

The Application of the *EGD* Design Process in *Environmental Graphic Design* for Pasar Baru Jakarta

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Abstract

Pasar Baru Jakarta, a historic commercial district established during the Dutch colonial period, has been officially recognized as a Cultural Heritage Area by the Provincial Government of DKI Jakarta. Despite its significant historical value and multicultural identity, the district currently faces several challenges, including the absence of an integrated *wayfinding* system, inconsistent visual *signage* elements, and ineffective communication of its heritage identity to visitors. This study seeks to design an *Environmental Graphic Design* (*EGD*) system to support the revitalization program of Pasar Baru Jakarta. This study employs the *EGD* Design Process proposed by Calori and Vanden-Eynden, which comprises three stages: Pre-Design, Design, and Post-Design. Data collection methods included field observations, visitor interviews, in-depth stakeholder interviews, competitor and comparator studies and expert validation. The findings indicate that the existing *EGD* elements do not constitute a coherent system owing to the lack of orientation *signage*, limited interpretive *signage*, and inconsistent visual standards. Based on these findings, a design concept entitled "Faces of Passer Baroe" was developed, incorporating the heritage architecture, multicultural identity, and colonial visual character of the district into an integrated-*signage* system. The final outputs encompass identificational, directional, orientation, regulatory, interpretive, and placemaking *signage* systems, along with an implementation guideline book titled "Passer Baroe: *Signage* and *Wayfinding* System Guidelines." Expert validation confirmed that the design was visually, materially, and technically suitable for implementation in an urban heritage district.

Keywords: *Environmental Graphic Design*, *EGD* design process, *signage*, *wayfinding*, Pasar Baru Jakarta.

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1. Introduction

Jakarta, a city that has evolved since the Dutch colonial era, boasts a rich array of historical heritage sites dispersed across various urban districts. Among the most iconic of these is Pasar Baru, formerly known as Passer Baroe, which is one of Jakarta's oldest commercial districts [1]. Situated on Pasar Baru Street in the Sawah Besar District of Central Jakarta, this district has existed since the tenure of Governor-General W. Daendels in the early nineteenth century.

The district's multicultural composition, encompassing Chinese, Indian, European, Betawi, and other ethnic communities, has rendered Pasar Baru a historically and culturally significant urban environment [2]. In 2022, the Provincial Government of DKI Jakarta officially recognized Pasar Baru as a cultural heritage district due to its architectural and historical importance [3]. It is currently part of the "Jakarta Living Heritage Triangle" revitalization initiative,

which seeks to enhance the heritage tourism and urban identity. However, field observations reveal that the existing visual communication system in the district has not optimally supported visitor experience. The absence of integrated *wayfinding* systems, inconsistent *signage* elements, and limited interpretive information regarding the district's heritage value have emerged as significant issues [3].



Figure 1. Pasar Baru Jakarta

Data on visitor behavior reveal that the majority of tourists allocate only two to three hours to their visit to the district, with recreational activities prevailing over cultural exploration [3]. This pattern suggests that the

spatial experience offered by the area has not sufficiently fostered a deeper engagement with the heritage environment. Within this framework, *Environmental Graphic Design (EGD)* assumes a strategic role in shaping orientation, identity, and spatial experiences through the integration of architecture, graphics, and visual communication.

Calori and Vanden-Eynden asserted that *Environmental Graphic Design (EGD)* integrates spatial communication with environmental identity to enhance user navigation and reinforce place branding [4]. Similarly, Gibson highlighted that effective *wayfinding* and *signage* systems can foster emotional connections between users and public spaces while augmenting the image of a district [5]. Prior research on the implementation of *EGD* in tourism and heritage contexts has demonstrated that integrated visual systems can bolster cultural identity and enhance the visitor experience [6].

Numerous studies have underscored the significance of *Environmental Graphic Design (EGD)* in facilitating spatial orientation and enhancing visual communication within public spaces. Research by Calista et al. elucidates that the efficacy of *signage* systems is contingent upon the consistency of visual elements, their strategic placement, and the integration between *signage* and the environmental context [6]. Razi and Lestari assert that the application of the *Signage Pyramid Method* aids in organizing information, graphics, and hardware systems into a cohesive environmental communication structure [7].

Furthermore, elucidated that *signage* serves not only as a navigational tool but also as a communicative medium capable of influencing user perception, emotional response, and spatial experience [8]. In heritage environments, contextual *signage* and *wayfinding* systems play crucial roles in conveying local identity and enhancing public space legibility.

This perspective is supported by the study conducted by Suwardana and Putra, which explains that sign systems function not only as directional media but also as representations of tourism area identity [9]. Their research further emphasizes that informative and contextually adapted *signage* systems play an important role in guiding visitors and improving spatial readability within public environments [9]. Consequently, implementing an integrated *Environmental Graphic Design (EGD)* system is essential to support both functional navigation and visual identity within heritage districts such as Pasar Baru Jakarta. In light of these considerations, this study aims to design an integrated *EGD* system for Pasar Baru Jakarta to support the district's revitalization program, reinforce its heritage identity, and enhance the spatial experience of visitors.

2. Methods

This study employs the *EGD Design Process*, as formulated by Calori and Vanden-Eynden, as the principal methodological framework. This process encompasses three interrelated phases: Pre-Design, Design, and Post-Design. The selection of this method is justified by its systematic integration of research, analysis, design development, and evaluation into a structured workflow pertinent to *Environmental Graphic Design* projects within the context of heritage revitalization.

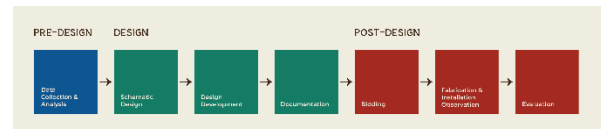


Figure 2. *EGD Design Process* by (Calori & Vanden-Eynden, 2015)

2.1 Pre-Design Phase

The Pre-Design phase focused on data collection and contextual analysis. Field observations were conducted to evaluate the existing visual communication system in Pasar Baru, employing visual audit principles and the *Signage Pyramid Method* [4],[5]. These observations included the documentation of *signage* elements, environmental conditions, and visitor movement patterns. Interviews were conducted with five visitors, aged between 20 and 30 years, to ascertain their perceptions, navigation challenges, and informational needs within the district. In-depth interviews were also conducted with stakeholders from the Pasar Baru Subdistrict Office to gain insights into revitalization objectives and heritage preservation issues. Furthermore, competitor and comparator analyses were performed by examining Braga Bandung and Little India Singapore, both of which are heritage districts that have successfully implemented integrated *Environmental Graphic Design* systems. Secondary data were sourced from journals, books, and government reports related to *Environmental Graphic Design*, heritage environments, and urban revitalization.

2.2 Design Phase

The Design phase focuses on the development of concepts and implementation of systems. A mind mapping technique was employed to identify keywords that encapsulated the district's character, cultural diversity, and heritage identity. Three alternative design concepts were formulated and visualized using mood boards, color palettes, and typographic explorations. These alternatives underwent evaluation via stakeholder interviews, culminating in the selection of the concept entitled "Faces of Passer Baroe." This concept was subsequently transformed into a comprehensive *Environmental Graphic Design (EGD)* system, which includes sign-type lists, symbol

systems, district zoning, sign location plans, graphic systems, typography, color systems, *pictograms*, and *signage* prototypes.

2.3. Post-Design Phase

The Post-Design phase encompassed expert validation conducted by an architectural specialist with expertise in heritage and public space design. This validation process assessed the visual appropriateness, material selection, construction feasibility, human-scale proportion, and effectiveness of the proposed *wayfinding* system within the context of the heritage district.

3. Results and Discussions

3.1 Existing Condition and Problem Formulation

Jakarta does not operate as a cohesive system. Various categories of *signage*, including identificational, directional, regulatory, and interpretive signs, were observed throughout the district; however, they exhibited inconsistencies in typography, color, material, and visual hierarchy. The most significant issue identified was the lack of orientation *signage*, such as district maps and "You Are Here" information points. Visitors primarily relied on Google Maps, TikTok, and local staff assistance for navigation. Interpretive *signage* conveying the historical significance of the district was notably limited, with only one heritage information sign identified during the observation. Interviews with visitors confirmed that most respondents encountered difficulties in navigating the district, particularly when seeking specific stores, thrift areas, or secondary circulation routes. Interviews with stakeholders further revealed that the current information system predominantly relies on digital QR codes linked to websites, while physical *signage* has yet to consistently represent the district's heritage identity.

Comparative analyses of Braga, Bandung, and Little India in Singapore reveal substantial disparities in the *wayfinding* quality. Little India features a multilingual and highly integrated *wayfinding* system, administered by the municipal government. Conversely, Braga achieves visual consistency through a unified approach to identificational *signage*. In contrast, Pasar Baru is characterized by a lack of visual standards, integrated zoning systems, and coherent *signage* hierarchy. These findings underscore the necessity of an integrated physical orientation system, consistent visual identity standards, interpretive *signage* that communicates heritage values, placemaking elements, and alignment with the government's revitalization initiatives.

3.2 Development of the "Faces of Passer Baroe" Concept

Through the application of mind mapping analysis, three design concepts were formulated to encapsulate the identity of Pasar Baru Jakarta. The first concept underscores the elegance inherent in heritage commerce, while the second is centered on a modern urban identity, drawing inspiration from contemporary branding strategies employed in Jakarta. The third concept, titled "Faces of Passer Baroe," highlights the district's multicultural identity and visual diversity. Following an evaluation by stakeholders, the third concept was selected because it most effectively encapsulated the authentic character of the district. This concept interprets Pasar Baru as a mosaic of "faces" shaped by colonial architecture, Chinese heritage structures, Indian cultural influences, Betawi ornaments, and the area's multicultural commercial activities.

The design implementation incorporated architectural arches, which are characteristic of the district, into the *signage*. Decorative patterns were extracted from the ornaments of heritage buildings and the Betawi "gigi balang" motifs. The color palette employed brown tones to signify historical identity, complemented by red, green, and blue accents inspired by Chinese, Indian, and European cultural influences, respectively. The typography selection included Hardtown for headlines and Montserrat for body text, achieving a balance between heritage and readability.

This approach aligns with the findings of Alfadly and Sari, who state that graphic design plays an important role in representing the identity and uniqueness of tourism destinations through visual communication elements [10]. Their study also explains that the integration of local cultural elements into visual communication media can strengthen destination identity and create distinctive visual experiences [10].

3.3 Implementation of the EGD System

The proposed *EGD* system was developed utilizing the *Signage* Pyramid Method, which comprises three components: information content, graphics, and hardware systems [4]. The classification of sign types encompasses six primary categories: identificational, directional, orientation, regulatory, interpretive signs, and placemaking elements.

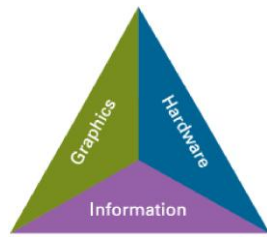


Figure 3. Signage Pyramid Model

The district is organized into three primary zones: textile commerce, culinary, and cultural zones. A bilingual Indonesian-English terminology system has been implemented to accommodate both domestic and international visitors. Based on the site analysis, *Environmental Graphic Design* elements were strategically distributed across the district to support visitor orientation, navigation, identification, and heritage interpretation. The placement of *signage* considers major access points, circulation routes, intersections, activity nodes, and significant heritage landmarks to ensure effective information delivery and spatial legibility throughout the area.

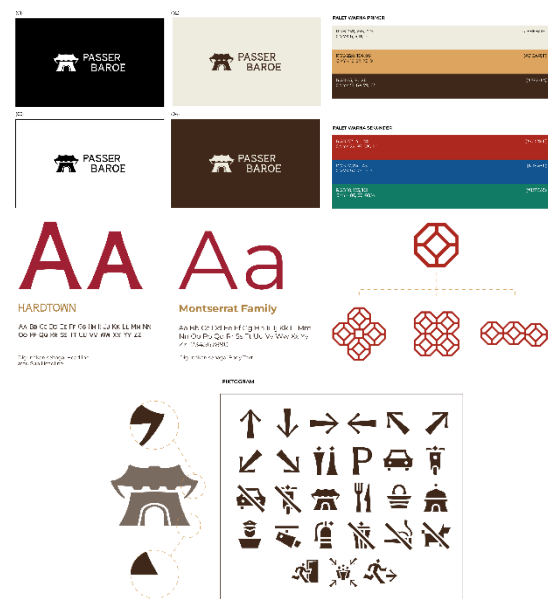


Figure 4. Proposed signage placement map.

Table 1. Sign Type List

A1	Entrance Gate
A2	Parking Type ID
A3	Street Name Sign
A4	Exit Parking ID
A5	Service ID
A6	Exit ID
B1	Parking Direction
B2	Directional
B3	Service Directional
C1	Area Map
C2	Floor Information
D1	Regulatory
D2	Assembly Point
D3	Regulatory
E1	Historical Panel
F1	Landmark
F2	Landmark

Figure 4 illustrates the proposed placement of *Environmental Graphic Design* elements throughout the Pasar Baru heritage district. Each sign type is positioned according to its communication function, ensuring a coherent *wayfinding* system while maintaining compatibility with the existing urban and heritage environment. To ensure consistency across all *Environmental Graphic Design* elements, a unified visual identity system was developed as the foundation of the proposed *wayfinding* and *signage* system. The visual identity translates the heritage character and multicultural values of Pasar Baru Jakarta into a cohesive set of graphic elements, including the logo, color palette, typography, *supergraphics*, and *pictogram* system. These elements serve not only as functional communication tools but also as visual representations of the district's unique cultural identity.

Figure 5. Logo, color palette, typography, *supergraphics*, and *pictogram* system of the proposed EGD concept.

The logo was developed as the primary visual representation of the *Faces of Passer Baroe* concept. Its form was inspired by the distinctive arch elements frequently found in Pasar Baru's heritage architecture, which have become one of the area's most recognizable visual characteristics. The arch motif was selected not only for its architectural significance but also as a symbol of connection, interaction, and cultural exchange that reflects the multicultural history of the district. Through the simplification of these architectural forms into a contemporary visual mark, the logo aims to communicate the identity of Pasar Baru while maintaining relevance to present-day audiences.

The color palette was derived from the visual characteristics of Pasar Baru's historic architecture, particularly the warm tones found in heritage shophouses, arcades, and ornamental details. These

colors were selected to reflect the district's historical atmosphere while maintaining visual harmony within the urban environment.

Typography selection considered both cultural expression and readability. Hardtown was utilized for headline applications to evoke a historical and nostalgic character aligned with the heritage identity of Pasar Baru, whereas Montserrat was selected for informational content due to its high legibility across various viewing distances and environmental conditions. According to Calori and Vanden-Eynden, visual consistency and readability are essential principles in creating effective environmental communication systems [4].

The *pictogram* system was developed through the simplification of architectural arch motifs commonly found throughout the district. This approach aligns with the role of graphic design in representing local identity through visual communication elements, as discussed by [10]. By translating architectural characteristics into a consistent symbol system, the *pictograms* function both as informational tools and as visual representations of place identity

The specific requirements of the indoor and outdoor environments guided the selection of materials and mounting systems. Ground-mounted systems were implemented for entrance gates and area maps, pole-mounted systems for directional *signage*, ceiling-mounted systems for parking signs, and pedestal-mounted systems for historical panels. The integration of *signage* forms with the surrounding architecture enhanced the visual relationship between the *Environmental Graphic Design (EGD)* system and the heritage environment.



Figure 6. *Environmental Graphic Design* implementation prototypes for Pasar Baru Jakarta.

3.4 Validation and Final Outputs

Expert validation confirmed that the proposed *Environmental Graphic Design (EGD)* system effectively aligns with the architectural characteristics of Pasar Baru Jakarta. The incorporation of architectural elements into *signage* has been deemed effective in reinforcing the district's identity. The proportions of the *signage* system were considered appropriate for the human scale, and the selected materials were suitable for long-term outdoor use. This research aligns with the findings of Sari and Dwitasari, who emphasize the importance of designing a professional and visually appealing sign system, supported by an efficient and integrated information system, as a strategy to enhance trust and positive perceptions among both internal and external stakeholders [11]. The final output of this study is a guideline book titled “Passer Baroe: *Signage* and *Wayfinding* System Guidelines,” which includes graphic systems, sign type lists, material specifications, construction details, and implementation examples. Additionally, a digital imaging video visualization was developed using Adobe After Effects to demonstrate the realistic implementation of the proposed *EGD* system in a district environment.

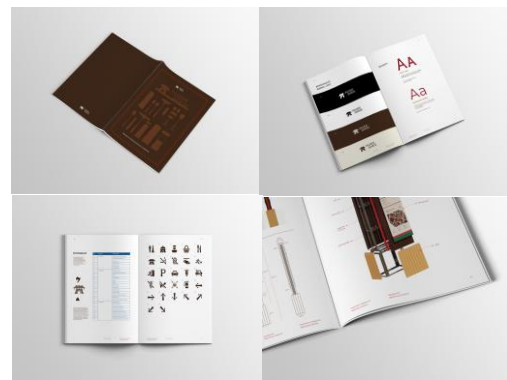


Figure 7. “Passer Baroe” *signage* and *wayfinding* guideline book.

4. Conclusions

The *Environmental Graphic Design (EGD)* project for Pasar Baru Jakarta exemplifies the application of the *EGD* Design Process, as proposed by Calori and Vanden-Eynden, to create an integrated visual communication system for a heritage commercial district. Through comprehensive research, visual audits, stakeholder interviews, comparative analyses, and design development, this study identified significant issues within the district, such as inconsistent *signage* elements, limited heritage information, and a lack of integrated orientation systems.

The implementation of the *EGD* Design Process culminated in an integrated *Environmental Graphic Design* system comprising identificational, directional, orientation, regulatory, interpretive, and placemaking *signage* elements, all tailored to the multicultural identity and architectural characteristics of Pasar Baru, Jakarta. This methodological application also facilitated the development of a more systematic, contextual, and functionally oriented visual communication system, enabling *signage* and *wayfinding* elements to operate cohesively within the environment.

The “Faces of Passer Baroe” concept translates the district’s heritage values into contextual visual elements through typography, color systems, ornament adaptation, *pictograms*, and *signage*. The final output of this study is a comprehensive *EGD* guideline book that provides visual, technical, and material implementation standards for the Pasar Baru Heritage Area. Expert validation also confirmed that the proposed design system is visually, technically, and materially appropriate for implementation in urban heritage environments.

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Name of Author	C	M	So	Va	Fo	I	R	D	W
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Dwitasari	✓	✓						✓	✓
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C : Conceptualization I : Investigation
M : Methodology R : Resources
So : Software D : Data Curation
Va : Validation W : Writing - Review

Fo : Formal analysis

Conflict of Interest Statement

The authors declare no conflicts of interest.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request. Certain interview and validation data are not publicly available because of privacy and research documentation considerations.

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