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Swedish Games Industry

Swedish Games Industry **2023**

Game Developer Index

Perfect Random –
Sulfur

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The Swedish Games Industry is the trade organisation for video games in Sweden. The organisation represents the industry as a whole through the industry associations Spelplan-ASGD (game developers, producers, education, academia and support members) and ANGI (publishers and distributors).

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Flamebait Games –
Passpartout 2:
The Lost Artist

Key Figures

Key Figures	2022	2021	2020	2019	2018
Number of companies	**939** (+20%)	**785** (+18%)	**667** (+14%)	**586** (+14%)	**513** (+16%)
Domestic Net sales MEUR Swedish companies	**3,058** (+13%)	**2,713** (+28%)	**2,115** (+26%)	**1,682** (+21%)	**1,393** (+3%)
Global Net sales MEUR Swedish companies	**8,136** (+40%)	**5,805** (+75%)	**3,312** (+43%)	**2,318** (+24%)	**1,872** (+33%)
Net sales per employee in Sweden TEUR	**362** (+6%)	**342** (+7%)	**321** (+13%)	**284** (+8%)	**262** (-10%)
Domestic Result Swedish companies MEUR	**1,818** (+532%)	**288** (-54%)	**630** (+71%)	**369** (+35%)	**273** (-37%)
Result in Swedish companies globally MEUR	**1,859**	**-123** (-117%)	**720** (+46%)	**493** (+47%)	**335** (-25%)
Number of employees in Sweden	**8,445** (+6%)	**7,944** (+20%)	**6,596** (+11%)	**5,925** (+11%)	**5,320** (+14%)
Of which men	**6,429** (76,1%)	**6,169** (77,7%)	**5,186** (78,6%)	**4,699** (79%)	**4,824** (80%)
Of which women	**1,977** (23,4%)	**1,755** (22,1%)	**1,410** (21,4%)	**1,226** (21%)	**1,036** (20%)
Number of employees in Swedish companies abroad	**16,494** (+48%)	**11,158** (+56%)	**7,177** (+121%)	**3,253** (+25%)	**2,604** (+290%)

Key figures from the last five years. Change from previous years in brackets. We have used the aggregated annual exchange rate defined by the Riksbank, Sweden's central bank. In 2022, 1 EUR was 10.6317 SEK.

Productivity and Skills

Questions were mounting for 2022. Would players around the world choose other pastimes over games after the lockdowns? Would delayed game projects lead to reduced sales? Would the problems with global value chains hit companies' finances? When we add up this year's figures, we see that these problems did not hamper the progress of Swedish game developers. More companies, more revenue, more employees, more women. It is with pleasure and not without relief that we present this year's report.

The biggest challenge facing Swedish game companies is the same as before: skills. Despite the high quality of Swedish game education programmes, it does not cover the needs. Compared to other creative industries, where there are usually more people being trained than the labour market can employ, the contrast is even greater. Despite recurring investments in education, not least in higher vocational education, the need is still great. Academic education also requires investment in research, so that education can rest on a scientific basis that is relevant to games. It takes a long time for educational initiatives to have an impact on the labour market: after all, it takes two to three years to complete an education.

Another way to illustrate the skills shortage, in business terms, is production capacity. The demand is there, the channels are there, the production budgets are there, and there is no lack of international attention, but production capacity is the bottleneck. Apart from recruitment, companies have different strategies to deal with this problem. Many open offices or acquire companies in other countries, which is clearly reflected in the key figures in this report. There are many more employees in Swedish companies outside of Sweden than inside. Some of these jobs could have remained in the country. In addition, which we cannot measure, this means that investments by international companies are directed to countries other than Sweden. As is so often the case, the true number is higher. In addition to subsidiaries, many companies have consultants, freelancers and not least outsourced production (or "co-dev") to companies in other countries.

Another strategy is to increase productivity through new technological solutions. Recently, technological leaps with generative artificial intelligence have gained attention in the public discourse. Game companies have experienced many technological advances despite the fact that the industry is relatively young. The move from two-dimensional graphics to 3D in the 1990s. Touch screens and smartphones in the 00s. The shift from

Foreword

games as a product to a service in the '10s. Just to name a few examples. The productivity gains in terms of technology leaps are also numerous. In the past, every game company used to develop their own game engines. Looking at the last decade, more and more have switched to standardised game engines that are used in many more games and thus have a larger user base and more resources. Asset libraries make it possible to reuse, for example, graphics from other games. Motion capture enables more realistic animations. So have the productivity gains from these technological advances led to fewer jobs? The answer is in the key figures in this report.

Game development is a team effort and the raw material is creativity. There you have it: two very human skills. With the right conditions, there will be even more jobs in future *Game Developer Index*.

Overall, companies have many ways to increase their production capacity, but they need more. Players around the world want more and better games. And they deserve it.

Stockholm, October 2023

Per Strömbäck
Head of Secretariat, Swedish Games Industry

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Aurora Arts –
Fae & Fauna

Summary

The Game Developer Index maps, reports and analyses Swedish game companies' operations and international industry trends over the past year by compiling the companies' annual reports.

The *Game Developer Index* maps, reports and analyses Swedish game companies' operations and international industry trends over the past year by compiling the companies' annual reports. Swedish game development is an export industry that operates in a largely global market. In a few decades, the games industry has grown from a hobby for enthusiasts to a worldwide industry with cultural and economic significance. The *Game Developer Index* 2023 compiles the Swedish companies' latest reported financial year (2022). The report in brief:

- The Swedish game industry's revenue grew to EUR 3.1 billion in 2022, which is an increase of 13% in Swedish-registered companies. In total, including subsidiaries abroad, the Swedish industry had a revenue of EUR 8,1 billion, an increase of 40%.

- A total of 1,977 positions at game companies in the country are held by women, representing a share of just over 23%. Among new entrants to the sector, 44% were women.

- Swedish game companies are growing, employing 8,445 people in Sweden in 2022 and 16,494 people abroad. The global increase is mainly acquisition-driven, and in Sweden 501 people were hired, an increase of 6%.

- 104 companies started in 2022. These, together with 50 newly added pre-existing companies that changed their activities to game development, result in a total of 939 active companies in December 2022, an increase of 20% compared to 2022.

- In 2022, 31 investments and acquisitions were reported, of which six had a deal value over 100 million EUR. Swedish companies were buyers in 26 of the cases and sellers in nine of the deals.

- The ten most profitable companies together paid about EUR 250 million in corporate taxes on their profits.

- The ten largest employers paid a total of EUR 113 million in payroll taxes.

- 23 Swedish companies are listed on the stock exchange in Sweden. Together they had a revenue of EUR 5.7 billion in 2022.

Game development is a growth industry. Sixteen of the companies that exist today have been around since the 1990s, but almost half of all companies have been registered in the last five years. In 2022, 104 new companies were registered. The games are launched directly on an

During 2022 DICE celebrated 30 years making games. Artwork by Jonas Åkerlund.

international market with strong growth and the supply of skills is also largely based on a global labour market. Factors that point to continued growth are more investments in regional hubs with incubators, accelerators and training programmes, more veterans starting new companies, several major game launches in the near future, and the fact that we have not yet seen the effects of the several large investments and acquisitions made in recent years.

During the year, several Swedish companies celebrated anniversaries. EA DICE celebrated 30 years at the end of 2022 and both Avalanche Studios Group and King turned 20 in 2023. Swedish game developers are characterised by versatility and quality. Sweden has world-leading developers in AAA, console, PC, mobile games, VR/AR, digital distribution and specialised subcontractors.

The industry's main challenges are access to expertise and capital - the latter especially in the early stages - and laws and regulations on digital markets that are out of step with its expansion. The most important future issue is diversity, both among game creators and players. In 2022, the share of women among new hires increased to 44%, but much work remains to be done to achieve gender equality in the industry. In the longer term, video games have all the prerequisites for diversity and inclusion: games offer an opportunity to leave your everyday life and enter worlds where only your imagination sets the limits. The number of "second-generation companies" where experienced game developers have moved on to new projects of their own, or where entrepreneurs have created their second company, continues to grow, and much of the industry's long-term growth happens through start-ups.

44%

among new recruits were women

Revenue and Results

Swedish game companies have continued to grow in 2022, increasing their domestic revenue, net sales, by 13% to EUR 3.1 billion. This is an increase of over EUR 300 million and more than double the revenue in the last five years.

In recent years, a couple of large company groups have grown even larger, partly through investments and acquisitions, and a significant part of the acquisitions have taken place outside Sweden. Swedish companies and groups have a total revenue of EUR 5.1 billion in subsidiaries outside Sweden, and the total global revenue of Swedish companies in 2022 was over EUR 8.1 billion. Not to be confused with the total market value of sales to consumers including distribution.

In the hard global competition, the companies have successfully taken market shares, attracted expertise and, not least, created game experiences for several hundred million players worldwide. However, the low exchange rate affects revenue in an international perspective. In Swedish krona, domestic net sales increases by 18% to SEK 32.5 billion, and total global revenue to 86.5 billion. In dollars, domestic revenue stays at USD 3.2 billion, and increases by 23% to USD 8.4 billion including foreign subsidaries.

With 104 new companies, the Swedish industry is growing steadily and in the last decade has increased its revenue from just over EUR 800 million to over EUR 3.1 billion in Swedish companies and EUR 8.1 billion when foreign subsidiaries are included. In 2022, the revenue of Swedish-owned foreign companies was higher than the revenue of Swedish-registered companies for the second year in a row, an effect of the many large acquisitions outside Sweden.

Eight of the Swedish companies had a revenue of over EUR 100 million during the year. The ten largest companies account for two thirds of the total revenue and beyond the EUR 100+ million companies, 31 companies have a revenue of over EUR 10 million. Swedish companies have had a record year in terms of profitability, which can partly be attributed to a couple of large dividends. The ten most profitable companies have paid EUR 245 million in pure tax and the largest employers have paid over EUR 130 million in social security contributions.

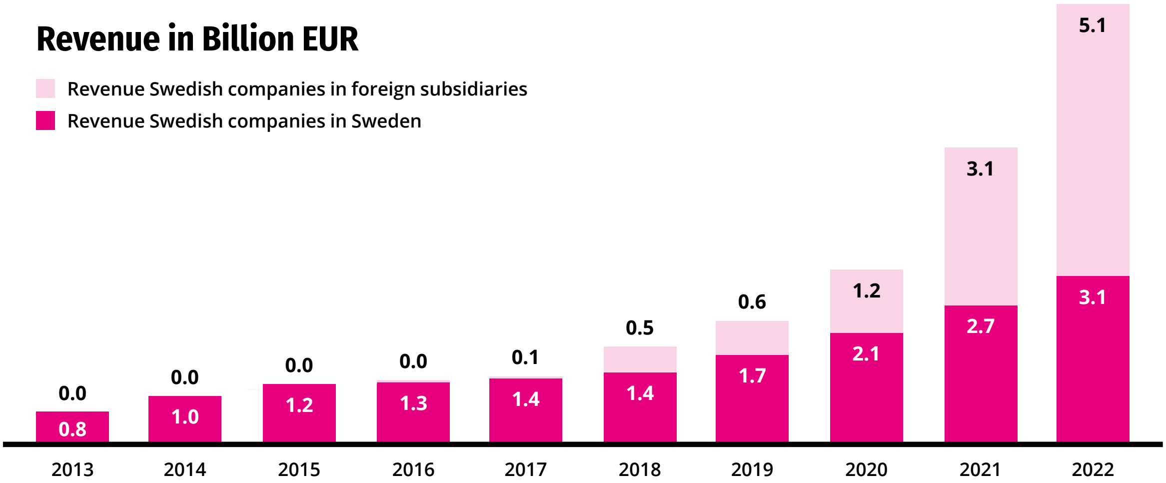
A couple of companies stand out in terms of increased revenue. Stunlock Studios went from a revenue of just over EUR 250K in 2021 to over 40 million in 2022, which can be attributed to a successful release of *V Rising*. Coffee Stain Publishing, Sharkmob and Resolution Games are three other companies that grew significantly last year.

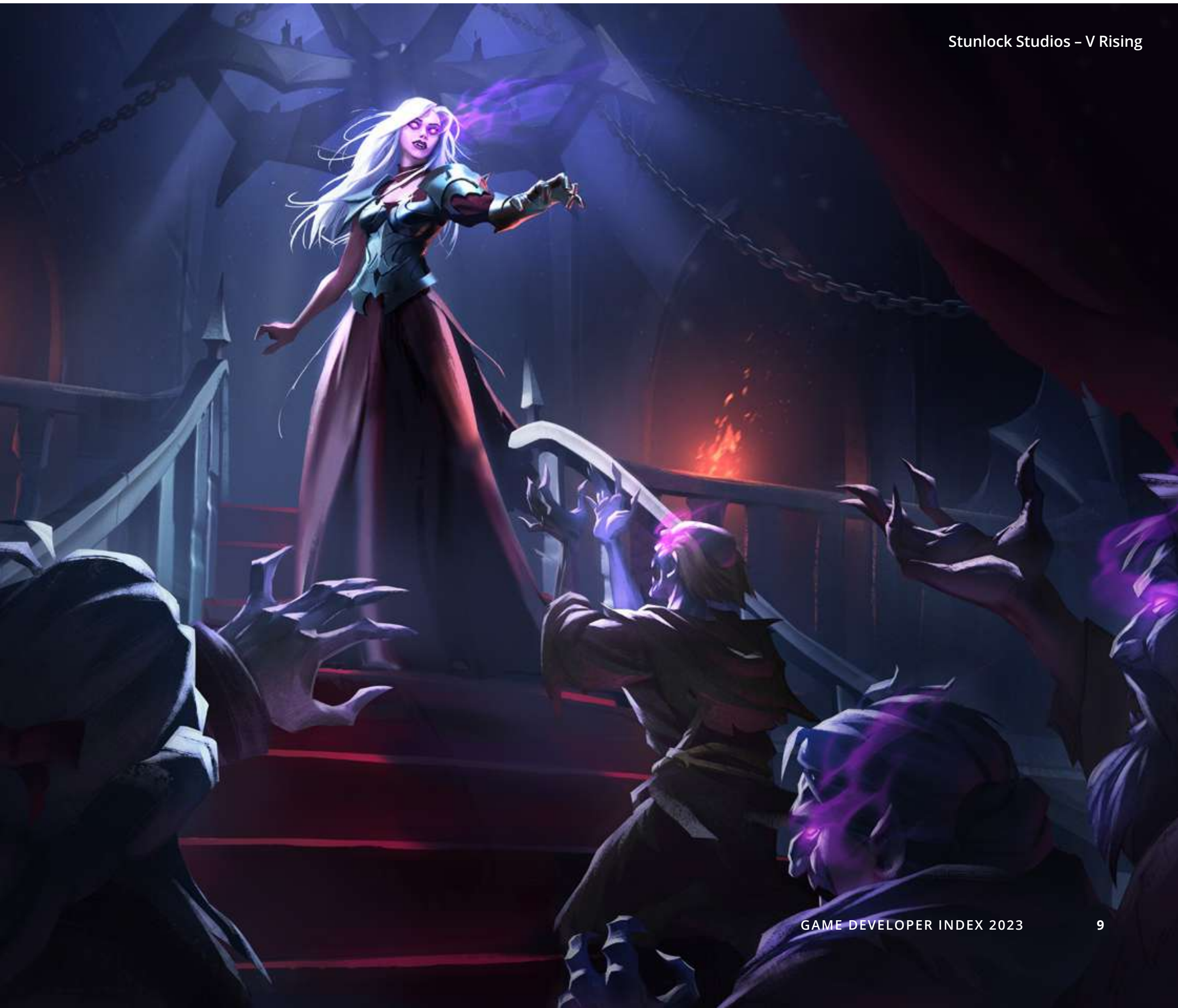
Revenue and Result Globally

In 2022, the revenue of the Swedish-owned subsidiaries abroad was higher than the revenue of the Swedish companies, an effect of the large acquisitions made over the past two years.

An example of this is Embracer Group, with net sales 2022 over EUR 3.5 billion, which means that the Karlstad-based company continues to be the country's largest game development group and one of the largest games groups in Europe. Stillfront Group and MTG also account for a significant share of global sales in Swedish-owned game companies.

Revenue in Billion EUR





Stunlock Studios – V Rising

Highlights

The number of Swedish games released varies from year to year, but the industry has reached a size where individual titles do not directly determine the overall outcome. Here are some examples of major events in 2022 and early 2023:

- **Avalanche Studios Group** celebrated twenty years of open world-games in 2023 with the release of their roguelite *Ravenbound* and the console release of the fishing game *Call of the Wild: The Angler*, which reached over 1.1 million monthly players (MAU). *Generation Zero* reached over 1.3 million MAUs and *theHunter: Call of the Wild* surpassed revenues of over EUR 140 million since its launch in 2017.

- **EA DICE**, founded in 1992, celebrated its 30th anniversary at the end of 2022 and the 25th anniversary of the successful *Battlefield* series. As part of the celebrations, *DICE at the Opera* was organised, a musical performance in collaboration with the Royal Opera and the Royal Court Orchestra. The studio continues to work on the *Battlefield* series. In Stockholm, the EA SEED research department has been recognised for development progress in AI and machine learning.

- **Embark Studios** is working on two major titles: *ARC Raiders* and *The Finals*. The latter has conducted two closed beta tests during the year, which garnered a lot of attention.

- **Embracer Group** continued to expand its portfolio in 2022 with acquisitions including **Crystal Dynamics**,

Pugstorm – Core Keeper

Frictional Games – Amnesia: The Bunker

King – Candy Crush

Paradox Interactive – Europa Universalis IV: Lions of the North

Square Enix Montréal, **Tripwire Interactive** and **Middle-earth Enterprises**. In June 2023, as part of an extensive restructuring, management communicated its intentions to shift focus to strengthen cash flow, prioritise operational efficiencies and launch more games for PC and console. The group has also entered into an agreement with **Amazon Games** to develop and launch an MMORPG based on J.R.R. Tolkien's *The Lord of the Rings* and *The Hobbit*.

- **G5 Entertainment** continued to hold a strong position in the mobile games market with a revenue of over EUR 130 million. Their in-house developed games, especially *Sherlock: Hidden Match 3 Cases*, show strong growth and account for an increasing share of total sales.

- **King** turned 20 years old in 2023 and *Candy Crush Saga* entered its 11th year on the market, with over $20 billion in revenue and 15,000 levels released as of September 2023. In the past five years, *Candy Crush Saga* players have swiped the equivalent distance of the circumference of Earth seven times over, and the *Candy Crush* franchise as a whole has been downloaded over five billion times. Across all titles, King has 238 million monthly players.

- **Maximum Entertainment**, formerly Zordix, appointed Christine Seelye as CEO and head of the group in early 2022. In 2023, the group has released several games, such as Swedish-developed *Bramble: The Mountain King*. In February 2023, the group presented its corporate structure where internal development is located in studios within the Modus Studios group, and publishing is divided between Just for Games, Merge Games, Modus and Maximum Games.

- **Mojang** has continued to expand the popular *Minecraft* franchise with a fifth title, *Minecraft Legends*, an action-strategy game developed in collaboration with Canadian studio Blackbird Interactive and released for PC and consoles in April 2023.

- **Paradox Interactive** released the long-awaited grand strategy game *Victoria 3* in October 2022. The game sold half a million copies in its first month and was nominated for *The Game Awards* award for the best simulator/strategy game of the year. Paradox's Dutch subsidiary Triumph Studios released *Age of Wonders 4* in May 2023. Paradox Arc was announced as a new label aiming to publish small and experimental games, along with the release of *Across the Obelisk* in August 2022.

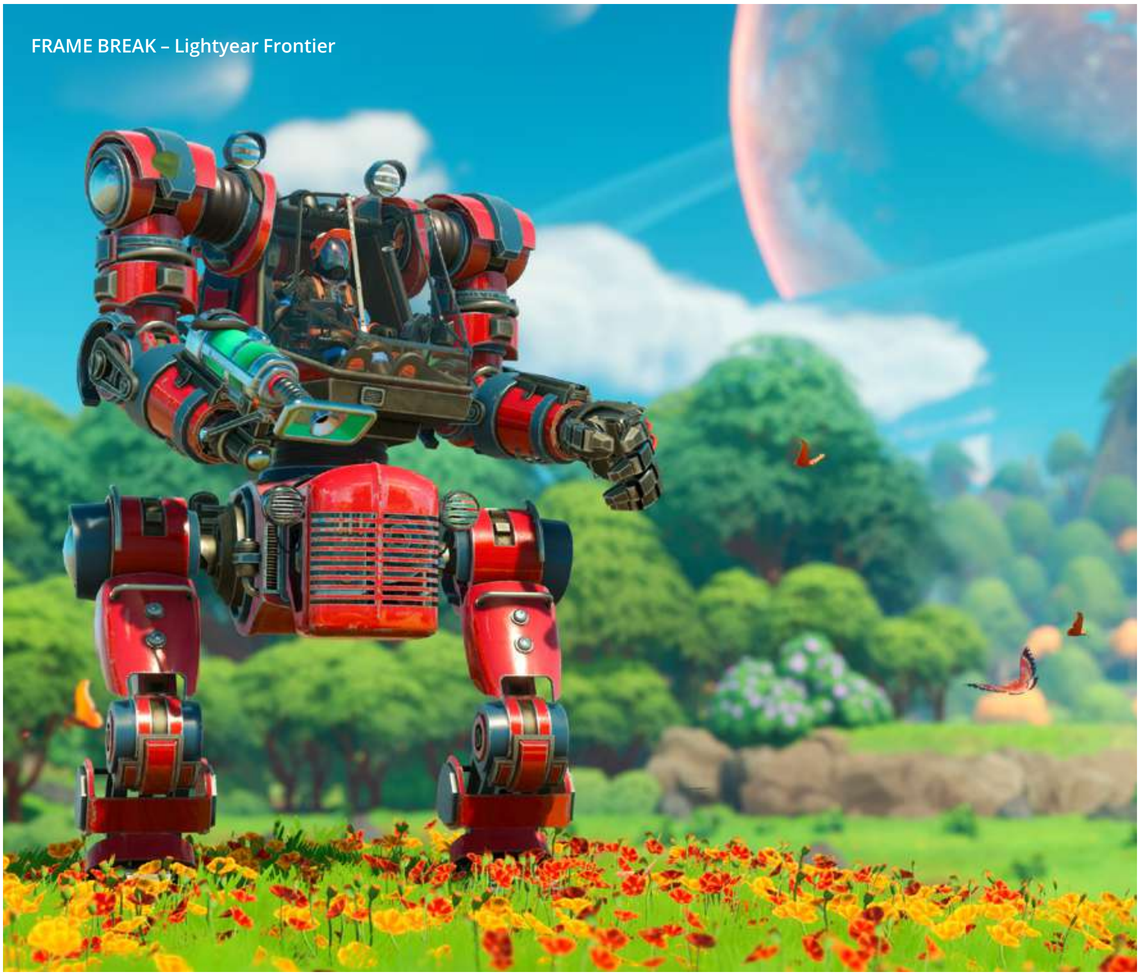
- **Resolution Games** continued to expand and diversify its business with the acquisition of Swedish VR studio Zenz VR and the founding of Resolution Games Inc. in Austin, Texas. Resolution also released the VR game *Ultimechs* and the MR game *Spatial Ops* in beta.

- **Stillfront** has shown steady growth in both the number of employees in the group and the group's total net sales due to the success of previously acquired studios.

- **Stunlock Studios** saw continued success with the vampire survival game *V Rising*. The game, which is still in Early Access, passed three million copies sold in January 2023.

- **Thunderful Games**, with studios in Gothenburg, Malmö, Karlshamn and Skövde, launched highly anticipated titles in 2022 such as *Hell Pie* and *LEGO: Bricktales*, *Viewfinder* and *Planet of Lana* were launched. In August 2023, industry veteran Martin Walfisz was appointed CEO of Thunderful Group.

- **Ubisoft Entertainment** is still the country's largest employer with 850 employees and 57 represented nationalities. The company has continued to work on *Star Wars Outlaws* in collaboration with LucasArts while Malmö studio Massive announced in 2023 that it is working on *Tom Clancy's The Division 3*. In December 2023, *Avatar: Frontiers of Pandora* will be released, developed together with Lightstorm Entertainment and FoxNext Games.


FRAME BREAK – Lightyear Frontier


Avalanche Studios Group – Ravenbound

The below list is not exhaustive, there are many more examples of successes for Swedish companies in the past year.

Notable Achievements and Awards

- Over the past year, Swedish computer games have taken prizes around the world. **The Outsiders**' rhythm FPS *Metal: Hellsinger* was named the *GamesCom Awards*' most anticipated PC game and best action game, best design at the *Nordic Game Awards 2023* and best and most innovative sound and music by the *Golden Joystick Awards 2022*, *MCV/DEVELOP Awards 2023*, *Nordic Game Awards 2023* och *NAVGTR 2022*.

- Karlshamn-based **Something We Made**'s first commercial title *TOEM* won the *BAFTA* award for Best Debut Game 2022, and the already award-winning *It Takes Two* by **Hazelight Studios** picked up additional trophies as *BAFTA*'s Best Multiplayer Game and Original Title in 2022.

- *Goat Simulator 3* by **Coffee Stain Studios** won the *Golden Joystick Award* for Best Trailer in 2022.

- **Flamebait Games**' anticipated sequel *Passpartout 2: The Lost Artist* won Best Visual Art at *Taipei Game Show 2023* and two more awards at *China Joy 2023* for best casual and single player games.

- *Payday 3* by **Starbreeze** won Best PC Game and Most Entertaining Game at the *2023 Gamescom Awards*.

- At the 2022 edition of the *NYX Game Awards*, *Demeo*, developed by **Resolution Games**, was named Grand Winner in the AR/VR category and in 2023 the studio's VR shooter *Spatial Ops* won in the Best Innovation category. Resolution was also named one of Sweden's and the world's most innovative and fastest growing tech companies by Breakit and Fast Company, among others. In 2023, Swedes were also on the *NYX Game Awards* top list, with *Bramble: The Mountain King* by **Dimfrost Studio**, *Vaudeville* by **Bumblebee Studios** and *Mortal Online 2* by **Star Vault** winning in several categories.

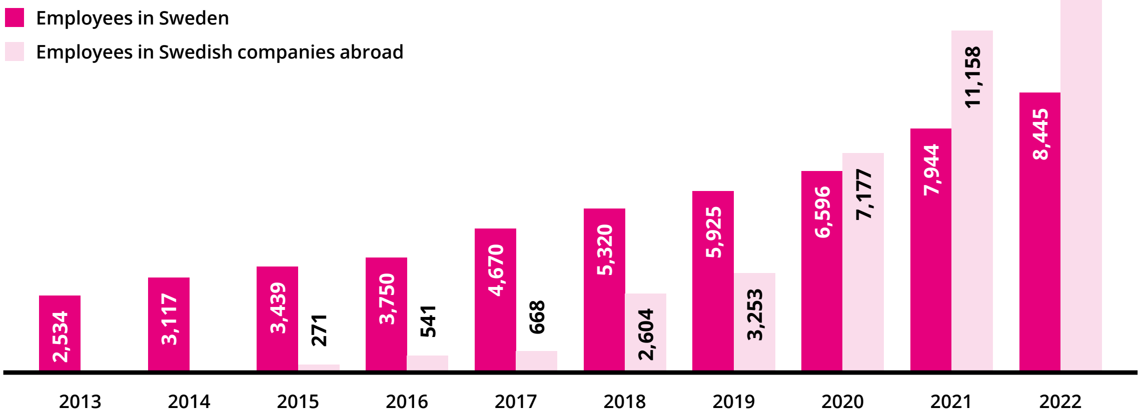
- Swedish games also won big at the *Nordic Game Awards 2023*, with five out of nine awards going to Swedish studios. Among them, *Source of Madness* by **Carry Castle** won Best Small Screen Game, *Virtuoso* by **Really Interactive** was named Best Technology and *Raft – The Final Chapter* by **Redbeet Interactive** won Best Debut.

- Closer to home, the surrealist horror game *Eclipsium*, developed by the **Housefiregames** team studying the Game Creator programme at Yrgo in Gothenburg, was named Game of the Year in the *Swedish Game Awards 2023* student competition organised by the Swedish Games Industry.

Employees

The number of employees in the Swedish game industry is increasing and several companies are hiring. In 2022, the number increased to 8,445 employees.

Employees in Swedish Companies



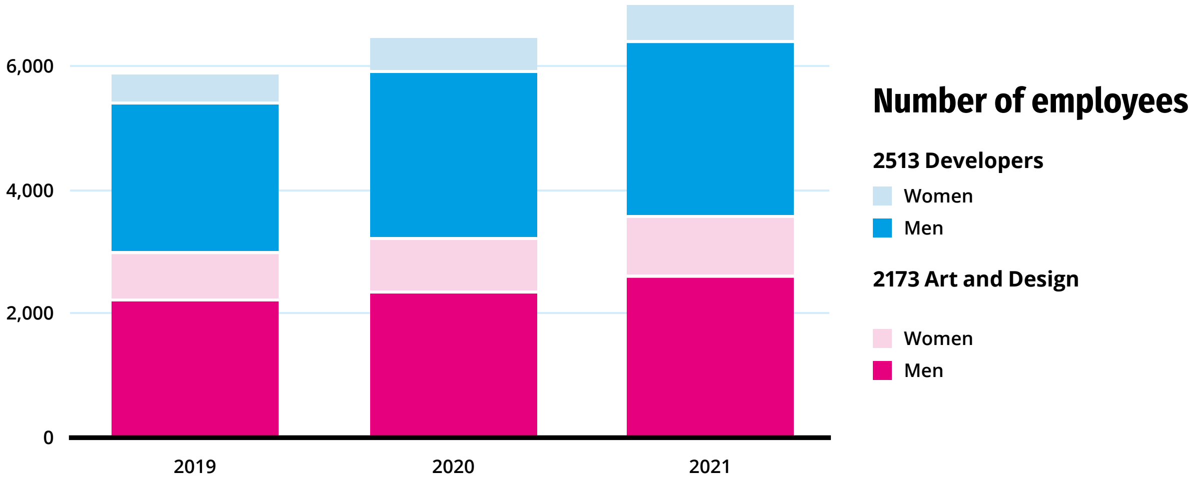
The number of employees in the Swedish game industry increased by 6% in 2022 to 8,445 people. This corresponds to 501 new full-time positions. The largest employer in Sweden is Ubisoft Entertainment, which employs around 850 people. 19 companies have over 100 employees in Sweden. 121 companies have ten or more employees.

In addition to employees in Sweden, over 5,000 full-time positions were added abroad in Swedish-owned companies, mainly through acquisitions. In 2022, Swedish-owned companies had around 16,500 people employed around the world outside Sweden. This means that a total of 25,000 people were employed by a Swedish-owned game company during the year. More about this in the chapter *Swedish Game Companies Around the Globe*.

The number of employees is based on the annual reports' average full-time employment throughout the entire financial year. This means that the actual number of people working in the industry is in many cases higher, as many companies that expanded in 2022 had more employees at the end of the year than at the beginning of the year. Where information was available, the number of employees in December of 2022 has been used as a reference to better reflect the development during the year.

In addition to the reported number, there are people in other types of companies, people in companies that have not submitted annual reports, and freelancers and consultants who are not shown as employees in the companies' annual reports. In view of these hidden figures, the real figure is higher. For example, there are 432 sole proprietorships registered under computer games. In the survey *The south Swedish game development industry 2022* (Game Habitat), 87% stated that they had a permanent full-time job. Almost no one works part-time.

Number of Employees in Occupation Codes 2173 & 2513



Higher Turnover in the Job Market

In 2023, several game companies reported a deteriorating economic situation, with layoffs and in some cases closed studios around the country. To some extent, this follows the recession and the global market, which has not least affected listed companies. 2021 was a year of strong growth throughout the industry, and in terms of key figures, the increase has slowed somewhat in 2022.

For individual locations, it has been a turbulent year. Umeå is one such example where several established studios, for completely different reasons, closed down their operations in the city in a short time. This has led to several new independent game studios starting up and hiring some of the staff who had to leave the closed companies.

As a sector, the game industry has fared well and the trend is still steadily upwards. In a review of the major companies in the industry, and with the reported closures and redundancies included, there is an increase even in 2023 and in September there were over 8,600 employees in the industry in Sweden.

Another trend noticed during the year is that more companies are offering more organised consulting services fully specialised in games expertise, and that more studios are so-called co-dev studios, companies that work on game production on behalf of other major game studios. The IT consulting company Netlight, for example, has 170 employed game developers who work in studios across the country.

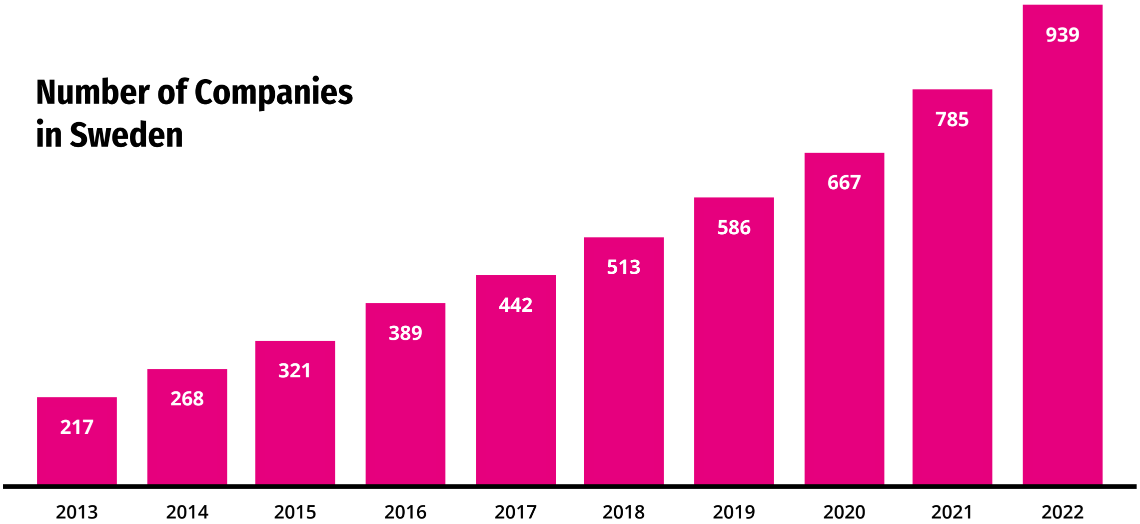
In the long term, skills supply remains a challenge of major proportions, combined with stable conditions for smaller companies to grow.

Number of Employees by Professional Role

Two occupational roles in game development have game-specific occupational codes (SSYK), in the official statistics compiled by Statistics Sweden (SCB). These are occupation code *2173 Designer in games and digital media*, which covers several jobs in graphics and design, and *2513 Developer in games and digital media*, which covers occupations in game programming. In addition to these, there are game developers in various specialisations under other occupational codes, and employees in the occupational codes may also work at companies in industries other than game development. The sample can be seen as an indication of the number of employees in the country in the various occupational roles and the growth in the labour market. Statistics Sweden also keeps statistics on gender distribution. In 2021, 16% of all game programmers were women and 27% of all graphic artists and designers. The total share of women in the sample was 21.4% in 2021, just below the industry average of 22.1% in the same year.

Number of Companies

In 2022, 104 new game companies were registered. At the end of the year, a total of 939 limited companies were active in game development, an increase of 19% from the previous year. Of these, 200 companies are now more than ten years old.



Other Types of Businesses

In 2022 there were 432 sole proprietorships, 45 partnerships and eight economic associations registered under *NACE 58.210 – publishing of computer games*.

Of the sole proprietorships, 164 reported revenue in 2022. 29 companies reported revenue of over half a million SEK, of which 11 companies had a revenue of more than one million. 30 firms were run by a woman, 14 of these reported revenue, of which two companies exceeded half a million SEK. Of the trading companies, 15 reported revenue.

This is a large increase compared with previous years, not least in terms of the number of sole proprietorships and the proportion of these with economic activity. More people are setting up companies registered in game development, and there is a threefold increase in the number of companies that have such a high turnover that it is not just a side business.

As with limited liability companies, there is a lack of accuracy among the companies that have registered with *NACE code 58.210* and those that actually operate in game development. For trading companies and sole proprietorships, we have not examined the actual activities, and in several cases it may be a question of secondary activities that change over time. Some companies in the sample group of which we have direct knowledge can be found on the *Game Developer Map*.

Data on companies comes from Statistics Sweden's business register, game development companies that we become aware of by, for example, contacting us, and a manual review of all companies that have registered operations under *NACE code 58.210 – publishing of computer games*.

Number of Employees and Revenue by Company Type

The list of Swedish game companies has been growing steadily for a long time, but far from all companies have active operations with revenue and employees. This can partly be explained by the fact that some companies are run as holding companies to manage ownership in other game companies, while others have transitioned from active game development to becoming dormant companies with no operations. One reason why inactive companies are sometimes left dormant instead of being wound up is that the sale of released games can provide passive income to the company with minimal effort even long after the games have been released.

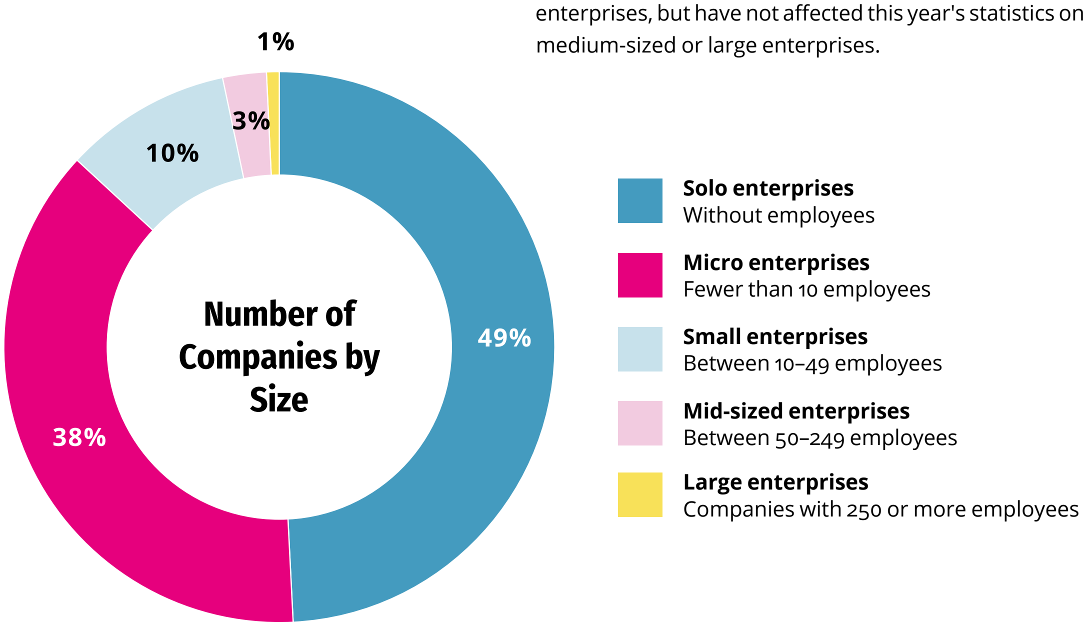
Among the 939 companies, almost half are solo companies, i.e. the company has no registered employees. Note, however, that companies owned and operated by a single person may be reported as having no employees, regardless of whether the owner receives remuneration. In other words, solo enterprises can refer to limited liability companies that are run by a single person or that simply have no activities.

Just over a third of the companies had at least one and no more than nine employees in 2022. The number of employees is based on the average number of full-time jobs for the year, regardless of the number of individuals. The statistics are taken from Statistics Sweden and are based on employer contributions registered with the Swedish Tax Agency.

Aurora Arts – Fae & Fauna

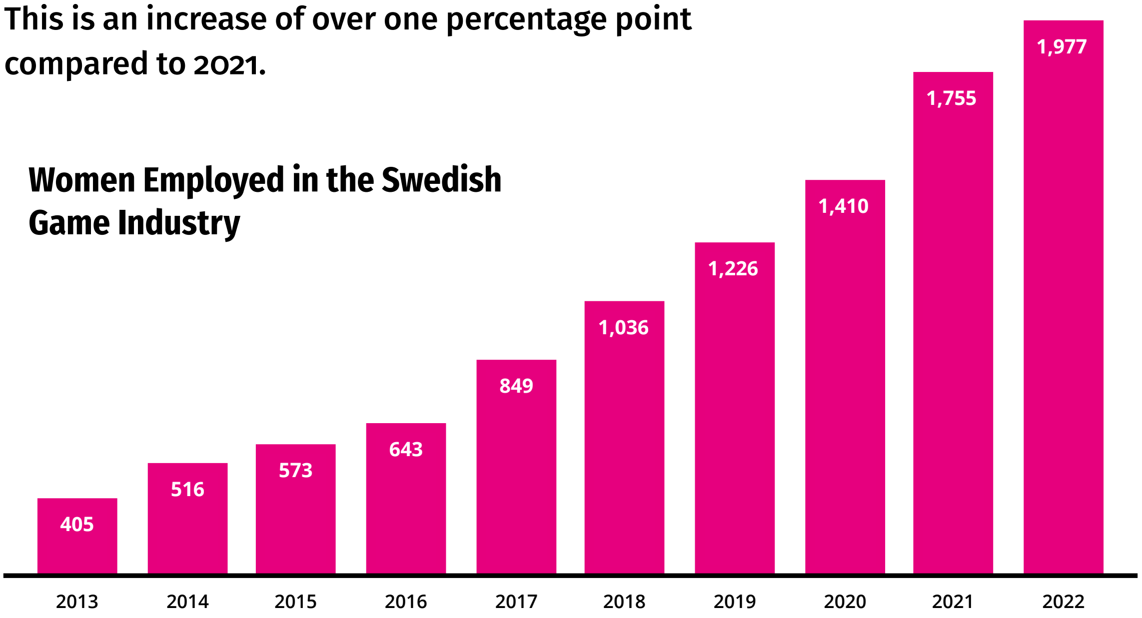
The number of companies with 50 or more employees has increased from 28 in 2021 to 31 companies in 2022. As in previous years, entire groups are not counted in this review, but each parent and subsidiary separately.

Note that the categorisation has changed slightly from previous years. The categorisation is based on the EU's definition of company size, which is based partly on the number of employees and partly on the companies' revenue and balance sheet total. This year, the companies are categorised solely on the basis of the number of employees in the companies, for greater clarity. In addition, the category of medium-sized enterprises has been updated from under 200 employees to under 250 employees, in line with the EU's definition of small and medium-sized enterprises (SMEs) in terms of number of employees. Overall, these changes have contributed to a marginally different distribution of solo, micro and small enterprises, but have not affected this year's statistics on medium-sized or large enterprises.



Inclusion and Gender Distribution

In 2022, the entire Swedish game industry grew in terms of the number of employees, including the number of women. In total, 1,977 women were employed in Swedish game companies in 2022, representing 23.4% of all employees. This is an increase of over one percentage point compared to 2021.



This year's statistics are particularly noteworthy in terms of the gender distribution of this year's additions. Of the 500 people who joined the industry during the year, 44.3% was a woman. The difference from the previous year may seem marginal in terms of the overall statistics, but in a historically male-dominated industry, this proportion shows a trend of increasingly equal recruitment. In September 2023, over 2,000 women worked in the Swedish games industry.

Analysing gender distribution in Swedish companies presents several challenges. Listed companies, which have a greater obligation to provide transparent statistics, represent only a small proportion of employees. For smaller companies, there is no requirement to report the gender of employees in the annual report. In cases where other companies have not reported themselves, information from company data from Statistics Sweden is used, which is not complete and also involves certain margins of error. For one example, the statistics do not currently take into account gender identity, trans or non-binary employees, as the data is based on social security numbers and legally registered gender. To the extent that information has been available, the gender distribution is based on gender identity according to how each company has reported data.

While the figures can never be considered exact, they do give us a better idea of how the sector is evolving and whether we are moving towards greater or lesser gender equality. The work of nurturing non-male interest in technology and making room for it in education and the workplace continues, thanks in large part to non-profit initiatives and movements working to promote inclusion, equality, diversity and tolerance in higher education, gaming culture and the workplace. More information on these initiatives can be found below.

A few companies in the country report a third category in their gender breakdown, sometimes as explicitly non-binary, and sometimes under another designation in their annual reports. Among the Swedish companies that reported this figure, the share of companies that did not report gender as male or female was 1.5% in 2022, a slight increase compared to previous years. However, this is a comparative figure that is likely still underreported.

Initiatives in the Industry

Game Dev Force was founded in early 2019 with the vision of uniting different initiatives within Sweden that all aim to create a more inclusive and diverse game development industry. In July 2023, the fourth edition of *Valkyrie Game Jam*, a gender separatist game development event in northern Sweden, was organised.

Women in Games is an international, non-profit organisation with the goal of combating discrimination in the game industry and game culture. The organisation has grassroots around the world and consists of companies, members and ambassadors. In September 2023, the largest Women in Games event ever was organised at *SPACE* in Stockholm.

The Swedish Internet Foundation organised the event *Tidsvåg* in connection with the Science Festival in Gothenburg in spring of 2022 and again in 2023. Tidsvåg is a game festival that highlights and celebrates female, trans, and non-binary role models in the game industry with the aim of inspiring the next generation of game developers.

Wings was founded in 2018 and invests in indie games developed by teams where women and marginalised gender hold key positions at the companies. In 2023, *Wings Elevate* was organised, an accelerator initiative where ten selected mobile studios from around the world received grants for development and were coached to finally pitch their prototypes.

Starbreeze – Payday 3

Dimfrost Studio – Bramble: The Mountain King

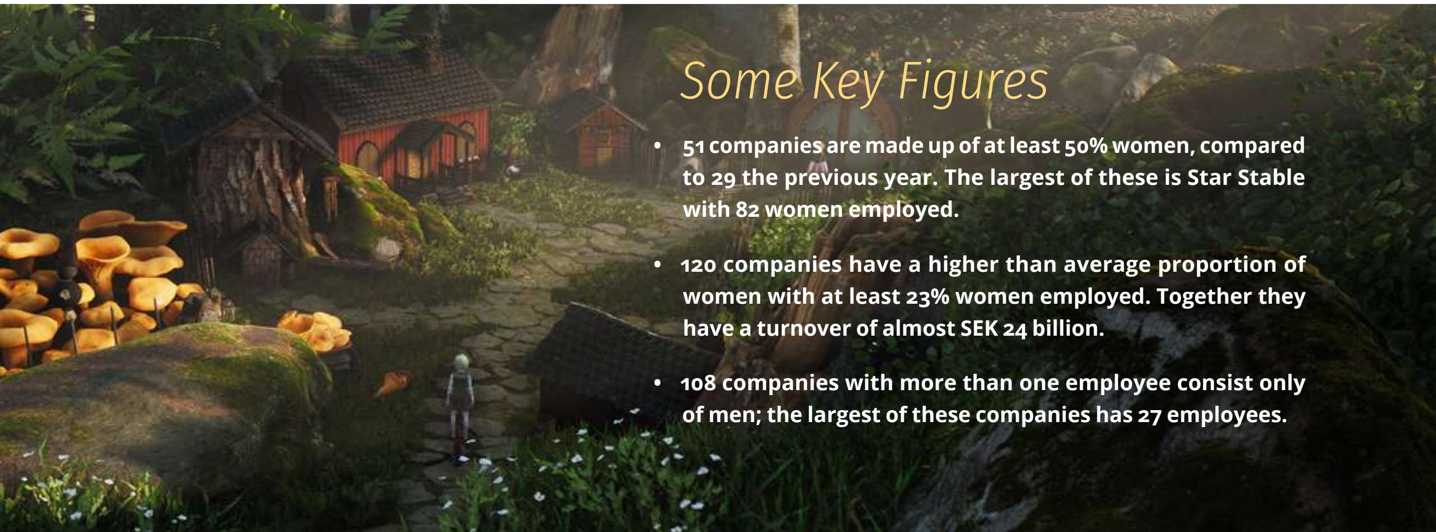
GEM, the *Game Empowerment Movement*, is a local initiative that aims to support a gender equal and inclusive culture in the southern Swedish game industry. In 2023, GEM organised a mentoring programme for women and non-binary people.

DONNA is an interest group based at the University of Skövde that has worked with gender equality issues in game development and game education since 2011. In 2022, the mini-conference *DONNA DAY* was held for the sixth year in a row, where about a hundred students and alumni could meet peers and mentors from the industry in connection with the *Sweden Game Conference*.

Equal Play is a network with roots in *East Sweden Game* that works to promote diversity and inclusion in the game industry in Östergötland by spreading knowledge and organising both separatist and open events for everyone interested in game development.

All In is a project run from 2023 to 2024 by *Science Park Skövde* as part of Vinnova's investment in development projects in incubators. Together with other game incubators in the country, the project will, among other things, map the obstacles and challenges that exist for non-binary and female game developers' entrepreneurship.

In June 2023, **PlaygroundSquad** organised a free game developer camp for girls, transgender and non-binary people aged 13-17 with an interest in game development. The camp gave young people a basic overview of what graphic artists, designers and programmers do. In addition, participants had the opportunity to develop their own game ideas.



Some Key Figures

- **51 companies are made up of at least 50% women, compared to 29 the previous year. The largest of these is Star Stable with 82 women employed.**
- **120 companies have a higher than average proportion of women with at least 23% women employed. Together they have a turnover of almost SEK 24 billion.**
- **108 companies with more than one employee consist only of men; the largest of these companies has 27 employees.**

THE INDUSTRY VOICE JENNY BRUSK

Innovation Manager, Science Park Skövde and founder of DONNA

"Diverse teams lead to a better culture, and more sustainable and dynamic companies"

Hi Jenny – you are the founder of DONNA and have worked in the games industry for over twenty years. What is DONNA, and what has changed in this time?

Today, there are far more women working in the games industry than when I started. Over the years, the issue of gender equality has also been raised, and with each crisis the industry has endeavoured to improve. We founded *DONNA* in 2011, which is a network for game developers and game students who identify as women, non-binary or trans. Through the network, we work for a healthy job market and for more marginalised people to apply for game education. In 2017, we also started the DONNA DAY conference to give students the opportunity to meet and be inspired by professional game developers who are role models from the industry.

Can you tell us about the All In project?

All In is a project that, in collaboration with other game clusters, will develop methods and tools to get more women, non-binary and transgender people to start their own companies. Research indicates that women currently take part in less than one percent of venture capital investments. Both women and non-binary people's motivation to start their own companies is about creative freedom and the power to create a diverse and inclusive work environment. An important aspect of the project is how we distribute support financed by public funds in an equal way when the majority of founders are men. Initially, we are working on surveying the various obstacles women face when starting a company and have identified the importance of support structures that welcome and help them into the industry.

How do you think the tools developed through the project will lead to increased diversity in the games industry?

Based on our work with DONNA, we know that it is possible to create change through increased awareness. Some companies are comfortable with a homogenous team and find it difficult to bring in someone from outside, but that's the whole point. Diverse teams lead to a better culture, and more sustainable and dynamic companies. Our work affects the entire industry as we collaborate with other clusters in the country. This affects both how many more different types of entrepreneurs we get, as well as how startup companies are formed.

Largest Companies

Swedish companies are growing. Eight companies reported revenues over 100 million EUR, and 19 companies had more than 100 employees. 37 companies had a revenue of more than 10 million EUR. About 40% of the companies showed positive results, 60 companies reported a profit of more than a million EUR and 135 companies had ten or more employees.

Only the net sales of Swedish-registered companies are included below. A list of the largest Swedish companies' global revenue can be found in the chapter *Swedish Game Companies Around the Globe*.

Aurora Arts – Fae & Fauna

Swedish Revenue in M EUR

	Company	Net Sales M EUR 2022/2023
1	King	598
2	Mojang	516
3	Paradox Interactive	187
4	EA DICE	155
5	Coffee Stain Publishing	155
6	G5 Entertainment	132
7	Toca Boca	131
8	Ubisoft Entertainment	96
9	Avalanche Studios Group	85
10	Sharkmob	84

Employees in Sweden

	Company	Employees in Sweden 2022/2023
1	Ubisoft Entertainment	850
2	EA DICE	696
3	King	621
4	Embracer Group	588
5	Paradox Interactive	474
6	Avalanche Studios Group	441
7	Sharkmob	329
8	Embark Studios	250
9	Fatshark	196
10	Thunderful Group	172

**The key figures for revenue are from the last reported fiscal year starting in 2022. The key figures for employees from Embracer Group, EA DICE, King and Paradox are from their last reporting period. Others were confirmed with the respective companies in September 2023. The figure for Thunderful includes the subsidiaries in game development. All are reported at group level in Sweden, except for revenue in Embracer Group where the largest subsidiary is listed.*

THE INDUSTRY VOICE NATALIA KOVALAINEN

Chief Archivist at Embracer's Games Archive

"Games are an important and central cultural expression. Because games are history and culture, they are part of what we leave behind as a civilisation"

Hi Natalia, you work as Chief Archivist at Embracer's Game Archive. Why is your job important?
The archive started with the private game collection of Lars Wingefors, co-founder and CEO of Embracer Group. Today we have games from many more private collectors and our ambition is to have as comprehensive an industry archive as possible of all physically released games for the consumer market. This includes the games, computers, consoles and all accessories. Being the chief archivist in a game archive that is being built from scratch is an extensive job. Today, there are over 80,000 items in the archive. An important part of the work is to establish collaborations with archives, museums, researchers and others who can spread knowledge about the cultural treasure that we manage.

How do you actually save a game? Do you need to think about anything in particular?
What makes the archive unique is that the objects in the archive will be used. We make sure that the objects have a good life but at the same time we want them to be useful. With the help of the archive, knowledge can be kept alive.

We catalogue the objects in iterations. The first iteration is a very simple list to create an overview of the objects, what we have and where they are located.

Who has access to all the games? Can you donate your game collection to the archive?
The archive is aimed at anyone involved in games in any way. For example, we have had visits from game and hardware developers who have used the archive to test and create new products, researchers studying games, and high school classes learning about games and the history of e-sports. Collaboration with heritage institutions and organisations is important, because together we can preserve more games.

We have received a few donations. One of my big goals is that all game developers send us a copy of their physically released games.

What cultural and historical value do you see in this archive? Could the archive be useful in the future?
The cultural and historical value of the archive is huge. Games are important and central cultural expressions. Because games are history and culture, they are part of what we leave behind as a civilisation. Just like film or music, games tell us about the time in which they were created and provide insights into human nature. We see the archive as an important resource for future generations as much as our present. Our ambition is to create history today and in the future!

Company Groups and the Stock Exchange

In recent years, an increasing number of groups with foreign subsidiaries have emerged or gained market shares while retaining their headquarters in Sweden.

The Swedish stock market has generally been favourable to the game industry and several foreign companies are listed on the Swedish stock exchange.

Some groups, such as Embracer and Stillfront, have a large part of their operations outside Sweden. Together, the two companies own a significant part of the German game industry. THQ Nordic, PLAION and Goodgame are some examples of Swedish-owned companies in Germany. This report's world map of Swedish-owned game companies illustrates where Swedish companies are buying up studios around the world.

Listed Companies

Today, 23 Swedish game companies are listed on the Stockholm Stock Exchange. MindArk was listed on Spotlight Stock Market in January 2023.

Eight of the listed companies reached a revenue of more than EUR 100 million in 2022. Together, the listed companies' revenue amounted to EUR 6 billion, a threefold increase since 2020 (EUR 2 billion) and almost twice as much as in 2021 (EUR 3.6 billion). Embracer Group accounted for more than half of the list's turnover in the past year. The stock market table includes the entire Thunderful Group despite the fact that a large part of the turnover comes from the company's mission as a Nordic Nintendo distributor.


Apskeppet – Hellgineers

The total market capitalisation in December 2022 was EUR 13 billion, slightly lower than the previous year (EUR 14 billion), reflecting the increasingly cautious economic situation.

In addition to the game companies listed on the next page, M.O.B.A. Network, a service provider to the game and e-sports industry, is also listed in Sweden.

Swedish Listed Companies

Company	Year of (first) listing	Listed on	Revenue 2022 M EUR
Adventure Box Technology AB	2019	Nasdaq First North Growth Market	0.5
Beyond Frames Entertainment AB	2018	Spotlight Stock Market	2
Embracer Group AB	2016	OMX Stockholm Large Cap	3,543
Enad Global 7 AB	2017	Nasdaq First North Growth Market	180
Fragbite Group AB	2021	Nasdaq First North Growth Market	25
G5 Entertainment AB	2006	OMX Stockholm Large Cap	135
Game Chest group AB	2021	Nordic SME	0.7
Gold Town Games AB	2016	Nordic SME	2
Goodbye Kansas Group AB	2017	Nasdaq First North Growth Market	6
Jumpgate AB	2016	Nordic SME	28
MAG Interactive AB	2017	Nasdaq First North Growth Market	3
Maximum Entertainment AB	2018	Nasdaq First North Growth Market	118
MindArk PE AB	2023	Spotlight Stock Market	9
Modern Times Group MTG AB	1999	Nasdaq Stockholm Large Cap	534
Paradox Interactive AB	2016	Nasdaq First North Growth Market	190
Qiiwi Games AB	2017	Nasdaq First North Growth Market	3
Safe Lane Gaming AB	2010	Nordic SME	5
Sozap AB	2021	Nasdaq First North Growth Market	2
Star Vault AB	2007	Nordic SME	2
Starbreeze AB	2000	Nasdaq Stockholm Small Cap	12
Stillfront Group AB	2015	OMX Stockholm Large Cap	681
Thunderful Group AB	2020	Nasdaq First North Growth Market	293
Wicket Gaming AB	2021	Spotlight Stock Market	0.7


Perfect Random – Sulfur

Game Developer Map – Sweden

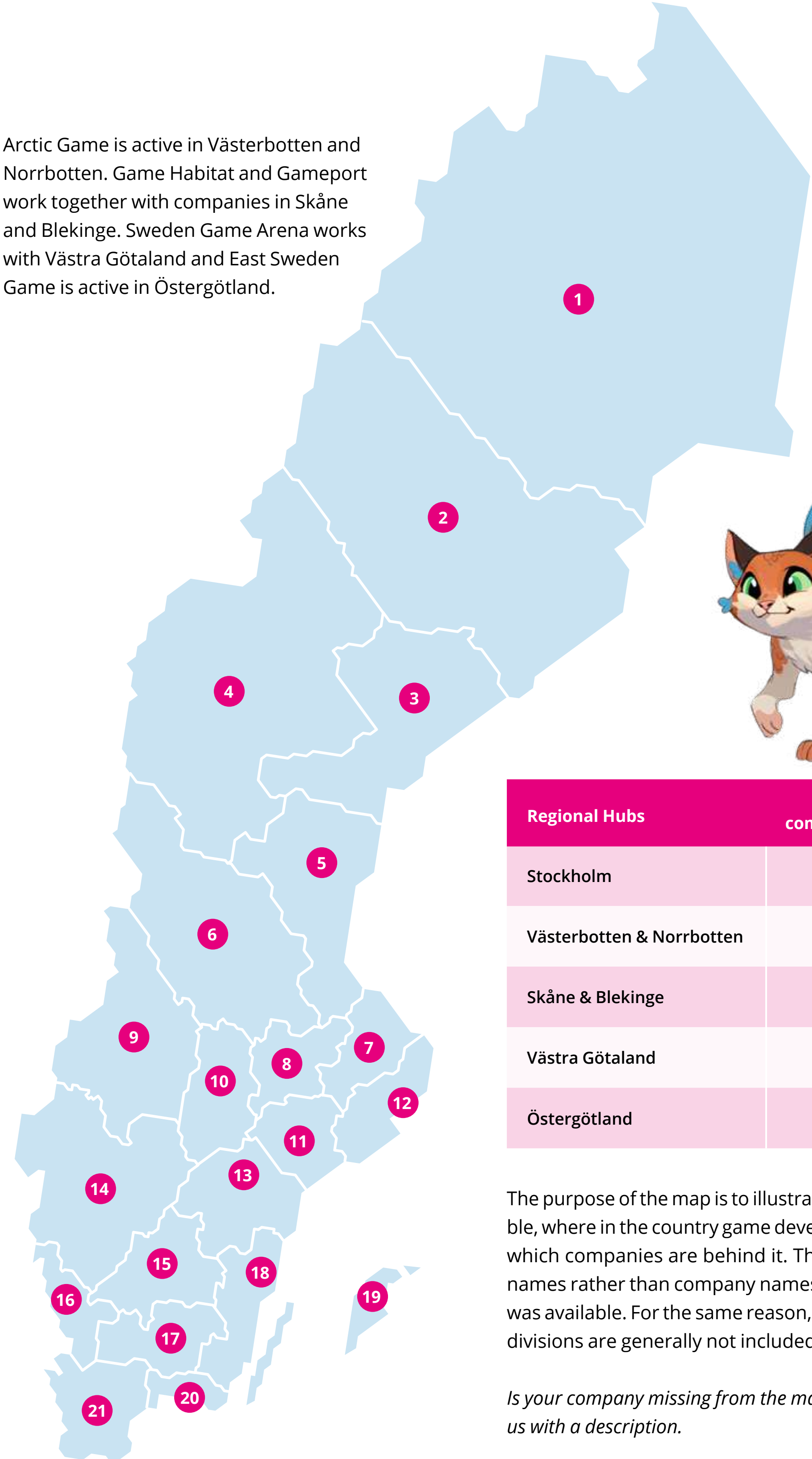
Game studios can be found in all Swedish regions, from Skåne to Norrbotten.

Embark Studios – ARC Raiders

Stockholm is still by far the largest region in terms of the number of companies and employees, but most companies are evenly distributed across the rest of the country in proportion to the population, with a clear bias towards cities with some form of incubator or cluster offering support or business development.

The majority of companies located in clusters are generally relatively small and newly started, resulting in lower turnover and fewer employees. The regions where larger clusters and hubs have been established are reported separately. These statistics also include companies founded in 2023 and may therefore differ slightly from the key figures. All of the hubs have seen an increase in the number of member companies. In some newly started companies there are more employees than listed, as their key figures have yet to be reported and registered. The game developer map primarily lists the Swedish limited companies that are active in the game industry and where in the country they are located, but some active companies in other corporate forms are also included in the list. Note that the statistics are based on the number of full-time positions reported in the companies' annual reports. The total number of people working with game development in each location should be considered to be significantly higher. In addition, the figures for employees in locations other than the head office have been adjusted as far as possible.

Arctic Game is active in Västerbotten and Norrbotten. Game Habitat and Gameport work together with companies in Skåne and Blekinge. Sweden Game Arena works with Västra Götaland and East Sweden Game is active in Östergötland.



Aurora Arts –
Fae & Fauna

Regional Hubs	No. companies	No. Employees
Stockholm	409	5,245
Västerbotten & Norrbotten	84	276
Skåne & Blekinge	149	1,706
Västra Götaland	142	793
Östergötland	56	81

The purpose of the map is to illustrate, as accurately as possible, where in the country game development takes place and which companies are behind it. Thus we have used studio names rather than company names when such information was available. For the same reason, administrative company divisions are generally not included in the map.

Is your company missing from the map? Please contact us with a description.

NORRBOTTEN 1

Boden
5 Fortress AB
921 Studios AB
Aurora Punks
House of How Games Sweden AB
Less is More
Miracle Bread AB
Nethash AB
Northify AB
October8 AB
Previous AB
Salt light studio
Sparrowland Aktiebolag
Synical Studios AB
TNTX in Boden AB
Tyrant Films AB
Wanderword i Sverige AB

Kalix
eelDev AB

Luleå
Bazooka Game Studios AB
Blamorama Games AB
Pixadome
RDY Arena AB
UNIGIL-SUPPORT AB
Volatile Frameworks AB

Piteå
Aurora Punks
Baldheads Creative AB
Digital Awakening AB
Frozen North Studios AB

VÄSTERBOTTEN 2

Skellefteå
ChillChat Studios AB
Cold Sector AB
Creative Crowd AB
Cubetopia AB
DANIEL LEHTO AB
Feral Flame Studios AB
Flat Tail Studios AB
Frigol IT & Media AB
Gold Town Games
Gold Town Games AB
Grand Pike AB
Gumlin Games AB
Lazer Wolf Studios AB
Mind Detonator AB
Mindforce Game Lab AB
Natural User Interface
Technologies AB
Nordsken Handlingskraft AB
NORTH KINGDOM DESIGN
& COMMUNICATION AB
Northplane AB
Spinoff Games AB
Streiff Studio AB
Throw away company AB
Triolith Games AB
Vavel Games AB
Vorto Gaming AB
White Warlock AB
Windswept Interactive
Yalts AB

Umeå
Allscope AB
Aurora Punks
Blast Bit Enterprises AB
Cassius Creative AB
Crypto Rouge Games
David Marquardt Studios AB
Frostspektrum Interactive AB
Game Boost Sweden AB
Level Eight AB
Mattias Wiking Development AB
Morningdew Media AB
Moxville AB
Musikmedel Future Vision AB
Nostop Horses AB
Oddgames Umeå
ORYX SIMULATIONS VERKLIGHETS-
MODELLER I SVERIGE AB
Parrexion Games AB
RankOne Global AB
Rusty Pug Entertainment AB
Sam & Frida AB
The Fine Arc Nordic AB
Turborilla AB
TWO 58 PRODUCTIONS AB
Twoorb Studios AB
Windup AB
Ånyo Studio AB

VÄSTERNORRLAND 3

Kramfors
Duck Tape AB
Grey Tower AB

Örnsköldsvik
Northern Ice Handelsbolag
WHYMAC AB

Sundsvall
A bit ago AB
AtomicElbow AB
Caeiro AB
Corncrow Games AB
Datacraft Holding AB
Good Decision AB
Gr IT AB
KONUNGER GAMES AB
Molntuss Spel AB
Mixxus Studio
Neozoo Creative
R&P Games AB
Romeo Invest AB
Saber Interactive Sweden
Sideline Labs AB
SideQuest Sweden AB
Simtarget
SPACELOOM STUDIOS AB

Timrå
Edym Pixels

Viksjö
Simtarget

JÄMTLAND 4

Åre
Hindelid Development AB

Östersund
JN Programutveckling AB

GÄVLEBORG 5

Gävle
Early Morning Studio AB
Virtual Beasts AB

DALARNA 6

Borlänge
Quiz Anytime AB
Zoikum Games Aktiebolag

Falun
Aktiebolaget Adit Studios
Giron Software AB
Kolesterol Cät Interactive AB
MEGAFRONT AB
North Concept ArtStudio AB
Tension Onsite Sport AB
TENSION technology AB
The New Branch AB
Wogglawooh Entertainment AB

Hedemora
Clifftop Games AB
Killmonday Games AB

Malung-Sälen
North Modding Company AB

REGION UPPSALA 7

Enköping
Yoger Games AB

Håbo
aMASE AB
Rennert Games AB

Knivsta
Outlean AB
Studio Knick-Knack AB

Sala
Everlight Studio AB

Uppsala
Aegik AB
BigMood AB
Bitfix AB
Chizu AB
Dinomite Games AB
Disir productions AB
Doctor Entertainment AB
Ember Trail AB
Epic Games
Frojo Apps AB
Gnomad Games
Javxa
MachineGames Sweden AB
Matematikspel i Uppsala AB
Nena Innovation AB
Neon Giant AB
Nexile AB
Night Node AB
Red Cabin Games AB
Semiwork Studios AB
Think First AB
Tretton Adam AB
Wicket Gaming AB
YemSoft AB

VÄSTMANLAND 8

Köping
LS Entertainment AB

Surahammar
Walrus Game Studios AB

Västerås
Bumble Byte AB

VÄRMLAND 9

Forshaga
Insanto Studios AB

Hammarö
Jonatan Röjder Delnavaz
Mystik AB

Karlstad
Agera Games AB
Clear River Games AB
Embracer Group AB
Firma Noah Molteberg Lundén
Forgebyte Studio AB
Frostglade AB
Isak Liljengren Enskild firma
Koncepting
Mirage Game Studios AB
Nimble Giant Sweden
Nine Lives Game Studio
Nuttery Entertainment AB
Omniscapes Interactive AB
Plucky Bytes AB
Studio Malosi AB
Team Velocita AB

Kil
Philosophic Games

REGION ÖREBRO 10

Degerfors
ORBMIT Productions AB

Hallsberg
vibynary Aktiebolag

Lindesberg
AC GAMES AB

Nora
Toasty Leaf AB

Örebro
DANJO CREATIVE AB
Elder Grounds AB
LOYD Studios AB
NBrigade Music AB
Shemshem Design AB

SÖDERMANLAND 11

Eskilstuna
AL Spelutveckling AB
anananas studio AB
AppsAlliance AB
DVapps AB
MythoLogic Interactive AB
Todys Games AB

Nyköping
SOZAP
Sysiac games AB

Strängnäs
Agile Softworks AB

REGION STOCKHOLM 12

Botkyrka
Beadhead Games AB
Counterspell AB
ngine technologies AB
Stringent Ljud AB

Bromma
Exertis Ztorm AB

Danderyd
bNosy AB
Planeshift Interactive AB
Solvarg AB
Tinto Consulting AB

Ekerö
chillbro studios AB
Mr.Ws Development AB
Playstack AB

Haninge
Gamatron AB
Pretty Fly Games AB
Rain of Reflections AB

Huddinge
Bright Gambit AB
Holmgång AB
Inzanity AB
Moon Mode AB
Razzleberries AB
Strawberry Hill AB
Typosaurus AB

Johanneshov
Stockholm VR Center AB

Järfälla
Ashkan Namousi AB
Cresthelm studios AB
Merrybrain AB
Smojo AB
Unleash the Giraffe AB

Lidingö
Mount West Music AB
My Left Head Entertainment AB
PIXEL TALES AB
The Froghouse AB

Nacka
2Play Studios AB
Colin Lane Games AB
Dejan Dimic AB
Domoore AB
Game Advisor Sweden AB
Kroonatus AB
LeadTurn Gaming AB
Liquid Swords AB
LootLocker AB
Polygongruvan AB
Puzzlebox Studios AB
Shellander Games AB

Norrtälje
Argent Realms AB
Dovora Interactive AB
Tomlin Studio AB
Space Plunge AB

Österåker
Ringtail Interactive AB
Sprint1 Productions AB

Sigtuna
GraphN AB
Svantech Studios AB
Usurpator AB

Södertälje
Diffident Games AB
JN Interactive AB

Sollentuna
Almost Fantastic AB
Short Infinity AB
Ullbors Illustrations AB
Vishindo AB

Solna
BBS Games AB
BitBear AB
Black Voyage Games AB
Christian Nordgren AB
DIVR Sweden AB
Fargo Games AB
Frozen Dev AB
FunGI AB
Jona Marklund AB
Lilla Fezen AB
Manaii World
Sharcoal Studios AB
Solutions Skövde AB
ToeDev AB
TRB Studio AB
TwifySoft AB

Stockholm
10 Chambers AB
A Small Game AB
Acegikmo AB
Adventure Box Technology AB (publ)
Aktiebolaget Fula Fisken
Amplifier Boot Camp AB
Amplifier Studios AB
Antler Interactive AB
anton.games AB
Arcmill AB
Arrowhead Game Studios AB
Art by rens AB
Ashes & Diamonds Entertainment AB
Atlantika Interactive AB
Avalanche Studios Group
Axolot Games AB
Barnacles Studio AB
Battlecamp AB
Bewildermill AB
Beyond Frames Entertainment AB
Björkman Consulting Group AB
Blackfox Studios
Blastronaut AB
BloodMoon Studios
Bodbacka:Boom AB
Book of travel AB
Brikk
Burning Planet Digital AB
Caketown Interactive AB
Challenge GG AB
Chief Rebel AB
Code Club AB
Coffee Stain North AB
Cold Pixel AB
Collecting Smiles AB
Cortopia AB
Cosmico AB
Coulianos Studio AB
Crackshell AB
Creation Zero Point Holding AB
Dark Riviera AB
Dashy Studios AB
Define Reality AB
Delit AB
Denove Service AB
Devm Games AB
Diax Game AB
Digiai AB
Digital Exception Sthlm AB
Doomlord Interactive AB
DorDor AB
DualNorth AB
EA Dice
Effsee AB
Ekvall Games Sweden AB
Eldring Games AB
Elemental Games
Embark Studios AB
Enad Global 7 AB
Enember Studios AB
Envar entertainment AB
Epic Games
Evergreen IT AB
Expansive Worlds AB
ExoCorp AB
Experiment 101 AB
Expertise Games Group Stockholm AB
Fablebit AB
Fall Damage Studio AB
Fast Travel Games AB
Fatshark AB
FeWes AB
Filimundus AB
FJRD Interactive
Flarie AB
Flashe Gaming Group AB
Fragbite Group AB
Fredtob Games AB
Frever AB
Friendly Foe Games AB
FunRock Development AB
Fury Studios AB
Fuyu Games AB
G5 Entertainment AB
Gambit Technologies AB
Game Chest group AB
GAME-HOSTING GH AB
Gameloom AB
Gamersgate AB
Gamescan Stockholm Studios AB
GeoGuessr AB
Ghetto Blaster AB
Ghiblio AB
Gleechi AB
Global Impact Gaming International HB
Glorious Games Group AB
Go Maddox Interactive AB
Goals AB
Goodbye Kansas Group AB
Grindstone Interactive AB
Gro Play Digital AB
GURATRON Industries AB
Hamlab AB
Hatrabbit AB
Hazelight
HVNT Entertainment AB
Hyperspeed Entertainment AB
Hypr10 AB
Ichigoichie AB
IdaP Studios AB
Idun Interactive AB
IG Consulting AB
Ilo Games AB
Insert Coin AB
Jhony Ljungstedt AB
JO Johansson Film & L Lindbom AB
Jonas Levin AB
Jopter Interactive AB
Kavalri Games AB
Keepsake Games AB
Kickflip Digital AB
King
Landfall Games AB
Legendo Entertainment AB
Lejongrejer AB
Lekis AB
LERP AB
Level Stars AB
Light & Dark Arts AB
Lilla Bas AB
Lionbite AB
LIQUID MEDIA AB
Maadwalk Games AB
MAG Interactive AB
Maximum Entertainment AB
Med Svärd AB
Megadib AB
Mentalytics AB
Mibi Games AB
Midjiwan AB
Might and Delight AB
Millionth Line AB
Minoan Studios AB

Continues on the next page

Paradox Interactive – Victoria 3

Continued from previous page

Miso Games AB
Modern Times Group MTG AB
Modoyo AB
Mojang AB
Moon Rover AB
Moreish Games AB
Motvind Studios AB
MuddyPixel AB
Mudpike AB
Mutate AB
Nampa Design AB
Neat Corporation
Neuston AB
New Galaxy Games Sweden AB
NFG Nordic Forest Games AB
Nibiru Software AB
NL Productions AB
NMBRS Production AB
Noid Games AB
Nørdlight Games AB
Odd Raven Studios AB
Off-Leash Interactive AB
Orion Eunix AB
Osivvi AB
Other Games AB
Oxeye Game Studio AB
P Studios AB
Palabit AB
Paradox Development Studio AB
Paradox Interactive
Perfect Random AB
Petter Bergmar AB
PLAYCOM GAME DESIGN AB
Plotagon Production AB
Polarbit AB
Pole Position Production AB
Poppermost Productions
Aktiebolag
POTEMKIN AB
Pounce Light AB
Psychogenic AB
Pusselbit Games AB
Puzzle Mill AB
QA Design AB
QDE Studio AB
Quel Solaar AB
Questadore AB
Rabbits Foot Studios
Rainbow Road AB
RAKETSPEL INTERAKTIVA
PRODUKTIONER AB
Rapix Games AB
Raw Fury AB
Really Interactive AB
Red Cup Games AB
Refold AB
Regius Group AB
Remedy Entertainment Sweden AB
Reset Media AB
Resolution Games AB
Right Nice Games AB
Rightsized Games AB
RimeLime AB
Rock A Role Games AB
Roro AB
Rovio Sweden AB
Rowil AB
Rymdfall AB
Safe Lane Gaming AB
Sagoverse AB
Schmugan AB
Scion Studios AB
Seidr AB
Shaping Games AB
Shelter Games AB
Short Circuit Studios AB
SHPEL AB
Sidres AB
Simway AB
Sleeper Cell AB
Snowprint Studios AB
Solid Studios Creative Lab AB
Sons of Mim AB
Source Empire AB
Spelkraft Sthlm AB
Square Dreams AB
STAR STABLE ENTERTAINMENT AB
Starbreeze AB
Sticky Games STHLM AB
Stillfront Group AB
Stroboskop AB
Sutur AB
Svartskägg AB
Systemic Reaction AB
Tale Maker Productions STHLM AB
Tappily AB
Ternios AB
The Gang Sweden AB
The Outsiders
Thriving Ventures AB
Tiger & Kiwi AB
Toadman Interactive AB
Toca Boca AB
Tomorroworld AB
Toppluva AB
Trail Games AB
TROISDIM AB
TTK Games AB
Ubisoft Stockholm
Unity Technologies Sweden AB
Unordinal AB
Valiant Game Studio AB
Varia Entertainment AB
Villa Gorilla AB
Vinternatt Studio AB
Virtual Brains AB
Vishindo AB
Visiontrick Media AB
Vobling AB
Warm Kitten AB
Wayfare Studio AB

Westre Games AB
Wild Games AB
Wildlife Studios Sweden AB
Wilnyl Games AB
Wings
Woodhill Interactive AB
wrlds technologies AB
Wrong Organ AB
Xpert Eleven AB
Ztar Games AB

Sundbyberg
Novamitech AB
Simple Magic Studios AB
White Imp Games AB

Täby
Frojo Investment AB
NIALBE AB
Polyregular Studios AB
Sleipner Games AB
Soundkids AB
Synthetic Mind AB
Tealbit AB
Warpzone Studios AB
Yangmei Studios AB

Tyresö
Oort Cloud AB
Sista Potatis AB
Spelagon AB
Wynne Technology AB

Upplands Väsby
Fredaikis AB
RobTop Games AB

Upplands-Bro
Bambino Games AB
Freshly Squeezed AB

Vallentuna
Delayed Again AB
Pixeldiet Entertainment AB

Värmdö
Blue Scarab Entertainment AB
Elias Software
Good Night Brave Warrior AB
IMGNRY International AB
Massive Shapes AB
Spelkultur i Sverige AB

ÖSTERGÖTLAND 13

Boxholm
Ioneo AB

Linköping
Adly AB
Aftnareld AB
Another Game Sweden AB
Avokodo Studios AB
Beartwigs AB
Catalope Games AB
Clifford Creative AB
Graewolv AB
Hihat Studios AB
Holmcom AB
Incredible Concepts of Sweden AB
Irrbloss AB
Landell Games AB
Laxbeam AB
Liopep
Lurkit AB
Lutra Interactive AB
Majewski Holding AB
Martin Magni AB
Miltonic Games AB
My Virtual Classroom AB
Neogon Holding AB
overflow AB
Pebble Paw AB
Pixleon AB
Power Challenge AB
Pugstorm AB
Red Nerv AB
Resolution Games
Screenput AB
Simplygon studios
SocAli Socialpedagogiska
Verktyg AB
Solid Core
Strategy Mill AB
Therese Kristoffer Publishing AB
VISIARC Inclusive Design AB
Worldshapers AB
Zero Index AB

Mjölby
Jidindi AB

Motala
Campcreation AB
Friendly Fire AB

Norrköping
AmberWing AB
Borrowed Soul Studio AB
Caspian Interactive
Correcture Games AB
Dimfrost Studio AB
Endjui Productions AB
Gamesclub International AB
GOES International AB
Molndust Interactive AB
One Potato Kingdom AB
Perpetuum Media Sverige AB
Silkworm
Skyfox Interactive AB
StoneTech Games

Söderköping
Loud Hat Productions AB

VÄSTRA GÖTALAND 14

Ale
1337 Game Design AB

Alingsås
Qiiwi Games AB

Bollebygd
Rockheart Studios AB

Borås
Gigantic Duck AB
Manavind AB

Continues on the next page


Stunlock Studios – V Rising

Continued from previous page

Gothenburg
A Creative Endeavor AB
AB Cx3
Ampd AB
An Otter Team AB
Apskeppet AB
Atvis AB
Beardybird AB
Bitwave AB
Box Dragon AB
Bulbsort AB
Choofun Games AB
Coffee Stain Gbg AB
Craft Animations and Entertainment AB
Creative AI Nordic AB
Creative Vault AB
Curiosa AB
Darson Tech AB
Dennaton Games
Devkittens AB
EA DICE Gothenburg
El Huervo AB
Elden Pixels AB
Feeble Minds AB
Friendbase AB
Fully Multiplayer AB
Greenblade Studios AB
Hello There AB
Hiber AB
Humla Games AB
inDirection Games AB
Insert Coin AB
int3 software AB
Itatake AB
ius innovation AB
just some games AB
Kamaji Experiences AB
Lavapotion AB
Lician Games AB
Like a Boss Games AB
MindArk
Mistwave Interactive AB
Neckbolt AB
Oscar Makes Games AB
Outbreak Studios AB
Pax6 Games AB
Playcentric Studios AB
Radgivery AB
River End Games AB
Räven Aktiebolag
SkyGoblin AB
Snapbreak Games AB
Soupmasters AB
South North Games AB
SteelRaven7 AB
Studio Far Out Games AB
Studio Northshade AB
Swarm Creations AB
The Fully Arcade AB
Thunderful Group AB
TinyHill AB
To the Sky AB
Wereviz AB
Winteractive AB
Wishful Whale AB
Wishfully Studios AB
YCJY Games AB
Zcooly AB

Götene
Pronoia AB

Härryda
Mambo Jambo Studios AB

Kungälv
Brimstone Games AB
Dreamon Studios AB
Skill2Win Studios AB

Lidköping
Pixel Pointer Studios AB

Mariestad
Frostcore AB

Mark
EXTRALIVES AB

Mellerud
Vovoid Media Technologies AB

Mölndal
Ball Lightning AB
E Games Invest Nordic AB
GSP golf AB
Heyman Atelje & Verkstad AB
Mindforce Game Lab AB
nornware AB
Oddiko AB
Pathos Interactive AB

Munkedal
Coilworks AB

Partille
Moonhood AB

Skara
Alega & Qiiwi Learning AB
VaragtP Studios AB

Skövde
Angry Demon Studio AB
Aurora Arts AB
Babloon Studios AB
Bad Luck AB
BridgeCo AB
Coffee Stain Publishing AB
Coffee Stain Studios AB
Designlayout EGU AB
DoubleMoose Games AB
Draw Three Cards AB
Elmseld Interactive AB
Ember Paw Games AB
Flamebait AB
FRAME BREAK AB
Green Tile Digital AB
Iron Gate AB
JETEBRA Games
Knackelibang Productions AB
Let it roll AB
Ludosity AB
Nattland Interactive AB
Nuggets Entertainment AB
Palindrome Interactive AB
Pieces Interactive AB
Piktiv AB
Redbeet Interactive AB
Sandspire Interactive AB
Sonigon AB
Stunlock Studios AB
Subfrost Interactive AB
Three Friends AB
Thunderful Skövde
Twitchy trigger finger AB
Whirlybird Games AB

Stenungsund
Ace Maddox AB

Tanum
Tenstar

Tibro
Pretty Broken Code AB

Trollhättan
ActiveQuiz Europe AB
Easy Trigger AB

Vänersborg
Virtuverse AB

REGION JÖNKÖPING 15

Jönköping
Brandywise AB
Cuddle Monster AB
Hatokuma Games AB
PrettyByte AB
Radical Sunset AB

Tranås
Head Coach Games AB

HALLAND 16

Falkenberg
Gellyberry Studios AB

Halmstad
Deadghost Interactive AB
Eagle games Sweden AB
Erik Svedäng AB

Kungsbacka
Breaker Interactive AB
Nifly Apps AB
Oganon interactive AB
Snojken AB

KRONOBERG 17

Älmhult
Inntq AB

Alvesta
Wadonk AB

Ljungby
Bläckfisk Förlag AB

Markaryd
Reality Park AB

Tingsryd
Spelkollektivet Sweden AB

Växjö
Arcade Mixtape AB
Mabozo AB
Nemo Studios AB
Universal Learning Games ULG AB
Wildcore AB

REGION KALMAR 18

Nybro
Deadly Serious Media Sweden AB

GOTLAND 19

Eat Create Sleep AB
Jumpgate AB
Pixel Ferrets AB
Storm Potion AB
Tableflip Entertainment AB

Virserum
Plink&Plonk Studio AB
Gotland
Fullscreen Studios AB
Glass Rock Gathering AB
Iterative Studios AB
Jumpgate AB
Photon Forge AB
Pixel Ferrets AB
Tableflip Entertainment AB
Wognum Studios

BLEKINGE 20

Karlshamn
Dreamwalker Studios AB
Mana Brigade AB
Noumenon Games AB
Pretty Ugly AB
Something We Made AB
Svavelstickan AB
Thunderful Karlshamn
Virtual Tree Design AB
Whacky Mole Studio AB

Karlskrona
Blackdrop Interactive AB
Macaroni Studios AB
Shatterplay Studio AB
Spellscaper AB

Olofström
Black Tundra Productions AB

Ronneby
Activout AB
Kernel Iron AB
Nodbrim Interactive AB
Powersnake AB

SKÅNE 21

Ängelholm
PMAbit AB

Burlöv
Happi Papi AB
Pfanne AB
Spiddekauga Games AB

Eslöv
Digital kittens AB
MistByte AB
Pastille AB
Triassic Games AB

Helsingborg
Decemberborn AB
Duckpond Interactive AB
HARBOURS MOON AB
Localize Direct AB
Monsuta AB
Pixelbite AB
Playtrigger Games AB
PTFH Development AB
Shapefarm AB
Sjöberg Game Consulting AB

Höganäs
KEP Games AB

Hörby
CroolBright AB

Kristianstad
JE Software AB

Landskrona
KFH Graphics AB
Urban Binary AB

Lund
Abcde Entertainment AB
Aroko Game Studio AB
Bridgestars Technologies Sweden AB
Desperate Measures AB
Illwinter Game Design AB
Jitesoft AB
Junno Labs AB
Pengu Studios AB

Malmö
Apoapsis Game Laboratories AB
Art in Heart AB
Avalanche Studios Group
Bearded Ladies
Bloom & Gloom Games AB
Carry Castle AB
Chimera Garden Games AB
Chromatic ink AB
Codeborn AB
Coffee Stain Malmö
Coherence Sweden AB
Cross Reality International AB
DeadToast Entertainment AB
Dengu AB
Diatomic AB
Divine Robot AB
Dunderbit AB
Echo Entertainment AB
Ernst & Borg Arkitektur AB
Frictional Games AB
Frogsong Studios AB
Gameflame
Golden Possum Games AB
Gotterdammerung AB
Grenaa Games AB
Haderajan AB
Icehelm AB
Illusion Labs AB
Infinite Mana Games AB
IO Interactive AB
King
KoniWorx Animation AB
Learning Loop Sweden AB
LERIPA AB
Linbasta AB
Longhand Electric AB
Magnetic Games AB
Massive Entertainment – a Ubisoft Studio
Mediocre AB
MU Studios AB
Multiscription AB
Neon Noroshi AB
Neuron Burner AB
nevsram AB
Nordic Game Resources AB
Nordic Game Ventures i Malmö AB
Nordic Stone Studio AB
Not My Jeans AB
On Pixel Graphics AB
On the Outskirts AB
Oskar Stålberg AB
Pixel Shade
Plausible Concept AB
ProCloud Media Invest AB
Rashidi Interactive AB
Rau Studios AB
Richard Meredith AB
Robertson Nordic Partners AB
Rubycone AB
Section 9 Interactive AB
Senri AB
Sharkmob AB
She Was Such a Good Horse AB
Simogo AB
Southend Interactive AB
Star Vault AB
SWEDISH GAME DEVELOPMENT AB
Sydow Production AB
Tales & Dice AB
Tarsier Studios
The Sleeping Machine AB
Thunderful Malmö
Transmuted Games AB
Tuxedo Labs AB
Undone Games AB
Velodrom AB
Vova Games AB
Vreski AB
webbfarbror AB
WhatAreBirds AB

Skurup
Spelmakare Jens Nilsson AB

Staffanstorp
Straw hat games AB
VoDoo Studios
WhyKev AB

Svedala
Binary Peak AB

Tomelilla
Pixilated Production AB
Redgrim AB
Trancenders Media AB

Vellinge
Impact Unified AB
Primary Hive AB

Ystad
VisionPunk AB

Ängelholm
PMAbit AB

REMOTE

Aurora Punks
Hadoque
NBrigade Music AB

Overflow – Madshot

Swedish Game Companies Around the Globe

Several game companies have expanded abroad. In 2022, there were 392 Swedish-owned studios around the world, of which 257 studios and branches belonged to the Embracer Group.

Largest Swedish Companies Globally

Largest Swedish registered companies including net sales from subsidiaries

	Company	Group Revenue M EUR 2022	Employees outside Sweden 2022
1	Embracer Group	3,543	11,956
2	Stillfront Group	664	1,470
3	King	598	-
4	Modern Times Group MTG	521	1,054
5	Mojang	431	-
6	Thunderful Group	285	257
7	Paradox Interactive	185	198
8	Enad Global 7	176	634
9	EA DICE	155	-
10	G5 Entertainment	132	932

Aurora Arts – Fae & Fauna

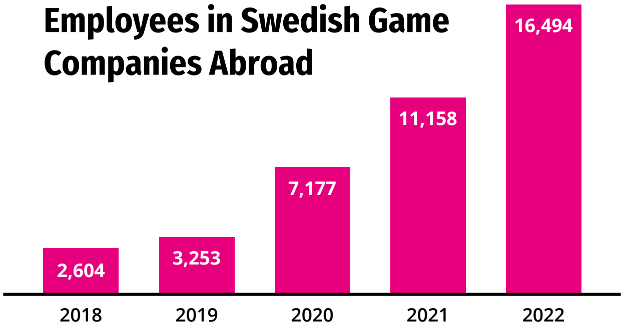
In total, there are studios in 59 countries on five continents. The largest number of companies are located in the USA, 85, and 208 studios are located across Europe, of which 41 are in the UK and 37 in Germany.

The largest outside Sweden is Embracer Group which, through its various branches, had 257 different corporate entities outside Sweden at mid-year 2023. During the year, the Group has announced a restructuring programme and divestments to strengthen the profitability of the company, which may cause the current figure to change.

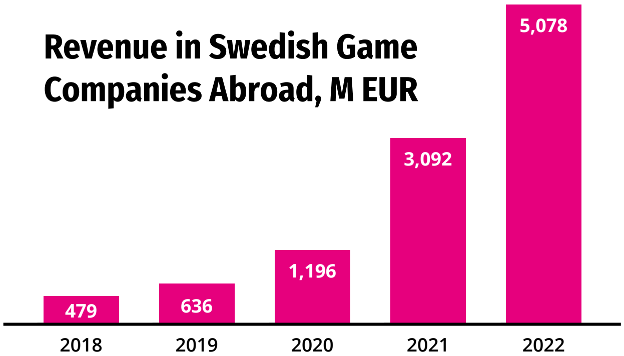
A total of 23 Swedish companies have various forms of branches and subsidiaries in other countries. Of these, two studios, Avalanche Studios Group in New York and Liverpool, have a Danish parent company and one studio, Sharkmob London, has a Chinese parent company. Stillfront Group had a significant global presence with 53 studios in 22 countries across five continents.

During the year, Enad Global 7 has divested its entire operations in Russia. Through Saber Interactive, Embracer Group remains in the country. During the year, G5 Entertainment has significantly reduced the number of employees in Russia and relocated them to other countries. G5 Entertainment has during the year significantly reduced the number of employees in the country

Employees in Swedish Game Companies Abroad



Revenue in Swedish Game Companies Abroad, M EUR



and relocated them to other countries. Both Embracer Group and G5 Entertainment have staff in Ukraine.

Together, Swedish-owned game companies employed almost 16,500 people in other countries in 2022. Of these, almost 12,000 of the employees worked for Embracer Group. Of the employees in Swedish-owned companies abroad in 2022, around 27% were women.

The current increase in number of studios and employees at home is largely driven by organic growth, while the increase abroad is largely acquisition-driven, although several of the individual studios abroad also increased in size.

Where in the world companies establish themselves depends largely on where there are game studios that have performed well in the past. In some cases, there are economic reasons for the establishment, for example Canada has generous tax rules for creative companies, and several other geographical regions attract economic incentives specifically aimed at foreign companies. To some extent, it may also be due to cultural links, such as employees or founders with a background in specific countries. An overwhelming majority of employees around the world are in countries with salary levels comparable to, or higher than, Sweden.


Aurora Arts – Fae & Fauna

Game Developer Map – Global

Swedish game companies are expanding rapidly through extensive acquisitions and investments abroad.

Below is a list of game studios around the world that are subsidiaries of Swedish game companies. Each ⌂ represents a corporate entity in the country.

NORTH AMERICA 1

Canada
Embracer Group
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
⌂⌂⌂⌂⌂⌂⌂⌂⌂
Enad Global 7 ⌂⌂⌂⌂⌂
Stillfront Group

USA
Avalanche Studios Group
Embracer Group
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
Enad Global 7 ⌂⌂⌂⌂
G5 Entertainment
Goodbye Kansas Group
Lurkit
Maximum Entertainment ⌂⌂
MTG
Paradox ⌂⌂
Resolution Games
Starbreeze ⌂⌂
Stillfront Group
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂

Remote
MTG

SOUTH AMERICA 2

Argentina
Embracer Group

Brazil
Embracer Group
Maximum Entertainment

British Virgin Islands
Stillfront Group

Chile
Embracer Group ⌂⌂

Peru
Embracer Group

Uruguay
Embracer Group

EUROPE 3

Austria
Embracer Group ⌂⌂⌂⌂⌂⌂

Belarus
Embracer Group ⌂⌂

Belgium
Embracer Group ⌂⌂⌂⌂⌂

Bosnia and Herzegovina
Embracer Group ⌂⌂

Bulgaria
Embracer Group ⌂⌂
G5 Entertainment
Stillfront Group

Croatia
Stillfront Group

Cyprus
Embracer Group ⌂⌂
G5 Entertainment
Qiiwi Games

Czech Republic
Embracer Group ⌂⌂⌂⌂

Denmark
Adventure Box Group
Embracer Group ⌂⌂⌂⌂⌂⌂⌂⌂

Estonia
Embracer Group

Finland
Embracer Group ⌂⌂
Goodbye Kansas Group
Paradox

France
Embracer Group
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
Fragbite Group
Maximum Entertainment
Paradox

Germany
Embracer Group,
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
Enad Global 7
Jumpgate ⌂⌂⌂⌂
MTG
Snowprint
Stillfront Group ⌂⌂⌂⌂⌂
Thunderful Group
Wicket Gaming ⌂⌂⌂⌂

Hungary
Embracer Group ⌂⌂⌂⌂
Maximum Entertainment

Ireland
Maximum Entertainment
Stillfront Group

Italy
Embracer Group ⌂⌂⌂⌂⌂

Lithuania
Goodbye Kansas Group

Malta
Embracer Group
G5 Entertainment
Stillfront Group ⌂⌂⌂⌂⌂

Montenegro
G5 Entertainment

Netherlands
Embracer Group
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
Fragbite Group
Paradox

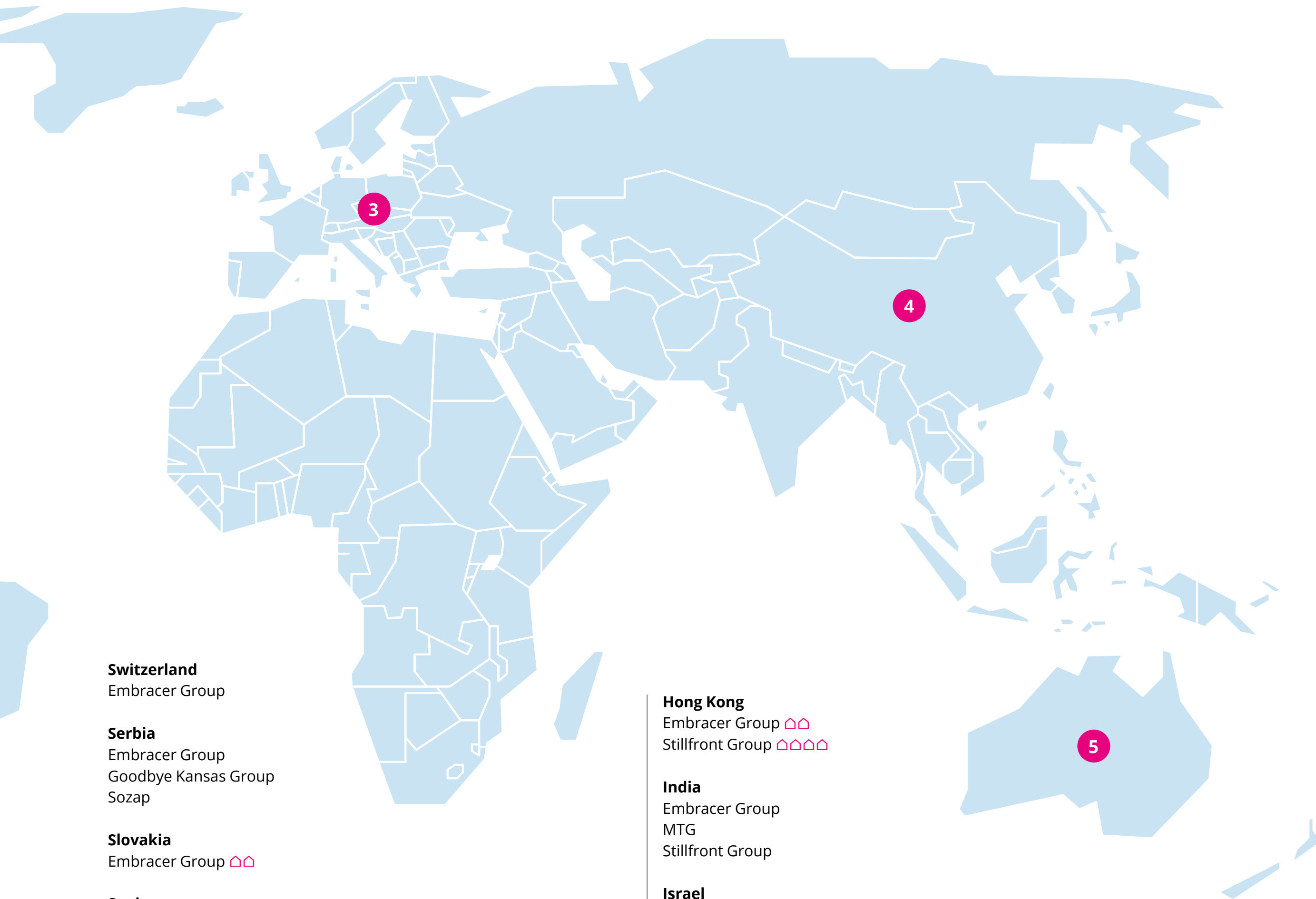
Norway
Embracer Group ⌂⌂⌂⌂
Enad Global 7

Poland
Embracer Group ⌂⌂⌂⌂⌂

Portugal
Embracer Group
Stillfront Group

Romania
Embracer Group ⌂⌂
Maximum Entertainment
Stillfront Group

Russia
G5 Entertainment ⌂⌂



Switzerland
Embracer Group

Serbia
Embracer Group
Goodbye Kansas Group
Sozap

Slovakia
Embracer Group ⌂⌂

Spain
Embracer Group ⌂⌂⌂⌂⌂⌂
Paradox
Starbreeze
Thunderful Group

United Kingdom
Avalanche Studios Group
Embracer Group
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂
⌂⌂⌂
Enad Global 7 ⌂⌂
Goodbye Kansas Group
MAG Interactive
Maximum Entertainment ⌂⌂
MTG ⌂⌂
Qiiwi Games ⌂⌂
Sharkmob
Starbreeze ⌂⌂
Stillfront Group
Thunderful Group ⌂⌂⌂⌂⌂

Ukraine
Embracer Group

G5 Entertainment
Stillfront Group

Remote
Aurora Punks

ASIA 4

Armenia
Embracer Group
G5 Entertainment

Bangladesh
Stillfront Group

China
Embracer Group ⌂⌂⌂⌂⌂⌂
Goodbye Kansas Group
Stillfront Group ⌂⌂

Georgia
G5 Entertainment

Hong Kong
Embracer Group ⌂⌂
Stillfront Group ⌂⌂⌂⌂

India
Embracer Group
MTG
Stillfront Group

Israel
Embracer Group
⌂⌂⌂⌂⌂⌂⌂⌂⌂⌂

Japan
Embracer Group ⌂⌂⌂
Stillfront Group ⌂⌂⌂

Jordan
Stillfront Group

Kazakhstan
G5 Entertainment

Korea
Embracer Group

Pakistan
Darson Tech

Philippines
Goodbye Kansas Group

Russia
Embracer Group ⌂⌂⌂⌂

Singapore
Embracer Group
Stillfront Group ⌂⌂

Taiwan
Embracer Group
Stillfront Group

United Arab Emirates
Stillfront Group ⌂⌂⌂

Vietnam
Stillfront Group

OCEANIA 5

Australia
Embracer Group ⌂⌂⌂
Stillfront Group ⌂⌂

New Zealand
MTG

Acquisitions and Investments

No deal beats the Microsoft $69 billion deal to acquire Activision Blizzard King in October 2023. On the Swedish market major investments and acquisitions in 2022 decreased in number but maintained their scale.

The most prominent in the list of Swedish investments is again Embracer Group, which made about half of the major Swedish investments in 2022, including full acquisitions in Sweden, the US, Canada, Japan, Germany, the UK, France and Denmark. Among other things, the group acquired the French card, board and role-playing game company Asmodee for EUR 3.1 billion and the combined companies Square Enix Montréal, Square Enix Holdings and Crystal Dynamics as well as a number of well-known IPs for a total purchase price of EUR 300 million.

In June 2022, Embracer Group raised around one billion EUR after issuing 100 million shares to Saudi Savvy Gaming Group. Earlier the same year, the Saudi group acquired e-sports company ESL Gaming and FACEIT from Swedish MTG for EUR 1 billion.

Stillfront also made a major acquisition in 2022 with the purchase of Japanese social games publisher 6waves for about EUR 200 million.

Among the, comparatively smaller, deals in 2022 can be noted Wicket Gaming's acquisition of German Wegesrand Group, Resolution Games' acquisition of the studio Zenz VR and Enad Global 7's acquisition of Canadian Big Blue Bubble. In 2023, Visby-based Jumpgate acquired the German developer Nukklear, which among other things works on FunCom's *Dune* games, and during the year Maximum Entertainments acquired the renowned Romanian company FUN Labs.

In the majority of the deals listed below, a Swedish company is the buyer. On the international side, South Korean *PUBG* publisher Krafton has acquired Uppsala-based Neon Giant. Canadian Spin Master, which also owns Toca Boca, acquired Skövde-based Nørdlight Games in 2022. In May 2023, Paradox Interactive sold its shares in Seattle-based Hardsuit Labs to Irish listed company Keywords Studios. In October 2023, Microsoft closed its $69 billion deal to acquire Activision Blizzard King.

Many investments and acquisitions in the game industry are made through large groups and large international companies. But there are also deals through publishers, individual investors, funds and smaller investment companies. The list below is based on publicly available information, which does not always include information on the purchase price of the transaction, and thus usually comes from listed companies that have higher standards of financial transparency. The list is far from being exhaustive and should be seen as a selection of major deals in the past year.

Dimfrost Studio – Bramble: The Mountain King

Acquisitions and Investments 2022

Seller	Country	Buyer/Investor	Country
A Creative Endeavor AB	Sweden	Embracer Group	Sweden
Big Blue Bubble, Inc.	Canada	Enad Global 7	Sweden
Crystal Dynamics (Square Enix)	Japan / Canada	Embracer Group	Sweden
Dark Horse Media LLC	USA	Embracer Group	Sweden
Eidos-Montreal (Square Enix)	Japan / Canada	Embracer Group	Sweden
Embracer Group	Sweden	Savvy Gaming Group	Saudi Arabia
Innova (Enad Global 7)	Sweden	Innova Intellectual Properties S.à r.l.	Russia
ESL Gaming (MTG AB)	Sweden	Savvy Gaming Group	Saudi Arabia
Financière Amuse TopCo (Asmondee)	France	Embracer Group	Sweden
Funatics GmbH	Germany	Jumpgate AB	Sweden
GoodBetterBest Lmt.	United Kingdom	Embracer Group	Sweden
Invisible Walls ApS	Denmark	Embracer Group	Sweden
Jumpship Ltd	United Kingdom	Thunderful Group	Sweden
Limited Run Games	USA	Embracer Group	Sweden
Lucky Kat B.V.	Netherlands	Fragbite Group	Sweden
Mane6	USA	Zordix	Sweden
Metricminds GmbH	Germany	Embracer Group	Sweden
Middle-earth Enterprises	USA	Embracer Group	Sweden
Multiverse ApS	Denmark	Adventure Box Technologies	Sweden
Neon Giant	Sweden	Krafton	South Korea
Nørdlight Games AB	Sweden	Spin Master	Canada
Perfect World Entertainment	USA	Embracer Group	Sweden
Singtrix	USA	Embracer Group	Sweden
Six Waves Inc.	Japan	Stillfront Group	Sweden
Square Enix Holdings	Japan / Canada	Embracer Group	Sweden
Square Enix Montreal (Square Enix)	Japan / Canada	Embracer Group	Sweden
Tripwire Interactive	USA	Embracer Group	Sweden
Turborilla	Sweden	Mind Detonator	Sweden
Tuxedo Labs	Sweden	Embracer Group	Sweden
Wegesrand Group	Germany	Wicket Gaming AB	Sweden
Zenz VR	Sweden	Resolution Games	Sweden

World Market

Our estimate based on download data is that at least one in four people in the world have played a game created in Sweden.

Chromatic Ink – Dice Gambit

7 billion downloads of games made in Sweden across the world

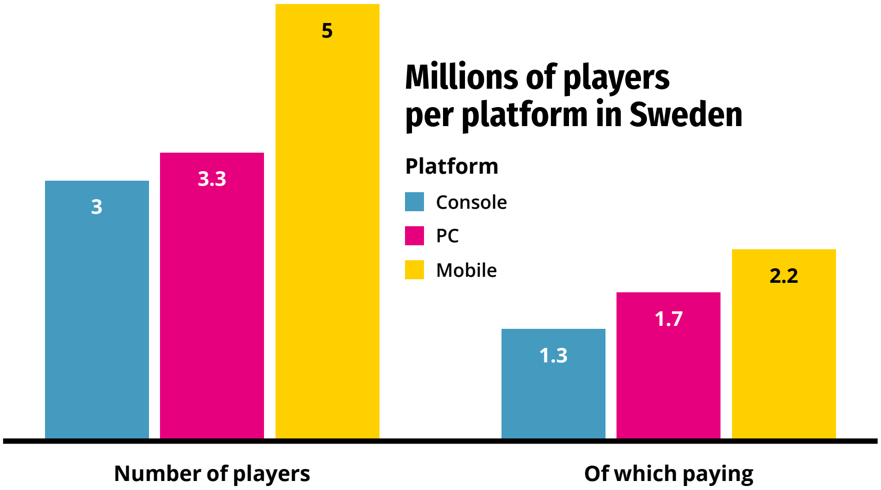
In total, Swedish-developed games have been downloaded nearly seven billion times, and major Swedish games regularly top the download and sales charts.

Video games are a constantly and steadily growing market worldwide. As living standards and personal finances increase, so does the demand for relaxation and entertainment, not least in the form of games. Today, more than three billion people play some form of digital game, a figure that has increased year after year.

According to research firm Newzoo*, the total number of gamers in the world increased by 6.3% to 3,381 million people in 2023 and the global world market is estimated to be worth USD 187.7 billion, around SEK 2 trillion. By 2026, the world market is expected to increase in value to USD 212.4 billion.

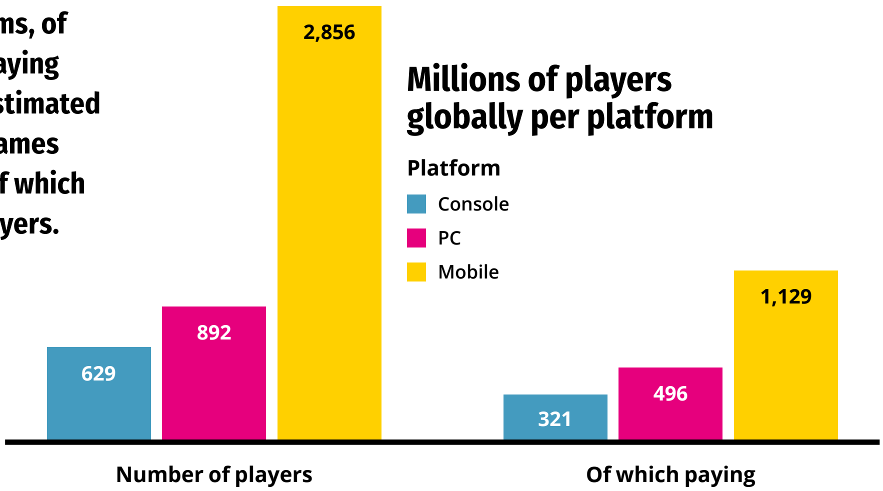
The Swedish consumer market is relatively small in size, but high in purchasing power. In 2023 it is estimated to be worth USD 803 million and grow to USD 962 million in 2026. The average revenue per user (ARPU) for Sweden is USD 198.3 compared to USD 127.1 globally.

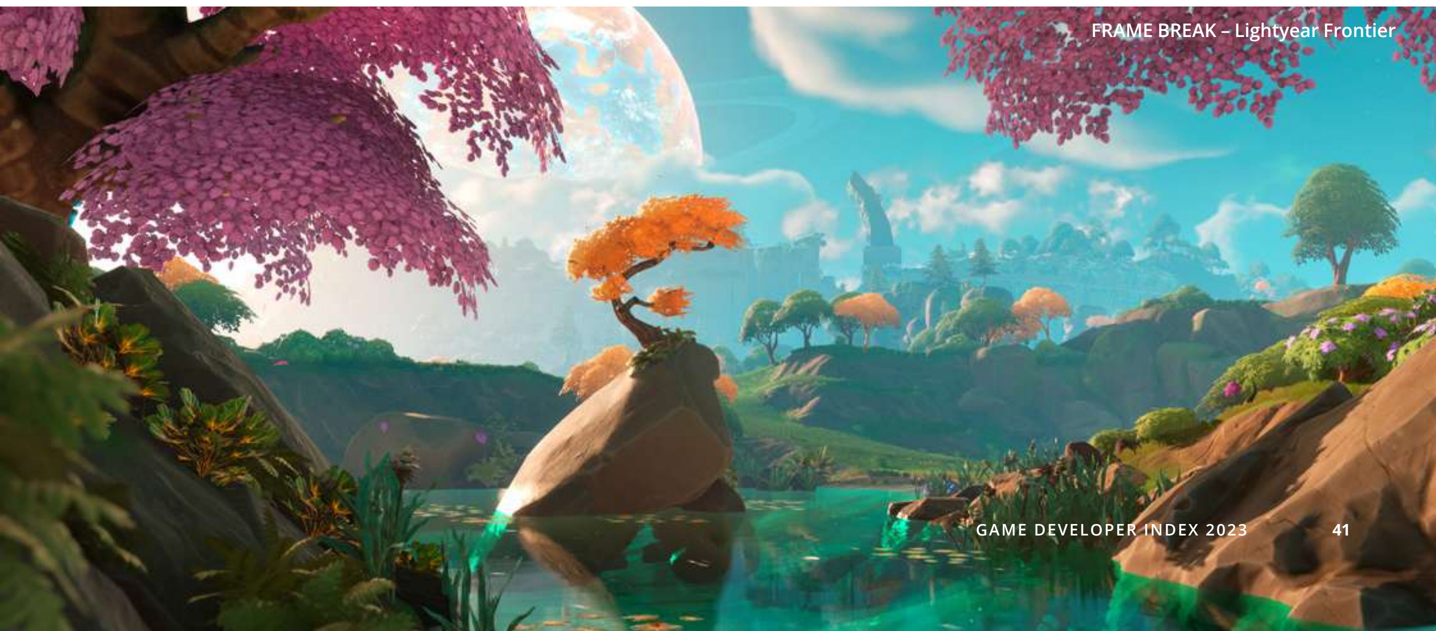
**Source: Newzoo's Global Games Market Report*



Globally, **3,381** million people play on different platforms, of which **1,477** million are paying players. In Sweden, an estimated **6.7** million people play games on different platforms, of which **4.1** million are paying players.

Source: Newzoo





Iron Gate – Valheim
(from trailer by Brikk)

PEGI 20 Years

The European standard for age labelling of video games, Pan European Game Information (PEGI), celebrated its 20th anniversary 2023. It was founded in the spring of 2003 by ISFE (now Video Games Europe) under the sanction of the European Commission. Over the years, PEGI has played an important role in consumer guidance by, among other things, helping parents to make informed decisions about their children's playing and thus create safer digital experiences. Within the framework of PEGI, there are both age categories and content labelling. Sweden is represented by the Swedish Media Council in PEGI.

Record Year for E-sports

E-sports as entertainment has continued its growth trend and shows no signs of slowing down, with around 532 million viewers worldwide in 2022 and a revenue of around EUR 1.5 billion. The market is expected to grow to around 650 million viewers and almost EUR 2 billion in revenue by 2025, according to analysts at Statista. At home, the Swedish E-sports Association was voted into the Swedish Sports Confederation in May 2023. E-sports are based on big game successes that are primarily played by, and entertain, millions more regular players, which remains the most important target group for game developers. The League of Legends *LEC Summer Finals* were held in Malmö in September 2022 in front of a packed Malmö Arena and the city estimates that the event generated a tourism revenue of EUR 5 million.

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Game Developer Educations

Training to become a game developer can be done in different ways. Some are completely self-taught and some start developing games at secondary school. However, the vast majority have gone on to further education in the subject or related subjects – often through a post-secondary programme in art, programming or game design at one of the country's universities.

Many colleges and universities around the country have made a name for themselves by investing heavily in game education, where students from different programmes usually collaborate in an interdisciplinary way to develop games together.

For more than 20 years, the **University of Skövde** has offered a wide range of game development programmes. Over the past five years, the programmes have received around 15,000 applications. The students are currently divided into eight bachelor's programmes and four advanced level programmes. Programmes include programming, design, animation, 3D graphics, 2D graphics, game writing, sound and music. At advanced level, three master's programmes and one master's programme are offered, all in English and open to international students. Master's programmes are available in *Games User Experience*, *Serious Games* and *Digital Narration: Game and Cultural Heritage*. The two-year master's programme offered is in Game Development with *Games User Experience* (GUX) and *Serious Games* (SG) as optional specialisations.

Blekinge Institute of Technology (BTH) has had game programmes since 2004 in Karlshamn. At the undergraduate level, the programme *Design of Digital and Immersive Experiences* is offered and they also have related programmes such as *Design of Digital Experiences for Learning*, *Digital Sound Production*, and *Digital Visual Production* which all teach techniques that are applicable in games. They also offer a Master's degree programme – *Master of Engineering in Game Technology*. In autumn 2023, the *Bachelor of Engineering in Technical Game Graphics* was launched. The game programmes at BTH cooperate closely with **Blekinge Business Incubator** and its game component Gameport, which has existed since 2003.

Chalmers University of Technology offers a master's programme (MSc) in *Interaction Design and Technologies*, where students can choose to profile themselves in areas such as games. Chalmers also conducts research on topics such as interaction design, game design, AI for music and graphics, VR and the use of IT in vehicles. The researchers in these areas are also lecturers in the Master's Programme in *Interaction Design*.

At its Campus Gotland in Visby, **Uppsala University** runs four undergraduate game programmes and two graduate programmes. All programmes focus on game design and offer a Bachelor's degree in *Game Design*, or alternatively *Game Design and Project Management*, *Game Design and Graphics* or *Game Design and Programming*. At advanced level, there are one- and two-year Master's programmes in *Game Design*.

Futuregames offers game programming education in Stockholm, Skellefteå, Boden and Malmö. In Skellefteå and Karlstad there are also programmes focusing on programming for mobile platforms. The programme *Game Artist* is offered in Boden, Skellefteå, Malmö and

FunRock & Prey Studios –
MMA Manager 2: Ultimate Fight

Karlstad. Two programmes are offered in game design, one in Boden and a specialisation programme in Stockholm. The *Project Manager IT & Games* and *Game & UX Designer* programmes are also offered in Skellefteå. The programmes *Immersive Experience Creator* in Stockholm and *QA/Game Tester* in Boden, as well as *Animator and VFX Artist* in both Stockholm and Boden are also offered.

The Game Assembly (TGA) has three main game development programmes in Stockholm and Malmö – *Game Programming Level Designer* and *Game Art* – which together create game projects during the course. In Malmö, the *Technical Artist* and *Game Animator* programmes are also available. In 2023, a new programme started in Stockholm, *Procedural Artist*. All programmes are offered in Swedish and in close collaboration with the local industry. The school also runs a short distance education programme, *Linear algebra for artists*.

PlaygroundSquad (PSQ) has run game development programmes since 2000 and currently offers three different programmes in Falun – *Game Programmer*, *Game Artist* and *Game Designer*. PSQ is also part of a collaboration with Sony through *PlayStation First*, which allows students to develop the majority of their game projects exclusively for Sony hardware and providing a unique specialised skill set.

In Stockholm, **Forsbergs Skola** organises the programme *Game Programming.* From autumn 2023, **Nackademin** offers a course in graphics, *Technical 3D artist in games* in Solna.

The City of Gothenburg provides trough **Yrgo** a programme in programming, *Game Creator Programmer*, and a programme in graphics, *Game Creator Artist*. Game students from Yrgo won the prize for best game at the 2023 *Swedish Game Awards*.

Several folk high schools offer courses in games at both upper secondary and post-secondary level. **Hola Folkhögskola** in Kramfors offers a two-year post-secondary programme in *Indie Game Development* and the one-year *Game Audio Design* course. The school also runs a basic summer course, *Summercamp Game Development*, in cooperation with **FCV Sweden**. Almost all participants were motivated to continue their studies or employment immediately after the programme, and among former participants all remained in studies or employment after one year. In 2023, *Summercamp* was carried out in Boden and Kramfors and all participants who completed the programme went on to study or employment.

In Luleå, **Sunderby Folkhögskola** offers a two-year post-secondary course, *Indie Game Developer*, which is located in Luleå and Boden. There is also a general course at high school level, *Gamemaker*.

Ädelfors Folkhögskola in Holsbybrunn offers an upper secondary course in *Computer Game Development* and a post-secondary course, *Indie Game Studio*, which focuses on game development and programming.

Valla Folkhögskola in Linköping, in collaboration with the *East Sweden Game*, offers a course in game development at post-secondary level, *Valla Game Education*.

Östra Grevie Folkhögskola outside Skurup offers a post-secondary course, *Virtual Composer and Sound Designer*, with a focus on games, film and television.

Kristinehamn Folkhögskola in Värmland, together with the game hub *The Great Journey*, offers the course *Indie Game Developer* at post-secondary level in Kristinehamn and Karlstad.

Bona Folkhögskola in Motala, in collaboration with the organisation *Female Legends*, offers a one-year remote general course titled *Digital Games and Community Management*.

Framnäs Folkhögskola in Öjebyn and **Solviks Folkhögskola** in Kåge are linked to the *Arctic Game* cluster and offer courses in game development, VFX and game sound.

In 2020, **Spelkollektivet** started its game education *The Indie Quest* together with Tingsryd Municipality, where courses in programming, art and business development at upper secondary level are offered. The course is free, CSN-eligible and is held in English for both Swedish and international students.

Some upper secondary schools are profiled in game development. For example, **LBS Kreativa Gymnasiet**, whose students won the *Swedish Game Awards* in 2018 and 2019. LBS conducts upper secondary education in game development at 17 different schools across half the country.

In Boden, the upper secondary education *GameDev Programme* is located at **Björknäsgymnasiet**, which is an aesthetic program with a focus on game development. The programme is run in close cooperation with Boden Game Camp and also has a national intake.

A longer review of games programmes in folk high schools and upper secondary schools can be found in the report *Talent, Education and the Art of Making Games* (2023).

Higher Game Educations

Longer CSN-eligible game education at post-secondary level commencing in autumn 2023.

NORRBOTTEN 1

Boden

Changemaker Educations AB
Futuregames Game Programmer
Futuregames QA / Game Tester
Futuregames Game Designer

Sunderby folkhögskola
Indie Game Developer

Luleå

Luleå University of Technology
Civilingenjör Datateknik, inriktning interaktiva system

VÄSTERBOTTEN 2

Skellefteå

Luleå University of Technology
Bachelor's Programme in Computer Graphics for Games and Film

Changemaker Educations AB
Futuregames Game & UX Designer
Futuregames Game Programmer

Visual Magic
VFX-artist: 3D-visualisering och digital compositing

VÄSTERNORRLAND 3

Kramfors

Hola folkhögskola
Indiespelutveckling

DALARNA 4

Falun

Tension Education AB
Playgroundsquad, Game Designer
Playgroundsquad, Game Artist
Playgroundsquad, Game Programmer

VÄRMLAND 5

Karlstad

Changemaker Educations AB
Futuregames Game Artist

Kristinehamns folkhögskola
Indiespelutvecklare

REGION STOCKHOLM 6

Huddinge

Södertörn University
Spelprogrammet – inriktning speldesign och scripting
Spelprogrammet – inriktning grafik

Stockholm

Stockholm University
Bachelor's Programme in Computer Game Development

Changemaker Educations AB
Futuregames Game Programmer
Futuregames Immersive Experience Creator

Forsbergs Skola
Forsbergs, Game Programming

TGA Utbildning AB
Spelprogrammerare
Leveldesigner
Spelgrafiker
Procedural Artist

Audio Production Academy
Game Audio Producent & Sound Designer

Botkyrka

Botkyrka kommun / Xenter Botkyrka
VFX-artist

Solna

Nackademin
Teknisk 3D-artist inom spel
Virtual reality-utvecklare

ÖSTERGÖTLAND 7

Linköping

Linköping University
Bachelor's Programme in Computer Game Development
Master of Science in Computer Science and Software Engineering

Valla folkhögskola
Valla Game Education

VÄSTRA GÖTALAND 8

Gothenburg

Chalmers University of Technology
Interaction Design and Technologies, Msc Programme

University of Gothenburg
Game Design & Technology Master's Programme

Gothenburg Municipality, Yrgo
Game Creator Programmer
Game Creator Artist

Skövde

University of Skövde
Digital Narration: Game and Cultural Heritage – Master's Programme
Games User Experience – Master's Programme
Serious Games – Master's Programme
Game Development – Master's Programme
Dataspelsutveckling – 2D-grafik
Dataspelsutveckling – 3D-grafik
Dataspelsutveckling – animation
Dataspelsutveckling – Game Writing
Dataspelsutveckling – ljud
Dataspelsutveckling – musik
Dataspelsutveckling – design
Dataspelsutveckling – programmering
Bachelor's Programme in Game Design and Project Management
Bachelor's Programme in Game Design and Graphics
Bachelor's Programme in Game Design
Master's Programme in Game Design (1 year)
Master's Programme in Game Design (2 years)

REGION JÖNKÖPING 9

Jönköping

Ädelfors folkhögskola
Indie Game Studio

GOTLAND 10

Visby

Uppsala University
Bachelor's Programme in Game Design and Programming

BLEKINGE 11

Karlshamn

Blekinge Institute of Technology
Design av digitala och immersiva upplevelser

Karlskrona

Blekinge Institute of Technology
Civilingenjör i spelteknik
Högskoleingenjör i teknisk spelgrafik

SKÅNE 12

Vellinge

Östra Grevie Folkhögskola
Virtuell kompositör och ljuddesigner

Malmö

Malmö University
Spelutveckling

The Game Assembly
Spelanimatör
Spelprogrammerare
Technical Artist
Leveldesigner
Spelgrafiker

Changemaker Educations AB
Game Artist
Game Programmer

VARIOUS LOCATIONS

Changemaker Educations AB
Futuregames Animator and VFX Artist

Embark – The Finals

Entrepreneurship and National Collaborations

Strong ecosystems, clusters and local communities are essential for growth in the game industry, especially outside the capital. This is evident in the data on where new companies are establishing themselves, where jobs are being created and where new game successes are born.

Kavalri Games – Equestrian the Game

There are three key components to a successful ecosystem. The first is a base of a few successful game companies that have established themselves in the city. The second is a game education programme that can provide both talent and new businesses. The third is a couple of enthusiasts who want to build a local community and are supported by a publicly funded independent organisation. Around the country, the ecosystems look different. In Skövde, the base is the municipality's Science Park. In Malmö, a non-profit organisation. In Linköping it is a municipal real estate company.

Not all companies in a town are active in the ecosystems and there may be different incentives for different companies to get involved. But companies coming together in the same place and building something on site is favourable both in terms of attracting investment from global players and creating a safety net in times of uncertainty. A very large part of the industry's underlying growth comes from start-ups. Some are started directly after training, others by experienced game makers who want to test their own ideas on the market.

At present, there are no reliable formal structures for start-ups in the sector. Many other European countries offer support for developing new game ideas into playable prototypes, deductions for labour costs and generous incentives within the framework of various innovation programmes. Several Swedish game companies have set up development offices in these countries. In Sweden, there is no financial support or deductions for game development.

EXPERT VOICE BJÖRN FLINTBERG

Researcher, RISE

"The game hubs are an important part of the ecosystem and act as greenhouses that can provide game entrepreneurs with the right soil"

Hi Björn, you are a researcher at RISE – can you tell us about entrepreneurial ecosystems?

The research talks about entrepreneurial ecosystems that arise when a geographical environment has a mix of actors, networks and conditions for new companies to be formed, grow and thrive over time. It is the relationships and interactions in the networks between these actors that make the ecosystem work and not just individual companies that are the engine of growth.

Ecosystems need three main components: cultural factors (which help start-up entrepreneurs to invest in their business), social factors (such as networks, access to skills and mentoring) and physical factors (such as support actors, physical environments and local and regional policies that support the industry).

How do ecosystems work in the game industry?

Within an ecosystem, it is not uncommon for certain actors to act as coordinators or bridge builders. They form a link between different actors such as education providers, research, local decision makers and can provide physical spaces to help networks emerge or be a link to or part of an incubator activity.

In Sweden, that role has come to be assumed by the regional game hubs. The game hubs are an important part of the ecosystem and act as greenhouses that can provide game entrepreneurs with the right soil, the right access to water and sunlight. This means that more companies can be created when developers dare to invest, and that there are networks and a culture that also helps them on the way to find staff, investments and provide them with knowledge. They are a link between incubators, investors, marketing initiatives and local decision-makers and often become important drivers for the industry as a whole in a geographical area.

What about other industries?

No industry can survive without support actors, and for traditional industries such as the automotive and food industries, it is obvious to have structures in place. Exactly how the game hubs have affected the Swedish game industry has not yet been clarified in the research, but many entrepreneurs and companies testify that they have played a major role for growth.

Paradox Arc – Mechabellum

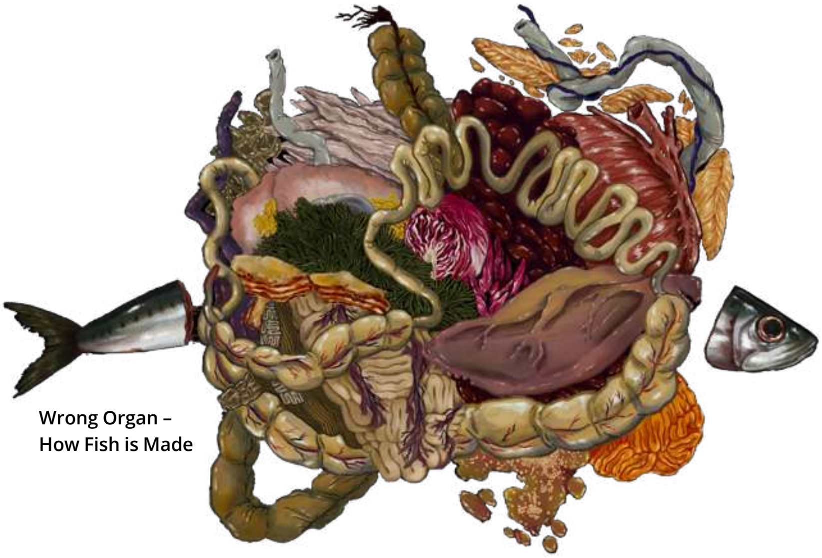
Key Events in Swedish Game Hubs

Arctic Game is a game cluster with a common platform for the development of new game studios, establishment, education, meeting places and investments in Norrbotten and Västerbotten. In 2017, the region's first game incubator, Boden Game Camp, was launched and today supports 15 local studios. Every year, the cultural event Nordsken is organised and the game conference Arctic Game Week, which, after a break during the pandemic, returned in spring 2022 for its 10th anniversary.

East Sweden Game is a community and incubator for game developers in Östergötland. They offer, among other things, office space, coworking and counselling. Their premises in Linköping cover over 400 square metres and in 2022 a second office was opened in the neighbouring city of Norrköping. East Sweden Game was initiated by the municipal property company Sankt Kors in Linköping and is run by Norrköping Science Park in Norrköping. Two successful studios that have emerged in the community are Pugstorm in Linköping, which launched the hit game *Core Keeper* on Early Access in 2022, selling a million copies in just a few months, and Dimfrost Studio in Norrköping, which released the critically acclaimed *Bramble: The Mountain King* in April 2023.

Spelkollektivet is an ambitious project involving collective living, education, game development, publishing and events, all started without external funding in the middle of the countryside. Preparations to launch the collective began back in 2016 with the Castle Game Jam, which aimed to create a network of game developers from around the world. Less than a week after the project was announced, the collective was fully booked for the next two years. In 2018, the organisation moved to new larger premises with around fifty bedrooms in Väckelsång in Småland. In 2022, the first publishing agreement was signed, and in 2023, eight games were in development by different teams with Spelkollektivet as publisher. Only about 20% of the residents on Spelkollektivet are from Sweden, and more than 25 different nationalities are represented in the community. In 2022, Spelkollektivet reported its first positive result since its founding in 2017.

Over the past year, **Uppsala University's Campus Gotland** in Visby has invested in building a viable community for game developers in collaboration with the local game industry and private actors, with the aim of eventually promoting entrepreneurship, research and commercial game development through coordinated business development. Campus Gotland also hosts one of Sweden's oldest game conferences, the Gotland Game Conference, with over forty student projects and a jury of around thirty industry experts who test, give feedback and judge the games. On the last day of the conference, a prestigious awards ceremony is organised where the jury's choice for best game in different categories is announced. A highlight every year is the first-year students' arcade game projects with unique and creative solutions to physical input with self-built levers, buttons, sensors, cameras and other technical solutions that enhance the digital experience. The arcade games have been nominated several times for the Swedish Game Awards, Tokyo Game Show and Alt.Ctrl.GDC, an expo for alternative game controllers in San Francisco.



Wrong Organ –
How Fish is Made

The Great Journey is the heart of the Värmland game industry since 2016. The hub is based in Karlstad, where a number of game companies have been started and gathered to take part in activities, meetups, game jams, counselling and business development with a focus on sustainability, inclusion and leadership. Between 2023 and 2026, The Great Journey runs the EU project Gamechanger with the aim of building a strong ecosystem for game developers. Members are offered, among other things, an accelerator programme with business development support to help them start game companies. In addition to the established game education programmes in the region, The Great Journey also organises its own Fasttrack programme, which gives developers the opportunity to work on their game projects for nine months with CSN support. One of the highlights of the year is the annual Great Summer Pitch, where local teams compete for the best business pitch with the chance to win SEK 100,000 to fund their future game development.

Science Park Skövde has since 2004 successfully managed incubator activities for game companies in Skövde and since 2016 also in Gothenburg. Over the years, the game incubator has given birth to hundreds of companies and is also the base for the innovation arena Sweden Game Arena, which offers a unique environment for game companies and brings together education, research and entrepreneurship, with the goal of creating a thriving game industry. Coffee Stain Studios, Stunlock Studios, Iron Gate, Flamebait, Pieces Interactive, Redbeet Interactive and Ludosity are just a few of the successful game companies that are part of Sweden Game Arena's community. As a further effort to strengthen the Swedish computer game industry, Science Park Skövde, together with the University of Skövde, RISE and Lindholmen Science Park, has initiated two projects: *Level Up Regional Game Industry* and *Level Up Swedish Game Industry*. Through the Level Up initiative, the Swedish game industry will gather strength and "level up" the industry regionally and nationally, thus contributing to greater influence and more sustainable economic conditions for Swedish computer game companies. In 2022, Skövde Science Park launched the Interlink initiative together with Arctic Game, The Great Journey and The Game Habitat to support start-up game companies in their journey towards an international market. The project was partly financed by the Swedish Agency for Economic and Regional Growth.

Mid Sweden Games brings together and strengthens the ecosystem for game developers, companies, game education and the public sector in Västernorrland. The cluster organises monthly networking meetings for game companies and regular workshops with industry players that increase the companies' business competence and create exchanges between game developers and academia. In June 2023, a delegation of 12 game studios travelled to Helsinki to meet with successful Finnish game and technology companies. Member studio Atomic Elbow, which released its second commercial game *Sir Whoopass* in 2022, was one of the companies to be accepted by SpielFabrique's European accelerator programme for game companies (EVA). The region also runs High Coast Game Lab, a game village in Nordingrå in Kramfors municipality. There, about ten companies share space and develop their games with the support of various training programmes, investors and other game companies. Mid Sweden Games also participates in the interregional project Level Up, which has enabled the Sundsvall studio A Bit Ago to participate in Science Park Skövde's start-up programme, an example of strong mutual exchange between Swedish game clusters.

Gameport (Blekinge Business Incubator BBI) has focused efforts on the ERDF project Game Accelerate South Sweden (GASS), a collaboration between BBI/Gameport, Game Habitat, Ideon, Minc and Blekinge Institute of Technology. As part of the project, the Game Startup programme was launched, offering several game startups in Blekinge and Skåne knowledge in the form of lectures, workshops and mentoring. In 2022, Gameport received funding from Region Blekinge to establish Blekinge Spelkonsulent, a project with the goal of introducing game development to children and young people in the region through various practical activities. In May 2022, the Creative Coast Festival returned after a break during the pandemic, with speakers, a conference, workshops and the annual Game Concept Challenge competition. In spring 2023, the Creative Coast Festival was organised on an even larger scale. Gameport has also revitalised the local game jam scene Jamport, which had been forced to lay low during the pandemic.

Game Habitat in Malmö celebrated a grand 10th anniversary in the autumn of 2023, and DevHub celebrated its fifth year as an office hotel and coworking hub for Malmö's game developers. Since 2013, Game Habitat has worked for the growth and sustainability of the regional games industry through a wide range of projects, collaborations, conferences and events, including the EU-funded Game Accelerate South Sweden (GASS) project, which aims to establish a sustainable process and methodology for establishing more profitable and growing game companies in the region. The three-year project ended in the summer of 2023 and the work to develop an incubator-like programme for game companies in southern Sweden continues in collaboration with other actors in the regional innovation system. In autumn 2023, Game Habitat decided to put even more focus on its work for increased gender equality, diversity and inclusion. This includes working with regional game studios, universities and organisations to bring more underrepresented game developers into the labour market and into leadership positions – for example through targeted initiatives.

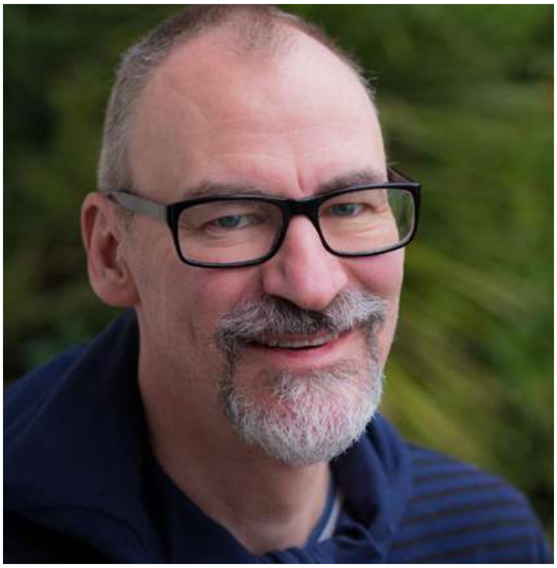
In spring 2023, Xbox Game Studios organised **Game Camp Sweden**, a 12-week developer programme filled with workshops and practical learning in game development. The programme was carried out in collaboration with the Swedish game companies Mojang, MachineGames and Simplygon. Game Camp is a travelling concept that has been held in South Korea and the USA in previous years.

BSG-Go! is an EU-funded project run through Interreg Baltic Sea Region with the aim of developing models and methods to create strong networks and increased conditions for young game developers and entrepreneurs in the Baltic Sea region for the long-term benefit of the participants' game industries. The project, which has so far been granted EUR 3.33 million, is run by various innovation actors in Sweden, Denmark, Finland, Germany, Poland, Estonia and Lithuania. In Sweden, Invest Stockholm, Arctic Game, East Sweden Game and Game Habitat are participating, with each actor responsible for different project packages that, after completion, will be made available to the industry to solve various needs or challenges in the industry.


Chromatic Ink – Dice Gambit

THE INDUSTRY VOICE TIM PONTING

Chief Executive, CODE New Zealand



"Money combined with support is much better than money, and the easiest path to sustainability is to avoid unsustainable decisions in the first place"

Hi Tim, you are Chief Executive at CODE NZ – can you tell us about CODE NZ?

The grandly named "New Zealand Centre of Digital Excellence" is an agency funded by the government to support the growth of a sustainable game development ecosystem in Aotearoa New Zealand.

What are some of the ways that CODE helps the national games industry grow?

We have three main pillars: grant funding for prototyping, production and studio growth acceleration to a point where the studios can attract external investment or publishing partnerships, but our secret sauce lies in the capability work we do – supporting teams with mentorship, workshops, masterclasses and so on – and our pathways work with education, especially uplifting underrepresented groups in the industry by employing and engaging directly with the communities.

Can you tell us about any examples of successful use cases from your work?

A good example would be Deep Field Games who recently announced a publishing deal for their game *Abiotic Factor*, but the thing that makes me most proud is the work where we take teams who have been unsuccessful in the initial applications but work with them to refine and develop their skills so they get funded in later rounds. Money combined with support is much better than money, and the easiest path to sustainability is to avoid unsustainable decisions in the first place.

CODE also works to create opportunities for Māori and Pacifica in game development, what do these efforts look like in practice?

Working in partnership means not going to a community with answers but questions that will draw them in to tell you what will work for them, not you. Employ indigenous people if you want to build a credible indigenous support programme. That's what we did. It builds their trust, and your own understanding and capability.

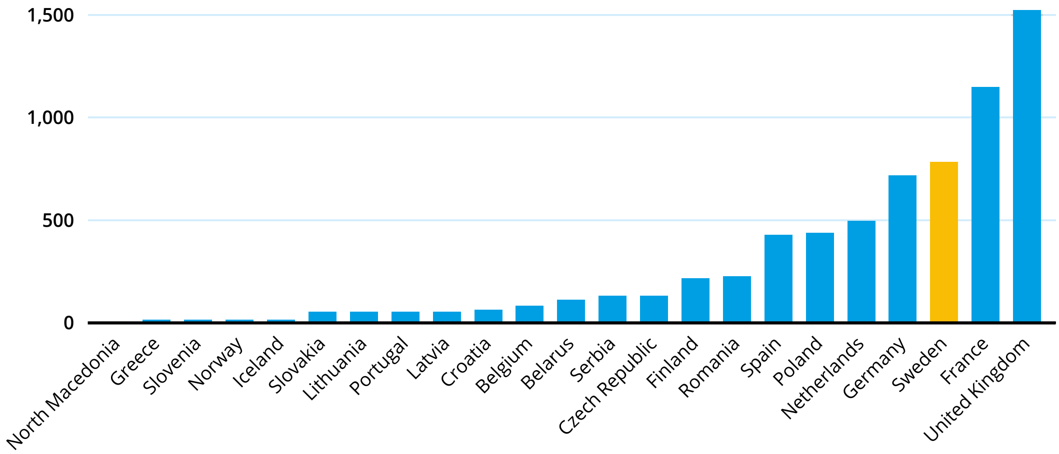
What can other countries who want to grow a healthy industry take away from these support systems that CODE offers?

Don't just give people money! Support is equally valuable. Also, remove the decision making from the grant management team and give it to external assessors so they can truly help teams without having to stay free from conflicts of interest.

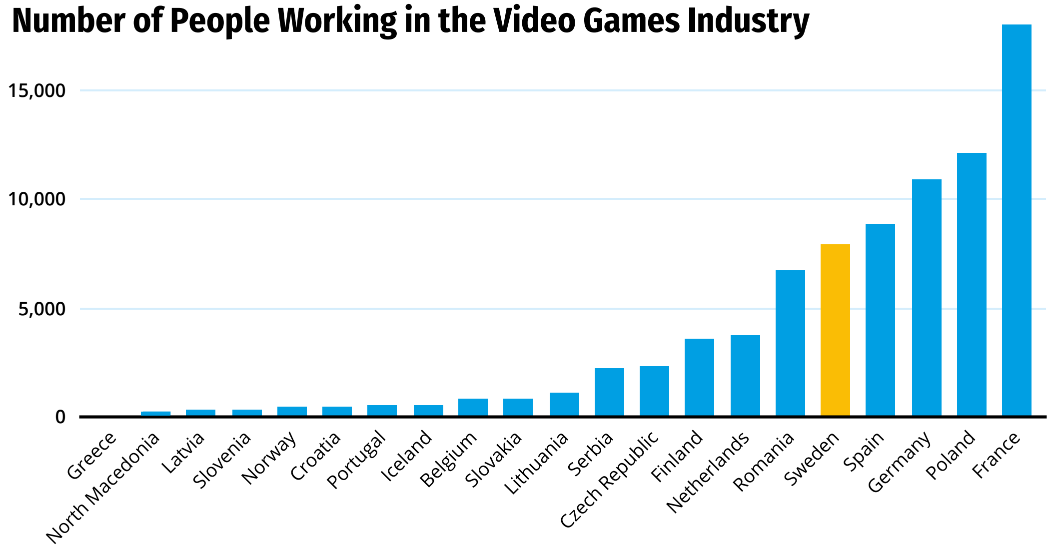
The European Games Industry

The European Game Developers Federation (EGDF) and Video Games Europe produce the annual *European Video Games Industry Insight Report*. The report published in 2023 is a compilation of the various countries' industry reports from 2021, with some reports based on surveys and some on data collected from official records.

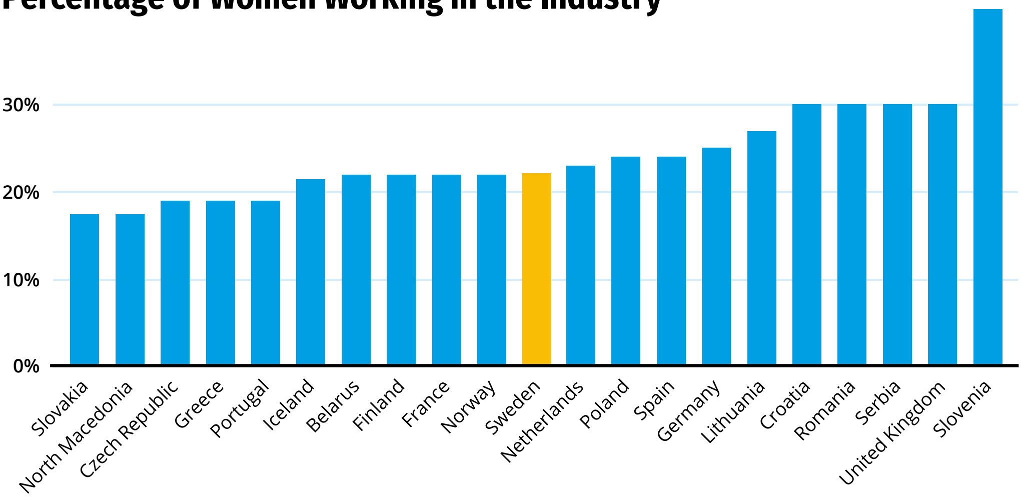
Number of Game Developer Studios



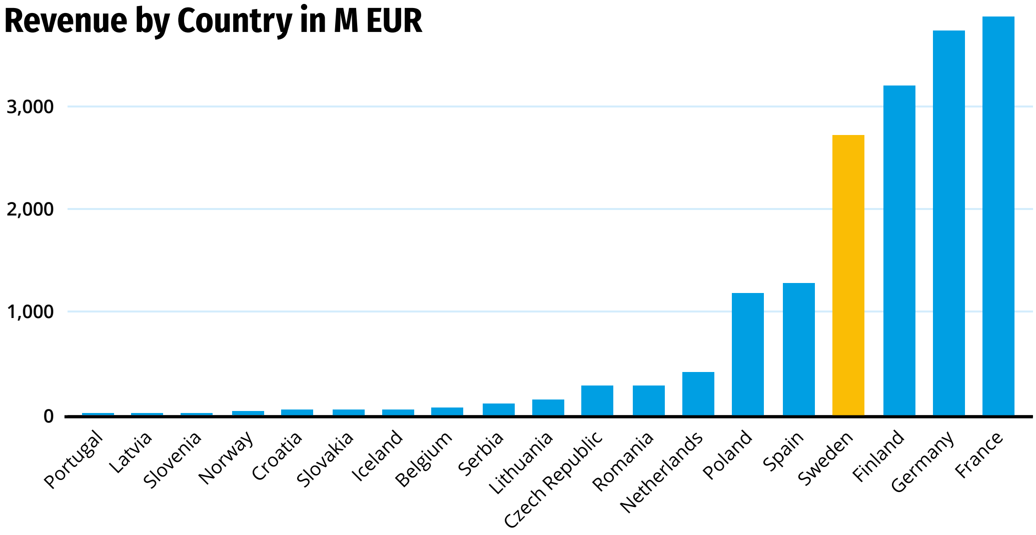
Number of People Working in the Video Games Industry



Percentage of Women Working in the Industry



Revenue by Country in M EUR



Data for number of employees and revenue are not available for the UK in 2021.

No Games on a Dead Planet

There are many industry initiatives to tackle the environmental challenges facing humanity. These include both reducing their own emissions and contributing to positive change in general.

Within a few years, the world is likely to pass the target of keeping global warming below 1.5 degrees centigrade. This implies a high risk of threshold effects that further increase warming as well as consequences for society that cannot yet be foreseen. This is a serious situation where industry approaches and initiatives can be part of the solution.

The ongoing shift to digital distribution leaves a lower carbon footprint than physical products. However, server operations and hardware still require resources, often beyond the control of game studios. The major Swedish game companies' emission calculations show that emissions referred to as *Scope 3** account for over 99% of the companies' emissions.

How *Scope 3* should be calculated for games is not entirely clear or simple, but some initiatives to clarify exist. The Finnish industry organisation Neogames has developed a calculation model to measure emissions in game development companies, and in France a major project is underway to develop an environmental impact calculator adapted for game studios. Here in Sweden, the Swedish Energy Agency granted funding in 2023 to the *GameOn* project, a collaboration between KTH and Uppsala University to investigate environmentally sustainable development paths for video games.

Less is More – Beyond One-on-One Basketball

EXPERT VOICE BJÖRN HEDIN

PhD at the Royal Institute of Technology KTH

"An interesting possibility is cloud gaming, where all the heavy computing and graphics is done on a central server"

Hi Björn, you are a PhD at KTH and research sustainability and energy, how is the planet doing?
One might say not so good. The use of energy and natural resources is at a clearly higher level than what is sustainable in the long run.

You are also working on the GameOn project, which received funding from the Swedish Energy Agency last spring, can you tell us a little about the project?
We will look at different aspects of video games from an energy and climate perspective. Through this, we hope to gain a better understanding of the different practices that exist for playing, and to be able to develop models of the energy and climate footprint for different forms of playing and related activities such as e-sports.

What are the main climate challenges and opportunities in the game industry?
Greenhouse gas emissions, energy and material consumption for computers, networks and servers is a major challenge. One interesting possibility is cloud gaming, where all heavy computing and graphics are done on a central server and the player only needs a thin client. This leads to less need to change hardware, and server halls can be located in places with good access to fossil-free energy.

What do you think the game industry could do more for the climate?
Get more people to play! Although games have their own sustainability challenges, video games are often much less climate-impacting than many other leisure activities.

***Greenhouse Gas Protocol**

The Greenhouse Gas Protocol (GHG Protocol) is an international public and private sector standard used to measure and report greenhouse gas emissions. Emissions are divided into three 'scopes', see below.

Scope 1

Direct emissions from own operations, for example from a company car.

Scope 2

Indirect emissions from purchased electricity, heating and cooling, such as energy consumption of computers and appliances in the office.

Scope 3

All other indirect emissions in a company's value chain that the company does not own itself. This applies both upstream, such as purchased computers, office supplies or employee travel, and downstream, such as energy consumption for servers and when games are downloaded and played. In the game industry, this scope is estimated to account for over 99% of emissions.

Overflow – Madshot

High Ambitions Among Swedish Game Companies

Several Swedish companies have taken concrete steps to collect data, set targets and reduce their emissions in 2022. For example, Embracer Group reports in its sustainability report that it has set group-wide sustainability targets, including reducing its *Scope 1* and *2* emissions by 45%. The operational groups will develop their own customised targets for their work during 2023-2024. To ensure that the emission reduction targets are in line with the Paris Agreement, Embracer Group has sent a commitment letter to *Science Based Targets initiative (SBTi)**.

Stillfront reports that they are committed to setting science-based targets for reducing emissions, also with the ambition to join the SBTi. They also plan to launch projects and partnerships to reduce emissions while playing their games. In 2022, they produced a handbook to provide their studios with strategic and practical guidance on sustainability in their daily operations.

Several companies are also developing games that inherently address sustainability challenges. Examples include Lutra Interactive's work on visualising ecosystems, Eat Create Sleep, who are developing a knowledge-enhancing game about restoring water ecosystems, and Gro Play, which is creating educational games for children with a sustainability theme. Other management games are also created on topics such as community building and resource management.

*Science Based Targets

Science Based Targets initative (SBTi) launched in 2015 in the context of the Paris Agreement. It is a collaborative project between several major stakeholders, such as CDP, WRI, WWF, We Mean Business and the UN Global Compact. An SBTi represents science-based targets that companies can set to reduce their greenhouse gas emissions. These targets are defined on the basis of research on what is required in each industry and business to collectively achieve the world's goal of a maximum temperature increase of 1.5 degrees. In order to have their SBTis approved, companies must set targets for all of *Scope 1* and *2*. If *Scope 3* emissions account for 40% or more of total emissions, as is the case for game developers, the organisation is also required to set a *Scope 3* goal.

Creative Game Innovations for a More Sustainable World

In the report *PowerUp Games Industry* (2023), RISE states that game creation drives development and innovation and provides added value as a catalyst for technological change and digitalisation in other industries such as manufacturing, health and education. This includes everything from visualisation and digital twins to communication and pedagogy.

Development and testing environments in VR have grown to become an important tool for many other industries where collaboration with game development companies has taken place. A concrete example is the game engine Unreal Engine, which has been used for everything from creating digital twins of mines to visualising large infrastructure projects such as the East Link. Virtual environments developed for game production have also been used in collaboration with other industries, contributing to faster technological development in the field. Life science, space technology, mining and textiles are all industries that have interacted with the game industry in various forms.

The great strength of the games industry lies in all the innovation and growth happening in the realm of intangible creation. A growing value shift from physical production to digital services can contribute to a long-term sustainable way forward for both the economy and the climate.

Wishfully – Planet of Lana

Dimfrost Studio – Bramble: The Mountain King

More Initiatives for Sustainability

There are several initiatives and collaborations within the industry both internationally and nationally to address sustainability challenges. A few examples:

Global — Playing for the Planet

The Playing for the Planet Alliance is a global initiative launched in 2019 during the UN Secretary-General's Climate Summit at the UN headquarters in New York. The Alliance consists of game companies, industry organisations and other industry actors who have made voluntary, ambitious, specific and time-based commitments to people and the planet. The Alliance's goal is to support companies in sharing learning and tracking progress on the environmental sustainability agenda.

playing4theplanet.org

Europe — Sustainability Nexus

Sustainability Nexus is a European initiative 2023 by SpielFabrique, a new hybrid conference based in Cologne and across Europe, serving as a dynamic international meeting place to come together and address challenges around environmental impact, social issues, inclusion and diversity. In 2023, two of the conference's physical meeting places will be in Sweden – one in Stockholm and one in Malmö.

spielfabrique.eu/Thunderfox/nexus

Nordics — Play Create Green

PlayCreateGreen is an initiative founded in October 2020 by several major Nordic game companies together with the Swedish Game Industry. The network supports efforts to create and spread knowledge about the environment and climate in the game industry, and provides practical guidance, examples and inspiration for activities related to positive climate impact.

playcreategreen.org

THE INDUSTRY VOICE EM PRIETO

Site Manager, Mind Detonator

"Everyone who lives here interacts and helps each other in an absolutely fantastic way"

Photo: David Wiksten

Hi Em, what is Game Village Jörn?

We are a place for aspiring game developers. Because we are in the countryside, we can offer cheap workspaces, we become minority owners and invest in the company. Then we work together to leverage the money so they get a start with good conditions. We go in with expertise from both the game industry and support from people with broad start-up experience and support for admin. Then we have the network. Working side by side with like-minded people helps the studios to solve problems, advise each other and utilise each other's strengths. Sometimes it's expertise, sometimes it's moral support. Quite simply, we are strong together!

Why Jörn in particular?

There is a kind of magic here. Jörn is a place where many more people once lived and worked, and there have been all sorts of businesses here. Nowadays Jörn is depopulated, there are lots of empty houses and premises. There are few of us and everyone who lives here collaborates and helps each other in a fantastic way. We ourselves are sitting in what used to be the people's house. I was afraid when we arrived that we would come and destroy or take over people's common house, but instead the people who already lived here were happy that we saved a dying house and how nicely we fixed it up.

What have been your greatest challenges?

We are supposed to help start-ups, but we are a start-up ourselves. The first year is always a bit of a 'guinea pig' - we learn at the same time as them. On top of that, we had a tragic fire. No one was hurt, but our newly renovated and fixed premises and equipment were damaged by smoke. I had to act quickly with temporary solutions, initially offices in Skellefteå while we made a temporary solution back in Jörn until all the clean-up, insurance matters and renovation were completed. It was hard to see everything we had built up fall apart. At the same time, the cohesion among us became stronger than ever. I can proudly say that we are now back and stronger than ever.

What do you hope Jörn's game industry will look like in ten years?

We hope that the studios will want to stay. Build their own company and thus help to rebuild Jörn into something new and good, almost like the old days but nerdier. The countryside offers great conditions to do almost anything. You don't have to build new. It is both cheaper and more environmentally friendly to use what we already have. This is something we enjoy and intend to continue doing.

Perfect Random – Sulfur

Threats and Challenges

Swedish game companies have continued to grow during the year, increasing both revenue and the number of employees, and as such have proved resilient to several external threats such as the pandemic and previous economic fluctuations. However, there are several challenges that the industry needs to address in order for growth to continue.

Skills Supply

In 2022, 501 people were newly employed in Sweden. This is a lower number of newcomers than in the previous year, but there remains a major shortage of skills, especially in the longer term. There are comparatively few game developers graduating from the country's education programmes, and employers are largely recruiting from other countries.

It is estimated that at least a third of the employees in the industry have moved to Sweden to work here, and in several of the larger companies it is up to half. At the same time, it is difficult for newcomers to find accommodation and obtain work permits. The processes and waiting times for work permits were made even more difficult during the year as many employees risk being banned from working if a permit is applied for, and the Swedish Migration Agency only grants six-month work permits for probationary employment.

Coordinated efforts to increase diversity and gender equality in the sector has meant that more women have been employed and the recruitment base has increased. But this work, as well as skills development for existing staff, needs to be further developed if the industry is to continue to grow.

Financing Capital

Access to capital has been affected by the macroeconomic situation. The number of investments has fallen and if we look at the investments made in the Swedish market, as in the previous year, a clear majority are from companies that are established in the industry. The inflow of new capital can be improved, and not least in the early stages it is still remarkably difficult to find financing. This particularly affects companies that do not have an existing strong network of contacts, and risks becoming a long-term obstacle to innovation and diversity in the industry.

In competing countries such as the USA, Canada, the UK and Finland, there are long-established financing structures, tax breaks and other forms of support to give start-ups a head start in international competition. For Swedish companies, the lack of a national equivalent means in practice a trade barrier to the outside world. There is also a need for greater business expertise in the sector, not least in small and new companies.

Artificial Intelligence

Artificial intelligence (AI) is a broad concept, and certain types of implementations have existed in games since the beginning of the industry – from self-playing chess to reactive behaviours in game characters. The latest developments in generative AI, with the ability to generate text, images, video, music and other material based on the interpretation of data, presents the industry with both a challenge and an opportunity. One clear challenge is how the legal rights and obligations around AI-generated material and the technology behind it are handled by legislators. It is important for game developers to be able to control how created material is used. It is also necessary to clarify how copyright and trademark protection can be ensured in the future, and how reference material can


Dimfrost Studio – Bramble: The Mountain King

or should be used. At the same time, AI as a technology can contribute to new game experiences and increased productivity, for example by being able to expand and extrapolate new variations of existing digital material.

Radicalisation and Online Hate

Managing unwanted player behaviour is an ongoing challenge. Methods used in the industry include blocking unwanted players, warnings, limiting communication between players and using AI to identify which players may pose a risk. Other measures include the cultivation of a good culture in the gaming community and the presence of moderators and editors. Apart from in-game communication and self-run forums, there are third-party channels where companies do not have a mandate and where the games industry faces the same challenges as any other actor in society. Radicalisation differs from online hate and bad behaviour in the intention to influence players' opinions and actions. The actors who engage in radicalisation can have different motives and ideologies, such as right-wing extremism, disinformation, misogony or Islamism. The method is usually to contact players in game and then move to a closed forum where the radicalisation itself takes place. These forums generally also include more opportunities to share material, such as links, images and videos than in game communications. Counteracting radicalisation requires cooperation, not least internationally as games reach a global audience. The secretariat of the Swedish Games Industry works actively on the issue of radicalisation together with authorities, researchers, organisations, member companies, international industry associations and others.

Ukraine

Several Swedish companies had hundreds of employees in Ukraine when Russia attacked the country again in early 2022. During the year, several industry initiatives were implemented to help Ukrainian game developers. Several large companies with employees in the country donated money to aid organisations, relocated employees from both Ukraine and Russia to safer regions, or offered jobs in other countries where possible. In some cases, companies have completely divested their Russian operations.

There was a global initiative where over 700 game developers joined forces and sold their games in a bundle on Itch.io that included over 1,000 games. By March 2022, it was reported that 450,000 copies had been sold and over USD 6 million had been raised.

The European Game Developer Federation (EGDF), of which the computer games industry is a member, has been active in supporting the country's game developers both practically and through a clear message condemning the invasion.

In their annual reports, many companies have taken Russia's invasion of Ukraine into account in their risk analyses, but largely state that it does not or has not had any impact on their day-to-day operations.

Work Environment

One long-term challenge is the work environment. The industry as a whole is constantly working to improve working conditions, but it does not always get all the way there. The game industry is not exempt from occasional poor leadership, corporate culture and problems in the workplace. At the same time, there are challenges with many young new employees, culture clashes with employees from different backgrounds in an international environment, and creative projects where many strong wills need to come together. Discouraging problematic behaviour, actively managing the workplace and detecting potential problems early are some of the measures to create attractive workplaces. After the pandemic, the industry has largely moved back to offices, but hybrid solutions and remote work are more common, bringing their own set of challenges.

Methodology

This report is a compilation of annual reports from the Swedish Companies Registration Office's Business Register and data from Statistics Sweden's company register, from limited companies that have game development, publishing or specialised subcontracting functions as a significant part of their operations.

Examples of subcontractors include companies offering game-specific services in translation, motion capture, programming or music production. Companies mainly specialising in gambling games such as poker, betting or casino games are not included.

For all figures pertaining to a company's sales, the term revenue has been used to refer to the net sales of the company, i.e. the net sum generated from sales of products or services after deducting taxes, fees, discounts, returns, etc.

Financial figures have been converted in this translated version of the report, from SEK to EUR. In instances where an exact EUR sum has not been reported, a manual conversion from SEK to EUR was made based on the 2022 average exchange rate, 10.6317, as reported by the Riksbank (Swedish central bank).

As with last year's compilation, we chose to report domestic group revenue based on the parent company and Swedish subsidiaries, instead of relying solely on the consolidated accounts. Group revenue including foreign subsidiaries is reported separately in the global revenue. This gives us a better idea of how Swedish companies are doing and gives a comparable report both with other industries and the same industry in other countries.

Part of the data collection is done with the help of Statistics Sweden's data, primarily for limited companies under *NACE code 58.210 - Publishing of computer games*. At the beginning of October 2023, there were 1,158 active companies registered under this code, but after manual review, 419 companies have been removed from the list as they had their main operations in other industries, mostly casino games or other software development. Some game companies, such as EA DICE, choose instead to use *NACE code 62.010 - Computer programming*. In total 252 manually included companies from this year's report have been registered under other NACE codes.

The main focus of the report is on limited companies. A brief overview of other forms of businesses, such as partnerships and sole proprietorships, is available in the chapter on the number of companies.

Several companies have broken financial years. For these, the latest available annual report has been used and for several larger companies, a reconciliation has been made for the number of employees in December 2022 to get as up-to-date a picture as possible of the overall industry.

Data from Statistics Sweden's company register was collected on 22 June 2023 and includes key data from 2022.

The chapter *Number of Employees and Revenue by Company Type* presents a summary of the number of companies by size category. This type of summary is typical in the EU context and is therefore based largely on the EU's definition of company size, which traditionally takes into account the number of employees and the company's revenue. This year, we have elected to remove the revenue criterion from the definition and instead use only the number of employees, seeing as game studios (especially small ones) can vary enormously in terms of revenue. This is projected to have a marginal impact on the distribution of micro and small enterprises. In addition, the threshold for large companies has been increased from 200 or more employees to 250 or more employees, in line with the EU definition of a large enterprise. This makes no difference to the number of large and medium-sized enterprises but may have some impact in future reports.

Due to the fact that the boundary between business owners and employees is sometimes somewhat blurred, it can be difficult to distinguish between solo and micro enterprises with a single employee.

The methodology as a whole has several shortcomings. There may be more companies that should be included in the report but are not included because we are not aware of them. The manual selection opens up for mistakes, and there is a grey area with companies that are difficult to categorise. The strength of the method is that the data is audited and made public through the agency's publication. The manual selection allows us to ensure that all major companies are included and the industry gets a more representative data base regardless of NACE code.

For companies that have no registered revenue or employees in Statistics Sweden's company register, annual reports have not been obtained from the Swedish Companies Registration Office. Data on the number of employees and gender distribution from the business register has been supplemented with annual reports when available.

In some cases, the annual report was submitted late in the year, a recurring pattern which, combined with the authorities' processing times, means that we do not receive all reports on time. In these cases, the annual report is reported for the most recent available year. These companies amount to 0.5% of this year's total revenue, which means a small margin of error. The largest company where this applies this year is Niburu Software AB.

More details on the selection and method of the key figures can be found in the respective chapters.

Embark – ARC Raiders

Glossary

AAA: Reads "Triple A". Popular term for bigger games with large budgets and staff. Typically published by the industry's largest publishers.

AI: Artificial Intelligence – basic use cases include computer controlled characters using, for example, "pathfinding" algorithms. More modern AI using technology such as machine learning is a growing area in computer games.

Alpha: The phase in software development where key systems and features are implemented and ready for software testing.

AR/Augmented Reality: Direct or indirect viewing of a physical environment whose elements are enhanced (or supplemented) by computer-generated sensory input (audio, video, graphics or GPS data).

Beta: Takes place after alpha. At this point the product is largely complete, but may contain bugs or require polishing. In some cases the game is made available for closed or public software testing by so-called beta testers.

Casual games: Simpler games, typically with minimal storylines, shorter learning curves and designed to be played for short periods of time.

Cloud gaming: Also known as gaming on demand, is a type of online game that allows the streaming of a game to a computer stored on the operator's or game company's server without the need for a console or advanced computer performance.

Co-development/Co-dev: Subcontracting production work from other game development studios, often for limited parts of a project as a complete team. See *outsourcing*.

Core: Term used to describe games made for a dedicated, self-identified gamer audience.

CPM: Cost Per Mille; cost of a thousand ad impressions.

Crossplay: Making it possible to play the same game together on different platforms.

Crowdfunding: Financing a project through crowdsourcing. In recent years, this has been popularly expressed in various web platforms that collect funding support for various projects from interested individuals or companies.

DAU: Daily Active Users; The number of unique users per day.

Digital distribution: Sales of digital software through digital channels.

DLC: Downloadable Content; downloadable additions to video games, oftentimes with less content than classic "expansions".

Early Access: games released for sale in an early development phase before official release.

Freemium: Collective name for business models where a product or service is offered for free but where the player can unlock additional content through micro-transactions such as buying virtual items or skip waiting times.

Free-to-play/free2play: Games that offer users to play the game for free in their basic version monetisation occurs through other means, such as ads or additional paid content.

Game Jam: Shorter events where game developers meet and create games together for a limited time, often with a specific purpose or theme.

Gold master: A traditional term for the final and finished version of a software, ready for wide distribution.

Hyper casual: Games under the casual category with an even greater focus on stripped-down interfaces to allow spontaneous game for very short moments, such as in public transport.

IAP: In-App Purchases, directly accessible in the app/game, rather than through external payment systems. The goods purchased can consist of additional levels, equipment, experience points or subscription services.

Indie: From "independent". A prefix that characterises games by independent developers, usually smaller games with small development teams.

IP: Intellectual Property, a type of intangible asset, often referring to game concepts, brands, trademarks and other assets.

MARPPU: Monthly Average Revenue Per Paying User.

MARPU: Monthly Average Revenue Per User.

MAU: Monthly Active Users; the number of unique users over a 30 day period.

Middleware: Software used to develop games. Middleware acts as a "glue" between two already existing software components.

Mikrobetalningar: A small online transaction. The term is used to describe transactions that pay, among other things, DLCs and in-app purchases.

MMORPG: Massively Multiplayer Online Role-Playing Game, a type of role-playing game where thousands of players exist in the same digital world, such as *World of Warcraft*.

MR/Mixed Reality: A type of game that combines the real-world environment with digital elements, for example (but not necessarily) using a headset with a built-in camera.

Multiplayer: Games that can be played by multiple people at the same time, online or on the same device.

Outsourcing: General term for hiring external human resources and specific skills from other companies and delegating production assignments to other companies. See *co-development*.

Premium: Revenue model where a digital product is purchased for a fixed price, unlike, for example, free-to-play where the game is free to acquire.

Retail: Games sold in physical stores.

Roguelike/Roguelite: Collective term for a genre of games characterised by procedurally generated levels, turn-based decisions, grid movements, and/or permanent endings if the game character dies, meaning that the game is played over from the start.

Serious games: Games with a primary purpose other than entertainment. It can be simulators, exercise games, games for learning, games for rehabilitation, or advertising games.

Singleplayer: Games played by only one person at a time.

Social games: Collective name for games on social networks, such as Mobage and Facebook.

Soft Launch: Releasing a game in limited markets to evaluate engagement.

Streaming: Direct playback of digital content while transmitting it over the internet.

Studio: Game development company or division of a game development company, for example, in a specific location.

VFX: Visual Effects in digital media, including particle effects, animations, motion capture and physics simulations.

Virtual goods/items: Term referring to digital objects that exist in games in the form of, for example, puzzle pieces, weapons, or other items.

VR/Virtual Reality: A way to visually immerse yourself in a game experience using some kind of headset (or "Head-mounted Display").

XR/Extended Reality: Collective term for all technologies that extend/change the user's perception of their surroundings, such as AR and VR.

Flamebait Games – Passpartout 2: The Lost Artist

DATASPELSBRANSCHEN
Swedish Games Industry

swedishgamesindustry.com