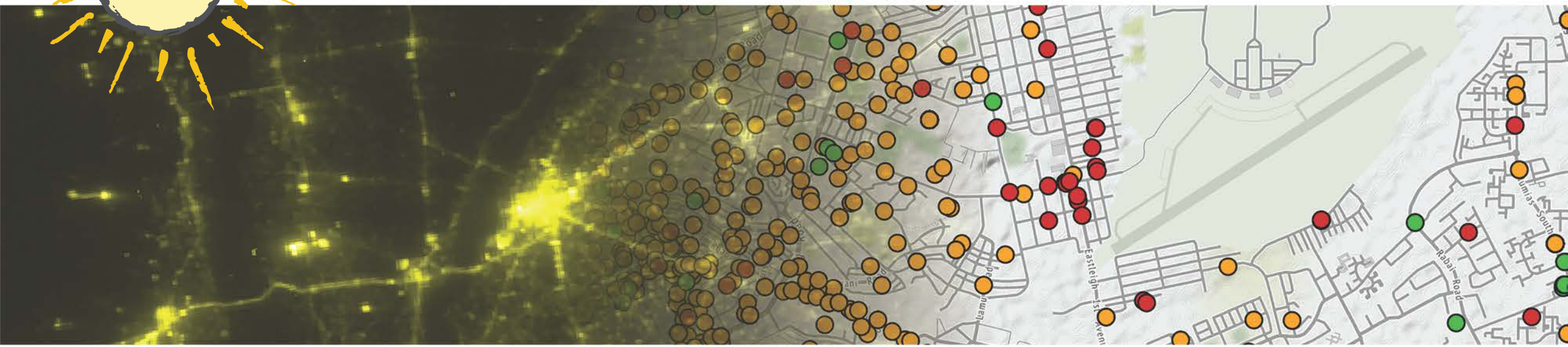
IE CONNECT FOR IMPACT

Transforming the Growth Potential of Transport Investments

Improving Monitoring and Evaluation in Transport Projects

Arturo Ardila-Gomez



i2i DIME TRANSFORM DEVELOPMENT

WORLD BANK GROUP Transport

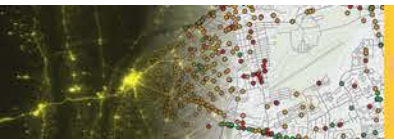
SUSTAINABLE mobility FOR ALL

UKaid from the British people

The problem

Based on real urban transport projects

- Project Development Objective (PDO) is to assist the Borrower's Municipality to enhance mobility for passenger trips within and to the central area of the city in an environmentally sustainable, integrated and safe manner.



The problem

PDO Indicators

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
1. Increased travel time of public transport users during the peak hour on the project corridor (minutes)	45						42
2. Increased daily ridership for buses in mixed traffic on the project corridor (number)	350,000						900,000
3. Reduction in Greenhouse Gas emissions from transport (tons)	0						-100,000

The problem

Indicator Description

PDO Indicator Name	Description (indicator definition etc.	Frequency	Data Source/ Methodology	Resp. for Data Collection
1. Increased travel time of public transport users during the peak hour on the project corridor (minutes)	Morning peak hour travel time on project Road from point A to B	Semi-Annual	Surveys	PMO and bus company
2. Increased daily ridership for buses in mixed traffic on the project corridor (number)	Daily public transport users on Project Road on the weekdays	Semi-Annual	Bus company statistics	PMO and bus company
3. Reduction in Greenhouse Gas emissions from transport (tons)	Deployment of low-carbon transit technologies and reduction of old bus over supply	Semi-Annual	Project monitoring supported by CPF methodology	PMO

The problem

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The problem

Issues with the PDO

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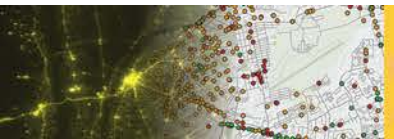
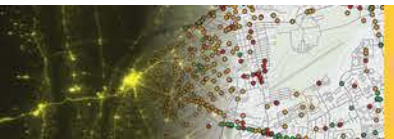


The Problem

Some Observations

1. Indicators stated expected direction of change which turned them into objectives.



The Problem

Some Observations

2. Clients could not replicate methodology: indicators where not measurable!

2.1 Same for subsequent task teams: no replicability!

The Problem

Some Observations

3. Clients did not own the Results Framework –it was a World Bank internal exercise!

3.1 But imperfect internal exercise because of lack of replicability

The Risk

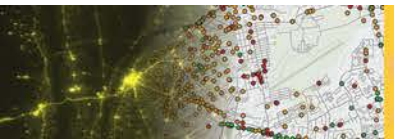
Example using Travel time indicator

- At baseline

1. Morning peak
2. Schools are in session
3. Rain
4. One trip by bus

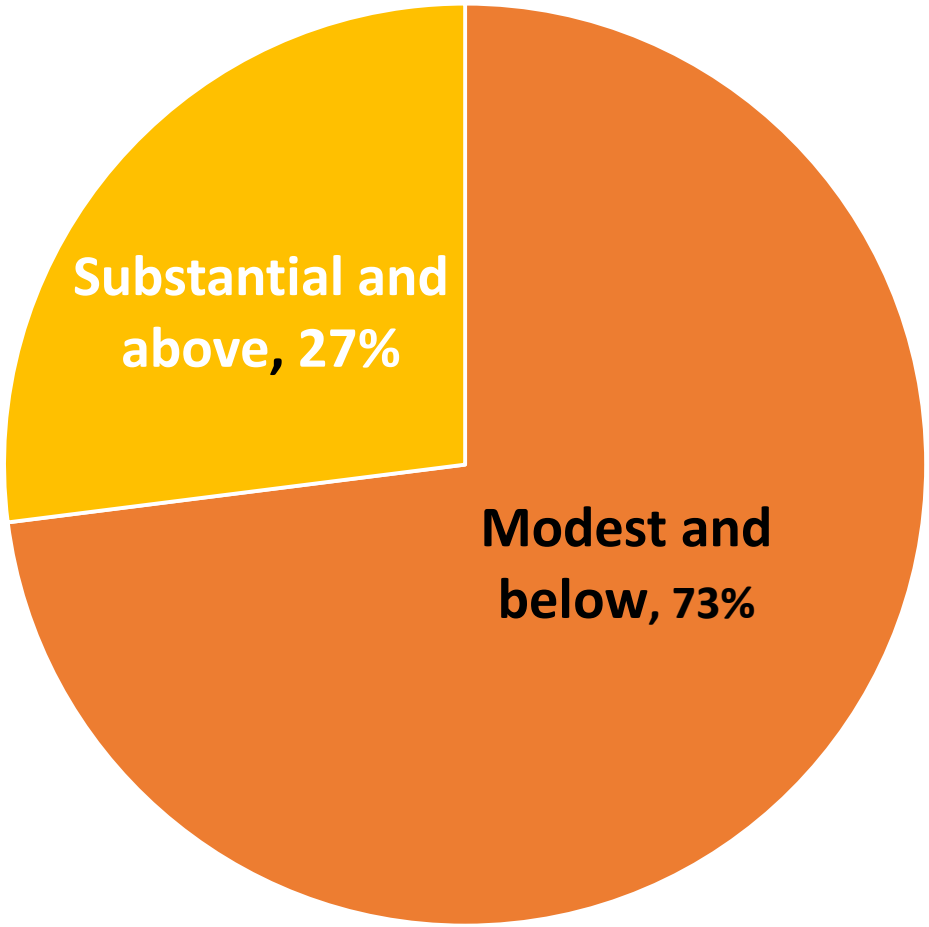
- At outcome

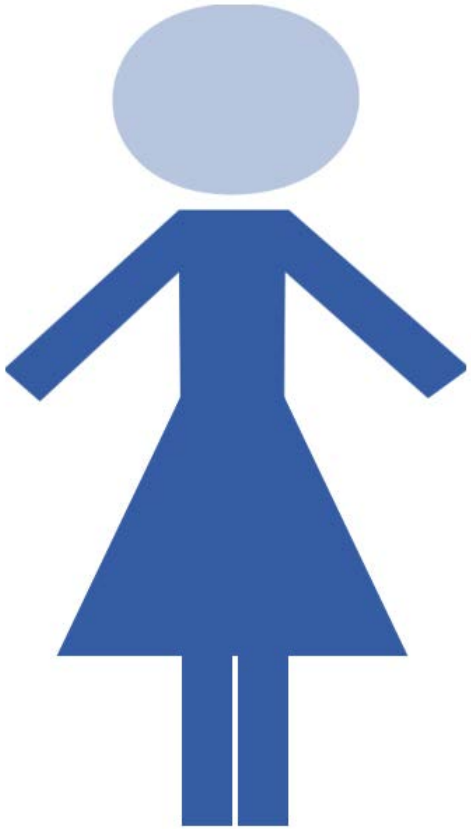
1. Off peak
2. Schools are on vacation
3. No Rain
4. GPS data on buses



The Consequence

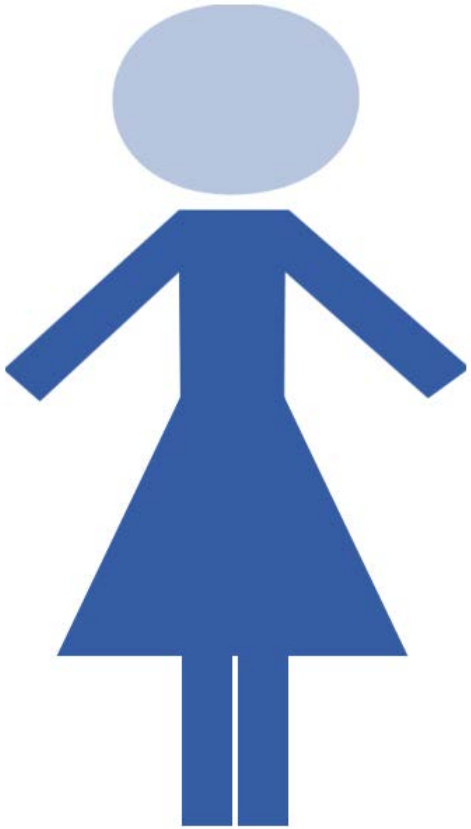
Low-Quality Results Frameworks





"You only need one word as per prior examples: Surveys"

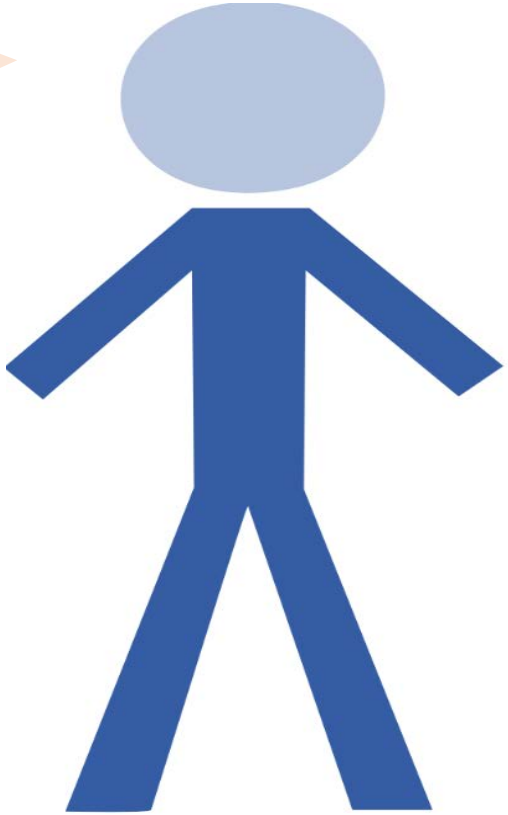
Why the low quality?



"I do not need to specify the methodology as I will be here in 5 years to explain it to the team that writes the ICR"

Why the low quality?

"The Client will be overburdened because they do not have the M&E capacity"



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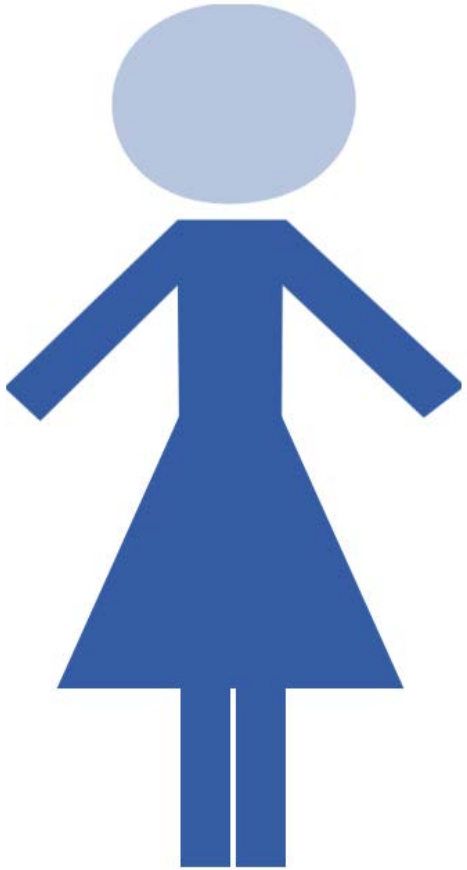


"I don't use sub-indicators, because I should have as few indicators as possible."

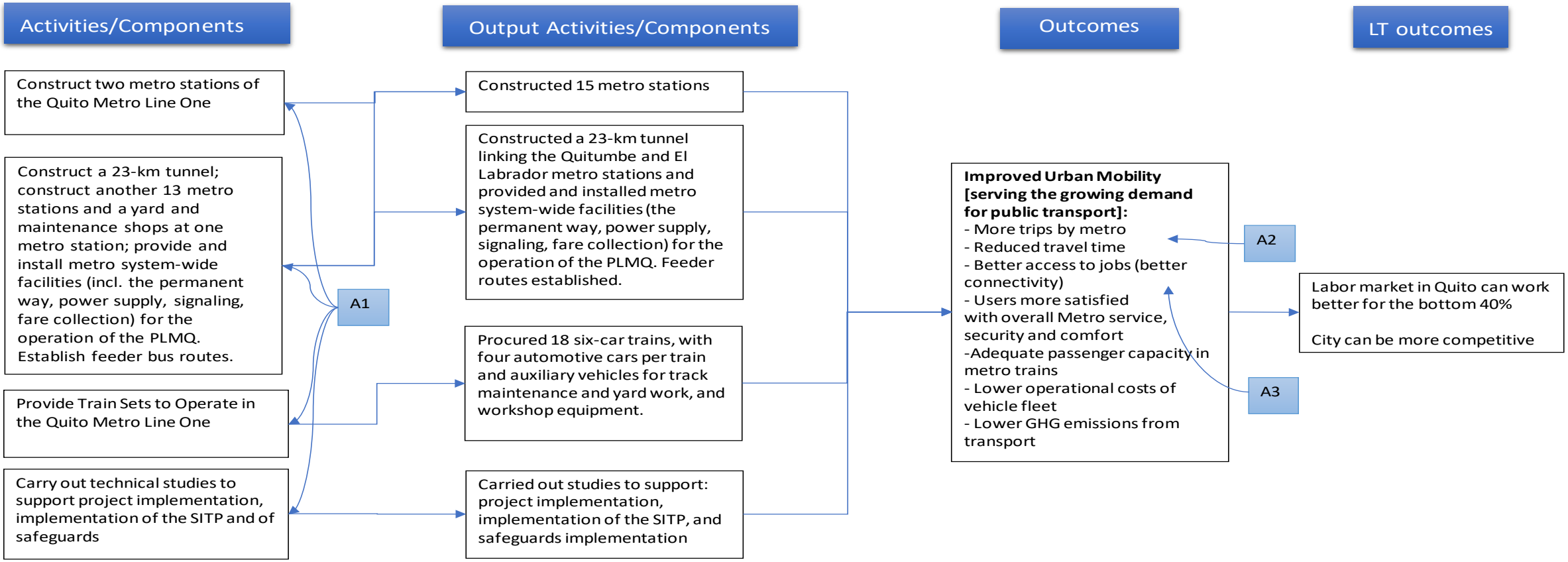
The Solution

In five steps

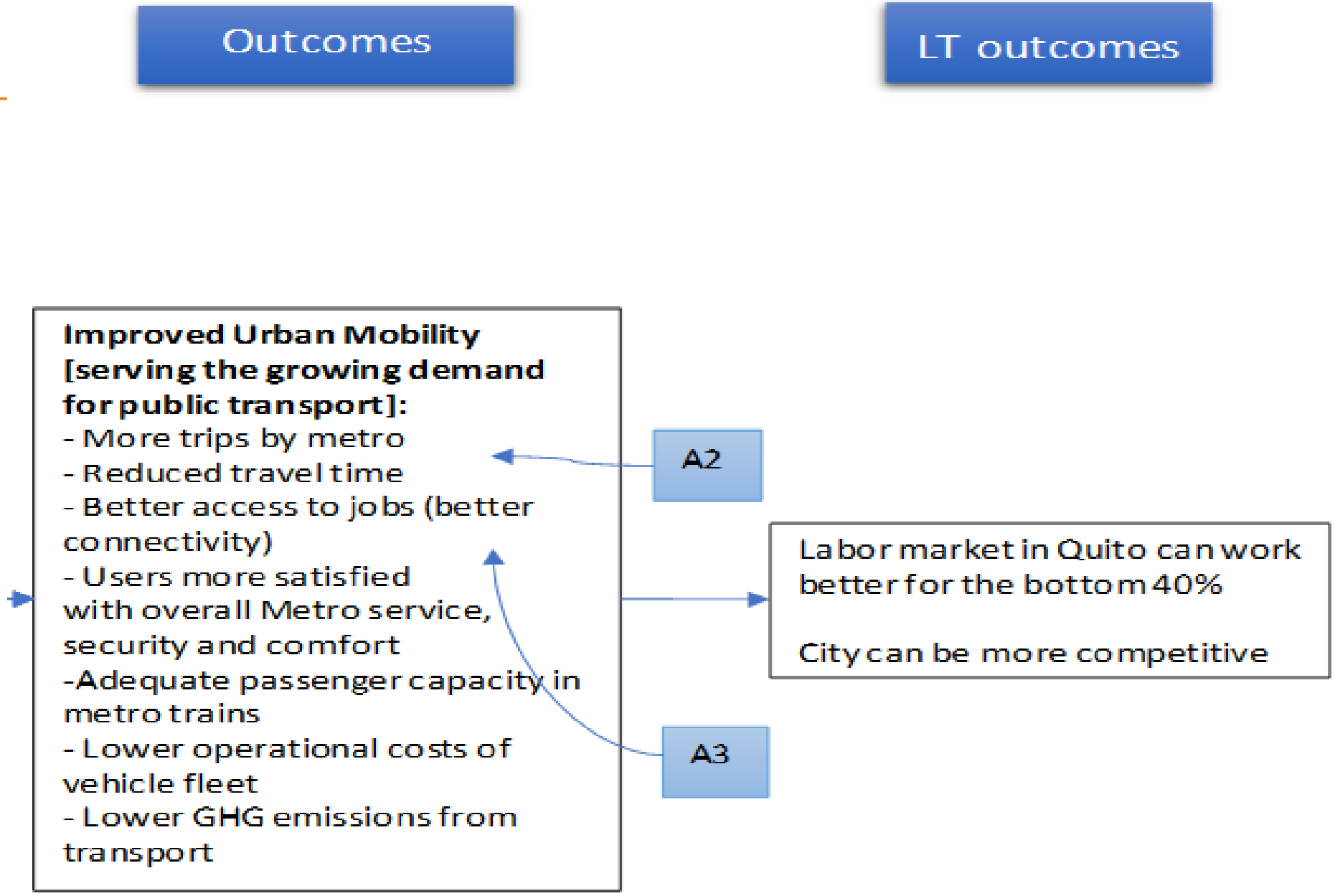
1. Theory of change:

The Solution

THEORY OF CHANGE



Critical Assumptions	
A1	Financing from co-financiers and counterpart needs to materialize in time.
A2	Fare collection for metro is integrated with city-wide fare collection. Bus routes are restructured and PLMQ has feeder buses. SITP is established.
A3	A capable operator for the metro is in place, be it private or public.


Outcomes
LT outcomes
Improved Urban Mobility [serving the growing demand for public transport]:
- More trips by metro
- Reduced travel time
- Better access to jobs (better connectivity)
- Users more satisfied with overall Metro service, security and comfort
-Adequate passenger capacity in metro trains
- Lower operational costs of vehicle fleet
- Lower GHG emissions from transport
A2
A3
Labor market in Quito can work better for the bottom 40%
City can be more competitive

The Solution

In five steps

2. PDO Statement indicates the:

- Target Group
- Benefits
- Expected Change
- Geographic boundary

The Solution

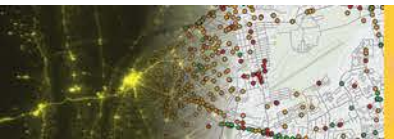
In five steps

2. Development Objective (PDO) is to assist the Borrower's Municipality to enhance mobility for passenger trips within and to the central area of the city, improve road safety, and reduce GHG emissions. ~~in an environmentally sustainable, integrated and safe manner.~~

The Solution

In five steps

3. Indicators are variables that change as a function of the project;
    a. Indicators must not say expected direction of change because they become objectives;
    b. Theory of change explains cause and effect;
    c. One indicator for every part of PDO.



The Solution

In five steps

BLOOD PRESSURE

not: Decrease in blood pressure

The Solution

In five steps

3. Indicators

1. ~~Increased~~ Travel time of public transport users ~~during the peak hour on the project corridor~~ (minutes)

2. ~~Increased~~ Daily ridership for buses ~~in mixed traffic on the project corridor~~ (number)

3. ~~Reduction in~~ Greenhouse Gas emissions from transport (tons)

4. Killed and injured people (number)

The Solution

In five steps

4. Description of indicator

a. States what indicator measures

b. States relationship to PDO

The Solution

In five steps

Key questions for the description:

1. What is being measured and why?
2. In what unit is the indicator measured?
3. What aspect of the PDO is the indicator measuring?
4. Are sub-indicators used? What are the sub-indicators for? (suggested: income, gender, disability, specific corridor)

The Solution

In five steps

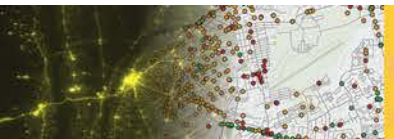
PDO Indicator Name	Description (indicator definition etc.
1. Travel time of public transport users	The indicator measures “the improvement of urban mobility” part of the PDO through reduced travel times. It is the average door-to-door travel time in minutes of public transport users of the metro, once the metro is operational including the walking, waiting, in-vehicle, and transfer times on the project corridor. Sub-indicators by gender and income.

The Solution

In five steps

5. Methodology: must be replicable by client and subsequent task teams.

Must measure change in variable due to project entering operation.

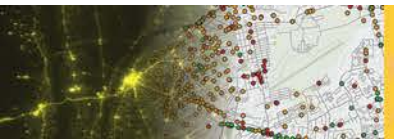


The Solution

In five steps

5. Key questions for the Methodology for Travel time

- Is it door to door travel time including all modes of PT together (metro, bus, bikes, walking to/from bus stops etc.)?
- Is it the travel time only spent riding one mode of PT? If so, does the travel time start as soon as the passenger boards, or when the bus/metro starts running?
- Is time spent on stops and delays disaggregated?
- Is it travel time measured by car on a select road corridor– if so, what is the starting and ending points of the travel time measurement, does it include only the running time or stops times at intersections.)



The Solution

In five steps

5. Key questions for the Methodology

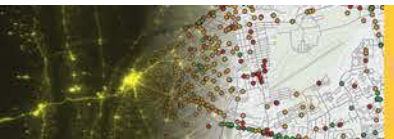
- How and when was the baseline value calculated? (i.e. if there has been construction work on the road/junction, how is this taken into consideration when measuring travel time?)
- When is the indicator measured: How long after the project activity is completed? What time of the year? Will schools be in session? Is it during regular work days or during holidays? Exactly which days – because even on regular workdays Monday through Friday, the travel behavior is different on Mondays and Fridays. Is it during rush hours? What is the rush hour?

The Solution

In five steps

5. Key questions for the Methodology

How will the data be collected and analyzed? The sampling needs to be statistically significant.



The Solution

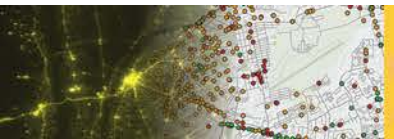
In five steps

5. Key questions for the Methodology

At baseline, there were buses in mixed traffic.

At target, there is a metro.

Therefore, different methodology for target and for baseline.



The Solution

In five steps

PDO Indicator Name	Methodology
1. Travel time of public transport users	*Baseline or without-project situation: demand studies conducted for the Metro stated that the equivalent average trip of 9.8 km made by bus at time of appraisal (2013) takes 38.5 minutes; by 2020 the trip is expected to take 42.5 minutes. This baseline is the without-project situation and projects travel time to 2018.*

The Solution

In five steps

PDO Indicator Name	Methodology
1. Travel time of public transport users	*With-project situation: three to six months after the Metro begins commercial operations, this indicator will be measured by timing a 10.7 km trip on any stretch of the Metro from origin to destination during a weekday rush hour. The indicator is the average of five workdays in a typical week when schools are in session and there are no holidays. To recognize the need for walking to and from Metro stations, add six minutes to this time. The travel time in the Metro will be obtained from reports by the Metro operator. The Metro will have signaling that tracks the location of each train.*

Thank You