

# Project Brief for Hagley Museum and Library Mobile App

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## Company Information

This application is being built for the Hagley Museum and Library. Located on 235 acres along the banks of the Brandywine River in Wilmington, Delaware, Hagley is the site of the black powder factory founded by E. I. du Pont in 1802. This historical property is an example of early American industry and includes restored mills, a workers' community, and the ancestral home and gardens of the du Pont family. Hagley's library furthers the study of business and technology in America. The collections include companies' records ranging from eighteenth-century merchants to modern telecommunications and illustrate the impact of the business system on society. This application will be a stand-alone product offered to museum visitors.

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## Project Description

This application, titled "Discover Hagley", is an interactive tour guide that will aid guests in their visit to Hagley. Guests will be able to purchase and store tickets within the app that can later be scanned at the admissions gate. A shuttle schedule will be loaded onto the app so guests can plan their route accordingly. A GPS enabled property map will help guests find their way through the over 200-acre property. The map will also show the nearest restroom, water, and food locations. Guests can navigate between a full view of the property or a zoomed-in view of their immediate surroundings with augmented reality overlay footprints showing them the way to their next destination. An event schedule will be loaded on to the app so guests can plan their route around the many demonstrations offered on the

property, including science experiments, 19<sup>th</sup> century life, and cannon firings. Lastly, in conjunction with select exhibits on the Hagley property, guests will be able to open their phone's camera from within the app to view augmented reality overlays. The overlays will depict people in 19<sup>th</sup>-century specific clothing, and they will share pre-recorded voice tracks about the exhibit in which they are located. Augmented reality overlays will be offered in the Millwright and Machine Shop, Gibbons House, Brandywine Manufacturers' Sunday School, du Pont Family Home, and the First Office.



Pictured Above: Property map of Hagley Museum and Library, <https://www.hagley.org/>



*Pictured Above: Example of augmented reality overlays being used in a museum courtesy of the Science Museum of Oklahoma as published on <https://catchoom.com/blog/augmented-reality-in-museums-and-exhibitions-improving-visitors-experience/>*

## User Base

Most users will be first time visitors to the Hagley Museum. First time visitors often have trouble grasping that the entire historical property is the museum instead of just one building to walk through. Having an up-to-date account of what is going on at the museum that day as well as an interactive map will help ease confusion and help with wayfinding. Hagley is also a family attraction. First time visitors with young children need to access accurate information quickly to determine what is the best course of action for their family. They will also need amenity information like water stations and restroom locations readily available. The augmented reality overlays will attract visitors of all types and will be particularly interesting to those who visit Hagley for the history of the property.

## Competition

Hagley does not currently have a mobile application of any kind. While this is a new concept for Hagley, many other museums and attractions have accompanying apps. Inspiration was taken from the American Museum of Natural History in New York, the National Gallery of Art in Washington, D.C., and the Rijksmuseum in Amsterdam. All three of these apps offer ticketing and interactive maps. The Rijksmuseum and Natural History Museum apps both offer augmented reality overlays while the National Gallery of Art offers audio commentary to pair with the displays.

## Functionality

The functionalities needed for each section of Discover Hagley are listed below:

- General Needs: registration of new users, log-in of existing users, user settings
- Mobile Ticketing: payment systems integration
- Bus Schedule: location services, calendar, push notifications (can be disabled)
- Property Map: location services, camera integration
- Event Schedule: location services, calendar, push notifications (can be disabled)
- Exhibit Augmented Reality: camera integration, volume, video capabilities

## Platform

Discover Hagley will be a stand-alone mobile application available on iOS and Android devices.