

Lean Six Sigma Black Belt Certification

PEOPLE AND
PROCESS



Project 3: Rexion Movie Theater



Learning Objectives

On completion of this project, you will be able to:

- 👁 Understand the Rexion Movie Theatre(RMT) project background
- 👁 Analyze the various factors that led to the customers being unhappy with the cinema experience at RMT
- 👁 Infer how the pilot run at Audi 1 helped improve the overall customer experience



Define Phase

Project Background

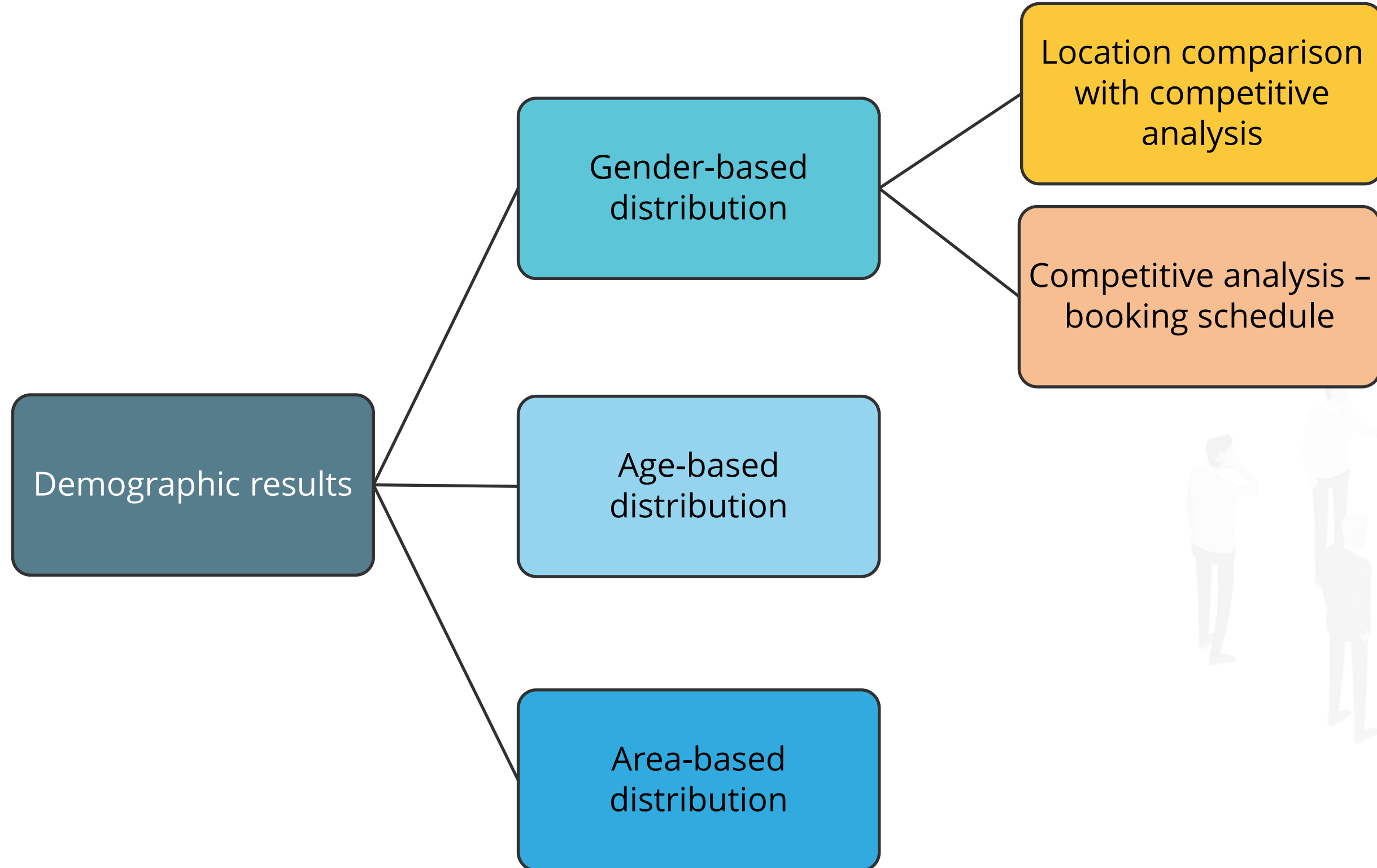


Rexon Movie Theater(RMT) has been in the film exhibition business for the last three years, opening multiplexes at two areas: BMR and RSVO.

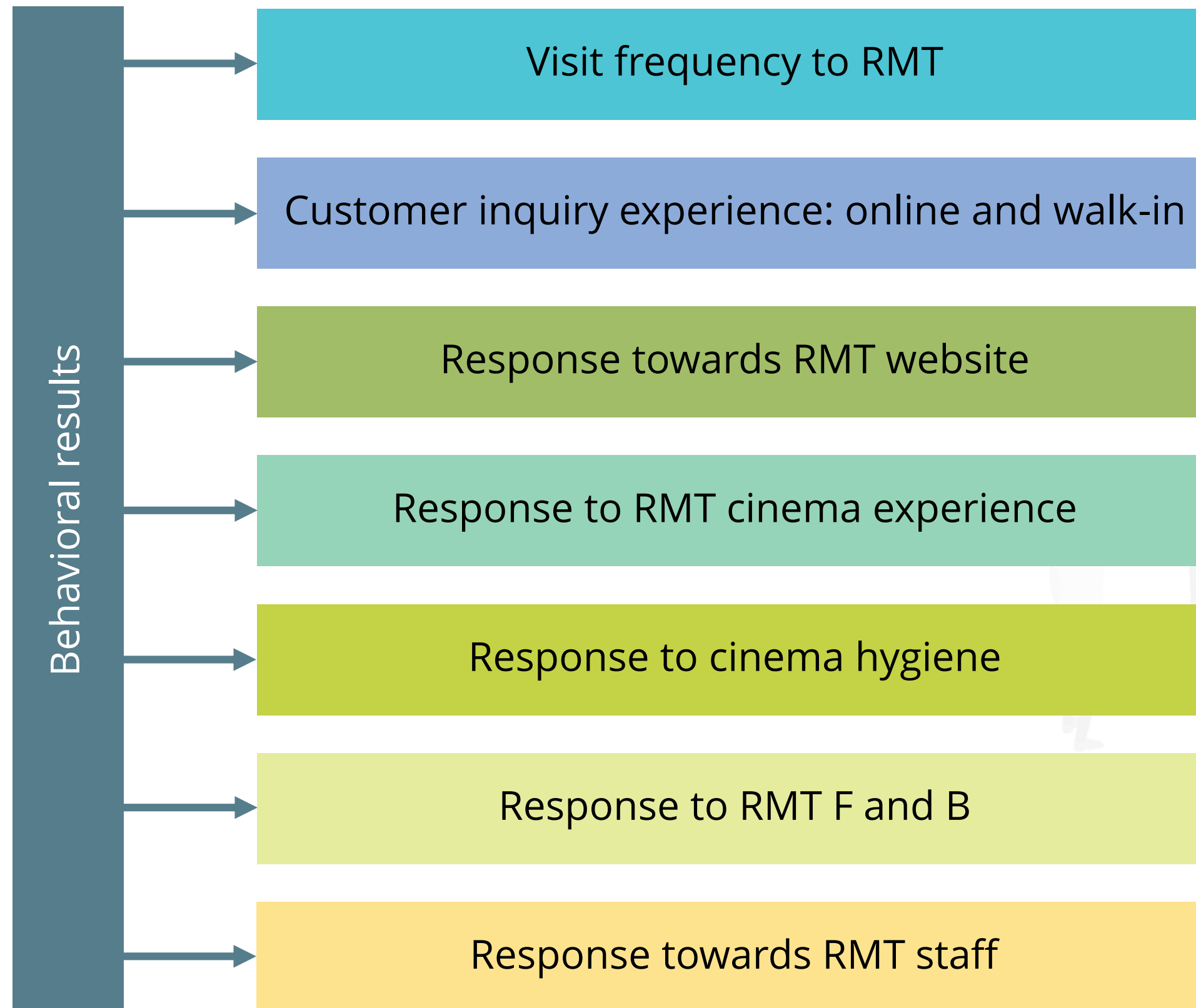
The company CEO has deputed Six Sigma Black Belt Tim Cruz to improve the current conditions so as to attract more audience. This is the first time Tim Cruz has conducted a survey to gauge customer experience at Rexon Movie Theater.

The survey was conducted from 22nd March to 26th April, 2019. 150 patrons participated in the survey – 75 for Rexon Movie Theater at BMR and 75 for Rexon Movie Theater at RSVO. The survey was done for two parts.

Survey Results: Part 1



Survey Results: Part 2



Gender-based Distribution

| Survey report part I | | Place | | Percentage | | Total | Total % |
|----------------------|--------|-------|------|------------|------|-------|---------|
| | | BMR | RSVO | BMR | RSVO | | |
| Gender | Female | 40 | 29 | 53% | 39% | 69 | 46% |
| | Male | 35 | 46 | 47% | 61% | 81 | 54% |
| Grand Total | | 75 | 75 | 100% | 100% | 150 | 100% |

- There are 61% male respondents at RSVO
- Lesser female patrons at RSVO (observed from survey and security guard response)

Inferences

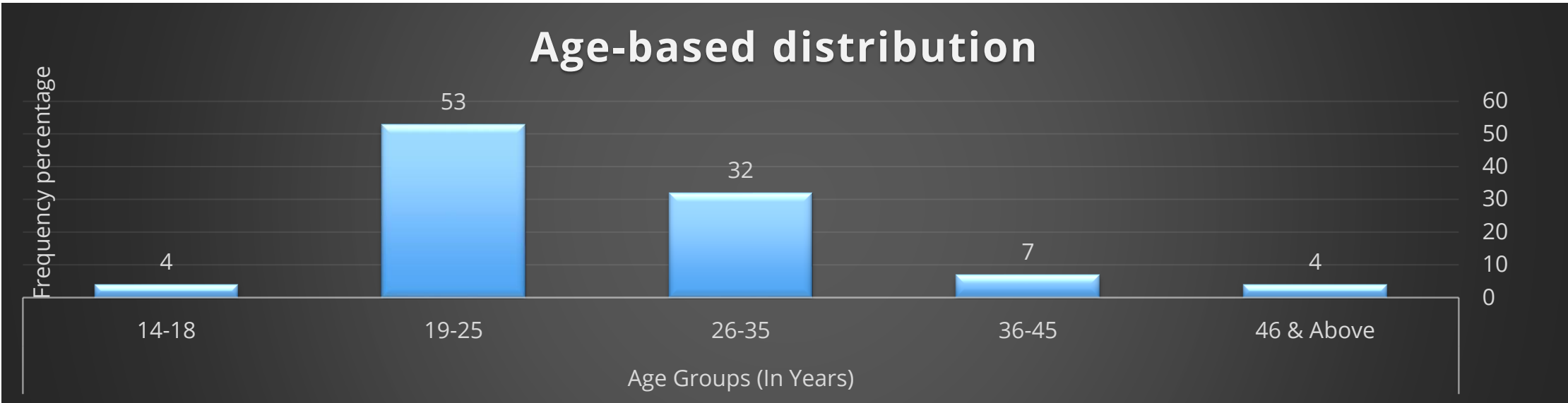
Largely, male members make purchase decisions at RSVO

Possible causes of female experience lacking at RSVO:

- Is safety a concern
- Is movie watching a taboo for females
- Did females not respond to the survey

Age-based Distribution

| BMR | Age groups (in years) | | | | |
|-------------|-----------------------|-------|-------|-------|--------------|
| | 14-18 | 19-25 | 26-35 | 36-45 | 46 and above |
| Frequency % | 4 | 53 | 32 | 7 | 4 |



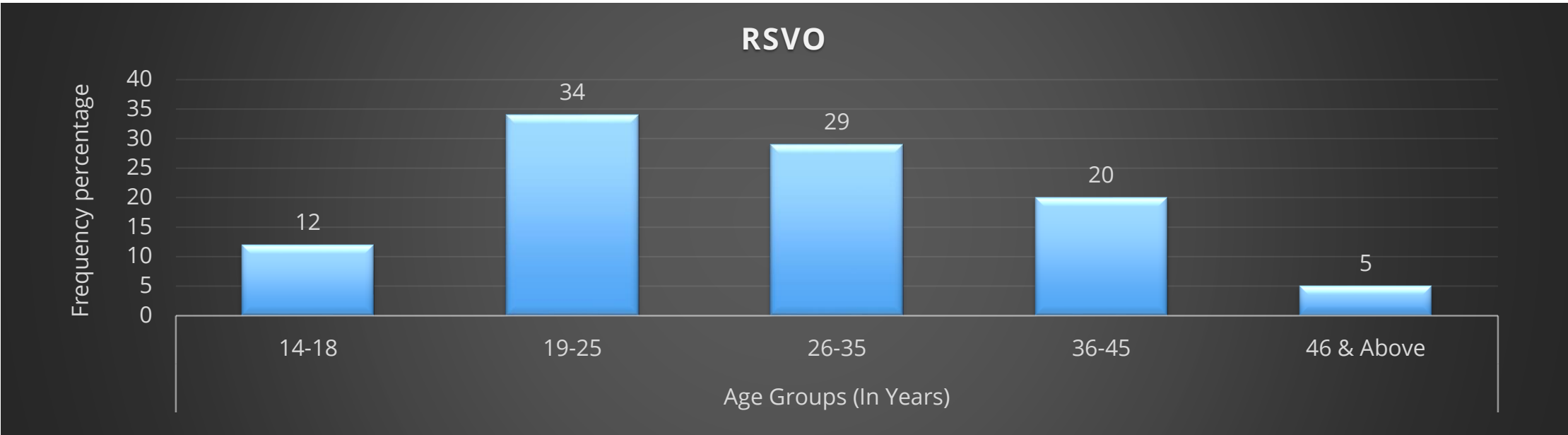
Inferences

Largest respondents in BMR are in the 19-25 age bracket

Food court on the floor below BMR offering a wide range of delicacies acting as a meeting hub for young couples

Age-based Distribution (Contd.)

| RSVO | Age groups(in years) | | | | |
|-------------|----------------------|-------|-------|-------|--------------|
| | 14-18 | 19-25 | 26-35 | 36-45 | 46 and Above |
| Frequency % | 12 | 34 | 29 | 20 | 5 |



Inferences

Relatively even distribution of age groups at RSVO

Presence of **Fusions** multi-cuisine family restaurant

Area-based Distribution

| | Location comparison | |
|------------------------------------|--|---|
| Parameters | BMR | RSVO |
| Locality | Office and college area | Residential area |
| Competitor in the closest vicinity | 8-10 kms. E2 cinema | AGP 4.6 kms; Frames 9.3 kms. |
| Premise benefit | E2 is stand alone cinema; BMR is in a commercial complex with food court below | RSVO has a family restaurant below; AGP is a stand-alone cinema; frames is inside a popular shopping mall |
| Location advantage | BMR is ideally located | Frames has location advantage |

Area-based Distribution (Contd.)

| Competitive analysis – booking schedule | | | | | | | | |
|---|-------------|------|---|----|---|---|---|-----|
| Competitive analysis | | Days | | | | | | |
| | | F | S | Su | M | T | W | Thu |
| BMR | Adv booking | Y | Y | Y | Y | Y | Y | Y |
| | Schedule | 2 | 2 | 1 | 2 | 1 | 1 | 1 |
| E2 | Adv booking | Y | Y | Y | N | N | N | N |
| | Schedule | 1 | 1 | 1 | 2 | 2 | 2 | 2 |

BMR

- More shows on F, S, M
- Booking opens for entire week in advance

E2

- More shows on M, T, W, Thu
- Booking opens on Thu at 4:00 PM for advance booking for F, S, Su

Area-based Distribution (Contd.)

| Competitive analysis – booking schedule | | | | | | | | |
|---|-------------|------|---|----|---|---|---|-----|
| Competitive analysis | | Days | | | | | | |
| | | F | S | Su | M | T | W | Thu |
| RSVO | Adv booking | Y | Y | Y | Y | Y | Y | Y |
| | Schedule | 3 | 3 | 3 | 1 | 1 | 1 | 1 |
| AGP | Adv booking | Y | Y | Y | N | N | N | N |
| | Schedule | 2 | 3 | 3 | 1 | 1 | 1 | 1 |
| FRAMES | Adv booking | Y | Y | Y | N | N | N | N |
| | Schedule | 3 | 3 | 3 | 2 | 2 | 2 | 2 |

RSVO

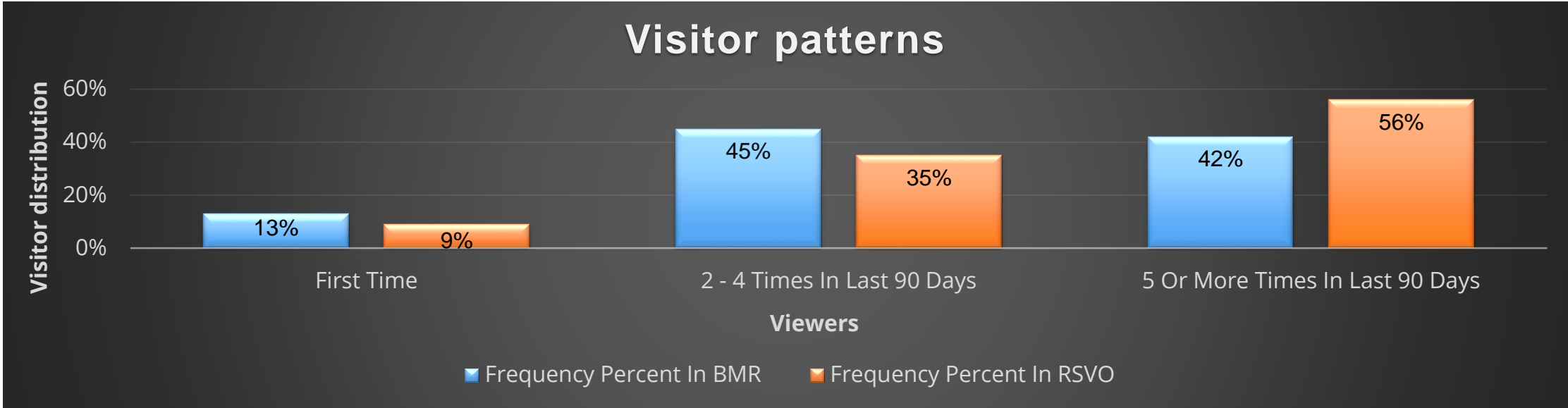
- More shows on F, S and Su
- Booking opens for entire week in advance

AGP and FRAMES

- More shows on F, S and Su
- Booking opens on Thu at 5:00 pm for advance booking for F, S and Su

Survey Report Part 2: Visit Frequency

| Viewers | Frequency percent in BMR | Frequency percent in RSVO |
|---------------------------------|--------------------------|---------------------------|
| First time | 13% | 9% |
| 2 - 4 times in last 90 days | 45% | 35% |
| 5 or more times in last 90 days | 42% | 56% |



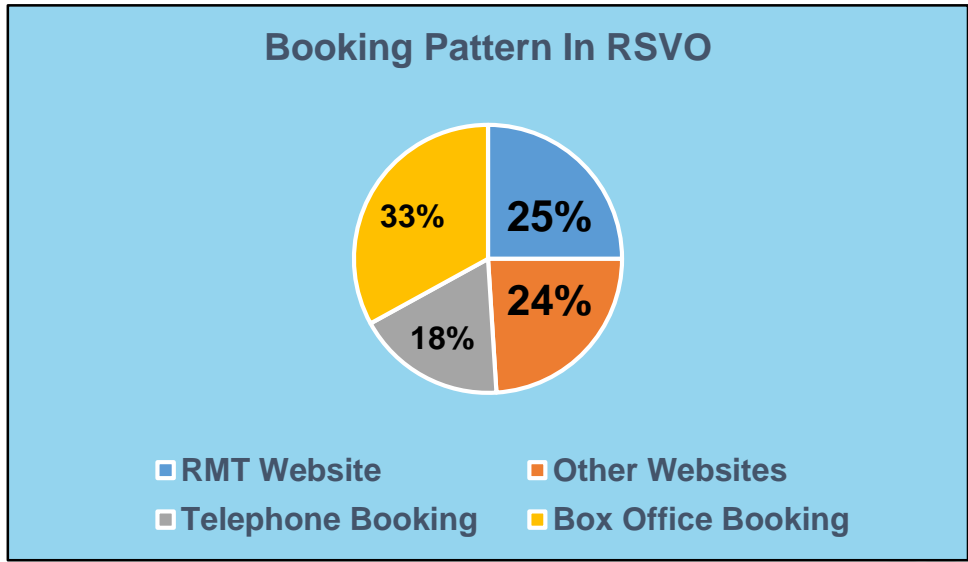
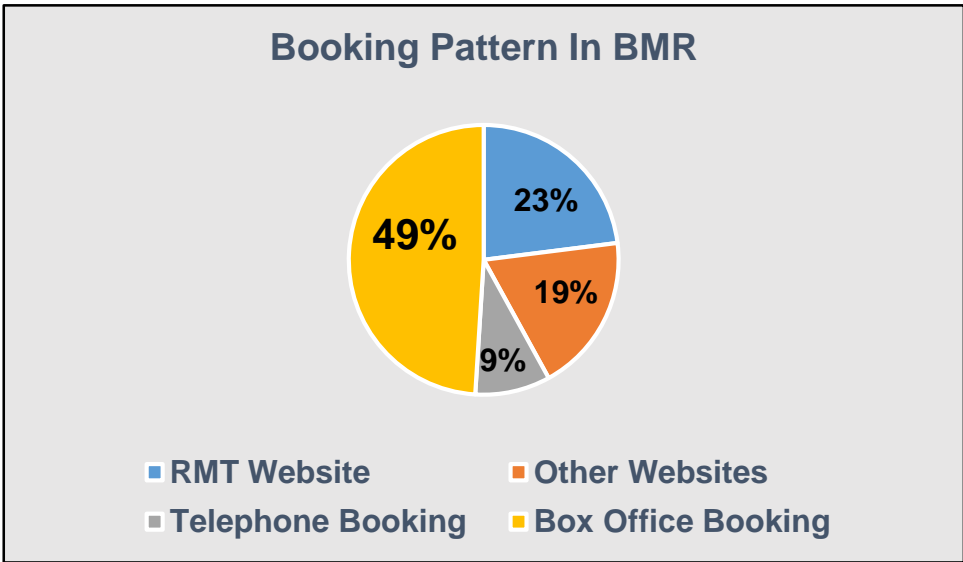
Inferences

Repeat viewers, who are IT professionals and students from nearby offices, hostels and campus in BMR, dominate

Dominated by very frequent repeat viewers from the vicinity at RSVO

RMT Booking Pattern

| Booking Options | Frequency Percent In BMR | Frequency Percent In RSVO |
|--------------------|--------------------------|---------------------------|
| Cinema Website | 23% | 25% |
| Other Websites | 19% | 24% |
| Telephone Booking | 9% | 18% |
| Box Office Booking | 49% | 33% |



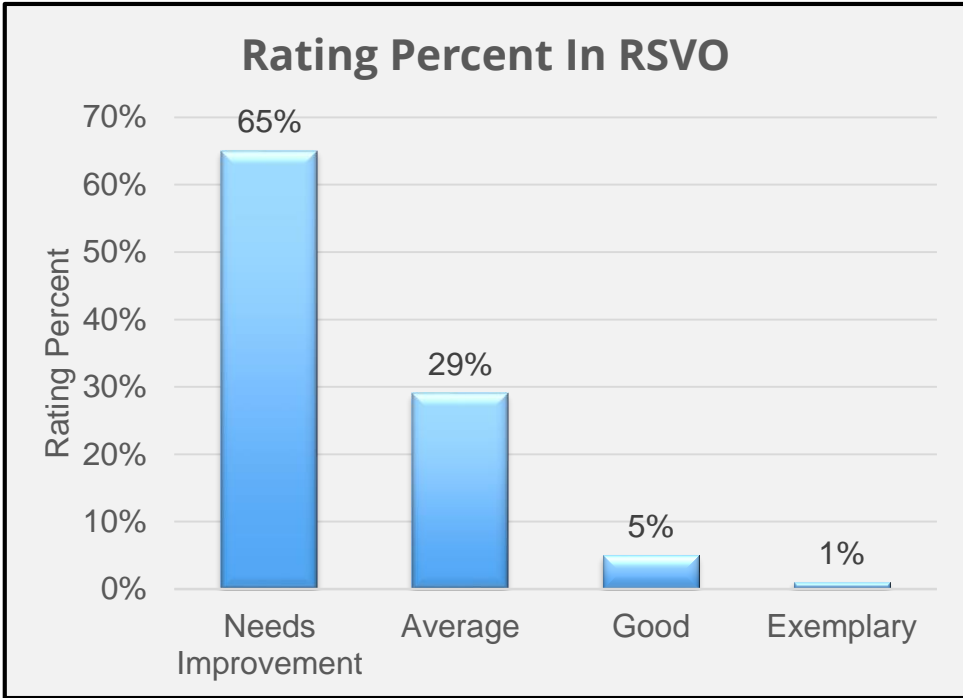
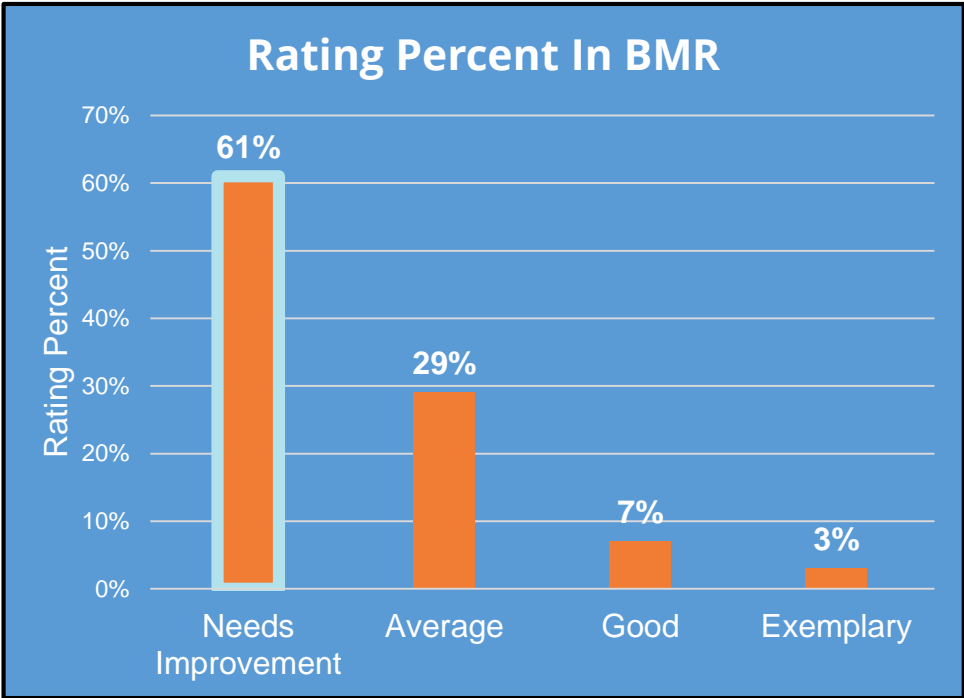
Inferences

In BMR, viewers prefer box office purchase with no additional cost to the tickets

Viewers prefer online purchase and are willing to pay additional convenience charges at RSVO

RMT Cinema Experience

| Cinema experience | Rating percent in BMR | Rating percent in RSVO |
|-------------------|-----------------------|------------------------|
| Needs improvement | 61% | 65% |
| Average | 29% | 29% |
| Good | 7% | 5% |
| Exemplary | 3% | 1% |



Inference

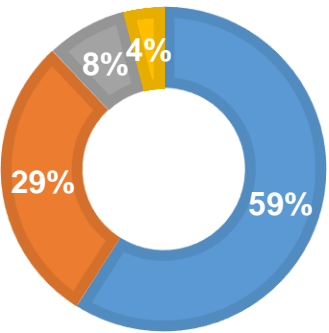
Viewers are not happy with the cinema experience at RMT (both BMR and RSVO)

RMT Cinema Experience

| Cinema hygiene | Rating percent in BMR | Rating percent in RSVO |
|-------------------|-----------------------|------------------------|
| Needs improvement | 59% | 64% |
| Average | 29% | 27% |
| Good | 8% | 7% |
| Exemplary | 4% | 2% |

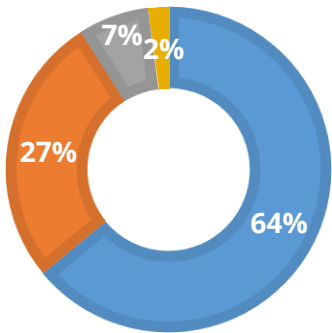
HYGIENE RATING PERCENT
IN BMR

■ Needs Improvement ■ Average ■ Good ■ Exemplary



HYGIENE RATING PERCENT IN
RSVO

■ Needs Improvement ■ Average ■ Good ■ Exemplary



Inference

Viewers are facing issues with the cinema hygiene at RMT (both at BMR and RSVO)

RMT F and B Experience

| F and B price | Rating percent in BMR | Rating percent in RSVO |
|-------------------------|-----------------------|------------------------|
| Affordable | 37% | 45% |
| Expensive yet will buy | 39% | 31% |
| Expensive; will not buy | 24% | 24% |

| F and B quality | Rating percent in BMR | Rating percent in RSVO |
|-------------------|-----------------------|------------------------|
| Needs improvement | 7% | 5% |
| Average | 23% | 25% |
| Good | 32% | 39% |
| Exemplary | 38% | 31% |

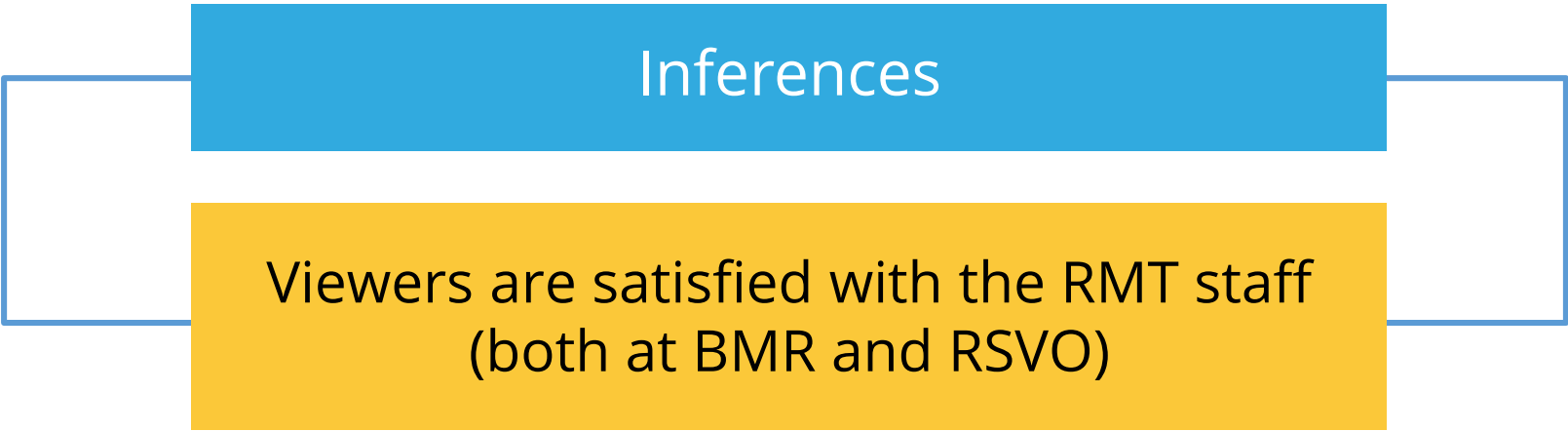
| F and B variety | Rating percent in BMR | Rating percent in RSVO |
|-----------------------------|-----------------------|------------------------|
| Needs to increase varieties | 17% | 15% |
| Serves sufficient varieties | 83% | 85% |

| | |
|-----------|--|
| Inference | Viewers are very happy with the F and B at RMT(both at BMR and RSVO) |
|-----------|--|



RMT Staff Positive Experience

| Parameter | RSVO | BMR |
|-----------------------|------|-----|
| Staff is friendly | 67% | 69% |
| Staff is well-behaved | 68% | 68% |
| Staff is cooperative | 51% | 53% |
| Staff is helpful | 53% | 55% |



RMT Areas Of Improvement

Viewers are not happy with the cinema experience at RMT(both BMR and RSVO)

Viewers are facing issues with the cinema hygiene at RMT(both at BMR and RSVO)

Inferences

Currently, viewers are still visiting RMT, however, if the issues are not addressed, they would soon opt for other alternatives

Project Charter

Problem statement

- Overall average of 63% of the viewers are not happy with the RMT cinema experience and 62% of them are unhappy with the RMT cinema hygiene.
- If the issues are not addressed now, viewers will opt for other alternatives which will decrease the revenue, making it difficult for RMT to continue with the business in next 6-8 months.
- This might result in a shut down or RMT being taken over by the competitors.

To improve the RMT cinema experience for BMR and RSVO by 70%, and RMT cinema hygiene by 85%, in next 8 months, so as to retain the existing viewers and also attract viewers from the competitors for higher profitability.

Goal statement

Project Charter (Contd.)

Business case

- If the RMT cinema experience and the RMT cinema hygiene is not improved, competitors E2, AGP and Frames will gain the market shares of RMT in next 6-8 months where the problem will be affecting the existing RMT viewers by 50% more than the current condition resulting in a revenue drop by 70% by the end of 12 months.
- If RMT cinema experience and cinema hygiene is improved by 75% within next 6-8 months; we would be able to retain the current viewers and also further get 15% of the growing market share due to increased brand value and better viewer experience and viewer reviews pushing the revenue up by 20% in the next 12 months.

To work on and bring improvement on RMT cinema experience and RMT cinema hygiene which will enhance viewer experience and help to retain the existing viewer base and increase the new viewers increasing overall profitability for RMT for both BMR and RSVO.

Project scoping

Project Milestones

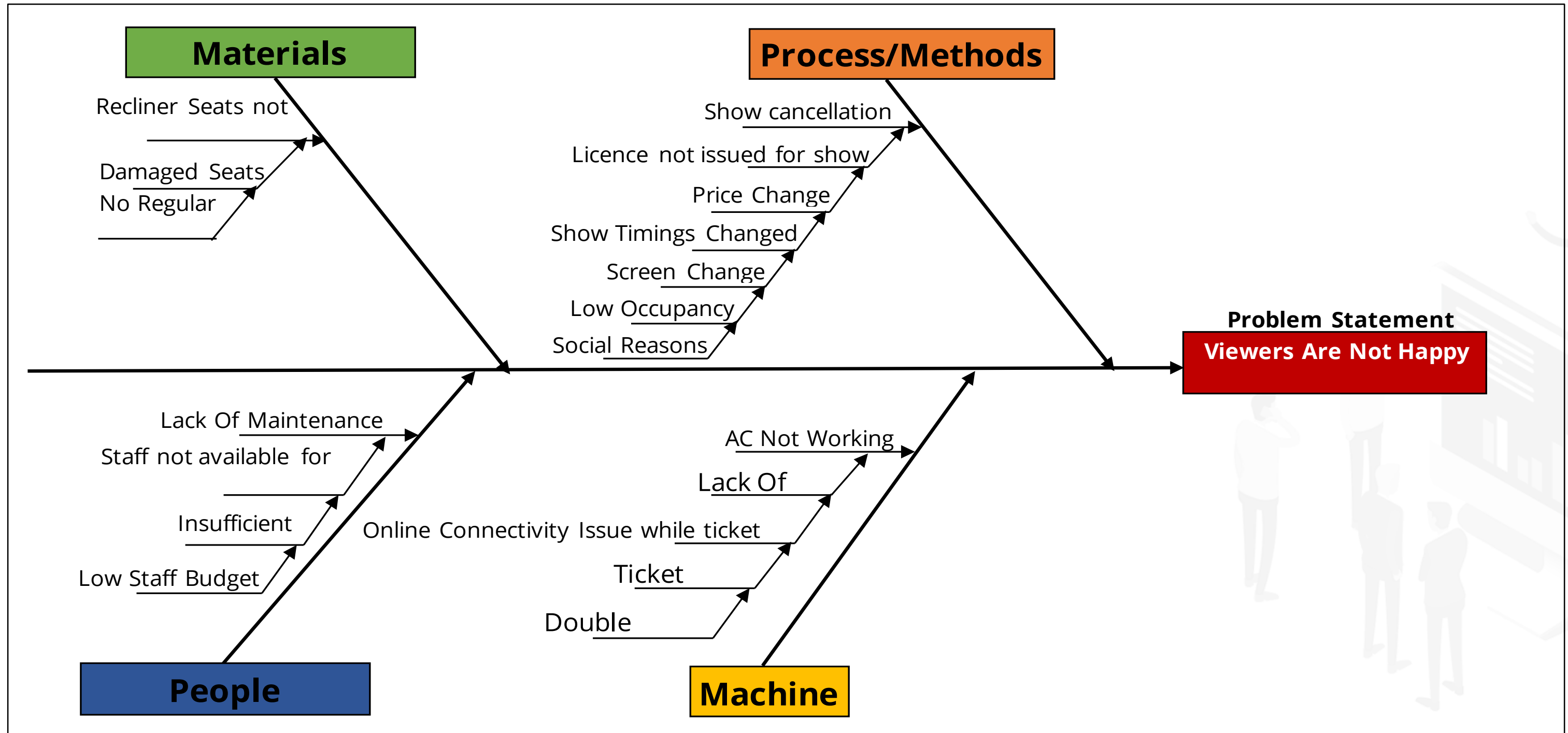
| Milestones | Jun | | | | Jul | | | | Aug | | | | Sept | | | | Oct | | | | Nov | | | | Dec | |
|------------|-----|----|----|----|-----|----|----|----|-----|----|----|----|------|----|----|----|-----|----|----|----|-----|----|----|----|-----|----|
| | w1 | w2 | w3 | w4 | w1 | w2 | w3 | w4 | w1 | w2 | w3 | w4 | w1 | w2 | w3 | w4 | w1 | w2 | w3 | w4 | w1 | w2 | w3 | w4 | w1 | w2 |
| Define | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measure | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Improve | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control | | | | | | | | | | | | | | | | | | | | | | | | | | |

RACI Model

| Team members | Define | Measure | Analyze | Improve | Control |
|--------------------------|--------|---------|---------|---------|---------|
| Black belt | A | A | R/A | R/A | A |
| Process owner | C/I | C/I | C | C/I | A/I |
| Process manager | C | C | C | C | R/I |
| Green belt | R | R | | | |
| Financial representative | | | I | | |

Measure Phase

Fishbone Diagram



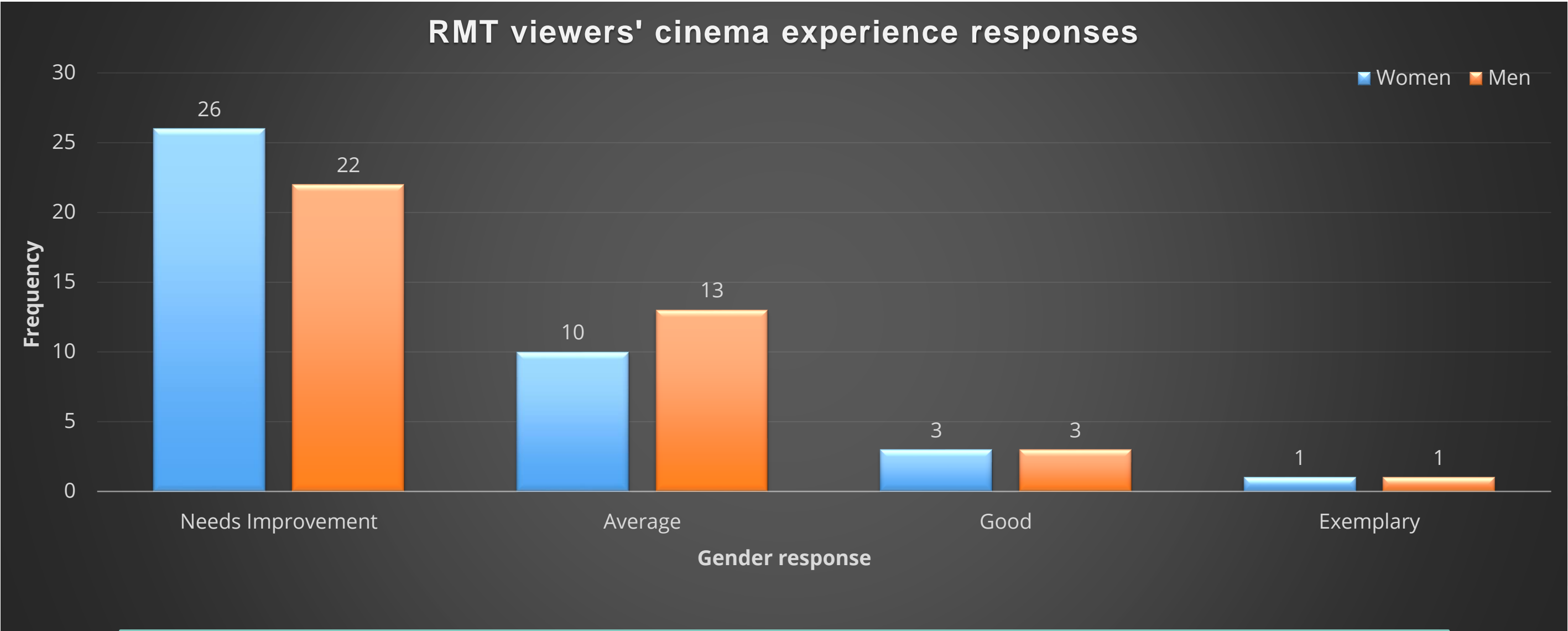
Viewers' Cinema Experience Responses (40 Women and 40 Men)

| Names | Needs Improvement | Average | Good | Exemplary |
|-----------|-------------------|---------|------|-----------|
| Emma | Y | | | |
| Ava | | Y | | |
| Sophia | Y | | | |
| Mia | Y | | | |
| Harper | | | Y | |
| Olivia | | | | Y |
| Isabella | Y | | | |
| Charlotte | Y | | | |
| Amanda | Y | | | |
| Jia | | Y | | |
| Evelyn | Y | | | |
| Abigail | | Y | | |
| Emily | Y | | | |
| Avery | | | Y | |
| Sofia | Y | | | |
| Camila | Y | | | |
| Aria | | Y | | |
| Scarlett | Y | | | |
| Victoria | Y | | | |
| Madison | | Y | | |
| Luna | Y | | | |
| Grace | Y | | | |
| Chloe | Y | | | |
| Penelope | | Y | | |
| Layla | Y | | | |
| Riley | Y | | | |

| Names | Needs Improvement | Average | Good | Exemplary |
|---------|-------------------|---------|------|-----------|
| Zoey | | | Y | |
| Nora | | Y | | |
| Lily | Y | | | |
| Eleanor | Y | | | |
| Hannah | Y | | | |
| Lillian | | Y | | |
| Addison | Y | | | |
| Aubrey | Y | | | |
| Ellie | | Y | | |
| Stella | Y | | | |
| Natalie | Y | | | |
| Zoe | | Y | | |
| Leah | Y | | | |
| Hazel | Y | | | |
| Chris | Y | | | |
| Andy | | | Y | |
| Calvin | Y | | | |
| Alex | Y | | | |
| Robert | | Y | | |
| Nick | | Y | | |
| Brian | Y | | | |
| Chris | | Y | | |
| Dave | Y | | | |
| Patrick | | Y | | |
| Colin | Y | | | |
| Michael | Y | | | |
| Dan | | Y | | |

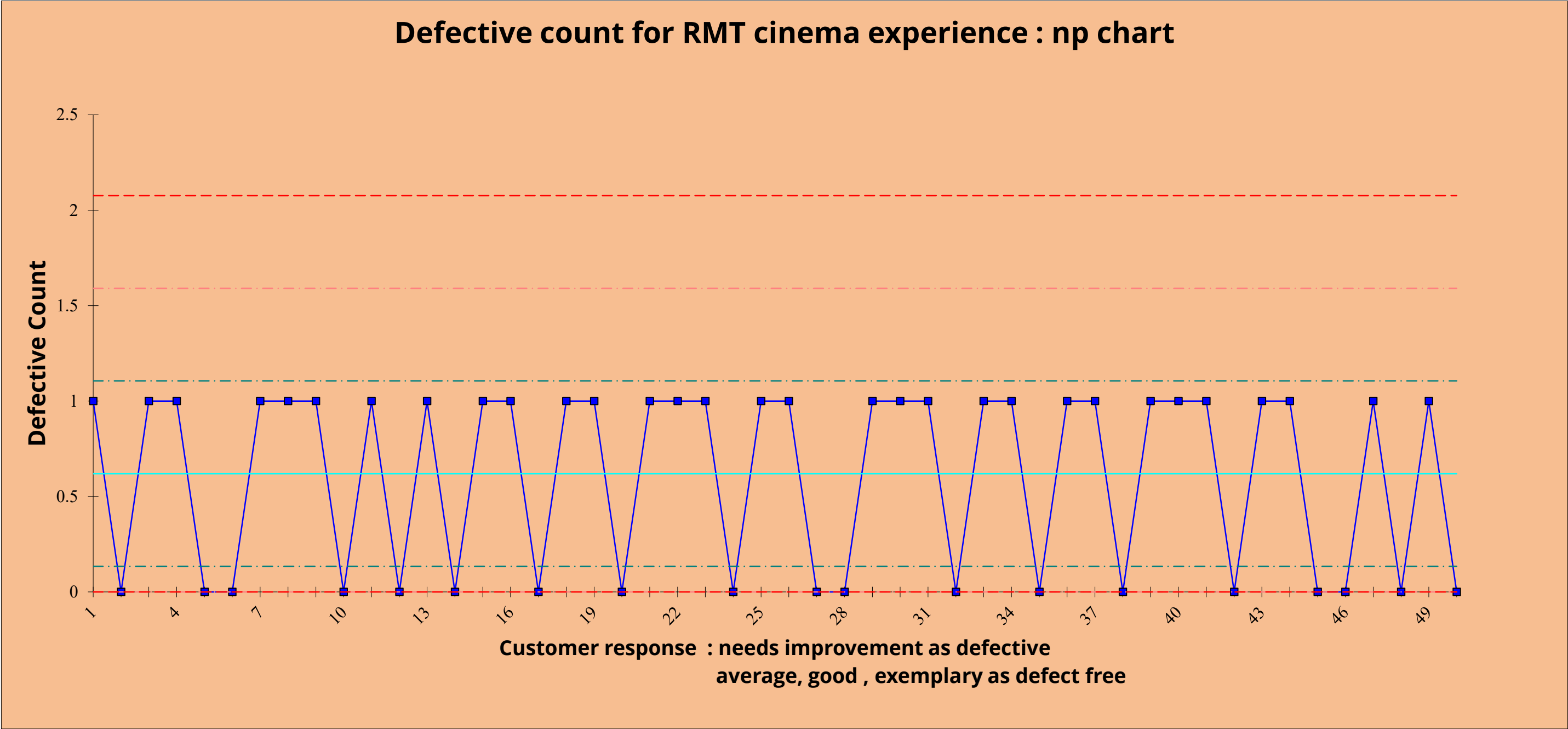
| Names | Needs Improvement | Average | Good | Exemplary |
|-----------|-------------------|---------|------|-----------|
| Steve | Y | | | |
| Ben | Y | | | |
| Adam | | Y | | |
| Eric | Y | | | |
| Jeff | Y | | | |
| Andrew | | Y | | |
| Matt | | | Y | |
| Harry | Y | | | |
| Joe | Y | | | |
| George | | Y | | |
| John | | | Y | |
| Keith | Y | | | |
| Kevin | | Y | | |
| James | Y | | | |
| Christian | | Y | | |
| Mark | Y | | | |
| Peter | Y | | | |
| Zach | | Y | | |
| Ryan | Y | | | |
| Sam | Y | | | |
| Tom | | Y | | |
| Trevor | Y | | | |
| Will | Y | | | |
| Noah | | Y | | |
| Austin | | | | Y |
| Jade | Y | | | |
| Ashley | Y | | | |

Viewers' Cinema Experience Responses (40 Women and 40 Men) (Contd.)



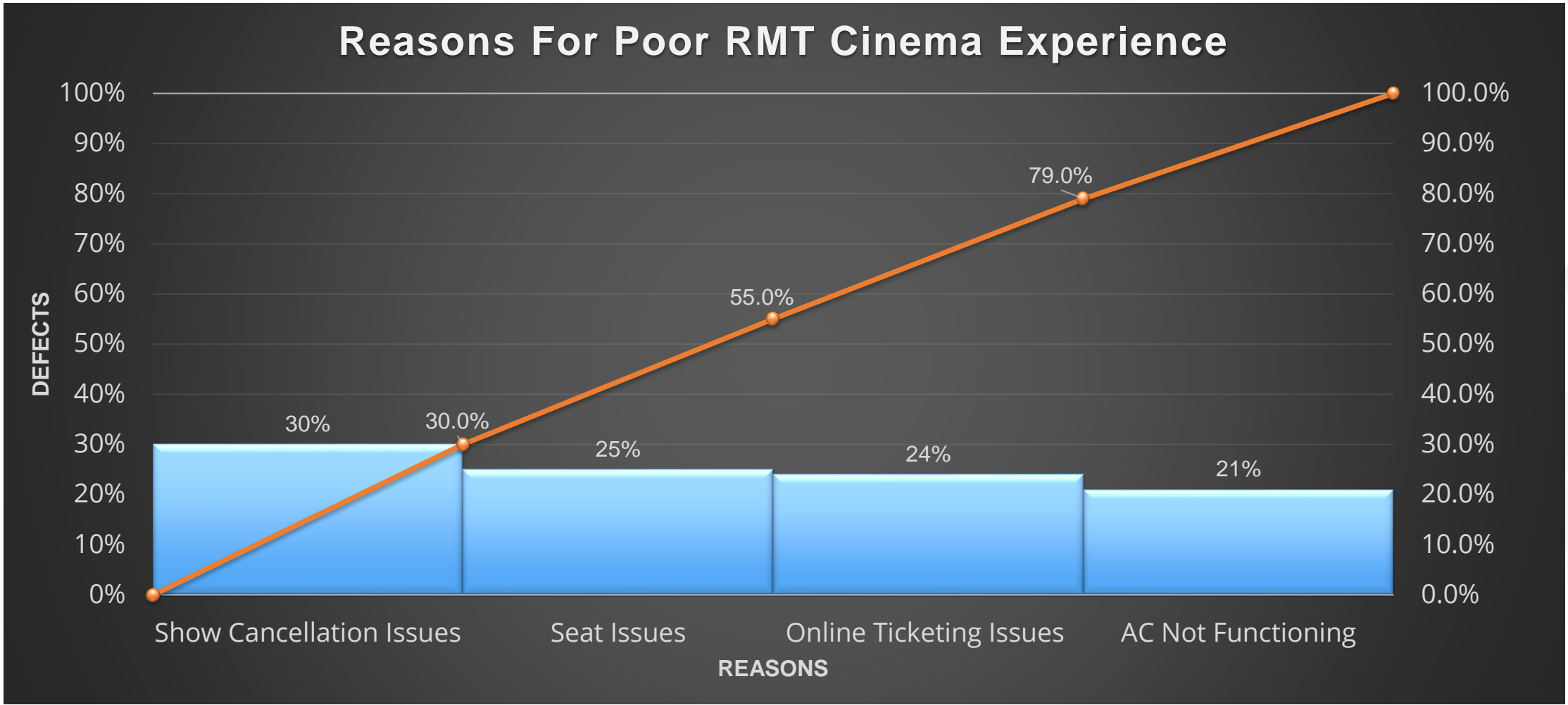
Women viewers are more uncomfortable with the RMT cinema experience than men viewers

Viewers' Cinema Experience Responses (40 Women and 40 Men) (Contd.)



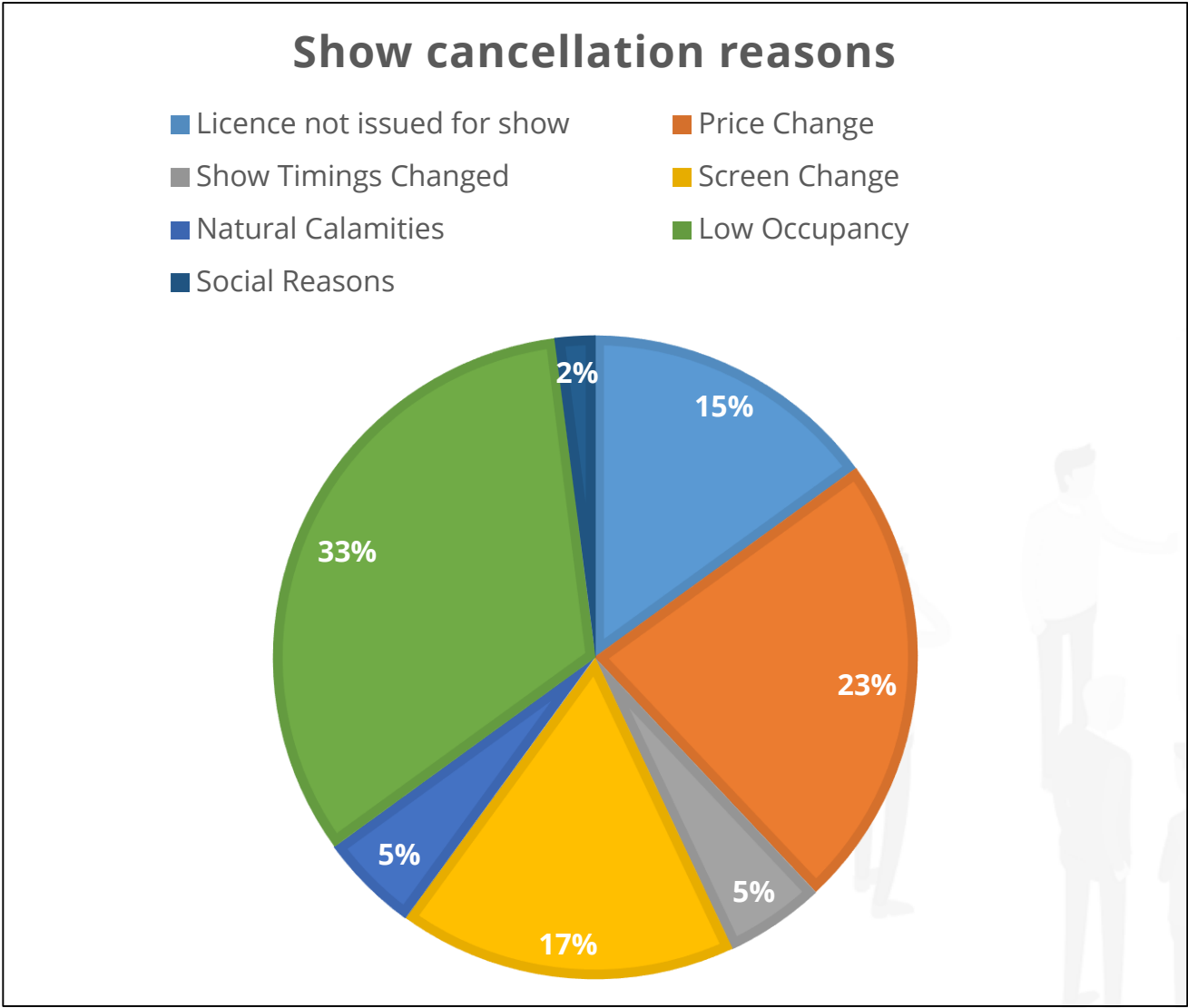
RMT Viewers' Poor Cinema Experience Reasons

| Seat issues | Online ticket booking issues | AC not functioning | Show cancellation issues |
|-------------|------------------------------|--------------------|--------------------------|
| 25% | 24% | 21% | 30% |



Reasons For Show Cancellation

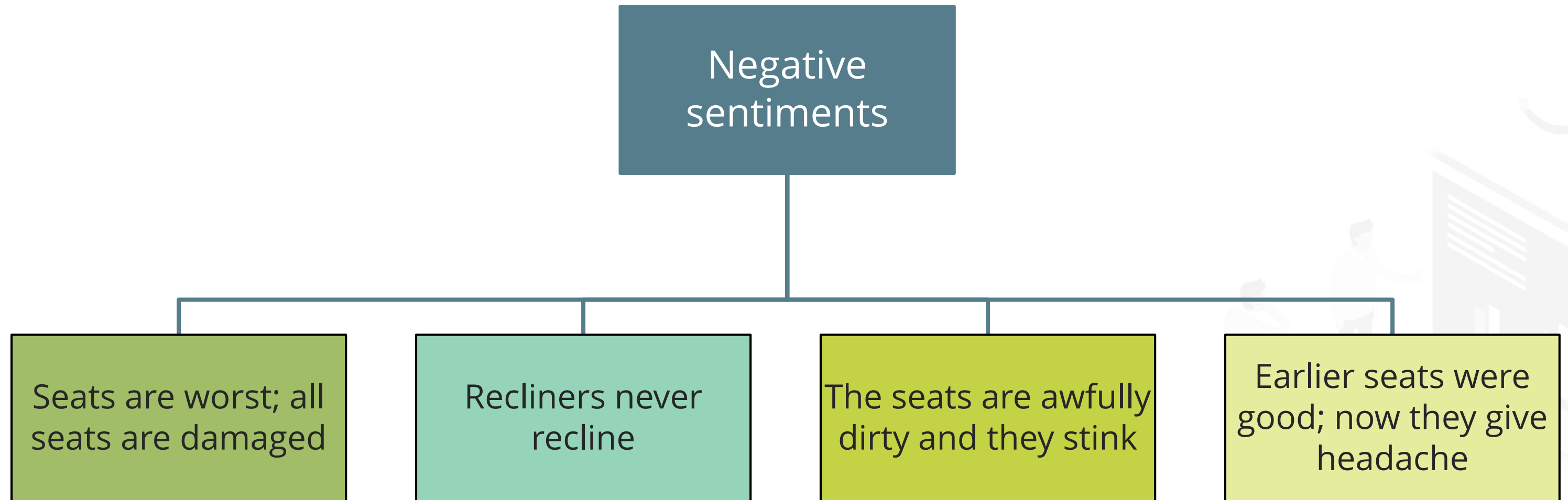
| Reasons for show cancellations | |
|--------------------------------|-----|
| License not issued for show | 15% |
| Price change | 23% |
| Show timings changed | 5% |
| Screen change | 17% |
| Natural calamities | 5% |
| Low occupancy | 33% |
| Social reasons | 2% |



RMT Auditorium Seat Experience

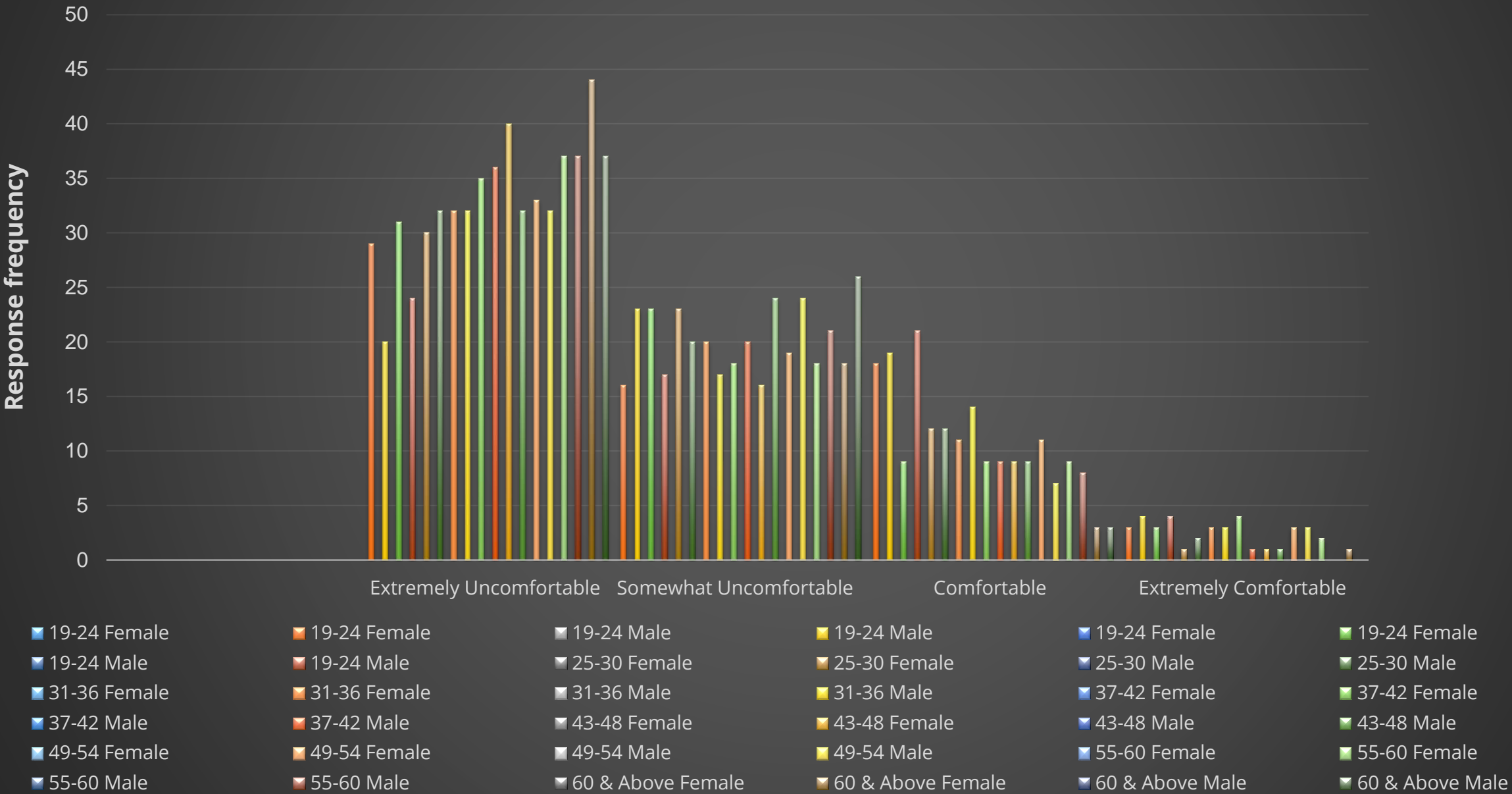
| Age | Gender | Profession | Response frequencies towards seats | | | |
|--------------|--------|---------------------|------------------------------------|------------------------|-------------|-----------------------|
| | | | Extremely uncomfortable | Somewhat uncomfortable | Comfortable | Extremely comfortable |
| 19-24 | Female | Working | 15 | 9 | 8 | 1 |
| | | Student | 14 | 7 | 10 | 2 |
| | Male | Working | 9 | 12 | 9 | 3 |
| | | Student | 11 | 11 | 10 | 1 |
| 19-24 | Female | Working | 16 | 11 | 4 | 2 |
| | | Not working/student | 15 | 12 | 5 | 1 |
| | Male | Working | 13 | 9 | 8 | 3 |
| | | Not working/student | 11 | 8 | 13 | 1 |
| 25-30 | Female | Working | 17 | 11 | 5 | 0 |
| | | Not working | 13 | 12 | 7 | 1 |
| | Male | Working | 15 | 11 | 6 | 1 |
| | | Business | 17 | 9 | 6 | 1 |
| 31-36 | Female | Working | 19 | 9 | 4 | 1 |
| | | Not working | 13 | 11 | 7 | 2 |
| | Male | Working | 15 | 7 | 9 | 2 |
| | | Business | 17 | 10 | 5 | 1 |
| 37-42 | Female | Working | 18 | 9 | 4 | 2 |
| | | Not working | 17 | 9 | 5 | 2 |
| | Male | Working | 17 | 11 | 4 | 1 |
| | | Business | 19 | 9 | 5 | 0 |
| 43-48 | Female | Working | 21 | 9 | 3 | 0 |
| | | Not working | 19 | 7 | 6 | 1 |
| | Male | Working | 17 | 11 | 5 | 0 |
| | | Business | 15 | 13 | 4 | 1 |
| 49-54 | Female | Working | 16 | 8 | 6 | 3 |
| | | Not working | 17 | 11 | 5 | 0 |
| | Male | Working | 15 | 13 | 4 | 1 |
| | | Business | 17 | 11 | 3 | 2 |
| 55-60 | Female | Working | 20 | 7 | 5 | 1 |
| | | Not working | 17 | 11 | 4 | 1 |
| | Male | Working | 18 | 10 | 5 | 0 |
| | | Business/retired | 19 | 11 | 3 | 0 |
| 60 and Above | Female | Working | 21 | 9 | 2 | 1 |
| | | Not working | 23 | 9 | 1 | 0 |
| | Male | Working | 18 | 14 | 1 | 0 |
| | | Not working | 19 | 12 | 2 | 0 |

RMT Auditorium Seat Experience

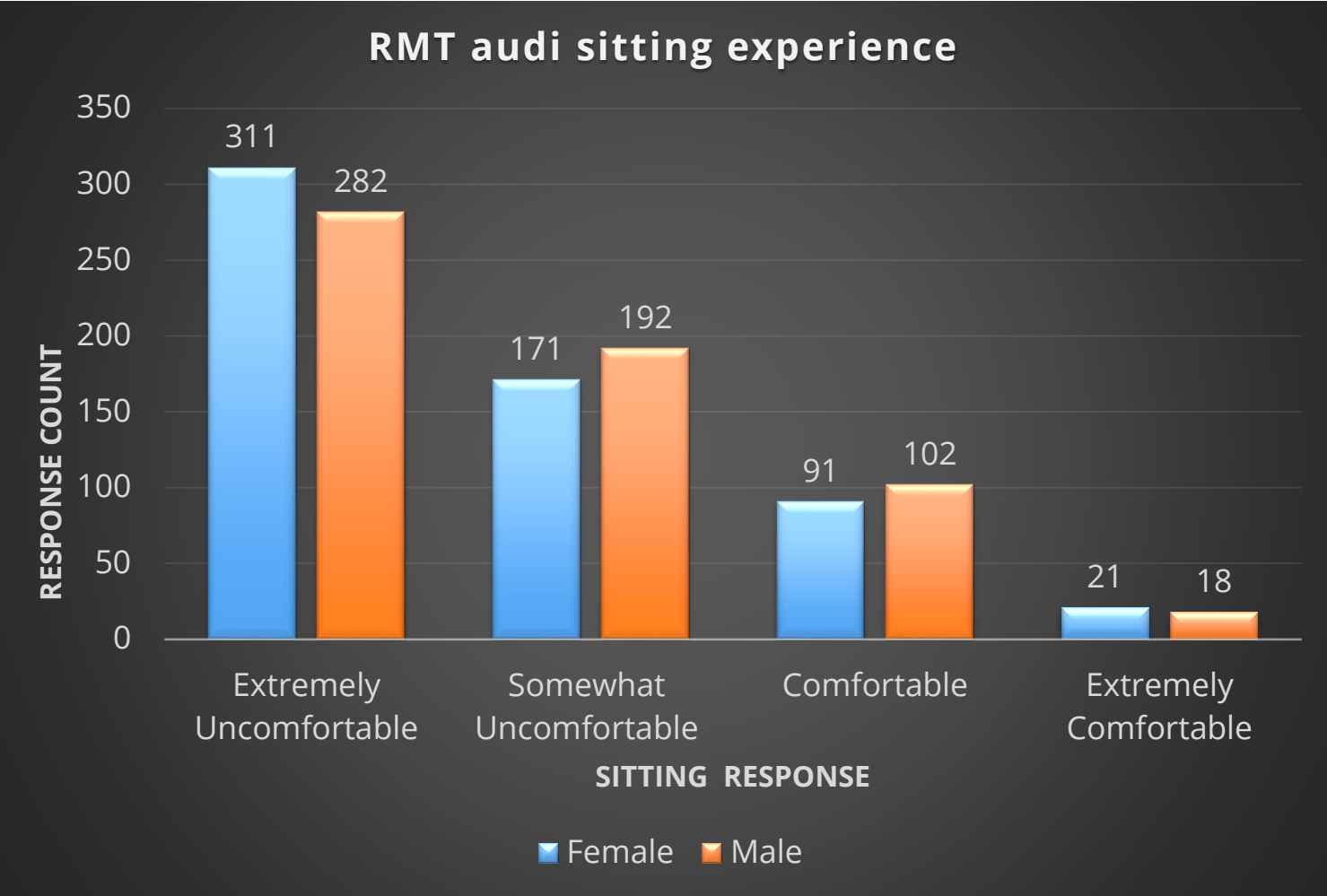


RMT Auditorium Seat Experience (Contd.)

Age and gender-wise viewer response for RMT audi sitting



RMT Auditorium Seat Experience (Contd.)



| Gender responses | Female | Male | Female % | Male % |
|-------------------------|--------|------|-------------|----------|
| Extremely uncomfortable | 311 | 282 | 26.17845118 | 23.73737 |
| Somewhat uncomfortable | 171 | 192 | 14.39393939 | 16.16162 |
| Comfortable | 91 | 102 | 7.65993266 | 8.585859 |
| Extremely comfortable | 21 | 18 | 1.767676768 | 1.515152 |

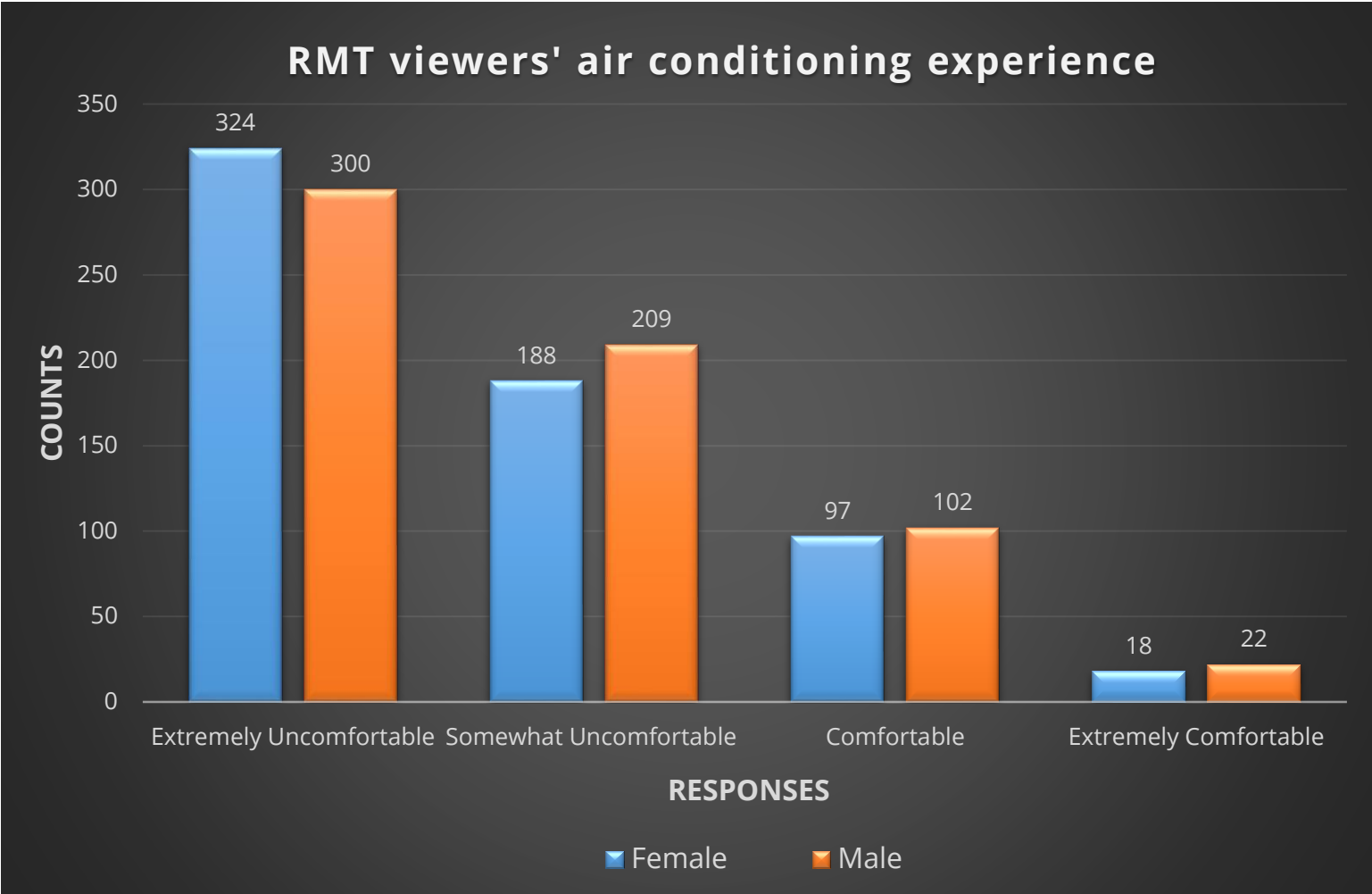
26.17% female viewers and 23.73% male viewers are extremely uncomfortable with RMT audi sitting experience.

26.17% female viewers and 23.73% male viewers are uncomfortable with RMT audi sitting experience.

RMT Auditorium Air Conditioning Experience

| Age | Gender | Profession | Response frequencies towards AC | | | |
|--------------|--------|---------------------|---------------------------------|------------------------|-------------|-----------------------|
| | | | Extremely uncomfortable | Somewhat uncomfortable | Comfortable | Extremely comfortable |
| 19-24 | Female | Working | 16 | 10 | 7 | 2 |
| | | Student | 15 | 8 | 11 | 1 |
| | Male | Working | 10 | 13 | 10 | 2 |
| | | Student | 12 | 10 | 11 | 2 |
| 19-24 | Female | Working | 18 | 13 | 3 | 1 |
| | | Not working/student | 14 | 13 | 6 | 2 |
| | Male | Working | 14 | 11 | 9 | 1 |
| | | Not working/student | 13 | 11 | 10 | 1 |
| 25-30 | Female | Working | 19 | 9 | 5 | 2 |
| | | Not working | 14 | 13 | 7 | 1 |
| | Male | Working | 18 | 9 | 7 | 1 |
| | | Business | 19 | 10 | 5 | 1 |
| 31-36 | Female | Working | 19 | 11 | 5 | 0 |
| | | Not working | 15 | 13 | 6 | 1 |
| | Male | Working | 16 | 8 | 10 | 1 |
| | | Business | 15 | 13 | 6 | 1 |
| 37-42 | Female | Working | 19 | 9 | 5 | 2 |
| | | Not working | 18 | 10 | 6 | 1 |
| | Male | Working | 18 | 11 | 5 | 1 |
| | | Business | 19 | 11 | 5 | 0 |
| 43-48 | Female | Working | 23 | 8 | 3 | 1 |
| | | Not working | 17 | 11 | 6 | 1 |
| | Male | Working | 19 | 11 | 5 | 0 |
| | | Business | 16 | 15 | 3 | 1 |
| 49-54 | Female | Working | 19 | 9 | 7 | 0 |
| | | Not working | 17 | 11 | 6 | 1 |
| | Male | Working | 17 | 15 | 2 | 1 |
| | | Business | 18 | 13 | 3 | 1 |
| 55-60 | Female | Working | 21 | 9 | 4 | 1 |
| | | Not working | 17 | 11 | 5 | 2 |
| | Male | Working | 19 | 11 | 4 | 1 |
| | | Business/retired | 19 | 12 | 3 | 1 |
| 60 and Above | Female | Working | 22 | 9 | 3 | 1 |
| | | Not working | 21 | 11 | 2 | 1 |
| | Male | Working | 19 | 13 | 2 | 1 |
| | | Not working | 19 | 12 | 2 | 2 |

RMT Auditorium Air Conditioning Experience (Contd.)

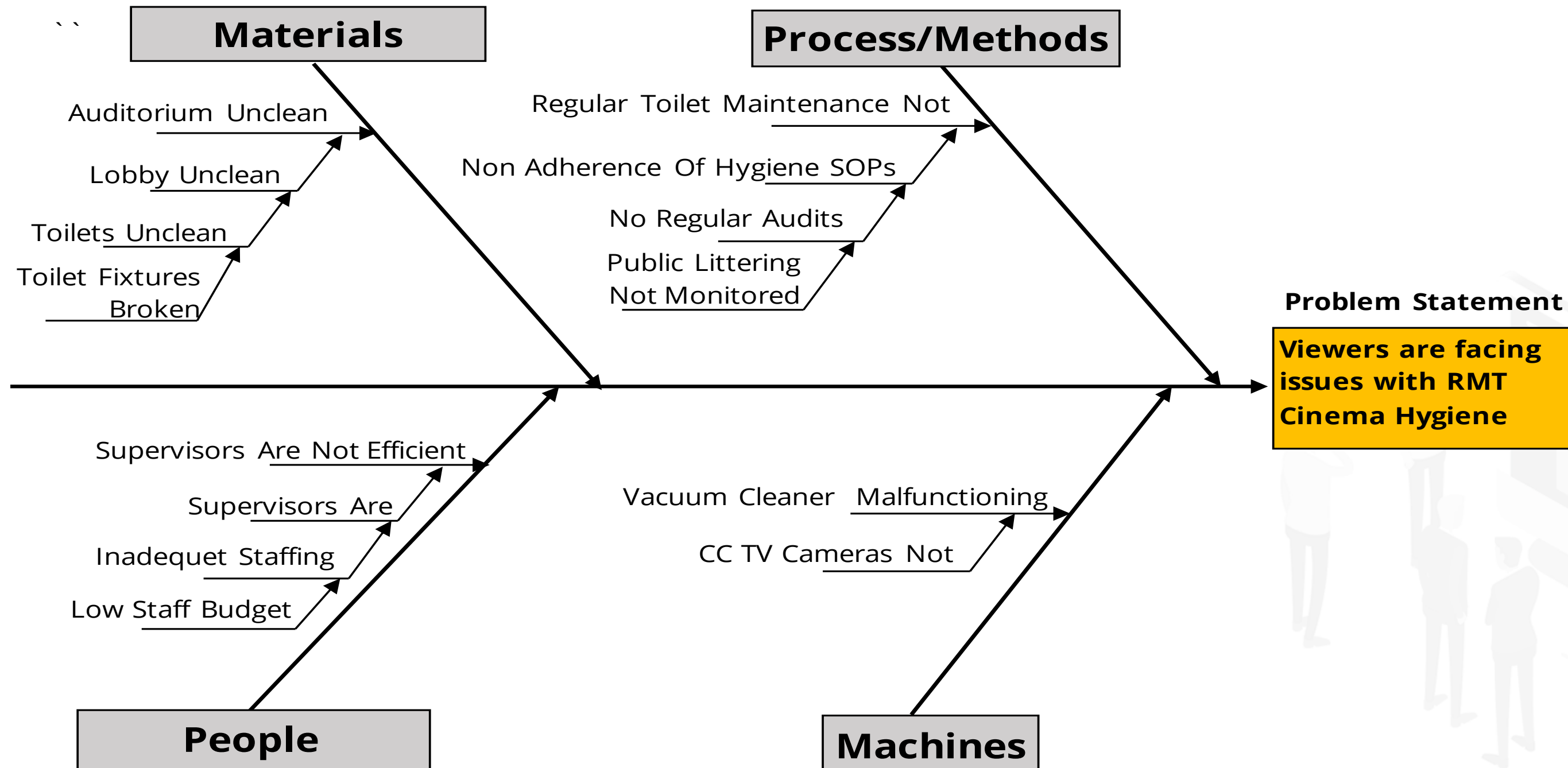


| Gender responses | Female | Male | Female % | Male % |
|-------------------------|--------|------|-------------|-------------|
| Extremely uncomfortable | 324 | 300 | 25.71428571 | 23.80952381 |
| Somewhat uncomfortable | 188 | 209 | 14.92063492 | 16.58730159 |
| Comfortable | 97 | 102 | 7.698412698 | 8.095238095 |
| Extremely comfortable | 18 | 22 | 1.428571429 | 1.746031746 |

25.71% female viewers and 23.80% male viewers are extremely uncomfortable with RMT audi AC experience.

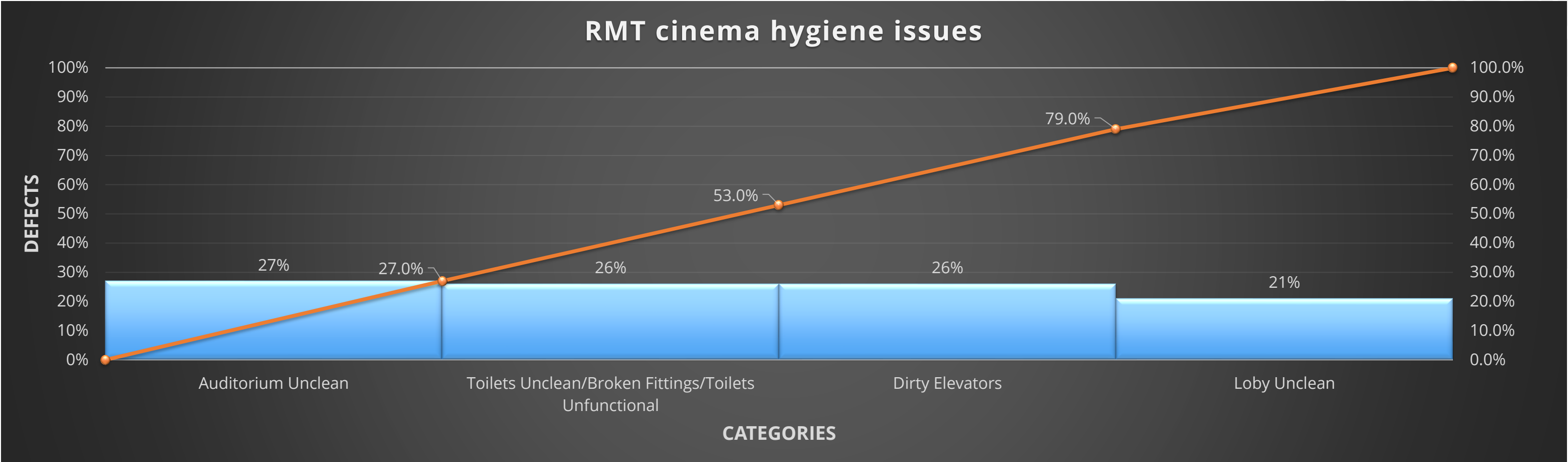
14.92% female viewers and 16.58% male viewers are uncomfortable with RMT audi AC experience.

Cause and Effect Analysis



Cause and Effect Analysis (Contd.)

| Theater hygiene issue: | |
|--|-----|
| Auditorium unclean | 27% |
| Lobby unclean | 21% |
| Toilets unclean/broken fittings/toilets non-functional | 26% |
| Dirty elevators | 26% |



SIPOC

| S | I | P | O | C |
|--|--|--|--|-----------|
| Suppliers | Inputs | Process | Outputs | Customers |
| Provider | Input requirements and measures | Start: Customer checks for movie at RMT online or offline High-level process description: Customer checks for the show timings Customer checks for the ticket prices Customer checks for the ticket availability Customer chooses the seats in the auditorium Customer books the tickets online or at the counter by paying Customer reaches RMT theater, 15 minutes prior to the show time Customer undergoes security check Customer takes the elevator Customer reaches RMT lobby and waits After auditorium cleaning is completed by RMT housekeeping, entry to audi is opened Customer enters the auditorium Customer sits on the allocated seat During movie or during the interval, customer may use the toilets During interval customer may order for RMT F and B When movie is over, customer leaves the auditorium through the exit End: Customer uses the exit steps to go out of the RMT cinema premises | Output requirements and measures | Receiver |
| RMT cinema Housekeeping RMT F and B ABC security RMT staff | Box office ABC security staff Elevator RMT lobby Projector and sound Screen Recliner seats Ac Lighting F and B Toilets Drinking water Exit steps | | Movie ticket Movie viewing experience F and B experience RMT food and beverage items purchased by customers | Customers |

Cause and Effect Matrix

| Kpovs | Viewer cinema experience | Viewer ticketing experience | Viewer amenities access | Rank |
|------------------------------------|--------------------------|-----------------------------|-------------------------|------|
| Weightage | 10 | 9 | 9 | |
| Kpivs | | | | |
| Smooth ticket booking | 7 | 10 | 0 | 160 |
| Lobby clean and fresh | 5 | 0 | 10 | 140 |
| Auditorium clean and fresh | 10 | 2 | 6 | 172 |
| Perfect recliner seats | 10 | 3 | 4 | 163 |
| AC optimally working | 10 | 2 | 3 | 145 |
| Toilets clean, fresh and operative | 6 | 3 | 10 | 177 |
| Clean and functional elevators | 5 | 2 | 9 | 149 |

Analyze Phase

RMT Viewers' Cinema Experience

Show cancellation reasons:

1. Low occupancy
2. Price change
3. Screen change
4. License not issued for show
5. Show timings changed
6. Natural calamities
7. Social reasons

Resolutions to stop show cancellation:

1. Strict adherence of movie projections even at **no guest attendance** to save studio
2. Introduce dynamic pricing as per demands
3. Remove convenience charges for online bookings
4. Introduce **app** offers during off day or off beat show timings
5. Announce confirmed show timings and issue ticket after the license to projection is confirmed
6. Stringently follow **one day advance booking** policy
7. Take customer details at box office while issuing physical tickets for advance bookings
8. Inform the viewers in advance for any changes/cancellations
9. Train staff to enable such **special case** management without viewer dissatisfactions

RMT Auditorium Sitting and Hygiene

Recliners maintenance:

1. Check and change the damaged seat covers
2. Check and repair the recliners for reclining
3. Check and change the seat sponge
4. Audit the recliners every 5 days
5. Disinfect the recliners after the last show every day
6. Monitor the viewers, damaging the seats intentionally at any point

Auditorium hygiene:

1. Clean and audit the auditorium after every show
2. Audit for SOP adherence
3. Deep disinfect and clean the auditorium every day after the last show
4. Change the carpets every month
5. Introduce weekly cleaning 5s
6. Clean and disinfect the AC ducts every week

RMT Auditorium AC and RMT Online Portals

Air conditioning maintenance:

1. Check and maintain the inner acoustic insulation on panels
2. Check and maintain the AC fans for low noise
3. Maintain AC for fresh air treatment with highly variable occupancy rate for comfort
4. Maintain air heating and/or air-cooling AC capacity
5. Monitor humidity control for viewers' comfort
6. Regular AMC to be done for the auditorium AC
7. Regular electricity consumption check to be performed

RMT online portals:

1. Extra **convenience charges** to be removed from RMT portal to empower viewers book tickets at their convenience
2. Introduce dynamic pricing through online portals
3. Install better servers for faster and better online viewer experience
4. Launch and maintain **RMT app** for cell phone users
5. Provide bonus points for repeat bookings with RMT
6. Do regular maintenance of websites and apps with regular update posting
7. Encourage and monitor viewers' online reviews

RMT Theatre Hygiene

Lobbies and toilets maintenance:

1. Maintain lobby seats and tables after every 2 hours
2. Check and maintain lobby air conditioning regularly
3. Check and maintain lobby lightings
4. Repair the broken fixtures in the toilets
5. Disinfect the lobby and toilets in every shift
6. Ensure the toiletries are available for the viewers
7. Audit the toilets and lobbies for maintenance adherence and share reports in every shift

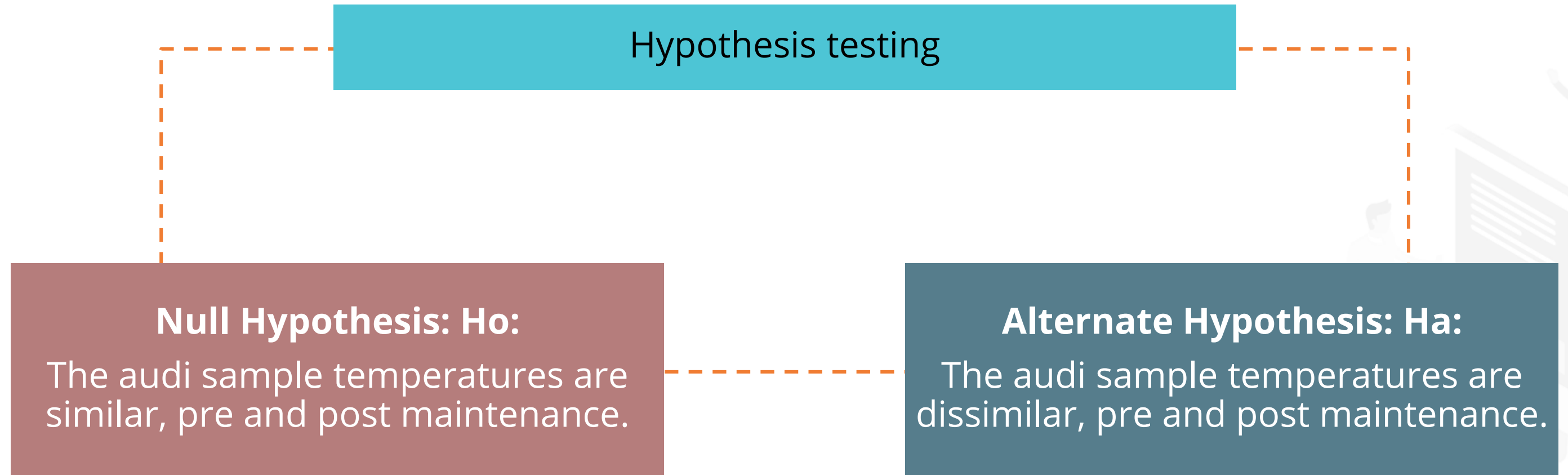
RMT elevator maintenance:

1. Regular monthly maintenance from the AMC
2. During every shift, check the functioning of elevator buttons, lights, and fans
3. Audit the presence of elevator operators in every shift
4. Introduce weekly cleaning 5s
5. Clean and disinfect the elevators in every 3 hours
6. Maintain the reports with the senior management daily, weekly, and monthly

RMT Audi Temperature

| Audi temperature sample in degrees pre maintenance | Audi temperature sample in degrees post maintenance |
|--|---|
| 19 | 23 |
| 16 | 24 |
| 27 | 23 |
| 16 | 25 |
| 28 | 26 |
| 23 | 23 |
| 21 | 26 |
| 17 | 24 |
| 20 | 23 |
| 22 | 26 |
| 25 | 23 |
| 17 | 24 |
| 29 | 25 |
| 25 | 26 |
| 22 | 26 |
| 19 | 25 |
| 17 | 23 |
| 26 | 26 |
| 21 | 25 |
| 27 | 25 |

RMT Audi Temperature (Contd.)



RMT Audi Temperature (Contd.)

Hypothesis testing

| T-test: paired two sample for means | | |
|-------------------------------------|-------------|-------------|
| | Variable 1 | Variable 2 |
| Mean | 21.85 | 24.55 |
| Variance | 17.92368421 | 1.523684211 |
| Observations | 20 | 20 |
| Pearson correlation | 0.288542573 | |
| Hypothesized mean difference | 0 | |
| Df | 19 | |
| T stat | -2.97878469 | |
| P(t<=t) one-tail | 0.003857752 | |
| T critical one-tail | 1.729132812 | |
| P(t<=t) two-tail | 0.007715505 | |
| T critical two-tail | 2.093024054 | |

RMT Audi Temperature (Contd.)

Hypothesis testing

$P(T \leq t)$ two-tail

0.007715505

Outcome: Reject null hypothesis

Alternate Hypothesis: H_a :

The audi sample temperatures are dissimilar,
pre and post maintenance.

RMT Audi Recliner Tilt

| Audi recliner seats maximum tilt in degrees before maintenance | Audi recliner seats maximum tilt in degrees after maintenance |
|--|---|
| 112 | 128 |
| 105 | 129 |
| 96 | 128 |
| 98 | 130 |
| 113 | 130 |
| 108 | 128 |
| 99 | 132 |
| 115 | 133 |
| 117 | 127 |
| 129 | 128 |
| 97 | 130 |
| 96 | 131 |
| 119 | 127 |
| 123 | 128 |
| 126 | 128 |
| 95 | 132 |
| 94 | 127 |
| 115 | 130 |
| 112 | 129 |
| 121 | 131 |

RMT Audi Recliner Tilt (Contd.)

Hypothesis testing

Null Hypothesis: H_0 :

The audi recliners are reclining similarly, pre and post maintenance.

Alternate Hypothesis: H_a :

The audi recliners are reclining dissimilarly, pre and post maintenance.

RMT Audi Recliner Tilt (Contd.)

Hypothesis testing

| T-test: paired two sample for means | | |
|-------------------------------------|--------------|-------------|
| | Variable 1 | Variable 2 |
| Mean | 109.5 | 129.3 |
| Variance | 128.1578947 | 3.273684211 |
| Observations | 20 | 20 |
| Pearson Correlation | -0.287788442 | |
| Hypothesized Mean Difference | 0 | |
| df | 19 | |
| t Stat | -7.399063549 | |
| P(T<=t) one-tail | 2.61952E-07 | |
| t Critical one-tail | 1.729132812 | |
| P(T<=t) two-tail | 5.23904E-07 | |
| t Critical two-tail | 2.093024054 | |

RMT Audi Recliner Tilt (Contd.)

Hypothesis testing

$P(T \leq t)$ two-tail

5.23904E-07

Outcome: Reject null hypothesis

Alternate Hypothesis: H_a :

The audi recliners are reclining dissimilarly,
pre and post maintenance.

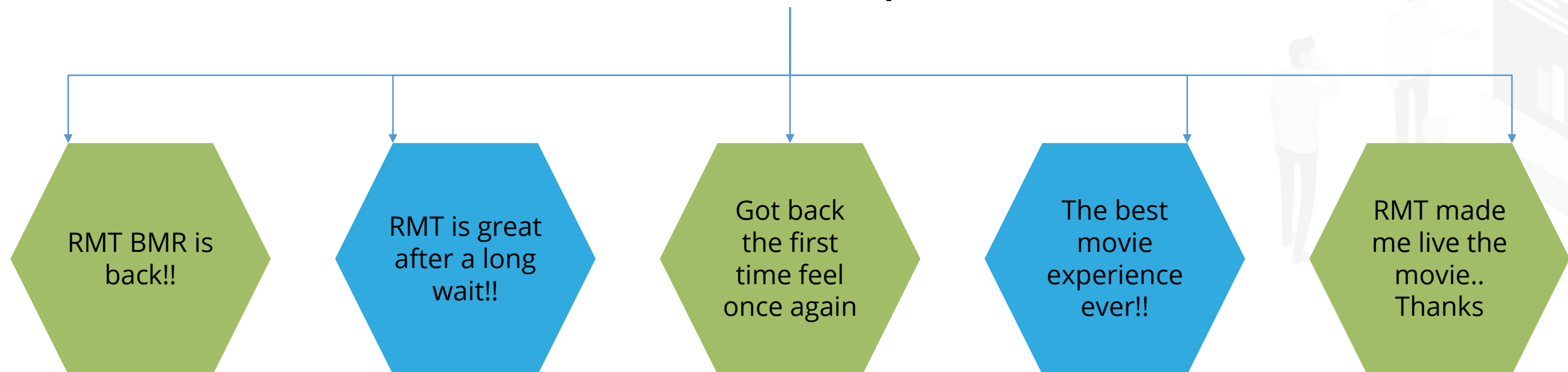
Improve Phase

RMT BMR

A pilot is performed in AUDI 1 in RMT BMR for 3 weeks

Results are analyzed for the parameters in review

Some trial run VOCs captured are:



RMT Audi Temperature Optimality Analysis

| Audi temperature sample in degrees post maintenance | Audi optimal target temperature in degrees |
|---|--|
| 23 | 24 |
| 24 | 24 |
| 23 | 24 |
| 25 | 24 |
| 26 | 24 |
| 23 | 24 |
| 26 | 24 |
| 24 | 24 |
| 23 | 24 |
| 26 | 24 |
| 23 | 24 |
| 24 | 24 |
| 25 | 24 |
| 26 | 24 |
| 26 | 24 |
| 25 | 24 |
| 23 | 24 |
| 26 | 24 |
| 25 | 24 |
| 25 | 24 |

RMT Audi Temperature

Hypothesis Testing

Null hypothesis: H_0 :

The audi sample temperatures are similar to the optimal target temperature.

Alternate hypothesis: H_a :

The audi sample temperatures are dissimilar from the optimal target temperature.

RMT Audi Temperature Optimality Analysis

Chi Squared Testing

| Data1 | Data2 | Total | Chi-sq | 8.161719 | Total expected | Chi-sq expected |
|-------|-------|-------|--------|-----------------|----------------|-----------------|
| 19 | 24 | 43 | p | 0.984968 | 20.49182 | 22.50818 |
| 16 | 24 | 40 | | | 19.06216 | 20.93784 |
| 27 | 24 | 51 | | | 24.30425 | 26.69575 |
| 16 | 24 | 40 | | | 19.06216 | 20.93784 |
| 28 | 24 | 52 | | | 24.78081 | 27.21919 |
| 23 | 24 | 47 | | | 22.39804 | 24.60196 |
| 21 | 24 | 45 | | | 21.44493 | 23.55507 |
| 17 | 24 | 41 | | | 19.53871 | 21.46129 |
| 20 | 24 | 44 | | | 20.96838 | 23.03162 |
| 22 | 24 | 46 | | | 21.92148 | 24.07852 |
| 25 | 24 | 49 | | | 23.35115 | 25.64885 |
| 17 | 24 | 41 | | | 19.53871 | 21.46129 |
| 29 | 24 | 53 | | | 25.25736 | 27.74264 |
| 25 | 24 | 49 | | | 23.35115 | 25.64885 |
| 22 | 24 | 46 | | | 21.92148 | 24.07852 |
| 19 | 24 | 43 | | | 20.49182 | 22.50818 |
| 17 | 24 | 41 | | | 19.53871 | 21.46129 |
| 26 | 24 | 50 | | | 23.8277 | 26.1723 |
| 21 | 24 | 45 | | | 21.44493 | 23.55507 |
| 27 | 24 | 51 | | | 24.30425 | 26.69575 |
| 437 | 480 | 917 | | | | |

RMT Audi Temperature Optimality Analysis (Contd.)

Chi-Squared testing

p

0.984968

Outcome: Accept null hypothesis

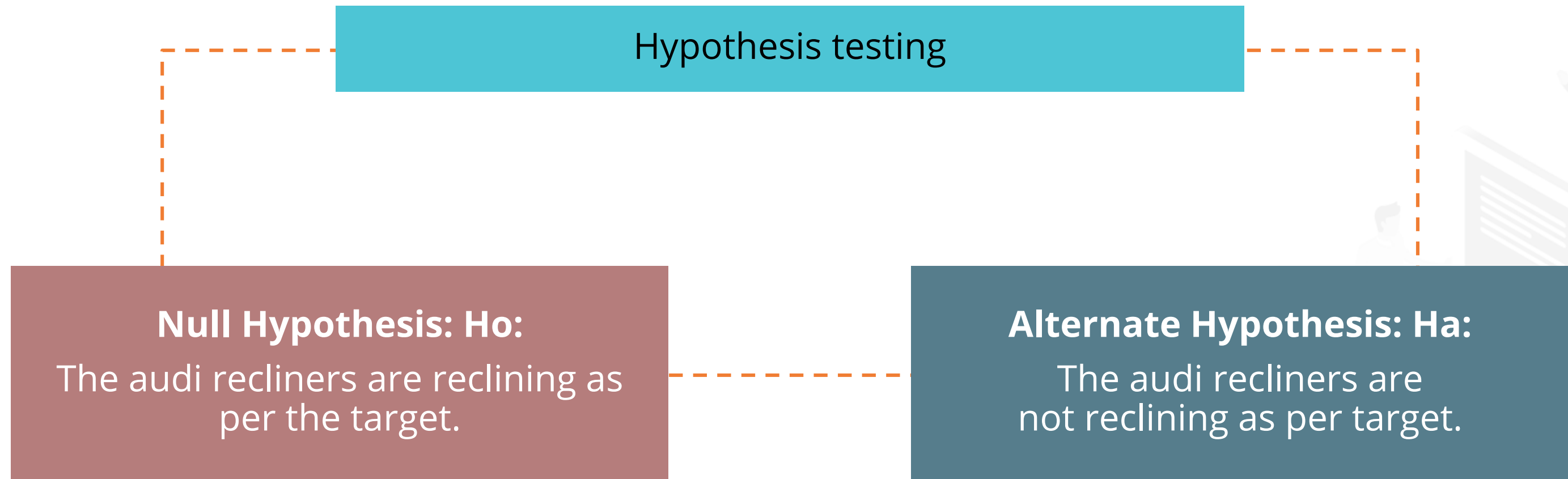
Null hypothesis: h_0 :

The audi sample temperatures are similar to the optimal target temperature.

RMT Audi Recliner Tilt Goodness Analysis

| Audi Recliner Seats Maximum Tilt In Degrees After Maintenance | Audi Recliner Seats Maximum Target Tilt In Degrees |
|---|--|
| 128 | 130 |
| 129 | 130 |
| 128 | 130 |
| 130 | 130 |
| 130 | 130 |
| 128 | 130 |
| 132 | 130 |
| 133 | 130 |
| 127 | 130 |
| 128 | 130 |
| 130 | 130 |
| 131 | 130 |
| 127 | 130 |
| 128 | 130 |
| 128 | 130 |
| 132 | 130 |
| 127 | 130 |
| 130 | 130 |
| 129 | 130 |
| 131 | 130 |

RMT Audi Recliner Tilt



RMT Audi Recliner Tilt (Contd.)

| Chi-Squared testing | | | | | | |
|---------------------|-------|-------|----------|-------------|----------------|-----------------|
| Data1 | Data2 | Total | Chi-Sq | 0.240506394 | Total Expected | Chi-Sq Expected |
| 128 | 130 | 258 | <i>p</i> | 1 | 128.6517547 | 129.3482453 |
| 129 | 130 | 259 | | | 129.1504049 | 129.8495951 |
| 128 | 130 | 258 | | | 128.6517547 | 129.3482453 |
| 130 | 130 | 260 | | | 129.6490551 | 130.3509449 |
| 130 | 130 | 260 | | | 129.6490551 | 130.3509449 |
| 128 | 130 | 258 | | | 128.6517547 | 129.3482453 |
| 132 | 130 | 262 | | | 130.6463556 | 131.3536444 |
| 133 | 130 | 263 | | | 131.1450058 | 131.8549942 |
| 127 | 130 | 257 | | | 128.1531045 | 128.8468955 |
| 128 | 130 | 258 | | | 128.6517547 | 129.3482453 |
| 130 | 130 | 260 | | | 129.6490551 | 130.3509449 |
| 131 | 130 | 261 | | | 130.1477054 | 130.8522946 |
| 127 | 130 | 257 | | | 128.1531045 | 128.8468955 |
| 128 | 130 | 258 | | | 128.6517547 | 129.3482453 |
| 128 | 130 | 258 | | | 128.6517547 | 129.3482453 |
| 132 | 130 | 262 | | | 130.6463556 | 131.3536444 |
| 127 | 130 | 257 | | | 128.1531045 | 128.8468955 |
| 130 | 130 | 260 | | | 129.6490551 | 130.3509449 |
| 129 | 130 | 259 | | | 129.1504049 | 129.8495951 |
| 131 | 130 | 261 | | | 130.1477054 | 130.8522946 |
| 2586 | 2600 | 5186 | | | | |

RMT Audi Recliner Tilt (Contd.)

Chi-Squared testing

p

1

Outcome: Accept null hypothesis

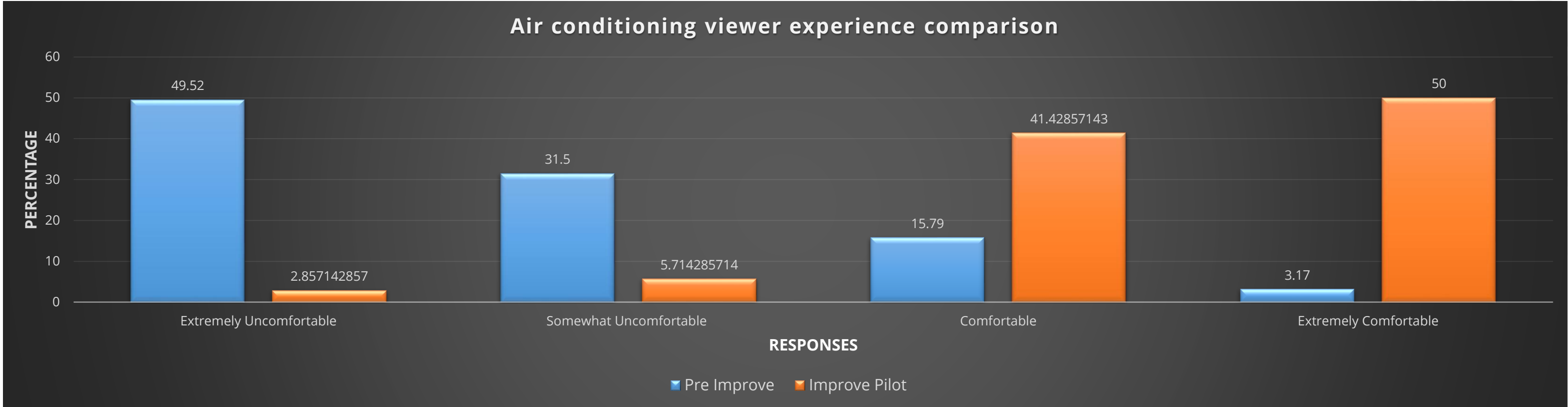
Null Hypothesis: Ho:

The audi recliners are reclining as per the target.

RMT Audi Temperature Viewer Experience

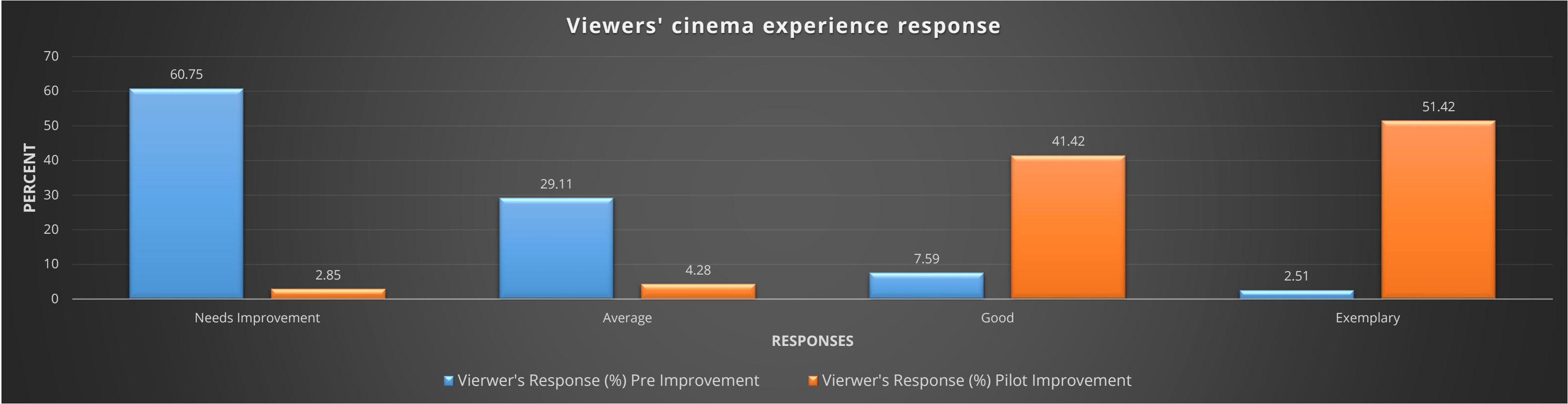
| Response frequencies towards AC | | | |
|---------------------------------|------------------------|-------------|-----------------------|
| Extremely uncomfortable | Somewhat uncomfortable | Comfortable | Extremely comfortable |
| 2 | 4 | 29 | 35 |

| Responses | Pre-improve | Improve pilot |
|-------------------------|-------------|---------------|
| Extremely uncomfortable | 49.52% | 2.857142857% |
| Somewhat uncomfortable | 31.50% | 5.714285714% |
| Comfortable | 15.79% | 41.42857143% |
| Extremely comfortable | 3.17% | 50% |



RMT Viewer Cinema Experience

| Viewers' Cinema Experience Responses In Pilot Phase | | | | |
|---|-------------------|---------|-----------|-----------|
| Needs Improvement | Average | Good | Exemplary | |
| 2 | 3 | 29 | 36 | |
| | | | | |
| Responses | Needs Improvement | Average | Good | Exemplary |
| Viewer's Response (%) Pre-Improvement | 60.75% | 29.11% | 7.59% | 2.51% |
| Viewer's Response (%) Pilot Improvement | 2.85% | 4.28% | 41.42% | 51.42% |



Control Phase

Implementation at Large

BMR and RSVO auditoriums maintenance

| | Audi and recliner repair/maintenance | | Air conditioning repair/maintenance | |
|------|--------------------------------------|--------|-------------------------------------|--------|
| BMR | Audi 1 | Week 1 | Audi 1 | Week 3 |
| | Audi 2 | Week 2 | Audi 2 | Week 4 |
| RSVO | Audi 1 | Week 1 | Audi 1 | Week 3 |
| | Audi 2 | Week 2 | Audi 2 | Week 4 |
| | Audi 3 | Week 3 | Audi 3 | Week 5 |

Implementation at Large (Contd.)

BMR and RSVO lobby and toilets maintenance and staff recruitment and training

| | Facilities | | Recruitment and training | |
|------|------------|--------|--------------------------|---------|
| BMR | Lobby | Week 1 | Recruitment and training | Phase 1 |
| | Toilets | Week 2 | Recruitment and training | Phase 2 |
| RSVO | Lobby | Week 1 | Recruitment and training | Phase 1 |
| | Toilets | Week 2 | Recruitment and training | Phase 2 |

Summary

You should now be able to:

- 👁 Understand the Rexion Movie Theatre(RMT) project background
- 👁 Analyze the various factors that led to the customers being unhappy with the cinema experience at RMT
- 👁 Infer how the pilot run at Audi 1 helped improve the overall customer experience

