**Group 6 Agile Paper Plane Project – Enhanced Outline for PowerPoint**

**🎯 Slide 1: Title Slide**

**Title:** *FlightPath: An Agile Paper Plane Sprint*  
**Subtitle:** Group 6 – Agile Group Project  
**Team Members:** Ashlynn, Andrea, Eduardo, Madhawa  
**Roles:**

* Andrea – Product Owner
* Ashlynn – Scrum Master
* Madhawa & Eduardo – Development Team

Speaker: Andrea (Product Owner)

Hi everyone, we’re Group 6, and today we’re excited to walk you through our Agile-based paper plane project, FlightPath. Our team includes myself as the Product Owner, Ashlynn as Scrum Master, and Madhawa and Eduardo as our developers. Over two sprints, we tackled two key goals—target accuracy and hang time using real Agile practices. Let’s dive in.

**✈️ Slide 2: Project Overview & Objective**

**Objective:** Build and refine a paper plane using Agile/Scrum methods over two sprints.  
**Goal:** Learn key Agile concepts—Sprint Planning, Retrospectives, Backlogs, etc.—through an iterative, hands-on process.  
**Tools Used:**

* **Asana:** Kanban Board
* **Lucidchart:** Flight & design diagrams
* **Paper & Stopwatch:** Plane materials & test metrics

🧠 *“We started with specific goals in mind and adapted along the way, just like in real Agile environments.”*

**Speaker: Ashlynn (Scrum Master)**

“The goal of this activity was to use Agile principles to design, test, and improve a paper airplane over two sprints. We used tools like Asana for our Kanban board and Lucidchart for visuals. We wanted to experience Agile in action—not just talk about it. That meant doing daily planning, backlogs, sprint reviews, and retrospectives to constantly improve our process.”

**Challenge:** “One challenge was resisting the urge to just build and throw a plane. Agile forced us to slow down, plan, and reflect after each step.”

**Opportunity:** “This structure actually made our planes and process better—we were able to measure progress and make smarter design decisions.”

**🧑‍🤝‍🧑 Slide 3: Roles & Team Dynamics**

**Original Roles (Sprint 1 Start):**

* Product Owner: Madhawa
* Scrum Master: Eduardo
* Developers: Ashlynn, Andrea

**Evolved Roles (By Mid-Sprint 1):**

* Product Owner: Andrea
* Scrum Master: Ashlynn
* Developers: Eduardo (E Series), Madhawa (M Series)

🔁 *“As we naturally gravitated toward different tasks, our team reshaped itself, reflecting the adaptability at the heart of Agile.”*

**Speaker: Madhawa**

“Initially, I was the Product Owner and Eduardo was the Scrum Master, but as the project progressed, we realized our strengths were elsewhere. Andrea naturally took over the vision and tracking, while Ashlynn helped us manage tasks and time more effectively. We self-organized—just like Agile encourages.”

**Challenge:** “Shifting roles mid-sprint caused some confusion in responsibilities.”

**Opportunity:** “But it also showed us how Agile allows teams to adapt organically to what works best.”

**📋 Slide 4: Backlog & Sprint Planning – Sprint 1**

**Sprint 1 Goal:** Accuracy (hit target within 10 cm)  
**Backlog Highlights:**

* Symmetry & folding quality
* Weight balance
* Wing proportion & angle
* Flap positioning

**Metric:** Target hit radius (bullseye poster system)  
✅ Created a ranking system: high vs low accuracy based on hit zone

🧩 *"Defining the backlog was our first challenge. It forced us to agree on what accuracy actually meant." – Ashlynn*

**Andrea**

“Sprint 1 focused on target accuracy. Our measurable goal was to hit within 10 cm of a bullseye using a paper plane. We created a backlog with five design tasks and one research task, then used a color-coded poster as our target system. I designed a ranking system to measure accuracy—each plane had to hit specific rings to qualify.”

**Challenge:** “As Product Owner, the toughest part was deciding which features mattered most—should we prioritize precision, balance, or build speed?”

**Opportunity:** “That decision-making process helped us really think like Agile product teams—choosing features that mattered most to our sprint goal.”

**🛠️ Slide 5: Build & Assembly – Sprint 1**

**Process:**

* Created multiple designs (Eduardo = E planes, Madhawa = M planes)
* Classic vs. boomerang-style models
* Challenges with syncing different visions
* Live documentation on Kanban board

💬 *“We had too many good ideas and not enough time to test them all thoroughly.” – Andrea*

**Speaker: Eduardo**

“During the build, we split our designs. I built traditional ‘E-series’ models, while Madhawa focused on more experimental ‘M-series’ planes. Each had different wing lengths and body weights. We folded, tested, and adjusted designs live while Ashlynn tracked our tasks in Asana.”

**Challenge:** There were creative differences—everyone had a vision for the ‘perfect plane.’ Coordinating that was hard.

**Opportunity:** But the variety gave us valuable test data and sparked ideas that helped us refine designs later on.

**🚀 Slide 6: Testing & Flight Performance – Sprint 1**

**Observations:**

* 6 prototypes tested once each
* E1 hit the black ring (most accurate)
* E4 failed to launch properly
* Too many designs, not enough tests

**retrospective:**

🎯 *“We focused too much on variety and not enough on refining a few designs for quality and repeatability.”*

**Speaker: Madhawa**

“We tested six prototypes—E1 to E4 and M1, M2. E1 hit the black ring, which was our best result. M-series planes had lower accuracy. We quickly realized that testing just once per prototype wasn’t enough to be reliable. But the process taught us a key Agile lesson: fail fast and iterate.”

**Challenge:** “Too many prototypes meant too little time per test. We were spread thin.”

**Opportunity:** “Now we had solid baseline data. E1’s accuracy made it a strong candidate for next sprint, and we learned to prioritize quality over quantity.”

**🔁 Slide 7: Sprint 1 Retrospective**

**Successes:**

* Clear target metric (accuracy)
* Hit some bullseyes
* Defined roles organically  
  **Challenges:**
* Time pressure
* Team unintentionally tackled future goals (hang time) too early
* Sprint Planning lacked strict focus

**Next Steps:**  
Use E1 as baseline in Sprint 2, shift goal to **hang time**.

**Speaker: Ashlynn**

“In our first sprint retrospective, we acknowledged we tried to do too much. Even though our goal was accuracy, we caught ourselves designing for hang time, too. We needed tighter focus and better backlog management.”

**Challenge:** “It was tough balancing multiple sprint goals and managing time across tasks.”

**Opportunity:** “But the retrospective helped us reset. We committed to better alignment and deeper testing in Sprint 2, which paid off.”

**🧠 Slide 8: Sprint 2 Planning – Hang Time**

**Sprint 2 Goal:** At least **5 seconds hang time**  
**Design Adjustments:**

* Eduardo: Modified E4 → E4.2 & created E5
* Madhawa: M2 → M1.1 & created M3

**Hang Time Strategy:**

* Reduce weight at tip
* Adjust wing length and paper distribution
* Stopwatch used to track results

**Speaker: Andrea**

“For Sprint 2, our goal shifted to hang time, with a metric of at least 5 seconds. Madhawa shortened the tip of M1.1 to reduce weight, and Eduardo redesigned E4 into E4.2 and E5 with wider wings for gliding. This time, we were more strategic: fewer planes, more tests per model.”

**Challenge:** We had to be more disciplined in defining success and controlling scope.

**Opportunity:** This planning was smoother and more informed by Sprint 1’s results, our backlog actually worked as a roadmap this time.

**🔧 Slide 9: Build & Assembly – Sprint 2**

**Iteration Highlights:**

* E5: Shorter wings, heavier body
* M1.1: Lighter tip  
  **Challenges:**
* Time again limited multiple flight tests
* Easier to fold but harder to stabilize

**Opportunities:**

💬 *“We knew what made planes glide, and we applied that learning fast.” – Ashlynn*

**Speaker: Eduardo**

“We applied what we learned. Lighter noses, broader wings, and clean folds helped stabilize the flight. M1.1 and E5 were our focus models. We minimized unnecessary complexity and emphasized repeatability.”

**Challenge:** Designing for hang time was tricky, some planes became too unstable.

**Opportunity:** But we adapted quickly, and every model got stronger with each tweak.

**📊 Slide 10: Testing & Results – Sprint 2**

**Key Planes & Results (3 trials each):**

| **Plane** | **Avg Hang Time (s)** | **Max** | **Min** |
| --- | --- | --- | --- |
| **M1.1** | **4.64** | **5.96** | 2.78 |
| E5 | 3.41 | 4.00 | 2.79 |
| M2 | 3.43 | 4.34 | 2.56 |
| Others | Ranged from 1.47 to 3.43 |  |  |

🏆 *“M1.1 was the top performer—light build and strong design.”*

(📽️ Consider embedding photos of M1.1 or E5 in action.)

**Speaker: Madhawa**

“We tracked three flight trials per prototype using a stopwatch. M1.1 had the best hang time—**5.96 seconds max, and an average of 4.64 seconds**. E5 also performed well. The data gave us confidence in our designs and helped justify our final product decision.”

**Challenge:** “Tracking precise time while also managing flight direction was tough.”

**Opportunity:** “But it gave us hard evidence—Agile thrives on measurable outcomes, and that’s what we delivered.”

A diagram of a process

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**💬 Slide 11: Reflections by Role**

**Andrea (PO):** Balancing scope was tough; wanted to test more thoroughly.  
**Ashlynn (SM):** Scheduling was our biggest challenge; relied on documentation to keep pace.  
**Eduardo:** Pointier planes seemed more accurate but required tweaks for stability.  
**Madhawa:** Learning to adjust based on feedback was key.

**Speaker: All (each say a line)**

* **Andrea:** “As PO, I learned that clarity in goal-setting drives stronger design choices.”
* **Ashlynn:** “As Scrum Master, it was about balancing creativity with timing and structure.”
* **Eduardo:** “For me, testing showed how small changes—like a pointed tip—can make a huge difference.”
* **Madhawa:** “I realized that good design isn’t about what looks good, it’s about what meets the goal.”

**🧩 Slide 12: Challenges & Opportunities**

**Biggest Hurdles:**

* Too many prototypes at once
* Limited test time
* Learning curve with Agile tools

**Biggest Wins:**

* Learned real Agile concepts in action
* Team adjusted and improved after each sprint
* Data-driven decisions improved design

**Speaker: Ashlynn (or team together)**

“This project taught us to think like Agile teams—iterate fast, plan smart, and adapt constantly. From a scattered first sprint to a focused second sprint, we grew not just as plane designers, but as collaborators. If we had more time, we’d run more tests, refine M1.1, and push for both hang time and accuracy. But we’re proud of how far we flew—literally and figuratively.”

**🎤 Slide 13: Final Thoughts & Retrospectives**

* We applied Agile through real iteration and role-based teamwork
* Prioritized feedback and metrics like in real development teams
* Shifted focus from *just building planes* to *building smarter*

🧠 *“Agile is less about getting it right the first time, and more about improving every time.”*

**Justification:**

1. **Goal Alignment Across Sprints**
   * In **Sprint 1**, your focus was on **accuracy**. While E1 was the most accurate, it lacked strong hang time performance in Sprint 2 (only ~2.7s avg).
   * In **Sprint 2**, your focus shifted to **hang time**, and **M1.1 far outperformed** all others with an average time of **4.64 seconds** and a high of **5.96 seconds**—exceeding your 5-second metric.
2. **Design Improvement & Adaptation**
   * M1.1 was a **refined version of M1**, specifically designed to reduce nose weight and increase stability and glide. This shows intentional learning and iteration from Sprint 1 to Sprint 2—an Agile best practice.
   * It successfully balanced **structural integrity** and **flight performance**.
3. **Repeatability & Consistency**
   * M1.1 consistently scored high in all three test runs, showing **stability**, not just a lucky outlier. That’s critical for final testing and presentation.
4. **Future Potential for Accuracy + Hang Time**
   * M1.1 was optimized for hang time but **can still be re-tuned for accuracy**—perhaps with minor nose adjustments or control surface tweaks (e.g., flaps or slight wing bends).
   * Unlike some E-series planes that sacrificed one goal for the other, M1.1 gives you **room to fine-tune for both**.

**🔧 Recommendation for Final Testing:**

To make M1.1 the ideal **dual-goal** performer (accuracy + hang time), try this:

* Slightly **increase front weight** using a small fold or paperclip (only if accuracy drops too much).
* Add subtle **elevator folds** at the back of wings to adjust flight path.
* Perform at least **3–5 more trial flights** and chart both metrics.

**📣 Final Statement for Presentation:**

“After evaluating all prototypes, we’ve chosen M1.1 for final testing. It delivered the best hang time results and offers flexibility to be fine-tuned for accuracy. It reflects our learning and iteration over both sprints—just like an Agile team should do.”

**Why M1.1 is the Best Choice**

A screenshot of a phone

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