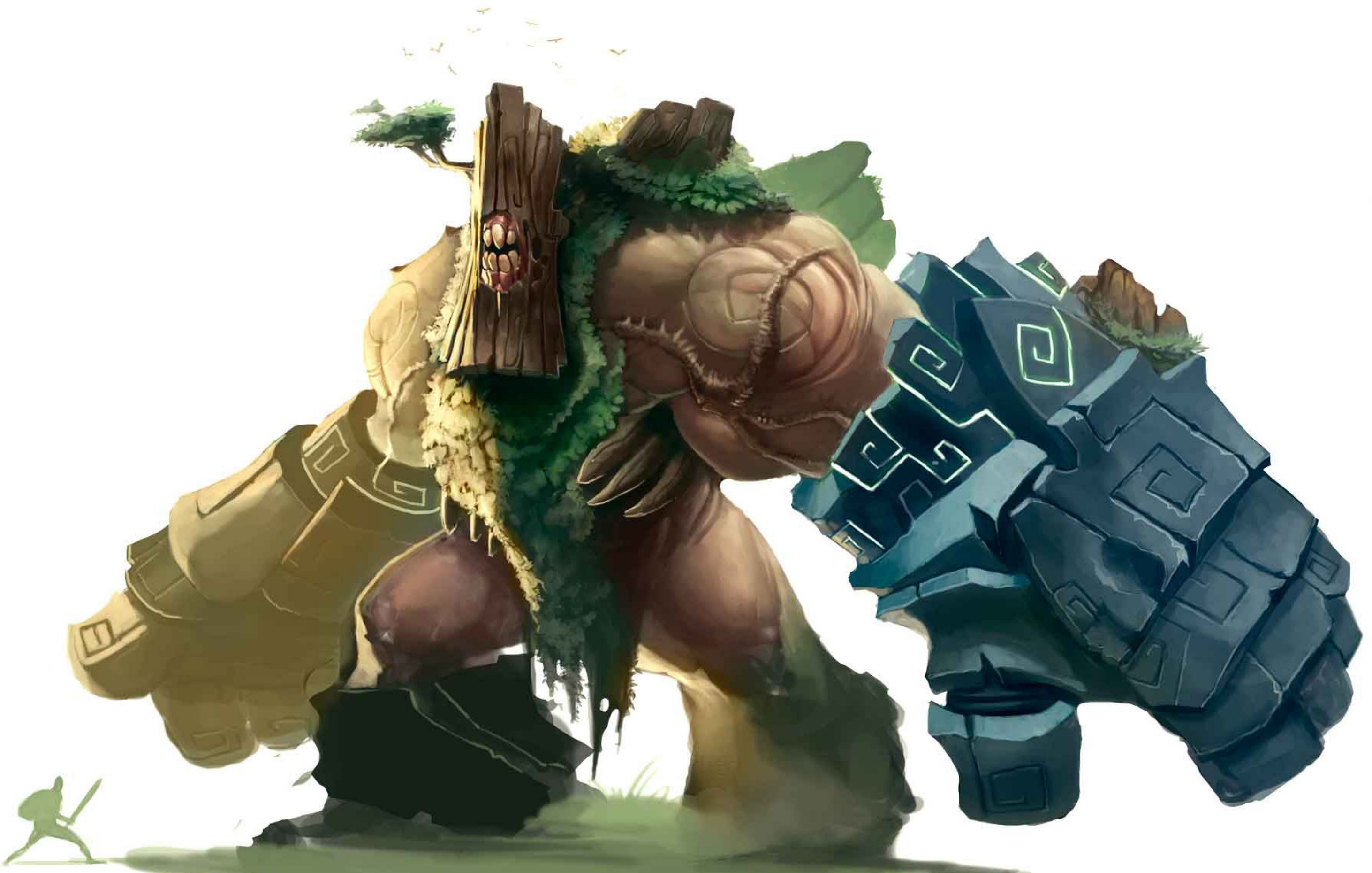
GAME DEVELOPER INDEX **2011**

SWEDISH GAMES INDUSTRY'S REPORTS 2012



DATASPELSBRANSCHEN
SWEDISH GAMES INDUSTRY

Pic: *Sacred Citadel* (in development), Southend Interactive

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EXECUTIVE SUMMARY

Game Developer Index analyzes Swedish game developers' activities and international industry trends of the past year by compiling key figures from the respective companies' annual reports. Swedish game development is an export industry and acts on a highly globalized market. The game industry has in a couple of decades grown from a niche embraced by enthusiasts to a global industry with a considerate cultural and economic impact. Game Developer Index 2011 compiles Swedish game developers' annual reports for their latest fiscal year. In short:

• Swedish game developers nearly double their turnover in 2011, amassing a 96 % growth to a total of 257 million EUR.

• The majority (60 %) of companies are profitable and the industry reports a combined profit for the third year in a row.

• Employment increases by 26 % to a total of 1 512 employees, also a record breaking number.

• The number of female employees increases by 74 %, resulting in 14 % of total employees.

• For the first time ever, the total turnover and employment rate is greater for companies developing games for digital distribution than those developing games mainly for retail.

• The compound annual growth rate (CAGR) for Swedish developers between 2006-2011 is 29,26 %

• An addition of 39 companies results in 117 active video game developers in 2011

• The number of companies with a turnover between 200 000 and 5 million EUR increased by 72 %

• Swedish game developers are renowned for their diversity and high quality. Sweden has world leading developers within several fields of game development: AAA, digital distribution, social games and mobile games.

By all accounts Swedish game developers will continue their growth in 2012. Thanks to digital distribution, an ever-increasing amount of developers self-publish, foreign players such as Rovio and Ngmoco have opened Swedish offices and several companies, big and small, are growing rapidly. The two greatest challenges for continued growth are skills supply and financing.

GLOSSARY

AAA: Refers to big budget video games, and is generally associated with a high level of quality. These games are usually published by the industy's biggest publishers, mainly via physical distribution.

Alpha: The first phase to begin software testing in a game's release life cycle.

Beta: Follows Alpha. This phase is typically the first time that the software is available outside of the company that developed it. External users are called beta testers.

Casual Games: Games targeted at a mass audience, typically distinguished by simple gameplay, short learning curves and being played for shorter sessions at a time.

Cloud Gaming: Also known as gaming on demand, is a type of online gaming that allows streaming of games onto a computer while the actual game is stored on the game company's server. This allows access to a game without the need of a console and largely makes the capability of the user's computer obsolete, as the server runs the processing needs.

CPM: Cost per mille

Crowdfunding: Raising funds by crowdsourcing. In recent years, this phenomenon has been prominent on different web platforms that collects co-funding support from the public.

Crowdsourcing: Outsourcing tasks to an undefined public rather than paid employees.

DAU: Daily Active Users

Digital Distribution: Sales of digital software through digital channels

DLC: Downloadable Content; Game add-ons, usually of a smaller scale than classic "expansions".

eCPM: Effective cost per mille

Freemium: A business model by which a game is provided free of charge, but requires payment for advanced features or virtual goods.

Free-to-play/Free2play: Any video game that has the option of allowing its players to play without paying. Revenues are usually generated by ads or fees for premium content instead.

Gaming: The act of playing video games. A word that is commonly used within the video game culture to describe one's hobby. A person is called a "gamer".

In-app Purchase: Real money-purchases conducted within a game, rather than an external payment system. Items usually bought consist of new levels, equipment, experience points etc.

Indie: Derived from "independent". Signifies game productions by independent developers; normally small companies with only one or a few number of employees. Indie has in recent years signified the emerging stream of smaller developers that have been able to reach a wider audience thanks to digital distribution, which has made many independent productions financially viable.

MARPPU: Monthly Average Revenue Per Paying User

MARPU: Monthly Average Revenue Per User

MAU: Monthly Active Users

Middleware: Computer software used for game development. Middleware acts as "glue" between two existing software components.

Micro Payments: A financial transaction that involves a small sum of money and usually occurs online. In the games industry, the term is normally used to describe payments of DLC or in-app purchases.

Off-shoring: International outsourcing

On-shoring: National outsourcing

Outsourcing: Contracting out of a business process to an independent organization from which the process is purchased back as a service.

Serious Games: Games with a primary purpose other than entertainment. This often involves simulation software, exercise games, games for learning, and advergames.

Smartphone: Mobile phones with advanced computing abilities built on a mobile operating system. Popular examples are the iPhone and Samsung Galaxy.

Social Games: Games on social networks such as Mobage or Facebook.

Streaming: Direct access of digital material as it is being transferred on the internet.

Tablet: A mobile computer primarily operated by touching the screen. Examples are the iPad and Galaxy Tab

Virtual Goods/Items: Non-physical goods for use in video games, usually weapons, clothing or other apparell.

FOREWORD

SWEDISH GAMES INDUSTRY STRONGER THAN EVER

2011 was another record year for Swedish video game developers and Swedish video game export. As if record numbers of employment, turnover, profit and female employees were not enough, 2011 also marked the largest increase ever in several of these areas. The success largely depends on individual companies' achievements, not least *Minecraft*-developer Mojang, who with a turnover exceeding 50 million EUR in the company's first year, became Sweden's biggest game developer in terms of revenues. Several other developers have also had an outstanding development. The structural transformation from AAA games sold at retail to games for digital services online, in social media and mobile phones, is in full effect, and for the first time companies adhering to the latter present a greater t urnover and employment rate than the previously dominant AAA studios. That being said, it's not synonymous with AAA developers having bad businesses, quite the contrary; 2011 was a very good year for many AAA developers and the outlook for the launch of the next generation of video game consoles is very promising.

2011 was the year when the Swedish game phenomenon managed the transition from the AAA paradigm to the new market for digital services without sacrificing quality, profitability or international competitiveness. AAA games still have an important role on the global market and Sweden is fortunate in having several successful companies in both categories.

Future challenges include finding adequate talent and funding, whereof the first is a limitation for established companies and the latter primarily for smaller and emerging companies. The long term requires a better skills supply (research, education, training, internationalization, foreign specialists etc.) and equal terms in international competition regarding funding and public subsidies in order for Swedish game companies' sensational development to continue.

Stockholm, September 2012
Per Strömbäck, Spokesperson, Swedish Games Industry

The Hunter, Expansive Worlds

TURNOVER AND PROFIT

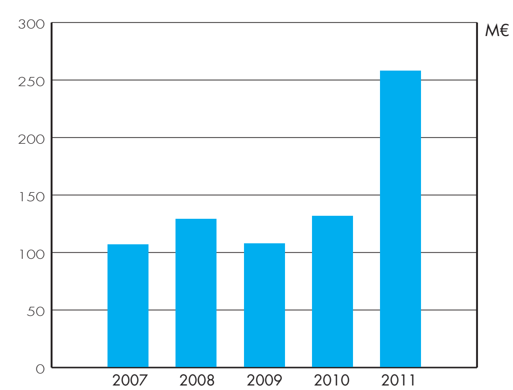
Swedish video game exports almost doubled in 2011, a landmark achievement for Swedish video game developers. The accumulated growth has never been greater, as the industry has gone from a turnover of 131.2 million EUR in 2010 to no less than 257.4 million EUR in the following year.

The combined profit increased by more than 700% to 14.2 million EUR, and a majority of the companies are profitable. Employment increased by 26% to a record total of 1512 people. The number of women increased by 74% totaling 212 positions, approximately 14% of the total number of employees; an all-time high, and a proportional increase of more than 40% compared with the previous year.

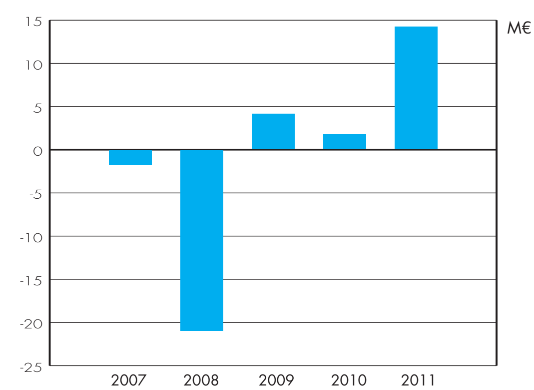
What measures then, lie behind this remarkable growth? In recent years, the video games industry has undergone a major overturn to digital distribution. From being dominated by boxed sales via traditional mortar-and-brick stores, digital distribution channels on mobile phones, social networks and various online venues has substantially increased. For the first time ever, the total turnover and employment among game developers focusing on digital channels is greater than developers who produce games mainly for retail. The combined sales value however is still greater for traditional distribution, mainly because the average price is higher and in some cases due to larger volumes, but since the supply chain is more complex the proportion of the developer's revenue is smaller compared to digital sales which also have the advantage of fewer middle-men.

To continue to deliver successful games in both traditional AND digital sales

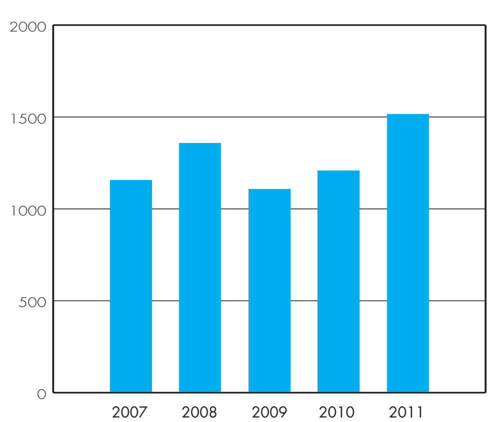
TURNOVER



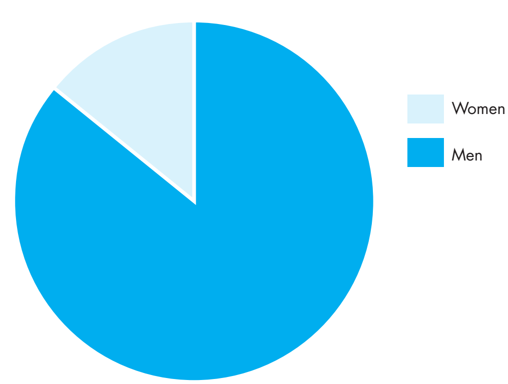
PROFIT



EMPLOYEES



GENDER DISTRIBUTION



KEY FIGURES	2011	2010	2009	2008	2007	2006
N:o of Companies	117 (+10%)	106 (+5%)	101 (-3%)	104 (+14%)	91 (+34%)	68
Turnover	257.4M (+96%)	131.2M (+22%)	107.4M (-17%)	128.7M (+21%)	106.6M (+49%)	71.3M
T.O per Employee	170.2K (+56%)	109.1K (+12%)	97.4K (+3%)	95.1K (+3%)	92.3K (+5%)	87.8K
Profit	14.2M (+747%)	1.7M (-59%)	4.1M (+120%)	-20.9M (-1121%)	-1.7M (+33%)	-2.6M
N:o of Employees	1512 (+26%)	1203 (+9,2%)	1102 (-19%)	1353 (+17%)	1153 (+42%)	813
Men	1300 (86%)	1082 (90%)	993 (90%)	1217 (90%)	1034 (90%)	702 (86%)
Women	212 (14%)	121 (10%)	109 (10%)	135 (10%)	119 (10%)	107 (14%)

All numbers in €

channels is a feat of strength and an important prerequisite for the continued growth of Swedish game developers.

A single company is alone responsible for half of the increase in turnover, a sensation in itself. In its first annual accounts, Mojang adds over 50 million EUR to the calculations. Mojang is the developer that came from nowhere and in record time created a game that became a cultural, social and economic phenomenon. The studio's first title, the internationally acclaimed *Minecraft*, has hardly gone unnoticed. The game was launched as a purchasable alpha as early as 2009, then a one-man project by studio co-founder Markus Persson. The beta version was released in the following year, to officially launch in November 18, 2011 during grand festivities at Mojang's very own convention: Minecon, in Las Vegas. *Minecraft* is sold only through digital channels and has been on sale during most of its development stages in different price ranges. In addition to PC and Mac, *Minecraft* was subsequently released on Android, iOS and Xbox Live Arcade.

Mojang is nevertheless not alone in enriching Sweden's vibrant video game fauna. Far from it. Hansoft, leading developer of software for agile development projects, was rewarded with the prestigious Uppland Gazelle of the Year* award for a second consecutive year. Hansoft has broadened its operations to include sectors outside game development as well, but is still close to the industry, working with several highly recognized developers worldwide. Another recipient of the award is Tarsier Studios, which through a 467-percent growth over the past three years managed to snatch the Blekinge Gazelle of the Year award, as well as the industry's own appointed Developer of the Year. Tarsier's

upcoming game, *LittleBigPlanet* on PS Vita, was additionally awarded with Best Motion Game during E3 2011, beating industry giants such as *The Legend of Zelda: Skyward Sword*.

With a growth of 74 percent in 2011, Paradox Interactive continues both developing and publishing games and has extensive expansion plans for the future. Ubisoft Massive is working on some of the industry's heaviest franchises and the online venture Uplay. DICE, long since the biggest player in Sweden, continues to grow, and more is to come with the accounts of 2012 – the year following the release of export success *Battlefield 3*. Last year's Index-newcomer King.com continues, like most of the largest companies, to grow and break new ground. They are currently second only to Zynga as the biggest developer of Facebook games.

This year's big newcomer is spelled Stardoll, a company that develops and operates the web-based fashion game of the same name. The game's concept is based on paper dolls and is mainly targeted toward girls. Stardoll had over 124 million users in 2011 and brings over 20 million EUR to the industry's combined turnover. Stardoll has previously not been included in the report, but as the service developed, gaming elements became clearer, and since 2011, Stardoll is a member of the trade association.

Along the year, Illuminate Labs merged with its owner company, Software giant Autodesk, and is therefore no longer included in the report. The business however, continues as an in-house studio. Another developer involved with high-quality middleware is the animation studio Imagination Studios. They have worked with developers such as DICE, Remedy and IO Interactive, and doubles its turnover to over 2.2 million.

Unlike previous years, this report covers the total turnover of companies (including, for instance, other operating income) rather than just sales. This has resulted in an increase of approximately 6.1 million, or roughly two percent of the total turnover.

**Gazelle of the Year is awarded by Swedish paper Dagens Industri*

The combined profit also results in a new record. Profits have previously varied greatly from year to year, but 2011 was the third consecutive year with an overall positive result. Approximately 60 percent of companies reported numbers in the black, which is 10 percent greater than in 2010.

Come to profits, Mojang has a large part in the success with a profit of 5.32 million EUR (approx. 37% of the industry total), but an ever increasing amount of developers do their share. Start-ups initially focused on digital business models have in many cases been able to achieve positive results from day one. This is in large part due to the shorter production cycles that mobile and online games constitutes, and consulting work for major developers or other companies. This allow developers to potentially reach out faster to their target audiences, and makes it simpler to manage project costs and revenues.

Sweden's GDP growth was 3.9 percent in 2011 (NIER). The compound annual growth rate between 2006-2011 for Swedish video game developers was a staggering 29.26 percent, i.e. almost eight times greater than the overall economy. Video game export is no longer simply a business for the future, but has real importance for the Swedish economy.

NUMBER OF COMPANIES

Following the financial crisis, the numeral growth of Swedish developers stalled. In 2008-2010, the studio count ended at just above 100 companies. Come 2011, the trend has reversed to resemble the establishment rate before the crisis. 39 new companies have emerged, which with deductions for companies that disappeared, results in 117 active game developers. Companies that fell short reflect no dramatic bankruptcies. The vast majority consisted of older companies that organically seized production following a couple of year's gradual decrease in activity. A majority of newcomers are start-ups from 2010 and 2011, but some include former web- and advertising agencies who changed their operations to primarily focus on video games and related services. What these companies can turn into a strength is long experience within a closely related business, where they have had customers and industry relations for several years. Their experiences range from design, programming and 3D animation to server solutions and other related middleware.

Many of the newly registered companies in 2011 show small figures with broken financial years since their businesses just got started. 2012 will present their first full-year accounts.

The average Swedish game developer employs 13 people. As a result of polarization, the median is only three employees. The average studio was founded in 2006 and mainly develops mobile- and online games.

NUMBER OF EMPLOYEES

In 2011, the number of employees increased by 26 percent, more than 300 full time jobs. This is almost 12 percent greater than the previous record year of 2008. Previously, the annual increase or decrease in number of employees has principally been decided by a token few of the biggest developers. To a large extent, this still rings true, but an increasing amount of mid-sized developers are growing and for the first time ever more people were employed by studios working mainly with digital distribution than traditional retail. A large work force is evidently needed not only for the production of blockbuster titles such as *Battlefield 3*, *Syndicate* or *Far Cry 3*, but also for the continued development, support and innovation of mobile and social games by the likes of King.com, or gaming services/communities such as Stardoll.

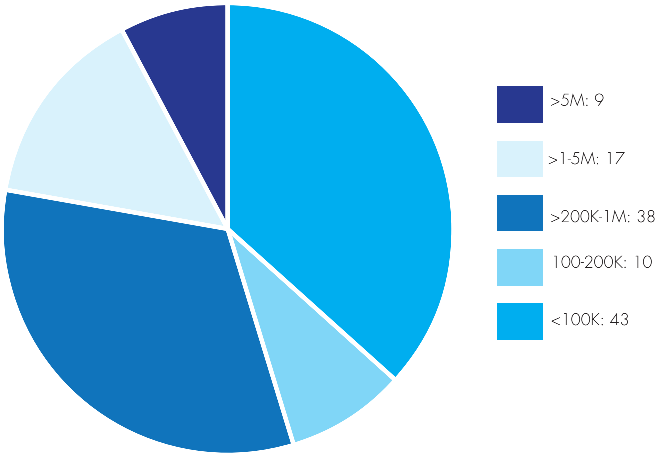
For many larger developers within the so called AAA segment, the number of employees may vary slightly from year to year. This is because they mainly work on commissioned jobs with a few larger projects where a part of the employed workforce only stays on during its respective project. In 2011, both Avalanche and Massive increased their numbers by 30 employees each. That mid-sized developers such as Tarsier are growing is also very important for the industry. They double their workforce to 38 people.

MachineGames is back in a new outfit and provides no less than 34 employees to the total. The studio is owned by American ZeniMax Media, parent company of distinguished game publisher Bethesda Softworks (known for the popular Elder Scrolls series).

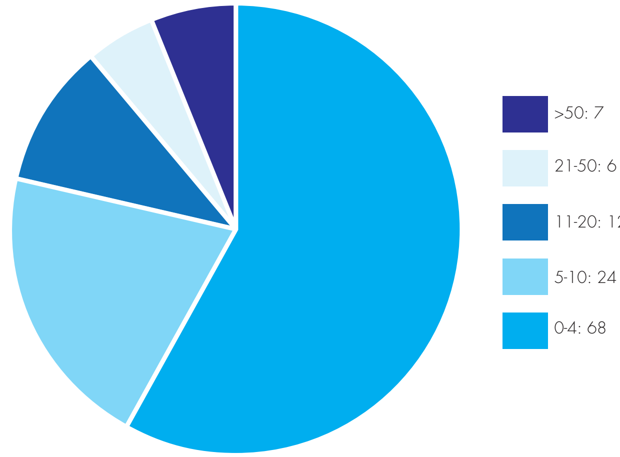
Individuals are by and large a company's most important resource. As the industry's development of self-publishing and growth continues, many studios emphasize the necessity of hiring staff outside of the most immediate needs of developing talent. These occupations often concern marketing, accounting, support, testing, and especially, human resources.

As in many other countries, there is a clique of Swedish developers that do not have any ambitions to exceed a small number of employees. Profitable results are obviously still in focus, but these companies rather outsource their needs than hire more personnel. The reasons for this may vary, but a common denominator is a desire to keep the feeling of a small, cohesive company. This lies in stark contrast to the trend before the financial crisis of 2008, when focus relied mostly on major publishers'

TURNOVER PER COMPANY



EMPLOYEES PER COMPANY



**For convenience, Turnover per Company intervals have been converted by 10 SEK = 1 EUR. For more details on currency conversion, see Method.*

large, internal development teams. A growing number of independent developers have come to characterize the emerging industry in the wake of the crisis. This occurs in symbiosis with new business models and the widely accessible technological advancement of smartphones, tablets, cheaper competitive graphics engines, programming modules and libraries, as well as the enormous social- and casual games market.

GENDER DISTRIBUTION

The skewed gender distribution among game companies' staff is a long-standing problem, but in 2011 the number of women plummeted by over 70 percent. The proportion of women in the total number of employees has remained steady at 10 percent for several years, but 2011 saw the proportion increase with over 40 percent to an approximate 14 percent share. That is more than twice as many as in the UK games industry. Still, women make up a small percentage of industry employees, but 2011 marks a much-welcomed trend. The highest proportion of women is found in King.com and Stardoll, both of which develop online games.

TURNOVER PER COMPANY

There is an interesting development in terms of turnover per company. Developers with a turnover of less than 100K EUR* decreases marginally, but given that the total number of companies is increasing, it is a clear sign that many start-ups make early revenues. Similarly, the number of companies with a turnover of 100-200K halved – not because of recession, but strongly improved businesses – and companies with revenues between 200K-5 million have increased significantly (72%). Meanwhile, the biggest developers continue to grow. The strength of Swedish developers is partly the rapid adaption of digital sales channels, without losing ground in the AAA model. New companies have almost exclusively established themselves digitally, while large companies such as Avalanche and DICE gradually expand their offerings to include both digital and physical channels. PwC estimates that global spending on digitally distributed games with downloadable content, online games and mobile games will exceed physically distributed games as early as 2013. In a report by NPD (Q2 2012 Games Market Dynamics: U.S.), digital sales already accounted the bulk of revenues.

EMPLOYEES PER COMPANY

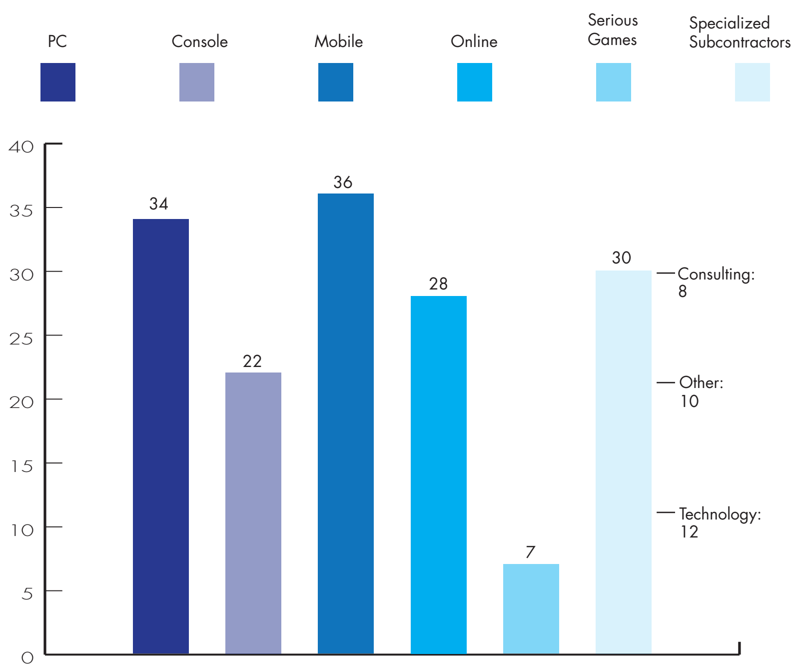
The average number of employees has not changed dramatically in 2011, with the exception of a small increase in firms with 20 to 50 or more staff members. This reflects the general growth of the industry. 23 companies have no employees.

BIGGEST PLAYERS

In accordance with 2010, the five largest companies account for 60 percent of the industry's total turnover. Worthy of notion is that no company in the top five now has less than 10 million EUR in turnover. Similarly, none of the companies with the biggest staffs have less than 100 employees. This is a big change from previous years, not least given the fact that the five largest companies alone account for almost 47 percent of the Swedish developer workforce, compared with 53 percent in 2010. The number of employees has thus been distributed more evenly among a larger number of companies, despite the overall increase. Even though it is a very small number of companies that account for the bulk of sales and employment, and thus affect the combined result, it proves that every developer matters for Swedish game development in general.

BIGGEST PLAYERS	Turnover M EUR
1. Mojang	61.2
2. DICE	42.1
3. Stardoll	22.3
4. Paradox Interactive	15.9
5. Avalanche Studios	12.7

BIGGEST PLAYERS	N:o of Employees
1. DICE	237
2. Ubisoft Massive	148
3. Avalanche Studios	119
4. Stardoll	115
5. Starbreeze	105



This is not a precise summary of the distribution platforms (PC, console, mobile etc.) the developers are working with. It gives a good picture of the platforms being used by seeing what the developers have done recently and what they are working on right now. A developer can be present in two or more columns in the extent that they have focused on several different formats.

DISTRIBUTION PLATFORMS

Despite doomsday headlines from several directions, PC development is perhaps stronger than ever in Sweden. PC is very convenient for self-publishing. Other platforms often have different kind of intermediaries which add various values such as marketing or financing but also make demands and take a greater share of the revenue. PC has in recent years become the obvious market for smaller, independent game developers. There are, however, intermediaries of different types on the PC market as well.

Not surprisingly, mobile and online are among the most common platforms to develop games for, particularly on smartphones. From being completely dominated by games on Apple's iOS, the market has slightly changed in 2011. Smartphones with an Android operating system has about 50 percent of the market share (compared with iOS' 25 percent). However, market share is not proportionate to the popularity of the format's games, which are purchased through Google Play (formerly Android Market). Studies also show that iPhone users are much more likely to pay for content than people with Android phones. The number of developers that only make games for Android is only a quarter compared to iOS.

NEW TECHNOLOGY

More game developers are now focusing on Android, and a lot of them publish their games on Appstore and Google Play both. Although Android does not differ significantly in terms of technological content being viable compared to iOS, it has been found that Android devices reach a more targeted audience than iPhone's wider user base. According to a study by Nielsen, Android's main proprietors are adults aged 25-43, which in turn can provide developers with a wider scope for a launch across more platforms.

The iPad and other tablets have led to a power injection for mobile game development. Many view tablets as

a whole new category of computing devices with great potential. It is plausible to think that iPad's success has tempered App Store's saturation rate. The tablet has made way for a wider development on iOS where developers either convert their iPhone games to a high definition format or focus completely on the tablet market. Tablets are, unlike smart-phones, basically synonymous with Apple's iPad, whose market share exceeds 60 percent. For developers, the trend of developing mobile games solely on iOS will last as long as the customer base proves affluent in comparison to Android or Windows.

Amazon's Kindle Fire is another potential competitor on the tablet market. King.com has experimented with game development on the format, but the Kindle has as of yet not been branded as a gaming platform. RIM, developer of Blackberry, has also instigated an ambitious venture into the tablet games market, but if game developers adapt more formats in the following year remains to be seen.

The financial services company Morgan Stanley forecasts that the use of smartphones and tablets will grow by 350 percent in 2011-2015. Smart-phones are on their way of becoming an indispensable standard for the entire world's population, making it an obvious market for game development and advertising.

AAA game development for consoles is on a stable level in Sweden, but most studios develop games for the consoles' digital marketplaces. These games can often easily be converted and published via PC's through services like Steam, Desura or GamersGate. An overall trend for physically distributed console games is an increased focus on bestsellers. The market has consolidated to promote titles with high production costs and large marketing budgets.

A growing number of households and consumers are using more than one gaming unit (cross platform). The question is not whether they will play on a smartphone or a computer, the fact is rather that many people use both. According to a US study by Nielsen, the number of consumers using more than one platform increased by seven percent in 2009-2011.

CLOUD GAMING

Also known as gaming on demand, cloud gaming is a type of online gaming that allows users to access a specific game by streaming its content to a computer directly from a server. This means that you can play basically any game at any time without the need of a dedicated games console. It largely makes the computer's capability obsolete, since servers perform the calculations in the PC's place. In other words, it becomes more important to have a fast internet access. Despite that cloud gaming is more of a distribution method than a gaming platform, it's a growing part of the video games market. It is in this context worth mentioning that Sony acquired the world's largest cloud gaming service, Gaikai, in July 2012.

OUTSOURCING AND CONSULTING

Outsourcing has become a rapidly growing niche among game developers. A lot of game productions require specific skills or extra staff during certain parts of a project. It is then common to hire personnel from other companies. For some developers, a majority of operations consists of consulting other companies. For others, especially smaller developers, it gives a good chance to practice skills and get the business going whilst investing in new games of their own device. This flexibility is important for the industry's efficiency and thus Sweden's competitiveness. It is part of the explanation for the strong growth in 2011.

Examples of Swedish companies outsourcing are Doctor Entertainment, who helped Starbreeze in the development of *Syndicate*, and Mojang who hired Scottish 4J Studios for the development of *Minecraft* on XBLA. Fatshark has acted consultant to companies such as Grin and paradox Interactive. Its subsidiary Bitsquid has with its graphics engine of the same name tied some ten ongoing game productions to the technology, including Swedish Zeal Game Studio's *A Game of Dwarves* and UK developer Just Add Water for future Oddworld titles like the upcoming *Abe's Odyssey HD*.

A challenge with outsourcing for the Swedish games industry is to keep on-shoring at a high level – to a large extent outsource tasks to other Swedish game developers. In the UK, 86 percent of developers use outsourcing, mostly for graphics, animation and programming. 51 percent of these services consist of on-shoring (source: TIGA).

SPECIALIZED SUBCONTRACTORS

As the industry matures, the degree of specialization increases, and several Swedish companies have successfully established themselves in different niches as subcontractors to other game developers. These include project management tool-provider Hansoft, and Simplygon that streamlines graphics production by mesh baking. The examples are numerous. This development opens up new business opportunities, as it will also be possible to work with companies outside of the gaming industry which, for example, Hansoft successfully did with customers such as Boeing. It has also led to foreign investments in Swedish companies; Autodesk acquired Swedish Illuminate Labs in 2010, who develops technology for the illumination of interactive environments.

DLC

DLC is short for downloadable content and consists of digitally downloadable additions to a video game. They vary in terms of size and often comprise new levels, characters, items or missions. They differ from classic "expansions" by in relation to these tending to be shorter, less extensive, and not being sold at retail.

DLC is part of the digital market's "long tail", i.e. a business structure that makes it viable to increase revenues by widening a product's appeal. The

INDUSTRY EXPERTS #1

The market is changing rapidly, we're moving from traditional boxed products to digital services. Digital distribution is snowballing on PC and we're also seeing consoles focusing more on digital. The accessibility through smartphones, tablets and social networks have showed the potential to reach a broader group of players in a convenient way. Cloud gaming could extend that by taking the immersive experience of so called AAA games to a broader audience without barrier-to-entries such as an expensive console or large chunks of data that needs to be downloaded before playing. It's compelling to see if the combination of smart-TV and cloud gaming can be the key to the next big growth within games, or if the tablets take the natural position in the home and simply stream AAA content to the TV. However, irrespective of business model or distribution, content will still be key. Deliver outstanding games and the players will rejoice. I believe we can see that diversity and quality in Sweden, no matter if it's triple AAA such as Battlefield or Just Cause, unique indie sensations such as Minecraft, mobile excellence in Anthill, the casual games from King.com or the evergreen "folkhem" classic Backpacker.

- Martin Lindell, Acquisitions Manager, PanVision

Tarsier has developed DLC for *LittleBigPlanet* and is now working on a PS Vita version of the game demand curve of a product is extended with new material, particularly proven effective for games that cost small amounts to begin with. This has represented a larger portion of the proceeds of several game developers since the digital distribution boom around 2008. The total value of these small revenues or "micro-trans-actions", may in some cases be equal to or even exceed the value that would traditionally be considered a bestseller. Without storage costs, it becomes profitable to invest in small, niche-like products that enhance and extend the gaming experience for the most loyal players. This lies in contrast with physical sales, where shelf space traditionally go to products that are early deemed to have bestseller potential.

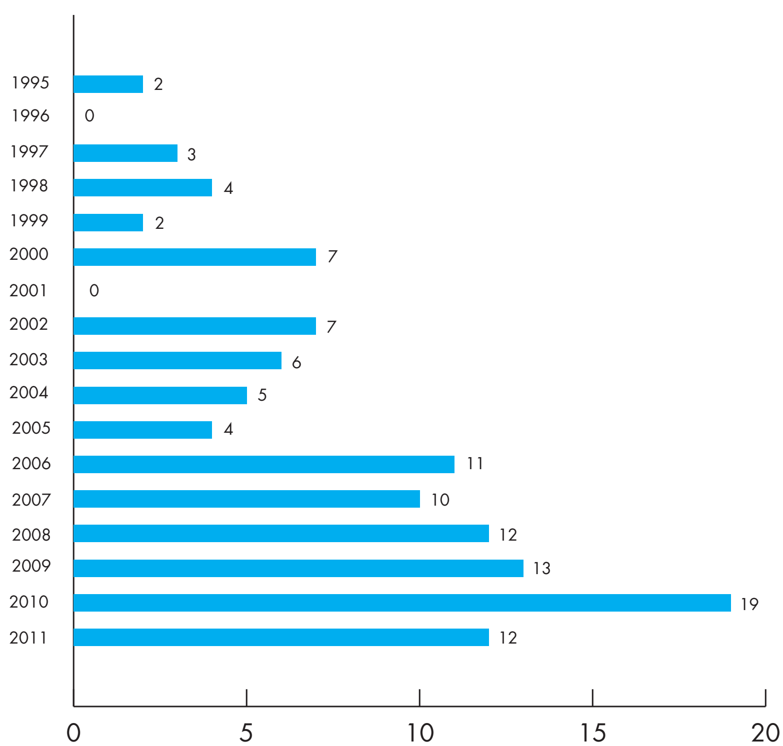
There are plenty of Swedish developers who produce DLC to various extents. Tarsier has developed DLC for Disney, DC Comics, Dreamworks, Media Molecule and Marvel. Arrowhead's fantasy adventure *Magicka*, which has sold more than 1.3 million copies, has sold over four million DLC bundles of which the most popular sold half a million on its own. Paradox Interactive has opened a new development team in Skövde, specializing on developing DLC to the studio's various game titles. DLC is also released for *Minecraft* on Xbox Live Arcade.

LOCATION OF COMPANIES

Below is a table of the largest municipalities ranked by number of employees and number of companies. It is worth mentioning Skövde at sixth place, which is a rapidly growing region with 11 companies (9.4 percent of total) and 43 employees (2.8 percent of the total) in 2011.

MUNICIPALITY	Employees	% of total	Companies	% of total
1. Stockholm	739	48,9	37	31,6
2. Malmö	227	15	16	13,7
3. Uppsala	177	11,7	8	6,8
4. Göteborg	110	7,3	11	9,4
5. Umeå	73	4,8	7	6

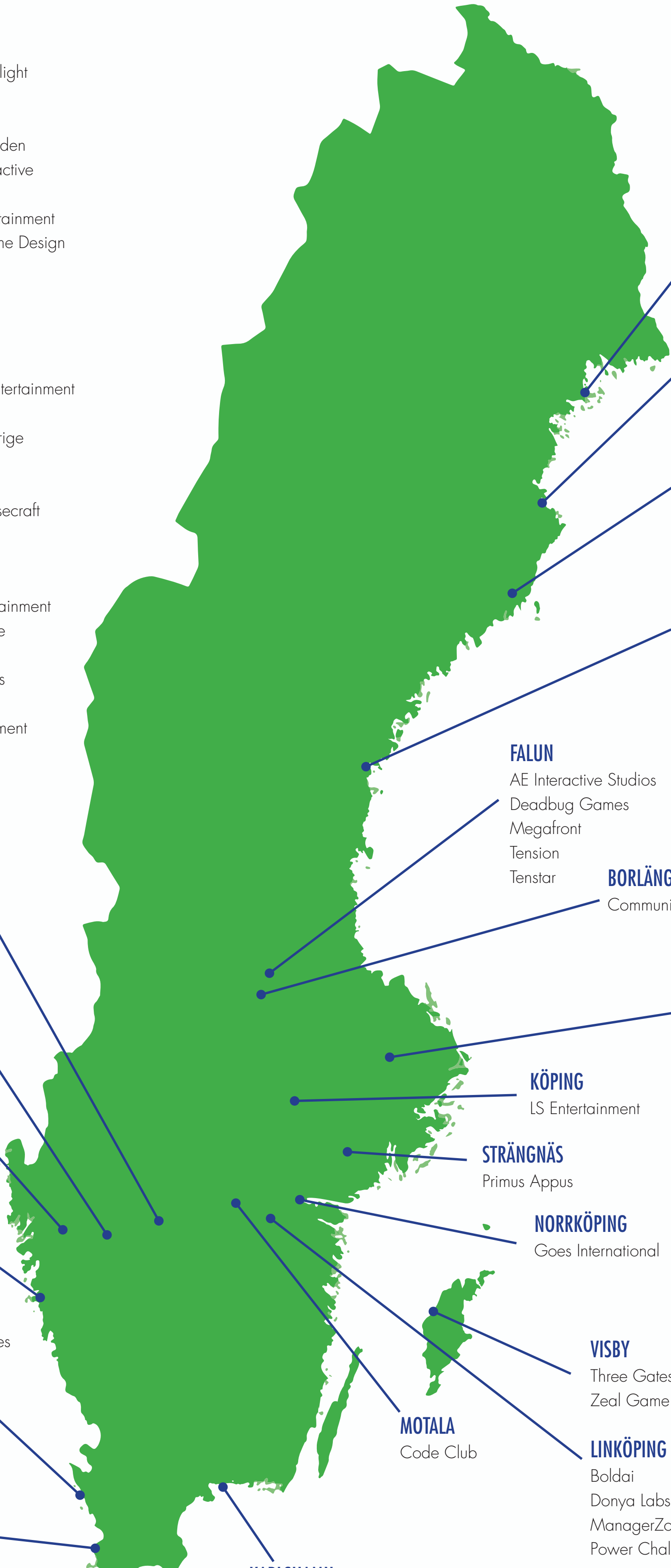
YEAR OF REGISTRY



(The data is based on registration year of active companies, though a company may have been founded or active before then)

Magicka, Arrowhead

GAME DEVELOPER MAP



STOCKHOLM
A Different Game Sweden
Active Media Group
Arcadelia
Avalanche Studios
Bajoum
Bitsquid
Contentgarden
DDM Europe
DICE
Expansive Worlds
Fabrication Games
Fatshark
Filimundus
G5 Entertainment
Hidden Dinosaur
Interactive Productline
King.com
Liquid Media
Might and Delight
Mojang
Movinto Fun
Ngmoco Sweden
Paradox Interactive
Pixel Tales
Pixeldiet Entertainment
PlayCom Game Design
Polarbit
Quel Solaar
Raketspel
Semionetix
SimWay
Spearhead Entertainment
Spelagon
Spelkultur Sverige
Stardoll
Tomorroworld
World of Horsecraft

SKÖVDE
Coffee Stain Studios
Colossai Studios
Digimundi
Immersive Learning
Lockpick Entertainment
Mandibol Entertainment
Pieces Interactive
Piktiv
Shortfuse Games
Stunlock Studios
Triolith Entertainment

LIDKÖPING
SimBin

TROLLHÄTTAN
Bearded Ladies

GOTHENBURG
1337 Game Design
EPOS
Free Lunch Design
Hello There
Image & Form International
Legendo Entertainment
MindArk
Mindshed
Outbreak Studios
Räven AB
Zoink Games

HELSINGBORG
Frictional Games
Localize Direct
Pixelbite

MALMÖ
Binary Peak
Blastdoor Interactive
Illusion Labs
Imperial Games Studio
Junebud
Leripa
Mandelform
Ozma
Planeto
ProCloud
Redikod
SouthEnd Interactive
Spelkultur Malmö
Starvault
Swedish Game Development
Ubisoft Massive

KARLSHAMN
12 O'Clock Studios
Custom Red
Tarsier Studios

LULEÅ
Velcro Interactive

SKELLEFTEÅ
Arrowhead

UMEÅ
Coldwood Interactive
Dohi Sweden
Ice Concept Studios
Level Eight
Oryx Simulations
Turborilla
Zordix

SUNDSVALL
Corncrow Games

FALUN
AE Interactive Studios
Deadbug Games
Megafront
Tension
Tenstar

BORLÄNGE
Communisport

UPPSALA
Aniware
Doctor Entertainment
Game-Hosting GH
Hansoft
Imagination Studios
MachineGames Sweden
Pikkotekk
Starbreeze

KÖPING
LS Entertainment

STRÄNGNÄS
Primus Appus

NORRKÖPING
Goes International

VISBY
Three Gates
Zeal Game Studio

MOTALA
Code Club

LINKÖPING
Boldai
Donya Labs
ManagerZone
Power Challenge

REVENUES OF FREE-TO-PLAY

King.com is the world's second largest developer of social games, ie games on Facebook or similar social networks. The company has developed over 150 titles with an approximate user base of 50 million players each month. King.com has focused more on Facebook since 2010, but also publishes its games on mobile phones, its own website and various internet portals. Since the games are free-to-play, revenue is primarily generated through micro transactions. Facebook has over 955 million users, nearly one-seventh of the world population, and is a perfect target audience for casual games since the users have already established themselves digitally in an online community.

Free Lunch Design has developed two distinct titles for Facebook, *Icy Tower* and *Hello Adventure*. The latter was nominated for the 2012 Golden Joystick Awards for Best Browser Game. Icy Tower has in turn been played by 20 million users on social networks and enjoys over a million users each month.

Although King.com's numbers impress, it is difficult to compare statistics between different types of free-to-play games. Free-to-play is in itself not a genre and can be as varied as any other game. Easy Studios' *Battlefield Heroes* has 13.5 million registered users, a small figure compared to the user base of King.com or Stardoll, but with the type of game and payment model considered – a game in which each user on average plays much longer than gaming sessions for social games – Easy's users may spend more time in total.

According to a recent report from Japanese Enterbrain, expected revenues of games on social networks will rise from 2.6 billion USD in 2011 to 3.4 billion in 2012. Unlike Western markets, it is not primarily Zynga and games on Facebook that accounts for the increase, but rather games for social networks on mobile phones. A majority of the forecasted increase is attributed to games on a free-to-play

model, generating revenues from consumers who pay for premium content; in-app purchases that extend and/or enhances the gaming experience. In Asia, there are more social networks in use than on Western markets, where Facebook is dominant. It is also important to distinguish between the most popular social networks and the most popular social networks for gaming. Although Facebook has more Japanese users than Gree, the latter has more gamers. There is no longer any doubt that you can make money on free-to-play games. The question is rather how it works, and what standards are available to account for the impact when traditional sales with packaged goods do not take place.

Bild: *Hello Adventure,* Free Lunch Design

BENCHMARKS

There is a countless number of ways for how to measure the revenues of a free-to-play game. In addition, many developers have an internal system for how to do this, while they rarely comment on monetization, which hampers a general estimation. This is nonetheless an attempt to collect some of the most common and powerful means of measurement as an indication of the popularity and revenues of free-to-play.

A common denominator of many free-to-play titles is a focus on the number of registered users and how many of them daily or monthly play a particular game. This serves as a benchmark for potential advertising revenues, if advertising is the model at play. Another important factor is the gamers that pay for more content, which can be measured in Monthly Average Revenue per Paying User. You can also derive revenues generally amongst both paying and non-paying users by measuring Monthly Average Revenue per User.

“

INDUSTRY EXPERTS # 2

2013 will be a transitional year for many social and free-to-play game companies. A lot of developers and publishers, including Free Lunch Design, are moving from the web to focus on smartphones and tablets. The majority of the App Stores top grossing apps have already shifted from premium to freemium. The biggest Facebook developers along with the largest Japanese social networks are pushing headfirst into the western mobile market. The biggest challenges will be game discovery and how to handle escalating user acquisitions costs. At Free Lunch Design, we are working with our biggest inhouse IP's (Icy Tower and Dark Nebula) for iOS and Android. We'll work with both freemium and premium as business model. In combination with our own social media campaigns we will partner with relevant advertising companies to maximize the launch and its "burst" effect on the App Store charts. ***- Magnus Alm, CEO, Free Lunch Design***

•Total registrations
•MAU – Monthly Active Users
•DAU –Daily Active Users
•MARPU – Monthly Average Revenue Per User
•MARPPU –Monthly Average Revenue Per Paying User

Comparisons between different platforms or social networks is still difficult because developers sometimes use in-house systems for measuring unique visitors, and have different definitions of what constitutes a "unique" visitor.

To simplify, one can say that there are essentially two sources of income. One is through ads that appear within the games, in loading screens or menus. In those cases, DAU is a good benchmark that gives an indication of how many users play daily. The other source is the consumers who pay for subscription fees or micro transactions for premium content. This can be measured by MARPU and MARPPU, ie how much revenue a user on average generates monthly.

Another measurement that may come in handy for ad-based free-to-play is eCPM. CPM (Cost per Mille; cost for a thousand ad impressions) is a benchmark long used for advertisement in radio, television, newspapers, and the web; for calculating the profitability and revenues of campaigns. Payments to the publisher/developer of a game are then based on views per thousand people.

CPM

•Total cost for running the ad is $ 40,000
•The total estimated audience is 5,000,000 people
•CPM is calculated as: (40 000/5 000 000)*1000 = $ 8 per thousand views

Choosing a CPM campaign over a click-based ditto may be done for a number of reasons. It has usually to do with the kind of media in use and the nature of the ads. In many cases, it is more appropriate that someone just sees and ad rather than clicks on it, especially in video games.

eCPM (Effective Cost per Mille; effective cost per thousand ad impressions) is used by developers as a benchmark to compare what effect a CPM ad would have given were it a Cost per Click (CPC) or Cost per Acquisition (CPA) campaign instead, in order to focus on the form that generates the best revenue for the time being.

eCPM

•There are two banners: "Apps" and "Games"
•The publisher earns $ 1 per click.
•Both banners were published for the duration of one week
•"Apps" was viewed by 5000 visitors from which 50 clicked on it
•"Games" was also viewed by 5000 visitors from which 115 clicked on it
•"Apps" has an eCPM of $ 10 (50/5000*1000)
•"Games" has an eCPM of $ 23 (115/5000*1000)

Games which in these cases act as advertisement space are thus given money by the advertiser per thousand impressions depending on the above, and in some cases, other variables.

NEW SERVICES, NEW PIRACY

Digital services are sometimes considered to have less risk of piracy, and there are certainly advantages over physical distribution that is easily subjected to unauthorized dissemination through file sharing or pirated discs. But, even digital services can be exposed to various types of intrusion and unauthorized use, even if it is usually a case of hacking or trademark infringement rather than copyright infringement. Examples of

Bubble Witch Saga, King.com

INDUSTRY EXPERTS #3

When I joined the industry in the mid 90's it was said Sweden had great engineers but lacked in art and game design. These days Sweden clearly is one of the most vibrant and multifaceted areas in the world for game development and publishing featuring and amazing range from some of the best AAA-studios to some of the world's biggest social games to some of the most successful indie games. I am very grateful being at Stardoll, which I consider to be one of several great examples of the fact that the Swedish game industry will prevail by continuously adapting to the increasingly rapidly changing landscape of computer games. In the next year we are going to see a lot of the old truths in our industry being questioned and new innovative games and businesses will spring up thanks to new platforms like Ouya and slowly the establishment of "smart TV's" and new business models like streaming games rented by the hour and the second generation of free to play games. It's going to be very exciting and I feel blessed to be smacked in the middle of it all. ***- Tobias Sjögren, VP, Mobile Games Business Development, Stardoll***

this are fake websites that sell accounts to popular games, hacked user accounts, pirate servers for online games and hacked credit card details. Paid apps on mobile marketplaces are also affected, though more by traditional file sharing via established torrent and bitlocker services. Several game developers have testified in international press about how logins on their mobile servers are many times higher than the number of actual apps sold, confirming the picture. Digital services thus have many advantages for game developers, but it is no final solution to the problem of unauthorized usage.

THE VALUE CHAIN

There are basically two main value chains for video games: physical and digital distribution. The former include games sold at retail or via mail order, on discs or other physical storage media. This distribution model is based on high prices, high volume, high development costs and large investments in marketing. The game developer typically assigns the rights to a publisher, for royalty advances that constitutes the development budget, having the publisher responsible for marketing and distribution. The developer's revenue is then only a fraction of the consumer's investment. Today, developers adhering to this business model are commonly owned by a publisher. Digital distribution is on the other hand characterized by low prices (often free-to-play or freemium), low volumes and low investment costs. The developer either sells the games directly to the audience or goes through an intermediary, such as Steam, GamersGate, App Store, Google Play, Xbox Live Arcade and others. The middleman usually takes 30% of revenues, and normally does not contribute with investments in communication.

This report studies developer revenues, but that should not be confused with the value of a game's total sales in the value chain. For game developers operating in the digital value chain, most of the consumers' payments are visible in the company's annual report, but for those who sell games mainly through physical distribution, the actual sales tend to be four to ten times greater. In addition, international business groups account their revenues in different ways that further complicates a fair assessment.

FUTURE

That the Swedish video games industry in the coming years is endowed with another sensation of Mojang's proportions is not very likely. Even so, everything indicates that Swedish game developers will continue to grow in 2012, the already biggest developers in particular. A selection: DICE has since launched *Battlefield 3* and continues to work on related DLC, Starbreeze is developing a downloadable game with filmmaker Josef Fares, Mojang has released *Minecraft* on Xbox Live Arcade, smashing previous records on the platform, Angry Birds developer Rovio has opened a branch office in Stockholm, Ngmoco Sweden develops free-to-play games for Japanese DeNA Mobage's social gaming platform, Fatshark is releasing its first mobile game, and

This pyramid examplifies how King.com divides its audience by different revenue models. Everyone playes the same game, but different approaches are required to make it profitable.

- Heavy player: The most ardent and skillful players gather at the top of the pyramid. They play for the sake of challenge and participate in various tournaments.
- Paying player: These players do not want ads in their games. They buy virtual items to facilitate or enhance the gameplay.
- Average player: The majority of players assemble at the bottom of the pyramid. They are casual gamers who want to play for free and thus generate revenue through ads.

NORDIC COMPANIES	
Denmark (2012)	83
Finland (2011)	75
Iceland (2011)	10
Norway (2011)	35
Sweden (2011)	117
Nordic Total	**320**

N:o of companies

NORDIC TURNOVER	
Denmark (2010)	51
Finland (2011)	165
Iceland (2011)	50
Norway (2009)	30
Sweden (2011)	257
Nordic Total	**553**

M Euro

NORDIC EMPLOYEES	
Denmark (2010)	578
Finland (2011)	1300
Iceland (2011)	470
Norway (2011)	200
Sweden (2011)	1512
Nordic Total	**4060**

N:o of employees

recent start-up Machine Games is in full swing to develop new AAA titles. Additionally, Southend Interactive has begun the development of the recently announced *Sacred Citadel*, a spin-off title in the Sacred series, which now awaits its third iteration. The game will be released on PSN, XBLA, Steam and other digital distribution services.

A likely scenario is that more and more game developers will self-publish in the future. In Britain, 70 percent of those who do not self-publish their games (27 % of the total) claim they will do so in the future (State of the UK Video Game Development Sector 2010).

According to a study by the European Games Developer Federation (European Online Game Survey 2012) 34 percent of concerned developers currently self-publish. Several of the recent mobile game developers self-publish via App Store and Google Play. Paradox Interactive and Mojang are two well-known examples who have successfully self-published their games. Distribution services typically take a percentage of profits or a lump sum to publish a game, where additional costs may apply if the game is prepared extra space in various marketing campaigns.

The employment within the Swedish games industry is also expected to increase. Paradox Interactive intends to hire nearly 70 people during 2012-2013. Online-focused Paradox North will employ about 50 of these, and Paradox South estimates 10-20 new job opportunities. In the meantime King.com opens an office in Malmö and employs nearly 150 people.

Avalanche Studios is working on no less than three parallel AAA productions based on both licenses and original IP. Mojang also has its sight on the future, currently working on fantasy card game *Scrolls* alongside the enigmatically titled space game *0x10c*. Minecon 2012 takes place in Paris.

WORLDWIDE

International predictions say that the industry will continue to grow at about 7.2 percent annually until 2016 (PwC – Global Entertainment and Media Outlook 2012-2016), to a total value of approximately 83 billion USD (consumer expenditures). Driven by worldwide broadband development, digitally distributed games are growing rapidly by approximately 15 percent per year until 2015. That gamers buy digital services rather than physical products is a mantra well-consistent with reality. The strongest driving factor for the international industry's growth will be mobile gaming. PwC estimates that 2.9 billion people will use their mobile phones for internet access in 2016, of which one billion in China alone. A doubling in just five years.

Cisco predicts that global internet traffic will quadruple by 2015, with a CAGR of 32 percent (2010-2015). Global internet usage in 2011 consisted of over 2.2 billion people, compared to about 1.1 billion in 2006 (ITU). It is thus no wonder that free-to-play and online/browser-based gaming has quickly become popular among consumers and the developers and distributors who have found ways to monetize this wave of new games. In addition, half of the population of the world's developed countries had an active internet subscription for their mobile phones in 2011. Furthermore, Cisco believes that the percentage of Wi-Fi and other wireless internet access on mobile phones will exceed wired devices in 2015. This reflects the markets where smartphones constitutes the bulk of a consumer's internet usage, not least in China and Japan. Emerging economies are generally synonymous with emerging video game markets, as seen in Brazil and India.

Along with the Wii U, new versions of PlayStation and Xbox are expected over the next few years. The current generation of consoles has been unusually long and during the first years of the coming generation, developers once again have the

Pic: Europa Universalis IV (in development), Paradox Interactive opportunity to establish new AAA franchises. At the same time, console manufacturers have the chance to rekindle an interest in their respective digital marketplaces, with lessons they have learned over the past years. The trend towards digital distribution has improved turnover and profits, primarily by attracting new audiences to gaming. The trend is expected to continue as more variety and greater diversity becomes apparent in content and distribution methods.

INTERNATIONAL EXPANSIONS

The video games industry becomes increasingly global and clients and customers of Swedish developers have long since existed on export markets. Several of the bigger Swedish companies have in line with this chosen to increase their presence in other countries. Online games developer MindArk has besides its office in Gothenburg offices in both Singapore and Mexico. Motion capture and animation studio Imagination Studios is other than Uppsala locally represented in London and Belgrade. App developer G5 Entertainment is headquartered in Stockholm with marketing offices in the US and development offices in Moscow and Ukrainian Kharkiv. Online developer Stardoll has besides its Stockholm headquarters also offices in the US, UK, France and Germany.

Game developer-oriented agency DDM has in addition to the head-quarters in American Northampton and its Stockholm office, local establishments in Boston, San Fransico, Manchester and Osaka. Both Avalanche Studios and Paradox Interactive have offices in New York.

Similarly, foreign companies have seen the potential of Swedish developers and either opened up offices in the country or acquired local studios. DICE is owned by Electronic Arts, Massive Entertainment by Ubisoft and Machine Games by ZeniMax Media. Moreover both Rovio and Ngmoco are establishing offices in Stockholm. Meanwhile, Power Challenge, developer of sports-based online games, has in addition to the branch in Linköping, offices in London and New York.

King.com is a global company in the truest sense. The developer has in addition to its Stockholm office and emerging Malmö studio branched out to London, Hamburg, Barcelona, Milan, Malta, Bucharest, and San Francisco.

INDUSTRY EXPERTS #4

I think we've seen an upswing for Indie games, and I think that's something that will grow stronger in the near future. The big AAA titles and MMO's are having a hard time; they can't be as sure of what will actually make a profit any longer. Smaller games are a lot less risky, which is good for both the developer and the player, as that allows for much greater creativity. Thanks to digital distribution that area of the industry will continue to grow as niche games continue to reach their target groups a lot easier. Over the next twelve months I hope to hear more regarding the next generation of consoles. My wish is that they will have solved the diplomacy around being able to sell games online on consoles as well. Afterall, who needs more boxes taking up more space at home? A few collectors' editions, sure, but the life of a gamer would be so much easier if we could just download and store the games digitally.

- Linda Kiby Producer, Paradox Development Studio

Bloodline Champions, Stunlock Studios

GAME SALES

Below is a selection of Swedish bestsellers in the last decade. The compilation still lists several older retail games, but as the sales figures for digitally distributed titles become known, more and more of those will enrich the list. Sales figures are gathered from annual reports, from information directly from the developers and publishers, as well as third party sources such as NPD or VGchartz. "Released" refers to the year of release and "Data" shows from which year the information was taken.

Of Minecraft's approximately 9 million copies sold, 6 million consists of the PC version.

TITLE	DEVELOPER	SALES	RELEASED	DATA
Battlefield 3	DICE	15 000 000	2011	2012
Battlefield: Bad Company 2	DICE	12 000 000	2010	2012
Battlefield 2	DICE	11 000 000	2005	2011
Minecraft	Mojang	9 000 000	2010*	2012
Battlefield 1942	DICE	3 000 000	2002	2004
Battlefield: Bad Company	DICE	2 320 000	2008	2010
Mirror's Edge	DICE	2 000 000	2008	2012
Just Cause 2	Avalanche Studios	1 500 000	2010	2010
Battlefield 1943	DICE	1 444 000	2009	2010
Battlefield 2: Modern Combat	DICE	1 330 000	2005	2010
Just Cause	Avalanche Studios	1 300 000	2006	2010
Magicka	Arrowhead	1 300 000	2011	2012
The Darkness	Starbreeze	1 137 000	2007	2011
Battlefield Vietnam	DICE	1 000 000	2004	2004
Rallisport Challenge	DICE	900 000	2002	2006
World's Scariest Police Chases	UDS	800 000	2001	2010
Headhunter	Amuze	700 000	2001	2010
Bionic Commando Rearmed	Grin	699 000	2008	2010
The Chronicles of Riddick: Assault on Dark Athena	Starbreeze	691 000	2009	2011
World in Conflict	Ubisoft Massive	650 000	2007	2010
Terminator Salvation	Grin	620 000	2009	2010
Krakels ABC: Det magiska äventyret	Pan Vision	608 369	1999	2010
Krakels ABC: Storm över Allemansland	Pan Vision	608 369	1998	2010
Backpacker 2	Aniware	600 000	1997	2010
Bionic Commando	Grin	550 000	2009	2009
Payday: The Heist	Overkill Software	520 000	2011	2012

**Beta version*

AVERAGE REVIEW SCORES

Swedish-developed video games are not only worthy of attention for their high sales. Several titles have over the years received excellent reviews from gaming media all across the world. The Metacritic rating serves as a more or less standardized industry measure of a game's qualities. The Metacritic database collects ratings from a variety of media and publications in several different countries. Unlike traditional average rating systems, Metacritic uses a system in which some media's score has greater impact on the Metacritic score. Listed below is a selection of Swedish games from 2002 and onwards.

TITLE	DEVELOPER	METASCORE	PLATFORM	YEAR
Minecraft	Mojang	93	PC	2011
Battlefield 3	DICE	89	PC	2011
Magicka	Arrowhead	74	PC	2011
Hamilton's Great Adventure	Fatshark	77	PC	2011
Ilomilo	Southend Interactive	81	Xbox 360	2010
Amnesia: The Dark Descent	Frictional Games	85	PC	2010
Battlefield: Bad Company 2	DICE	88	PS3	2010
Just Cause 2	Avalanche Studios	84	PC	2010
Puzzle Dimension	Doctor Entertainment	83	PC	2010
Battlefield 1943	DICE	84	Xbox 360	2009
Hearts of Iron 3	Paradox Interactive	77	PC	2009
Lode Runner	Southend Interactive	76	Xbox 360	2009
Mirror's Edge	DICE	81	PC	2009
R-Type: Dimensions	Southend Interactive	76	Xbox 360	2009
The Chronicles of Riddick: Assault on Dark Athena	Starbreeze	82	Xbox 360	2009
Battlefield: Bad Company	DICE	84	PS3	2008
Bionic Commando: Rearmed	Grin	87	PS3	2008
GTR Evolution	SimBin	83	PC	2008
Europa Universalis 3	Paradox Interactive	83	PC	2007
Race 07 Official WTCC Game	SimBin	83	PC	2007
The Darkness	Starbreeze	82	Xbox 360	2007
World in Conflict	Ubisoft Massive	89	PC	2007
GTR 2 FIA GT Racing Game	SimBin	90	PC	2006
Race: The WTCC Game	SimBin	81	PC	2006
Battlefield 2	DICE	91	PC	2005
GTR FIA GT Racing Game	SimBin	85	PC	2005
Hearts of Iron 2	Paradox Interactive	83	PC	2005
Ground Control 2	Ubisoft Massive	80	PC	2004
Rallisport Challenge 2	DICE	87	Xbox	2004
The Chronicles of Riddick: Escape from Butcher Bay	Starbreeze	90	PC	2004
Battlefield 1942	DICE	89	PC	2002
Rallisport Challenge	DICE	87	Xbox	2002

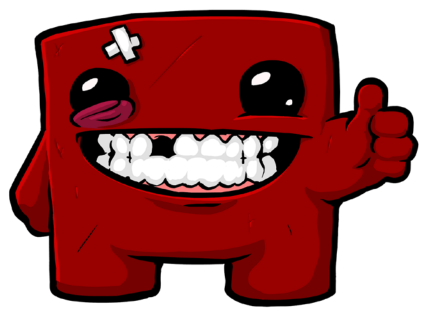
The listed Metascore were read on 1 September 2012. For more information, please visit: http://www.metacritic.com.

INNOVATIONS IN MARKETING

This report shows how the established physical distribution channel is being overshadowed by the growing market for digital services. It is nonetheless worth pointing out that the latter, in many cases, covers another kind of gaming experiences than the physical market. Mobile games are very different in design, scope, and game mechanics than a typical game for consoles; compare *Battlefield 3* with *Minecraft* to take an example among the recent Swedish successes in respective channels. Franchises like Battlefield, which exists in in both AAA and casual versions, has a distinctively different design in the different channels. *Battlefield Heroes* is the free-to-play online version of Battlefield and has a more playful, less realistic style than *Battlefield 3*. There is only in certain digital sales that the games are the same as in physical distribution, such as parts of the supply of online stores like GamersGate.

Digital distribution enables innovation on multiple levels, beyond matters of game design, not least in regards to marketing and finance. By keeping in touch with the audience through forums and social media, game developers may involve gamers in the development process, which companies like Paradox and Mojang successfully leveraged to gain both loyal users and ambassadors who can to help spread information about the company and its games. Popular phenomena such as crowdsourcing (users create content) and crowdfunding (users contribute funding) also occurs in the world of video games.

Humble Indie Bundle is an initiative launched in 2010 by the American independent game developer Wolfire Games, now managed by Humble Bundle Inc. It consists of a series of video game collections, or "bundles", that are on sale for a set amount of time. A number of independent developers typically participate with one game each and the bundles are then sold by the motto of "pay-what-you-want". The buyer may thusly decide how much he or she wants to pay for a certain collection and



then divides the investment into three categories: Developers, Humble Indie Bundle Tip, and Charity. An investment of $ 20 may for example be divided by 10 to the developers, 5 to the service itself and 5 to the various charities. The initiative turned out well, both financially and publicity-wise. In August 2012, the fourteen then-released bundles had generated over $ 19.5 million in revenue.

Throughout the years, acclaimed games like *World of Goo*, *Machinarium*, *Super Meat Boy*, *Limbo*, and *Amnesia: The Dark Descent* have been included. Swedish developers that have participated are Mojang, Oxeye Game Studio and Frictional Games.

Steam has also released Indie-centered bundles, although its most famous campaign is likely the Steam Summer Sale. Apart from a number of Indie and AAA games that receive temporary price reductions, users can participate and vote for the games they want to give a price-cut for one day of the campaign. Valve's Gabe Newell has repeatedly commented on the importance of a continued price experimentation on digital channels.

Kickstarter, the most talked-about crowdfunding platform in gaming circles, is a relatively new phenomenon to the general public. Crowdfunding allows potential users to co-finance a project in its development stage. A project's fund raising phase typically runs the course of one month. A famous example of Kickstarter-projects is Double Fine Adventure. Double Fine (*Psychonauts*, *Brütal Legend*, *Stacking*) announced its desire to develop an old school adventure game on 8 February 2012. The funding target was set at $ 400,000. Private co-financiers, known as "backers", were encouraged to make an investment according to different intervals with the promise of equivalent future rewards. Backers are typically encouraged to be active during the

Pic: *Super Meat Boy*, Team Meat

INDUSTRY EXPERTS #5

The coming year will be very exciting as we get to see how the tablet market develops and positions itself in relation to the PC and Smart TV. We will also see more "ubiquitous games" that can be played with and against each other across multiple platforms. Sony's acquisition of Gaikai reinforces my belief that we will soon see the last console generation, and what we then see is that the screen turns into a console. The power struggle between Microsoft, Sony and Google (Android) will be exciting to follow since it will go a long way in determining what future gaming platforms and business models will look like. Nintendo is faced with a defining year with the release of the Wii U, and the likelihood that they are shifting towards becoming purely a software company gets bigger and bigger every year. Talking about business models, free-to-play will to continue to grow, but pay-and-play games will also move over to a more service-oriented business model with more small releases instead of one or a few major updates, which will result in the business models being closer to each other. At Paradox we see a very positive trend towards streaming, download, and free-to-play as this has so far led to more competition and a wider range of consumers. 2012 has been a year of consolidation with approximately 15-20% growth for Paradox, but we look forward to another crazy year of growth in 2013 with about 50% growth in both turnover and profit.

- Fredrik Wester, CEO, Paradox Interactive

development stage in the respective project's forums and generally receive a greater insight into the process than the average stakeholder. In Double Fine's case, backers who paid at least $ 15 were offered a digital copy of the game when it eventually launches. This was followed by intervals of 30, 60, 100 and all the way up to $ 10 000. The rewards are often creatively and personally designed. In this case, you could get a portrait of yourself drawn by the game's designer, autographed posters, a deluxe edition of the game, and for the more affluent speculators: lunch with the developers. On March 13, it was clear that the project had exceeded its goal and raised no less than $ 3,300,000 from over 87,000 backers (who are refunded for projects that do not reach their goal, but are not refunded for initiated projects that get cancelled). Double Fine Adventure is expected to launch during Q2 of 2013. Projects that far exceed their specified objectives often expand their plans for the game's design in progressive tiers as the budget increases. For example, a game that reaches 20% above its target can promise more levels and content, and if it reaches 40%, a new story arc etc.

Following Double Fine's successful and medially renowned campaign, a stream of inspired developers submitted their own projects to Kickstarter: a sequel to cult game *Wasteland*, Swedish Three Gates' *Legends of Aethereus*, and console project Ouya are some successful examples. It remains to be seen how the first wave of Kickstarter-funded game projects will fare on the regular market.

Other than a mean to raise money, crowdfunding is an excellent way to predict how much interest a game will see in the most hardcore players. Campaigns in Kickstarter and other crowdfunding platforms are spread mainly from user to user via social media and word of mouth.

CONCLUSION

2011 was the best year ever for Swedish game developers. The success can partially be attributed to the rise of digital distribution, gone from potential into tangible reality. Another reason is that new audiences have opened their eyes to gaming – female gamers have grown substantially in number over a couple of years. The third and single most obvious reason is that individual companies have progressed remarkably. Mojang with *Minecraft* is perhaps the most famous example, but King.com and Stardoll have also grown substantially, and DICE released the much awaited and successful *Battlefield 3*. Other heavy industry players like Paradox Interactive, Avalanche Studios and Massive Entertainment continue to have a strong position. Several newer mid-size companies have also enjoyed a splendid development, perhaps most clearly Fatshark and Tarsier.

Thanks to the amplitude of the Swedish industry's success, developers are well-poised for the future, and by all accounts 2012 will mark another record year. Major limitations of the favorable development are the availability of skilled personnel and capital investments.

METHOD

This report is based on a compilation of annual reports from the Companies Registration Office's Enterprise Records, including companies that have video game development or specialized middleware as a significant part of their operations. Companies mainly focused on poker, gambling or casino games are not included. The method has several shortcomings: other types of corporate structures than joint-stock companies (Swedish "AB") fall outside the scope, as well as companies operating in Sweden but are registered in another country. Therefore, there is a grey zone of game developers not included in this report that would have provided slightly higher numbers to all key figures disclosed. The strength of this method is that the basis is audited and publicly approved by authority officials.

There are also problems with non-game-related parent companies; more specifically when the subsidiary's game developing operations are recorded in the owner company's accounts, making it indiscernible for the Game Developer Index. A problem shared with most trade associations.

In cases where annual reports were unavailable, the previous year's figures of turnover, profit and employees were used. These companies are: SimBin, LS Entertainment and AE interactive.

The annual reports are in SEK, but for translation purposes the currency has been converted into Euro. One Euro was considered to be worth 9 Swedish Krona (SEK), as this was the approximate average exchange rate during 2011.

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www.swedishgamesindustry.com.

Jacob Kroon
Information/Analyst
jacob.kroon@dataspelsbranschen.se

Per Strömbäck
Spokesperson
per.stromback@dataspelsbranschen.se

Dataspelsbranschen Swedish Games Industry
Klara norra kyrkog 31, Box 22307
SE-104 22 Stockholm
www.dataspelsbranschen.se

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