

THE OUTER WORLDS

SKILL POINT
REVAMP

- MORGAN HARRIS -

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HIGH LEVEL SUMMARY

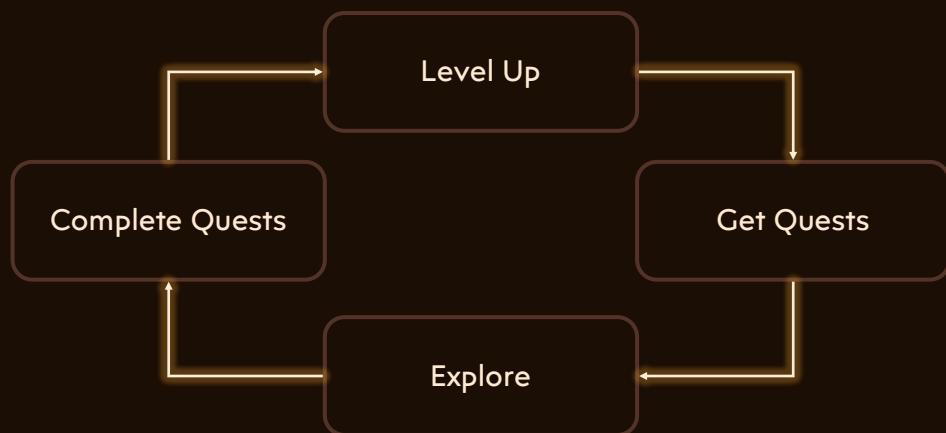
SYSTEM ESSENCE STATEMENT

Level up your character, earning skill points and perk points along the way. Use your skill points to upgrade your skills and tailor your character build to your play style. Unlock perks when you meet skill requirements and give yourself special bonuses when you purchase them.

CHOSEN GAME ANALYSIS

The Outer Worlds is an open-world game created by Obsidian Entertainment and Private Division. It has lots of very interesting systems to really add to the narrative experience of the game.

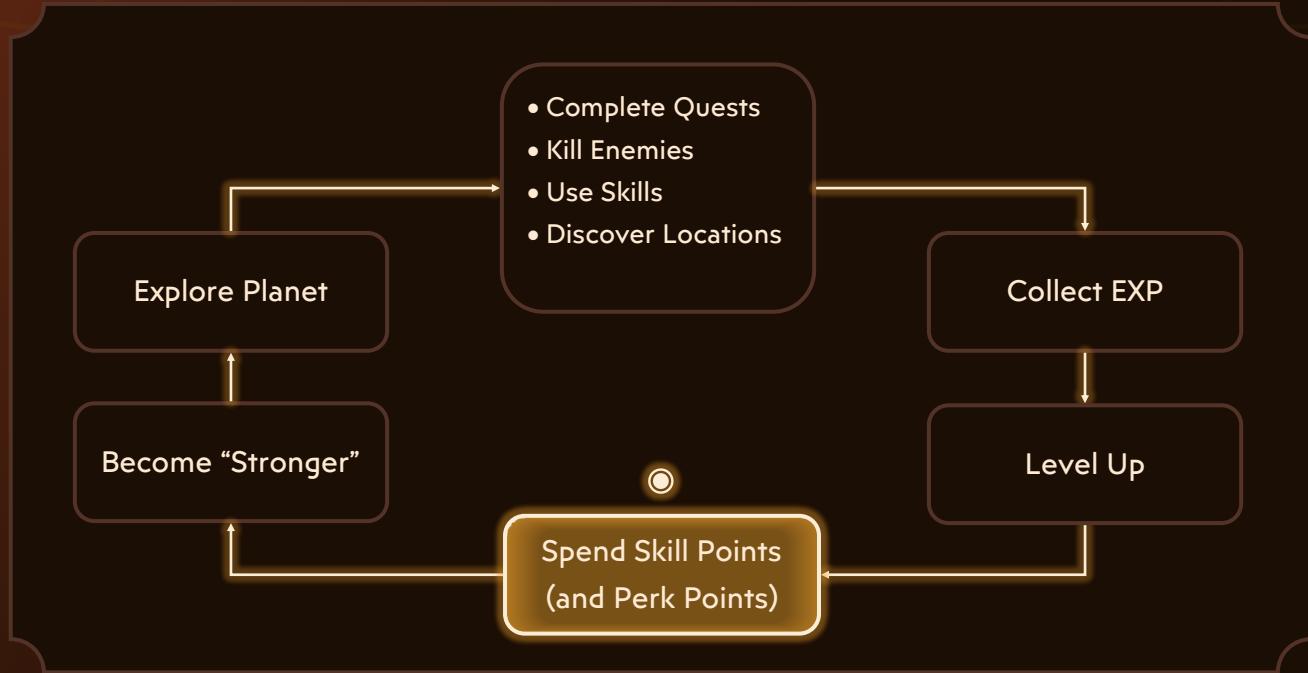
Core Game Loop



The Outer Worlds is an open-world game, so the core loop is based on completing the stages of the story and any side quests along the way.

SYSTEM ANALYSIS

Player Progression Loop



Weapon Collection/ Upgrade Loop



Throughout the game, players will find new weapons, and progressively deplete their durability the use.

The lower the durability of a weapon is, the less damage the weapon does.

PROBLEM STATEMENT

The current skill point allocation system within The Outer Worlds is constructed to promote players upgrading lots of skills to a mid-range level, rather than upgrading a couple of skills to a high level. This system leads to a jack-of-all-trades effect, which doesn't lead to a fun narrative experience.

HOW THE SYSTEM ADDRESSES THE PROBLEM

As skills would improve faster the higher they were, players would hopefully choose to improve their already levelled skills to an even higher level, instead of upgrading lots of skills to a low level.

CORE SYSTEM CONCEPTS

- New Skill Point allocation system: skill points affect individual skills, not the categories they fit into
- Skill Point “waterfall” system: after a skill reaches a threshold, any more points spent on that skill also increases other skills, simulating a player’s expertise in a field.
- Locked Perks: the player must reach a specific skill level before they can purchase specific perks, meaning they are more tailored to the player’s character build.

EXPECTED PLAYER EXPERIENCE

Reflecting the real world, players will focus on certain skills and develop them to levels of expertise and mastery. Players will only be able to achieve what they are skilled in, meaning certain opportunities they face will be cut off.

GAME RESEARCH

CHOSEN GAME RESEARCH AND ANALYSIS

Skills

The Outer Worlds uses 7 “*Core Skills*”, which are named groups of “*Specialised Skills*”. The 7 Core Skills are **Melee**, **Ranged**, **Defence**, **Dialogue**, **Stealth**, **Tech** and **Leadership**.

There are 18 Specialised Skills, which can be improved via *skill points* or temporarily boosted by armour, companions and consumables.

Specialised Skills:

MELEE:

- 1-Handed Melee
- 2-Handed Melee

RANGED:

- Handguns
- Long Guns
- Heavy Weapons

DEFENCE:

- Dodge
- Block

DIALOGUE:

- Persuade
- Lie
- Intimidate

STEALTH:

- Sneak
- Hack
- Lockpick

TECH:

- Medical
- Science
- Engineering

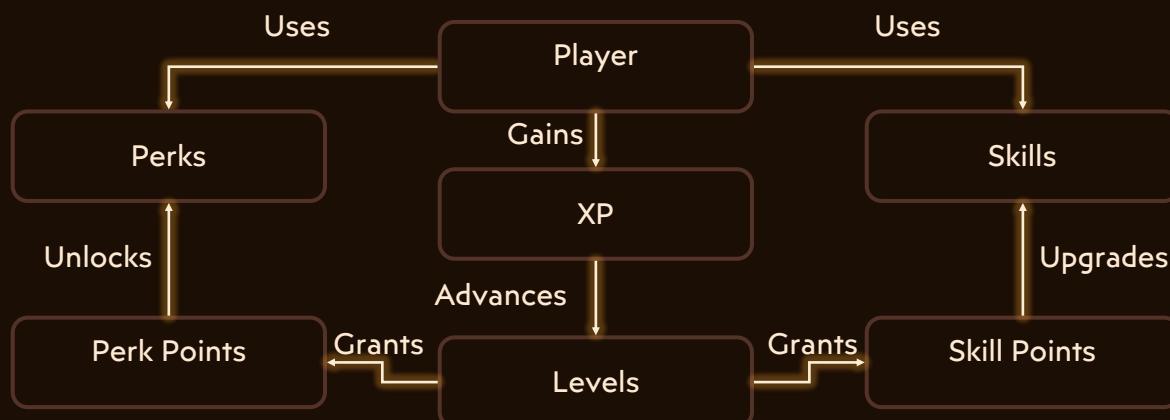
LEADERSHIP:

- Inspiration
- Determination

Levelling Up

A player collects XP from defeating enemies, succeeding with skills, and discovering locations. When a player levels up, they gain 10 *skill points*, and 1 *perk point* every other level.

Once the player has points to spend, they can spend them whenever they would like.



Spending Skill Points

A player receives 10 *skill points* for every level they gain. To begin with, players spend points to upgrade *core skills* which, in turn, upgrades all the *specialised skills* contained within it. Once a core skill has reached level 50, the player must instead spend their skill points to upgrade each specialised skill underneath it individually. This system gives the player the ability to learn new skills quickly, and vary their playstyle.

Spending Perk Points

When the player reaches an even level, they will be awarded 1 *perk point*. This point can be used to unlock a *perk*, which is a permanent buff towards a specific activity or action.

In total, there are 42 perks on offer, split up into 3 tiers. Each tier must require 5 perks to have already been purchased before it unlocks.

Levelling Up - Skill Bonuses

As a player upgrades their specialised skills, they will reach milestones that unlock further benefits for those skills.

Skill	Unlock at Level 20	Unlock at Level 40	Unlock at Level 60	Unlock at Level 80	Unlock at Level 100
1-Handed Melee	Unlock Pow- er and Sweep Attacks	Unlock TTD (Tactical Time Dilation) Lo- cation Hit Ef- fects	1-Handed Me- lee Weapon Reach +30%	1-Handed Me- lee Weapon TTD Drain - 50%	Power and SweepAttack Chance to Stun +25%
2-Handed Melee	Unlock Pow- er and Sweep Attacks	Unlock TTD (Tactical Time Dilation) Lo- cation Hit Ef- fects	2-Handed Melee Weap- on attacks are unblockable	2-Handed Melee Weap- on TTD Drain -50%	Power and Sweep attack chance to knockdown +25%
Handguns	Unlock TTD Location Hit Effects	Handgun Crit- ical Damage +50%	Minimum Ar- mour Pene- tration Dam- age +10%	Debuffed En- emy Critical Chance +20%	Handgun Crit- ical Hits ig- nore 100% Armour
Long Guns	Unlock TTD Location Hit Effects	Long Guns Critical Dam- age +50%	Long Guns Headshot / Weakspot Damage +20%	Deadly Focus: No Weapon Sway for 5s after each kill	Long Gun Critical Hits ignore 100% Armour
Heavy Weapons	Unlock TTD Location Hit Effects	Heavy Weap- ons Critical Damage: +50%	Heavy Weap- ons Reload Speed: +30%	Heavy Weap- ons Frenzy: Critical Hits increase Rate	Heavy Weap- on Critical Hits ignore 100% Armour of Fire +30%

Levelling Up - Skill Bonuses (Cont.)

Skill	Unlock at Level 20	Unlock at Level 40	Unlock at Level 60	Unlock at Level 80	Unlock at Level 100
Dodge	Unlock the ability to Leap (Dodge Forward) +100%	Dodge Recovery Speed +100%	Dodge Protection: +30% Armour Rating for 5s after every dodge	Dodge Force: After dodging, your next Melee Attack gains Damage +50%	Dodge Penetration: After dodging, you next Weak Spot hit within 5s has a 50% chance to ignore armour
Block	Perfect Block: Block just before you get hit to Stagger your attacker	Weapon Durability Loss from Blocking -25%	Walk Speed while Blocking +100%	No Weapon Durability Loss on a Perfect Block	Perfect Blocks weaken opponents, increasing the damage they take by +100% for 5s
Persuade	Cower: Humans have a 20% chance to cower in fear for 3s after the first time you hit them.	Cower Duration: +7s	Cowered Target's Armour: -50%	Human Cower Chance: +10%	When a Human cowers, you gain +25% Armour for 10s
Lie	Scramble: 15% chance Auto-mechanicals will slowly attack other enemies instead of you for 10s	Scramble Duration: +7s	Scrambled Automechanicals attack at their normal speed	Automechanical Scramble Chance: +10% Automechanical Weakspot Damage +30%	Scrambled Automechanical Weakspot Damage +30%

Levelling Up - Skill Bonuses (Cont.)

Skill	Unlock at Level 20	Unlock at Level 40	Unlock at Level 60	Unlock at Level 80	Unlock at Level 100
Intimidate	Terrify: 20% chance creatures will become terrified and flee for 10s after you kill one.	Terrify's Area of Effect: +100%	Terrified Creature Movement Speed: -30%	Creature Terify Chance: +10%	Terrifying a creature gives 10s Crit Chance +5% and Critical Damage +25%
Sneak	Sneak Attack: Attack unaware enemies while crouched to deal bonus damage	Pickpocket: Steal from humans while sneaking	Crouch Move Speed: +25%	Sneak Attack Weakspot Damage: +20%	Sneak Attacks ignore +50% of the target's Armour
Hack	Unlock the ability to sell goods to Vending Machines	Unlock access to Restricted Items in Vending Machines	Hack Automatics: Turn them off for 3s	Automechanical Detection Range: -30%	Hack Automatics: mechanical Distance: +2.5m (5m)
Lockpick	Doors and Containers requiring 1 Mag-Pick to unlock are free to open	Find +25% more Bits in containers	Lockpick Preview: See what is inside locked containers	Lockpicking speed is increased to be nearly instant	Find Pristine Item Chance: +100%
Medical	Unlock the 2nd Drug Mixing Slot for the Inhaler	Unlock the 3rd Drug Mixing Slot for the Inhaler	Hostile Effect Duration on Targets: +50%	Unlock the 4th Drug Mixing Slot for the Inhaler	Damage Bonus vs Humans: +20%

Levelling Up - Skill Bonuses (Cont.)

Skill	Unlock at Level 20	Unlock at Level 40	Unlock at Level 60	Unlock at Level 80	Unlock at Level 100
Science	Tinker: Improve your weapons and armour in the Workbench	Tinkering Cost: -50%	N-ray Damage: +25%	Tinkering cost for Science Weapons is capped	Further Reduce Tinkering Cost to -90%
Engineering	Field Repair: Repair Weapons and Armour in the Inventory	Break down weapons and armour for a 20% chance to extract a Basic Mod	20% chance items you Repair will be Pristine, increasing Value and Durability	Break down weapons and armour for a 10% chance to extract a Rare Mod	Damage vs Automechanicals: +20%
Inspiration	Companion Abilities: You can order Companions to do special attacks	Companions gain +20% Armour Rating	Companions Skill Bonus to Player Skills: +100%	Inspired Precision: When Companions kill an enemy, All kill an enemy, the party gains Critical Hit Chance +20% for 5s	When Companions kill an enemy, All Companion Ability Cooldowns -20% for 5s
Determination	The Inhaler heals you and your companions, but they get 30% of the healing effect	Companion Critical Damage: +20%	Companions get an additional 25% of the Inhaler's healing effect	Resolve: If a Companion is downed, the party gains +50% Armour Rating and Damage +50% for 10s	When Companions kill an enemy, they gain 50% Health

SIMILAR GAMES ANALYSIS

The Elder Scrolls IV: Oblivion

In Oblivion, there are 21 skills that are split into 7 categories: *Strength, Endurance, Speed, Agility, Personality, Intelligence, and Willpower*

Attribute	Skills		
Strength	Blade	Blunt	Hand to Hand
Endurance	Armorer	Block	Heavy Armour
Speed	Athletics	Acrobatics	Light Armour
Agility	Security	Sneak	Marksman
Personality	Mercantile	Speechcraft	Illusion
Intelligence	Alchemy	Conjuration	Mysticism
Willpower	Alteration	Destruction	Restoration

Each skill is levelled up by successfully doing activities that relate to that skill (e.g. arrow hitting a target increases the Archery skill).

When the player creates their character, their choice of class dictates their character's 7 *Major Skills* and 2 *Favoured Attributes*. In Oblivion, skill upgrades aren't governed by the player levelling up. Instead, the major skills levelling up gives the player experience which counts towards their overall player level.

Similar to The Outer Worlds, skills in Oblivion unlock extra bonuses in the form of *skill perks* when they level past certain points. These often allow the player to do things that weren't previously possible, rather than exclusively providing buffs

Skill Points	Mastery Levels
0 - 24	Novice level
25 - 49	Apprentice level
50 - 74	J Journeyman level
75 - 99	Expert level
100	Master level

The Outer Worlds 2

The Outer Worlds 2 is the second in the series, following on from The Outer Worlds. The systems are mostly the same, but tweaks have been made to the core systems like spending skill points and buying perks.

In The Outer Worlds 2, the player has 12 skills that can be upgraded (unless they are “Dumb”, in which case 5 skills are locked).

The skills are:

Engineering, Explosives, Guns, Hack, Leadership, Lockpick, Melee, Medical, Observation, Science, Sneak, Speech



Screenshot from IGN - https://www.ign.com/wikis/the-outer-worlds-2/What_is_the_Max_Skill_Level_in_Outer_Worlds_2

When the player levels up, they get 2 skill points to spend on their skills. Skills can be upgraded up to the player's level (with *specialised skills* having a limit of the player's level +2).

When skills are levelled up, they increase stats relating to the skill by a percentage amount. There aren't any milestone bonuses or effects in The Outer Worlds 2, each level upgrades the same amount.

As there are so few skill points awarded each level, the player is incentivised to prioritise their specialised skills and others that complement them.

LEARNING FROM OTHER GAMES

Skill Systems in Other Games

Narratively, it is more engaging to have players choose a “character build” and stick with it throughout the game.

Oblivion:

- Incentivises players to use their major skills, to upgrade them.
- Rewards continuous build progression by levelling up the player.
- Has milestone bonuses for skills.
- Still has the ability to upgrade other skills (albeit slower)

The Outer Worlds 2:

- Gives a higher level cap for specialised skills
- Locks certain perks behind a level threshold
- Decreases rate of skill progression

What Has Been Learnt

Giving an incentive for prioritising the skills that most relate to the player’s character build helps to guide its further development, and prevent characters turning into a “jack-of-all-trades” and struggling in the later game.

ACADEMIC RESEARCH

“Fun” Theory - Lazzaro

When designing this system, I wanted to try and adhere to Lazzaro’s 4 keys to fun, specifically “Serious Fun”. Serious fun is centred around creating an impact on either the player or the game world.

The player’s skill are very important in The Outer Worlds, as they influence combat, encounters with people and with the world. I wanted to make sure that my point allocation system had the players’ experiences at the forefront.

If a player has the character build that they want to use, then the experiences they have within the game are much more impactful and enjoyable.

Achterman Principles

Comprehensible

My new point allocation system is comprehensible to me and the players, as it's

Consistent

Every level, the points are able to be allocated in the same way. Even though the waterfall system upgrades different skills depending on which you pick, those linked skills never change. As well as this, options given to the player will be explained each time they upgrade their skills. This means that even if the player forgets, they are able to look at what influences what, without losing out on anything.

Predictable

I chose the waterfall skill list to reflect character build choices and thematic links. This is to try and make the system as predictable as possible. Any variations are clearly communicated to the player, and do not change throughout the game.

Extensible

This new system fits very well into the game, as it is very similar to the point allocation system already included within the game. This means that other systems are already “prepared” and just need a couple of tweaks to fit in my

Elegant

My system is very elegant, as it impacts lots of elements within the game, from only the skill points system. The player's interactions with NPCs, combat and the world are all based on this system.

ITERATIVE DOCUMENTATION

DESIGN OUTPUTS - ITERATION 1

“Paper Prototype”

A strictly paper prototype is difficult to make for a system that requires lots of choice, numbers and calculations, so instead I tried my best to strip the system back into something as low-fidelity as possible.

Concept:

The prototype simulates the process of the player levelling up and spending their skill points (pretending they are advancing through the game).

The old system is put against my new system, to see how people will differ in point allocation, while still trying achieve the “same build”.

The result of my new system was then compared against creating the same character build with the older point allocation system.

	Skill Points Value	Player Level																													Bonus Points			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
Melee:																																		
· 1-Handed Melee	25	0	3	0	2	0	2	0	1	0	0	1	0	0	0	0	0	3	0	0	0	3	0	3	3	0	0	0	0	0	0			
· 2-Handed Melee	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Ranged:																																		
· Handguns	21	0	2	0	0	0	2	0	2	0	1	1	0	0	3	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0			
· Long Guns	51	3	2	0	3	0	0	0	3	0	1	0	1	2	2	0	0	0	3	2	0	0	0	1	0	3	3	0	0	3	0	0		
· Heavy Weapons	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Defense:																																		
· Dodge	35	0	0	0	0	0	3	2	0	0	2	0	2	0	2	0	0	0	3	0	0	3	1	0	0	0	0	0	0	0	0	0		
· Block	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Dialogue:																																		
· Persuade	41	0	0	0	3	0	0	3	0	0	0	3	0	0	0	0	2	0	0	0	3	3	2	0	0	1	2	0	3	0	0	0		
· Lie	43	3	0	0	2	0	0	0	0	2	0	2	0	0	0	0	0	2	0	0	0	2	2	0	0	0	0	3	0	0	0	0		
· Intimidate	4	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Stealth:																																		
· Sneak	63	3	0	3	0	3	0	2	0	2	0	0	2	0	0	3	2	3	0	0	0	3	0	3	0	0	3	3	3	3	0	0		
· Hack	43	0	1	3	0	3	0	0	2	0	1	2	3	0	0	0	3	0	0	0	3	0	3	3	3	1	0	0	3	0	0	0		
· Lockpick	43	1	2	3	0	0	3	0	0	1	0	3	0	3	0	0	0	2	1	2	0	3	0	3	0	2	3	0	1	1	0	0		
Tech:																																		
· Medical	37	0	0	0	0	2	0	0	2	0	0	2	0	0	0	3	3	2	2	0	0	0	0	3	0	3	0	0	0	0	0	0	0	
· Science	45	0	0	0	0	0	3	0	0	0	0	3	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
· Engineering	44	0	0	1	0	0	0	0	2	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	
Leadership:																																		
· Inspiration	16	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0
· Determination	17	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0

My first iteration included spending the 10 skill points on the player's skills, with no more than 3 points used on a single skill at a time. Then, when a skill surpassed 20, a “waterfall” effect happened where other similarly thematic skills would also be increased.

The “Waterfall Effect”

In my new system, I wanted the ability to “passively” upgrade skills that the player wouldn’t necessarily prioritise, but *were still beneficial to their playstyle*, as opposed to the regular system which puts points into similar categories.

I created a table of which skills influenced others, and tried to group them by either thematic reasons, (e.g. becoming good with engineering gains knowledge of internals, thus improving lockpicking skills) or build-related reasons, (e.g. levelling up Sneak also increases the Lie skill)

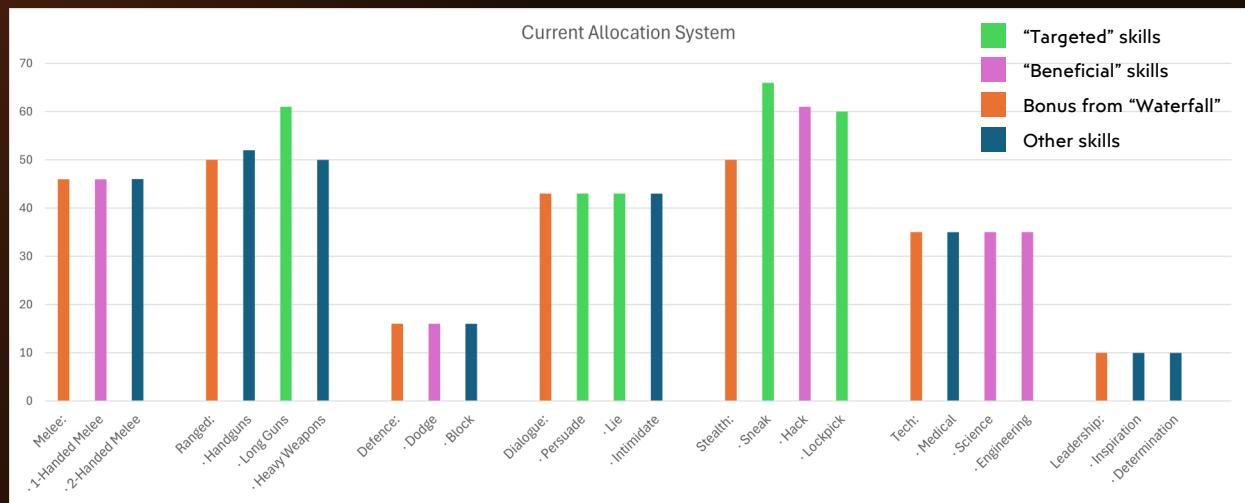
Influencing Skill	Skills it Increases		
1 Handed	Hand Guns	Block	Inspiration
2 Handed	Block	Intimidate	Determination
Handguns	Long Guns	1 handed	Persuade
Long Guns	Sneak	Heavy Weapons	Medical
Heavy Weapons	Block	Intimidate	Persuade
Dodge	Handguns	Lie	1 handed
Block	Handguns	Determination	2 handed
Persuade	Sneak	Lie	Inspiration
Lie	Sneak	1 handed	Dodge
Intimidate	Heavy Weapons	2 handed	Hack
Sneak	Lie	Engineering	Long Guns
Hack	Engineering	Dodge	Science
Lockpick	Science	Determination	Persuade
Medical	Lockpick	Science	Hack
Science	Engineering	Medical	Inspiration
Engineering	Lockpick	Hack	2 Handed
Inspiration	Heavy Weapons	Dodge	Intimidate
Determination	Medical	Lockpick	Long Guns

Evaluation of Iteration 1

When creating the character build using both models, I saw a dramatic difference between the two versions.

Version A - The Outer Worlds' current allocation system:

This version showed lots of “unnecessary” upgrades, when spending points on the Core Skills. As the player spends points on a whole category at once, there is often lots of skills that get developed that may never be useful for the player’s play style.

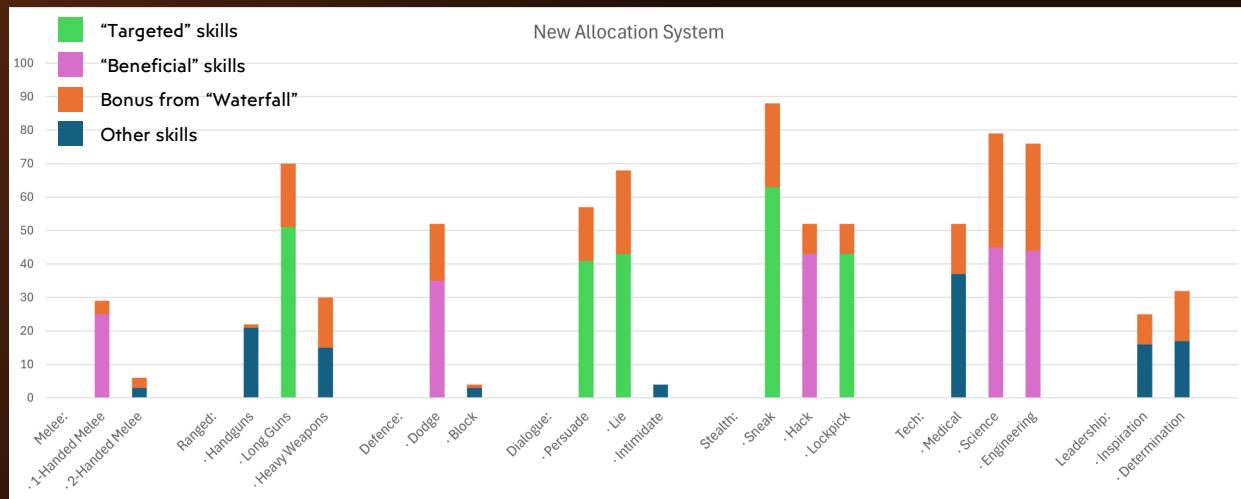


In this model, skills like 2-Handed Melee and Heavy Weapons aren’t helpful to the player’s style, yet they get upgraded along with the more helpful skills. On the other hand, due to a player prioritising the most important skills, elements like the Tech category get left behind.

Another observation is that a lot of the skills are very similar values. Most of the skills are sat around 30-50, which, on a scale from 1–70, is quite mediocre. This shows that it is easy for the player to become a jack-of-all-trades easily, when trying to build their character how they want.

Version B - My new allocation system:

This version showed that the player was able to properly focus on the skills that they wanted, while also passively upgrading other beneficial skills. There weren't points "wasted" on unnecessary skills.



In this model, skills like 2-Handed Melee and Heavy Weapons barely got upgraded, as the player didn't purposefully spend points on them. On the other hand, as the player was upgrading Stealth-related skills, others got boosted by the waterfall effect, to make sure the player still had other beneficial skills, without having to purchase them.

EVALUATION OF PROTOTYPE

This model worked very well to give an outcome that I had hoped for with regards to this system.

With this system, the Jack-of-all-trades issue has been dramatically decreased. The player has been able to specialise in a few skills, but the skills that are outside of that play style are kept much lower. This means that the player is faced with true road-blocks along the story as some options require specific skill levels.