

Invest in Sweden

# Game Development



*The winner takes it all*



## Sweden

### Why Sweden?

- Highest levels of PC, internet, broadband and mobile phone penetration.
- Advanced users of digital services.
- Large and structured game development industry.
- Well-established education and research in game development technology and methodology.
- Leading producer of media and entertainment technology.
- Outstanding combination of resources for developing, testing and launching new technology.
- The world's largest wireless cluster.

“With its mobile technology expertise, high use of mobile devices and tradition of innovation in niche areas, Sweden is well placed for mobile gaming development.”

Owen Mahoney  
VP Corporate Development  
Electronic Arts

### Europe's most innovative regions

1. Stockholm, Sweden
2. Munich/Oberbayern, Germany
3. Stuttgart, Germany
4. Braunschweig, Germany
5. Helsinki/Uusimaa, Finland
6. Göteborg/West Sweden
7. Ulm/Tübingen, Germany
8. Eastern UK
9. Oulu, Finland
10. Uppsala/Eastern central Sweden

Note: The study covered 214 European regions and measured the number of patents, people employed in R&D and the expenditure on R&D.

Source: Empirica Delasasse/Wirtschaftswoche, 2002

## Birth of an industry

Over the past twenty years, digital game development in Sweden has leaped from basement hobby rooms into the boardrooms of venture capitalists, giving rise to a new multimillion dollar industry.

In the late 1980s the PC moved into Swedish homes, and small groups of enthusiastic programmers formed the foundation of what would later emerge as a homegrown game development industry. During the 1990s the development community grew dramatically, keeping pace with the global gaming market – though development was still carried out in small studios and loosely knit networks.

An abundant supply of venture capital gave the fledgling industry a financial platform around the turn of the century, and it quickly became more structured. As development projects grew larger and more complex, developers turned to the traditional IT industry for methods and project management experience.

Major game titles are often launched in conjunction with campaigns linked to movie releases. This makes timely delivery crucial. By using proven management methods and recycling technology, Swedish developers have gained a name for themselves as innovators on the frontier of gaming technology, while delivering on time and on budget.

Demand for online and mobile gaming is growing fast, and Swedish developers are capitalizing on that by tapping into a vast pool of experience from internet development and wireless technologies.

Sweden is one of very few countries that enjoy a net export of computer games, alongside the US, the UK and Japan.

### Gain competitive advantage with Swedish development skills

Looking for developers you can trust to deliver the most critical parts of your project, while also adding creative talent and the latest gaming technologies? Sweden is a good place to start. You can operate a studio with highly skilled Swedish developers at a considerably lower cost than in the US, the UK, or many other countries. Widespread use of English in business and private life is an extra bonus.

### Among the world's largest recipients of FDI

Foreign investors are discovering Sweden's many business and investment opportunities. As a result, Sweden has risen to become one of the world's largest recipients of foreign direct investment. There are several reasons behind Sweden's attraction to foreign business. For one, investors gain access to sophisticated products and technologies, skills, innovations, and first-rate infrastructure. An establishment in Sweden means triple market presence: in Scandinavia, the Northern Europe/Baltic Sea region and the European Union, home to some 500 million consumers. Additional advantages include a qualified workforce, extensive R&D facilities, an advanced test market and competent customers and suppliers providing the foundation for business operations of the highest caliber. The Swedish business climate and growth prospects earn high rankings in most internationally recognized studies or surveys.

## Build your success on Swedish gaming tradition

*A strong game development industry together with proven inventiveness in gaming, internet and wireless technologies provide a good foundation for future development.*



**Cut time-to-market** By repeatedly completing complex projects and adopting methodology and processes from the rest of the information and communication technologies (ICT) industry, Swedish game developers are recognized for delivering high quality products on time and on budget.

**Be the leader** Creative use of technologies and groundbreaking gaming ideas are the two most important factors in creating a successful game. The ability to make use of technology from other industries or research institutes has become a Swedish trademark.



**Recycle** Swedish game developers have built up extensive libraries of reusable code. Many have packaged platforms and methods that can be licensed to other developers. Platforms, such as 3D-engines and rendering tools, are available for advanced gaming solutions including online and mobile gaming.

**Grab the wireless opportunity** Tap into Sweden's leading position in wireless technologies and mobile application development. Swedish game developers lead the integration of stationary and mobile gaming. Companies like It's Alive and Synergenix are bridging this gap.



### **Get to know the next generation of game developers**

Several universities in Sweden offer education programs in game design, game development and project management. Some universities and research institutes also focus on how 3D graphics, advanced physics, graphic design and other advanced technologies can be used in media and gaming.

**More quality, less money** The wide range of investment opportunities together with a competitive cost level for game development makes Sweden an excellent option for your next investment.



### How to benefit

- Direct investment in a minority or majority stake of a developer.
- Strategic partnership that is long term and more extensive than traditional development contracts and includes joint financing of projects.
- Joint research and development projects with a research institute focusing on joint development of gaming technologies.

### R&D collaboration between business and academia

Score



Business collaboration with local universities in their R&D activity  
1 = minimal or nonexistent  
7 = intensive or ongoing

Source: World Economic Forum, 2003

### One for all, and all for one

Swedish developers have a tradition of helping each other in an environment of "friendly competition" and collaborate when it brings mutual benefits. Examples include industry associations that provide information and news as well as acting as the natural meeting point for industry insiders.

- MDTs – [www.mdt.se](http://www.mdt.se)  
Industry association for computer games and multimedia
- ASGD – [www.asgd.se](http://www.asgd.se)  
Association of Swedish Game Developers
- MANUAL – [www.manual.nu](http://www.manual.nu)  
Trade magazine for interactive entertainment in Scandinavia

## The Swedish game development landscape

### Göteborg

8 companies  
159 developers

*Examples of companies:*  
Digital Illusions  
Mindark

*Research:*  
Interactive Institute – PLAY lab  
Viktoria Institute – Future Applications lab

### Skåne/Blekinge

23 companies  
94 developers

*Examples of companies:*  
Massive Entertainment  
Sony Ericsson  
Southend Interactive  
Warthog Sweden

*Research:*  
Education in Game Design  
National Research

### Umeå/Luleå

10 companies  
30 developers

*Examples of companies:*  
Daydream  
Evol Interactive  
Lugna Gatan

*Research:*  
Interactive Institute – Tools, Sense  
VR Lab – Umeå

### Stockholm/Uppsala

27 companies  
226 developers

*Examples of companies:*  
Amuze  
Digital Illusions  
Paradox Entertainment  
Starbreeze  
Synergenix

*Research:*  
Interactive Institute – MOBILITY lab  
Royal Institute of Technology (KTH)  
SICS – Swedish Institute of Computer Science

### Linköping/Norrköping

*Examples of companies:*  
Meqon Research

*Research:*  
NVIS – Norrköping Visualization  
and Interaction Studio



## Examples of successful integration of new technologies

*Through the combination of expertise in different technology fields, Swedish innovators are reshaping the way gaming looks, feels and is being accessed.*

**Terraplay – [www.terraplay.com](http://www.terraplay.com)** Provides the solution for future mobile online gaming. The company has developed an advanced solution for a high quality, real-time online gaming service in both existing and future mobile and fixed networks. The core technology was developed at Ericsson, which also supported the company financially when it was founded in 2000.

**Synergenix – [www.synergenix.se](http://www.synergenix.se)** Introduces a technology shift in mobile gaming with Mophon, a software-based gaming platform for mobile devices that enables digitally distributed high quality games. The company has successfully launched Mophon on Sony Ericsson's phones and set up download services with several operators.

**Defence Gaming – [www.defencegaming.org](http://www.defencegaming.org)** Defence Gaming is an initiative from the Swedish Defence Materiel Administration (FMV), the Swedish Defence Research Agency (FOI) and the Swedish National Defence College (FHS) to study, research and explore the conjunction of the computer and video games world and the military.

**Meqon Research – [meqon.com](http://meqon.com)** Integrates advanced physics into gaming. The company provides a development tool that enables the creation of extremely realistic object motion in a virtual world in real-time. Meqon Research is a recent spin-off from Linköping University that focuses on developing advanced simulation tools for the engineering and interactive industries.

## Examples of Swedish game developers

**Amuze** [www.amuze.com](http://www.amuze.com)

Developer for clients such as Sega and Sony

**Carbello** [www.carbello.se](http://www.carbello.se)

Online gaming and mobile game producer operating [www.mophungames.com](http://www.mophungames.com), an online marketplace for mobile games

**Daydream Interactive**

[www.daydream.se](http://www.daydream.se)

Game producer with extensive network of developers

**Digital Illusions** [www.dice.se](http://www.dice.se)

Developers of Battlefield 1942

**Gatorhole** [www.gatorhole.se](http://www.gatorhole.se)

Middleware and network engines

**Grin** [www.grin.se](http://www.grin.se)

Developers of Vultures

**Idol FX** [www.idolfx.se](http://www.idolfx.se)

Developers of Nosferatu for Xbox

**Iridon Interactive** [www.iridon.com](http://www.iridon.com)

Console games developer

**It's Alive** [www.itsalive.com](http://www.itsalive.com)

Mobile multiplayer games

**Jadestone** [www.jadestone.se](http://www.jadestone.se)

Developers of online mass market sporting games

**JunglePeak** [www.junglepeak.com](http://www.junglepeak.com)

Innovative developer of games and interactive entertainment

**Liquid Media** [www.liquid.se](http://www.liquid.se)

Independent developer

**Massive Entertainment**

[www.massive.se](http://www.massive.se)

Developer of console and mobile games

**Meqon Research** [www.meqon.com](http://www.meqon.com)

Advanced physics middleware for gaming industry

**Mindark** [www.mindark.com](http://www.mindark.com)

Online games developer

**PAN Interactive** [www.panvision.se](http://www.panvision.se)

Publisher and developer

**Paradox Interactive**

[www.paradoxplaza.com](http://www.paradoxplaza.com)

Developer of technology

**Redikod** [www.redikod.com](http://www.redikod.com)

Online, mobile games and game industry development

**Snowcode** [www.snowcode.com](http://www.snowcode.com)

Developer of multiplayer online games

**Southend Interactive**

[www.southend-interactive.com](http://www.southend-interactive.com)

Developers of DeathRow

**Starbreeze** [www.o3games.com/sbz](http://www.o3games.com/sbz)

Major development house with its own motion capture studio

**Upside Studios** [www.upsidestudios.se](http://www.upsidestudios.se)

Adventure and online games developer

**Warthog Sweden** [www.warthog.se](http://www.warthog.se)

Swedish unit of the UK developer



## Electronic Arts invested in Swedish Digital Illusions

After publishing two titles developed by Digital Illusions, Electronic Arts decided to back the game Battlefield 1942. Inspired by the game's success, Electronic Arts entered into an extensive cooperation and publishing agreement with Digital Illusions, including an equity investment worth EUR 8.5 million, giving Electronic Arts a 19 percent stake in the company.

**Electronic Arts (EA)** is the world's leading independent developer and publisher of interactive entertainment software for games consoles and PCs. Based in California, EA earned revenues of USD 2.3 billion in fiscal 2003 and employed around 4,400 people worldwide. Outside the US, EA has international subsidiaries in 27 countries, including Sweden. In 2003, EA sold over 1 million units of its 22 titles, which include: *The Sims*; *Medal of Honor*; *Command & Conquer*; *Harry Potter and the Chamber of Secrets*; *James Bond 007*; and *FIFA Soccer 2003*.

**EA and Digital Illusions** Göteborg-based games developer Digital Illusions earned revenues of USD 27 million in 2003, up 39 percent on 2002. Of this income, 73 percent came from projects with co-publisher and part-shareholder EA, particularly its highly acclaimed Battlefield 1942 game. Digital Illusions also works with other publishers such as TDK Mediactive, Vivendi Universal Publishers and Microsoft. In 2002, EA and Digital Illusions won the Academy of Interactive Arts and Sciences' Game of the Year award for Battlefield 1942. Digital Illusions' recent projects have included Battlefield Vietnam, released in March 2004.

**Technical expertise** "Digital Illusions' expertise compares well internationally," says Owen Mahoney, EA VP Corporate Development. "It's unusual to find so much development talent in one place. Joint ventures are notoriously difficult to

manage, but this isn't the case with Digital Illusions. We stay in touch electronically and through frequent visits. Communication is always good so everyone's clear about progress and objectives. I would add that we also learn a lot from each other."

"We have a creative, focused, results-oriented and highly successful partnership with Digital Illusions. Great, high-quality products and a mutually rewarding and enjoyable working relationship – we're very happy. EA has a stake in Digital Illusions, but we get on so well that they feel like a full part of our organization."

**Doing business in Sweden** "Swedes are businesslike, rational and easy to get on with," says Owen Mahoney. "I've found this on every occasion, whether I'm working with Digital Illusions or support organizations such as lawyers, bankers and accountants. There are relatively few cultural differences to overcome and of all the places I've visited, Sweden is one of the world's most pleasant places to do business. I hope EA will be able to do more business in Sweden."

**Mobile gaming potential** "With its mobile technology expertise, high use of mobile devices and tradition of innovation in niche areas, Sweden is well positioned for mobile gaming development," says Owen Mahoney. "I think Scandinavia, the US and Asia are most likely to lead in mobile gaming."

[www.dice.se](http://www.dice.se)

[www.ea.com](http://www.ea.com)

## ISA – Business facilitator

Invest in Sweden Agency (ISA) is the government agency responsible for informing foreign investors about business opportunities in Sweden. Companies planning to establish or expand business operations in Sweden can obtain information and assistance free of charge from ISA and its regional and international network.

With its headquarters in Stockholm, ISA has international operations and representation in major European, North American and Asian cities. The vast majority of ISA staff has a background in the corporate sector and expertise in the investment process. These attributes help ensure professional guidance for successful business launches in Sweden.

ISA's IT Sweden Project is a special initiative for the international promotion of the Swedish ICT industry in general, and wireless technology and mobile communication in particular. IT Sweden assists foreign ICT companies in finding business and investment opportunities in Sweden and facilitates the investment and establishment processes.

For more information please visit  
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