100RC: *'Working across silos, teams and departments is more important than ever to address the interconnected challenges of the 21st century. Moving away from single risk approaches, urban resilience forefronts an inclusive and integrated way of planning cities'* (emphasis added) (Gubbels, 2019). The de-siloing efforts and improved levels of integrated working in Thessaloniki have had significant success in widening participation of stakeholders and different city-departments in the activities organised as it has progressed along its resilience journey. This wide multi-stakeholder engagement generated a new reality for the city in achieving, an initial layer of resilience building, by creating capacities within and outside of the Municipal authority to act in new ways that were largely absent in the past. Notably, cross-departmental and cross-sectoral collaborations were facilitated through numerous activities the city organised and supported; however, further engagement of urban stakeholders and citizens is needed in the future. Such sustained engagement will ultimately be the key for releasing Thessaloniki's resilience potential. This outcome echoes the results of the Midterm Evaluation Report on Institutionalising Urban Resilience published by the Urban Institute on behalf of the Rockefeller Foundation (Martin & McTarnaghan, 2018), which argued that internationally, the process of generating overarching strategies, such as Resilience Strategies, necessarily encourages new forms of collaboration and models of citizen engagement.

Finally, the co-produced Resilient Strategy presented a shared vision for the future of the city and expressed a clear understanding of resilience principles as well as a necessity to prioritise external shocks and internal stresses the city might experience, or are currently facing. Raising awareness and working with continuous uncertainty and risk for contemporary urban environments is a vital component of building urban resilience. Thessaloniki embraced this rationale and mobilised a series of actions and activities to raise the level of awareness among citizens and urban stakeholders in the effort to cultivate a city-wide resilience mentality. For example, starting in 2017, the city has established a 'City Resilience Day' where a series of city-wide events are organised in the waterfront area in collaboration with various municipal departments, academics, NGOs, cultural institutions and other urban stakeholders. In its inaugural year, the main event was a story-telling workshop run by local citizens who experienced the devastating 1978 earthquake, and which was complemented by lectures from academics and practitioners on preparing and responding to emergencies, and particularly earthquakes[14].

The establishment of a 'City Resilience Day' showcases the potential capacity of resilience practices to translate local experiences into meaningful urban actions by consolidating a 'risk vernacular' for dealing with vulnerability and uncertainty and constitutes an important short-term legacy of the city's participation in the 100RC network. However, in the medium-long term, continuous effort and action is required to further generate and sustain a city-wide shift towards resilience and the implanting of its principles into everyday administrative practice and localised governance[15].

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[14] Local authorities symbolically chose the 20th of June, as it is the day in which the city experience a great earthquake in 1978, which caused the death of 49 people and extensive damages of its building stock and infrastructure (Penelis, Sarigiannis, Stravrakakis, & Stylianidis, 1989).

[15] The first step towards this direction has been made and is manifested in the establishment of a post-graduate programme in 2018 in "Planning for Sustainable Development and Resilience' at the School of Planning and Development of the Aristotle University of Thessaloniki, the largest and most prestigious university in the city.

Table 4: Assessment of governance transformation in Thessaloniki

Objectives	Criteria	Emerging Experiences from Thessaloniki
Reorganisation of traditional governance apparatus	• Institutional changes in the Municipality's organisation chart • Devolution of responsibilities to smaller scale • Alignment of sectoral plans and institutional projects with the resilience vision of the city	Establishment of the Deputy Mayor of Urban Resilience. Developmental projects of the Municipality are required to follow the Resilience Strategy goals and objectives. Problems in the reintroduction of the role of Boroughs have been identified.
Mobilisation adaptive governance capacity	• Inclusion of citizens and other urban stakeholders in the design of actions • Breaking of cross-sectoral silos • Promotion of inter-departmental coordination	Citizens and urban stakeholders have been central in the development of the Resilience Strategy. Some issues on equal participations have been identified. De-siloing process has been initiated and cross-sectoral collaborations enabled. More actions needed towards this goal. There is a precedent for inter-departmental collaboration that needs to be expanded.
Co-production of a shared vision for medium- and long-term urban development	• Clear understanding of urban resilience content, principles and aims • Raising of awareness towards shocks and stresses • Encouragement of bottom-up activities local governance scales	The content and principles of resilience have been introduced and are based on 100RC definition. Awareness is starting to raise but the further engagement and promotion in the future is key for keeping the momentum. Bottom-up activities and collaboration with NGOs is satisfactory but needs to be more encouraged.

5   Pursuing urban resilience through governance transformation

5.1   Lessons for practice from studying resilience implementation

The transition from conventional urban management and planning to more innovative and sustainable practices requires robust urban governance (Thomson & Newman, 2020) as well as learning lessons from implementation that might be applied carefully across different urban contexts. '*to shape and influence our understanding of how the term urban resilience can and should be conceived'* (Shamsuddin, 2020). Moreover, a thorough exploration of different cases of urban resilience implementation across dissimilar urban contexts for an extended period, can assist practitioners in understanding the potential impact of such policies on local governance structures as well as the importance of governance culture, local needs and past experiences. In this section, we discuss some lessons for urban resilience practitioners derived from the case of Thessaloniki.

First, Thessaloniki's resilience experience demonstrates the capacity of urban resilience to facilitate urban transitions from long-held obdurate governance practices to more flexible and collaborative arrangements by putting into practice ideas and principles of adaptive governance (Boyd & Juhola, 2015; Healey, 2006; Sellberg et al., 2018). Policy implementation is often hampered by bureaucratic structures and regulatory oversight (Shamsuddin, 2020), but resilience implementation and adaptive governance principles are capable of transforming traditional practices and establishing a more flexible governance apparatus. Although a roadmap to a successful and resilient urban future is far from defined, as urban transitions are rarely systematically structured within existing political realities (Thomson & Newman, 2020), the need for strategic planning to move away from emphasising short and medium term outcomes and neglect election cycles, individualistic interests and spontaneous urgency, and focus on long-term holistic governance solutions is apparent (Loorbach, 2010).

Second, whilst, institutional changes in strategic planning provide a great opportunity for rapid change through centralised and governed planning systems, in some cases such an approach tend to minimise citizen participation in the decision making processes (Coaffee & Healey, 2003), as the example of the Boroughs in Thessaloniki has showcased. Such macro-scale transformations in urban governance, deriving from largely top-down resilience policy implementation approach, should go hand-in-hand with micro-scale implementation paradigms, or bottom-up policy implementation perspectives, in order to create learning curves and feedback loops that can ultimately inform a more citizen-centric urban policy. Such a process though, requires flexible and adaptive governance, mobilisation of a wide array of stakeholders, and the local community and strong and sustained political will, rendering urban resilience implementation a long and slow process.

Third, from a methodological standpoint, the approach to tracking governance transformation adopted by this study presents an analytical framework for exploring and tracking resilience implementation strategies and governance dynamics for an extended period, in cities implementing resilience policies. Such an approach has already been adopted and proved to be useful in other studies, as the importance of actually understanding the challenges of implementing resilience, and the appreciation of resilience as a never-ending journey rather than a fixed destination, becomes more widespread (Coaffee, 2019). Notably, this study illuminates a range of factors that have created implementation gaps or challenges in terms of actually grounding resilience-thinking. These factors include, but are not limited to, breaking cross-departmental and cross-sectoral silos and raising awareness around the transition from risk management towards

resilience (Coaffee et al., 2018; Meerow et al., 2019). Notably, Thessaloniki's case highlights that using resilience as a policy metaphor can bring urban stakeholders and citizens to the same table and assist in the process of building trust, which is a prerequisite in any city building programme.

Finally, insights from the analysis of Thessaloniki's resilience journey could also inform future research on the benefits of peer-to-peer collaboration and experience exchange with cities facing similar urban challenges. Through its participation in the 100RC network, the city has established collaborations and peer-peer learning with other participant cities, and especially with the city of Athens. A further catalyst of such city-city collaborations has been the Network Exchange on Cities and Migration, with the participation of Amman, Athens, Los Angeles, Medellin, Paris, Montreal, Ramallah and Thessaloniki, as well as other similar collaborations that have flourished as a result of the extended network provided by 100RC. In other words, participation in 100RC positioned Thessaloniki in a pool of European cities dealing with resilience in practice, whilst enabling further collaborations in the context of resilience implementation. This has positioned urban resilience as something truly evolutionary, based on bouncing forward to a new normality that is conditioned by greater levels of uncertainty (Davoudi et al., 2012; White & O'Hare, 2014). Future challenges for resilience implementation

In addition to lessons for urban resilience practice, there is a number of challenges that need to be addressed for resilience-thinking to have a significant footprint in transforming traditional governance configurations, and in order to avoid a setback to 'business as usual' practices. Such challenges relate to securing resources and political will to continue the resilience implementation, institutionalising urban resilience, and tackling 'complacency' (Shamsuddin, 2020).

The first challenge that many city administrations need to face while implementing urban resilience is securing long-term funding – a requirement made all the more pertinent given the sudden demise of the 100RC initiative in mid-2019 (Bliss, 2019). In this situation, the need to secure resources for the longevity of actions has become an imperative amongst those in the 100RC network. While Thessaloniki has fortunately managed to secure funding for the short-term (until 2022) from regional funds that will be used predominantly to staff the newly established Urban Resilience Observatory[16], additional funding will likely be needed if resilience is to be institutionalised. Moreover, in Thessaloniki, the resilience journey, that until recently has been led by the same political administration; yet, a recent change of administration in May 2019, poses a potential threat to the medium and long-term implementation of the Resilience Strategy. Experiences from other cities that participated in the 100RC network from across the globe also reveal that new leadership regimes have often intentionally rejected resilience-building efforts in an attempt to diminish the work of the previous administration. This is a significant challenge for cities that have embraced programmes of resilience-building, as institutionalisation requires consolidation of the momentum around urban resilience and capitalising on the changes in city governance already achieved.

As a result, the institutionalisation of urban resilience is cast as a very challenging endeavour. Whilst avoiding the uncritical translation of 'best practices', the lessons from Thessaloniki presented in this study can be generalised to other cities facing similarly complex governance structures and corresponding governmental bureaucracy, and who are seeking to transform urban governance and embed adaptability

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[16] The Urban Resilience Observatory will monitor and track changes in ecological, social and economic level in order to analyse and update urban resilience metrics and will monitor the implementation progress of the activities set by Resilience Strategy.

and resilience-thinking across their core functions. Cities in the European South, the Balkans, Latin America and the Middle East would be particularly inspired by Thessaloniki's case. The building of capacities to transform governance and operate in resilient ways is, above all else a long-term endeavour - a time-consuming process that requires development of trust between a full range of urban stakeholders and the local authority. The process of trust-building however, is fragile and can be easily derailed due to political transitions that threaten the longevity of any new governing approach (in this case resilience), particularly when such transitions involves handing of reins of power to opposition parties (Martin & McTarnaghan, 2018).

Another challenge deriving from resilience implementation relates to institutional complacency (Shamsuddin, 2020). Institutional complacency can arise as a result of a largely perceived successful resilience implementation process and a fictitious sense of security and could be manifested through abandoning established changes in governance structures seen as no longer essential, or through a lack of urgency towards confronting emerging urban pressures. As Shamsuddin, 2020 argues *'by virtue of putting a policy in place and feeling satisfied with the results, involved groups may become untroubled by potential risks and vulnerabilities'.* Thessaloniki's success in transforming entrenched governance traditions through the implementation of urban resilience should provide an example for other cities to proceed with further engagement of citizens in the decision making processes alongside continuous and consistent monitoring of the proposed development plans, to avoid returning to the prior state on institutional inertia.

6 Conclusions

Lessons from the 100RC and other city-based resilience initiatives and approaches, showcase that implementation requires an in-depth understanding of existing governance arrangements along with prudent leadership and strong willingness to acknowledge the unpredictable nature of urban life and promote anticipatory planning models. This poses a major challenge for policy-making, as resilience strategies should foreground effective identification and mapping of urban strengths and weaknesses and highlighting of urban vulnerabilities so as to tackle a full range of disruptive challenges.

However, operationalising and implementing urban resilience so that it is truly transformative and 'sticks' is a complex venture, highly localised, and inextricably depended on delicate political manoeuvring (Pitidis & Coaffee, 2018). Early evidence from a range of empirical studies, show that the transition from resilience as an ambitious strategic objective, to a demonstrated transformational concept for urban governance, is frequently derailed (Fitzgibbons & Mitchell, 2019; Martin & McTarnaghan, 2018; Meerow et al., 2019; Spaans & Waterhout, 2017). This 'implementation gap' between theory and practice is to be expected as new resilience approaches challenge the traditional bureaucratic models of public administration. Such occurrences, however further focus attention on the inability to institutionalise resilience as a mainstream governance practice and have caused the emergence of a complex set of trade-offs across spatial and temporal scales (Chelleri, Waters, Olazabal, & Minucci, 2015; Coaffee et al., 2018). In short, achieving urban governance transformation through adopting resilience approaches is demanding, with many attempts to implement resilience-thinking inevitably leading to short-term, ad hoc and incremental changes instead of radical transformations, thus fostering 'business as usual' practices and echoing critical voices among the resilience community that call for a bounce forwards, rather than bouncing back.

This paper has highlighted that resilience-building is a long process that requires the mobilisation of a wide array of stakeholders, the local community, and strong and sustained political will in translating high-level

objectives to everyday practice and hopefully leading to more robust planning frameworks. It has also heralded that the understanding of resilience as a strategic goal can facilitate the adoption of new governance models that challenge traditional bureaucratic governance habits, allow new ideas to be mainstreamed and avoid, or fill, gaps between resilience theory and practice. Co-developing a multi-stakeholder vision for future urban development based on the principles of resilience, as well as raising awareness and working across sectoral and departmental silos, are key in promoting the resilience building process.To this end, and following the sudden halting of the 100RC programme, a new legacy vehicle has emerged through the work of many former and current CROs of cities around the world who have established the *Global Resilient Cities Network* (GCRN). The GCRN that was officially launched at the World Urban Forum, in Abu Dhabi in February 2020 as a city-led, impact-based and bottom up initiative – in contrast to the top-down structure of 100RC- builds on the legacy of 100RC aiming at expanding the scope of its work both geographically, by adding cities to the already existing network, and operationally by providing expertise, resources and experiences from working partnerships (Whybrow, 2020). The aims of the GCRN foreground opportunities for advancing holistic urban resilience implementation, by building on lessons learned from research on 100RC and reframing the way urban resilience is actualised in future urban policy and practice. The assumption here is, as former 100RC president Michael Berkowitz, noted *'the idea of urban resilience has gone mainstream'* (Scruggs, 2020), but as this paper has showcased, normalising or institutionalising resilience so that it become baked into the DNA of urban operations is a very slow, unsure and highly contextual process.

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