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Implementation Status & Results
India
Mumbai Urban Transport Project-2A (P113028)

Operation Name: Mumbai Urban Transport Project-2A (P113028) | Project Stage: Implementation | Seq.No: 10 | Status: ARCHIVED | Archive Date: 15-Aug-2014

Country: India | Approval FY: 2010

Product Line: IBRD/IDA | Region: SOUTH ASIA | Lending Instrument: Specific Investment Loan

Implementing Agency(ies):

Key Dates

Board Approval Date	29-Jun-2010	Original Closing Date	15-Jun-2015	Planned Mid Term Review Date	17-Jun-2013	Last Archived ISR Date	01-Jun-2014
Effectiveness Date	08-Oct-2010	Revised Closing Date	15-Jun-2015	Actual Mid Term Review Date	17-Jun-2013		

Project Development Objectives

Project Development Objective (from Project Appraisal Document)

To improve the passenger carrying capacity, operational efficiency, level of comfort of, and the institutional capacity of entities involved in, the suburban rail system of Mumbai Metropolitan area.

Has the Project Development Objective been changed since Board Approval of the Project?

○ Yes ◉ No

Component(s)

Component Name	Component Cost
Component 1. Rolling Stock Fleet Increase	659.60
Component 2. DC to AC Conversion	173.80
Component 3. EMU Maintenance Facilities and Stabling Lines (counterpart funded)	117.70
Component 4. Technical Assistance	14.60
Component 5. (not part of LA/PAD): Project Management	0.00

Overall Ratings

	Previous Rating	Current Rating
Progress towards achievement of PDO	Moderately Satisfactory	Moderately Satisfactory
Overall Implementation Progress (IP)	Moderately Unsatisfactory	Moderately Satisfactory
Overall Risk Rating	Moderate	Moderate

Implementation Status Overview

This ISR is the result of the Implementation Support Mission held during March 24-27, 2014 and subsequent interim mission held during July 7-8, 2014. The project has shown substantial progress in last few months, especially in regard to the biggest component of the project which is supply of EMU trains. The prototype testing of trains was successfully

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completed on July 6, 2014. As a result, after inspection of series supply components and necessary clearances and bringing the imported components to India, the series supply is expected to commence in October 2014 as per the revised schedule provided by MRVC. Start of series supply will bring a big relief to the suburban rail system in Mumbai and also result in substantial increase in disbursement of loan.

Procurement for OHE maintenance equipment and trespassing reduction has progressed and the mobilization advance has been paid in most cases. There has been progress in all the components of the project, though not as planned. There continues to be no progress in the contract of supply of high speed bogies and this remains an area of concern.

In component 2, full quantity of Digital Axles Counter equipment has been received. Works for DC to AC conversion have progressed mostly as per the contract. Progress under component 3 for EMU maintenance facilities, especially works being executed by Western Railways and work at Kurla remain an area of concern. However, MRVC has made satisfactory progress in this activity and has handed over 24 stabling lines to WR. The remaining stabling lines and maintenance facilities at Virar Phase II are planned to be completed by May 2014. In regard to the TA component, the progress has been generally satisfactory except for traction power simulation software, where it has been slow.

Locations

Country	First Administrative Division	Location	Planned	Actual
India	State of Maharashtra	Virar		
India	State of Maharashtra	Vasai		
India	State of Maharashtra	Titvala		
India	State of Maharashtra	Tilaknagar		
India	State of Maharashtra	Sion		
India	State of Maharashtra	Panvel		
India	State of Maharashtra	Matunga		
India	State of Maharashtra	Mahim		
India	State of Maharashtra	Mahalakshmi		
India	State of Tamil Nadu	Chennai		
India	State of Maharashtra	Kurla		
India	State of Maharashtra	Khopoli		
India	State of Maharashtra	Kasara		
India	State of Maharashtra	Kandivli		
India	State of Maharashtra	Chinchpokli		
India	State of Maharashtra	Borivli		
India	State of Maharashtra	Mumbai		

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Country	First Administrative Division	Location	Planned	Actual
India	State of Maharashtra	Amarnath		

Results

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure		Baseline	Current	End Target
Action plan on revenue improvement prepared	☐	Text	Value			Action plan prepared
			Date		31-Dec-2013	15-Jun-2015
			Comments			
Action plan on trespassing and safety prepared	☐	Text	Value			Action plan prepared
			Date		31-Dec-2013	15-Jun-2015
			Comments			
Average energy consumption per 12-car train-km (kWh/t/km)	☐	Number	Value	17.62	14.27	12.76
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments		Reduction in energy consumption due to induction of three phase AC-DC train sets received between April 2009 to March 2011 under MUTP. These train sets are having energy saving of 30-35%.	
Reduction in journey times # transit times in minutes reduced	☐	Number	Value			
			Date			
			Comments			
Reduction in journey times # transit times in minutes reduced for Harbor local CSTM to Panvel	☐	Number Sub Type Breakdown	Value	77.00	77.00	75.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments			
Reduction in journey times # transit times in minutes reduced for CR Local CSTM to Thane	☐	Number Sub Type Breakdown	Value	56.00	56.00	53.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments			
Reduction in journey times # transit times in minutes reduced from CR through CSTM to Kalyan	☐	Number Sub Type Breakdown	Value	59.00	59.00	54.00
			Date		31-Dec-2013	15-Jun-2015
			Comments			

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Reduction in journey times # transit times in minutes reduced from WR Local Churchgate to Borivali	☐	Number	Value	65.00	64.00	62.00
		Sub Type	Date		31-Dec-2013	15-Jun-2015
		Breakdown	Comments			
Reduction in journey times # transit times in minutes reduced from WR through Churchgate to Virar	☐	Number	Value	81.00	81.00	75.00
		Sub Type	Date		31-Dec-2013	15-Jun-2015
		Breakdown	Comments			
Reduction in overcrowding (passengers per 12-car train)	☐	Number	Value			
			Date	01-Apr-2009		
			Comments			
Reduction in overcrowding (passengers per 12-car train) - Harbor	☐	Number	Value	4200.00	3924.00	4000.00
		Sub Type	Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
		Breakdown	Comments		Due to additional services & augmentation of all 9 car to 12 car on CR & WR, the crowding level has reduced.	
Reduction in overcrowding (passengers per 12-car train) - CR	☐	Number	Value	4800.00	4901.00	4000.00
		Sub Type	Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
		Breakdown	Comments		Due to additional services & augmentation of all 9 car to 12 car on CR & WR, the crowding level has come down while on CR there is a minor increase in overcrowding as DC to AC conversion yet to be completed.	
Reduction in overcrowding (passengers per 12-car train) - WR	☐	Number	Value	5400.00	5086.00	4000.00
		Sub Type	Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
		Breakdown	Comments		Due to additional services & augmentation of all 9 car to 12 car on CR & WR, the crowding level has reduced.	
Vehicle km per day during morning peak hours (8-11 a.m.)	☐	Number	Value			
			Date	01-Apr-2009		15-Jun-2015
			Comments			
Vehicle km per day during morning peak hours (8-11 a.m.) - CR (Harbor)	☐	Number	Value	151001.00	232748.00	182646.00
		Sub Type	Date	01-Apr-2009	31-Dec-2013	15-Jun-2015

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		Breakdown	Comments		36/12 car trains under MUTP & procured by MoR, have been put into service (excluding maintenance & traffic spares) on CR, WR & HL.	The revised target value is provided by the client and detailed calculation is given in Annex-VIII of the AM. The revised value is 266243.
Vehicle km per day during morning peak hours (8-11 a.m.) - CR (ML)	☐	Number Sub Type Breakdown	Value	447578.00	548132.00	777050.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments		36/12 car trains under MUTP & procured by MoR, have been put into service (excluding maintenance & traffic spares) on CR, WR & HL.	The revised target value is provided by the client and detailed calculation is given in Annex-VIII of the AM. The revised value is 693453.
Vehicle km per day during morning peak hours (8-11 a.m.) - WR	☐	Number Sub Type Breakdown	Value	436500.00	536879.00	815400.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments	The revised target value is provided by the client and detailed calculation in Annex-VIII of the AM. The revised value is 436500.	36/12 car trains under MUTP & procured by MoR, have been put into service (excluding maintenance & traffic spares) on CR, WR & HL.	The revised target value is provided by the client and detailed calculation is given in Annex-VIII of the AM. The revised value is 615400.

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure		Baseline	Current	End Target
Impact assessment of trespassing reduction measures completed	☐	Text	Value			Study completed
			Date		31-Dec-2013	15-Jun-2015
			Comments			Output: Final Report
Ridership per day	☐	Number	Value			
			Date			
			Comments			
Ridership per day Western Railway	☐	Number Sub Type Breakdown	Value	3298.00	3498.00	3486.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments	Figures in thousand	Additional rakes under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Ridership per day Central Railway	☐	Number Sub Type	Value	3592.00	3923.00	3797.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015

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		Breakdown	Comments	Figures in thousand	Additional rakes under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Continued MRVC ISO Certification	☐	Text	Value	MRVC Certified		ISO 14001 and ISO 18001 Certification
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments			
TA for IR strategy	☐	Text	Value			TA Completed
			Date		31-Dec-2013	15-Jun-2015
			Comments			
Study for Mumbai suburban development plan	☐	Text	Value			Study completed
			Date		31-Dec-2013	15-Jun-2015
			Comments			
Study on potential for ISO 14001 at CR and WR	☐	Text	Value			Study completed
			Date		31-Dec-2013	15-Jun-2015
			Comments			
Additional track (TKM)	☐	Kilometers	Value		0.00	181.00
			Date		31-Dec-2013	15-Jun-2015
			Comments		Yet to be completed.	
Punctuality - percentage of trains reaching less than 5 minutes late to destination	☐	Percentage	Value			
			Date			
			Comments			
Punctuality - Percentage of trains reaching less than 5 minutes late to destination Western Railway	☐	Percentage Sub Type Breakdown	Value	98.20	94.52	98.50
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments			
Punctuality - Percentage of trains reaching less than 5 minutes late to destination Central Railway	☐	Percentage Sub Type Breakdown	Value	93.20	88.27	94.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments		The punctuality deteriorated mainly because of many works such as DC-AC conversion, additional lines etc, are under progress and requires frequent traffic and power block, speed restrictions.	
Length of trains (percent of 12 car trains)	☐	Percentage	Value			100.00

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			Date			15-Jun-2015
			Comments			
Length of trains (percent of 12 car trains) Corridor: CR Local	☐	Percentage Sub Type Breakdown	Value		100.00	100.00
			Date		31-Dec-2013	15-Jun-2015
			Comments		Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Length of trains (percent of 12 car trains) Corridor: CR Through	☐	Percentage Sub Type Breakdown	Value		100.00	100.00
			Date		31-Dec-2013	15-Jun-2015
			Comments		Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Length of trains (percent of 12 car trains) Corridor: WR Local	☐	Percentage Sub Type Breakdown	Value		100.00	100.00
			Date		31-Dec-2013	15-Jun-2015
			Comments		Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Length of trains (percent of 12 car trains) Corridor: WR Through	☐	Percentage Sub Type Breakdown	Value		100.00	100.00
			Date		31-Dec-2013	15-Jun-2015
			Comments		Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Trains per hour during peak hour	☐	Number	Value			
			Date			
			Comments			
Trains per hour during peak hour Harbor Local	☐	Number Sub Type Breakdown	Value	16.40	17.00	18.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments		Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Trains per hour during peak hour CR Through	☐	Number Sub Type Breakdown	Value		15.00	Empty
			Date		31-Dec-2013	
			Comments			Empty

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Trains per hour during peak hour CR Through	☐	Number Sub Type Breakdown	Value	14.40	15.00	18.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments		Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Trains per hour during peak hour WR Local	☐	Number Sub Type Breakdown	Value	17.00	18.00	18.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments		Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
Trains per hour during peak hour WR Through	☐	Number Sub Type Breakdown	Value	16.00	16.33	18.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments		Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	
DC to AC conversion (Track km)	☐	Number	Value	569.00	1235.00	1577.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments		The complete section of WR charged on 05.02.2012 and also section upto Kalyan has been charged on 25 kV AC.	
EMU Fleet size (12-car rakes in service)	☐	Number	Value	190.00	196.00	258.00
			Date	01-Apr-2009	31-Dec-2013	15-Jun-2015
			Comments	The revised target value is provided by the client and detailed calculation in Annex-VIII of the AM. The revised value is 156.	Additional trains under MUTP & procured by MoR, have been put into service on CR, WR & HL.	

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Data on Financial Performance (as of 24-Jun-2014)

Financial Agreement(s) Key Dates

Project	Ln/Cr/Tf	Status	Approval Date	Signing Date	Effectiveness Date	Original Closing Date	Revised Closing Date
P113028	IBRD-79410	Effective	29-Jun-2010	23-Jul-2010	08-Oct-2010	15-Jun-2015	15-Jun-2015

Disbursements (in Millions)

Project	Ln/Cr/Tf	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P113028	IBRD-79410	Effective	USD	430.00	385.00	45.00	81.10	303.90	21.00

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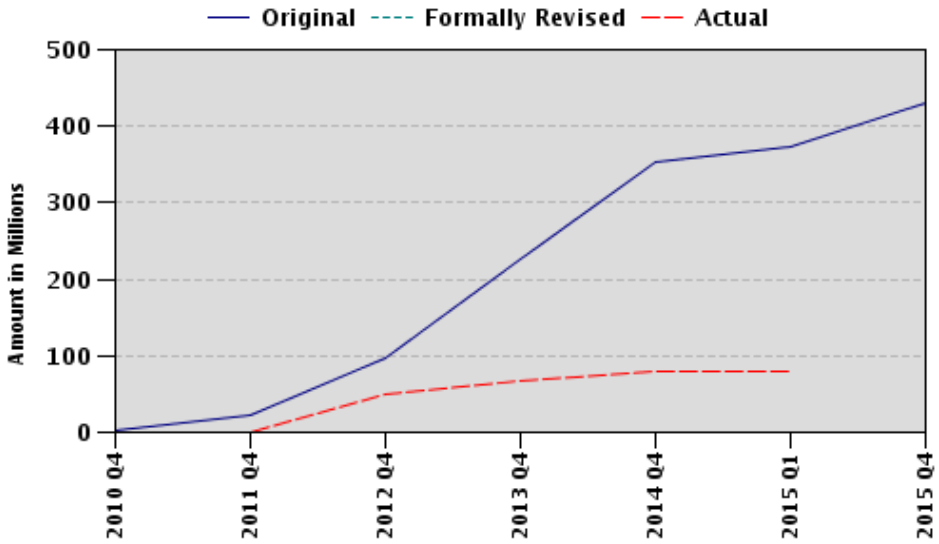
Disbursement Graph



Key Decisions Regarding Implementation

In light of achievement of the major milestone of completion of prototype testing and resulting certainty in future supply of trains and disbursement, the implementation progress rating of the project is changed to Moderately Satisfactory. Also, DEA has forwarded a request for extension of project closing date to December 2016 (from June 15, 2015) to facilitate completion of all project activities. MRVC informed that they will be able to complete all the project components by December 2016.

Restructuring History

Level two Approved on 09-Aug-2011, Level two Approved on 08-May-2013

Related Projects

There are no related projects.

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