

*PRESENTATION TO MEETING OF  
ELECTRIC VEHICLE PROMOTION CONFERENCE  
ON TOPIC*  
**RELEVANCE OF CLEAN ENERGY ELECTRIC  
TRANSPORTATION IN COSMOPOLITAN  
KATHMANDU**

**PRESENTED BY  
BIJAYA MAN SHERCHAN  
CHAIRMAN, EVMIAN**



# CONTENTS OF PRESENTATION

1. Corporate Details of EVMIAN
2. Historical Overview Of EV Development in Nepal
3. Problems Faced By the EV Sector
4. Support For EVs Around The World
5. Advantages Of EVs
6. Problem Mitigation

# DETAILS OF INCORPORATION OF EVMIAN

Name in Nepali : **लुभिले कल/खग लुगुदफुतु तयु  
कुलुतु;+३**

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**गुलकुलन -लेलेदुगु**

Name in English : **Electric Vehicle Manufacturers &  
Importers' Association – Nepal  
(EVMIAN)**

Registration in CDO : **Reg No. 1273**  
Office, Kathmandu Date : **2069/3/6**

Registration in District : **Reg No. 1333/ 068/69**  
Development Committee Date : **2069/2/12**

# Objectives Of Association

1. To operate as a non-profit making non-governmental, public-benefitting, social organization.
2. To operate as an organization unifying all manufacturers and importers of electric transport vehicles in Nepal,
3. to represent all such institutions and to strive for rights of such institutions; to promote the qualitative aspects of services rendered by these institutions; to spearhead industrial development, protection, promotion, research and development of these institutions ; and to deal with and seek assistance of government and non-governmental institutions capable of assisting in policy formulation and implementation of activities related to their institution.

# INITIAL MEMBERS OF ASSOCIATION

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1. **Nepal Electric Vehicle Industry (P) Ltd.**
2. **Nevi Tradelink (P) Ltd.**
3. **Shree Eco Visionary (P) Ltd.**
4. **Clean Energy Nepal (P) Ltd.**
5. **Clean Energy Products International (P) Ltd.**

# Initial Executive Committee of Association

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1. Mr. Bijaya Man Sherchan - Chairman
2. Mr. Ashok Raj Pandey- Vice Chairman
3. Mr. Umesh Raj Shrestha- General Secretary
4. Mr. Shyam K.C, Treasurer
5. Mr. Bharat Poudel, Secretary
6. Pramod Bhandary, Member

# **CLEAN ENERGY TRANSPORT SECTOR TO BE EMBRACED BY EVMIAN**

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- 1. Electric Cycles & Scooters**
- 2. Electric Rickshaws**
- 3. Safa Tempos**
- 4. Other 3 Wheeler Electric Vehicles**
- 5. 4-Wheel Cars, Jeeps, Vans, Buses**
- 6. Electric Ropeways, Cable cars**
- 7. Hybrid Vehicles**
- 8. Electric trolley buses, trams and trains**

# **EFFORTS MADE BY EVMIAN SINCE INCORPORATION**

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- 1. Lobbying (together with Nepal Arthik Sarokar Kendra) with GoN agencies for the formulation and implementation of the Batabaran Maitri Tatha Yatayat Niti – 2071.**
- 2. Functioning as active promoter of EVAN**



# HISTORICAL OVERVIEW OF EV DEVELOPMENT IN NEPAL

# HISTORICAL OVERVIEW OF ELECTRIC TRANSPORTATION DEVELOPMENT

## Goods Ropeway

### 1. 1960

*43 km long bicable good ropeway with 22.5 ton/hr capacity operated between Kathmandu and Hetauda. Closed down after development of Prithivi Highway and poor management of National Transport Corporation (NTC).*



# HISTORICAL OVERVIEW OF ELECTRIC TRANSPORTATION DEVELOPMENT

## 2. 1977

*Completion of Tripureshwor – Suryavinayak Trolley Bus with Chinese Grant of Rs. 40 millions. Initially 22 trolley buses with addition of 10 more buses in 1997. Ferried up to 20,000 pax per day. Closed down in December 2001 due to poor management by GON of the system.*



# HISTORICAL OVERVIEW OF ELECTRIC TRANSPORTATION DEVELOPMENT

## 3. 1993

*Development of Safa Tempo. Proto types taken over by NEVI. Proliferation of system leading to 700 tempos 30 charging station.*





# HISTORICAL OVERVIEW OF ELECTRIC TRANSPORTATION DEVELOPMENT

## 4. 1998

*First cable car developed in Mankamana by private investor. But further development hampered due to lack of positive GoN policy on cable cars.*



# HISTORICAL OVERVIEW OF ELECTRIC TRANSPORTATION DEVELOPMENT

## 5. 2008

*GoN provides tax incentive for 4 wheeler EV's. As a result today around 700 EV cars operational*

**Marketed by Agni Inc / Mahindra**



**4 Pax – E2**



**2 Pax – REVA**

# HISTORICAL OVERVIEW OF ELECTRIC TRANSPORTATION DEVELOPMENT

- Marketed by NEVI Tradelink



**4 Pax – Bijuli 1**



**5 Pax – Bijuli 2**



**14 Pax – Safa 1**



**14 Pax – Safa 2**



# HISTORICAL OVERVIEW OF ELECTRIC TRANSPORTATION DEVELOPMENT





# HISTORICAL OVERVIEW OF ELECTRIC TRANSPORTATION DEVELOPMENT



# EV's IN OPERATION

- 1. MAHINDRA EV – Total 413
  - . Reva 1 114
  - . E2O 170
  - . E2O Plus 114
  - . E-VERITO 13
  - . E-Supro 2
  
- 2. KIA EV – Total 150
  - . Soul 80
  - . NIRO BOOKING 70

# EV's IN OPERATION

- 3. HYUNDAI EV – Total 83
  - . IONIQUE 8
  - . KONA 75
- 4. SHRANGIA GROUP EV – Total 1
  - . Peugeot Partner Tepee-MUV -1
- 5. BYD EV – Total 45
  - . E6 -40
  - BUS – K6 - 5

# EV's IN OPERATION

6. SUNDAR YATAYAT - 2

- BAK EV (Bus) - 2

7. TOYOTA EV - 12

- BYVIN - 12

# OTHER Evs IN OPERATION

1. E-Ricksaws in operation – 35000
2. Two Wheeler Evs - 5000
3. 3 Wheeler Evs (Safa Tempo)- 710

# PROBLEMS FACED BY EV SECTOR IN NEPAL

# SUMMARY OF PREVIOUS EXPERIENCES

1. Trolley bus system closed due to mismanagement after government takeover;
2. SAFA Tempo Industry fully developed with 4 manufacturers, 31 charging stations and over 700 Safa Tempos in Operation but faces a deadend;
3. 4 wheeler EV's have found entry into Nepal, but face many operational problems. 5 Chinese electric buses imported for operation in Lumbini are in a stage of inoperation in Kathmandu.
4. GON has declared a plan to operate 300 electric buses within Kathmandu municipality but the work is not progressing.

# RECENT ACHIEVEMENTS IN PROMOTING EV SECTOR

1. Customs duty for Evs revised to 50%
2. Excise duty waived
3. Annual Vehicle Registration charges waived
4. Road Maintenance Tax reduced to 50% for Evs
5. Special electricity tariff for EV charging stations of Rs 5.30 per unit of electricity
6. Nepal Rastra Bank has directed local banks to stop providing loans for purchase of POL operated vehicles. This follows the decisions of both India and China to eliminate operation of POL vehicles after 2030





# **CLEAN TRANSPORT POLICY - 2071**

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- 1. Recently approved and promulgated by GON**
- 2. Steering Committee includes representative of EV manufactures**
- 3. Excellent opportunities for EVMIAN to actively engage in the development of this sector**

# PROBLEMS AND MITIGATIONS

## MAJOR PROBLEMS FACED BY SAFA TEMPOS

- Operational sustainability initially affected by electrical load shedding but this problem no longer exists;
- Lack of dedicated routes to Safa Tempos & other EVs
- Safa Tempos operating in mixed vehicle route find it difficult to compete with the bigger mini buses owned by the dominating transport unions;
- Frequent and hap-hazard changes in government decisions regarding tax incentives to the EV sector create difficulties in the sector. As an example battery import was completely stopped during 2008 as GoN revoked the customs incentives in batteries. The decision was corrected only after tough lobbying by EVAN;

# PROBLEMS AND MITIGATIONS

## OTHER PROBLEMS FACED BY EV SECTOR

- Batteries imported are allegedly of substandard quality and often fail to meet the standard life cycle targets;
- Exodus of trained drivers and technicians to foreign countries due to poor condition of transport sector in Nepal;
- Lack of an apex umbrella body that will champion and advocate for the causes of the EV sector;
- Lack of an institution to undertake research and development in the EV sector;
- Lack of an institution for training of EV sector manpower such as drivers, mechanics, electricians;
- Lack of centralized maintenance centre;
- Lack of battery bank.

# PROBLEMS OF CABLECARS/ROPEWAYS

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1. No Policy regarding tax incentives
2. No Incentives for Loans for construction of Cable Car Systems
3. No Incentives for electricity rates by NEA
4. No Support of GON for land acquisition

# PROBLEMS FACED BY HYBRIDS

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1. Cost of hybrids very high due to high custom and other taxes

# **PROBLEMS IOF 4 WHEELERS**

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- 1. Four wheeler EVs do not enjoy the same tax benefits as 3 wheeler Evs**
- 2. No government policy regarding manufacture of 4 wheeler Evs in Nepal**
- 3. 4 Wheelers 14 seater coaches not being provided commercial operation permit**

# **PROBLEMS OF BYCYCLES/SCOOTER**

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- 1. No differentiation between electric bicycles & scooters. Differentiated only as with pedal and without pedal**
- 2. Registration process of electric scooters cumbersome**

# **ADVANTAGES OF EV's**



# ADVANTAGES OF ELECTRIC TRANSPORT

- i. Low Operation and Maintenance Cost;
- ii. Positive Environmental Impact;
  - for every litre of fossil fuel replaced. EV's will prevent 3 – 10 gm of PM<sub>10</sub> from being emitting,
  - reduction in polluting gases,
  - reduction of green house gases.
- iii. Each EV can reduce consumption of 2190 lit of fossil
- for per year:
  - reduction of economic burden of imported POL,
  - reduction of health risk,
  - increase of productivity of population.

# ADVANTAGESNCE OF ELECTRIC TRANSPORT

## Cost of Operation / Maintenance:

### A: Petrol Vehicle

▪ Petrol Cost for small car	:	Rs. 12.00 /Km
▪ Lubricant	:	Rs. 0.40 /Km
▪ Maintenance	:	Rs. 0.70 /Km
▪ Tyre Replacement	:	<u>Rs. 0.30 /Km</u>
Total per Km	:	Rs. 13.40

### B: Electric Vehicle

▪ Battery Replacement	:	Rs. 3.50 /km
▪ 18 kWh @ Rs. 7 /– per unit	:	Rs. 0.80 /km
▪ Maintenance	:	Rs. 0.30
▪ Tyre Replacement	:	<u>Rs. 0.30</u>
Total per Km	:	Rs. 4.90

# **PROBLEM MITIGATION MEASURES**

# **PROBLEM MITIGATION MEASURES**

## **Formulation Of Transport Policy Favoring CEVs**

- **Preference to be accorded to CEVs in municipal transport, transport to and within world heritage and tourist destinations and to airports**
- **Preference to operation of trolley buses and electric trains wherever suitable;**
- **Preference to ropeway transportation in hill areas**
- **Promoting use of cablecars for operation in tourist destinations.**
- **Preference to electric taxis in municipal area**

# PROBLEM MITIGATION MEASURES

## Provision Of Incentives To Clean Energy Vehicles

- Waive VAT and Excise Duty charges on import of all categories of Clean Energy Vehicles (CEV)
- Implementation of customs duty @ 5% on CEVs designated for public transport and customs duty of 10% for CEVs for private use (2,3 and 4 wheeler CEVs)
- Waiver of VAT and Excise duty on all CEV components and batteries with customs duty application of only 1%
- Waiver of parking fees for CEVs all together
- Low / Subsidized electricity tariff to be applicable for charging stations for charging CEVs during off-peak hours
- Assistance to be accorded for land acquisition for CEV related projects such as ropeways, cable cars, electric trains and trolley buses.

# **PROBLEM MITIGATION MEASURES**

## **Provision Of Financial Incentives To CEV Projects**

- **Environmental fund collected by GoN as per Environmental Protection Act 2013 Clause 13 to be made available for EV sector development and for funding CEV related projects**
- **Low interest loans to be made available to CEV entrepreneurs from GoN or Banks for implementation of ropeways, cable cars, battery recycling plants in the private sector.**
- **Assistance to be accorded for land acquisition for CEV related projects such as ropeways, cable cars, electric trains and trolley buses.**

# **PROBLEM MITIGATION MEASURES**

## **Battery Management System**

- **Regular monitoring of battery quality imported into Nepal**
- **Creation of battery bank to ensure price stability**
- **Monitoring of battery waste disposal**
- **Promotion of establishment of battery recycling plant in Nepal**

# **PROBLEM MITIGATION MEASURES**

## **Establishment Of CEV Promotion Center**

**An Clean Energy Transport Promotion Center should be created with assistance from the GoN Environmental fund to undertake the following activities to promote EV development :**

- a. implement R&D in EV sector;**
- b. training of manpower for sector;**
- c. setting up of battery bank;**
- d. monitoring of battery waste disposal;**
- e. setting up of EV maintenance centre;**
- f. undertake advocacy of EV sector;**



# SUPPORT FOR EVs AROUND THE WORLD

# **SUPPORT FOR EV'S AROUND THE WORLD**

## **UNITED KINGDOM**

- **100% depreciation in 1 year**
- **Free parking and charging in key areas**
- **EV exclusive Zones**
- **No Congestion charge**

## **IRELAND**

- **Exemption of VAT**

## **JAPAN**

- **Subsidy of US \$ 2600 on each EV**
- **¥ 20 million project for Lithium Iron Battery develop**
- **¥ 210 million of R & D**
- **Subsidy up to 50% of incremental cost**

# SUPPORT FOR EV'S AROUND THE WORLD

## Norway & Sweden

- No import duty on EV
- Subsidised electricity cost
- Euro 1000 incentive to EV customer
- Evs allowed to drive in bus lane
- No congestion charge
- Free parking in governmental parking area
- No annual fee
- subsidy in insurance premium

# **SUPPORT FOR EV'S AROUND THE WORLD**

## **FRANCE**

- **Subsidy of EV 2000 for EV**
- **Reduced load tax**
- **100 % depreciation in first year**
- **20% public transport to be electric**
- **Free parking**
- **No tax on electricity for EV**

# **SUPPORT FOR EV'S AROUND THE WORLD**

## **USA**

- **Subsidy of US \$ 4000 per EV**
- **10 % vehicles to be EV's in California**
- **Preferential parking area**
- **Subsidy in charging infrastructure**
- **Incentives for power supply**

## **Italy**

- **Subsidy of Ev 1800 per EV**
- **Free parking for EV**
- **No road tax for EV**
- **50% of governmental vehicle- EV's**

# SUPPORT FOR EV'S AROUND THE WORLD

## India

- Sales tax and road tax exemption in several states
- Subsidy of Rs.75,000 to governmental agencies for EV purchase



# **KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT (KSUTP)**



## KSUTP VISION

1. Encourage people to travel by public transport or on foot;
2. Discourage private motorized vehicles from entering the central area of Kathmandu;
3. Improve movement (of all modes, including pedestrians) within the central area;
4. Improve air quality and reduce carbon emissions;
5. Improve transport equity





# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT

Implementation of an improved transport system in Kathmandu with ADB – US \$ 20 millions GRF Grant - \$ 2.8 millions, GoN \$ 7.9 millions

- Promotion of public transport;
- Traffic management;
- Pedestrianization;
- Better air quality.



# **KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT**

**Draft Final Report : Kathmandu Sustainable Urban Transport Project**

## **COMPONENT A : PROMOTION OF PUBLIC TRANSPORT**

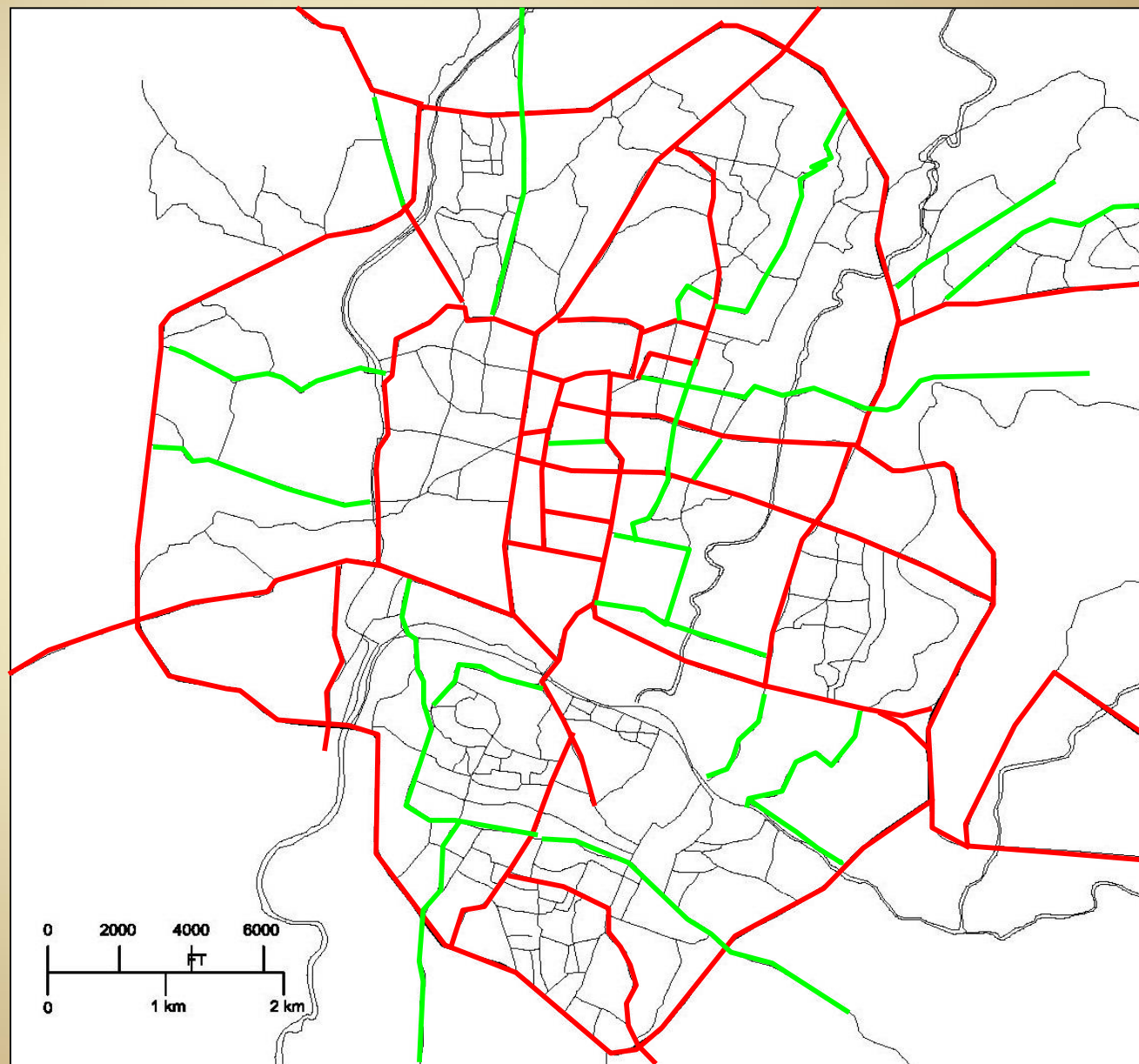
### **Sub-components :-**

- 1. Redefine routes into Primary, Secondary and Tertiary**
- 2. Assign appropriate vehicles to routes**
- 3. Big buses and trolley buses on primary routes**
- 4. Mini buses on secondary routes**
- 5. Safa and 4 wheeled electric buses on tertiary routes**
- 6. Express and premium services**
- 7. Franchise routes to providers (Associations of operators)**



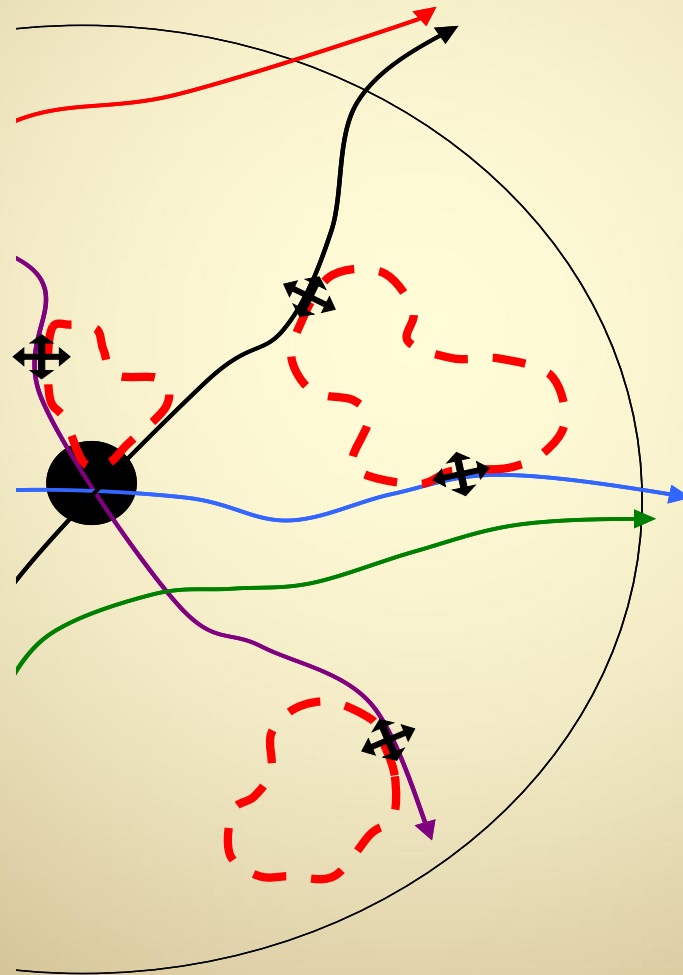
# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT

## Primary and Secondary Routes





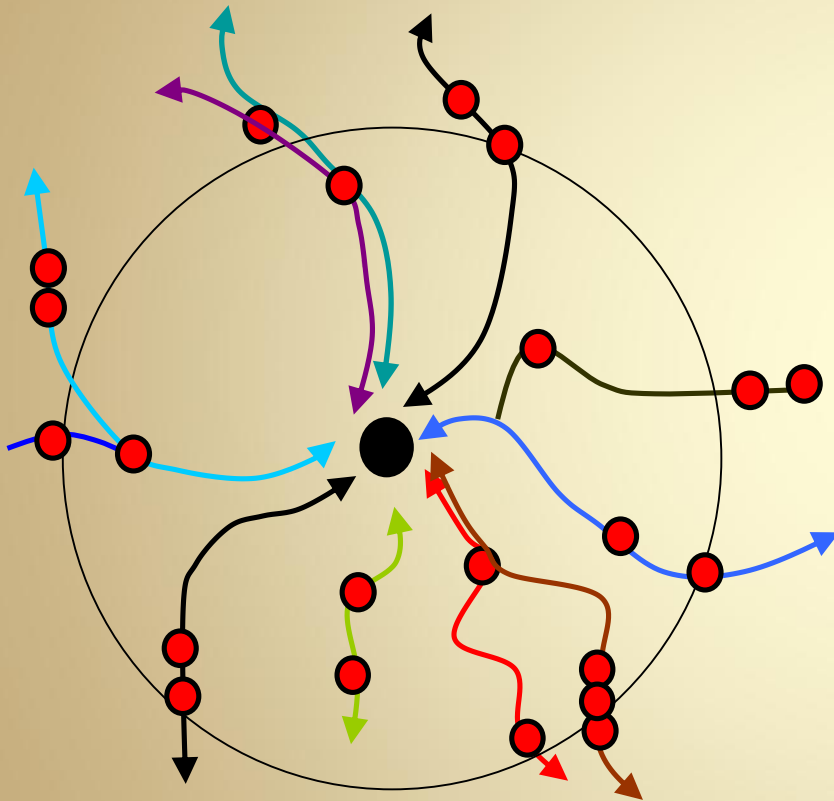
# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT



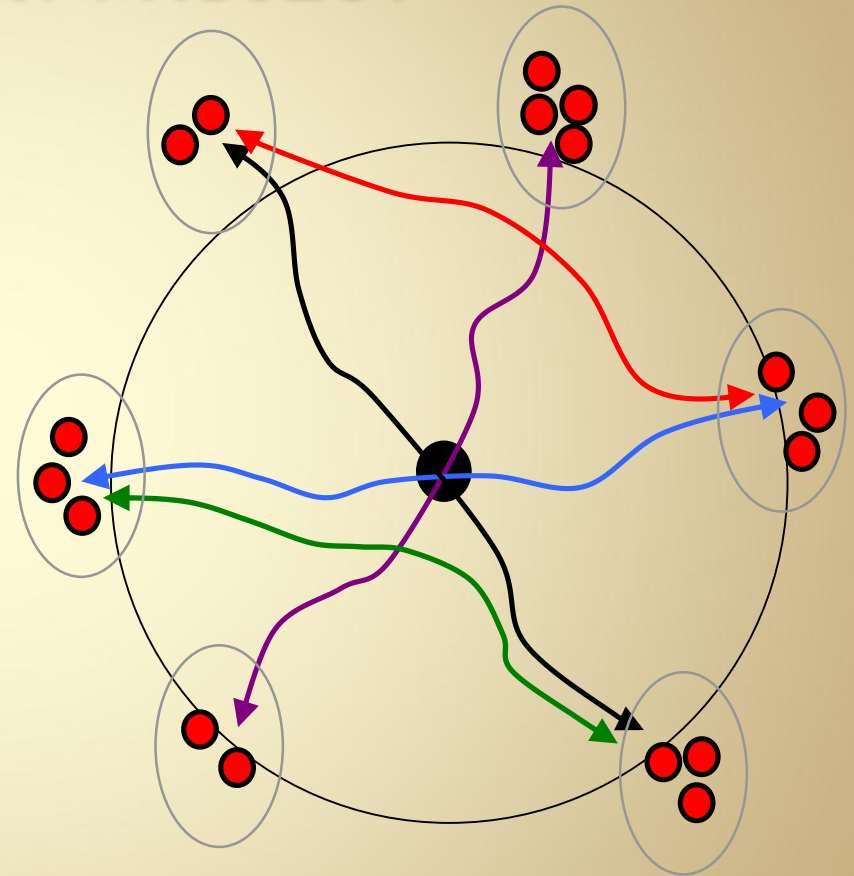
**Tertiary Route**



# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT



**Traffic Pattern Before Rationalization**

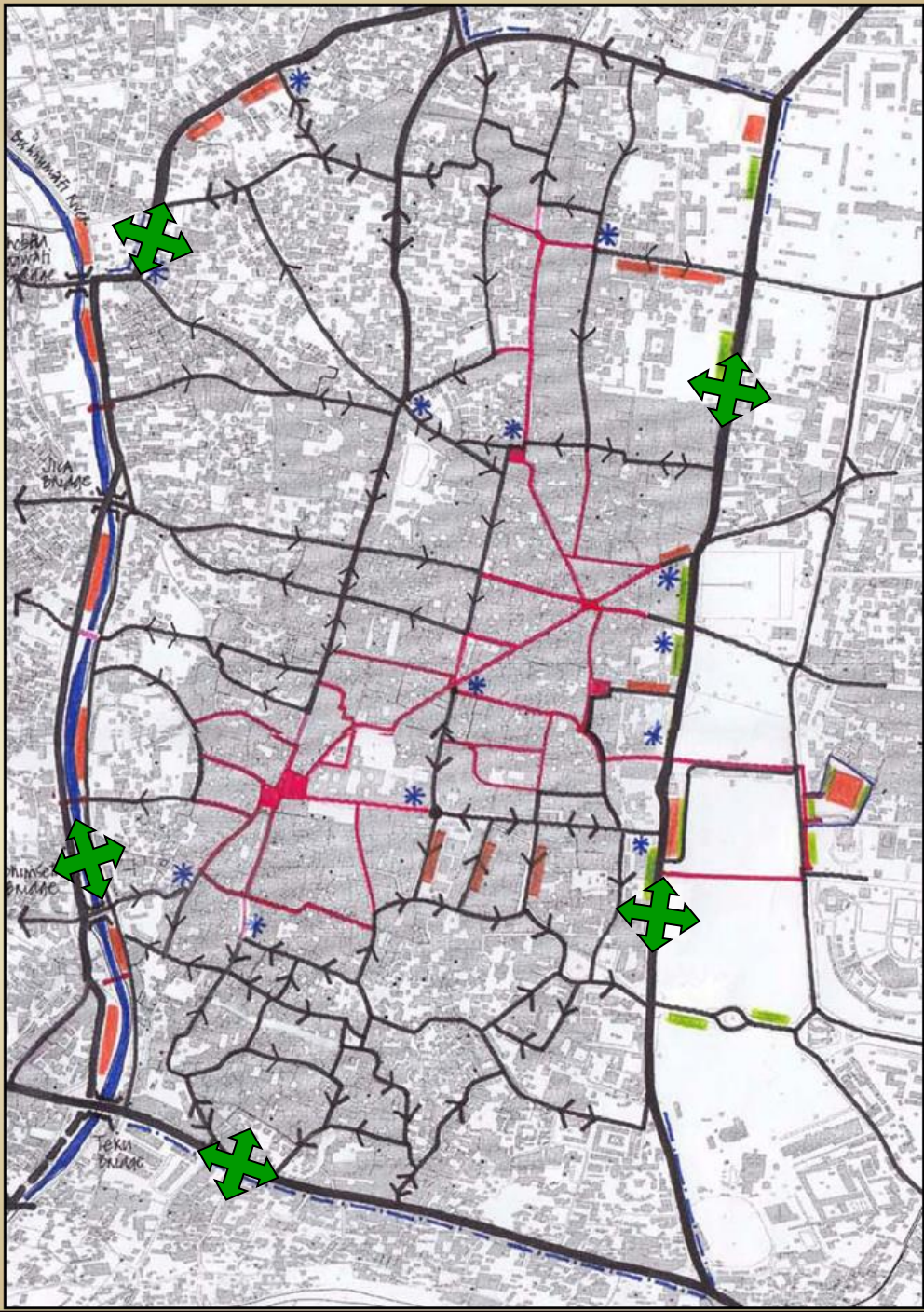


**Traffic Pattern After Rationalization**





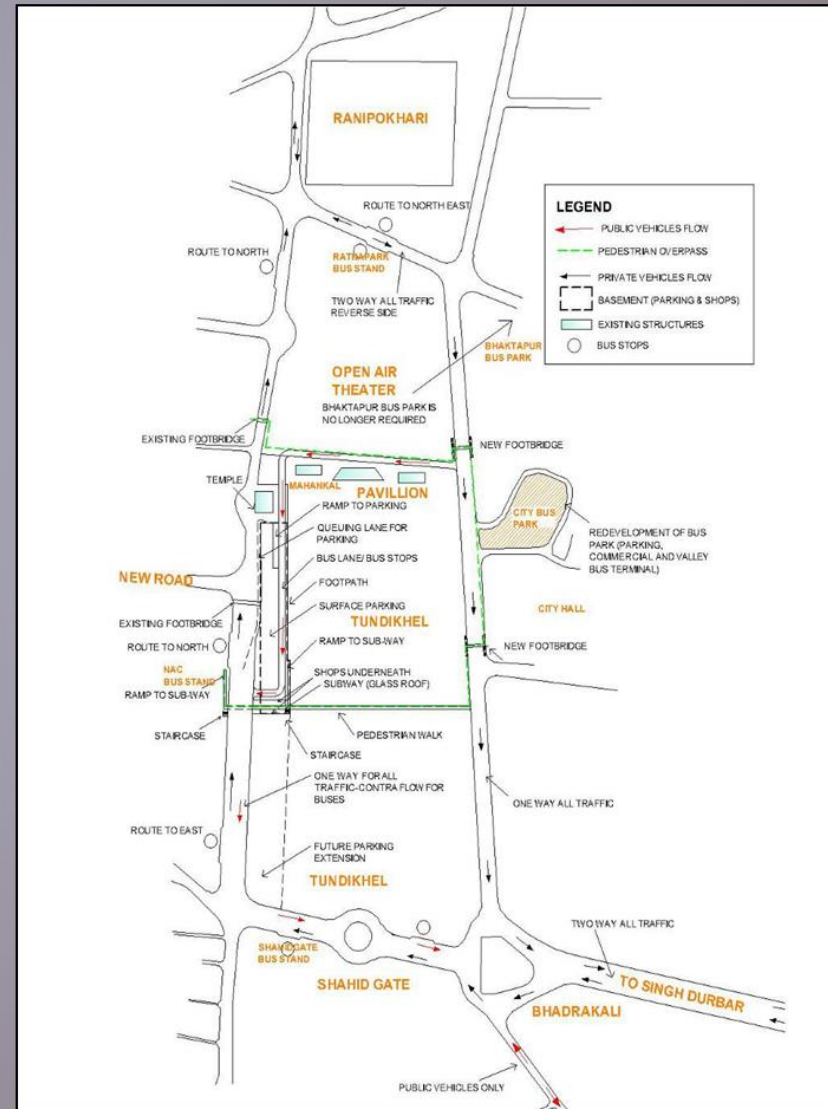
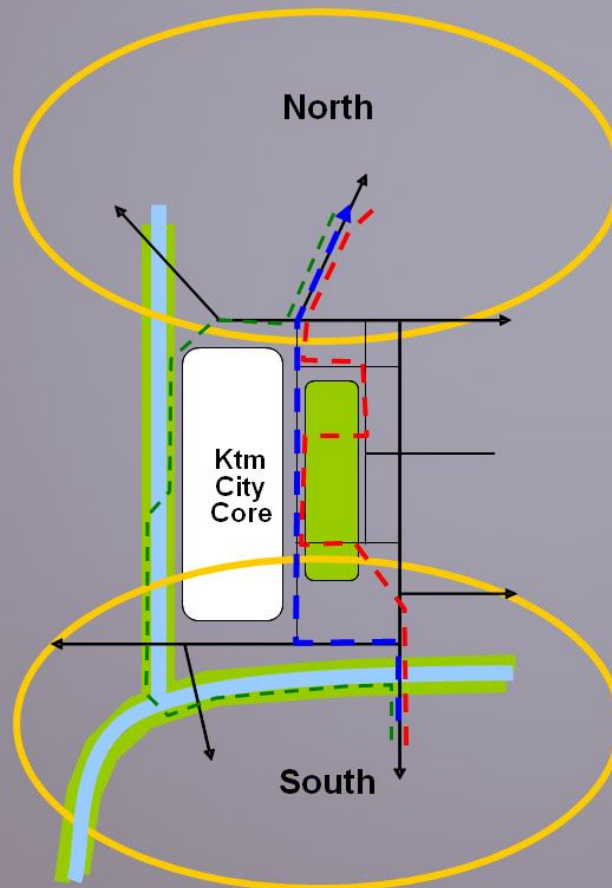
## Planning of Routes and Interchange





# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT

Make getting on/off easy  
Bus station/bus priority lanes

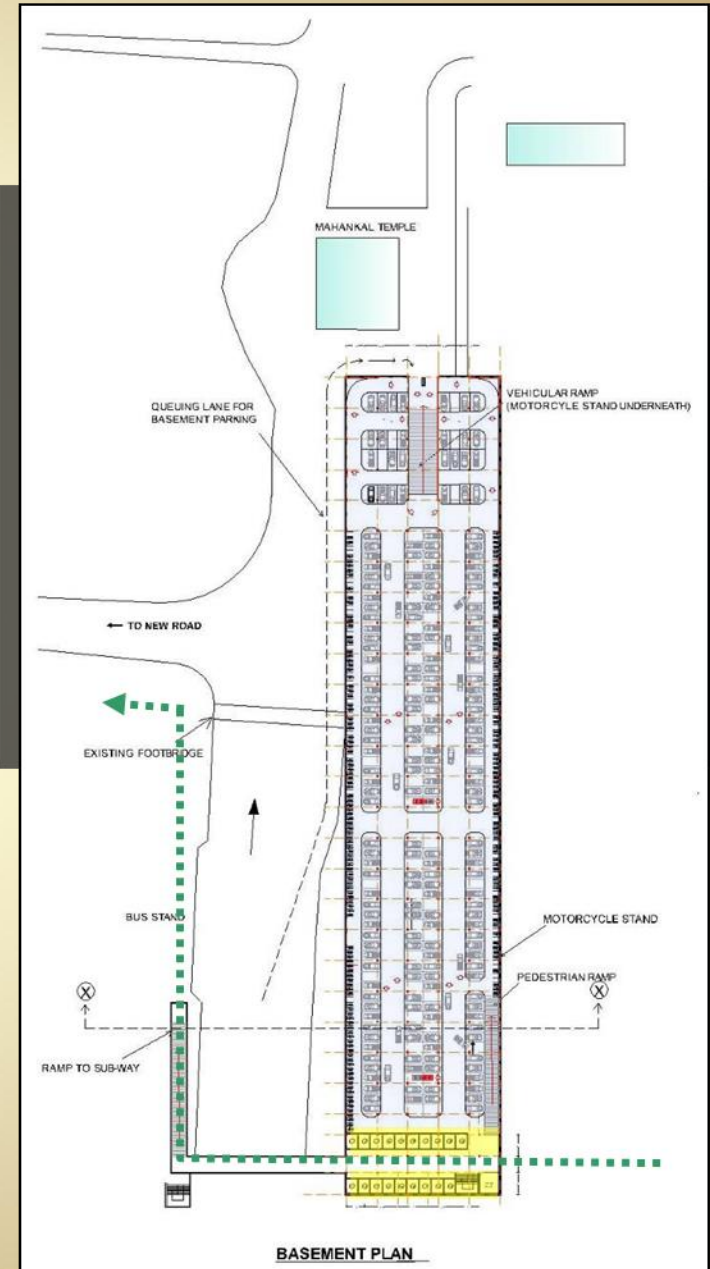
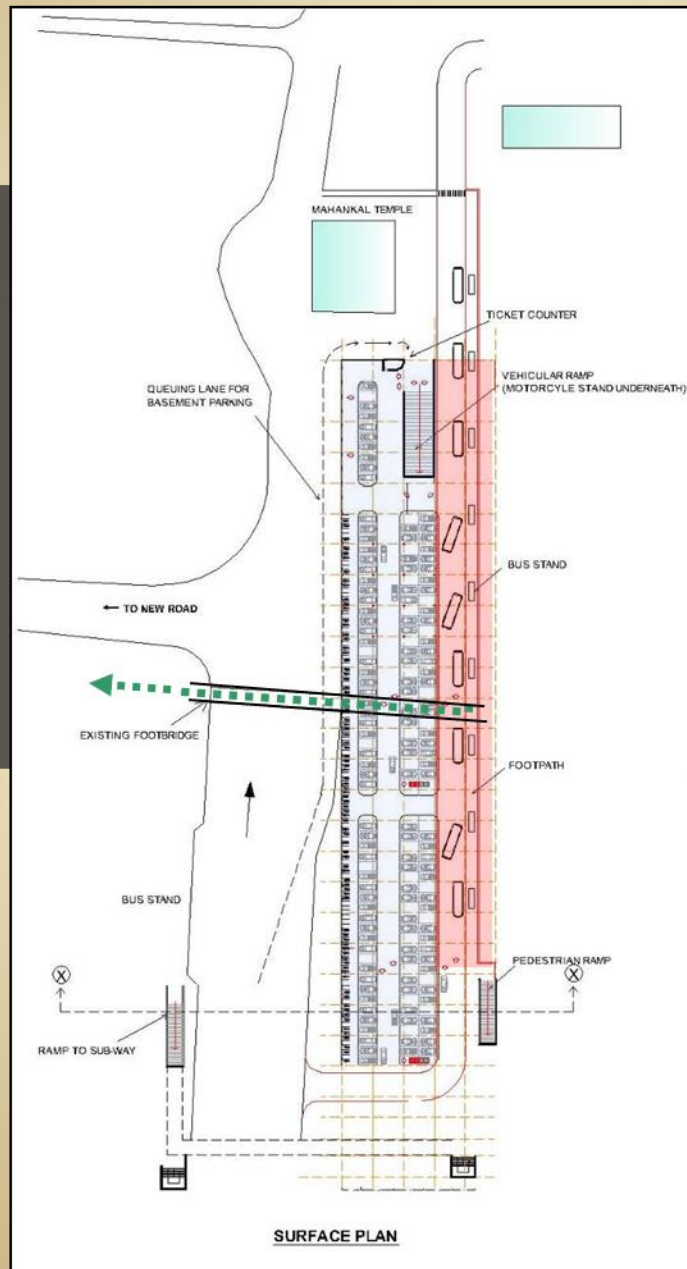






# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT

## Bus Station and Parking West Side of Tundikhel





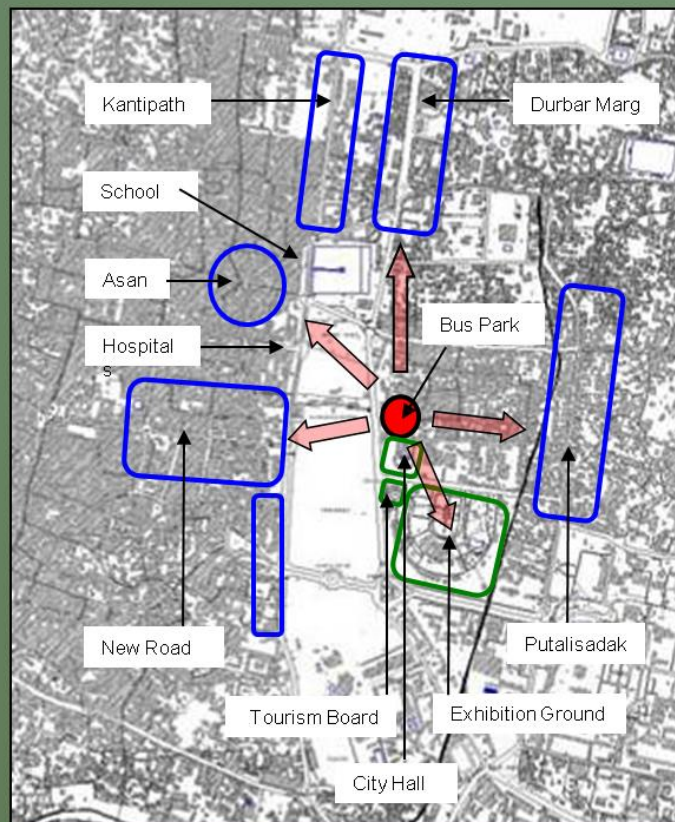


# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT

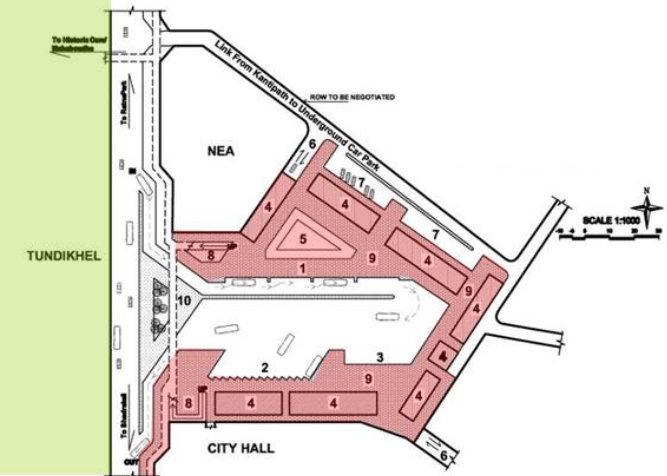
## Redevelopment of Old Bus Park

### Concept

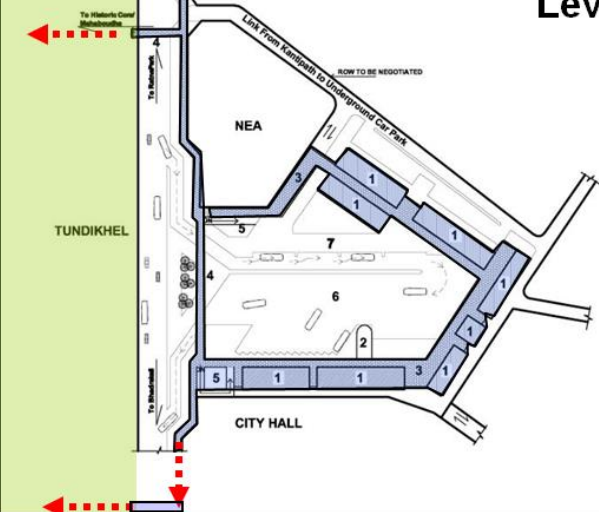
### Location



### Level 1



### Level 2





# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT

## Alternative Routes for thorough Traffic

Junction  
Improvements

Lazimpat By-Pass

BLR North Extension

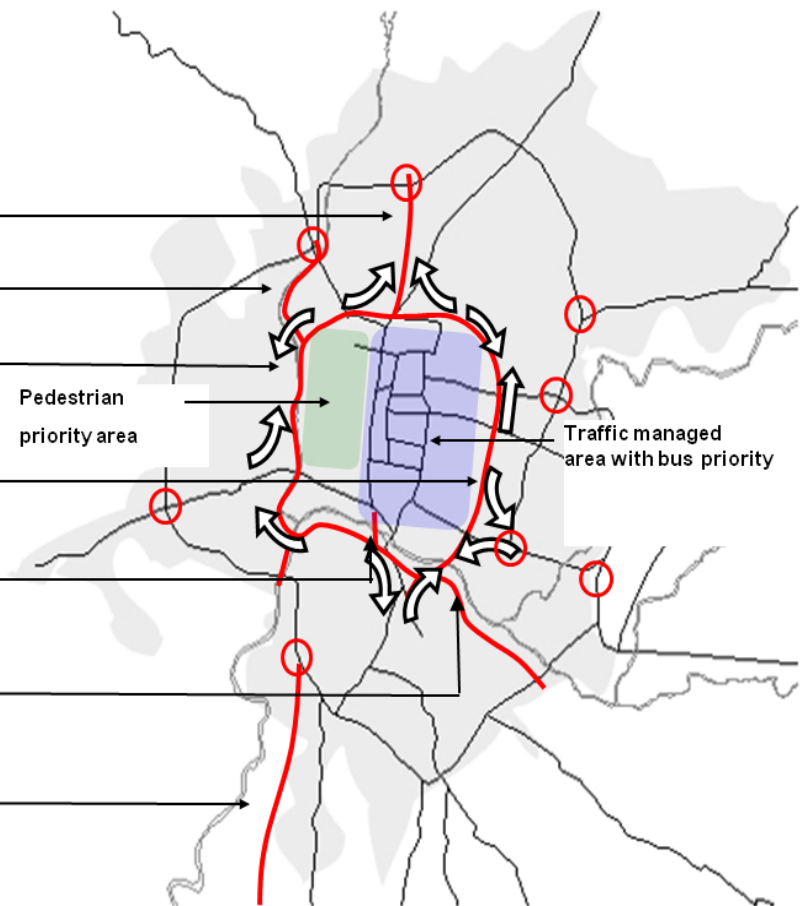
Bishnumati Link Road (BLR)

Inner Ring Road

Additional Bridge across Bagmati

Link to Ring Road

Fast Track









## **KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT**

### **Possible Route for Operating of Modern Trolley Bus System:**

1. Maharajgunj to Lagankhel
2. Tinkune to Kalanki
3. Tripureshwor to Bauddha
4. Ring Road



# KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT

## INVESTMENT BY KMC WITH PPP:

1. Bus station and car park on west side of Tundikhel;
2. Redevelopment of old bus park as bus terminal commercial centre and city hall;
3. Car park and commercial development in social welfare council compound.





# **KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT**

## **COMPONENT C : PEDESTRIANISATION**

### **Sub-Components :-**

- 1. Pedestrianisation of the Historic Core**
- 2. Pedestrian improvements within the Central Area**
- 3. Improvements to pedestrian links**
- 4. Movement of vulnerable people**
- 5. Awareness building**



# **KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT**

**Limit private motorised vehicles entering the central area**

**Options :-**

**1. Central area tax :-**

- **tax to use on specified roads**
- **levied with annual registration tax**
- **not applicable to PT and service vehicles**
- **increase tax over time**

**2. Parking controls :-**

- **no more on-street parking**
- **increase the hourly charge**



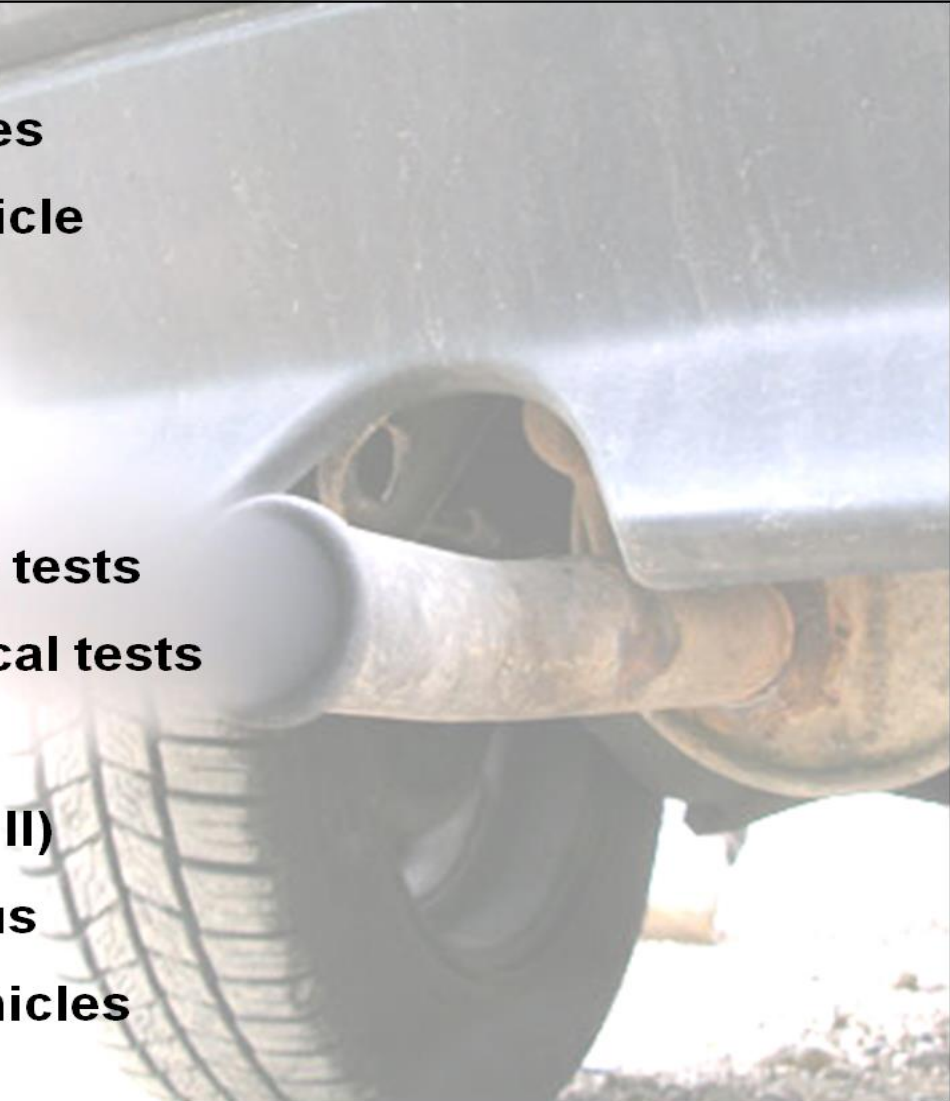
# **KATHMANDU SUSTAINABLE URBAN TRANSPORT PROJECT**

## **Air Quality Sub-Components :-**

- **Reduce the number of vehicles**
- **Reduce the emission per vehicle**

## **How ?**

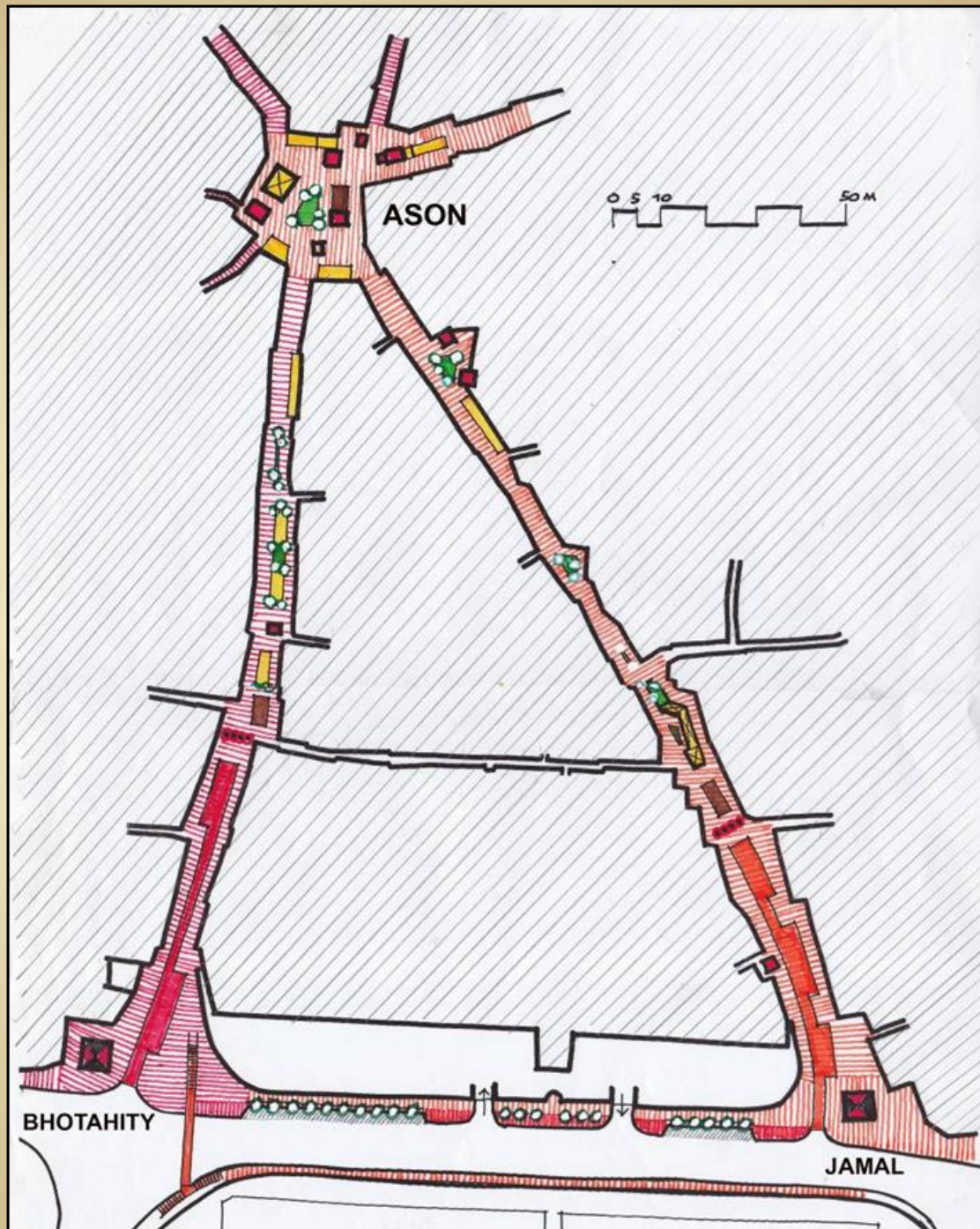
- **Improve public transport**
- **Strict application of emission tests**
- **Strict application of mechanical tests**
- **Better quality fuel (Euro III)**
- **Better quality vehicles (Euro III)**
- **Re-start and extend trolley bus**
- **Encourage zero emission vehicles**







## Primary Pedestrians Routes





- **Primary Routes**

- P1: Ring Road
- P2: Narayangopal Chowk – Panipokhari – Lainchaur - Royal Palace Museum – Bhadrakali - Singh Durbar – Maitighar – Thapathali – Jawalakhel - Satdobato
- P3: Kalanki – Kalimati – Tripureshwar – Thapathali – Maitighar - New Baneshwor - Koteswor
- P4: Balaju – Lainchaur - Jamal – Hattisar - Kamalpokhari – Gaushala – Chabahil – Bouddha – Jorpati Return via Maiti Devi - Dilli Bazaar – Bag Bazaar.



- **Secondary Routes**

- S1: ChappalKarkhana – Bishalnagar - BhatBahateni - Royal Palace Museum - Old Bus Park
- S2: Khusibu (Sorhakhutte) – Lainchaur - North of Royal Palace Museum - Police Head Quarter – Naxal – Kalopool – Siphail – Chabahil – Bouddha
- S3: New Bus Park (Gongabu) - Samakhusi – Lainchaur– Old Bus Park – Dilli Bazaar – Old Baneshwor - Airport
- S4: Sangkhamul – New Baneshwar – Old Baneshwar – Gaushala



- **Tertiary Route**

- T1: Bagdole – Sanepa – Teku – Paropakar – SawaBhagwati – Khusibu (Sorhakhutte)
- T2: Balaju Bus Park – Banasthali – Swayambhu – Chhauni – Kalimati – Balkhu
- T3: Balkhu – Sanepa – Jhamsikhel – Pulchwok – Managal Bazar – Gwarko
- T4: Balkhu-Bagmati river corridor-Sankhamul-Balkumari
- T5: BishalnagarChowk-Baluwatar (RB) – Lazimpat – Raniban-SamakhushiChowk
- T6: Kalimati – BishnumatiLink road-Balaju bridge – NewBus park at Gongabu
- T7: Tilganga – Singamangal-Shantinagar gate at Min Bhawan
- T8: Dhobikhola (Gopi Krishna hall) – Dhaulagiri Chowk along river bank



# PROLIFERATION OF ELECTRIC RICKSHAWS





## **PROLIFERATION OF ELECTRIC RICKSHAWS**

1. Rickshaws of 2,4,6 passenger capacity
2. Motor capacities 500-600 w, 800-1000 w, 1000 w and above for 2,4,6 passenger capacity
3. Currently in operation - 3415 Nos.  
Market Potential - 8385 Nos.  
Potential of Replacing pedal Rickshaw- 40370 Nos.  
Potential of Replacing Vikram Tempo- 2500 Nos.

# CONVERSION OF LPG VEHICLES INTO ELECTRIC VEHICLES

- EFFORTS ONGOING FOR CONVERSION OF  
PERMIT FOR CONVERTING FOLLOWING:

3 Wheeler LPG- 1500

4 Wheeler LPG- 378

Total - 1878



# **FORMULATION OF ENVIRONMENT FRIENDLY TRANSPORT POLICY 2071**





## वातावरणमैत्री सवारी तथा यातायात नीति, २०७१

### १) पृष्ठभूमि :

जलविद्युतको द्रोष्टकोण ले नेपाल सहत्वपूर्ण देशको रूपमा विश्वभर चिनिन्छ । जहाँ हिमाल, पहाड हुँदै तराई तर्फ बगिरहने ६,००० भन्दा बढी नदी नालाहरु बाट ६३,००० मेघावाट भन्दा बढी विद्युत फाइदाजनक रूपमा उत्पादन गर्न सकिने सम्भावना रहेको अनुमान गरिएको छ । यी दुवैहुँदै पनि पछिल्लो मात्रामा जलविद्युत र विद्युतीय सवारी साधनको विकास र विस्तार हुन सकेको छैन । यस विद्युत र विद्युतीय सवारी साधनको विकास भएमा यसले राष्ट्रको आर्थिक, सामाजिक, समृद्धि हासिल गर्न सकिने प्रचुर सम्भावना देखिन्छ । तर खनिज इन्धनमा नेपाल परनिर्भर भैरहेको विद्यमान अवस्थामा यसको अन्वेषण नै रहेगाने तराईको परिणाम प्राप्त भई नसकेको अवस्था र विगतमा जलविद्युतमा प्रयोग भएका योजना हुन नसकेको कारणले लोडसेडिङ जगत्मा खनिजजन्य इन्धनको भण्डार खोल्नु परेको छ । अर्को तर्फ, बाह्रौँ राष्ट्रियकरण र दिन प्रति दिन यातायातको माधमको वृद्धिले गदा खनिज इन्धनको माग तीव्र रूपमा बढिरहेको छ ।

खनिज इन्धनको विश्वव्यापी बढ्दो उपभोग र आकासिदै गएको मूल्य पथ यसको सिमितताको कारणले गर्दा नेपालको कूल निर्यातबाट प्राप्त गर्ने वैदेशिक मुद्रा परस्परको रकम बर्षेति यसको लागि खर्च गर्दा पनि लगाने अवस्था निर्जना भै सकेकोले यसको विकल्पको लागि विद्युत र विद्युतीय सवारीको विकासमा शिघ्र जोड दिनु पर्ने आवश्यकता हुनेको छ । विगतमा ठूली बस र २५०० बटा भन्दा बढी सफा टेम्पो संचालनमा ल्याइएको भएता पनि यसको ठाँटी रूपमा व्यवस्थापन हुन नसकेको कारणले ठूली बस बन्द हुनु पुगेको भने सफा टेम्पो लगायत अन्य विद्युतीय सवारी तथा यातायातको संरक्षणको पनि पर्याप्त विकास हुन सकेन ।

विगतमा खनिज इन्धनबाट संचालन हुने सवारी साधनलाई वातावरणमैत्री सवारी तथा यातायातका समग्रको रूपमा स्वीकारण गर्ने निर्जी क्षेत्रको प्रयासलाई सन्धानात्मक प्रोत्साहन तथा प्राथमिकता पुर्‍याउन नसक्नु सरकारले शिघ्रबाट पनि पर्याप्त ध्यान पुर्‍याउनु नसक्नु भन्ने पक्षहरु बीच पनि साभकारीको कमी रहनु विद्युतीय लगायत कम इन्धन खपत र कम प्रदुषण गर्ने वैकल्पिक वा नविकरणिय उर्जाबाट संचालन हुने वातावरणमैत्री सवारी तथा यातायात नीति लगायत कानूनी पक्षको कमी रहनुले वातावरणमैत्री तथा विद्युतीय यातायातको व्यवस्था (Electricity Based Transport System) को पर्याप्त विकास हुन नसकेको पाइन्छ । विद्युत लगायत अन्य देशले वैकल्पिक उर्जाको विकासमा जोड दिई प्रचुर मात्रामा वातावरण मैत्री विद्युतीय सवारी तथा यातायातको सफल विकास गरिरहेको अवस्थालाई मध्यनजर राख्दा नेपालमा पनि वैकल्पिक वा नविकरणिय उर्जाको पर्याप्त उपलब्धताको सम्भावना रहेकोले प्राथमिकताका साथ यसको विकासमा ध्यान दिनु पर्ने अवस्था रहेको छ ।

यातायात क्षेत्रमा प्रयोग हुने खनिज इन्धनबाट हुने मुद्रा बहिर्गमन, वैदेशिक निर्भरता, वातावरण प्रदुषण, विश्वमा भएकी जलवायु परिवर्तनको सन्दर्भमा, बिहल उष्मकरण, हरित ग्यासहरु तथा हाशिकारक कणजन्य तत्वको उत्सर्जन गर्ने विषयहरु जस्त कार्यमा यातायात क्षेत्रबाट बाटोबरणमः उत्पन्न हुने नकारात्मक असरहरुलाई न्युनिकरण गरि हरित विकास गर्नुपर्ने आवश्यकता भएकी छ । स्वदेशी सीउ र प्रविधिको प्रयोगबाट देशका उपलब्ध हुने उत्पादनका साधन र साधनको समुचित व्यवस्थापन तथा उपयोगद्वारा संरक्षण एवं प्रबर्द्धन गर्दै नीजि, सार्वजनिक, सामुदायी, सरकारी, सरकारी र स्वदेशी तथा विदेशी लगानीलाई परिचालन गरी व्यवस्थित रूपमा औसंगिकरणको प्रक्रियालाई तीव्र बनाई आवश्यक पूर्वाधारको निर्माण तथा विकास गरी सफा शहर कार्यक्रमलाई प्रभावकारी कार्यान्वयन एवं व्यवस्थित गर्दै उत्पादन तथा रोजगारीको अवसर बढि सरी आर्थिक समृद्धि हासिल गरी राष्ट्रिय इर्दतन्त्रमा यसले, गतिशील तथा प्रतिस्पर्धी, उत्सर्गनिर्भर अर्थतन्त्र निर्माण गर्नु आजको आवश्यकता रहेको छ । संविधानले परिचालन गरे बमोजिम समावेशी समाजको लागि



# **FORMATION OF COMMITTEE FOR IDENTIFICATION OF ROUTES IN KATHMANDU, BHAKTAPUR & LALITPUR FOR ALLOCATION TO ENVIRONMENT FRIENDLY VEHICLE & SUBMISSION OF REPORT**



नेपाल सरकार, भौतिक पूर्वाधार तथा यातायात मन्त्रालयको  
मिति २०७५/१०/१३ र २०७५/१२/११ को निर्णयानुसार  
वातावरणमैत्री सवारी साधनहरूलाई रुट चिन्का  
लागि काठमाण्डौ, भक्तपुर तथा ललितपुरका  
वाटोहरूको अध्ययन गर्न गठित रुट  
अध्ययन समितिको  
प्रतिवेदन

२०७२

प्रतिवेदन प्रस्तुतकर्ता :

रुट अध्ययन समिति

नाम थर	संयोजक	हस्ताक्षर
श्री प्रजुन कुमार थापा, निर्देशक, यातायात व्यवस्था विभाग		
श्री विजय कुमार महर्जन, सि लि ई सडक विभाग	सदस्य	
श्री सुमधरज खड्ग, असिस्टन्ट निपाय निरीक्षण परिवहन रुट	सदस्य	
श्री हितलाल शर्मा, भाषा अधिकृत, यातायात व्यवस्था विभाग	सदस्य परिचय	



# **FORMATION OF EVMIAN EMBRACING ALL TYPES OF CLEAN ENERGY TRANSPORTATION**



नेपाल सरकार  
गृह मन्त्रालय

जिल्ला प्रशासन कार्यालय  
काठमाडौं

निर्वाचन मिति २०७२-०३-१६  
दस्तावेज नं. १२७६८  
वर्ग नं. १२७६८

प्रमाण-पत्र

श्री अध्यक्षज्यू,

जिल्ला निर्वाचन कार्यालय, जिल्ला निर्वाचन कार्यालय, काठमाडौं  
जिल्ला निर्वाचन कार्यालय, काठमाडौं  
जिल्ला निर्वाचन कार्यालय, काठमाडौं  
नक्सा (४) वनोपयोग मिति २०७२  
विद्यार्थी छ।

स्थानीय अधिकारीको सही:

परी मिति २०७२-०३-१६

वर्ग नं. १२७६८

टिप्पणी:- यो प्रमाणपत्र हरेक आर्थिक वर्ष भित्र नवीकरण गर्नु पर्ने छ।



## 7. CONCLUDING REMARKS

Implement the KSUTP project in Kathmandu without delay.

2. Reinstate Kathmandu-Bhaktapur Trolley Bus System
3. Implement trolley bus systems
  - a) Around Ring Road
  - b) Ring Road to Budanilkantha, Kalanki, Thankot & Godavari & Boudha
4. Implement electric transport along the outer ring road

## CONCLUDING REMARKS

- 5 Hike environmental tax on POL transport
6. Hike import duties, registration & & parking charges on POL based transport vehicles.
7. Implement the Clean Energy Transport Policy 2071 without delay.
8. Provide Custom incentives for import of all types of electric vehicles and spares.
9. Create the EV PC immediately.
10. Permit conversion of LPG/ POL Vehicles into Evs.

**THANK YOU**