Context Diagram

User

Blood Donation Location Finder App

Scheduling Service

Confirmation of Appointment

User's location

Closest 3 locations to user

Location preference from 3 locations

Available Appointments

User's selected appointment

Appointment Reminder

User's location preference

Date/Time options at selected location

User's Appointment selection

Appointment Confirmation

Scheduling Confirmation

Record of # of confirmed appointments

Blood Donation Association

User Location

Appt Date/Time
Turing Machine Flow Chart:

- Input/Output Tape
  - Rule List (algorithms)
  - Modify its internal state
  - Write a symbol OR move the head on tape left or right
Part 3:

1. The characteristics of infrastructure architecture, in order of importance, for Tribune Co. are:
   a. Reliability
   b. Availability
   c. Performance
   d. Flexibility
   e. Scalability

This was difficult to rank, because each characteristic is important in its own right. However, given the rocky transition of the new architecture, which resulted in 680,000 subscribers not getting their paper on time, and the additional lost revenue, the reliability and availability of the architecture become paramount for Tribune Co.

3. Backup is a full and exact copy of system information, stored on any number of media. Recovery is an organization’s ability to get said system operational following a system failure or crash. Having a backup and recovery plan is hugely important for the Tribune Co. who is operating over a dozen newspapers, all of which providing up to the minute news for their readers. My recommendation to Tribune Co. is to have an hourly backup plan, as even just a few hours of lost work could have significant financial, and quality, ramifications.

4. Scalable enterprise architecture is critical to future organizational growth because it allows an organization’s systems to very quickly adapt to their growth. Growth happens quickly, there can be a boom in the service an organization provides, an event that triggers increased demand for their service, and a whole host of other factors that can quickly grow an organization and thus necessitate immediately scalable systems and technology to meet that growth.

And of course availability of enterprise architecture is equally important. What good is architecture that scales with business needs if those very systems are not available to meet customers’ needs? Particularly as businesses/organizations continue to grow, so too does the proximity of their customer base. Maintaining availability means smart, well thought out planning for system maintenance such that it is the least burdensome to an organization’s customers.

5. The need for information security at Tribune Co. is not unlike the security needs at most organizations. Tribune Co. has customer information (including billing information), advertiser billing information, and, of course, their own employees’ information. All of this information needs to be secured to prevent those with harmful intent from accessing their system. Customer billing information means customer addresses, phone numbers, email addresses, and likely, bank account numbers are stored on their system. Same goes for the businesses that use the Tribune Co. for advertising. Employee information can be even more personal and include Social Security numbers, benefit enrollment information, retirement plans, etc. So firstly, securing the network and managing who has access to this information is critical. Once a secure foundation is in place, ensuring that any software being used to secure data is being updated and monitored becomes a full-time, daily responsibility.
1. For the public sector, cloud computing provides a whole host of advantages for agencies, but is not without its disadvantages. Probably the biggest advantage for the public sector is the low cost of cloud computing. Because the user doesn’t have local storage and there is very little physical infrastructure, the start-up cost, and long-term cost, to the user is far less. This can be a distinct advantage for public sector users, whose budgets are often quite limited and need to stretch every dollar to its fullest extent. After all, they are using public funds so ensuring those funds are spent efficiently is critical. The other key advantage for users is the scalability of cloud computing. Scalability is an organization/agency’s ability to adapt their information systems to increased demands. This is a benefit for all users, but specifically in the public sector an agency may experience increased demands following certain administrative initiatives or during specific times of the year so having systems that can easily, and cost-effectively, adjust is very important.

Probably the biggest disadvantage of cloud computing is security. This has been a major concern for organizations who are adopting cloud computing environments, as cloud system development has not focused on security. Obviously for the public sector this is a monumental concern, since citizen data is stored in these environments.

2. IUanyWare allows certain individuals associated with the university access to certain software applications without spending time or storage capacity to actually install the software. A user would simply need a web browser and IU-sanctioned credentials to have access. This is the very essence of virtualization, which is simply creating a virtual form of a software program (or hardware platform, storage device, operating system, etc.) instead of an actual physical form. This also allows users to access the resources from anywhere, assuming they have access to the aforementioned required elements. The resources are limited to what IU is licensed to provide.

3. I think a system that provides predictive analytics would make sense in the public sector context. Without private industry parallels like market share and demand, public sector actors are often left scratching their heads when it comes to proactively using resources. In order to employ this sort of machine intelligence in the public sector you would certainly need the functional characteristic of virtual reality. This is where a combination of data and sources allows the construction of a real-life environment simulation. This would be an opportunity for agencies to explore trends and simulate the various outcomes of policy decisions. This can help guide an agency towards more data-based decision making, which can then be used to make proactive policy decisions and lead to more efficient use of resources.