Visitors, Museums, and Mobiles
December 11, 2017

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(Dawson, Samios, Ward, 2016.)
Acknowledgement of Land

We acknowledge the Traditional Owners of the land on which we are meeting. We pay our respects to their Elders, past and present, and the Elders from other communities who may be here today.
Project Goal

The goal of this project is to assess visitor interest in expanding the use of mobile technologies in the Melbourne Museum and present recommendations to Museums Victoria for the further development of mobile technology to enhance the visitor experience.

(Museums Victoria, n.d.)
Project Objectives

1. Establish a database of current electronic device usage and visitor behavior in the Melbourne Museum
2. Define expectations and appeal of mobile technology for enhancing the visitor experience in museums.
3. Evaluate visitors’ initial responses and engagement with an upcoming museum exhibition.
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We surveyed 150 visitors to gather information on current mobile device usage.
Yes

Do you own any of the following mobile devices (smartphone, iPod, tablet)?

No

Why do you not own a mobile device?

Why do you not own a mobile device?

Do you think your life would be made easier with one?

If the museum provided devices, would you use one throughout your visit?

What specific mobile devices do you own?

Which devices do you have with you today at the museum?

When you arrived did you expect to use any of these devices during your visit?

Which devices did you use during your visit?

How did you use your device(s) during your visit?

None

None

Why didn't you bring your device(s) to the museum?

If you had brought it, do you think it would have enhanced your visit? If yes, why?

Why didn't you use your device(s) during your visit?

If you had brought it, do you think it would have enhanced your visit? Why?
Survey Results

Device Uses Reported by Survey Participants

- Taking pictures: 69%
- Text messaging: 35%
- Telephoning: 19%
- Internet: 17%
- Emailing: 11%
- Social Media: 9%
- Recording videos: 4%
- Instant messaging: 4%
- Navigation: 4%
- Other: 14%

n = 188
Observations allowed us to determine how visitors are currently using their mobile devices throughout the museum.

<table>
<thead>
<tr>
<th>Gender (circle one):</th>
<th>Approx. Age (circle one):</th>
<th>Type of Device (circle one):</th>
<th>Gallery Density (circle one):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Female</td>
<td>20-30</td>
<td>30-40</td>
</tr>
<tr>
<td>Gallery (circle one):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest Gallery</td>
<td>Mind &amp; Body</td>
<td>Bunjilaka</td>
<td>iPhone</td>
</tr>
<tr>
<td>Dinosaurs</td>
<td>Evolution Gallery</td>
<td>Museum Cafe</td>
<td>Android phone</td>
</tr>
<tr>
<td>Children’s Gallery</td>
<td>Te Pasifika</td>
<td>Foyer</td>
<td>iPod</td>
</tr>
<tr>
<td>Geology Gallery</td>
<td>Marine Life</td>
<td>Bugs Alive</td>
<td></td>
</tr>
<tr>
<td>Love and Sorrow</td>
<td>Circulation Spaces</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobile Device Uses</th>
<th>Check if observed</th>
<th>Mobile Device Uses</th>
<th>Check if observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texting</td>
<td></td>
<td>Instagram</td>
<td></td>
</tr>
<tr>
<td>Taking Picture</td>
<td></td>
<td>Snapchat</td>
<td></td>
</tr>
<tr>
<td>Recording Video</td>
<td></td>
<td>Email</td>
<td></td>
</tr>
<tr>
<td>Telephoning</td>
<td></td>
<td>Translation</td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td></td>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Facebook</td>
<td></td>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Twitter</td>
<td></td>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>
Observation data shows that most people were using iPhones and the most common use was taking pictures.
Visitor observations also revealed that most people take pictures of their family members or the dinosaurs.
A heat map displays that the majority of observed mobile device usage was in the west wing of the museum.
Circulation Spaces
Project Objectives

1. Establish a database of current electronic device usage and visitor behavior in the Melbourne Museum

2. Define expectations and appeal of mobile technology for enhancing the visitor experience in museums.

3. Evaluate visitors’ initial responses and engagement with an upcoming museum exhibition.
Site visits provided us with a general understanding of visitor profiles at each of the Museums Victoria sites.
An exhibit rating exercise assessed visitor interest in various mobile technologies

<table>
<thead>
<tr>
<th></th>
<th>Very interested</th>
<th>Interested</th>
<th>Neither interested nor uninterested</th>
<th>Uninterested</th>
<th>Very uninterested</th>
</tr>
</thead>
<tbody>
<tr>
<td>An app that sends additional information to your smartphone about the exhibit that you are currently viewing</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>An exhibit that gives realistic 360 degree views of various environments, such as space shuttles or a rainforest</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>A self-guided audio tour on your mobile device or a device provided by the museum</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Scanning a QR code located next to an exhibit for more information on the exhibit’s topic</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>An exhibit in which you can hold your mobile device up to dinosaur bones to see what the living dinosaur might have looked like</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
The data shows that visitors found virtual and augmented reality to be the most interesting technological exhibits.
Younger audiences were often more interested in using technology, but not always.
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Inside Out testing allowed us to experience the methods involved in museum studies.
Students’ pilot testing of *Inside Out* testing aided the exhibition designers

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Limited text, mostly audio tracks appeal to younger generation</td>
<td>● Personal device must be an iPhone</td>
</tr>
<tr>
<td>● Various engaging displays, such as animals, rocks, and a large</td>
<td>● New iPhone versions don’t have headphone jack</td>
</tr>
<tr>
<td>polar bear</td>
<td>● Flaws with the Detour application</td>
</tr>
<tr>
<td></td>
<td>● Audio cues indicating when to move were unclear.</td>
</tr>
<tr>
<td></td>
<td>● Stories to accompany the displays were confusing</td>
</tr>
</tbody>
</table>
Recommendations
Implement an interactive digital map that can be accessed on mobile devices to enhance visitor museum experience

(Munich airport digital mapping, 2016)

(Melbourne museum visitor map, n.d)
Advertise the availability of the free Wi-Fi with instructions on how to connect to it to increase mobile device usage in the museum

Museum Victoria Wireless Access Service

By logging in to use this network you accept the terms and conditions of use as outlined below.

Museum Victoria Internet Terms and Conditions

These conditions apply to all computer and computer-related services being used on the premises of Museum Victoria, Melbourne Museum, 11 Nicholson Street Carlton, Immigration Museum, 400 Flinders Street Melbourne and Scienceworks 2 Booker St, Spotswood.
Incorporate an augmented reality photo station near the Dinosaur Walk exhibit

(Rieland, 2012)
Research methods of implementing a scavenger hunt application that would enhance visitor engagement

(Munzee Inc, 2017)  
(STÄDEL APP, 2017)
Take Home Thoughts

- Devices were most commonly used for taking pictures
- Younger visitors were generally more willing to use their devices inside the museum
- Visitors in general were interested in technological experiences in the museum
- Provided Museums Victoria with a benchmark study
  - Captured a picture of current mobile device use
  - Provided a point of comparison for a future where mobile devices within a visiting experience might become more significant
Acknowledgements

We would like to thank...

- Our sponsor, Museums Victoria
- Carolyn Meehan, Carla English and the rest of the Audience Insights team
- Our advisors, Fred Looft and Karen Oates
- Worcester Polytechnic Institute
- Our fellow students in Melbourne
- Professor Ingrid Shockey
Questions?