

Voodoo **Art** Manual.

How to quickly boost your prototype's KPIs

This document is intended for the external studios working with Voodoo.

These guidelines are not mandatory at all, but **we highly recommend you to follow them**. We have tried to bring together some of the most important and impactful tips we could think of.

This will impact game development speed, game performance (thus KPIs, especially when scaling), and it will also help anyone (from Voodoo or elsewhere) to join you during game development.

Don't hesitate to send us feedback on any of these points!

Summary :

- 1 Create great materials
 - 2 Avoid black shadows
 - 3 Avoid aggressive colors
 - 4 Creative templates
 - 5 The prohibited colors
 - 6 Check your contrasts
 - 7 Shape your contrasts
 - 8 Check your level of details
 - 9 The Unity triangle system
 - 10 Display the number of triangles
 - 11 Avoid triangles & save performances
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 - 13 Shadows or not shadows?
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1. Create great materials.

Avoid using the Unity « Standard » material and prioritize a [“cartoon style” shader](#) (There are a lot of them on Unity Store). A cartoony shader is simplified and **optimized** for quick and efficient use.

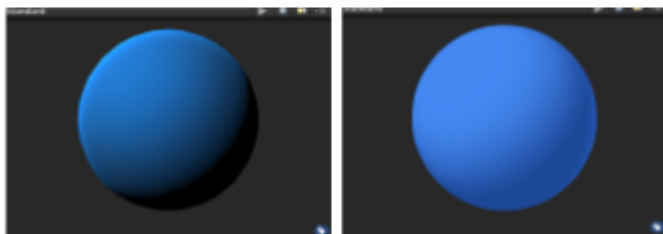
Furthermore, standard shaders sometimes need to generate lightmaps to work correctly. If they’re missing or corrupted, the game will end up being **very dark**.

Standard

Albedo
Metallic / Smoothness
Normal map
Height Map
Occlusion
Detail Mask
Emission
Secondary Maps (+6 layers)

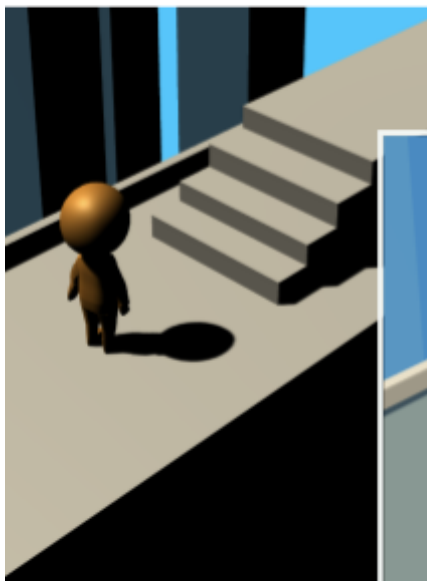
Cartoony

Color
Highlight Color
Main Texture
Shadow values

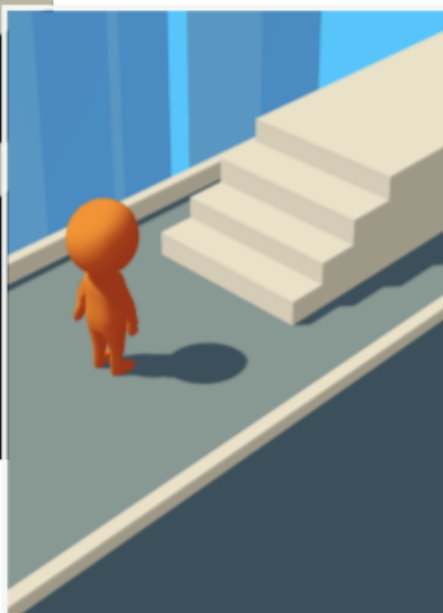


A cartoon shader is **optimized** to quickly obtain a good colorimetry.

✗ Standard



✓ Cartoony



By using these types of shaders, you will obtain better **contrasts** and better **readability**.

✗ Standard

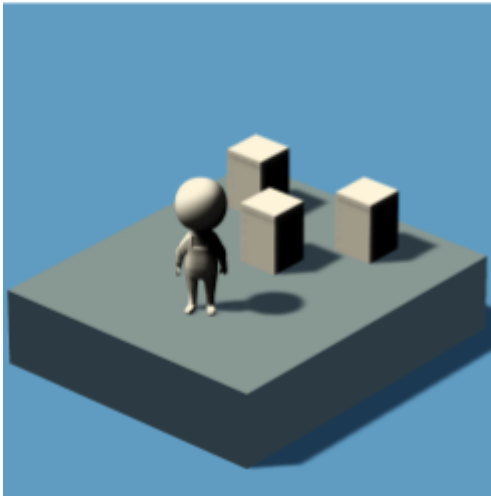


✓ Cartoony

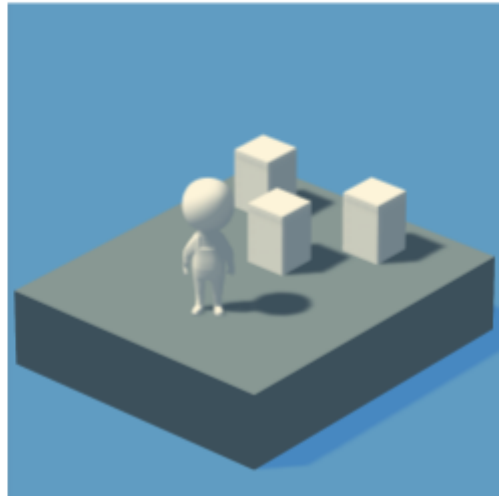


2. Avoid black shadows.

✗ 27313A



✓ 758CA2



3. Avoid aggressive colors.

Each of the colors you choose is a message to your **players**, so it's essential to make them feel comfortable.

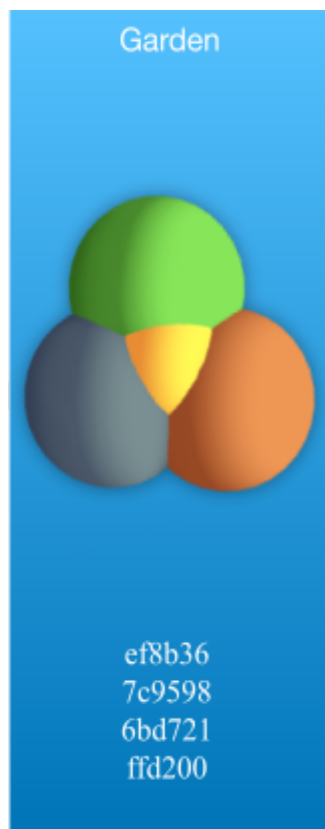
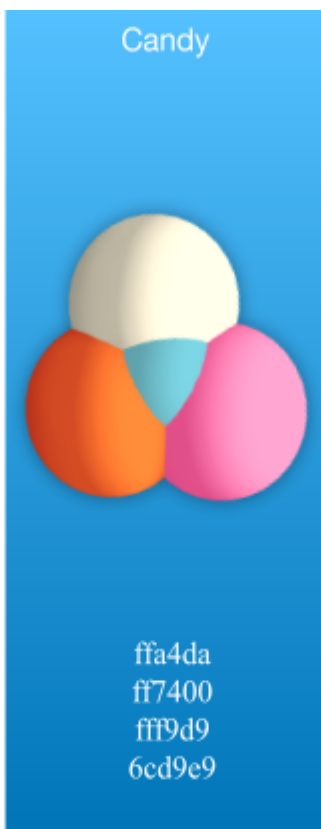
✗ eg of bad color mix



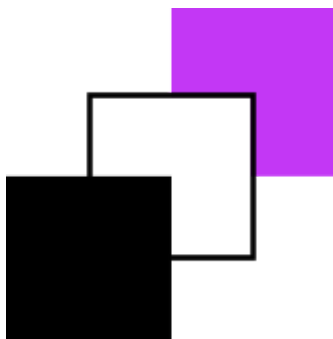
✓ eg of recommended mix



4. Creative templates.



5. Sensible colors



Light purple, white and black are highly not recommended. In Unity, **light purple** represents missing materials and can create confusion in production. White backgrounds on the other hand will make your FX very difficult to read. Finally, black shadows will darken your colors in a market where colors really need to pop out.

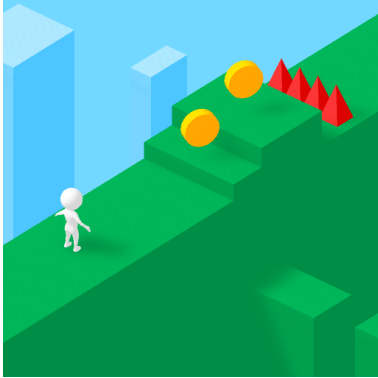
6. Check your contrasts.

Contrasts can be used in a lot of different ways (Grayscale, colors, shapes). You must seek for each of them to **maximize the impact** of your visuals on the audience.



Use a black & white filter to help you identify your contrast issues. **Protect the colors related to gameplay from the ones related to environment.**

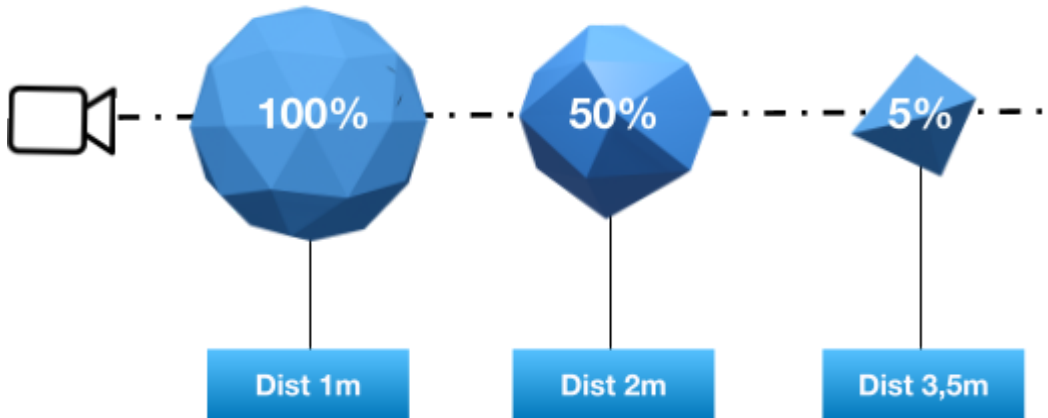
7. Shape your contrasts.



Give a **unique shape language** to each gameplay element (roundish = positive, Spiky = negative/danger). And avoid having the same saturation level everywhere. Remember that almost 8% of your audience is colorblind. You'll need multiple layers of contrast to ensure that your players we'll be able to effectively read your visuals. Contrast can also come in scales too!

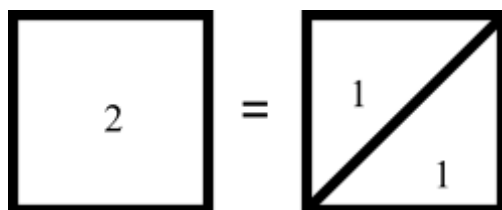
8. Check your level of Details.

Ensure that your elements will always be higher in details if the player can move close to them and put fewer detail on areas that are for background purposes only. You can even use 2D for objects that are close to the horizon.



9. The Unity triangle system.

UBe careful when using external packages for your 3D models as the polycount can quickly goes up. As a reminder each quad will be twice the number of triangles.



Find here some recommendations for numerous props :

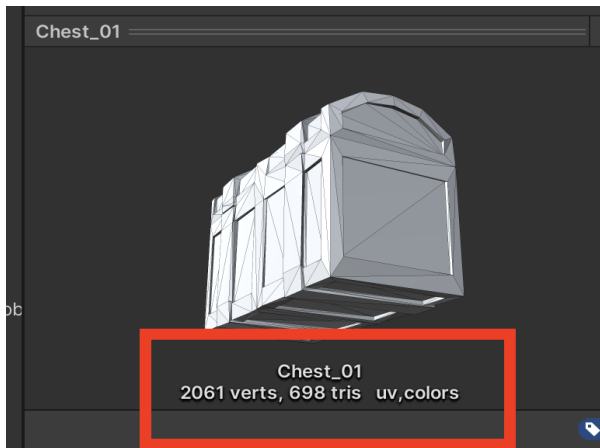
Small props (eg: plants, boxes) : =/< 50 tris

Medium props (eg: trees, =/< 300 tris

Big props (eg: mountains, houses) =/< 600 tris

10. Display the number of triangles.

When you select a mesh you can display the number of triangles in Unity.



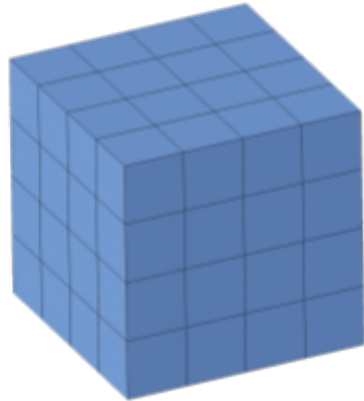
11. Reduce triangles count : save performances.

If you have an asset that has been **duplicated several times**, pay attention to its number of triangles. (Triangles only appear when the props is in Unity)

✓ 12 Tris



✗ 192 Tris



12. Power of Two

If you want to add images in your project (Icons, textures, etc...) pay attention to their ratio: **it must be in a power of 2**. Images that are not Po2 are generally 4 times heavier for the phone's memory.

Example :

small images : 128 x 128, 128 x 256, 256 x 256

medium images : 512 x 512, 1024 x 1024 (only if really necessary)

You should think of the resolution of your images relative to the surface they cover on screen. A full screen image can be 1024px sized but an object that only covers 25% of the screen will be 256px wide instead.

You can also use the atlas feature if you feel comfortable with it.

13. Shadows or not shadows?

The shadows help to understand at which altitude your objects are relative to the floor.

You can manage the shadows created by your light in the project **quality settings**. You can choose to use soft (heavier) or hard (lighter) shadows.

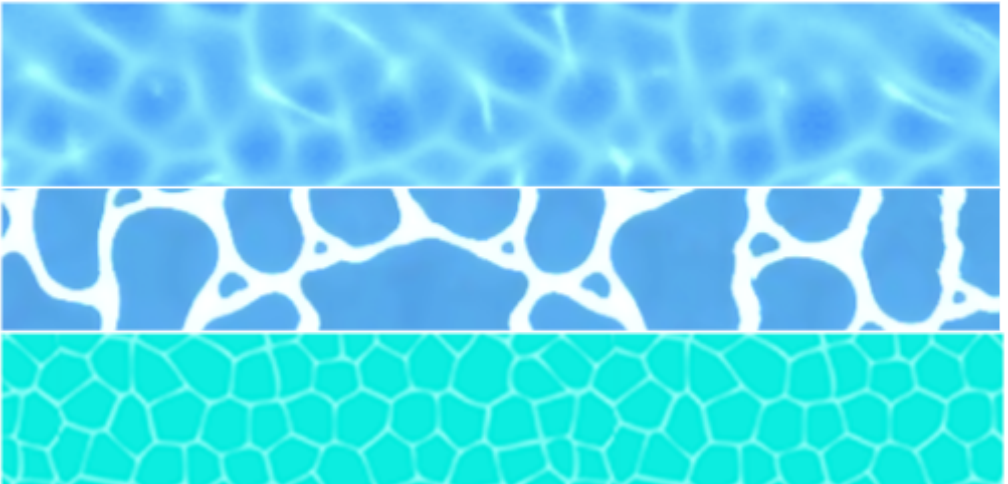
The shadows created by your light can change the look of your game, but Unity has to render twice to draw the shadows so you should turn some of them off **if you have a lot of props**, very detailed props or special requirements. Consider using fake shadows on the floor by using smooth sprites instead.

14. Add **water** on your scene.

5-10 min / integration

Water **works very well** in mobile games, so you definitely should test it in your game.

Avoid low poly style water, dark colors, static textures and water shaders (if you don't have time to configure it properly). Use animated textures when possible for performance purposes.



15. Reward your players.



It is very important to reward your players when they win but **also when they lose!**

The positivity of your game goes through your choice of colors but also through the **visual rewards** that you add. Be careful of your performances while adding a lot of particle systems. instead put them on the most important elements like collectibles.

Confettis particles are the most popular but you can also use star shower, glitter, etc...

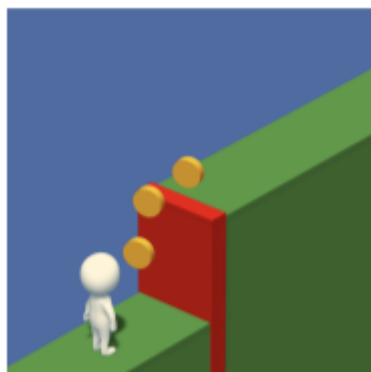
16. Take care of your sky.

It is very important to pay attention to your sky. The sky takes a big part of the screen in most games, and ugly skies **can damage your KPIs**.

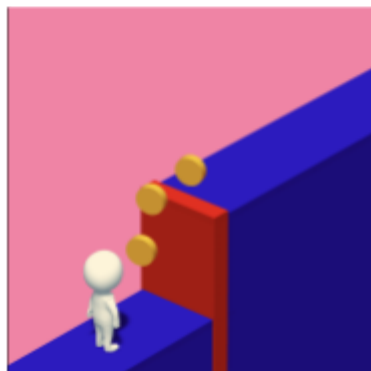
A joyful color brings a **feeling of well-being**, but dark or discordant colors hurt the eyes.

Adding primitive shapes or clouds to your background **improves the progression feeling**.

✗ BAD SKY MIX



✓ GOOD SKY MIX

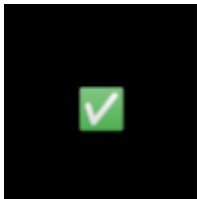


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17. More about UI.

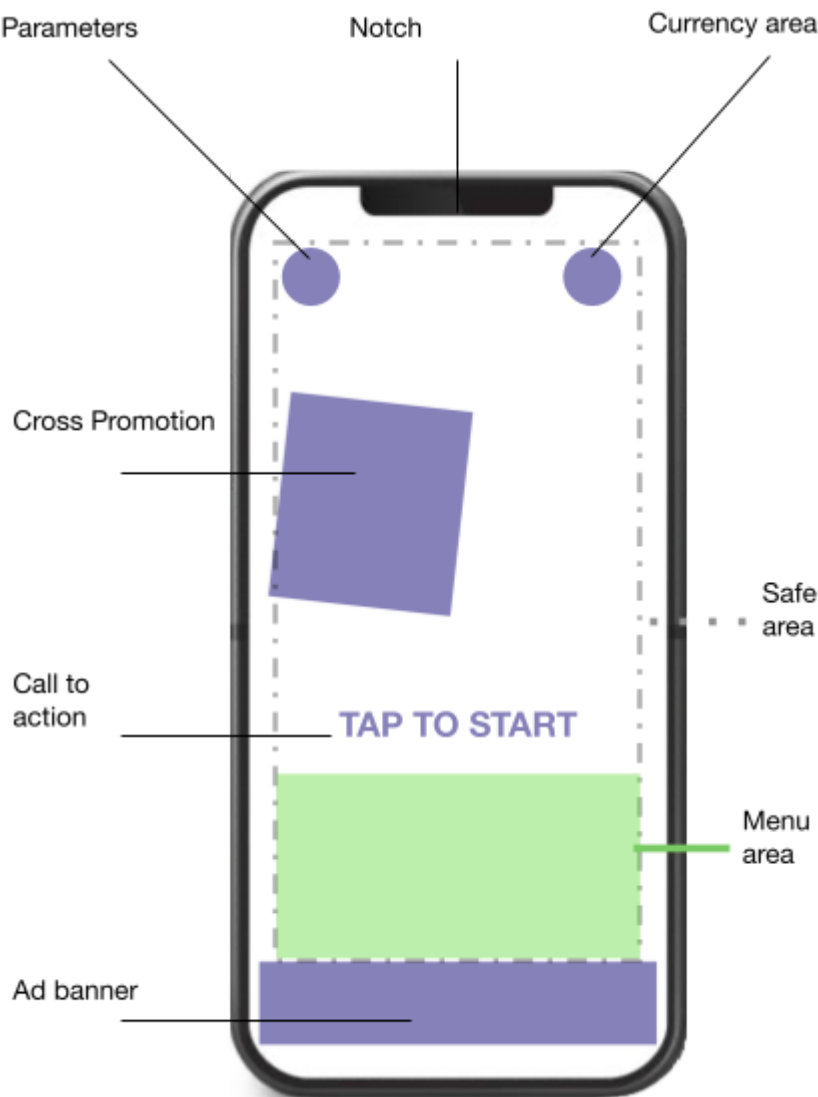
Usually the UI does not improve the KPIs, **but an unreadable user interface could damage them.**

Your buttons should look **clickable**. Avoid exotic shapes or bubbles for main menus.

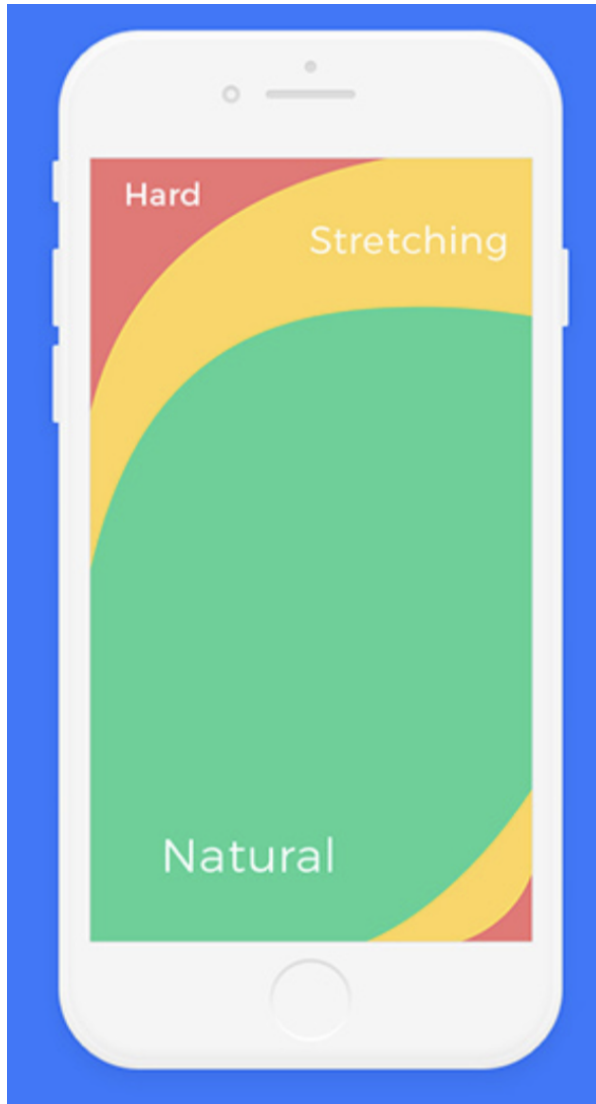


The bottom area is the easiest for players to click.

18. The Voodoo UI template.



19. Heat Map.



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20. Structure your canvas.

Split your canvas in different prefabs for each view of your UI :

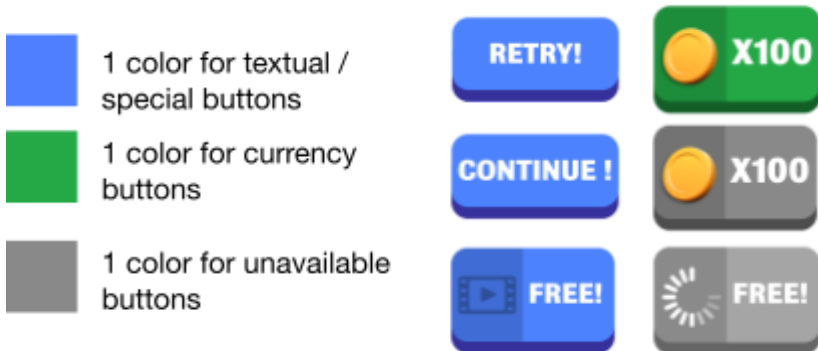
- ✓ 1 prefab for the main menu
- ✓ 1 prefab for the Win screen
- ✓ 1 prefab for the lose screen

Etc...

By doing this you'll make collaborative work easier within all the developers.

21. UX structured = good experience.

Avoid multi-colored buttons, each color you use is an **information**. Find a good example below:



Make sure **all of your buttons** are the same size and follow the same guidelines on each part of the user interface.

Avoid using a PLAY button and prioritize a simple outlined text like **TAP TO START**.

Questions?

If you need any additional information about our recommendations, please [reach your PM](#) and he/she/they will put you in touch with the GameOps Art team.

Resources.

Find some resources you need [here](#).

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