Finance to Education

KIWI GROUP

Seattle University
Mengshan Chen, Chidozie Ononiwu, Karen Marcjan

CONTENT

01 INTRODUCTION

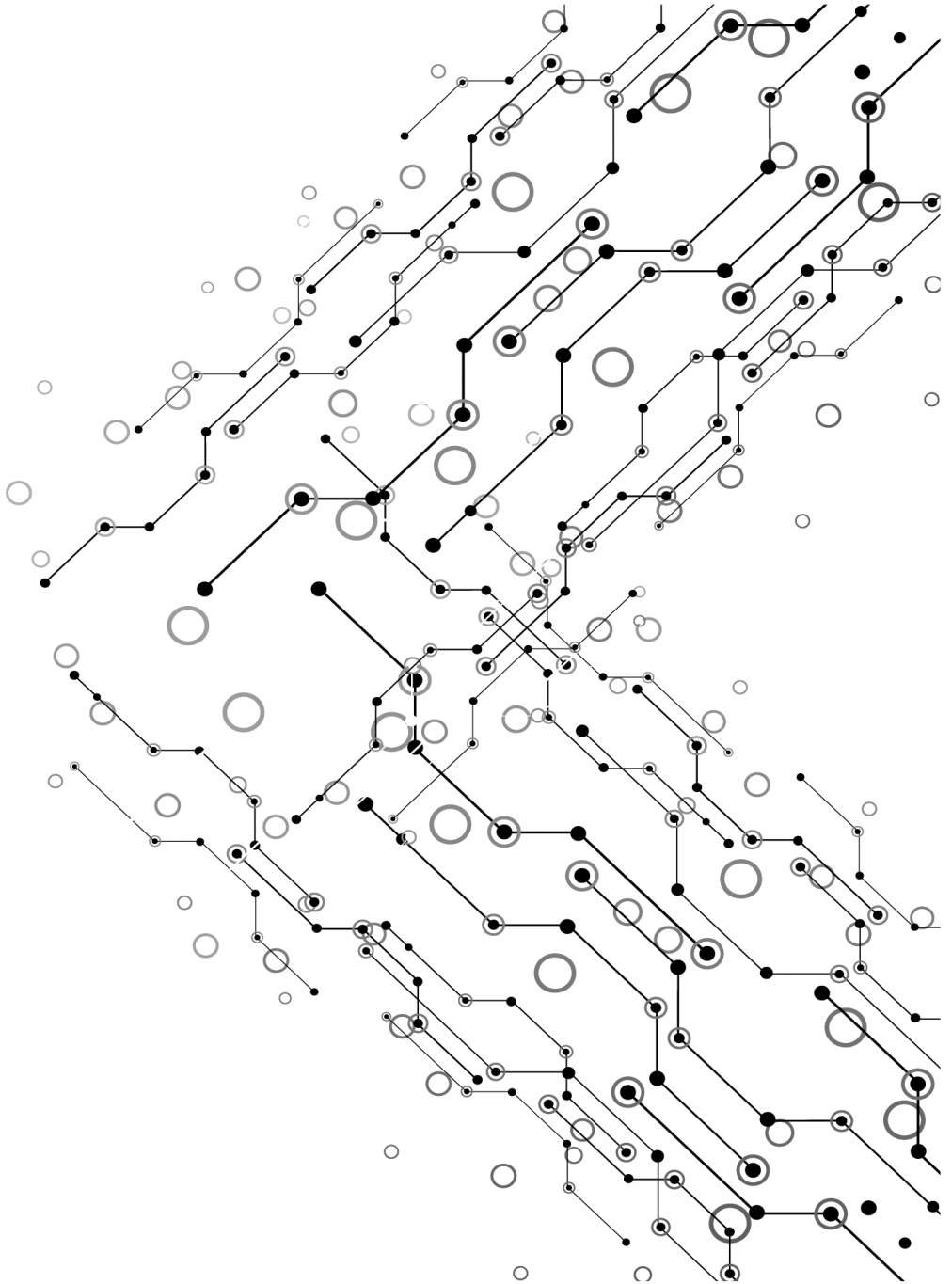
02 SOLUTION

03 EXECUTION

04 TECHNOLOGY CHOICES

05 LESSONS LEARNED

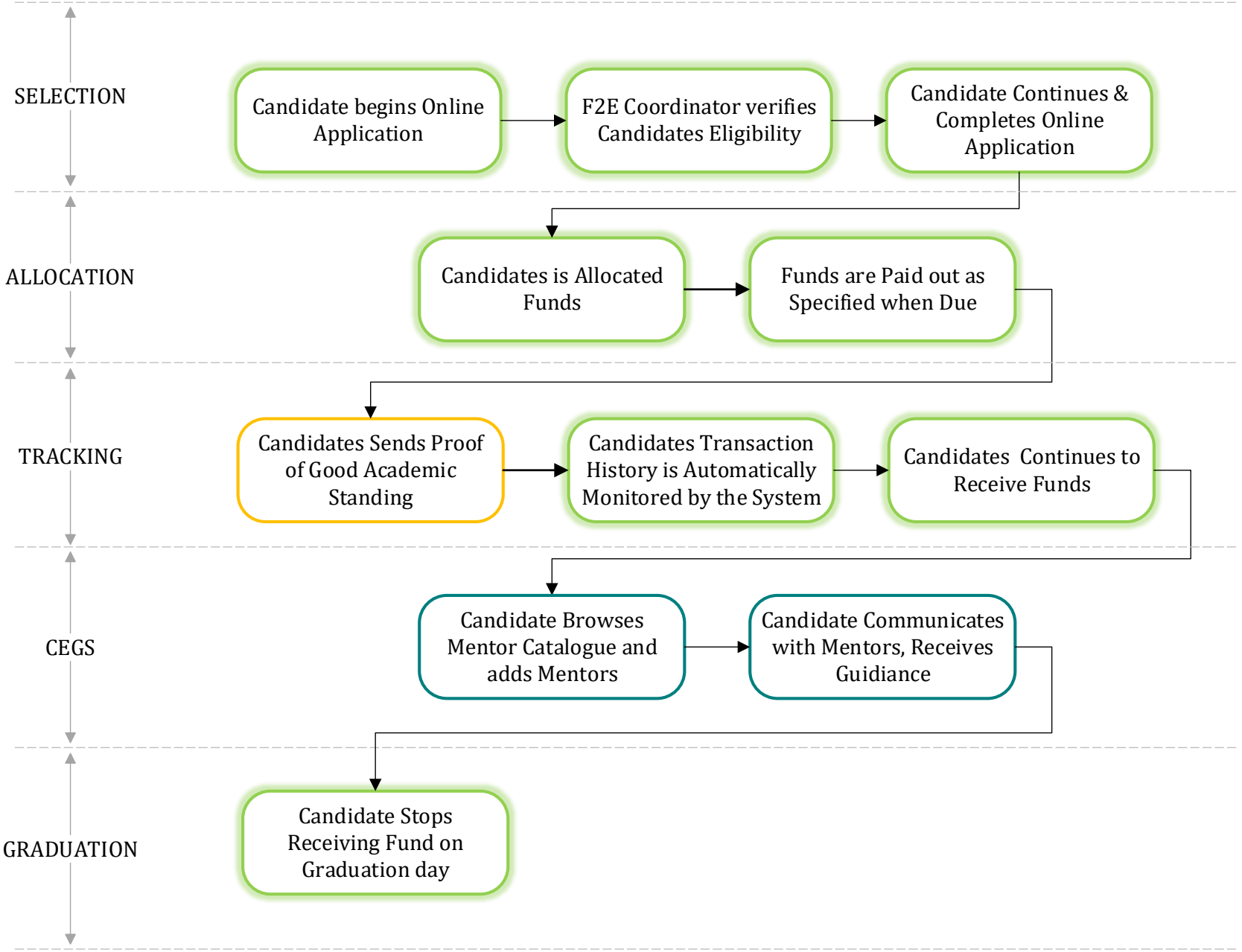
06 FUTURE WORK



INTRODUCTION

PROBLEM	KEY FUNCTIONAL REQUIREMENTS	KEY QUALITY ATTRIBUTES	KEY CONSTRAINTS
NON-PROFIT ORGANIZATION	AUTOMATE THE PROCESS	SCALABILITY	EASY TO USE / LEARN
-SELECTION -ALLOCATION -TRACKING -CEGS -GRADUATION	UNIFIED ADMIN MODULE	USABILITY	MOBILE & CLOUD
NEEDS DIGITAL TRANSFORMATION	WEBSITE & MOBILE APP	SECURITY	MINIMUM IMPLEMENTATION / MAINTENANCE COST

INTRODUCTION



Automated Activities

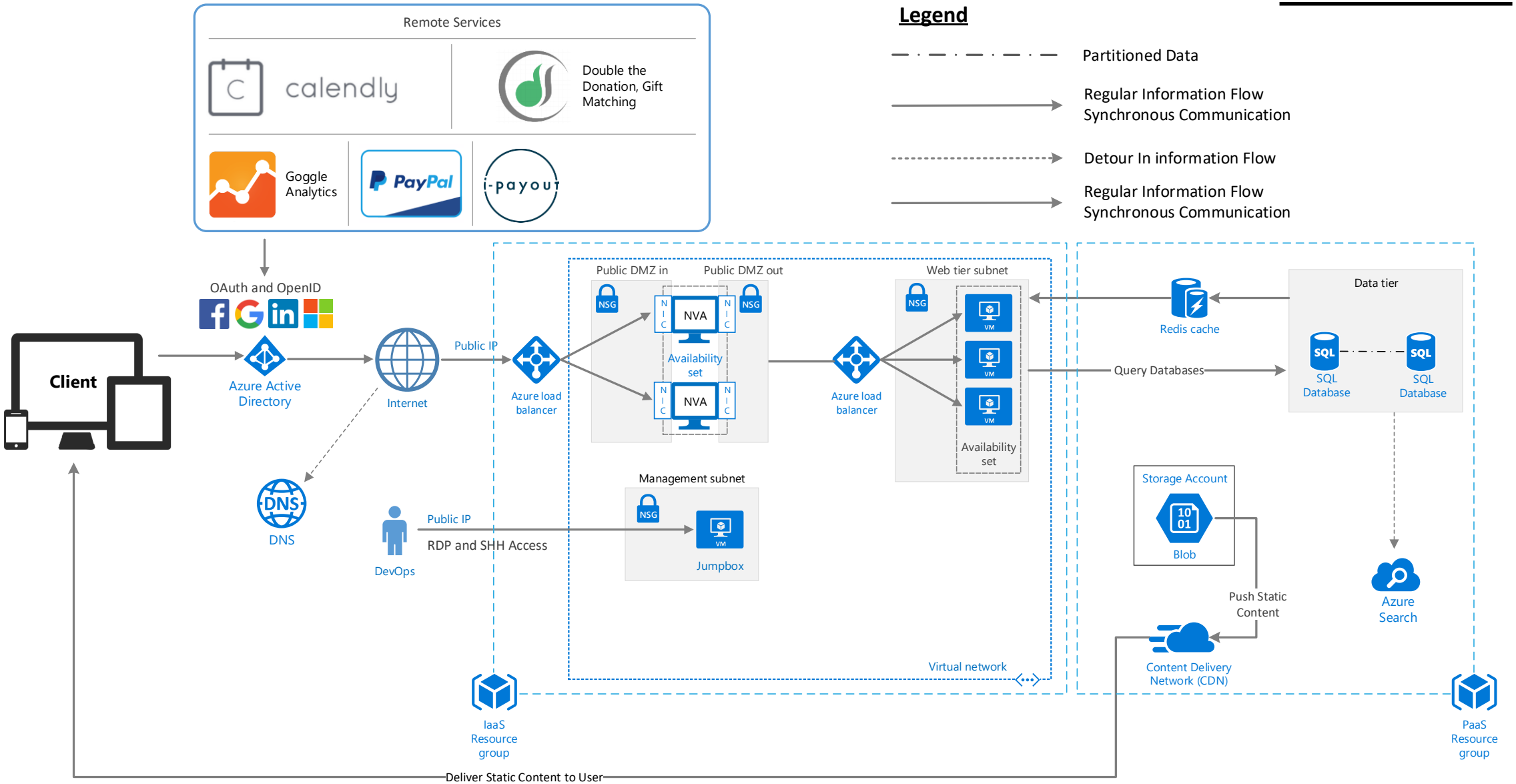
Added Activities

Unchanged Activities

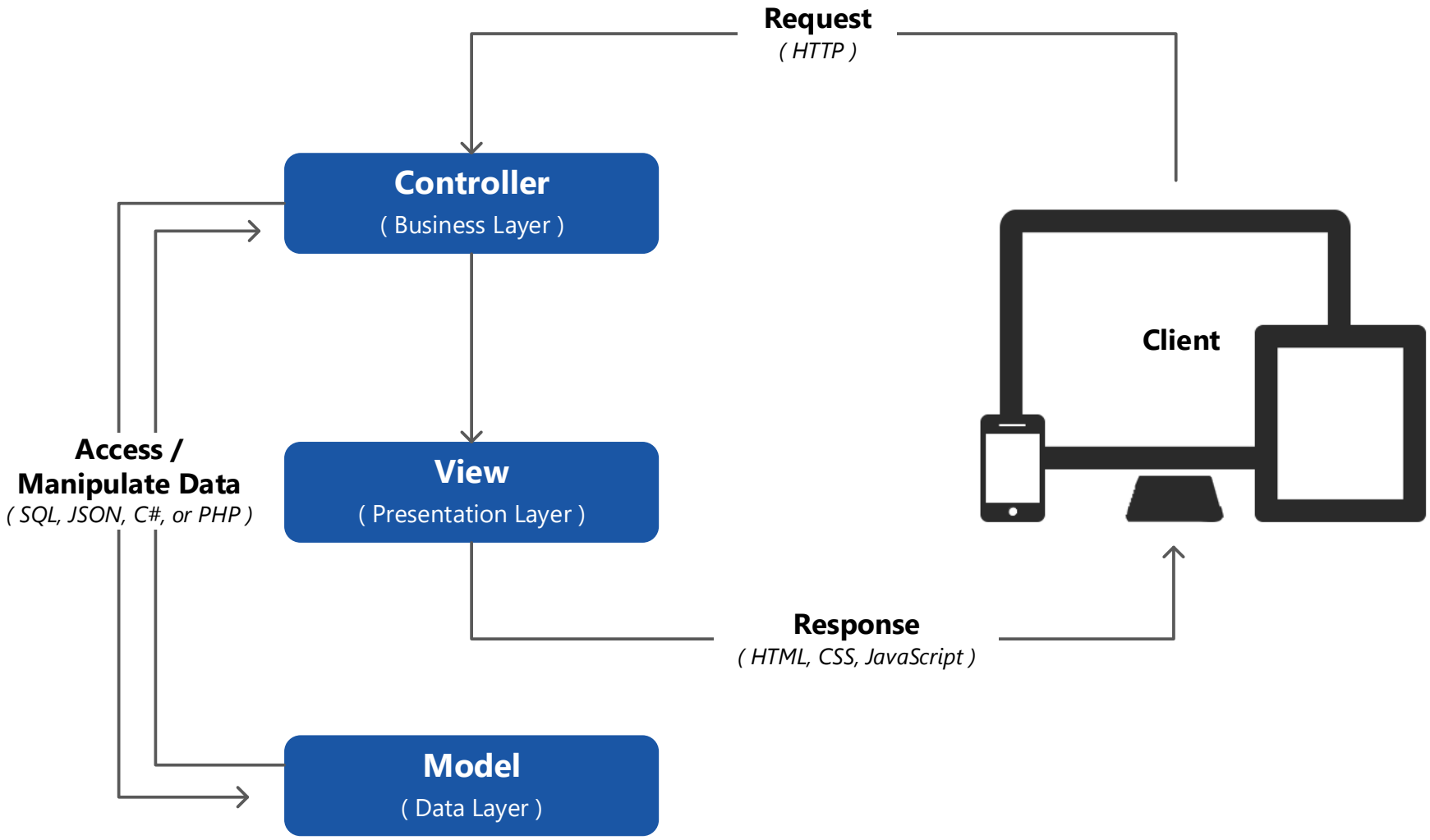
INTRODUCTION

BUILD	BUY
User Management System	Identity Management System
Fund Management System	Inbound / Outbound Messaging System
Internal Communication System	Analytics System
Matching System	Payment System
	Scheduling System
	Records System
	Corporate Donation Matching

SOLUTION

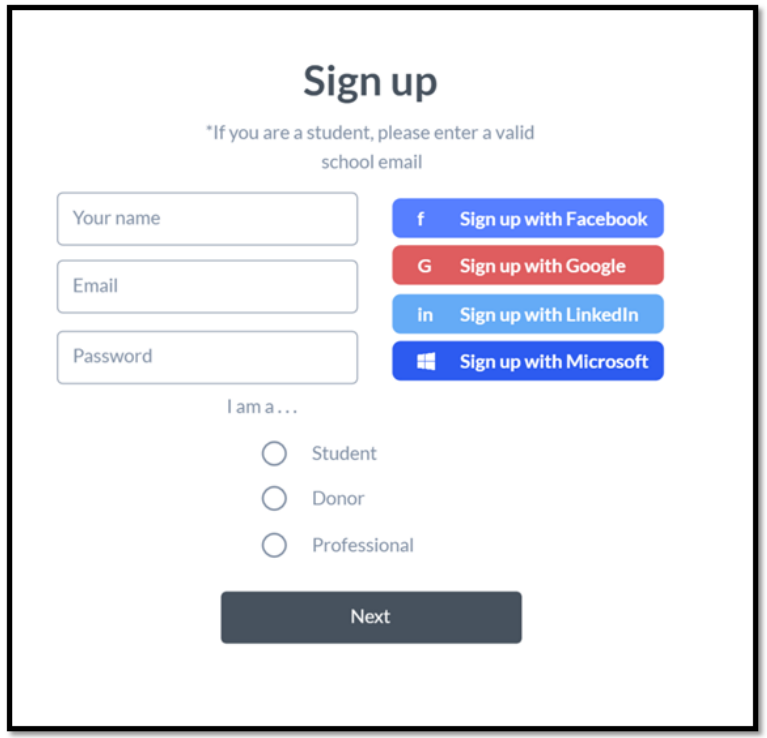

Remote Services
calendly
Double the Donation, Gift Matching
Goggle Analytics
PayPal
i-payout
Legend
Partitioned Data
Regular Information Flow
Synchronous Communication
Detour In information Flow
Regular Information Flow
Synchronous Communication
OAuth and OpenID
Client
Azure Active Directory
Internet
Public IP
DNS
DevOps
Public IP
RDP and SHH Access
Azure load balancer
Public DMZ in
Public DMZ out
NSG
NIC
NVA
Availability set
Management subnet
Jumpbox
Azure load balancer
Web tier subnet
Availability set
Redis cache
Data tier
Query Databases
SQL Database
SQL Database
Storage Account
Blob
Push Static Content
Content Delivery Network (CDN)
Azure Search
Virtual network
IaaS Resource group
PaaS Resource group
Deliver Static Content to User

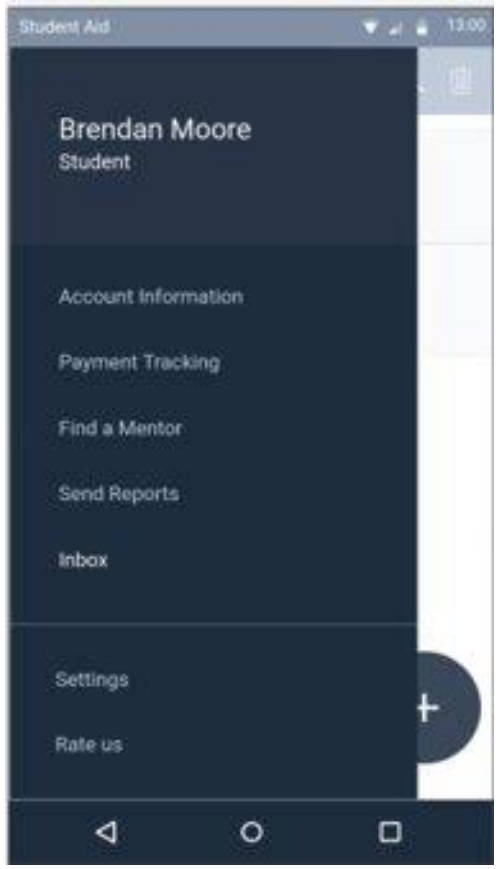
SOLUTION

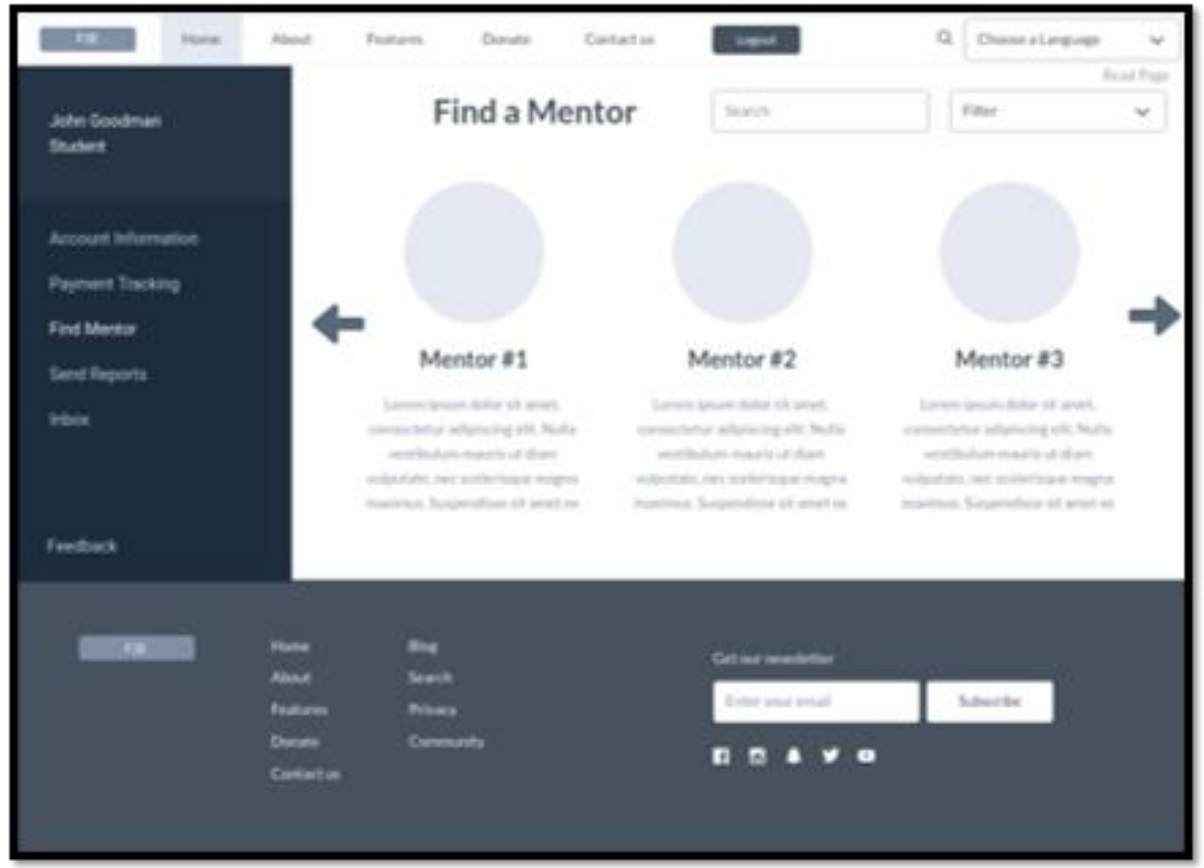

Request
(HTTP)
Controller
(Business Layer)
Client
Access /
Manipulate Data
(SQL, JSON, C#, or PHP)
View
(Presentation Layer)
Response
(HTML, CSS, JavaScript)
Model
(Data Layer)

SOLUTION

UI interface







EXECUTION

PHASE 1
3 WEEKS

PHASE 2
9 WEEKS

AZURE

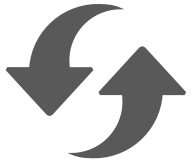
TEST PLATFORM & INFRASTRUCTURE CONNECTIONS

USER MANAGEMENT SYSTEM

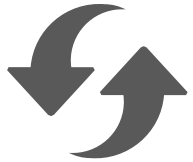
TEST API CONNECTIONS
-IDENTITY MANAGEMENT SYSTEM
-INBOUND / OUTBOUND MESSAGING SYSTEM
-SCHEDULING SYSTEM

FUND MANAGEMENT SYSTEM

TEST API CONNECTIONS
-PAYMENT SYSTEM
-COPORATE DONATION MATCHING

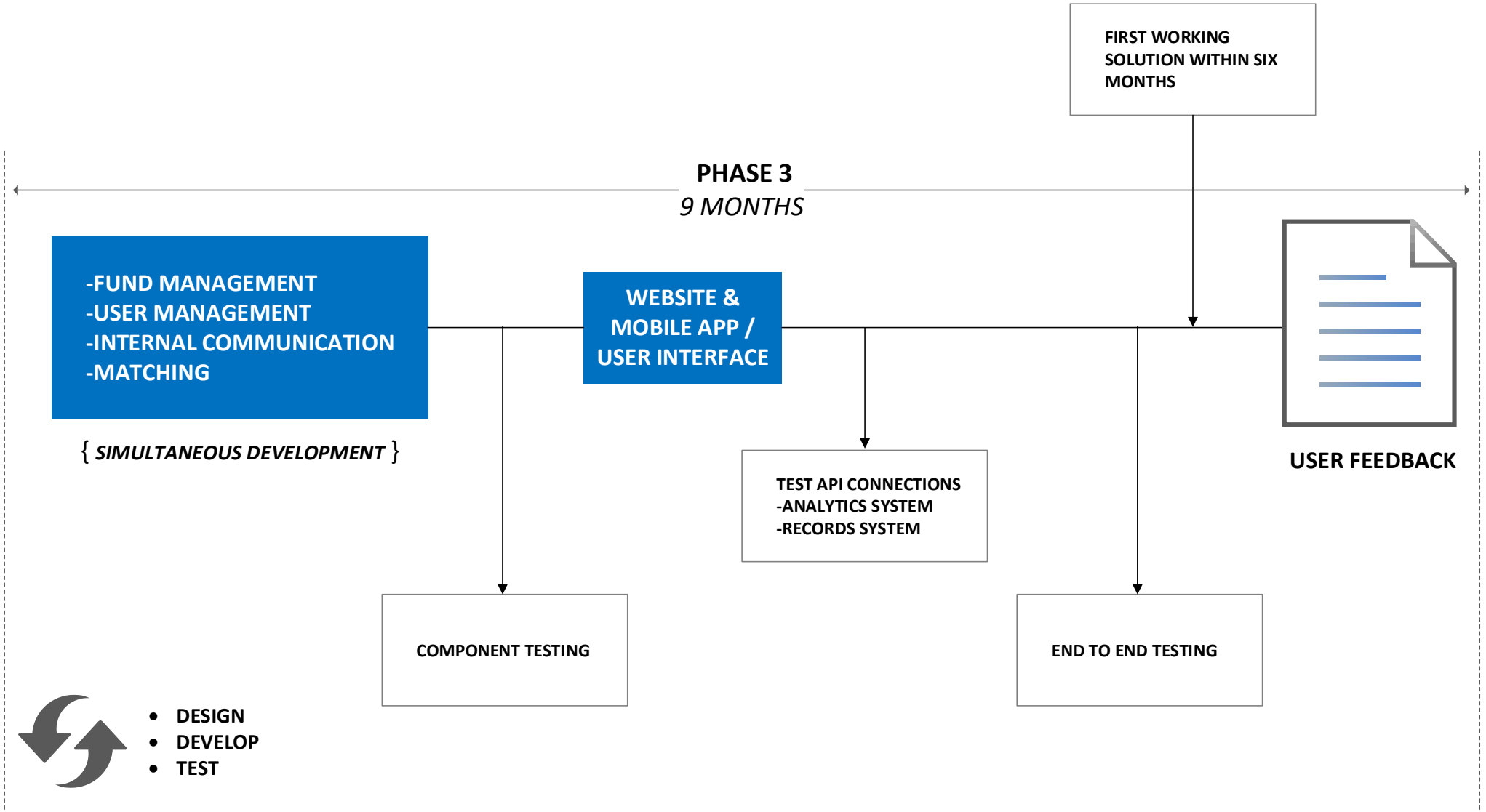


- **DESIGN**
- **DEVELOP**
- **TEST**



- **DESIGN**
- **DEVELOP**
- **TEST**

EXECUTION


FIRST WORKING SOLUTION WITHIN SIX MONTHS
PHASE 3
9 MONTHS
-FUND MANAGEMENT
-USER MANAGEMENT
-INTERNAL COMMUNICATION
-MATCHING
{ SIMULTANEOUS DEVELOPMENT }
WEBSITE & MOBILE APP / USER INTERFACE
USER FEEDBACK
TEST API CONNECTIONS
-ANALYTICS SYSTEM
-RECORDS SYSTEM
COMPONENT TESTING
END TO END TESTING
DESIGN
DEVELOP
TEST

EXECUTION

Implementation cost			
Type	Description		Annual cost
Azure Implementation Cost			$7,200.00
Azure Credits			$5,000.00
		Sub Total	$2,200.00
Human Resource Expense	The number of people needed	Average salary per year	Annual cost
Project Manager	1	$97,000.00	$97,000.00
Software Developer	6	$92,000.00	$552,000.00
UI Designer	1	$82,000.00	$82,000.00
Software Tester	3	$62,000.00	$186,000.00
		Sub Total	$917,000.00
		Total Cost for First Year	**$919,200.00**

Running Cost			
Type	Description		Annual cost
Azure			$13,072.31
Azure Credits			$5,000.00
		Sub Total	$8,072.31
Software Bought			$5,819.00
		Annual Total	**$13,891.31**

04

TECHNOLOGY CHOICES

Platform/System	Choices	Alternatives	Reasons for not choosing alternatives
Cloud	Microsoft Azure	AWS	Azure would offer a yearly $5,000 Azure credit to nonprofits. F2E can get discount if it uses windows virtual machines.
Record System	OpenText	Sharepoint	Sharepoint is more complex than OpenText
Payment System	Paypal	Google wallet	Google wallet is less popular and more expensive than Paypal for nonprofits
Analytics System	Google Analytics	PowerBI/ Tableau	PowerBI cannot publish reports and Tableau is more expensive; Google Analytics is free.
Identity management system	Active Directory & Facebook, Gmail, LinkedIn, Microsoft	Twitter	Twitter is less popular and less suitable than others we choose
Scheduling System	Calendly	Acuity	Calendly has more functions than Acuity in the basic plan
Inbound/outbound messaging system	SendGrid	GoDaddy	GoDaddy cannot be used in Azure
Corporate Donation Matching system	Double the donation	360MatchPro	360MatchPro is more expensive than Double the donation

LESSONS LEARNED

- Don't reinvent the Wheel
- Always explore better design

FUTURE WORK

- Languages support
- Online Help and Support Services

KIWI