



# Improving Visitors Experience in Finding Parking Lots at KKH Basement Car Park



Mohd Taha Rahmat  
Bobby Manjit  
Helena Wong  
Ainin Binte Jasni  
KK Women's and Children's Hospital

Singapore Healthcare Management 2016

## INTRODUCTION

KKH Carpark Management Section (CM) is responsible to ensure that we meet the visitors' parking needs by having smooth operations of the carpark. CM also manage a team of valets who help to solve the parking problems faced by visitors. CM also manage staff season parking. The allocation of car parks is done in a transparent and equitable manner.

## BACKGROUND

KKH carpark have seen an increase in the number of user since its opening in 1997. This is due to an increase in the services provided and increasing population. CM have introduce valet services in order to manage and reduce car park congestion. However notwithstanding the excellent services by the valet the traffic congestion condition have not seen an improvements.

## METHODOLOGY

DMAIC is a highly effective, data-driven, five-step approach to business that is one of the many useful components of the Six Sigma toolkit. The main goal of DMAIC is to eliminate defects and improving quality-related business metrics.

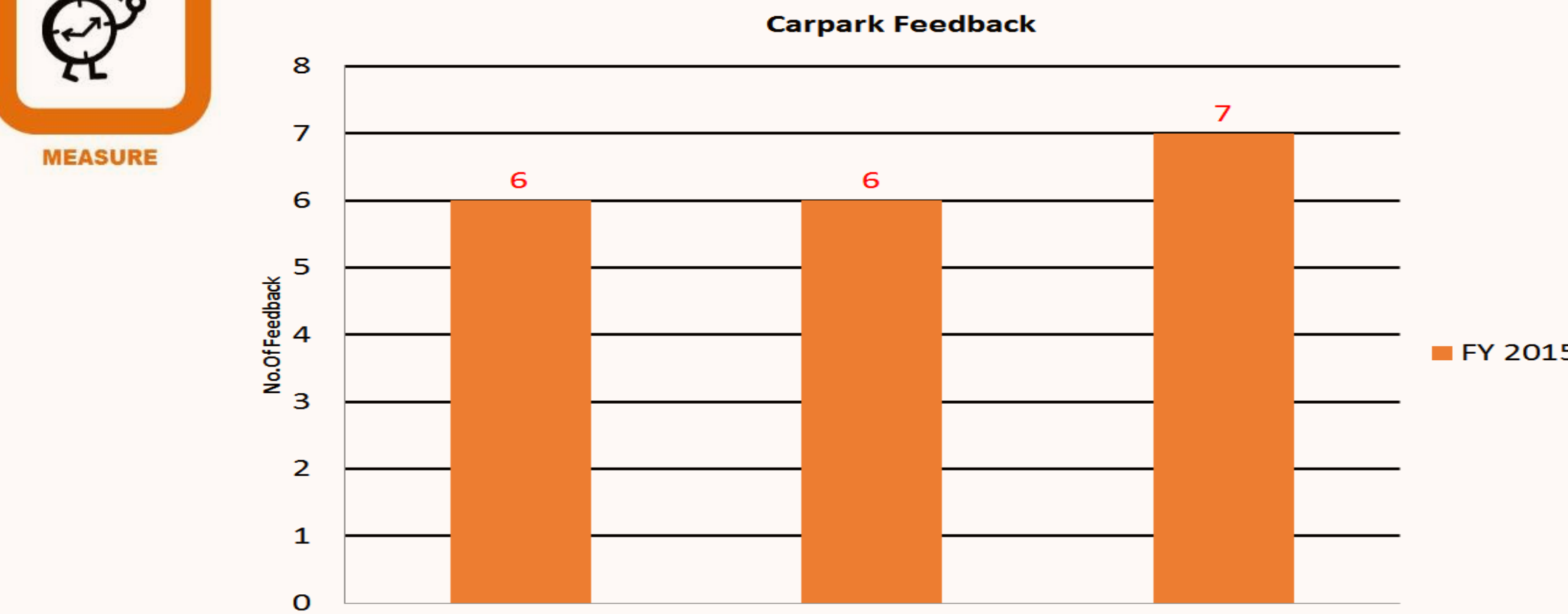
**Define:** To reduce congestion in KKH basement car park

SIPOC is a high-level picture of the process that depicts how the given process is servicing the customer.



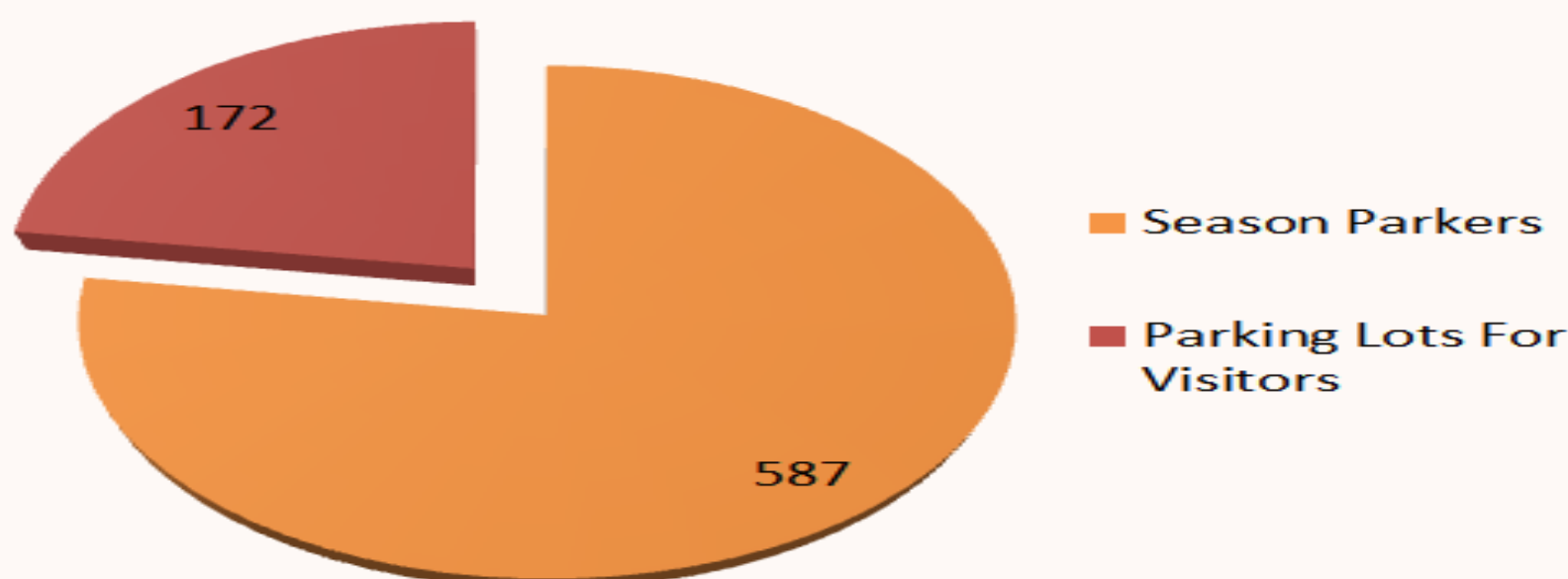
Supplier	Inputs	Process	Outputs	Customers
Carpark Management	Carpark Application Form	Received Application Form	Parking Privileges, Valet, Entry & Exit	Eligible Staff, Doctor on Attachment
		Check Application Form		
CEPAS Enabled Card	Gantry Accepted	Assigned Parking Privileges	Entry & Exit	Patients
		Assigned Duration of Parking Privileges		
		Informed User on their application status	Visitors	

## Customer feedback on carpark is on increasing trend

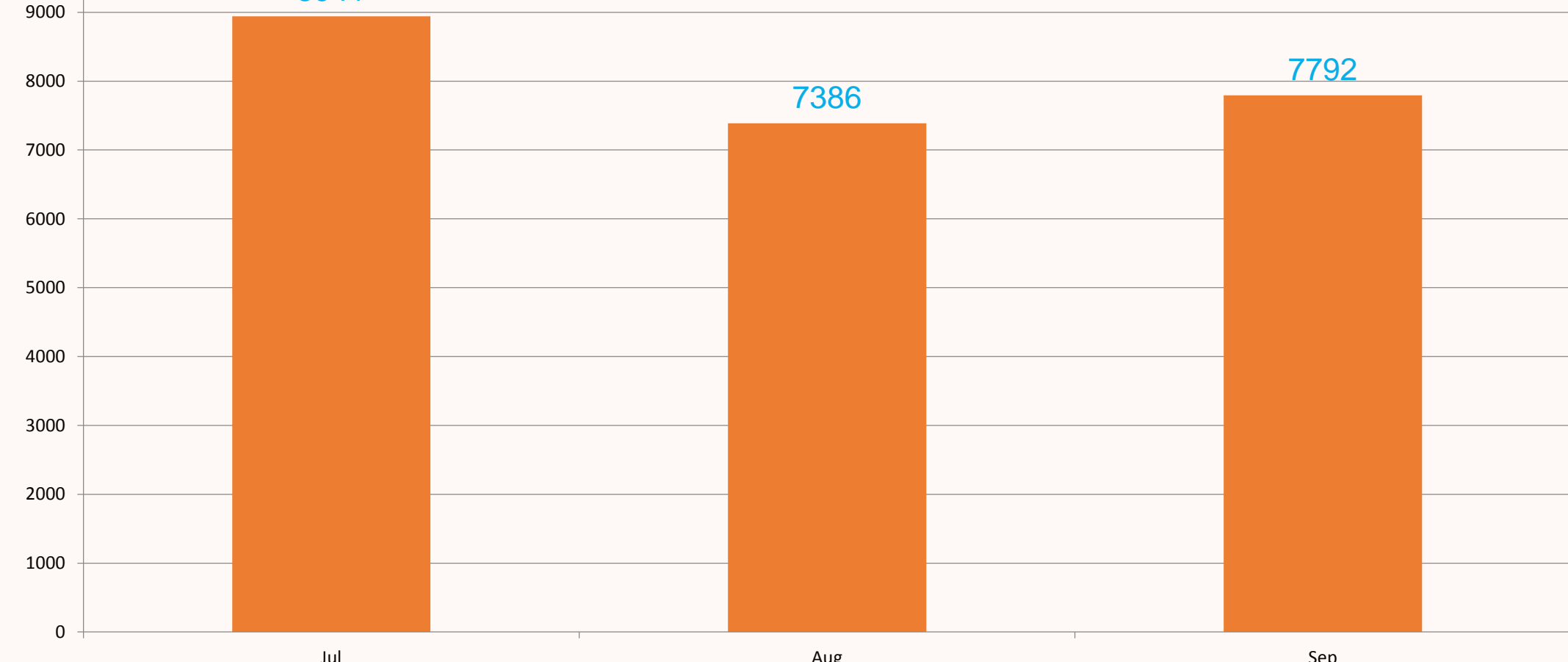


In KKH, we have 560 car parks lots. Out of the maximum capacity of 756 cars "parkable" we have 587 (78%) seasons holders.

### Parking Lots By Allocation

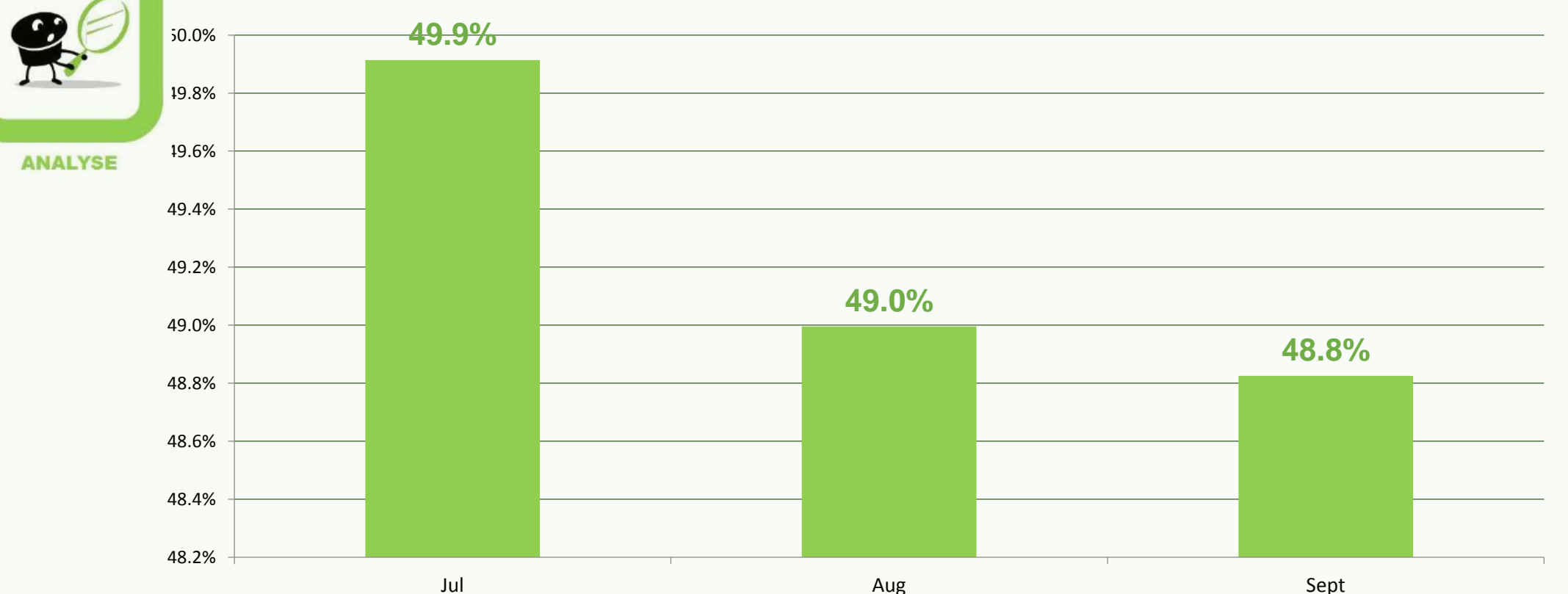


### Valet Take Up Rate From July - Sept

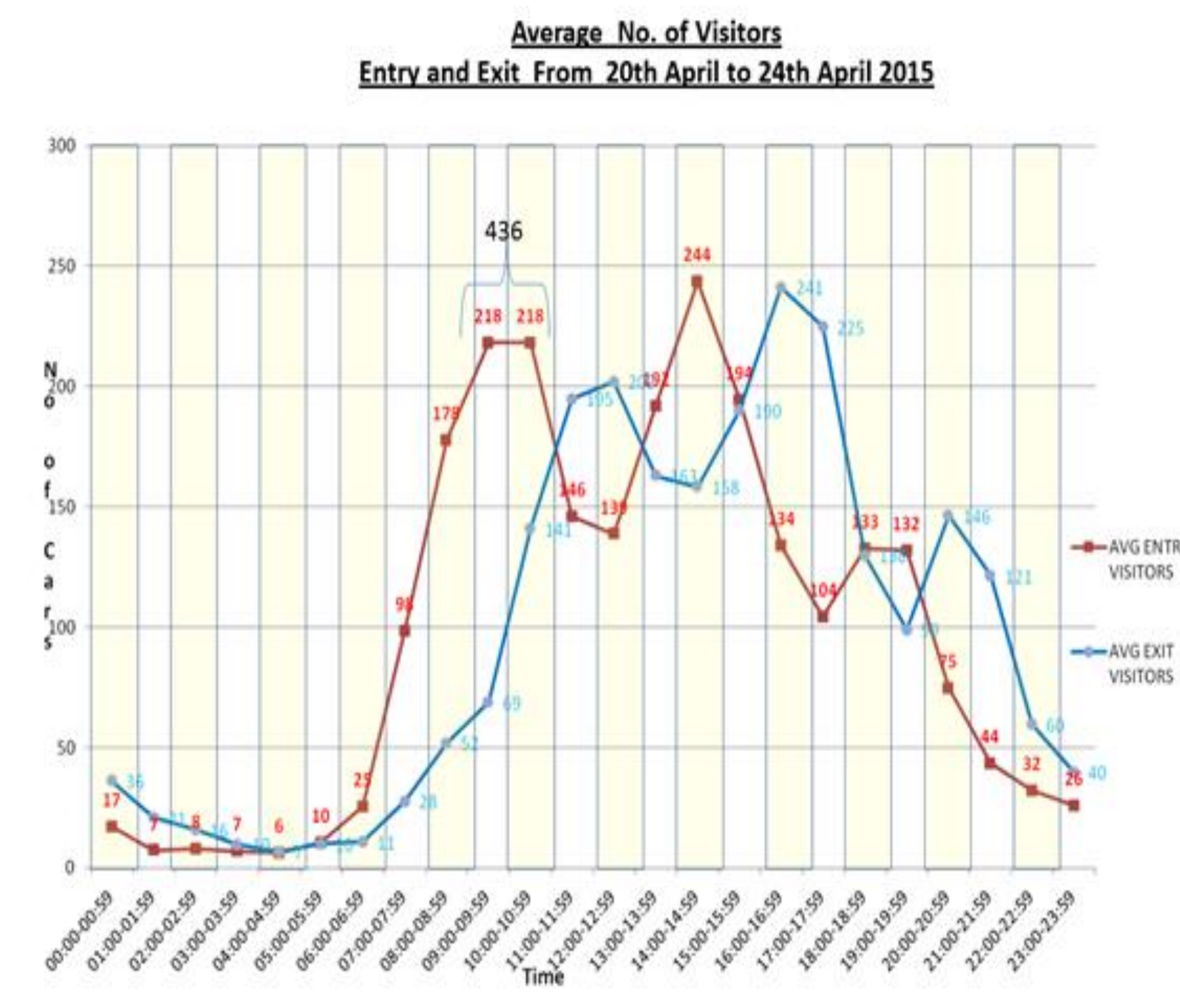
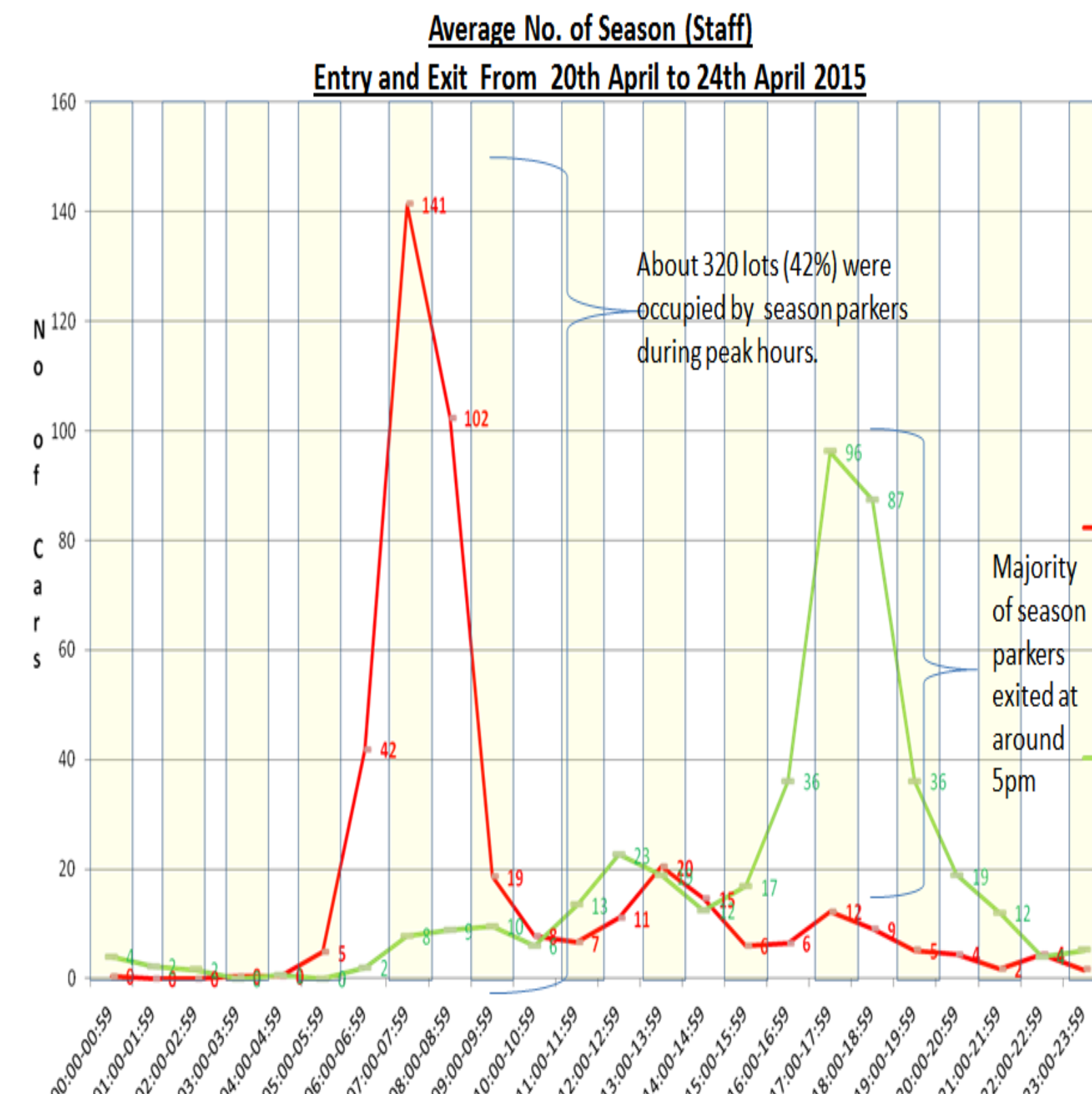


The number of visitors and staff using the valet services is consistently on the high side averaging 8040 take up from July to September.

### % Valet Take Up Rate from July - Sept

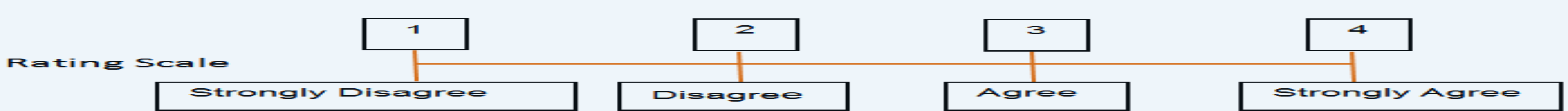


The valet services performance index was peg at 20%. Based on the data the valet have serves an average 49% of the car park user. The valet service is operating more than double their performance index



## The Solution Selection Matrix

Solutions	Feasibility	Acceptability	Low Cost	Effectiveness	Sustainability	Total Rating	Rank
Building A New Car Park	1	1	1	1	2	6	5
Having Valet parking Offsite	1	1	2	2	2	8	4
Limiting Patients and Visitors Parking	1	1	3	2	2	9	3
Limiting Staff Parking	1	1	4	2	2	10	2
Offsite Car Parking for Staff	4	3	3	4	3	17	1



## Benchmark

### Staff Parking Privileges Across SingHealth

Organisation	Eligibility	Parking Location
KK Women's and Children's Hospital SingHealth	All Clinicians, Managerial grade and above, Senior Nurse Managers / Nurse Managers or equivalent	KKH Car Park
SingHealth HQ	SingHealth staff who are holding Grade 17 (Senior Managers / Assistant Directors and above).	HDB Connection One Car Park Or SGH Multi-Storey at MacAlister Car Park "H"
Singapore General Hospital SingHealth SGH Campus	Medical Doctor under the employment of SGH / SingHealth / MOHH, Nursing Managers and above, Non-Nursing Staff - Managers & above, Visiting Consultants to SGH.	Category of Staff: Board Members, CEO/CMB (including those from Restructured Hospitals), Associate Consultants & above, Visiting Consultants
		Job Grade: Senior Management & Medical
		Car Park: SGH Basement 2, Car Park "G" & MacAlister Car Park "H"
		Below Associate Consultant grade
Admin/ Ancillary/ Allied Health	Division Director & above	SGH Basement 2, Car Park "G" & MacAlister Car Park "H"
Nursing	Below Division Director grade	MacAlister Car Park "H"

### Proposed Staff To Be Off-Sited

SGH Campus	Parking Options	Proposed KKH Staff	"Off Site Parking"
Medical Students & Above	MacAlister Car Park "H"	MEDICAL STUDENTS (HOs, MOs & DOs)	Yes
Nurses & Above (NMs, SNMs, ADS & DDs)		NURSING (SCNs, NMs, SNMs & SNCs)	Yes
ADMIN/ANCILLARY/AHS (Assistant Managers, Managers, Senior Managers & Deputy Directors)		ADMIN (Managers, Senior Managers, Service Road Parkers & Existing Non-Executives)	Yes

## Implementation

After the data had analysed. We analysed the roots cause by using fish-bone diagram. One solutions were selected to reduce congestion at the car park.

1. Seek approval from Senior management
2. Department Head to communicate to affected staff
3. Personalised letters, contained map, direction and FAQ were given to affected staff
4. Appoint contact person to answer queries
5. Conduct tours to the off side to familiarise staff with the new location

## Result

The number of season holder parking lots at KKH drops to 40%.

Feedback received from the last 2 quarters averaging 1.5

The valet take up rate from the last 3 months averaging 43%. A reduction cost for out sourced valet manpower. As the usage of valet services decreased we are able to reduce the number of valet from 8 to 3 person manning the counter. This is a saving of \$425 per day. A saving of \$20,400 per year.



- 1) P&P was revised to include new process flow
- 2) E-mail blast was send to department secretaries every month to remind to submit any new applicant 2 weeks in advance.
- 3) Weekly staff update on the car park occupancy.
- 4) Presently working on e-form.

## Conclusion

Significant process improvements have been achieved from this project, overall:

Streamlined Car Park applications – Improved the turnaround efficiency and reduced time

Time-saving-Visitors don't have to circle the car park to find parking lots

Cost-saving- Significant costs saved through reduction in the cost of valet staff

Improved Teamwork and Communication -Better collaboration and relationship with stakeholders, showcasing strong focus on KKH's core values.