

COLLABORATIVE GOVERNANCE AND ACTOR COMMUNICATION IN BANDUNG SCIENCE TECHNO PARK

**¹Muhammad Arief Mubarak, ²Nandang Alamsyah Deliarnoor,
³Dede Sri Kartini, ⁴Salsabila Humaira**

¹⁻⁴ Universitas Padjadjaran

¹m.ariefmubarak@gmail.com, ²nandang.alamsyah.deliarnoor@unpad.ac.id,

³dede.sri.kartini@unpad.ac.id, ⁴salsabilahumaira13@gmail.com

Abstract: *This study explores the dynamics of stakeholder communication in the collaborative process of managing the Science and Techno Park Bandung Institute of Technology (STP ITB) using the Ansell and Gash Collaborative Governance framework (2008). The main focus is on five core elements of communication in the collaborative process: face-to-face dialogue, trust building, commitment to the process, shared understanding, and intermediate outcomes. Qualitative research methods with in-depth interviews, are used to uncover communication patterns, conflict mediation, and evaluation mechanisms implemented by STP ITB. The results show that regular coordination forums and thematic workshops facilitate synchronization of visions between parties, while procedural transparency and evidence-based trust strengthen partner trust. Long-term partner selection policies also the formulation of Memorandums of Understanding and Cooperation Agreements periodically evaluated foster collective commitment. Intermediate outcomes such as the operation of ready-to-use laboratories, increasing the number of incubated startups, and patent registration are drivers of collaboration momentum. However, the participation of regional actors and the capacity of Micro, Small, and Medium Enterprises still need to be strengthened. These findings recommend expanding invitations for cross-regional dialogue, developing mentoring programs for weak actors, and sharpening incentive mechanisms to increase the inclusiveness and sustainability of the innovation ecosystem in Bandung.*

Keywords: Collaborative Governance, Collaborative Process, Science and Techno Park ITB, communication between actors.

Abstrak: *Penelitian ini mengkaji dinamika komunikasi para pemangku kepentingan dalam proses kolaboratif pengelolaan Science and Techno Park Institut Teknologi Bandung (STP ITB) dengan menggunakan kerangka Collaborative Governance Ansell dan Gash (2008). Fokus utama penelitian terletak pada lima elemen inti komunikasi dalam proses kolaboratif, yaitu dialog tatap muka, pembangunan kepercayaan, komitmen terhadap proses, pemahaman bersama, serta capaian antara (intermediate outcomes). Metode penelitian kualitatif melalui wawancara mendalam, observasi, dan analisis dokumen digunakan untuk menggali pola komunikasi, mekanisme mediasi konflik, serta praktik evaluasi yang dijalankan oleh Direktorat Science and Technology Park ITB. Hasil penelitian menunjukkan bahwa forum koordinasi rutin dan lokakarya tematik berperan dalam menyelaraskan visi di antara para pihak, sementara transparansi prosedural dan kepercayaan berbasis data memperkuat hubungan kepercayaan antar mitra. Kebijakan pemilihan mitra jangka panjang serta penyusunan Nota Kesepahaman dan Perjanjian Kerja Sama yang dievaluasi secara berkala turut mendorong komitmen kolektif. Capaian antara seperti beroperasinya laboratorium siap pakai, meningkatnya jumlah startup binaan, dan pendaftaran paten menjadi penggerak momentum kolaborasi. Namun demikian, partisipasi aktor daerah dan kapasitas Usaha Mikro, Kecil, dan Menengah (UMKM) masih perlu diperkuat. Temuan ini merekomendasikan perluasan undangan dialog lintas wilayah, pengembangan program pendampingan bagi aktor yang masih lemah, serta penajaman mekanisme insentif untuk meningkatkan inklusivitas dan keberlanjutan ekosistem inovasi di Bandung.*

Kata kunci: Collaborative Governance, Proses Kolaboratif, Science and Techno Park ITB, komunikasi antar aktor.

A. Introduction

The city of Bandung, which celebrated its 214th anniversary in 2024, has become one of the centers of economic growth and innovation in Indonesia¹. Known for its creative sector, technology, and unique socio-cultural dynamics, Bandung also faces complex challenges in managing urban space sustainably. Problems such as congestion, flooding, air pollution, and limited green open space reflect the need for a governance approach that is not only adaptive, but also involves various stakeholders collaboration^{2,3}. Therefore, various governments are now implementing innovative governance strategies to create more inclusive public decision-making that is able to respond to the needs of society more satisfactorily^{4,5}. As one of the strategic efforts to answer these challenges, the Bandung City Government developed the Science and Techno Park (STP) as an innovation hub that integrates research functions, technology development, and cross-sector collaboration. STP is designed as an arena for mutual communication between academics, industry, government, and the community in formulating knowledge-based solutions for sustainable city development⁶. This initiative is also part of the vision of Bandung Technopolis as a future city based on technology and innovation⁷. In the context of innovation ecosystem, collaboration between actors is an absolute requirement for the success of developing new solutions. This success is highly dependent on the ability to build relationships and collaborate with external partners⁸.

¹ Bappelitbang Kota Bandung, *Laporan Perkembangan Ekonomi dan Inovasi Kota Bandung* (Bandung: Pemerintah Kota Bandung, 2023).

² Mahmoud, Israa, Grégoire Dubois, Camino Lique, and Marine Robuchon. 2025. "Understanding Collaborative Governance of Biodiversity-Inclusive Urban Planning: Methodological Approach and Benchmarking Results for Urban Nature Plans in 10 European Cities." *Urban Ecosystems* 28 (2): 17. <https://doi.org/10.1007/s11252-024-01656-5>.

³ Laura Compagnucci dan Federico Spigarelli, "Fostering Cross-Sector Collaboration to Promote Innovation in the Water Sector," *Sustainability* 10, no. 11 (2018), <https://doi.org/10.3390/su10114154>.

⁴ Carlos L. M. Cide, *Collaborative Governance: Beyond Mere Participation* (2.: Third International Public Policy Conference Singapore., 2017).

⁵ Wei Wang, "The Functioning Mechanism of a Collaborative Environmental Governance Network in a Coastal Zone: A Case Study of the Wenzhou Dongtou Coastal Zone," *Sustainability* 16, no. 23 (2024), <https://doi.org/10.3390/su162310159>.

⁶ Eka Yulinda, Saiful Aripin, Waskitoaji Waskitoaji, Heryadi Heryadi, dan Edi Kurniawan, "Evaluasi Kebijakan tentang Manajemen Inovasi Perguruan Tinggi (MIPT) di Perguruan Tinggi Negeri," *Jurnal Ilmu Administrasi* 13, no. 2 (2022): 85–102, <https://simanis.ristekbrin.go.id>.

⁷ World Bank, *Enabling Innovation Ecosystems in Indonesian Cities* (Washington, DC: World Bank Group, 2021).

⁸ Beomjoon Bae dan Sungyong Choi, "The Effect of Collaborative Governance in Social Startups on Social Performance: The Mediating Effect of Economic Performance," *Journal of Open Innovation: Technology, Market, and Complexity* 10, no. 3 (2024), <https://doi.org/10.1016/j.joitmc.2024.100370>.

However, the implementation of STP in Bandung City still faces various challenges, especially in terms of coordination and mutual communication to build collaboration between the actors involved⁹. In this context, the Collaborative Governance approach proposed by Ansell and Gash (2008) becomes relevant as an analytical framework to understand the dynamics of inter-sectoral relations in STP management. Collaborative governance is a form of governance in which actors from the public and private sectors collaborate through specific mechanisms and processes that are specifically designed^{10,11}. The focus of this approach lies on how actors from the public, private, academic and civil society sectors can work together in a participatory and sustainable decision-making process.

In this study, the main center is on the collaborative process as the core of collaborative governance, includes face-to-face communication, trust building, commitment to the process, shared understanding, and achievement of intermediate results¹². The success of a collaboration depends not only on the institutional structure or initial conditions, but also on the dynamics of communications between actors that occur continuously during the program¹³. Based on this background, this study attempts to answer the key question, how are the dynamics of communication between actors in the collaboration process at STP management in Bandung City reviewed from the Collaborative Governance model by Ansell & Gash? This question is important to understand the extent to which communication patterns, trust, and commitment of stakeholders can form effective and sustainable collaboration. Therefore, this study aims to examine how the collaborative process between actors is formed and implemented in the management of Science and Techno Park (STP) in Bandung City.

⁹ John M. Bryson, Barbara C. Crosby, dan Melissa M. Stone, "Designing and Implementing Cross-Sector Collaborations: Needed and Challenging," *Public Administration Review* 75, no. 5 (2015): 647–63, <https://doi.org/10.1111/puar.12432>.

¹⁰ Alfiandri, Ahmad, Endang Prasajo, Ria V. Salomo, dan Agung Wicaksono. "Beyond Volatility: Harnessing VUCA Methodology for Sustainable Collaboration in Bintan Island's Mangrove Ecotourism Governance." *Danube* 15, no. 2 (2024): 166–87. <https://doi.org/10.2478/Danb-2024-0010>.

¹¹ Lintang Lintas, Dedi Angkutan, Johan Di, Fawwaz Kamal Semarang, Armi Tilano, dan Siti Suwitri, "Collaborative Governance dalam Upaya Keselamatan," *Jurnal Keamanan Publik* 2, no. 1 (2019): 15–30.

¹² Christopher Ansell dan Alison Gash, "Collaborative Governance in Theory and Practice," *Journal of Public Administration Research and Theory* 18, no. 4 (2008): 543–71, <https://doi.org/10.1093/jopart/mum032>.

¹³ Nicola Ulibarri et al., "How Does Collaborative Governance Evolve? Insights from a Medium-N Case Comparison," *Policy & Society* 39, no. 4 (2020): 617–37, <https://doi.org/10.1080/14494035.2020.1769288>.

Collaborative Governance Theory

This research starts from the understanding that the collaborative process is the core of collaborative governance. Referring to the model developed by Ansell and Gash (2008), the collaborative process is not just a series of technical stages towards an agreement, but a cycle of social communication and interaction involving dialogue, building trust, commitment to the process, forming a shared understanding, and achieving intermediate outcomes. Collaborative governance can be understood as a system that solves public problems through the participation and mutual cooperation of various actors, such as government, the business sector, and local communities. This system builds social networks to address public problems that are difficult to solve with traditional approaches amidst the complexity of modern society¹⁴.

In the context of the Science and Techno Park (STP) of Bandung City, this approach is used to explore in depth the dynamics of communication and relations between academic, government, industry, and civil society sectors in forming sustainable innovation governance. Ansell and Gash emphasize that the collaborative process is cyclical, not linear^{15,16,17}. Mutual communications that occur in the early stages, such as face-to-face dialogue and open communication, can produce positive feedback in the form of growing trust and commitment, which in turn strengthens shared understanding and opens up opportunities for short-term collaborative outcomes¹⁸. Face-to-face dialogue is the key to breaking down stereotypes and building trust between parties with different backgrounds and interests. This trust does not emerge instantly, but requires a long-term process and consistency in communication.

¹⁴ Bae dan Choi, "The Effect of Collaborative Governance," *J Open Innov* 10, no. 3 (2024).

¹⁵ Ibid.

¹⁶ Ulibarri et al., "How Does Collaborative Governance Evolve?" *Policy & Society* 39, no. 4 (2020): 617–37.

¹⁷ Cide, *Collaborative Governance*, 2017.

¹⁸ Wang, "Collaborative Environmental Governance," *Sustainability* 16, no. 23 (2024).

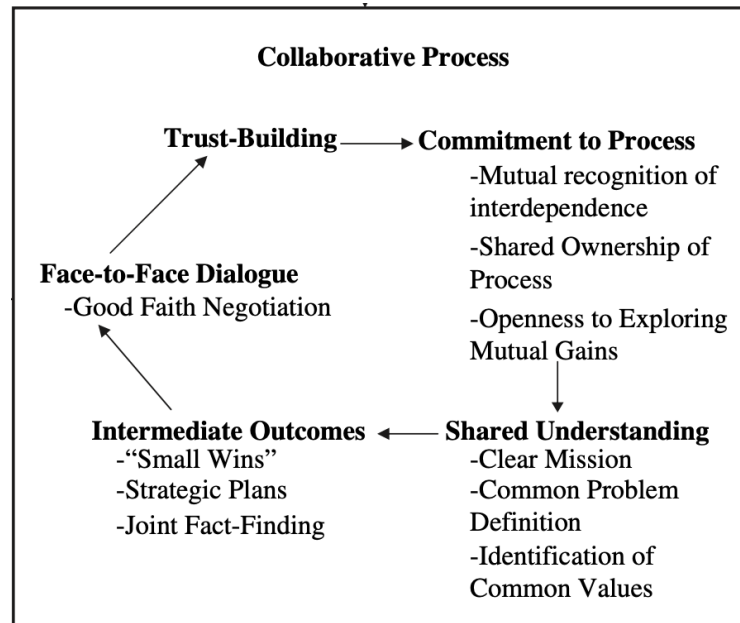


Figure 1: The mutual communications model in the collaborative process by Ansell & Gash (2008)

It is relevant to note that effective social communication and interaction requires an initial drive (impulse) and the ability to understand symbols and responses of others as a basis for building shared meaning. As explained, "*communication has the goal to build a common understanding and experience among actors to produce a synergy and collaboration.*"¹⁹. This principle is effective mutual communication is very important for the success of cross-difference communication²⁰. In the context of cross-sector collaboration such as at STP Bandung which brings together actors from academia, industry, government, and society, a similar adaptation mechanism is needed²¹. Each actor needs to adjust their expectations, communication style, and way of working in order to create a shared understanding. Thus, adaptation is not only relevant in cross-cultural communication, but also in the collaboration process between actors who bring diverse of institutional backgrounds and interests. The ability to manage these differences through open communication and shared meaning is the foundation for trust and commitment in collaborative governance.

In addition to trust, commitment to the process is a crucial element. Commitment indicates that actors are not only present to represent their

¹⁹ Amelia Qanitha, Nisa Anisah, Universitas Islam Negeri Ar-Raniry Banda Aceh, dan Universitas Syiah Kuala Banda Aceh, "Pola Komunikasi Organisasi (Studi Kanguru International Education Service di Aceh)," *Jurnal Peurawi: Media Kajian Komunikasi Islam* 7, no. 1 (2024): 5–20.

²¹ Atika Fadilatul Rodiyah Saputri, Muhamad Bisri Mustofa, dan Siti Wuryan, "Adaptasi dan Interaksi Mahasiswa Pattani (Thailand) dalam Tinjauan Komunikasi Antar Budaya di Lampung," *Jurnal Peurawi: Media Kajian Komunikasi Islam* 20 (2020): 12–28.

respective interests, but are willing to negotiate and take part in the collective decision-making process. In this case, shared understanding also becomes the foundation for building a sense of ownership of the process, which makes actors not only observers, but also part of the decision makers. Furthermore, a healthy collaborative process will produce intermediate outcomes, such as initial agreements, project collaborations, or joint prototypes, which are tangible evidence of short-term success. These outcomes are important for building collaboration momentum and further strengthening trust.

In this framework, the collaborative process is positioned as the main analytical axis that will be examined contextually in the management of STP Bandung. The focus on the dynamics of communication and interaction allows this study to identify practical challenges and strategies in bridging various interests, as well as describing how social processes in collaboration determine the effectiveness of urban innovation governance at the local level.

B. Research Methods

This study uses a qualitative approach to understand the dynamics of communications between actors in the collaborative governance of Science and Techno Park (STP) in Bandung City. This approach was chosen because it is able to explore meanings, processes, and social experiences that cannot be explained quantitatively²². The purpose of qualitative research in the context of Collaborative Governance is to explain phenomena that occur in the field in a scientific state through a process of collecting data as deeply as possible and in-depth analysis of a research object^{23,24}.

The researcher acts as the main instrument that actively collects and interprets data inductively. Data collection was carried out through non-participatory observation, in-depth interviews, and documentation. Interviews were conducted purposively with eleven main informants consisting of internal and external actors involved in the collaboration process in the management of Science and Techno Park (STP). The unit of analysis in this study includes individuals and institutions involved in the cross-sector collaboration process in the Science and Techno Park (STP)

²² John W. Creswell, *Qualitative Inquiry and Research Design: Choosing among Five Approaches*, edisi ke-3 (Thousand Oaks, CA: SAGE Publications, 2013).

²³ Muhammad Rifki Basyar, Agus Mardiyanta, dan Erlina Setijaningrum, "Multi-Stakeholder Analysis in Building Tourism Resilience: Collaborative Governance Implementation in the Majapahit House Heritage Area, Indonesia," *Tourism and Hospitality* 6, no. 1 (2025), <https://doi.org/10.3390/tourhosp6010005>.

²⁴ Qanitah et al., "Pola Komunikasi Organisasi," *Jurnal Peurawi* 7, no. 1 (2024): 5–20.

environment, with the selection of informants based on direct involvement in program implementation and communications between actors²⁵.

Table 1

Respondents information

No.	Informans	Frequency
1	Director/ Founder of Science Techno Park	1 Person
2	Director & Head of Collaboration Team	1 Person
3	Head of Planning & STP Policy Expert Consultant	2 People
4	Partnership Manager/ STP Collaboration Coordinator	1 Person
5	External Stakeholders: Universities, Private Sector, Local Government, Community	6 People
	Total	11 People

Source: Refined by Researcher

Data analysis was carried out following three stages according to Miles, Huberman, & Saldaña (2014): data reduction, data presentation, and drawing conclusions²⁶. Data validity was maintained through source triangulation, namely comparing data from various informants and documents to ensure the accuracy and consistency of information. This research was conducted at the Science and Techno Park (STP) office in Bandung City during the period January to May 2025, along with the ongoing collaborative initiatives between stakeholders.

C. Results and Discussion

Research Results

Based on Ansell & Gash's (2008) Collaborative Governance model, the collaborative process includes five key elements are face-to-face dialogue, trust-building, commitment to the process, shared understanding, and intermediate outcomes that reinforce each other in an iterative cycle. At STP ITB, the dynamics of communications between actors can be understood through how these five elements are manifested from both internal (ITB and DKST) and external (industry, partners, and local government) perspectives. From the results of the interviews with the respondents, the research results are grouped based on the communications in the collaborative process model by Ansell & Gash (2008) below.

²⁵ Creswell, *Qualitative Inquiry*, ed. ke-3 (2013).

²⁶ Michael B. Miles, A. Michael Huberman, dan Johnny Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, edisi ke-3 (Thousand Oaks, CA: SAGE Publications, 2013).

Face to Face Dialogue

Direct mutual communications between actors is the foundation for the formation of cross-sector synergy at the Science and Techno Park of the Bandung Institute of Technology (STP ITB). Every quarter, the team from the Directorate of Science and Technology Area (internal actor), holds a prototype roadmap workshop in the main meeting room. In this session, internal and external representatives present research progress, such as Hyundai and SinarMas Group (external actors) that will provide critical feedback and offer technical input. For example, after researchers presented their renewable energy module designs, Hyundai representatives immediately asked about the readiness of small-scale manufacturing, sparking a break-out discussion between the engineering team and business developers. On another occasion, local government officials, expressed concerns about funding sources, forcing the Directorate of Science and Technology Area to detail a joint funding proposal. This two-way communication of questions and answers, intensive debates, technical clarifications, and adjustments to commercialization steps dismantled the initial misconception that the Science and Techno Park of Bandung was just a *“simple business incubation space.”* Although the internal forum went well, challenges arose in engaging local stakeholders. The Gedebage Sub-District Secretary and the Cisaranten Kidul Sub-district Secretary reported that they had never been invited even though their areas were the locations of ITB’s STP facilities.

Trust Building

Trust between actors is built through procedural transparency and real performance evidence. Each research proposal undergoes an open review by a multidisciplinary panel of academic experts, industry practitioners, and representatives of the Bandung Institute of Technology Law Office, where panel members question each other’s methodology, commercialization targets, and intellectual property rights. Once a proposal is approved, quarterly progress reports are published to the Bandung Institute of Technology Science and Techno Park dashboard, accessible to external partners. For example, when an energy startup successfully completes a micro-turbine prototype, the research team presents the results of the field test, other industries immediately use the data to adjust their feasibility studies.

The ITB Science and Technology Park Directorate also implements an “*evidence-based trust*” scheme, where partners who reach milestones are given priority access to advanced facilities and opportunities to pitch to investors. This is reflected when a micro, small, and medium enterprise processing coconut waste received an additional slot in a chemistry laboratory after showing performance data on environmentally friendly products. As one source said, “*We first look at partners seriousness, not just talk, but how is their track record and actions in the field.*” The feedback process from prototype presentations, review panel comments, to re-access to facilities fosters ongoing trust.

Commitment to the Process

The ITB Science and Techno Park affirms its collective commitment through a partner selection policy. All Memorandums of Understanding and Cooperation Agreements require approval of long-term indicators (number of research, patents, and incubated startups) and willingness to undergo periodic evaluations. The Head of the ITB Science and Technology Area Sub-Directorate emphasized, “*We are selective in our partners because we want to build an ecosystem, not one-on-one cooperation that does not contribute to transformation.*” However, the orientation of the local government that focuses on annual projects has sparked serious debate, for example when they asked for the incubation target to be completed in one year, while the ITB roadmap covers five years. The ITB Science and Technology Area Directorate then broke down the five-year milestone into measurable annual targets, and roundtable negotiations were held every quarter between representatives of the partners to align expectations. Through this negotiation process, both parties finally agreed on quarterly indicators, keeping the collective commitment intact.

Shared Understanding

The ITB Science and Technology Area Directorate facilitated an alignment workshop. On a roundtable, academics, startup alumni, micro, small, and medium enterprises, and city bureaucrats took turns mapping out research challenges and opportunities on a whiteboard. The STP facilitator guided the discussion using real-time voting so that each participant could voice their priorities and concerns. The result was a consent agenda document containing a joint agreement from the Technology Readiness Level target to the business model. To empower weak actors, the ITB Science and Technology Area Directorate held a mentoring session after the workshop, startups without managerial experience were paired with mentors for marketing, while micro, small, and medium enterprises were assisted by industry practitioners in production readiness audits. The availability of a

technical “*help desk*” every week ensured that questions were answered directly, minimizing gaps in understanding. Thus, all parties, even though they came from different backgrounds, were “*on the same page*” before proceeding to implementation.

Intermediate Outcomes

Since rebranding as the Directorate of Science and Technology Area of ITB, the Science and Techno Park of Institut Teknologi Bandung has completed the construction of a ready-to-use laboratories in Summarecon, established many national and international research partnerships, and registered multiple patents within 12 months. The number of incubated startups continues to increase with increasing retention of strategic partners. These achievements are announced in quarterly evaluation forums, triggering discussions between parties on lessons learned and adaptation of future plans. These small wins are not only evidence of the effectiveness of the process, but also learning materials that strengthen communications between actors. Prototype data is used by academics for further research, testimonials from industry partners generate interest from new investors, and endorsements from local governments open up further policy dialogues. Thus, intermediate outcomes serve as positive feedback in an iterative cycle, keeping the dynamics of communication alive and productive.

Discussion

The results of the study show that the dynamics of communication between actors in the management of the Science and Techno Park of the Bandung Institute of Technology (STP ITB) are generally in line with the collaborative governance model of Ansell & Gash (2008), where the collaborative process is built through a cycle of face-to-face dialogue, trust building, shared commitment, shared understanding, and intermediate outcomes. First, well-structured face-to-face dialogue in workshops and research roadmap socialization programs is the key to opening communication channels between heterogeneous actors. The intensity of these routine meetings has succeeded in reducing initial misconceptions about the function of STP ITB, although inclusivity with regional officials still needs to be expanded.

Second, trust-building is fostered through procedural transparency and evidence of real performance that is openly published in the dashboard and multidisciplinary review panel. This evidence-based approach creates a sense of security for partners, while encouraging active participation because actors

understand that decisions and access to facilities depend on real achievements. This trust then strengthens the commitment to the process, where the partner selection mechanism and the provisions of the MoU/Collaboration Agreement, emphasize consistency in periodic and long-term evaluations, an adaptive response to the differences in time horizons between the Bandung Institute of Technology and the Bandung Government.

Third, efforts to build shared understanding through alignment workshops, intensive mentoring for weak actors, and the preparation of a consent agenda bridge the differences in academic, industry, and government perspectives. Finally, intermediate outcomes such as increasing the number of ready-to-use laboratories, growth in startup incubation, and patent registration serve as “*small wins*” that provide positive feedback and strengthen the legitimacy and momentum of collaboration. However, challenges remain, limited invitations for local regional institutions, gaps in Micro, Small, and Medium Enterprises (MSME) capacity, and high facility rental costs for partners still hinder full participation. For this reason, STP ITB needs to continue to intensify cross-regional dialogue, expand mentoring programs for weak actors, and review incentive structures so that collaboration is more inclusive and sustainable. Thus, communication between actors in STP ITB not only reflect ideal collaborative governance practices, but also identify areas of improvement to strengthen the innovation ecosystem of the city of Bandung.

D. Conclusion

This study reveals that the collaborative process in the governance of the Science and Techno Park Institut Teknologi Bandung (STP ITB) is built through a series of dynamic communications that include face-to-face dialogue, trust building, shared commitment, shared understanding, and intermediate outcomes. Face-to-face dialogue at the strategic level through various MoU and Collaboration agreements, to workshops and socialization. Meanwhile, trust is realized through transparency mechanisms and evidence-based trust, while commitment is also maintained through formal agreements that are periodically evaluated with a long-term orientation. On the other hand, facilitation of shared understanding through collaborative workshops has succeeded in aligning the visions of academics, industry, and government.

Finally, initial achievements such as laboratory operations, an increase in the number of incubated startups, and patent registration function as small wins that strengthen the momentum of collaboration. Although the collaborative governance framework by Ansell & Gash (2008) has been implemented quite well, there are still obstacles and limitations in the

participation of regional actors, gaps in MSME capacity, and costs of accessing facilities. Therefore, expanding invitations for cross-regional dialogue, strengthening mentoring programs for weak actors, and adjusting incentive structures will be the next strategic steps. Thus, STP ITB can continue to strengthen Bandung's innovation ecosystem through increasingly inclusive, equitable, and sustainable two-way communication between actors.

Bibliography

- Alfiandri, Alfiandri, Eko Prasajo, Roy Valiant Salomo, and Agung Wicaksono. 2024. "BEYOND VOLATILITY: HARNESSING VUCA METHODOLOGY FOR SUSTAINABLE COLLABORATION IN BINTAN ISLAND'S MANGROVE ECOTOURISM GOVERNANCE." *Danube* 15 (2): 166–87. <https://doi.org/10.2478/danb-2024-0010>.
- Ansell, Christopher, dan Alison Gash. "Collaborative Governance in Theory and Practice." *Journal of Public Administration Research and Theory* 18, no. 4 (2008): 543–71. <https://doi.org/10.1093/jopart/mum032>.
- Bae, Byungyun, and Sungyong Choi. 2024. "The Effect of Collaborative Governance in Social Startups on Social Performance: The Mediating Effect of Economic Performance." *Journal of Open Innovation: Technology, Market, and Complexity* 10 (3). <https://doi.org/10.1016/j.joitmc.2024.100370>.
- Bappelitbang Kota Bandung. *Laporan Perkembangan Ekonomi dan Inovasi Kota Bandung*. Bandung: Pemerintah Kota Bandung, 2023.
- Basyar, Muhammad Roisul, Antun Mardiyanta, and Erna Setijaningrum. 2025. "Multi-Stakeholder Analysis in Building Tourism Resilience: Collaborative Governance Implementation in the Majapahit House Heritage Area, Indonesia." *Tourism and Hospitality* 6 (1). <https://doi.org/10.3390/tourhosp6010005>.
- Bryson, John M., Barbara C. Crosby, and Melissa Middleton Stone. 2015. "Designing and Implementing Cross-Sector Collaborations: Needed and Challenging." *Public Administration Review* 75 (5): 647–63. <https://doi.org/10.1111/puar.12432>.
- Cide, Cynthia L Michel. 2017. "Collaborative Governance: Beyond Mere Participation."
- Compagnucci, Lorenzo, and Francesca Spigarelli. 2018. "Fostering Cross-Sector Collaboration to Promote Innovation in the Water Sector." *Sustainability (Switzerland)* 10 (11). <https://doi.org/10.3390/su10114154>.
- Creswell, John W. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. 3rd ed. Thousand Oaks, CA: SAGE Publications, 2013.
- D., dan Yusran Nasir. "Bentuk-Bentuk Interaksi Mahasiswa KPM." *Jurnal Peurawi: Media Kajian Komunikasi Islam* 7, no. 2 (2024): 45–60.
- Lintas, Lalu, Dan Angkutan, Jalan Di, Kota Semarang Fawwaz, Aldi Tilano, and Sri Suwitri. 2019. "COLLABORATIVE GOVERNANCE DALAM UPAYA KESELAMATAN."

- Mahmoud, Israa, Grégoire Dubois, Camino Liqueste, and Marine Robuchon. 2025. "Understanding Collaborative Governance of Biodiversity-Inclusive Urban Planning: Methodological Approach and Benchmarking Results for Urban Nature Plans in 10 European Cities." *Urban Ecosystems* 28 (2): 17. <https://doi.org/10.1007/s11252-024-01656-5>.
- Miles, Michael B., A. Michael Huberman, dan Johnny Saldaña. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Thousand Oaks, CA: SAGE Publications, 2014.
- Pemerintah Kota Bandung. *Masterplan Bandung Teknopolis*. Bandung: Pemerintah Kota Bandung, 2022.
- Qanitha, Arifa, Nur Anisah, Universitas Islam Negeri Ar-Raniry Banda Aceh, and Universitas Syiah Kuala Banda Aceh. 2024. "POLA KOMUNIKASI ORGANISASI (STUDI KANGGURU INTERNASIONAL EDUCATION SERVICE DI ACEH)." *Jurnal Peurawi: Media Kajian Komunikasi Islam* 7 (1).
- Saputri, Atika Fadilatul Rodiyah, Muhamad R. Salomo, Bong Mustofa, dan Siti Wuryan. "Adaptasi dan Interaksi Mahasiswa Pattani (Thailand) dalam Tinjauan Komunikasi Antar Budaya di Lampung." *Jurnal Peurawi: Media Kajian Komunikasi Islam* 20 (2020): 12–28.
- Ulibarri, Nicola, Kirk Emerson, Mark T. Imperial, Nicolas W. Jager, Jens Newig, and Edward Weber. 2020. "How Does Collaborative Governance Evolve? Insights from a Medium-n Case Comparison." *Policy and Society* 39 (4): 617–37. <https://doi.org/10.1080/14494035.2020.1769288>.
- Wang, Wanjuan. 2024. "The Functioning Mechanism of a Collaborative Environmental Governance Network in a Coastal Zone: A Case Study of the Wenzhou Dongtou Coastal Zone." *Sustainability (Switzerland)* 16 (23). <https://doi.org/10.3390/su162310159>.
- World Bank. *Enabling Innovation Ecosystems in Indonesian Cities*. Washington, DC: World Bank Group, 2021.
- Yulinda, Eva, Sofjan Aripin, Wihatmoko Waskitoaji, Hedi Heryadi, and Eko Kurniawan. 2022. "EVALUASI KEBIJAKAN TENTANG MANAJEMEN INOVASI PERGURUAN TINGGI (MIPT) DI PERGURUAN TINGGI NEGERI." *Jurnal Ilmu Administrasi* 13 (2). <https://simanis.ristekbrin.go.id>.