A producer's guide to decision-making

Written by Iain Angus, development manager at Total War *developer Creative Assembly*

Decision-making is a phrase you hear a lot and will regularly see on job descriptions for senior roles in the games industry. Despite this, it isn't often explored in any serious depth, which is strange as it will determine the success or failure of any project.

In this article we'll look at what decision-making really means, and how we can make better decisions.

I've experienced the disaster we all hope to avoid, having worked on a cancelled project (*Fable Legends*) that led to a studio closure (Lionhead). Upon reflection of this experience, what I learned is that there was not one single wrong turn that had been made. Instead, there were several separate decisions that were not fatal on their own, but when combined they add up.

When developing a game, you start at the very beginning with nothing but a vague idea. This idea is turned into a product (or a disaster) by a series of decisions, big and small. Every decision, from which engine to use or which publisher to go with to the color of the main character's hat, contributes to the success of the product. Even a small improvement in the quality of decision making on your team will compound during the course of a project to make a huge difference in the final quality of your game.

One thing is immediately obvious, if you make no decisions at all, or if you make them very slowly, your project goes nowhere and that is a fast track to disaster. Part of the role of the producer is to make both prompt and high-quality decisions and to help the people around them to do the same.

So, decisions are important, we just need to make sure we all make good decisions all the time, right? Unfortunately, it isn't as easy as that, because decisions are made by:

People

"When dealing with people, remember you are not dealing with creatures of logic, but with creations of emotion, creatures bristling with prejudice and motivated by pride and vanity" - Dale Carnegie

If you think this doesn't apply to you I'm sorry to tell you that it does. People are emotional and irrational and that affects our decision-making. Let's look at a well-known example:

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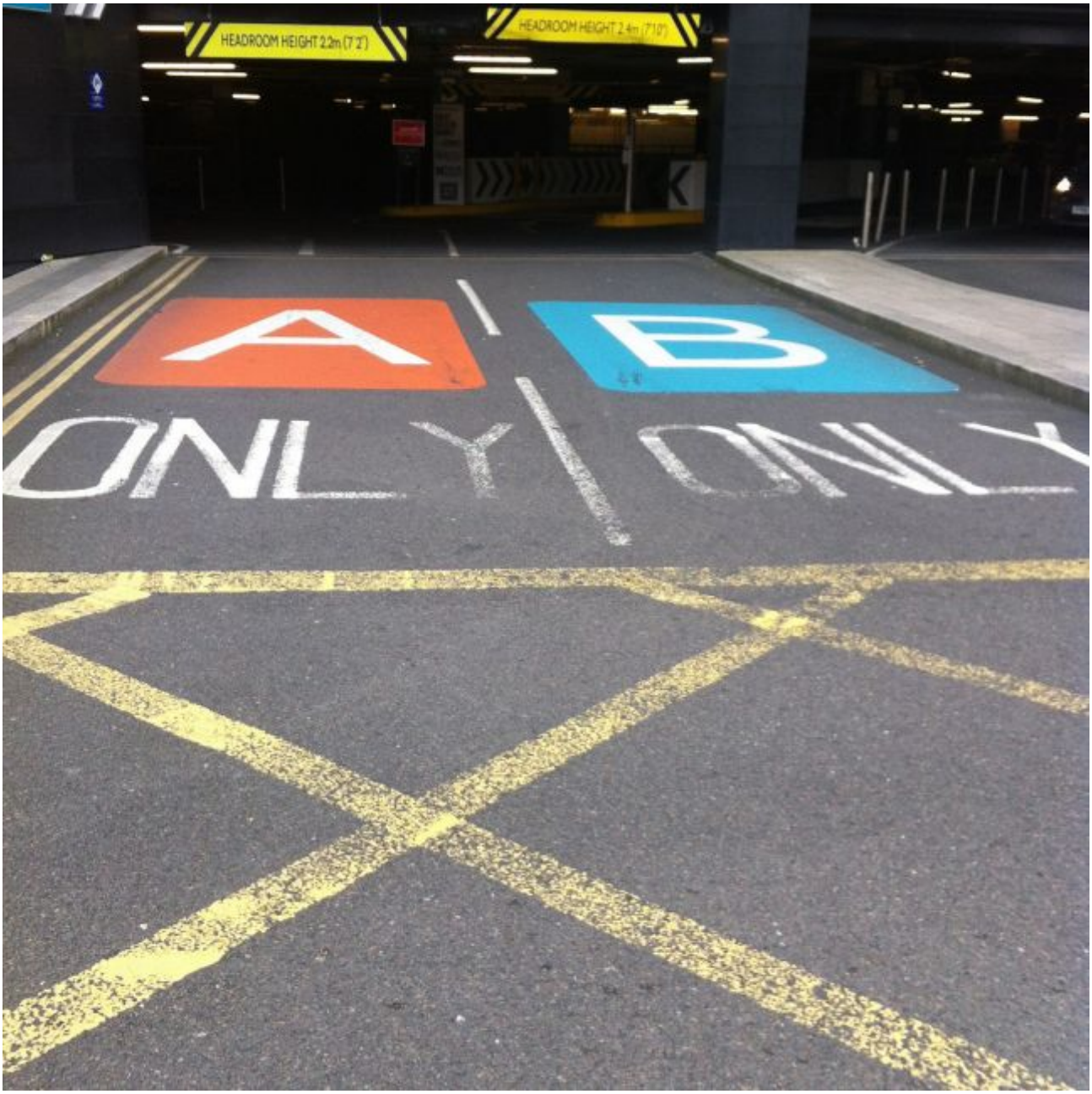
A study of parole judges found that at the start of a day and immediately after lunch a prisoner had nearly a 70 percent chance of being granted parole. At the end of a day, when the judges were tired and hungry, the chance was close to 0 percent after all other factors had been accounted for. If a decision as simple as yes or no, as important as whether someone should stay in prison and made by people who have been trained specifically to make this type of decision can go wrong, then what hope do we have with the complex and creative decisions that happen on a game team?

Intrigued by this I did some research and came across the work of Antonio Damasio who researched the emotional component of decision making. Upon studying a group of people who had brain damage which meant they did not feel emotions, he concluded that they had difficulty in making any decisions. These individuals were able to understand the better option out of a range of choices, but they didn't have the drive or motivation to commit to it; they would always sit on the fence. Damasio's conclusion was that emotions are a crucial part of how we make decisions but, as we've seen with the example of the parole judges, emotions can affect our decisions in unpredictable ways.

Automation

The natural conclusion at this point would be to remove the emotional human element from the decision-making process. This is done by systemizing, data-driving and automating your processes as much as possible.

Checklists, A/B testing, standard procedures and KPIs with actions that are applied automatically when the value goes beyond a threshold are common examples of this. They take the emotion out of a decision by separating the creation of the decision-making criteria from the measurement against that criteria.



For example, a game I worked on had a game mode that divided opinion. Some people loved it, others hated it and we were considering cutting it altogether. To help make this decision we ran a focus test that would score the game mode out of 5. The result came back: 3.7, a good score but not a great one. It was inconclusive and didn't help with the decision. What we should have done was to set the score threshold needed to keep the game mode before we knew the score. Doing so afterwards was impossible.

Automating and data-driving decisions can be very effective but beware of two common drawbacks:

1. The paradox of automation: if your automated system has an error this error will be replicated over and over. The more efficient your system the faster the error gets replicated. The paradox is that the more efficient your system the more crucial the contribution of the human operators, who are the ones who spot the errors.
2. The human bias called "What you see is all there is". We are biased to treat data that we

have as a lot more important than things we don't know and to make decisions based on only the things we know. To combat this, you need to frequently ask yourself "what information am I missing?" whenever you make important decisions. In addition to this, when collecting data from your game define in advance what you will use it for. If you don't, the temptation will be to use it for something even if it is not useful or relevant.

Despite the drawbacks, automating decisions is a powerful and effective tool. But game development is a creative enterprise and we haven't (yet) found a way of automating creativity. At some point you need to allow emotional, irrational and unpredictable people to make decisions and there are some techniques to help with this.

Choices

It may seem obvious, but boiling decisions down into a finite number of choices is a good first step, then you just need a method of selecting one of these choices. It is however, worth listing out every possible option, even if it seems ridiculous or impractical at first. After some investigation it might turn out that one of these options is the best choice.

If it is difficult to enumerate all your choices, but in any given situation you can either:

1. Continue what you are doing
2. Stop what you are doing
3. Do something else

For example, if your schedule says that your project is going to overrun its next milestone you can either continue as you are and just be late, stop the project altogether or make some changes. Potential changes could be reducing scope, adding resource or asking to push the milestone date back.

Now you have a list of choices you are ready to choose one of them.

Choosing

There are two approaches to making a choice:

- Optimizing - evaluating all your options and choosing the best
- Satisficing – choosing the first option that meets your criteria

Optimizing finds the best option possible but isn't practical when there is an overwhelming number of options, Satisficing is the best approach in this situation. For example, when choosing a game engine for your project there might only be a handful of possible options and Optimizing is the correct approach. However, if you have one vacancy and receive thousands of applications, you might consider saving time by using a Satisficing approach and hiring the first candidate with the right skills and experience.

Optimizing-type decisions are prone to being affected by the irrational emotional state of the person making them. A common reason for this is “Black and White Thinking” which is a term used in the treatment of mental health. People with anxiety disorders can find it hard to make choices when all the options come with drawbacks as well as benefits, they want to find a perfect solution with no drawbacks that often doesn’t exist.

Most options are a mixture of costs and benefits so when you are making a decision, be careful that you are not over-valuing one above the other. Most commonly people over-value the costs due to the human bias of loss-aversion. To combat this phenomenon, you can use…

Heuristics

Heuristics are rules of thumb that can short-cut you to a good decision and leave less opportunity for irrational emotions to get in the way. Always choosing the option with the lowest cost is a heuristic you can use when all options are a mixture of costs and benefits. This will mean missing out on the largest benefits, but this is acceptable on a project where you need to be risk-averse.

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A variation on this is always choosing the simplest option. This has the advantage of minimizing the cost of being wrong, which is advantageous when creating new and innovative technologies.

Learning from other people's mistakes is a valid heuristic, especially in game development. Reading postmortems to discover what went wrong on projects similar to yours and then not making the same decisions they did gives you a better chance of success.

Unless there is a change in the situation or new information comes to light, a previously made decision should not be changed. Conversely, if a large change has been made to a game, such as an important feature being cut, then all decisions that relied on it should be re-evaluated.

Heuristics have the added advantage of saving time which is invaluable in situations where quick decisions are important. If you are ever wondering whether to spend more time over a decision, consider the cost of waiting versus the cost of being wrong. If the cost of waiting is very high, you might miss your milestone. In which case, a heuristic to get a good-enough decision is a valid approach. Alternatively, in the early stages of a project when the team is small, relatively cheap and the decisions you make affect the whole course of the project, spending more time to get things right is the best approach.

Group decision-making

Napoleon Hill interviewed several early 20th century billionaires for his book ('Think and Grow Rich') and discovered that none of them made decisions on their own. They all had what Hill called a mastermind group; a collection of friends and peers who meet to discuss ideas and encourage each other to follow up on them. Essentially, well-managed group decision-making is almost always superior to doing things on your own.

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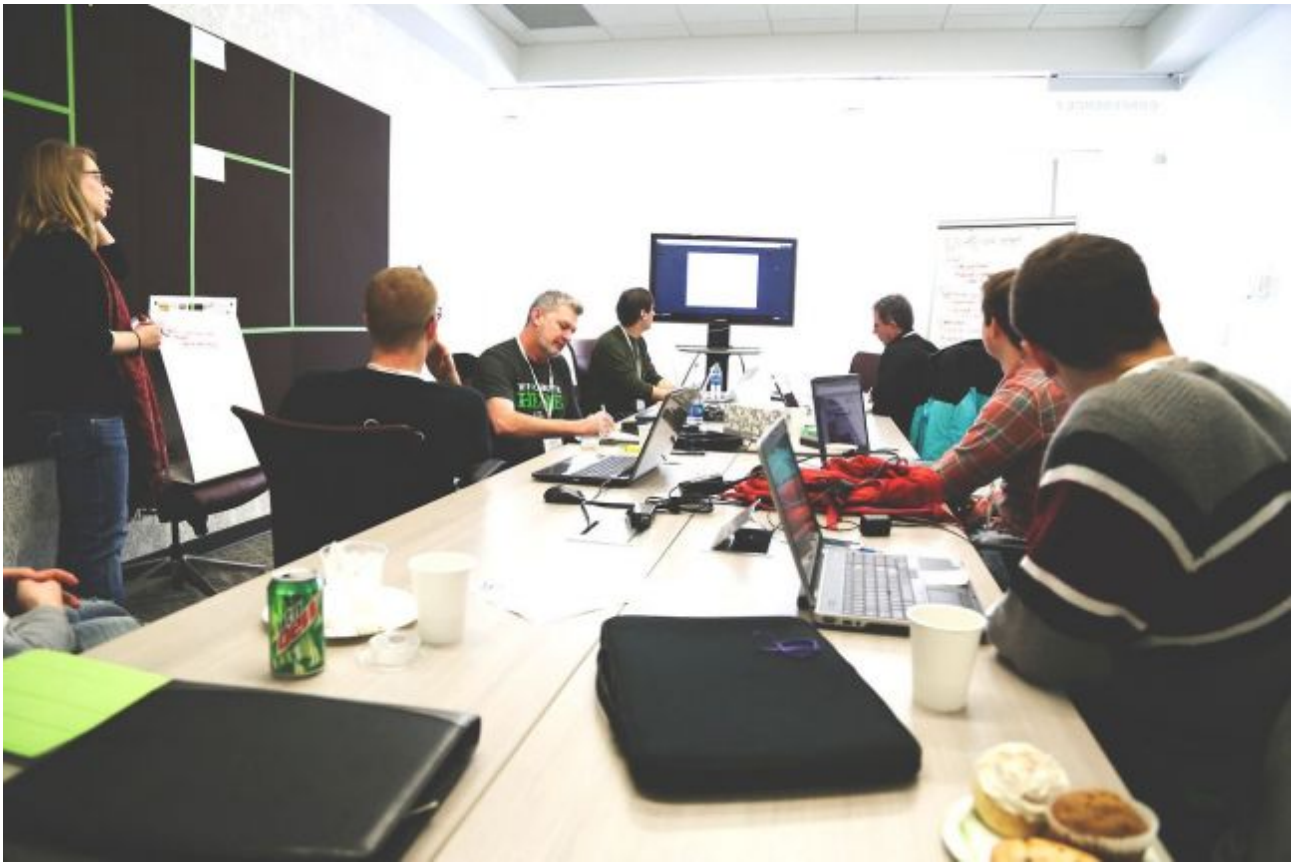
Group dynamics introduce a whole new layer of complexity on top of the irrational emotional states of the individuals who make up the group. These group dynamics can vary tremendously between different cultures, companies and teams. An interesting example of this is the difference in group decision making styles in the UK and in Japan.

In the UK, a subset of a group works on a proposal before presenting it back to the rest of the group in a meeting. In this meeting there will be more senior people who will see the proposal for the first time and make the decision. All being well, the proposal gets approved, the sub-group goes off to work on it, there might be a few changes and iterations along the way and the result is broadly what was approved in the meeting.



In Japan it works very differently. All members of the group are involved throughout the process, including the senior decision makers. Everyone gets the opportunity to raise concerns and contribute ideas. There is a meeting, but this takes place much later in the process and everyone already knows what the proposal is and what the decision will be, the meeting is essentially a rubber stamp. After this happens the plan is implemented with zero deviation from what was agreed.

This is a huge generalization of course, but it is worth considering alternative ways of managing group decisions when figuring out what works for you. Both methods have advantages and disadvantages, the UK version is quicker and flexible to changing circumstances whereas decisions are generally of better quality and the group feels happier with them when the Japanese method is used. I personally find it effective to use aspects of both and I try to involve more people from the team earlier in the decision make process than most people are used to, whilst keeping things flexible throughout.

Pitches

Pitches are a special case in terms of decision-making. You use persuasive language to get other people to make the decision that you want them to make. A lot gets written about pitching so I'm only going to touch on the aspect of it that relates to the theme of how irrational and emotional human psychology affects decision making.

My universal pitching formula aims to target the emotional side of the decision-making process:

1. Establish your credibility and make a personal connection
2. Explain why your proposal is important
3. Describe what your proposal actually is

This is designed to get the people you are pitching to excited and motivated to make the decision you want. If you are doing it well, the decision should already have been subconsciously made before you even get to step three.

Think about your environment and your appearance, and the subconscious emotional effect it can have on those in the room. Is the room too hot, too cold, too messy? Are you dressed appropriately? This all adds to the impression of your pitch and we've likely all experienced a video-link not working and five minutes shouting "I can see you but not hear you." If that happens in a pitch you might as well give up there and then.

Finally, remember the example of the parole Judges. Try to schedule pitch meetings at the start of the day or immediately after lunch!

Dealing with difficult people

No matter your job, we all occasionally have to deal with difficult people. They might be in positions of authority and make poor or slow decisions that can jeopardize the success of your project. This might be due to them having insufficient time to make a good decision, or it could be because the decision you want is at odds with their own agenda.

In these situations, you might have to use *crafty* techniques to get the decisions you need. I agonized over the word "crafty" because there can be some moral ambiguity here. For the sake of this argument we are assuming that you know best and the course of action you are trying to get approved is the correct one. So how do you get your difficult boss to agree to your plans? The advice you often hear is to "make them think it was their idea". I know three ways you might be able to achieve this:

1. Plant the idea. Drop the idea into a conversation. Often, they will repeat it back to you a few days later as if they thought of it. This happens more often than you might think but it is an unreliable approach, especially for complex ideas.
2. Ask for help. Go to your decision maker and ask for help with a problem you are currently facing. Frame it in such a way that the solution to the problem is blindingly obvious and with any luck the decision maker will volunteer this solution as if it was their idea. The risk is that they give you the wrong solution and then insist that you implement it.
3. The 90% trick. Present a complex plan to the decision maker and tell them that there is a small part of the plan (10% of it) that you are not sure about and ask for help. Allow the decision maker to make whatever changes they want to this part so that they approve the rest of the plan unchanged. It helps if the 10% you choose appears to be a crucial part of the plan but is actually entirely cosmetic or superfluous, so the important parts get through unscathed.

There is a dark side to decision-making, and I strongly advise you to avoid it. Coercing, browbeating or being underhand may work in the short-term, but it creates long-term resentment in your team and will take its toll on your project overall.

People (again)

This all brings us back around to emotional, irrational people. It is my belief that there are no tech problems, no process problems, no art problems and so on. There are only people problems. Everything in a game project is artificial and has been decided upon and created by people. If you fix all the people problems, you fix everything else.

A producer's job therefore is to influence people to do things that they wouldn't necessarily have done by themselves, for the greater good of the project. The best way for producers to be effective at this is to understand human psychology and apply it to themselves and their work. Then they can make better decisions themselves, help the people around them to do the same and ultimately produce better games.