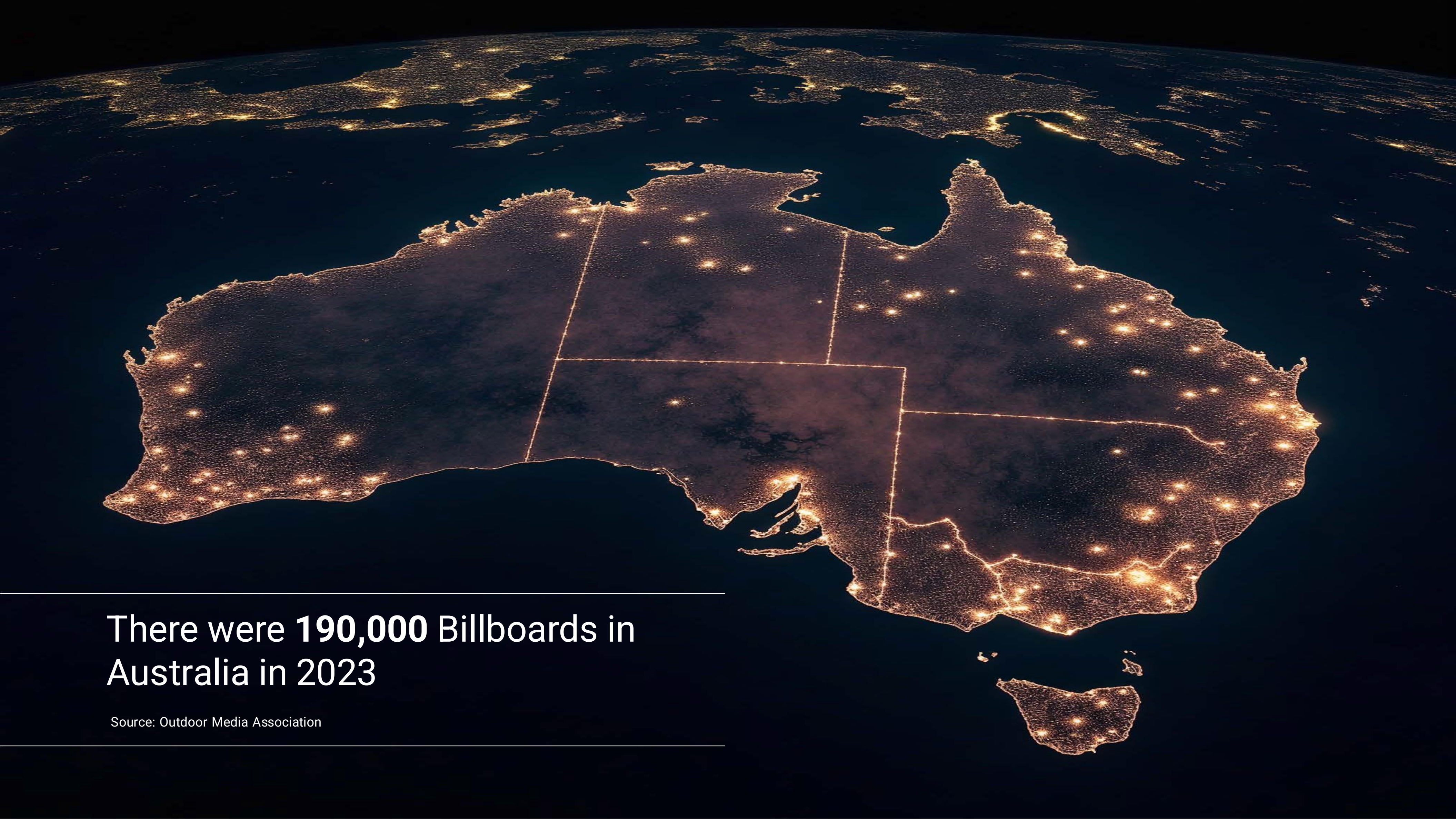


# Illuminated Signage and Digital Billboards Current and Future Developments

Ryan Shamier  
Senior Lighting Designer  
Electrolight





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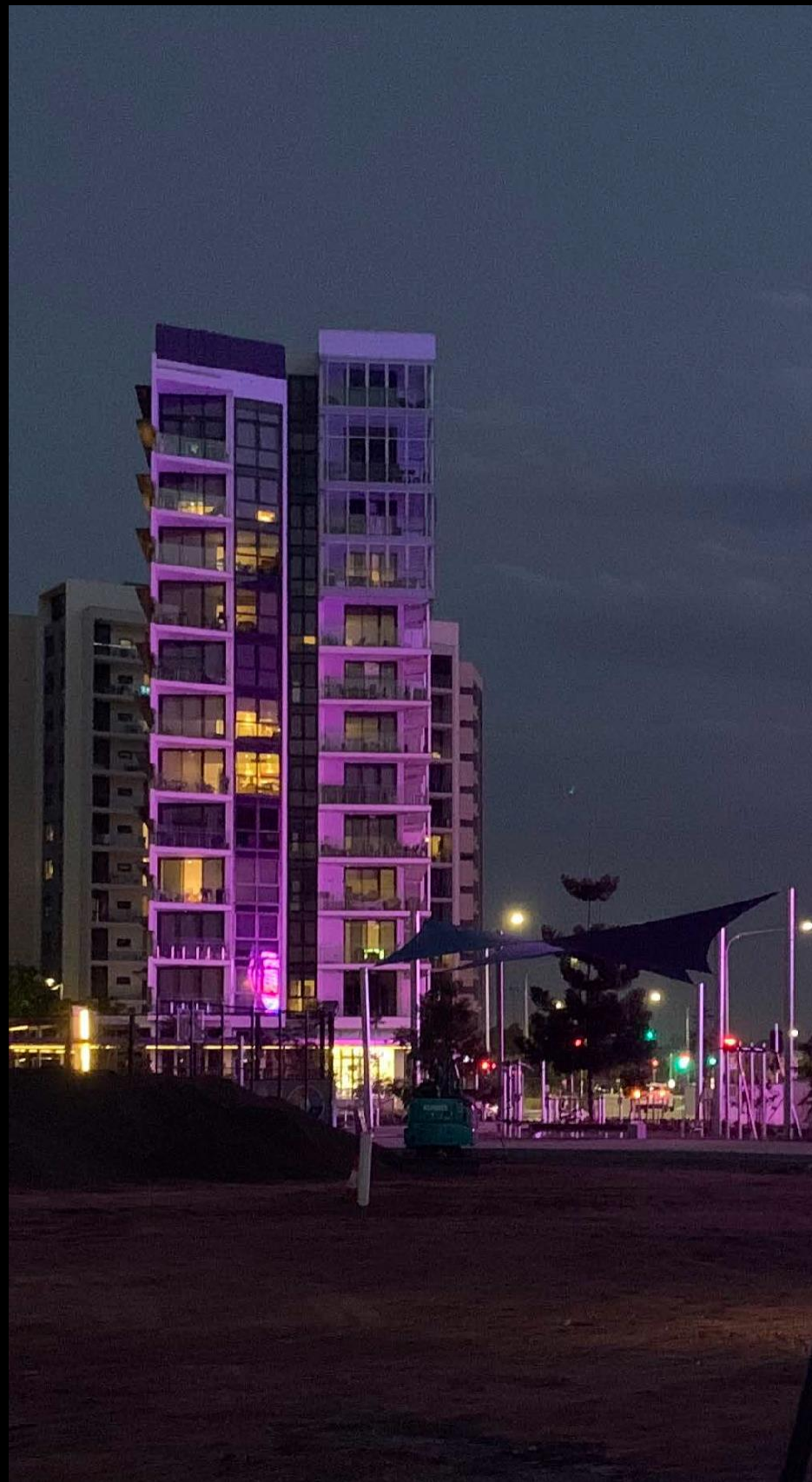
There were **190,000** Billboards in  
Australia in 2023

Source: Outdoor Media Association

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People



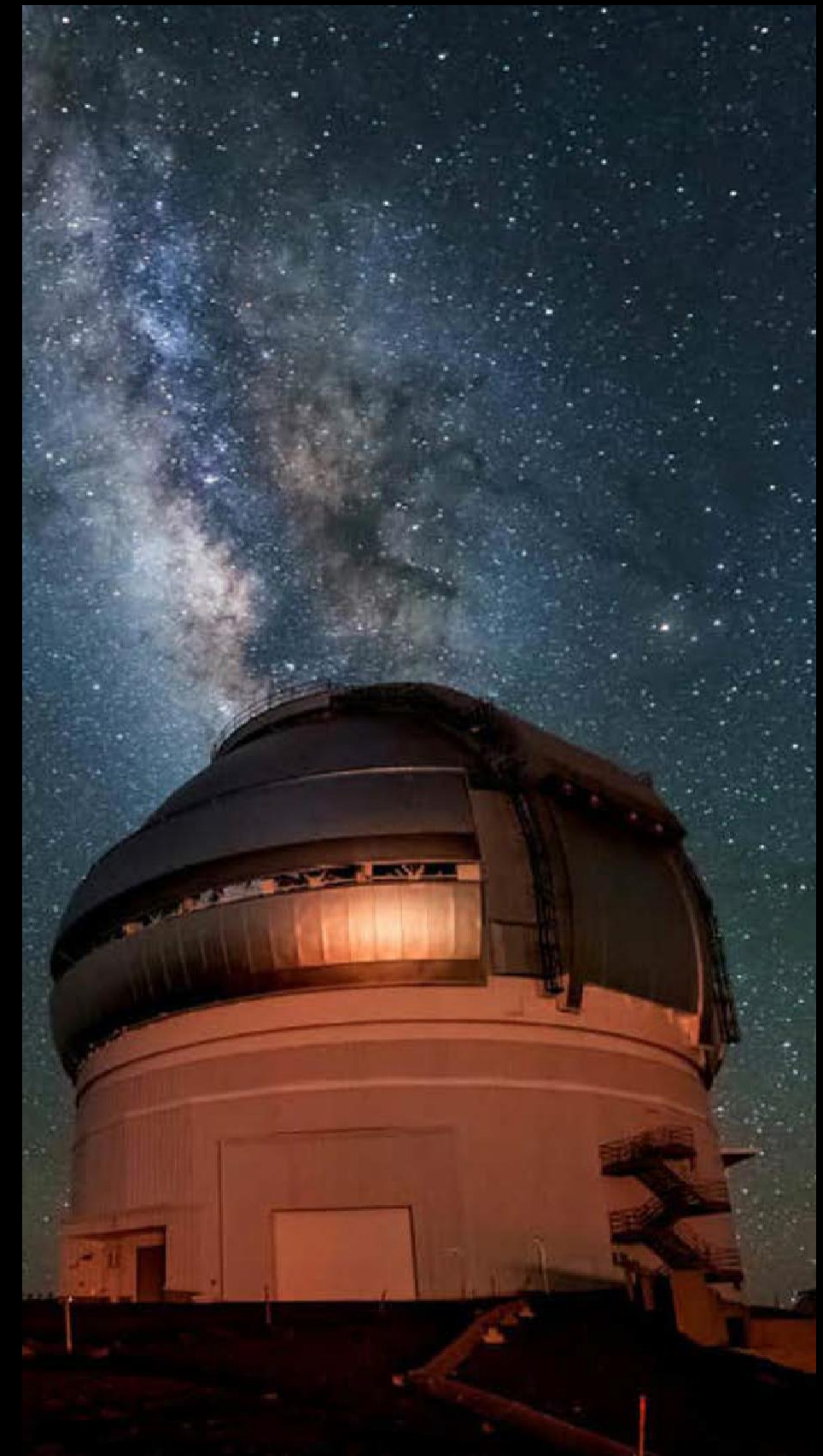
Transport



Nature



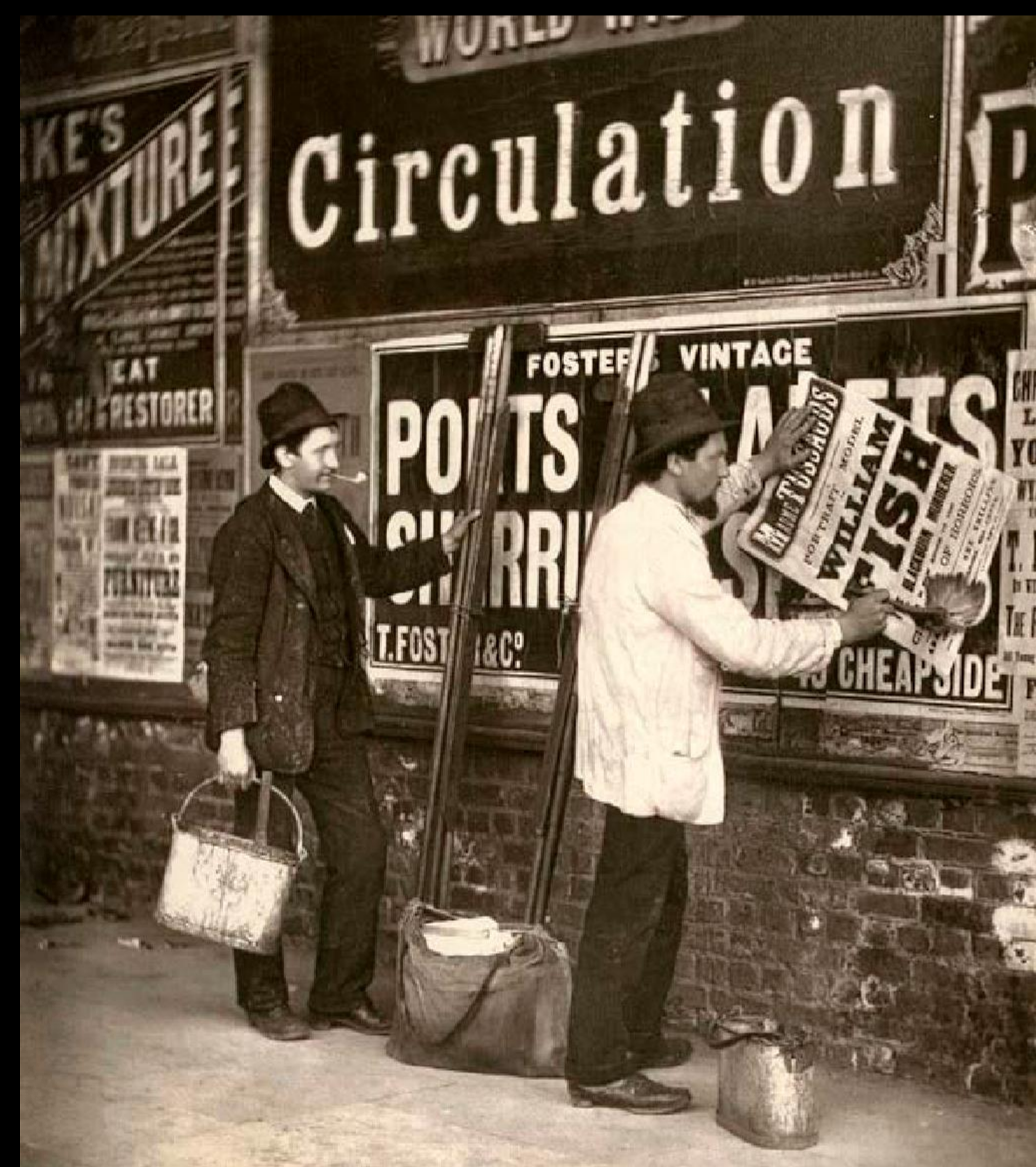
Astronomy

















TASTE THE REAL THING

Enjoy  
**Coca-Cola**









BIG TREE

NEW

MAGNUM  
MINI

For pleasure seekers



CLASSIC



ASSORTED



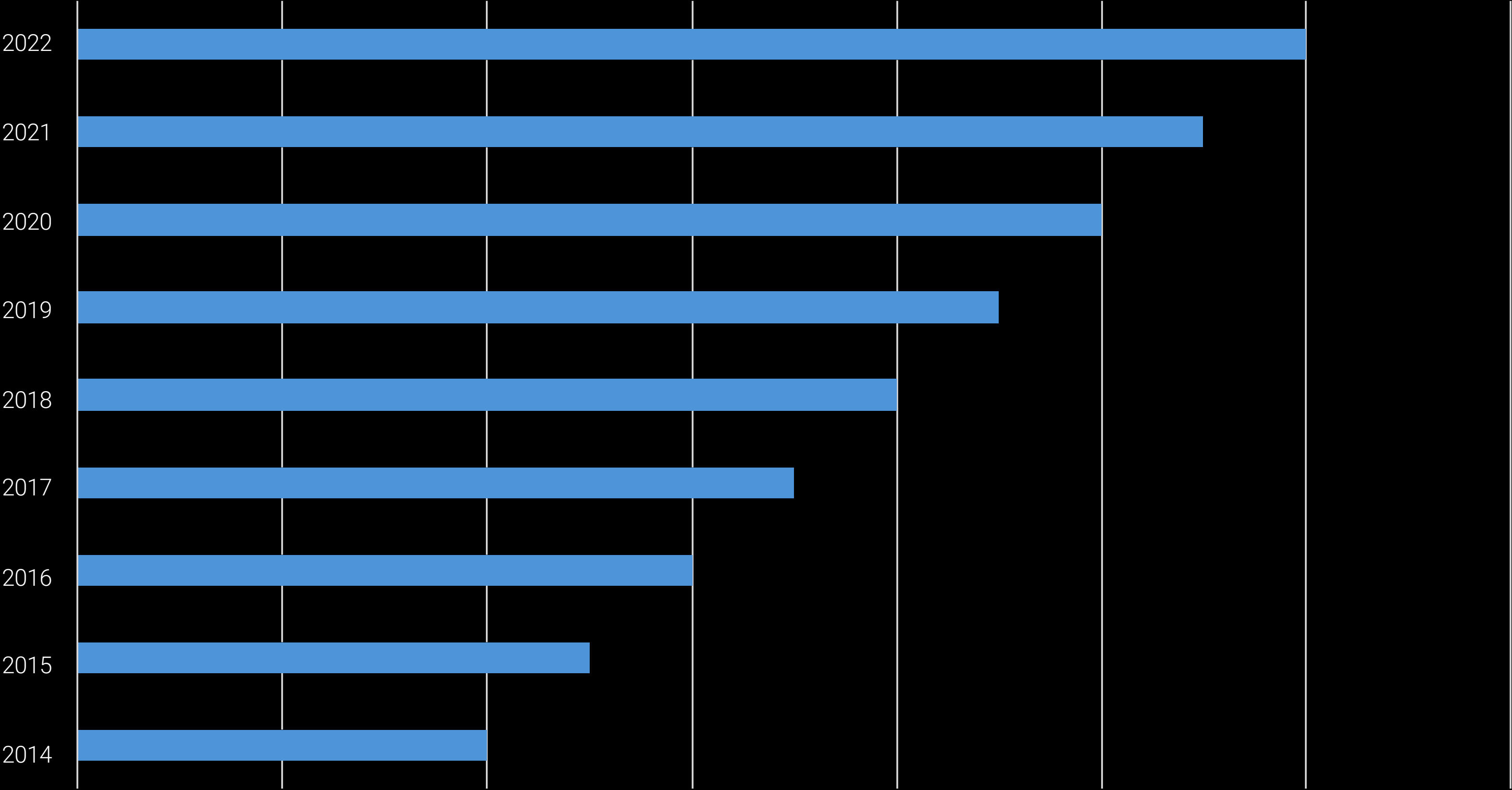
ALMOND

KEDAI 26'X70'

258 483



# Digital OOH % Revenue



Source: Outdoor Media Association









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If all existing illuminated signs in Australia were replaced with digital signs of the same brightness, **the ALAN outcome would be improved.**

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Самые большие монстры  
РИНГОНН — МАЛЛОУ











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Reason #1

Better Control of Light

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# Floodlit Signage



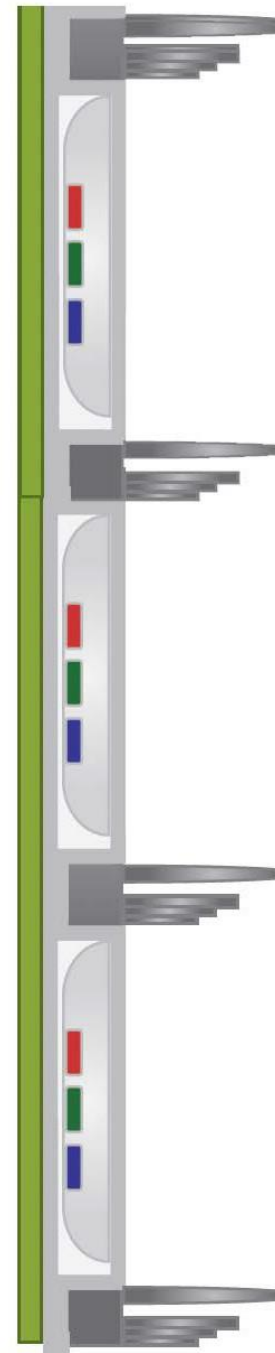
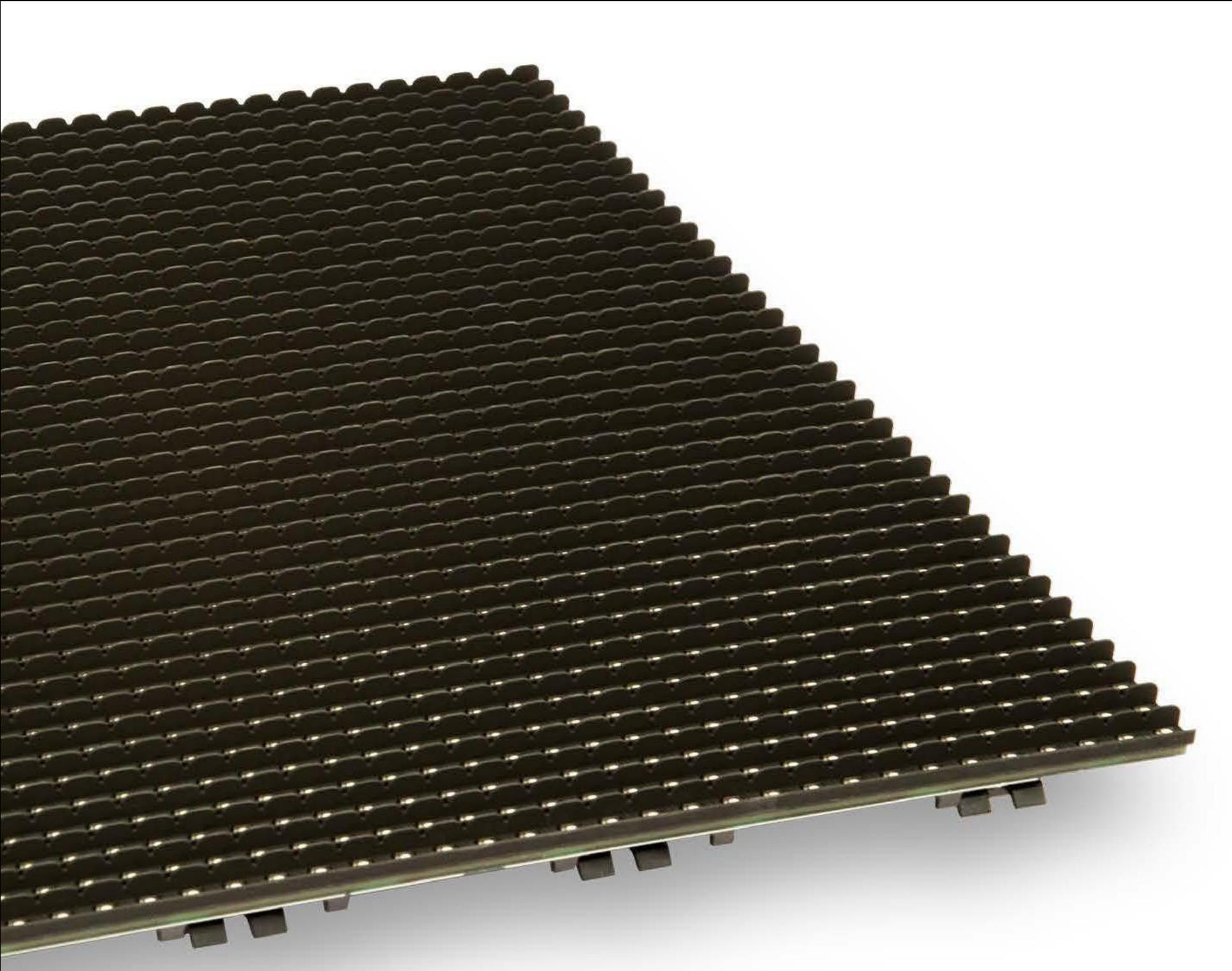


# Internally Illuminated (Backlit) Signage

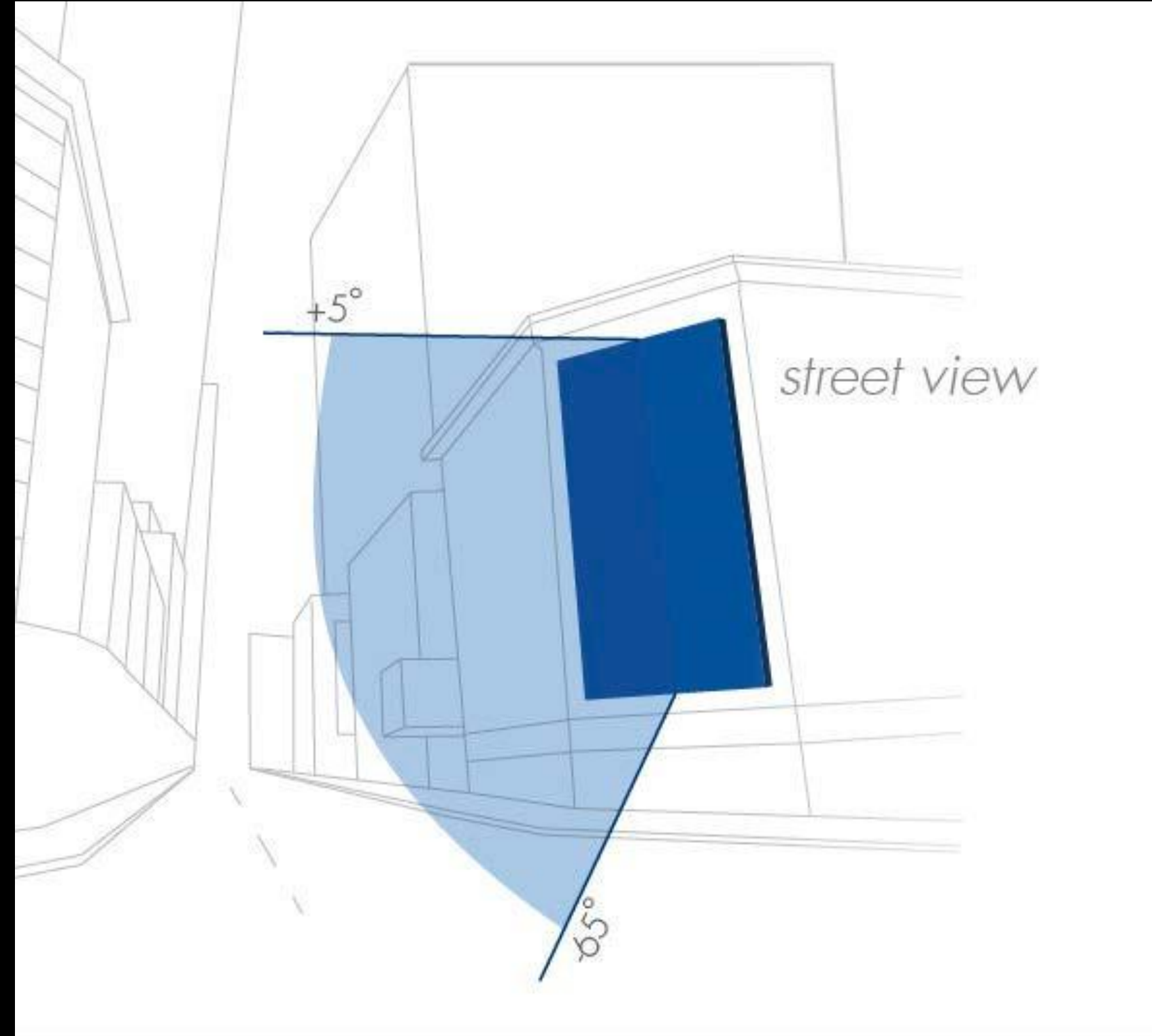




# Digital Signage



Side view





Digital Sign



Conventional Backlit Sign



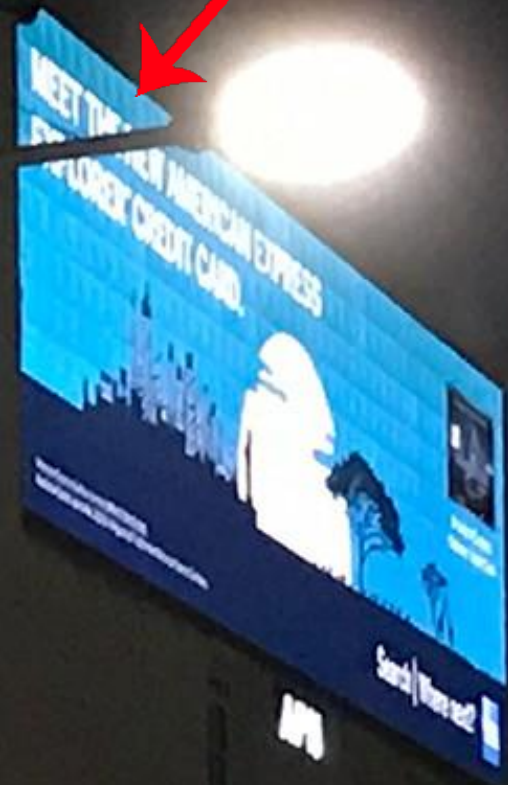




Digital Sign. Screen is on but no image visible as outside of viewing angle.



Digital Sign



Conventional Backlit Sign







Digital Sign (brightness level reduced at high viewing angle)

Conventional Backlit Sign



Digital Sign  
(Image no longer viewable)

Conventional Backlit Sign  
(Light still visible but image illegible)



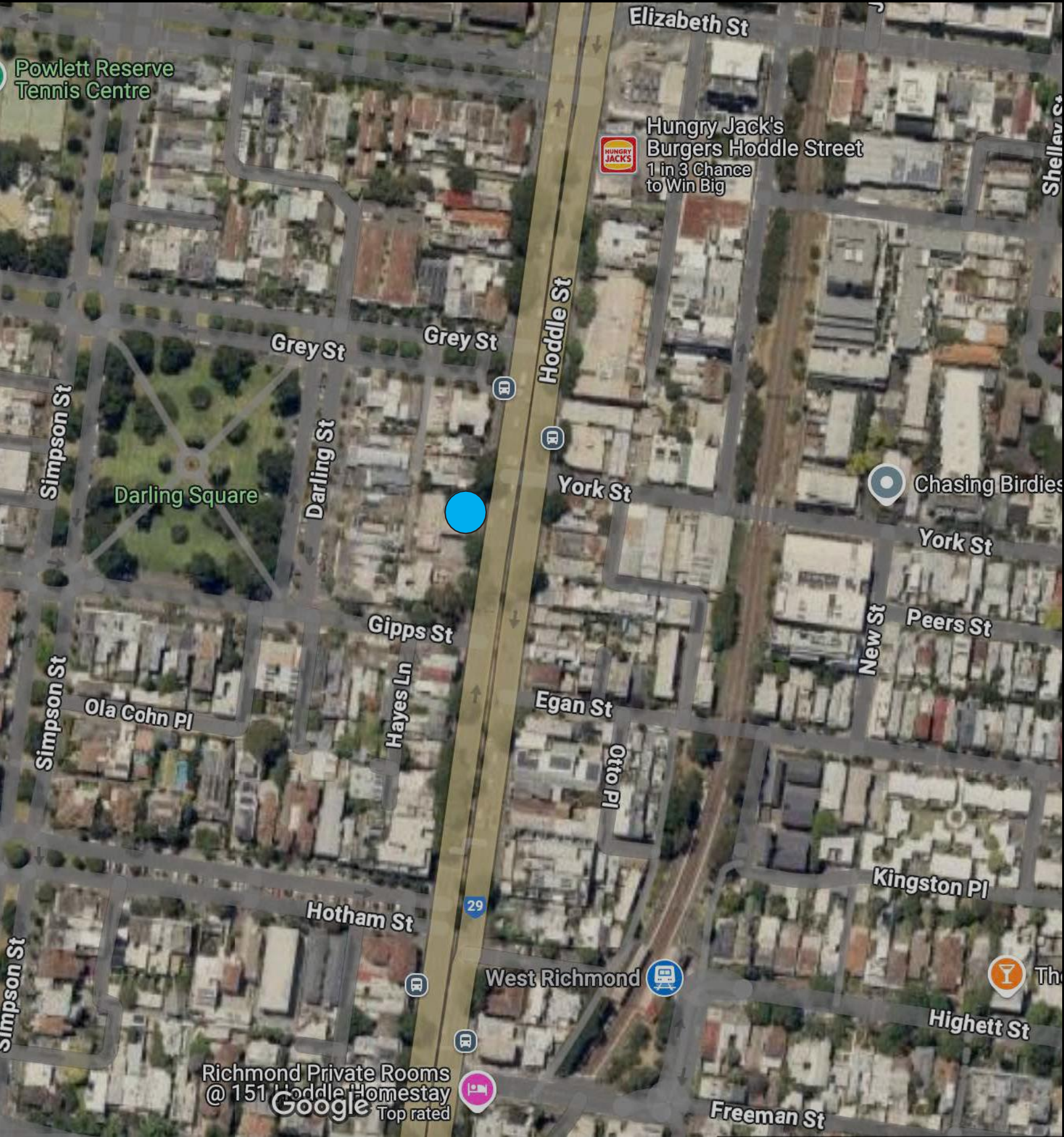




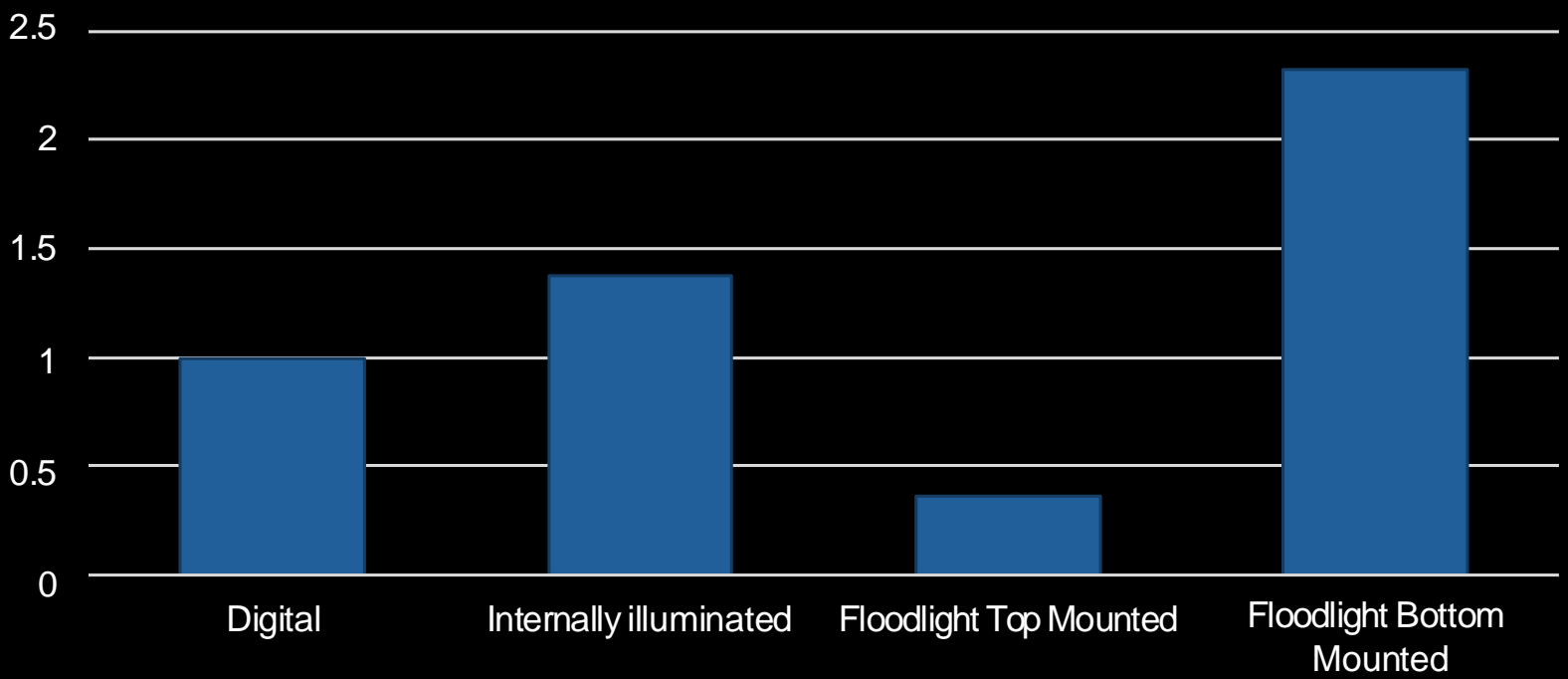
Case Study 2 - 1181 Hoddle St, East Melbourne



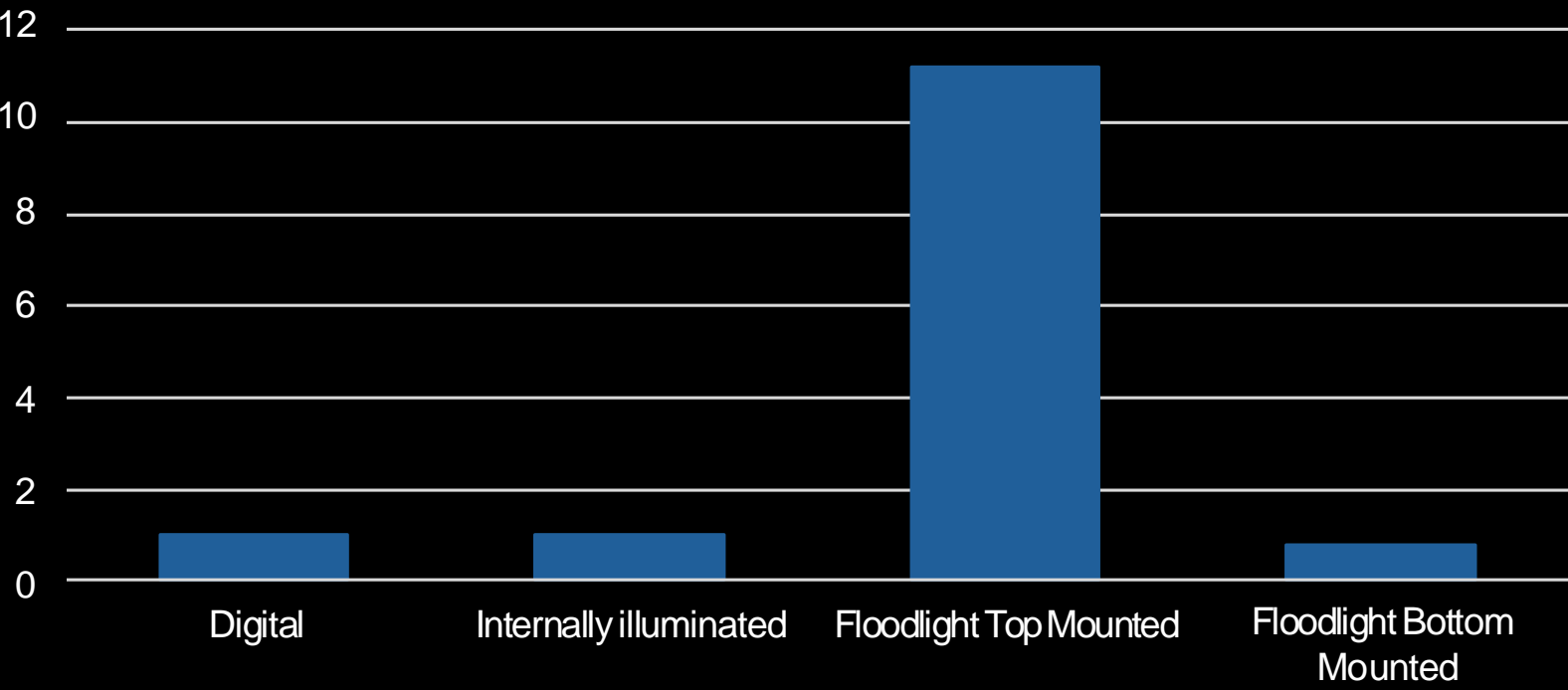
# Case Study 2 - 1181 Hoddle St, East Melbourne



Upward Waste Light



Vertical Illuminance





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Reason #2

Tighter Regulation for Digital Signage

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AS/NZS 4282:2023



Australian/New Zealand Standard™

## Control of the obtrusive effects of outdoor lighting



## Digital Signage must:

- Result in **50% less light spill** to dwellings when displaying dynamic content
- Have a maximum upward light ratio of **45%**
- be tested in a photometric lab to accurately determine light spill to environment
- Dimmable to ensure compliance







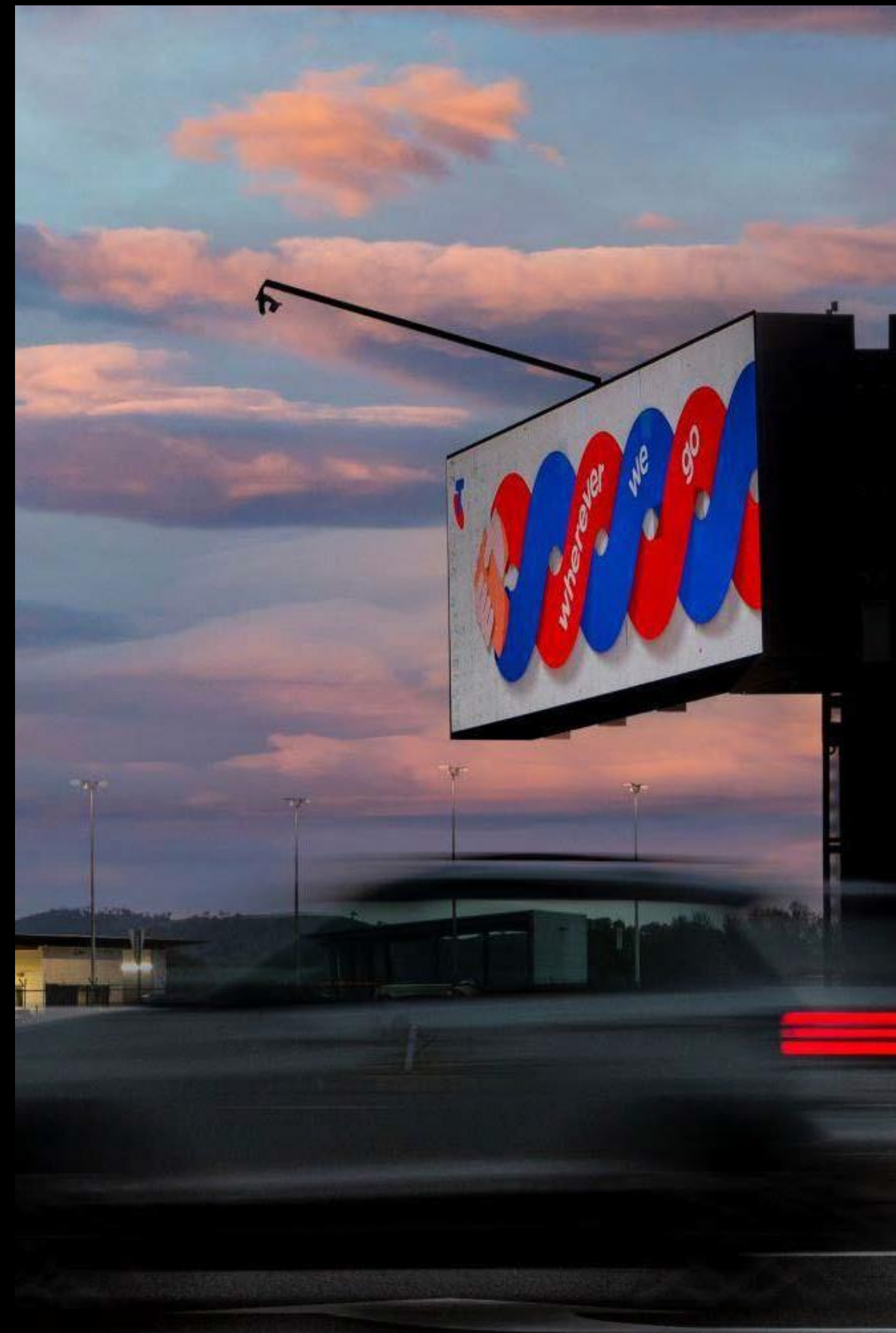
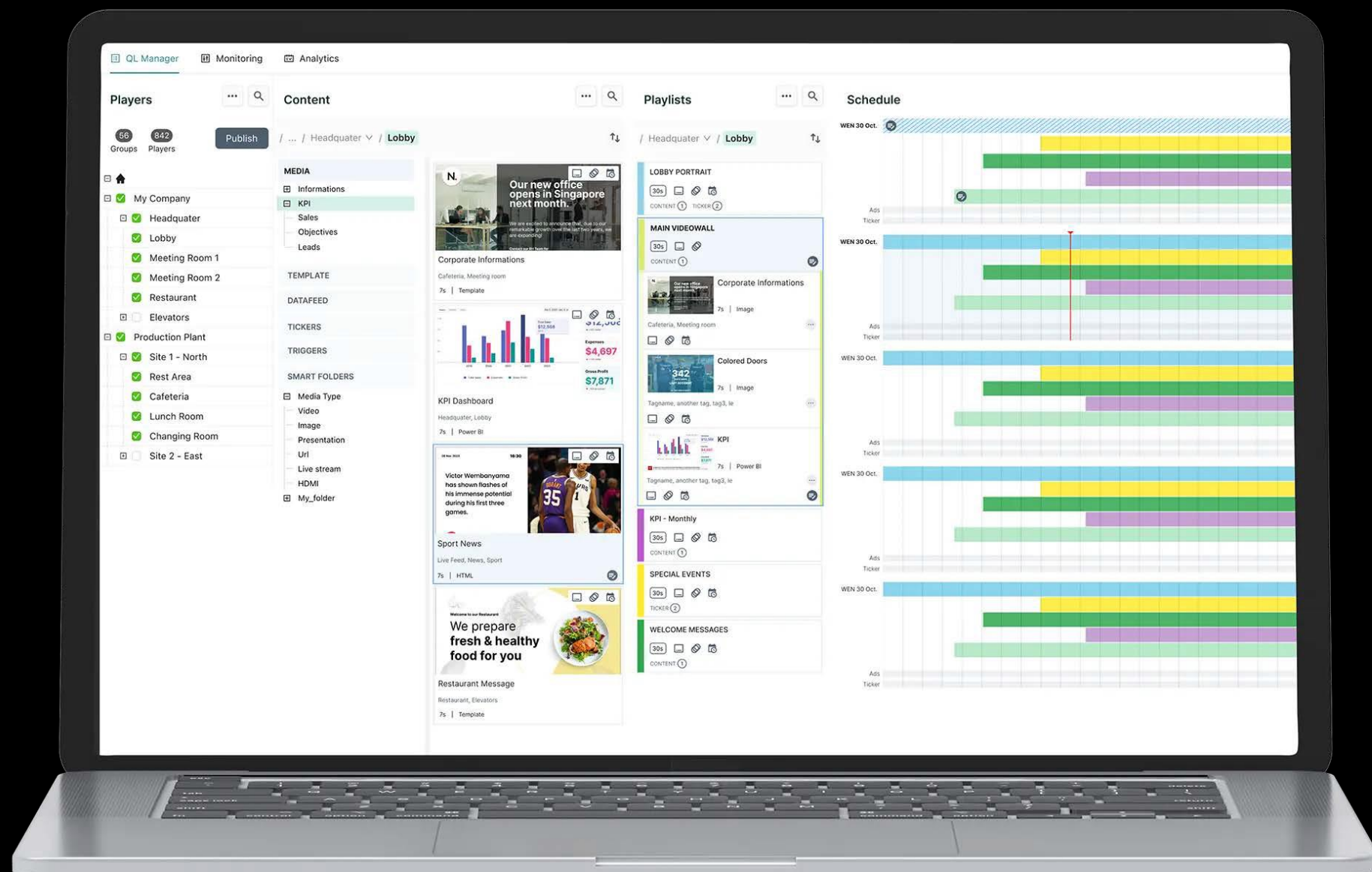
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Reason #3

# Advanced Monitoring and Control

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Digital Signage can be  
part of the solution

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The Economist





# Smart Ideas for Smarter Cities

Join the conversation at [people4smartercities.com](http://people4smartercities.com)





ELECTRO  
LIGHT