SDLC OVERVIEW + CLIENT/STAKEHOLDERS

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Dr. Alison Murphy | IST 440

College of Information Sciences and Technology

Penn State University

- ✓ **Career Events**

- ✓ **SDLC Overview**

- ✓ **Planning Phase**

  - ✓ Problem Statement

  - ✓ Client/Stakeholder Identification and Communication

CAREER EVENTS

Access2Alumni

- Today, Wed 1/25 – Sign-up for a timeslot in Compass

- Resume reviews, career advice, etc.

Future Forum – College of IST Career Fair

- Tomorrow, Thu 1/26 – 10am-4pm

- 35+ companies specifically targeting IST/SRA students

SDLC OVERVIEW

SYSTEMS DEVELOPMENT LIFE CYCLE (SDLC) is …

… a structured process for **planning, analyzing, designing, implementing, supporting,** and **retiring** an information system for an organization.

[Tilly & Rosenblatt, 2016]

6 PHASES OF SDLC

| PLAN | ANALYZE | DESIGN | IMPLEMENT | SUPPORT | RETIRE |

6 PHASES OF SDLC

PLAN | ANALYZE | DESIGN | IMPLEMENT | SUPPORT | RETIRE

- Create **project team** & identify **roles**

- Summarize your **problem statement**

- Identify **key stakeholders**

- Understand the **context** of your problem and stakeholders

- Gather **user** and **policy requirements**

- Identify key **tasks**

- Establish project **timeline, budget**, etc.

6 PHASES OF SDLC

| PLAN | ANALYZE | DESIGN | IMPLEMENT | SUPPORT | RETIRE |

- Document **user requirements**

- Translate user requirements into **technical specifications**

- Model the **process**

- Model the **data**

- Evaluate **design options**

- Determine a **design strategy**

6 PHASES OF SDLC

| PLAN | ANALYZE | **DESIGN** | IMPLEMENT | SUPPORT | RETIRE |

- **Develop** and/or **configure** the system

- Establish the **data design** (field parameters and security mechanisms)

- Design/configure the **user interface**

- Discuss prototype or current "build" with stakeholders to get **feedback**

- Map out the **system architecture**

- Create **system documentation**

6 PHASES OF SDLC

PLAN	ANALYZE	DESIGN	IMPLEMENT	SUPPORT	RETIRE

- Create **testing documentation** that maps to user requirements

- **Test the system** and document test results (including fixing any issues)

- Create **training and/or implementation documentation**

  - *System Support procedures*

  - *System Use procedures*

- Present the **solution** to the user

- Provide a **proposal** for the next phase or for continued support of the existing system

6 PHASES OF SDLC

| PLAN | ANALYZE | DESIGN | IMPLEMENT | SUPPORT | RETIRE |

OUTSIDE THE SCOPE OF THIS CLASS

- Ongoing **maintenance** provided by IT staff

- Continuous **governance** of the system

- Ongoing **change control procedures** for any fixes or enhancements (which usually go through their own SDLC), including regressing testing

6 PHASES OF SDLC

| PLAN | ANALYZE | DESIGN | IMPLEMENT | SUPPORT | RETIRE |

OUTSIDE THE SCOPE OF THIS CLASS

- Incremental **shut-down** of the system

- **Change management**: All users properly notified and new processes and/or systems are in place ready to be used

- Archival or migration of the **system data**

- Archival of any **system documentation**

PLANNING

6 PHASES OF SDLC

| PLAN | ANALYZE | DESIGN | IMPLEMENT | SUPPORT | RETIRE |

- **Create project team & identify roles**

- **Summarize your problem statement**

- **Identify key stakeholders**

- **Understand the context of your problem and stakeholders**

- Gather **user** and **policy requirements**

- Identify key **tasks**

- Establish project **timeline, budget**, etc.

SUBMIT PLANNING BRAINSTORM

As a team, work on answering the questions we discuss in class

Open Canvas

In Assignments > "Planning: Problem Statement + Stakeholders"

- ✓ *Summarize your problem statement*

- ✓ *Identify your client and key stakeholders*

- ✓ *Understand the context of your problem and stakeholders*

Have <u>one</u> person from your team submit this <u>by the end of class</u>

It is NOT graded – Just for me to see where teams are

SUBMIT PLANNING BRAINSTORM

As a team, work on answering the questions we discuss in class

Not all projects are the same!

Some teams may not be able to
fully answer all of these questions just yet.

Focus on the questions you <u>can</u> answer.

Have <u>one</u> person from your team submit this <u>by the end of class</u>

It is NOT graded – Just for me to see where teams are

(1) PROBLEM STATEMENT

Problem Statement = Articulates an existing problem or issue that your client (or your team) has identified.

This statement does <u>not</u> propose a solution – Your user requirements and the analysis phase will help your team determine the right solution.

(1) PROBLEM STATEMENT - EXAMPLE

NOT GOOD   Reads like a user requirement, not a problem statement

IST Recruiting wants a Buzz-feed like website to allow high school students to take quizzes to see where they fit in the college.

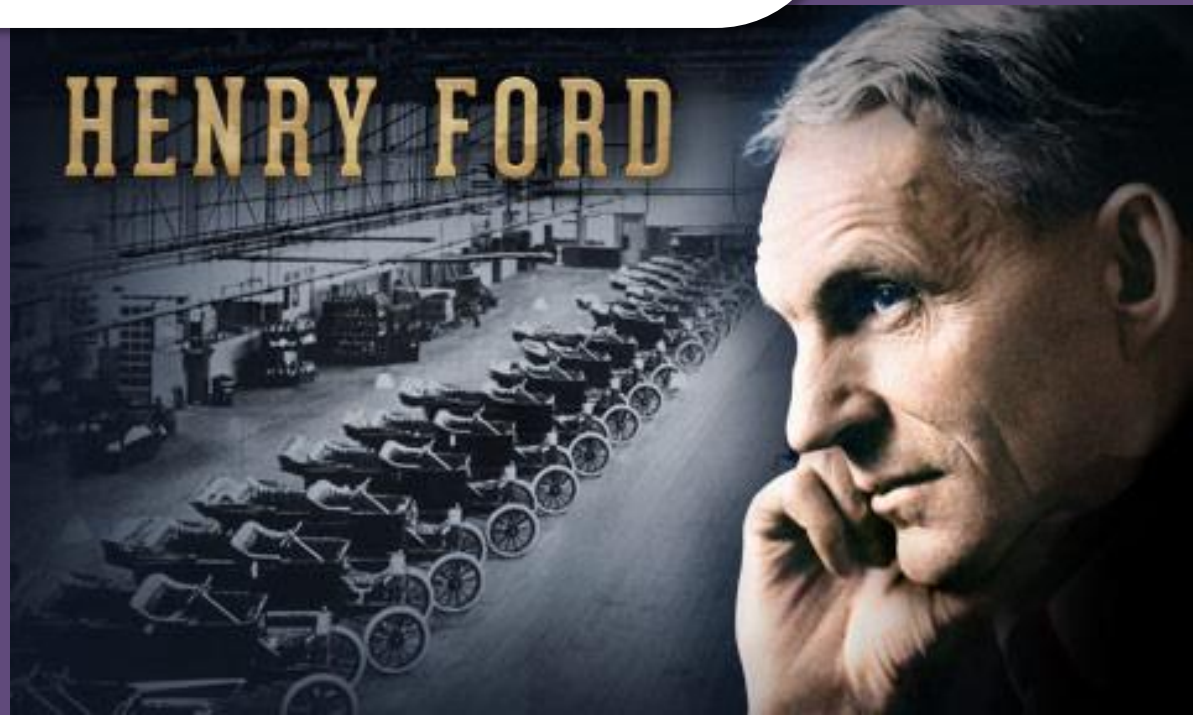**GOOD**   Identifies the problem, but leaves solution open to IT team

IST Recruiting believes that the existing IST website is not effective at engaging potential students in high school because it is difficult to find relevant information in a way that appeals to the younger generation

?

Why is it important to identify the problem, and <u>not</u> focus on the solution at this point?

(1) PROBLEM STATEMENT

You have to **understand the problem <u>before</u>** you can identify the **appropriate solution**

Your clients may not realize the most effective IT solution for their problem – That is **your job as IT professionals**.

…However, sometimes your client will still require the solution they think is best.

?

(1) How would you describe the problem or issue that your team is trying to solve?

Enter your draft problem statement in Canvas

(2) CLIENT & KEY STAKEHOLDERS

Client = Individual or group that you are directly working with to deliver a solution.

Stakeholder = Any other individual or group who could provide insight or requirements for the project, OR who has an invested interest in the project.

NOTE: Some of you may <u>not</u> have a direct client if it's your own problem/issue – So just identify the key stakeholders.

(2) Who are your client and key stakeholders?

Be as specific as possible.

Enter your list of people in Canvas

(3) UNDERSTAND THE CONTEXT

Brainstorm the **social** and **technical** systems of your client (or targeted client) organization.

Think of the 5 Information System components:

1) People
2) Processes

Social Systems

3) Hardware
4) Software

Technical Systems

5) Data

(3) UNDERSTAND THE CONTEXT

How can you get this information?

- Do some **online research** – Look up the company, website, competitors, etc.

- Draft a **list of questions** to ask the client/stakeholders or **activities you'll need to do** so that you can get this information

(3) What is the context of the client/stakeholder's organization
(5 components + questions or activities)?

Enter your context description in Canvas

FOR NEXT CLASS FRI JAN 27…

- ✓ Continue identifying stakeholders and exploring the context (research + questions)

We'll discuss:

- ✓ Contacting clients

- ✓ Team contract