Guidelines for an iterative workflow between researchers and game developers

Koboldgames

PRE-PROJECT

„To The Moon“ - What are the project goals?

All parties need to be aware of the core project goal. There must be a vision for the use case of the product. Is it a tool for immersive data gathering? Is it an interactive visualization of a complex process? Is it a flashy showcase game to demonstrate the possibilities of a newly developed machine?

„A game?“ - Is a game the right choice and why?

Check if a game really is the right product for the research at hand and if yes, why? This is an important decision in order to apply your resources in a target-oriented approach and at the right place.

For example, the reason to collect data in a gamified way could be to reduce the social desirability bias with the help of immersion. If the developers are aware of the importance of immersion, they can make better design decisions according to this fact and for example prioritize quality over quantity when producing assets to support this immersion.

„Who's boss?” - Fields of expertise and deciders, who is in charge of what?

Within big and diverse teams with a lot of stakeholders it is important that the fields of expertise and decision competences are predefined. This creates the space for creative freedom within clear boundaries and speeds up the development process.

„But this needs to be fixed!” - Don't underestimate maintenance

Prepare a selection of pre-defined maintenance cases, not just a general maintenance option. This increases the awareness about different understanding of what should be covered by maintenance or not.
What are the longterm needs of this game? Does it need updates? What happens if the game or parts of it stop being available because of store or platform changes? Plan time and budget accordingly to keep the game running.

PRODUCTION

„Think iteratively" - What is the core? What's the absolute minimum needed?

Start with a simple prototype and get feedback for this first version from the target group and all the stakeholders. The smaller this prototype is the faster you get feedback for improvement. Sure, you need to dream big and feed the vision, but for the development process it is best to use an incremental approach to optimize predictability and control risk.
Simplifying game mechanics as well as conveyed content can be the key to achieve a successful information transference.

„Are we there yet?" - Fast Iterations: frequently share the progress with all project participants

You need to be able to adapt to new discoveries on many fronts. It is mandatory that all fields of expertise are included in these adaptations and we want to keep this communication overhead as small as possible. This frequent sharing also concerns the project management parts like time plans and budgets to avoid misunderstandings.

„It's just a tool!" - Flexible data input/output is mandatory for experimenting.

You need to be able to use a research tool in a flexible way to give room for experimenting and there must be an output for further analysis of these experiments. It is a great benefit if the input parameters of the product can be adjusted in a fast way, therefore create configuration systems that are easy to use. To evaluate these experiments there needs to be a high-quality data log that matches the requirements of the researchers.

„Share your testing groups" - Align test sessions, specify the desired results

For example, when the researchers conduct a pretest to evaluate the scientific part of the product, the game developers can use this opportunity and give the participants a questionnaire as part of the pretest to gain additional knowledge about the game experience.
It is important to clearly define the desired answers in order to maintain a manageable data set and to prevent unnecessarily long testing sessions.

POST-PROJECT

„The end is not the end" - Evaluate the product and the process

That is nothing new, but often not given enough thought and time. This is where all team members can grow and learn lessons for their next cooperation. It's an opportunity to identify techniques and approaches that worked and devise steps to ensure they're used in the future. And also allow to recognize project achievements and acknowledge people's work.

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