

Actors or Actions? Rethinking Platform Governance in Pre-Platform Crisis Settings

Completed Research Paper

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Abstract

Crises expose the limits of governance characterized by predefined roles and stable structures. This study examines how governance emerges in the pre-platform stage under conditions of urgency, unpredictability, and fragmented authority. Using four dimensions of platform governance, i.e. roles, decision rights, control, and ownership, we analyze three crisis actions during the Ukrainian refugee crisis in Switzerland: communication via online refugee communities, identification of refugees, and civic-led host-refugee matching. Findings show that governance emerges through action rather than formal authority: roles become overlapping, decision rights shift to those who can act, control relies on local norms, and ownership becomes collective and negotiated. We conceptualize this as governance-by-action, that explains how coordination arises before a coherent platform is established, extending platform governance theory to pre-platform contexts.

Keywords: Platform governance, crisis management, pre-platform stage, governance-by-action

Introduction

Large-scale crises affect people faster than institutions can organize a response. When millions of refugees from Ukraine arrived across Europe in early 2022, coordination among government agencies, humanitarian organizations, and volunteer groups became an immediate challenge (Garazha et al., 2024; UNHCR, 2024). Digital platforms have long demonstrated their capacity to orchestrate diverse actors within ecosystems toward shared goals (Constantinides et al., 2018; Haki, Tanriverdi, et al., 2024). Their success in commercial contexts inspired their adoption in crisis coordination (Roth et al., 2022). Yet current research explains governance through mechanisms a platform owner designs and enforces, presupposing the roles, boundaries, and ownership structures whose emergence is at issue in crises, and offers little insight into how these structures are provisionally allocated before a shared platform, its owner, or mandate exists. We address this gap by examining how situated actions allocate these governance dimensions and how such allocations persist, remain contested, or become formalized.

In crisis situations, coordination does not begin with a functioning platform; it emerges under conditions of absent structure, where actors must act first and formalize later. Multiple actors simultaneously attempt to create solutions that may become part of a platform later, without shared architecture, governance, or

ownership to begin with. We refer to this as a pre-platform stage, where platform-like coordination is emerging but not yet stabilized. Existing models of platform governance (Staub et al., 2022; Tiwana et al., 2010) typically assume stable ecosystems with clearly defined roles and ownership structures, characteristic of commercial settings but not of crises marked by urgency, unpredictability, and fragmented authority (Christensen et al., 2016): current theories explain how governance operates once in place, but offer limited insight into how it emerges from such unpredictable circumstances. As part of a broader platform design initiative to improve coordination of services for Ukrainian refugees in Switzerland, this study addresses that gap by examining how governance unfolds in the pre-platform stage under crisis conditions.

All crises challenge the status quo: normal procedures, protocols, technologies, and practices that are usually taken for granted, and thus invisible, are exposed in their shortcomings. The Ukrainian refugee crisis revealed deep flaws in orchestrating crisis responses within and across countries (Sprenkamp et al., 2025). Multiple actors mobilized, but efforts were fragmented, overlapping, and often redundant if not contradictory. Instead of a single orchestrated platform, coordination was distributed across heterogeneous initiatives led by different actor groups, each addressing parts of the problem without shared governance. Crisis orchestration failed not because of a lack of capable actors, but due to unsuitable governance models (effective in stable times but showing limits under pressure and unforeseen demands), as well as unclear mandates and slow institutional coordination (Katashinskaya et al., 2025).

To explore how governance emerges under such conditions, we analyze three crisis actions (CAs), each representing an initiative driven by a different actor group during the Ukrainian refugee crisis in Switzerland. We do so through the lens of platform governance with its four dimensions of roles, decision rights, control, and ownership (Staub et al., 2022; Tiwana et al., 2010). We examine how these CAs' fragmented practices collectively give rise to platform-like governance and address the following research question: *RQ. How does governance emerge in the pre-platform stage under crisis conditions?*

Building on empirical data from a longitudinal study, we introduce governance-by-action as a distinct governance mode that arises through what people do (actions) rather than through assigned roles (actors). Our study complements Tiwana et al.'s (2010) model of platform governance by showing how its core dimensions manifest differently in the pre-platform stage under crisis conditions: roles become overlapping, decision rights shift to those able to act, control develops locally through informal norms, and ownership is collective and negotiated. Our contribution is twofold. We extend platform governance theory to the pre-platform stage. We show how these dimensions are enacted when there is no owner, no architecture, and no mandate, and how the resulting arrangements are formalized over time. Improvisation, in this view, is not an exception to governance but its starting point. In doing so, we speak to a broader discourse on how digitally mediated coordination reshapes societal responses to crises.

Theoretical Framework

We build our theoretical framework on three bodies of literature. First, from the literature on platform governance, Tiwana et al. (2010) identify four dimensions through which governance can be conceptualized: roles, decision rights, control, and ownership. However, this literature largely takes the existence of a platform as a given, with less attention to how governance arrangements emerge during the platform's formation. Second, crisis research highlights the governance challenges that arise when time is short, authority is fragmented, and the consequences of actions are risky and unpredictable — helping us understand the conditions under which governance emerges. Third, the body of literature that conceptualizes governance as emerging through action rather than formal positions: a perspective we refer to as governance-by-action, which shifts attention from who formally holds authority to how governance is enacted through situated actions and interactions.

Platform Governance

Governance serves as a means to bring order into a relationship in which potential conflict may disrupt or reduce the opportunities of achieving shared benefits (Williamson, 1999). Traditionally, governance has been conceptualized around distinct modes — markets, hierarchies, and networks — where actions are determined by price, bureaucratic control, or mutual consensus, respectively (Powell, 1990). Building on this tradition, corporate and IT governance assume a defined order in which membership, rules, monitoring, sanctions, and hierarchy are constitutive and relatively stable (Weill & Ross, 2004). Digital

platforms complicate this notion of governance, as platform ecosystems are composed of loosely coupled yet largely independent actors (Ceccagnoli et al., 2012). These ecosystems involve many more actors than Powell's networks, but with less freedom of action. Platform governance is therefore critical to the proper functioning of an ecosystem, balancing the opposing forces of control and generativity (Staub et al., 2022; Wareham et al., 2014). Platform governance relies on four key elements: roles, decision rights, control, and ownership (Staub et al., 2022; Tiwana et al., 2010). Our interest is in how these dimensions are allocated when collective coordination begins before those positions and structures have stabilized, or exist at all.

Roles. In platform ecosystems, roles are distributed among platform owners, complementors, and users. Platform owners provide the platform's core and act as orchestrators, coordinating ecosystem activities and designing governance structures. Complementors, such as third-party developers, enhance platform value by creating add-ons or services and drive platform generativity. Users derive value from the combined offerings of owners and complementors (Ceccagnoli et al., 2012; Haki, Tanriverdi, et al., 2024). Typically, platform roles are distinct, predefined, and stable over time: platform owners act as orchestrators, complementors as innovators, and users as consumers, with roles separated from one another (Wareham et al., 2014). **Decision rights.** Decision rights determine who is authorized to make which decisions within the ecosystem with the goal of balancing control and generativity (Staub et al., 2022; Tiwana et al., 2010). Typically, platform owners retain authority over the core architecture and overall direction, with complementors granted conditional rights to innovate within these boundaries and users limited to consumption and feedback (Tiwana et al., 2010; Ye & Kankanhalli, 2018). **Control.** Control refers to mechanisms used by platform owners to influence or regulate the behavior of complementors. This includes rules, standard interfaces (e.g., APIs) and programming resources (e.g., SDKs, libraries), and gatekeeping (Foerderer et al., 2019; Ghazawneh & Henfridsson, 2013; Tiwana et al., 2010). Typically, control operates through predictable and hierarchical mechanisms that maintain stability and enforce standards while sustaining complementor generativity (Staub et al., 2022). **Ownership.** Ownership in digital platforms relates to intellectual property and control over core components of the platform. Platform owners typically retain ownership of the platform's core architecture, while complementors may own or co-own the modules or applications they develop (Bakos & Katsamakas, 2008; Hein et al., 2019). In most commercial platforms, these boundaries are set through licensing and intellectual property sharing arrangements, and are considered clear and enforceable (Niculescu et al., 2018).

We use these dimensions as a scaffolding device to examine how governance unfolds in a pre-platform stage — a situation in which no unified platform exists yet, while multiple actors attempt to establish one. Other scholars referred to this stage as a birth stage of the platform lifecycle (Teece, 2017). We focus on the pre-platform stage because it reveals an important gap in the platform governance literature: while prior research recognizes that platform governance evolves and can be contested over time (Haki, Blaschke, et al., 2024; Safaei et al., 2026; Schreieck et al., 2022), it primarily examines how established actors adjust and reconfigure existing governance mechanisms within already formed platforms (Cai & Wang, 2022). Governance at this stage does not operate through a single orchestrator or shared architecture, but is distributed across heterogeneous initiatives driven by different actor groups: platform governance at the birth stage differs from other stages of the platform life cycle, as actors invest unequally in governance while its costs are very high (Han & Xie, 2025). Still, platform governance is not one-size-fits-all: recent research argues that different platforms exhibit different “flavors of governance depending on their business models, business strategies, and other contingent and sector-specific factors” (Gorwa, 2024). This suggests that contextual factors in the pre-platform stage shape how a platform is enacted, and that platform governance should be understood in context.

Throughout the paper, we keep three uses of the term apart: 'governance' for the generic problem of bringing order into interdependent relations; 'platform governance' for its platform-specific form along the four dimensions above, which presupposes an owner and an architecture; and 'crisis governance' for the coordination of crisis response at the societal level.

Governance Challenges in Crises

The four dimensions above describe governance where a platform, and therefore an owner, already exists. Crises remove that condition: crises are, by definition, irregular — if they were not, they could be anticipated and managed through routine governance. Contemporary crises are also mostly trans-boundary, cutting across geographical and policy boundaries (Boin & Lodge, 2016; Broekema et al., 2024). They affect the core of governance and democracy (Christensen et al., 2016). Crisis responses therefore span jurisdictions,

sectors, and mandates, creating overlapping responsibilities and governance vacuums. Crisis contexts present three systemic governance challenges that recur across emergencies: urgency, unpredictability, and fragmented authority. Urgency is defining: decision-makers must act rapidly with incomplete information and severe resource constraints (Christensen et al., 2016). This creates a fundamental tension between the need for speed and deliberative processes designed to ensure legitimacy, accountability, and safeguarding. Rapid scaling of service delivery has similarly overridden deliberation in other crises (Burton, 2021; Holloway et al., 2021). The unpredictable nature of crises means that formal governance structures struggle to adapt in real time. This gap between institutional design and crisis demands results in ad hoc coordination mechanisms and informal workarounds that expose tensions in formal governance systems (Boin & Lodge, 2016; Christensen et al., 2016) and in high instability of initial crisis-caused governance constellations (Cabane & Lodge, 2024). Crises are also rarely managed by a single actor: response efforts add new players who expect to be consulted during preparations and utilized during operations (Efe, 2026; OECD, 2015), resulting in fragmented authority (Mavrot & Sager, 2024). Humanitarian platforms intersect with state security regimes, NGO mandates, private sector actors, and increasingly citizen volunteers, but no actor can or wants to fully own or be accountable for such systems under pressure leaving coordination distributed across multiple initiatives without a shared governance.

Governance-by-Actor and Governance-by-Action

Urgency, unpredictability, and fragmented authority explain why established governance models falter in crises, but not how coordination is nevertheless achieved despite the limits of models built around predefined actors and fixed structures. Recent governance research has moved beyond such models: Przybilowicz and Cunha (2024), for instance, show how smart urban governance modes emerge dynamically from the interplay of technological artefacts, government entities, social actors, and established urban governance modes – but among institutional actors that hold mandates within an already established governance order, whereas the crisis settings we examine offer neither. Governance research, both corporate and societal, tends to treat “actors” – individual or collective entities with defined identities, roles, and authority – as the main source of order and control, and “actions” as simple outcomes of their intentional decisions (Ahrne & Brunsson, 2019). Similarly, established perspectives contrast stable organizational structures (formal rules, roles, procedures) with the emergent practices of day-to-day work, and workarounds of formal arrangements with spontaneous improvisations (Roux-Dufort & Vidaillet, 2003; Weick, 1993). We focus on the dichotomy between actors and actions, then introduce two derivative dichotomies – structure vs. practice, and institution vs. improvisation, foregrounding the actor-action dichotomy as our main analytical lens and treating the other two as extensions of it. Each reflects how governance unfolds when the capacity to act becomes more important than formal positions or predefined procedures.

We draw on Czarniawska’s (2004, 2009) concept of action nets, which conceptualizes organizing as the ongoing linking of interdependent actions rather than the execution of decisions by stable actors. In this perspective, agency is not an inherent property of individuals or organizations but an emergent outcome of connected doings (Lindberg & Czarniawska, 2006). Governance thus arises through the performance of actions, such as verifying information, rerouting requests, developing tools, rather than through formal hierarchies or predefined roles.

The structure-practice dichotomy applies this logic to technology: Orlikowski (2007) conceptualizes structures as enacted through ongoing use rather than designed once and applied uniformly. In crises, coordination depends on situated practices such as repurposing tools, stretching rules, or creating ad hoc communication channels (Nowell et al., 2017), so governance exists only as it is enacted in practice and continually reconfigured through users’ adaptations. The institution-improvisation dichotomy captures how formal institutions give way to improvisation under time pressure and uncertainty: Weick’s (1993) study of the Mann Gulch disaster, Moynihan (2009) on decision-making under uncertainty, and Boin & Lodge (2016) on adaptive crisis response show that rigid, role-bound structures can hinder coordination, while flexible, networked action enables it (Gkeredakis et al., 2021; Perrow, 2011; Roux-Dufort & Vidaillet, 2003). Improvisation is thus not the absence of governance but its enactment under volatile conditions. In our study, we argue that these dichotomies are not binaries but continua. In the pre-platform stage, this shift becomes visible as governance is enacted through multiple initiatives rather than within a single structure, with crises making it especially visible by shifting governance from static actors and institutions to dynamic actions and practices. This motivates our comparison of governance-by-actor and governance-

by-action as distinct but potentially complementary modes of governance. We therefore define 'governance-by-action' as a governance mode in which roles, decision rights, control, and ownership are conferred through the actions actors perform rather than through the positions they hold.

Each research stream above motivates our study. Platform governance literature specifies what governance consists of but derives each of its four dimensions from the design authority of an owner, so it cannot state what allocates them in the absence of one (Staub et al., 2022; Tiwana et al., 2010). Action nets explain how organizing proceeds through linked actions rather than through stable actors, but remain agnostic about how roles, decision rights, control, and ownership are allocated in the process (Czarniawska, 2004, 2009). Research on improvisation explains how actors depart from established routines under pressure, yet treats such departures as temporary deviations from a pre-existing order (Boin & Lodge, 2016; Weick, 1993). Studies of emergent coordination show that dispersed actors can act jointly without central direction, but say little about what remains once the episode ends (Gkeredakis et al., 2021). Research on how situated action allocates governance, and on how such allocations endure, is therefore scarce.

Methodology

Research design

This study is part of a broader research initiative led by local universities in one Swiss canton to improve coordination among government, private, and civic actors during the Ukrainian refugee crisis. The initiative began in early 2022, when the sudden arrival of refugees fleeing the war in Ukraine exposed major coordination challenges, and follows a design science research approach (Peppers et al., 2007) with design echelons (Tuunanen et al., 2024), aimed at developing a digital platform for coordinated crisis response.

While the broader initiative focuses on platform design and implementation, this paper takes an analytical perspective: our goal is to understand how governance unfolds in a pre-platform phase, where no unified platform exists yet but multiple actors attempt to establish coordination mechanisms. Specifically, we investigate how governance emerges through actions rather than predefined actor roles, and how these observations can inform platform governance for the platform currently under development.

At the beginning of the crisis, individuals, civic groups, and institutions created separate digital tools to meet urgent needs such as housing, identification, and information sharing. Driven by different actor groups and developed independently, without shared governance or integration, these uncoordinated efforts — which we refer to as CAs — collectively formed a fragmented crisis response in which platform-like solutions were attempted but not consolidated. The initiative's overarching goal was to design a platform that could consolidate and coordinate these fragmented CAs, making CAs a useful lens for examining how governance unfolds in a pre-platform stage under crisis conditions, since the governance mode observed in them is expected to shape the functioning of the final platform.

Data Collection

The study draws on a rich qualitative dataset collected between 2022 and 2025 within the broader research initiative. Data come from multiple subprojects addressing different aspects of digital crisis response and platform development. Together, these subprojects produced 159 semi-structured interviews, internal documents, workshop notes, and extensive online communication data from Telegram (see Table 1). For the present paper, we analyzed the interviews that relate directly to actions, together with materials from Telegram channels, project documents, and workshop notes. Table 1 outlines which sources informed each action. Access to the field was established through the broader initiative, whose partner network across public administrations, NGOs, and civic organizations gave us contact to interviewees who would otherwise have been difficult to reach during an ongoing crisis. We purposively selected and approached respondents directly involved in the Ukrainian refugee crisis in the country. Interviews were semi-structured and followed a guide covering the respondent's role, the tools and channels they used, and the coordination problems they encountered; they were conducted in person or by video call in English, German, or Russian, and recorded and transcribed with the respondents' consent. The Telegram data comprise 425,000 messages from 34 Ukrainian groups in Switzerland, which we retrieved via the Telegram API and pseudonymized before analysis, while documents and workshop notes were collected as they emerged in the initiative. Furthermore, two authors are directly involved in the initiative: one as principal investigator

throughout and another joining after the first six months. This provides longitudinal insights into how the CAs evolved. Table 1 summarizes six subprojects conducted between 2022 and 2025 within the initiative. Each examined a different facet of digital platform creation and governance in crisis contexts.

Subprojects with goal and time period	Data	Focal actors
1. Challenges in refugee crises (2022 – 2023)	55 interviews; Swiss media	14 public sector, 13 NGOs and private sector, 28 individuals (refugees, volunteers)
2. Data-driven refugee needs analysis (2022 – 2024)	28 interviews	Public sector
	425,000 Telegram messages from 34 Ukrainian groups	Refugee communities on Telegram
3. Digital identities for refugees (2023 – 2025)	26 interviews	4 public sector, 14 individuals, 8 experts
4. Chatbot to support refugees (2024)	15 interviews	Refugees
5. Low-code prototyping in refugee crisis (2024)	16 interviews	8 public sector, 4 NGOs and private sector, 4 individuals
6. Refugees' ethical dilemmas (2025)	19 interviews	Refugees
Table 1. Subprojects and data collection activities		

For this paper, we focus on three CAs: *CA1 - Online refugee communities* on Telegram; *CA2 - Identification of refugees* across administrative systems, and *CA3 - Host-refugee matching* led by civic organizations. Each CA represents an initiative driven by a different actor group and illustrates a different way in which governance emerged from action: community-driven (CA1), administrative (CA2), and civic-public collaboration (CA3). Each CA highlights specific challenges of roles, decision rights, control, and ownership, allowing us to analyze how governance arises through action, how governance-by-action differs from conventional governance-by-actor mode, and how such a perspective can extend platform governance theory to pre-platform and crisis contexts.

Data Analysis

We use the four dimensions of platform governance, i.e., roles, decision rights, control, and ownership (Staub et al., 2022; Tiwana et al., 2010), as our analytical lens to examine how governance is enacted in a pre-platform setting. Although these dimensions were developed for more stable platform ecosystems with well-defined actors and ownership structures, they provide a structured way to analyze how governance unfolds even before such stability exists.

Our analysis is guided by a theoretically informed perspective contrasting actors (formal roles, structures) with actions (situated practices and improvisations). We describe the shift from governance-by-actor to governance-by-action. To explore this shift, we follow an interpretive qualitative approach (Walsham, 1995, 2006), focusing on the situated meanings and practices through which diverse actors made sense of and responded to unfolding events (Klein & Myers, 1999; Walsham, 1995, 2006). Given the volume, richness, and complexity of the data, we approached the analysis iteratively and interpretively rather than through systematic coding, organizing it chronologically and thematically, then applying a priori coding (Saldaña, 2015) with a predefined codebook derived deductively from our theoretical lens: four codes correspond to the platform governance dimensions, and two further codes capture the actor-action distinction. Passages the a priori codes could not accommodate were coded inductively, yielding lower-order categories such as informal moderation, improvised data workarounds, and contested ownership. We then related these categories back to the four dimensions, refining what each means in a pre-platform setting. Coding proceeded in several rounds, alternating between deductive and inductive coding, until further passes no longer changed our interpretation.

We selected three CAs from the wider set of initiatives covered by the subprojects according to three criteria: each was driven by a different actor group (community, administrative, civic-public), addressed a distinct coordination problem (information, identification, housing), and was covered by data dense enough to understand its governance approach letting us observe governance-by-action under different constellations of authority. The cross-case comparison proceeded in two steps: we first analyzed each CA separately along the four dimensions, then compared the three CAs dimension by dimension, asking where they converged and diverged. Convergent patterns across the three CAs form the basis of our synthesis, allowing us to

identify how governance unfolded in crisis settings. To illustrate our interpretations, in the findings we include excerpts from interviews and field notes that exemplify evidence in the data.

Findings

Crisis Action 1. Online Refugee Communities

When tens of thousands of Ukrainians entered Switzerland in early 2022, the public information environment broke: federal, cantonal, and municipal authorities, the Red Cross, large and small NGOs, and many volunteer initiatives launched independent “Help Ukraine” information webpages. Update rhythms diverged greatly — two federal pages updated about weekly, some forty cantonal sites irregularly, more than a hundred municipal pages ad hoc, large NGO sites roughly monthly, and dozens of grassroots pages and chat groups daily. The outcome, in the words of cantonal officers, was a “*cacophony of data sources*,” with duplicative content, conflicting dates and forms, clogged hotlines, and rising burnout among coordinators. Refugees and volunteers started Telegram channels that became the de facto guide for newcomers.

Roles. Formally, roles were clear on paper. The State Secretariat for Migration (SEM) issues the official status S (a special permit allowing for refugee protection and the right to work) for refugees, cantons on social assistance, municipalities on schools and public health, and charities fill residual gaps. In practice, everyone was information publisher, helpdesk, and advisor at once. Refugees, who had to re-enter the same data repeatedly, were positioned as recipients of guidance but operated as integrators and translators, triangulating across channels and languages for their community¹. Volunteers and prominent chat participants became curators, translators, and trust brokers, i.e. informational guides. Thus, while stable roles and clear separation between information producers, coordinators, and users were taken for granted, actions diverged from roles: refugees took on coordination work, volunteers often gatekept by channeling information from different sources, and informal channels oscillated between official communications and ad-hoc mutual support. Roles were not just blurred — in practice they were often ignored by people trying to get things done.

Decision rights. On paper, decision rights over content domains were distributed: SEM sets migrants’ status, cantons allocate social benefits, and municipalities decide local implementation. Yet at the communication level, no actor held meta-level rights to decide the canonical version when pages conflicted, nor to impose information management procedures across administrative tiers. Refugees were bounced between numbers and offices; duplication flourished as hosts and refugees registered in multiple places, diploma recognition and employment guidance varied across sites, and Telegram groups determined which answers were accepted through pinned posts and reputational authority. Thus, while decision rights are meant to clarify who decides what, they were siloed and detached from the dynamics of a crisis: many actors took decisions within their narrow lane, yet people had to move across lanes to resolve contradictions, and de facto decision rights were displaced closer to the problems the crisis created.

Control. Formal controls leaned on hierarchical procedures and normal-times pace, but a crisis does not happen according to these institutional patterns: controls often failed on timeliness, coherence, and choosing suitable channels for their targets. There were no accepted service level agreements, no cross-level versioning, and only limited cross-office data sharing beyond ad hoc emails between offices trusting each other. Public bodies reported “*more effort to combat misinformation than to answer regular enquiries*,” with helplines jammed by duplicated questions and volunteers moderating countless “*which form do I need?*” threads. Refugees asked for email over letters, videos over flyers, and human advice for sensitive topics; generalist chatbots were judged unhelpful for specific cases. In this context, bottom-up controls in Telegram evolved quickly: pins, group rules, and informal vetting of repeat answerers created a lightweight but responsive moderation. While control is supposed to enforce consistency and quality against a common standard, formal mechanisms remained rigid where they needed adaptability and absent where escalation paths were needed. Functional controls were informal and thus more adaptable, albeit often invisible to officials: the center of gravity shifted from standard workflows to speed and reputation-based group norms.

Ownership. Formally, each organization owns and manages its documents, and refugees own their private data in any form. Practically, ownership was fragmented and difficult to manage: organizations maintained

¹ It is noteworthy that the linguistic complexity is exacerbated by the coexistence of four national languages in Switzerland.

ownership by managing their own information flows, but uncoordinated channels generated contradictions, refugees could not move their information across tiers, and digital copies and prior submissions were re-purposed as proofs for something else. On social media platforms, especially Telegram, content and advice were collectively produced by refugees and volunteers, without any formal actor owning that context. As such, while ownership clarifies ultimate responsibility, in practice it generated information silos — no one owned the channels across organizational tiers or boundaries. These informal channels therefore became the most trusted guidance, given users' shared sense of being in the same boat, and a lifeline for recurring issues like securing employment, diploma recognition, delayed payments, and ever-present language barriers. Notably, the two sides described the same situation in different terms: public agencies framed the problem as misinformation to be combated, whereas refugees and volunteers framed official information as too slow, too generic, and delivered through channels they did not use. The same control mechanisms thus appeared adequate from above and unusable from below — which is why assessments of control in a crisis cannot be separated from the position they are made from.

The CA illustrates this paper's central dichotomy: in crises, effective coordination hinges less on who is entitled to act than on what actions actually make sense under time pressure. The Telegram groups illustrate governance-by-action in terms of a proto platform whose boundary resources (bots, API, links) enabled rapid additions without central design.

Crisis Action 2. Identification of Refugees

CA2 reveals how identification — a routine bureaucratic process that normally works efficiently in Switzerland — repeatedly failed under crisis conditions, not primarily for technological reasons but from a misalignment between actors (who were formally responsible) and actions (what actually happened).

Roles. During the crisis, roles were blurred. Refugees were expected to act as data providers, yet they often had to repeat the same identification procedures across multiple agencies, filling out identical forms or correcting errors introduced by organizations. This is how a refugee described it: *"[Administration] said: we don't know exactly what happened with this registration. Fill it all out again online. (...) They [administration] had given the mother a wrong postal address, and they didn't have the daughter at all."* The formal role of public administrations was to coordinate, but in action they passed responsibility back to refugees, producing duplication and error rather than resolution.

Decision rights. Identification failed because no actor had clear decision rights in the fragmented federal system: municipal offices dealt with a largely sedentary population and required in-person verification, cantonal authorities held partial data, and federal offices mainly managed asylum status. Each actor wanted to preserve its autonomy, so refugees had to stitch together their own identity across layers. As a cantonal administration interviewee explained: *"Currently, not even one office of the Canton (...) can share personal information with another office of the Canton internally."* Instead of speeding up identification, decision rights were so dispersed that no one could decide authoritatively, leaving refugees stuck in procedural loops.

Control. Control over identification was exercised through rigid procedures rather than facilitation. Refugees could not accelerate processing or correct errors without waiting weeks or months. Nor could they limit what data to disclose without risking exclusion from services. One refugee put it bluntly: *"If the city of Zurich requires that [data], what option do we have?"* Identification failed because control mechanisms were unresponsive: organizations enforced procedures designed for normal times, even when they no longer fit the crisis scale.

Ownership. Although refugees technically "owned" their identity documents, ownership in practice was fragmented and fragile: lost documents could not be easily replaced, digital copies were not recognized across agencies, and organizations insisted on issuing their own versions of credentials. This left refugees in limbo — without a valid ID they could not access services, and with conflicting IDs (different addresses or missing family members) they faced further delays. In a system designed for stability, ownership became a liability: no single actor could guarantee the integrity of identification when documents failed.

Thus, some actions emerged to overcome the problems created by role-based actors: to share data among themselves, front-line workers resorted to Excel sheets circulated by email to track registrations and housing. These improvised files circulated across offices and NGOs, providing the only up-to-date overview of arrivals, but also causing version conflicts, data gaps, and security concerns. Despite these risks, such ad hoc exchanges kept coordination running — though not equally for all involved: front-line workers gained

the overview they lacked, while refugees continued to repeat identification procedures and carry the consequences of errors they could neither see nor correct, such as the wrong postal address and missing family member mentioned above. CA2 shows that the capacity to act was distributed unevenly: those who could improvise did so, and those who could not remained dependent on them.

Crisis Action 3. Host-refugee Matching

When thousands of Ukrainian refugees arrived in Switzerland in spring 2022, the most urgent challenge was housing. Public shelters were quickly overwhelmed, and citizens across Switzerland began offering spare rooms and apartments to host refugees. Yet bringing the two sides together proved extremely difficult: some hosts registered with multiple cantons, municipalities, and NGOs, often repeating the same forms without clear guidance, while refugees relied on word-of-mouth or social media. In this vacuum, the civic organization Virex (pseudonymized), ordinarily focused on civic campaigns rather than refugee issues, rapidly developed an online host-refugee matching platform that quickly became widely used. What began as an improvised grassroots solution gradually attracted government attention and was later incorporated into formal procedures, illustrating a shift from civic action to institutionalization.

Roles. In the early weeks, with no pre-defined role of platform orchestrator, Virex performed the orchestrating actions by rapidly developing a host-refugee matching platform when no comparable solution existed: volunteers and private households became complementors, offering housing, while refugees were users of the platform, and public authorities played only a minor role at first. As an NGO representative described it: *“For the first couple of weeks, the federal asylum center was responsible for matching refugees and hosts. But then federalism took over and 26 cantons were given the task to do this matching on their own. [...] And then we struggled to coordinate, and we had 2 or 3 people only coordinating.”* As the crisis progressed, municipalities and cantons institutionalized the host-matching process, defining the orchestrator roles and taking coordination over from civic actors.

Decision rights. Initially, decision rights were decentralized and informal: hosts registered via Virex, and matching decisions were made by volunteers or through direct negotiation on social media. Refugees sometimes had to register multiple times with different NGOs and cantons, leading to duplication: *“First, I went to Canton A and shared my info to welcome refugees. Then I went to canton B and also shared my data. Then it was some NGO, and then another NGO.”* Over time, cantons claimed decision rights, setting official criteria for housing matches and integrating the Virex platform into formal processes — a shift from civic improvisation to bureaucratic protocols, often at the expense of speed and flexibility.

Control. In the action phase, control was minimal: Virex operated under norms of openness and trust, with few formal checks. This flexibility enabled rapid scaling but also created concerns about data protection and reliability, and several cantons rejected cooperation with Virex due to its reliance on overseas servers. An NGO representative described this situation: *“Governmental organizations expected that all data should be stored physically in Switzerland but at the same time Virex was forced to look for third-party providers overseas to store this data reliably because there is no public service for community projects like ours [in Switzerland].”* As host-matching became institutionalized, control mechanisms hardened — data storage requirements, background checks for hosts, and stricter eligibility criteria were introduced — and what began as informal coordination transformed into proceduralized oversight. While cantons pointed to data protection obligations they could not waive, Virex pointed to a missing infrastructure that no public actor had provided: both positions are defensible on their own terms, and the disagreement was less about compliance as such than about who should have closed this infrastructure gap. The resulting risk, however, fell on the civic actor and refugees, not the authorities.

Ownership. Ownership of the host-matching solution was initially civic and collective: Virex owned and operated the platform, while hosts and refugees co-produced matches. This ownership was contested once authorities began adopting the practice: cantons demanded integration with their systems, raising questions over who owned the data, how securely it was preserved, and who set the rules and outcomes of host-matching. In time, ownership became hybrid — the civic organization initiating Virex retained a role but within a framework increasingly steered by public institutions — until, several months later, a Swiss NGO specializing in refugee support and integration took the platform over.

Synthesis

Crisis actions (CAs)		
CA1. Online refugee communities	CA2. Identification of refugees	CA3. Host-refugee matching
Roles. Who is expected to do what		
• Formal: federal government, cantons, municipalities, NGOs. • Practice: refugees and volunteers acted as curators and guides. • Roles blurred and often ignored.	• Formal: public administrations had to coordinate identification; refugees as data providers. • Practice: public administrations passed errors back to refugees, who had to repeat identification procedures.	• Formal: cantons are responsible for arranging housing for refugees. • Practice: Virex built and ran the platform; hosts offered housing; refugees used it. • Authorities took over later, shifting roles to municipalities/cantons.
Decision rights. Who decides what happens on the platform		
• Public authorities do not have any decision rights over Telegram groups • The decision rights are with moderators who stem from refugees and volunteers	• Fragmented across federal/cantonal/municipal offices; no actor had full authority. • Refugees got stuck in queues. • No one could decide definitively.	• Early: informal, decentralized (Virex, hosts). • Later: cantons set rules; formalized matching.
Control. How coordination and standards are maintained		
• Federal pages updated weekly, cantons irregularly, municipalities ad hoc, NGOs monthly, grassroots daily. • Telegram created faster way to distribute information: pinned messages, rules and moderation, community vetting.	• Distributed across administrative layers: federal, cantonal, municipal, each maintaining their own records. • Rigid, slow procedures. • Refugees had no way to fix errors or speed up.	• Early: open and trust-based, little oversight. • Later: strict checks (data storage, host vetting, eligibility).
Ownership. Who owns and is responsible for the platform		
• Telegram information was collectively produced by refugees and volunteers, without a formal owner, yet it became the most trusted source.	• Refugees “owned” IDs but fragile. • Public administrations issued conflicting records. • No actor guaranteed integrity.	• Early: Virex owned platform; refugees/hosts co-produced matches. • Later: contested by authorities due to data privacy; ownership became hybrid, with responsibility gradually transferred to a refugee organization.
Table 2. Crisis actions and their challenges across platform governance dimensions		

Table 2 provides the synthesis of the findings. CA1 shows a distributed partnership without predefined partners: instead of complementors integrating via stable interfaces, each actor contributes whatever information it holds and others adapt and reuse it downstream suggesting that platform governance in crises should amplify bottom-up actions and retrofit roles, responsibilities, and interfaces afterward. CA2 shows that identification failed not because actors were absent but because their actions did not align with their formal roles: refugees were formally owners and decision-makers over their data yet had little agency, while fragmented procedures produced contradictory, erroneous, or missing records, so every step intended to prove identity produced new errors and delays. CA3 shows governance emerging through civic action, with Virex orchestrating without a formally assigned role and public administrations later institutionalizing what began as a grassroots practice. Since this trajectory was not equally visible in CA1 and CA2, we treat formalization as one possible outcome of governance-by-action, not an inevitable transition.

Discussion and Conclusion

Extending Platform Governance: The Logic of Governance-by-Action

In digital organizing, and particularly within the fluid context of crises, approaches based on pre-defined roles proved inadequate. This is most visible in the pre-platform stage, where governance must emerge before stable roles, structures, or a unified platform exist. Empirical evidence from various crisis situations demonstrates that establishing an inter-stakeholder collaboration through ad hoc networks is very

challenging, particularly during the initial phases of a crisis (Roth et al., 2022). These initial phases correspond to what we term the pre-platform stage, where crisis coordination precedes any platform formation. Therefore, organizations predominantly leverage existing networks in times of crisis (Roth et al., 2022). This underscores the importance of leveraging pre-existing arrangements with their own networks that can be rapidly activated for re-use or modification when a crisis emerges and serve as a foundation for coordinated activity (Allison et al., 2018).

Building on Czarniawska's (2004, 2009) concept of 'action nets', Orlikowski's (2007) practice lens on technology, and Weick's (1993) sensemaking for organizing, we conceptualize governance in the pre-platform stage as an emergent, practice-based action net. Specifically, we argue that it emerges through connected actions rather than through predefined actors or platform structures. Governance is enacted jointly and continuously, rather than as a static structure legitimized by mandates. Actions like sharing information, designing and adapting the platform's features, and mobilizing resources are the key constituents of effective governance. These actions may draw on institutionalized logics (e.g., using government data sources where available) but can also involve improvising new solutions (e.g., a makeshift translation service by volunteers). Over time, some actions may stabilize into recognizable structures, such as a volunteer-led coordination team or a workflow the platform codifies from user innovation.

	Governance-by-Actor	Empirical mismatch	Governance-by-Action
Roles	• Distinct roles: platform owner (orchestrator), complementors (innovators), and users (consumers). • Roles are clearly separated.	• Refugees took the lead in navigating and validating information, information sources, mismatching documents. (CA1) • Refugees had to repeat identification multiple times when agencies failed to share information among each other. (CA2) • Virex improvised as orchestrator until cantons and refugee agencies took over. (CA3)	• Roles are fluid and overlapping rather than predefined. • Users often act as co-creators, integrators, or even orchestrators. • Authority derives from action and contribution, not from formal designations.
Key difference: Clear vs. Overlapping			
Decision rights	• Owner retains authority over core architecture; complementors receive conditional rights; users are limited to consumption and feedback. • Top-down allocation.	• Nobody resolved conflicting info pages. Telegram groups provided answers to critical information. (CA1) • Identification stuck because no office could authoritatively decide. (CA2) • Virex and volunteers made ad hoc matches, later replaced by cantonal rules. (CA3)	• Decision rights are situational and migrate to whoever can act fastest and most effectively. • Authority shifts to actors closest to urgent problems.
Key difference: Predefined vs. Emergent			
Control	• Stability ensured through gatekeeping, standardized interfaces, monitoring, and contracts. • Predictable and hierarchical.	• Telegram groups created own informal moderation rules and reputation systems when official updates were too slow. (CA1) • Identification relied on rigid procedures that refugees could not bypass, creating delays and errors. (CA2) • Virex initially operated on trust with minimal checks, later replaced by strict institutional requirements. (CA3)	• Control is local and determined through informal norms, lightweight moderation, and social proof. • Effectiveness is measured by adaptability and responsiveness rather than compliance with fixed standards.
Key difference: Hierarchical vs. Local			
Ownership	• Platform owner owns core assets (infrastructure, algorithms, data); complementors own add-ons under licensing. • Boundaries are clear and enforceable.	• On Telegram, content was collectively produced by refugees and volunteers with no formal ownership. (CA1) • Refugees owned their IDs but couldn't ensure cross-agency recognition. (CA2) • Virex initially owned the platform; ownership became contested, then hybrid, once cantons intervened. (CA3)	• Ownership is collective, hybrid rather than exclusive, and often contested or may be avoided. • Content and data are co-produced, sometimes with no single accountable owner. • Responsibilities may shift.
Key difference: Exclusive vs. Collective			
Table 3. Governance-by-Actor and Governance-by-Action across four dimensions			

Our analysis shows how crisis governance, and the actions it comprises, spans across public, private, and civic boundaries. A key insight from our study is the distinction between governance-by-actor and governance-by-action as two modes of governance, rather than two stages, that are observable in the pre-platform stage under crisis conditions (and potentially beyond). In the settings typically examined in prior research, governance-by-actor appears to be the dominant mode: delineated actors (e.g., a platform owner, service providers, user groups, government agencies) carry defined responsibilities, and governance is exercised through established roles and hierarchies. By contrast, our cases suggest that governance-by-action becomes particularly relevant in the early and unstable stages of crisis coordination, before roles and structures have settled. In our refugee crisis case, governance differed markedly from stable environments: it took the form of a practice-based, emergent mode in which actions, including uncoordinated ones, took precedence over predefined roles. Table 3 summarizes the differences between governance-by-actor and governance-by-action derived from our CAs, showing an empirical mismatch with established platform governance assumptions across four key dimensions (Staub et al., 2022; Tiwana et al., 2010):

Roles become overlapping rather than clear. In the pre-platform stage, roles are not assigned but enacted through contribution: instead of adhering to fixed designations such as owner, complementor, or user, participants take on whatever roles are needed in the moment, and authority derives from contribution rather than position — those who act, share information, or solve problems gain influence regardless of formal status. The boundaries between orchestrator, innovator, and user become blurred, and legitimacy stems from visible participation.

Decision rights become emergent rather than predefined. Under pressure, authority shifts to those closest to the problem and capable of immediate response, if they take initiative, and decision-making disperses across the network rather than following top-down allocation, enabling faster coordination and problem-solving. This results in a fragmented governance where speed and proximity matter more than predefined authorities.

Control is local and defined through informal norms, lightweight moderation, and social validation. Stability is maintained not by enforcing rigid procedures or contracts but through collective monitoring and adaptive adjustments. Effectiveness is therefore measured by responsiveness and flexibility, not by adherence to predetermined standards. This bottom-up mode of control allows systems to remain functional even when formal oversight breaks down.

Ownership becomes collective, hybrid, and sometimes contested. Content, data, and infrastructure are co-produced by multiple actors, and clear boundaries of responsibility are often absent, since ownership in such settings is enacted through use and maintenance rather than formal rights. This collective stewardship enables rapid adaptation but also creates ambiguity about accountability and long-term custodianship.

Our empirical data support the governance-by-action model in the pre-platform stage in crisis contexts, showing that governance emerges through distributed actions that precede and enable later platform formation. In the case of the Ukrainian refugee crisis, waiting for designated actors to authorize and coordinate every step would have been too slow and would likely have created other problems. Indeed, some formal actors initially struggled — government officials had to bypass normal approval channels to update information as the situation evolved — while NGOs took advantage of more permeable role boundaries, adjusting to who could handle which type of aid and relying more on diverse information channels and social networks. These governance contributions were emergent and unsolicited; no one formally assigned these actors their roles. This mirrors observations from other crises where informal networks fill gaps left by formal authorities. Much of the effective governance was carried out by “doers,” including refugees themselves, who took active roles such as circulating real-time feedback about what to do and how.

Our study offers two further critical observations. First, the capacity to act was unevenly distributed: those best able to act were those with digital access, language skills, and the required documents, so the mechanism that produced coordination also reproduced the exclusions of the formal system it compensated for. Second, what counts as effective depends on whose account is privileged: administrations, civic organizations, and refugees described the same episodes as problems of misinformation and legal compliance on one hand, and of unusable procedures and missing infrastructure on the other. Governance-by-action therefore explains how order was produced, yet not that this order was adequate — in our cases, it substituted for formal governance while inheriting some of its blind spots.

Our findings identify several possible temporal relationships between the two modes: some action-based allocations may later be formalized into actor-based arrangements, while others persist informally or remain contested. Formalization is therefore a possible trajectory rather than a necessary outcome. Platforms can support this by allowing roles to shift as needed, so refugees, volunteers, and officials can act where gaps appear. Rather than designing governance *ex ante*, platform designers should account for how governance emerges before the platform is created: enabling fast onboarding of new participants such as NGOs or civic groups, supporting user-developed tools like chatbots or matching apps, and relying on modular designs that let functions such as information sharing or identification evolve independently. In our project, we saw early signs that, by focusing on actions, platform leaders and policymakers could better design interventions that support what is already working on the ground — implying that effective platform governance in crises is not designed upfront but built on top of emergent action-based coordination, including post-hoc formalization: once emergent practices prove effective, they can be institutionalized by retrofitting roles and protocols to support these organically developed solutions.

Thus, we define governance-by-action as a governance mode, and the pre-platform stage as a condition under which that mode may become particularly salient. The concepts are therefore analytically distinct: traces of governance-by-action remain visible once a platform has stabilized. It is also a governance logic, not an absence of governance — what looks like disorder from a structural vantage point is, in our reading, order produced by other means. Finally, governance-by-action and governance-by-actor are not opposites: they mark two ends of a continuum, and the movement between them is gradual rather than a switch between discrete states. Formal structures thus remain important, yet must work alongside the spontaneous actions that emerge in crises.

Theoretical Contribution

This study shifts the theoretical locus of platform governance from established platforms to pre-platform contexts under crisis conditions. Prior research on platform governance has largely assumed the existence of a platform with a stable architecture, identifiable actors, and the capacity to design governance mechanisms such as decision rights, control structures, and boundary resources (Staub et al., 2022; Tiwana et al., 2010). In contrast, our findings show that in a pre-platform stage and under crisis conditions these foundational elements are initially absent. By examining how coordination emerges in such contexts, we extend platform governance theory by specifying the conditions under which governance mechanisms become possible in the first place. This moves the literature beyond the design and adaptation of governance within platforms to the emergence of governance prior to platform formation.

We introduce governance-by-action as a distinct mode of allocating platform governance dimensions, where coordination arises from situated actions rather than from predefined roles or ownership structures, which may not exist or mismatch with the situations at hand. We theorize governance in the pre-platform stage as an emergent action net (Czarniawska, 2004; Orlikowski, 2007; Weick, 1993) and see governance-by-action as particularly relevant in the pre-platform stages, i.e. early and unstable stages of crisis coordination, where no single orchestrator, architecture, or governance structure yet exists. This perspective extends prior literature by showing that the four core dimensions of platform governance can become fluid, emergent, and collectively enacted under crisis conditions: roles become overlapping rather than fixed; decision rights migrate to those closest to the problem; control arises through informal norms and local validation; and ownership turns hybrid and collective. Over time, these action-based forms of coordination give rise to more formalized governance structures. This offers a dynamic account of how governance mechanisms emerge, rather than assuming their prior existence. The boundary conditions of our theory lie in contexts characterized by urgency, unpredictability, and fragmented authority, such as crisis management, where platform governance forms one element of a broader crisis governance arrangement. Improvisation, in this reading, is not an exception to governance but the material from which governance is made.

Finally, this study contributes to broader discussions on governance by conceptualizing it as an emergent and practice-based phenomenon. While prior research has acknowledged the dynamic and contested nature of governance within platforms (Haki, Blaschke, et al., 2024; Schreieck et al., 2022) and shown how governance modes emerge dynamically in digitally mediated public settings (Przebylłowicz & Cunha, 2024), it has largely focused on how identifiable actors adjust and reconfigure mechanisms that are already in place. Governance-by-action differs in that neither condition holds: the actors hold no mandate and the

mechanisms do not yet exist, so what emerges is not a new configuration of governing actors but the allocation of governance through action. Our findings extend this view by showing that governance can originate from situated practices. This highlights the role of action, experimentation, and improvisation in shaping governance structures, particularly in contexts with high uncertainty and distributed authority.

Implications for Practice

In the pre-platform stage under crisis conditions, governance-by-action becomes particularly relevant because coordination must emerge before formal structures, roles, or platforms are in place. In the early stages of a crisis, governance-by-action can complement or even supersede governance-by-actor: where roles are still unclear and speed matters, those able to act should be enabled to do so, though such actions later require safeguards, verification mechanisms, escalation routes, and suitable assignments of responsibility. When consolidating fragmented actions into a unified platform, lessons from those emergent actions can inform more structured governance improvements and guide further platform design. Ultimately, reconceiving governance in pre-platform crisis settings as governance-by-action broadens the strategic IS perspective, calling for platform partnerships that are not solely architected in boardrooms but also co-created on the ground in real time turning disparate actions into coherent crisis governance through digital platforms that serve as responsive infrastructures for collective improvisation.

For platform designers and system architects, this means building platforms that adapt quickly, on the assumption that governance emerges before the platform stabilizes: modular architectures, flexible access rights, and lightweight onboarding should let new actors such as NGOs, volunteers, or civic groups join and contribute immediately, and platforms should support integration of ad hoc tools and evolve through continued use rather than enforcing early standardization. In this way, platforms can capture and stabilize effective practices that originate in the pre-platform stage. For public managers and policymakers, flexible structuring is key. In the pre-platform stage, prescribing fixed roles or procedures can delay coordination rather than enable it. Governance mechanisms should instead empower actors to act where needs arise, supported by simple, adaptive rules that enable safe improvisation. Afterward, authorities can institutionalize the most effective practices by formalizing what worked, rather than imposing predefined ownership or procedures from the outset. This shifts the role of public actors from designing governance *ex ante* to recognizing and stabilizing governance that has already emerged through action.

Action-based crisis coordination is not without risks. First, it risks exclusion: those who lack digital access, language skills, or the required documents stay outside the channels where help is organized (e.g. when identification depended on paperwork that many refugees did not have). Second, information in self-organized channels such as Telegram spreads fast but is unverified, which creates the risk of misinformation. Third, when several actors work on the same problem without knowing of each other, effort is duplicated and refugees are asked for the same information again. Fourth, when no one owns a solution, no one is accountable for it, which becomes an issue as soon as questions of data protection or liability arise. These risks do not speak against enabling action. They rather call for guidance on how to mitigate them: visible points of contact, simple verification for widely shared information, a shared overview of who is doing what, and an early decision on who takes responsibility once an improvised solution proves durable.

Limitations and Future Work

Several limitations and boundary conditions should be noted when interpreting our insights. First, the study is embedded in a single national context and a specific crisis, which may limit the transferability of findings to other settings or types of emergencies. However, governance-by-action provides a theoretical basis for future comparative studies across countries and crises to assess which dynamics generalize and which remain context-dependent. Second, two of the authors are involved in the broader initiative, one as principal investigator. This gave us longitudinal access, but it also means that we studied a setting we helped to shape; we therefore grounded each claim in interview and field data and discussed our interpretations with the co-authors outside the initiative. Third, actors are unevenly visible in our data. Public sector and NGO respondents are well represented, whereas refugees appear mainly through Telegram messages and fewer interviews, so governance actions that left no digital trace or were not covered by our qualitative data are likely underrepresented. Fourth, although our study captures the emergent nature of crisis governance, we do not assess its outcomes. Whether governance-by-action leads to better effectiveness, inclusion, legitimacy, or long-term sustainability than governance-by-actor remains open, as does how the emerged

structures become institutionalized. Fifth, although our data span 2022 to 2025, longitudinal coverage differs across the three CAs. We therefore identify temporal trajectories only where supported by the available evidence and do not claim a complete year-by-year comparison of all four governance dimensions. Future research could build on this bounded analysis through systematic temporal bracketing and comparable longitudinal evidence across CAs. Finally, due to its empirical context, the specificities of the pre-platform stage and the characteristics of crisis situations are inherently intertwined. As both the pre-platform stage and crisis contexts offer promising opportunities for novel contributions to the platform governance literature, we encourage further research to examine each independently and develop theoretical views within their respective contexts.

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