

Governing Sustainability in Emerging Times: Institutional Work and Practice Dynamics in Two Southeast Asian Cities

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ABSTRACT

Manuscript type: Research paper

Research aims: This study examines how institutional work and teleo-affective structures interact in shaping sustainable-city transformation in Putrajaya, Malaysia, and Surabaya, Indonesia. It explains how situated ends, projects and affective orientations make particular forms of institutional action practically intelligible within contrasting governance contexts.

Design/Methodology/Approach: The study employs comparative qualitative documentary analysis. Government reports, strategic plans, policy documents, official websites, public speeches and media reports were analysed using reflexive thematic analysis and theory-informed coding. The analysis considered institutional creation, maintenance, disruption and repair, together with practical intelligibility and the teleo-affective organisation of governance action.

Theoretical contribution/Originality: The study extends institutional-work theory by showing how situated teleo-affective structures make institutional action practically intelligible and how contestation over appropriate ends shapes sustainable-city transformation. It also conceptualises calculative practices as constitutive institutional work that maintains, privileges and reorders sustainability priorities.

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Practitioner/Policy implications: Urban performance systems should capture environmental outcomes alongside social well-being, community participation and public value. Policymakers should also embed leadership-driven sustainability initiatives in durable organisational routines, mandates, resources, participatory mechanisms and transparent accountability systems.

Keywords: Institutional Work, Practice Theory, Teleo-Affectivity, Practical Intelligibility, Calculative Practices, Sustainable Cities, Emerging Economies, Southeast Asia

JEL Classification: H83, M14, Q56, R58

1. Introduction

Cities are increasingly expected to translate global sustainable development commitments into locally meaningful policies, practices and systems of accountability (Patel et al., 2017; Masuda et al., 2021; Guarini et al., 2022). Yet, the adoption of sustainability plans, performance indicators and governance structures does not necessarily explain how a city becomes, or is maintained as, a sustainable city. Indicators and formal plans are not neutral implementation devices; their meanings and uses are shaped by local institutional arrangements, political priorities and governance processes (Hezri & Dovers, 2006; Holden, 2013; Adolfsson et al., 2021). Sustainability transformation instead unfolds over time as government actors and other participants interpret competing priorities, decide what actions are appropriate, mobilise support and develop particular understandings of what sustainability should mean (Bulkeley & Castán Broto, 2013; Hölscher et al., 2019; Perry et al., 2018). The central problem is therefore not simply whether cities possess appropriate sustainability policies or measurement systems, but how sustainability priorities are constructed, enacted and sustained through situated governance practices (Patel et al., 2017; Hölscher et al., 2019; Lord & Prior, 2024).

Existing research provides important but partial insights into sustainable-city transformation. Sustainability-governance studies explain how institutional arrangements, policy frameworks and stakeholder relationships support sustainable development, but tend to emphasise formal governance architecture rather than how actors interpret and enact it (Van Zeijl-Rozema et al., 2008; Adger and Jordan, 2009; Abhayawansa et al., 2021). Smart- and sustainable-city research similarly demonstrates the importance of urban planning, digital systems and governance capacity, yet provides less

explanation of why particular priorities become dominant or how they are translated into contextually meaningful action (Ahvenniemi et al., 2017; Grossi and Pianezzi, 2017; Tan and Taeihagh, 2020). Accounting research shows how performance indicators, reporting systems and other calculative practices make urban sustainability visible, measurable and governable, but pays less attention to how these practices privilege particular understandings of sustainability and shape different transformation trajectories (Brorström et al., 2018; Alsaid, 2021; Bekier and Parisi, 2023). Consequently, although these literatures explain the formal mechanisms through which sustainability ambitions are organised and monitored, they provide a limited account of how governance actors interpret competing priorities, determine what actions are appropriate and create or maintain particular versions of urban sustainability over time.

This limitation is particularly significant in emerging economies, where sustainability initiatives develop amid strong state involvement, rapid urbanisation, developmental pressures and varying forms of citizen participation (Alsaid, 2021; Tan and Taeihagh, 2020; Lauwo et al., 2022). It also presents a theoretical problem; institutional work explains how actors purposively create, maintain or disrupt institutions, but offers less insight into why particular courses of action become meaningful or intelligible within specific social and historical contexts. Schatzki's (2002) concept of teleo-affective structures addresses this limitation by directing attention to the ends, intentions, emotions and practical understandings that organise what actors regard as sensible, desirable or appropriate to do.

Putrajaya in Malaysia and Surabaya in Indonesia provide a theoretically revealing comparison through which to examine this problem. Both cities have pursued sustainability transformation within Southeast Asian emerging-economy settings, but their trajectories differ substantially (Kaur and Ahmad, 2010; Novalia et al., 2018). Putrajaya was created through a centrally planned, state-led development model in which sustainability ambitions were incorporated into the city's foundational design. Surabaya's transformation developed more incrementally through interactions between municipal leadership, local communities and citizens' everyday socio-economic concerns. Comparing these cities therefore enables an examination of how different political histories, governance relationships and actor priorities shape the construction, legitimation and maintenance of sustainability practices.

Accordingly, this study examines how institutional work and teleo-affective structures interact in shaping the transformation of Putrajaya and Surabaya towards sustainable cities. It addresses the following research question: How do institutional work and teleo-affective structures shape the transformation trajectories of Putrajaya and Surabaya towards sustainable cities? The study contributes theoretically by integrating institutional work with teleo-affectivity to explain both how actors act upon sustainability institutions and why particular actions become intelligible within their contexts. Empirically, it contributes to the limited accounting and governance research on sustainable-city transformation in emerging economies. It also extends understanding of calculative practices by showing how performance indicators, plans and reporting systems operate not merely as measurement devices but as forms of institutional work that shape what becomes visible, legitimate and governable within urban sustainability agendas.

2. Literature Review

Since the Brundtland Commission's 1987 report and the subsequent global commitments arising from the 1992 Rio Earth Summit and the United Nations 2030 Agenda, sustainable development has become an established priority in both policy and academic research. This growing literature has examined sustainability within the public sector (Filho et al., 2016; Galli et al., 2018; Horan, 2019; Meadowcroft, 2007; Lange et al., 2013) and has increasingly connected its implementation to governance, accountability and stakeholder participation (Van Zeijl-Rozema et al., 2008; Adger and Jordan, 2009; Abhayawansa et al., 2021). Governments are consequently regarded as important actors in coordinating sustainability initiatives, aligning institutional arrangements and making performance visible to stakeholders. In particular, Abhayawansa et al. (2021) conceptualise governmental value creation for the Sustainable Development Goals as requiring coordinated government action, stakeholder participation, and accountability through the collection and communication of sustainability performance.

Research on sustainable development has established that governments influence sustainability through institutional arrangements, policy coordination, stakeholder engagement and accountability mechanisms (Van Zeijl-Rozema et al., 2008; Adger and Jordan, 2009; Abhayawansa et al., 2021). This literature generally assumes that better-designed governance structures, greater transparency and more comprehensive performance measurement

facilitate sustainability transformation, giving rise to risks of treating governance arrangements as if their formal adoption determines how sustainability will be enacted. Policies and accountability systems do not carry fixed meanings or produce uniform outcomes. Their effects depend upon how governance actors interpret sustainability priorities, mobilise support and translate general ambitions into situated courses of action. Sustainable governance should therefore be understood not only as an institutional architecture but also as an ongoing practical accomplishment.

A similar tension is evident in the accounting and smart-city literature. Performance indicators, reporting systems and other calculative practices can make complex urban activities visible, comparable and accountable (Brorström et al., 2018; Alsaid, 2021; Bekier and Parisi, 2023). From this perspective, accounting facilitates sustainability governance by translating broad ambitions into measurable objectives. Yet, calculative practices are not neutral representations of an already established sustainability agenda. By determining what is measured, reported and rewarded, they also influence which environmental, social or economic concerns receive organisational attention. Calculative practices may therefore enhance accountability while simultaneously narrowing sustainability to those dimensions that can be formalised through plans and indicators. The unresolved issue is not merely whether cities employ accounting systems, but how these systems become implicated in constructing, legitimising and maintaining particular versions of urban sustainability.

Studies have emphasised the need for strong government coordination where institutional capacity, resources and accountability arrangements remain uneven (Alsaid, 2021; Tan and Taeihagh, 2020; Lauwo et al., 2022). In contrast, participatory approaches suggest that sustainability becomes meaningful and durable when citizens and communities are actively involved in defining and enacting it (Carrick et al., 2023). These positions create a tension between sustainability as a centrally coordinated developmental project and sustainability as a socially embedded accomplishment. Existing research does not sufficiently explain why a state-led model becomes dominant in one city while a more relational and community-oriented model develops in another, or how these different approaches shape the sustainability dimensions that become visible through accounting and reporting.

Institutional work provides a useful basis for addressing this question because it directs attention to the purposive actions through

which individuals and organisations create, maintain and disrupt institutions (Lawrence and Suddaby, 2006; Hampel et al., 2017). However, an institutional-work explanation may remain overly actor-centred if purposive action is treated as arising principally from actors' intentions and strategic interests. Identifying activities as forms of creating, maintaining or disrupting institutions explains what institutional effects actors seek to produce, but it does not fully explain why a particular course of action becomes sensible, desirable or morally appropriate to an actor at a specific time. Consequently, institutional work alone provides an incomplete account of how actors' intentions are conditioned by the shared meanings, histories and normative expectations within which sustainability governance occurs. Practice theory addresses this limitation by explaining how activities are organised through shared understandings, rules and teleo-affective structures (Schatzki, 2002). It draws attention to the ends, emotions and practical understandings through which particular actions become intelligible. Nevertheless, practice theory is principally concerned with how practices are organised, performed and reproduced. Used alone, it provides less analytical precision for examining how actors deliberately mobilise those practices to create, legitimise or maintain wider institutional arrangements. It can therefore explain why particular sustainability actions make sense within a practice, but is less explicit about how such actions acquire institutional consequences within governance systems.

As such, sustainable-city transformation requires an explanation of the relationship between purposive institutional action and the socially organised practices that make such action intelligible. Institutional work and practice theory approach this relationship from different analytical directions: the former moves from purposive action towards institutional consequences, whereas the latter moves from organised practices towards situated action. Bringing institutional work into dialogue with teleo-affective structures enables the study to explain both how actors attempt to construct and maintain sustainability institutions and why particular actions become meaningful within specific political, historical and socio-economic contexts.

Putrajaya and Surabaya provide a theoretically useful comparison through which to investigate this relationship. Putrajaya represents a planned, state-led trajectory in which sustainability was incorporated into a broader national development project (Omar, 2004; Moser, 2010). Surabaya represents a more emergent trajectory in which its sustainability practices developed incrementally

through interactions among municipal leaders, neighbourhood organisations, environmental cadres, civil-society organisations, businesses and residents (Prasetyo et al., 2019). The comparison is therefore analytical rather than categorical as it enables an evaluation of how different teleo-affective structures shape actors' institutional work and how these configurations produce different forms of sustainability governance, accountability and calculative practice.

3. Theoretical Framework

Building on the theoretical tension identified in the preceding section, this study integrates institutional work with Schatzki's (2002) concept of teleo-affective structures. The framework explains how sustainability-related actions are simultaneously purposive in their institutional consequences and situated within historically and socially organised understandings of what is meaningful, appropriate and worth pursuing.

Institutional work refers to "the purposive action of individuals and organisations aimed at creating, maintaining and disrupting institutions" (Lawrence and Suddaby, 2006, p. 215). The concept redirects institutional analysis towards the activities through which actors construct new institutional arrangements, preserve existing institutions or challenge established practices (Lawrence et al., 2009; Hampel et al., 2017). It also addresses the problem of embedded agency: actors are capable of influencing institutions, but their actions remain conditioned by the institutional arrangements, meanings and resources within which they operate (Battilana and D'Aunno, 2009). Institutional work has consequently been used in accounting research to examine how actors mobilise accounting practices, expertise and organisational relationships to create or transform institutional arrangements (Agyenim-Boateng et al., 2017; Canning and O'Dwyer, 2016; Biygauntane et al., 2020; Ahmad et al., 2023). In this study, institutional creation, maintenance, disruption and repair provide analytical categories for examining how governance actors established, legitimised, sustained or reconstructed sustainable-city practices.

Practice theory provides a complementary perspective by examining how social activities are organised, performed and reproduced through situated practices (Schatzki et al., 2001; Schatzki, 2002). Its use in accounting research reflects the broader "practice turn", which shifts attention from formal structures and abstract systems towards what actors actually do and how their activities become socially intelligible (Ahrens and Chapman, 2007; Baxter and

Chua, 2008; Ahrens and Khalifa, 2013; Stacchezzini et al., 2020). This perspective is particularly relevant to sustainable-city governance because policies, performance indicators and accountability arrangements acquire practical effects only when actors interpret, mobilise and incorporate them into ongoing governance activities.

Schatzki (2002) proposes that practices are organised through practical understandings, rules and teleo-affective structures. Practical understandings refer to actors' abilities to perform the activities constituting a practice, while rules comprise explicit formulations, instructions or principles concerning how those activities should be undertaken. Teleo-affective structures refer to the range of ends, projects, tasks, beliefs and emotions that are regarded as acceptable or appropriate within a practice. These organising elements belong to the practice rather than exclusively to individual actors. Nevertheless, actors may participate in related practices while prioritising different ends or interpreting their appropriateness differently. Teleo-affective structures therefore do not necessarily produce consensus; they can also become plural, contested and reordered over time. In sustainable-city governance, they shape what actors regard as worth pursuing, such as national modernisation, environmental protection, community welfare, administrative efficiency or socio-economic security.

Practical intelligibility connects teleo-affective structures to situated action. It refers to what makes sense for an actor to do at a particular moment within an ongoing practice, without assuming that the selected action is objectively rational or universally regarded as optimal (Schatzki, 2001, p. 47; Schatzki, 2002). Actors respond to circumstances by selecting actions that appear appropriate in relation to the ends, projects, understandings and affective orientations organising the practice. Practical intelligibility therefore helps explain why different governance actors may respond differently to similar sustainability pressures.

In the integrated framework, teleo-affective structures organise the ends, projects and affective orientations considered acceptable within sustainability-governance practices. Practical intelligibility explains how actors draw upon these organising elements when deciding what makes sense to do in particular circumstances. These situated actions become institutional work when they contribute to creating, maintaining, disrupting or repairing sustainability-related institutions. The relationship is recursive rather than unidirectional: actors draw upon existing teleo-affective structures when undertaking institutional work, but their actions, policies and

calculative practices may subsequently reproduce or reorder those structures. The framework therefore explains both why particular sustainability actions become meaningful and how those actions produce institutional consequences over time.

4. Methodology

4.1 Research Design

To address the research question, this study adopted a comparative qualitative documentary design to examine the sustainability governance trajectories of Putrajaya, Malaysia, and Surabaya, Indonesia. The analytical focus was not the cities as organisational cases in the conventional case-study sense, but the ways in which sustainability was constructed, legitimised and enacted through publicly documented governance activities over time. Putrajaya and Surabaya were selected as comparative settings because they represent contrasting approaches to sustainable-city transformation. Putrajaya reflects a predominantly planned and state-led trajectory, whereas Surabaya reflects a more emergent and community-engaged trajectory. Comparing these settings enables the study to examine how different political histories, governance arrangements and actor priorities shape institutional work and the teleo-affective organisation of sustainability practices.

4.2 Documentary Sources, Data Analysis and Research Rigour

Documentary materials were appropriate because the study sought to reconstruct and interpret sustainability discourses, initiatives and governance priorities over approximately three decades. Documents provide temporally situated accounts of how governance actors publicly articulated sustainability ambitions, justified particular actions and represented their achievements. They were not treated as neutral or inherently authoritative records of events. Instead, they were analysed as socially produced materials created for particular purposes, audiences and institutional contexts. The documentary corpus included government reports, strategic blueprints, policy documents, official websites, public speeches, media reports and publicly reported statements by governance actors. Appendix 1 presents the documents included in this study.

Documents were selected purposively according to four criteria. First, they had to relate directly to the establishment, development or governance of sustainability initiatives in Putrajaya or Surabaya. Second, they had to contain information concerning governance

actors, policy priorities, calculative practices, accountability arrangements or citizen participation. Third, the source and date of each document had to be identifiable to permit consideration of its provenance and temporal context. Fourth, the documents had to contribute evidence concerning significant developments within the sustainability trajectory of either city. Materials that merely reproduced information from another source, lacked identifiable provenance, or contained no substantive information relevant to the research question were excluded.

The analysis was undertaken collaboratively by the research team of which two researchers with familiarity in Indonesian and English took primary responsibility for reviewing the Indonesian-language material. Interpretations, source classifications and emerging themes were discussed among the research team through iterative review sessions. Because the study used reflexive thematic analysis, the researchers did not seek statistical intercoder reliability. Instead, collaborative discussions were used to interrogate alternative interpretations, identify unsupported assumptions and refine the relationship between documentary evidence and theoretical claims.

Analysis proceeded through six interconnected phases: familiarisation with the documentary corpus; initial open coding; development of categories; construction and comparison of themes; theory-informed interpretation; and cross-city comparison. During familiarisation, the researchers reviewed the materials chronologically to reconstruct significant developments in each city's sustainability trajectory. Initial codes remained close to the documentary content and captured actors, stated ambitions, policy initiatives, calculative practices, accountability relationships, forms of participation and expressions of legitimacy. Examples of these descriptive codes included "nation-building vision", "green-city planning", "low-carbon targets", "performance indicators", "community participation", "*kampung* improvement", "citizen dignity" and "legitimation of policy achievements". Coding was not based on a predetermined list of keywords because reflexive thematic analysis treats coding as an active and interpretive process rather than the mechanical classification of data into fixed categories (Braun and Clarke, 2021, 2022). Nevertheless, recurring terms and expressions, such as "green city", "low carbon", "sustainable development", "community participation", "performance" and "quality of life", sensitised the researchers to potentially relevant passages. These expressions were treated as entry points for closer contextual interpretation rather than as automatic coding criteria. Consistent

with qualitative documentary analysis, the meaning and relevance of each passage were considered in relation to its source, purpose and institutional context (Bowen, 2009). Related codes were subsequently grouped into broader categories, and relationships among the categories were examined within and across the two cities.

The analysis subsequently moved from inductive coding to theory-informed interpretation. Categories were examined using the institutional-work vocabulary of institutional creation, maintenance, disruption and repair and Schatzki's concepts of practical intelligibility and teleo-affective structures. The theories were not used as predetermined coding templates at the initial stage. Rather, they were employed to interpret how actors' documented actions contributed to institutional outcomes and how their expressed aims, beliefs and priorities made courses of action intelligible within each context. Cross-city comparison was then undertaken to identify similarities and differences in the actors involved, forms of institutional work, sustainability priorities, calculative practices and patterns of citizen participation. This process generated theory-informed themes concerning institutional creation, maintenance, disruption and repair, together with the calculative practices and teleo-affective structures shaping these processes.

Each document was interpreted in relation to its provenance, purpose, intended audience and temporal context. Official reports and public speeches were examined as authoritative representations of government priorities but also as potentially selective and legitimacy-oriented accounts. Media reports were used to provide alternative representations of significant events, while their framing, provenance and use of attributed statements were also considered. Where different sources provided inconsistent descriptions of an event or initiative, the divergence was retained as analytically relevant rather than resolved by automatically privileging an official source.

Given the interpretive nature of this study and its reliance on publicly available documentary evidence, particular attention was given to ensuring the rigour and trustworthiness of the research process. Rather than treating documents as neutral repositories of facts, we approached them as socially constructed artefacts that both reflect and shape governance discourses around sustainability (Bowen, 2009). This was especially important as the study traces the sustainability journeys of Putrajaya and Surabaya over a long temporal period, during which narratives, priorities, and institutional arrangements evolved.

Document-source triangulation was undertaken by comparing accounts across government reports, strategic plans, official websites, public speeches and media reports. Major events, policy initiatives and sustainability claims were corroborated, where possible, through sources with different institutional origins and communicative purposes. Triangulation was not treated solely as a means of identifying one definitive version of events. Agreements, silences and contradictions across sources were also analysed because they revealed how different actors constructed and legitimised the sustainability trajectories of the two cities.

Rigour was also enhanced through the iterative nature of the analytical process. Coding and theme development did not occur as a linear exercise but involved continuous movement between the empirical materials, emerging interpretations, and relevant literature. As themes began to emerge, we repeatedly revisited the data to refine our interpretations and ensure that the findings remained grounded in the documentary evidence. Maintaining this systematic audit trail helped improve consistency in coding and interpretation.

We also adopted a reflexive stance throughout the analysis. Given that documentary records, particularly official reports and public statements, may contain elements of selective disclosure or legitimacy-seeking narratives, interpretations were developed with critical sensitivity to both what was explicitly stated and what appeared less visible or omitted. This reflexive approach allowed us to move beyond descriptive accounts and examine how sustainability discourses were mobilised as part of the broader institutional work.

The research team recognised that its disciplinary backgrounds in accounting, governance and sustainability could direct attention towards formal plans, performance systems and accountability mechanisms. To limit an overly calculative interpretation, the researchers also examined community participation, political contestation, moral claims, affective expressions and issues that were absent or marginalised in official documents.

The researchers' familiarity with Malaysian and Indonesian institutional contexts supported interpretation of locally embedded concepts and governance arrangements. At the same time, familiarity was not treated as guaranteeing an authoritative interpretation. Assumptions arising from contextual familiarity were discussed within the research team and checked against the documentary evidence and alternative source accounts. Particular caution was exercised when interpreting official reports and political speeches because these materials may function as instruments of public legitimisation rather than neutral descriptions of events.

Finally, the comparative documentary design strengthens the analytical contribution of the study by enabling systematic examination of sustainability governance across two cities with distinct developmental trajectories. By examining similarities and differences in documented governance practices over time, the analysis contributes to theoretical understanding of how institutional work, practical intelligibility and context-specific priorities shape sustainable-city transformation in emerging economies.

4.3 Study Context and Case Selection

Putrajaya and Surabaya provide contrasting but comparable settings for examining how sustainable-city institutions are created, maintained and transformed within Southeast Asian emerging economies. Sustainability transformation in such settings frequently occurs amid rapid urbanisation, strong government involvement, uneven institutional capacity, developmental pressures and diverse forms of citizen participation (Tan and Taeihagh, 2020; Alsaid, 2021; Lauwo et al., 2022). Although both cities have pursued environmental, social and economic development agendas, they differ in their historical formation, governance relationships and approaches to citizen engagement. Putrajaya was established as a purpose-built federal administrative city in which sustainability ambitions were incorporated into its initial planning and physical development. In contrast, Surabaya's sustainability transformation developed incrementally within an established city through interactions among municipal leaders, government agencies, community organisations and residents. The two cities therefore provide theoretically useful settings for examining how different political histories, governance arrangements and socially organised priorities shape sustainable-city transformation.

4.3.1 Putrajaya

Putrajaya is a purpose-built city located approximately 25 kilometres south of Kuala Lumpur. Its development began in the mid-1990s as part of Malaysia's broader programme of administrative modernisation and the relocation of federal government functions from Kuala Lumpur. The city became the federal administrative centre in 1999 and was designated a Federal Territory in 2001. Although Putrajaya is closely associated with the vision and political leadership of former Prime Minister Tun Dr Mahathir Mohamad, its development also represented a broader attempt to construct a new national administrative identity through urban planning, architecture

and public infrastructure. Putrajaya can therefore be understood not simply as a response to the congestion and administrative limitations of Kuala Lumpur, but also as a symbolic representation of Malaysia's aspirations for modernisation, national identity and international recognition (King, 2007).

Sustainability considerations were incorporated into Putrajaya's physical planning through its original concepts of an intelligent city and a "City in a Garden". Approximately 40 per cent of its planned area was allocated to green spaces, while its constructed lake and wetland system formed a central component of the city's landscape and environmental-management infrastructure. The Putrajaya Lake and Wetland Catchment was subsequently recognised as a UNESCO Ecohydrology Demonstration Site, reflecting its role in integrated urban water and environmental management (UNESCO-IHP, 2020, PJY-PP2). These environmental ambitions were later formalised through strategic and calculative instruments, including *Towards Putrajaya Green City 2025*, the *Putrajaya Smart City Blueprint* and the strategic plans issued by Putrajaya Corporation (Putrajaya Corporation, 2020, PJY-PP3). Governance of the city is principally undertaken by Putrajaya Corporation, which is responsible for municipal administration, development planning, infrastructure and the implementation of sustainability-related strategies. Putrajaya thus represents a predominantly planned and state-led setting in which sustainability was incorporated into the institutional and physical construction of a new administrative city.

4.3.2 Surabaya

Surabaya is the capital of East Java and one of Indonesia's largest urban centres. Unlike Putrajaya, Surabaya developed over an extended historical period and faced sustainability challenges associated with rapid urban growth, population density, flooding, waste management, transportation and socio-economic inequality. Its sustainability initiatives became increasingly visible from the early 2000s, when the municipal government began promoting household waste reduction, composting and community-based environmental management. Early initiatives included cooperation with Japan's Kitakyushu International Techno-Cooperative Association and the subsequent introduction of the Surabaya Green and Clean programme in 2005 (Global Covenant of Mayors for Climate and Energy, 2019).

Citizen participation became an important feature of Surabaya's sustainability trajectory. The Surabaya Green and Clean programme

involved municipal agencies, neighbourhood leaders, environmental cadres, media organisations and residents in waste reduction and neighbourhood improvement. Prasetyo et al. (2019) show that the programme's development depended on interactions among local leadership, environmental volunteers, community competitions, media campaigns and government support. These participatory arrangements demonstrate how environmental initiatives can become embedded through civic engagement and locally organised practices rather than through government planning alone (Prasetyo et al., 2019; Carrick et al., 2023).

Surabaya's sustainability transformation became particularly prominent during the mayoral administration of Tri Rismaharini from 2010 to 2020. During this period, the city expanded programmes relating to urban greening, flood mitigation, waste management, service delivery and community welfare. These initiatives combined direct engagement between municipal leaders and residents with formal systems of planning, performance measurement and accountability. For example, the e-Performance system introduced administrative monitoring of employee activities, work completion, budget absorption and service delivery (Wimastuti, 2016; Febriani and Prabawati, 2021). Religious and community actors were also influential in shaping the legitimacy of particular municipal interventions, reflecting the importance of moral authority and locally embedded social relationships within Indonesian governance practices (Bashri, 2021). Surabaya therefore represents a more incremental and relational setting in which sustainability developed through interactions between municipal leadership, community participation, administrative systems and citizens' everyday environmental and socio-economic concerns.

The contextual differences between the two cities should not be interpreted as representing rigid or mutually exclusive models. Putrajaya's state-led development also involved evolving administrative and community relationships, while Surabaya's participatory trajectory continued to depend on municipal authority, formal planning and calculative systems. Rather, the comparison provides two distinctive arrangements through which to examine how governance actors' priorities, practical understandings and institutional work contributed to the creation and maintenance of sustainable-city practices.

5. Findings

5.1 Institutional Work and Practice Dynamics in the Two Cities

5.1.1 Putrajaya: Institutional Creation, Maintenance and Reconfiguration

Institutional Creation through Identity and Vision: Putrajaya's creation involved state-led institutional work that connected the establishment of a new federal administrative centre with national identity, administrative modernisation, technological progress and environmental order. The city was not presented merely as a solution to the congestion and administrative constraints of Kuala Lumpur. Mahathir's portrayal of the city as "the country's pride" and "built in the Malaysian spirit" (New Straits Times, 2024, PJY-MD14) constituted identity work, it differentiated Putrajaya from Kuala Lumpur's colonial architectural inheritance and defined the new city as a material representation of an independent and modern Malaysia (Prime Minister's Office, 2020, PJY-OW1). Mahathir's public accounts were central to this identity work. He distinguished Putrajaya from Kuala Lumpur's colonial architectural inheritance by portraying it as a city designed by Malaysians to reflect an independent Malaysian identity.

Many buildings in the country have colonial-style architecture as they were constructed before independence. But we have achieved independence now, so we want our cities to reflect our own identity. It is truly Malaysian in character. Putrajaya will be a unique city built in the Malaysian spirit and for all Malaysians (PJY-OW1)

Media accounts attributed to him described the city as "built in the Malaysian spirit" and intended for all Malaysians (The Jakarta Post, 2014, PJY-MD12). He also explained that elements of Putrajaya's boulevard and spatial arrangement drew inspiration from the Champs-Élysées in Paris, while emphasising that the city should not comprise government buildings alone (The Jakarta Post, 2014, PJY-MD12). These statements linked administrative relocation with a wider aim of constructing a modern urban identity.

This institutional work was organised by a teleo-affective structure comprising national pride, modernisation, administrative efficiency and international recognition. These ends shaped what became practically intelligible to Mahathir and other state actors. Within this orientation, developing an entirely new administrative city made sense not simply as an infrastructure decision but as a nation-building intervention. Putrajaya's initial sustainability trajectory was consequently embedded within a

broader developmental project in which the state defined the city's physical form, symbolic identity and intended social purposes.

Materialising the vision through state-led planning: The city's sustainability institution was materialised through its master plan, planning doctrine, administrative arrangements and physical infrastructure. Putrajaya was conceived as an "intelligent garden city", combining information and communication technology, administrative efficiency, planned neighbourhoods, extensive green spaces, a constructed lake and wetland system, and a controlled urban environment (Prime Minister's Office, 2020, PJY-OW1). Omar (2004) explains that Putrajaya's development was informed by the Total Planning Doctrine, which sought to integrate relationships between humans and their Creator, among members of society, and between humans and the natural environment. Its planning principles included social interaction, consultation, environmental preservation, responsible resource use and the provision of a clean and healthy urban environment.

The Total Planning Doctrine is important because it demonstrates that the social and environmental meanings of Putrajaya were formally inscribed into the project from its early development. Sustainability was not initially presented as a separate carbon-management agenda. It was connected to holistic development, social order, spiritual values, administrative modernity and quality of life (Omar, 2004). The physical allocation of land to parks, lakes, wetlands and landscaped areas provided material expression to the "City in a Garden" identity, while the location of federal ministries and administrative institutions embedded the city within the routines of the Malaysian state.

Putrajaya Corporation also provided an organisational foundation for Putrajaya. Established under the Putrajaya Corporation Act 1995, it was assigned responsibility for administering and managing Putrajaya on behalf of the federal government and coordinating the city's development (Omar, 2004; UNESCO-IHP, 2020, PJY-PP2). The establishment of a dedicated governing body helped translate the founding political vision into formal authority, planning responsibilities and continuing administrative practices.

The physical and organisational construction of Putrajaya simultaneously made some elements of sustainability more visible than others. Landscaped environments, monumental architecture, administrative order and technological infrastructure were highly visible manifestations of the city's development (Prime Minister's Office, 2020, PJY-OW1). Citizen participation, social diversity and

community-led interpretation were less prominent within the original planning trajectory. The city's early sustainability institution was therefore principally constructed through expert planning and state authority rather than through extensive participation by future residents.

Institutional maintenance during fiscal and political contestation: Putrajaya's institutionalisation was challenged by the 1997–1998 Asian Financial Crisis and by criticism concerning its cost, financing and parliamentary accountability. The crisis created pressure to postpone or abandon large development projects, thereby threatening the legitimacy of Putrajaya's continuation. Mahathir publicly defended the project as evidence that Malaysia retained the capacity and confidence to continue national development despite the financial crisis (Malaysiakini, 2002, PJY-MD10). Within this framing, Putrajaya was repositioned from a potentially excessive public expenditure into a symbol of national resilience and independence.

This defence constituted institutional maintenance because it sought to preserve the project's legitimacy when the original development agenda had become vulnerable. Continuing the project also illustrates practical intelligibility. Within a teleo-affective structure organised around resilience, national capability and developmental autonomy, suspending Putrajaya would have undermined the broader political meaning attached to the city. Continuing construction therefore made sense to its political sponsors even though other actors interpreted the same decision through competing ends of fiscal prudence, transparency and parliamentary accountability.

These competing interpretations are evident in parliamentary and political criticism. Lim Kit Siang questioned the project's financing, the role of government-linked entities and the extent of parliamentary scrutiny, arguing that the federal government had borne substantial financial exposure without adequate accountability (Lim Kit Siang, 2004, PJY-PS1). His parliamentary intervention is not a neutral assessment of the project, but it provides evidence of an alternative teleo-affective ordering in which financial accountability, institutional oversight and prudent use of public resources were prioritised over symbolic national development.

The financial crisis therefore did more than interrupt Putrajaya's construction. It exposed competing understandings of responsible governance. For Mahathir and the project's supporters, continuation represented resilience, independence and commitment to Malaysia's developmental ambitions. For critics, the same action raised concerns

about fiscal responsibility, transparency and executive dominance. Putrajaya's institutional creation was consequently contested from its early development rather than based on a uniformly shared vision.

Partial disruption and repair of the original vision: The transition in political leadership following Mahathir's first premiership exposed the extent to which elements of Putrajaya's original vision depended on continuing political sponsorship. The planned monorail system, intended to support an integrated public-transport network, was suspended in 2004 during Abdullah Ahmad Badawi's administration. The suspension left completed tunnels and sections of elevated infrastructure unused and weakened the mobility arrangements envisaged in the original plan (The Edge, 2023, PJY-MD14).

The suspension should be interpreted as partial disruption rather than the abandonment of Putrajaya's institution. The city continued to function as the federal administrative centre, but one element of the planned relationship between urban form, mobility and social activity was not fully realised. Different political actors therefore maintained different components of the founding vision. Administrative centralisation and monumental development remained institutionally secure, while the public-transport infrastructure intended to connect the city's dispersed precincts was weakened.

Mahathir's later reflections similarly indicate that aspects of the original vision were not reproduced as intended. He claimed that they had "spoiled everything" (New Straits Times, 2018, PJY-MD1) and expressed dissatisfaction with Putrajaya's limited commercial activity, evening vibrancy and dependence on motorised movement, observing that he had envisioned a more active boulevard where "people would go to and fro walking, having coffee in cafes". (New Straits Times, 2018, PJY-MD1). These comments demonstrate a gap between the founding teleo-affective structure and the practices that subsequently developed. The physical city had been created, but some of the social and economic activities necessary to sustain the imagined urban life remained underdeveloped. These created a need for institutional repair. Subsequent strategic plans and sustainability blueprints sought to broaden Putrajaya beyond its original administrative function by promoting smart mobility, commercial development, community well-being, environmental management and technological innovation (Putrajaya Corporation, 2024, PJY-PP1; MSCA, 2024, PJY-MD5; New Straits Time, 2024, PJY-MD6; Business Today, 2022, PJY-MD9). These 'repair' has selectively reconstructed that vision through new programmes, technologies and measurable administrative objectives.

These efforts are then reflected in subsequent media accounts which continued to maintain the “beautiful garden city” identity and Mahathir’s emotional attachment to the project (Bernama, 2020, PJY-MD3; New Straits Times, 2024, PJY-MD2). These functioned as retrospective legitimization by linking the city’s continued development to its founding narrative of national pride and environmental beauty, which could be interpreted as public representations of achievement.

Overall, Putrajaya’s sustainability institution was created through the interaction of political vision, national identity work, expert planning, legislation, administrative organisation and material urban development. The Asian Financial Crisis and subsequent political transitions exposed competing priorities concerning resilience, national ambition, fiscal prudence and accountability. The suspension of the monorail and the limited development of urban vibrancy partially disrupted the founding vision, while later plans and calculative systems sought to repair and stabilise it. Putrajaya therefore illustrates a predominantly centralised and technocratic pathway in which sustainability evolved from an affectively powerful nation-building project into an increasingly formalised system of environmental targets, smart-city initiatives and administrative performance measurement.

5.1.2 Surabaya’s Institutional Trajectory: Participation, Disruption and Repair

Institutional creation through distributed participation: Unlike Putrajaya’s centrally planned development, Surabaya’s sustainability institution emerged incrementally through interactions among the municipal government, community leaders, environmental cadres, non-governmental organisations, private-sector partners, media organisations and residents. This trajectory developed partly in response to the city’s waste-management difficulties following the closure of the Keputih disposal site in 2001. Beginning in 2004, the Surabaya municipal government, supported by local non-governmental organisations, introduced community education on waste separation, recycling and household composting. These activities were expanded in 2005 through neighbourhood competitions and the Surabaya Green and Clean programme, which provided incentives for residents to participate in environmental improvement (UCLG-CISDP, 2014, SBY-IO1). Cooperation with Japan’s Kitakyushu International Techno-Cooperative Association also helped introduce accessible and relatively inexpensive household-composting practices (Global Covenant of Mayors for

Climate and Energy, 2019).

These initiatives constituted institutional creation because they did more than introduce technical approaches to waste management. They established new roles, relationships and expectations through which residents, neighbourhood leaders and environmental volunteers became recognised participants in governing the urban environment. Community members were encouraged to separate household waste, produce compost, establish waste banks, maintain vegetation and participate in collective neighbourhood-cleaning activities.

The Surabaya Green and Clean programme was particularly important in creating shared understandings of environmental responsibility. It was implemented through environmental education, neighbourhood competitions, media campaigns, community mobilisation and support from municipal agencies and private-sector organisations. The projects in Kampung Margorukun depended on interactions among the village head, environmental cadres, residents, media organisations and the municipal government. These demonstrated that the actors did not merely implement a completed government plan. Through repeated participation, communication and demonstration, they created new routines and expectations through which cleanliness, waste reduction and neighbourhood improvement became regarded as legitimate collective responsibilities.

"The first and basic improvement we did was to improve the infrastructure, accessibility, and sanitation... After that, we intensively communicate with the inhabitants and teach them how to improve their kampung to be healthier, cleaner, and more comfortable." (GFHS Forum, 2025, SBY-OW2)

The transformation of Kampung Margorukun also demonstrates how institutional creation was organised by a teleo-affective structure connecting environmental improvement with dignity, collective achievement and a more positive community identity. The participation of this programme practically intelligible not simply because environmental cleanliness was promoted by the municipal government, but because participation offered residents a means of transforming both their physical surroundings and the social identity of their community.

Competitions and public recognition strengthened the reproduction of these emerging practices. The distribution of prizes, tools, composting equipment and neighbourhood-development funds further connected environmental participation with tangible

community benefits (UCLG-CISDP, 2014, SBY-IO1). Institutional creation consequently occurred through a combination of social recognition, material support and community-based learning rather than through coercive regulation alone.

Disrupting infrastructure-led development: The election of Tri Rismaharini as mayor in 2010 strengthened this participatory trajectory by connecting municipal leadership with residents' everyday environmental and socio-economic concerns. Documentary accounts portrayed her administration as directly involved in urban greening, flood mitigation, waste management, neighbourhood improvement and public-service delivery. Flood-management activities included replacing pumps, constructing drainage channels and pump houses, dredging rivers, developing retention infrastructure and increasing green open spaces (DetikNews, 2020, SBY-MD4). These interventions helped establish environmental management as a continuing responsibility of municipal governance rather than an occasional response to flooding.

"I believe the best practice that we have in Surabaya can be replicated in other cities because the key to success is not about using high-tech [technology]... But rests on a strong and routine partnership" (Surabaya Media, 2020, SBY-MD11)

The DetikNews account should nevertheless be interpreted critically because it was published as an advertorial and presents the administration's achievements favourably. It is analytically useful as evidence of how municipal interventions were publicly represented and legitimised, but its performance claims should not be treated as independently verified outcomes. The source demonstrates how material interventions such as drainage channels, pumps and green spaces were mobilised to construct a visible narrative of competent and responsive environmental governance (DetikNews, 2020, SBY-MD4).

Bu Risma's rejection of the proposed inner-city toll road provides stronger evidence of how Surabaya's sustainability trajectory disrupted an established infrastructure-led development logic. Opposition to the toll road preceded her administration. City officials and transport advocates had raised concerns that an elevated toll road would divide the city, privilege private vehicle users and adversely affect access to workplaces, schools and markets (Institute for Transportation and Development Policy [ITDP], 2003, SBY-IO2). The proposal also faced resistance from residents, academics and civil-society groups who questioned its ability to reduce congestion

and expressed concern about household displacement.

Bu Risma's administration transformed this existing opposition into an authoritative municipal position. Despite support for the project from sections of the central and provincial political establishment, she rejected the toll road and favoured access roads and alternative approaches to urban mobility (The Jakarta Post, 2011, SBY-MD9; Tempo, 2013, SBY-MD8). This action constituted disruptive institutional work because it challenged the assumption that large-scale toll-road construction represented the most appropriate response to congestion and urban growth. It also redirected the meaning of responsible development towards the social consequences of infrastructure decisions for residents.

The decision became practically intelligible within a teleo-affective orientation that prioritised citizen welfare, residential security and responsiveness to everyday urban needs. It did not originate solely from Bu Risma's personal intentions. Her action drew upon a longer-standing oppositional practice involving city officials, residents, transport advocates and academic actors. The case therefore demonstrates embedded agency: municipal leadership was influential, but its ability to disrupt the proposed development depended upon the mobilisation of existing meanings, relationships and opposition. Surabaya's sustainability institution was created partly by disassociating legitimate urban development from infrastructure projects perceived as socially disruptive.

Disrupting and repairing established practices: The closure of Dolly, a long-established prostitution district, provides a further example of disruptive institutional work, although it involved a more contested relationship between moral reform, social protection and economic livelihood. Bu Risma retrospectively explained that Dolly was the last of six prostitution areas closed by her administration and that alternative forms of employment had to be prepared for affected individuals (SBY-MD1). She justified the intervention by referring to child protection, trafficking and the moral consequences of allowing the district to continue. Religious leaders also influenced the process by providing moral authority and support for closure within a predominantly Muslim social setting (SG News, 2014, SBY-MD6).

"Dolly localization is closed to save the children living around Dolly, because many children living around Dolly have become perpetrators of human trafficking crimes or tiny pimps" (Sindo News, 2014, SBY-MD10)

The competing positions surrounding Dolly reveal a plurality of teleo-affective structures. Bu Risma, religious leaders and

supporters of closure prioritised moral reform, child protection and responsibility before God. In contrast, affected residents and opposing political actors placed greater emphasis on livelihood security, economic survival and the practical consequences of removing an established local economy (The Jakarta Post, 2014, SBY-MD7). Actors were therefore not simply disagreeing over the most effective policy instrument, but also contesting on what constituted responsible urban governance and which ends should be prioritised.

This case demonstrates that teleo-affective structures do not automatically produce consensus. Different actors can participate in related governance practices while holding different understandings of acceptable ends and appropriate action. The closure became practically intelligible to Bu Risma within a moral and religious orientation, but resistance was equally intelligible to actors whose livelihoods were embedded in Dolly's economic arrangements. Institutional disruption therefore involved the reordering of competing ends rather than the straightforward replacement of an illegitimate practice with an uncontested alternative.

The durability of the intervention depended on whether disruptive work was accompanied by institutional repair. The municipal government sought to support alternative income-generating activities, including batik production, printing, tailoring, footwear manufacturing and food-related enterprises (Gesuri, 2024, SBY-MD1). The Dolly case therefore demonstrates that disruption alone does not create sustainable institutional change. Actors must also establish credible alternatives, repair damaged relationships and connect the ends used to justify disruption with the socio-economic needs of affected communities.

Legitimising sustainability institution: Surabaya's emerging sustainability institution was further legitimised through the visible involvement of municipal leaders and residents in environmental and neighbourhood activities. Media accounts frequently portrayed Bu Risma as interacting directly with residents and municipal employees in flood response, cleaning, tree planting, traffic management and emergency activities. These representations constructed an image of sustainability governance based on proximity, responsiveness and practical involvement. The significance of these representations lies not only in whether every reported activity can be independently verified, but also in how they connected mayoral authority with the participatory practices through which Surabaya's environmental transformation had developed.

External recognition further strengthened this legitimacy. Surabaya received a Special Mention in the 2018 Lee Kuan Yew World City Prize for its approach to preserving and improving *kampung* neighbourhoods while promoting economic development. The award documentation highlighted cooperation between residents and local government, home-based entrepreneurship, community-based waste management, environmental improvement and the involvement of Bu Risma's administration (Lee Kuan Yew World City Prize, 2018, SBY-MD5). It specifically associated Surabaya's transformation with the mobilisation of residents, community organisations and businesses in improving the urban environment and creating employment. This award operated as an external legitimating device, connecting local practices to globally recognised ideas of inclusive and sustainable urban development and reinforced the public identity of Surabaya as a clean, participatory and socially responsive city. This award also provided a symbolic recognition for the collective efforts of municipal actors and residents. Such external recognition consequently contributed to institutional maintenance by reaffirming that the activities undertaken locally were meaningful beyond their immediate settings.

Overall, Surabaya's sustainability institution was created through a combination of distributed participation, municipal leadership, disruption of established development practices, moral legitimation and attempts at socio-economic repair. The Green and Clean programme created new environmental roles and collective routines across *kampung* communities (Dhokhikah et al., 2015; Irawanti et al., 2013; Prasetyo et al., 2019). Opposition to the inner-city toll road challenged an infrastructure-led development logic and reconnected urban planning with its consequences for residents (ITDP, 2003, SBY-IO2; Genpi, 2021, SBY-MD9; Tempo, 2013, SBY-MD8). The closure of Dolly revealed competing moral and economic ends, with post-closure empowerment programmes demonstrated the importance of institutional repair.

These actions were purposive, but their practical intelligibility was organised through socially embedded priorities. Community dignity, citizen welfare, religious responsibility, livelihood protection and responsiveness to everyday urban problems shaped what different actors regarded as meaningful and appropriate. Surabaya therefore illustrates a relational and contested pathway of institutional creation in which municipal leadership remained important but acquired legitimacy through its connection with community participation, moral authority and citizens' lived concerns.

5.2 *Maintaining and Reordering Sustainability Agenda*

The sustainability institutions created in Putrajaya and Surabaya were subsequently maintained through strategic planning, performance measurement, reporting systems and recurring administrative routines. These calculative practices did not merely record the progress of pre-existing sustainability agendas. They translated broad aspirations into organisational responsibilities, projects, targets and performance expectations. In doing so, calculation stabilised sustainability while selectively increasing the visibility of particular environmental, social and economic ends. The two cities nevertheless differed in how calculation was connected to governance. In Putrajaya, calculative practices increasingly reinforced a centralised and technocratic sustainability trajectory. In Surabaya, performance and transparency systems were more closely connected to service delivery, citizen accountability and changing socio-economic priorities.

5.2.1 *Maintaining Putrajaya Through Strategic Planning and Calculative Practices*

Putrajaya's sustainability institution was progressively codified through a series of plans and blueprints. The *Putrajaya Pure Values Cultivation Action Plan 2011–2015* continued the moral and community-oriented dimensions of the city's original planning vision, while the *Putrajaya Corporation Strategic Plan 2016–2020* formalised the organisational aspiration of moving "Towards a Sustainable Putrajaya 2020". Its mission connected development planning and municipal service delivery with community well-being, efficiency and effective governance. The subsequent *Prosperous Society Blueprint* extended this emphasis by articulating desired social values and behaviours for the Putrajaya community (Putrajaya Corporation, 2021, PJY-GR2; Putrajaya Corporation, 2021, PJY-GR3). The institutionalising purpose of strategic planning is explicitly stated in the Putrajaya Corporation Strategic Plan:

"The PPj Strategic Plan 2021–2025 is a reference document that manifests PPj's philosophy, direction and strategic initiatives for a period of five years" (Putrajaya Corporation, 2021, PJY-GR2; authors' translation).

This statement indicates that the plan was intended to function as more than a general expression of the city's aspirations. By establishing an authoritative organisational reference for a defined period, it connected Putrajaya's sustainability vision to specified

strategic initiatives and continuing administrative responsibilities. Strategic planning therefore contributed to institutional maintenance by embedding sustainability within the formal direction and routines of Putrajaya Corporation.

Alongside these social and administrative plans, Putrajaya's sustainability trajectory became increasingly organised around environmental calculation. The *Putrajaya Strategic Plan 2021-2025* report developed quantitative scenarios and proposed actions covering land use, transportation, energy, water, waste and urban management. Greenhouse-gas baselines and future projections were used to identify the difference between business-as-usual development and alternative low-carbon pathways (Putrajaya Corporation, 2021, PJY-GR2). The *Putrajaya Low Carbon Green City* subsequently extended this calculative orientation by specifying environmental objectives, targets and actions intended to reduce greenhouse-gas emissions, minimise environmental impacts and improve quality of life (Putrajaya Corporation, 2021, PJY-GR3).

These documents constituted institutional maintenance because they translated the founding sustainability vision into formal responsibilities and recurring administrative practices. Quantitative scenarios made a low-carbon future visible, while targets established standards against which progress could be assessed. Plans and indicators also reduced dependence on the continuing sponsorship of the city's founding political leader by embedding sustainability within Putrajaya Corporation's administrative systems. Sustainability was no longer sustained primarily through the affectively powerful language of nation-building and urban imagination; it was progressively reproduced through plans, programmes, performance indicators and reporting requirements.

The *Putrajaya Smart City Blueprint* and *Rancangan Pemajuan Putrajaya 2050* further codified this transition. The Blueprint organised 92 initiatives across short-, medium- and long-term periods and connected sustainability to smart mobility, environmental monitoring, digital services, public safety, economic development and administrative efficiency (Perbadanan Putrajaya, 2020, PJY-PP3; Putrajaya Corporation, 2025, PJY-GR1). The use of defined initiatives and implementation periods enabled Putrajaya Corporation to classify activities, assign responsibilities and report progress. Smart-city calculation therefore helped integrate sustainability with the routine management of the city. The calculative character of this administrative arrangement is particularly evident in the plan's proposed monitoring mechanism:

“A Key Performance Indicator monitoring system will be developed as a method of measuring and monitoring the programmes and activities planned under this Strategic Plan” (Putrajaya Corporation, 2021, PJY-GR2; authors’ translation).

The quotation demonstrates how broad strategic intentions were converted into programmes and activities capable of being measured and monitored. The KPI system did not merely report Putrajaya’s sustainability performance retrospectively. It established expectations about what activities should be undertaken, what results should be made visible and how implementation should be evaluated. Calculation thereby helped reproduce the sustainability institution through recurring practices of measurement, monitoring and administrative review.

Calculative practices also selectively reordered Putrajaya’s teleo-affective structure. The founding vision connected environmental order with national pride, administrative modernisation, social cohesion and international recognition. As this vision was translated into plans and indicators, measurable concerns such as carbon emissions, energy use, transport, waste and project completion became more administratively visible. Less measurable ends, including national identity, community participation and the affective experience of urban life, received less explicit attention. Institutional maintenance consequently involved transformation: sustainability was preserved, but its acceptable ends were increasingly expressed through technical and measurable categories.

5.2.2 Maintaining Surabaya Through Performance and Transparency Systems

Quantitative measurement played an important role in maintaining Surabaya’s sustainability institution, although it was connected more closely to employee performance, public-service delivery and transparency. The e-Performance system, introduced in 2011, recorded municipal employees’ attendance, work activities, completion of assigned tasks, budget absorption and competency assessments.

The e-Performance system constituted institutional maintenance by translating expectations of responsive municipal leadership into recurring administrative routines. Bu Risma’s visible and direct involvement in municipal activities could not by itself provide a durable basis for governing a large city. The performance system extended this orientation by specifying activities, allocating responsibilities and making employee actions visible to supervisors. It therefore reduced reliance on direct mayoral intervention while embedding service responsiveness within the municipal

administration (Aplikasi e-Performance, 2011, SBY-OW1).

Surabaya's development plans provided a broader framework for institutional maintenance. The revised *Medium-Term Development Plan 2016–2021* formalised priorities relating to environmental management, public services, urban infrastructure and community welfare (JDIH, 2016, SBY-GR1). The subsequent *Medium-Term Development Plan 2021–2026* expressed the city's vision as:

“Mutual cooperation towards Surabaya as a developed, humanistic and sustainable world city” (PPID, 2022, SBY-GR2, authors' translation).

The formulation connects sustainability with 'gotong royong', humanistic development and the aspiration to become a globally recognised city. By incorporating these ends within the formal development plan, the city translated community-oriented values into organisational programmes, performance indicators and resource-allocation priorities. The plan therefore maintained Surabaya's participatory orientation while codifying it within the municipal planning system.

Transparency arrangements further extended the visibility of municipal governance. Surabaya's Open Data Portal provides public access to datasets relating to government administration, budgets, the environment, transportation, education, health and other dimensions of city life (Satu Data Surabaya, 2025, SBY-OW3). The city's information-request arrangements also record the types of information requested, the decisions made and, where access is refused, the reason for refusal. These systems potentially extend calculation beyond internal management by making selected governmental activities and socio-economic conditions available for public scrutiny.

Reordering sustainability priorities following COVID-19: The COVID-19 pandemic disrupted Surabaya's socio-economic conditions and reordered the ends associated with its sustainability institution. Environmental improvement remained important, but employment, poverty reduction, livelihood security and economic recovery became more urgent. The city's 2021–2026 development vision retained environmental sustainability while placing greater emphasis on humanistic development and cooperation (PPID, 2022, SBY-GR2).

The reordering of priorities is visible in poverty and accountability data. Surabaya's statistical and accountability documents reported that approximately 152,490 residents, or 5.23 per cent of the city's population, were living in poverty in 2021, with the pandemic identified as an important factor in the increase (BPS Statistika

Indonesia, 2021, SBY-ST1). Poverty indicators made the socio-economic effects of the crisis visible and provided an administrative basis for redirecting programmes and resources towards vulnerable households.

The Padat Karya programme became an important mechanism through which these changing priorities were enacted (Pemerintah Kota Surabaya, 2022, SBY-MD2). The programme used municipal assets and labour-intensive economic activities to provide employment and income-generating opportunities for low-income households. Activities were implemented across subdistricts and involved coordination among municipal departments, district and village authorities, community groups and other partners.

"Government expenditure be used to reduce poverty and unemployment in Surabaya. Land is provided for residents to use, with all the resulting proceeds given to them." (Pemerintah Kota Surabaya, 2022, SBY-MD2; authors' translation)

The programme's connection between municipal resources, employment creation and poverty reduction was explicitly articulated as evidenced in the above quotation, with municipal assets presented as resources that could be redirected towards residents' economic participation.

The programme was subsequently formalised through municipal regulations establishing responsibilities for participant selection, programme coordination, partnerships, activity recording, monitoring and evaluation.

Padat Karya constituted adaptive institutional maintenance. Rather than abandoning the existing sustainability institution, the city reordered its acceptable ends in response to the pandemic. Employment creation, poverty reduction and livelihood security became more prominent components of what it meant for Surabaya to remain a humanistic and sustainable city. Calculation made these changing priorities administratively actionable by connecting poverty data with budget allocation, participant identification, asset utilisation and programme monitoring. Unlike Putrajaya's predominantly environmental calculations, Surabaya's calculative practices increasingly rendered socio-economic vulnerability, service delivery and livelihood support visible within its sustainability agenda.

The pandemic therefore shows that teleo-affective structures are temporal and capable of being reordered. Before COVID-19, Surabaya's sustainability institution was strongly associated with environmental cleanliness, waste management, neighbourhood

improvement and participatory urban governance. Following the pandemic, economic security and poverty reduction became more prominent without entirely replacing these established ends. Institutional continuity was achieved through adaptation rather than unchanged reproduction.

5.2.3 Comparative patterns of institutional maintenance

Putrajaya and Surabaya maintained their sustainability institutions through different configurations of calculation, participation and administrative authority. Putrajaya relied predominantly on strategic blueprints, environmental models, targets and smart-city initiatives that increasingly formalised sustainability as a technocratic and administratively managed project. Surabaya combined internal performance measurement with transparency systems, community-oriented planning and adaptive socio-economic programmes.

Calculative practices were therefore constitutive in both cities, but they did not produce identical versions of sustainability. In Putrajaya, calculation increased the visibility of carbon emissions, environmental performance, digital infrastructure and project implementation. In Surabaya, it was more closely connected to employee activities, public services, budget implementation, poverty, employment and citizen-facing transparency. What became calculable also became more administratively actionable.

Institutional maintenance was consequently not a neutral process of preserving sustainability. Plans, indicators and reporting systems selectively stabilised and reordered the ends receiving organisational attention. Putrajaya's founding affectivities of national pride and urban imagination became increasingly translated into environmental and technological targets. Surabaya's relational and environmental orientation was reordered following COVID-19 to give greater prominence to livelihood protection and economic security. In both settings, calculation connected institutional work with teleo-affective organisation by embedding selected ends, tasks and standards of appropriate performance within the routine governance of sustainability.

5.3 Discussion

5.3.1 Practical Intelligibility and Situated Institutional Work

Institutional work explains how actors purposively create, maintain and disrupt institutions (Lawrence and Suddaby, 2006; Hampel et al., 2017), but the comparative findings in this study show that

purposiveness alone does not adequately explain why actors pursue particular institutional projects. Mahathir and Bu Risma both exercised agency in shaping urban sustainability, yet their actions became intelligible through differently organised practices. Putrajaya's sustainability practice connected administrative modernisation with national identity, environmental order and international recognition. Surabaya's practice connected sustainability more closely with community dignity, moral responsibility, livelihood protection and direct engagement. Institutional action was therefore purposive but not detached from context. The actors' publicly articulated objectives and justifications indicate that their institutional work was organised through different teleo-affective structures.

This interpretation qualifies actor-centred accounts of institutional work. Existing institutional-work research recognises that actors' agency is embedded within the institutional arrangements, positions and resources that enable and constrain action (Battilana & D'Aunno, 2009; Lawrence et al., 2009). The present findings extend this argument by showing that embedded agency is also organised through socially available ends, projects and affective orientations that make particular courses of institutional action intelligible (Schatzki, 2002). The findings do not suggest that Mahathir and Bu Risma independently possessed and imposed sustainability visions. Rather, they were enabled and constrained by socially available ends, norms, projects and affectivities. Mahathir mobilised the discourses of national development, resilience and modernisation, whereas Bu Risma mobilised gotong royong, community welfare and moral legitimacy. Integrating teleo-affectivity with institutional work therefore shifts the explanation to how particular institutional actions became meaningful and legitimate within situated practices.

5.3.2 Plural and Temporally Reordered Teleo-Affective Structures

The findings further indicate that sustainability governance is not necessarily organised by a single shared teleo-affective structure. Institutional work occurred within competing orderings of acceptable ends. In Putrajaya, the ends of national ambition and administrative modernisation competed with fiscal prudence and parliamentary accountability during the Asian Financial Crisis. In Surabaya, the moral and social ends invoked to justify closing Dolly encountered an alternative orientation centred on livelihood security. Similarly, rejection of the proposed toll road reflected conflict between infrastructure-led development and the protection of residents from displacement.

This plurality is theoretically significant because teleo-affective structures should not be understood as producing consensus automatically. Practice theory explains how practices are organised through shared understandings, rules and teleo-affective structures (Schatzki, 2002; Ahrens & Chapman, 2007), but such organising structures can sometimes be interpreted as implying coherence among participants. The present findings qualify this interpretation by demonstrating that actors may participate in related governance practices while prioritising different ends and regarding different affective orientations and actions as appropriate. Institutional contestation consequently arises not only from conflicting interests or resources but also from disagreements over what is worth pursuing, what emotions are legitimate and what constitutes responsible governance. Institutional maintenance and repair require actors to reconcile, suppress or reorder these competing ends. Surabaya's attempt to provide alternative livelihoods following the closure of Dolly, for example, can be interpreted as repair work connecting the moral ends of reform with the economic ends sustaining the previous practice.

The study therefore extends the application of practice theory by showing that teleo-affective structures are both temporal and contested. The COVID-19 pandemic reordered Surabaya's sustainability practice by increasing the relative importance of employment, poverty reduction and economic security. Sustainability was maintained not by reproducing an unchanged environmental agenda but by adapting its acceptable ends and projects. Institutional continuity may consequently depend on teleo-affective reordering rather than stability.

5.3.3 Calculative Practices as Constitutive Institutional Work

Previous studies demonstrate that performance indicators and reporting systems make urban sustainability visible and governable (Brorström et al., 2018; Alsaid, 2021; Bekier and Parisi, 2023). The present findings extend this argument by showing that calculative practices also constitute institutional work. Plans, targets, budgets and performance systems stabilised sustainability by translating broad aspirations into organisational responsibilities, recurring tasks and assessable outcomes. In this sense, calculation helped embed sustainability within the routine governance of both cities. However, calculation did not merely preserve a pre-existing sustainability institution. It selectively reordered that institution by giving greater visibility to some ends than others. In Putrajaya, carbon projections,

environmental targets and strategic blueprints strengthened a technocratic orientation towards low-carbon development. The founding affectivities of national pride, independence and urban imagination became less visible as sustainability was translated into measurable administrative targets. In Surabaya, e-Performance, budget information and open-data systems were more closely connected to service delivery, transparency and citizens' socio-economic conditions. Calculative practices therefore participated in producing different versions of sustainability rather than neutrally reporting their progress.

This finding introduces an important qualification to instrumental accounts of sustainability measurement. What is measured becomes more administratively actionable, but what is difficult to quantify may become less visible. Accounting can consequently maintain sustainability institutions while simultaneously narrowing, redirecting or transforming their teleo-affective organisation. Calculative practices connect institutional work and practice theory because they are both purposive governance interventions and material arrangements through which particular ends, tasks and standards of appropriate performance become embedded.

5.3.4 Configurations of Sustainable-City Transformation

The comparison identifies two configurations of sustainable-city transformation rather than two universally applicable models. Putrajaya represents a predominantly centralised-technocratic configuration in which institutional creation was led by the state and subsequently stabilised through planning and calculative systems. Surabaya represents a more distributed-relational configuration in which municipal leadership interacted with community participation, moral authority and everyday socio-economic concerns. Both configurations produced recognisable sustainability institutions, but they differed in how agency, participation, legitimacy and calculation were combined.

These differences challenge the assumption that sustainable cities follow a common progression from policy adoption to implementation and measurement. Previous research has variously emphasised the importance of strong governmental coordination in emerging-economy sustainability governance (Tan & Taeihagh, 2020; Lauwo et al., 2022) and the role of citizen participation in making environmental programmes locally meaningful and durable (Carrick et al., 2023; Prasetyo et al., 2019). The present comparison suggests that these approaches should not be treated as competing universal

prescriptions; instead, they represent governance configurations whose effects depend on how authority, participation, calculation and contextually meaningful ends are combined. Similar global sustainability expectations were translated through different political histories, governance capacities and teleo-affective structures. Putrajaya's pathway made large-scale planning and technocratic calculation intelligible, while Surabaya's pathway made direct engagement and adaptive community programmes intelligible. Sustainable transformation is therefore not determined by formal governance arrangements alone; it emerges from the interaction between institutional work, organised practices and contextually meaningful ends.

The comparison also avoids treating one trajectory as inherently superior. Centralised governance may mobilise resources and stabilise long-term planning but can weaken participation or narrow sustainability to administratively measurable outcomes. Distributed governance may foster participation and contextual responsiveness but can remain dependent on relational leadership and continuing community mobilisation. The theoretical implication is that sustainability governance should be examined as a configuration of institutional and practice mechanisms rather than evaluated through a single ideal model.

6. Conclusions

Drawing on institutional work (Lawrence and Suddaby, 2006) and Schatzki's (2002) concept of teleo-affective structures, this study demonstrates that sustainable-city transformation is shaped not only by formal governance arrangements but also by the situated practices through which actors determine what is meaningful, appropriate and worth pursuing. The comparison of Putrajaya and Surabaya shows that institutional work is purposive but contextually organised. Actors' efforts to create, maintain, disrupt and repair sustainability institutions became practically intelligible through historically and socially constituted ends, projects and affective orientations.

The two cities represent distinct but not mutually exclusive configurations of sustainability transformation. Putrajaya reflects a predominantly centralised-technocratic formation in which sustainability was initially connected to nation-building, administrative modernisation and environmental order. These ambitions were subsequently stabilised through strategic planning, performance indicators and low-carbon targets. Although such calculative practices made sustainability visible and administratively

actionable, they also gave greater prominence to measurable environmental and technological objectives while rendering participation, national identity and the affective experience of urban life less visible.

Surabaya reflects a more distributed-relational arrangement in which sustainability developed through interactions among municipal leadership, communities and residents. Environmental improvement was connected to community dignity, moral responsibility, livelihood protection and responsiveness to citizens' everyday concerns. Formal planning, performance measurement and transparency systems helped institutionalise this participatory orientation, while the COVID-19 pandemic reordered the city's sustainability priorities towards employment, poverty reduction and economic security. The comparison therefore shows that calculative practices do not simply measure sustainability transformation; they contribute to maintaining and reordering the ends that define what sustainability means and what governance actors regard as appropriate actions. Sustainable-city transformation consequently emerges through the interaction of institutional work, situated practices and contextually meaningful ends rather than through the adoption of a universal governance model.

6.1 Academic Implications

This study makes two interrelated contributions in which the overarching contribution is an explanation of how situated practices organise institutional work in sustainable-city transformation. First, this study extends institutional-work theory by explaining how situated teleo-affective structures organise the practical intelligibility of institutional action. Institutional work does not arise solely from actors' independent intentions; it is shaped by socially constituted ends, projects and affective orientations that make particular actions meaningful and appropriate. The findings further show that these structures are plural, contested and temporally reordered, enabling actors participating in the same governance setting to prioritise different ends and pursue competing institutional projects. Sustainable-city transformation therefore emerges through the ongoing contestation and reordering of what actors regard as worth pursuing and responsible to do.

Second, this study contributes to accounting research by conceptualising calculative practices as constitutive institutional work. Strategic plans, performance indicators, carbon projections, budgets and transparency systems not only made sustainability

priorities visible and actionable but also selectively stabilised and reordered the ends receiving institutional attention. Calculation therefore operated simultaneously as a mechanism of institutional maintenance and as a means of transforming the teleo-affective organisation of sustainability governance.

6.2 Implications for Management and Policy

This study offers two principal implications for managers and policymakers involved in urban sustainability. First, sustainability governance requires performance systems that are both context-sensitive and socially inclusive. Accounting indicators, strategic plans and performance measurement systems do more than monitor outcomes; they shape priorities, resource allocation and prevailing definitions of success. Managers should therefore design these systems to capture environmental performance alongside social well-being, community participation and broader public value. The comparison between Putrajaya and Surabaya further demonstrates that these systems must reflect the socio-economic and institutional conditions of each city. Planned cities such as Putrajaya may require stronger participatory mechanisms to prevent sustainability from becoming predominantly technocratic, while organically developed cities such as Surabaya need adequate institutional support and resources to sustain community-based initiatives. Formal measurement and planning should consequently be integrated with citizens' lived experiences rather than treated as substitutes for meaningful participation.

Second, long-term sustainability transformation requires institutional commitment that extends beyond individual political leaders. Visionary leadership can initiate and accelerate change, but its durability depends on embedding sustainability priorities within organisational routines, accountability arrangements, resource-allocation processes and governance structures. Policymakers should therefore convert leadership-driven initiatives into formal institutional responsibilities, supported by clear mandates, stable resources, participatory mechanisms and transparent performance systems. Such institutionalisation is particularly important in emerging economies, where leadership transitions and changing political priorities may disrupt established sustainability programmes. The managerial challenge is thus not merely to initiate sustainability transformation but to establish the organisational capacity and institutional continuity needed to maintain and adapt it over time.

6.3 Limitations of Study and Avenues for Future Research

Notwithstanding these contributions, this study is subject to limitations. This study is subject to limitations arising from its reliance on publicly available documentary materials. Such documents provide access to the public articulation and legitimization of sustainability agendas but cannot fully reveal actors' private deliberations, informal interactions or retrospective interpretations. Official reports and speeches may also privilege institutional achievements while obscuring conflict, failure or marginalised perspectives. Although document-source triangulation and critical attention to provenance reduced dependence on any single account, the findings should be interpreted as an analysis of documented governance practices and discourses rather than a complete reconstruction of all activities occurring within the two cities. Future research could combine documentary analysis with interviews, observation or ethnographic engagement to examine how publicly articulated sustainability agendas are interpreted, contested and enacted in everyday governance.

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References

- Abhayawansa, S., Adams, C. A., & Neesham, C. (2021), "Accountability and governance in pursuit of Sustainable Development Goals: conceptualising how governments create value." *Accounting, Auditing & Accountability Journal*, 34(4), 923-945.
- Adger, W. N. & Jordan, A. J. (Eds) (2009), *Governing Sustainability* (Cambridge: Cambridge University Press).
- Adolfsson, P., Lindblad, J., & Peacock, S. (2021). Translations of sustainability in urban planning documents – A longitudinal study of comprehensive plans in three European cities. *Cities*, 119 Article 103360 .
- Ahmad, H., Ismail, S., & Zakaria, Z. (2024). Value for money (VFM) in private finance initiative (PFI) implementation in Malaysia. *Journal of Accounting & Organizational Change*, 20(3), 593-614.
- Ahrens, T., & Chapman, C. S. (2007), "Management accounting as practice." *Accounting, organizations and society*, 32(1-2), 1-27.

- Ahrens, T., & Khalifa, R. (2013), "Researching the lived experience of corporate governance." *Qualitative Research in Accounting & Management*, 10(1), 4-30.
- Ahvenniemi, H., Huovila, A., Pinto-Seppä, I., & Airaksinen, M. (2017). What are the differences between sustainable and smart cities?. *Cities*, 60, 234-245.
- Alsaid, L. A. Z. A. (2021). Performance measurement in smart city governance: A case study of an Egyptian city council. *Journal of Accounting in Emerging Economies*, 11(3), 395-430.
- Bashri, Y. (2021). Kiai in Indonesian social-political changes. *Journal of Nahdlatul Ulama Studies*, 2(1), 67-88.
- Baxter, J., & Chua, W. F. (2008), "Being the chief financial officer of an organisation: Experimenting with Bourdieu's practice theory." *Management Accounting Research*, Vol. 19 No. 3, 212-230.
- Battilana, J. and D'aunno, T., (2009), Institutional work and the paradox of embedded agency. *Institutional work: Actors and Agency in Institutional Studies of Organizations*, 31, 58.
- Bekier, J., & Parisi, C. (2023). Co-creating sustainability performance accounts in cities via tinkering and bricolage. *Journal of Public Budgeting, Accounting & Financial Management*, 37(2), 156-174.
- Braun, V. and Clarke, V. (2021), One size fits all? What counts as quality practice in reflexive thematic analysis?", *Qualitative Research in Psychology*, 18(3), 328-352.
- Braun, V. and Clarke, V. (2022), Conceptual and design thinking for thematic analysis, *Qualitative Psychology*, 9(1), 3-26.
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40.
- Brorström, S., Argento, D., Grossi, G., Thomasson, A., & Almqvist, R. (2018). Translating sustainable and smart city strategies into performance measurement systems. *Public Money & Management*, 38(3), 193-202.
- Bulkeley, H., & Castán Broto, V. (2013). Government by experiment? Global cities and the governing of climate change. *Transactions of the Institute of British Geographers*, 38(3), 361-375.
- Canning, M., & O'Dwyer, B. (2016). Institutional work and regulatory change in the accounting profession. *Accounting, Organizations and Society*, 54, 1-21.
- Cassell, C. and Bishop, V. (2019), "Qualitative data analysis: exploring

- themes, metaphors and stories." *European Management Review*, 16, 195–207.
- Carrick, J., Bell, D., Fitzsimmons, C., Gray, T. and Stewart, G. (2023). Principles and practical criteria for effective participatory environmental planning and decision-making, *Journal of Environmental Planning and Management*, 2854-2877.
- Febriani, A. L. and Prabawati, I. (2021). Analisis Penerapan E-Performance di Kota Surabaya. *Publika*, 9(2), 13-24.
- Filho, L.W., Platje, J., Gerstlberger, W., Ciegis, R., Kėėariėa, J., Klavins, M. and Kliucininkas, L. (2016), "The role of governance in realising the transition towards sustainable societies", *Journal of Cleaner Production*, 113(1), 755-766.
- Galli, A., Đurovic, G., Hanscom, L. and Knezevic, J. (2018), "Think globally, act locally: implementing the sustainable development goals in Montenegro", *Environmental Science and Policy*, 84(1), 159-169.
- Global Covenant of Mayors for Climate and Energy. (2019). Climate change acceleration report 2019. *Global Covenant of Mayors for Climate and Energy*. <https://www.globalcovenantofmayors.org/impact2019/>
- Grossi, G. and Pianezzi, D. (2017), Smart cities: Utopia or neoliberal ideology? *Cities*, 69, 79–85.
- Guarini, E., Mori, E., & Zuffada, E. (2022). Localizing the Sustainable Development Goals: A managerial perspective. *Journal of Public Budgeting, Accounting & Financial Management*, 34(5), 583–601. <https://doi.org/10.1108/JPBAFM-02-2021-0031>
- Hampel, C. E., Lawrence, T. B., & Tracey, P. (2017), "Institutional work: Taking stock and making it matter." *The Sage Handbook of Organizational Institutionalism*, 558-590.
- Hezri, A. A., & Dovers, S. R. (2006). Sustainability indicators, policy and governance: Issues for ecological economics. *Ecological Economics*, 60(1), 8699.
- Holden, M. (2013). Sustainability indicator systems within urban governance: Usability analysis of sustainability indicator systems as boundary objects. *Ecological Indicators*, 32, 89–96.
- Hölscher, K., Frantzeskaki, N., McPhearson, T., & Loorbach, D. (2019). Capacities for urban transformations governance and the case of New York City. *Cities*, 94, 186–199.

- Horan, D. (2019), "Compensation strategies to enact new governance frameworks for SDG transformations", *Public Sector Economics*, 43(4), 375-400.
- Kaur, H., & Hitam, M. (2010). Sustainable living: an overview from the Malaysian perspective. *Towards a liveable and sustainable urban environment: eco-cities in East Asia*, 159-177.
- King, R. (2007). Re-writing the city: Putrajaya as representation. *Journal of Urban Design*, 12(1), 117-138.
- Lauwo, S. G., Azure, J. D. C., & Hopper, T. (2022). Accountability and governance in implementing the Sustainable Development Goals in a developing country context: evidence from Tanzania. *Accounting, Auditing & Accountability Journal*, 35(6), 1431-1461.
- Lawrence, T. B., & Suddaby, R. (2006), "Institutions and institutional work". *The Sage Handbook of Organization Studies*, 215-254.
- Lim, S. B., and Yigitcanlar, T. (2022). Participatory governance of smart cities: Insights from e-participation of Putrajaya and Petaling Jaya, Malaysia. *Smart Cities*, 5(1), 71-89.
- Lord, F., & Prior, J. (2024). How do governance visions, institutions and practices enable urban sustainability transformations? A study of Battambang and Sihanoukville, Cambodia. *Frontiers in Sustainable Cities*, 6, 1342524.
- Masuda, H., Okitasari, M., Morita, K., Katramiz, T., Shimizu, H., Kawakubo, S., & Kataoka, Y. (2021). SDGs mainstreaming at the local level: Case studies from Japan. *Sustainability Science*, 16, 1539-1562.
- Meadowcroft, J. (2013). "Who is in charge here? Governance for sustainable development in a complex world." In *Governance for sustainable development* (pp. 107-122). Routledge.
- Moser, S. (2010). Putrajaya: Malaysia's new federal administrative capital. *Cities*, 27(4), 285-297.
- Novalia, W., Rogers, B. C., Bos, J. J., & Brown, R. R. (2018, November). Diagnosing strategic influences of different agents in governing transition towards green city in Surabaya, Indonesia. In *Earth Systems Governance Conference* (pp. 5-8).
- Omar, D. B. (2004). The total planning doctrine and Putrajaya development. In N. Marchettini, C. A. Brebbia, E. Tiezzi, and L. C. Wadhwa (Eds.), *The Sustainable City III* (pp. 79-88). WIT Press.
- Patel, Z., Greyling, S., Simon, D., Arfvidsson, H., Moodley, N., Primo,

- N., & Wright, C. (2017). Local responses to global sustainability agendas: Learning from experimenting with the urban sustainable development goal in Cape Town. *Sustainability Science*, 12, 785–797
- Perry, B., Patel, Z., Norén Bretzer, Y., & Polk, M. (2018). Organising for co-production: Local interaction platforms for urban sustainability. *Politics and Governance*, 6(1), 189–198.
- Prasetyo, W. H., Kamarudin, K. R., & Dewantara, J. A. (2019), "Surabaya green and clean: Protecting urban environment through civic engagement community." *Journal of Human Behavior in the Social Environment*, 29(8), 997-1014.
- Schatzki, T., Knorr Cetina, K & von Savigny, C. (Eds.) (2001). *The practice turn in contemporary theory*, London & New York: Routledge.
- Schatzki, T. R. (2002), *The site of the social: A philosophical account of the constitution of social life and change*. Penn State University Press.
- Stacchezzini, R., Rossignoli, F., & Corbella, S. (2020), "Corporate governance in practice: the role of practitioners' understanding in implementing compliance programs." *Accounting, Auditing & Accountability Journal*, 33(4), pp. 887-911.
- Tan, S.Y. and Taeihagh, A. (2020), "Smart city governance in developing countries: a systematic literature review", *Sustainability*, 12(899), pp. 1-30.
- Wimastuti, N. (2016). Efektivitas Penerapan Sistem E-Performance sebagai Upaya Meningkatkan Kinerja Pegawai Dinas Pendidikan Kota Surabaya. *Kebijakan dan Manajemen Publik*, 4(1), 1–8.

Appendix 1

City	Source	Type	Year	Code
Putrajaya	Dr Mahathir less than pleased with how Putrajaya turned out, NST 15 October 2018. https://www.nst.com.my/news/nation/2018/10/421490/dr-mahathir-less-pleased-how-putrajaya-turned-out	Media	2018	PJY-MD1
Putrajaya	Dr M: Putrajaya truly a beautiful garden city, NST 3 September 2024. https://www.nst.com.my/news/nation/2024/09/1100588/dr-m-putrajaya-truly-beautiful-garden-city	Media	2024	PJY-MD2
Putrajaya	I never dreamed of seeing Putrajaya today: Dr. Mahathir, Bernama, 1 January 2020. https://www.bernama.com/en/news.php?id=1803649	Media	2020	PJY-MD3
Putrajaya	The new capital city will succeed! Learn from Putrajaya – Advice from Dr Mahathir. https://www.youtube.com/watch?v=_pCEJYLnJc	Media	2024	PJY-MD4
Putrajaya	Putrajaya on the way to become smart city with strategic deal, MSCA, 25 June 2024. https://malaysiasca.org/putrajaya-on-the-way-to-become-smart-city-with-strategic-deal/	Media	2024	PJY-MD5
Putrajaya	Putrajaya on the way to become smart city with strategic deal, NST, 4 June 2024. https://www.nst.com.my/news/nation/2024/06/1059009/putrajaya-way-become-smart-city-strategic-deal#google_vignette	Media	2024	PJY-MD6
Putrajaya	Putrajaya to adopt Shanghai's smart city management, The Star, 15 October 2024. https://www.thestar.com.my/metro/metro-news/2024/10/15/putrajaya-to-adopt-shanghais-smart-city-management	Media	2024	PJY-MD7
Putrajaya	Blueprint Masyarakat Sejahtera Putrajaya (2018-2022) https://www.ppj.gov.my/storage/blueprint/492/492.pdf	Policy/ Strategic Plan	2024	PJY-PP1
Putrajaya	Tapak demonstrasi Ekohidrologi UNESCO-IHP https://www.ppj.gov.my/second-menu/tapak-demonstrasi-ekohidrologi-unesco-ihp	Policy/ Strategic Plan	2020	PJY-PP2

City	Source	Type	Year	Code
Putrajaya	Putrajaya city council to establish smart sustainable city innovation hub with Petronas, Business Today, 18 October 2022 https://www.businesstoday.com.my/2022/10/18/putrajaya-city-council-to-establish-smart-sustainable-city-innovation-hub-with-petronas/	Media	2022	PJY-MD9
Putrajaya	New administrative capital Putrajaya costs RM4.6 billion, 18 June 2002. https://m.malaysiakini.com/news/11831	Media	2002	PJY-MD10
Putrajaya	Putrajaya Smart City Blueprint. https://www.ppj.gov.my/en/second-page/blueprint-smart-city-putrajaya	Policy/ Strategic Plan	2020	PJY-PP3
Putrajaya	The journey of Putrajaya – Malaysia’s jewel capital city, The Malaysian Reserve, 31 January 2019. https://themalaysianreserve.com/2019/01/31/the-journey-of-putrajaya-malaysias-jewel-capital-city/	Media	2019	PJY-MD11
Putrajaya	Putrajaya is fashioned after Paris: Mahathir, The Jakarta Post, 8 January 2014. https://www.thejakartapost.com/news/2014/01/08/putrajaya-fashioned-after-paris-mahathir.html	Media	2014	PJY-MD12
Putrajaya	Frankly Speaking: Tackling wanton wastage and abandoned public projects, The Edge, 20 February, 2023. https://theedgemalaysia.com/node/655853	Media	2023	PJY-MD13
Putrajaya	Putrajaya a truly beautiful city: Dr M, NST, 3 September 2024. https://www.nst.com.my/news/nation/2024/09/1100588/dr-m-putrajaya-truly-beautiful-garden-city#google_vignette	Media	2024	PJY-MD14
Putrajaya	Rancangan Pemajuan Putrajaya 2050. https://www.ppj.gov.my/second-page/rancangan-pemajuan-putrajaya-2050	Government Report	2025	PJY-GR1
Putrajaya	Pelan Strategik Perbadanan Putrajaya (2021-2025) https://www.ppj.gov.my/storage/5757/BUKU-PELAN-STRATEGIK-PERBADANAN-PUTRAJAYA-2021-2025.pdf	Government Report	2021	PJY-GR2

City	Source	Type	Year	Code
Putrajaya	Putrajaya Low Carbon Green City. https://www.ppj.gov.my/storage/laporan04/726/726.pdf	Government Report	2021	PJY-GR3
Putrajaya	Call for full accountability of Petronas, Putrajaya Holdings, National Oil Reserve Fund and funding of Mahathir's retirement lifestyle. https://www.limkitsiang.com/archive/2004/may04/lks3032.htm	Political Speech	2004	PJY-PS1
Putrajaya	Perdana Putra: From Vision to Reality. https://www.pmo.gov.my/en/perdana-putra/	Official Website	2020	PJY-OW1
Putrajaya	Development of Putrajaya proof of independent Malaysia. http://lib.perdana.org.my/PLF/Digital_Content/Prominent_Leaders/Mahathir/News_1968-2004/1999-2000/2000pz/plopment%20of%20putrajaya%20proof.pdf	Official Website	2020	PJY-OW2
Surabaya	Dolly closure and alternative livelihoods. https://www.gesuri.id/pemilu/tri-rismaharini-ungkap-kisah-penutupan-lokalisasi-dolly-ini-lengkapnya-b2kGyZR2y	Media	2024	SBY-MD1
Surabaya	Program Padat Karya Surabaya Jadi Percontohan dalam Penanggulangan Kemiskinan, Pemerintah Kota Surabaya, 23 October, 2022. https://www.surabaya.go.id/id/berita/70217/program-padat-karya-surabaya-jadi-percontohan-dalam-penanggulangan-kemiskinan	Media	2022	SBY-MD2
Surabaya	Surabaya Raih Penghargaan Smart Government dan Smart Environment Dari Kemenkominfo RI. https://surabaya.go.id/id/berita/9971/surabaya-raih-penghargaan-smart-government-dan-smart-environment-dari-kemenkominfo-ri	Media	2023	SBY-MD3
Surabaya	Flood Management Intervention. https://news.detik.com/adv-nhl-detikcom/d-4866428/cara-jitu-risma-atasi-banjir-yang-bikin-bangga-surabaya	Media	2020	SBY-MD4
Surabaya	Lee Kuan Yet World City Prize. https://www.leekuanyetworldcityprize.gov.sg/surabaya/	Media	2018	SBY-MD5

City	Source	Type	Year	Code
Surabaya	Indonesia takes on 'Dolly' red-light district. https://sg.news.yahoo.com/indonesia-takes-dolly-red-light-district-073234737.html	Media	2014	SBY-MD6
Surabaya	Risma's plans to close Dolly opposed by deputy mayor. https://www.thejakartapost.com/news/2014/05/07/rismas-plans-close-dolly-opposed-deputy-mayor	Media	2014	SBY-MD7
Surabaya	Tol Tengah Kota Surabaya Masih Terganjai Wali Kota, Tempo 18 March 2013. https://www.tempo.co/arsip/tol-tengah-kota-surabaya-masih-terganjal-wali-kota-1621242	Media	2013	SBY-MD8
Surabaya	Dengarkan Seruan Bu Risma, Pemerintah Tidak Bisa Kerja Sendiri! https://www.genpi.co/berita/123435/dengarkan-seruan-bu-risma-pemerintah-tidak-bisa-kerja-sendiri	Media	2021	SBY-MD9
Surabaya	3 alasan Risma ngotot tutup Dolly (Sindo News, 8 May 2014). https://daerah.sindonews.com/berita/861540/23/3-alasan-risma-ngotot-tutup-dolly	Media	2021	SBY-MD10
Surabaya	Bongkar Strategi Keberhasilan Tangani Perubahan Iklim, Wali Kota Risma Jadi Pembicara di Forum Internasional (25 September 2020). https://www.surabaya.go.id/id/berita/13561/bongkar-strategi-keberhasilan-tangani-perubahan-iklim-wali-kota-risma-jadi-pembicara-di-forum-internasional	Media	2020	SBY-MD11
Surabaya	Perubahan Rencana Pembangunan Jangka Menengah Daerah Kota Surabaya Tahun 2016-2021. https://jdih.surabaya.go.id/peraturan/3628	Government Report	2016	SBY-GR1
Surabaya	Laporan Keterangan Pertanggungjawaban (LKPJ) Walikota Tahun 2022. https://ppid.surabaya.go.id/web/content/5040?unique=61501e52aa21f66da5391a91f952d43bbab34ca6	Government Report	2022	SBY-GR2

City	Source	Type	Year	Code
Surabaya	United Cities and Local Governments Committee on Social Inclusion, Participatory Democracy and Human Rights (UCLG-CISDP) (2014), "Green and Clean Initiative in Surabaya, Indonesia", 2 May.	International organisation case study	2014	SBY-IO1
Surabaya	Institute for Transportation and Development Policy (ITDP) (2003), "Surabaya Toll Road Proceeds over Objections from City", 1 October.	International organisation case study	2003	SBY-IO2
Surabaya	Voluntary Local Review Surabaya City 2021. https://sdgs.un.org/sites/default/files/vlrs/2022-03/vlr_surabaya2021_english_fa.pdf	International Organisation Case Study	2022	SBY-IO3
Surabaya	Applikasi e-Performance. https://eperformance.surabaya.go.id/portal/	Official Website	2011	SBY-OW1
Surabaya	Tri Rismaharini: Sustainable Development in kampung. https://ghsforum.org/content?article_id=297	Official Website	2025	SBY-OW2
Surabaya	Satu Data Surabaya. https://opendata.surabaya.go.id	Official Website	2025	SBY-OW3
Surabaya	BPS Statistika Indonesia. https://surabayakota.bps.go.id/en/pressrelease/2021/12/21/278/poverty-profile-march-2021-surabaya-city.html	Official Website	2021	SBY-OW4