The consequence of technological developments in video gaming over time is how the increased potential market to the mainstream population is having a direct influence on technologist's responsibilities.

Video games reached mainstream popularity in the 1980's starting with arcade games and going onto home-based computer games (e.g. Dungeons & Dragons being one of the first computer role playing video games).

Dune II (based Frank Herbet's science fiction novel Dune) is one of the first real-time strategy games, using the innovative 3D graphics being developed at that time. These technological developments led to several transitions of these games, which then established a format to follow for years to come, striking a balance between complexity and innovation.

The player is a military commander from a house of his choice. In the first few missions the objectives are to establish a military base on unoccupied territory, to defeat intruders. As the complexity increases so do the challenges until a final showdown, a battle between the players house and enemy sides. The basic strategy of the game is to harvest spice and convert it into credits that can be used to build military units to defeat the enemy.

A Key element that first appeared in this game is the technology tree, a visual representation of the possible decisions a player can take by means of research. This allows the player to choose one sequence or another. At the start of the game the payer may only have a few options but as they progresses more options open up, or not, depending on the game the player is playing.

Another was the Mac software 'interface', the design system enabling the mouse to click and select. Brett Sperry, co-developer of Dune II states that this technological development made them question previous game strategy. "Why not allow the same inside the game environment? Why not a context-sensitive playfield? To hell with all these hot keys, to hell with keyboard as the primary means of manipulating the game!"

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As home based computers became more affordable, the popularity of this style of game appealed to a wider audience, due to it being easier to play, and more realistic.

This led onto further ethical responsibilities that technologists now needed to consider. For example, a wider societal consequences involved in playing electronic games is time. Increased time invested into the development of games has had a direct impact on the amount of time players now spend playing games, due to there increased complexity and realism, impacting on the player's physical and emotional wellbeing. For example, old style video games like Pac-man were simple in complexity and designed for short impromptu play so time invested by players was moderate as was the platform (arcade) it was being played on.

As innovations in video gaming developed so did the platforms and time being invested by players. As broadband became more affordable, an increase in the popularity of online games has changed how gamers interact. Named 'massive multiplayer online role-playing games' (MMORPGs) for the number of players, MMORPGs such as World of Warcraft currently the worlds most-subscribed game, require the player to pay for a subscription, either by buying prepaid game cards for a selected amount of playing time, or by using a credit to pay on a regular basis. This dramatic change has resulted in internet safety being a large part in responsibilities of technologists.

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Another ethical responsibility for technologists that has evolved in recent years is sustainability management, as with the increase in technological developments comes the wider use of resources. Technologists need to establish responsibilities of the care of our environment. For example, games are expensive as a lot of time and money has gone into developing them but as the technology increases so does the demand for newer faster games and/or consoles, potentially making the lifespan of previous games shorter. 3

Human intellect and will for example, are how we make decisions and the importance of personal choice. Games allow us to make decisions and learn from them in ways that may not be possible in real life. For example, the popular SimCity series allows the player to create a society from scratch, with players seeing the direct effect when they choose to do something or nothing. Another growing trend is mega online games that develop their own social culture building up around them. Learning through play is not a new concept however games today reinforce that drive to learn new things, which is fundamentally what makes us human. 2