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Transportation Demand *Omotenashi* at Ijen Corridor: The problems and development strategies

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Abstract. Ijen was one of the roads in Malang City with land use intensity dominated by education and trade and services, generating land use caused a large movement. The main purpose of the study was to identify some problems and propose solutions to improve the performance of Ijen corridor. The meaning of "*Omotenashi*" is Japanese-style excellent service mindset consisting of hospitality aspect, familiarity and warmth aspects. The study employed Customer Satisfaction Index (CSI) and Analytical Hierarchy Process (AHP). Analysis of the familiarity aspect was descriptive evaluative interaction of public transport passengers. The analysis of the warmth aspect was descriptive evaluative in physical, social and historical attractiveness. The results showed that hospitality level at Ijen Corridor was 2.038 (hospitable), the familiarity aspect was 61 out of 100 people have interacted on the public transport, while the warmth aspect showed that many buildings are physical attractions and historical areas. The Ijen Corridor's alternative development strategies include raising public awareness of the use of public transportation, restricting access to motorized vehicles, law enforcement, and improving bicycle infrastructure, as well as enhancing the quality of public transportation services, pedestrian facilities, parking management, and carpooling/sharing.

Keywords: Corridor; Design; Malang City; Transportation Demand Omotenashi

1. Introduction

Driving-related congestion is a major issue for people living in megacities since it results in negative social and environmental effects such as energy depletion, air and noise pollution, traffic accidents, and everyday delays. Of all these consequences, traffic delays are the most common and costly issues [1]. Over the past few decades, transportation planners and policymakers have proposed transportation demand management measures in an effort to

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reduce the use of cars, given the constraints on growing transit networks. The phrase "transportation demand management" (TDM) refers to a broad range of tactics that maximize the use of available transportation resources; so far, almost 80 policies have come into existence [2]. Many TDM measures have been proposed in places such as streets and commercial areas, but not many of these propositions have reached the level of implementation. There are various reasons for this, therefore it is time to confirm the course of action and reevaluate. Several academics have suggested using a forcing-based classification approach to choose the best TDM policy [3–5]. According to this method, policies fall into two categories based on their ability to compel modal changes: pull policies and push policies [6]. Pull policies make non-vehicle modes more appealing to automobile users, which promotes their use. Push policies, on the other hand, attempt to discourage car use by decreasing their appeal [7,8], for a review of push/pull and pull/push policies that is more comprehensive. Even while several research, including studies on road pricing, examine the effects of a single TDM policy on society, park and ride [9], and parking pricing [10], for a review of push/pull and pull/push policies that is more comprehensive. Even while several research, including studies on road pricing, examine the effects of a single TDM policy on society [3,11], There has also been discussion of the potential for concurrent TDM policies to arise from the indecisive actions of public and private entities [2]. While some research indicates that it may be challenging, enacting more TDM policies could actually cover more individual journeys and be more successful [12]. While some research indicates that it may be challenging, enacting more TDM policies could actually cover more individual journeys and be more successful [13].

Kubota [14] tries to propose a general concept called TDO (Transportation Demand *Omotenashi*), which means trying to handle visitor requests in a friendly way. Here a questionnaire survey was conducted in a shopping district, paying attention to the manager's side, and analyzing how acceptance measures increased by switching from TDM to TDO. Increased levels of acceptance and satisfaction from the point of view of tourism agents, confirmed by moving from the TDM concept to the TDO concept. The situation is set virtually this time, but it is necessary to check the effects of TDO when actually applied, for example in a social experiment and investigate it. At Peninsula, Tokyo, tourists get a pleasant experience from the services provided by tourist facilities. The concept of "personal touch" at Peninsula Tokyo by providing personal service to each customer. This personal touch represents the concept of *omotenashi* on the Tokyo Peninsula, where the main thing to be achieved is success in service as is the Japanese concept of omotenashi in Western culture [15].

In East Java, Malang metropolis is the second-biggest metropolis after Surabaya City. It has promise for tourism and is experiencing annual economic growth [16]. Malang City frequently has the same issues as other major Javan cities, including DKI Jakarta, Surabaya, Bandung, and others: complete traffic jams that are impossible to break through without a management plan. Because of Malang City's annual population growth brought on by urbanization efforts, traffic bottlenecks may occasionally arise [17], the culture of the people who glorify exclusivism to use private vehicles, lack of road infrastructure, and limited public

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transportation [18]. The Central Bureau of Statistics City of Malang stated that in the 2014-2016 period, the average annual growth in vehicle ownership reached 122,148 units of motorized vehicles, an increase of 10.84% per year [19]. Ijen Corridor is one of the Corridors in Malang City with the intensity of land use, namely education (university), trade and services (restaurants, coffee shops, pharmacies, barber shops, shoe shops, etc.). The uniqueness of the area in the Corridor of Ijen causes a great attraction of movement. Ijen Corridor has a unique area which is dominated by trade and services in the form of restaurants, coffee shops, barber shops, shoe shops, fast food restaurants, food stalls and there is a university and a historical area, namely the statue of the hero Hamid Rusdi which is located at the intersection of the races roundabout. The transportation problem in the Ijen Corridor that still occurs today is traffic congestion. The congestion is caused by the attraction of land use around the corridor which is not matched by an appropriate transportation planning system. Other problems are the misuse of the pedestrian way by motorized vehicle users to park, the existence of illegal parking along Bandung Street which hinders the flow of cyclists and hinders the flow of vehicle movement, the lack of physical conditions of the pedestrian way, for example, such as damaged paving, unavailability of ramps, and markings for disabled persons. cut off by trees. Furthermore, the lack of information boards, warning lights in the fleet, and health and safety facilities on the LDG/LH, ADL, GL/HL, and AL routes all contribute to the poor quality of public transportation services [20].

Therefore, to overcome various kinds of problems in the Corridor of Ijen, an appropriate comprehensive transportation planning strategy is needed. One strategy that will be tried is to use the TDO (Transport Demand *Omotenashi*) model. This is because the Ijen Corridor has a unique area or area that attracts a lot of interest from the public to visit and do activities, but this is not matched by the provision of an adequate transportation system and has an unfriendly, unsafe and inconvenient design or existing condition. by the public or visitors. The road corridors around the study area in this study, such as Veteran, Bandung, Besar Ijen and Sigura-Gura have already been studied regarding the implementation of Transport Demand Omotenashi so that it is hoped that later from Sigura-Gura to Veteran, Bandung, to Ijen can be integrated into a comprehensive TDO planning system. TDO is a concept of implementing Transportation Demand Management (TDM) which has the goal of maximizing the satisfaction of every visitor who comes by optimizing the transportation system based on the concept of hospitality or omotenashi [14]. The meaning of the word "*Omotenashi*" here is a Japanese-style excellent service mindset by prioritizing aspects of friendliness, kinship and warmth. Aspects of friendliness, according to [21], include the friendliness of public transportation services as well as the construction of user-friendly roadways and pedestrian pathways. The way that people engage with public transit and with parking management demonstrates the familiarity element [22]. Meanwhile, warmth is related to the attractiveness of the area which consists of physical, social and historical attractiveness [22].

The strategy for implementing Transport Demand *Omotenashi* in the Corridor of Ijen is later expected to be able to highlight the uniqueness of the area, control motorized vehicle traffic in order to improve environmental quality, increase pedestrian activity by improving existing

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sidewalk conditions, encourage increased use of public transportation by increasing the quality of its services, increasing the percentage interactions between fellow visitors, as well as providing maximum satisfaction or service for users of the 3 Corridors.

2. Methods

Both qualitative and quantitative methods were used in the TDO study in the Ijen Corridor. The first stage involved geometric analysis of the road and pedestrian way, level of service analysis of the road, level of service analysis of the pedestrian way, and customer satisfaction index (CSI) analysis, which is the first of four analyses used to determine the hospitality value of the Ijen Corridor. Next, identify the familiarity aspect with an evaluative descriptive analysis of interaction of public transport users with the aim of seeing how much public transport users interact while in the fleet. The third is identifying physical-social-historical attractions using evaluative descriptive analysis to determine attractiveness in the Ijen Corridor. The final step is to determine alternatives for TDO development based on the results of a 3-aspect analysis, previous research related to TDO in Batu by [22], and the TDM strategy which will be prioritized using AHP analysis. The geometric of the street and pedestrian way aims to determine the hospitality level of the streets and pedestrian way in Ijen Corridor using parameters from Designing Streets [23]. This analysis is carried out by weighting and scoring techniques in each road segment. The weight of each attribute and parameter will later be obtained from the results of the AHP questionnaire given to transportation experts. Table 1 is the attributes and parameters that will be used.

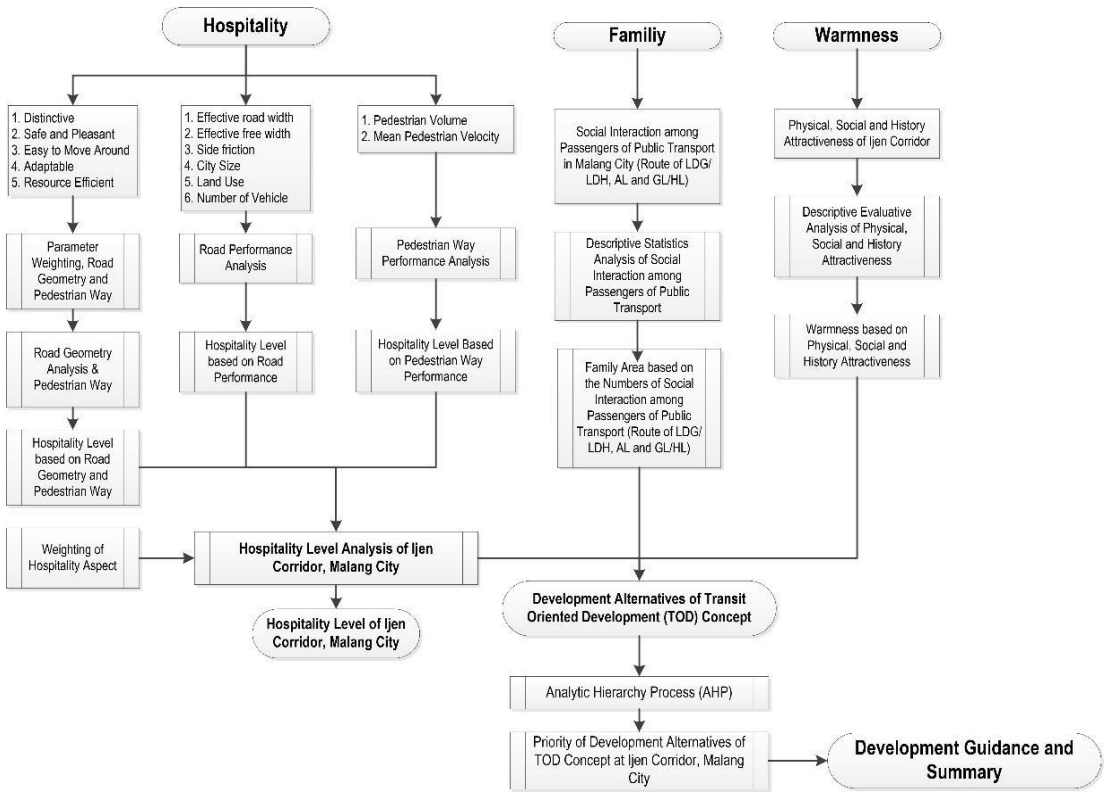

Figure 1. Research framework.

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Table 1. Geometric attributes and parameters.

Attributes		Parameters
Distinctive (A)	Context and character	• Presence of pedestrian path (A1) • Existence of cycle lanes (A2) • Presence of historical buildings along the corridor of the study area (A3)
Safe and Pleasant (B)	Pedestrians and cyclists	• Pedestrian lanes are wider than vehicle lanes (B1) • Existence of markings and ramps to make it easier for people with disabilities to walk on pedestrian paths (B2)
	Decrease in vehicle speed	• The existence of traffic calming in the form of media or roundabouts (B3)
	Reduce clutter	• Existence of road markings (B4) • Presence of lighting (B5)
Easy To Move Around (C)	Mass transit	• Affordability with mass transportation systems (C1)
Adaptable (D)	Connected with a major road	• There is a link or connection with the primary arterial road, primary collector and local primary (D1)
	Integrated with parking	• Parking facilities available (D2)
	Services for vehicle users	• The width of the road property is more than 3.7 m (D3)
Resource Efficient (E)	Plant Material	• There is vegetation on the road corridor (E1) • Using asphalt or concrete pavement (E2)

Scoring is conducted by assessing each attribute between 1-3 which will later be multiplied by the weighting value of each parameter from the geometric AHP results of the road and pedestrian paths. Based on the layout of the roads and pedestrian pathways, the degree of friendliness is ranked as follows.

2.001 – 3.000 = Hospitable
1.001 – 2.000 = Quite hospitable
0.000 – 1.000 = Unhospitable

2.1 The road's level of service

The calculation of the road's level of service, from which the LOS value is obtained by dividing the number of vehicles by the road capacity, is used to determine the level of hospitality based on that route [24].

$$Q = QKT + (QKB \times empKB) + (QMC \times empSM) \ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Notes:

Q = Traffic volume (vehicle/hour)
QXR = KE volume (vehicle/hour)
QKB = Volume KB (vehicle/hour)
empKB = KB passenger car equivalent

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QSM = SM Volume (vehicle/hour)
empSM = passenger car equivalent SM

$$C = Co \times FClj \times FCpa \times FChs \times Fcuk \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Notes:
C = Capacity (vehicle/hour)
Co = Base capacity (vehicle/hour)
FClj = Lane width adjustment factor or traffic lane
FCpa = Splitting adjustment factor (only for undivided roads)
FChs = Adjustment factor for side barriers and curbs
FCuk = City size adjustment factor

$$DS = \frac{Q}{C} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Notes:
DS = Degree of Saturation (vehicle/hour)
Q = Traffic Flow (vehicle/hour)
C = Road Capacity (vehicle/ hour)

2.2 The pedestrian way's level of service

The level of hospitality based on the performance of the pedestrian way is carried out by calculating the V/C ratio which is obtained after calculating the flow of pedestrians, the average speed of pedestrians, pedestrian density, and pedestrian space [25]. Pedestrian volume was surveyed using 15 minutes intervals for 2 hours.

$$Q15 = \frac{Nm}{15WE} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Notes:
Q15 = Pedestrian flow at the largest 15 minutes interval (pedestrians/m/minute)
Nm = The highest number of pedestrians at 15 minutes intervals (pedestrians/m)
WE = Effective sidewalk width
WE = WT-B
WT = total sidewalk width (meters)
B = The width of the sidewalk that cannot be used for walking (meters)

$$s = \frac{1}{\frac{1}{n}\sum_{i=1}^{n} \frac{1}{Vi}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

Notes:
Vs = Average speed of space (m/min)
n = Number of data
Vi = Speed of each pedestrian observed (m/min)

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$$D = \frac{Q}{Vs} \quad (6)$$

Notes:
D = Pedestrian density (pedestrians/m2)
Q = pedestrian flow (pedestrians/m/minute)
Vs = Average speed of space (m/min)

$$S = \frac{Vs}{Q} = \frac{1}{D} \quad (7)$$

Notes:
S = Pedestrian space (m2/pedestrian)
D = Density (pedestrians/ m2)
Q = Current (pedestrians/m/minute)
Vs = Average speed of space (m/min)

2.3 Public transport service level

Using Customer Satisfaction Index (CSI) data, the city of Malang's passenger satisfaction with its public transportation services was determined. By examining the performance and significance levels of service qualities, CSI seeks to ascertain the overall degree of satisfaction among service users [26]. The attributes used to measure passenger satisfaction with public transport services come from Ministerial Regulation Number 98 of 2013. The determination of the population size is based on research [27]. Meanwhile, a sample of public transport passengers used the Yamane formula [28]:

$$n = \frac{N}{1 + N\varepsilon^2} \quad (8)$$

Notes:
n = Sample to be used
N = Population (people)
ε = adjuts margin error, which uses an error of 10%

The number of samples that must be distributed for the LDG/LH, AL, ADL, and GL/HL routes is 100 respondents each with an error of 0.1. The following is the CSI calculation step [29]. Determining the Mean Importance Score (MIS):

$$MIS = \frac{\sum_{i=1}^{n} Yi}{n} \quad (9)$$

Notes:
n = Number of consumers
Yi = Importance value of attribute Y to i

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Make Wight Factors (WF), which are the presentation of MIS values per attribute to the total MIS of all attributes.

$$WF = \frac{MISi}{\sum_{i=1}^{p} MISi} \ldots \ldots (10)$$

Notes:
p = Attribute of importance to p

Make a Weight Score (WS), which is the multiplication between WF and the average level of satisfaction (X) (Mean Satisfaction Score = MSS)

$$WSi = WFi \times MSS \ldots \ldots (11)$$

Determining Customer Satisfaction Index (CSI)

$$MIS = \frac{\sum_{i=1}^{p} WSi}{HS} \times 100\% \ldots \ldots (12)$$

Notes:
p = Attribute of importance to p
HS = (Highest Scale) the maximum scale used

2.4 Evaluative descriptive public transport passenger interactions
Social interaction is a dynamic relationship, where the relationship is closely related to the relationship between individuals, between one group and another, and the relationship between individuals and groups. An adequate public transportation system will support and support the social and cultural interactions of the community getting better [29]. An evaluative descriptive analysis will be used to find out how much the percentage of passengers is involved in social interaction in Malang City public transportation routes LDG/LDH, AL, ADL, and GL/HL.

2.5 Analytical Hierarchy Process (AHP)
AHP analysis is a decision support technique that creates a hierarchy out of difficult multi-factor or multi-criteria issues [30]. The AHP in this study was used to determine the weights and parameters of the geometric friendliness of roads and pedestrian paths, to determine the weights of the friendliness sub-variables in 3 road corridors, and to prioritize the alternative development of TDO. The number of experts in the AHP method is as many as 8 experts which come from academia and agencies.

3. Result and discussion

The geometric analysis of the road and pedestrian paths was carried out in 3 segments using parameters based on the key success of the place [24]. Figure 2 shows motorized and non-motorized vehicle drivers and pedestrians on Ijen Road (Segment 1). Figure 3 shows a cross

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section of Ijen Road (Segment 1), which has five meters between car lanes and a bicycle lane of 1.8 meters. The road does not have a median.

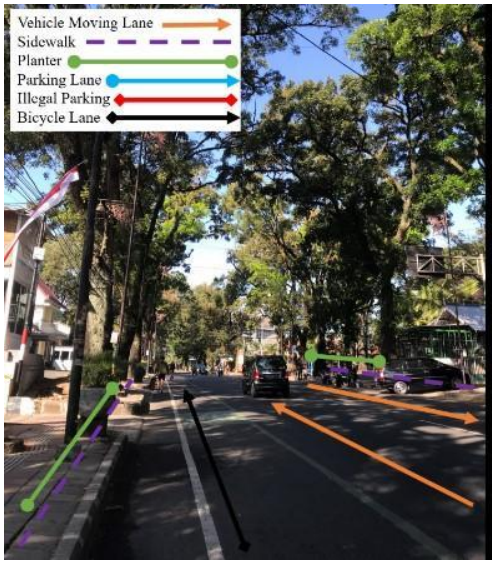

Figure 2. Photo analysis of the Ijen corridor (Segment 1).

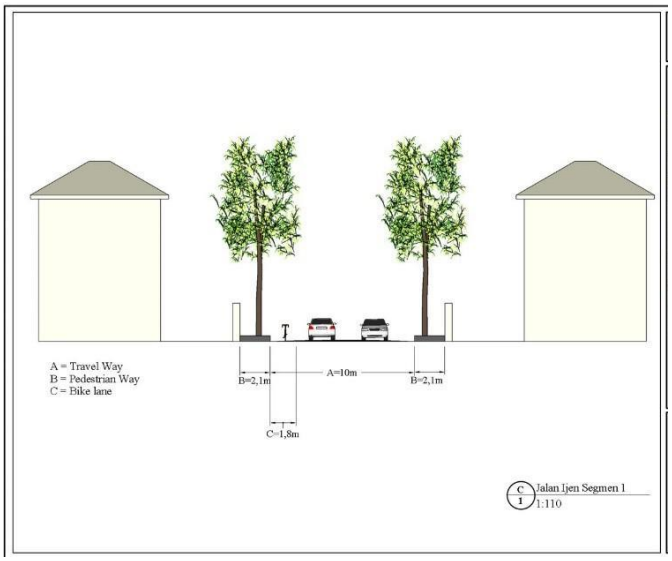

Figure 3. Cross section in the Ijen corridor (Segment 1).

The results of calculating the geometric AHP of roads and pedestrian paths for the 5 attributes in place are as follows:
1. Distinctive (0.186)
2. Safe and pleasant (0.229)
3. Easy to move around (0.218)
4.Adaptable (0.285)
5. Resource efficient (0.082)

The CR value of 0.01 is equal to 1% so it can be concluded that inconsistency is still acceptable due to the inconsistency limit of ≤10% (Table 2).

Based on the [24] place concept, Table 2 displays the geometric dimensions of the road and pedestrian pathways together with their respective weights. Based on the current state of the roadways and pedestrian pathways on Ijen Road, Table 3 displays the findings of the hospitality assessment for each criterion (Segment 1, Segment 2 and Segment 3).

The geometric value of the road and pedestrian paths in the Ijen Corridor has an average value of 2.32 which is included in the hospitable category. The meaning of hospitable here is that it can be seen from the design of the road and the design of pedestrian paths which are unique, easy to access to move places, comfortable and safe to use, use resources efficiently, and easy to adapt.

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Table 2. Hospitality aspect parameter weight.

Attributes	Parameter	Composite Weight
Distinctive (A) 0,186	Presence of pedestrian way(A1) 0,455	$0{,}186 \times 0{,}455 = 0{,}085$
	Existence of cycling paths (A2) 0,123	$0{,}186 \times 0{,}123 = 0{,}023$
	Presence of historic buildings along the corridor of the study area (A3) 0,422	$0{,}186 \times 0{,}422 = 0{,}078$
Safe and Pleasant (B) 0,229	The pedestrian path is wider than the vehicle lane (B1) 0,121	$0{,}229 \times 0{,}121 = 0{,}028$
	Existence of markings and ramps to make it easier for disabled people on pedestrian paths (B2) 0,307	$0{,}229 \times 0{,}307 = 0{,}070$
	Presence of traffic calming in the form of medians and roundabouts (B3) 0,110	$0{,}229 \times 0{,}110 = 0{,}025$
	Existence of road markings (B4) 0,173	$0{,}229 \times 0{,}173 = 0{,}040$
	The presence of lighting (B5) 0,289	$0{,}229 \times 0{,}289 = 0{,}066$
Easy To Move Around (C) 0,218	Affordability by transportation system (C1) 1,000	$0{,}218 \times 1{,}000 = 0{,}218$
Adaptable (D) 0,285	There is a link or direct connection with the primary road (D1) 0,256	$0{,}285 \times 0{,}256 = 0{,}073$
	Available parking facilities (D2) 0,398	$0{,}285 \times 0{,}398 = 0{,}113$
	The width of the road area (damija) is more than 3.7 m (D3) 0,347	$0{,}285 \times 0{,}347 = 0{,}099$
Resource Efficient (E) 0,082	There is vegetation on the road corridor (E1) 0,748	$0{,}082 \times 0{,}748 = 0{,}061$
	Using asphalt or concrete pavement (E2) 0,252	$0{,}082 \times 0{,}252 = 0{,}021$

Table 3. Geometric assessment based on the hospitality aspect.

Geometric analysis	Parameter	H	I	J
Street	A2	3	3	3
	A3	1	1	2
	B3	1	1	1
	B4	3	3	3
	B5	2	2	2
	C1	3	3	3
	D1	2	2	2
	D2	1	1	1
	D3	3	3	3
	E1	3	3	3
	E2	3	3	3
Pedestrian Way	A1	3	3	3
	B1	1	1	1
	B2	2	2	2

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Notes:
H = Bandung Corridor (Segment 1)
I = Bandung Corridor (Segment 2)
J = Ijen Corridor (Segment 3)
3 = Hospitable
2 = Quite hospitable
1 = Inhospitable

Table 4. Hospitality level for 3 segments.

No	Segment	Hospitality score	Hospitality level
1	Ijen Segment 1	2,30	Hospitable
2	Ijen Segment 2	2,30	Hospitable
3	Ijen Segment 3	2,38	Hospitable
Average (3 segments)		2,32	Hospitable

The road's level of service is carried out by LHR surveys for 4 weekend days (Saturday) and weekdays (Monday, Tuesday, Wednesday) starting from 05.00-22.00 every 60 minutes interval. It aims to determine the peak time of vehicle movement. To get the LOS value, volume and road capacity calculations are carried out. Table 5 is the level of hospitality per segment on the Ijen Corridor based on the LOS of the highest volume road. Where all segments have inhospitable values.

Table 5. Hospitality level based on the road's level of service.

No	Segment	Vehicle high volume	DS (V/C)	LOS	Hospitality level*
1	Ijen Segment 1	3302,3	1,20	F	3302,3
2	Ijen Segment 2	3317,6	1,21	F	3317,6
3	Ijen Segment 3	3351,6	1,22	F	3351,6

The pedestrian way's level of service (LOS) is obtained based on the V/C ratio obtained after calculating pedestrian traffic, average speed, density and space. Based on pedestrian LOS calculations, it was found that the Ijen Corridor has a level of pedestrian hospitable as can be seen in Table 6.

Table 6. Hospitality level based on the pedestrian way's level of service.

Segment	Pedestrian way's level of service (V/C)	Hospitality level
Ijen Segmen 1	1. 0,0213/A	Hospitable
Ijen Segmen 2	2. 0,0538/A	Hospitable
Ijen Segmen 3	3. 0,0322/A	Hospitable

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Based on CSI calculations, the 4 public transport routes that pass through the study area (AL, ADL, GL/HL, and LDG/LH routes) have an average value of 0.63 or 63%, which means they fall into the sufficient category. Or has a value of 1.89 out of 3 which means it is quite hospitable. Based on the results of the analysis of public transport service levels on the 4 routes, the same problems were found, namely the unavailability of cleaning facilities in the form of trash cans that made the fleet dirty, the unavailability of hazard warning lights, the absence of safety facilities, the absence of health facilities (P3K), the absence of emergency response information, and unavailability of service information.

Table 7. Calculation of the hospitality level of Ijen Corridor.

Sub variable	Score results	Value
Geometric: Street and Pedestrian way ● hospitable→ Weight 3 ● quite hospitable→ Weight 2 ● inhospitable→ Weight 1	Score = 2,342 AHP yield weight= 0,404	2,342 × 0,404 = 0,946
Road ● hospitable→ Weight 3 ● quite hospitable→ Weight 2 ● inhospitable→ Weight 1	Score results = (Total hospitable value) x3 = 0x3=0 (Total quite hospitable) x2 = 0x2=14 (Total unhospitable) x1 = 3x1=3 Total score = 3 Total score/total road segment= 3/3 Score results = 1 AHP yield weight = 0,263	 1 × 0,263 = 0,263
pedestrian way ● LOS A = hospitable→ Weight 3 ● LOS B = hospitable→ Weight 3 ● LOS C = quite hospitable→ Weight 2 ● LOS D = inhospitable→ Weight 1 ● LOS E = unhospitable→ Weight 1 ● LOS F = inhospitable→ Weight 1	Score results = (LOS A) x3 = 3x3=9 (LOS B) x3 = 0x3=0 (LOS C) x2 = 0x2=0 (LOS D) x2 = 0x2=0 (LOS E) x1 = 0x1=0 (LOS F) x1 = 0x1=0 Total score = 9 Score results/total segment of pedestrian way = 9/3 = 3 Score result = 3 AHP yield weight = 0,180	 3 × 0,180 = 0,54
Passenger satisfaction with public transport services CSI: ● 0,81-1,00 = hospitable ● 0,66 – 0,80 = hospitable ● 0,51 – 0,65 = quite hospitable ● 0,35 – 0,50 = inhospitable ● 0,00 – 0,34 = inhospitable	CSI 0,00-1,00 equated with the level of hospitality 1-3 so multiplied by 3. CSI public transport on average from 4 routes x 3= 0,63 x 3 = 1,89 AHP yield weight = 0,153	1,89 × 0,153 = 0,289
Total Score		2,038

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Based on the outcomes of the weighting of the hospitality variable in omotenashi, which was acquired from AHP, the level of hospitality in Ijen Corridor was determined. The road and pedestrian path geometry, road performance, pedestrian path performance, and passenger happiness with public transportation services are the four hospitality variables. The Ijen Corridor has a hospitality value of 2.038, or welcoming, according to Table 7's estimate.

One component of the familiarity element in the TDO idea is the interaction of passengers on public transportation. The percentage of user contacts with public transportation routes AL, LDG/LH, ADL, and GL/HL Malang City is used to determine where. The analysis used to explain the results of public transport user interaction data is using descriptive evaluative analysis. Most of the respondents answered that they had interacted in public transportation. The most frequent form of interaction between passengers is asking about the route of the angkot, making small talk such as asking where they are going or where they are going, asking where they go to school or college, asking where they work, greeting each other lightly (just smile), and other light interactions. Whereas respondents who admitted that they had met new people, where the purpose of getting to know new people was to know the background of the person such as knowing or exchanging information related to names, professions/occupations, place of residence, status, sharing about each other's lives and so on others are less numerous.

Table 8. Recapitulation of the percentage of passenger interaction in public transportation.

Route	Percentage of interaction with public transport passengers		Percentage of interaction with new people on public transportation	
	YES	NO	YES	NO
LDG/LH	58%	42%	33%	67%
AL	59%	41%	31%	69%
GL/HL	60%	40%	38%	62%
ADL	62%	38%	32%	68%

Ijen Corridor has a historical location, namely Simpang Balapan Park or also known as Simpang Balapan Roundabout. This park is located in segment 3 and has a circular shape in the middle of the road so that it connects Ijen and Simpang Balapan. [31] explains that the name Simpang Balapan Park comes from the name of the road itself, namely Simpang Balapan. In addition, this park has a statue which is located in the center of the park and has access for pedestrians that are already available in it. The statue is of a hero from Malang named Major TNI Hamid Rusdi. Simpang Balapan Park can be enjoyed and used by the community for social activities such as taking pictures, sitting relaxed on the edge of the park due to the unavailability of seats in the park, and other activities. On weekends in the morning there are several groups of cyclists who stop briefly to rest and take pictures at Simpang Balapan Park. Figure 4 is a photo of the existing condition of Simpang Balapan Park in Malang City, while Figure 5 is a map of the points of distribution of historical attractions on the Ijen Corridor.

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Figure 4. Statue of hero Major Hamid Rusdi at Simpang Balapan park.

An alternative to Transport Demand *Omotenashi* development is obtained based on the results of an analysis of 3 aspects in TDO, TDM strategy, and previous research on TDO located in Batu. So that each strategy gets the following weight, where the first rank is improving the quality and service of public transportation, while the last ranking is the strategy for improving bicycle infrastructure.

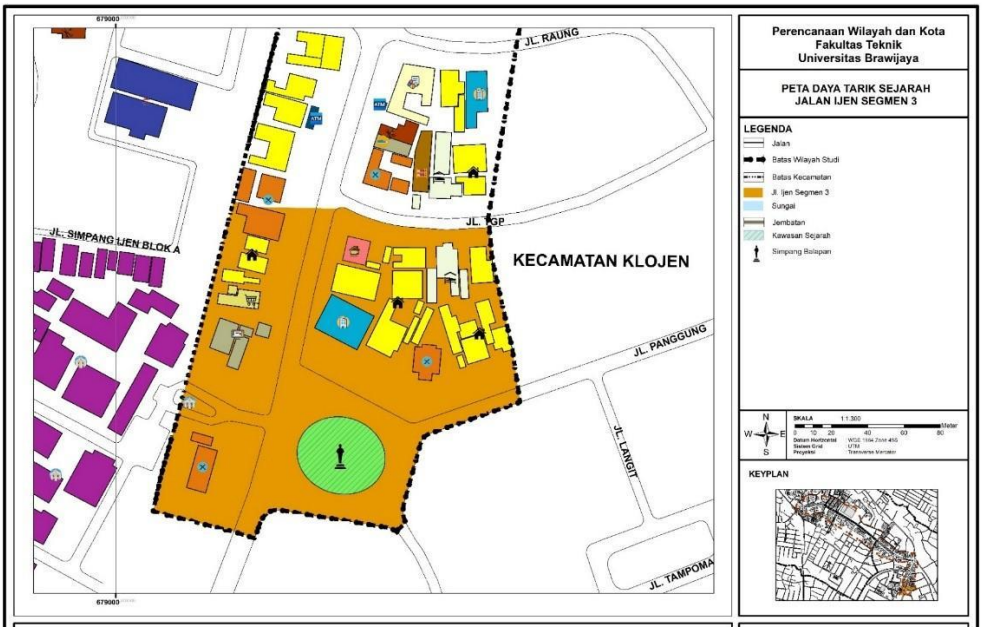

Figure 5. The historical attraction of the Ijen Corridor.

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Table 9. TDO development strategy ranking in the Ijen Corridor.

Development strategy (TDO)	Weight value	Rank
Improving the quality and service of public transport	0,226	1
Improve pedestrian way lanes and improve pedestrian facilities	0,205	2
Parking management and car-sharing/carpool	0,170	3
Increasing public awareness regarding the use of public transportation	0,138	4
Motor vehicle access restrictions	0,098	5
Law enforcement	0,086	6
Bicycle infrastructure upgrade	0,075	7

4. Conclusions

Based on the results from each analysis in this study, it can be concluded that based on the conditions of hospitable, familiar and warmth in the Ijen area, the strategy for the development of Transport Demand *Omotenashi* is to improve the quality and service of public transportation, improve the pedestrian way and improve pedestrian facilities, parking management and car-sharing/carpool, increasing public awareness regarding the use of public transportation, limiting access to motorized vehicles, law enforcement, and improving bicycle infrastructure. These 7 strategies are expected to improve and maintain the concept of omotenashi in the Ijen Corridor, Malang City so that corridor users feel comfortable and safe when doing activities.

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