



Storytelling Visualization as an Approach to Designing a Creative Industry Map of West Sumatra

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ABSTRACT

West Sumatra's creative industry is growing rapidly and demonstrating a strategic role in strengthening the culture-based economy. However, this complex creative ecosystem has not been comprehensively mapped through informative and communicative visual media. This research aims to design elements of a West Sumatra creative industry map using a storytelling visualization approach, a method that combines data, narrative, and visual elements to produce a more meaningful representation of information. Furthermore, this study applies digital imaging isometric art techniques as a design approach to create more structural, detailed, and readable map visuals, and utilizes Artificial Intelligence (AI) as a finishing tool to refine graphic elements. The research method is carried out through the stages of literature data collection, isometric visual design, and AI-based graphic refinement. The results show that the integration of storytelling visualization with isometric art can improve the clarity of information structure, strengthen the Minangkabau cultural narrative, and provide a more immersive visual experience for users. The use of AI has proven effective in accelerating the visual refinement process without eliminating the character of manual design. This research contributes to the development of creative mapping methods based on visual narratives and offers a new design model that can be applied to creative mapping contexts in other regions.

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INTRODUCTION

The creative industry in West Sumatra has shown significant growth and plays a strategic role in driving a culture-based regional economy (Putri et al, 2020). Various subsectors such as culinary, crafts, music, design, and fashion continue to develop and give birth to new creative practices at the district/city level. However, information on the distribution and condition of the creative industry in West Sumatra remains relatively limited, especially in the form of communicative, structured visuals that can depict the dynamics of the ecosystem as a whole (Aprizia et al, 2025). Currently available mapping is generally descriptive and does not provide a

visual representation that can help stakeholders understand the interrelationships between subsectors and the creative potential in each region (Ansofino, 2021).

Table 1. Classification of the creative economy (Mardiah et al, 2024).

No	District / City	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Amount
1	Tanah Datar			1	1	2	4			2	45					5	1		61
2	Pesisir Selatan								3	5	6					3			17
3	Pasaman Barat			1		3	4	2		1	3						1		15
4	Solok Selatan						3			1	10					1			15
5	Kab. Solok			2		1	2	1		1	9	4				3			23
6	Sijunjung						1		3	13	18					17			52
7	Lima Puluh Kota								3		4			1					8
8	Dharmasraya										12								12
9	Agam					1	7		4		5	1							18
10	Padang Pariaman																		0
11	Mentawai																		0
12	Pasaman																		0
13	Padang					1	9	2		11	5	1			1	19	1		50
14	Pariaman										1								1
15	Padang Panjang	6		1	1	1	3	1	2	2	11	1				2	1		32
16	Bukittinggi					1	8		6	3	6	2			1	10	2		39
17	Payakumbuh						2	1		1	4					2			10
18	Sawahlunto					4	3		1	3	3					5			19
19	Solok				1	1	1	2	1	5	3					3	1		18
	Jumlah	6	0	5	3	15	47	9	23	48	145	9	0	1	2	70	7		

One of the basic data available to illustrate this situation is a creative economy classification table that lists the subsectors that appear in each district/city in West Sumatra (Mardiah et al., 2024). This data illustrates the number of actors and the types of subsectors active in each region. Simply put, the table shows the presence of subsectors in a region; for example, Tanah Datar has more subsectors than other regions, while some regions only show the presence of one or two subsectors. While this table is basic, the data indicates that the distribution of creative subsectors in West Sumatra is uneven and has important patterns for visual analysis.

Preliminary research results indicate that creative actors, local governments, and academics require a form of mapping that is not only informative but also narrative (Aisyah et al., 2022). They need visual media that can explain where subsectors emerge and build visual elements of the region. In other words, they need visual maps that convey meaning, not just numbers. To date, no visual media has presented a map of West Sumatra's creative industry with a strong narrative approach and visual communication design.

The gap analysis in this study found three main deficiencies that should be present in the existing mapping:

1. There is no storytelling visualization approach to mapping the creative subsector. The available maps are informative but not narrative, so they cannot explain the cultural meaning and relationships between subsectors.

2. The digital imaging isometric art technique has not yet been used, which can provide a neat visual structure, intuitive spatial perspective, and element details that are easier for various groups to understand.
3. There has been no integration of AI as a visual finishing tool in creative mapping in West Sumatra, even though this technology has the potential to improve graphic quality, style consistency, and design production efficiency.

The analysis demonstrates the urgency of this research in developing a more comprehensive and communicative creative visual mapping model. The storytelling visualization approach allows simple data, such as the number of subsectors, to be transformed into a more meaningful visual narrative (Rosyidah, 2025). The Minangkabau narrative, with its rich culture and values, can serve as a foundation for framing the data, allowing the narrative to convey not only information but also identity (Wiraseptya et al., 2023).

Isometric digital imaging techniques are applied to create more detailed and directed visual structures, presenting an intuitive three-dimensional impression and making it easier for users to understand the relationships between visual elements (Imani, 2021). The use of Artificial Intelligence (AI) as a finishing tool allows the final design to be more consistent, aesthetically pleasing, and efficient without losing the manual design character that is the hallmark of creative work (Abdel et al., 2024).

The novelty of this research lies in the integration of storytelling visualization, isometric digital imaging, and AI as the finishing touches within a single creative industry mapping model. No previous research in West Sumatra has combined these three approaches in the context of mapping creative subsectors. Furthermore, this research focuses not only on data representation but also on visual interpretation, presenting Minangkabau cultural identity as part of the narrative.

Overall, this research aims to design elements of the West Sumatra creative industry map by combining storytelling visualization, digital imaging techniques and AI-based visual enhancement, so as to produce a design model that is informative, communicative, and supports strategic decision-making in the development of the creative industry.

METHODS

This research uses a qualitative-design approach with a focus on developing a narrative visualization model (storytelling visualization) applied in designing creative industry map elements and creative sub-sector posters, such as in the visual example of the fashion sub-sector. This method is designed to produce visual output that is communicative, narratively meaningful, and representative of the character of Minangkabau culture. The research stages combine the process of data exploration, visual concept design, isometric element arrangement, illustration or photo/AI-hybrid production, and visual enhancement through AI.

Desk Research dan Visual Data

The initial stage involved a literature study and document review of various articles, data from the Tourism Office, and literature related to the creative economy in West Sumatra. The data collected included both visual and graphic data:

1. Number of creative sub-sectors in each district/city.
2. Minangkabau cultural characters that are relevant for visual representation.
3. Identification of work equipment, environment, and cultural symbols of related sub-sectors.

One of the prototype works in the fashion sub-sector, supporting data such as sewing activities, use of sewing machines, and representation of Minangkabau women actors are used as the basis for creating a visual narrative concept.

Context Analysis and Visual Narrative

At this stage, researchers formulated the core narrative, namely the message they wanted to convey through the visuals. The narrative used in the fashion sub-sector poster was then transformed into storytelling elements (Soewardikoen, 2019).

Table 2. Narrative transformed into visual storytelling

Narrative	Storytelling
The majority of fashion industry players work from home. Production activities are based on handicrafts. The colors of the fabrics represent creativity, work dynamics, and product diversity.	Character (creative actor) Activity (sewing) Space (simple work environment) Symbolic objects (pile of fabric, work tools)

Visual Ideation, Moodboard, and Model Workflow

This stage produces a visual style direction that researchers will use to create a moodboard, including color style references, studio setup references, and visual storytelling composition references. The visual concept is formulated to create a human-centered, warm tone, and narrative composition (Talgorn, 2023).

Then, methodologically, this research produces a visual production flow model (Figure 1).

Workflow Storytelling Visualization Model for Creative Mapping

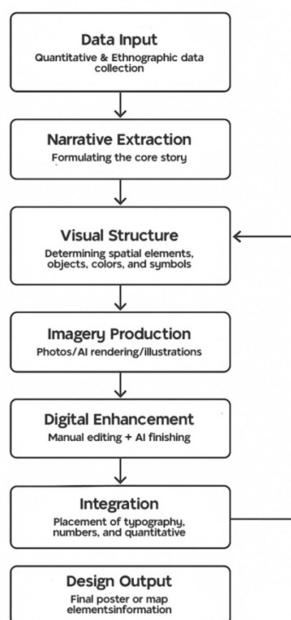


Figure 1. Workflow storytelling visualization model for creative mapping

This workflow model illustrates a series of narrative-based visual design processes used to produce map elements or posters for the creative industry subsector. The first stage, Data Input, involves collecting quantitative and ethnographic data to serve as a basis for understanding the context (Haki, et al., 2024). This data is then processed in the Narrative Extraction stage, which is the process of formulating the core story to be conveyed through visuals so that information appears not merely as numbers but also has cultural and social meaning (Latif, 2019).

Next, the visual structure stage determines the visual framework, consisting of space, objects, colors, and symbols that support the narrative. In the Imagery Production stage, basic visuals are produced through photography, illustration, or AI rendering, as needed. The visuals are then refined in the Digital Enhancement stage through a combination of manual editing and AI finishing to achieve stylistic consistency and aesthetic quality.

The integration stage includes information elements such as typography, numbers, and data labels to enhance readability (Putra, 2025). The final stage, Design Output, produces the final product in the form of a subsector poster or map element ready for use. This process creates a visual design model that can be replicated for other creative subsectors.

RESULTS AND DISCUSSION

The visual storytelling design process is determined by the selection of a theme. This identifies the need for relevant representation to depict the creative industry subsector, both in terms of activities, actors, and cultural context. In the fashion subsector case study, the chosen theme is a representation of a warm, simple, yet creatively active home workspace, reflecting the daily lives of fashion industry players in West Sumatra. This theme leads to a human-centered storytelling approach, presenting humans as the main characters with sewing as a symbol of creative production. This concept is translated into visual elements such as an old sewing machine, colorful fabrics, a fan, a table lamp, a wooden shelf, and various small objects that enrich the story.



Figure 2. Image results with marking of storytelling supporting elements

Isometric art is created by creating wooden panels that act as floors, creating space within an image. The use of isometric art creates a point of view within an image, allowing the focus to remain on the subject. This adds a sense of depth and allows the audience to explore the story within the image.



Figure 3. Results of the finishing process for adding informative supporting elements

The design then progressed to data and typography integration, transforming the basic visual into an innovative poster. Informational elements such as the title “Pelaku Ekonomi Kreatif Sektor Fashion di Sumatera Barat” and the number of subsector actors (78 orang) were added using a layout that follows the principle of visual hierarchy. The use of hanging tags to display data figures was chosen as a visual metaphor for fashion product labels, allowing statistical information to blend naturally into the visual story. The placement of typography and data sources was carefully executed to avoid distracting from the main subject, while remaining easily identifiable. The end result of this entire process is a storytelling image that represents the fashion subsector in an informative and emotional way, ready to be used as an element in mapping the West Sumatran creative industry.

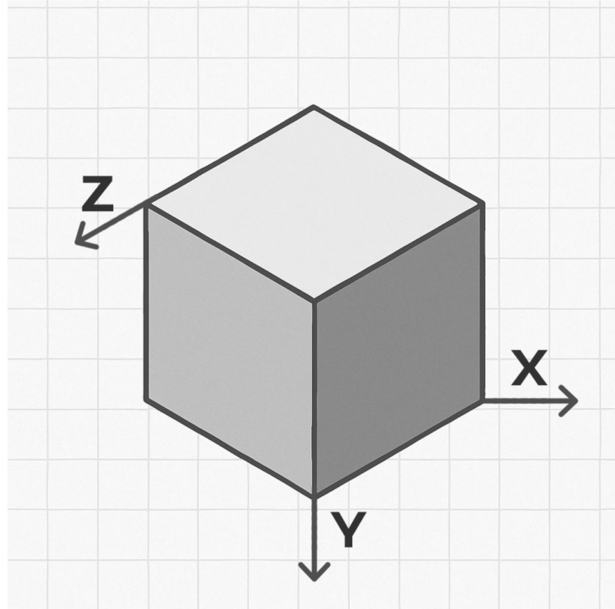


Figure 4. Basic isometric art

In isometric space, the x-axis represents the horizontal, the y-axis represents the vertical, and the z-axis represents the depth. This shape creates a three-dimensional image. Isometric art, in the sense of a three-dimensional image within a two-dimensional work, is realized in this fashion case (Wiraseptya, 2019).



Figure 5. Image results with AI using an isometric art approach

If we look at another form of landscape perspective that tells the story of the Padang City area, the basic image (figure 5) is used. The "PADANG" visual is the result of a series of isometric design processes based on storytelling visualization that aims to present the city's identity symbolically and easily recognized. The image is designed with an isometric soil structure that appears to be raised from the surface. Layers with steep textures and small rocks are added to emphasize the realistic impression while providing a dimension of depth. On top of the land block, a stretch of green grass is formed as a base for cultural elements. The traditional house is placed as the main focus because it functions as the most recognizable symbol of Minangkabau identity. Its proportions are made slightly monumental to harmonize with the "PADANG" typography placed at the front as a city marker. The placement of this typography not only serves to inform but also serves as a visual element that strengthens the impression of the location directly and effectively.

The integration of isometric style in this research has a function as visual consistency with the same format, then provides a modern, communicative appearance for the needs of points of view on objects (Skliarenko, 2021).

CONCLUSION

This study demonstrates that the storytelling visualization approach can be an effective method for designing visual elements in mapping the creative industry in West Sumatra. By integrating cultural narratives, visual representations, and quantitative data, this study successfully produced a visual model that is not only informative but also communicative and aesthetic. Through conceptualization, storyline development, and the selection of relevant visual elements, the design process is able to present a more vivid representation and directly relate to the social reality of creative industry actors. The results of the study show that visualization cannot be understood simply as an image, but as a storytelling medium that conveys meaning, context, and cultural identity.

The use of isometric digital imaging art in designing city representations and map elements represents a significant contribution to building a clean, consistent, and recognizable visual structure. This technique allows for the display of cultural elements, landscapes, architecture, and local icons in a harmonious and flexible style that can be developed across various regions. Through an isometric approach, each city can be visualized as a modular unit that remains integrated within a single map system, without losing its local character. This approach also helps produce modern and engaging visualizations for users, especially in the context of creative visual data presentation.

The integration of Artificial Intelligence (AI) technology in the finishing stage significantly contributed to the efficiency and consistency of the work. AI helped refine textures, enhance colors, balance lighting, and create a uniform visual style across all sub-sector elements and the city. Thus, AI does not replace human creativity, but rather acts as a supporting tool that enhances aesthetic quality and accelerates the work process. The results of this study emphasize the importance of utilizing digital technology in contemporary design practice, especially when large-scale visual production is required while maintaining stylistic cohesion.

Methodologically, this research produces a comprehensive workflow, from theme identification and concept development to color selection and basic visual creation, to data and typography integration. This model can be used as a reference for researchers, designers, and local governments seeking to develop narrative-based visual media for mapping or creative

promotion purposes. This workflow not only produces images but also produces an integrated visual narrative that can support a more intuitive understanding of the creative ecosystem.

However, this study has limitations, particularly in the depth of field data, which does not fully reflect the overall dynamics of creative industry players. Furthermore, the use of AI as a refinement tool still requires manual oversight to avoid visual distortion or inaccurate interpretation. Overall, this study demonstrates that storytelling-based visualization, supported by isometric techniques and AI, can make a significant contribution to the development of a creative industry map in West Sumatra. This approach is relevant not only for the local context but can also be applied to other creative regions in Indonesia, thus potentially becoming a national model for future mapping of culture and the creative economy.

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