Developments in Transport and Mobility in the Philippines

Alexis M. Fillone, PhD De La Salle University-Manila



Transport and Mobilities: Network Dissemination Event 4th May 2018, University of Oxford, UK

Flow of Presentation



- Public Utility Vehicle (PUV) Modernization Program of the Philippine Government
- Current Researches in Transportation in DLSU-Manila
- Summary

PUV Modernization Program of the Philippines











Current Public Transport System

- -Unreliable
- -Pollutive
- -Unsafe
- -Inconvenient
- -Uncomfortable







ROAD-BASED PUBLIC TRANSPORT REFORM PROGRAM PUV MODERNIZATION



A transformational large-scale initiative and flagship project of President Duterte supported by the proposed Comprehensive Tax Reform Program of the Department of Finance.

It envisions a restructured, modern, well-managed, and environmentally sustainable transport sector where drivers and operators have stable, sufficient, and dignified livelihoods while commuters get to their destinations quickly, safely, and comfortably.

"Starting 2018, Filipinos will have a pleasant commuting experience."

Slide from the PUV Modernization Program Capacity Building presentation by Usec. Anneli Lontoc (DOTr), April 2018

MAJOR COMPONENTS PUV MODERNIZATION PROGRAM



Regulatory Reform



LGU Local Public Transport Route Planning



Route Rationalization



Fleet Modernization



Industry Consolidation



Financing PUV Modernization



Vehicle Useful Life Program



Initial Implementation



Stakeholder Support Mechanism



Communication

From the PUVMP Capacity
Building presentation by Usec.
Anneli Lontoc (DOTr), April 2018

"System Reform and Vehicle Modernization"

Ongoing Local Public Transport Route Planning







- Development and Application of Transport Desirability Index for the Assessment and Planning of Transport Systems in the Philippines
- 2. Metro Manila Transportation Network: Big Data Analytics and Applications (MMTN:BDAA)



Research Title: Development and Application of Transport Desirability Index for the Assessment and Planning of Transport Systems in the Philippines

Principal Investigator: Dr. Jose Bienvenido Manuel B. Biona

Co-investigators/Members: 6

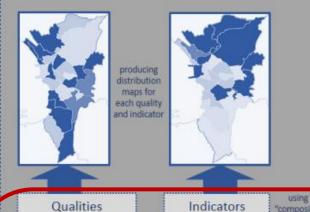
Duration: 2 years (April 2018-March 2020)

Funding Institution: Commission on Higher Education (CHED)

Study Locations: 4 Cities (Metro Manila, Iloilo, Dagupan, Baguio)



FRAMEWORK



Mode Share

Cost

Trip distance

Travel time

Energy consumption and fuel types

Locations of services

(e.g. jobs, hospitals)

Demographics per zone (e.g. income, Indicators

Efficiency

Environmental

Impact

Accessibility

Resilience

Social Equity

Baseline Scenario

composite"

indicators

aggregation of indicators

Multicriteria

Model

Transport Desirability Framework

Possible Uses:

- 1. Diagnosis: Identify zones which currently have poor transport desirability, and would require intervention.
- 2. Assessment: Test proposed projects impacts to transport desirability in the city.

Other Uses:

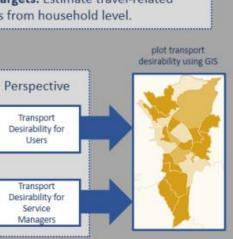
varying

weights

Indicators

1. Land-Use: Assess spatial equity of locations

2. Climate targets: Estimate travel-related emissions from household level.

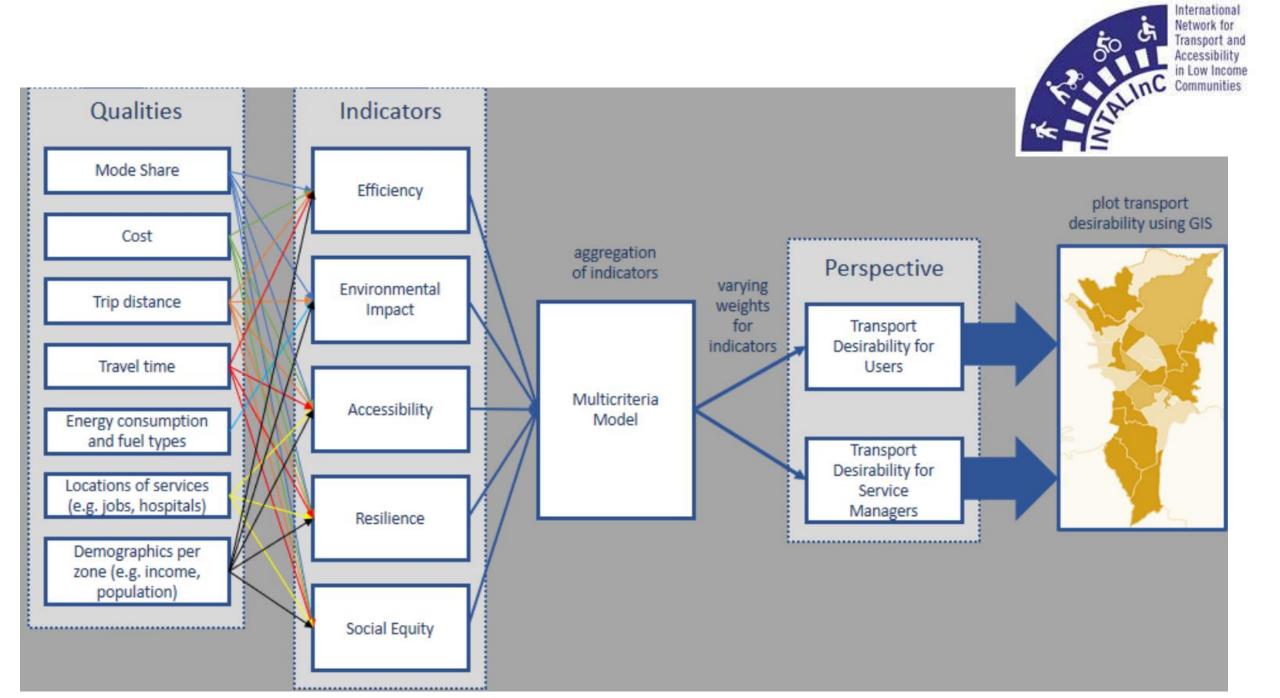


International Network for Transport and Accessibility in Low Income Communities

Mode Choice Model

Scenario Analysis

- 1. Sample Scenario 1 LRT Extension
 - 2. Sample Scenario 2 Reduce congestion
 - 3. Sample Scenario 3 Fare increase



Research: Development and Application of Transport Desirability Index for the Assessment and Planning of Transport Systems in the Philippines



General Objective: To develop a household-based transport desirability assessment model and tool to aid local government units and researchers in identifying areas which badly need transport interventions, and in visualizing impacts of proposed projects in a GIS map.

Research: Development and Application of Transport Desirability Index for the Assessment and Planning of Transport Systems in the Philippines



Specifically:

- 1. Develop criteria for transport desirability assessment,
- 2. Develop a software for data gathering and data management
- 3. Develop a software for implementing the transport desirability assessment model and visualization results (qualities and indicators) in a GIS platform
- 4. Perform multicriteria analysis with local experts to consult on the aggregation of indicators
- 5. Conduct capacity building workshops with partner universities, local government units and development institutions to disseminate the outputs of the research.

Current Researches in Transportation in DLSU-Manila

International Network for Transport and Accessibility in Low Income Communities

Research Title: Metro Manila Transportation Network:

Big Data Analytics and Applications (MMTN:BDAA)

Principal Investigator: Dr. Alexis M. Fillone

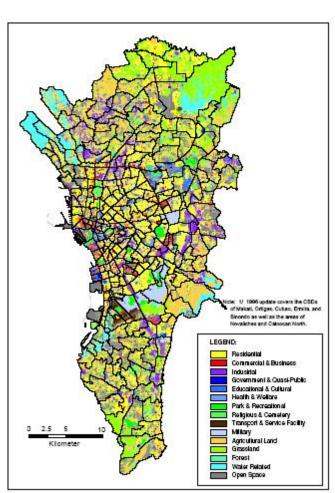
Co-investigators/Members: 7

Duration: 2 years (January 2018-December 2019)

Funding Institution: Department of Science and

Technology (DOST)

Study Locations: Metro Manila



Research: Metro Manila Transportation Network: Big Data Analytics and Applications (MMTN:BDAA)



Primary Objective

To model and assess the existing road transportation network and transport-related facilities of Metro Manila as well as planned transport infrastructure projects at the local (city) and metro-wide levels (Metro Manila) with the end objective of developing a transport database system.

Research: Metro Manila Transportation Network: Big Data Analytics and Applications (MMTN:BDAA)

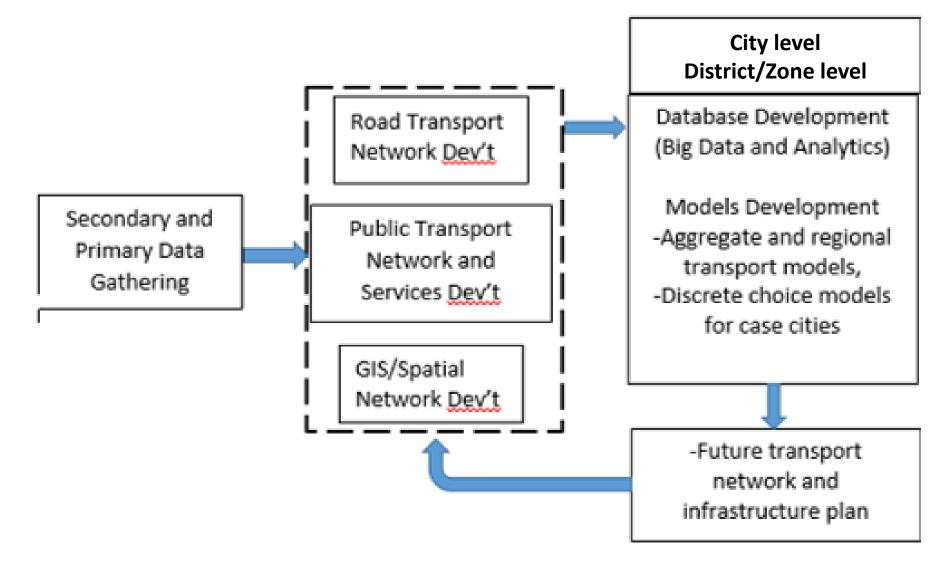


Specific Objectives:

- 1. To develop a database system of transport-related data and information on a citywide scale, and relate these to socio-economic and demographic variables at the district and/or zone level of Metro Manila,
- 2. To characterize and describe the travel patterns of Metro Manila,
- 3. To identify critical points or bottlenecks in Metro Manila's road transportation system including access and egress to the port of Manila, and
- 4. To develop forecasting models that estimate trips produced by district and/or zone

Flowchart of Major Activities (MMTN:BDAA)





Metro Manila Transport Network: Big Data Analytics

and Applications (MMTN: BDAA)

Three Important Components:

- 1. Data
- 2. People
- 3. Equipment/Facilities





Image: https://www.usaonlinecasino.com



Summary



- The PUV Modernization Program offers plenty of opportunities to conduct research in transport and mobility
- Current researches in transportation at DLSU-Manila will address some issues/concerns with regards to the ongoing PUV Modernization Program
- DLSU-Manila is fully supportive of INTALInC and is more than willing to conduct collaborative research with partner Universities

References:



- Development and Application of Transport Desirability Index for the Assessment and Planning of Transport Systems in the Philippines, Project Leader, Dr. Jose Bienvenido Manuel Biona, externally-funded research project funded by the Commission on Higher Education (CHED), grants-in-aid for research, April 2018
- Metro Manila Transportation Network: Big Data Analytics and Applications
 (MMTN:BDAA), Project Leader: Dr. Alexis M. Fillone, externally-funded research
 project funded by the Department of Science and Technology (DOST) Philippine
 Council for Industry, Energy and Emerging Technology Research and Development
 (PCIEERD), January 2018
- Omnibus Guidelines on the Planning and Identification of Public Road
 Transportation Services and Franchise Issuance, Department of Transportation,
 Department Order No. 2017-011, 19 June 2017
- GIZ Jeepney Market Transformation Programme Study, 2016



END

THANK YOU FOR YOUR KIND ATTENTION!

This work was supported by the Economic and Social Research Council grant number ES/P006221/1

