To: Professor Krasso

From: Rochelle Markham

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Subject: From Legacy to SOA

Migrating to a Service-Oriented Architecture is a huge step, but one in the right direction. As you can see in the attached diagram, our legacy applications and services would benefit greatly from the ability to communicate. As a business, making this migration will allow us valuable time and resources that were once hard to come by. Where retrieving documents for the budget would usually require multiple steps and hours of preparation, implementing an SOA would greatly reduce this time and allow us to access these documents in minutes.

The migration that I am proposing also involves the use of an ESB, to smooth out the process and alleviate some of the headache that can come with setting up an SOA. In the diagram, you can see that the user has three points of access. The first is the Service Desk System, which directly interacts with users. Since this system doesn’t have interaction with a large number of other services, it will be one of the last in the migration. The second point of access is the Recruiting system for future employees. This system will be one of the last in the migration as well, as it can be maintained as a standalone system. The third point of access, and the first system in the migration process, is the Active Directory system.

The active directory system is what users will use to gain access to secure documents within the SOA. The active directory will authenticate users and will “consult” with the employee system to allow access to users based on their employee profiles and levels of access granted. The employee system is the second step in the migration, since it holds the key to allowing access to other systems. From that point, the payroll system, will be the next step.

The next big step we will take in the proposed migration is to connect to the Procurement system. This will be an involved step, as this system is responsible for product ordering and inventory levels, so there is little room for error. Once the Procurement system is in place, we will be able to add budgeting to the SOA. With the payroll and procurement systems in place, this seems like the next logical move in our migration. The budget will allow us to access spending through the payroll service as well as through the procurement service.

Once these major players are in place, we can begin to add on some features for convenience. The GitLabs system can be added at this point to allow for employee communication and to help with future planning and system management. The contract system is next and will connect with the budget system, to track vendor spending and invoices. Next, we will add in the Employee Training system, so that employees can access training materials based on their access levels and employee files. Finally, as previously mentioned, we will add in the Recruiting and Service Desk systems, to incorporate all of our legacy systems and programs.

Resources:

Gupta, D. (2012). An Executive Approach for Large-Scale SOA Technology Migration. *Cognizant*, https://www.cognizant.com/whitepapers/An-Execution-Approach-to-Large-Scale-SOA-Technology-Migration.pdf.

Khadka, R., Saeidi, A., Jansen, S., Hage, J., & Haas, G. P. (2013). *Migrating a Large Scale Legacy Application toSOA: Challenges and Lessons Learned.*

Razavian, M., & Lago, P. (2011). A Survey of SOA Migration In Industry. *Service-Oriented Computing*, 618-626.

A close up of a map

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