Jon-Mark Chappellet, Director of Operations at Clos Du Val Winery, looked out his window at the rows of grapevines traversing the valley as the December sun set over the western hillsides. He sat holding a glass of Cabernet Sauvignon Reserve from the winery's 2012 vintage, one of his favorites of the past decade. He was mulling over his upcoming presentation to the winery's president, Steve Tamburelli, and the winery's board of directors to discuss the 50-year strategic outlook for the winery.

Having spent over a quarter century in the wine industry, and with family renowned for their status as vintners in the region, Chappellet had witnessed a slow but palpable change in how grapes are grown. Situated north of San Francisco in Napa Valley's famed Stags’ Leap District (Exhibit 1), the winery had established itself over the past 40 years as one of the area's prominent producers of quality estate wine, specifically its cabernet sauvignon, for which Napa is renowned. Chappellet had seen the growing season for grapes start earlier and earlier, becoming especially more pronounced over the last decade (Exhibit 2). Winters had been warmer, pulling the growing season forward, which now began before the threat of frost was over. Moreover, the warmer winters had failed to provide the same protection against pests as in the past, requiring additional monitoring and protection of crops in the region.

As Chappellet thought about his imminent meeting, he wondered what the winery would look like in 50 years. Climate change was having a multitude of impacts in Napa, and adaptation to maintain status as a premier regional winery could come in many forms. Could Napa continue to provide the world's finest cabernet sauvignon grapes? Would prominent grape growing regions emerge in other historically unexpected geographies, and if so, how could Clos Du Val recognize and anticipate where? Would Clos Du Val need to abandon its signature brand of cabernet sauvignon wines and adopt other grape varietals capable of thriving in the changing climate conditions? What type of diversification strategy should Clos Du Val implement to buffer the impacts of climate change over the short- and long-term? These questions rushed through Chappellet's mind as he gazed across the meticulously spaced rows of grape vines and swirled the wine in his glass.

Background

History of the Napa Valley Wine Industry

The origins of winemaking in California can be traced back to the mission period in the 18th century, during which the product was consumed only for communion and by Catholic missionaries. The plantings...