

Managed Lanes and the Park-and-Ride Shuttle into Tel Aviv, Israel: New Developments in Managed Lane Arena

Rimon Rafiah¹ , Shuki Cohen²

¹ Economikr, Israel; ² MATAT Transport Planning Center, Israel;

1. Introduction – the Fast Lane

- The fast lane is a separated, managed lane, extending from Ben Gurion International Airport to the Ayalon Freeway, at the entrance to Tel Aviv, the major economic and financial center of Israel.
- It is about 8 miles (13 kilometers) long, and was opened on January 7th, 2011.
- It is the first project of its kind in Israel – and the only project whose toll subsidizes 2 free shuttle lines from a dedicated parking facility to Tel Aviv.

2. Major Fast Lane Features

- **Cost of usage (Toll)** – it is a variable toll, dependent on lane occupancy, ranging between \$2.3 to \$24.3 (between \$0.3 and \$3.0 per mile).
- **Free usage for HOV** – depending on the time of day, it can be 3 people or 4 people (including the driver) – i.e. buses and minibuses are free for use.
- Has **electronic signs** mentioning the current cost of using the lane, and the LOS of Highway No. 1 (Jerusalem – Tel Aviv Highway), its main competitor, which is not tolled.

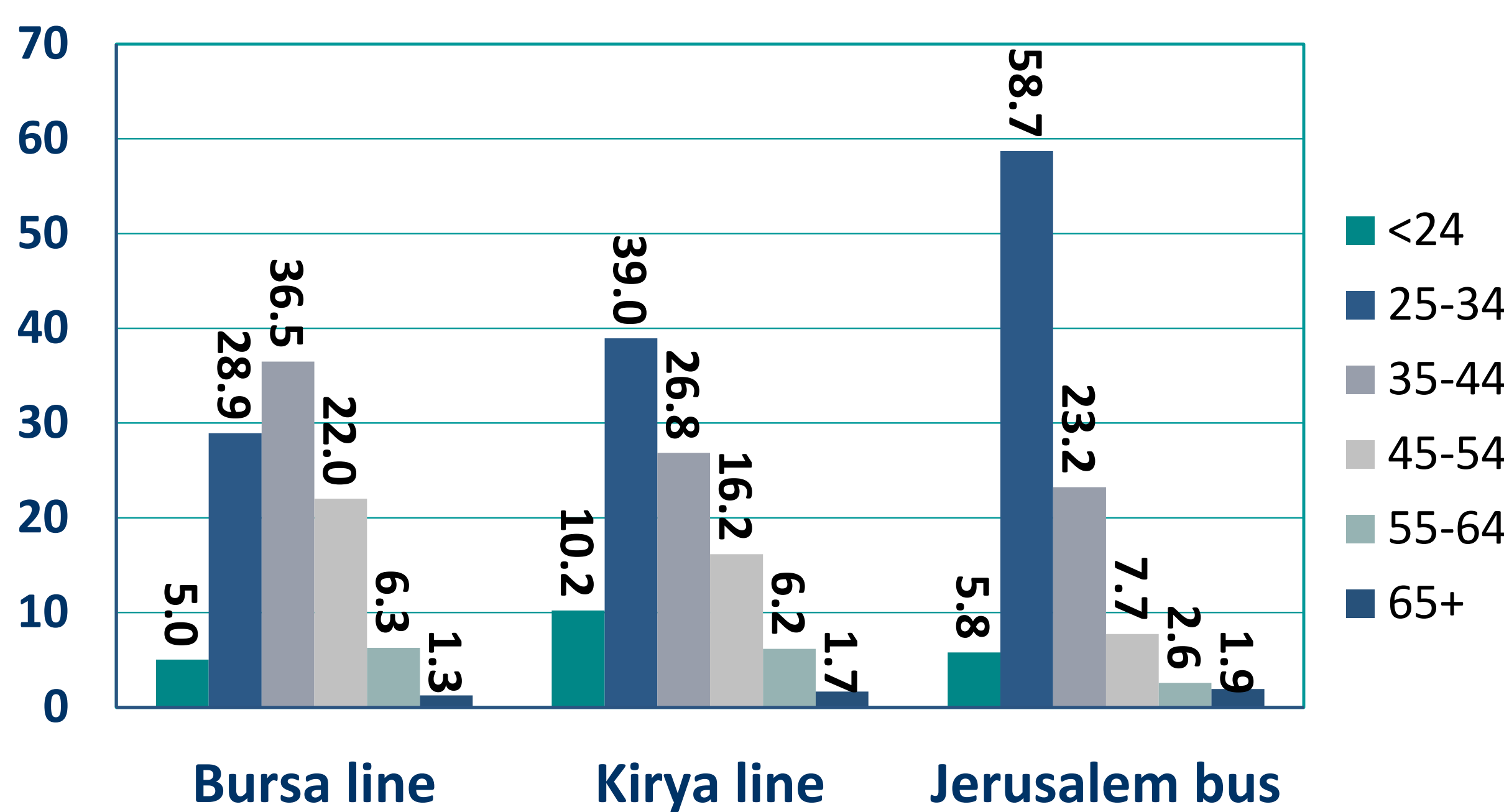
3. Parking Facilities and Shuttle Rides

- Has about 2,000 parking spaces next to Shappirim Interchange. Parking is free for non-overnight parking (to prevent long term parking due to its proximity to Ben Gurion airport).
- The parking facilities are accompanied by 2 free-of-charge shuttle rides to central locations in Tel Aviv:
 - The Kirya line – close to the CBD, Azrieli Towers and government complexes.
 - The Bursa line – close to the Diamond Exchange, with many legal offices, venture capital, and consulting firms.
- Bus line from the parking facilities to Jerusalem.
- The shuttles are operational between Sunday and Thursday, from 6:30 AM to 11 PM. They do not operate on holidays and holiday eves.
- During Peak Periods the frequency of the shuttle rides are every 5 minutes. At other times of the working day – 15 minutes (or until the shuttle is filled).

4. Shuttle and Jerusalem Bus Ride Survey

- The survey was conducted on 3 working days in March 2013, and encompassed 769 people – 587 on the shuttle rides, and 182 on the bus to Jerusalem (approximate sample size of 19%, based on average monthly working day parking data).

Age Distribution of Shuttle Users



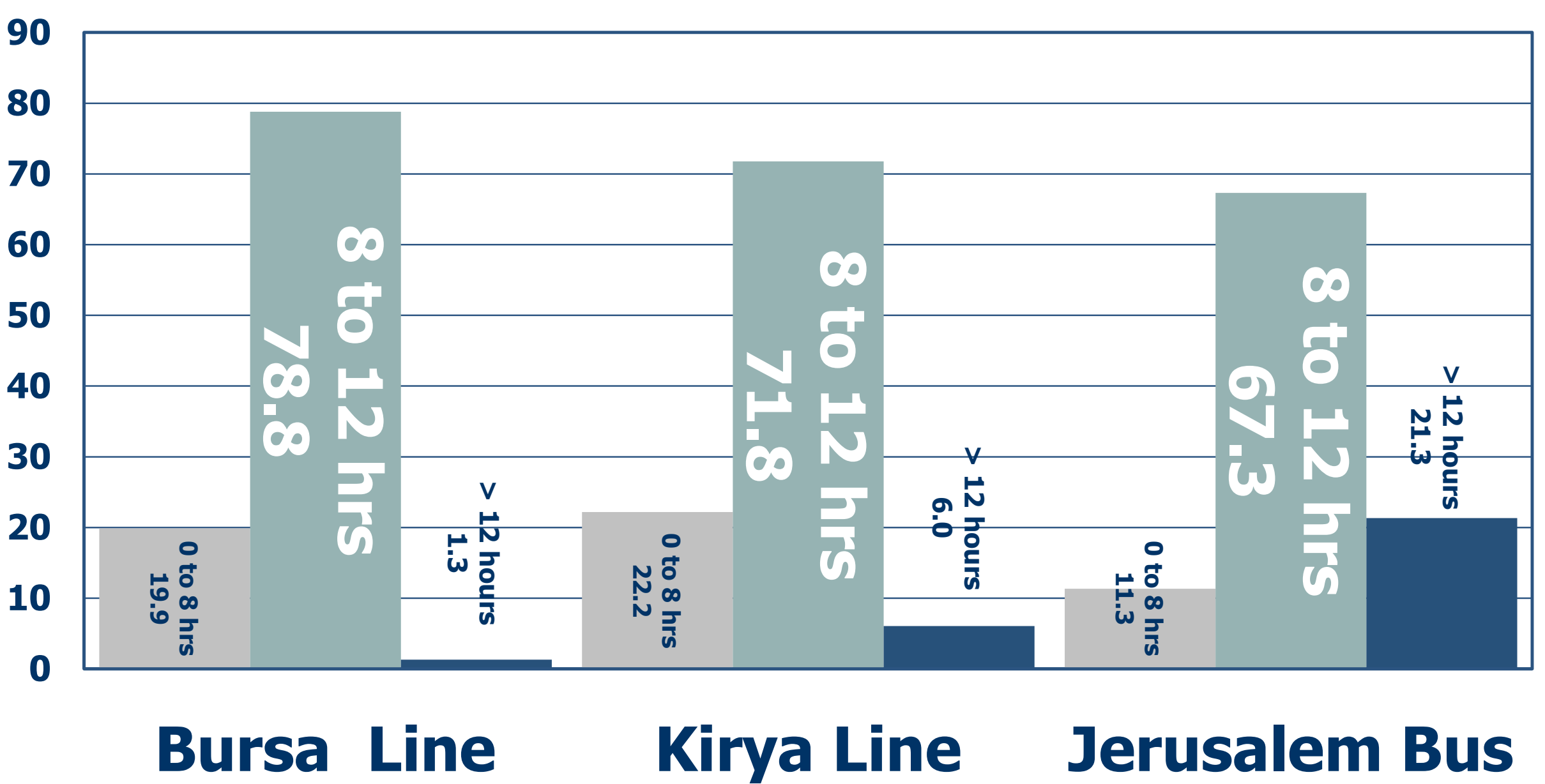
- Vast majority between 25-44
- Used by people of all ages
- Roughly 60-40 split between male and female passengers

Yearly Fast Lane Parking Statistics

	Parking Spaces Utilized			
	Number of vehicles on working days		As % of total available parking	
Year	Monthly Average	Maximum	Monthly Average	Maximum
2011	911	1,358	46%	68%
2012	1,376	1,797	69%	90%
2013	1,466	1,753	73%	88%

- Annual growth in usage each year
- At the daily maximum, the car park is utilized almost 100%
- Most of the parking is long-term (in hours per day)

Distribution of Shuttle Users by # of Hours Parked (%)

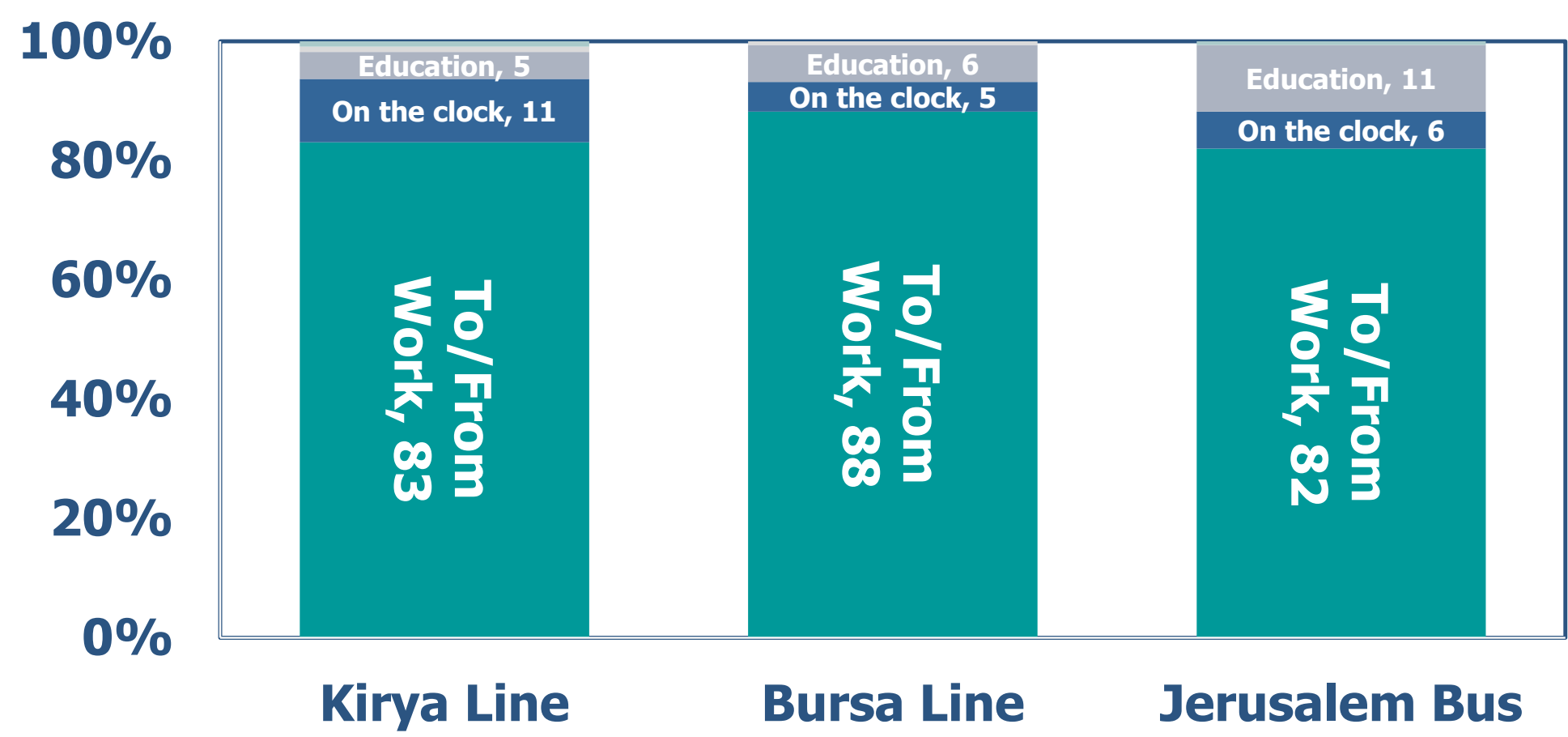


- For all lines, the vast majority park between 8 and 12 hours a day
- Hours correspond to a normal workday
- Most of the shuttle users utilize it to get to and from work

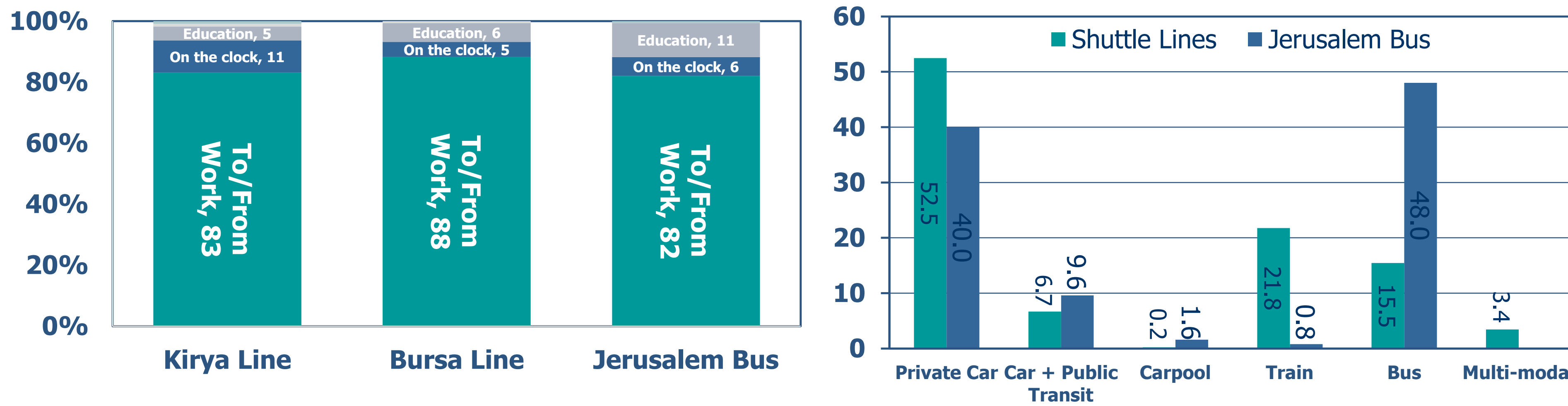
5. Change in Modal Split

- Most of the passengers on the shuttles and the Jerusalem bus originally used their cars (i.e. less vehicles on the road, less congestion). Most people getting off the shuttle stations go by foot to their destination.
- The vast majority of the shuttle bus users do so for getting to and from work.
- Most of the people using the shuttles do so on an almost-daily basis – i.e. this change is permanent.

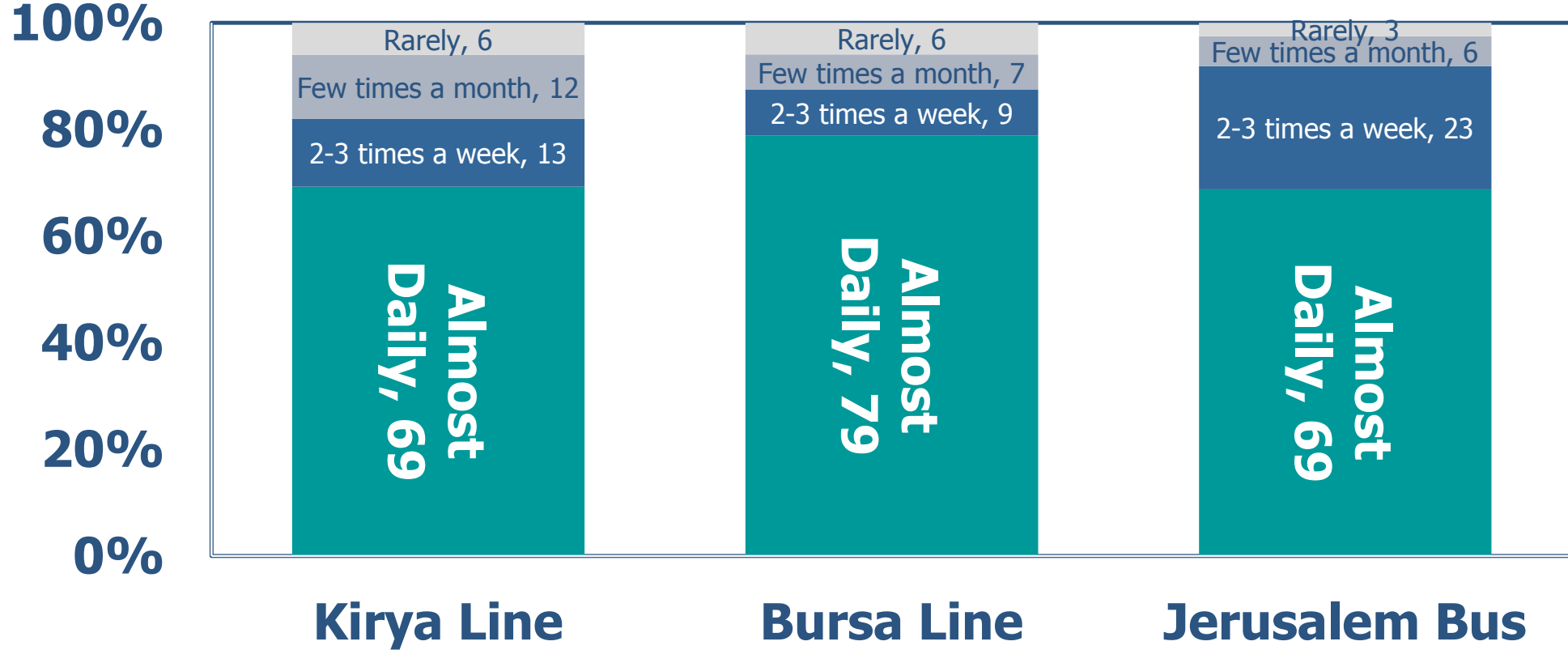
Trip Purpose



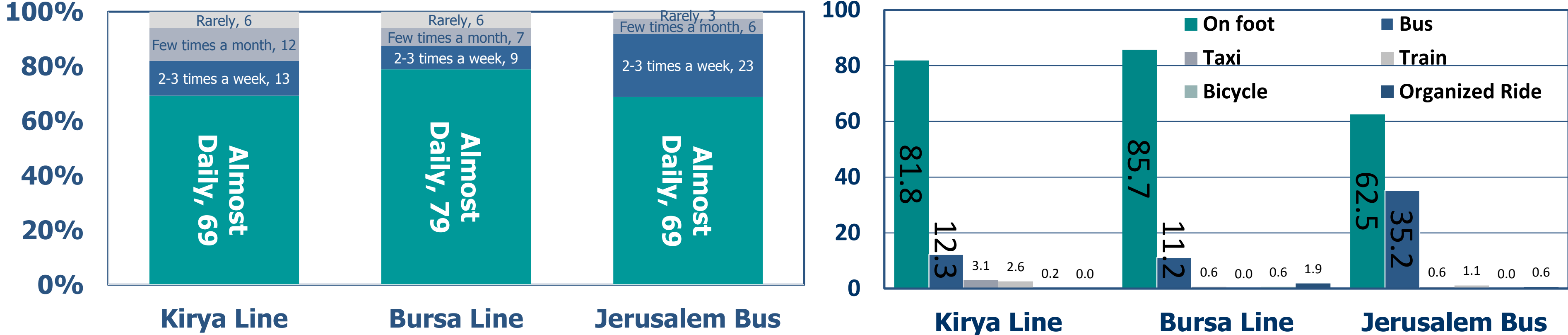
Modal Split Prior to FastLane (%)



Shuttle/Bus Usage Frequency



Mode Used from Shuttle to Destination (%)



6. Conclusions

- Managed lane with dedicated parking and free shuttle ride – first of its kind.
- People changed their transportation mode as a result of the park and free shuttle – lessened congestion into Tel Aviv (estimated savings of about 2,500 hours daily).
- Based on the survey data and national census data, about 20% of the vehicle owners, who work in Tel Aviv, and whose destination is in the close proximity of the shuttle rides, utilize the shuttle, thus lessening congestion.
- Was conceived as a bus priority lane into Tel Aviv and “selling capacity” to non-HOVs. This “sold capacity” created a revenue stream which funds the free shuttle rides.
- Is being considered for 2-3 additional locations in Israel.