MTAT.03.231 – Business Process Management

Practice Session 8: University Admission Process Redesign

We consider the following process for handling admission applications from international applicants at a University.

In order to apply for admission, candidates fill in an online application form by a fixed deadline (the deadline is the same for all applicants). Online applications are recorded in an information system to which all staff members involved in the admissions process have access. Prior to submitting the online form, the applicant must upload electronic copies of the following documents: (i) a motivation letter; (ii) certified copies of previous degree and academic transcripts; (iii) copy of identity document; (iv) copy of English language test results. Applicants can view and track the status of their application via the online application system.

Once an applicant has submitted the online application, a PDF document is automatically generated based on the application data. The applicant is requested to download this document, sign it, and send it by post together with the certified copies of previous degree and academic transcripts. Documents take on average 2 weeks to reach the University by post. The University waits at most 4 weeks for the hard copy of a given application to arrive (together with accompanying certified copies). Otherwise the application is disqualified.

A few days after an application is submitted online, an admissions officer checks it in order to determine if the application is administratively correct and complete. If any deficiency is identified in the application, an email is sent to the applicant. The applicant has to resubmit their application after correcting the identified deficiencies.

Once an application has passed the administrative check, the admissions office performs two verifications (in any order):

1) *Academic verification*. An admission officer sends the certified copies of the degrees to an academic recognition agency, which checks the degree and gives an assessment of the equivalence of the degree in terms local education standards. The academic recognition agency requires hard copies of the certified degrees to perform its verification. Hence, the admission office must first receive the certified copies from the applicant and then send them to the academic recognition office by post. It usually takes two weeks to get a response from the academic recognition agency (including the time spent by the postal service to deliver the documents to the agency). The University pays a fee of EUR 20 for each document it sends to the academic recognition agency for verification and accreditation. The agency replies by e-mail.

2) *English language test verification*. The academic officer uses a Web-based interface to verify that the provided English language test result is valid.

If an application fails to pass any of these two verifications, it is rejected (notifications of rejection are sent by e-mail).

Once all documents of an applicant have been verified, the admissions office marks the application as "Ready for assessment". The application is automatically forwarded to the admissions committee of the relevant study program (e.g. medicine, IT, etc.). The mean cycle time between the moment an application is submitted online and the moment it is "ready for assessment" is 6 weeks.

Committees make their decisions based on academic transcripts and motivation letters. The committee meets once to examine the applications submitted to its study program, which have passed all verifications made at the admissions office. Before the meeting, the head of the committee examines each application in order to:

1) Extract the grade-point average (GPA) of the applicant in the previous degree and convert it to a standard GPA score based on a GPA conversion table.

2) Perform a plagiarism check of the motivation letter using a Web-based plagiarism detection software.

3) Read the motivation letter (if it is plagiarism-free) and assign a score to it.

The head of committee marks as "failed" those applications with very low GPA, with plagiarized motivation letters, or with very poorly written motivation letters.

Based on the collected information, the head of committee makes a preliminary ranking of applicants. This ranking is reviewed during a full-day (8-hours) committee meeting. At the end of the meeting, the head of committee sends back a ranked list of applicants to the admissions office, together with an indication of the applications that have "failed" due to low GPA or issues with the motivation letter.

It takes 4 weeks between the moment all applications assigned to a given committee are "ready for assessment", and the moment the committee sends back its ranking to the admissions office.

Each year, the University receives in total 1500 online applications. Applicants compete for 150 study places distributed across 10 study programs. Each study program (e.g. Masters program) has 15 study places. The top-3-ranked applicants in each study program are offered scholarships in addition to a study place. Applicants ranked in positions 4 to 15 in their study program are offered a study place but without a scholarship.

About one week after a committee has produced its ranking, the admission office sends the corresponding notifications. An applicant may be notified that their application is: (i) accepted with a scholarship; (ii) accepted without scholarship; or (iii) admissible but not accepted unless a study place is freed up by a higher-ranked applicant; or (iv) rejected due to low scores or plagiarism.

Successful applicants must accept or decline the offer at most 2 weeks after notification. If an applicant declines the offer, their study place is allocated to the next admissible non-admitted applicant in the ranking of their study program. If an applicant with an allocated scholarship rejects their study place, the scholarship is allocated to the next applicant in the corresponding ranking, who does not yet have an allocated scholarship.

Applications are generally rejected or discarded for the following reasons:

- 20% of applications are rejected initially due to deficiencies in the online application form (e.g. missing documents). In half of the cases, the applicant

manages to fix the identified issues and the application passes the administrative check after the second try.

- 10% of applications are rejected because the hard copy is not received on time.

- 3% rejected due to a negative advice from the academic recognition agency.

- 2% rejected due to invalid English language test

- 5% rejected due to plagiarized motivation letter

- 5% rejected due to poorly written motivation letters

- 15% rejected due to low GPA

- 20% of applicants are offered a place but decline it. In 90% of these cases, the applicant declines because they expected to get a scholarship but their score was insufficient for a scholarship.

The admissions office handles circa 4000 e-mails from applicants concerning the application process, including questions about the application form, the procedure and the required documents; questions about eligibility; questions about the application status (e.g. have hard copies of documents reached the University?), etc.

The admissions office is staffed with four full-time admission officers, each one with a salary cost of EUR 15 per hour. An admission committee consists of 3 members (including the head of committee), each member with an average salary cost of EUR 25 per hour. Each head of committee takes on average 5 working days to prepare the ranking prior to the admission committee meeting. Two days are spent reading the motivation letters; the remaining time is spent extracting data and checking the applications e.g. for plagiarism.

The manager of this process is being pressed to simultaneously reduce the cycle time to the process, and reduce costs, while ensuring that no unqualified application gets admitted and applicants continue to receive good levels of attention and service.

In a previous practice session, we found these wastes (among others):

1. **Defect:** There is a significant impact on cycle time for applications being resubmitted due to deficiencies in the online application form.
2. **Over-processing:** The 4000 emails concerning questions regarding the application can be mitigated.
3. **Waiting times:** There is no good reason provided for the one week delay in notifications to the students once the rankings have been assigned and delivered to the admissions office. An opportunity for a concrete 1 week cycle time reduction exists.
4. **Over-production:** The text tells us that (90% of 20%) 18% of the applicants are admitted and do not accept because they did not get the scholarship.

Task.

Propose a set of changes to this process that have the potential to reduce or eliminate the identified sources of waste, and to contribute to the manager's objective of reducing both cycle time and cost.