**Current Data Center Environments**

Physical Data Centers

The City of Seattle data centers and server rooms encompass:

·  over 22,000 square feet of floor space; available capacity varies based on the data center/server room.

·      space located in 7 separate buildings within the Seattle city limits, additional sites are used for network equipment only.

Seven departments are currently managing data centers or server rooms. Some departments manage multiple locations. These departments include the Department of Information Technology, Seattle City Light, Seattle Police Department, Seattle Public Utilities, Seattle Department of Transportation, Seattle Fire Department, Seattle Parks Department, and the Seattle Center.

Power Delivery

Standards and practices for power delivery and distribution vary between data centers. These differences include the selection, sizing and practices involving UPSs, PDUs, and cabinet loading.

Server Infrastructure

There are approximately 1000 physical servers and 720 virtual servers located throughout the data centers/servers identified above. System Management tools are not standard and are different between data centers and departments providing the support. Primary operating systems include Windows, Solaris, AIX, Linux.

Data Network Infrastructure

There are a number of different vendors and products utilized to deliver data networking to Servers/Applications. Networking equipment is primarily Cisco but includes networking elements from F5, NetGear and Avaya. Both copper and fiber are being utilized for interconnections.

Storage Infrastructure

Many vendors and products are utilized to deliver Storage to Servers/Applications. Vendors include IBM, NetApp, EMC and HP. There are at least 10 different storage solutions throughout the Data Centers. Most storage is direct attached however networked storage is available for approximately 20% of the storage capacity. Approximate active storage across shared storage arrays is 1PB.

Data Backup and Recovery

The majority of departments are supported by an IBM Tivoli solution which is supported by DoIT. In addition, each of the departments supporting their own data centers/server rooms have made individual choices on data preservation (e.g. Commvault, EMC Avmar, …). There is approximately 5-8PB of tape capacity across the data centers.

Applications

Departments have self-identified approximately 720 significant applications used in support of their business processes. These applications are run out of one or more the data centers/server rooms identified above. It is estimated there are several hundred additional applications used by departments that are not considered critical to the support of their core business.