

## How BRT Lost Its Way in the Philippines

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**Abstract:** The Philippines is a late rider on the BRT bandwagon, but tried to make up for it with three projects lined up for implementation almost concurrently. However, all of them encountered varying setbacks, with one aborted at birth. This paper reveals the travails of each project, analyzes them from the lens of the BRT playbook, and identifies the land mines encountered along the way. The Philippines experiments provide cautionary tales for other countries in the Global South so they can avoid costly ‘matriculation’ fees. The paper ends with suggestions on how BRT can claw its way back into its appropriate position in the urban transport firmament.

*Keywords:* bus rapid transit, busway, public transport, transport policy

### 1. INTRODUCTION

Reforming the road-based urban public transport system invariably focuses on buses, and of course, the more numerous “LAMATs” to countries of the Global south (paratransit to planners of the Global north). And in the last 20 years, the Bus Rapid Transit (BRT) model has become the ideal template promoted by international lenders for such reformation. Before that and for three decades, bus reformations contented itself with the busway nameplate. These public transit programs intersect with traffic management concerns on the HOV (or High Occupancy Vehicles) front.

#### 1.1 BRT and Conventional Bus

While BRT is of recent coinage (~year 2000), busways can be traced back to 1970s. Before then, buses operate on city streets like other motor vehicles. The idea of giving bus transit preemptive rights on HOV lanes and signal priority at road intersections came much later. Whether a busway or a BRT, they are fundamentally of the same ‘specie’ – a shared road transport using buses with varying preference stripes.

Differences have some utility. For this purpose, ITDP developed a BRT scorecard in six dimensions that differentiate the various shades – from bronze to gold (ITDP, 2016). The low-end of the spectrum is sometimes referred to as BRT Lite. The Curitiba Bus Transit System (Adler, 2016) - considered as the *crème de la crème* of bus-based transit system - began in the 1970s without the BRT label. The USA only has few BRTs, and none of them could merit the gold rating (Malouff, 2013). In Europe, the more common term is busway, transitway, or BHLS (buses with a high-level of service).

#### 1.2 Methodology

This paper relied heavily on “oral evidence” (the direct experiences of the authors about BRT initiatives in the Philippines), combined with a critical review of documents – some of which are not publicly available - on the four bus projects that came out of the woodwork in the last

15 years. The pre-implementation plans for these cases were decomposed into phases and viewed under the lens of the BRT planning guidebook. Backcasting (Wikipedia, 2022) was then employed – as a kind of reality check - on the analyses of the phases or steps, from the desired future end-state back to the present state. The tentative findings were then stress-tested through international comparisons with known BRT projects that failed (Minh Hieu Nguyen and Pojani, D. 2018) - as well as succeeded - in other cities of the Global south. The three Philippine cases are experiments on BRT systems; a field laboratory that can offer valuable lessons to other countries embarking on similar journeys.

## 2. EARLY BEGINNINGS

The first busway in the Philippines was introduced in 1975 on Aurora Boulevard (R-6) a radial road dominated by jeepneys in Metro Manila. A subsequent evaluation study revealed that intrusion by cars into the yellow lane was small, at 20% of daily volume, despite weak enforcement. The findings obviated the need for lane barriers. EDSA (or Circumferential Road 4) had its yellow lane marked out in 1991, almost at the same time as the emerging obsession of traffic authorities on this particular corridor.

The first wave of bus reformation transpired from 1976 to 1986 – when more than 120 independent bus operators were merged into 14 consortia (Santiago, RS 2021). Each consortium was assigned a set of routes within its corridor of responsibility. Route overlaps was minimized between consortia. This ‘regulated competition’ regime was ditched in the 1990s, when deregulation became a policy mantra; it gave rise to fragmentation into more than 600 bus operators deploying more than 8,000 units. By 2017, the government turned back the clock and launched its public transport modernization program (DoTr, 2017). Its subsequent implementation in Metro Manila entailed consolidation by dicta of bus operations into 31 (one franchisee per route), as well as a similar consolidation of the more than 40,000 jeepney operators in Metro Manila (LTFRB, 2020). The new jeepney routes was released in tranches – and remained incomplete, as of end-2022. The transition of buses and jeepneys to the new order is currently in state of flux, i.e., a work in progress.

A BRT line on Commonwealth Avenue was mooted in a 1997 urban transport master plan (JICA, 1999), as an intermediate stage link to LRT-4 on Quezon Avenue. This was later abandoned in favor of a full railway line, 28-km from Recto to Batasan. Subsequently, a USAID-funded study in 2007 revived a BRT on the outer section of this R-7 arterial road. A feasibility study for a BRT system was prepared in 2002 as part of a new road study; this was for a suburban busway (Almec Corp, 2002) 21-km from the end-point of a proposed LRT Line 1 extension. The project failed to get traction, as none among three agencies (road agency-transport agency-local government) rose to be its champion. As can be gleaned in later sections of this paper, the same institutional ambiguities bedeviled the 3 cases of BRT projects that emerged after 2010.

A research study (Sigua, Ricardo, 2014) attempted to identify and ranked the best routes for a BRT system in Metro Manila’s road network of 5 circumferential and 10 radial roads. Using several criteria (e.g., demand, right-of-way, existing congestion levels, adequacy of existing public transit services, growth potentials), its findings are summarized in Table 1.

Table 1. Potential BRT Corridors in Metro Manila

Rank	Corridor	Comments
1	Quezon Avenue and Commonwealth Avenue (R-7), from Lerma to Fairview	The IBRD-funded Manila BRT 1 is on Quezon Avenue segment; the Commonwealth segment was overtaken by MRT-7, and unsolicited proposal
2	Ortigas Avenue, from Gilmore to Binangonan (R-5)	Currently served by 2 private bus companies. Considered the best bus service in Metro Manila
3	Circumferential Road (C-5) 5 from SLEX to Commonwealth	Trial balloon of a BRT project under PPP modality was floated in 2015. No takers, because of the ridiculous 1-year time frame to execute. This corridor also appeared in the ITDP study of 2016.
4	Bacoor-Dasmaringas via Aguinaldo Highway	Analogous to the 2002 Cavite Busway Project alignment that became the Cavite-Laguna Expressway
5	Alabang Zapote Road and Sucat Road	Proposed for Monorail under the 2015 Master Plan for Greater Capital Region
6	C-3 (Araneta Avenue-Buendia Avenue)	This was overtaken by the construction of Skyway 3 and Link Road, elevated roads linking NLEX and SLEX

EDSA/C-4 was nowhere on the list for good reasons: there was already an operational elevated railway line (known as MRT-3) on the median since 2003.

### 3. THE ITDP CANONS ON BRT

The ITDP is as a “non-governmental non-profit organization that focuses on developing bus rapid transit (BRT) systems, promoting biking, walking, and non-motorized transport, and improving private bus operators margins” (ITDP 2016). From its bike-focus origin in 1985, the organization has become the acknowledged authority on the planning, development, and operation of a BRT system. It publishes and regularly updates the BRT Online Planning Guide - a repository of the best practices and accumulated lessons on BRT – the equivalent of a bible for BRT advocates.

Operating buses approximating that of a metro transit system is what makes a BRT. From the low-end to the high-end of the spectrum, there are “30 shades of grey” in the BRT universe as shown on Table 2.

Table 2. The ITDP Standards on BRT

CRITERION	Features/Characteristics to be Rated	Max. Score
1. BRT Basics	Dedicated Right-of-Way; Busway Alignment; Off-board fare collection; Intersection treatments, Platform-level boarding	38
2. Service Planning	Multiple routes; Express, limited & local service; Control center; Located in top 10 corridors; Demand profile; Hours of operations; multi-corridor network	19
3. Infrastructure	Passing lanes at stations; Minimizing bus emissions; Stations set back from intersections; Center stations; Pavement quality	13
4. Stations	Distances between stations; Safe and comfortable stations; Number of doors on bus; Docking bays and sub-stops; Sliding doors in BRT stations	10
5. Communications	Branding; Passenger Information	5
6. Access and Integration	Universal access; Integration with other public transit; Pedestrian access and safety; Secure bicycle parking; Bicycle lanes; Bicycle-sharing integrations	15
		100

The guidebook also presupposes a state agency to accomplish the six functions that make a BRT click (Hook, 2007). These functions are illustrated in Figure 1 below.

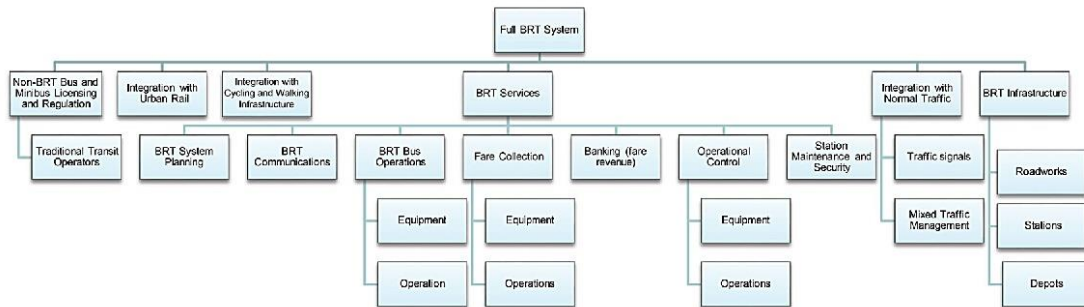


Figure 1. Six Intrinsic Functions that Make a BRT System

The six functions need not be in one umbrella, as it is possible for a BRT to be conceptualized and implemented with several state actors in collaboration. However, it is hard to imagine a sustainable operation on a long term basis without a public transit agency at the city level responsible for nearly all of the six, or at the very least orchestrating the efforts.

## 4. THE CEBU BRT SAGA

### 4.1 Conception from Below

The project was initiated at the city level on three occasions: in 1988-94, in 2001-2010, and in 2016-2019. It gained traction when Tomas Osmeña took over as Cebu City Mayor from 2001 to 2010, and from 2016 to 2019; inspired by what he had seen in Curitiba in 1996 and in Bogota in 2009. The national government was initially cool to the idea, perhaps due to the proverbial NIH (not-invented-here) syndrome. To overcome skeptics, the Cebu City government launched several advocacy campaigns that culminated with the presence of Enrique Peñalosa (the Bogota City Mayor who spearheaded the Trans Millenio) in November 2008. The efforts paid off when the World Bank granted funding for a feasibility study a few months thereafter. Completed in 2010, the study went up the regular government channels for investments of this magnitude and led to a World Bank financing. By first half of 2012, the Cebu BRT got the final green light from the National Economic and Development Authority (NEDA), the country's arbiter on public investment.

### 4.2 A Series of Setbacks

It should have been smooth sailing - from that final approval and loan signing, if past experiences were any guide. But it was not to be.

The first shockwave was on 30-Nov 2012, when the NEDA Board convened to affirm the project execution. Presiding over the meeting, the country's President at that time openly expressed doubts about it. Where is the proof- of-concept? It could have been resolved there and then, had the head of the Transportation department not been clueless and quickly pointed to Taipei and Jakarta; the two cities nearest to the Philippines that have had BRTs on their streets - the former dating back to 1992 and the latter since 2004. The proof-of-concept was subsequently shown via a bus doing a simulated run on a short lane of a street in BGC, a new town built on re-purposed military lands.

A second headwind came in mid-2016, when a new administration took over. Out of courtesy, the outgoing head of the implementing agency left the signing of the contract for

Technical Support Consultant (TSC) to his successor. The successor, a lawyer by training, dilly-dallied for nearly 2 years; and kept the Cebu BRT in suspended animation.

Then, a 3<sup>rd</sup> squall buffeted the project in the second half of 2018. Two high-profile duo (composed of then Presidential Assistant for Visayas and Secretary of Transportation) lobbied to terminate the project. One of the malum duo salivated at the false expectation of diverting the funds to his pet project – a rail line being negotiated below the radar with Chinese suppliers. Faced with a difficult choice, NEDA opted not to rock the boat by citing the potential negative repercussions of a loan cancellation with the World Bank. It also tasked the duo to execute the project posthaste; akin to assigning Dracula to guard the blood bank.

As the ‘duo’ proceeded grudgingly, a black swan event struck the world: Covid pandemic. The China-style lockdown imposed in mid-March 2020 paused many infrastructure projects, the Cebu BRT among the victims.

### **4.3 Key Features of the Plan**

The Cebu BRT connects the southernmost urban barangay to the northernmost urban barangay (Banilad), passing through the corridor of highest demand currently served by jeepneys (see Figure 2). The Plan (World Bank, 2012) had two physical routes: Bulacao to Ayala (on exclusive lane) and Talamban to Ayala (on priority lane) with a branch to South Road Properties – a reclaimed area on early stages of becoming a business district. With 8 service plans, it envisaged ridership to rise from 200 thousand boardings during AM peak to 400 thousand over a 25-year period. The project was to be completed in 3 years – a typical average for a BRT project of this scale.

This original plan adhered to the BRT playbook. It was on the corridor of high demand. Experts – especially those from the Global North - would be hard-pressed to find any flaw in it. But local experts have some misgivings. For one, the implementation plan discounted the difficulties of acquiring right-of-way in a city notorious for delays in such matters. And the road agency (DPWH) – to whom the ROW acquisition was subsequently delegated to - was kept in the dark of the planned road modifications and work schedule, until the ‘rubber meets the road’.

The institutional set up was dicey – with no definitive plans on who shall assume responsibilities for the six functions illustrated in Figure 1. There was enough time to remedy the shortcoming, but the implementing agency left it open. Approximately 2,000 jeepneys would be displaced, and the responsibility for easing them out was assigned to another clueless agency.

On the technical aspects, the BRT was oversold in terms of achievable capacity to 14,500 pphpd. The non-exclusive sections of the route criss-crossed several intersections, as well as at-grade crossings with major roads, a fact that militate against achieving less than 2-minute headway.

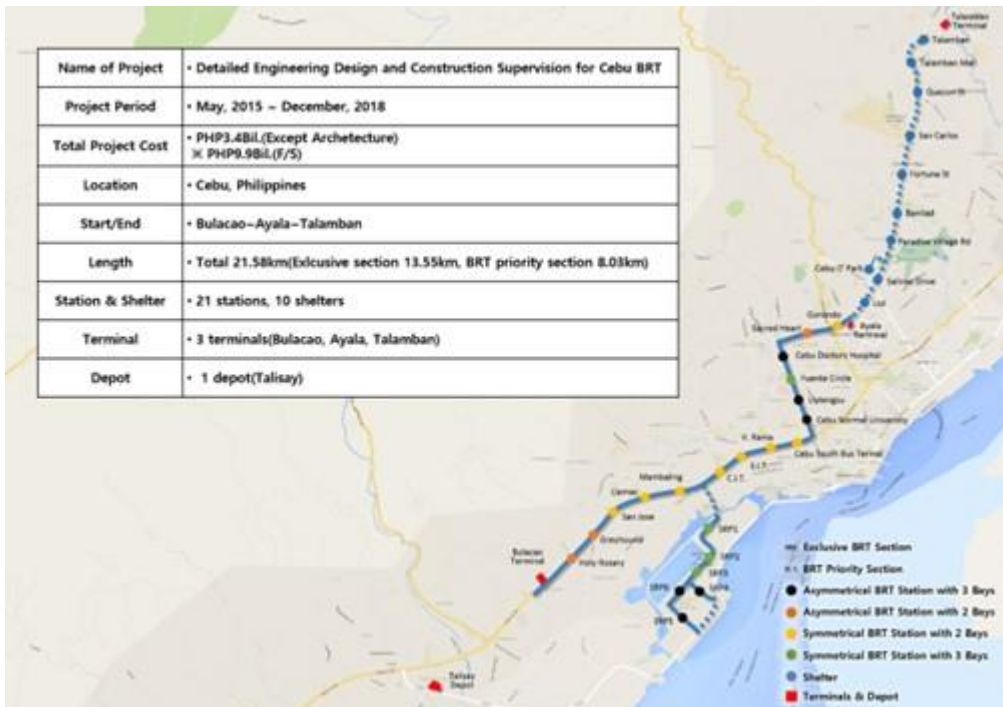


Figure 2. The Original Plan for Cebu BRT

But the biggest shortcoming of the Plan was its limited reach – confined to Cebu City. The adjoining cities of Talisay, Mandaue, and Lapulapu opted out for various reasons aside from local political rivalries. These four cities constitute the urban core of Metropolitan Cebu.

Nevertheless, the Cebu BRT was a good opportunity and could have lived up to its moniker as the first BRT system of the Philippines, and on its wake, the prototype of long-needed bus reforms.

#### 4.4 Best-Laid Plans of Mice and Men

Unable to kill the BRT project, the “duo” pivoted and unveiled an instant urban transport plan - a smorgasbord of wish-list transport projects under the heading “Metro Cebu Integrated Intermodal Transport System (MCIITS)”. This is shown on Figure 3. Its authors called it “a basket of solutions”, or BS (Erram, MM 2018), which was very appropriate. With typical hubris, the BS Plan did not even bother to anchor its proposals on a 20-year master plan (JICA, 2015) for Metro Cebu’s transport that was already on the table.

The “BS plan” can be likened to what a snake-oil salesman would peddle as a cure-all elixir for Metro Cebu’s traffic problems. The authors even promised an operating BRT plus an LRT, by 2020 (Mercurio, R. 2018). This was subsequently corrected to 2022, still an improbable target. For one, the LRT in their basket was nothing more than a conceptual plan-proposal by a private entity that had no capital nor railway credentials.

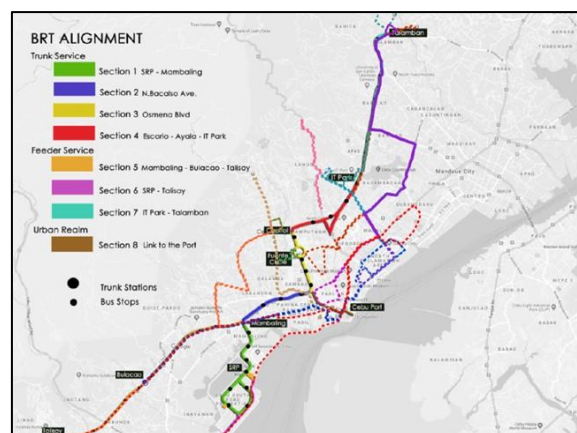


Figure 3. The BS Plan for Metro Cebu

Naturally, the BS Plan featured a revised (or mangled?) Cebu BRT Project. After all, it was shovel-ready – with preparatory studies and budgetary allocations at that time. Under the

BS plan, however, the length of the BRT was shortened from 23 km to 13 km, with the ancillary branch in the original plan becoming Phase 1 of less than 3-km. The revisions also relegated BRT into a secondary role to an LRT Project that was still imaginary.

#### 4.4 What's Next for Cebu?

By first quarter of 2023, the project finally reached construction stage – but for Phase 1 only. An event 6 years late, but celebrated with a ribbon cutting by no less than the President.

Beyond the official government “praise releases”, the outlook for the project is dismal. The original funding of Php16.3 Billion (~US\$295m) would surely fall short after numerous delays, inflation, and design revisions. The loan validity, already extended to 2023, would require another extension. More worrisome is the next steps – phases 2 and 3 are longer, more difficult to build, and have yet to be tendered.

After the twists and turns, the Cebu BRT project is now on track for the distinction of “longest time to realize a BRT project in the world.” Educated guess puts completion date to 2028, or 10 years behind schedule. In contrast, the Peshawar BRT took only 3 years - from 2017 to August 2022, with a gold standard to boot (ADB, 2021). What made Peshawar outperform Cebu?

The saddest part of all is that Metro Cebu has no other public transport bets in the pipeline for the next 6 years. The BRT project has placed, on-hold, other necessary transport interventions – except road buildings which continue unabated. Car-based trips can only go up and traffic congestion worsen.

### 5. THE BRT THAT FAILED WITHOUT TRYING

From Metro Cebu - the second largest metropolis (about 2 million population) in the Philippines – the second project case is located in the largest: Metro Manila, a conurbation of 13 million.

The Manila BRT 1 qualifies as the one most likely to succeed. Until, it was nipped in the bud.

The plan for BRT-1 comprises a 12.3-km route on radial road-7 from Manila City Hall to Quezon Memorial Circle (See Figure 4), with 16 stations. Total project cost was placed at US\$109.4 million (of which \$64.6 million would come from the World Bank). The loan was approved in March 2017, and made it into the flagship list of the 2016-2022 Build-Build-Build (BBB) infrastructure program of the government. The superlatives that gushed out in 2017 (“an affordable and convenient public transport option . . . will help make job and education opportunities more accessible, especially for the poor residing around the BRT route”) turned into a sour griping of sorts 5 years later: “zero procurement activity . . . weak capacity from inexperienced implementing agency” (De Vera, B. 2022).



Figure 4. Plan for Manila BRT-1

What went wrong with something that was so right?

It ranked number one in Table 1. Its do-ability was evident from its relatively low capital cost: about 1/3 that of the Cebu BRT and 1/6 of the Manila BRT 2. The route was shorter than the Cebu BRT and the road more accommodative (6 lanes, with medians, 20m wide for the most part, only short segments of mixed traffic). Only two challenging intersections that are not technically difficult to re-engineer. Right-of-way issues was also minor, as a depot site at the northern terminus was available from a government entity and bus stations easier to situate and build. The depot accounted for US\$48.9M or ~45% of total.

The project was frozen in time over a 3-year period. This inaction could only be ascribed to either of two things: a deliberate neglect from the top, or a case of having cold feet after the bad experience from the Cebu BRT project. Which one may never be known, but can be inferred from the diplomatese “weak capacity of implementing agency”. The fact remains that the official who tried to pull the rug on the Cebu BRT was the same one in-charge of this project, and was an unabashed rail zealot.

## **6. THE SUBVERSIVE BRT-2**

### **6.1 Before Covid Came**

The EDSA (or C-4) corridor was the most favored operating theater of all bus operators in the capital region. It has also been subjected to more studies, competing proposals, and band-aid solutions than any other public transport corridor in the entire Philippines.

With the highest concentration of buses on this road, it was a natural testing ground for conventional and outlandish solutions. And yet, none of the several government agencies (MMDA, LTFRB, DoTr, DPWH) who have a say on this corridor had precise statistics on bus fleet size and number of operators *ex ante*. The most accurate count was made in 2006 – when an actual field count was conducted (JICA, 2006). It revealed 164 bus operators with a total fleet size of 3,414 units on 35 supposedly-different routes where Edsa was the common section. After 2006, the transport regulator (LTFRB) had allowed more units and licensed new operators as to raise the number beyond 3,500.

The daily traffic nightmare that characterized Edsa before Covid came vanished overnight after a drastic lockdown was imposed in March 2019. As the metropolis re-opened, public transit supply was unable to go back up as quickly as demand pick up. Aside from the scarring effects of the pandemic, the government launched its long-delayed bus route rationalization program in March 2020 (LTFRB, 2020). Essentially, it restructured the bus route network into 31 routes, with a reduced fleet requirements of 4,600 buses. This is lower than the estimated 8,000 buses *status quo ante*. The C-4 route became the Edsa Carousel, 28.1-km long, with authorized number of units pegged at 550 buses. All operators were ordered to re-apply for their franchises following the new route list. This re-structuring did not envisage a shift of the busway from curbsides to median – the better to avoid costly investments on transfers between bus routes.

Flashback 3 years earlier, when a Manila BRT 2 project appeared in the BBB Infrastructure Program. From its ashes, the Edsa Carousel came out in 2020. A dog previously abandoned in a letter to NEDA dated 27-Feb 2018 now bore a different collar.

### **6.2 Tale of Two Plans**

Then came 2021. A new busway plan was unboxed. It appeared to be a truncated version of an earlier plan (ITDP, 2016), with substantial revisions. The two schemes are shown in Figure 5.



The ITDP-scheme carried a price tag of \$837 million, while the 2021 scheme would only require one-half at Php22 Billion (~\$400m), aside from being shorter and confined to one route.

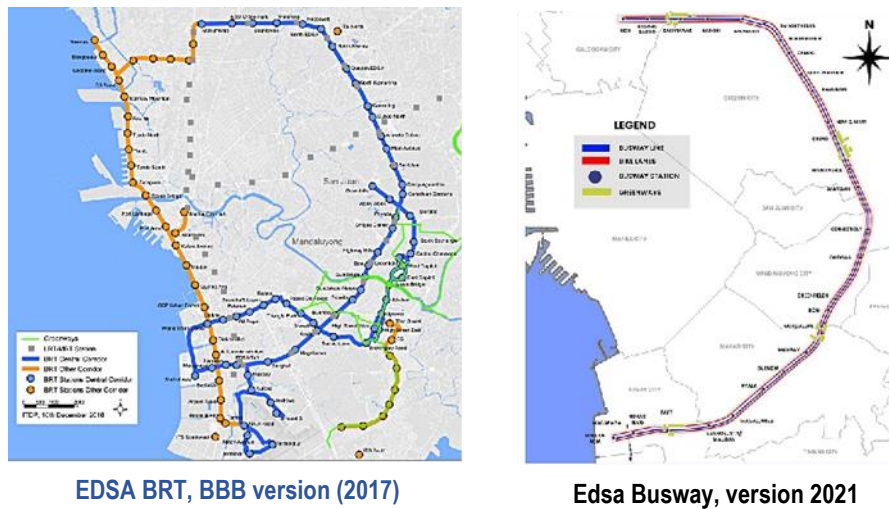


Figure 5. Two Bus Plans on Edsa

Not unlike the plan for Cebu BRT, the 2017 plan for Manila BRT 2 hewed closely to the ITDP playbook – except during execution. After all, it was prepared by a unit of ITDP. Its impressive credentials, notwithstanding, it had its Achilles heel, such as the following:

- Absence of ridership forecast to justify the fleet size, a demand that would be impacted by the impending 66% increase in MRT-3 capacity and the subsequent operation of the Mega Manila Subway. Plan A assumed, tongue-in-cheek that “there is always significant demand uncertainty with BRT” but floated 2 million ridership per day, which was 2 times the volume carried by existing buses, 6x more numerous with longer routes and expanded coverage. It is also twice the volume of a longer TransJakarta.
- The institutional dimension was also uncertain, albeit the report alluded to the creation of a new Transport Authority, a Clearinghouse Company, and a System Management entity. The same organizational template prescribed for the Cebu BRT that never transpired.
- It discounted the obstacles to rights-of-way acquisition – for the terminals, bus stations, and depot. This issue is a recurring thorn on many road and transport projects in the Philippines – more so in the a heavily built-up corridor where even ordinary sidewalks are deficient.
- It evaded the investment issue: is it cost-effective to plunk \$837m for BRT on C-4 or simply improve MRT-3? The rail alternative had already 48 LRVs on-hand, as well as soon-to-be-completed US\$300-M rehabilitation works.

### 6.3 ODA Funding that Went Kaput

The two plans illustrated in Figure 5 appeared to have been driven by a singular directive: force-fit a BRT system on the road regardless of physical constraints, network integration, or economics. It ignored the analyses behind Table 1, aside from evading the question: is a BRT the best option on a corridor with existing mass transit railway line?

The more ambitious ‘Plan A’ required two elevated interchanges on-top of existing interchanges. One on top of busy Edsa-Ortigas Interchange (which is already on 3 levels, with MRT-3 tracks weaving at the tight intersection space at 2<sup>nd</sup> level). The other on Edsa/Quezon interchange (or C4/R7). These two structures alone would entail closure of the two arterial roads, as well as disruption of the MRT-3 operations, during construction – enough to place the

metropolis into standstill for 5 years. Its proposed stations on EDSA alone would add 30 structures to the existing 17 rail stations on median – as to farther uglify the avenue. With those fatal flaws, it was no wonder that ADB lost enthusiasm and quietly backed out. It undertook the necessary back casting.

But the saga did not end there.

#### 6.4 Resurrection via an Edsa Carousel

At the height of the Covid pandemic, the government came out with a special budget that included a huge amount for assistance to commuters and public transport. To disburse that money rapidly, the Edsa BRT was exhumed from its graveyard and given new garb “Edsa Transformation” (DoTr, 2021). A foreign consultant was hired to hijack the newly-minted Edsa Carousel route and re-make it into a “pop-up BRT” - an oxymoron used by one of its advocates. The 2-lane busway on the curbside became a single lane on the median, co-using as

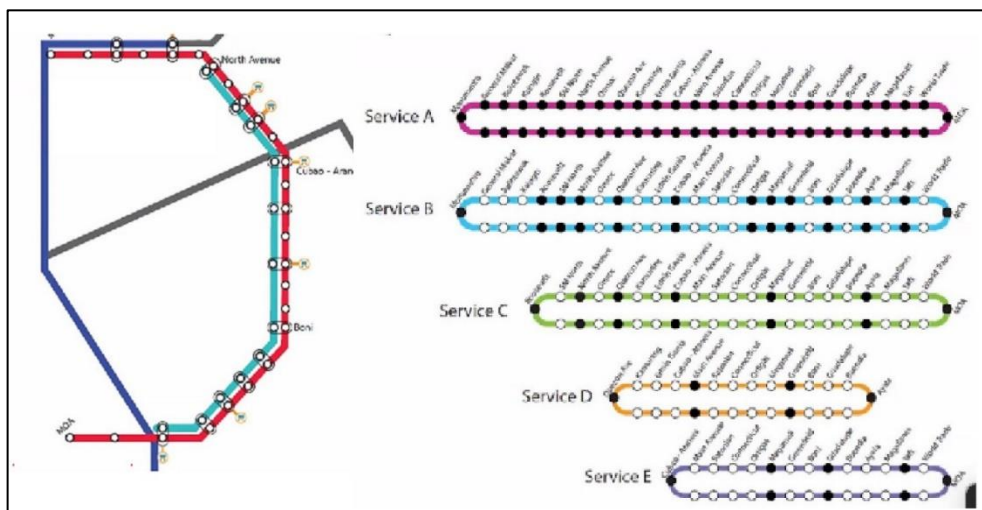


Figure 6. Proposed Service Plans for Edsa Busway/Carousel

much of the 17 rail stations for access, abandoning the 29 bus stations on the curbsides, and truncating the ‘carousel’ from 28.1 km to about 24 km. It re-engineered the LRT stations to accommodate bus passengers, and came out with 5 service plans that, in fairness, is justifiable to cope with the uneven load profile along the corridor (see Figure 6). The implementing agency re-branded the 5 service scheme as multi-loops, omitting the fact that the turning radius in-between the end points were too narrow as to constrain bus maneuvers. It specified 27 bus stops, including two terminal stations – 10 more than the available rail stations.

Because of extant traffic schemes on C-4 that involved unconventional U-Turns slots, the busway had to adjust to these traffic management constraints, aside from making do with buses with doors on the right side (for curbside loading), instead of left-side (for median loading). The erstwhile 170+ Edsa bus operators were cajoled to group into a consortium, and offered service contracts that paid buses according to mileage - regardless of passengers carried. The scheme was heralded as the future franchising system (Espelia-Codatu, 2022) that would do away with the old system – where drivers earn their income from revenues net of a fixed lease fee to bus owners. Fare collection was supposed to be digital, with buses equipped with on-board fare collection and GPS devices. Dispatching was to be managed by a central authority. Many of these features did not happen for many reasons; one of them was the choice of the wrong entity to act as the ‘transit-manager’. With this faux pas, the services were gaslighted as “free rides.” And because it relied on the government budget, the so-called ‘revolutionary

scheme' made the level of service dependent on annual budget to be determined by politicians. A formula for disaster.

## 6.5 Outlook for Plan C

If the ITDP and BBB plan of 2017 is Plan A, then the 2021 Edsa Carousel was Plan B. Emerging in 2023 is "Plan C" – which is still a work-in-progress.

With the expiration of the pandemic budget, the Edsa buses also ended its free-rides – a privilege not enjoyed by other routes, transport modes, and other cities in the Philippines. No budget, no service contract. Pay-as-you-go has returned, based on a government-prescribed tariff levels. As of February 2023 the end-to-end fare (Monumento-Taft) were: Php59.50 southbound and Php48.00 northbound. The comparable fares on the competing LRT mode is Php43 in either directions - without the burden of walking up and down steep stairs.

Government claimed heavy patronage on the Carousel, in excess of 300 thousand a day, during its free-ride moments. That is good news, but nothing extraordinary at it implies a turnover of 600 pax/bus on the average per day. However, the official narrative does not jive with field observations that showed many empty buses during off-peak hours. Long queues and waiting times are common during peak hours, for three reasons: a) the full fleet of 120 LRVs on the rail alternative have yet be deployed; b) the busway fleet was insufficient; and c) inter-station distances was longer than the old bus routes and the parallel railway line. The counting method was not specified. A study (Tiglao, 2021) using crowdsourced data placed headways on the Edsa Carousel between 2.2 – 4.1 minutes. A finding that is at par with comparable BRTs in other countries, such TransJakarta.

Of course, with near 100% lane exclusivity, travel time greatly improved. Business groups heralded the Edsa Carousel experiment a huge success – because it disciplined the buses into one lane instead of two, and gave car-owners one more lane to use without interference from wayward buses. The scene of orderly buses was also appealing, but at the expense of reduced public transit capacity and punishing inter-bus transfers.

By the last quarter of 2022, several private business groups (Luna, F., 2022) issued a call to 'privatize' the busway – to upgrade it into "gold-rated BRT" status. It is unclear, as of this writing, what would happen and what is meant by 'privatize'. There are no government assets to privatize, with the exception of concrete barriers and bus stations that already cost taxpayers about US\$13.7 M. If based on Plan B, an additional US\$364-M would be needed. A privatization modality implies public sector picking up the entire tab, building the fixed infrastructure facilities, and handing over the operations to a private entity. That would imply a 5-year wait, at the minimum. On the other hand, if PPP is the real pathway, then the winning bidder would have to build the specified number and locations of bus stations, design-build several flyovers to bypass problematic intersections, buy new buses with doors on the left side, as well as other ancillary obligations. If Plan A were to be prescribed and the expectation of the business groups for a gold-rated BRT were to be achieved, the winning bidder needs to invest about US\$500 million.

Will the private sector be willing to ante \$500m (or half of the amount), which no bus operators had done before? With a fiscally-challenged government, how much can the public sector allocate to the project? With a scenario of highly-regulated fare, competition with rail, and forecasted reduction in corridor demand, will it be a viable proposition?

No one in the government raised the preceding questions. Three plans in 5 years betray confusion about the urban transit imperative – aside from an underlying misunderstanding about BRT.

## 7. A 4<sup>TH</sup> BRT IN PETTO?

There is a fourth bus project that needs to be mentioned. It was christened, initially as Davao Public Transport Modernization project. It is on the 3<sup>rd</sup> largest urban center in the Philippines (about 1.8 million, density of 727 inhabitants per sq-km). Jeepneys comprise its current intra-urban public transport system, with very little buses.

Project pre-implementation activities started in 2017, with loan agreement lined up by 2019 and a project cost of Php19 Billion (~US\$380m). From its inception, its goal is to replace more than 7,400 jeepneys with 1,550 modern buses.

The funder, ADB, elaborated on the wide scope of the project as follows:

- (i) Establishment of bus operation concession arrangement with the engagement of private bus operators through performance-based contract;
- (ii) Rationalization of bus routes of about 670 km, into about 30 routes;
- (iii) Procurement of approximately 1,100 electric and diesel buses;
- (iv) Construction of about 1,000 bus stops with shelters;
- (v) Construction of five bus depots, three bus terminals, and a bus driving school;
- (vi) Implementation of minor road improvements; and
- (vii) Establishment of an intelligent transport system.

The project had all the features of a BRT - except for dedicated and exclusive bus lanes. Its new appellation: Davao High Priority Bus System (HPBS). Its reluctance to don the BRT garb maybe tactical, perhaps to avoid the bad rap arising from the 3 preceding projects. Its technical support consultant (the second) brandished a UN SDG Award for Prosperity (Cheung, H. 2022) for its efforts.

The HPBS is ambitious, by Philippine standards: implementation in 2 years culminating in commercial service by 4Q 2024. Then on 03-February 2023, the government (Cupin, B. 2023) changed the completion date to 2029. Effectively, a 5-year extension. Belated enlightenment? The latest revisions also raised the project cost to Php73.378Billion - a whopping 291% cost overrun before it has even taken off ! At this price, the HPBS will be the most expensive busway project in the Philippines: nearly 2x the cost of the Edsa BRT version 1, or 3.7x the cost of version 3, 4x that of Cebu BRT.

It remains to be seen whether HPBS will get to the finish line. The handicaps that bedeviled the Cebu BRT and Manila BRTs have not been expunged from the HPBS project design. It is predicated on public funding for all of its assets (fixed infrastructure and bus fleet), and a service contract with a private entity. That is a major departure in policy, as it represents a nationalized road-based public transport regime whose operations and maintenance will be privatized. A subsidy trap in the making.

## 8. TRIP WIRES ON THE BRT ROAD

### 8.1 BRT in a Sea of Paratransit

In a city with a huge paratransit population and multiple bus operators – all of which are privately-owned, a BRT is an anomaly. It requires consolidation of existing bus/jeepney operators. The estimated jeepney operators in the case of Cebu BRT numbered 2,000; the number of bus operators on Edsa was about 170. On Quezon Avenue(BRT-1), an undetermined number of jeepneys.

Consolidation is preceded by route re-design – a network that evolved in 4 decades thru market forces. In Metro Manila, the bus reforms would lead to a single operator in each of the simplified 31 bus routes (LTFRB, 2020) - which is a major improvements, but still one too many. In any case, from 600+ to 31 is a good start – except that government took the passive

way. It expected the thousands of operators to coalesce on their own steam, for the change of vehicles to occur concurrently – sans public investment on infrastructure, nor tweaks on fares. In short, it assumes that private money is willing to render social service, at the expense of profit.

Before the consolidation process could accelerate, and during the pandemic lockdowns, the government resorted into short-term service contracts that mimicked cities of the Global North. An instrument of privatization in the Global North turned into a weapon of nationalization in the Global South where the government as Contractee becomes de facto transit operator.

Bus industry restructuring is a necessary precondition, but not sufficient, for a BRT system to succeed. In Bogota, about 25 private bus operators had to be merged. A public transit authority was created that awards contracts to private bus companies on a competitive basis. Project implementation was thru the coordinated effort of 3 groups: i) the regulators, from the national and local government; ii) the managers coming from the transit agency, and IDU, both of which are organic part of the city government; iii) private companies that operated and delivered the services under a service contract.

Putting the cart before the horse is akin to pushing a string. Is it any wonder why the 3 BRT projects struggled?

## **8.2 Reach Exceeds Grasp**

The technical underpinnings to realize a BRT system is not rocket science. However, it requires managerial competence to execute a project that cuts across several agencies. In the Philippine case, four independent agencies all of whom are amateur players on the BRT game. In comparison, railway projects have a single-point of responsibility for the track infrastructure, electromechanical system, and rolling stocks. That single point of responsibility – as contemplated in Figure 1 - does not exist for BRT, at least not yet. The responsibility for road is under a national agency, the provision of buses is under many private entities who are franchised by separate regulator, traffic management is under local governments (a metropolitan body, in the case of Metro Manila), while the provision of bus stops and other fixed infrastructure is in a no man's land. It is not surprising that in the three BRT cases, foreign experts recommended the formation of mezzanine-level organizations to fill the gap. The recommendations are in the right direction, but splitting the six functions shown in Figure 1 goes against Occam's razor or the principle of parsimony (Encyclopedia Britannica, 2023).

By proceeding with the BRT projects sans institutional reform, the burden of planning, coordination, and realization was placed under ad hoc project management units created within the national transport agency. This was not up to the task - as pointed out by the World Bank about its aborted BRT-1 project. The deficiencies were more glaring in the case of the Edsa BRT, with improvisations galore that subvert the ITDP canons.

## **8.3 BRT is an Island**

Transport planners often waive the necessity of integration of the urban transport network – especially of public transport of all modes. Although it has several shades of meaning, integration has a common denominator – a single route is part of an overall network, designed so that transfers are minimized, if not seamless. In other words, a BRT line is not independent of itself; there are other modes that feeds passengers into it, and vice versa.

Indonesia's TransJakarta has the distinction of being the first BRT system in Southeast Asia. Started in 2004, it has expanded to cover 251.2 km by 2020. With a fleet of 4,300 buses, it carried about 1.01 million passengers. Run by the city's public transit agency, most of its fleets is operated by private companies(Wikipedia, 2023Feb). TransJakarta serves 13 corridors,

aside from 36 cross corridor routes, 68 inner city feeder routes, and 69 paratransit (angkot) feeder routes. In short, it has integrated the medium-sized bus operators, paratransit operators, and LRT into an overall urban transport network.

In contrast, the resurrected Edsa BRT (Plan B or C) is for a single route, and in direct competition with a railway line. Against Table 2, it would score very low.

Perceptive planners would sense that something does not add up, and they are not wrong. It brings to mind the contention (Minh Hieu Nguyen and Pojani, 2018) that “cities cannot be regarded as successful in their efforts to create BRT until an extensive network has been established which covers most of the city”. When confronted about the existence of LRT line on the same C-4 corridor, a private sector group defended the scheme as a back-up. A back-up system in an urban transport network is very novel. It is against the principle of complementarity - different modes taking their appropriate roles in accordance with their comparative advantages or strengths.

One BRT line does not make an efficient public transit system. It can not be divorced from the overall reform of the road-based public transport network and service providers (buses and paratransit). Without doing the overall reform, the BRT line would falter. It need not be sequential and can be incremental (Niles, J and Jerram, L. 2010), but the symbiotic links can not be ignored. If the next laps are not do-able, then the finish line would be a perpetual imaginary line.

## 9. CONCLUSIONS

The Philippines tried to run, before it has learned to walk the BRT path. Hence, the embarrassing stumbles on three BRT projects.

Planning and development in the hands of amateurs is a high-risk proposition in any endeavor. That is stacking the odds against success. To a transport project that demands more project management savvy – in terms of inter-agency coordination, what transpired in the Philippines is reminiscent of a playbook on purposeful stupidity (OSS, 1944). The enemies of BRT could not have chosen a better battleground than the Edsa Corridor. It is akin to a moonshot. By casting aside the lessons of the past, it has taken a subversive approach. Should it succeed, it could upend the ITDP guidebook.

Clearly, the 3 BRT projects is reaping a bad rap for future planners. It is unclear whether BRT can recover its tarnished reputations. The railway lobby can only smile.

This paper believes that going back to basics offer the only hope. Two steps must be taken a priori: introduce busways incrementally and reform the franchising system. Then the other elements (e.g., attractive and convenient bus stops, traffic signal priority, smart dispatching, modern vehicles, exclusive lanes, pre-boarding fare collection, integration with paratransit) can be added later, one package at a time. This was also the gist of a study on four cities in USA (Niles, J. and Jerram, L. 2010).

For further research, an ex post facto evaluation study on the fortunes (or misfortunes) of these 3 (or 4) BRT projects should be conducted. From the ashes, the proverbial phoenix can emerge with greater vigor.

There is no doubt that BRT is an improvement over existing and conventional urban bus transit system. Overselling it as a revolutionary replacement of the bus (or even the rail) mode undermines its potentials and rightful place in the urban landscape. It should be recognized for what it is: an intermediate capacity mass transit system at a lower capital cost than rail. But it is not a “mode for all seasons and for all reasons”.

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