

Finance to Education

Business Requirements Document



Trust the Process
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1 INTRODUCTION

Finance to Education is a Non-Profit Organization that aims to support students in need of financial assistance for higher education. Currently all activities encompassing Finance to Education are done manually. The following document lays out the scope of an Information System Solution as well as necessary requirements. Some important acronyms are listed for future reference. A brief background of Finance to Education's basis for supporting students is given followed by an explanation of a viable business opportunity. Following this is an in-depth look at the system scope, assumptions, constraints, and anticipated risks for the new system. Finally, requirements are laid out in the form of Epics alongside accompanying User Stories as well as numerous system quality attributes expected by Finance to Education.

1.1) DEFINITIONS, ACRONYMS, INITIALISMS, AND ABBREVIATIONS (DAIAs)

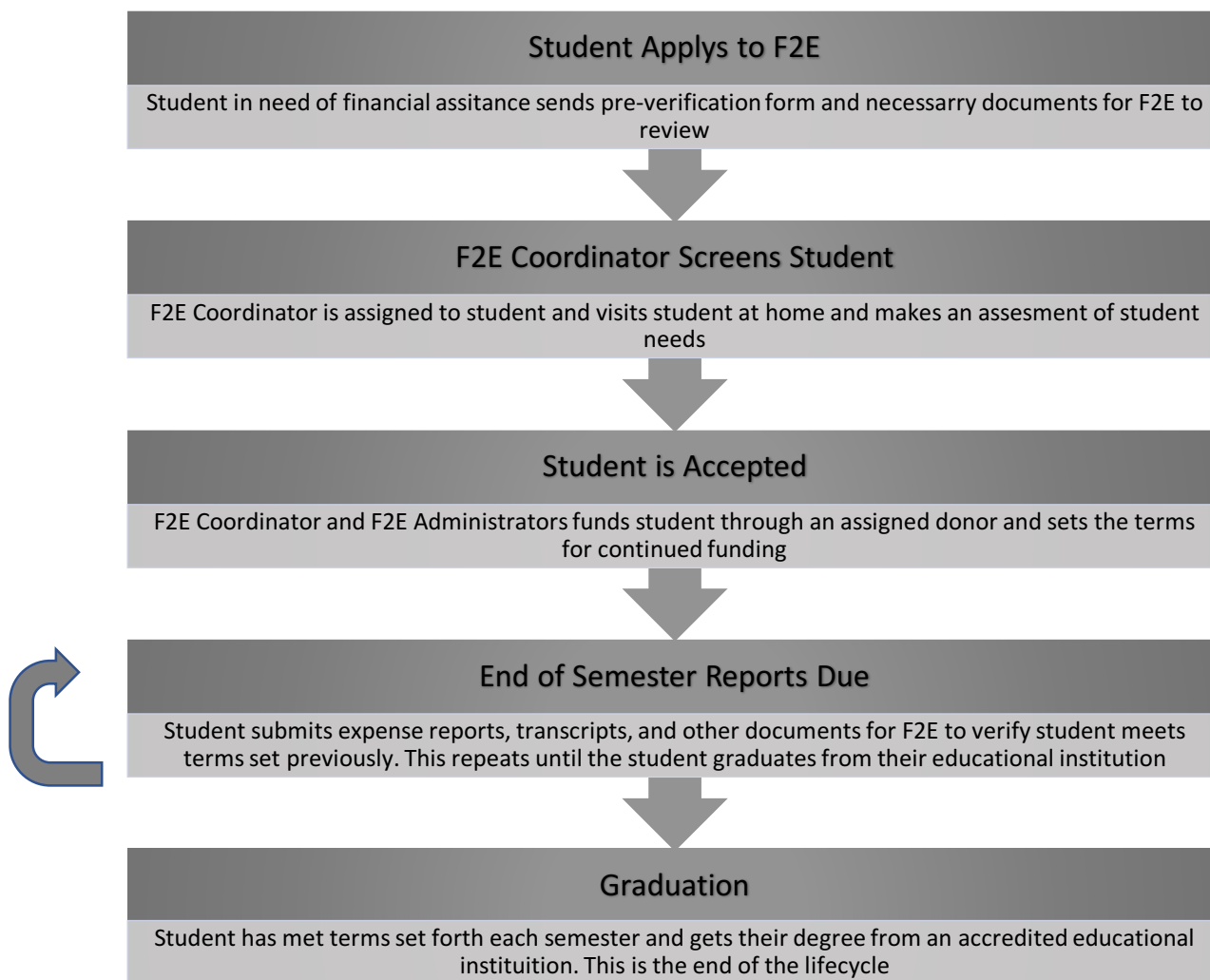
DAIAs	Term	Definition
F2E	Finance to Education	Non-Profit Organization that supports financial needs for the education of students
CEGS	Career & Education Guidance Service	Service F2E provides for students. Services include: Mentorship, Guidance, and various assistance
IT	Information Technology	The use of computer systems for storing, retrieving, and sending information
DB	Database	A structured set of data held in a computer and accessible in many ways
iOS	iPhone Operating System	Operating System on Apple's iPhone
WAI	Web Accessibility Initiative	World Wide Web Consortium effort to improve the accessibility of the World Wide Web for people with disabilities
PCI	Payment Card Industry	Developed to encourage and enhance security of personally identifiable information and cardholder data
PII	Personal Identifiable Information	Information that can be used on its own or with other information to identify, contact, or locate a single person
EPIC	Electronic Privacy Information Center	Focuses public attention on emerging civil liberties, privacy, First Amendment issues and works to promote the public voice in decisions concerning the future of the internet
EST	Eastern Standard Time	The standard time zone we will be using
1:00	1 AM	One a clock in the morning (Military Time)
13:00	1 PM	One a clock in the afternoon (Military Time)

1.2) BACKGROUND

Student financing is a necessity for a majority of students pursuing higher education. Higher Education tuition costs have gone up 3.2% on average for the 2017-18 school year. The increase

in tuition costs is expected to grow each year for public and private universities. F2E have Donors who are willing to provide financial stipulations for students who need financial support. Currently F2E supports more than 200 students and continues to grow.

A basic overview of F2Es operational life cycle is shown below.



2 BUSINESS OPPORTUNITY

F2E started in 2010 and supports more than 200 students currently. Each student costs F2E a significant number of resources. Expanding F2E business would require the administration to track information that exceeds the available resources. F2E's resources cannot keep up with the increase of students and other features. All steps of their lifecycle are currently done manually. Their current manual process inhibits F2E from achieving an efficient and effective increase of future students as the total number of users in their system is expected to grow 25% per year. F2E is in dire need of an IT solution. The IT solution needs to allow F2E to continue their same

process but automating certain aspects to improve efficiency and effectivity. The implementation of this IT solution should allow F2E to incrementally transition all current students along with their staff and leadership to the new system with adequate training resources. The IT solution will allow new students to apply online and simplify the coordination F2E has to do. An IT solution would allow F2E to spend more time supporting students instead of getting stuck in the slow process of doing everything manually.

Once F2E has our IT Solution implemented the process for supporting a new student would be somewhat as follows:

1. Using F2E's interactive website a prospective student would start their application online
2. The students will then get all their documents in order and submit the requirements specified by F2E on the application portal
3. The student's information would be sent to the person in charge of sorting applications and F2E would allocate a coordinator for that student
4. Coordinator will start a line of communication with the student and perform next steps
5. Once terms are determined and accepted student information will be stored in cloud DB
6. The student will then use the phone application and/or web application to submit reports electronically, communicate with coordinator/donors, and get career guidance
7. F2E Coordinator verifies student satisfies the terms and notes a continuation of funding (Steps 6 and 7 repeats until the students last semester)
8. Student graduates and all information regarding the student is erased as it ends the lifecycle for F2E

3 **SCOPE**

The IT solution's main goal is to provide a more efficient process for F2E in the most cost-effective manner. Our IT solution is not going to have any fancy gimmicks additional to what the requirements express. The IT solution will automate parts of F2E's lifecycle which include – Selection, Allocation, Tracking, CEGSs, and Graduation. Anything that does not automate their process is out of scope. If a feature is taken away without affecting the efficiency then that feature is out of scope for this solution. Our IT solution will have support for troubleshooting issues users may face. Administrators are able to fix issues as well as a dedicated support staff. User interface troubleshooting issues is out of scope for this solution and should be delegated to F2E's training resources.

4 **ASSUMPTIONS**

- We assume major usage of the system around the deadlines for student submissions
- We assume that financial reports sent in by students are shareable with donors since it is their money being awarded to students
- We assume that students will be awake and using the system at all hours of the day and the F2E staff only during regular business hours
- We assume that F2E is headquartered on the East Coast which is why we use EST
- We assume the only other language the application needs to be translated into is Spanish

- Assumed that there are 5 major roles and created epics and corresponding user stories for each. Following lists all roles in life-cycle (Bolded are Major Roles):
 1. **Student receiving funding**
 2. **Student applying for funding**
 3. **F2E Coordinator** - Visits students house, verifies credentials, gets semester reports & expense reports (Assumption)
 4. Schools receiving fees from F2E - F2E pays educational institutions directly
 5. Bank of Student - They receive funds from F2E for the student's bank account
 6. CEGS - Network of mentors to assist and guide students with any issue
 7. **F2E Leadership** - Makes sure all the pieces are working and put together right
 8. **Donors** - Provide funding for students

5 CONSTRAINTS

- Solution needs to fulfill requirements cost effectively
- Solution needs to be developed and incrementally implemented over the course of a semester
- Website and mobile application needs to be accessible to families whose first language is not English
- Website and mobile application needs to work on all major browsers and devices
- Solution has to comply with privacy laws and data protection protocols
- Data storage should be with a cloud service as they are the lowest costing and most effective form of DB Management

6 RISKS

Ultimate solution will mitigate these anticipated risks as well as keeping them in mind when implementing the solution. This list is not exhaustive, we anticipate other risks to emerge as we continue with the development of the solution. Requirements could be wrong or changed later on, so we need to keep that in mind as well.

Business/Execution Risks:

- F2E has a change of requirements that affect the entire system and all users
- Transitioning current students and information to the online automated solution could prove to be challenging and cause unforeseen issues
- Protected data could be inadvertently breached

Financial Risks:

- Actual cost of cost hosting on a cloud provide may exceed the budget
- Can't afford to hire IT professionals to monitor the system
- Non-Profit is not focused on creating a world class technology solution, simply a cost-effective solution that will do what they need without any gimmicks
- As a Non-Profit organization supporting student, their main source of money is from donors who support students as well as other scholarship funds among others

Technical Risks:

- Data management systems are compromised and/or crash
- System unable to handle user load
- System unable to handle high volume times
- System not usable, bad UI, etc.

7 REQUIREMENTS

7.1) EPIC AND USER STORIES

Epics and User Stories for Student Applying for Funding:

Epic 1: As a student in need of financial support, I need to apply for financial support from F2E on their website in order to attend college.

User Story 1: As a student applying for F2E, I want the website to clearly list all required documents to submit in order for my application to be complete.

User Story 2: As a student applying for F2E, I want a bar indicating the status of my application in order for me to know the stage of my application.

User Story 3: As a student applying for F2E, I want to easily drag and drop required pdfs and documents to the application in order to meet all requirements.

User Story 4: As a F2E Administrator, I want to be notified when a student has submitted an application and move to next steps in the process in order to accept or reject their funding.

Epics and User Stories for Student Receiving Funding:

Epic 1: As a student receiving funding from F2E at the end of a semester, I have to meet all the requirements set forth by F2E and get approval by submitting various items in order to continue my funding.

User Story 1: As a student, I need to upload an expense report with clear steps on F2E's website in order for F2E to confirm my eligibility.

User Story 2: As a student, I need to upload transcripts from my educational institution with clear steps on F2E's website in order to meet all requirements at the end of the semester.

User Story 3: As a student who submitting all required reports, I want an email confirming I will continue receiving funding in order for me to get ready for the new semester.

User Story 4: As a F2E Coordinator, I want to be notified when a student has submitted check-in items in order for me to verify they meet the terms.

Epic 2: As a student receiving funding from F2E, I want to use F2E's CEGS resource to get assistance for school in order succeed in school.

User Story 1: As a CEGS coordinator, I want to know when a student request help and guide them towards the best resource in order for them to succeed.

User Story 2: As a student, I want the website to clearly denote a section that will request help from F2E's CEGS in order to get help.

User Story 3: As a student, I want to indicate the nature of my request for help (General Questions, Career Questions, etc.) in order for F2E to know what I need.

User Story 4: As a F2E Coordinator, I want to be notified that my student is requesting assistance from CEGS in order to confirm that the student received satisfactory support.

Epics and User Stories for F2E Leadership:

Epic 1: As part of the F2E Leadership, I want to study the current students we support in order to increase students and donors.

User Story 1: As part of the F2E Leadership, I need to see a list of all students F2E supports and corresponding resources in order to draw conclusions.

User Story 2: As part of the F2E Leadership, I want to reach out to coordinators and/or donors in order for them to answer any marketing questions I may have.

User Story 3: As a F2E Coordinator, I need to be notified that F2E Leadership requests information from me in order to help them.

User Story 4: As a Donor, I need to be notified that F2E Leadership requests information from me in order to help them.

Epics and User Stories for Donors:

Epic 1: As a donor, I want to know how the student I am supporting is fairing in order to know that they are benefiting from my funding.

User Story 1: As a student, I want it to be clear how I can contact my donor in order to thank them or communicate them.

User Story 2: As a donor, I want to be notified if the student I support is struggling and needs guidance in order for them to be successful in school.

User Story 3: As a donor, I want F2E to send me my students end of semester expense reports and transcripts in order for me to confirm whether they are succeeding or not.

User Story 4: As a F2E Coordinator, I want to confirm my student is interacting with their donor in order to make sure the student is succeeding.

Epics and User Stories for F2E Coordinator:

Epic 1: As a F2E Coordinator, I want to check up on all the students I support in order to support them.

User Story 1: As a F2E Coordinator, I want a clear line of communication between my students in order for me to check in on them.

User Story 2: As a Student, I need to be notified that my coordinator is communicating with me in order to respond to them.

User Story 3: As a F2E Coordinator, I want to guide student to relevant resource (CEGS and/or Donor) should they be struggling in order for them to succeed.

7.2) **SYSTEM QUALITY ATTRIBUTES (NON-FUNCTIONAL REQUIREMENTS)**

7.2.1) **Availability (Service Level Agreement)**

- The system is required to be available for student use 24/7 with the only exception being system maintenance periods
- The system should anticipate F2E Administrators and Coordinators to use the system mainly from 9:00 EST to 17:00 EST on Monday through Friday. They can also use it at

other times should it be necessary, but at a lower volume expect for maintenance windows

- There will be a planned maintenance window in which the system will be down 2 hours a week on Saturday night from 1:00 EST to 3:00 EST
- The system should expect maximum usage at the beginning and end of semesters as these are the times students are most likely applying to F2E and submitting reports respectively

7.2.2) **Security**

- Overall anyone who downloads the mobile application and logs in to the website portal has access to relevant parts of the system. For instance, students who have not applied for funding have access to information on F2E and link to application. Students who have applied and are waiting for a response will see a bar indicating the status of application. Students who are receiving funding will have access to CEGS and end of semester submission link. All students will be able to access a form of communication between them and the F2E staff
- F2E staff will be able to see a list of all students they support as well as being notified when a new application is submitted
- On the data side, F2E Administrators have access to all information regarding students in the program. Students have access to all information pertaining to them as well as access to CEGS
- Personal information regarding students will be absolutely secure due to the private nature of it
- Financial transactions regarding the students should be available to F2E Administrators and Coordinators. They have the right to share financials with Donors as well. Financials and personal information will be secured following legal protocols

7.2.3) **Portability**

- System available on all major browsers and mobile devices
 - Browsers: Internet Explorer Version 11, Google Chrome, Safari Version 11 and above, and Mozilla Firefox version 57 and above
 - Mobile: Android and iOS
- Website is compatible with all major screen sizes
 - Extra Small Devices (Phones ~ less than 768px)
 - Small Devices (Tablets ~ greater than or equal 768px)
 - Medium Devices (Laptops ~ greater than or equal to 992px)
 - Large Devices (Desktops ~ 1200px)
- Website and Mobile Application are able to support different languages
 - Languages: English (Default) and Spanish

7.2.4) **Performance**

- System needs to support times when the volume is at full capacity during end of semesters

- System should support up to 200 students at a given time initially and each year factor in the expected 25% growth in users
- The system is expected to have a response time no longer than 1 second for page reloads and navigation to different sections
- The system is expected to have a response time no longer than 2 seconds for queries and submissions

7.2.5) **Usability**

- Students can easily use the website and mobile application to accomplish tasks such as submitting reports and requesting help
- Accessibility (hearing and visual impaired users) guidelines will be followed from the WAI
- User interface is built with non-tech users in mind, but should there be any issue F2E will provide support through IT professionals
- F2E Administrator staff needs to be trained to deal with managing the DB and communicating with students

7.2.7) **Scalability**

- This system is built to grow, any increase in students accepted will simply extend the DB. Since the DB is using a pay as you go service, increasing students will only cost a little bit more.
- With an expectation to grow users by 25% per year and a 40% increase in total data, F2E expects the cloud service to accommodate these increases every year

7.2.8) **Agility**

- F2E can track the efficiency of the process using the new system. They can confirm that the new system is indeed faster than the old one

7.2.9) **Supportability**

- Data logs will be kept for students currently in the program
- Any student who is rejected, does not meet terms, or graduates will cause the data logs to be deleted
- F2E will have at least 1 full time IT staff for general issues during the day
- Should a new feature of the system be deployed and cause an issue down the road the system will revert to the previously working system

7.2.10) **Flexibility**

- The system must be able to add and delete new features without affecting preexisting ones

7.2.11) **Applicable Standards**

- System must follow the standard data and process models for the student financing industry
- Legal compliance for funding students as determined by the United States Government

7.3) **DATA REQUIREMENTS**

- The use of transferring money to students will require PCI/PII standards to be followed, PCI standards:
 1. Maintain and test a secure network
 2. Map the flow of cardholder data
 3. Protect cardholder data
 4. Upkeep a vulnerability management program
 5. Implement strong access control methods
 6. Maintain a security knowledge program
- Epic's Donor Privacy protocol, EU Data Protection Directive, and Cloud Computing standards

7.4) **REFERENCES**

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