

# **Design Brief III**

Context Scenarios & Requirements

Design challenge II: Change

*Punctuality*

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# 1 Introduction

During the previous design briefs, we gathered qualitative information about users, and we created a model based on that information, producing a primary persona.

Now that the persona is clearly defined, we can use it to generate stories that help the design. These stories, or scenarios, exemplify ideal user interactions, describe how personas achieve their goals and are essential to define requirements, i.e user’s needs [1].

In this report, we present our vision statement, which focuses on users’ goals and the novelties we introduce to achieve them. Then, we use our primary persona to define context scenarios that cover different user experiences and activities, from showing up on time to a work meeting to arriving punctually to a social gathering. Finally, we exploit these scenarios to build our user’s task tree and extract data and functional requirements.

The rest of the report is organized as follows. In Section 2, we state our vision statement. In Section 3, we present several context scenarios. In Section 4, we provide our user’s task tree in a diagram. In Section 5, we extract from our context scenarios the data and functional requirements.

## 2 Vision statement

PunctuAll™ helps users overcome lateness, avoid the shame that comes with it, and improve their daily productivity. It achieves this by allowing its users to compete with their peers in a “race” to an event, to check their progress in their journey through checkpoints and to compare their lateness against each other through a ranking system based on “punctuality points”.

## 3 Context scenarios

### 3.1 Meeting with friends

While texting with her university friends in their group chat, Julia and her friends decide to meet this evening at 9 pm for drinks. Since PunctuAll is connected to her messaging app, it creates an alert suggesting to schedule a new event for this evening and automatically fills in the time and location details for her and all of her friends that also use the app.

Since the app knows her available and most commonly used transportation options and that she cannot travel by car, it automatically sets the transportation method to public transport and shows her the time she needs to leave her house, which is 8:30 pm. The app prompts her to enter the desired time at which a reminder will be sent. She selects to be reminded an hour before she has to leave as she wants to take a shower before leaving.

Knowing the app has set a reminder to remind her to get ready in time, Julia continues to run her errands for the day with ease. She goes grocery shopping and does some cleaning around the house when she receives a reminder that she will need to leave the house in an hour to be at her friends’ meeting in time. She quickly finishes up on her chores and then begins to get ready.

Julia gets another reminder by the time she has to leave in 15 minutes and a notification that her friend Jessica has already completed her first checkpoint for the event by leaving her house. Learning that her friend Jessica has already left her house, she becomes more eager to leave on time and not make her wait.

Before leaving the house, the app reminds her what type of transportation she will need to use, which in this case is the bus, as it is the fastest form of transport at this time of the day. She checks directions to the bus stop from the app and manages to catch it right on time.

As Julia is riding the bus, she wonders if any of her other friends have still not left their house. She checks their checkpoints from the app and sees that all of her friends except for Michael have already

left. She sends a notification to him from the app to urge him to get there on time. When Michael gets the notification, he feels bad that he has been wasting his time on non-urgent tasks and runs to the metro station that the app directs him to. Knowing he is running late, the app suggests a different method of transport from the original one that is the optimal method of transport at this time.

When Julia arrives at 8:53 pm, she sees that Jessica and Frank have already arrived and have seated at their table. She feels good to not be at the last place in the leaderboard and to have gained punctuality points in her profile unlike Michael.

### 3.2 Going to work

PunctuAll imports Jonathan's schedule from his calendar and asks him the night before if he wants to use the app for going to work tomorrow and he accepts it. PunctuAll wakes Jonathan at the optimal hour so that he has the right amount of preparation time. He then receives an alert from PunctuAll to leave his house in 30 minutes. He displays the details of the alert to reveal his typical work-day morning routine tasks, composed of several checkpoints. As he progresses in his preparation, Jonathan validates the checkpoints and adjusts his pace accordingly.

As he is getting ready to leave, he receives a traffic update from the app that there has just been an accident in his usual route and shows him the suggestion to take the longer but faster route.

Jonathan gets in his car and sets up the navigation system of PunctuAll to display the suggested route. As he is on his way, he gets a phone call from his mother. He answers her and puts her on speakerphone while he continues to follow the directions of the navigation system from his phone screen until he reaches his destination.

Jonathan arrives just in time to get a cup of coffee and review his material before his morning meeting starts. He feels refreshed and ready to take on the day.

### 3.3 Work meeting

James has an important business meeting tomorrow afternoon, scheduled via email. Since PunctuAll is connected to his email app, it creates an alert suggesting to schedule a new event and automatically fills in the time and location details for him and for Bob, the colleague he has to meet who also uses the app.

The day after, James receives a reminder 30 minutes before the meeting. He is in his office, while the meeting is in the conference room on the other side of the company campus. Thus, he sets up the navigation system of PunctuAll to display the suggested route by foot.

James checks the app continuously throughout his journey to make sure that he follows the right route. As he progresses in his preparation, James validates the checkpoints and adjusts his pace accordingly. At some point, he wants to know if Bob has already arrived. He thus checks Bob's checkpoints and realizes he has some advance.

James manages to arrive early. He feels confident and more productive, as he now has some time left to review his material to mentally prepare for the meeting and to help with his performance. He even has the opportunity to have a chat with the people he is going to present to in his meeting that resolves his nervousness.

### 3.4 Going to school

PunctuAll imports Jim's class schedule from his calendar and asks him the night before if he wants to use the app for going to school tomorrow. Jim says yes, and invites his classmates via the app: the ones that arrive first get the best places.

PunctuAll wakes Jim at the optimal hour so that he has the right amount of preparation time, taking into consideration factors such as the time of the meeting and transportation duration at that time of the day.

He then receives an alert from PunctuAll to leave his house in one hour and take the bus. He displays the details of the alert to reveal his typical work-day morning routine tasks, composed of several checkpoints.

Unfortunately, Jim decides to watch an episode on Netflix during his breakfast, and he runs late for the next checkpoint.

The app communicates the amount of time Jim is late. He speeds up his pace by taking a quick shower and dressing up fast, and manages to leave the house on time.

In the end, Jim manages to arrive on time to class, getting a nice central place in the room. He checks the app to see his place in the leaderboard and sees that he has become the third. He feels proud that he has come such a long way after arriving late for all of his classes in his freshman year.

Nevertheless, PunctuAll registers his 15 minutes delay during breakfast on the app’s calendar and offers him the possibility to explain the reason so that he does not repeat the same mistake in the future. Jim writes down a note explaining he was watching Netflix.

At the end of the day, the app displays him an overview of his punctuality statistics for the day. He sees that he has spent 15 minutes more on breakfast than the allocated time in his checkpoints. PunctuAll suggests him to change his morning routine and allocate more time to breakfast. Jim knows that he should not have watched Netflix and therefore declines the suggestion.

## 4 Task tree

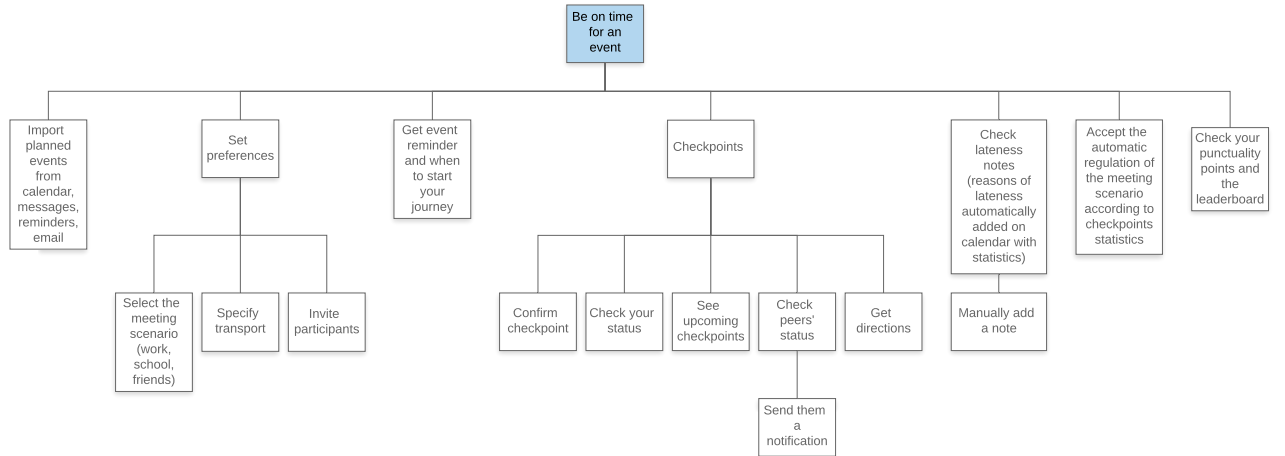


Figure 1: Our user’s task tree

## 5 Requirements extraction

In this section, we determine the information and the capabilities our primary persona requires to accomplish their goal.

To the left of the following table, we present the data requirements: objects and information that must be represented in the app [1].

We conclude with functional requirements to the right: operations or actions that need to be performed on the objects of the app [1].

<b>Data Requirements</b>	<b>Functional Requirements</b>
Account (with personal information and photo)	Create an account Log in
Friends (friends, colleagues, relatives) Groups of friends	Add a friend Check profiles Create a group of friends Add a friend to a group
Meeting scenario Event Event participants	Set a meeting scenario Create an event Import events from other apps (messaging apps, emails, calendars) Invite friends to an event
Alarms (set by the app) Reminders (set by the app)	Confirm alarm time Get reminders Get notifications
Navigation User localisation	Specify method of transport (public transport, car, foot, bike, etc.) Get directions
Checkpoints Status Notifications (can be sent to event participants) Event leaderboard Group leaderboard Checkpoints statistics Punctuality points	Check status (checkpoints progression) Confirm checkpoint completion Check friends' status (checkpoints progression) Send notifications to friends View event leaderboard View group leaderboard View daily checkpoints statistics View weekly checkpoints statistics Check punctuality points
App calendar with notes Scenario updates	Note reason of lateness Accept automatic scenario changes

## References

- [1] Alan Cooper, Robert Reimann, and Dave Cronin. *About Face 3: The Essentials of Interaction Design*. USA: John Wiley & Sons, Inc., 2007. ISBN: 9780470084113.