Draw.IO
Technical roadmap

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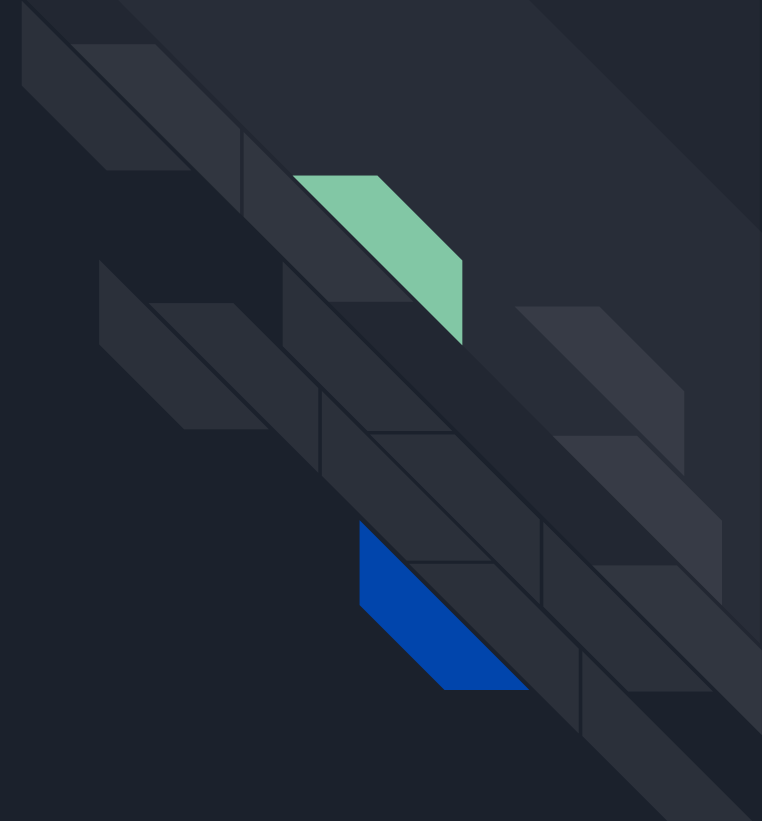
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Assignment goal

Propose a clear roadmap of what needs to be fixed in priority and how to make this game sustainable.

The definition of "sustainability" is up to the candidate.

Assignment analysis

1   The project should be easy to maintain and develop

2   The project should be ready to be released on new platforms or countries

3   The project should not have visible issues that affect user experience

Assumptions

1. Development prioritises the needs of the business
2. Development is able to release updates of the app
3. Starting form the first release of the app, it should not contain major issues that affect user experience
4. Business should have enough data to make decisions starting from the first release
5. Session playtime of the application is low enough
6. The team has 2 developers of ±senior level
7. The team has no infrastructure present, but an unlimited budget
8. The development process should keep the "stop the world" blocking refactorings to minimum

Agreements

Taking into account that the app is expected to be in active development at least for a year it is worth to have some agreements within the team before starting the project modification

1. Product requirements for the range of supported devices, screen ratios and resolutions, quality, targeted platforms
    a. Define technical requirements for assets produced by the art team
2. Project architecture
    a. Composition of directories
    b. Contents that the team checks in the version control
    c. Assets naming convention. Requirements to use English for asset naming
    d. Code architecture (asmdefs, separate dirs for code shared with server)
    e. UI management architecture (MV*)
    f. Set of frameworks to use
3. Code style
    a. Introduce DotSettings\editorconfig file, apply it to the project
4. Development framework (Scrum, Kanban, waterfall)

Technical preparations

Non-mandatory but important preparatory steps that could be introduced during the development process

1. Choose the version of Unity editor (considering stability and pricing)
2. Hosting a separate build machine and setting it up to:
   a. Run builds
   b. Run unit tests (pull request checks)
3. LFS storage hosting
4. Acquiring software and hardware for the development team

Milestones

1. **First release ready**

    No UX issues present. Business is able to get first metrics about the performance

2. **The development is ready to implement features**

    Core frameworks are present in the project. Introducing new features does not increase the project's complexity because of the old architecture

3. **A\B testable**

    Business is able to run A\B tests and make decisions based on the data

4. **The app is ready to be released on new markets**

    Localization mechanism is applied

5. **Adding the convenience of development and live operations**

Milestone 1 - First release ready

Required steps:

1. Support the development team's [Forming phase](#).

2. Launch the initial QA process checking the app for UX problems

3. Fix known bugs and those that could be found during QA process

4. Fix the major performance affecting issues within the standard time left in the sprint (2 weeks)

   a. CPU spikes

   b. Memory allocations

   c. Quick-wins made by managing Unity settings like occlusion culling, texture import settings and atlassing, getting rid of unused assets

   d. Impactful but quick changes like the reuse of materials, turning UI off instead of changing of the alpha

Milestone 2 - The development is ready to implement features

The heaviest milestone that could be split on several that will contain DI and UI steps

Required steps:

1. Support the development team's possible beginning of the Storming phase.

2. Introduce dependency injection framework and get rid of singletons one by one. Probably first by wrapping them for the injection and then by getting rid of static fields

3. Introducing UI management framework and migrating existing user interfaces

4. Replacing `enum`s with classes with special behaviour

5. Moving from `DefaultExecutionOrder` attributes to orchestrator class

Milestone 3 - A\B testable

Required steps:

1. Introduce A/B testing framework
2. Attach analytics framework, add analytics calls in code if needed
3. Implement features required by business in the remaining time of the sprint

Milestone 4 - The app is ready to be released on new markets

This milestone is mainly required to incorporate localization mechanism to all new user interfaces to reduce the complexity of migration on the later stages of the project. It does necessarily not imply adding new localizations to the game. Depending on business needs and the product roadmap it could be moved earlier\later.

Required steps:

1. Introduce localization framework
2. Implement features required by business in the remaining time of the sprint

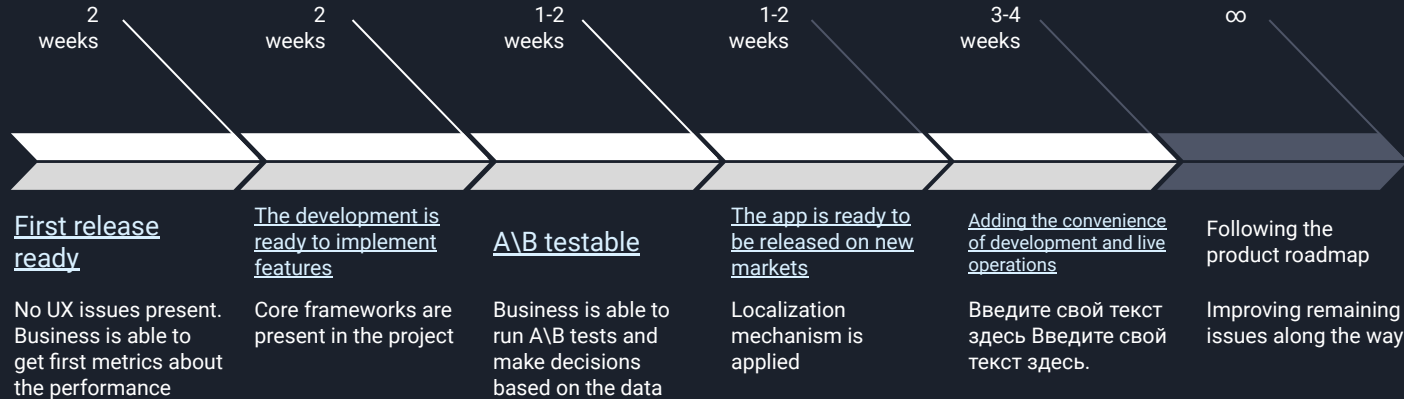# Milestone 5 - Adding the convenience of development and live operations

Could be split into several sprints.

Required steps:

1. Adding exception, crash and ANR monitoring. Production state monitoring, alarms

2. Implementing cheat menu. QA and development convenience

3. Implementing way to extract logs from the device

4. Choosing a way to deliver live operations data and content

5. Adding user reports mechanism that is capable of capturing player progress, logs, screenshots

6. Start implementing automatization of the development - build machine usage, PR check steps if such were not prepared before

Roadmap visualization

Approximate estimations

| 2 weeks | 2 weeks | 1-2 weeks | 1-2 weeks | 3-4 weeks | ∞ |

First release ready

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The development is ready to implement features

Core frameworks are present in the project

A\B testable

Business is able to run A\B tests and make decisions based on the data

The app is ready to be released on new markets

Localization mechanism is applied

Adding the convenience of development and live operations

Введите свой текст здесь Введите свой текст здесь.

Following the product roadmap

Improving remaining issues along the way

Following actions

Most of the technical issues in the project that were not previously addressed in the roadmap could be resolved along with the implementation of the business features, as they were kept in the project backlog and remembered.

However, as is sometimes the case, any tech plan can be derailed when the business needs "that thing tomorrow".