



Penta-Helix Collaboration Model in Community Development (Batik Making in Sangiran)

Triesanto Romulo Simanjuntak; Rizki Amalia Yanuartha; Sih Natalia Sukmi; Putri Hergianasari

Satya Wacana Christian University, Indonesia

<http://dx.doi.org/10.18415/ijmmu.v10i10.5103>

Abstract

The Sangiran site is one of the largest Early Man sites in the world. The Sangiran site is located in Sragen and Karanganyar Regencies. Because of its content which has high historical and scientific value, the Sangiran Site is designated as a Cultural Heritage area. In addition, UNESCO has designated Sangiran as a World Cultural Heritage. However, the local community has not used it optimally, so community empowerment is needed. Cross-stakeholder collaboration is one of the keys to successful development, as well as in community development. This study aims to build a penta-helix collaboration model in the Batik community in Sangiran by highlighting the characteristics of the Sangiran site as a batik motif. Using the penta-helix concept consisting of government, academia, private sector, community, and media. Using qualitative research methods with participatory action. Batik is one of the potentials of local residents who work as batik makers but have not been maximized to produce batik characterized by the Sangiran site while at the same time increasing financial welfare. Through the penta-helix model, it is hoped that it can realize the Sustainable Development Goals (SDGs) in achieving accelerated economic development for the Sangiran village community.

Keywords: *Penta Helix; Community Development; SDG's, Batik; Sangiran*

Introduction

The Sangiran site has been known to the world since 1936 because the Sangiran site has the potential to be a key site for understanding the evolution of early humans in the world. The Sangiran site was recognized as a World Heritage Site by UNESCO in 1996. (<https://whc.unesco.org/>, 2016) Sangiran site is located in Central Java, Indonesia, particularly at three sub districts Kalijambe, Plupuh and Gemolong in Sragen District and sub district Gondangrejo in Karanganyar District with an area 56 km². The total population in the third Sub district in Sragen is 217.701 inhabitants. Most of the citizens of Sangiran have farmed livelihoods connected with the invention history of Sangiran sites. Since G.H.R. von Koenigswald found flakes tools in 1934, the researchers have worked with local inhabitants to excavate important findings for history of human origins, culture and environment. (BPS Kabupaten Sragen, 2022)

However, the local community has not used it optimally, so community empowerment is needed. Cross-stakeholder collaboration is one of the keys to successful development, as well as in community development. This study aims to build a penta-helix collaboration model for the Batik community in Sangiran by highlighting the characteristics of the Sangiran site as a batik motif. Socio-economic changes

in community empowerment cannot be done alone. Changing the situation must be done together with many parties. cooperation that allows a society to be able to continue to progress and develop.(Ratna Sari et al., 2022)

Articles with collaboration in community empowerment have been carried out by previous researchers, the article entitled Collaboration of Stakeholders in Community Empowerment (Case Study in Wonoyoso Village, Pringapus District, Semarang District) states that collaboration between parties must be active so that synergies can result in making commitments between villages and residents.(Ciptaningsih & Nurcahyanto, 2018)

An article entitled Community Empowerment in the Perspective of Collaborative Governance (Case Study of the Mina Bayu Lestari Fish Cultivation Group and the Office of Maritime Affairs and Fisheries of Kulon Progo Regency) explains that the form of collaborative governance that is carried out is running well, this is measured by indicators of starting condition, facilitative leadership, design appropriate institutional and collaborative processes. (Nopriyono & Suswanta, 2019)

An article entitled Collaborative Governance in Empowering People with Disabilities in Maron Village, Garung District, Wonosobo Regency explains that collaborative governance in empowering people with disabilities has not gone well. This can be seen from the indicators of collaborative governance according to DeSeve which have not been achieved, namely the absence of commitment, trust, official rules related to collaborative community empowerment with disabilities and limited access to resources, especially budgets and infrastructure.(Winarni et al., 2021)

An article entitled Collaborative Community Empowerment: An Illustration of a Six-Step Process explains that Consistent community discussions, open communication, focused community leadership, community networking, and collaboration of community organizations and universities are factors that strengthen the empowerment process. Challenges such as maximizing limited resources and generating more participation from the community need to be increased.(Yoo et al., 2004)

An article entitled Community Collaboration and Empowerment, shown that the principles of collaboration with the community include: respecting, understanding the community by recognizing its knowledge base and working with cultural liaisons, and building trust through sustainable relationships.(Acevedo & Dusenbery, 2018)

The article entitled Implementation of the Penta Helix Collaborative Model in the Context of Developing Tourism Potential in East Java and Improving the Domestic Economy states that the tourism industry, as the largest foreign exchange earner, is often less than optimal in driving the economic sector so that coordination and collaboration between government, tourism business, communities, academics, and media is required.(Aribowo et al., 2018)

From the article above, states that collaboration between stakeholders has an important role in community empowerment in building a team to create a synergistic environment for all, interaction and collaboration are needed. Collaboration is the process of working together to generate ideas or ideas and solve problems together towards a shared vision. In an interdependent organization, collaboration is the key to creative thinking. Collaboration is important for achieving the best results when solving complex problems. In its development there is a collaboration model from a simple one consisting of two parties, then developing into three, four, and up to five parties. (Etzkowitz, 2008)

Literature Review

Penta-Helix

The penta-helix collaboration aims to empower local communities to find innovative approaches to develop, finance, implement and enhance sustainable development and action plans.(Stott, 2022) The

main objective is to develop a penta-helix-based method and use it to engage and support authorities at various levels along with other key stakeholders in various sectors. (Raditya, 2021)

The penta-helix or multi stakeholder concept in which elements of government, academia, the private sector, community and media come together to collaborate and are committed to developing knowledge innovations that have the potential to be transformed into products and services that have economic value. One of the objectives of this approach is to strengthen the economic resilience of the community to find a pattern of partnership in developing the potential of an area by involving multi-stakeholders who work together in synergy. (Alamsyah, 2021)

The Penta-helix model for the first time in Indonesia was launched in Indonesia by the minister of tourism Arief Yahya and included in the Regulation of the Minister of Tourism of the Republic of Indonesia Number 14 of 2016 concerning Guidelines for Sustainable Tourism Destinations that is to create orchestration and ensure the quality of activities, facilities, services, and to create experiences and the value of tourism benefits in order to provide benefits and benefits to society and the environment, the role of business, government, community, academic, and media (BGCAM) is needed. (jdih.kemeparakraf.go.id, 2016)

This research adopts the penta-helix concept in tourism to be used in community empowerment in Sangiran. So that this research focuses on creating a penta-helix collaboration model in empowering local communities for batik making so that they can encourage the potential of local communities. Sangiran has a group of batik craftsmen. The other reason to empower local inhabitant with batik project because there is a tendency that the creative industries (based on local knowledge) have a strategic position in the economy of developing countries.

Community Development

Community development is a process and a result. There are several important components of the definition of community development, including: (1) Place based focus: The base is a physical environment, such as a town, village, suburb, or town where people live. It also means a community based on the same interests; (2) Building or creating assets: Asset-based community development, such as resources or benefits in the community (place); (3) Improved quality of life: Quality of life can refer to the economic, social, psychological, physical and political aspects of a community (Phillips & Pittman, 2009). So that community development is related to how the community can physically develop every asset owned by its territory, including its human resources as an effort to improve the community's quality of life.

Social capital is increasingly being used in the fields of community development and social economy. Social capital can be used in the context of community development with a number of policy implications. Recognition and understanding of social capital by the government and local authorities in policy making will strengthen the social economy. At the local level, policies can be developed by encouraging local communities to come together and form social networks. The formation of assistance, volunteers and so on contributes directly to building local social capital. The public sector may try to build local social capital with a new approach through networking methods. At the regional or national level, support for third sector organizations and encouragement of collective work through coalitions and forums will also strengthen social capital. Society is made up of connections just like money, material resources, and human resources (Kay, 2006). Community participation in the development process has been the subject of policy aspirations and scientific criticism. Practical challenges for professionals working with the community. Knowledge of the role of experts and formal institutions that translate every potential, and become a bridge between the community and externals. This is within the framework of a participatory development process between the community and professionals (Eversole, 2012).

Art projects have become an important part of community development strategies. In addition to creative achievements, this project is expected to have a positive and measurable impact on local social capital. But to make it more complex and comprehensive, a broader range of evaluative techniques is needed to capture the depth, as well as the breadth of the encounter between the community and the creative arts (Newman et al., 2003).

Sustainable Development Goals (SDG's)

Indonesia is committed to implementing the Development Goals Sustainable. The Indonesian government has launched Presidential Regulation Number 59 of 2017 concerning SDGs. these regulations become the legal basis for the implementation of the SDGs in Indonesia for all stakeholders.(BAPPENAS-INFID-UNU IAS, 2018) The implementation of the SDGs in Indonesia includes ensuring inclusiveness and no one left behind, integration of programs for all stakeholders, aligning government and non-government priorities.(sdgs.bappenas.go.id, 2018)

Presidential Regulation Number 59 of 2017 concerning Implementation of the Sustainable Development Goals clearly recognizes the important role of stakeholders and partnerships between stakeholders. Article 3, Paragraph a): SDGs National Targets as a guideline for ministries/agencies and local governments. Paragraph b): Reference for mass organizations, philanthropists, business actors, academics, and other stakeholders in planning, implementing, monitoring and evaluating. Article 10, Paragraph 2: The Implementation Team consists of elements from ministries/agencies, philanthropy and business actors, academics, and mass organizations. Article 15, Paragraph 1: The Governor prepares the 5 yearly SDGs Regional Budget Draft together with the regents/mayors in their respective regions, involving other stakeholders.(SDGs, 2018)

“No one left behind” in SDGs means all and every citizen including the poor, the disabled community, and women should not be left behind and left behind in the development process. Socially, partnerships need to be ways and methods of working for can reach and ensure the participation of all stakeholders and citizens. Without multistakeholder partnerships, the government itself will be less able to reach them with the right program policies. limited resources, information, and funding sources, the government (central and regional) needs the support and active participation of all stakeholders including the private sector, academic groups, and to be able to effectively implement and achieve the SDGs Target Goals. Partnerships in the implementation of the SDGs are an opportunity to ensure or accelerate the achievement of all or a number of the SDGs Goals. (BAPPENAS-INFID-UNU IAS, 2018)Therefore, as an effort to support sustainable development goals, as well as improve the economy of the Sangiran community, the role of a multi-stakeholder partnership is needed.

Method

This research using qualitative research methods with participatory action that research activities carried out in a participatory manner among citizens in a community or wider social sphere to encourage transformative actions.(McIntyre, 2008) Collecting data through observation, interviews and participatory action research steps. All processes are documented through sound recordings, photos and several moments with video recordings for analysis. The results of data collection were analyzed through a qualitative approach. Validation is carried out by means of triangulation to ensure the reliability of the results. This research was conducted with the following steps:

- 1.Literature and preliminary research to understand the problematic research, include mapping community potential and challenges in heritage, development and sustainability
- 2.Identify a participatory communication model to choose the appropriate references.
- 3.Discussion between academicians to design participatory project for heritage conservation, development and sustainability

4. Discussion about participatory project to local community and preparation focal point with all participants
5. Implementation participatory project, name Batik Sangiran
 - a. Integrating perception among academicians and researchers who participate in the program (2 times)
 - b. Gathering collective memory to find the identity for batik motif (2 times)
 - c. Transfer of prehistory values from expertise to participants (1 time)
 - d. Drawing motif based on the experience, memory, and prehistoric knowledge
 - e. Drawing motif as a sketch to the paper and discuss with all participants
 - f. Transfer sketch to the clothes
 - g. Nyanting (the process in which batik artisans draw motif in clothes with candle)
 - h. Nglorot (dissolve the wax/candle) and dyeing the clothes
 - i. Designer works with the Sangiran Batik
 - j. Fashion show in Sangiran by live and streaming
6. Evaluation the participatory project

Result and Discussion

Penta-helix collaborative is a concept that describes the process of facilitating and operating in a multiorganizational setting to solve problems that cannot be easily, by a single organization. Collaboration is a relationship whose purpose is designed to solve a problem by creating or finding a solution within a certain set of constraints. (Agranoff & McGuire, 2003) The Penta-Helix collaboration model aims to optimize the roles of academia, business, community, government and media as drivers of social change that can benefit society and the surrounding environment. Schematic Penta-Helix as follows:

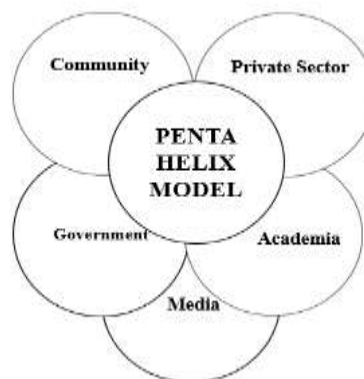


Figure 1. Penta Helix Model

In penta-helix, the actors have their respective roles as follows: the media plays the role of connecting all the main actors with industrial markets both on a national scale and on an international scale. (Rozikin, 2019) Academics as a source of knowledge, through academics are expected to be able to create strategies to explore community development so that it is sustainable, Business is an entity that plays a role in managing goods and services so that they have value, provide assistance Community is a group of people who have the same interests and commitment, The government is a stakeholder who has access to make regulations. (Wahidah & Suherman, 2022)

In the penta-helix of Community Development Collaboration in Sangiran, it can be seen from how the involvement of various actors to work together in developing the Sangiran community and creating value-added products that describe the characteristics of the product characteristics of Sangiran. To create a collaboration, namely through a constructive unification of thoughts to equate vision-mission

and get solutions in community development in Sangiran. Collaboration is created based on joint decisions between actors in policy making. From the results of research conducted seen by the discussions, deliberations in community development for batik making in Sangiran by inviting figures, sub-district officials, tourism offices, academics, media, and the private sector as well as other groups involved in the Penta-helix Collaboration.

On June, 5 2021 the research team held discussions with local community activists in Sangiran. The main focus of this discussion is to carry out activities in the form of brainstorming and drawing batik patterns which are often done by the local community. This batik activity later became important, because during the excavation several interesting things were found related to image patterns which were then used in the Sangiran area, such as images of early humans, bones, shells or molluscs, ivory and also a floral motif called *Kawung*. The brainstorming was continued by digging deeper into the unique things that can be raised from Sangiran in the form of batik. The discussion continues with the meaning of batik as a story that has a certain theme, so that the motifs are fossilized shells, fish teeth, pieces of fish bones.

The following are some of the discussion activities carried out with the private sector, academics, local communities and governments.



Figure 2. Discussions with Academics



Figure 3. Discussions with Local Community



Figure 4. Discussions with Local Community



Figure 5. Discussions with Private Sector and Government

This discussion activity is a process in community development through the potential or resources that exist in Sangiran in the form of sites that are applied to Batik. The process requires the synergy of various sectors to find a core and produce an art product which is of course for the development of the surrounding community. That is why participation from every sector must be intertwined here.

The following is direct participation in action research consisting of collaborations from various actors.

Table 1. Number of Participatory Action Research with Collaboration of Multiple Actors

No	Participants	
1	Sangiran batik artisans	15 persons
2	Pokdarwis (Tourism Awareness Group)	10 persons
3	Multidiscipline academicians (mathematics, physics, biology, early childhood education programs, international relations, communication science, sociology, nutrition, history, and information technology)	13 persons
3	Manager site (BPSMPS)	1 person
4	International researchers	2 persons
5	Batik designer	1 person

The following are some follow-ups of batik art products through fashion shows and displays at the Sangiran festival.



Figure 6. Batik Sangiran Fashion Show with Designers (Private Sector)



Figure 7. The results Of Batik Products That Were Exhibited At The Sangiran Festival

The following is a flowchart of how Sangiran community development takes place using the penta-helix model

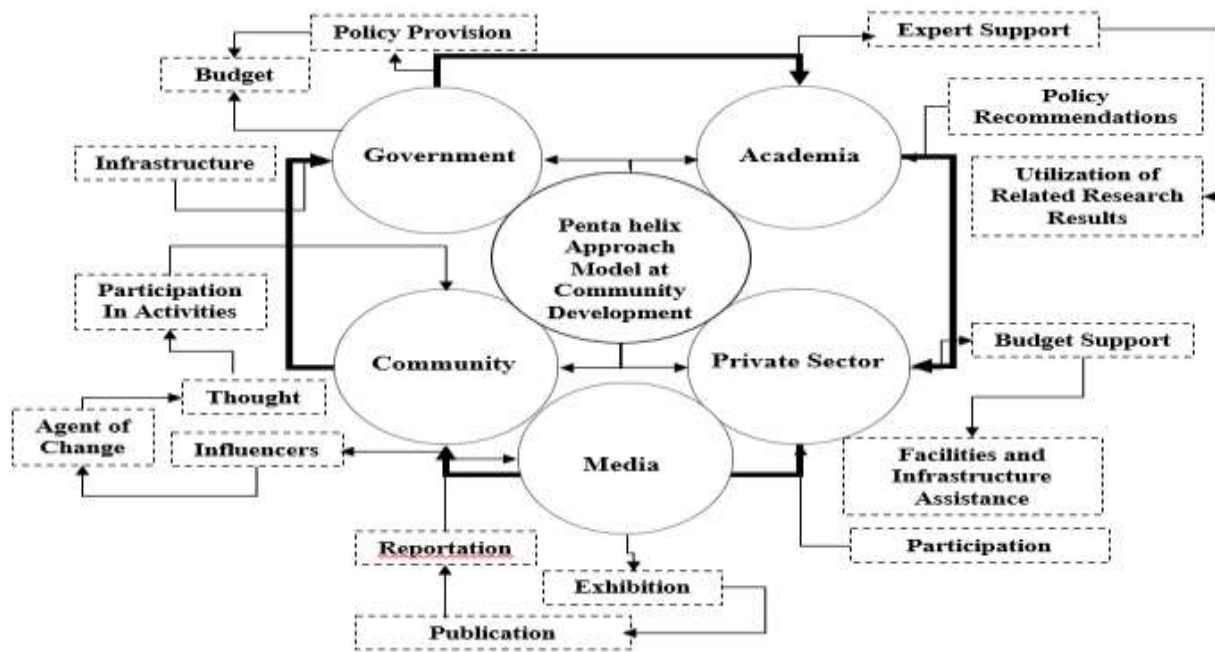


Figure 8. Penta Helix Community Development Model at Sangiran

The following is the division of roles of each stakeholder in an effort to develop the Sangiran community through Batik art products.

Table 1. The Role of Stakeholders

No	Actors	Roles
1	Researchers	Conceptor , sharing sites with local people who are batik craftsmen. They convey prehistoric knowledge and conservation as concepts in batik making. Socializing to the community about the technique and product distribution or inviting students to get involved.
2	Community (batik craftsmen)	Accelerator , as the main actors in community development. as influencers and agents of change in making batik motifs based on the knowledge that has been provided by researchers and academics and based on their knowledge
3	Privat Sector	Enablers , provide ingredients and become distributors of products. They can negotiate to take advantage of their products and/or work in corporate social responsibility.
4	The government	Regulators support these activities with training, infrastructure and exhibitions that are needed by the community afterwards. provision of a budget, policy, they can carry out their responsibilities to improve social welfare
5	Media	Expander , supporting publications in promotion and creating brand image. Publish local community products to the public through mass media and social media, exhibitions,

Conclusion

The concept of Collaboration states that it is no longer just the responsibility of one party but rather builds shared responsibility between various parties. The main key to the success of this community development is the existence of strong synergy and commitment among stakeholders in implementing it. The Penta Helix model is especially useful for managing actor-based complexity. In the penta-helix of Community Development Collaboration in Sangiran, it can be seen from how the involvement of various actors to work together in developing the Sangiran community and creating value-added products that describe the characteristics of the product characteristics of Sangiran. To create a collaboration, namely through a constructive unification of thoughts to equate vision-mission and get solutions in community development in Sangiran. Collaboration is created based on joint decisions between actors in policy making. From the results of research conducted seen by the discussions, deliberations in community development for batik making in Sangiran by inviting figures, sub-district officials, tourism offices, academics, media, and the private sector as well as other groups involved in the Penta-helix Collaboration.

References

Acevedo, S., & Dusenbery, P. (2018). Community Collaboration and Empowerment. In *GENIAL Generating Engagement and New Initiatives for All Latinos*. www.starnetlibraries.org.

- Agranoff, R., & McGuire, M. (2003). *Collaborative Public Management: New Strategies for Local Governments (American Governance and Public Policy)*. Georgetown University Press.
- Alamsyah. (2021, October 13). *Mewujudkan Prinsip-Prinsip Penta-Helix dalam Mengelola Kekayaan Negara (Studi Kasus Penataan Sungai Citarik)*. [www.Djkn.Kemenkeu.Go.Id](http://www.djkn.kemenkeu.go.id).
<https://www.djkn.kemenkeu.go.id/artikel/baca/14311/Mewujudkan-Prinsip-Prinsip-Penta-Helix-Dalam-Mengelola-Kekayaan-Negara-Studi-Kasus-Penataan-Sungai-Citarik.html>.
- Aribowo, H., Wirapraja, A., & Putra, Y. D. (2018). IMPLEMENTASI KOLABORASI MODEL PENTAHHELIX DALAM RANGKA MENGEMBANGKAN POTENSI PARIWISATA DI JAWA TIMUR SERTA MENINGKATKAN PEREKONOMIAN DOMESTIK. *Jurnal Mebis (Manajemen Dan Bisnis)*, 3(1), 31–38. <https://doi.org/10.33005/mebis.v3i1.21>.
- BAPPENAS-INFID-UNU IAS. (2018). *Panduan Kemitraan Multipihak untuk Pelaksanaan Tujuan Pembangunan Berkelanjutan (TPB/SDGs) Di Indonesia*.
- BPS Kabupaten Sragen. (2022). *Statistik Daerah Kabupaten Sragen 2022*.
- Ciptaningsih, R., & Nurcahyanto, D. H. (2018). KOLABORASI STAKEHOLDERS DALAM PEMBERDAYAAN MASYARAKAT (STUDI KASUS DI DESA WONOYOSO, KECAMATAN PRINGAPUS, KABUPATEN SEMARANG). *Journal of Public Policy and Management Review*, 8(1), 97–112. <https://doi.org/10.14710/JPPMR.V8I1.22729>.
- Etzkowitz, H. (2008). *The Triple Helix: University–Industry–Government Innovation in Action*. Routledge.
- Eversole, R. (2012). Remaking participation: Challenges for community development practice. *Community Development Journal*, 47(1), 29–41. <https://doi.org/10.1093/cdj/bsq033>.
- <https://whc.unesco.org/>. (2016, November 24). *Sangiran Early Man Site*. <https://Whc.Unesco.Org/>.
<https://whc.unesco.org/en/list/593/>.
- jdih.kemenparekraf.go.id. (2016). *PERMEN No 14 Tahun 2016 tentang Pedoman Destinasi Pariwisata Berkelanjutan*. [Jdih.Kemenparekraf.Go.Id](http://jdih.kemenparekraf.go.id). <https://jdih.kemenparekraf.go.id/katalog-40-Peraturan%20Menteri>.
- Kay, A. (2006). Social capital, the social economy and community development. *Community Development Journal*, 41(2), 160–173. <https://doi.org/10.1093/cdj/bsi045>.
- McIntyre, A. (2008). *Participatory Action Research* (J. van Maanen, Ed.). Sage Publications, Inc.
- Newman, T., Curtis, K., & Stephens, J. (2003). Do community-based arts projects result in social gains? A review of the literature. *Community Development Journal*, 38, 310–322. <http://cdj.oxfordjournals.org/>.
- Nopriyono, & Suswanta. (2019). Pemberdayaan Masyarakat dalam Perspektif Collaborative Governance (Studi Kasus Kelompok Budidaya Ikan Mina Bayu Lestari dan Dinas Kelautan dan Perikanan Kabupaten Kulo Progo). *JPK: Jurnal Pemerintahan Dan Kebijakan*, 1(1), 21–36.
- Phillips, R., & Pittman, R. H. (2009). *AN INTRODUCTION TO COMMUNITY DEVELOPMENT* (R. Phillips & R. H. Pittman, Eds.; First). Routledge.
- Raditya, D. (2021). *Penta-Helix dan Perubahan Sosial*. [Chub.Fisipol.Ugm.Ac.Id](http://chub.fisipol.ugm.ac.id).
<https://chub.fisipol.ugm.ac.id/2021/09/01/penta-helix-dan-perubahan-sosial/>.

- Ratna Sari, Y., Wahyu Handayani, D., Marta, A., Desiana International Relations, V., & Jaya Wiranata International Relations, I. (2022). Penta Helix Collaboration on Village Tourism Development Program in Indonesia Post Covid-19 Pandemic. *Proceedings of the Universitas Lampung International Conference on Social Sciences (ULICoSS 2021)*, 628, 25–32. <https://doi.org/10.2991/ASSEHR.K.220102.004>.
- Rozikin, M. (2019). Kolaborasi Antar Stakeholders Penta Helix dalam Pengembangan Kota Kreatif 9Studi di Kota Malang). *PANGRIPTA: Jurnal Ilmiah Kajian Perencanaan Pembangunan*, 2(2), 49–57. <https://jurnalpangripta.malangkota.go.id/index.php/pangripta/index>.
- SDGs. (2018). *Sustainable Development Goals*. Sustainable Development Goals. <https://www.sdg2030indonesia.org/#modalIconDefinition>.
- sdgs.bappenas.go.id. (2018, May 3). *Koordinasi antara Bappenas & Kementerian Dalam Negeri: Pelaksanaan SDGs di daerah*. Sdgs.Bappenas.Go.Id. <https://sdgs.bappenas.go.id/koordinasi-antara-bappenas-kementerian-dalam-negeri-pelaksanaan-sdgs-di-daerah/>.
- Stott, L. (2022). *Partnership and Transformation; The Promise of Multi-stakeholder Collaboration in Context*. Routledge. www.routledge.com/.
- Wahidah, I., & Suherman, D. (2022). Penta Helix Collaboration in Increasing Regional Tourism Competitiveness of Bandung City. *Jurnal Manajemen Pelayanan Publik*, 6(1), 14–29. <https://doi.org/10.24198/jmpp.v6i1>.
- Winarni, L., Afni, I. N., & Wirawan, R. (2021). Collaborative Governance dalam Pemberdayaan Masyarakat Disabilitas di Desa Maron Kecamatan Garung Kabupaten Wonosobo. *Jurnal Litbang Provinsi Jawa Tengah*, 19(2), 137–143. <https://doi.org/10.36762/jurnaljateng.v19i2.857>.
- Yoo, S., Weed, N. E., Lempa, M. L., Mbondo, M., Shada, R. E., & Goodman, R. M. (2004). Collaborative Community Empowerment: An Illustration of a Six-Step Process. *JSTOR Health Promotion Practice*, 5(3), 256–265. <https://www.jstor.org/stable/26735237>.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).