GAME DEVELOPER INDEX **2012**

SWEDISH GAMES INDUSTRY'S REPORTS 2013

DATASPELSBRANSCHEN
SWEDISH GAMES INDUSTRY

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Cover: *Mad Max* (in development), Avalanche Studios

EXECUTIVE SUMMARY

The Game Developer Index maps, reports and analyzes the Swedish game developers' annual operations and international trends by consolidating their respective annual company accounts. Swedish game development is an export industry and operates in a highly globalized market. In just a few decades the Swedish gaming industry has grown from a hobby for enthusiasts into a global industry with cultural and economic importance. The Game Developer Index 2012 compiles Swedish company accounts for the most recently reported fiscal year. The report highlights:

- Swedish game developers' turnover grew by 60 percent to 414 million euro in 2012. A 215% increase from 2010 to 2012.

- Most game developer companies (~60 percent) are profitable and the industry reported a combined profit for the fourth consecutive year.

- Job creation and employment is up by 30 percent. That's 455 full-time positions and 1967 employees total.

- The number of women employed in the industry increased by 39 percent, resulting in a total share of 15 percent.

- The average annual growth rate (CAGR) from 2006 to 2012 was 34 percent.

- Thirty-five new companies have emerged. There are now 145 active companies, an increase of 24 percent.

- Game development is a growth industry. Over half of all companies were registered post-2008.

- The Swedish game developer is characterized by breadth and quality. Sweden has the world's leading developers of AAA, digital distribution, social games, mobile games and specialized subcontractors.

The outlook is for continued growth in 2013. External issues and challenges are access to capital, access to expertise, and regulations around digital markets that are out of step with current industry developments.

WORDLIST

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.

Micropayment: 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.

PREFACE

ANOTHER RECORD YEAR

Twenty-twelve was yet another record year for Swedish game developers and 2013 is looking to be even better. The enormous success of the last few years means the most exciting conclusion of this report is not whether the figures have risen, but how much. This is of course a pleasant situation for a business to be in, and the result of the hard work of those involved. Although Swedish computer games have had a good trajectory in the last decades, it is only a few years since the Lehman crash and the subsequent financial crisis rattled our business too, with big redundancies and reduced sales as a consequence. Since then, the companies have adapted with less reliance on assignments from publishers (who depend on credits from the financial markets) and more on direct revenues from the audience.

Through the digital sales channels of mobiles, the internet and social media, new audiences have been introduced and today everybody can play. The technical development of touch screens, tablets and smartphones has made gaming more accessible, also to those who are not used handling an advanced hand control with several buttons. Today, games and gamers are on every train, bus and soon in every home. Computer games have in less than a decade gone from a hobby of enthusiasts to real public entertainment.

Sweden is one of the world's main games exporters, among the ten biggest in the world. Calculated per capita we top the list together with our neighbors Finland and Iceland. Relatively speaking we are unique in having international success in all segments: console, online, mobile, social media and tools/middleware. The Swedish company culture is a big part of the success; game development is team work and the ability to co-operate in groups is a characteristic of the Swedish workplace culture. Culturally, the legacy of Luther and Jante's tall-poppy-syndrome is important in international competition; we work hard but believe we can become even better. In addition, Swedish game developers are exceptionally diverse; many companies have employees of over 30 different nationalities.

The number of female employees in the gaming companies is continuing to grow with the number of women employed increasing faster than the total number of employees. The proportion of women is also increasing. There is still a long way to go to reach a passable gender distribution; workplace equality is a high priority both for affiliated companies and the business organization.

A dark cloud on the horizon is the digital competition issue, where a small number of players dominate the global market for mobile games and social media, leaving developers in a weak bargaining position. Infringements of rights used to be piracy, but today it is equally about infringement in the form of hacked servers or trademark infringement whereby unscrupulous competitors sell copies of successful game titles. The legal security of the digital channels remains weak. There are also certain growing pains when it comes to adapting laws and regulations to global and digital channels, the double VAT charge on apps in 2011 is a clear example. Luckily the Swedish tax authorities changed their interpretation on that point but further, similar issues can be expected, for example what rules will apply to under-age online gamers.

Everything points to the continued growth of Swedish game developers, however. It is not demand that constitutes the limit, as this appears insatiable. Rather, it is access to capital and skill that creates bottlenecks in the development. The companies would be able to expand even faster in the right conditions. There are good examples in our vicinity. Finland has a state system of soft loans that encourages foreign investments, something which Sweden should adopt.

Game developers are good examples of so called "born globals", companies that are global from inception. The audience is global, as are most of the business processes: recruitment, financing, marketing, subcontractors and there are a high proportion of foreign owners. The world also comes to Sweden, during 2012 one of the most successful gaming companies, Rovio (of *Angry Birds* fame) established an office in Stockholm.

The start-up scene is strong; the report shows around thirty new limited companies during 2012. It is indicative of dynamism in the business that several young companies have enjoyed international success in a short time. *Minecraft* is of course a spectacular example, with total revenues of over 220 million euro during the first two years, but there are a number of additional impressive young companies that within a few years have reached a turnover of around one million euro and employ 15-20 staff. The game development education in universities and incubator like The Game Incubator in Skövde are particularly prominent in developing successful young companies.

Twenty-thirteen will be another exciting year, not least with the launch of the new PlayStation and Xbox. Everything is pointing towards new records being set.

Stockholm, September 2013
Per Strömbäck, Spokesperson
Swedish Games Industry

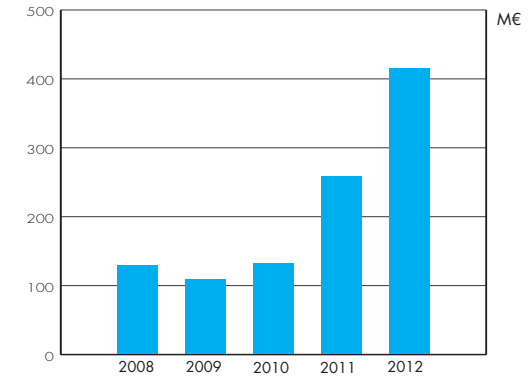
TURNOVER AND PROFIT

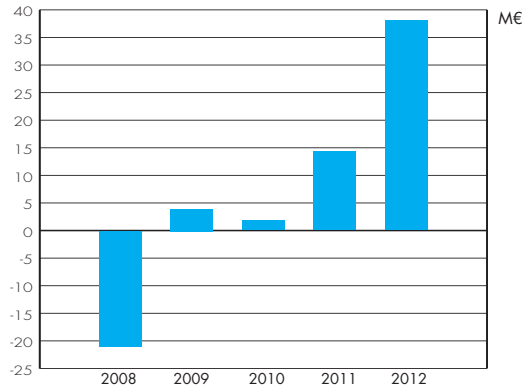
The Swedish game boom continues. All key figures point upwards and the industry grew by over 215 percent from 2010 to 2012. With reasonable expectations, last year's near twofold increase will not be beaten in 2012, but is a sign of strength that the industry continues to grow after such a record year – and that it grows with a reassuring 60 percent. The total turnover in 2012 was 414 million euro.

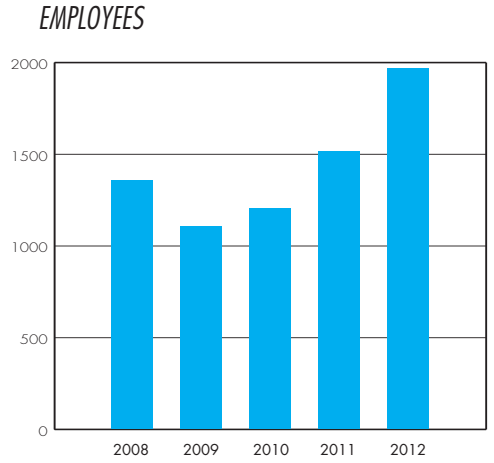
Profits rose 163 percent to 38 million and a growing majority of companies are profitable. Employment increased by 30 percent, totaling 1967 jobs, or 450 more full-time jobs since 2011. The Swedish industry has never reported a similar increase, which trumps last year's growth with over 100 new jobs created. The number of female employees increased by 39 percent, resulting in 293 full-time employees, 81 more than last year. The overall proportion of women has now reached 15 percent.

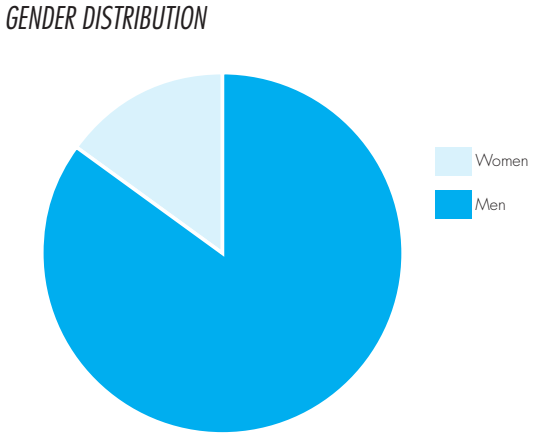
That the digital and mobile evolution has played a major role in the industry's positive momentum is unquestionable, but when all is said and done it's about the ability to develop games that engage the audience, and that is not in short supply among Swedish developers.

Mojang continues to play a significant part in the industry's success. With a turnover of 168 million euro they have not only increased the company's turnover by 110 million, but they also represent 40 percent of the industry's combined turnover. The interest in *Minecraft* has hardly diminished, and when the game was launched on the Xbox 360 for digital download, it quickly became the bestselling title ever on Xbox Live Arcade. With good margins a feat that prevails to this day.









KEY FIGURES	2012	2011	2010	2009	2008	2007	2006
N:o of Companies	145 (+24%)	117 (+10%)	106 (+5%)	101 (-3%)	104 (+14%)	91 (+34%)	68
Turnover	414M (+60%)	257.4M (+96%)	131.2M (+22%)	107.4M (-17%)	128.7M (+21%)	106.6M (+49%)	71.3M
T.O per Employee	210K (+23%)	170.2K (+56%)	109.1K (+12%)	97.4K (+3%)	95.1K (+3%)	92.3K (+5%)	87.8K
Profit	38M (+164%)	14.2M (+747%)	1.7M (-59%)	4.1M (+120%)	-20.9M (-1121%)	-1.7M (+33%)	-2.6M
N:o of Employees	1967 (+30%)	1512 (+26%)	1203 (+9,2%)	1102 (-19%)	1353 (+17%)	1153 (+42%)	813
Men	1674 (85%)	1300 (86%)	1082 (90%)	993 (90%)	1217 (90%)	1034 (90%)	702 (86%)
Women	293 (15%)	212 (14%)	121 (10%)	109 (10%)	135 (10%)	119 (10%)	107 (14%)

All numbers in €

In July 2012, the company also launched Minecraft-themed Lego.

Even disregarding Mojang's incomparable success, it is clear that the Swedish industry goes from strength-to-strength. In 2011-2012 growth would have been measured at 25 percent – in other words, more than most industries could boast.

Since 2013 King reached number one on Facebook beating former frontrunner Zynga with titles such as *Bubble Witch Saga* and *Candy Crush Saga*. This path had of course been staked out already in 2012, which is evident by the studio's figures. Turnover increased by almost 9 million during the year and recent victories include top App Store rankings. Today, Candy Crush Saga is one of the most played games in the world.

DICE grows rapidly and reported a turnover in excess of 55 million, a natural corollary of the studio's success with *Battlefield 3*, its publisher Electronic Art's fastest selling game of all time. Over 17 million copies have been sold to date. DICE currently has more AAA projects in production than ever before.

MachineGames is a new star in the firmament of Swedish AAA. The studio is currently developing its first game, *Wolfenstein: The New Order*, on behalf of owner ZeniMax Media. This does not stop the company from contributing with an impressive turnover of 7.6 million, an increase of 2.2 million on the year before.

Malmö studio Massive Entertainment increases its turnover by 3 million. The owner Ubisoft released the acclaimed Far Cry 3 in November 2012, in which Massive was highly involved, mainly with the multiplayer mode. Amidst much praise at E3 2013, the studio revealed *Tom Clancy's The Division*, Massive's first self-developed game since *World in Conflict*, which became one of the expo's top crowd favorites.

Tarsier Studios was awarded 6th place in Deloitte Technology Fast's list of fastest growing tech companies, based on the merits of the period 2007-2011, when the studio grew by 1284 percent. *LittleBigPlanet Vita* was awarded Best Mobile Game at GamesCon in Cologne. It was also awarded the Game of the Year trophy at the TIGA Games Industry Awards 2012. Tarsier's CEO Mattias Nygren was named Entrepreneur of the Year in both Blekinge and Sweden in 2012 and the studio won Developer of the Year in the industry's own Utvecklarpriset (The Developer Award) 2012.

Linköping-based Simplygon (previously Donya Labs) more than doubled its turnover to 1.3 million. The company's technology for 3D optimization has been used in commercial successes such as *Tomb Raider* and *Gears of War*. Simplygon is currently working with renowned industry actors like Blizzard, Capcom and Bioware.

Pieces Interactive has grown considerably, increasing turnover from 257 000 to 1 million. The number of employees has simultaneously grown from 5 to 20. The company is one of many positive examples of Skövde's growing strength and importance as a developer hub. Another talented company based in Skövde is Stunlock Studios, the developer behind *Bloodline Champions*, with a turnover that has grown by 147 percent to over 727 000 euro.

Umeå developer Level Eight doubles its turnover to almost 336 000. During the last financial year, the studio sold 110 000 copies of *Megastunt Mayhem* and over 240 000 copies of *Robbery Bob* with associated DLC to both App Store and Google Play. The studio has also developed a game commissioned by BBC Worldwide. Umeå is Sweden's northernmost game development cluster, where companies like Zordix also increased their turnover, in this case by 157 000 to 403 000 in total. Zordix's portfolio includes games for the Nintendo 3DS eShop.

Pic: *SteamWorld Dig*, Image & Form

BIGGEST PLAYERS	Turnover M Euro
1. Mojang	169
2. DICE	60
3. Stardoll	23
4. King	21
5. Paradox Interactive	16

BIGGEST PLAYERS	N:o of Employees
1. DICE	323
2. Massive	229
3. King	152
4. Stardoll	138
5. Avalanche Studios	129

Twenty-twelve is the industry's fourth consecutive year of positive results, and the second in a row with a record increase. Earnings increased by 162 percent, resulting in a total of 38 million. Approximately 60 percent of companies report figures in the black, in line with 2011.

Mojang's unique position should again be emphasized. The company made profits of 36 million in 2012, which is an incredible 70.5 percent of the entire industry's positive result (about 52 million). Meanwhile, it is encouraging to see start-ups and newly established companies becoming profitable early on. A majority of 2012's new entrants reported positive figures. Other companies with significant profits center around 2.2 million.

Sweden's GDP growth was 0.7 percent in 2012 (NIER 19/6 2013), approximately three percentage points lower than in 2011, reflecting the economic situation worldwide. The Swedish game industry's Compound Annual Growth Rate (CAGR) from 2006 to 2012 is 34 percent, a testament to game development's important position in the Swedish economy, now and for the future.

NUMBER OF COMPANIES

The start-up rate from 2011 continues and 37 new companies joined Sweden's developers in 2012. Drop-outs accounted for; this results in a total of 145 active companies, a record figure with good margins. Only four of the new entrants have been active before they were included in this report. Examples of these are: a former administrative parent company that started game development after fusion with its subsidiaries, and a creative agency that gradually began developing video games. A distinguished newcomer is the Bonnier-owned studio Toca Boca, which achieved a strong position on the market thanks to its focus on children's games for tablets. At the end of its first fiscal year, the studio made a turnover of over 3.3 million. FEO Media, the developer behind success story *Quizclash*, also shows good results from start.

The average Swedish game developer employs 14 people, was registered in 2007 and mainly develops mobile and online games.

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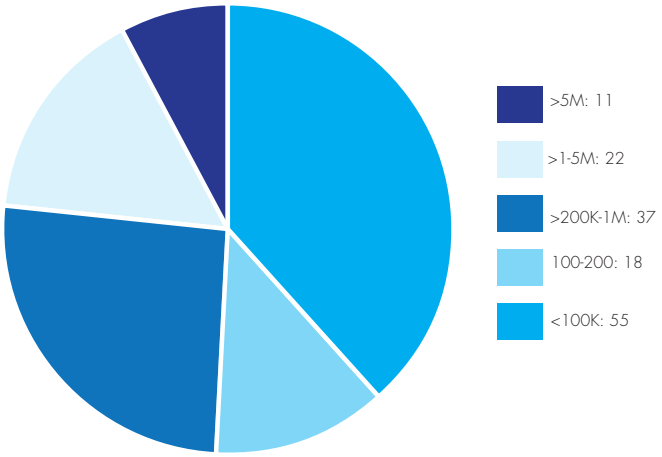
GENDER DISTRIBUTION

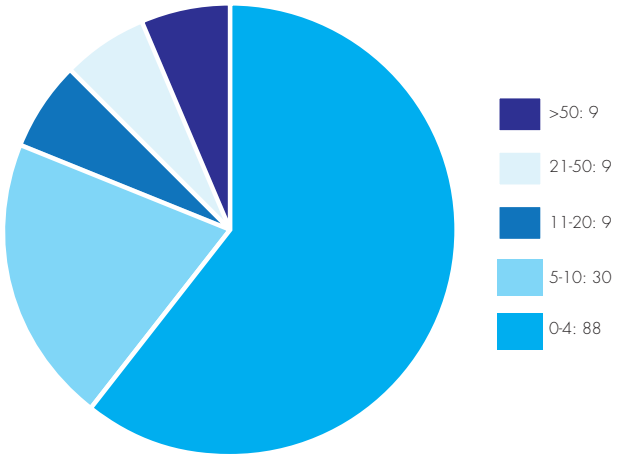
The number of female employees has increased by 39 percent, thus making up 15 percent of Sweden's developers. It is encouraging that the proportion is growing despite the lack of new business with a high share of female workers from start (such as Stardoll, which employs 26 percent of the industry's women). In other words, existing firms continue to recruit more female developers. Everything indicates that this positive trend will continue and increase in the future. Between 2009-2012 the number of women employed increased by 169 percent while the number of men increased by 78 percent.

This positive trend can to some extent be seen as a result of the industry's active and long-term work on gender equality, counting both measures by the trade organization and the individual companies. Attracting more women as both employees and customers is an important goal for the industry's continued development. Much of the recent growth can be attributed to new audiences, which to a large extent consists of women of all ages.

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 Methodology.

TURNOVER PER COMPANY

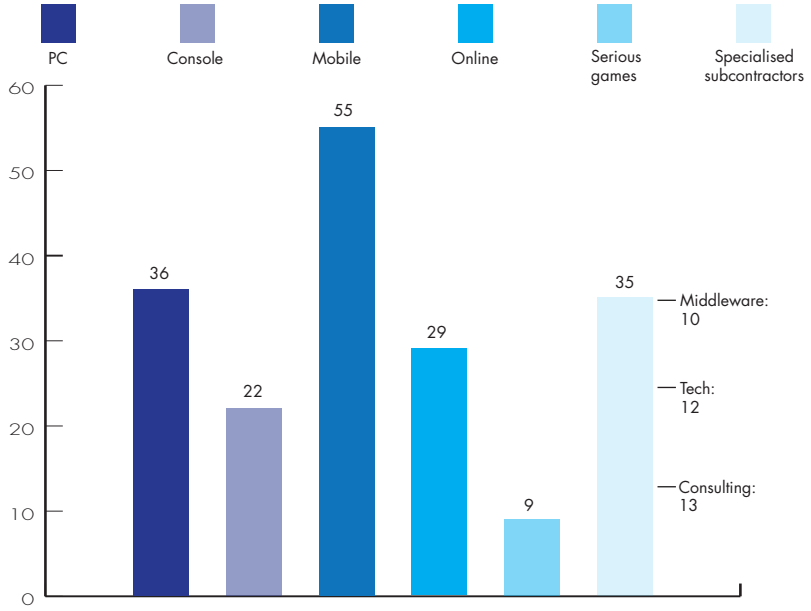
With several newly established developers in the starting blocks, the number of companies with a turnover of less than 100 000 increased by 28 percent. At the same time, more studios have now surpassed the 100 000 milestone, and 29 percent of companies have a turnover of 1-5 million. The top layer has come off remarkably, with an ever increasing number of companies with a turnover exceeding 5 million.

EMPLOYEES PER COMPANY

A couple of interesting changes in average number of employees took place in 2012. Number of developers with 21 to 50 employees or more has increased by 38 percent, and for companies with more than 50 employees, the average number of employees increased from 125 to 138. Meanwhile, the 0-4 segment increased substantially, and 30 companies have no full-time employees, which can partially be explained by the onslaught of smaller start-ups.

BIGGEST PLAYERS

With Mojang's turnover increase of nearly one billion, the five biggest players are responsible for 69 percent of the industry total. That translates to almost 10 percentage points more than the two previous calendar years. No company in the top five has a turnover below 15 million, a benchmark surpassed with almost 5 million since



DISTRIBUTION PLATFORMS

This chart gives a good overview of the platforms in use by looking at what developers have done recently and what they are working on right now. A developer can be present in two or more columns depending on which formats they have focused on.

Roby Tumbler, Pieces Interactive

last time. Moreover, the leaderboard is very level since both Massive and Avalanche submit figures well over 11 million.

The numbers of employees in the biggest companies has increased significantly. In contrast, they only account for 36 percent of the industry workforce, a decrease of almost 10 percentage points since 2011. Employees thus continue to be distributed more evenly among more companies, a testament to the rampant growth of Swedish game developers.

DISTRIBUTION PLATFORMS

The scope of Swedish game development is clearly illustrated by the relatively high numbers for all formats. A remarkable change is the increased focus on mobile game development (or rather mobile operative systems, since the games are released on both smartphones and tablets). Mobile was last year's biggest category and now about 20 additional studios have lined up. Please note that these companies are not necessarily entirely dedicated to mobile game development, but do it to a significant extent.

OUTSOURCING/ CONSULTING

Outsourcing has rapidly become a 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, the main part of operations consists of consulting other companies. For others, especially smaller developers, it is a good opportunity to practice skills and get the business going while investing in the original content of their own device. This flexibility is important for the industry's efficiency and thus Sweden's competitiveness. It is part of the reason behind the strong growth in recent years.

Examples of outsourcing Swedish companies are Doctor Entertainment, who assisted Starbreeze in developing *Syndicate*, and Mojang who hired Scottish 4J Studios to develop *Minecraft* on XBLA. Fatshark has acted as consultants to companies such as Grin and Paradox Interactive. Its subsidiary Bitsquid has with its self-titled graphics engine tied itself to projects such as Paradox North's *Magicka: Wizard Wars* and Arrowhead's upcoming *Helldivers*. Bitsquid worked closely with Nvidia on their launch of the game console Shield.

A challenge connected with outsourcing is to keep on-shoring at a high level – i.e. outsourcing tasks to

vother Swedish game developers as far as possible

SPECIALISED 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, which streamlines graphics production. This development opens up new business opportunities, partly to also work with companies outside of the gaming industry like, for example, Hansoft successfully did with clients such as Boeing. It has also led to foreign investments in Swedish companies.

Scrolls (open beta), Mojang

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 typically being shorter, less extensive, and not being retailed.

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 demand curve of a product is extended with new material, particularly proven effective for games that are low-cost to begin with. Since the digital distribution boom around 2008, this represents a larger portion of the proceeds of several game developers. The total value of these small revenues or "micro transactions" 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 products that enhance and extend the gaming experience for the most loyal players. This lies in contrast with physical sales, where shelf space normally goes to products that early on are deemed to have bestseller potential.

DLC is frequently released to AAA titles as well, such as *Just Cause 2* and *Battlefield 3*. However, it is typically smaller titles and free-to-play games that use it as the main income model, rather than sales of the actual game. Publisher Take 2 has for example highlighted DLC's part in success story *Borderlands 2*: "add-on content for Borderlands 2, including its season pass, was the single-largest contributor to our first quarter results".

GAME DEVELOPER MAP

***STOCKHOLM**
Amagumo Games
Arcadelia
Arrowhead
Avalanche Studios
Bajoum
Bitsquid
Contentgarden
DDM Europe
Defold
DeNA Sweden
DICE
Expansive Worlds
Fabrication Games
Fatshark
FEO Media
Filimundus
Funrock Media
G5 Entertainment
Gamevibe
Goo Technologies
Interactive Productline
King
LaughLoud Labs
Liquid Media
Massive Shapes
Might and Delight
Modesty
Mojang
Movinto Fun
Mute Industries
Oxeye Game Studio
Paradox Interactive
Paradox North
Pixel Tales
Pixeldiet Entertainment
PlayCom Game Design
Polarbit
Quel Solaar
Raketspel
Semionetix
SimWay
Spearhead Entertainment
Spelagon
Spelkultur Sverige
Starbreeze
Stardoll
Talawa Games
Tealbit
Toca Boca
Tomorroworld
World of Horsecraft

LULEÅ
Velcro Interactive

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

SUNDSVALL
Corncrow Games
Ouch Games

FALUN
AE Interactive Studios
Megafront
Tension Graphics
Tenstar

BORLÄNGE
Communisport

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

SKÖVDE
Coffee Stain Studios
Coilworks
Digimundi
Immersive Learning
Lockpick Entertainment
Ludosity
Mandibol Entertainment
Mobile Storytelling
Paradox South
Pieces Interactive
Piktiv
Shortfuse Games
Stunlock Studios
Triolith Entertainment

LIDKÖPING
SimBin

KÖPING
LS Entertainment

STRÄNGNÄS
Primus Appus

ESKILSTUNA
Daikonsoft

GOTHENBURG
1337 Game Design
EPOS
Free Lunch Design
Hello There
Image & Form
Itatake
Legendo
Entertainment
MindArk
Mindshed
Music Instrument
Champ
Nornware
Outbreak Studios
Räven AB
Senri
Sleeper Cell
WarmBreeze Studios
Zoink Games
Zoink

NORRKÖPING
Goes International

HELSINGBORG
Frictional Games
Localize Direct
Pixelbite

VISBY
Meow Entertainment
Three Gates

MALMÖ
Ayeware
Binary Peak
Blastdoor Interactive
Color Monkey
Global SouthEnd Productions
Illusion Labs
Imperial Games Studio
Leripa
Mandelform
Massive
Mediocre
Ozma
Planeto
ProCloud
Redikod
Spelkultur Malmö
Star Vault
Swedish Game Development
Tarsier Studios

MOTALA
Code Club

LINKÖPING
Boldai
Chillbro
Power Challenge
Simplygon

KARLSHAMN
12 O'Clock Studios
Coastalbyte
Custom Red
Forgotten Key
Noumenon Games
Redgrim
Tarsier Studios

MUNICIPALITY	Employees	% of total	Companies	% of total
1. Stockholm	1131	57,5	50	34,5
2. Malmö	357	18	18	12,4
3. Göteborg	105	5,3	18	12,4
4. Skövde	75	3,8	14	9,7
5. Umeå	92	4,7	8	5,5

LOCATION OF COMPANIES

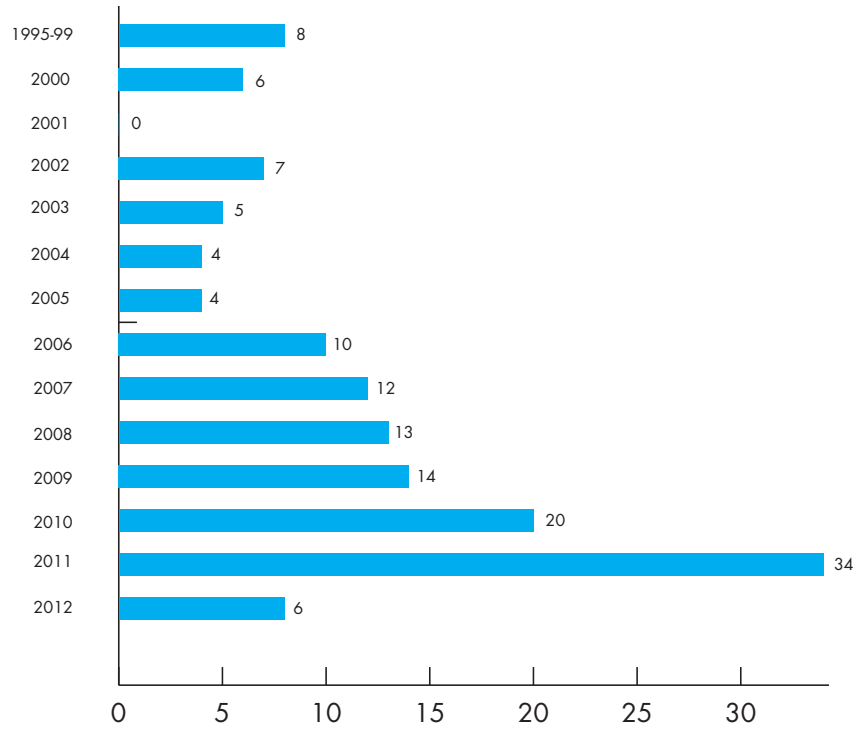
The above table shows the largest municipalities ranked by number of employees and number of companies.
The ranking is based on the combined percentage units of each category's total share and does not take the companies' turnover into account. Uppsala is in sixth place with 6 companies (4.1 percent of the total) and 103 employees (5.2 percent of the total).

One of last year's most notable relocations was Starbreeze's move from Uppsala to Stockholm. Arrowhead also migrated to the capital.

Karlshamn and especially Skövde are two regions where game incubators have been very successful. For Skövde's part, Gothia Science Park's proximity to the University of Skövde with its Game Development program and the national projects run by The Game Incubator has played a significant part in the success. Several companies have taken the step from students to multimillion turnovers with dozens of employees, often with high profile victories in the Swedish Game Awards as a common denominator.

Although Easy Studios and Ghost are legally part of DICE as business units, it is important to point out that they essentially act as individual studios with separate offices and management: Easy is located on Södermalm in Stockholm and Ghost is situated in Gothenburg. Easy develops free-to-play games and Ghost is working on *Need for Speed: Rivals*.

YEAR OF REGISTRY



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

Europa Universalis IV, Paradox Interactive

GAME SALES

Below is a selection of Swedish best-sellers over the past decade. The list contains several older retail games, but as sales figures for digitally distributed games are revealed, several of them will enrich future reports. Sales data is sourced direct from annual company accounts, directly from developers and publishers as well as third parties, such as NPD och VGchartz. Launched refers to the year when the game was released and Data provides an indication of which year the sales figure is derived. Note that sales success is in relation to development costs: A game developed by one or two developers can equally count as a success with fewer units sold than a large AAA release.

TITLE	DEVELOPER	SALES	PUBLISHED	DATA
Minecraft*	Mojang	33 000 000	2011	2013
Battlefield 3	DICE	17 000 000	2011	2013
Battlefield: Bad Company 2	DICE	12 000 000	2010	2012
Battlefield 2	DICE	11 000 000	2005	2011
Far Cry 3	Ubisoft**	4 500 000	2012	2013
Just Cause 2	Avalanche Studios	3 200 000	2010	2013
Battlefield 1942	DICE	3 000 000	2002	2004
Battlefield: Bad Company	DICE	2 320 000	2008	2010
Mirror's Edge	DICE	2 500 000	2008	2013
Magicka	Arrowhead	2 300 000	2011	2013
Payday 2	Overkill Software	1 580 000	2013	2013
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
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
Backpacker 2	Aniware	600 000	1997	2010
Crusader Kings II	Paradox Interactive	540 000	2011	2013

**Whereof 12 million PC, approx. 10 million mobile (Pocket Edition) and the remaining on Xbox 360.*
***With, among others, Swedish studio Massive Entertainment*

AVERAGE REVIEW SCORES

Swedish developed computer games are not only worthy of attention because of their high sales figures; several titles have received grand reviews in the gaming media around the world. The ratings database Metacritic works as a form of standardized benchmark of the qualities of a game. It collects ratings from a wealth of media and publications in several different countries. Unlike a traditional average rating, Metacritic weights the collected ratings, which means the assessments of certain media have more impact on the Metascore that is given. Below, a selection of Swedish games from 2009 onward is listed.

TITLE	DEVELOPER	METASCORE	PLATFORM	YEAR
Year Walk	Simogo	87	iOS	2013
Far Cry 3*	Ubisoft (med Massive)	91	Xbox 360	2013
Sanctum 2	Coffee Stain Studios	78	PC	2013
Brothers: A Tale of Two Sons	Starbreeze Studios	86	Xbox 360	2013
Europa Universalis IV	Paradox Interactive	85	PC	2013
Knytt Undergound	Nifflas	79	iOS	2012
Crusader Kings II	Paradox Interactive	82	PC	2012
Unmechanical	Talawa Games	78	iOS	2012
War of the Roses	Fatshark	73	PC	2012
Syndicate	Starbreeze Studios	75	PS3	2012
LittleBigPlanet Vita	Tarsier Studios	88	Vita	2012
Hotline Miami	Dennaton Games	86	PS3	2012
NightSky	Nifflas	86	iOS	2011
Bloodline Champions	Stunlock Studios	79	PC	2011
Anthill	Image & Form	82	iOS	2011
Renegade Ops	Avalanche Studios	81	Xbox 360	2011
Payday: The Heist	Overkill Studios	76	PC	2011
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

The listed Metascore were read on September 5th 2013. For more information, visit http://www.metacritic.com.

REVENUES OF FREE-TO-PLAY

King is the number one developer of social games, i.e. games on Facebook or similar social networks. The company has developed hundreds of games with an approximate user base of 255 million active players every month. Since the games are free-to-play, revenue is primarily generated through micro transactions. Facebook has over one billion users, one-seventh of the world population, and is perfect target audiences 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 millions of users on social networks and enjoys over 200 000 active users every day. *Icy Tower Classic*, a remake of the original, is downloaded a million times a month. The popularity of the game has spawned new versions of *Icy Tower 2*, for example Temple Jump and Zombie Jump.

Although King's numbers impress, it is difficult to compare statistics of different types of free-to-play games. Free-to-play is not a genre in itself and can be as varied as any other game. Easy Studios' *Battlefield Heroes* has 17.7 million registered users, a small number compared to the user base of King 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 are likely spend more time in total.

About 20 percent of King's active users on Facebook pay for premium content: in-app purchases that extend and/or enhance the gaming experience. There is no longer any doubt whether it is possible to 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 there are no traditional sales of packaged goods.

Pic: *Icy Tower 2*, Free Lunch Design

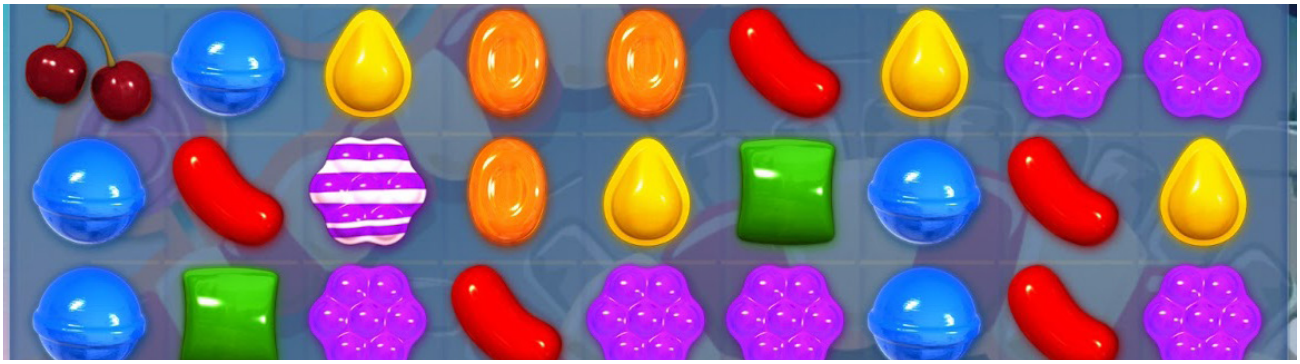
BENCHMARKS

There are countless ways to measure the revenues of a free-to-play game. Almost every single developer has internal systems for how to do this, while rarely commenting on monetization for reasons of competition, which hampers a general estimation. Nonetheless, this is an attempt to summarize 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 these play a particular game daily or monthly. 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.

- Total registrations
- MAU – Monthly Active Users
- DAU – Daily Active Users
- MARPU – Monthly Average Revenue

Candy Crush Saga, King



Per User
•MARPPU – Monthly Average Revenue Per Paying User

Comparing 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.

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

Another useful measure of ad-based free-to-play games is eCPM. eCPM (Effective cost per mille is the cost of 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 eCPM campaign over a click-based one may be done for a number of reasons. It usually has 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 views an 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 eCPM ad would have had were it a Cost per click (CPA) 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 of which 50 clicked on it
•"Games" was also viewed by 5000 visitors of which 115 clicked on it
•"Apps" has an eCPM of $ 10 (50/5000*1000)
•"Games" has an eCPM of $ 23 (115/5000*1000)

Games that act as advertisement space are thus paid by the advertiser per thousand impressions depending on the above, and in some cases, other variables. Many developers, especially those who do not hold heavy positions on social networks, have testified that the focus has shifted from ad revenues to sales of premium content. In other words: users would rather pay for more content than click on ads. One reason that led some developers to focus less on Facebook as that is the market seen as a battleground for the largest handful of companies. These developers typically see Facebook more as an opportunity to promote their mobile games.

NEW SERVICES, NEW PIRACY TARGETS

Digital services are sometimes considered to be at less risk of piracy, and there are certainly advantages over physical distribution, which is easily subjected to unauthorized dissemination through file sharing or

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

Sanctum 2, Coffee Stain Studios

pirated discs. That said, 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 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.

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, on the other hand, is 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 via 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 this must 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.

The future of physical distribution is much debated in light of the accomplishments of digital game services. In 2013, however, new versions of game consoles Xbox and Playstation are anticipated for release, along with consequent game releases. It is worth noting that more AAA development projects than ever before are taking place in Sweden, somewhat in the background of the attention surrounding the digital services.

Tom Clancy's The Division (in development), Massive Entertainment

DIGITAL MIDDLEMEN

New distribution channels require new intermediaries and in the wake of digital game services a number of new sub-categories emerge, for instance within marketing, analytics, technology and payment services. Meanwhile, marketplaces such as App Store, Google Play and Facebook get more important. They do not act as retailers in a formal way, but in practice they constitute powerful and important middlemen who often have significant impacts on how games reach their audiences.

OUTLOOK

Considering 2011 and 2012's phenomenal growth, the future of Swedish video game development looks bright. And from what we have already witnessed in 2013, it is clear that the industry will continue to grow for the foreseeable future. Mojang released *Minecraft* for physical sale for Xbox 360, and topped sales charts in numerous countries. The studio's second game *Scrolls* has reached open beta, offering players to buy a trial version of the game. Meanwhile, Mojang has announced that it's working on its own server solution – Minecraft Realms – which allows players to more easily control and maintains their own game world for a subscription-based fee. The studio plans to release *Minecraft* on Playstation 3, Playstation Vita and the upcoming pair of HD consoles. Earlier this year, Markus Persson and Jens Bergensten were included as the only Swedes on Time Magazine's TIME 100.

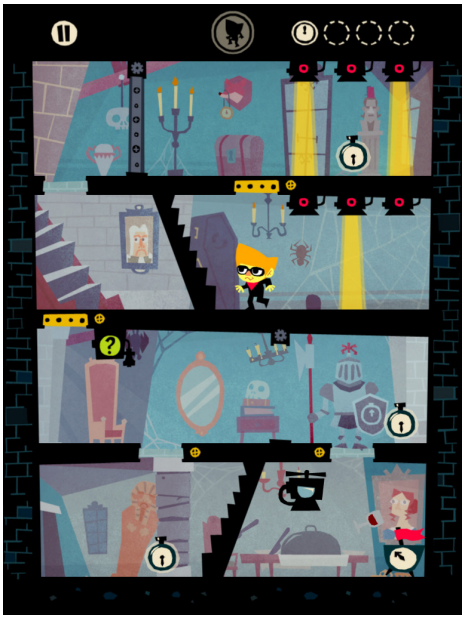
The Swedish DeNA studio Scattered Entertainment are releasing its first game *The Drowning* in 2013. It's free-to-play and has received considerable attention for its graphics, described as a milestone for mobile game development. The studio's vision is to offer the kind of production values and depth normally reserved for console or PC games. Scattered Entertainment is based in Stockholm, but employees based in many locations, spread out geographically.

Fatshark and Paradox Interactive continue to collaborate. *War of the Vikings*, a further development of the War-of franchise that started in 2012 with the acclaimed *War of the Roses*, was announced in August 2013. Paradox will also release its flagship title *Europa Universalis IV* in 2013.

King continues to expand and has opened up another office in Malmö. The studio is increasingly committed to mobile platforms, and has great potential to step up its strong growth. Thanks to the viral buzz of King's games, games such as *Candy Crush Saga* have become something of a pop culture phenomenon, certainly benefitting the brand in a user-based community.

Starbreeze acquired Overkill Software in 2012, the developer behind *Payday: The Heist*. In August 2013, Starbreeze announced that pre-

Beat Sneak Bandit, Simogo



War of the Vikings (in development), Fatshark

liminary earnings of *Payday 2* covered 100 percent of advances and marketing costs from publisher 505 games, one week before the game was even released. During the same month, Starbreeze launched *Brothers: A Tale of Two Sons*, its first game since Syndicate. The game was met with a very favorable critical acclaim. Brothers was also selected as one of four games on Microsoft's annual sales campaign A Summer of Arcade. The studio is currently developing the science fiction game Storm.

Rovio Sweden has enormous potential, of course, both to create qualitative sales hits and to contribute to the monetary development of the business. However, the studio will file its first annual report in 2013 so the figures are not included in this year's index.

Magicka developer Arrowhead is working on *Helldivers* – a new trademark – for Sony Entertainment. In 2014, the game will be released on Playstation 3, Playstation 4 and Playstation Vita. Stunlock Studios is working on Dead Island: Epidemic for publisher Deep Silver.

The international expansion is also progressing; DICE follows in the footsteps of Avalanche and opens a development studio in the US. Unlike Avalanche, which has an office in New York, DICE has chosen Los Angeles as the address for its expansion.

SWEDISH AAA IN TOP SHAPE

Electronic Entertainment Expo (E3) in Los Angeles is one of the biggest and most prestigious events in the business, and a classic stage for showcasing big, up-coming games. From the titles being presented it's clear that this was Swedish gaming's strongest E3 ever.

We have known for a long time that the Swedish gaming industry is doing well. Records and milestones have been piling up in the last few years, with export successes, innovations and creative reinventions hot on the heels. Sweden enjoys an almost unique position with its wide range: mobile games, Facebook games, independent developers, great technical competence and huge export hits.

But it was AAA productions – big development projects with budgets of millions – that once put Sweden on the map. And it has never been more obvious that this kind of production still flourishes.

DICE had already announced *Battlefield 4* ahead of E3, but still had a few nice surprises in store. Mirror's Edge 2 is a hotly anticipated follow-up to the studio's cult classic, usually presented as shining example of Nordic design. DICE also reported that they are working on a new *Star Wars Battlefront* – one of the most popular Star Wars games ever.

Another developer in the Swedish EA network is Ghost in Gothenburg. The studio is working on *Need for Speed: Rivals*, which is released in autumn 2013. Avalanche Studios also lifted the lid and revealed a game based on Mad Max. The game will be accompanied by a new film, planned for next year.

It is a busy time in Sweden's largest cities. The Malmö studio Massive Entertainment premiered *The Division*, an action based role play game signed Tom Clancy, and in Uppsala MachineGames are working on

NORDIC COMPANIES	
Danmark (2011)	125
Finland (2012)	150
Island (2011)	10
Norge (2010)	52
Sverige (2012)	143
Totalt i Norden	**480**

N:o of companies

NORDIC TURNOVER	
Danmark (2011)	58
Finland (2012)	250
Island (2011)	50
Norge (2010)	25
Sverige (2012)	425
Totalt för Norden	**808**

M Euro

NORDIC EMPLOYEES	
Danmark (2011)	615
Finland (2012)	1800
Island (2011)	470
Norge (2010)	353
Sverige (2012)	1967
Totalt i Norden	**5205**

N:o of emloyees

Wolfenstein: The New Order. Swedish developers' international imprint has never been bigger.

CONSOLES

When Nintendo's Wii U was introduced on the market in late 2012, the time had finally come for a new console generation. Historically, it has been difficult for third party developers to gain a foothold on Nintendo's platforms, but Wii U offered a broader scope with Nintendo concentrating more and more on games distributed via the console's online shop. So far, Wii U has had modest sales, but the potential is undeniably there. The control system can be likened to a mix of traditional hand controls and pressure sensitive tablets, which makes it stand out among its competitors. Wii U is Nintendo's first HD console (offering a screen resolution of at least 720p).

Both Sony and Microsoft aim to launch their new consoles - Playstation 4 and Xbox One respectively – in time for the 2013 Christmas trade. Already they have been applauded by many developers for their attempts at further democratizing game development, i.e. making it easier for anyone to create and sell games on the platforms. Microsoft has, for example, spoken of a solution which means every Xbox One console can be transformed into a debug unit*, which would mean great possibilities for smaller developers and enthusiasts. Free pricing has also been mentioned as well as freer reigns in the verifying process, less bureaucracy and a system that makes it easier (and free) to update the games once they are released for sale.
When Sony presented Playstation 4 at this year's E3, the approach towards developers was one of the key issues. Sony promised to slim down DRM** and was lauded for their attitude towards gamers and developers.

This democratization process is evident in several ways. Many technical companies, such as Swedish Simplygon, can attest to making their services accessible also for indie developers, via the popular graphics engine Unity, amongst other things.

**Previously, developers have been given specially made debug consoles, able to run games in the development stage, which has made it complicated for some developers to work with the platform.*

***Digital Rights Management. A way to limit unlawful gaming and piracy. DRM has been criticised for its limited usability.*

PUBLISHERS

The publishers' role has changed with time, too. Figures from western publishers have shown that console users are fairly eager to buy. A comparison of user and number of units – installed user base – shows that EA has sold games to a value of 300 million dollars to iOS which has 600 million users, whereas the HD consoles have sold games worth over 600 million distributed amount 150 million potential users (PS3 an XB60). Furthermore, EA is well on its way of becoming the first large western publisher whose digital share is larger than the physical.

EA's biggest sales partner during the first quarter of 2012 was Apple. Moreover, these partners include Walmart and GameStop. An interesting development, neatly illustrating the trend towards new intermediaries.

GLOBAL

The audit firm PricewaterhouseCoopers (PwC) estimate in their report *Global Entertainment and Media Outlook 2013-2017* that the global computer game market will grow with a CAGR of 6.5 per cent. In order to reach a global turnover of 86.9 billion dollars in 2017, compared to 63.4 billion in 2012.

Double-digit CAGR growth is forecasted in countries like Nigeria, Kenya, India and Vietnam. It is of course easier for countries that have long been lacking an existing games market to experience this kind of growth, but it is undeniably a good sign for the future, also for Swedish companies wishing to widen their reach. Russia is by far the brightest shining star among the potential gargantuan markets, and is on its way to become the eighth biggest in the world around 2017. Eastern Europe also shows signs of good growth.

If we are to believe PwC, the three biggest gaming markets of 2017 are US (18.2 billion), Japan (13.7 billion) and China (11.4 billion).

The mobile games market will be the fastest growing gaming sector in the next few years. But the console market is still the biggest, and it will still, according to the forecast, be more than twice the size of the mobile game market in five years (14.4 billion compared to 31.2).

Online game expenditure is continuing to increase and is expected to be on level with console games in 2017, when 97 dollars will be spent for every 100 dollars spent on console games. Although PC game sales seem to be stagnating, the platform is more alive than ever, as platform-independent online games are often played on PCs.

Internet connections per household are continuing to grow at a tremendous rate. According to the report, half of the world's internet use, both broadband and mobile, will be in Brazil, China, India and Russia.

RUSSIA

A survey by Mail.ru* shows that gaming has increased by 240 percent in the last two years, and reached a value of over 900 million USD. Russia is increasingly starting to look like the well-established markets in the West and in Japan. Online gaming has grown immensely - 64 per cent in 2012. We have previously seen Blizzard localize World of Warcraft in Russia, and in recent times Valve has talked about the country as the third biggest market in Europa (based on revenue) after Germany and Great Britain. This despite Russia being hampered by piracy.

Russia's mobile games market grew by 180 per cent during 2012, mainly because of Android based phones and tablets. More and more metro stations offer Wi-Fi.

**Mail.ru manages Russia's biggest online gaming platform and mail client. The research also shows that the most loyal gamers are willing to spend 34 dollars per month on various gaming services.*

JAPAN

Japan is expected to remain ahead of China in the entertainment sector until 2017, thereby continuing to be the second-biggest market, after the US. With a CAGR of 7 per cent, the market is valued at 13.7 billion dollars in 2017.

SOUTH KOREA

South Korea's games market increased by 18.5 per cent during 2011 until the first quarter of 2012. At the same time, worries are expressed over the fact that 90 per cent of the turnover is based on the giant online games market (27 per cent of the world market, second only to China). Compared with Sweden for example, this looks very different with a relatively even distribution of various kinds of gaming experiences. At the same time, the online games market is growing by just 1.1 per cent. However, South Korea has a safety net in the mobile games market, which is growing by almost 34 per cent.

USA

According to NPD Group (Games Market Dynamics U.S.) the digital proportion of the nation's game sales was 40 per cent in 2012, compared to 31 per cent the year before. Simultaneously, total expenditure on games, has reduced from 16.4 to 14.8 billion dollars.

CONCLUSION

Twenty-twelve was the best year ever for Swedish game developers.

Minecraft continued its triumphant run with results that are probably unique in the history of the Swedish industry. With Candy Crush, King.com has added yet another global hit to its list of merits. DICE's Battlefield series is continuing to sell millions of copies also this past year. The specialized subcontractors, companies like Simplygon, Hansoft and Game Hosting, are displaying strong growth with companies rather than gamers as their clients. In the category historical strategy games, Paradox is king of the castle, both as developers and publishers. Stardoll are bringing gamers from all over the world. Massive and Avalanche are working tirelessly on AAA projects for future launching. Starbreeze successfully took the step from console to online, at the same time as working with the film director Josef Fares in the unique game project Brothers. The Start-up scene is bigger than ever and the works of the incubators are starting to result in established and profitable companies. All in all, the diversity is the strength of Sweden's game developers.

The biggest challenges are surrounding issues such as access to capital and skills, and laws and regulations of digital markets, out of step with developments.

METHODOLOGY

This report is a summary of annual reports from the industry register of the Swedish Companies Registration Office, from companies with game development or specialized subcontracting as a major part of their operations. Not included are game companies focusing on poker, gambling or casino games. The method has several flaws: corporate forms other than limited companies fall outside the scope of the data, as do companies active in Sweden but registered in other countries. For this reason, there is a grey zone, and key figures such as turnover and employment are all actually slightly higher than stated in this report. The strength of the method is that the data is audited and published openly.

Examples of developers that are not included in the report because of their corporate form, is Simogo, a studio that has released *Year Walk* and a number of other commercial and critically acclaimed hits; Dennaton Games, the studio behind *Hotline Miami*; and Hörberg Productions which developed *Gunman Clive*.

There is also a problem with non-game related parent companies, more precisely when a company's game development operation is booked under the parent company, which means it cannot correctly be distinguished for the game developer index. A problem shared by the majority of industry organisations.

In the instances where annual reports have been unavailable, last year's numbers were used for results, turnover and number of employees. These companies are ProCloud and Semionetix.

The annual reports are in SEK, but for translation purposes the currency has been converted into Euro. One Euro was considered to be worth 8,9 Swedish Krona (SEK), as this was the approximate average exchange rate during 2011.

Swedish Games Industry is a partnership between MDTS and Spelplan-ASGD. For more information, please visit:

www.swedishgamesindustry.com.

Jacob Kroon
Communications/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

DATASPELSBRANSCHEN
SWEDISH GAMES INDUSTRY

DATASPELSBRANSCHEN
SWEDISH GAMES INDUSTRY