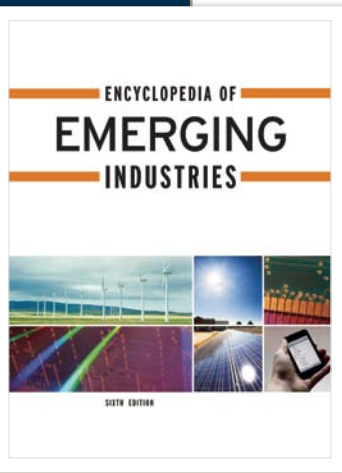


NEW EDITION



Encyclopedia of Emerging Industries, 6th Ed.

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Encyclopedia of Emerging Industries, 6th Ed.

This updated 6th edition of *Encyclopedia of Emerging Industries* provides insight into the inception, emergence and current status of new industries – business segments that are pioneering new technologies and those introducing breakthrough marketing strategies or implementing innovative means of serving new markets. The work includes detailed profiles on approximately 140 emerging industries. It is an ideal reference for academic researchers, students, faculty, entrepreneurs, and anyone with an interest in the latest developments in the business world.

Typical profiles include an overview; description of the industry's organization and structure; discussion of its history and development; profiles of pioneers in the field; trends and long-term outlook; leading companies; employment outlook; a bibliography of further reading sources; and much more. Adding to the product's appeal are approximately 50 tables and graphs.

SECTION HEADINGS INCLUDE:

- Industry Snapshot
- Organization and Structure
- Background and Development
- Pioneers in the Field
- Current Conditions
- Industry Leaders
- Size and Nature of the Workforce
- America and the World
- Research and Technology
- Bibliography of Further Reading

SAMPLE PAGES

Key features of this new edition include:

- Table of contents
- Further Reading section
- Comprehensive general index
- Industry index
- More than 50 tables and graphs

Software as a Service

Internet User Growth in Percentages, 2000 to 2010

Asia	2,387.2%
Main East	1,822.2%
Latin America/Caribbean	1,227.2%
Africa	821.2%
Europe	789.2%
Oceania/Pacific	788.2%
South America	788.2%

Source: Internet World Stats.

...making off of the same copy. That means, in most cases, that users are able to benefit from what is known as "The User Community." When one upgrades or fits in made to the single instance of the software, every user is able to benefit—free of charge and disruption to their business. In every upgrade situation there is the company that "picks up the bill," for a benefit that everyone will feel. In theory, however, the company that from the bill one user, will benefit free of charge other users.

An issue still besetting over all benefits of Software as a Service is the issue of Security. Many business owners wonder how their data is able to remain safe on the Internet in a time when Internet hacking is a very real thing. According to Forensic analyst Liz Herbert, "Security is the No. 1 reason preventing firms from moving to SaaS." "What many potential users don't know is that security can actually be one of the major advantages of using many SaaS applications. Many of the SaaS providers actually have access to many more security resources than the average business. This usually enables the providers to provide features like round-the-clock, 24-hour security staffs, biometric control systems, security experts, and certified policies, procedures, and equipment. The combination of the abundant resources provides a very safe environment for data.

SaaS applications exist in a magnitude of industries, from Aerospace and Defense, to Professional Services, to Medical, to Manufacturing, to Electronics, and the list goes on. As the world continues to find a need for a more cost-efficient, technologically savvy way to connect with their customers and do business, the list of SaaS offers is only going to grow.

BACKGROUND AND DEVELOPMENT

In many respects, Software as a Service is the brainchild of a previous generation of Application Service Providers (ASPs). The traditional ASP model—also referred to as "hosted applications"—was a "service provider" simply renting and housing a traditional, on-premise application in its facilities to relieve the customer of the ongoing operational requirements. Unlike the current SaaS

Software as a Service

model, which didn't become popular until the early to mid 2000s, the traditional ASP model does not eliminate:

- Upfront costs
- Extended deployment cycles
- Remote accessibility issues
- Need to acquire an up-front perpetual license
- Multiple versions of the software

The traditional ASP model failed to satisfy business needs for corporate customers at the turn of the new century, which is why most ASPs founded in the dot-com era failed and disappeared. There are still companies today that support the traditional ASP model, but they are struggling to stay afloat. In fact, many of the companies that support that ASP model in today's market attempt to quote their product off as a SaaS application, however much of the time that is not true. A common tell-tale sign of a true SaaS application is if there is a single version of the software. Many companies will market their product as SaaS, but in reality they are an ASP that is offering to lease the servers that just so happen to be purchased.

However different Application Service Providers are from their descendants (Software as a Service), they both share a common goal of enabling customers to outsource computer applications so they are able to focus on their core competencies. Based on that similarity, both of can be considered indirect descendants of the "service business" of the 1960s and 1970s. In turn, the service business were trying to fulfill the vision of computing as a utility, which was "initially proposed by John McCarthy during a presentation at MIT in 1961."

PIONEERS IN THE FIELD

Salesforce.com is a company that has inspired new thinking and truly revolutionized an industry. Salesforce.com was started by Marc Benioff in a rental apartment in 1999 with the goal of making enterprise software as easy to use as a Web site like Amazon.com. "Benioff envisioned a world where enterprise software was no longer 'unbearably expensive and unexciting to implement.'" Benioff's vision changed the way the software industry works, and along the way Salesforce.com earned the distinction as the first dot-com listed on the New York Stock Exchange.

Benioff started off his career as an intern with Apple, and then moved into a full-time position at Oracle. Benioff started at Oracle when there was only about 200 people on staff at that time, founder and CEO, Larry Ellison, was a regular in the halls. According to Benioff, it was Larry's vision that inspired him. Ellison "envisioned a world of interconnected computers that could easily share information across the planet at the touch of a button." With the help of the Internet, Benioff seemed to fulfill that goal with Salesforce.com and all that came after.

Mark Benioff was very successful at Oracle, but it was eventually Oracle's inability to "respond quickly or easily to new directions or opportunities, [that] found that limitation comically challenging." Eventually Marc left to seek other opportunities elsewhere; this was when Salesforce.com was born.

The vision to make software "easier to purchase, simpler to use, and more democratic without the complexities of installation, maintenance, and constant upgrades," the vision of Salesforce.com, had been hovering in the mind of Marc Benioff since 1996. To make his dream of on-demand software (Software as a Service) a reality, Benioff spent the next several years planning and believe passionately in the computing evolution he was cooking up. In his book, *Behind the Cloud* Benioff explains the steps he took to turn his dream into a reality. It was the next steps that he took that have truly transformed the software and business industries as we once knew them.

Salesforce.com started small, and has now transformed into more than a billion-dollar company. They have expanded their services to include much more than their original Customer Relationship Management (CRM) application; their offerings now include the Platform as a Service (PaaS), Force.com, and formerly brands of other SaaS applications that have been built to run on Force.com (both privately and by Force.com).

Software as a Service is an industry that is growing at a rapid pace and is at a stage that could allow competitive adopters at "Pioneers in the Field." Software as a Service still represents a very small portion of the software industry, so every early adopter is, in a way, stepping out on a limb and being a pioneer in the industry.

CURRENT CONDITIONS

In light of the recent economic downturn in America and the rest of the world, companies are looking everywhere to cut costs, streamline operations, and gain a competitive edge. One of the first places companies are starting to look in their operations for software applications. Historically companies have invested in infrastructure that would enable them to house and run their own copies of the software that was necessary to run their business in many cases this proved to be very costly. Costs add up quickly when one company is responsible for acquiring, deploying, updating and maintaining legacy systems. Additionally, in many cases legacy applications lack the "formers and functional capabilities [that] are essential in today's rapidly changing business environment."

Terms like "Globalization" and "e-Commerce" have become standard in most business sectors. Companies are looking for solutions to help them thrive as the business landscape changes from one inhibited by geographic barriers, to one that is free of geographic barriers to entry. The SaaS community is recognizing and latching on to this business paradigm shift and in light of the economic downturn, is experiencing high growth. A study released by Gartner showed that in 2009, worldwide SaaS sales are at about \$7.5 billion. In 2010 however, Gartner predicts worldwide SaaS sales be up 14.1 percent from 2009, coming in around \$8.5 billion.

INDUSTRY LEADERS

Salesforce.com is arguably the most influential company in the SaaS sphere. Salesforce.com (NYSE: CRM) was founded as a "groundbreaking idea" in 1999 and since has transformed into a "major and technology leader in enterprise cloud computing." Salesforce.com provides a customer relationship management (CRM) solution that helps companies "record, track, manage, analyze and share information regarding sales, customer service and support, and marketing operations." Salesforce.com is available in over 20 languages, and can be access from almost any Internet device (including many mobile platforms).

Salesforce.com includes CRM modules such as:

- Accounts and Contacts
- Marketing and Leads
- Analytics and Forecasting
- Workflows
- Social networking

Salesforce.com filed to go public in December of 2003. They were the first SaaS company to go public, with offering the most money to date on the NYSE. They ended their first day on public trading, Wednesday, June 23, 2004, at \$17.26. Since then Salesforce.com has seen great success. Its 5 year growth rate is 49.24, compared to the rest of the industry, which is lagging behind at 13.96. According to *BusinessWeek*, many projections for Google's fiscal year ending January, 2010 is \$1,293.81 billion.

Cirris Systems Inc. Cirris, founded in 1980, was one of the first companies to "exploit the potential of virtualization." Although many people typically associate Cirris with offering the most money they actually started out by "creating products designed for low bandwidth, high latency." Its 5 year growth rate is 49.24, compared to the rest of the industry, which is lagging behind at 13.96. According to *BusinessWeek*, many projections for Google's fiscal year ending January, 2010 is \$1,293.81 billion.

Cirris offers a variety of products and solutions involving virtualization, cloud computing, and

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ENCYCLOPEDIA OF EMERGING INDUSTRIES 4TH EDITION

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The new 6th edition of *Encyclopedia of Emerging Industries* includes detailed profiles on approximately 140 emerging industries.

SOFTWARE AS A SERVICE

SIC CODE(S)
7372

INDUSTRY SNAPSHOT

Software as a Service (SaaS) is revolutionizing computing as we know it. SaaS is upending the way we traditionally think about computing by delivering software over the Internet, thus making it accessible from anywhere, at any time.

SaaS is a new way of leveraging software applications—it shifts the burden of getting and keeping an enterprise application up and running, from the customer to the vendor. This enables customers to be able to focus on their core business objectives, and frees them from dedicating resources to support the enterprise application on an ongoing basis.

In his book *The Big Switch*, Nicholas Carr draws a parallel between what happened with the invention of electric utilities a hundred years ago to what is happening with computing today. As he explains, before the electric grid, people had to generate their own power to run their machines. It wasn't until the late 1880s, when people no longer had to worry about producing their own power, and instead could take advantage of the cost effective, powerful electric utility grid. What is happening now with SaaS is very similar to what happened with electricity—instead of accessing software on their personal computers, people are accessing services that are running on the provider's infrastructure and are accessed through a public network connection.

The landscape of personal computing, business computing, and the traditional way of offering software is getting rocked with the agile nature and low cost that SaaS has to offer. Those corporate users taking the leap

are finding that SaaS consistently offers benefits that "far outweigh any limitations. These benefits include:

- Quicker time to value
- Lower cost of ownership
- Higher return on investment
- Greater scalability and agility

Throughout this essay readers will get an inside look at Software as a Service, including background, pioneers leading the way in the field, and an objective view of what the implications, both good and bad, might be on our workforce and world.

ORGANIZATION AND STRUCTURE

Software as a Service enables businesses to shift their computing applications to the Internet. In the purest sense of the phrase, SaaS shifts the burden of housing and hosting data, and enables users to log in to their application from anywhere, at any time. True SaaS applications must be multi-tenant, and single instance. That is to say, multiple users are using a single instance of the software as if it is their own. With all users running on the same instance of the software, the SaaS providers are able to make upgrades and developments to that one version and have it be pushed out to all users at once. One of the largest benefits of this is that users are never faced with an upgrade; those new features and customizations automatically get folded in to the base application.

One of the biggest characteristics of Software as a Service that sets it apart from any other software offering, is that the software exists in a single instance; all users are

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This updated edition provides insight into new industries, new business segments and pioneering technologies.

NEW TOPICS FOUND IN THE *ENCYCLOPEDIA OF EMERGING INDUSTRIES, 6TH ED.*

Environment/Energy

- Aeroponics
- Biodynamics
- Bioremediation
- Drip irrigation
- Electric vehicles, including information on infrastructure required to serve electric vehicles
- Green construction
- Green retailing
- Hydroponics
- Natural pest control
- Ocean energy
 - Energy from waves and tides
 - Ocean thermal energy
- Organics
- Roof gardening
- Specialty gardening

Food

- Boutique wineries
- Specialty baked goods

Healthcare

- Medical tourism
- Quick care clinics
- Sleep clinics
- Wound care products and services

Technology

- Agile software
- Mobile apps
- Social media – Facebook, LinkedIn, Twitter, Flickr, blogs etc.
- Software as a service (SaaS)
- Tablet computers, iPad®, etc.
- Videogaming – gesture-based control systems, digital distribution, marketing and more

ENTRIES INCLUDE:

- Alternative Medicine
- Alternative Vehicle Fuels
- Blogging
- Business Continuity and Emergency Preparedness Planning
- Competitive Intelligence
- Computer Security
- Data Mining
- Entrepreneurial Training and Advisory Services
- Micromachines and Nanotechnology
- Natural and Organic Groceries
- Outsourcing
- Radio Frequency Identification
- Risk Management Services
- And more

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