TRANSPORTA UN SAKARU INSTITŪTS

Article Management System Project Presentation

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Computer Science

Project and Requirements management

Content

- Introduction
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- Conclusions
- References

1.Product Inception and Business Requirements

Study the product

- Delays and inefficiencies
- Lack of transparency
- Security Concerns
- Scalability Limitations

Create Business Requirements

- User Management
- Submissions
- Review Process
- Searchable Database
- Notifications

Similar solutions take 2-5 months of development depending on specific requirement from the client

2. Project Initiation

Fig 1. Scholar Stream logo (logoai, 2024)

Fig 2. Strategic solutions group logo (logoai, 2024)

Background

This project aims to develop a custom article management system to streamline the editorial workflow for academic publishers and scholarly journals. The system will eliminate the inefficiencies of email-based review processes, facilitating collaboration among editors, reviewers, and authors.

Goals

- Develop a platform for user registration, login, and profile management.
- Create functionalities for article submission with file upload capabilities.
- Implement a system for assigning reviewers, managing reviews, and facilitating communication.
- Establish a searchable database to organize and store submissions, reviews, and user information.
- Integrate automated email and/or in-system notifications for status updates.

Fig 3. A portion of Project charter

3. Defining product scope

ID	Name	Position	Interna/ External	Project Role/Tasks	Contact Information
1	Alan Richard	Project Manager	Internal	Project planning, execution, monitoring, communication	alan@email.com
2	Bill Evans	Sponsor from Scholar Stream	External	Project funding approval, championing within Scholar Stream	bill@email.com
3	Emily Grims	Product Owner	Internal	Representing user needs, defining product backlog items	emily@email.com
4	Clara Garcia	Senior Developer	Internal	Development, code reviews, technical expertise	clara@email.com
5	Ben Jones	Scrum Master	Internal	Facilitating scrum process, removing roadblocks	ben@email.com
6	Omar Romero	Head of Legal of Scholar Stream	External	Legal review of contracts, ensuring compliance	omar@email.com
7	Dr. Amelia Rose	Journal Editor	External	User, providing feedback during testing	amelia@email.edu

Table 1. A portion of Stakeholder list

Functional	Non-Functional
The system interface should be developed in English.	• System Design: The system will be developed using a Material Design Template.
User Roles and Access: Access to the system modules will depend on the roles assigned to each user.	• Interface Languages: The system user interface will be displayed in English.
User Management with: ■ Registration page ■ Login page ■ Reset password page	• System Security: The system should be GDPR compliant and a standard security pack should be developed.
Submissions with: ■ Submission form	• System Availability: The system should be accessible on the following web browsers: ○ Chrome 67 ○ Safari 11.1 ○ Edge 17 ○ Firefox 61 ○ Internet Explorer 11 ○ Opera 53

Table 2. A portion of functional and non-functional requirements

4. Project Planning

- Project Scope Planning

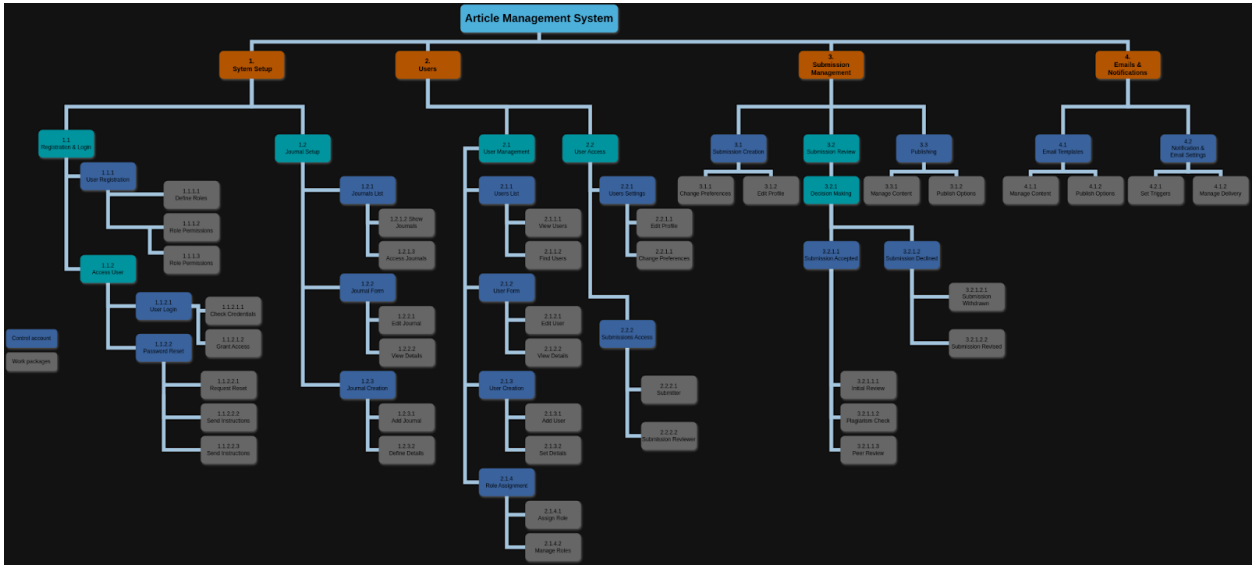

Fig 4. WBS for Article Management System

Table 3. WBS key dictionary

WBS-1.1.2	Access User: The user is able to access the appropriate account
WBS-2.2	User Access: What is the user able to access in their account

4. Project Planning

- Project Scope Planning

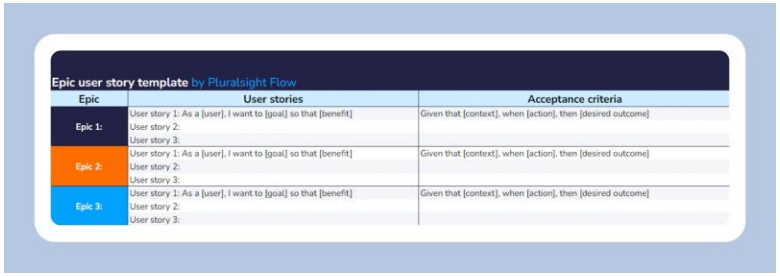

Fig 5. Epic user story template by Pluralsight

Table 4. A portion of the product backlog

Epic	User Story	Acceptance Criteria
E-14: WSB 3.2.1.1	**US-14-1(WBS 3.2.1.1.1): As a System Administrator or Editor,** I want to review submitted content initially **so that** I can ensure it meets basic formatting and quality guidelines before moving forward in the approval process.	**Given** a submission is uploaded to the system, the system should display the submission details (title, author, abstract) when the reviewer accesses the submission. The system should also display pre-defined criteria (e.g., formatting, adherence to topic) to allow the reviewer to assess the content. After assessment, the system should allow marking the submission as "Approved" for further processing or "Rejected" with feedback for the author. Additionally, the system should allow the reviewer to leave comments and suggestions for improvement.

4. Project Planning

- Project Schedule Management

Table 5. Table of first 6 out of 17 epics

Epic	Priority	Story Point(Fib.)
E-1. User Registration (WBS 1.1.1)	High	8
E-2. User Login (WBS 1.1.2.1)	Medium	5
E-3. Password Reset (WBS 1.1.2.2)	Low	5
E-4. Journals List (WBS 1.2.1)	Low	3
E-5. Journal Form (WBS 1.2.2)	Medium	5
E-6. Journal Creation (WBS 1.2.3)	High	5

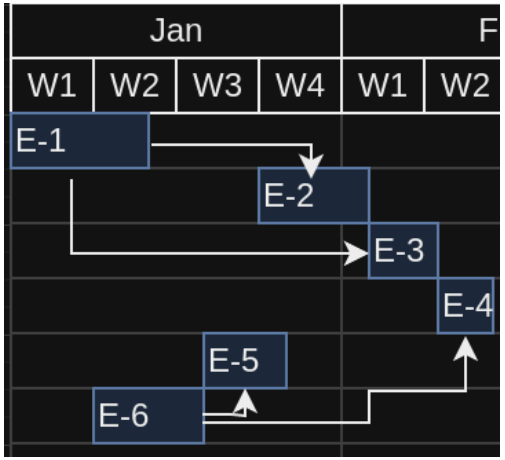

Fig 6. Gantt Chart for first 6 epics

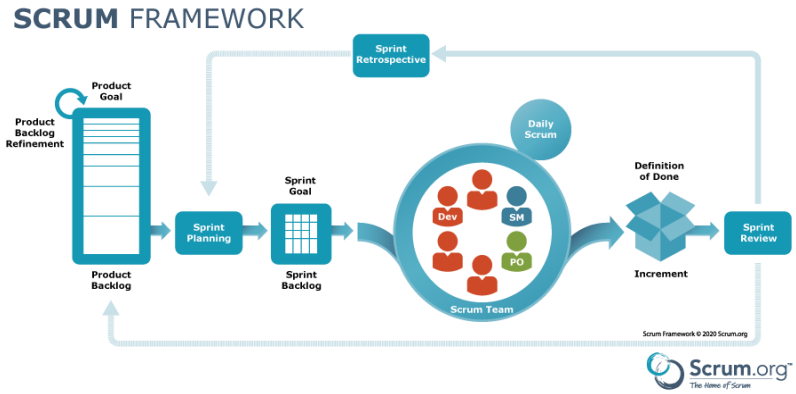

Fig 7. Sprint in the Scrum Framework from Scrum.org

4. Project Planning

- Project Quality Management

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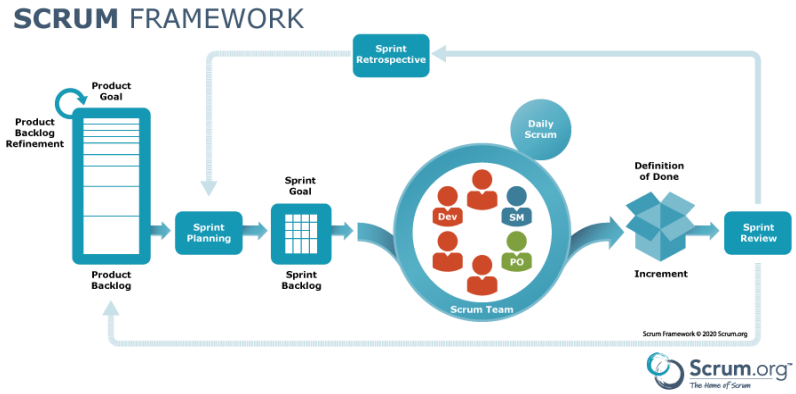
Fig 8. Definition of Done check



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4. Project Planning

- Project Risk Management

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Table 5. Risk identified for WBS 3.2.1.1.2

Risk ID	**Description**
R-14-2-1	Integration complexity with plagiarism detection service
R-14-2-2	Inaccurate plagiarism detection results
R-14-2-3	High cost of plagiarism detection service

4. Project Planning

- Project Risk Management

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Table 6. Probability and Impact Matrix for Risk of WBS 3.2.1.1.2

PROBABILITY	IMPACT: INSIGNIFICANT	MINOR	MEDIUM	MAJOR	SEVERE
ALMOST CERTAIN	MEDIUM	MEDIUM	HIGH	CRITICAL	CRITICAL
LIKELY	LOW	MEDIUM	MEDIUM	HIGH	CRITICAL
MODERATE	LOW	MEDIUM	R-14-2-3	MEDIUM	HIGH
UNLIKELY	R-14-2-1	LOW	MEDIUM	R-14-2-2	MEDIUM
RARE	VERY LOW	VERY LOW	LOW	LOW	MEDIUM

Table 7. Risk Response for WBS 3.2.1.1.2

Risk ID	Risk Response
R-14-2-2	**Mitigation:** Evaluate the chosen plagiarism detection service's accuracy and choose one that meets thresholds for flagging potential plagiarism based on the percentage and source of matching content.
R-14-2-3	**Mitigation:** Research pricing models of plagiarism detection services and choose one that fits the project budget. Consider alternative open-source options if available and appropriate.

4. Project Planning

- Project Cost Management

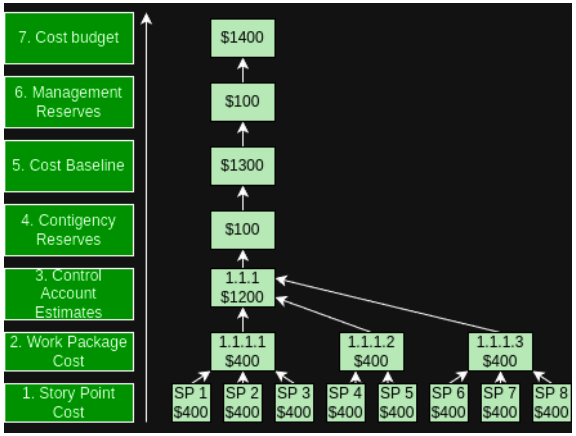

Fig 9. Budget for the control account WBS 1.1.1

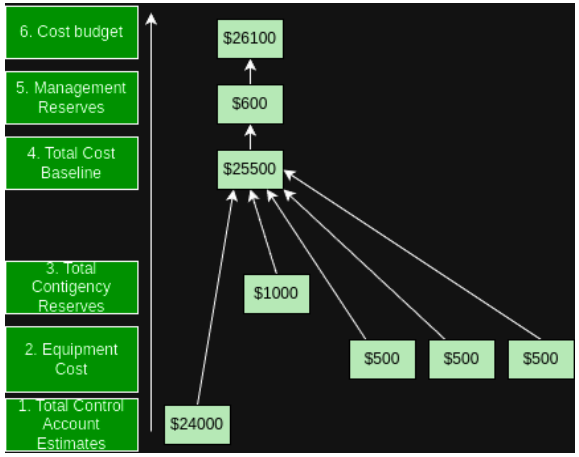

Fig 10. Budget for the total project

Rough order of magnitude estimate of 30%
Lower Estimate Cost: $18,270
Base Estimate Cost: $26,100
Upper Estimate Cost: $33,930

4. Project Planning

- Communication Management

Fig 10. Push communication with informal written in an email

4. Project Planning

- Project stakeholder Management

Table 8. Sample of Stakeholder Register

ID	Name	Position	Interna/ External	Project Role/Tasks	Contact Information	Power (1-5)	Interest (1-5)
1	Alan Richard	Project Manager	Internal	Project planning, execution, monitoring, communication	alan@email.com	5	5
2	Bill Evans	Sponsor from Scholar Stream	External	Project funding approval, championing within Scholar Stream	bill@email.com	4	5
3	Emily Grims	Product Owner	Internal	Representing user needs, defining product backlog items	emily@email.com	4	4
4	Clara Garcia	Senior Developer	Internal	Development, code reviews, technical expertise	clara@email.com	4	4
5	Ben Jones	Scrum Master	Internal	Facilitating scrum process, removing roadblocks	ben@email.com	3	4
6	Omar Romero	Head of Legal of Scholar Stream	External	Legal review of contracts, ensuring compliance	omar@email.com	4	2
7	Dr. Amelia Rose	Journal Editor	External	User, providing feedback during testing	amelia@email.edu	2	4

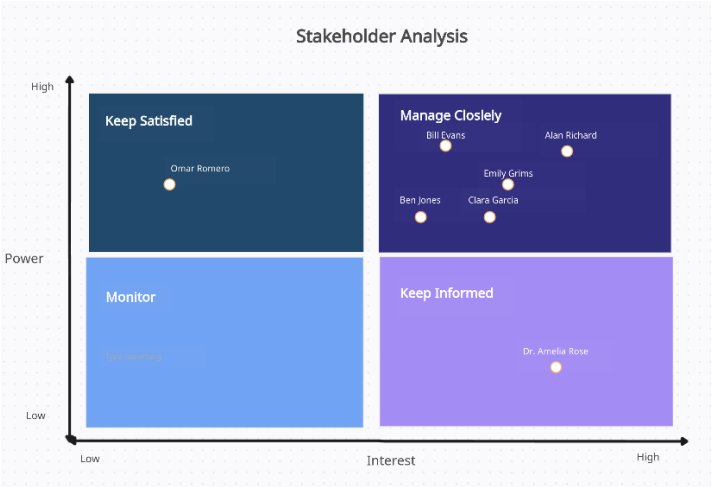

Fig 11. Stakeholder Analysis Matrix

5. Monitoring Strategies

SIMPLE RACI MATRIX TEMPLATE

R RESPONSIBLE
A ACCOUNTABLE
C CONSULTED
I INFORMED

PRIORITY	STATUS	User Story	1. Alan Richard	2. Bill Evans	3. Emily Grims	4. Clara Garcia	5. Ben Jones	6. Omar Romero	7. Dr. Amelia Rose
Medium	On Hold	User Story 14-1(WSB 3.2.1.1.1)	C	R	R				
High	Needs Review	User Story 14-2(WSB 3.2.1.1.2)	C	R	R			A	
High	In Progress	User Story 14-3(WSB 3.2.1.1.3)	C	R	R	C			I

Fig 12 RACI matrix for 3 User Stories using Smart Sheet Template

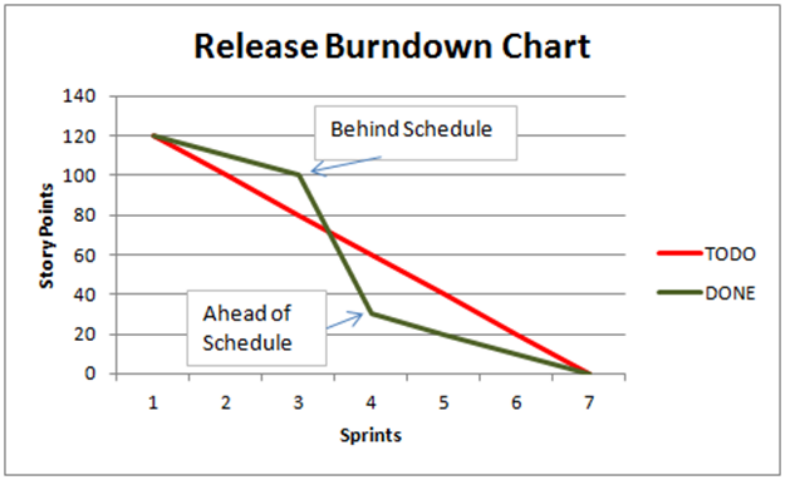

Fig 13 Example Release Burndown Chart from Word of Agile

5. Monitoring Strategies

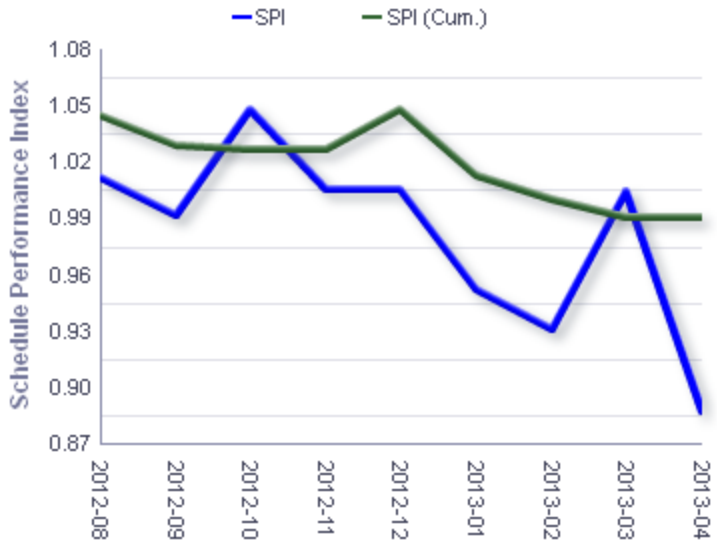

Fig 14. SPI chart from Oracle

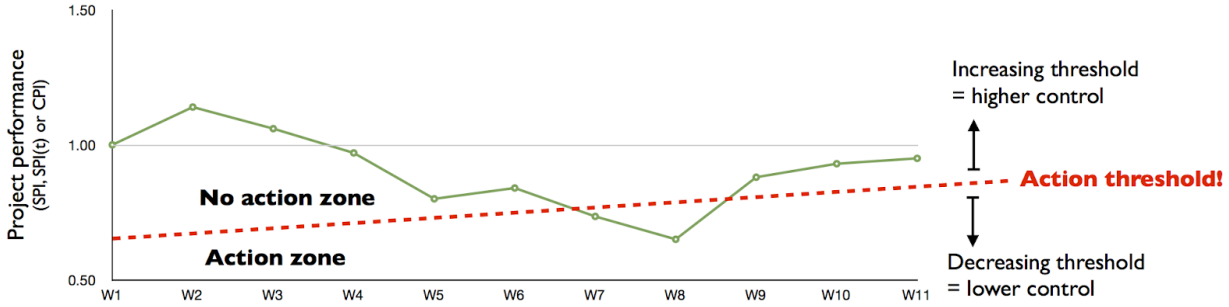

Fig 15. Action Threshold on a CPI/SPI a chart from pmknowledgecenter

Conclusions

- How to plan for a project
- SCRUM has systems built in for project management
- Better understanding for a complex solution and breaking it down to be manageable

Questions?

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