Case One: WholeWorldBand, Digital Recording Studio

WholeWorldBand is a collaborative online music and video platform that enables anyone to collaborate with others to create music videos. The service was founded by Kevin Godley, a musician and music video director, and is accessible via a Web-based app available on the iPhone and iPad and on Windows and MacOS computers. Anyone can contribute to WholeWorldBand using just the camera and microphone in their computer or mobile device. The service enables users—whatever their level of musical ability—to record and perform with music legends and friends. Using WholeWorldBand, you can start a video-recording session that others may join, create your own personal video mix with up to six performers, and then share the results with your friends and fans via Facebook, Twitter, or YouTube. Users can also pay to collaborate with other musicians who have posted their own content. Collaborating on a project might mean providing new audio or video components or remixing existing ones.

WholeWorldBand uses a sophisticated digital rights management system to ensure that artists earn revenue for the work they contribute—if your work gets used, you get paid. WholeWorldBand provides users the opportunity to perform and record with popular artists. A number of major recording artists have already uploaded tracks including The Edge (U2), Ronnie Wood (Rolling Stones), Taylor Hawkins (Foo Fighters), Stewart Copeland (The Police), Liam Ó Maonlaí (Hot House Flowers), Michael Bublé, Phil Manzanera (Roxy Music), Dave Stewart (Eurythmics), and Danny O’Reilly (The Coronas).

The platform generates revenue from registered users who purchase subscriptions (or sessions) and from royalties paid by third parties in situations where users have shared and distributed content using the app or the Web site. Each session artist is entitled to receive a share of the revenue generated when other registered users purchase sessions for the purpose of creating contributions and/or mixes in relation to their original track. Keeping track of contributing artists, royalty payments, and the necessary revenue splits among artists, third parties, and WholeWorldBand can become quite detailed and tedious.

**Critical Thinking Questions:**

**1. Identify some of the challenges associated with building an information system infrastructure to support this new service. Would cloud computing be an appropriate solution to address these challenges? Why or why not?**

Obviously, if we are going to create an information system infrastructure to support a service of this kind, we are going to plan it as if it is going to be a successful startup. With this in mind, it would require prime-level equipment. First, enough energy, space, an adequate environment, and storage would be needed to host the app and Website. Sufficient energy to power all computers; plenty space to physically maintain all the infrastructure; suitable room temperature to optimize a better performance; and as much as necessary storage to warehouse all the data. Also, an extremely reliable network connectivity should be a considered in order to ensure a smooth flow of downloads and uploads.

With the exception of the last requirement, cloud computing would be a plausible cost-effective successful alternative in comparison to the other 4 challenges. In order to make it more profitable, we can decide to contract a vendor that offers Infrastructure as a service or Platform as a service. Either or would be an appropriate solution because WholeWorldBand would save the cost of hosting. Instead, this third-party company would be in charge of the cost and complexity of owning, housing, running, maintaining, and managing the underlying hardware and software. WholeWorldBand would only pay on a per-use or monthly basis, which in my opinion, at the end it is more efficient.

**2. Would WholeWorldBand be likely to employ SQL, NoSQL, or a mix of both?**

Keeping in mind WholeWorldBand would be an example of the Web2.0 since its user would be able to post, share, and collaborate, its app and website would be most likely to be a “victim” of Big Data due to the high probable amount of data. Because of the platform’s nature, its data would be mostly multimedia. However, it will also host debits and credits to its users. Therefore, I would suggest WholeWorldBand’s best method should be a mixture of SQL and NoSQL. The Structured Query Language should be applied (but is not limited) to the users’ account login information. For example, this will permit usernames to be unique and restrict duplication, allowing an organized process and an easier visualization of the data. Also, since the money earned or spent will be entitled to its users, these transactions would be completed with more security with SQL.

On the other hand, users will be expecting fast and reliable navigation through the app/website. Consequently, a NoSQL approach will be an effective technique to deal with the tremendous amount of multimedia shared. Specifically, a Document NoSQL database is meant for posts of this nature, as WholeWorldBand is basically a social media for musicians and video creators. With this said, a balance between SQL and NoSQL would be the ideal fashion for WholeWorldBand.