



## Development of E-Catalog Design as a Promotional Medium to Support Digital Transformation and Professional Certification for Batik Communities

Amalia<sup>1</sup>, Cinantya Paramita<sup>2</sup>, Dwi Nurul Izzhati<sup>3</sup>, Rudi Tjahyono<sup>4</sup>, Rodia Syamwil<sup>5</sup>, Nanda Dwi Febrian<sup>6</sup>, Adi Nugroho<sup>7</sup>

<sup>1,3,4,6,7</sup> Industrial Engineering Study Program, Faculty of Engineering, Universitas Dian Nuswantoro

<sup>2</sup> Informatics Engineering Study Program, Faculty of Computer Science, Universitas Dian Nuswantoro

<sup>5</sup> Lembaga Sertifikasi Profesi Batik Indonesia

Email: amalia@dsn.dinus.ac.id, cinantya.paramita@dsn.dinus.ac.id, dwi.nurul.izzhati@dsn.dinus.ac.id, rudi.tjahyono@dsn.dinus.ac.id, rodiasyamwil@mail.unnes.ac.id, 512202101567@mhs.dinus.ac.id, 512202101583@mhs.dinus.ac.id

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### Abstract

The Indonesian government is encouraging the digitalization of public procurement to strengthen the use of domestic products and services, including competency certification. The LSP Batik is a professional certification institution that assesses the competencies of batik artisans and communities. They face challenges due to limited digitalization and restricted access to certification information. This project aims to develop an e-catalog design for the certification schemes and to enhance the understanding of digital procurement. A Participatory Design approach was adopted, actively engaging both end-users and key stakeholders across all phases of the co-creation and evaluation process. The project culminated in the development of an e-catalog integrated with the government's e-procurement portal, designed to modernize the services of LSP Batik. The design evaluation yielded high suitability scores for illustration and contrast (100%), followed by the completeness of information (88%), and branding and clarity of information (75%). Furthermore, user assessment indicated a high degree of comprehension in product search functionality (100%), while understanding of product comparison (63%) and showcase development (50%) was moderate, suggesting areas for future improvement.



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## Introduction

The batik industry is part of the creative economy sector, encompassing cultural traditions, aesthetics, and economic value<sup>1</sup>. As a cultural heritage recognized by UNESCO, batik requires standardization and quality assurance to maintain product quality and enhance its competitiveness in both national and international markets. To produce high-quality batik products as a creative component of sustainable economic development capable of competing globally, the role of artisans with skills, creativity, and professional certification is essential<sup>2</sup>. Recognition is not only given to the products but also to the artisans, craftsmen, and workers for their knowledge, skills, and attitudes through professional certification. Batik education and competency certification play a crucial role in ensuring the quality and competence of human resources as well as the batik industry in Indonesia<sup>3</sup>.

Professional certification holds a strategic role in supporting the development of the batik industry in Indonesia. The Batik Professional Certification Institute (LSP) P3 Batik is a certification body licensed by the National Professional Certification Agency (BNSP). It ensures the competence of human resources in the batik sector, aligning with the Indonesian National Work Competency Standards (SKKNI), to produce batik products that meet market demands. As of 2024, LSP has certified 17,412 batik professionals in 296 regions across Indonesia. In conducting certification, LSP Batik has partnered with various government and non-government institutions. Government partners include the Ministry of Tourism and Creative Economy (Kemenparekraf), the Industrial Human Resource Development Agency (BPSDMI) of the Ministry of Industry, BNSP of the Ministry of Manpower and Transmigration, the Ministry of Education, Culture, Research, and Technology, the Central Java Provincial Industry and Trade Office, the Cooperatives and SMEs Office, the Central Java Education Office, and others.

As digital technology advances, all areas of corporate administration and operations, including the procurement of goods and services, must transition from

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<sup>1</sup> A. Bakhtiar, Sriyanto, and Amalia, "Analisa Faktor-faktor yang Mempengaruhi Pengembangan Kreativitas Industri Kerajinan Batik," *J@TI Jurnal Teknik Industri* 4, no. 1 (2012): 23-34, <https://doi.org/10.12777/jati.4.1.23-34>

<sup>2</sup> M. Rosyada and T. Tamamudin, "Pengembangan Ekonomi Kreatif Batik Tulis Kota Pekalongan Sebagai Upaya Pelestarian Budaya dan Peningkatan Pendapatan Masyarakat," *Darmabakti : Jurnal Pengabdian Dan Pemberdayaan Masyarakat* 1, no. 2 (2020): 41-50, <https://doi.org/10.31102/darmabakti.2020.1.2.41-50>.

<sup>3</sup> R. Syamwil, A. Amalia, A. Atika, and S. Sawitri, "Batik Education and Competency Certification in Indonesia," In: *VEIC 2020: Proceedings of the 2nd Vocational Education International Conference, VEIC 2020, 27th August 2020, Semarang, Indonesia*. European Alliance for Innovation, (2021):. 162, <https://doi.org/10.4108/eai.27-8-2020.2305782>; A. P. Siregar, A. B. Raya, A. D. Nugroho, F. Indana, I. M. Y. Prasada, R. Andiani, T. G. Y. Simbolon, and A. T. Kinasih, "Upaya Pengembangan Industri Batik di Indonesia," *Dinamika Kerajinan Dan Batik: Majalah Ilmiah* 37, no. 1 (2020), <https://doi.org/10.22322/dkb.v37i1.5945>; S. Suranto, R. Pratiwi, N. Nurgiyatna, A. Pratiwi, and R. A. Rahman, "Model Pemasaran Batik Berbasis Digital Industri Kreatif di Indonesia," *AKSES: Jurnal Ekonomi Dan Bisnis* 18, no. 1 (2023): , <https://doi.org/10.31942/akses.v18i1.8592>

conventional to digital methods. Batik product marketing can be enhanced through social media, online marketing, and digital product catalogs, which have proven to boost sales<sup>4</sup>. Not only products but also service offerings can be streamlined using technology, such as the digitalization of certification processes and the online promotion of certification services. Several web-based applications have improved certification process efficiency with features like online registration, status tracking, and automated assessment<sup>5</sup>. Digitalization in certification and marketing serves as a strategic step to support the transformation of the batik industry towards a more modern and sustainable ecosystem.

Beyond general web-based marketing by product/service providers, there is another strategy for government procurement of goods and services. The management of state finances through procurement is overseen by the Government Procurement Policy Agency (LKPP), and based on Presidential Instruction No. 2 of 2022, the implementation of an electronic catalog (e-catalog) is necessary to promote the use of domestic products and SMEs in government spending<sup>6</sup>. The government, particularly the Ministry of Tourism and Creative Economy, a key partner of LSP Batik, has expressed its commitment to accelerating the registration of creative economy SMEs and certification services in the government e-catalog.

Digitalization will be a strategic move to support the growth of the batik industry and strengthen LSP Batik's presence by implementing digital procurement through the e-catalog. The adoption of e-catalogs presents opportunities for partnerships and serves as a strategic approach to supporting SME growth and improving government procurement practices. This initiative enhances efficiency, transparency, and competitiveness in procurement processes, including identifying and preventing fraud in tenders<sup>7</sup>. However, challenges remain in its implementation, such as digital technology adoption, transparency, and administrative requirements. Additionally, e-catalog implementation is still limited due to a lack of information<sup>8</sup>. The development of this system requires leadership commitment, change management, and adequate

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<sup>4</sup> S. Suranto, R. Pratiwi, N. Nurgiyatna, A. Pratiwi, and R. A. Rahman, "Model Pemasaran Batik Berbasis Digital Industri Kreatif di Indonesia,"

<sup>5</sup> W. E. Sari, R. Ahmad, and F. Faisyal, "Aplikasi Pendaftaran Uji Sertifikasi Kompetensi Keahlian Pada Lembaga Sertifikasi Profesi Berbasis Web," *Jurnal Rekayasa Teknologi Informasi (JURTI)* 7, no. 2 (2023), <https://doi.org/10.30872/jurti.v7i2.13569>; R. E. Putra, D. V. Wijanarko, S. Usodoningtyas, and J. Singke, "Pengembangan Aplikasi Sertifikasi Online untuk Menguji Kompetensi Mahasiswa UNESA," *Journal of Information Engineering and Educational Technology* 3, no. 2 (2019), <https://doi.org/10.26740/jieet.v3n2.p90-96>

<sup>6</sup> A. Prikustiawan and Priyanto, "Analisis Kebijakan Pengadaan Barang Atau Jasa Melalui E-Katalog Lokal Pengembangan UMKM Kota Surabaya," *Soetomo Magister Ilmu Administrasi Jurnal* 1, no. 2 (2023): 177-184

<sup>7</sup> G. Andriana, "Penerapan E-Procurement Pengadaan Barang/Jasa Pemerintah terhadap Identifikasi Persekongkolan Tender," *Jurnal Suara Hukum* 3, no. 2 (2021): 351-381.

<sup>8</sup> M. Iqbal, "Pengaruh Pelaksanaan E Katalog dalam Pengadaan Barang/Jasa Pemerintah Terhadap UMKM," *JURNAL USM LAW REVIEW* 3, no. 1 (2020), <https://doi.org/10.26623/julr.v3i1.2204>; A. Kristianto, "Negosiasi Harga e-Purchasing Katalog Dalam Pengadaan Barang/Jasa Pemerintah," *Jurnal Pengadaan Barang/Jasa* 1, no. 1 (2022): [Halaman], <https://doi.org/10.55961/jpbj.v1i1.14>

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infrastructure<sup>9</sup>.

Currently, professional batik certification services are still conducted conventionally, often consuming excessive time, cost, and effort. Manual processes require physical documents, face-to-face coordination with partners, inefficient time management, and potential administrative errors. These factors hinder LSP Batik from efficiently expanding certification processes. The primary objectives of this community service initiative are (1) designing an e-catalog interface for batik certification services and (2) providing an understanding of digital procurement through the e-catalog to LSP Batik via outreach activities. Through this community service program, the design and implementation of an e-catalog for LSP Batik are expected to support the transformation and acceleration of digital procurement in batik professional certification services.

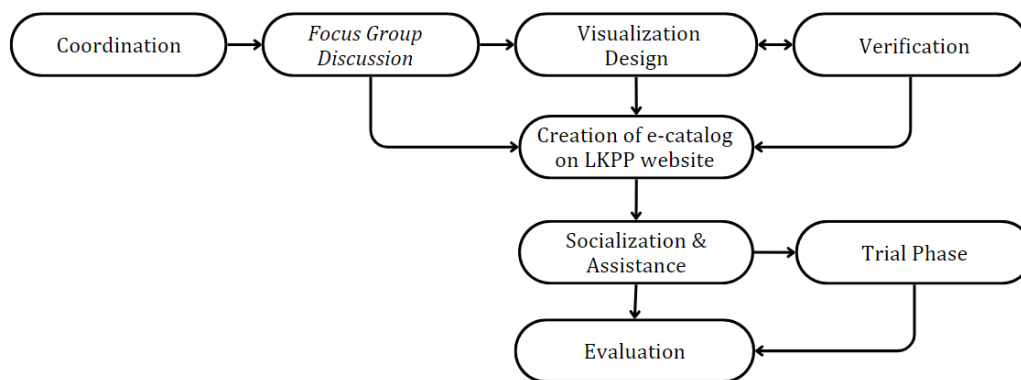
Previous studies have predominantly emphasized the use of websites as digital platforms for promotion and marketing activities. At the same time, the application of e-catalog systems has primarily been confined to tangible product listings. There remains a notable paucity of research addressing e-catalog development for service-oriented sectors, particularly certification services, with a focus on batik certification. This is despite the recent issuance of government regulations mandating the inclusion of both goods and services within the national e-catalog framework. Moreover, the absence of user-centered design approaches in current e-catalog research and practice highlights a critical gap in ensuring usability and accessibility for diverse user groups. This study seeks to fill these gaps by introducing a user-centered e-catalog design framework tailored explicitly for certification services.

## Method

The target of this community service program is LSP P3 Batik, located in Semarang. The community service activities are conducted over a period of five months in 2024. The implementation of activities follows several stages, as illustrated in Figure 1, as follows:

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<sup>9</sup> A. Djojosoekarto, *E-Procurement di Indonesia, Pengembangan Layanan Pengadaan Barang dan Jasa Pemerintah Secara Elektronik* (Jakarta: Partership Kemitraan dan LPSE Nasional, 2008); A. Asprianto, S. Alam, and Z. Larisu, "Penerapan Digitalisasi dalam Pengadaan Barang dan Jasa pada Sekretariat Daerah Kota Kendari," *Publica : Jurnal Administrasi Pembangunan Dan Kebijakan Publik* 12, no. 1 (2021), <https://doi.org/10.33772/publica.v12i1.15020>



*Figure 1.* Flowchart of LSP Batik's E-catalog Implementation

The implementation of this community service project was carried out through several interrelated stages following the Participatory Design (PD) approach, which emphasizes collaboration and co-creation between the project team and the partner institution, LSP Batik. The process began with coordination meetings to discuss the technical aspects of the activities, including duration, role distribution, and participation mechanisms between the team and the partners. This coordination ensured that all parties had a shared understanding of the project objectives and expected outcomes.

Subsequently, a Focus Group Discussion (FGD) was conducted to explore the specific needs of LSP Batik related to the e-catalog design. The discussion covered the institution's requirements, including scheme types, descriptions, and pricing structures, as well as applicable procurement policies and the supporting documents and infrastructure necessary for e-catalog development. Insights from this stage were used as the basis for the co-design phase, where the team and the LSP collaboratively developed the initial catalog visualization using Canva. This stage embodied the participatory principle of involving users directly in the design creation process.

After the initial design was completed, LSP Batik conducted data and design verification to ensure that all content and layout elements met institutional and procurement requirements. The verified e-catalog design was then uploaded into the official LKPP e-procurement portal (<https://e-katalog.lkpp.go.id/>), following the prescribed data entry fields and format. To support implementation and capacity building, the team organized sessions on socialization and assistance aimed at improving the partners' understanding of digital procurement processes and e-catalog management.

A trial phase was carried out by placing a test order for certification services through the registered e-catalog. This stage simulated real procurement transactions and was followed by the actual implementation of competency certification by LSP Batik in collaboration with government partners. Finally, a comprehensive evaluation was conducted to assess the overall effectiveness of the community service program. Feedback was collected from LSP Batik, the primary user, to measure satisfaction, identify challenges, and formulate recommendations for improving future digital

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transformation initiatives. Through these iterative and collaborative steps, the project ensured that every stage of the e-catalog development process reflected the needs, participation, and ownership of the partner institution, consistent with the core principles of the Participatory Design (PD) methodology. PD is defined as the involvement of both designers and intended end users in a cooperative design process<sup>10</sup>, and is engaged through multiple stages of a design process<sup>11</sup>

## Result

In general, the community service program for creating an e-catalog of competency certification was implemented in 2024 for occupational schemes owned by LSP Batik. The creation and development of a catalog design, based on the results of the FGD and the needs of the LSP, align with the requirements set by the government, particularly those of the Ministry of Tourism and Creative Economy. The FGD implementation involved several meetings, both offline and online, to determine priority needs, catalog visualization, and the information to be displayed in the product/service display case. The creation of the e-catalog design refers to the announcement of the Ministry of Tourism and Creative Economy, as indicated in No. PEM/3/PA.03/S/2024 concerning the inclusion of goods/services in the sectoral catalog of the Professional Competency Certification Service Product Showcase in the Tourism and Creative Economy Sector, including product information and requirements for the inclusion of goods/services.

The requirements for listing goods/services include: (a) agreeing to the terms and conditions for conducting business activities; (b) complying with the applicable regulations for business operations (KBLI No. 74321); (c) possessing a Taxpayer Identification Number (NPWP) with valid taxpayer status; (d) not being listed on the blacklist; (e) providing information on the unit price offered/price structure; and (f) uploading unit price information in the Price Supporting Documents section. The cost or price structure is determined based on the components of competency test fees, transportation, and accommodation in specific regions. The price structure calculation process follows the policy set by the head of LSP and references the Standard Cost Input for the 2024 Fiscal Year. In this program, the targeted areas are Central Java and the Special Region of Yogyakarta.

The LSP was assisted in creating designs for visualizations of the certification service showcase's design using Canva Pro for 18 schemes (Figure 2), namely (1) batik

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<sup>10</sup> T. J. Willmott, D. J. Schmidtke, and S. McLeod, "Editorial: Nothing about us without us: participatory design application in social marketing," *Journal of Social Marketing* 14, no. 2 (2024), <https://doi.org/10.1108/JSOCM-04-2024-281>;

<sup>11</sup> P. Wacnik, S. R. Daly, and A. Verma, "Participatory design: a systematic review and insights for future practice," *Design Science* 11 (2025), <https://doi.org/10.1017/dsj.2025.10009>

motif drafter; (2) batik fashion designer; (3) manual batik motif designer; (4) hand-written batik maker; (5) stamped batik maker; (6) wax mixer; (7) synthetic color mixer; (8) synthetic color dyer; (9) natural color mixer; (10) natural color dyer; (11) batik wax remover; (12) hand-drawn canting maker; (13) stamped canting maker; (14) computer batik motif designer; (15) industry manager; (16) batik engineering and equipment engineer; (17) batik industry waste manager; and (18) batik craftsman. The design development considers several factors: (a) visual identity; (b) visual aesthetics, including appropriate color selection, photos/illustrations, contrast, and readable typography; (c) design consistency; and (d) a clear and well-organized information structure. For each occupational certification scheme, an image is displayed above with elements relevant to the scheme being offered.

Socialization and guidance are provided to offer insight into the stages of creating a showcase on the digital procurement application. Starting from logging into the LSP account as a registered supplier or provider of goods/services. Subsequently, add a product showcase by following the steps that include fields based on the KBK, category, product showcase name, product showcase code, product type, and pricing formation structure established by LSP Batik. LSP Batik partners are socialized, and administrators overseeing the e-catalog account receive rigorous mentoring. The showcase is being developed using the e-catalog version 5.0 in stages from July to September 2024.

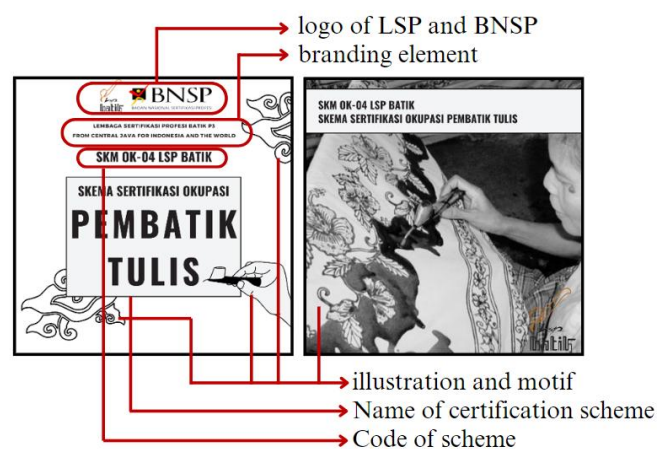
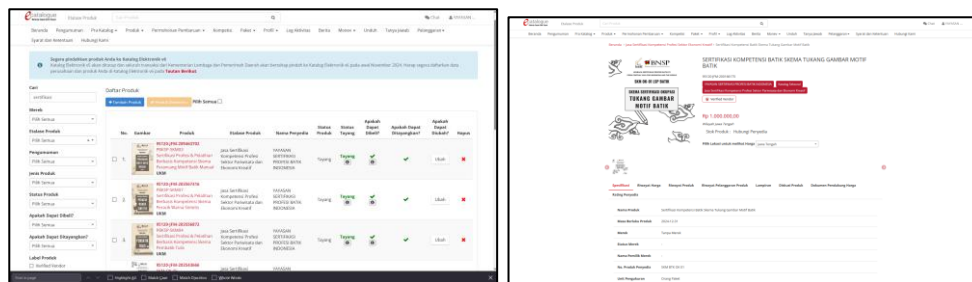


Figure 2. Design Composition in The Showcase Visualization of Hand-Written Batik Maker (*Pembatik Tulis*) Scheme



*Figure 3. Socialization and Guidance on Procedures of E-catalog Usage Processes*



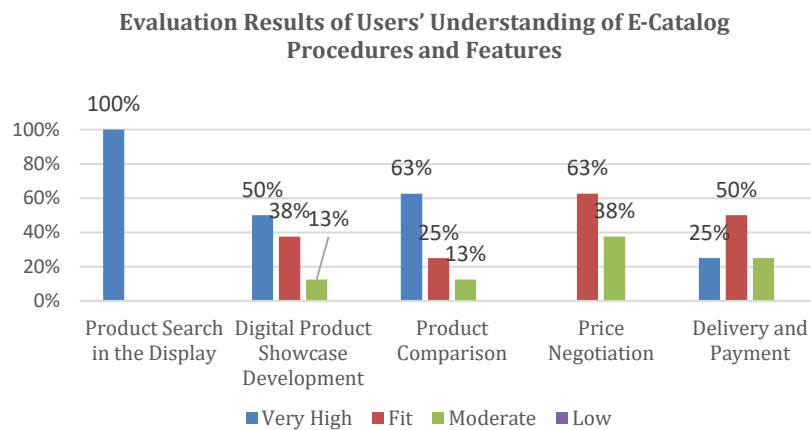
*Figure 4. Example of Product/Services Showcase of Batik Competency Certification on Government Procurement Website*

The initial trial focused on the ordering process for competency certification examinations for Batik Communities or Workers in the Special Region of Yogyakarta. It involved two occupational certification schemes: hand-drawn batik artisan and batik motif designer. The second implementation was conducted in collaboration with the Tourism Office of Kalimantan, aiming to certify batik artisans, communities, or workers across the Kalimantan region. The evaluation of the e-catalog project, the assessors, and the management of LSP Batik as sample providers and e-catalog users.

*Table 1: Evaluation of e-catalog Design Visualization*

Aspect of Evaluation	Very suitable	Suitable	Quite Suitable	Less Suitable	Not suitable
Color	13%	62%	25%	0%	0%
Typography	63%	37%	0%	0%	0%
Illustration	100%	0%	0%	0%	0%
Branding	75%	25%	0%	0%	0%
Contrast	100%	0%	0%	0%	0%
Completeness Information	88%	12%	0%	0%	0%
Clarity of Information	75%	25%	0%	0%	0%

In Table 1, the evaluation results for the color aspect show that 12.5% of users rated it as very appropriate, 62.5% as appropriate, and 25% as moderately appropriate. For the typography aspect, 62.5% rated it as very appropriate and 38% as appropriate. In terms of illustration, all users (100%) rated it as very appropriate. Regarding the visual branding aspect, 75% of users rated it as very appropriate and 25% as appropriate. In contrast, 100% of users stated it was very appropriate. Based on the completeness of the information provided, 88% of users stated it was very appropriate, while the remaining 13% considered it appropriate. Clarity of information was also rated highly, with 75% of users indicating it was very clear and 25% saying it was clear. Overall, 96.43% of users strongly agreed or agreed with the design of the display. The evaluation results show that the e-catalog design has met the technical, aesthetic, and content requirements needed by the Batik LSP. This e-catalog has strong potential to serve as a more transparent and efficient medium for service procurement.



*Figure 5. Evaluation of e-catalog Procedures and Features*

The Batik LSP also gained understanding of the procedures for creating product showcases—50% stated they had a very high level of understanding, 37.5% had a fit-to-understanding level. In comparison, 12.5% still had a limited or moderate understanding. A total of 62.5% were able to use the e-catalog to compare products. Meanwhile, 62.5% can understand the negotiation process, though 37.5% have a moderate understanding. Regarding shipping and payment, 25% of respondents stated they had a very high understanding, while 50% said they could understand.

The implementation of certification resulting from digital procurement through the e-catalog is shown in Figure 6.



Figure 6. Certification for Batik Communities (a) DIY Yogyakarta; and (b) Samarinda

## Discussion

A community service program focused on the development of an e-catalog design for 18 competency certification schemes offered by the Batik Professional Certification Institute (LSP Batik). This initiative is part of a digital solution designed to meet the transformation needs in delivering certification services. The evaluation of the e-catalog design development shows that implementing a digital catalog system for the LSP Batik has positively impacted both functionality and user perception. The evaluation results in Table 1 show that the developed e-catalog design effectively met user expectations in both aesthetic and functional aspects. One study of fishermen's e-catalog using User Centered Design found positive usability scores<sup>12</sup>. Research demonstrates that aesthetic design significantly increases user satisfaction and task performance<sup>13</sup> and that visual design variables, including color, do influence user perceptions as intended<sup>14</sup>. Masoud & Sajjad (2020) found "colorfulness" was the least essential aesthetic factor compared to craftsmanship, simplicity, and diversity. In this project result, most users rated the color selection and overall visual identity as appropriate and consistent with the cultural values of batik<sup>15</sup>. This reflects the success of the participatory design approach, where users directly contributed to design decisions.

High satisfaction levels were also observed in typography, illustration, and visual branding, indicating that the chosen design elements enhanced readability, visual appeal,

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<sup>12</sup> M. F. A. Nasrullah, R. Yulius, M. S. Nizan, S. Handayani, and B. Failasuf, "E-Catalog Promotion of Fishermen Business Group with User Centered Design Method," *JISA (Jurnal Informatika Dan Sains)* 7, no. 1 (2024); <https://doi.org/10.31326/jisa.v7i1.2014>

<sup>13</sup> C. Miller, "Aesthetics and e-assessment: the interplay of emotional design and learner performance," *Distance Education* 32, no. 3 (2011), <https://doi.org/10.1080/01587919.2011.610291>

<sup>14</sup> D. R. Peak, V. R. Prybutok, G. Michael, Y. A. Wu, and C. Xu, "User Perceptions of Aesthetic Visual Design Variables within the Informing Environment: A Web-Based Experiment," *Informing Science: The International Journal of an Emerging Transdiscipline* 17 (2014), <https://doi.org/10.28945/1933>.

<sup>15</sup> R. N. Masoud and S. Sajjad, "Analyzing the effects of visual aesthetic of Web pages on users' responses in online retailing using the VisAWI method," *Journal of Research in Interactive Marketing* 14, no. 4 (2020); <https://doi.org/10.1108/JRIM-11-2018-0147>

and institutional recognition across digital platforms. Similarly, the information-related aspects—completeness and clarity—received strong evaluations, confirming that the collaborative process successfully addressed users' needs for accessible and accurate certification data. Overall, 96.43% of users agreed or strongly agreed with the design quality, demonstrating that participation throughout the design cycle improved usability, satisfaction, and user ownership. The e-catalog not only fulfills technical and aesthetic standards but also strengthens transparency and efficiency within the certification process. In a broader sense, these findings reaffirm the potential of participatory design as an effective strategy for advancing digital transformation in public services, integrating cultural identity with modern functionality—particularly within Indonesia's creative industries such as batik.

The evaluation results show an increase in knowledge and information regarding digital procurement and the procedures for creating product showcases. Based on the evaluation shown in Figure 5, after the socialization session, there was an improvement in the understanding of digital procurement among the Batik LSP. Following the training session, all members of LSP Batik demonstrated the ability to search for products within the e-catalog showcase, showing a significant improvement in digital literacy and operational familiarity with the platform. This progress reflects the success of the participatory approach, which emphasized hands-on engagement and collaborative learning throughout the process. Furthermore, participants reported increased knowledge of procedures for creating product showcases, with 50% indicating a very high level of understanding, 37.5% adequate understanding, and only 12.5% moderate comprehension. This suggests that the training materials and practice sessions were generally effective in transferring practical skills. Similarly, 62.5% of participants were able to use the e-catalog for product comparison, demonstrating the system's usability and accessibility. In terms of negotiation, shipping, and payment processes, more than half of the participants achieved adequate understanding, though a portion (37.5%) still showed moderate familiarity. This finding highlights the need for continued mentoring and advanced sessions focusing on procurement transaction mechanisms. Overall, the program successfully strengthened LSP Batik's digital procurement capacity, supporting broader efforts toward digital transformation in competency certification services.

The designed e-catalog is not only intended to facilitate access to service information but also to support efficiency, transparency, and accountability in the procurement process, in line with government policies on digitalization. This activity supports the government's program to accelerate digital transformation. This aligns with the development of e-catalogs for small and medium enterprises (SMEs) in Indonesia, which aim to enhance digital marketing strategies and contribute to economic growth. E-catalogs have been successful in increasing product visibility, simplifying marketing processes, and improving operational efficiency<sup>16</sup>. Implementation of e-catalogs has led

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<sup>16</sup> D. A. Pratiwi, D. Abidah, F. H. Ilhami, F. Husna, N. A. F. Farida, M. P. Ariyanti, S. L. Munawaroh, W.

to increased transactions, with one study reporting a 30% rise<sup>17</sup>. These digital tools are particularly beneficial for SMEs in the fashion industry, helping to promote Indonesian culture through products like batik<sup>18</sup>. The adoption of e-catalogs aligns with government initiatives to accelerate digital transformation and reduce corruption in procurement processes<sup>19</sup>.

The development of the Batik LSP e-catalog is a strategic step aligned with government policy in promoting digital transformation in the procurement of goods and services, as stated in Presidential Regulation No. 16 of 2018 concerning government procurement of goods/services. Based on the trial implementation of the e-catalog through LKPP, the Batik LSP received a certification trial order from the Yogyakarta Tourism Office for 25 packages of hand-drawn batik scheme and 25 packages of manual batik motif designer scheme. Additionally, they also received another order from the Kalimantan Tourism Office for 50 packages of hand-drawn batik schemes and 25 packages of batik motif drafter schemes. The implementation of certification resulting from digital procurement through the e-catalog is shown in Figure 6. This indicates that the e-catalog has been successfully implemented and has aligned the LSP with its professional certification service partners, particularly government institutions. It also opens up the possibility for certification service information and offerings to be made publicly accessible to all segments of the batik community, including batik associations, MSMEs, educational institutions, and other batik artisans.

Through a collaborative and participatory approach with LSP Batik, the program has enhanced LSP's understanding and capacity in utilizing information technology and strengthened the trust of LSP partner institutions in delivering professional certification services. Through the e-catalog, the LSP Batik believes it can provide easier access to information related to the certification schemes being offered. Efficiency refers to the ability to save time, costs, and resources in the digital procurement process. Digital procurement can minimize the time needed for ordering, as it is conducted online. This aligns with studies on e-catalog implementation, which show that digital procurement is

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Putri, and A. J. Afandi, "Pengembangan Usaha Mikro Kecil Menengah Melalui Pembuatan E-Katalog Di Kerajinan Tenun Ikat Medali Mas Bandar Kidul Kota Kediri," *Welfare : Jurnal Pengabdian Masyarakat* 2, no. 4 (2024), <https://doi.org/10.30762/welfare.v2i4.1755>; S. A. A. Zahra, A. B. Remalya, and L. S. Rahmatin, "Pembuatan E-Katalog Sebagai Media Promosi Digital UMKM Warga RW 03 Kelurahan Manyar Sabrangan," *Jurnal AbdiMas Nusa Mandiri* 7, no. 1 (2025), <https://doi.org/10.33480/abdimas.v7i1.5836>

<sup>17</sup> D. A. Pratiwi, D. Abidah, F. H. Ilhami, F. Husna, N. A. F. Farida, M. P. Ariyanti, S. L. Munawaroh, W. Putri, and A. J. Afandi, "Pengembangan Usaha Mikro Kecil Menengah Melalui Pembuatan E-Katalog Di Kerajinan Tenun Ikat Medali Mas Bandar Kidul Kota Kediri,"

<sup>18</sup> N. S. Prameswari, M. Krisnawati, P. B. Widagdo, and K. H. Luthfia, "Desain E-Katalog UMKM Fesyen "Womanpreneur Community" Surakarta dalam Transformasi Ekonomi Digital," *Fashion and Fashion Education Journal* 12, no. 2 (2023), <https://doi.org/10.15294/ffej.v12i2.74315>

<sup>19</sup> K. Setyowati, S. G. Prakoso, I. H. Utomo, H. Parwiyanto, R. Suryawati, R. A. Nugroho, P. Susiloadi, and S. Santoso, "E-Catalogue Utilization Counseling for Small and Medium Enterprises Association in Surakarta City," *Dinamisia : Jurnal Pengabdian Kepada Masyarakat* 7, no. 6 (2023), <https://doi.org/10.31849/dinamisia.v7i6.15377>

faster compared to conventional methods<sup>20</sup>. In addition, through digital procurement, LSP Batik can simplify manual processes that require physical documents or face-to-face meetings, which could potentially incur additional costs. Simplifying these manual processes can reduce expenses and positively impact the effectiveness and satisfaction of service providers<sup>21</sup>. Nonetheless, current technology still allows for virtual face-to-face meetings via online platforms. Procurement becomes more transparent with open access to information related to service offerings, providers, and pricing. Furthermore, every transaction and procurement activity is traceable and recorded, making supervision and auditing easier. With digital procurement, all activities are recorded, ensuring a clear and accountable trail for all parties involved. Transparent documentation and reporting enable objective monitoring and evaluation of the procurement process, thereby increasing public trust in the LSP Batik.

## Conclusion

This community service program focused on designing an e-catalog for 18 competency certification schemes offered by the Batik Professional Certification Institute (LSP). This initiative is part of providing a digital solution aligned with the transformation needs in the procurement of certification services. The designed e-catalog not only facilitates access to service information but also supports efficiency, transparency, and accountability in the procurement process, aligning with government policies on digitalization. This activity supports the government's program in accelerating digital transformation efforts. Through a collaborative and participatory approach with the Batik LSP, the outcomes of this program have enhanced the LSP's understanding and capacity in utilizing information technology, while also increasing the trust of the LSP's partner institutions in delivering competency certification services. Some of the conclusions drawn from this community service activity program are as follows: (a) a design for the certification scheme showcase's visualization should take into account visual identity, visual aesthetics, design consistency, and information structure; (b) the creation and use of e-catalogs requires knowledge, proficiency, and preparedness in using information technology; and (c) this activity supports the government's program in an effort to accelerate digital transformation.

During the trial phase, the use of the e-catalog with partner institutions collaborating with the LSP was not yet fully implemented. Its effectiveness reached only around 20–30%. This was due to several factors, including technological infrastructure

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<sup>20</sup> D. Ariesta, "Efektivitas Pengadaan Barang dan Jasa Melalui E-Catalogue di Kecamatan Kebayoran Lama Kota Administrasi Jakarta Selatan Provinsi DKI Jakarta," *Ascarya: Journal of Islamic Science, Culture, and Social Studies* 1, no. 2 (2021), <https://doi.org/10.53754/iscs.v1i2.26>.

<sup>21</sup> K. Arifin, R. Daga, and Muh. A. Anshar, "Analisis Penerapan E-Katalog terhadap Efektifitas dan Kepuasan Penyedia Pada Biro Pengadaan Barang dan Jasa Pemerintah Provinsi Sulawesi Selatan," *Jurnal Sains Manajemen Nitro* 2, no. 2 (2023), <https://doi.org/10.56858/jsmn.v2i2.165>

support, human resource competencies, regulatory support, and management support. For the advantages of this e-catalog to remain sustainable, additional recommendations, continuous observation, further training, and feature development are required. If this e-catalog is implemented consistently, it should serve as a model for expediting the acquisition of digital services in other industries. However, for the initiatives to continue, any changes to government policy about e-catalogs must be consistent.

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## Conflicts of Interest

The authors declare no conflict of interest.

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