



Sarah Holson (PM) & Junia Gabasa

Sponsor: Dr. Michelle Londa

Problem Statement

- The TXST Industrial Engineering program has seen a continuous decline in student enrollment since 2019 due to the introduction of two new engineering programs and the Covid-19 pandemic.

Project Deliverables

- Create a Critical Path Method (CPM)
- Update and revise ISoE Website information for IE
- Start a recruitment program with high schools to increase enrollment in the IE program

Objectives

Increase Increase IE enrollment & expose highschoolers to the different engineering fields

Send Send surveys to alumni & get their commitment to participate in recruiting

Determine Determine the critical path to complete the project

Update Update the IE website

Team Members



SARAH HOLSON
PROJECT MANAGER



JUNIA GABASA
DATA ANALYST

Undergrad Campus Admissions Report for Freshman Fall 2024 for week 16

Applicants				Institutional Admit				Institutional Deny				NSO Registration				Registered		
revYr	CurrYr	Diff	%chng	PrevYr	CurrYr	Diff	%chng	PrevYr	CurrYr	Diff	%chng	PrevYr	CurrYr	Diff	%chng	PrevYr	CurrYr	Diff
67	99	32	48%	46	69	23	50%	4	5	1	25%	5	10	5	100%	0	0	0

CPM

General Mathematical Model

Parameters

$I =$ set of Activities i
 $J =$ set of predecessors j
 $\delta_i =$ duration of activity i

Variables

$x_i =$ start time of activity i

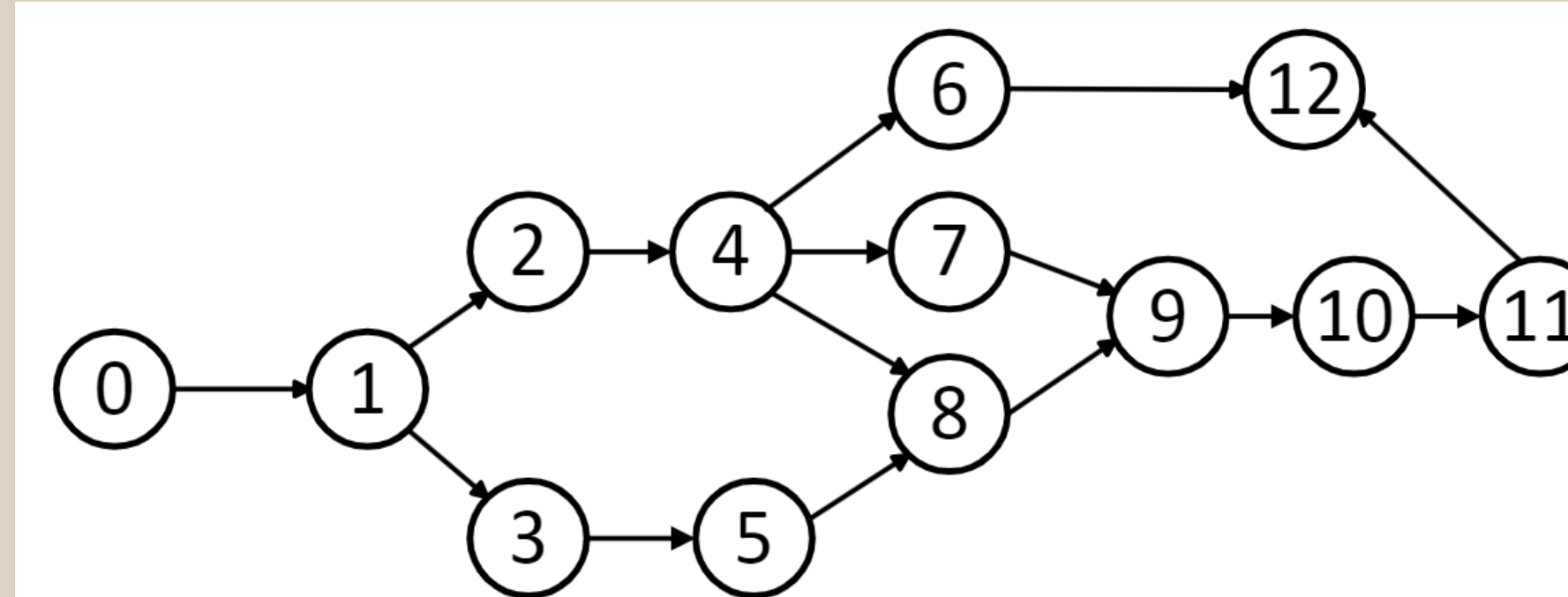
Objective Function

$$\min x_{12}$$

Constraints

$$x_i \geq x_j + \delta_j$$

where j is a successor of i



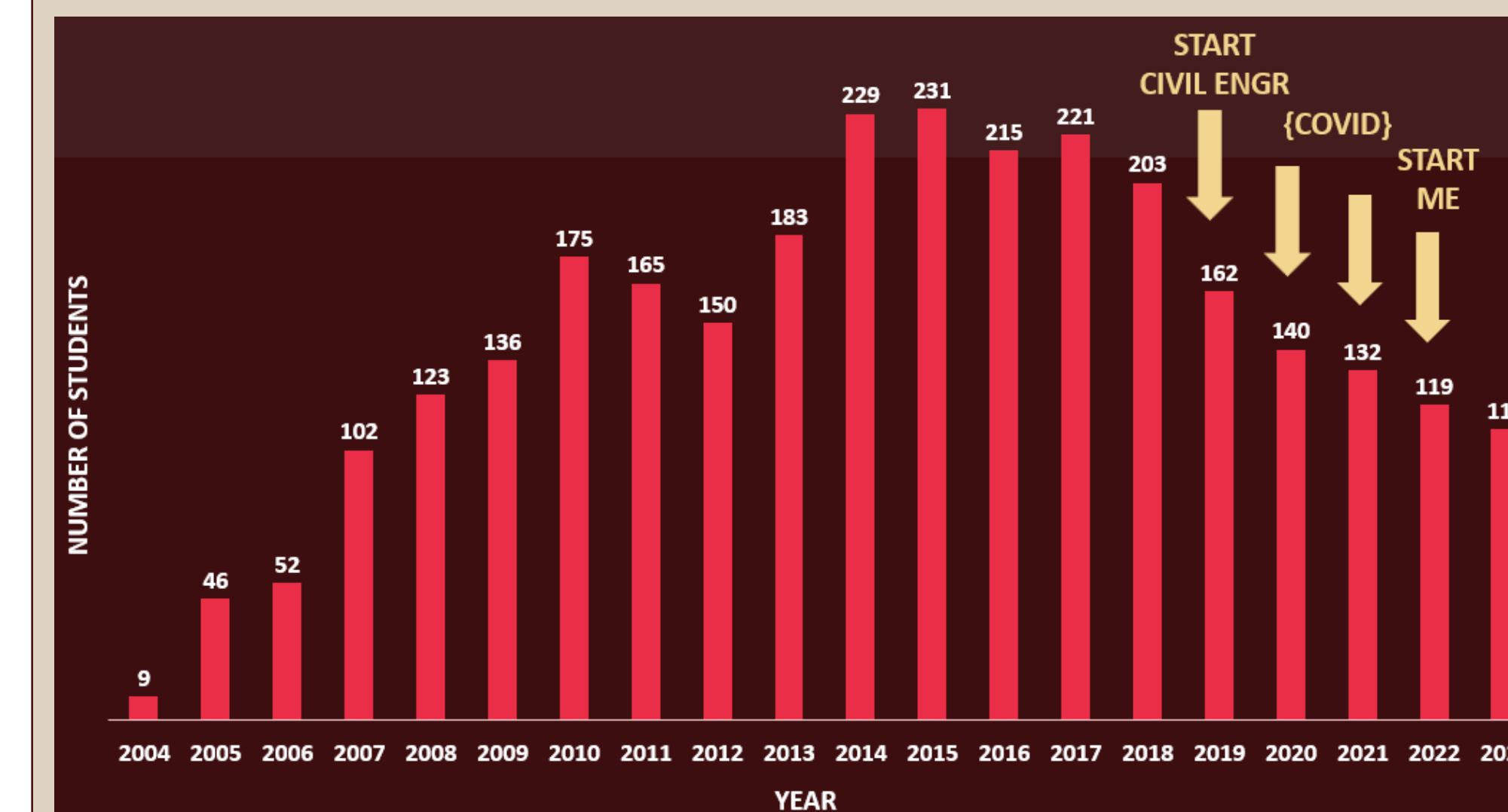
*Activity 0 and 12 are dummy activities

#	Activities	Predecessor	Duration (weeks)
1	Collect Alumni Surveys	-	3
2	Analyze alumni surveys	1	1
3	Send letter/survey to HS	1	1
4	Respond to surveys	2	2
5	Get HS commitments	3	1
6	Update list of alumni	4	3
7	Collect alumni videos	4	6
8	Determine alumni + HS availability	4,5	3
9	Create/Update HS presentation	7,8	2
10	Get approval for HS presentation	9	2
11	Present to HS	10	3

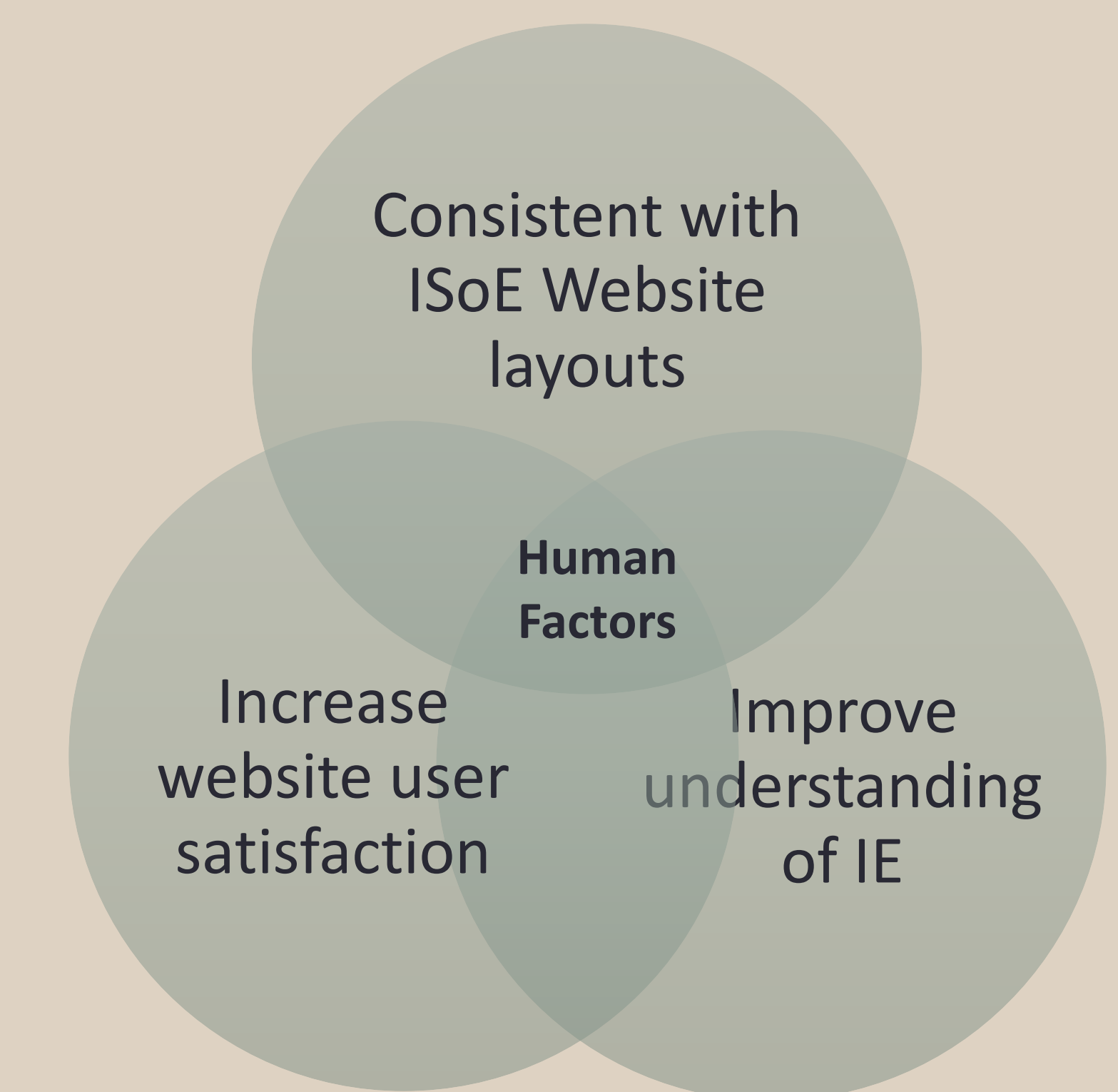
Website Enhancements

Before	After
Brief explanation of possible IE careers	An in-depth exploration of industrial engineers' roles and methodologies employed in real-world contexts.
Career opportunities list	A dynamic new dropdown menu showcasing a range of intricate job opportunities.
List of general engineer courses	Revised catalog featuring enhanced courses tailored for increased accuracy in IE standards.
Median annual wage \$88,950 May 2020	Median annual wage \$96,350 May 2022
115+ student enrollment Fall 2020	100+ student enrollment Fall 2023

Growth and Decline of IE Enrollment



Human Factors



Future Plans

- Based on the critical path, determine a schedule for future activities.
- Determine list of committed alumni and high schools
- Schedule recruiting events
- Create presentation for high school

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