



FIT2002 IT Project Management

Assignment Three

Chrono Nexus

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Deliverable 1. Agile Project Foundations

Task 1.1: Project Vision and Initial Requirements

- **Refine Business Vision:**

Chrono Nexus will revolutionise engagement for PixelForge's players with an immersive DLC combining time-travel mechanics with fantasy and historical elements. By empowering players to influence historical events through branching storylines, the project directly aligns with PixelForge's objectives of increasing W1 retention by 30%, M1 by 25% and M3 by 10%. Chrono Nexus will bring in a projected \$1 million revenue increase over the subsequent 18 months, solidifying PixelForge's console-gaming-market positioning.

- **Problem Statement:**

Players do not have sustained engagement with PixelForge's existing releases (low retention rates). This is due to lack of fresh content and limited player agency in influencing game narratives result in decreased replayability and player satisfaction. Chrono Nexus redresses this, enabling players to journey across time, change the game story with their choices, and explore richly-detailed historical places, all fulfilling player desire for better control of/ immersion in their gaming experience.

- **High-Level Requirements:**

Time-Travel Mechanics: Allow players to seamlessly travel between different historical periods, enhancing exploration and gameplay variety.

Benefit: Players like Alex (a history enthusiast) can experience, even influence, various eras, increasing immersion and satisfaction.

Branching Storylines: Implement narratives where player choices significantly affect the game's outcome.

Benefit: Jamie and other players who value agency enjoy personalised gaming experiences, incentivising them to replay Chrono Nexus compared to other market offerings with limited personalisation.

Historical and Fantasy Integration: Blend accurate historical settings with creative fantasy elements.

Benefit: Appeals to both history buffs and fantasy fans by offering authentic environments enriched with imaginative content.

Enhanced Character Customisation: Offer avatar customisation with historically accurate attire and equipment.

Benefit: Players feel more connected to the game world, satisfying those who value personalisation.

Interactive Historical Figures: Real-life characters are present and can be influenced by players.
Benefit: Offers educational entertainment, attracting players interested in history and storytelling.

In-Game Analytics Tools: Data tracking tools for player engagement, choices, and retention metrics.

Benefit: Captures actionable data to improve game updates, and future DLC, with, making sure they align with player preferences.

Task 1.2: Scrum Persona Development

Persona 1: Alex Johnson



- **Description:** Alex is a 28yo historian and Melburnian, who chooses story-rich games accurate to history. Tech-savvy, though he prioritises ease-of-use.
- **Goals/Needs:** Prefers immersive games that combine educational value with entertainment. Historical events presented in-game should be interactive, instead of passively displayed to the player.
- **Frustrations/Pain Points:** Dislikes games that lack historical authenticity or offer limited influence over narratives. Frustrated by linear gameplay.
- **Feature-Persona Connection:** Both the **Interactive Historical Figures** and **Time-Travel Mechanics** afford Alex access across various historical periods, enhancing both enjoyment and educational value.

Persona 2: Jamie Chung



- **Description:** Jamie is a 22yo graphic design student and Sydneysider, as well as an avid gamer valuing agency, creativity and personalisation in games.
- **Goals/Needs:** Prefers games offering deep customisation and meaningful choices affecting the game world. Enjoys exploring different outcomes.
- **Frustrations/Pain Points:** Fed up with linear games presenting limited personalisation. Frustrated by choices that are unimpactful on the storyline.
- **Feature-Persona Connection:** The **Branching Storylines** and **Enhanced Character Customization** features cater to Jamie's desire for agency and personalization, providing a unique and engaging experience.

Task 1.3 Journey Mapping

Stages	Steps	Touchpoints	Pain Points	Ideal Journey Improvements
Stage 1: Awareness & Consideration	Jamie learns of Chrono Nexus through her socials and online friends. Intrigued by the promise of player agency and customisation. - She navigates to the game site, curious about the customisation/ player agency offered	Game site, ads on her social platforms, game website, word-of-mouth	Skeptical of player choices' impact on the game storyline	Focus heavily on the unique branching mechanics and personalisation in the marketing
Stage 2: First Interaction	In-game, Jamie starts with the character customisation menu, keen to customise her avatar.	Game interface, main menu	Complexity of menus, combined with lack of guidance, might confuse first-time players	Make guided tutorials of main menu, and have tooltips appear next to buttons for easier navigation
Stage 3. Engagement & Problem Solving	Chooses her class (eg: noblewoman, warrior, advisor), and chooses from voice actors' recorded voice types. She wonders how her choices will affect storylines.	In-game decisions, customisation menu	Uncertainty about long-term impact of choices; possibly overwhelmed from range of decisions	Provide clear indicators or hints about the consequences of choices
Stage 4. Decision Point	Evaluates if her choices truly matter. Decides whether to continue playing and recommend the game to friends based on satisfaction.	Game feedback, achievements, storyline progression	If she perceives her choices' impacts as minimal, she may not play regularly, hurting player retention	Ensure choices visibly alter the game world; offer immediate feedback on decision impact

Deliverable 2. Agile Planning and Sprint Allocation

Task 2.1: Develop a Comprehensive Product Backlog

The Prioritisation Method is MoSCoW, and the Effort Estimation Technique is Planning Poker.

Epic	Feature	User Story	Priority (MoSCoW etc.)	Estimated effort (Story Points)
Epic 1: Time-Travel Mechanics	Seamless Era Transition	Let me traverse across different historical periods seamlessly, so I can explore various eras without interruption.	Must Have	8
	Time Paradox Prevention	Make sure there are no paradoxes when I alter historical events, so the storyline stays coherent.	Should Have	5
Epic 2: Branching Storylines	Multiple Endings	My choices should trigger different game endings, for replay value	Must Have	8
	Decision Impact Indicators	To see how my choices affect the story, I want hints that inform my decisions but that don't spoil the story	Could Have	3
Epic 3: Historical and Fantasy Integration	Authentic Historical Settings	Historical sites must be explorable and true-to-history, so I can feel immersed in the past.	Must Have	5
	Fantasy Elements	Fantasy elements should have more history integration, for more exciting gameplay.	Should Have	5
Epic 4: Enhanced Character Customization	Historical Attire	I want to customise my character with period-specific clothing, so that I can feel part of the era.	Could Have	3
	Historical Accuracy of Equipment Upgrades	My equipment upgrades/ advancements should adhere to technological advancements of the time	Should Have	5
Epic 5: Interactive Historical Figures	Historical NPC Interactions	I want to interact with historical figures so that I can influence historical events.	Must Have	8
	Educational Content	I want to learn more about each era through voiced-over historical information	Could Have	2

Task 2.2: Strategic Sprint Allocation

Dependencies and Pain Points:

Dependencies: Time-travel mechanics must be established in Sprint 1 to enable branching storylines in Sprint 2.

Pain Points Addressed Early: Prioritising core functionalities mitigates foundational issues that could affect later features.

Adaptability:

Buffer Time: A 10% buffer each sprint for ad-hoc scope changes.

Flexibility: If new critical requirements arise, less essential features (like character customisation) will be deferred.

Critical Analysis and Adjustments:

Risks: Making time-travel mechanics seamless might require more time.

Mitigation: Monitor time-travel mechanic progress closely, to reschedule subsequent sprints for any delays

Gaps: Uncertainties in effort estimation for advanced features.

Resolution: Conduct spike solutions or prototype testing to refine estimates and reduce uncertainty.

Section	Example
Sprint Allocations	Sprint 1: Epic 1 - Time-Travel Mechanics (Core Functionality) Sprint 2: Epic 2 - Branching Storylines (Core Functionality) Sprint 3: Epic 3 - Historical and Fantasy Integration (User Experience Enhancement) Sprint 4: Epic 5 - Interactive Historical Figures (Narrative Enhancement) Sprint 5: Epic 4 - Enhanced Character Customization (Polish and Final Features)
Justification & Trade-offs	Sprint 1 prioritises time-travel mechanics, foundation to other features. <ul style="list-style-type: none">• <i>Trade-off:</i> Delays customisation features to prioritise core gameplay. Sprint 2 builds off core mechanics to introduce branching storylines (targeting player engagement) Sprint 3 enhances immersion through authentic settings, improving overall user experience. Sprint 4 adds depth with interactive historical figures, enriching the narrative. Sprint 5 finishes with customisation options for character and equipment, enhancing personalisation before release.

Task 2.3: Sprint 1 Execution Plan

Category	Description
Objective	Code/ animate the time-travel mechanics with seamless transitions between eras, redressing the pain point of lacking gameplay variety
Scope	<p>User Story 1.1.1: I want to venture across different historical periods without interruption.</p> <ul style="list-style-type: none"> ● Acceptance Criteria: <ul style="list-style-type: none"> ○ Time-travel has a maximum loading time of 5s. ○ Time-travel animations do not lag ○ Each era loads assets with correct resolution ○ No critical bugs during time transitions. <p>User Story 1.2.1: No paradoxes should happen when I alter historical events, for storyline coherence.</p> <ul style="list-style-type: none"> ● Acceptance Criteria: <ul style="list-style-type: none"> ○ Code prevents actions that would start paradoxes. ○ Players are warned when attempting paradox-inducing actions..
DoD	<p>Code is peer-reviewed, then merged into the main branch. Unit/ integration tests have a 100% pass rate. Performance benchmarks (like transitions completing within 2 seconds) are hit Accepted by stakeholders during the sprint review.</p>
Capacity Alignment	<p>Team Velocity: 16 Story Points/ sprint. Story Points for Sprint 1: 13 Buffer: 3-point (19%) buffer.</p>

Sprint Review:

We will demonstrate the Time-Travel's:

1. Smooth animations for transitions between historical periods.
2. Loading of different eras' environments with the correct assets and resolution.

We will collect feedback on:

1. Whether the mechanics are glitch-free.
2. Player immersion level and whether the transitions enhance gameplay.
3. Loading times and system performance during transitions.

Feedback will be collected through:

1. Q&A Sessions for stakeholders to ask questions and contribute immediate input.
2. Feedback Forms on the artistic and technical aspects of the time-travel.

We will then:

1. Pinpoint mechanics' areas for refinement
2. Re-evaluate the product backlog to align with stakeholder expectations.
3. Modify user stories to incorporate new requirements.

Sprint Retrospective:

Discussion Points:

1. Successes like effective collaboration and meeting sprint goals.
2. Challenges, such as workflow bottlenecks or technical difficulties.
3. Efficiency of our daily scrums and communication methods.

Actionable Improvements:

1. Process Enhancements: Develop strategies for streamlining workflows and improving teammate coordination.

2. Risk Mitigation: Identify unforeseen risks encountered, so as to brainstorm how to better anticipate and manage them.
3. Capacity Planning: Relook and adjust our effort estimations, to better reflect team velocity.

Integrating internal reflections and stakeholder feedback will improve our development process, making future sprints higher-value for end-users and stakeholders. This aligns with Agile's adaptability, iterative development and continuous improvement.

Deliverable 3: Agile Reflection and Professional Development

Task 3.1: Reflection on Agile Game (LEGO/Agile Activity Experience)

Gibbs' Reflective Cycle:

Our team built a cityscape specific to client requirements, complete with transportation/ urban infrastructure and multiple buildings. There were numerous sprints, with each having sprint planning, execution, scrums, sprint reviews, as well as retrospectives.

I felt excited but overwhelmed by the open-ended nature of what we could build. The subsequent backlog of tasks was frustrating. After integrating client feedback into subsequent sprints, I felt satisfied.

What went well:

- The iterative approach allowed us to adapt our designs based on feedback.
- Team members contributed ideas freely, fostering a creative environment.
- Our Scrum Master prioritised the tasks in our backlog, which gave us project planning we wouldn't have otherwise.

What to improve:

- Time mismanagement meant rushed decisions/ incomplete features.
- Miscommunication meant duplicated efforts on the same building.
- **Scope Creep:** Despite the Scrum Master's backlog management, we could not finish every task.

Agile principles used:

- **Iteration:** Each sprint (of iterative development) allowed us to refine our cityscape, (continuous improvement).
- **Collaboration:** The team members all worked closely together to achieve the Scrum Master's high-value increments that met the DoD.
- **Flexibility:** The need to adapt to changing requirements and feedback emphasized the value of flexibility.

In daily scrums, the Scrum Master advised Scrum implementations, kept us focused on sprint goals, and resolved impediments (like Lego brick disorganisation).

Challenges and Solutions:

- **Task Assignments Misunderstandings.** We improved our daily stand-ups by clearly stating our tasks and any obstacles. And in future, I will make sure what we talk about in Scrum reviews is productive, to keep within the timebox.
- **Time Pressure.** We prioritised high-value features with MoSCoW, tackling 'Must Haves' first.
- **Scope Creep.** We revisited the product backlog throughout sprint planning to realign our focus.

As each different Lego construction had unique requirements (which could change), the work environment was complex. So I understood the need for the Scrum Master's empirical product planning and a team's adaptability.

Task 3.2: Personal Reflection and Career Development in Agile Roles

As **Scrum Master**, aligning objectives came naturally. I

- Helped teammates better articulate their points.
- Mediated tensions; 1 of my teammates was frustrated with a language barrier, so I suggested he show us the project terms he meant in the activity instructions
- Kept the team on track to meet sprint goals within the timebox.

I am now considering Scrum Master career opportunities. Accordingly, I can:

- Obtain certifications like the **Certified Scrum Master (CSM)**.
- In my current AI Prompt Engineering job, lead small teams of prompt reviewers, for practical Scrum experience.
- Connect, at networking events, with Scrum Master professionals to hear about their industry experiences.

I felt challenged though, trying to balance team autonomy with guidance.

Skills Developed:

- **Facilitation:** Improved my ability to guide team discussions and keep meetings focused.
- **Conflict Resolution:** I can now better mediate disagreements, finding collaborative solutions and restoring morale.
- **Adaptability:** I have a higher capacity to adjust plans based on feedback and changing circumstances.

References

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