Immersion Maps Enhance Port of San Diego Asset Management

Intro
The Port of San Diego manages 34 miles of waterfront to provide economic vitality and community benefit through a balanced approach to the maritime industry, tourism, water and land recreation, environmental stewardship and public safety. The Port creates over 34,000 jobs and adds over 9 billion dollars to the San Diego economy. The Port is a conscientious innovator that leverages unique expertise, deep-water berths, forward-thinking solutions, and relationships to expand the opportunities for the businesses and employees it serves.

The Challenge
Multiple departments, including Operations, Planning, Facilities, Environmental and Public Safety, are all responsible for separate but integrated aspects of the Port’s mission. Understanding conditions above and below the surface of the San Diego Bay is critical to the Port’s success. However, with each department gathering data for their focus, these conditions are not always cataloged in a format that quickly and easily informs everyone across the organization. The Port of San Diego needed a platform through which all departments could aggregate their data and share common information in a customizable way, creating efficiencies.

The Partner
FishViews, Inc. is a web-based mapping company focused on aquatic environments. FishViews integrates panoramic HD imagery and other high-precision data about waterways to bring virtual aquatic environments to your desktop or mobile device. In addition, FishViews is a Woman Owned, Service-Disabled Veteran Owned Small Business.

The Solution
FishViews provided a custom, web-based platform to enable Port employees to virtually navigate through the San Diego Bay to assess and catalogue the condition of assets above and below the water. The virtual experience is created by pairing shoreline 360 panoramic imagery above the water and 3D bathymetric imagery below the water to an Esri base map. With the FishViews integrated tagging feature, Port employees can add location-
specific data and highlight points of interest directly within the surface images themselves. Combined with an ArcGIS online map this interactive virtual tour of the shoreline brings powerful context to the analysis of Port data. FishView also partnered with SpatialMax to develop a rapid, easy-to-use 360 mobile app (EV360) that will allow the Port to collect their own geo-tagged 360 imagery from the surface point-of-view, which can then be curated into the Port’s image database for seasonal and/or situational assessments of the facility.

**The Results**

By integrating ArcGIS online with FishViews’ web-based virtual platform, FishViews was able to enhance location awareness and understanding of critical Port infrastructure by mapping thousands of 360-degree panoramic images that can be navigated similar to Street View. In addition, conditions under the water can be viewed as a bathymetric image layer that can be toggled on and off via the ArcGIS online map. The FishViews’ platform and imagery enable comprehensive desktop assessments across the enterprise, allowing more people to better understand the natural and man-made infrastructure. Seeing the big picture helps managers not only develop strategies and prioritize actions, but also communicate challenges and solutions to more stakeholders. From underwater facility management, to infrastructure maintenance & repair, to capital improvements and environmental compliance; Port leadership now has access to immersive imagery and data above and below surface to more effectively communicate and execute their respective missions.

**Images or Videos:**

Panoramic image viewer combined with ArcGIS