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SIGNS of the SOUND

REPORT ON:

QR CODES



QR coded trails in Bowen Island. (Bowen Island, n.d.)

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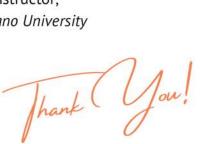
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REPORT: QR CODES

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1. INTRODUCTION

QR codes have become an essential part of everyone's lives with the rapid growth of technology, as a result, the need to adapt from companies and organizations has increased rapidly (Garg, 2018). This report will include the main advantages of QR code adaptation into the signage of Howe Sound Biosphere Region, data about the success rates, examples of parks that have incorporated QR codes, and tips to consider while creating and designing QR codes regarding signage.

In this report, we intend to emphasize the main benefits of incorporating QR codes into the signage, and why using those will be helpful for the Howe Sound Biosphere region.

It is vital to pay attention to the easiness and quickness of accessibility of the QR codes, considering that most people nowadays with the advancement of technology have access to a smartphone with a camera to scan the code (Ozkaya, et al., 2015). What is more, it will attract a new target market of younger populations who tend to be more familiar with technology such as millennials and Generation Z (Skinner et al., 2018). A tourist after completing this simple step will be redirected to a source that will offer more insightful and educational information to the visitor such as sharing knowledge about the park, cultural stories, and history (Durak, et al., 2016).

2. FINDINGS

Main Benefits of OR Codes

There are some main benefits of using the QR codes on signage that it is important to highlight in consideration to decision-making:

- 1. Cost-Efficient: QR codes do not require any major costs, as a result, they are considered cost-efficient, while they offer additional value to the visitors that choose to engage more with the location of the visit (Woo, 2021), and reach a better understanding of the history and culture of the lands that belong to Indigenous people
- 2. Easiness and Convenience of Usage: To utilize the element of the sign does not require any significant effort, it can just be scanners with a camera or a smartphone. Therefore, a visitor can easily gain access to additional information about the location (Gopale, 2019).



- 3. Small Placement: As a sign does not require a great amount of space on the sign, it will not take away the attention of the main purpose of the signage, and will just provide additional benefits, without occupying much space or overloading it with text or photos, related to the product (Gopale, 2019).
- 4. Interactive: QR Codes can lead their users to links that may contain different types of engagement activities, such as audio, visual, and text information
- 5. Trackable: QR codes with the usage of technology offer an opportunity to monitor the number of times it has been used and estimate how much time a user has spent on the page, as a result assisting in rating the efficiency of the tool and coefficient of value that the tourist obtains (Woo, 2021).

Overall, QR codes carry great value for their users that can be used on signage, making them a valuable tool for providing visitors with additional information and enhancing their experience while accessing the destination.



QR coded trails in Bowen Island. (Bowen Island, n.d.)



Success Rate of OR Codes

Considering QR codes has recently become a marketing and advertising tool that can be utilized by using various options and techniques. And while estimating the success rate is crucial to consider such factors as placement, design, purpose, the link with content and audience that is intended to be targeted (Çeltek,2010). There is a very limited amount of research that has been completed on the topic of successful impact of QR codes on tourists engagement, however there are some approximate statistical data that offer a reasoning why QR codes are still worth implicating into the signage for the Howe Sound Biosphere region. One of the example is the data that has been completed in Pitney Bowes (2015) which has established that "63% of consumers said they would be more likely to scan a QR code than click a link, and 57% said they would be more likely to scan a code if they knew it would lead to exclusive content" (Skinner et al., 2018).

After it was determined in 2015 that 96% more people are inclined to interact with a QR code if it is placed in front of them, the use of QR codes has greatly expanded (David, 2021). The willingness to utilize QR codes in daily life is 82% among persons between the ages of 18 and 44 (Gacnik & Lombardi, n.d.)

One more factor to consider is the overall global usage of QR codes in the daily lives of people. The free access to high-speed internet along with the growth and popularity of smartphones has shaped how people perceive and consume content on a daily basis (Garg, 2018). The rapid growth of QR codes has also been observed, as per Bluebite there was a significant increase of usage and distribution from 2018 to 2020: "96% growth in QR Code Reach, 94% surge in the number of interactions, 98% increase in the number of interactions per object" (Garg, 2018, para. 38).

In conclusion, it is critical to stress that the success rate of QR codes in signage can vary. It is very important to acknowledge that they continue to be an effective tool for attracting visitors and providing them with value by enhancing their experience and helping them form a closer bond with the location. (David, 2021).



The Story Trail in Tsútswecw Park. (Hike Kamloops, n.d.)

Examples of Uses of OR Codes

Mount Fuji - Japan

QR codes have also been implemented on the trails of Mount Fuji, the tallest mountain in Japan, to improve the hiking experience. With the use of smartphones, hikers may use the QR codes put along the paths to get useful information such as their current location, weather updates, and emergency contacts. The codes also provide cultural and historical context for the mountain, adding to the educational and entertaining value of the hike (Impress Watch, 2019). It also provides some pictures of the view in case the hikers could not see due to the weather condition.

As Mount Fuji is the most famous mountain in Japan, there are a lot of tourists coming to hike every year. But most of the tourists do not have cash. Therefore, the organization of Mount Fuji introduced a digital payment method by using QR codes. This new strategy increased the sales at those small shops on the mountain, and started to receive more donations (Impress Watch, 2019).

These creative uses of QR codes are a great illustration of how contemporary technology can be utilized to protect and improve the natural environment while also giving visitors a fun and instructive experience and generating income for the locals.



QR coded top of the Mt Fuji, Japan. (Mt Fuji, n.d.)

Translation:

Congratulation. You made it to the top! Here is a reward picture.



Bay of Fundy Geo Park

Eastern Canada's Bay of Fundy Geo Park has placed QR codes on signage to give tourists access to more content and information about the geology, ecology, and cultural history of the park (Calder & Kaulbach, 2021). With the help of QR codes, the park's interpretative panels and signage can point visitors to online resources including films, articles, and maps.

For instance, a QR code on the interpretative panel at the UNESCO World Heritage Site Joggins Fossil Cliffs directs visitors to a website with details on the geology and history of the location. The Tidal Bore Discovery Centre's informational panels about the park also have QR codes that direct guests to films and articles about the ecology and culture of the area (Calder & Kaulbach, 2021).

The Bay of Fundy GeoPark uses QR codes on signage to engage visitors and give them access to further content and information on the distinctive features of the park. The QR codes are positioned on the signage in a way that makes them strategically visible and scannable, and they point visitors to websites that are mobile-friendly and offer useful and pertinent information (Calder & Kaulbach, 2021).

Overall, the Bay of Fundy Geo Park's usage of QR codes on signage has been an effective tactic for boosting visitor satisfaction and highlighting the park's distinctive qualities and history (Calder & Kaulbach, 2021).



Story sites of Kluscap (Glooscap) legends (courtesy Gerald Gloade, Confederacy of Mainland Mi'kmaq), Calder & Kaulbach (2021)

^{*}See Appendix below for more unique uses of QR codes

3. HOW TO ACHIEVE THE BEST RESULT WITH QR CODES

After highlighting the main advantages and benefits of QR code incorporations along with providing examples of successful implications, there are also some helpful tips on how to implement the feature to achieve the best outcome. Some of the most important aspects to consider are listed below:

- Placement and location of the QR Code. There is no doubt that QR codes are placed on signage but they do not intend to take away from the main purpose of the sign, but rather offer additional value and information to the visitor, therefore, it has to be visible easily identifiable and at the eye-level, therefore it should not be placed at the top of the sign but rather in the center or bottom, to allow more convenience to tourists who will scan the code (Trivedi, et al., 2019).
- Sizing. Rather than the location of the QR Code, another crucial aspect is the size of the subject, as it has to fit organically with the photos or text that has been originally incorporated on the sign but also has to be large enough to scan and showcase to the visitors that further exploration of the area is available (Trivedi, et al., 2019).
- Clarity. The sign that will have the QR Code incorporated on it has to be clear and readable, as
 mentioned above making sure that anyone can easily scan the code, and also get redirected to
 the link or platform that will assist the visitor with more content (Durak, et al., 2016).
- Contrast. It is essential to verify that the QR Code does not take away attention from the sign,
 however, it has to be visible, therefore background imagery has to be a contrast color palette
 to the color of the QR Code that the organization has agreed upon (Potharaju, 2022). Building
 a design within the brand's signature color palette will make the signage more cohesive and
 will be more memorable for the visitor while showcasing the professional approach
 (Potharaju, 2022).
- Call to Action. The last recommendation on behalf of the design, it is vital to offer instruction underneath or above the QR Code to invite people who are less familiar with the QR Code concept to scan it with their mobile device. Completing this step increases the success rate of tourists following the instruction and engaging with the content (Potharaju, 2022).



- The Link/Page. Another useful recommendation is to utilize the opportunity to incorporate
 more into the experience of the visitor by designing and creating a link where the tourist will
 be directed after performing the scan. It has to be user-friendly and optimized for mobile
 devices, so the tourist experiences ease of use and has no difficulty engaging with the content
 provided on the web page (Gacnik & Lombardi, n.d.)
- Trial run. The final recommendation focuses on ensuring the QR Code is working properly and serves its purpose, which is taking the user further to explore the destination. Therefore it is essential to test the code, by scanning it using a smartphone and reassuring that it will direct people to the write pages filled with content for further exploration (Potharaju, 2022).

By utilizing these recommendations, Howe Sound Biosphere Region can efficiently incorporate QR codes on signage, providing visitors with engagement and educational content that enhances their experience (Ozkaya, et al., 2015).





4. CONCLUSION

With the increasing use of smartphones, QR codes offer an effective way to bridge the gap between offline and online resources, providing an enhanced experience for visitors while sharing the local history and promoting sustainable practices. The use of QR codes in Howe Sound Biosphere Region provides numerous benefits for both visitors and the organization. The visitors visitors can easily access information about local attractions, species, as well as learn about the region's history, culture, and environmental initiatives.

The organization can also track the effectiveness and get the actual statistics of QR codes usage as it automatically produce the total access number for the organization. It is also an inexpensive investment to enhance the visitor experience.

The dependence of the internet connection might be a struggle for the visitors. However, the adoption of QR codes can lessen paper waste and support a more sustainable travel and tourist sector. Furthermore, the Howe Sound Biosphere Region's use of QR codes will serve as a prime example of how technology can be used to improve the overall experience of visitors to a region while promoting sustainability, conservation efforts, and storytelling.

QR codes are great way to spread the awareness of the significance of natural and cultural heritage while enhancing the visitor interaction and experience at the Howe Sound Biosphere Region.



Hokkaido Shimbun Digital. (n.d.)



5. REFERENCES

Calder, J., & Kaulbach, K. (2021). Interpretation strategy - fundy geopark. Cliffs of Funny Geopark. Retrieved March 22, 2023, from https://fundygeopark.ca/wp-content/uploads/2021/07/Geopark_Interpretation-Plan_2021_WEB.pdf

Campbell, C. (2022, November 2). Dundas driving park augmented reality big historic tree tour launches Nov. 5. thespec.com. Retrieved March 31, 2023, from https://www.thespec.com/local-dundas/news/2022/11/02/dundas-driving-park-augmented-reality-big-historic-tree-tour-launches-nov-5.html

Çeltek, E. (2010). Mobile advergames in Tourism Marketing. Journal of Vacation Marketing, 16(4), 267–281. https://doi.org/10.1177/1356766710380882

David. (2021, June 21). The state of QR in 2021. Blue Bite. Retrieved March 20, 2023, from https://www.bluebite.com/nfc/qr-code-usage-statistics

Durak, G., Ozkeskin, E. E., & Ataizi, M. (2016). QR codes in Education and communication. Turkish Online Journal of Distance Education. https://doi.org/10.17718/tojde.89156

Flowcode Team. (2022). 5 best practices for QR code signage. 5 Best Practices for QR Code Signage. Retrieved March 20, 2023, from https://blog.flowcode.com/qr-signage-best-practices

Gacnik, M., Lombardi, J. How QR codes are impacting the future of advertising - havasedge.com. (n.d.). Retrieved March 20, 2023, from https://www.havasedge.com/wp-content/uploads/sites/29/2022/05/QR-ticle.pdf

Garg, G. (2018, September 12). QR code statistics 2022: Latest numbers on global usage. Scanova Blog. Retrieved March 20, 2023, from https://scanova.io/blog/qr-code-statistics/

Gopale, V. B. (2019). QR code and Useful application in Libraries. International Journal of Library and Information Studies, 9(4), 82–86. https://www.ijlis.org/articles/qr-code-and-useful-applications-in-libraries.pdf

Hokkaido Shimbun Digital. (n.d.). Learning about Ainu Culture from the Animals and Plants Right in Front of You: "Devices" at Facilities in Obihiro to Learn Their Names and Lifestyles: Hokkaido Shimbun Digital. Hokkaido Shimbun Digital. Retrieved March 31, 2023, from https://www.hokkaido-np.co.jp/article/723428

Ozkaya, E., Ozkaya, H. E., Roxas, J., Bryant, F., & Whitson, D. (2015, April 9). Factors affecting consumer usage of QR codes - journal of direct, data and digital marketing practice. SpringerLink. Retrieved March 20, 2023, from https://link.springer.com/article/10.1057/dddmp.2015.18#citeas



5. REFERENCES CON'T

Potharaju, S. (2022, March 23). Council post: How to use QR codes to enhance your brand's accessibility. Forbes. Retrieved March 22, 2023, from

https://www.forbes.com/sites/forbesbusiness council/2022/03/21/how-to-use-qr-codes-to-enhance-your-brands-accessibility/

Skinner, H., Sarpong, D., & White, G. R. T. (2018). Meeting the needs of the millennials and generation Z: Gamification in tourism through geocaching. Journal of Tourism Futures, 4(1), 93–104. https://doi.org/10.1108/jtf-12-2017-0060

Smith, J. (2021, April 19). Trail Mix: Project Pairs local artists with trails around Waterloo. Kitchener. Retrieved March 31, 2023, from https://kitchener.ctvnews.ca/trail-mix-project-pairs-local-artists-with-trails-around-waterloo-1.5393038

SpeedPro. (2021, December 23). Best practices for using QR code signage. SpeedPro. Retrieved March 20, 2023, from https://www.speedpro.com/blog/best-practices-for-qr-code-signage/

Trivedi, R., Teichert, T., & Hardeck, D. (2019). Effectiveness of pull-based print advertising with QR codes: Role of ...Retrieved March 20, 2023, from https://bradscholars.brad.ac.uk/bitstream/handle/10454/17841/manuscript_QR_Code_Ver_17_RT.pdf? sequence=3

Woo, E. (2021, July 26). QR codes are here to stay. so is the tracking they allow. The New York Times. Retrieved March 20, 2023, from https://www.nytimes.com/2021/07/26/technology/qr-codes-tracking.html

Impress Watch (2019, July 3).. Retrieved March 22, 2023, from https://www.watch.impress.co.jp/docs/news/1193621.html



5. APPENDIX

City of Waterloo's new initiative: Trail Mix

- The QR codes along the trail connect people with a playlist of selected musics created by the local musicians while walking on the trail.
- Howe Sounds Biosphere could do something similar by collaborating with the indigenous artists or performers to share their music or performing videos with the visitors through QR codes.



Trail Mix: Project Pairs local artists with trails around Waterloo, 2021



Dundas driving park, 2022

City of Waterloo's new initiative: AR Tree Tour

- The AR Tree Tour of historic trees in the Dundas Driving Park, Ontario will feature virtual field guides, old photos and artwork of some of the park's biggest trees.
- Howe Sounds Biosphere could do something similar by placing a QR code by the regions oldest trees, habitat of certain quire animals or species. This will be a interactive activity and a great educational moment to the visitors.





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