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Signage & Wayfinding Design For The Indonesian National Library

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Abstract

Signage and wayfinding is one of the components of Environmental Graphic Design that is used to help people feel safe and comfortable when navigating, particularly for individuals in heavily crowded locations. The Indonesian Nasional Library (Perpustakaan Nasional Republik Indonesia), recognized as the world's tallest library, comprises 24 floors filled with various services and amenities that cater to the community's interests and consistently attract many visitors. Hence, signage and effective wayfinding are indispensable in accommodating users in their library activities. The framework of this design process is established based on the pyramid method by Chris Calori & David Vanden-Eynden, with additional methods by the execution of conceptual designs, mind mapping, and the formulation of keywords. The authors aspire to contribute a signage and wayfinding design proposal that optimizes usability, resolves navigation challenges, and enhances the user experience at The Indonesian National Library.

Keywords: *The Indonesian National Library, Signage, Wayfinding, Environmental Graphic Design*

Abstrak

Signage & wayfinding adalah salah satu aspek dari keilmuan Environmental Graphic Design yang digunakan untuk membantu orang merasa aman dan nyaman ketika bernavigasi, khususnya bagi mereka yang sedang berada di tempat dengan tingkat keramaian yang cukup tinggi. Perpustakaan Nasional Republik Indonesia, yang dinobatkan sebagai perpustakaan tertinggi di dunia, memiliki 24 lantai yang menyediakan berbagai layanan dan fasilitas yang dapat memenuhi kepentingan masyarakat, sehingga tidak dapat dipungkiri bahwa gedung ini selalu padat dikunjungi. Oleh sebab itu, diperlukan sebuah signage & wayfinding yang mampu memenuhi kebutuhan pengguna ketika beraktivitas di dalam perpustakaan. Perancangan ini dilandasi dengan teori pyramid method yang dikemukakan oleh Chris Calori & David Vanden-Eynden, serta didukung dengan metode desain konseptual, pemetaan mind map, dan perumusan kata kunci. Melalui perancangan ini, penulis berharap dapat memberikan proposal rancangan desain signage & wayfinding yang dapat membantu usabilitas, membantu permasalahaan navigasi, dan meningkatkan pengalaman pengguna dalam Perpustakaan Nasional Republik Indonesia.

Kata Kunci: *Perpustakaan Nasional Republik Indonesia, Signage, Petunjuk Arah, Desain Grafis untuk Lingkungan*

1. INTRODUCTION

1.1 Contextual Background

The Indonesian National Library (Perpustakaan Nasional Republik Indonesia) is a Non-Ministerial Government Institution accountable to the Minister of National Education, established to serve the interests of Indonesian society (Figure 1). Since its founding in 1980, the National Library has played a pivotal role as a literacy center, allowing society to explore

the world and enrich their intellectual pursuits through knowledge acquisition. Unquestionably, the central objective of this exceptional twenty-four-story building is to ensure visitors' comfort and convenience as they partake in various activities and move around within the library's expansive space [1] .

Figure 1. The Indonesian National Library Building
[Source: Calista, 2023]

A library as a public space is a space where people have different goals and objectives interacting in the space [2]. Thus, it becomes essential to establish a wayfinding design and system that can maximize the efficiency and effectiveness of visitor activities, explicitly catering to individuals unfamiliar with its complex surroundings [1]. Even today, visitors need help locating specific areas, facilities, or reading materials. Therefore, a redesign to update and improve the efficiency of people navigating The Indonesian National Library Building may be necessary.

To implement a redesign for signage in public spaces, it is essential to understand how people behave in the space [2], [3]. Another important thing is understanding the factors that can be improved from the previous design as inputs or data for the new design [4]. From preliminary research, it can be seen that issues in The Indonesian National Library Building are evident in the need for more utilization of the existing signage and wayfinding within the library [1].

This issue can be divided into three major components: information content system, graphic system, and hardware system. Essentially, signage serves the purpose of communicating information [1]. Unfortunately, Figure 2 shows that the information and messages conveyed through the existing signage need a consistent system.

Figure 2. Existing Information Content System
[Source: Calista, 2023]

In addition to the information content system, the graphic system was also found to lack consistency – this was evaluated through the implementation of color, typographic systems, and pictograms [1]. The lack of consistency is shown in Figure 3.

Figure 3. Existing Graphic System
[Source: Calista, 2023]

The last component that affects the purpose and function of signage and wayfinding is the selection of materials and the positioning of signage, which must be more effectively and strategically placed [1]. Figure 4 shows how several signages are positioned poorly, such as behind objects, banners, or even in poor contrast compared to the background.

Figure 4. Existing Hardware System
[Source: Calista, 2023]

Therefore, it is necessary to design a systematic and holistic signage and wayfinding design for the National Library of Indonesia to enhance and advance its three fundamental components.

1.2 Literature Review

Environmental graphic design is the graphics found in an environment that is intended to communicate information about a particular environment to its users (information content system) – especially in situations where there are no people nearby to provide guidance or assistance – through graphics (graphic system) displayed on a physical object or hardware (system hardware) [5], [6]. Therefore, these three components influence and complement each other to create a comprehensive sign system. This implies that wayfinding becomes an active process that requires mental engagement and keen observance of the built environment. In addition to its functional role as a guide, signage, and wayfinding can contribute to placemaking by forming a unique identity to create images and meanings in a space [4].

Information Content System

The information content represents the core of a sign system, fulfilling multiple roles and encompassing diverse forms of information. This system includes what information will be displayed on the signage, the grammatical structure, and how the messages in different areas remain interconnected, consistent, and cohesive [5], [6].

The following are various kinds of information content that can be found:

1. Identification sign: helps identify a specific location or facility within a given environment.
2. Directional signs: used to indicate directions within an area or environment.
3. Warning sign: alerts users to hazards or safety procedures within an environment.
4. Regulation sign: prohibits activities or regulates behaviour within an environment.
5. Operational sign: provides information about the use and operation of facilities within an environment.
6. Honorific sign*:* pays tribute to individuals associated with a particular environment.
7. Interpretive sign: assists individuals in interpreting the significance of an object, place, or given environment.

Graphic System

The graphic system is a two-dimensional visual representation of content from the information system. Fundamentally, design elements form the essence of the graphic system, including typography, color, layout, and pictograms [6]. These design elements are organized to visualize information content, emphasize messages, and create visual identities.

1. Typography
   In the graphic system, typography is the backbone for communicating informational content within a series of signage systems [7], [8]. This highlights the significance of carefully selecting a typeface that should be taken with seriousness regarding its visual presentation. Four factors to consider when choosing signage and wayfinding typography are formal suitability, stylistic longevity, and legibility [6].

2. Color
   Color within the graphic system is a pivotal factor in effectively communicating meaning within messages, distinguishing the delivery of messages between different signage, and determining whether the signage system will stand out or blend in with the surrounding environment [4]. In design projects where navigation decisions such as transportation facilities need to be made quickly and easily, it is essential to create signage that contrasts with the surrounding environment, making it easy to read, distinguish, and act upon [2]. However, environmental graphic designers are only sometimes free to select the colors of their choice. In some instances, the colors are typically predetermined by the color standards specified in the brand identity. It is also essential for an environmental graphic designer to study and be sensitive to the cultural connotations of colors when designing signage and wayfinding [9].

3. Layout
   Since any message can be communicated through signage, this becomes an important consideration factor when designing the

layout. The amount of information content and graphics determines the final size and proportion of the signage. Therefore, variations in layout systems can be developed to accommodate the needs of the information content [6].

4. Pictogram
   Pictograms in signage serve as one of the design elements that translate words into visual images to create effective visual communication [10]. This effectiveness can be achieved by considering visual unity, clarity, and simplicity [6].

The design of pictograms can be categorized into two types: universal pictograms and project-specific pictograms. Universal pictograms are widely recognized icons in various locations, while project-specific pictograms are designed for the developed project [6].

Hardware System

Signage is often perceived as a flat object that displays information and graphics [5], [6]. In reality, understanding the hardware system can provide opportunities for environmental graphic designers to develop signage from different and various perspectives: visually and conceptually appealing. The hardware system refers to all physical information content formulated within the graphic system, including dimensions, materials, finishing, coatings, installation, and lighting techniques [6].

1. Material
   The materials that can be utilized and processed into signage include iron, plastic, glass, wood, fabric, and others.

2. Installation Techniques
   Essentially, signage can be installed at eye level, aligning with the human line of sight, or above the average human height (over the head) on horizontal surfaces such as the floor or ceiling and on vertical surfaces such as walls. Commonly used installation techniques include ground-mounted, ceiling-hung, flag-mounted, and flat wall-mounted.

2. RESEARCH METHOD

The design methodology for the project adepts the methodology from Calori & Vanden-Eynden Design Methodology and Robin Landa Graphic Design Process. The combination of these two methodologies focuses on obtaining data to define the design objective and graphic design exploration to create visual solutions [11], [12].

The initial process of designing signage and wayfinding begins with conceptual design, creating mind maps, and identifying representative keywords. The conceptual design process starts by examining entities, comprehensive identity studies, and a deep understanding of the architectural concept of the national library. Conceptual design aims to discover effective solutions through fundamental concepts that address and guide design decisions. These studies are then translated into a mind map, providing a means to simplify and organize the gathered data. After conducting the mind-mapping process, keywords that can visualize the values of the built concept can be identified. These representative keywords serve as the foundation for the author throughout the signage and wayfinding design process. The overall design process can be seen on Figure 5.

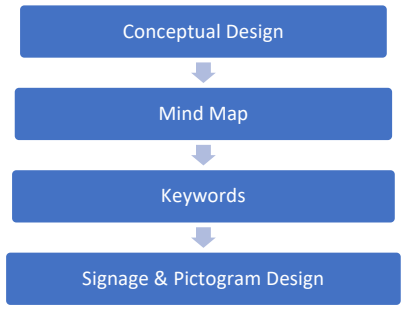


Figure 5. Design Methodology for Signage & Wayfinding
[Source: Calista, 2023]

3. RESULT AND DISCUSSION

3.1 Conceptual Design

Entity study

What is studied during the entity study is the function of the library. The Indonesian National Library has four functions [13]. The first function is assessing and formulating national policies in the field of libraries. Second, preserving library materials of national scope. Third, regulating library regulations throughout Indonesia. The final function is to publish bibliographies.

Identity study

The vision, mission, and meaning of the National Library's logo are studied in the

identity study. Quoting directly from the official website of the National Library of Indonesia, The National Library envisions the achievement of a knowledgeable Indonesian society by fostering a passion for reading and empowering libraries. This vision is supported by three core missions of the National Library: achieving excellent service, preserving the nation's cultural heritage, and meeting the standards set for national libraries [1].

More than just a star symbolizing the five foundational principles of Pancasila, upon closer examination, the National Library logo is also composed of an open green book, representing the ever-growing field of knowledge. Green symbolizes growth and regeneration, while blue evokes tranquillity [1].

Architectural concept study

According to the Executive Summary of the National Library of Indonesia in 2014, In constructing the architecture of the National Library of Indonesia, the theme used as the design foundation is Window to the World (Jendela Dunia). This overarching theme is formed by three Hindu-Buddhist concepts: Mandala, Lingga-Yoni, and Tri Hita Karana [14].

1. Mandala
   The concept of the Mandala is employed as a symbol of hope that the National Library of Indonesia can consistently serve as the center of the nation's culture through the inexhaustible knowledge of Indonesia.
2. Lingga-Yoni
   Implementing the Lingga-Yoni concept in the architecture of the National Library of Indonesia is envisioned to uphold the enduring sustainability of the National Library.
3. Tri Hita Karana
   In the context of its architectural design, this concept portrays a relationship that humans possess with God, interpersonal connections among individuals, and the harmonious integration of human beings with the natural environment.

3.2 Design

3.2.1 Ideas and concept

The Kawi script

The Kawi script emerged as a progressive evolution and adaptation of the Pallava script following the arrival of Indian migrants who introduced the profound cultural heritage of Hinduism and Buddhism [15]. The language predominantly employed for literary purposes represents a synthesis of Sanskrit and Javanese linguistic elements [16]. Example of the Kawi Script can be seen on Figure 6.

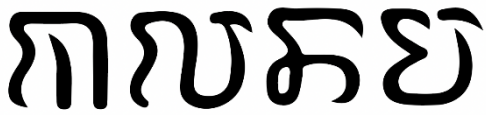


Figure 6. Kawi Script
[Source: Calista, 2023]

Lontar manuscript

In ancient times, before the existence of paper, Indonesian society utilized dried lontar leaves to capture and record their undertakings. The script visible on the lontar leaves was inscribed using scratching and filled with black pigment, allowing the script to be clearly seen and easily read [18]. The form of a lontar manuscript is then used as an idea for signage format and structure, shown in Figure 7.

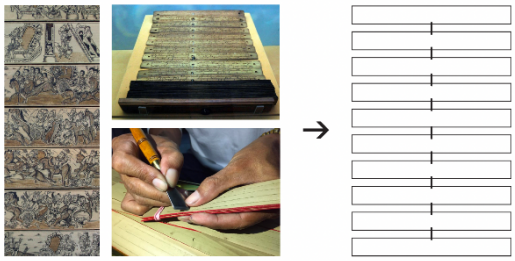


Figure 7. Lontar Manuscript
[Source: Calista, 2023]

The Nasional Library architecture concept

This design is developed from one of the Indonesian National Library's architectural concepts, Lingga-Yoni. The building concept can be observed from the frontal and top views. Specifically, this design adopts the top view of the architecture. Precisely, this design adopts the top view of the architectural structure, which is subsequently arranged and transformed into a grid format to explore and develop the form of signage (Figure 8).

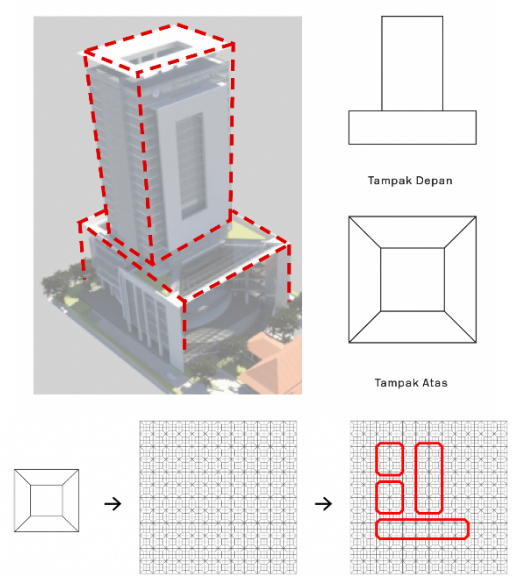


Figure 8. The Frontal and Top View of the National Library's Architecture and Lingga-Yoni Grid
[Source: Calista, 2023]

Colonial architecture in Indonesia

Despite the modern concept upon which the Indonesian National Library was built, upon closer analysis, elements inspired by colonial architecture in Indonesia can be identified within the structure. This can be observed in the distinctive roof design, a recognizable characteristic of this architectural style (Figure 9).

Figure 9. Colonial Architecture in Indonesia
[Source: Calista, 2023]

3.2.2 Integration of Concept

The structured form of signage, shaped according to the Lingga-Yoni grid, is harmoniously combined with the concept of interconnected suspension inspired by the leaf-like structures encountered in lontar manuscripts (Figure 10).

Figure 10. The Integration of Signage Form and Lontar Manuscript
[Source: Calista, 2023]

3.2.3 Design System

Primary system

1. Shape

   In this design, two different panel choices are available to communicate information and visually display graphics effectively. Moreover, the shape selection for the signage panel needs to be carefully assessed within technical considerations for installation requirements. Figure 11 illustrates shape A, with a basic dimension of 17.5 x 15 cm. This shape will be highly effective for signage installed using the hanging technique (ceiling/wall hanging), and shape B, with a basic dimension of 7.5 x 5 cm, will be impactful for signage embedded directly into the wall (wall mounted).

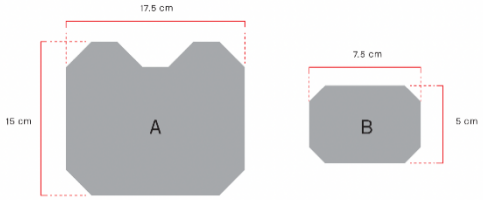


Figure 11. Division of Signage Forms
[Source: Calista, 2023]

Both forms hold the potential for size expansion to accommodate the informational content requirements. By intending to maintain consistency in shape expansion, the formulas that serve as the calculation system are as follows:

Length (Figure 12)

Panel A: 17.5cm + 2.5x
Panel B: 7.5cm + 2.5x
* The value of x may be adjusted to accommodate the content specifications.

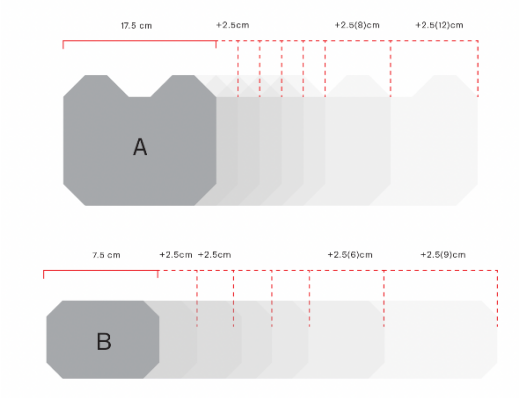


Figure 12. The Calculation of Panel Length
[Source: Calista, 2023]

Height (Figure 13)
Panel A: 15cm + 2.5y
Panel B: 5cm + 2.5y
* The value of y may be adjusted to accommodate the content specifications.

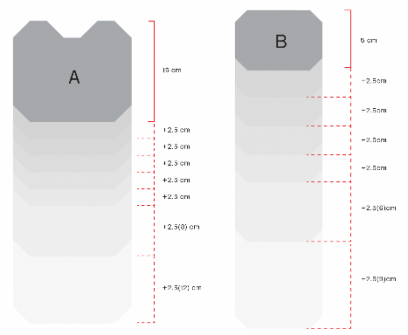


Figure 13. The Calculation of Panel Height
[Source: Calista, 2023]

2. Color
The colors, which are aligned with the brand identity of the Indonesian National Library, are utilized in signage and wayfinding systems to organize and distinguish various types of signage. Blue is applied to identify directory and directional signs, green is used to indicate signage with identification purposes (identification sign), and red is used to indicate regulation signs. Figure 14 shows the implementation of the color system on the design.

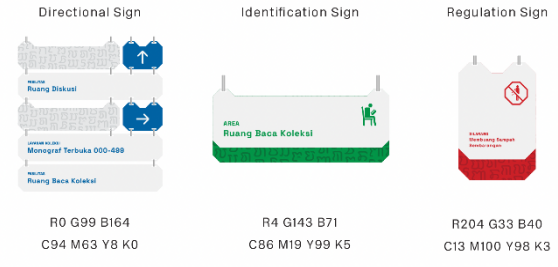


Figure 14. Color System Implementation
[Source: Calista, 2023]

3. Typography
Typeface characteristic
Calistype and Space Grotesk are the selected typefaces for signage and wayfinding design in the Indonesian National Library (Figure 15). Calistype is a custom typeface designed specifically for the National Library. The inspiration behind this typeface design derives from the three components of Hindu-Buddhist temple architecture and the curved strokes of the Kawi script.

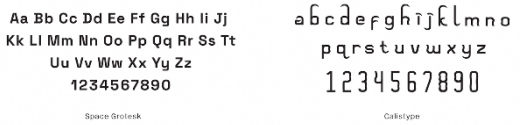


Figure 15. Typeface Used for the Designs
[Source: Calista, 2023]

On the other hand, Space Grotesk is used as the typeface for signage. This typeface, designed by Florian Karsten, has geometric characteristics that give a modern impression yet are balanced by a human touch through thick and thin strokes (Figure 16). The humanist quality of this typeface enhances the typographic impression reminiscent of ancient lontar manuscripts.

Figure 16. Space Grotesk Characteristic
[Source: Calista, 2023]

This sans-serif typeface tends to have tight letter spacing. Therefore, the typeface applied in signage is given a tracking value of +50 to enhance the readability and legibility of its letters. This increased tracking is then tested by conducting a visibility test called the 'blur

test' (Figure 17). Compared with a tracking value of 0, the added tracking makes the letters and text more accessible to recognize and read.

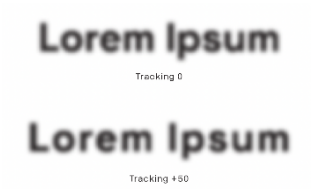


Figure 17. Blur Test on Typeface
[Source: Calista, 2023]

Typographic system

This typographic system is established due to signage positioned at eye level, which exceeds human height (over the head). The information on signage is classified into body text and eyebrow. The body text is used to communicate the names of facilities or services in the library, while the eyebrow indicates place categories.

1. Eye-level signage (Figure 18)
   For signage positioned at eye level, with the body text formatted in title case, it is sized at x, whereas the eyebrow, displayed in uppercase, has a size of x/2. The spacing (leading) between the eyebrow and body text is precisely 1x the cap height of the body text.

Figure 18. Typographic System for Eye-level Signage
[Source: Calista, 2023]

2. Over-the-head signage (Figure 19)
   For over-the-head signage, where the body text is displayed in the title case, it is a size of x, while the uppercase eyebrow is a size of x/1.5. The distance between the eyebrow and body text is equal to 1x the cap height of the body text.

   The size variation of the eyebrow content between eye-level and over-the-head signage is intended to ensure optimal comfort and facilitate the legibility of the text.

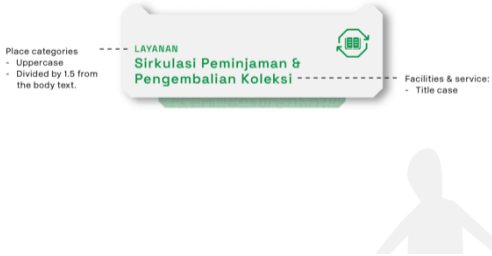


Figure 19. Typographic System for Over-the-head Signage
[Source: Calista, 2023]

4. Pattern
   Apart from being a decorative element, the pattern used in signage has a function to determine whether the informational content on the signage is flexible for expansion or not. If the information displayed on the signage is static and not subject to change or expansion, such as identification signs, then the signage will consist of two layers. The second layer, positioned after the content panel, will be filled with the Kawi script pattern. If the signage has the potential for content expansion, such as directional signs, the pattern panel will parallel the content panel. An example of the implementations can be seen in Figure 20.

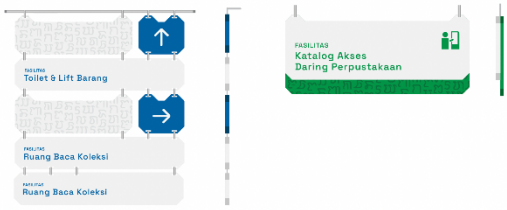


Figure 20. The Significance of Pattern Panels in Signage
[Source: Calista, 2023]

In the design of signage for the Indonesian National Library, various types of informational content must be conveyed, which inevitably leads to different signage sizes. For this reason, a formula is required to determine the dimensions of the pattern panel in signage with a dual-layer composition.

After specifying the size of the content panel, the pattern panel will be increased by an

additional 5 cm in height compared to the content panel. If the size of the content panel exceeds 50 cm, an additional 5.5 cm will be added to the pattern panel for optical adjustment purposes. At every multiple of 50 cm, the pattern panel will undergo an expansion by applying the formula of a + 5 cm + 0.5b. In this equation, 'a' denotes the size of the content panel, while 'b' represents the number of intervals. An illustration of the formula's implementation can be seen in Figure 21.

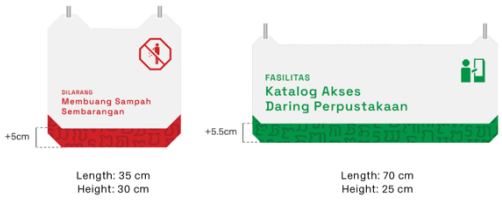


Figure 21. The Calculation System of Pattern Panel
[Source: Calista, 2023]

Subsystem

Once the signage needs have been finalized, the signage types are subdivided into subsystems and categorized according to the grouping of informational content.

1. Subsystem 1
   - Type A (Figure 22): This type is a large-sized directory. This directory type contains textual content, pictograms, and numbers (floor numbers) and can be found in the library lobby as the leading building directory.

Figure 22. Type A Directory Sign
[Source: Calista, 2023]

   - Type B (Figure 23): This directory type is placed inside elevators. As the space inside the elevator is tight-fitting, the type B directory is designed to be compact, featuring primarily text and numeric content (floor numbers) to maximize efficiency within the limited area.

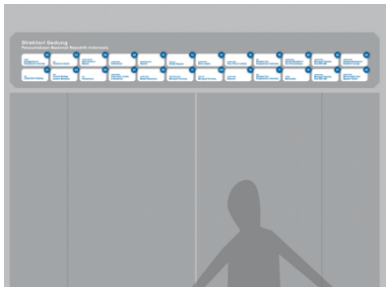


Figure 22. Type B Directory Sign
[Source: Calista, 2023]

   - Type C (Figure 23): This type is a digital media directory. This digital signage combines two types of signage: directory and identification sign.

Figure 23. Type C Directory Sign
[Source: Calista, 2023]

2. Subsystem 2
   Signage categorized under subsystem 2 has flexible informational content, such as directional signs. The directional signs are divided into four types, distinguished by the number of directions indicated.
   - Type A (Figure 24): This directional sign is used to navigate three directions. Essentially, this type indicates directions to various facilities and services on the same floor.

Figure 24. Type A Directional Sign
[Source: Calista, 2023]

   - Type B (Figure 25): The type B directional sign indicates only one direction. This type

is designed to display a single type of information, such as book call numbers.

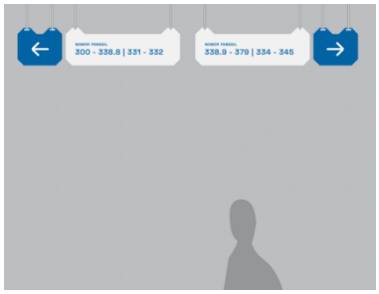


Figure 25. Type B Directional Sign
[Source: Calista, 2023]

- Type C (Figure 26): Similar to Type B, the Type C Directional sign is also used to indicate one type of information. However, the distinctive feature of this type compared to the previous one is found in the inclusion of a pictogram, which emphasizes the written facility information.

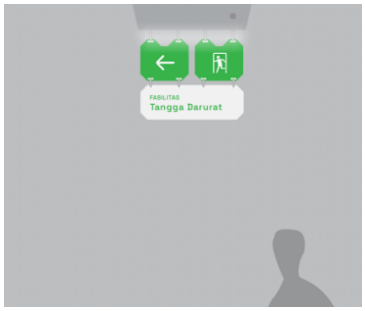


Figure 26. Type C Directional Sign
[Source: Calista, 2023]

- Type D (Figure 27): Unlike the three previously mentioned types, type D represents a directional sign in an interactive kiosk. With the presence of this interactive kiosk, visitors are not only assisted in finding their desired books, but it also provides directions to locate the books.

Figure 27. Type D Directional Sign
[Source: Calista, 2023]

3. Subsystem 3
   Subsystem 3 comprises signage featuring informational content that is both extensive and flexible. The types of signage included in this subsystem are regulation signs and identification signs.

   Identification sign

- Type A (Figure 28): This type of identification sign is used to identify the services and facilities provided within the Indonesian National Library. Identification sign type A incorporates textual information and pictograms in its content.

Figure 28. Type A Identification Sign
[Source: Calista, 2023]

- Type B (Figure 29): The type B Identification sign is used to identify the sections within a facility/service marked with numerical numbering. Consequently, the content presented by this type solely consists of numbers.

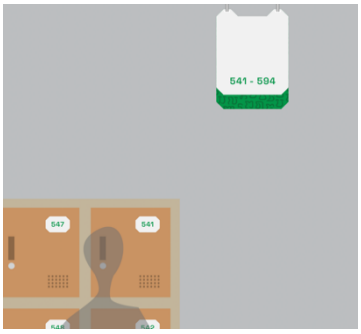


Figure 29. Type B Identification Sign
[Source: Calista, 2023]

Regulation sign

- Type A (Figure 30): This type of regulation sign communicates the library's general regulations. In type A, the content predominantly consists of text

accompanied by pictograms as supporting graphics.

Figure 30. Type A Regulation Sign
[Source: Calista, 2023]

- Type B (Figure 31): Regulation sign type B is used to communicate supplementary regulations regarding the facilities available at the library. Such regulations include rules for using escalators appropriately and instructions for proper use of the restroom facilities. In this type, the content predominantly consists of pictograms accompanied by explanatory text.

Figure 31. Type B Regulation Sign
[Source: Calista, 2023]

4. Subsystem 4 (Figure 32)
   Subsystem 4 is signage with multilevel informational content. The types of signage categorized under Subsystem 4 include interpretive signs, operation signs, and warning signs.

Figure 32. Interpretive, Operation, & Warning Sign
[Source: Calista, 2023]

5. Subsystem 5 (Figure 33)
   Subsystem 5 includes placemaking, which gives a distinctive image for each floor – creating space into place.

Figure 33. Placemaking
[Source: Calista, 2023]

Pictogram

Pictogram grid

The pictograms created in this design are built from the same grid that shapes the signage. Figure 34 demonstrates two parts within the grid used to compose the pictograms. The blue-colored grid represents the design area, whereas the black-colored grid section denotes the clear space area.

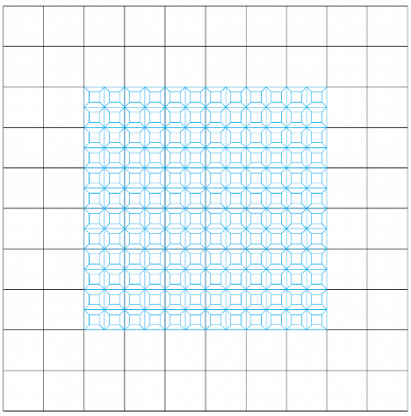


Figure 34. Pictogram Grid
[Source: Calista, 2023]

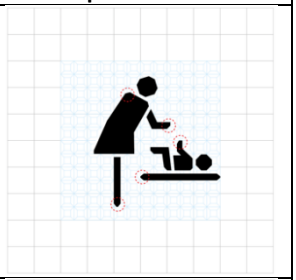
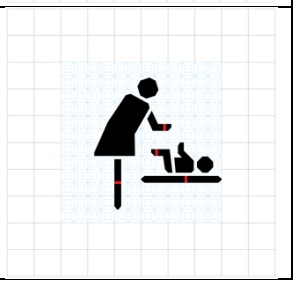
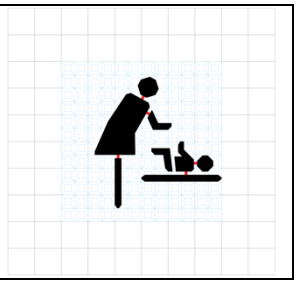
The pictograms designed for this library are divided into universal pictograms and project-specific pictograms (Figure 35). Custom pictograms depict the services and facilities provided by the Indonesia National Library.

Figure 35. (Up) Universal Pictogram, (Down) Project-specific Pictogram
[Source: Calista, 2023]

Characteristics of pictograms

To ensure consistency among the pictograms, the following characteristics are maintained during their arrangement, as presented in the table provided below:

Table 1. Characteristics of Pictograms
[Source: Calista, 2023]

Characteristic	Implementation
Sharp angles in pictograms are avoided by adding anchor points, thus creating shapes resembling the roofs of colonial architecture in Indonesia.	
x/2 represents the size of the shape with the thinnest thickness.	
x/4 is the measurement for negative space.	

Pictogram system

In signage, pictograms can be used either separately or combined.

1. The separate usage of pictogram
   The pictograms used separately are those used to depict informational content marked with the symbol of ampersand (&); the example can be seen in “Layanan Koleksi Budaya Nusantara & Eksekutif Lounge” (Nusantara Cultural Collection Services and Executive Lounge). To represent the following services, the chosen pictograms are the “Koleksi Budaya Nusantara” (Nusantara Cultural Collection) pictogram and the “Eksekutif Lounge” (Executive Lounge) pictogram. The symbol '&' will be replaced with a vertical line between the two pictograms. An illustration of this system can be seen in Figure 36.

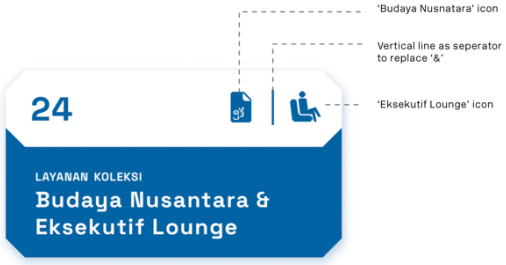


Figure 36. Separated Pictogram Usage Example
[Source: Calista, 2023]

The designated clear space defines the separation distance between the pictograms and the dividing line. If one grid has a size of x, then the distance between one pictogram and another is 4x, with a vertical line positioned at 2x from each pictogram (Figure 37).

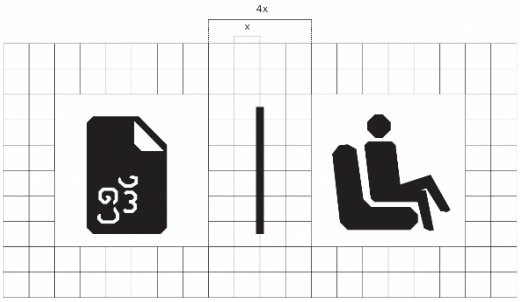


Figure 37. Clear Space Implementation
[Source: Calista, 2023]

2. The combined usage of pictograms
   In contrast to separate usage, the combined pictograms visualize a facility name formed by two words (Figure 38). Therefore, in this usage, the pictograms are not separated by a vertical line, and the clear space is omitted (Figure 39). The example can be seen in "Layanan Monograf Terbuka" ("Open Monograph Service"). The pictograms used will be those that can represent the words 'Monograf' and 'Terbuka' as in self-service.

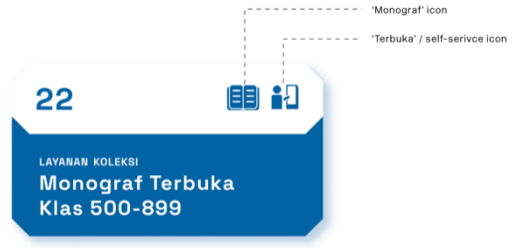


Figure 38. Combined Pictogram Usage Example
[Source: Calista, 2023]

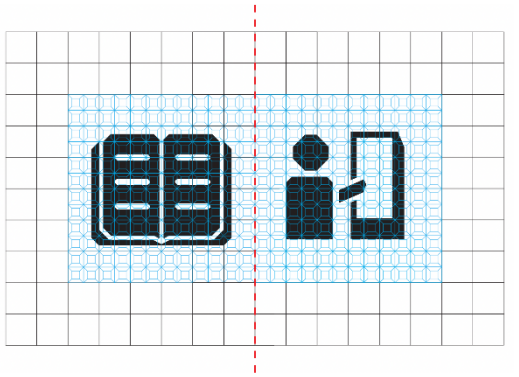


Figure 39. Omitted Clear Space
[Source: Calista, 2023]

3.3 Final Design Result

After completing the design process, the author had the opportunity to present (Figure 40) and showcase her work at the Indonesian National Library to Deputy I, Ms. Dra. Mariana Ginting, and her team, along with Deputy II, Mr. Dr. Adin Bondar, M.Si., and his team (Figure 41). After the presentation, the author received a positive response regarding the proposed design and signage system. The National Library team will proceed with further discussions to incorporate it into their planning to develop the library's signage design and system.

Figure 40. Mini Display at the Indonesian Nasional Library
[Source: Calista, 2023]

Figure 41. Documentation with the Deputy Officials of the Indonesian National Library
[Source: Calista, 2023]

4. CONCLUSION

By identifying several issues found in the existing signage and wayfinding design of The Indonesian National Library, it is concluded that a redesign that focuses on functionality and a representation of the identity of The National Library is needed.

Through the redesign proposal, the author concluded several conclusions. First, the

signage and wayfinding design adopts a more conceptual dimension by drawing inspiration from the essence and identity of the Indonesia National Library. Second, the design system is crucial in preserving identity, ensuring consistency, and maintaining environmental coherence. Lastly, in the design process for public environments or facilities, it is imperative to prioritize the needs and comfort of the users. Therefore, careful consideration and attention to these aspects are essential when making design decisions.

Signage and wayfinding design at the Indonesian National Library underscores the critical role that effective wayfinding systems play in enhancing the user experience and optimizing the environment's functionality. This research illuminates the significance of culturally sensitive and visually intuitive signage solutions through comprehensive study and analysis of the library's layout, user preferences, and cultural nuances.

The redesign proposal that the author had conducted had several limitations. The first limitation is the quantity of data gathered for the study. Second, the prototyping of the design on the actual site. Third, the design was revised after getting feedback from the board of the Indonesian National Library.

From these limitation, the author suggests several practical suggestions for others attempting to do similar design projects. First is to gather many data from different sources. The data can also be gathered through different means, such as observation, survey, interview, etc. Second is to try to prototype the design on the actual site. In doing so, designers can have a more actual impression and feedback on how the design perform. Third is to manage the design process to accommodate more time to revise the design after getting feedback.

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