MDC5310

Studio Part 1: Individual Project

Orbit

Your Schedule Revolves Around You



PHASE 1

Design Brief

01 CONCEPT STATEMENT

An **adaptive** weekly planning system built around the student's real life: it understands existing commitments through their calendar, **learns the routine** they want through onboarding, then creates a **balanced week** that can adapt when life changes.
Rather than requiring students to manually rebuild their schedules whenever a work shift or other commitment changes, Orbit identifies what can move, **suggests realistic alternatives**, and keeps the user in control of every decision.

02 DESIGN RATIONALE - TARGET AUDIENCE

- University students
- Casual workers
- Changing weekly schedules
- Balancing study + work
- Frequently replans their week
- Wants realistic balance

03 PRIMARY TASK

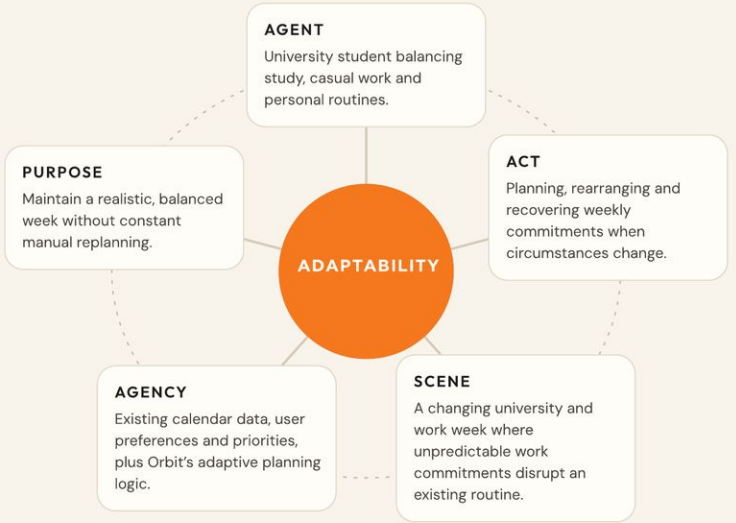
The PoC demonstrates how Orbit creates a balanced weekly plan from existing commitments and preferred routines, then adapts that plan when a fixed commitment changes.

01 **Understand** — Reads calendar commitments → 02 **Plan** — Generates a balanced week → 03 **Review** — Student accepts or edits → 04 **Adapt** — Re-plans around change

04 NEED STATEMENT

University students who rely on casual employment need a way to adapt their weekly commitments around unpredictable work schedules, because existing planning methods require constant manual adjustments and cannot keep up with changing priorities.

PENTAD



05 LEAD USER CONTEXT

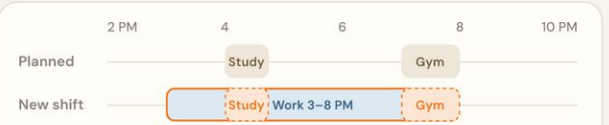
AGENT

A university student who also works casually, with availability that changes at short notice.

University · Casual work · Assignments · Fitness · Hobbies · Social · Rest

SCENE

Tuesday: the work shift changes to **3:00–8:00 PM**.



- Assignment Research and Gym now sit inside work hours.

06 TWO IXD PRINCIPLES

01 Immediate feedback

When a commitment changes, Orbit responds straight away. It names what changed and which activities are affected, so the student never discovers a clash on their own.

- "Work changes, Orbit adapts." · 2 overlaps flagged at once

Why it fits: change is the trigger for Orbit's core behaviour, so the response has to be visible the moment it happens.

02 Minimise memory load

Each suggestion keeps the whole decision in view: what changed, what is affected, where it moves and why. The student decides from the screen, not from memory.

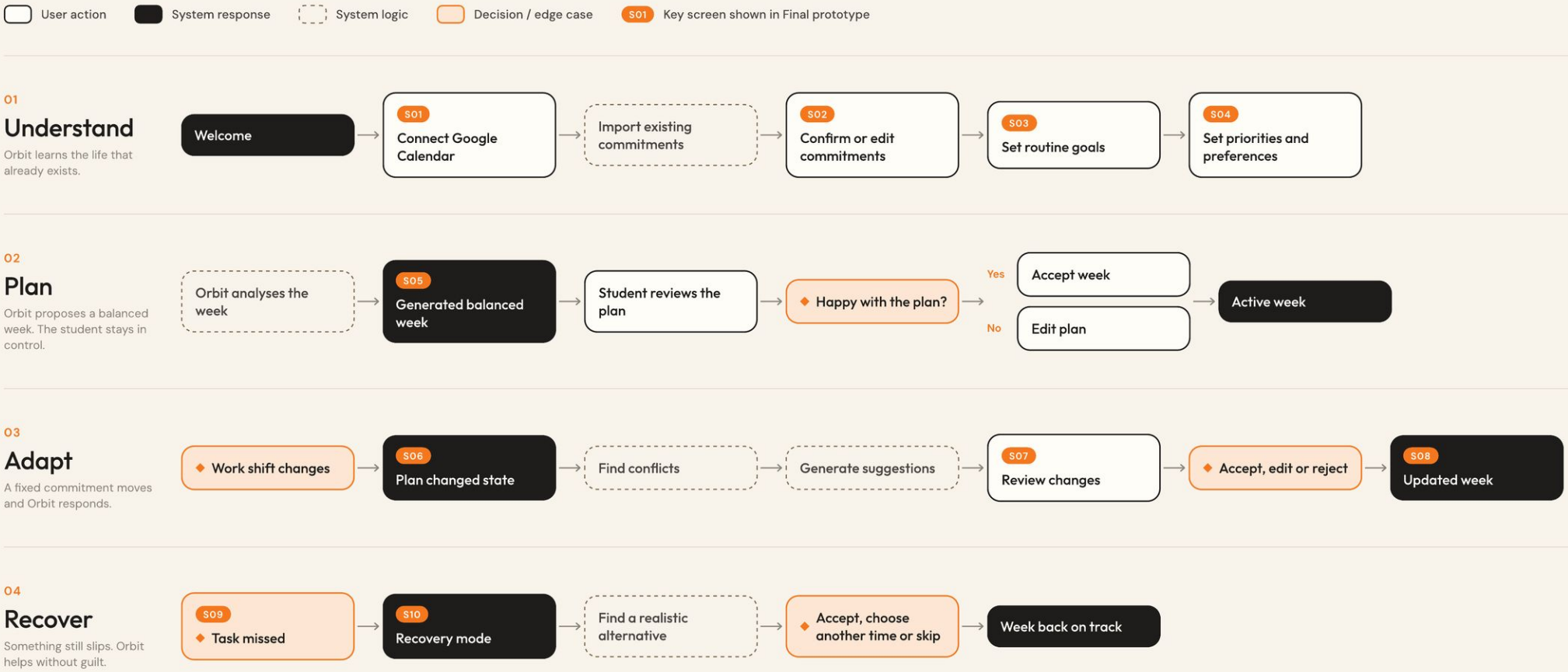
- Research → Wed 1:00 PM · "Wednesday afternoon is open…"

Why it fits: holding a whole week in your head while replanning is exactly the friction Orbit removes.

PHASE 2

Interaction flow

One continuous sequence: Orbit understands the student's week, plans a balanced routine, adapts it when work changes and helps recover when something is missed.



PHASE 2

Visual Concept

A COLOUR

Warm cream
#F8F4EC · Primary background

Charcoal
#1F1D1B · Type and structure

Soft orange
#F5781F · Actions, changes, suggestions

- University #E7E3F6
- Work #DCE8F2
- Flexible activity #EFE7DA
- Suggestion highlight #FDE7D4

Approximate share of the interface. Orange appears only on primary buttons, selected states, important notifications, progress and suggestions.

B TYPOGRAPHY

Aa Geom
Medium · SemiBold

Display, headings and numbers. Geometric and friendly, echoing the round wordmark.

Aa Outfit
Regular · Medium · SemiBold

Body, labels and interface text. Open, highly legible at small sizes.

Heading 32
Your week is ready.

Body 16
I built this around your commitments.

Label 12
THURSDAY · 3 ACTIVITIES

D MASCOT



Welcome — Onboarding
Planning — Balanced week
Thinking — Finding a fit
Adapting — Plan changed
Success — Changes accepted
Recovery — Missed task
Rest — Protected evening

The mascot sets the emotional tone, especially when the week changes or a task is missed. It appears small, at the top of a screen, and never competes with the plan.

E CORE VISUAL METAPHOR



01 Your life is the centre.
The student, not the calendar, sits in the middle of every plan.

02 Fixed commitments provide structure.
Classes and shifts form a stable inner ring that Orbit protects.

03 Flexible activities move around them.
Gym, study and hobbies sit on the outer ring and glide to a new slot when something changes.

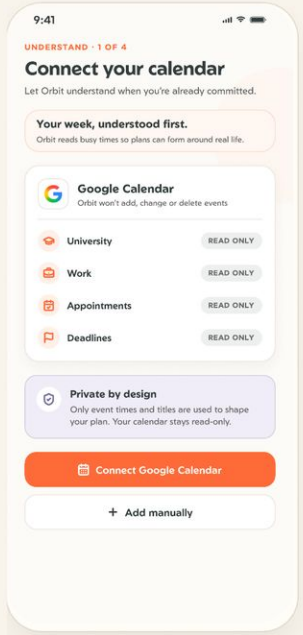
- Shown through motion, circular progress and curved paths. Never planets or space graphics.

PHASE 2

Final prototype: Understand and plan

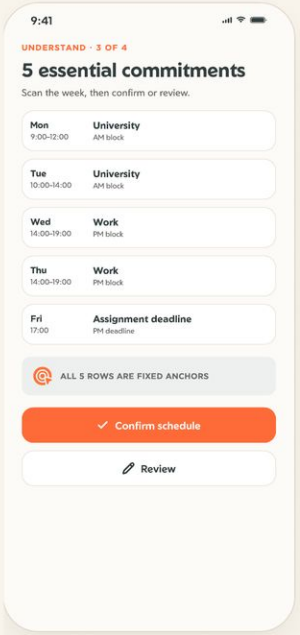
Key states only. Orbit starts from the life the student already has, learns the week they want, then proposes a balanced plan they stay in control of.

S01 Connect your calendar



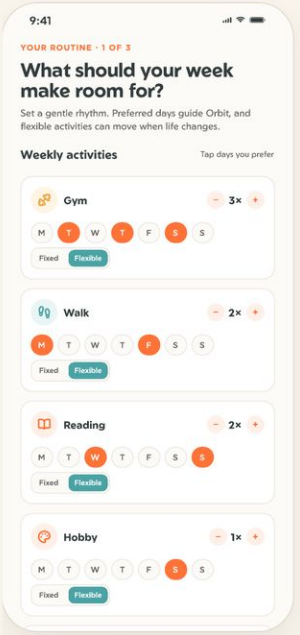
- Starts from real life: commitments come from Google Calendar, read-only.
- 'Add manually' keeps a path open for students without a synced calendar.

S02 Commitments found



- Imported events become five fixed anchors to scan and confirm.
- 'Review' lets the student correct anything Orbit misread.

S03 Routine preferences



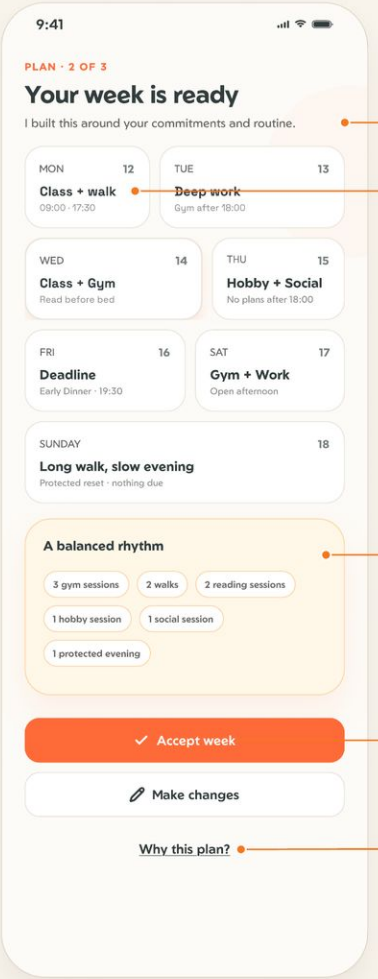
- Goals describe the week the student wants (Gym 3×, Walk 2×), not exact times.
- Preferred days guide placement; every suggested time still needs approval.

S04 Planning preferences



- Rules like protecting sleep and keeping an evening free keep the plan realistic.
- "Orbit will explain meaningful changes and wait for your approval."

S05 Generated balanced week



1. First-person voice: Orbit presents the plan as a companion, not a system report.
2. Each day is a short summary card instead of a dense calendar grid.
3. 'A balanced rhythm' confirms every routine goal found a place this week.
4. The plan is a recommendation: accept it as is, or make changes first.
5. 'Why this plan?' explains Orbit's reasoning on demand.

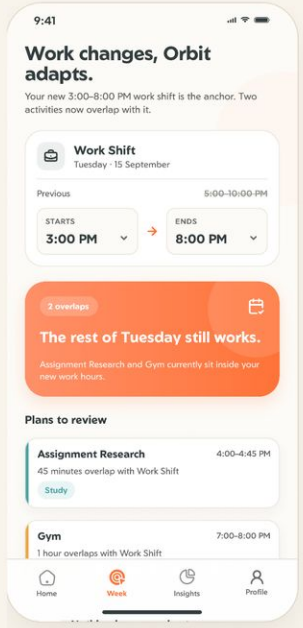
- Understand before planning: across S01–S04 the student never places a single activity. Orbit gathers commitments and preferences first, then does the placing.

PHASE 2

Final prototype: Adapt and recover

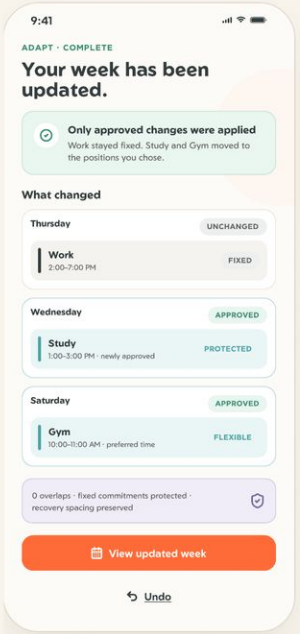
When work changes, Orbit detects the clash, explains its suggestions and waits for approval. When something is still missed, it offers one realistic way back.

S06 Disruption detected



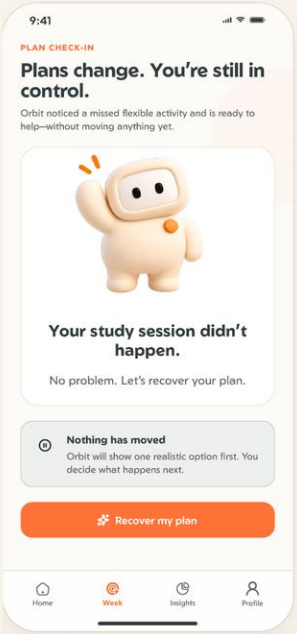
- Immediate feedback: the new shift becomes the anchor, with the previous time alongside.
- Overlapping activities are listed before anything moves.

S08 Week updated



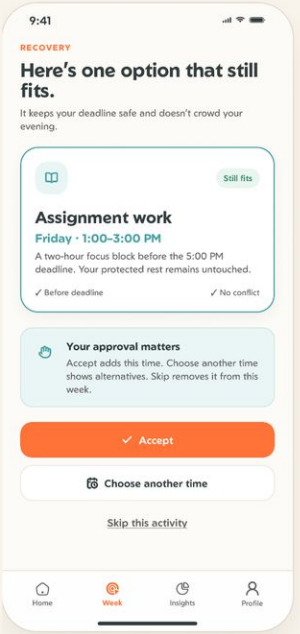
- Confirmation shows that only approved changes were applied.
- '0 overlaps' and Undo keep the result trustworthy.

S09 Missed study



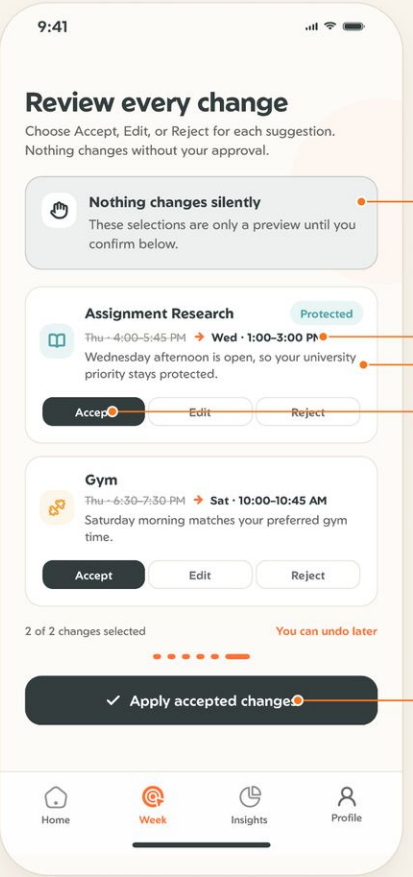
- Recovery, not failure: "Your study session didn't happen. No problem."
- Nothing moves until the student chooses to recover.

S10 Recovery option



- One realistic option first, keeping the Friday deadline safe.
- Accept, choose another time or skip this activity.

S07 Review every change



1. 'Nothing changes silently': every suggestion is a preview until confirmed.
2. Old time struck through, new time in orange, so the change reads at a glance.
3. Each move carries its reason, so the student never has to recall the whole week.
4. Accept, Edit or Reject per activity keeps the student in control.
5. One clear confirmation, and changes can be undone later.

- **Adapt with permission: Orbit detects, explains and suggests, but the student decides.**

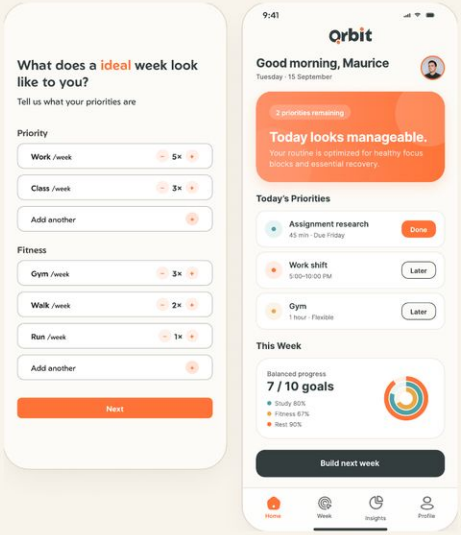
Edge cases also designed: a move that conflicts with work ("Thursday isn't open"), a rejected suggestion with alternatives, and a full week where Orbit recommends doing less.

PHASE 2

Design evolution

ITERATION 01 — Calendar-first

Traditional planner



FOCUS

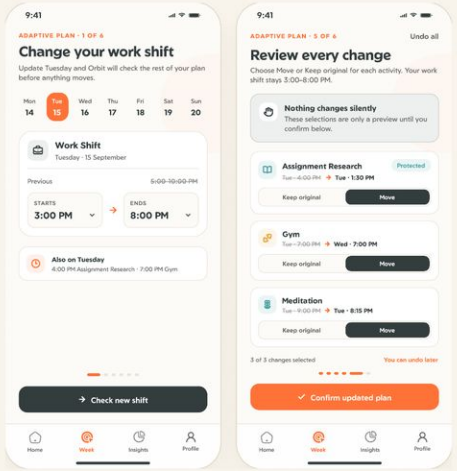
Combined a calendar, task list and routine tracking. Onboarding asked students to type in how often they work, study and train; home tracked streaks and goal percentages.

PROBLEM

It behaved like the calendars and to-do lists students already use. Replanning was still manual, and streaks added productivity pressure.

ITERATION 02 — Change-first

Adaptive planner



FOCUS

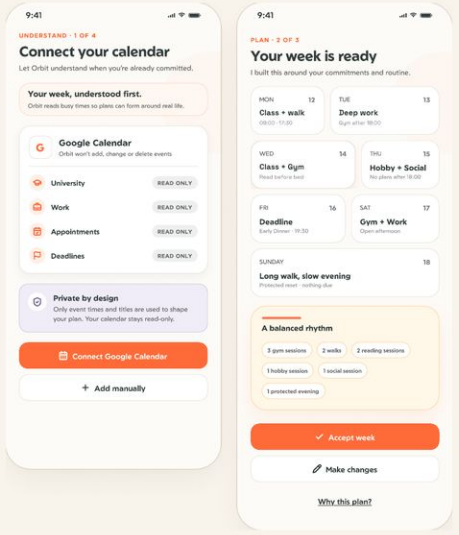
Shifted to one question: what happens when the student's week changes? Introduced fixed vs flexible activities, conflict detection and suggested moves.

PROBLEM

Commitments were still entered by hand, and choices were limited to Move or Keep original, with little explanation of why.

ITERATION 03 — Life-first

Understand → Plan → Adapt



FOCUS

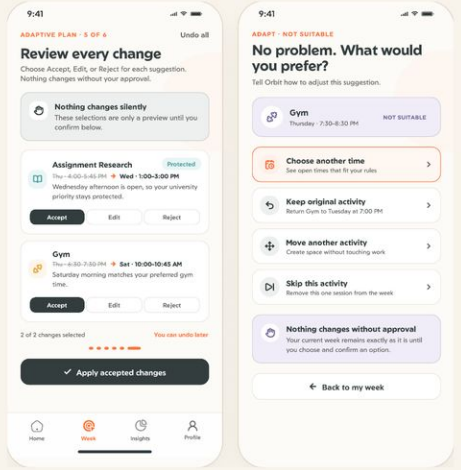
Google Calendar became the source of fixed commitments. Onboarding now asks what the student wants their week to look like, and Orbit generates the balanced week.

NEXT

Adaptation still needed to feel like the student's decision, not the system's.

ITERATION 04 — Student-first

User-controlled intelligence



FOCUS

Every suggestion became a recommendation with a reason. Students accept, edit or reject each change, and nothing applies until they confirm.

RESULT

Orbit acts as an assistant, not an autonomous system running the student's life.

PHASE 2

Key design decisions

DECISION 01

Google Calendar integration

WHY

Typing in classes and shifts recreates the very friction Orbit set out to remove. Reading the existing calendar, read-only, lets Orbit start from the student's real week.

DECISION 02

Orbit generates the routine

WHY

Students already know what they want from their week. They shouldn't have to work out where every gym session, walk or hobby fits, so Orbit proposes a balanced arrangement.

DECISION 03

The generated week stays editable

WHY

The student knows things Orbit doesn't. The plan is a recommendation, with Accept week, Make changes and Why this plan? always in reach.

DECISION 04

Fixed vs flexible activities

WHY

Not everything should move equally. Work, classes and deadlines are protected anchors; gym, walks and hobbies can move. This rule drives Orbit's system logic.

DECISION 05

Nothing changes without approval

WHY

Suggestions stay a preview until confirmed. Each comes with Accept, Edit or Reject, a reason and Undo, so Orbit assists without taking over.

DECISION 06

Recovery instead of failure

WHY

Real weeks are imperfect. A missed task triggers one realistic way back rather than a red mark or guilt, and skipping is a valid choice.

TESTING EVIDENCE

A participant was asked to review a planned week and respond to a work shift changing from 2:00–7:00 PM to 5:00–10:00 PM. They were able to identify the affected study and gym activities and understood Orbit's suggested alternatives. The test reinforced the need to make the "Your plan changed" state visually prominent and clearly explain why each activity was moved.

MY MANUAL WORKAROUND	WHAT ORBIT DOES INSTEAD	SCREEN
Checking several calendars for fixed commitments	→ Reads the existing Google Calendar, read-only	S01
Deciding where every gym session and walk should go	→ Generates a balanced week from stated goals	S05
Spotting clashes only after a shift has moved	→ Flags overlaps the moment work changes	S06
Rebuilding the week by hand	→ Suggests moves with reasons, applied only on approval	S07
Letting a missed task slide	→ Offers one realistic way to recover	S10

PEER FEEDBACK

What peers said, and what changed



During peer review, the main feedback focused on

Peers wanted to understand how Orbit decides which activities should move.

One recurring observation was that

The onboarding process asked the user to enter too much information before Orbit could generate a useful week.

Peers also identified that

Connecting Google Calendar could allow Orbit to directly fetch existing classes, work shifts and other commitments, making the setup faster and more realistic.

Response: based on this feedback, I changed the prototype by

Adding a Google Calendar connection during onboarding.

Allowing users to manually move activities.

Adding explanations for why Orbit recommends a particular time.

These changes helped clarify the relationship between the student's existing commitments, Orbit's generated routine and its adaptive replanning behaviour.

PHASE 2

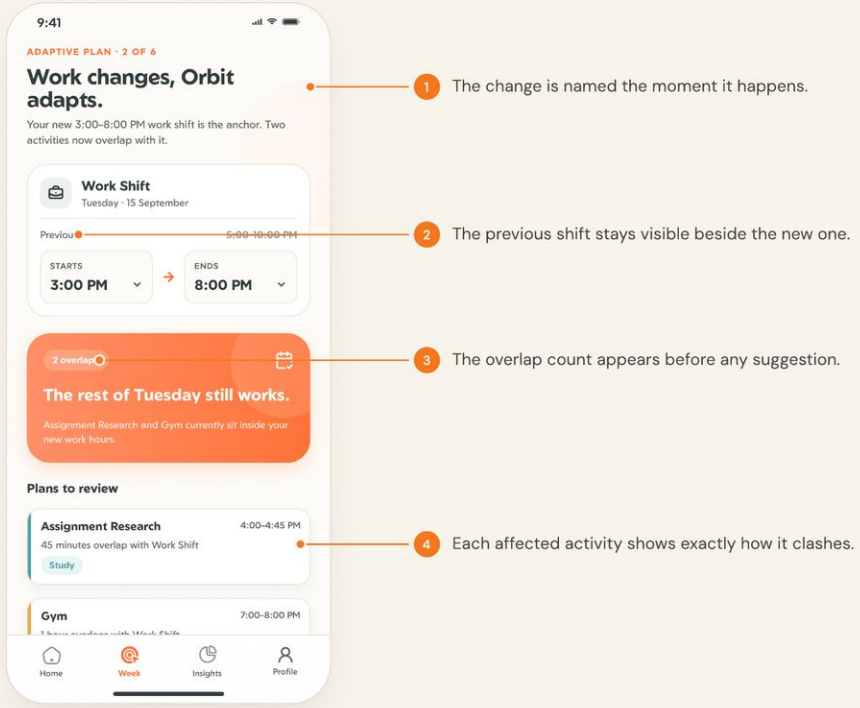
IxD principles in the final design

PRINCIPLE 01

Immediate feedback

When an existing commitment changes, Orbit immediately shows what changed and which activities are affected, before it suggests anything.

- Immediate feedback means the student never has to search the whole week to find out what a change broke.



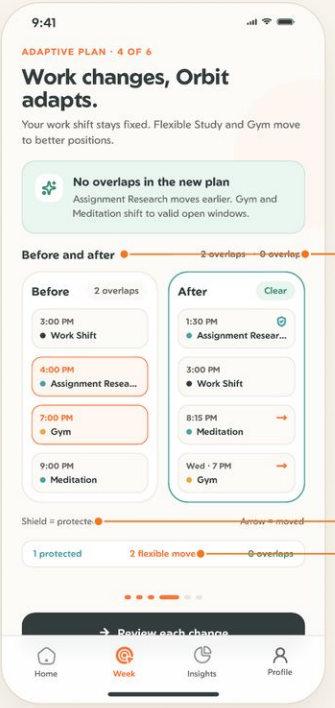
1. The change is named the moment it happens.
2. The previous shift stays visible beside the new one.
3. The overlap count appears before any suggestion.
4. Each affected activity shows exactly how it clashes.

PRINCIPLE 02

Minimise memory load

Orbit keeps the original commitment, the new commitment, the affected activities, the suggested alternatives and the reasons in the same interaction.

- The student doesn't need to remember their whole weekly schedule while deciding what should move.



1. Before and after sit side by side, so nothing has to be recalled.
2. The outcome is summarised in one line.
3. A simple legend: shield means protected, arrow means moved.
4. A closing summary of what stays and what moves.

PHASE 2

What Orbit became

THE PROBLEM

01
Personal friction
I kept rebuilding my week.

02
Manual workaround
Checking calendars and moving tasks by hand.

03
Underlying need
Adapt the week without constant replanning.

THE SYSTEM BEHAVIOUR

04
Orbit
An adaptive layer over existing commitments.

05
Understand
Reads the real week first.

06
Plan
Generates a balanced routine.

07
Adapt
Re-plans around change, with approval.

08
Recover
Helps the week back on track.

Orbit is not another calendar.

It is an adaptive layer between the student's existing commitments and the life they want to maintain.

Orbit began with a recurring personal workaround: manually rebuilding my week whenever changing commitments disrupted my plans. Through the Lead User process, this workaround became the basis for a system that understands existing commitments, generates a balanced routine and adapts that routine when circumstances change. The final prototype therefore focuses not on being another calendar, but on helping students maintain a realistic week when life does not go according to plan.



Your life is the centre.
Your schedule adapts around you.

Understand. Plan. Adapt. Recover.