Creative Industry Potential Model for Micro, Small and Medium Scale in West Bandung Based on Geographic Information System

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Abstract: Lack of information to the public about the potential of the creative industries on a scale which is owned Micro, Small and Medium enterprises (UMKM) West Bandung regency result less economic growth increased significantly thus increasing revenue for the SMEs to grow. Thus, the need for information systems is indispensable for the creative industry in West Bandung Regency scale UMKM. With the spread of information about the products of creative industries on a scale of UMKM by making use of Geographic Information Systems (GIS), it is expected that the increase in business scale and productivity of businesses in the creative industries sector and the growing scale of UMKM will increase. The first year of this study have result output UMKM West Bandung regency profile, the profile of potential entrepreneurs creative industries UMKM, profile business potential of creative industries and design model for information dissemination potential of creative industries. This research resulted in the design model is right for dissemination of information insutri creative potential in West Bandung regency using geographic information system technology, so that the design model obtained in this study can be used as a blueprint for the software to be built of further research.

Key words: Creative industries, UMKM, distribution of information, Geographic Information Systems (GIS), further research

INTRODUCTION

West Java Provincial Government is encouraging the development of micro, Small and Medium Enterprises (SMEs) creative products in an effort to open a variety of jobs and incomes. SME is one of the pillars of development of an independent nation. Creative effort has now become a business that many people do in the districts/cities in West Java (Bernik *et al.*, 2015).

Creative economic development constraints exactly the problem for SME development in general. Among others, limited access to resources and technology, access to financing constraints, market access and the issue of packaging content (Bhullar and Singh, 2016).

The development work done by the people must be supported by a number of factors, ranging from business conditions, weather, until the technology. The lack of information to the general public about the potential of creative industries on a scale of MSMEs owned in West Bandung regency lead to less economic growth increased significantly thus increasing revenue for the SMEs to thrive. Thus, the need for information systems is indispensable for the creative industry scale SMEs in Bandung regency. Global competition demands accelerated development of information for interested people to invest or pay a visit to the district of West Bandung. As disclosed in Bandung District Development Plan 2013-2018 that the main issue is the competitiveness of SMEs including are not strong, yet comprehensive and sustainable development as well as the technology is still lacking.

With the spread of information about the products of creative industries on a scale of SMEs by making use of Geographic Information Systems (GIS), the expected increase in business scale and productivity of businesses in the creative industries sector and the growing scale of SMEs will increase. In turn, if the business is developing will increase revenue, so the increased purchasing power in addition relation to employment which in turn will help in the effort to cope with the population to solve the problems in West Bandung regency. Thus poverty and unemployment can be eliminated so that more can increase incomes which in turn will further improve the original income West Bandung regency. West Bandung

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District is a new district in West Java province which was formed in 2007 as a result of the expansion of Bandung regency. West Bandung regency has the potential of natural and economic potential make a significant contribution to the development of regional and national economy. The Planning 2813-2018 West Bandung regency permasahan disclosed major strategic issue in the field of industry. The competitiveness of SME products is not strong. The use of local raw materials and depend not optimal raw/auxiliary materials imported. The system of industrial development/micro, small and medium-sized yet comprehensive and sustainable. Not optimal product quality improvement through standardization and certification of products and the protection of Intellectual Property Rights (IPR). Ability SME technology is still lacking.

The development work done by the people must be supported by a number of factors, ranging from business conditions, weather, until the technology used. If there is a problem on one of the supporting factors, the efforts that have been made by the society will not develop properly. Geographic information system is a combination of information systems and geography the main objective of the utilization of geographic information system is to make it easier to get the information that has been processed and stored as an attribute of a location or object.

Based on the above phenomenon, then the model of the spread of information on the potential of creative industries on a scale of Micro, Small and Medium Enterprises (SMEs) is needed in West Bandung regency. With the increasing spread of information about the products of creative industries which are incorporated by SMEs by making use of Geographic Information Systems (GIS), the expected increase in business scale and productivity of businesses in the creative industries sector MSMEs to grow and develop:

- Based on preliminary described previously, it can be formulated specific objectives of this research
- Obtain the profile of SMEs in West Bandung regency
- Obtain profile of potential entrepreneurs of MSMEs scale creative industries in West Bandung regency
- Obtain profile business potential of SMEs scale creative industries in West Bandung regency
- Analyze the design model is right on the dissemination of information on potential SME scale creative industries in West Bandung regency

Creative industry: The creative industry is an industry that is derived from the utilization of creativity, skill and talent of individuals to create wealth and jobs through the creation and utilization of creativity and inventiveness of the individual. The Government of the Republic of Indonesia through the Ministry of Tourism and Creative Economy has identified the scope of the creative industry includes 15 sub-sectors. Sub-sectors, namely advertising, architecture, market art, crafts, design, fashion, video, film and photography, interactive games, music, performing arts, publishing and printing, computer services and software, broadcasting, research and development and the last is culinary. The whole of the creative industry consists of all the industries covered in the creative industrial group named as the creative economy.

Micro, Small and Medium Enterprises (SMEs): Micro, Small and Medium Enterprises (SMEs), according to Law No. 20 of 2008 on micro, small and medium enterprises are. Micro is a productive enterprise belonging to individuals and/or entities that meet the criteria of individual businesses micro as stipulated in this law.

Small business is an economic enterprise productive stand-alone, conducted by an individual or business entity that is not a subsidiary or branch of the company is not owned, controlled or be a part either directly or indirectly from or medium enterprises large enterprises that meet small businesses are the criteria referred to in this act.

Medium enterprises is an economic enterprise productive stand-alone, conducted by an individual or business entity that is not subsidiaries or branches of companies owned, controlled or be a part either directly or indirectly by the small business or large business with the amount of wealth or annual net sales revenue as stipulated in the act. According to Law No. 20 of 2008 on micro, small and medium enterprises are the.

Criteria micro is as follows:
- Has a net worth of at most 50 million rupiahs), excluding land and buildings
- Having annual sales results (300 million rupiah)

Criteria for small business is as follows:
- Have a net worth of >50 million rupiah up to at most 500 million rupiah) not including land and buildings
- Having an annual sales turnover of >300 million rupiah up to at most 2 billion 500 million rupiah

Criteria medium enterprises are as follows:
- Have a net worth of >500 million rupiah up to at most 10 billion rupiahs, excluding land and buildings
- Having an annual sales turnover of >2 billion 500 million rupiah up to at most 50 billion rupiah

System theory: According to research of Fanny and Eko there are two groups of approaches in defining the system. There is emphasis on the procedure and there is emphasis on the component or element Turban including. The first opinion stressing the system components. "The system is a collection of elements that interact to achieve a certain goal".

A second opinion on the procedure stressed system. "The system is a network of procedures that are interconnected, gathered together to perform an activity or to accomplish a particular goal".

Information theory: According to Jogiyanto (2005), information is data that is processed into a form that is more useful and more meaningful for those who receive. It can be said that the data is the raw material, while the information is so material or material which is ready to use.

Geographic information systems: Some definitions of GIS are according to Husein research. According to Longley *et al.* (2005), "GIS is a computer system to collect, check, integrate and analyze information related to the earth's surface".

Definition of GIS according to Purwadhi and Hardiyanti (2008). GIS is a system that organizes the Hardware (Hardware), Software (Software) and data and can shuck-use storage systems, processing and analysis of data simultaneously, to obtain information related to the spatial aspect.

GIS is the spatial data management and nonspasial-based computer with the three basic characteristics, namely has actual phenomenon (nonlokasi data variables) relating to the subject matter at the location in question an incident at a location has the dimension of time.

MATERIALS AND METHODS

The method used in this study is a comparative descriptive method. Engineering studies using three approaches, namely literature (Desk study). The use of Participatory Rural Appraisal (PRA), Focus Group Discussion (FGD) survey (interviews and observations). Implementation of these activities using a variety of stages, starting from the preparation of the study design, drafting instrument, sampling (sampling technic), field data collection, tabulation of data, selection and sorting of data, data analysis and interpretation of data and preparation of recommendations and preparation of reports. While the method of data analysis in the manufacture of geographic information system software using the paradigm of the waterfall software.

RESULTS AND DISCUSSION

Geographical conditions: West Bandung regency is geographically located at between 107°1.10 'up to 107°4.40 East longitude and 6°3.73 1.031 up to 7° South latitude with an area of 1305.77 km^2 or 130 577 ha.

Based on its geographical position, West Bandung Regency is located between the district or city has developed another relative, namely Regency Bandung, Subang regency, Purwakarta district, Cianjur, Cimahi and Bandung. West Bandung regency consists of 16 districts. Sub-district is the District Gununghalu widest area of 16796.2 ha (12.29%) and the smallest is the District Ngamprah area of 3.608 ha (2.76%). Vast districts and the number of villages in West Bandung regency listed in the table.

Data recapitulation MSMEs West Bandung regency: According to the Table 1 obtained information that the types of businesses that are most numerous in MSMEs in West Bandung regency that kind of micro-enterprises and small businesses and the latter is a type of medium-sized businesses. So, when seen from the number of the existing workforce, the type of micro-businesses have the highest number for later followed by small businesses and the latter is a medium scale Table 1.

According to the Table 2 can be obtained information that on a micro-scale enterprises, the top three districts most of the micro-scale enterprises of the region, districts Cihampelas, then Cipongkor and Padalarang. Then the least to the area of the micro scale Saguling Districts.

Table 1: Summary of Data UKM West Bandung

Type of business	Total business executors
Micro	2.154
Smal	5621
Medium	53
Total UMKM KBB	2.769

Table 2: Summary of data UKM West Bandung based business scale

District	Total company based business scale			
	Micro	Small	Medium	Total UMKM
Batijajajar	59	1	13	73
Cikalong Wetan	63	5	13	81
Cihampelas	459	1	55	515
Cililin1	36	0	16	152
Cipatat	78	14	40	132
Cipendeuy	158	0	210	368
Cipondkor	374	2	51	427
Cisarua	49	3	8	60
Gunung Halu	13	0	1	14
Lembang	175	3	39	220
Ngamprah	202	2	48	252
Padalarang	215	17	34	266
Parongpong	57	2	21	80
Rongga	103	0	4	107
Sindang Kerta	12	0	7	19
Saguling	1	0	2	3
Total	2.154	53	562	2.769

Fig. 1: Scale enterprises SMEs each sector

For a small scale in the area of West Bandung regency are most numerous in the districts Padalarang, then Cipatat and the third most are districts Lembang. While the area at least for the small-scale sub-district is the area of the cavity, sindang kerta and sub Saguling.

For medium-scale enterprises in the area of West Bandung regency which is most prevalent in sub-district area Cipeundeuy, then districts Cihampelas and the third most are Cipongkor districts. While the area at least for the medium-scale namely Gunung Halu Sub district.

When viewed from the total number of MSMEs in West Bandung Regency, the first order of regions with the number of SMEs that many are the first order of the District Cihampelas, namely Sub Cipongkor second and third in the District Cipeundeuy. Areas that the least number of SMEs it is Sindang Kerta regional districts, Mount Halu and the latter is Saguling.

Based on the explanation of Fig. 1, it can be concluded that the MSMEs in West Bandung regency consists of a scale of Micro, small and medium enterprises. From these data it can be seen there are three sectors that are not found in West Bandung regency, namely architecture, design and television and radio in which both of micro, small and medium enterprises for the third value is 0 or not found.

There are three sectors of the creative industries that have the greatest business potential that the first sequence is the craft industry sector, then the second is the culinary and the third is the fashion. Third creative industries are spread into three scales SMEs ie small, medium and micro.

For SMEs micro scale, it is known that the creative industry the most is the culinary as much as 36.22%, followed by craft creative industries amounted to 31.96% and creative fashion indistri of 31.96%. For small-scale SMEs, it can be seen that the creative industry is at most craft industry that is as much as 14.64%, followed by culinary as much as 9.07 and 1.08% of the fashion industry. As for the medium-scale SMEs, creative industries sector is the most dominating crafts and fashion. When viewed from the information contained in Table 2, it can be seen that for the creative industries handicrafts sector, at most there are areas of the District Cihampelas, District Cipeundeuy and District Cipongkor. Meanwhile, the craft industry in the region at least encountered Saguling districts. Based on this information, it can be obtained information that the District Cihampelas, Cipeundeuy and Cipongkor can be said to have the potential of creative industries businesses in the craft sector is very high.

For the culinary creative industries sector, most numerous in the area of the District Cipongkor, then the District Cihampelas and Lembang district. While the creative industries culinary least Saguling encountered in the district. Based on this information, it can be obtained information that districts Cipongkor, Cihampelas and Lembang district can be said to have business potential of creative industries in the culinary sector is very high.

For fashion creative industries sector, most Padalarang there are areas of the District and the District Ngamprah and sub Cipeundeuy. While most fashion creative industries bit encountered in District Saguling.
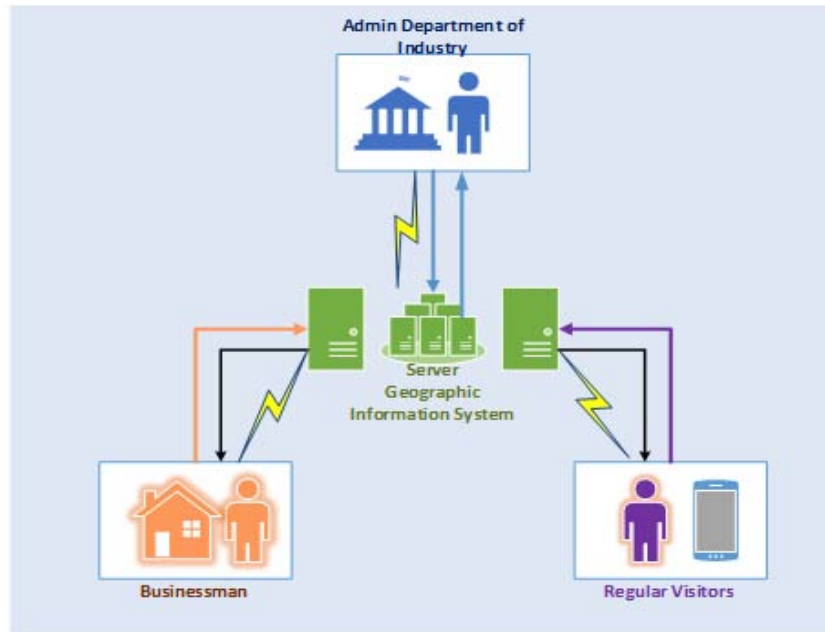
Fig. 2: System architecture to be built

Based on this information, it can be obtained information that districts Padalarang, Ngamprah and Cipeundeuy can be said to have the potential of creative industries in the fashion sector is very high. Based on analysis of data obtained, it can be seen also that the District Saguling is a district that has a very low potential of creative industries to the industrial sector craft, culinary and fashion.

Analysis of information distribution system design creative industries: As for problems found after conducting a survey to the public, it can be obtained main problem is difficult and the length of time required by the user or the public to obtain data on the distribution of industrial SMEs because of the lack of media or information that can help provide such information. It certainly can inhibit the investors or the public to invest in the area of West Bandung Regency.

Architectural design of system will be built: The analysis of the architecture of geographic information system distribution SMEs in the creative industries. West Bandung can be seen in the following Fig. 2.

The design of system user: Detail explanation of users in the system distribution information SMEs in the creative industries. West Bandung is as follows.

Admin: Users of the system that acts as Admin is a clerk in the Department of Industry and Commerce of West Bandung regency. The responsibility is on an Admin user, namely:

- Perform data processing on MSME industry in the district. Bandung Barat
- Perform data processing SME businesses in the district. Bandung Barat
- Perform data processing admin

Entrepreneurs/business executors: Users of the system that acts as a business communities is a society that has creative industries SME businesses in the district. Bandung Barat. The responsibility is on the user is a business communities, namely:

- Perform data processing on industry-owned SMEs
- Perform data processing businesses

Ordinary visitors: Users of the system that acts as an ordinary visitors of people who access the system only to see the spread of information about the industry SMEs in West Bandung. Regular visitors will not be able to log into the system.

Context diagram analysis system: Context diagram is a diagram that consists of a process and describe the scope of a system. The context diagram for the system to be built can be seen in the following Fig. 3-6.

Draft menu structure business actor: Here is a draft of the menu structure of Businesses in the system to be built.
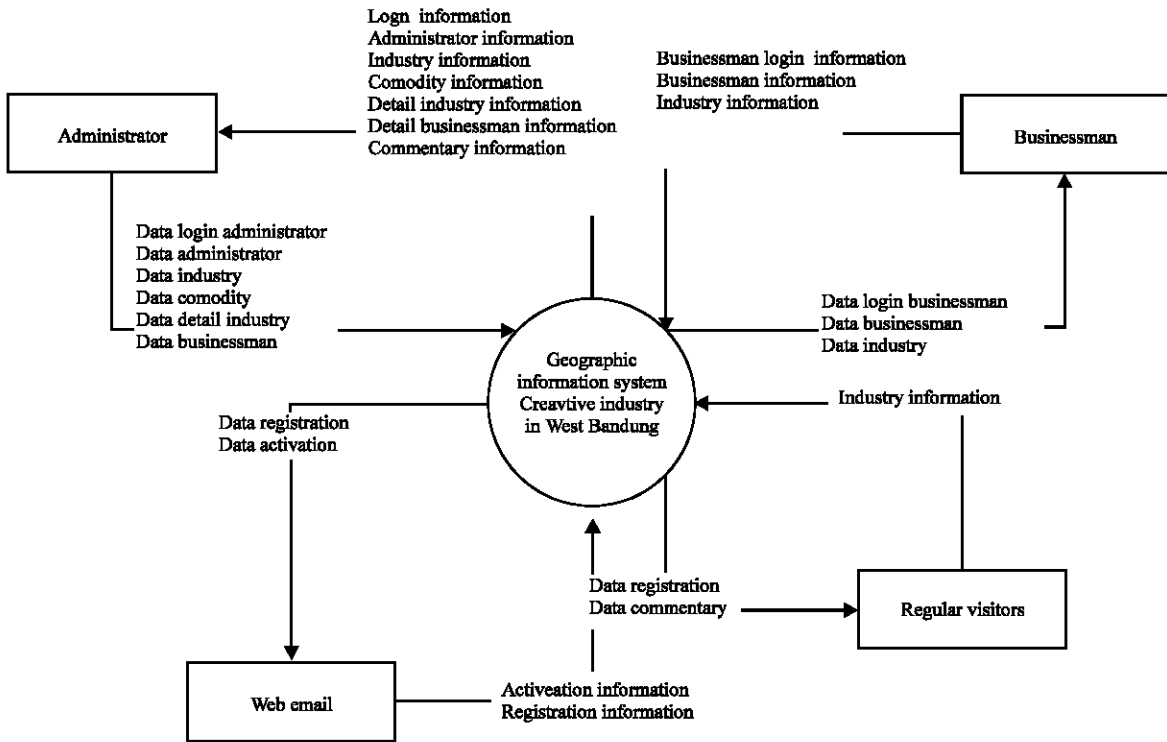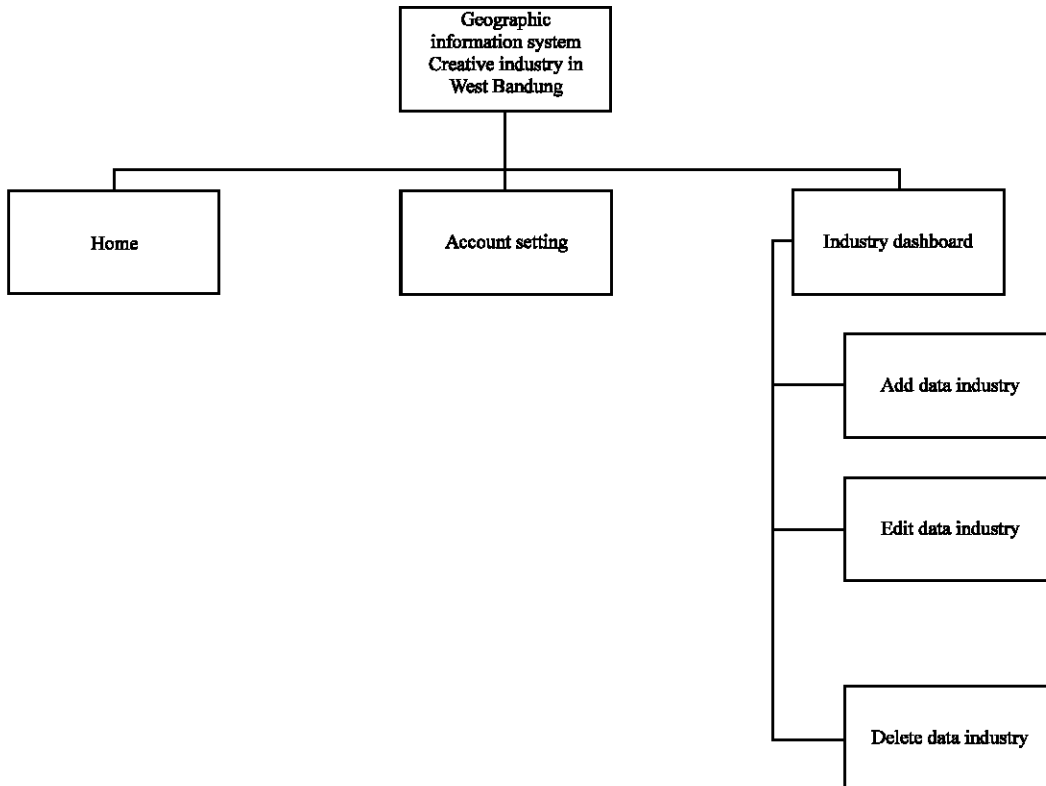
Logn information
Administrator information
Industry information
Comodity information
Detail industry information
Detail businessman information
Commentary information

Businessman login information
Businessman information
Industry information

Administrator

Businessman

Data login administrator
Data administrator
Data industry
Data comodity
Data detail industry
Data businessman

Data login businessman
Data businessman
Data industry

Geographic
information system
Creavtive industry
in West Bandung

Industry information

Data registration
Data activation

Data registration
Data commentary

Regular visitors

Web email

Activeation information
Registration information

Fig. 3: Design diagram context system

Geographic
information system
Creative industry in
West Bandung

Home

Account setting

Industry dashboard

Add data industry

Edit data industry

Delete data industry

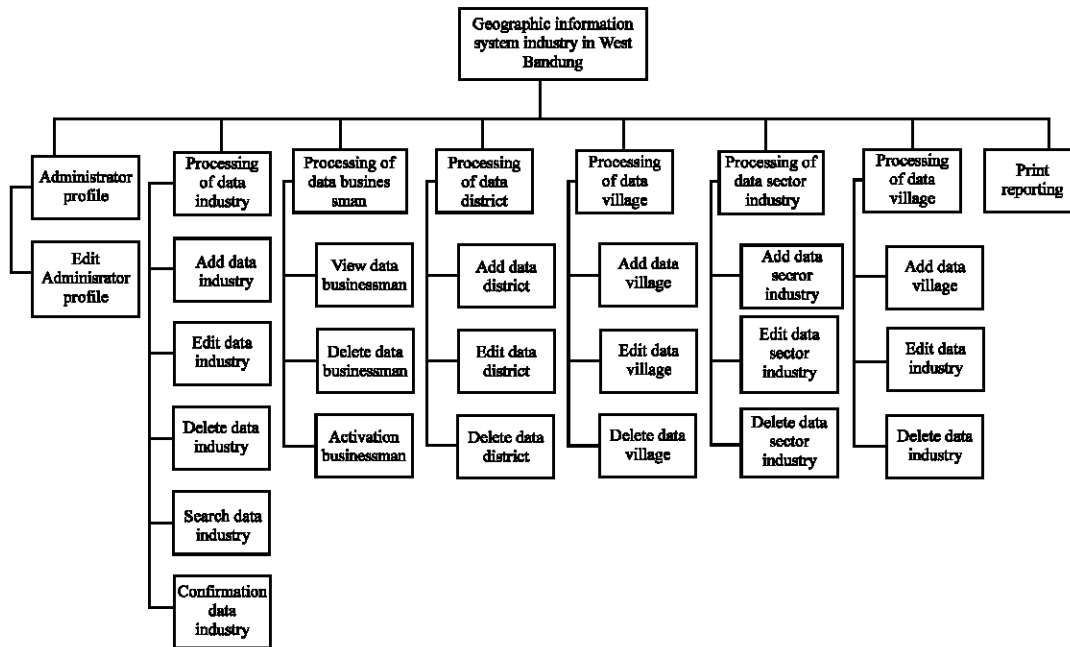Fig. 4: Menu structure design business actor
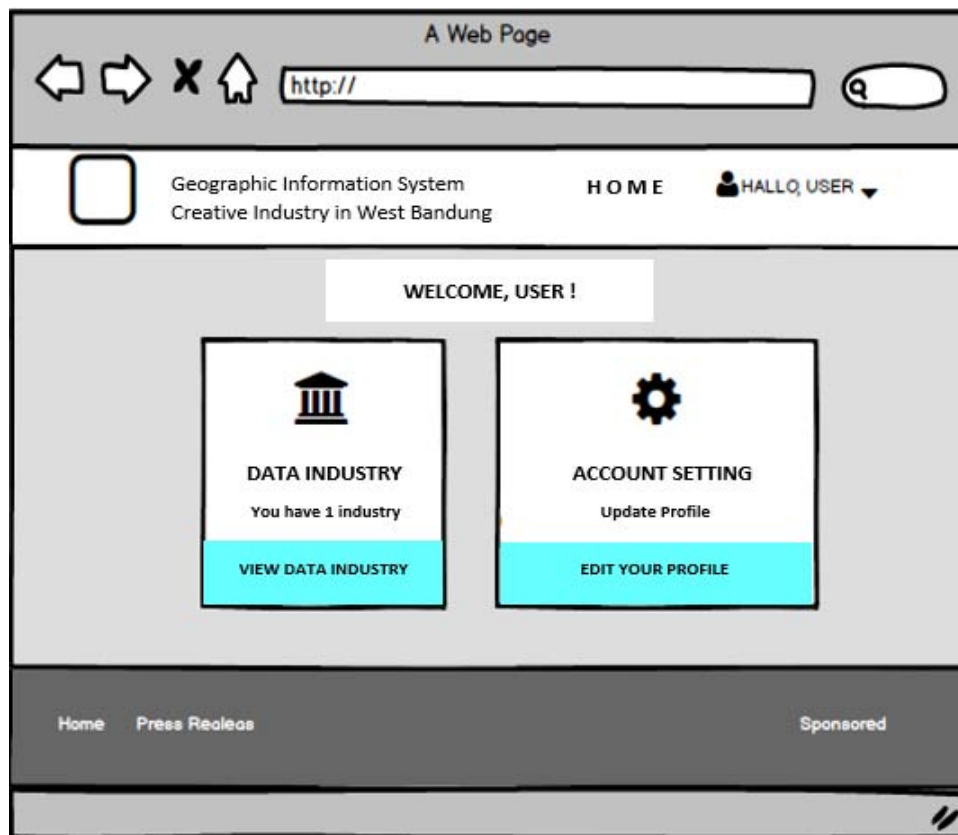
Fig. 5: Admin menu structure design

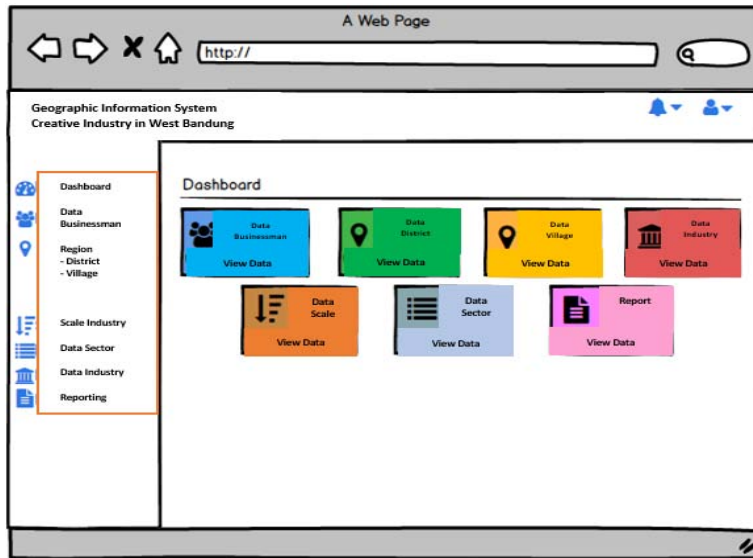Fig. 6: Dashboard display business actor design

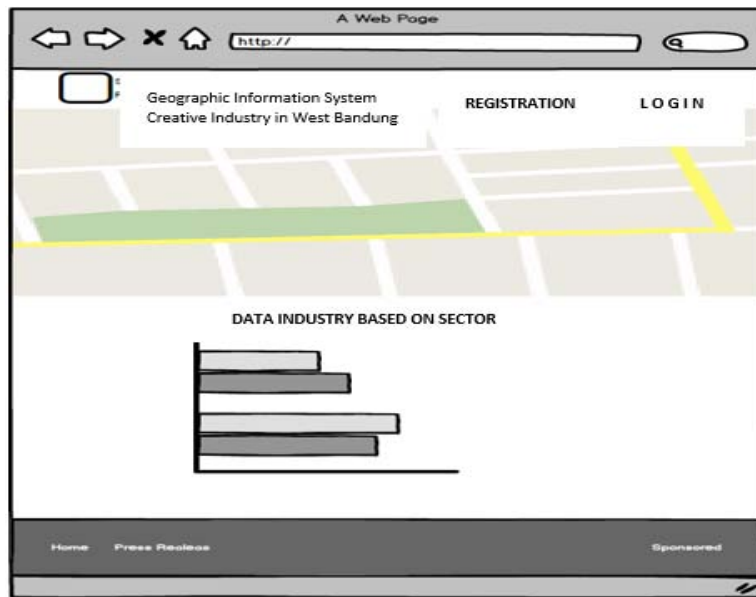Fig. 7: Model interface design office admin dashboard display

Fig. 8: Model interface design visitors guide

Admin menu structure design: Here is the design of the system admin menu.

Model design dashboard page views business actor: The design of the user interface dashboard pages businessmen after a successful login. The design of zoom is as follows.

Model design office admin dashboard page views: This display will appear after successful login admin department. Admin Office after successfully login can view the statistical data, perform data processing sub-districts and villages, large-scale data processing, the data sector, the business data and print reports. The design of zoom is as follows Fig. 7.

Draft model main page views visitors: The design of the main page interface is the first display that appears when accessing the GIS system Distribution of Creative Industries of West Bandung regency. Main page interface design can be seen in the following Fig. 8.

CONCLUSION

Based on research that has been done, it can take several conclusions, namely Based on the geographical location of SMEs in West Bandung regency spread into 16 subdistricts and 165 villages. Based on the profile of potential entrepreneurs obtain information on age, it can be said the percentage is fairly even from the age of 0-35 years to 66-70 year. However, it can be obtained information that the creative industry SMEs in the district. Bandung Barat still a lot younger. Based on the research that has been done can be concluded that there are three sectors of the creative industries that have the greatest business potential. The first sequence is the creative craft industry sector, the second is the culinary industry and the third is the fashion. Having obtained the design of the system to model the potential of creative industries SME scale by utilizing the concept of Geographic Information Systems (GIS).

RECOMMENDATION

As for suggestions for future research are also involved modeling the creative industries with mobile technology and Global Positioning System (GPS).

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