OBSERVATORY OF ARGENTINEAN VIDEO GAME INDUSTRY

UNRaf
UNIVERSIDAD NACIONAL DE RAFAELA

VIDEOJUEGOS HECHOS EN ARGENTINA

2019 EDITION

OBSERVATORY OF ARGENTINEAN VIDEO GAME INDUSTRY

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INTRODUCTION

After 2017, **The National University of Rafaela (UNRaf) and the Association of Video Game Developers of Argentina (ADVA)** joined for the syndication of the Argentine Video Game Industry Observatory. Importantly, UNRaf is the first higher education institution in Argentina to offer a degree in Video Game Development and Digital Entertainment.

By early 2018, the editing of the survey began with the objective of generating an entity focused on monitoring the efforts invested in our country's video game development industry, a position that remains vacant. Finally, in mid-2018, the first survey of companies in the industry was carried out, in which information was collected on the activities of Argentine video game companies during 2017 in terms of the amount of companies, billing, employee number and features, growth prospects, financing, and deployment types, among other factors. Said report is available on the UNRaf institutional website.

In this edition, results of the information gathering carried out during 2019 are presented, which summarize information concerning 2018 business activities, updating and complementing the information in the first report. In the first report information was collected on **39 companies**, and in the current report that number grew to **55**.

The main purpose of the Observatory is maintaining an updated database for the video game development sector in Argentina. It is expected to collect data concerning the state of companies in terms of general characteristics, human resources, financing, billing, foreign relations, main activity, types of developments, among others.

In order to do this, a questionnaire was designed to be carried out systematically over time for the Argentine video game development industry. Consequently, the generation of periodic reports was planned to contribute to the development of the sector with complete, reliable and comparable information. It is important to clarify that, for both the current and previous reports, descriptive statistics were obtained based on the gathered responses, but it is not appropriate to make probabilistic inferences about the studied population due to the lack of current official information concerning the size of the entire population. However, the database was provided by ADVA, a pioneering institution in this industry, with the greatest number of contracts and video game company partners in Argentina to date.

The current report was coordinated by Andrés Rossi, Director of the Degree in Video Game Development and Digital Entertainment of UNRaf, and elaborated with a researcher at the same institution, Hernán Revale, with the collaboration of student Juan Ignacio Minotti. In addition, expert opinions about the video game industry were heard, provided by the ADVA Board of Directors, chaired by Mauricio Navajas.

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SURVEY RESULTS

Legal

When inquiring about the year in which the companies were formally registered **(Figure 1)**, we can observe that –from the group of companies that adopted a corporate form– 70% of the formal registrations were made in the period 2015-2020.

The results also highlight the growth experienced during 2010-2014 compared to the previous period, where the number of registered companies quadrupled (from 5% to 20%).

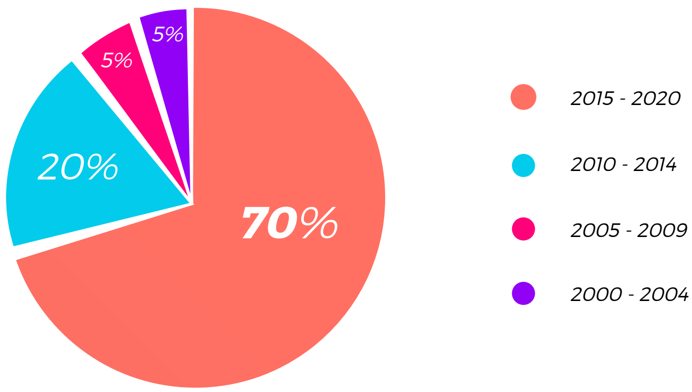

Figure 1. Distribution of years in which companies were formally established (n=40).

Within the legal forms adopted by all the companies **(Figure 2)**, we find that 45% are registered as single tax payers, followed by legal forms that limit pecuniary liability, like S.A. (Inc), S.A.S. (simplified stock company) and S.R.L (LLC- limited liability company), with 14%, 11% and 9%, respectively. However, 19% of the companies are not registered.

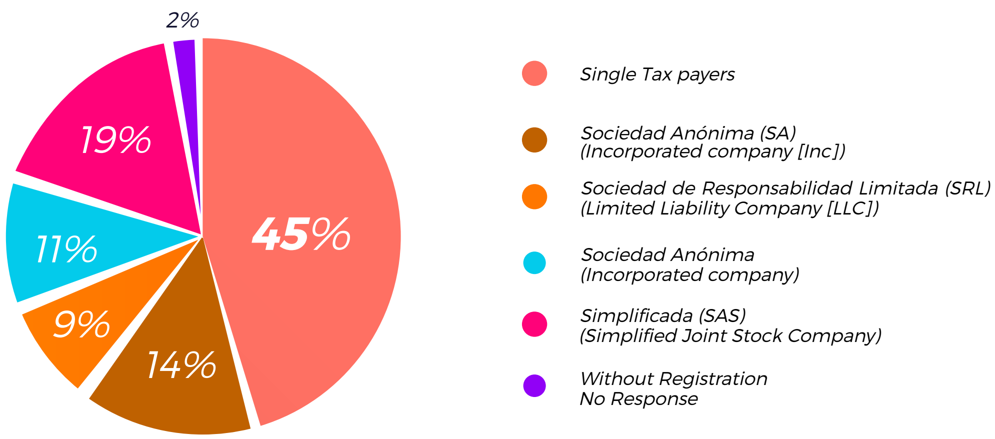

Figure 2. Legal form.

HUMAN RESOURCES

Out of all the video game companies, there are employees in only 29% of them, with part or full-time jobs. The remaining percentage consists of sole proprietorships. The analysis also showed that the number of freelancers hired during 2018 increased by 25% when compared to the previous hiring report from 2017. There are currently 360 freelance contractors. On the other hand, in the case of workers with employee status, a total of 787 were counted, a number 47% higher than what was observed in the previous study. It should be clarified that both interannual comparisons are drawn in relation to the total amount of responses in the reports and that this increase can be partly explained by an increase in the responses provided.

In reference to the total number of employees, both in relation to workers with employee status and freelancers, programmers and graphic artists are observed to show the greatest participation in both categories due to their professional roles within the company **(Figure 3)**. On the other hand, sound engineering and testing is where the greater number of freelancers in relation to workers with employee status are found.

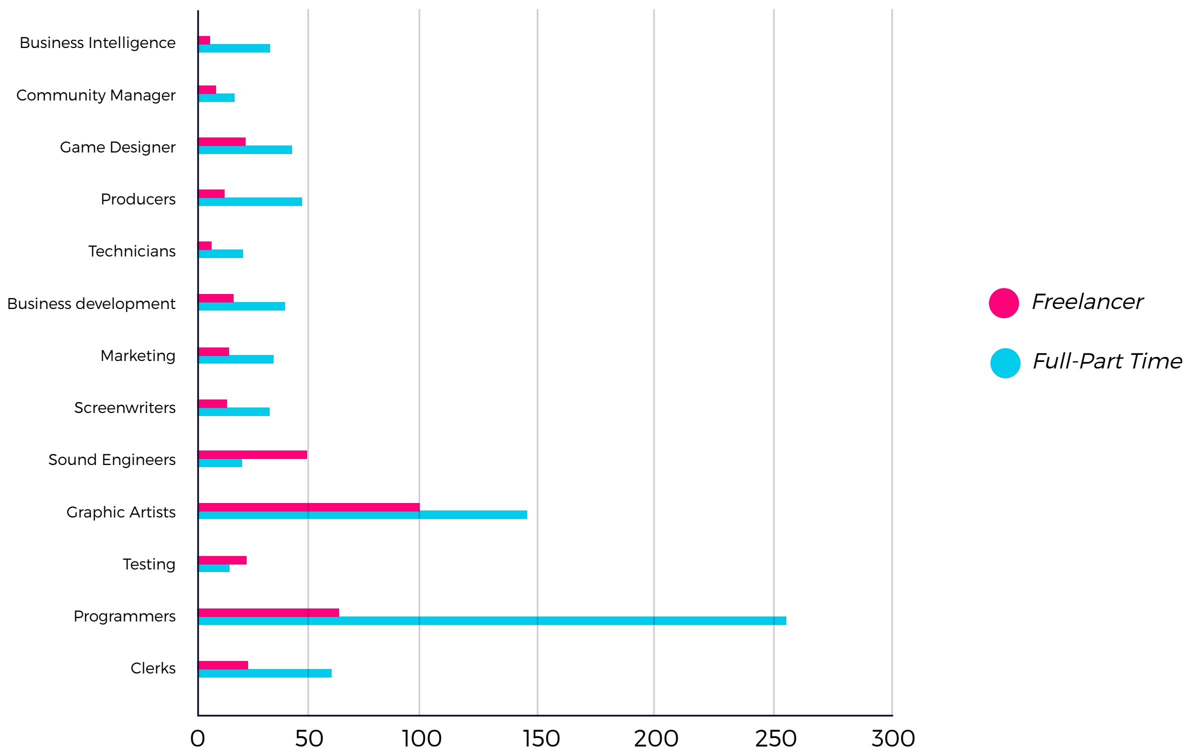

Figure 3. Number of employees divided by professional roles.

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HUMAN RESOURCES

Of the total employees under an employment contract, 21% have or are currently earning a college or higher-education degree related to video games. Along these lines, 18% of the companies stated having an internal program for employee training. Of those, 90% center on internal tutorials, followed by online courses or employee-led initiatives (both with 70%) and face-to-face classes or courses (40%) **(Figure 4).**

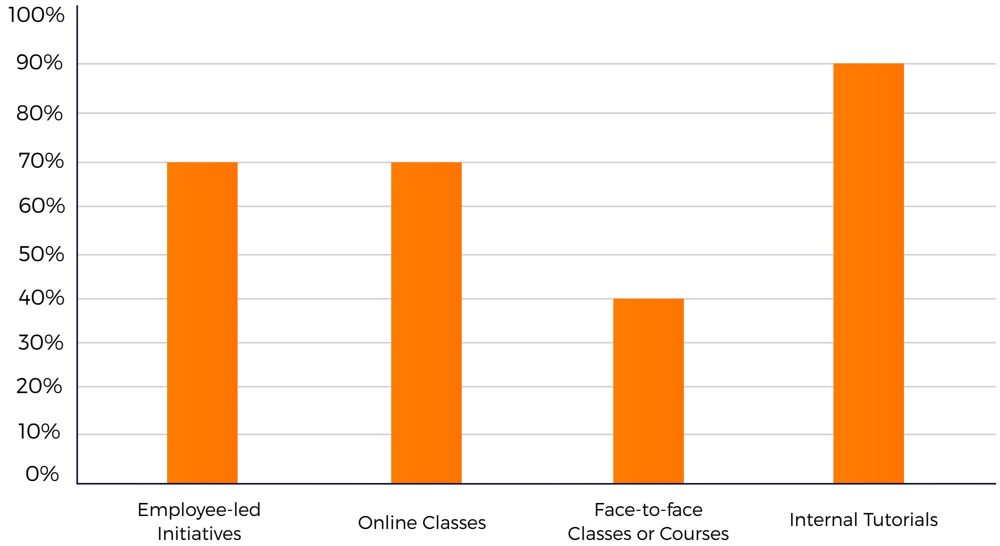

Figure 4. HR (Human Resources) training type.

Additionally, information about the positions that are the hardest to fill when recruiting was gathered. The first three in descending order of difficulty are the production, development and marketing sectors. In turn, the roles with the highest demand **(Figure 5)** for companies are art (71%) and development (65%). These are followed by game design (33%), production (22%) and marketing (18%).

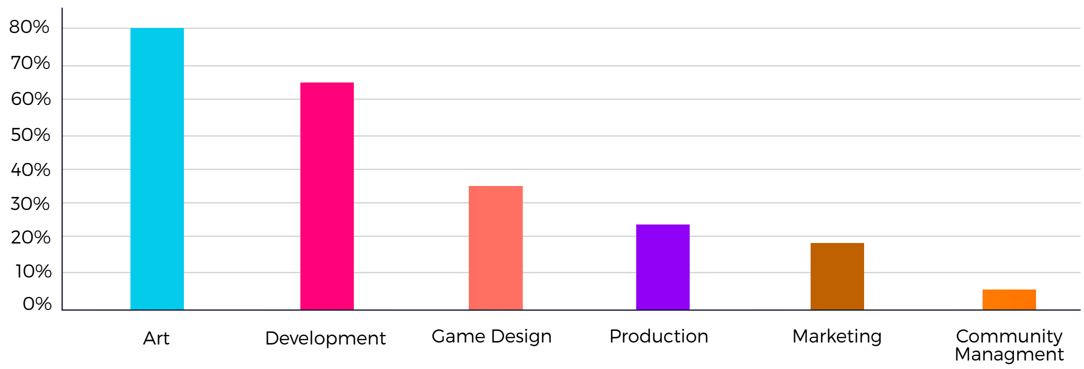

Figure 5. Roles with the highest demand.

HUMAN RESOURCES

Lastly, it was asked which skills are considered necessary for employees in the video game industry **(Figure 6).** Knowledge of English ranked first, with 77%. This was followed by recreational culture and agile methodologies (64%), along with the use of versioning systems (48%) and testing (30%).

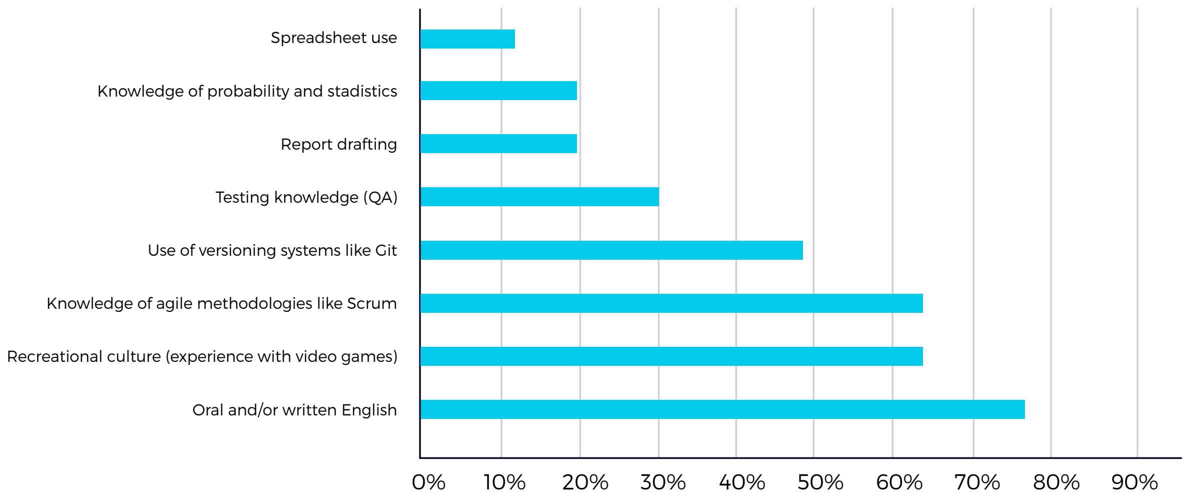

Figure 6. Necessary skills for the industry.

TARGET MARKETS

With respect to target markets for the sale of video games **(Figure 7)**, it is observed that, from the total sales, the main target markets are the United States and Canada, with 41%, followed by Europe, with 22%. It should be noted that the percentage of sales in the local market (Argentina) is 17%, at third place.

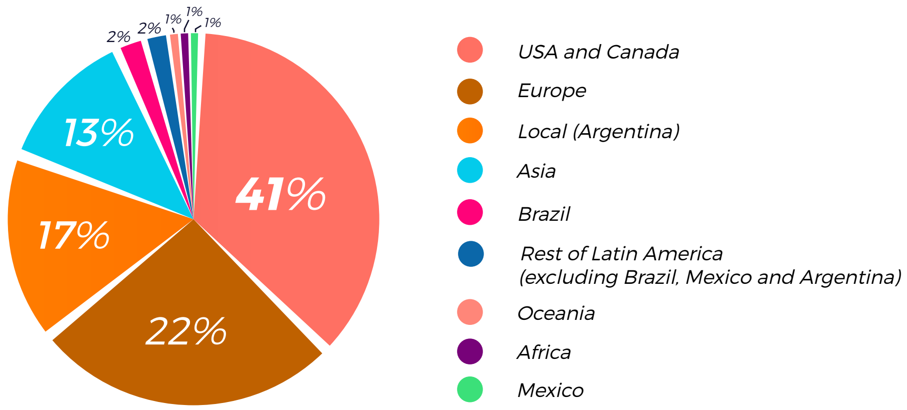

Figure 7. Target markets for the sale of actual video games.

BILLING

To define billing levels, intervals were generated by the total annual billing amounts in dollars **(Table 1).** Having obtained 37 answers, it was observed that in 2018 practically all of the billing was concentrated in the seven largest companies.

INTERVALS	Nº COMPANIES	PROPORTION	BILLING
UP TO USD 50.000	24	USD 235.000	0,31%
BETWEEN USD 50.000 AND USD 100.000	6	USD 390.000	0,51%
MORE THAN USD 100.000	7	USD 75.895.000	99,18%
TOTAL	37	USD 76.520.000	100,00%

Table 1. 2018 Billing.

Additionally, how this year's billing varied with respect to the previous year was determined **(Figure 8)** and, in most cases (46%), it had increased. On the other hand, as for next year's projection **(Figure 9)**, the majority (57%) predicted an increase in their billing.

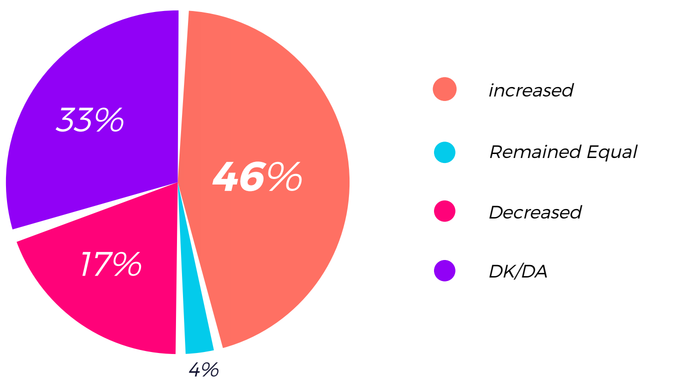

Figure 8. Billing variation year 2018 with respect to 2017.

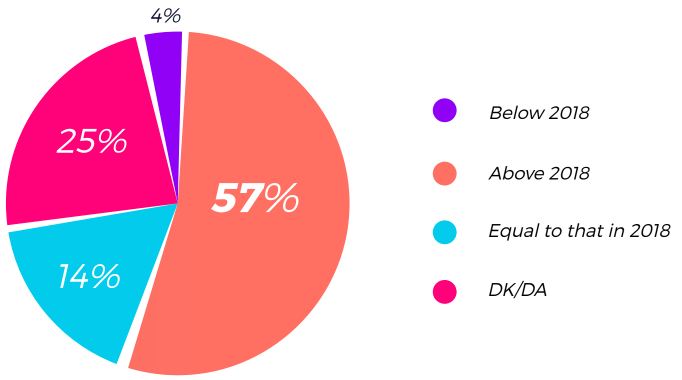

Figure 9. Billing projection for 2019.

VIDEO GAME DEVELOPMENT AND ACTIVITY

45% of the surveyed companies do not undertake video game development as a sole activity, they also carry out web design and development (16%), software and application development (20%), AR/VR (12%), among others. The activity that companies carry out the most is consulting, design and/or animation (40%).

On average, of all the activities carried out by the surveyed companies, 55% could be classified as their own video game development, 32% could be classified as the provision of services to other companies, and 13% could be classified as the performance of activities unrelated to video games **(Figure 10).**

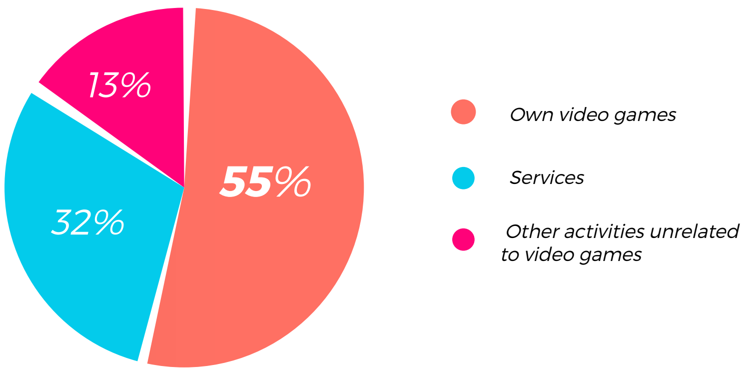

Figure 10. Average by activities carried out by companies.

Companies were asked about the amount of games in the development process and those already developed. Within the entirety of the companies surveyed, we observe that developed video games and small releases, that is, with up to six months of development, take precedence. Those in the process of large development (more than 6 months of development) come in second place, followed by large development video games. In total, we have 131 video games, of which 68 are small and 63 are large **(Figure 11).**

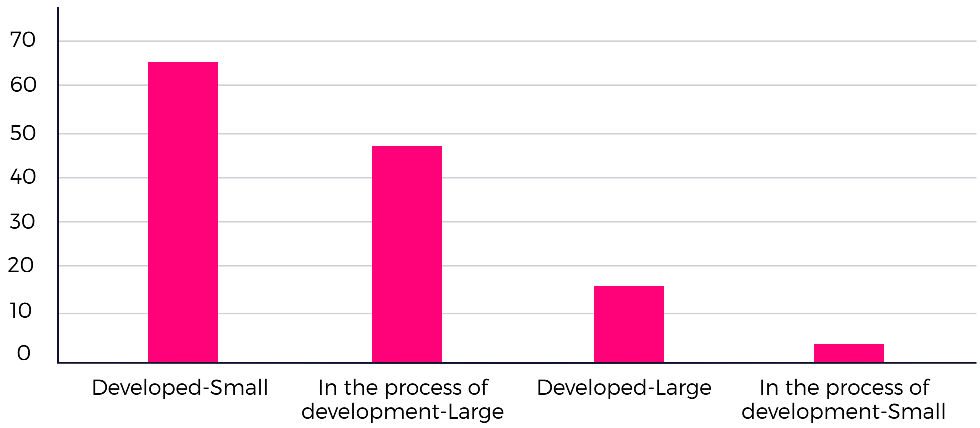

Figure 11. Developed games, released and in development process, small and large.

VIDEO GAME DEVELOPMENT AND ACTIVITY

Upon asking companies about the types of games developed **(Figure 12)**, we see that 61% have developed or develop casual/social games and 33% have developed or develop adventure games/graphic adventures, followed closely by 27%, which develop educational and strategy games. On the other hand, among the platforms for those games **(Figure 13)**, mobile devices and PCs rank first, with more than 70%. Lastly, the target audience for the majority of the companies (Figure 14) is users between the ages of 18 and 35.

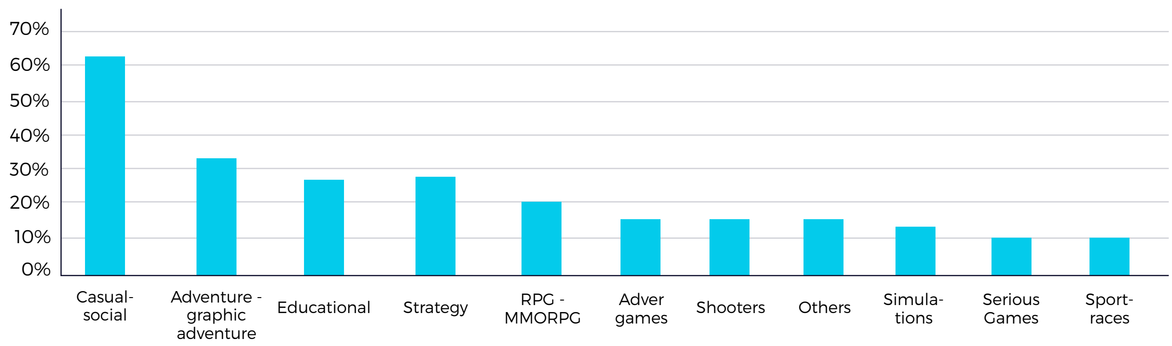

Figure 12. Types of developed games by company.

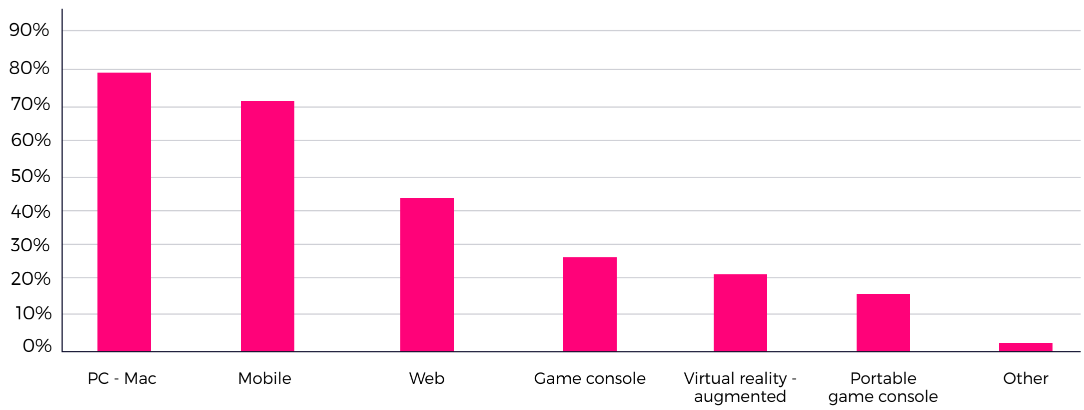

Figure 13. Targeted platforms.

VIDEO GAME DEVELOPMENT AND ACTIVITY

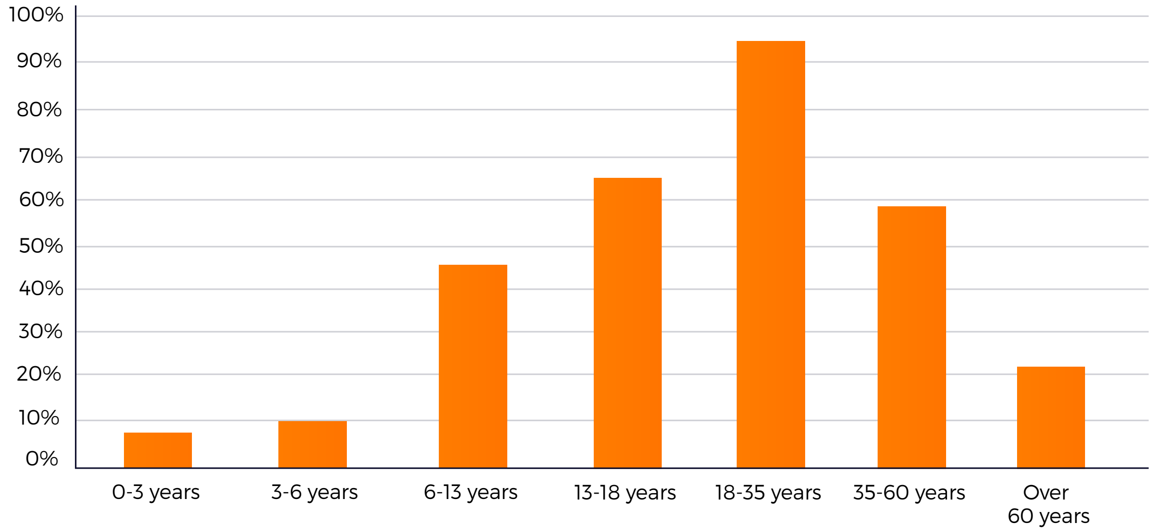

Figure 14. Target audience.

In reference to the services carried out by the companies **(Figure 15)**, we observe that 60% of the clients are advertisement/advertgames companies, 57% are other video game companies, 40% are companies with IP, 37% are public institutions.

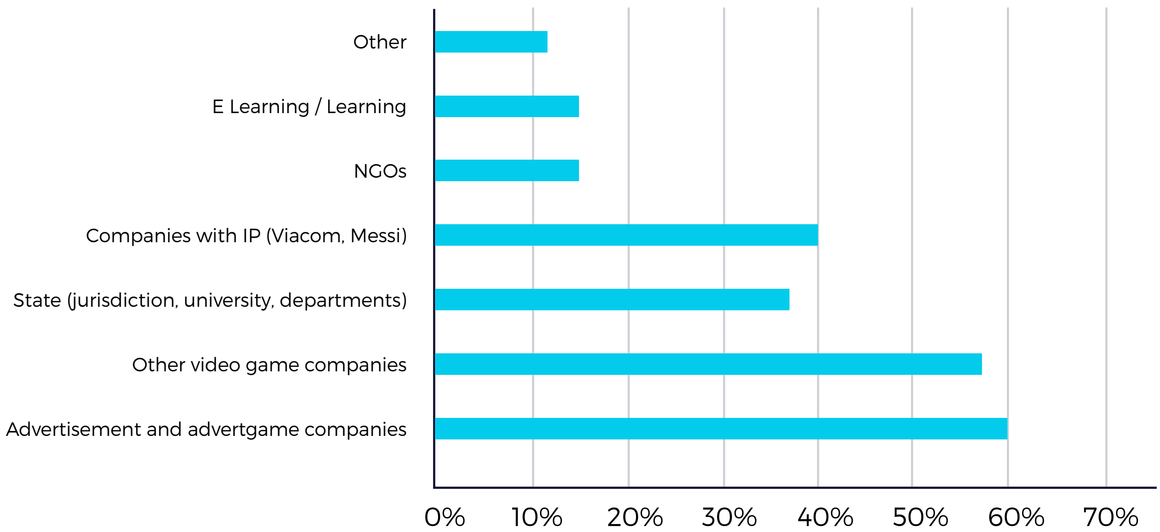

Figure 15. Type of clients.

VIDEO GAME DEVELOPMENT AND ACTIVITY

With respect to target markets for the services carried out by the companies **(Figure 16)**, sales without revenue share take place mainly in the USA and Canada (49%), followed by Europe at 14%. On the other hand, in service sales with revenue share **(Figure 17)**, the situation is slightly different, as the local market takes a leading role with 10.2%, in third place behind Europe (21%) and the USA and Canada (47.6%)

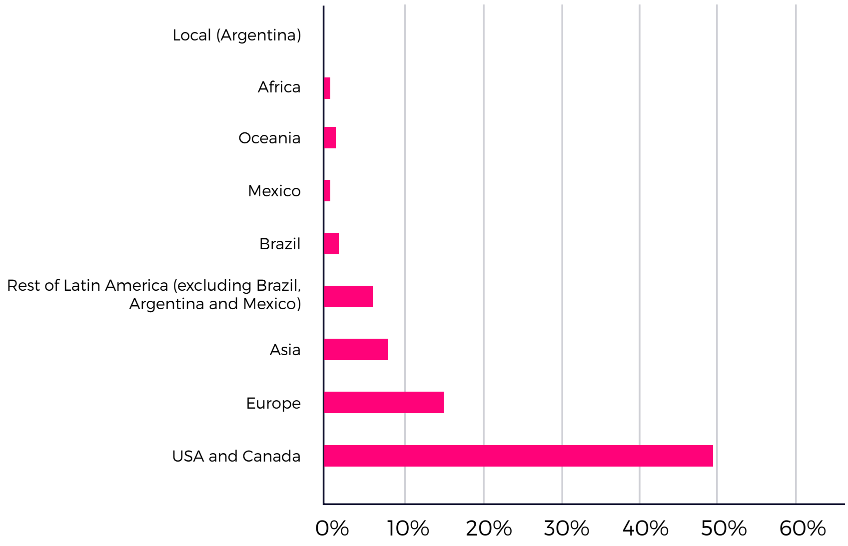

Figure 16. Service sale destinations without revenue share.

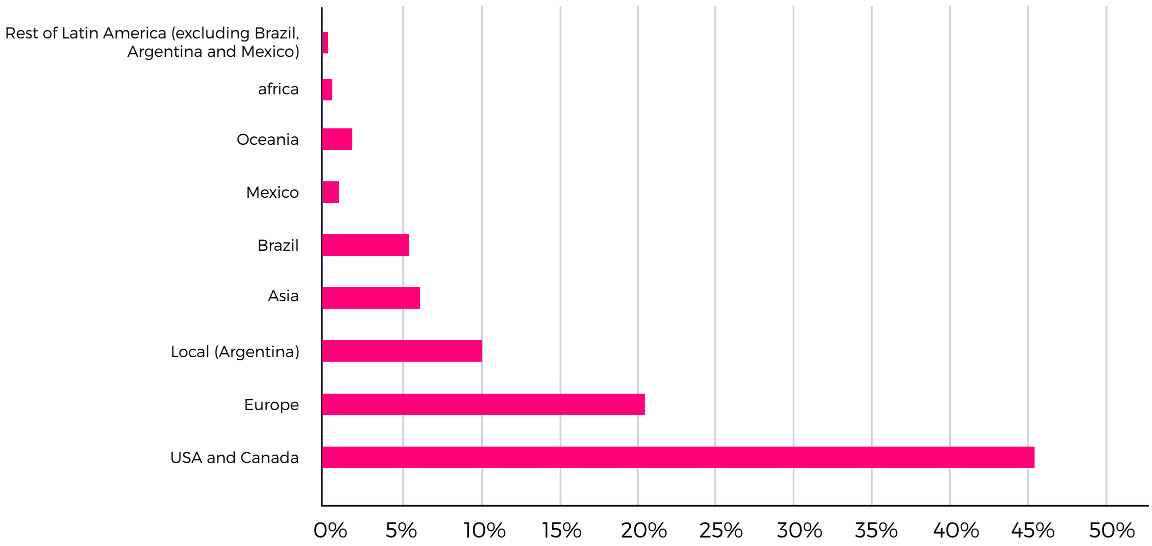

Figure 17. Service sale destinations without revenue share.

FINANCING

Of all the surveyed companies, it is worth noting that 86% did not request bank financing options in 2018, and only the remaining 14% used it to finance their sales in that period **(Figure 18)**. However, 76% of the surveyed companies stated that a lack of funding prevented them from investing or doing some projects; and access to funds is first among the main obstacles highlighted by companies for the development of their activity, followed by high tax pressure with respect to salaries and uncertainty regarding product demand.

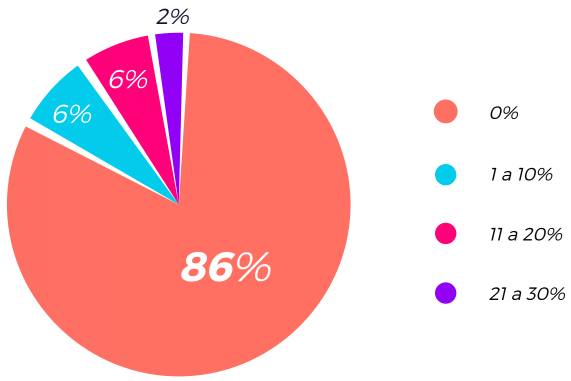

Figure 18. Percentage of billed sales.

TOOLS

Companies were asked about the tools they use when developing. As for framework and engines **(Figure 19)**, Unity 3D takes the lead by far with 87%, followed by Unreal Engine and HTML5, both with 26%, and then Gamemaker/Construct with 15%.

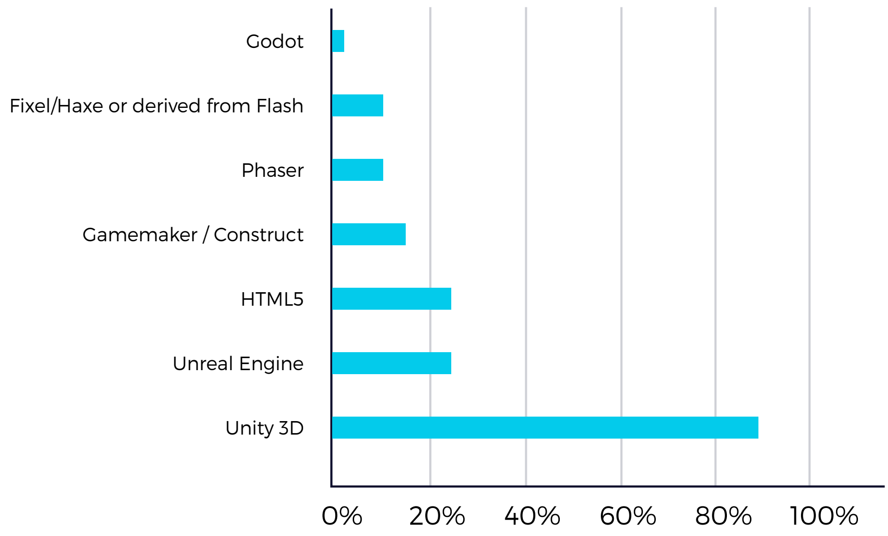

Figure 19. Framework and engines.

Among 3D programs **(Figure 20)**, Blender is the most used (67%), followed by 3D Max (47%), Maya (39%) and Z-Brush (37%). Among animation programs **(Figure 21)**, the majority use internal tool Unity (60%) and After Effects (53%), followed by Spine (34%), Flash (19%) and Dragonbones (13%).

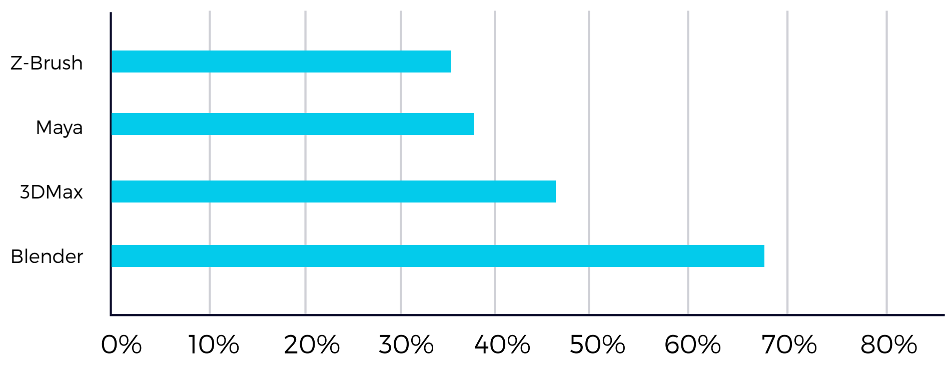

Figure 20. 3D programs used.

TOOLS

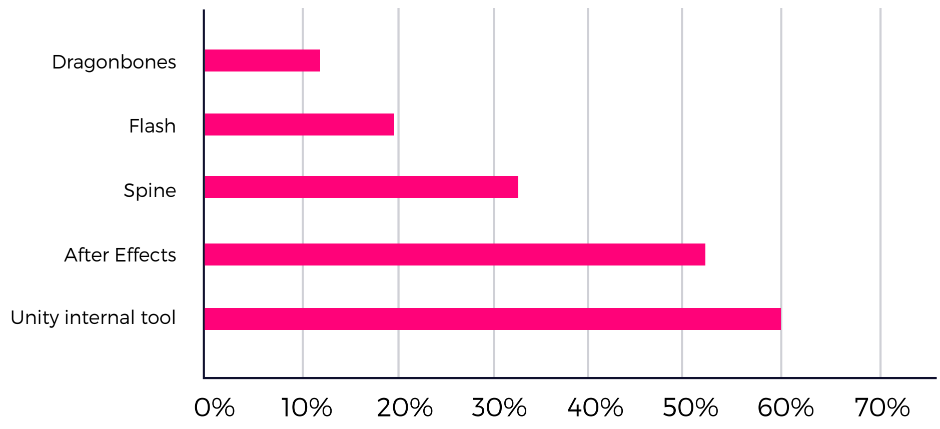

Figure 21. Animation programs used.

Of the programming languages **(Figure 22)**, C# is used by an ample majority (83%), and C/C++ is also used to a lesser extent (48%), followed by HTML5 (40%), Java and JavaScript (both with 25%).

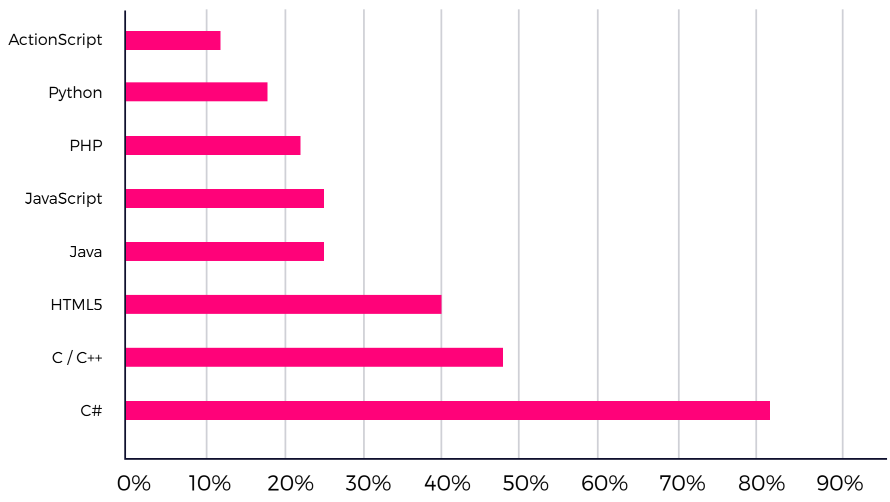

Figure 22. Programming languages used.

TOOLS

We also consulted on production methodologies used **(Figure 23)**, within which Scrum (56%), Agile (53%) and Kaban (29%) take the top positions. Finally, in terms of data analysis engine used **(Figure 24)**, most choose Google Analytics (70%) and Unity Analytics (53%), are followed by Firebase (38%), Google Play Console (35%) and iTunes Console (20%), among others.

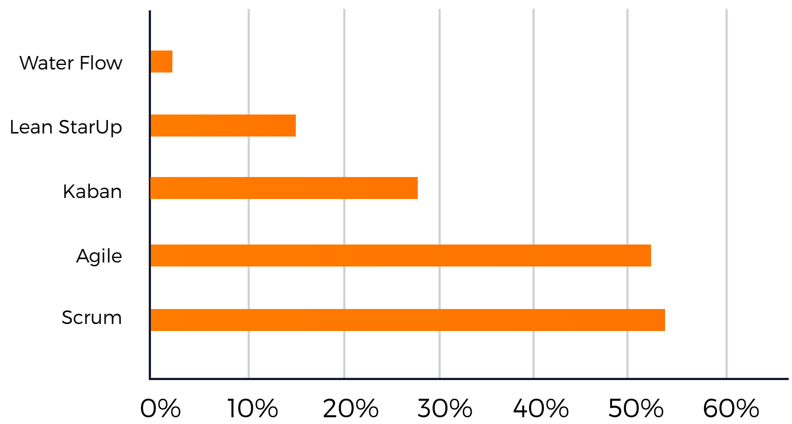

Figure 23. Production methodologies used.

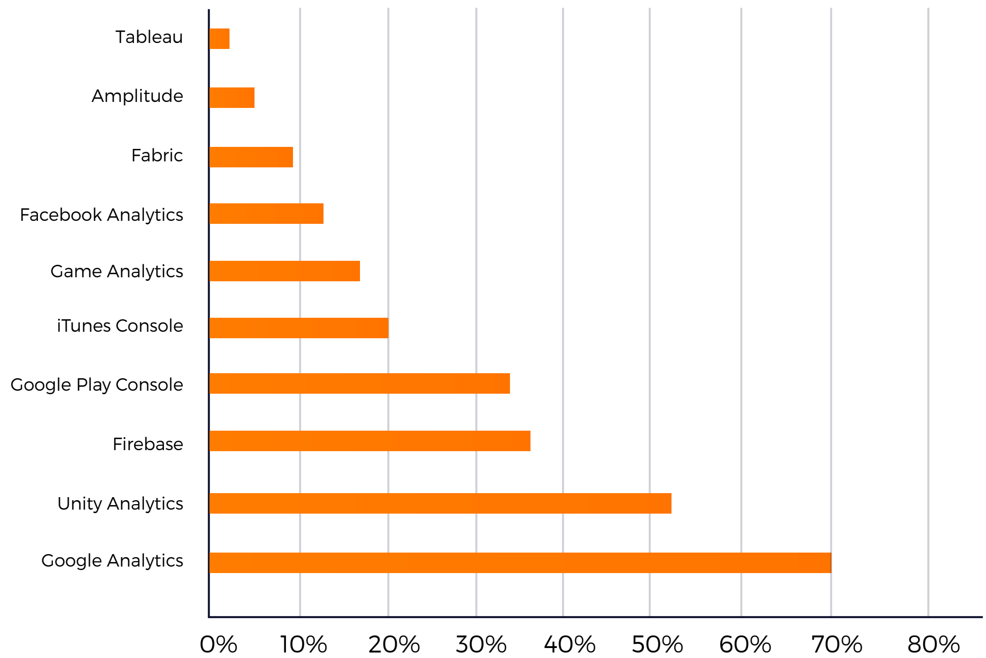

Figure 24. Data analysis engine used.

FINAL COMMENTS

Based on all the data presented above, the following can be highlighted:

• For the most part, the surveyed companies are micro-enterprises, with 86% according to billing (n=37) and 82% according to the number of employees (n=56) [1].

• 71% state they do not have workers under an employment contract.

• ADVA has more than 120 associates, between studios and entrepreneurs, of which 56 responded to the survey in full or in partial.

• 45% of the respondents are freelancers.

• Proportionally, the employees of the surveyed companies perform duties in the main technical areas necessary for the industry, although there are also sections that support or participate in certain specific stages of projects.

• The tool most used by developers is Unity.

• 86% of respondents did not request any bank financing in 2018. This may be due to the lack of appealing options for the sector (e.g., contingent credit lines); in which the respondents work by project, have a high proportion of intangible assets and invest the most in human resources.

• The Western market continues to be the most appealing one for national production. However, we see that access to the Asian market, mainly China, is beginning to make a difference. This could be due as much to an increase in their appeal as to decreases in their barriers to entry.

• In Argentina, there is a repetitive tendency seen at a global level, where the main companies that make more than USD 100,000 make up almost all of the industry turnover.

• From an academic point of view, we see that 21% of employees have or are currently earning a college or higher-education degree related to video games. ADVA revealed that there is only one bachelor's degree in the subject at the public level, though there are some undergraduate programs, both private and public.

[1] Following criteria from 2018 provided by the Secretary for Entrepreneurs and PyMEs (Large and Medium-Sized Enterprises) from the Ministry of Production. At: https://www.argentina.gob.ar/noticias/nuevas-categorias-para-ser-pyme