The Tech Revolution for community engagement

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The exponential growth in technology presents a range of exciting and potentially revolutionary opportunities to broaden the scope, increase the effectiveness, and above all, enhance the value of community engagement for infrastructure projects.

As communities become more sophisticated and more accustomed to the use of technology, the integration of technology into community engagement strategies will be crucial in coming years if we want to be able to continue to effectively communicate and engage with communities.

During the early stages of a project, community engagement provides the greatest value when it is used to not only develop awareness and build understanding of the features, benefits and impacts of projects, but also to generate input from the community and stakeholders that can be incorporated into the planning and design process.

Recent advances in technology can facilitate this engagement function by providing a more realistic experience for the potential 'end users' of infrastructure. Communities are able to better understand what they will see, what they will hear, how different options or features will change those experiences and how that compares to their current situation. Thus, engagement can generate more meaningful feedback that can be used throughout a project lifecycle to inform decision-making and provide benefits for projects and for communities.

Strategy of innovation

Innovations in technology provide tools that enable the implementation of a strategy that can more effectively address the unique challenges of infrastructure engagement. These challenges require a communication and engagement strategy that is able to:

- Demonstrate a commitment to consultation that seeks out community opinions, ideas and concerns for the purpose of using this information to inform decision -

making and improving project outcomes

- Build a more realistic and objective understanding of project features, options, benefits and impacts and mitigations
- Simplify complex technical information with user-friendly tools
- Use targeted channels that align with the preferences of the local community and encourage different audiences to become involved.

The future is now

Advances in virtual reality, augmented reality, interactive mapping, social media and online tools have opened up a host of new possibilities for infrastructure engagement. We are gradually beginning to see both the government and private sectors implement these next-generation tools as part of engagement programs, to complement, or in some cases substitute, the traditional suite of communication and engagement tools.

These tools include immersive audio visual simulations, which simulate a realistic experience of the potential noise and visual impacts of new infrastructure, without the need for interpreting complex noise reports. These simulations encourage more constructive dialogue and feedback based on a better understanding of the degree of potential impacts, which can then be used to improve the design process.

Virtual and augmented reality are also opening up possibilities for a customer experience that immerses users into an environment and enabling them to experience what a project, such as a new train station, will look like when it's completed.

Current technology provides the ability to combine aerial photography, satellite imagery, on-ground still photography and video, which is then overlayed into 3D models, providing a highly realistic example of the visual impact of a project.

Whereas in the past video fly-throughs, artists' impressions or 3D visuals could provide details of completed designs or examples from set viewpoints, real-time 3D visuali¬sations can be used to demonstrate a project alignment or site in detail, change design features or create ani¬mations on the fly and show visuali¬sations from different viewpoints that are specifically relevant to impacted communities.

Phillips Group is using real-time 3D visualisation technology in upcoming stakeholder flooding and hydrology workshops, where flood modelling data will be overlaid in a 3D model, allowing stakeholders to attend a 'virtual site visit', provide feedback on their own experiences with flooding in their communities and see how the proposed new infrastructure will change hydrology in their area.

Better outcomes for projects and communities

become far more commonplace over the next few years, as costs continue to reduce and the benefits become more widely recognised. Clearly these tools provide much greater flexibility and therefore provide a more user-friendly and informative experience for individuals.

For community engagement managers, the key is to build these technological functions and features into the implementation program at the start of projects and ensure that management who are approving budgets fully understand the benefits of using the technology.

Engagement programs that embrace technology such as virtual and augmented reality and user-friendly interactive mapping are reporting significant increases in the number of people becoming involved in engagement activities, as well as reaching a broader cross-section of communities.

We also see these tools as increasing levels of transparency, building greater trust in the consultation process by breaking down the barriers of complexity and generating more robust feedback that is more valuable for decision-making and more likely to be incorporated into the planning and design process.

Ultimately, increased use of technology will lead to project outcomes that are more aligned with community views, creating mutually beneficial outcomes that drive greater value both for projects and for communities.

phillipsgroup

17, 100 Edward Street, Brisbane QLD 4000
GPO Box 1564, Brisbane 4001

P +61 7 3230 5000
W www.phillipsgroup.com.au