





# ENISA Survey Results

## SECURITY AND PRIVACY IN

## MASSIVELY-MULTIPLAYER ONLINE GAMES AND SOCIAL AND CORPORATE VIRTUAL WORLDS

# Background

- This survey and its results should be read in combination with ENISA's position paper on [Virtual Worlds, Real Money Security And Privacy In Massively-multiplayer Online Games And Social And Corporate Virtual Worlds](#)
- Fieldwork was conducted online using YouGov's pre-recruited panel (UK) and the equivalent panel of our research partner in Sweden and Germany. Initial panel pulled for use in the survey pre-identified respondents who claimed to visit virtual world sites and/ or played online games (MMORPGs), and then screening questions qualified respondents more stringently by checking for usage in the last month
- The completed interviews achieved were:

|   |  |  |  |  |
|---|--|---|---|---|
| Users of social virtual world websites    | 316  | 301   | 166   | 783   |
| Users of gaming virtual world websites    | 288  | 360   | 383   | 1031  |
| Users of corporate virtual world websites | 20   | 53  | 23  | 96  |
| <b>Total sample size</b>                  | <b>518</b>   | <b>500</b>  | <b>506</b>  | <b>1524</b>   |

- Most of the following charts show data analysed at the European level, identified by the EU flag in the top right hand corner of the chart. Some charts show the data analysed at individual country level, identified by in the top right hand corner of the chart.
- We are also able to analyse the data by type of virtual world site visited, but be aware that the data for social and gaming worlds is much more accurate ( $\pm 3\%$ ) than the data for corporate worlds ( $\pm 9\%$ ) because of the differing base sizes
- In interpreting the data, also remember that some respondents visit more than one type of site, so when you compare responses for social versus gaming versus corporate site visitors, there is some double-counting

# Types of worlds

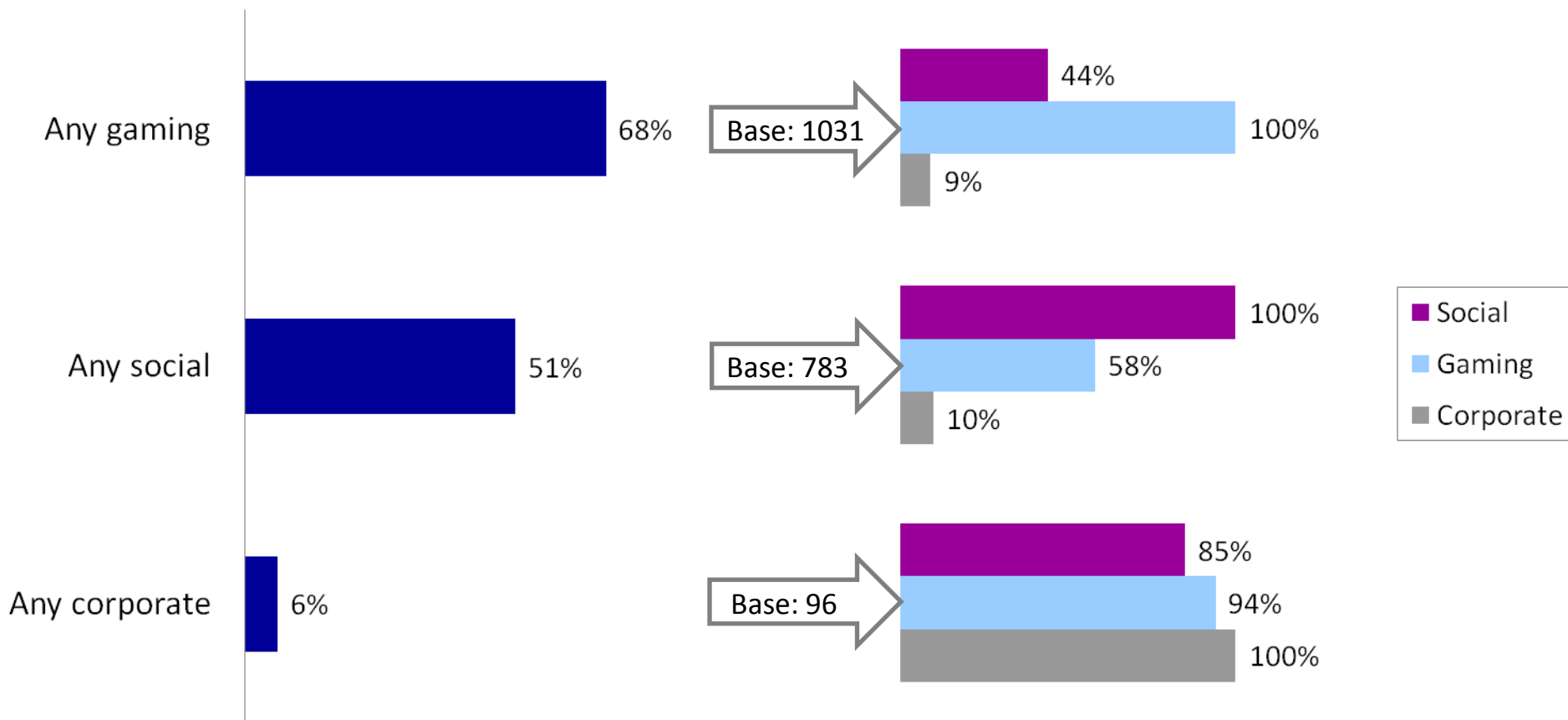
- Social Worlds
  - The main objective is socialising and in-world services/business.
- Gaming Worlds
  - Objectives such as gaining higher level characters, quests etc...
- Corporate worlds
  - 3D platforms for business meetings and collaboration

## Research findings



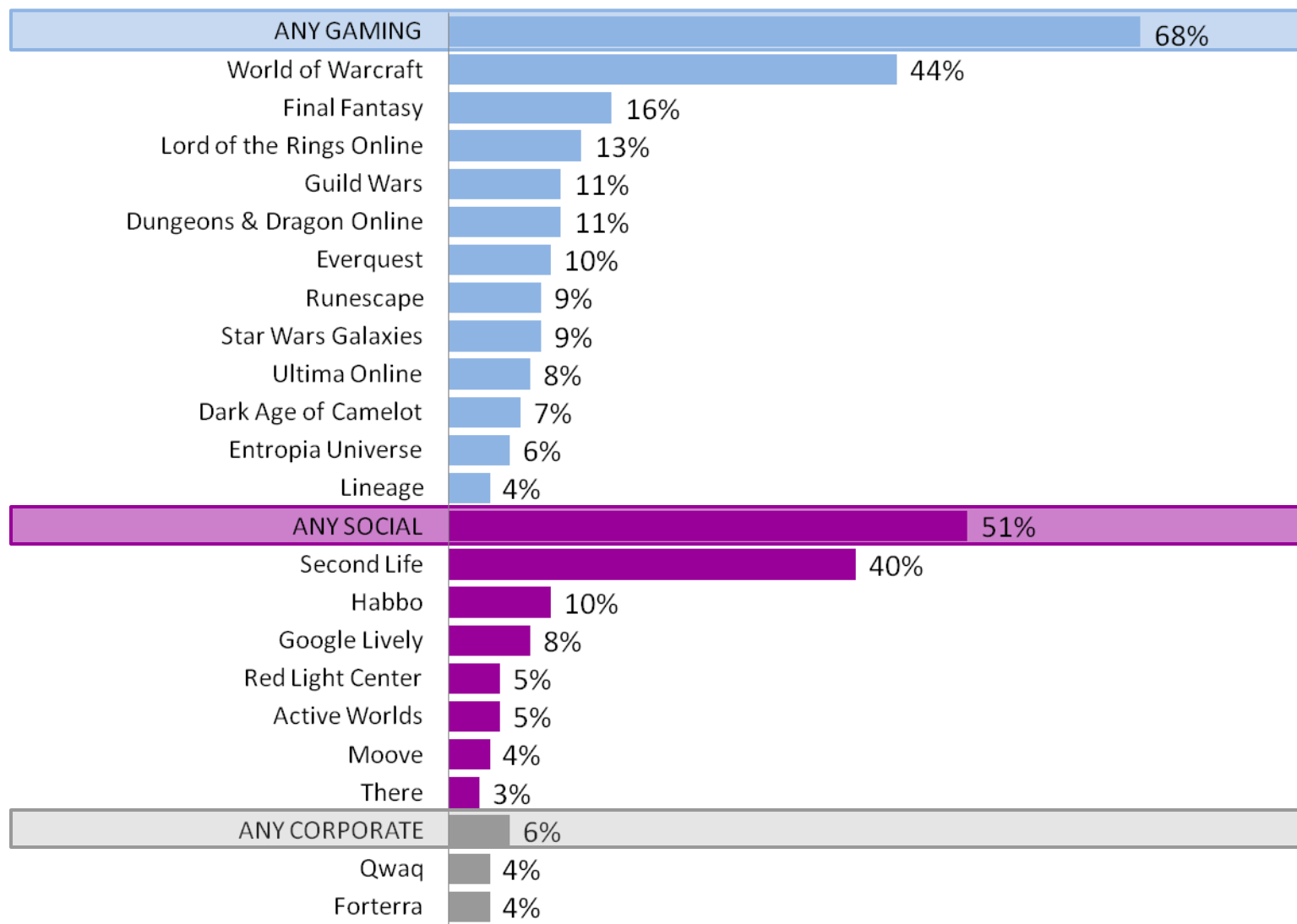
# Types of virtual worlds visited

## Usage of multiple types of sites



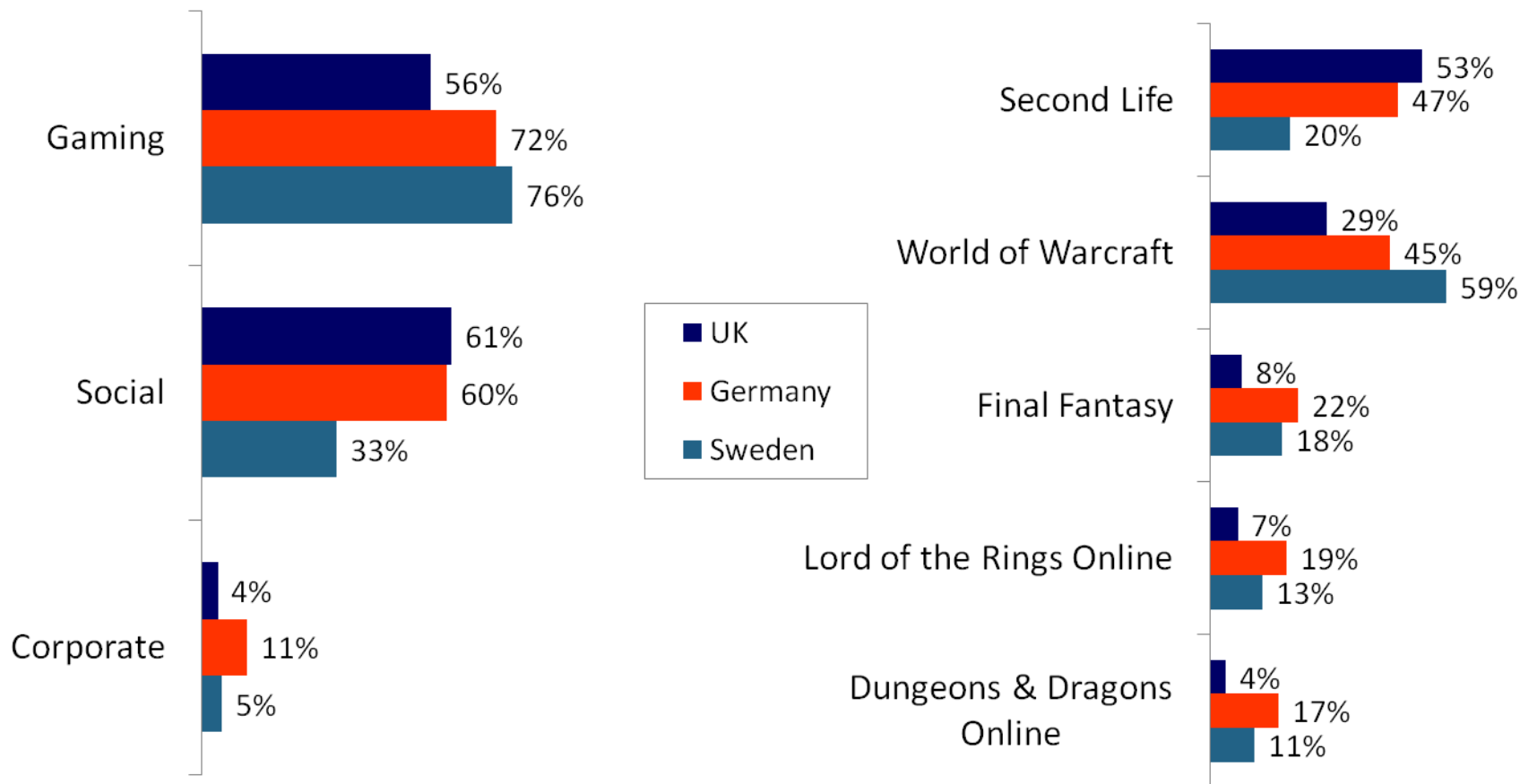
Base: Visitors to any type of virtual world site (1524)

# Specific virtual worlds visited



Base: Visitors to any type of virtual world site (1524)

# Types of MMOVW specific sites visited

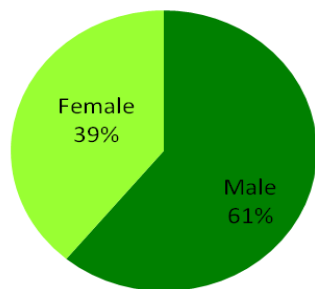
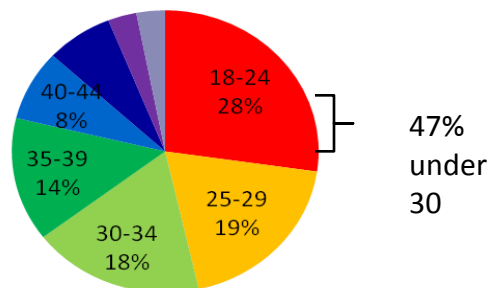


Base: Visitors to any type of virtual world site (UK-518, Germany-500, Sweden-506)

# Age and gender profile of social, gaming and corporate site visitors

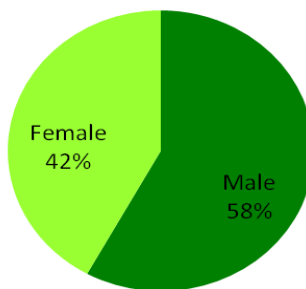
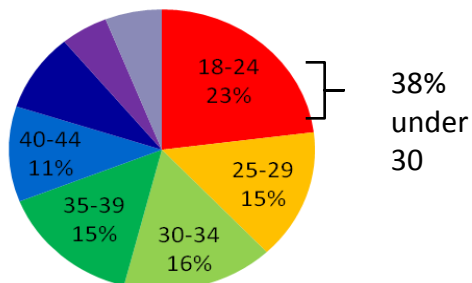


13%  
45+  
**Gaming site visitors**



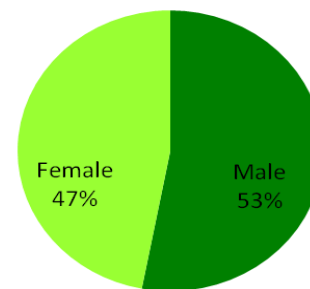
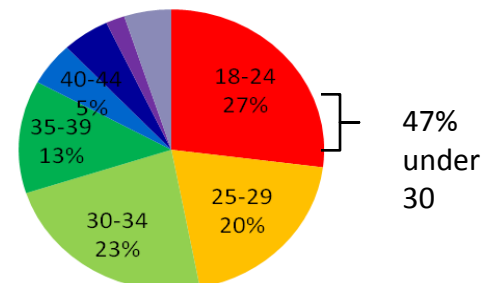
Base: Visitors to gaming virtual world site (1031)

20%  
45+  
**Social site visitors**



Base: Visitors to social virtual world site (783)

12%  
45+  
**Corporate site visitors**



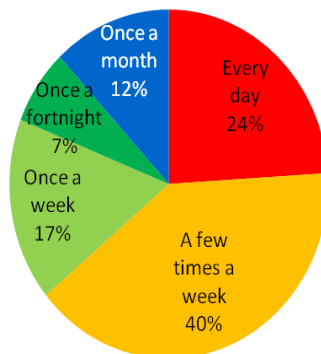
Base: Visitors to corporate virtual world site (96)



# Frequency of participation in virtual worlds

Average: 3.3 visits  
per week

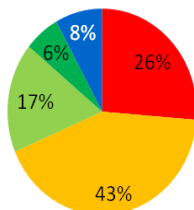
All virtual world visitors



REMEMBER  
that the  
frequency  
figures here  
include double-  
counting as  
respondents  
visit more than  
one type of  
site.

Average: 3.5 visits  
per week

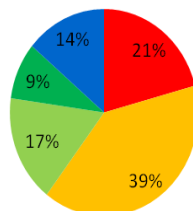
All gaming site visitors



Base: Visitors to gaming site (1031)

Average: 3.1 visits  
per week

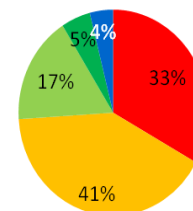
All social site visitors



Base: Visitors to social site (783)

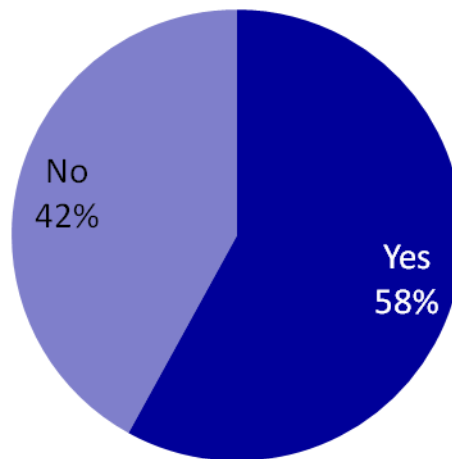
Average: 4.0 visits  
per week

All corporate site visitors



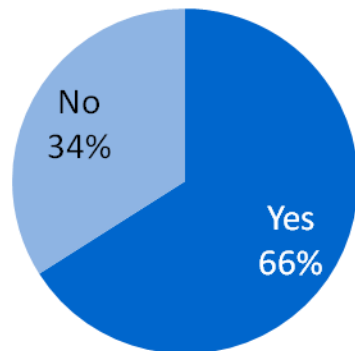
Base: Visitors to corporate site (96)

## All virtual world visitors



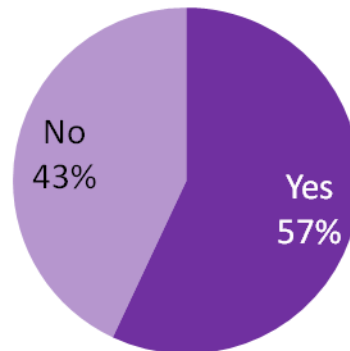
REMEMBER that the figures here include double-counting as respondents visit more than one type of site, e.g. corporate site visitors might say they are members of a guild, but the guild is part of the gaming site they visit, not the corporate world .

## All gaming site visitors



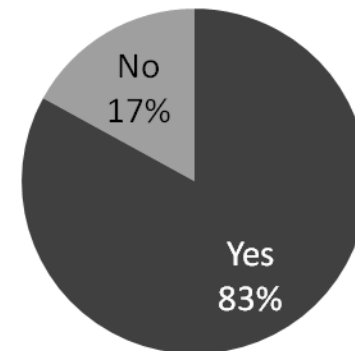
Base: Visitors to gaming site (1031)

## All social site visitors



Base: Visitors to social site (783)

## All corporate site visitors

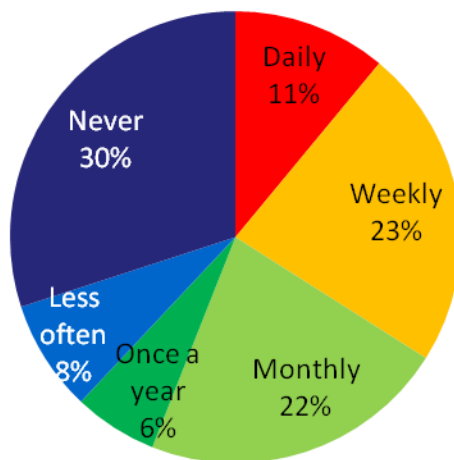


Base: Visitors to corporate site (96)

# Frequency of conducting commercial business in virtual worlds

## All virtual world visitors

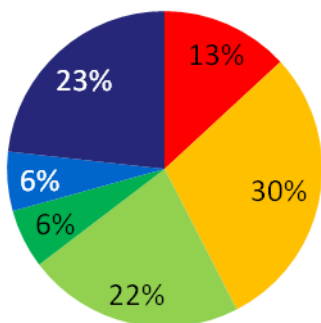
Average: 4.4 occasions per month



REMEMBER that the frequency figures here include double-counting as respondents visit more than one type of site, e.g. gaming site visitors might say they conduct business in a virtual world, but it is while they are in a corporate virtual world, not a gaming world.

## All gaming site visitors

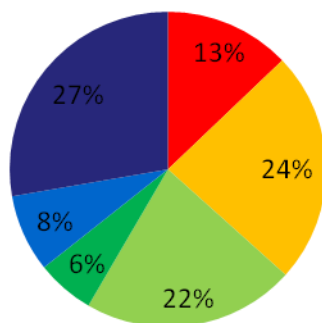
Average: 5.4 occasions per month



Base: Visitors to gaming site (1031)

## All social site visitors

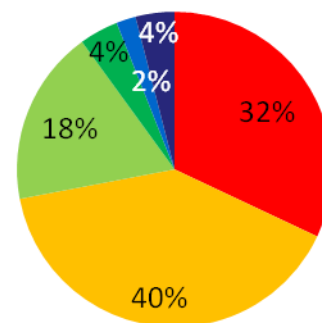
Average: 5.0 occasions per month



Base: Visitors to social site (783)




## All corporate site visitors

Average: 11.5 occasions per month



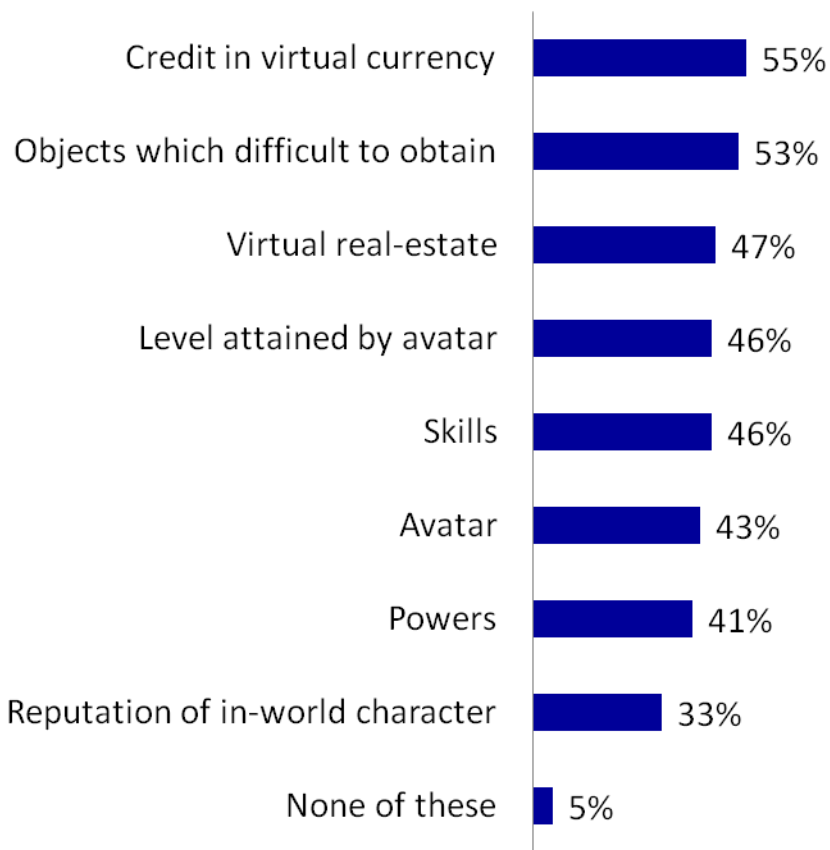
Base: Visitors to corporate site (96)

As a consequence of the differing profiles of site usage in each country, responses to frequency questions and spend are significantly different from one country to another. Generally, our analysis will examine results at the European level, rather than at individual country level.

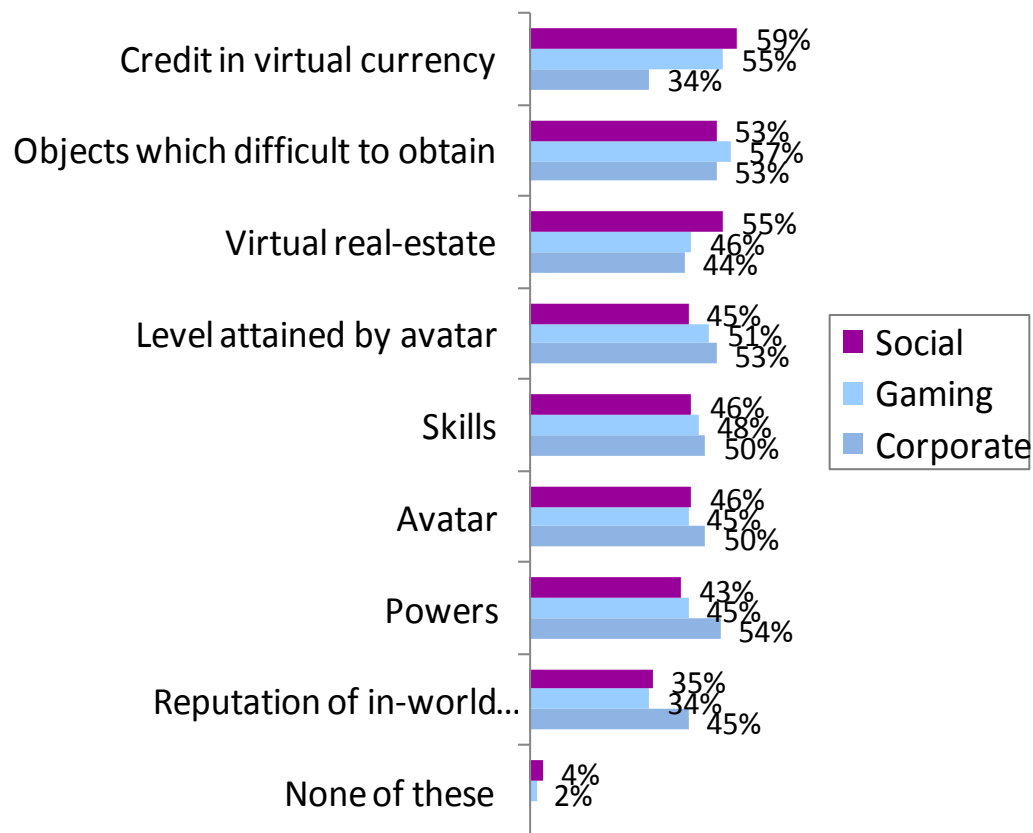
|  |  |  |  |
|--|---|---|---|
|  | Relatively low incidence of gamers  | Relatively high incidence of gamers and corporate site visitors                     | Relatively high incidence of gamers, very low social                                |
| Any social                                       | 61%   | 60%   | 33%   |
| Any gaming                                       | 56%   | 72%   | 76%   |
| Any corporate                                    | 4%  | 11%   | 5%  |
| Times per week participate in virtual worlds     | 3.0   | 3.6   | 3.4   |
| Membership of community, guild, discussion group | 47%   | 74%   | 53%   |
| Times per month conduct commercial business      | 2.8   | 5.8   | 4.5   |
| Average monthly spend                            | €16   | €97   | €202  |

# Items considered as virtual assets

**All virtual world visitors**



**By type of site visited**

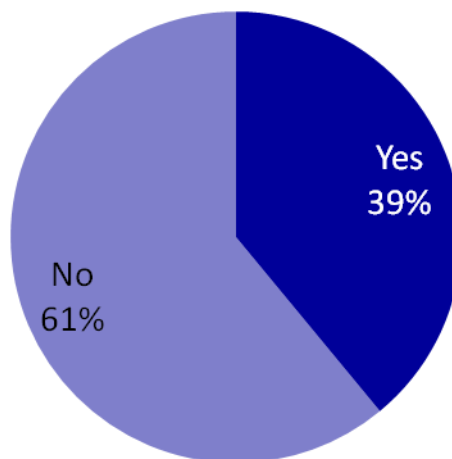


Base: Visitors to any type of virtual world site (1524)

# Whether bought anything for use in a virtual world

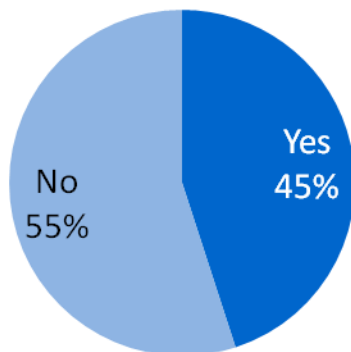


**All virtual world visitors**



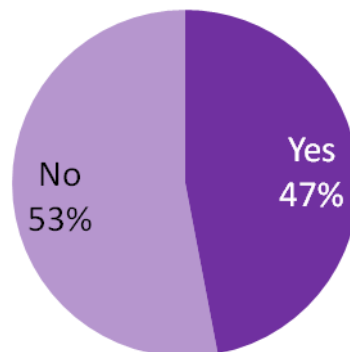
REMEMBER that the figures here include double-counting as respondents visit more than one type of site, e.g. corporate site visitors might say they bought something but it was for use in their gaming site, not the corporate virtual world .

**All gaming site visitors**



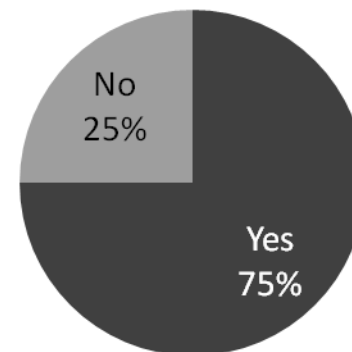
Base: Visitors to gaming site (1031)

**All social site visitors**



Base: Visitors to social site (783)

**All corporate site visitors**

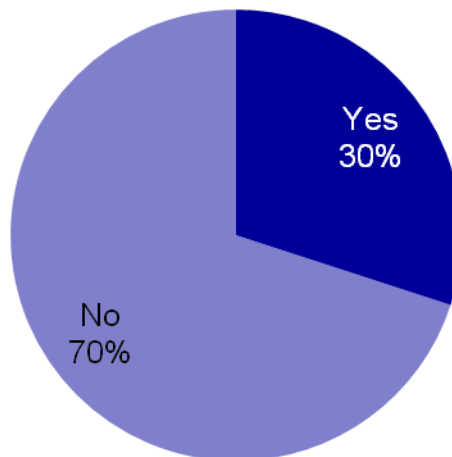


Base: Visitors to corporate site (96)

# Whether lost anything of value in a virtual world

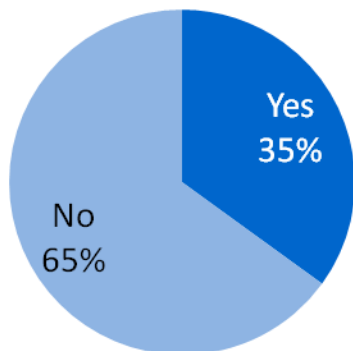


## All virtual world visitors



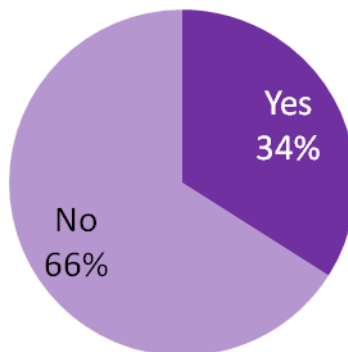
REMEMBER that the figures here include double-counting as respondents visit more than one type of site, e.g. corporate site visitors might say they bought something but it was for use in their gaming site, not the corporate virtual world .

## All gaming site visitors



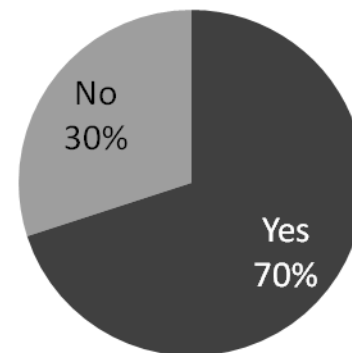
Base: Visitors to gaming site (1031)

## All social site visitors



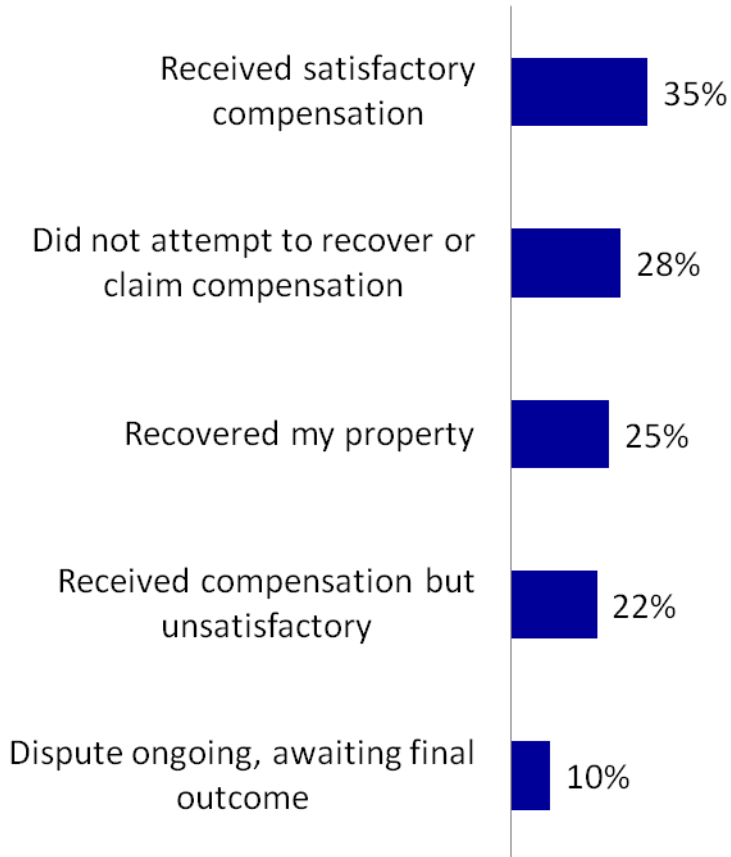
Base: Visitors to social site (783)

## All corporate site visitors

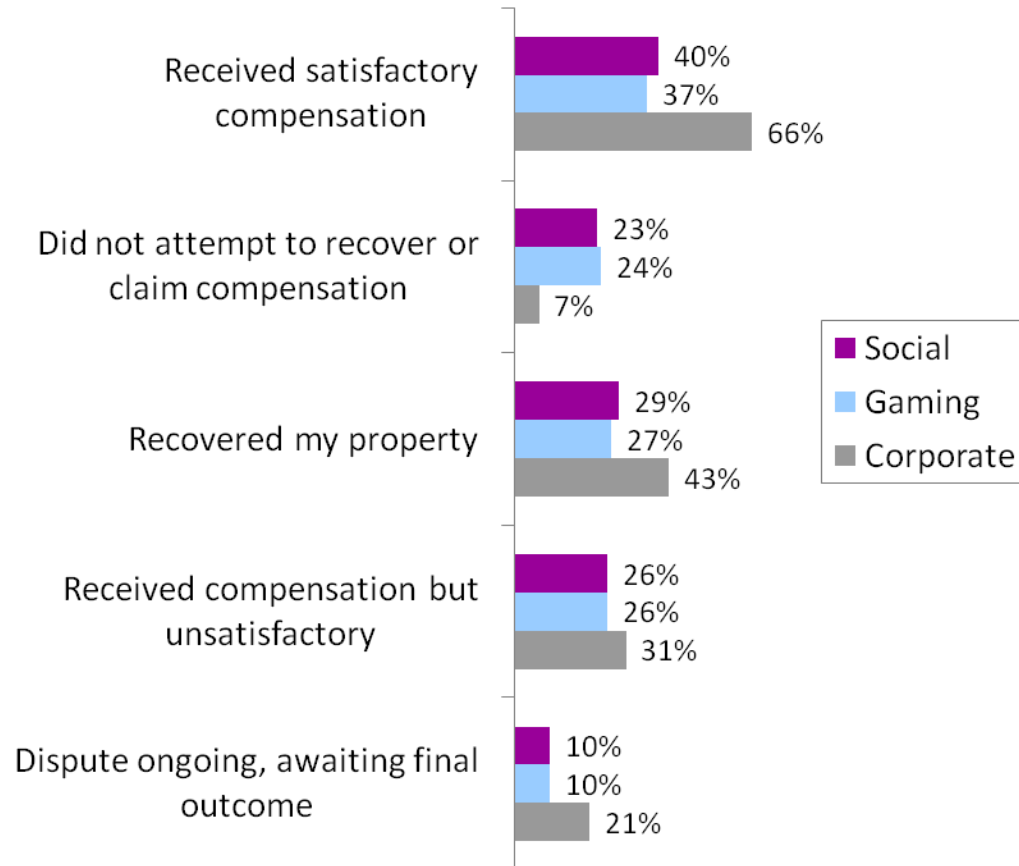


Base: Visitors to corporate site (96)

## All virtual world visitors



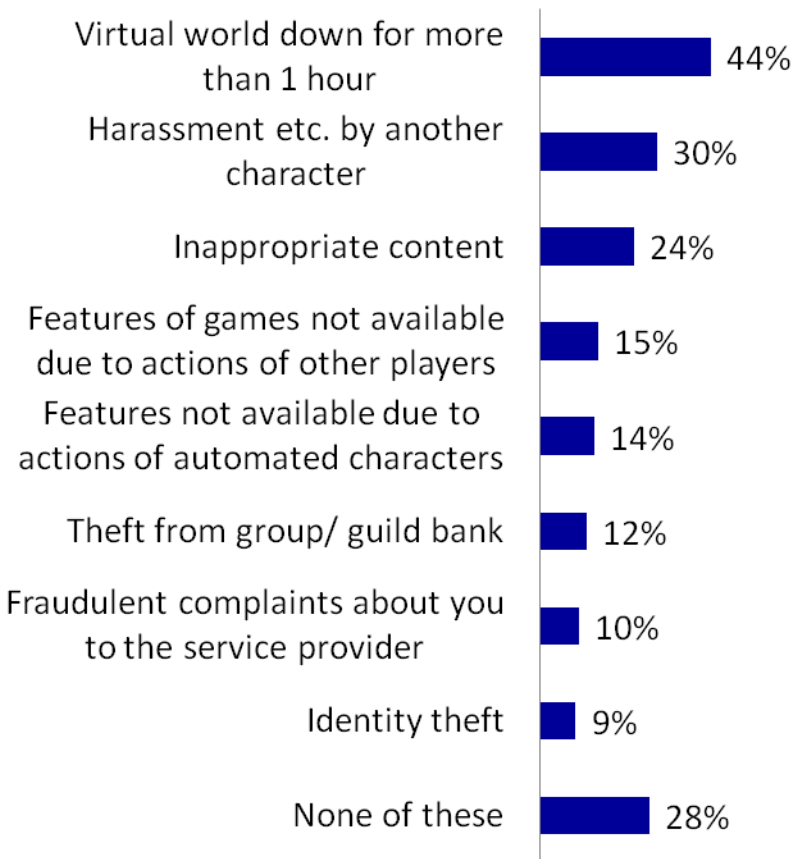
## By type of site visited



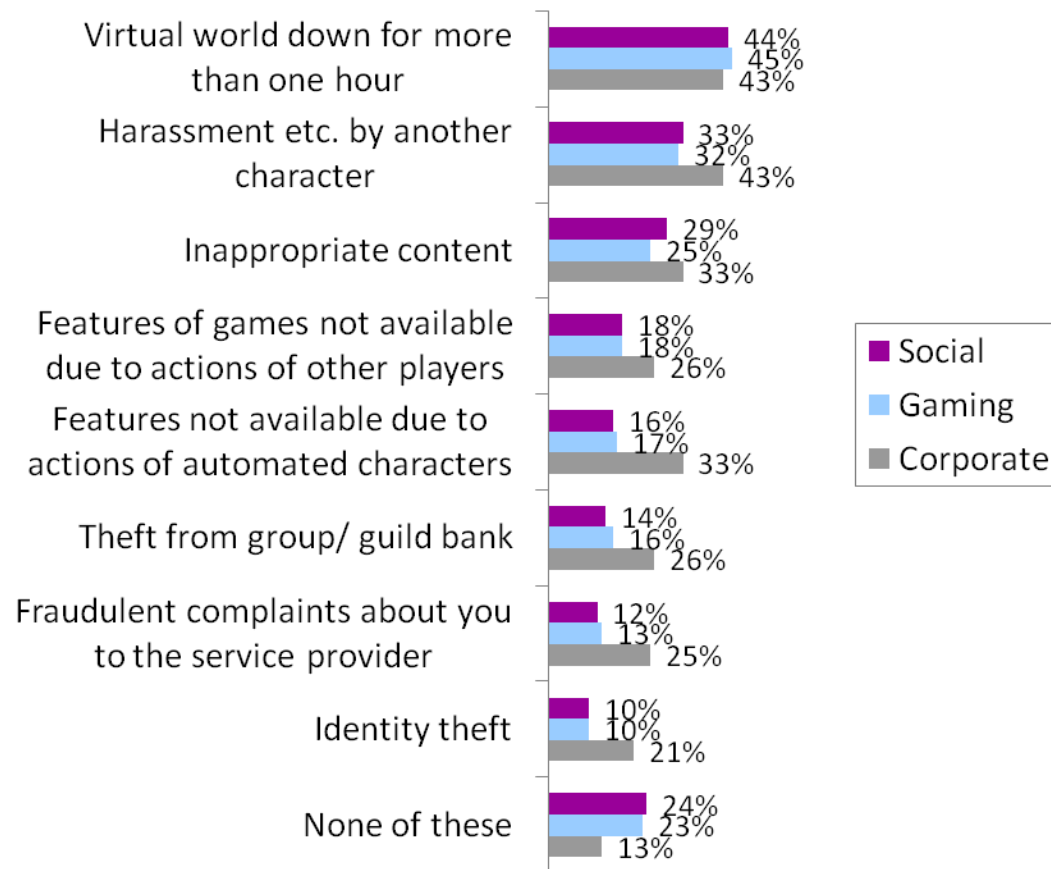


# Security/ reliability problems experienced within virtual world

**All virtual world visitors**

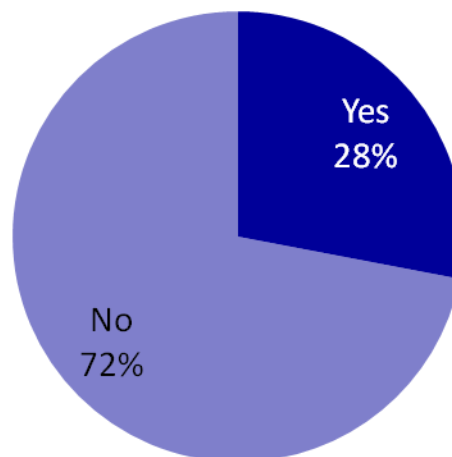


**By type of site visited**



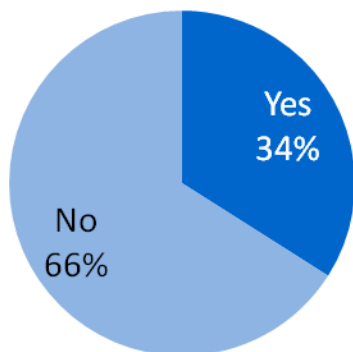
Base: Visitors to any type of virtual world site (1524)

**All virtual world visitors**



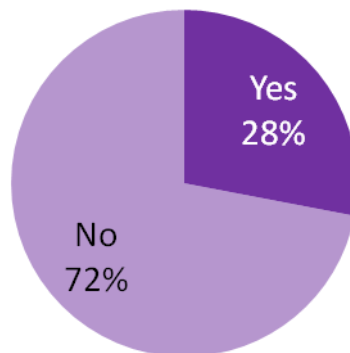
REMEMBER that the figures here include double-counting as respondents visit more than one type of site, e.g. social site visitors might say they reported abuse but it was in their gaming site, not the social virtual world .

**All gaming site visitors**



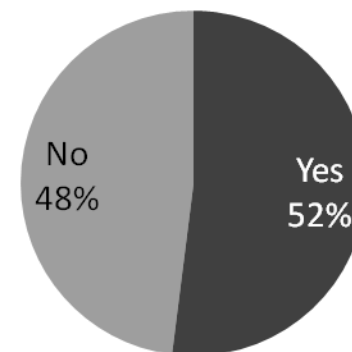
Base: Visitors to gaming site (1031)

**All social site visitors**



Base: Visitors to social site (783)

**All corporate site visitors**

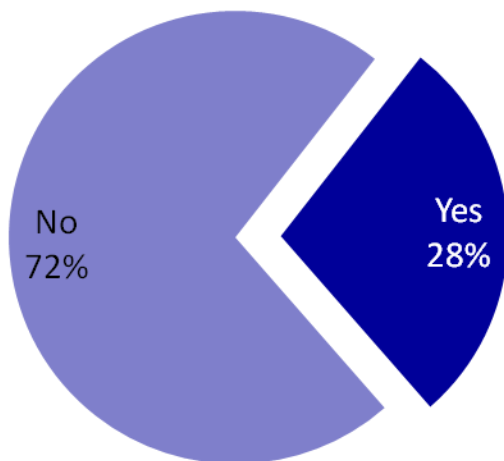


Base: Visitors to corporate site (96)

# Time taken by provider to respond to abuse report/ satisfaction with response

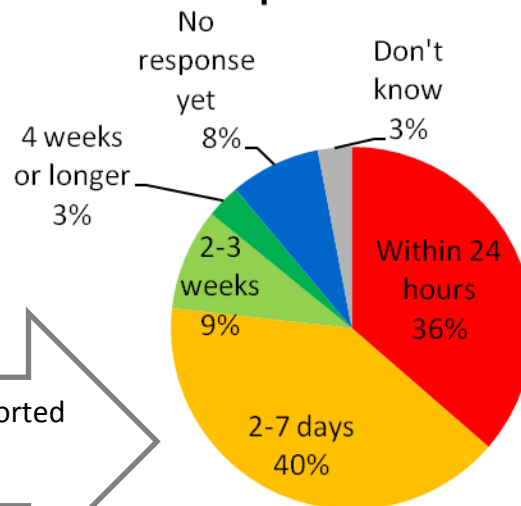


**Whether reported abuse**

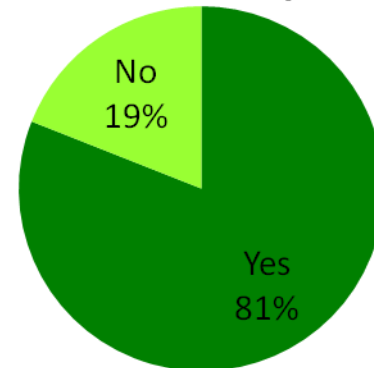


Base: All who reported abuse(432)

**Response time**



**Problem resolved satisfactorily**

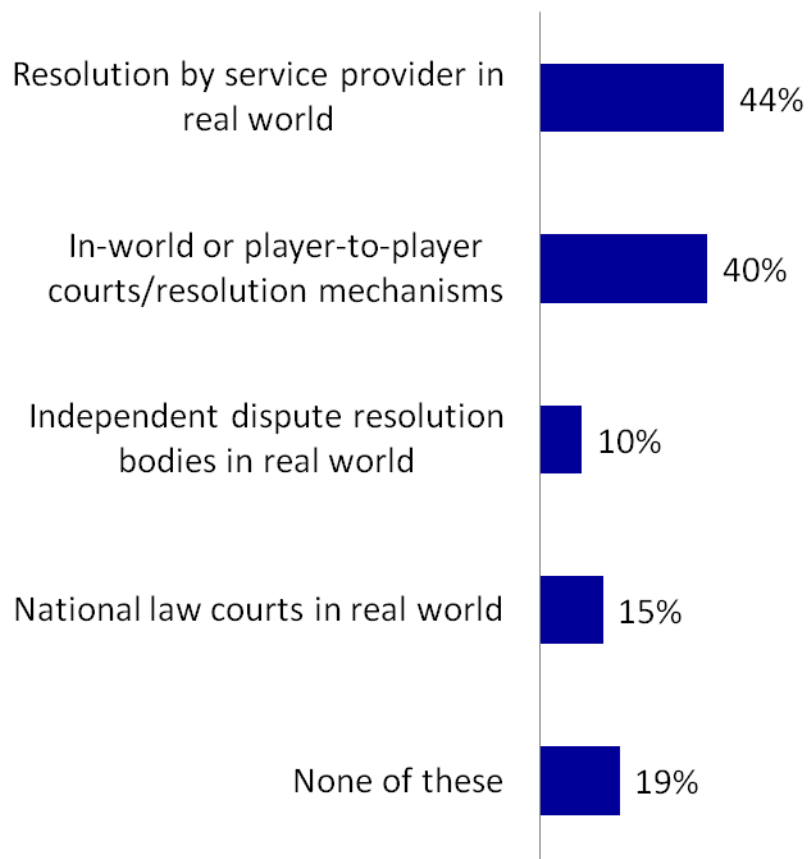


Base: Visitors to any type of virtual world site (1524)

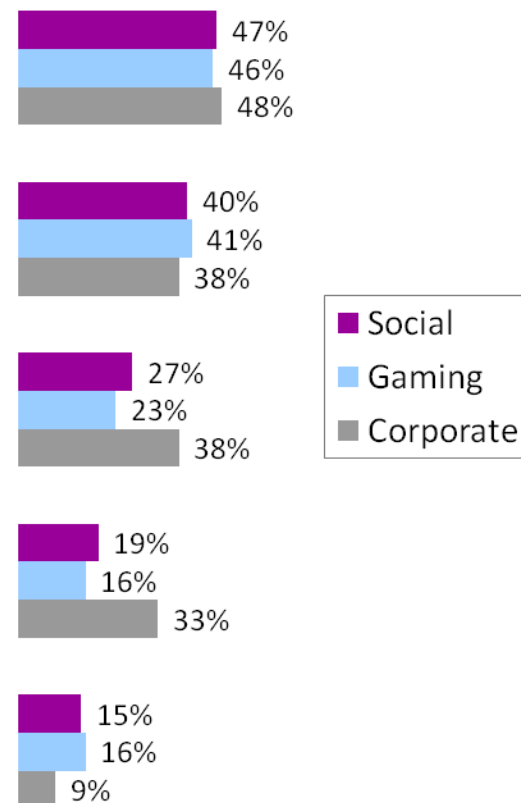
# Methods of governance perceived as most effective



## All virtual world visitors

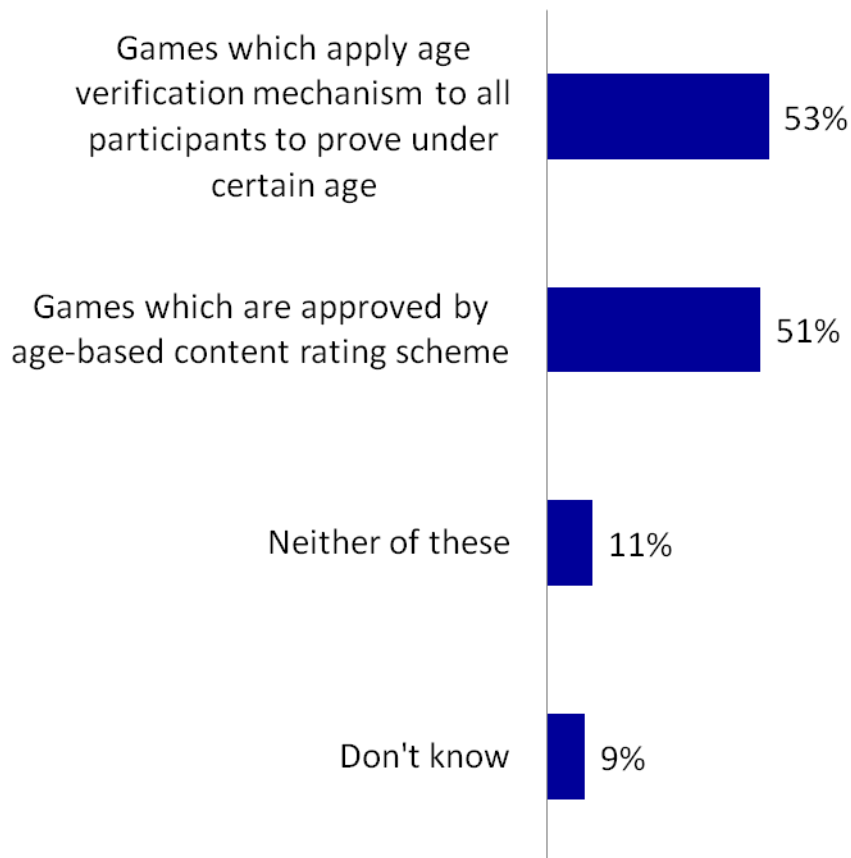


## By type of site visited



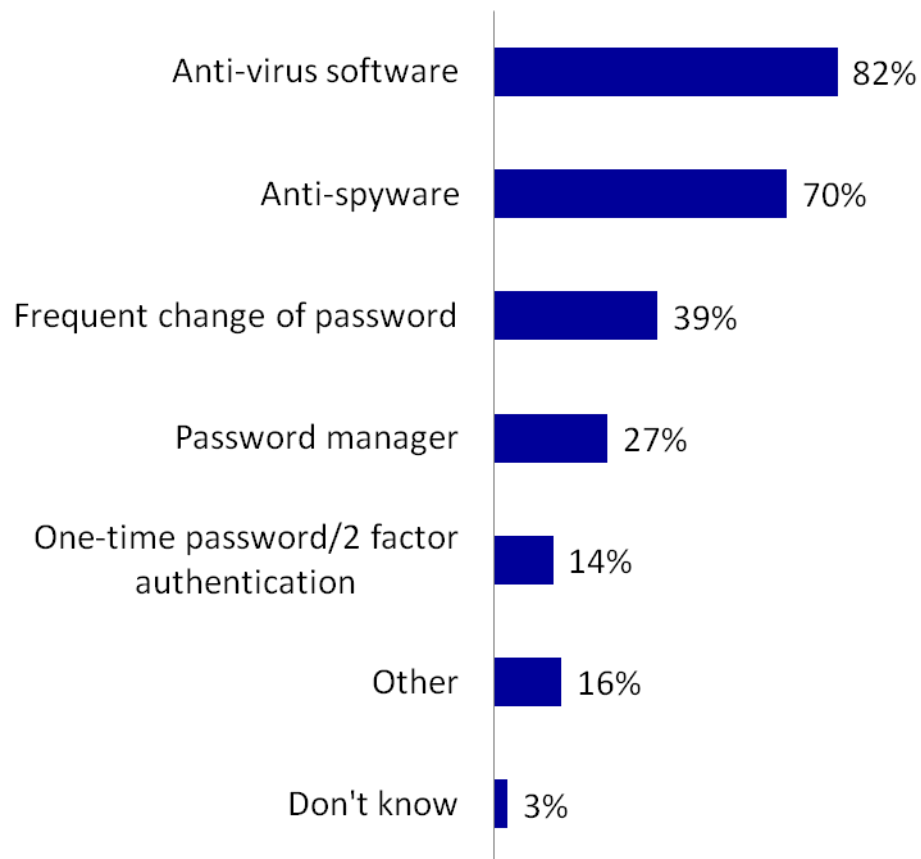
Base: Visitors to any type of virtual world site (1524)

## Acceptability of approval schemes for games for children

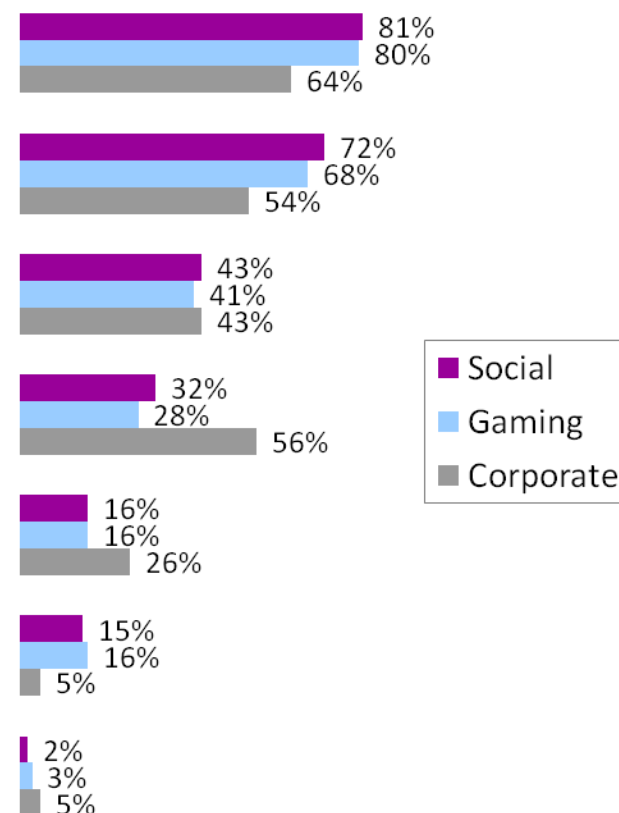


Base: Visitors to any type of virtual world site who have online gaming children (366)

## All virtual world visitors



## By type of site visited

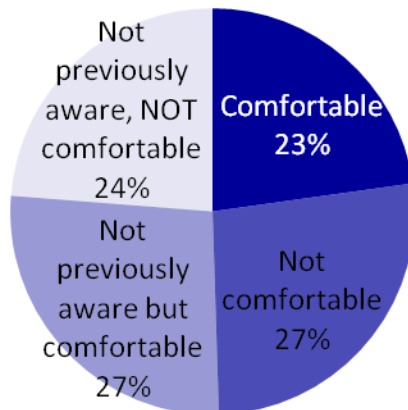


Base: Visitors to any type of virtual world site (1524)

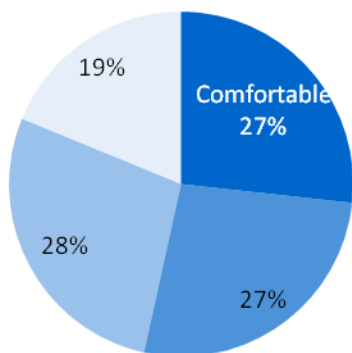
# Whether comfortable with installation of tracking software by virtual world providers



## All virtual world visitors

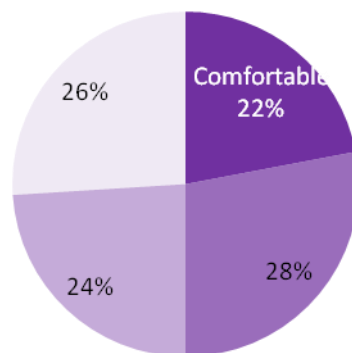


## All gaming site visitors



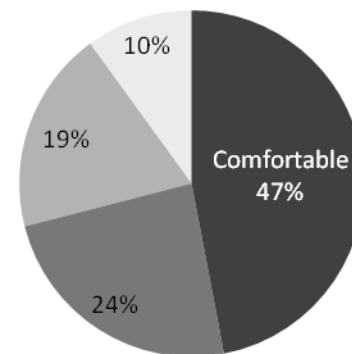
Base: Visitors to gaming site (1031)

## All social site visitors



Base: Visitors to social site (783)

## All corporate site visitors

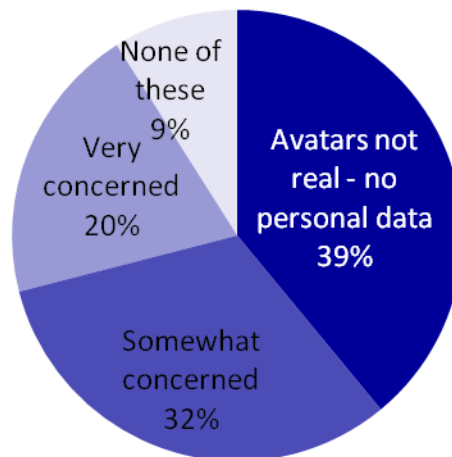


Base: Visitors to corporate site (96)

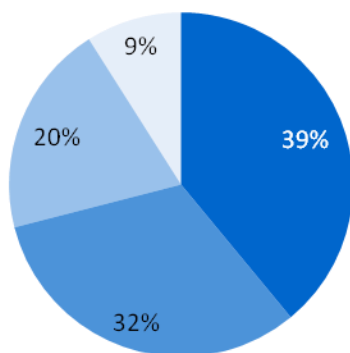
# Attitude towards divulging personal data in virtual worlds



**All virtual world visitors**

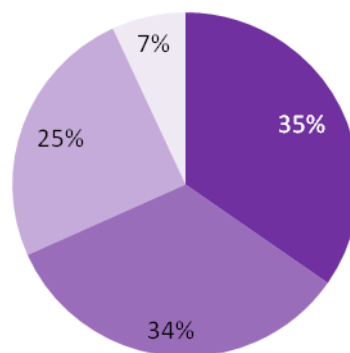


**All gaming site visitors**



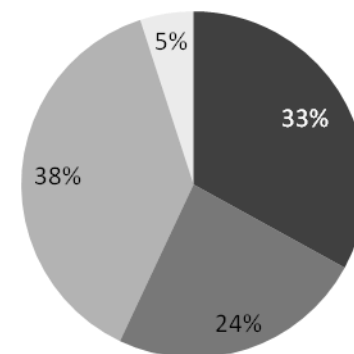
Base: Visitors to gaming site (1031)

**All social site visitors**



Base: Visitors to social site (783)

**All corporate site visitors**



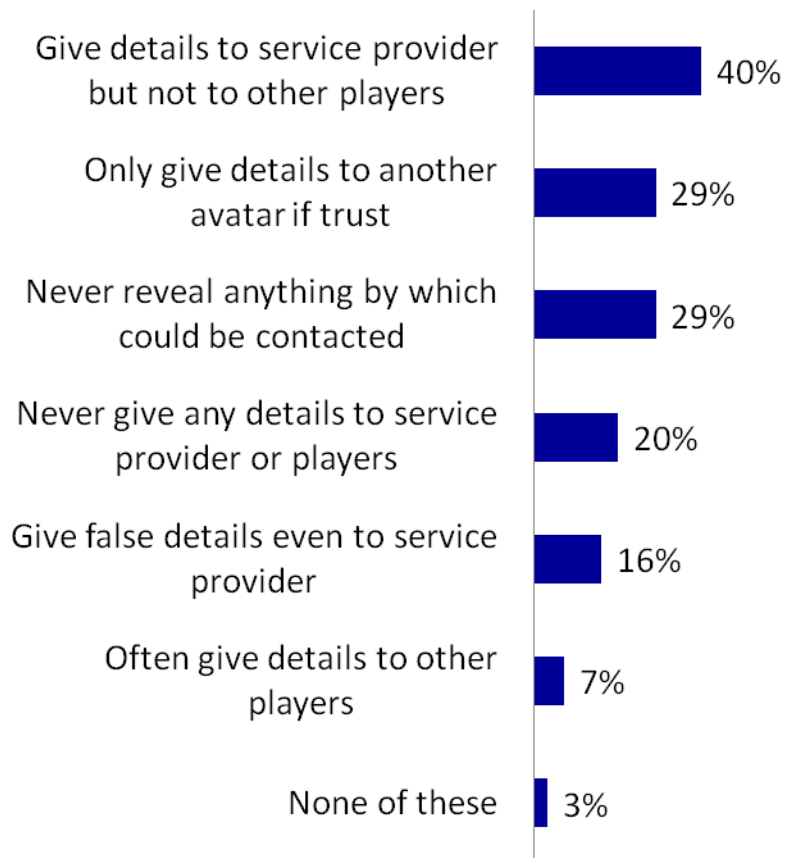
Base: Visitors to corporate site (96)



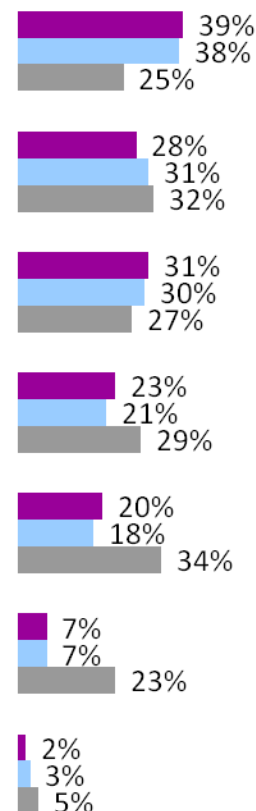
# Approach to giving details of real world identity in virtual worlds



## All virtual world visitors



## By type of site visited

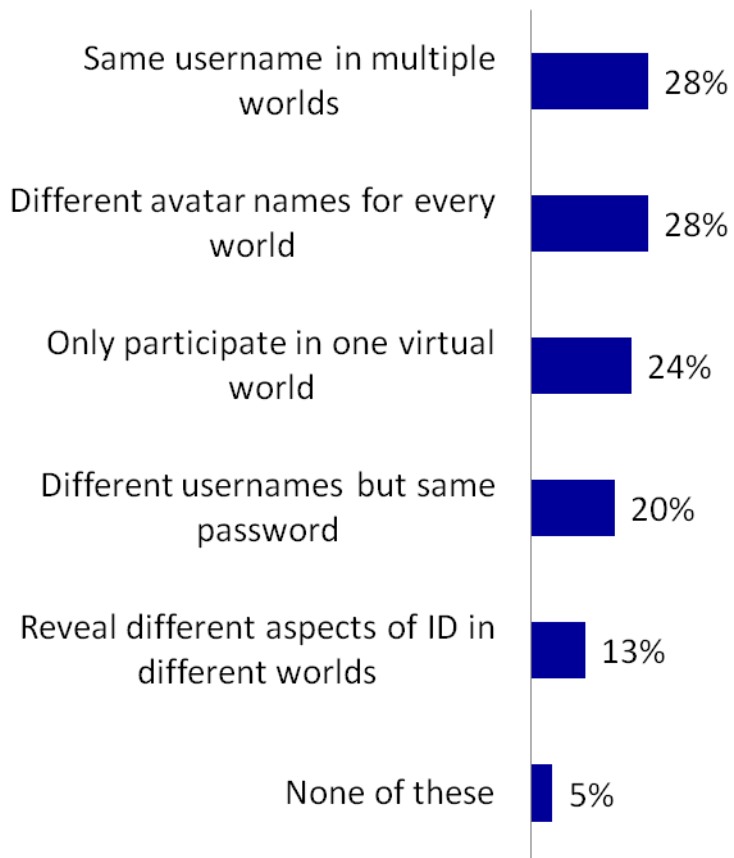


Base: Visitors to any type of virtual world site (1524)

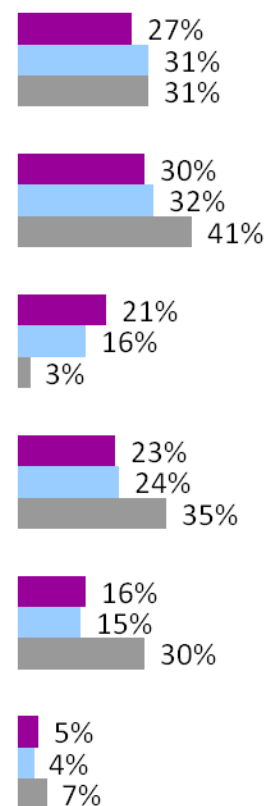
# Strategies adopted to manage identity across multiple virtual worlds



## All virtual world visitors



## By type of site visited

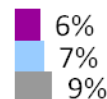
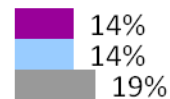
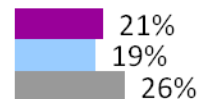
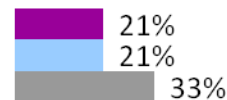
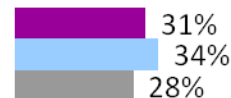
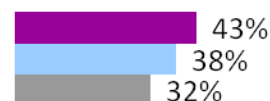
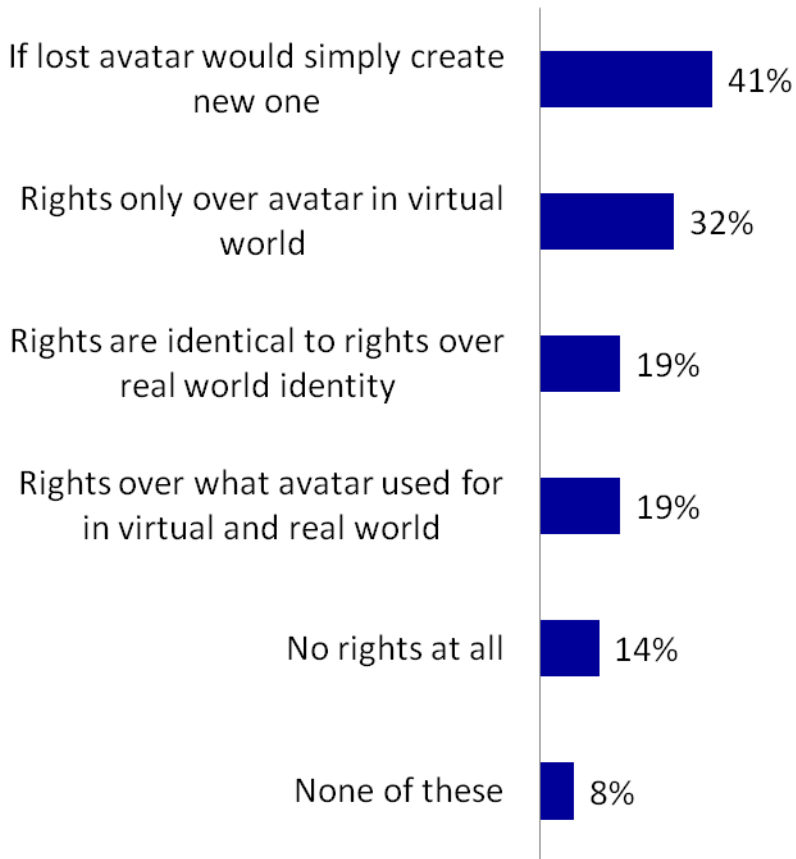


Base: Visitors to any type of virtual world site (1524)

# Perception of owners' rights over avatars

## All virtual world visitors

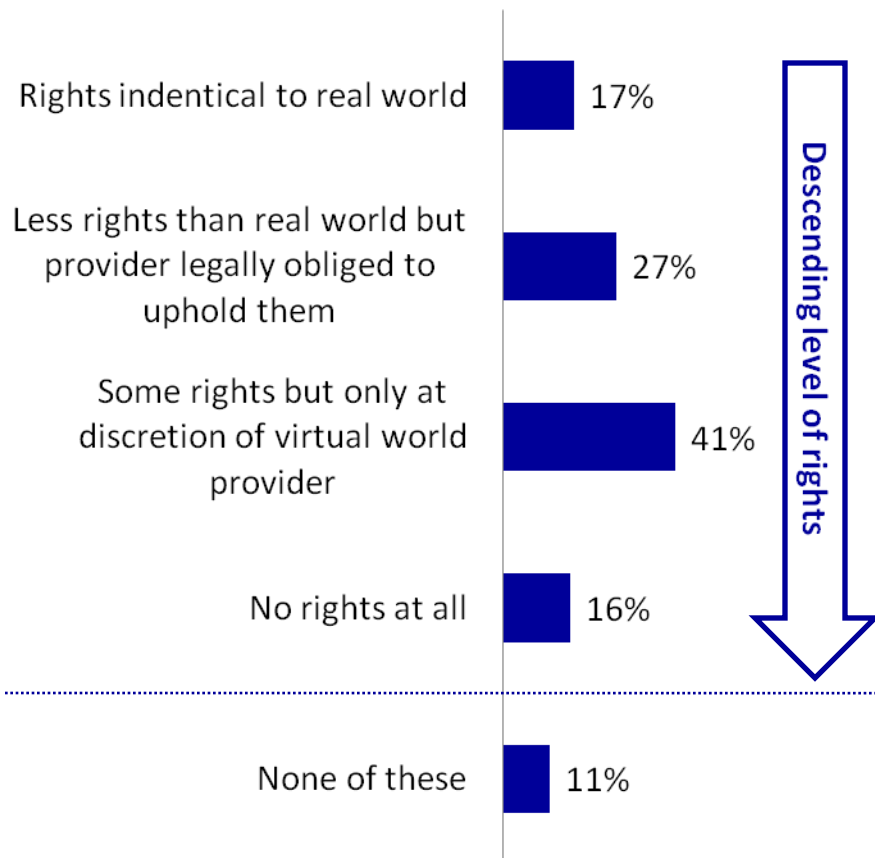
## By type of site visited



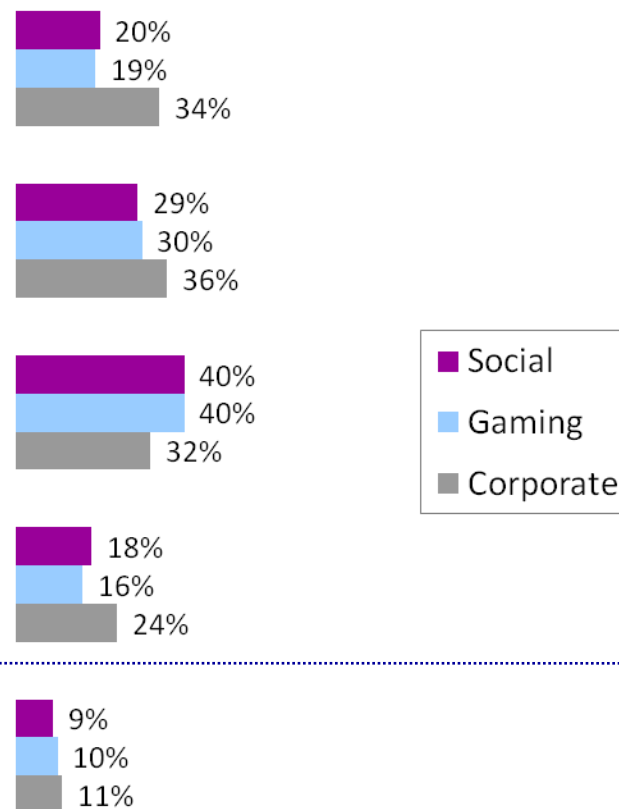
Base: Visitors to any type of virtual world site (1524)

# Perception of rights over avatars' possessions

## All virtual world visitors



## By type of site visited



Base: Visitors to any type of virtual world site (1524)