

**Bridging the user-research gap in mobile app development:  
An exploratory study of users' experiences with FitVine and Vitanopy**  
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### **Introduction**

Research innovations in wine science rely on close partnerships with industry practitioners (such as viticulturists and winemakers) who must apply research findings in vineyards and wineries. Wine scientists and industry associations create many information resources and tools to support research adoption in the industry; however, little research examines the effectiveness and utility of resources and tools from a user-focused perspective. Although the current literature demonstrates the importance of building partnerships between researchers and practitioners (e.g., Santiago-Brown, Metcalfe, Jerram, & Collins, 2014), little research engages the industry to document the types of information needed or how best to design information technology tools. While a few recent studies discuss technological adoption in the wine industry (e.g., Hill, et al., 2015; Hood & Hill, 2014), there is a significant gap in research examining mobile technology use and industry members' information behaviours. The wine industry is experiencing tremendous growth in the development of mobile applications (apps) but with insufficient user-focused design to ensure these tools meet practitioners' needs. This paper presents results of an interdisciplinary study (combining expertise in viticulture-oenology and information science) exploring viticulturists' needs related to mobile technologies.

### **Research Design**

Qualitative focus group interviews were conducted with a total of 25 viticulturists and vineyard managers to explore their experiences with mobile technologies. Small group interviews were followed by tests of two industry-specific mobile apps designed to support viticulturists' work (i.e., FitVine, which is used to assess rootstock health prior to planting; and, VitiCanopy, which is used to assess leaf gaps in the vineyard canopy). Participants used the apps and discussed the tools' features and functionality, commenting on the strengths and weaknesses of the apps' content and design. Data were gathered on ease of navigation, overall look/feel of app design, accessibility issues, the apps' ability to enhance work practices, and other relevant topics. Data were analysed using a grounded theory approach to develop analytic themes on the users' experiences with mobile technologies, generally, and these two apps, in particular.

### **Study Results**

Overall, the results demonstrate significant disconnects between user needs and the design of mobile apps, particularly where existing (non-app) tools provide comparable outcomes. Interview results document the usefulness of mobile devices in the vineyard, including non-industry specific tools (e.g., weather apps). Interviewees identified specific challenges in the use of mobile technologies (e.g., poor internet connectivity) and areas for future development (e.g., integration of separate apps). The vineyard testing of FitVine and VitiCanopy points to the design changes needed to support usability of these specific apps (e.g., relabeling of features; embedding instructions for understanding app outputs) and reinforces the need to apply user experience "best practices" and user testing

in app development. Overall, the study demonstrates that user engagement is needed throughout app development to bridge the gap between wine science research (i.e., which informs app content) and wine industry practice (i.e., which informs applicability of tools in the vineyard) to ensure that apps best support industry members' needs.

### **References**

Hood, V., & Hill, M. (2014). Social research helps target audiences to increase adoption of precision viticulture. In *Proceedings of APEN International Conference* (pp. 1–7). Beechworth, VIC: Regional Institute Online Publishing. Available at: [http://www.regional.org.au/au/apen/2006/refereed/4/3111\\_hoodvm.htm](http://www.regional.org.au/au/apen/2006/refereed/4/3111_hoodvm.htm)

Hill, M., Hathaway, S., Wilkinson, R., Barr, N., Cowey, G., & Kristic, M. (2015). *Adoption of grape and wine R&D outputs: Who, what and why*. Melbourne: Victorian Government Department of Economic Development, Jobs, Transport and Resources Available at: <http://research.wineaustralia.com/wp-content/uploads/2016/04/Final-Report-DPI-1201.pdf>

Santiago-Brown, I., Metcalfe, A., Jerram, C., & Collins, C. (2014). Transnational comparison of sustainability assessment programs for viticulture and a case-study on programs' engagement processes. *Sustainability*, 6(4), 2031–2066.