

Proposing Indonesian Comic Ecosystem-Making Through Systemic Design: Social Innovation by Co-design

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Abstract

After many unsuccessful national plans, steps towards systemic thinking and new leadership to improve the Indonesian comic ecosystem have emerged. The research investigates comic artists' leadership capability in improving the ecosystem by understanding it as a systemic problem. Artists are regarded as creative agents capable of designing (“designers”) their ecosystems in addition to excelling in their material culture. The research aims to shift away from government reliance and put artists and the community of practice who were previously unrecognized to lead the effort. It will reveal creative communities' inventive skills and become theoretical prototypes of community-led ecosystem transformation. The proposal will be investigated through systemic design methodology, operating through participatory design in social innovation to empower all inhabitants as “designers” in defining and achieving goals and devising enabling systems. In conclusion, this new understanding presents political and ethical power shifts, the intriguing possibility of system transformation through social innovation, and creative methodologies.

Keywords: Indonesian comic, design for sustainability, systemic design, ecosystem-making

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Introduction

Before the 2000s, Indonesian comics were predominantly seen as cultural practices and informal labor. As such, design research on comics as industrial artifacts has been limited. When the Indonesian government later attempted to incorporate comics into the national creative economy agenda, it became evident that the resulting plans lacked references to academic literature and design scholarship. Bonneff (1998) argued that comics are not merely cultural products, but foundational elements of culture itself. However, academic inquiry into Indonesian comics remains sparse, particularly with their role as commodified design artifacts shaped by policy, distribution systems, and shifting audience behaviors (Rhoele & Lent, 2023).

This research positions itself within design studies by centering on the lived experiences and situated knowledge of comic practitioners. As a former artist-turned-academic, I approach this work through a practice-led inquiry that combines creative reflection with the systemic framework. My Ph.D. project, conducted in Australia, critically investigates how comics in Indonesia operate as both cultural and design-driven commodities. It is both an intellectual and personal inquiry which born from years of creative practice, professional relationships, and a yearning to contribute more to Indonesian comics.

Problem Space

There is a growing dissatisfaction with the knowledge foundations that underpin Indonesia's *creative economy national plan*, particularly within the comics publishing sector. Since its formal conception in 2008, the plan has failed to meaningfully improve the comics ecosystem or enable its transformation into a robust cultural industry. Indonesian comics, as a medium within the broader publishing sub-sector, have long existed and evolved largely as an *unregulated domain*. Seventeen years since the creative economy plan was introduced, and with its vision set on transforming the national economy by 2030, there has been little structural support for comics to evolve into a sustainable cultural industry. More importantly, the sector has not yielded equitable economic incentives for practitioners, producers, and stakeholders. Instead, the comic ecosystem remains precarious, trapped within a *marginalized economy*.

At the macro level, this neglect manifests as a persistent *spiral-down effect* that undermines the growth of creative sub-sectors such as comics. Indonesia's creative economy planning continues to exhibit characteristics of a *wicked problem*: it is multi-dimensional, spans across sectors, endures through time, and resists resolution due to the absence of enabling structural systems (Ministry of Tourism and Creative Economy, 2022; Prayudi et al., 2022; Suhendra, 2017). Despite numerous policies and programmatic interventions, systemic transformation remains elusive due to the state's inadequate support.

The meso level, particularly policy formulation and institutional interaction, mirrors these macro-structural flaws. Government-led mapping of the comic ecosystem remains government-centric and top-down, characterized by uniform publishing policies and a lack of participation from the very practitioners most affected: the comic artists themselves (Kurniawan Subagja, 2017; Kusuma Nur Ichsan et al., 2020). Engagement with universities and research institutions is minimal, and what little interaction exists often suffers from the *Ivory Tower Syndrome*, a disconnect where academic research prioritizes disciplinary depth over real-world relevance. This results in a limited understanding of the socio-cultural

practices, institutional dynamics, and livelihood needs of comic practitioners, thereby weakening interventions aimed at building resilient creative ecosystems (Lakitan, 2013).

At the micro level, the lived realities of comic artists reveal the structural neglect with stark clarity. Most artists rely on secondary employment to support their creative practice, face unstable incomes, and endure slow or unpredictable revenue flows. Studies and reports consistently highlight a range of structural barriers: small market size (Imanda, 2002), lack of access to major publishers (Kurnia, 2022; Kuslum, 2007; Sinaga, 2023), absence of dedicated distribution channels (Jatmiko et al., 2022; Zul Fahmi, 2015), perceived low product value (Astuti, 2025), dependency on self-publishing (Hutapea, 2019; Imanda, 2002), and non-standardized talent pipelines (The Straits Times (Singapore), 1995). Other systemic issues include a colonized market orientation (Giftanina, 2012; I. Gunawan, 2012; Imanda, 2002), limited financial access (Hutapea, 2020), low readership (Astuti, 2025; Berman, 1998), and exploitative compensation models (A. Gunawan, 2023; Sinaga, 2023).

Research Aims, Methods, Scope, and Significance of the Study

This research aims to investigate the potential of systemic design for sustainability through the lens of social innovation, with the specific goal of stimulating transformation within the Indonesian comic ecosystem.

The study is delimited to two primary methodological components:

- Desk research, including literature review, policy analysis. It investigates the promise of social innovation, systemic thinking, and challenges to implementing the methods in the Indonesian context.
- Holistic diagnosis and gigamap. These two tools are the default analytical tools of systemic design.

Desk Research

The Promise of Social Innovation for Ecosystem Transformation to Sustainability

The urgency of integrating public participation, especially from ecosystem inhabitants, into policymaking processes has become increasingly evident. Such innovation is not merely an add-on but a necessity for navigating and transforming complex ecosystems. It demands a paradigm shift: one that repositions community members not as passive recipients but as active agents capable of inventing, enhancing, and managing viable solutions for sustainable living (Meroni, 2007). This transformation aligns with the reality that many communities emerge from systemic failures, where prevailing economic structures fail to respond to their lived challenges, giving these communities unparalleled value as sources of deep, context-sensitive insight.

Echoing this, Visser et al. (2005) posit that end-users can serve as experts of their own experiences, contributing crucial knowledge to the design process. Sanders and Stappers (2008) extend this notion by arguing for a systemic shift where users become co-producers through new relational models, *ways of doing together*, that foster not just novel economic configurations, but broader social outcomes such as cohesion, democratization, and equality (Evers & Ewert, 2015).

Creative community-based social innovation does not merely deliver economic benefits; it fosters emotional investment and shared goals. This aligns with Ackoff's (1994) concept of *dissolution*, where rather than solve a problem within the existing system, the goal is to redesign the system itself to eliminate the problem altogether, pushing the boundaries of what the system can achieve. This method embraces both the uniqueness and generality of wicked problems, leveraging any suitable tools, scientific or otherwise, in a comprehensive design response.

In this research, *social innovation* is thus positioned as a systemic response to both market and state failures. It is not merely about plugging gaps in welfare provision or service delivery. As Jenson (2016) argues, social innovation responds to failures in providing work, income, inclusion, and access to services, offering instead pathways to new forms of participation, employment, and social integration. These innovations have underpinned the rise of social entrepreneurship and the social economy, fields celebrated for their capacity to generate employment and foster inclusion.

Social Innovation

This chapter explores the concept of *Social Innovation (SI)* and its relevance to design-led interventions within complex, creative ecosystems, specifically in the Indonesian comics industry. It reviews definitions, typologies, and mechanisms of SI, situating it within broader debates around participatory policy-making, grassroots transformation, and the evolving role of design in society.

Contemporary societal challenges, marked by chronicity, complexity, and structural entrenchment, have outgrown the capacity of conventional policy and economic models to address them effectively. In such contexts, innovation must be reimagined not solely as a market or technological driver, but as a process of altering entrenched social structures, dissolving binaries between public-private, local-global, and consumer-producer.

Heiskala (Sutriadi et al., 2022) defines innovation as a process that (1) introduces a new idea or pattern, (2) alters social practices, and (3) improves social and/or economic performance. Combining typologies from Bekkers and Heiskala, Sutriadi categorized innovations into:

- Technological-business innovation
- Organizational-institutional innovation
- Social innovation

Social innovation, in this context, is understood as systemic change at the societal level, grounded in creativity and aimed at restructuring how communities relate, work, and solve problems.

The Systemic Design in a Social Innovation

This chapter reviews the theoretical and conceptual foundations relevant to this study, with a particular focus on systemic design (SD), and social innovation. These intersecting fields form the basis for exploring how design can operate within complex social ecosystems, such as the Indonesian comic industry.

This research positions SD as an alternative to conventional design thinking, especially within complex and “wicked” problem spaces that cannot be addressed through linear or

siloed strategies. Drawing from the work of Latour (1996), SD emphasizes the inclusion of not only multiple human perspectives but also non-human actors, in shaping system dynamics. This pluralistic view of systems allows designers to mediate between stakeholders, support systemic understanding, and foster shared ownership of change.

In contexts like Indonesia, where government support is fragmented, policy is often top-down, and communities are historically excluded, design for social innovation provides a powerful, adaptable framework for ecosystem transformation. The systemic principles reviewed here will inform the design methods, tools, and facilitation strategies deployed in this research, particularly in its use of Holistic Diagnosis and Giga map as platforms for collaborative intervention.

Systemic Design Tools: Holistic Diagnosis and Giga Map

The research method is structured around two main tools: Holistic Diagnosis (HD) and Giga map. HD is used to perform an extensive, cross-sectoral diagnosis of the Indonesian comics ecosystem, mapping key actors, subsystems, relationships, and flows of value, attention, and influence (Sevaldson, 2018). It helps reveal the underlying structures and systemic barriers that hinder transformation.

Giga map, as a collaborative systems visualization tool, facilitates stakeholder dialogue, knowledge sharing, and design synthesis. It functions simultaneously as an analytical tool, a planning mechanism, and a communication medium, making it ideal for engaging interdisciplinary groups in making sense of complex problems and imagining alternatives.

Social Innovation in the Indonesian Context

There are three core reasons SI is an appropriate lens through which to explore transformation in Indonesia's creative sectors:

1. Sectoral Interconnectedness: The comics industry sits at the intersection of animation, literature, games, and film. Social innovation can seed cross-sector transformation, forming soft infrastructure for broader cultural development.
2. Policy Limitations: Indonesia's hybrid of state-led and market-driven development fails to deliver equitable cultural policies. SI offers an alternative to extractive, centralized planning, enabling grassroots actors to define and implement their own agendas.
3. Governance Constraints: As Grimm et al. (2013) observe, SI can bypass bureaucratic bottlenecks, operating outside formal systems until those systems are ready to adopt or scale successful models. This is particularly relevant in Indonesia, where government interventions are often top-down, ceremonial, and disruptive.

Grimm et al. (2013) and Howaldt and Schwartz (2016) highlight that the success of SI depends heavily on the macro-meso-micro policy landscape:

- Macro: National policy, institutional frameworks, and economic orientation (e.g., extractive vs. creative).
- Meso: Sector-level infrastructure, including financing mechanisms, distribution networks, and organizational partnerships.
- Micro: Community values, entrepreneurial culture, and local capacity for change.

In Indonesia, the environment for SI remains underdeveloped. The “Ivory Tower Syndrome” in universities (Lakitan, 2013) reflects a broader disconnect between academic institutions and real-world challenges. Limited R&D budgets, weak infrastructure, and siloed research agendas further isolate potential contributors from the innovation process.

Barriers to Social Innovation in Indonesia

Four main barriers to SI are particularly relevant in the Indonesian context:

1. **Funding Constraints:** SI often lacks sustainable financing. In Indonesia, it is frequently bundled into CSR initiatives, which are short-term, market-oriented, and fail to produce systemic change (Prabawani et al., 2023).
2. **Resistance to Change:** Centralized governance structures and risk-averse bureaucracies are hesitant to support distributed decision-making. Participatory policymaking is viewed as threatening to hierarchical control (Blomkamp et al., 2017).
3. **Conflicts of Interest:** Cross-sector collaboration can result in unequal goal alignment. Tensions may arise when stakeholders have competing priorities or when benefits are unequally distributed (Rahmawati, 2011).
4. **Poor Knowledge Sharing:** The absence of institutional mechanisms to catalogue and circulate SI best practices impedes replication and learning. Most community outreach or university-led programs remain undocumented, informal, or under-publicized (Ghazali & Martini, 2012; Tjakaraatmadja et al., 2008; Zul Fahmi, 2015).

Phase 1, Step 1. Literature Review, Policy Analysis

Structural Weaknesses in Indonesian Policy-Making

Public policy in Indonesia, particularly across cultural and creative sectors, has been widely critiqued as complex, unpredictable, and structurally weak. As Court and Young (Datta et al., 2011) and Blomkamp et al. (2017) observe, key stages of the policy cycle, such as stakeholder consultation and evidence-based decision-making, are frequently overlooked. Consequently, Indonesian policies are often top-down in nature and disconnected from the communities they claim to serve.

Zhang (2015) further critiques the lack of evaluation mechanisms in Indonesia’s policy cycle. Decisions to continue or terminate programs are rarely grounded in systematic assessment, weakening institutional accountability and limiting opportunities for adaptive learning. In creative economy policymaking, these gaps are especially visible.

Indonesia’s creative economy master plan, for instance, was largely modeled after the UK’s DCMS (Department for Culture, Media and Sport) framework. However, as Sutmuller and Setiono (2011, as cited in Blomkamp et al., 2017) argue, this imported model lacks cultural and institutional translation into local Indonesian contexts. Its implementation demonstrates a persistent reliance on copy-paste strategies, with little regard for grassroots realities or stakeholder engagement.

Stakeholder Exclusion and the Ivory Tower Syndrome

As Blomkamp (2017) and Datta et al. (2011) highlight, there is no established culture of participatory policymaking in Indonesia. Practitioners, researchers, universities, and civil

society actors are rarely consulted in policy formulation, and as a result, their knowledge is excluded from public governance.

This disconnect is further exacerbated by what Lakitan (2013) terms the “Ivory Tower Syndrome”, wherein academic institutions operate in isolation from community needs. Universities, though theoretically part of the national “pentahelix” development model, often fail to engage meaningfully with societal challenges, thereby missing opportunities to influence policy through research-based evidence and community-rooted insight.

Incentive Structures and Political Economy of Policy

Datta (2011) points out that Indonesian formal policy processes are shaped by presidential mandates, bureaucratic competition, and coalition politics, rather than community-centered priorities or developmental logic. Often, economic or political incentives drive whether a policy is pursued or not. Policymakers are generally more responsive when policies align with executive interests or offer potential financial gain.

This dynamic in Indonesia is popularly reflected in the saying: “The government will come to you only if you are a *mata air* (spring), not *air mata* (tears).”

This metaphor underscores a profit-oriented governance paradigm, one that prioritizes economic value extraction over social care or long-term sustainability. In such a policy environment, artistic and cultural sectors, especially informal or decentralized ones like comics, are rarely viewed as strategic, and thus remain under-supported.

Systemic Blockages and the Need for Social Innovation

The symptoms of dysfunctional policymaking are mirrored in what Meroni (2007) refers to as the “blocked system” of contemporary society. Corporations and politicians deflect responsibility, claiming that systemic change is impossible because “people do not want to change.” In contrast, citizens argue that they lack alternative models and structural support for transformation. This mutual deferral of responsibility perpetuates stasis and disenfranchisement.

In response, Meroni suggests using social innovation as a starting point for unlocking systemic transformation. Rather than responding to technological innovation, designers must leverage their situated knowledge, relational skills, and creative intuition to co-create solutions that are socially embedded and collectively owned. In doing so, design becomes a tool not for market expansion, but for rebalancing power and enabling inclusive change.

In sum, the literature on Indonesian political openness for a participatory process found a disconnect between policy, society, and innovation in Indonesia, particularly in the creative sectors. Imported frameworks, elite-centric governance, and a lack of participatory mechanisms have resulted in a creative economy strategy that is neither inclusive nor adaptive.

Phase 2, Step 1. Holistic Diagnosis

This phase of HD is conducted amid a lack of data and information that has become a chronic problem in Indonesia. The absence of actual, up-to-date, and detailed data is one of the

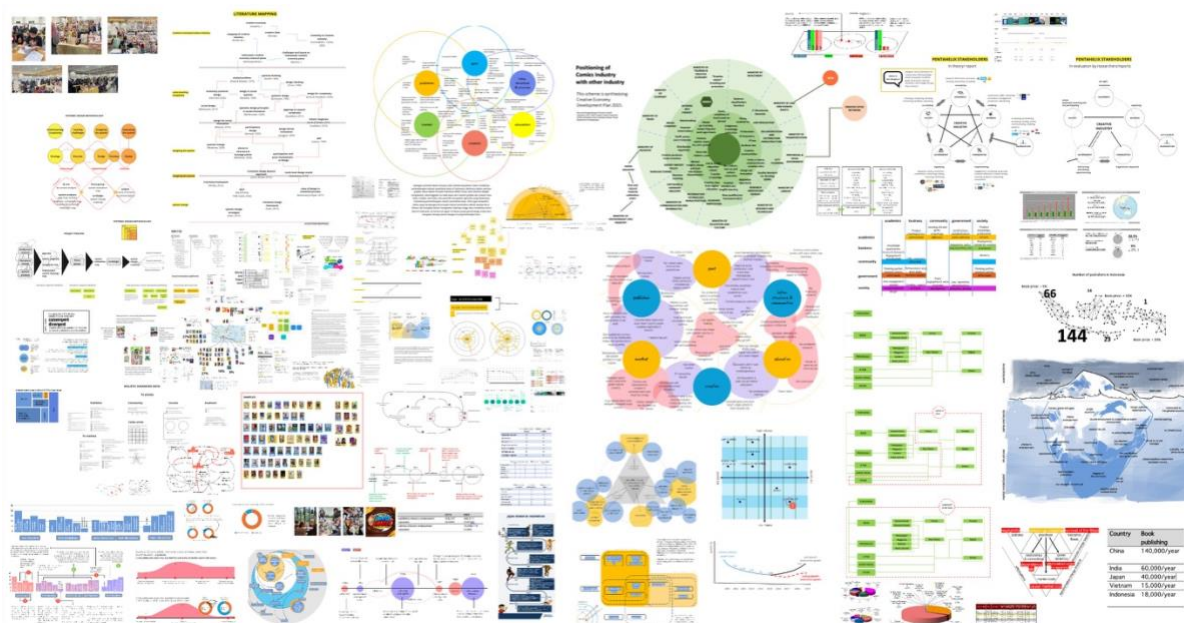
biggest challenges for the government to manage the publishing sector. As Peter Drucker said, “you can't manage what you can't measure,” sums up the government's hesitation.

HD is conducted in two phases: Phase 1: Analysis of Energy and Matter Flows, and Phase 2: Analysis of Contexts and Territories. HD's primary data come from the Indonesian Creative Economy National Reports for the last two periods of 2023 and 2024, the Central Statistics Bureau for 2024, and various academic manuscripts cited in the literature review.

According to Grimm et al. (2013), HD can be conducted using flexible tools and methods, depending on data availability and context. A territorial development case study conducted in a newly formed province in Indonesia by Hidayat et al. (2024) also demonstrates how data can be extrapolated creatively and how secondary data can be used to create a more accurate picture. Among the tools used by HD (figure 5) are multi-level perspectives, causal loop analyses, iceberg models, comparisons, radar diagrams, historiography analyses, stakeholder mapping, access mapping, action map, knowledge maps, participation involvement maps, power-interest matrices, connection map, and ecosystem maps (Figure 6-8).

There are also limitations to HD during this phase, such as distorted understanding, biased diagnosis (diagnosis based on a researcher's assumptions), and blind spots. Hence, this HD phase is not used as a final diagnosis, but as a hypothesis.

Figure 1
Holistic Diagnosis Phase 1 + 2



HD 1: Analysis of Energy and Matter Flows

This first phase of HD analyses every matter used by the ecosystem's production, distribution, and consumption cycle of goods and services. HD is rooted in many methods borrowed from other disciplines to see what energy and matter enter and leave (input and output) the system. Some of the analyses used in this HD are: input-output analysis, causal loop analysis, skill maps, titles published per year, labor growth data, cost-income comparison, innovation index, work hour to income comparison, supply-demand analysis, and many others.

Result of HD 1

The result captures the movement of intangible energy (attention, skills, labor, production cost, capital, motivations, etc) and tangible matter (comics published, merchandise, events, funds, revenues, etc.) through various actors within the ecosystem.

Table 1

Result Consolidation of HD 1

Flow type	input	in-system process	output
Creative energy (human capital)	artist, communities, passion, artistic skills, knowledge (formal & tacit), storytelling ability, communication. Through academia: design knowledge and research.	comics production, collaboration, innovation, transmedia.	comics (in many types), intellectual property. Transmedia products, and spinoffs that circulate in niche market.
Cultural ideas	local myths, folklore, identity, religious narratives, values, and traditions.	narrative adaptation, IP development. Informal teaching, mentoring, reviewing, and collaboration transform individual practices into <i>communities of practice</i> . This sustains talent pipelines and builds morale, but often lacks formal structure or reward systems.	narratives, counter narratives, social commentary, values, cultural representation, national identity. This output is often unacknowledged or undervalued within the national plans or public discourse. Cross-platform monetization. IP development is promising and observable, but fragile due to legal, financial, and policy gaps.
(Financial) capital	Self-funding, crowdfunding, fan patronage.	comic IP, event organizing, education tools, activism. This adds adaptive versatility, but often emerges out of necessity (survival) rather than institutional planning.	revenue, products, livelihood, and social wellness bonds that provide resilience).
Policy Input	University-injected programs (fair, comic weeks), and community-based initiatives (conventions, festivals,	publishing and distribution. Conventions, festivals, and pop-up markets transform cultural energy into public presence and	market exposure, data, audience feedback

	cooperatives, association)	monetization. These events are entry points for lay audiences and moments of feedback, market testing, and cultural visibility.	
Infrastructure	Social media, platforms, publishers, bookstore.	intervention, programs	(often misaligned) impact and (low) sustainability

HD 2: Analysis of Context and Territories

To discover the relationships between the activities and the contexts around them, HD's second phase examines all the relationships generated directly or indirectly, including the environment where the system is located. Both territorial considerations and stakeholder involvement are addressed in depth in this analysis. Besides its morphological features, the context is influenced by its economic, social, and cultural characteristics. The focus shifts from natural resources to relevant industrial activities, typical products, folklore, and demographics. Some analyses used in this phase are demographic data, purchase parity, ecosystem map, geo-economic data, ecosystem interrelatedness scheme, market value, publisher mapping, and many more.

Result of HD 2

Table 2

Result Consolidation of HD 2

Territory	Territory Type	Core Dynamics	Systemic Opportunity
Cultural	symbolic-cultural	identity, satire, heritage, hybridity	reconnect comics to cultural policy
Economic	precarious economic	informalized survival economy	build IP-based value chains
Institutional	institutional vacuum, state-centric intervention	policy mismatch, top-down control	co-design policy with practitioners
Educational	knowledge asymmetry	disconnected from the industries reality	bridge informal-formal education
Platform	platform-dominated digital infrastructure	reliance on global tech infrastructure	develop sovereign digital platform/tools
Community	grassroots cultural infrastructure	peer mentoring, production, distribution	recognize and fund community work
Societal Perception	perception & social legitimacy space	low status of comics as a career	shift narratives through strategic campaigns

Comics in Indonesia are a complex constellation of overlapping territories: cultural, economic, institutional, educational, digital, communal, and perceptual; each shaped by systemic asymmetries and historical neglect. While formal structures such as government policy, education, and publishing remain fragmented or misaligned, informal networks and community-driven practices fill the gaps. Despite institutional support, comics thrive through

community solidarity, platform improvisation, and hybrid cultural narratives. The resilience of the public sector hides deeper systemic fragilities, including reliance on foreign platforms and policy irrelevance. To achieve sustainable transformation, these grassroots territories must be recognized and empowered, their logic integrated into formal systems through participatory design, and comics must be reframed as dynamic elements of Indonesia's identity and creative economy.

The result of phases 1 and 2 holistic diagnosis reveal five systemic failure symptoms, escalating the Indonesian comic ecosystem issue into wicked problem territory. The five symptoms are cobra effect, doom loop, tragedy of the commons, fixes that fail and lesser of evils.

Phase 2, Step 2. Giga Map

Giga Map of Indonesian Comic Ecosystem Complexities

Giga maps were developed to map cross-sectoral issues and unpack their nuances. The giga map was visualized using multi-model and layered data in the form of infographics, cartoons, news articles, photos, and data visualization. During Melbourne Design Week 2024, it was also exhibited with the “Work in Progress” RMIT Ph.D student collective under the event “Distabbling: Acts of Emergent Design Research.”

Figure 2

Giga Map of Indonesian Comics Ecosystem



Consolidation of Analysis From the Giga Map

Each of stakeholder in the ecosystem is a silo, they're disconnected in sharing similar understanding of the system's goals. They don't have the means to pursue betterment because each believes the issue is not systemic, and tends to generate reactive correction of a system failure. A SWOT analysis was then used to reveal strategic patterns encapsulating hidden strengths and future potentials, as well as barriers and bottlenecks for change.

Table 3*SWOT Analysis of the Giga Map*

Strength	Weakness
• Comic artists in Indonesia are highly versatile and adaptable, working across disciplines like animation, design, and filmmaking. • A strong community of practice exists, offering mutual learning, creative support, and distribution alternatives. • Communities fix and offering alternative to the failing system; becomes crucial for the practice. These are grassroot innovation traits. • Artists demonstrate creative cross-pollination, combining skills from various fields to produce unique outcomes. • Artists are not only creators but also ecosystem builders, initiating communities, events, cooperatives, and educational hubs.	• There is no structured career path, leading to job insecurity and inconsistent income. • Comics are often perceived as cultural practices (similar to hobbies), not legitimate professions, resulting in low societal and market valuation. • The industry lacks artist representation, and most publishing models offer minimal financial return. • Distrust in government support is widespread due to disconnected, ceremonial, or ineffective programs. • Distribution systems are fragmented, and there is limited collaboration with academia or formal institutions. • Artists' versatility is often a survival strategy, not a sign of healthy industry support. • Education sector is an "ivory tower," unable to give answer to the problems.
Opportunity	Threat
• Cross-sector collaboration is possible, especially with education, and digital content sectors. • Digital platforms and self-publishing enable artists to bypass traditional gatekeepers and reach audiences directly. • Campus communities and alternative publishers are emerging as hubs of experimentation and support. • There is growing momentum for multi-stakeholder collaboration, including bridging between sub-systems within the ecosystem. • Cultural identity and local storytelling are gaining value as assets in the broader creative economy. • Social innovation readiness is observable in many community initiatives. • Some Indonesian comic artists have achieved international recognition, showing potential for global market reach. • There are sufficient fan conventions throughout the year to provide a collaboration platform, market access point, talent discovery, and economic-cultural legitimization.	• Deep reliance to community making the ecosystem is fragile and hard to grow. • Community-reliance might gatekeep innovation and block outlier. • Regions without communities are virtually deadlocked. • The market is dominated by foreign comics (manga, manhwa), making it harder for local content to thrive. • Ongoing financial precarity discourages long-term commitment to the comic profession. • Government programs remain symbolic, bureaucratic, and disconnected from real artist needs. • Publishers prioritize short-term sales over ecosystem development or talent growth. • Creative burnout and dropout risks are high due to over-reliance on informal support and under-compensated labor. • Low commitment towards sector regulation since no data backs up the importance of doing so.

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| <ul style="list-style-type: none"> • The existing ecosystem has the key foundations for social innovation: self-organized actors (groups) with shared goals and behaviours. • Comics in Indonesia are deeply rooted in local culture and social commentary—making them ideal vehicles for cultural transmission and civic engagement. | <ul style="list-style-type: none"> • With a skewed policy-making process, the government's role in any effort is a deadweight. • Government tends to hold the status quo, making change efforts seen as a challenge to authority. • Indonesian chronic socio-cultural mindsets of readership. • Macro-meso-micro landscape are not ready to justify the ecosystem transformation to industry. |
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Conclusion

1. Toward an artist-led transformation

There is a pressing need to reposition comic artists as active agents of ecosystem design rather than merely content producers. Since these artists have historically been marginalized and institutionally unsupported, they operate in an environment marked by informal economies, fragmented infrastructures, and the absence of policy scaffolding. Artist-led system interventions are proposed to replace ineffective top-down government strategies by focusing on their situated knowledge and leadership potential.

2. The Systemic Design Framework for Change

The research unearths the multilayered complexity of the comic ecosystem through holistic diagnosis and Giga mapping, highlighting systemic symptoms such as policy dysfunction, economic precarity, and institutional fragmentation. The tools provide a comprehensive understanding of the ecosystem's actors, flows, and failures, positioning the comic field as a “wicked problem.” This approach reframes comic artists and their communities as “designers” able to articulate new futures through collaborative, reflective, and relational practices.

3. The Role of Social Innovation as an Enabling Mechanism

As a process rather than a product, social innovation links participatory design with systemic change. Peer mentorship, hybrid platforms, and adaptive cultural practices already exist in grassroots initiatives, but remain underrecognized and underfunded. These informal efforts are legitimized and replicated as sustainable, replicable systems of value creation by framing them as prototypical forms of innovation.

4. A Need for Institutional and Policy Alignment

The research cautions against romanticizing grassroots resilience despite the vibrant, self-organized energy of comic communities. Bottom-up innovations risk being co-opted, gatekept, or exhausted without institutional realignment, particularly in policy, education, and digital infrastructure. By bridging the gaps between government, market, and community, co-design becomes a design method and a political strategy. Power must be redistributed ethically so that multiple stakeholders can shape the future collectively and fairly.

5. Building a Regenerative Ecosystem

Ultimately, this study contributes to a theory of change that reframes comics in Indonesia not only as cultural commodities but also as vehicles of civic imagination and socioeconomic change. The paper promotes distributed leadership, participatory governance, and contextual intelligence as the building blocks of a regenerative ecosystem. In this vision, comics will catalyze broader dialogues on identity, agency, and the creative

economy's role in shaping equitable futures, rather than conventional economic and policy frameworks.

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Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

In the process of writing this paper, I utilized AI-assisted language and writing software, namely Google Translate, Grammarly, and Wordtune. Google Translate was used to translate the initial manuscripts written in the Indonesian language to English. Grammarly was used to check and correct the texts, and Wordtune was used to fine-tune the sentences into a formal and shorter form. Software is not used for any other than what is declared.

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