

Software Industry Business Models

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// Software companies can leverage successful firms' business and revenue models to create a competitive advantage. //



WHAT ARE THE business models of successful software companies? Can others leverage them to create a competitive advantage? A semiformal approach to classifying and modeling business models by types, along with examples from three successful software companies, provides some answers.

Classifying Business Models

Certain characteristics guide the classification of business models. Peter Weill and his colleagues developed a classification system based on a study of about 1,000 companies that we can use to classify and build software company business models.¹

A business model describes the goods or services that a company provides and the compensation for them. Formally, the business model has three

characteristics: the type of goods or services, the business model archetype, and the revenue model. A business model is a generic model showing the type of business, but not how the business is run.

Types of Goods or Services

The basic types of goods or services are *financial goods* (cash and other assets), *physical goods* (physical products—durable and nondurable), *intangible goods* (software and intellectual property), and *human services* (people's time and effort).

Business Model Archetypes

Four archetypes describe the basic patterns of doing business:¹

- A *creator* transforms supplied goods and internal assets into a

product. The creator's main work is designing the product.

- A *distributor* buys a product and provides it to customers. Obvious examples are commodity wholesalers and retailers or software resellers.
- A *lessor* provides the right to use but not own a product or service. Examples are landlords, money-lenders, or companies that license their software to customers.
- A *broker* facilitates the matching of potential buyers and sellers. A broker never takes ownership of the products and services. An example is Google's advertising business, which matches advertisers with potential customers.

Figure 1 shows the combination of archetypes and types of goods or services.

Software vendors focus on providing intangible goods and services such as software.² So, let's investigate different archetypes for intangible goods and services.

Inventors create intangible goods or services. The main task is inventing (designing) the new service or product. This archetype is widespread in the software industry. Often, this task is expensive, especially when the inventor designs and programs software by leveraging developers on his or her own payroll. After the invention activities have ended, software companies use other archetypes for intangible products to make the software available to customers, such as the intellectual property (IP) distributor or lessor.

IP distributors sell their IP rights or another software vendor's usage rights to customers. Typical ways to distribute IP in the software industry are original equipment manufacturer (OEM) agreements for software components and distribution rights for redistributables.

Redistributables are often bundled with development tools and integrated and shipped with a software product.

IP lessors provide intangible goods “for rent,” such as when software companies provide software usage rights to customers.

Hybrid Business Models

A company can choose more than one combination of goods and services and business model archetype to create a hybrid business model. This can help provide a competitive advantage, especially when inventions or revenue from one business model feed the other.

Most software companies have a hybrid business model because they’re acting as both an inventor and IP lessor. In addition, software companies can differentiate their business model by offering software as a product (SaaP), software as a service (SaaS), or a combination of both.

SaaP means that the company delivers a copy of the software to the customer, who gets usage rights but not ownership. SaaP represents a hybrid business model (see Figure 2a). The customer carries the cost for the usage rights, support, maintenance and operations.

SaaS means the software vendor does not deliver the software, but the customer gets both access to the software and usage rights (see Figure 2b). The software vendor carries the cost of software support, maintenance, and operation.

Revenue Models

A revenue model defines how a company is compensated for its goods and services. The compensation is usually, but not necessarily, a payment. A company can create a revenue model for each of its products and services.

A revenue model consists of one or more revenue streams.^{3,4} Usually, one revenue stream compensates the company for each good and service offered. But this isn’t necessarily the case. With SaaS, the customer usually pays one

	Types of goods/services offered			
	Financial	Physical	Intangible	Human
Creator	Entrepreneur	Manufacturer	Inventor	n/a
Distributor	Financial trader	Wholesaler, retailer	IP distributor	n/a
Lessor	Financial lessor	Physical lessor	IP lessor	Contractor
Broker	Financial broker	Physical broker	IP broker	HR broker

FIGURE 1. Business model archetypes and types of goods or services.¹ Software companies typically use archetypes from the intangible-goods column.

	Types of goods/services offered		Types of goods/services offered		
	Intangible	Human	Physical	Intangible	Human
Creator	Inventor	n/a	Manufacturer	Inventor	n/a
Distributor	IP distributor	n/a	Wholesaler, retailer	IP distributor	n/a
Lessor	IP lessor	Contractor	Physical lessor	IP lessor	Contractor

(a) (b)

FIGURE 2. Hybrid business models for (a) software as a product (SaaP) and (b) software as a service (SaaS). The highlighted boxes show the active business models. Software as a product focuses on creation, providing usage rights and maintenance and support services. Software as a service adds operations of the software by lending hardware usage and additional services.

subscription fee to access a combination of services provided by physical lessor, IP lessor, and contractor archetypes.

Creation of a revenue model can be a source of a competitive advantage. A company could choose to offer three products or services and only get paid for one service, with the others being free. In software, IP lessor revenues often pay for sunk inventor cost. Furthermore, software companies can include a nonmonetary compensation for their services as a source of differentiation.

The Range of Software Business Models

Creating a business model involves combining business model archetypes, goods and services provided, and revenue models.⁵ For simplicity, let’s focus on business model archetypes and their combinations with goods and services.

Common Business Models

As I mentioned before, the software industry mainly offers intangible goods,

although most software companies also offer consulting and support services, which correspond with human services.

Looking at the archetypes, software companies usually act as creators of intangible goods (inventors). Some software companies create individual software and sell it along with IP to their customers (acting as an IP distributor).

Most software companies, especially when creating standard software, act as an IP lessor and give their customers the right to use the software. An example is a vendor designing and programming business applications to license to many customers in an SaaS model.

If a vendor provides usage rights for another vendor’s software or sells that vendor’s IP, it acts as a distributor of intangible goods (an IP distributor). Software vendors also provide consulting services, which correspond to being a lessor of human services (contractor).

If a vendor provides usage rights for a SaaP offering, it acts as a lessor of physical rack space, storage, and com-

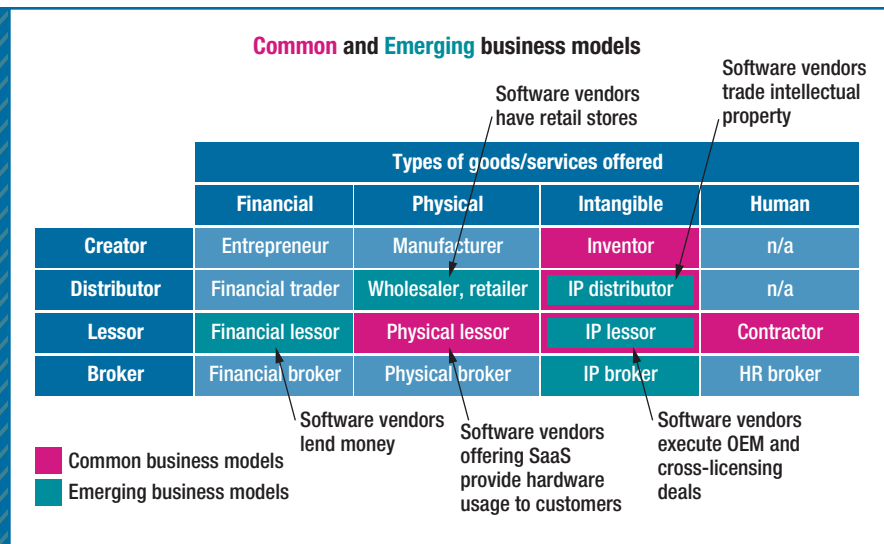


FIGURE 3. Typical business models in the software industry. Common models are highlighted in brown and include creating and trading software as well as offering SaaS and SaaS; emerging models are highlighted in green and contain manufacturing, retailing, financing and broker business.

puters (a physical lessor) as well as an IP lessor for the software.

Figure 3 shows the most common combinations of business model archetypes (highlighted in brown).

Emerging Business Models

Some software vendors, especially large ones such as IBM, offer additional combinations of goods and services and business model archetypes (marked in green in Figure 3).

Financial lessor. Software companies lend customers money to pay for software license fees—for example, when SAP lends customers money to buy its software.

IP distributor. Software companies trade IP. They revise their IP portfolio regularly and might decide to sell IP rights, mostly patents.

Additional IP lessor business. Large software companies usually have a large number of IP rights summarized as a portfolio. The likelihood of two companies having overlapping portfolios increases with portfolio size. Cross-licensing agreements let two software

vendors use each other's IP. Another way to use another software vendor's IP is the OEM software business, which lets a vendor distribute a supplier's software with its products.

IP broker. Large software vendors have marketplaces that their partners use to advertise their solutions.⁶ Examples include SAP's EcoHub and Microsoft's Solution Finder.

Retailer. Software vendors have retail stores for physical and intangible goods. One example is Microsoft's flagship store.

Successful Software Business Models

Now, let's apply this business model framework to three software companies chosen on the basis of their size and availability of information about their business models: SAP, Microsoft, and Google.

SAP

SAP is a successful German company selling software and services in the area of enterprise applications, with revenue of 11.5 billion Euros. SAP focuses on

SaaS but is also working to increase its SaaS business.⁷ In addition, the company offers system integrator services and various support services (see Figure 4).

SAP is acting as an inventor, which means money spent on development. But by having a hybrid business model, SAP's revenue streams as an IP lessor and contractor cover the sunk cost of inventing. SAP's business model also includes the IP distributor business, in which SAP acts as a reseller and revenue-sharing partner for partner solutions. SAP distributes usage rights for its partners' software while avoiding the sunk cost of inventing in these solutions. Furthermore, SAP has an IP lessor business working directly and indirectly with customers. Whereas SAP owns direct business for large and very large enterprises, it engages with partners to access small- and medium-sized customer companies.

SAP acts as a physical lessor by providing hardware to run SaaS solutions such as SAP Business ByDesign or customer relationship management on demand. SAP also acts as a contractor by providing consulting, support, and maintenance services, as well as customer-specific development for its on-premise offerings and operating services for its SaaS products.

Finally, SAP has an IP broker business.⁵ It hosts SAP EcoHub, an online solution partner marketplace where partners can advertise their solutions and SAP gets a revenue share if this leads to sales of partner solutions. Overall, SAP is extending its activities to increase revenue from the partner ecosystem.

SAP's largest revenue stream comes from maintenance and support, followed by SaaS. Besides consulting and reselling partner solutions, emerging revenue streams include SaaS and the partner ecosystem.

Microsoft

Microsoft has a number of business models and over \$US 60 billion

revenue. Like SAP, Microsoft is rapidly changing from a company focused on SaaS to SaaS (see Figure 5).⁵ Unlike SAP, Microsoft

- is in the business-to-business and the business-to-consumer market,
- offers software and hardware solutions,
- has an SaaS offering in the business-to-consumer business (with Windows Live and so on), and
- receives most of its revenue indirectly through partners. Hardware vendors bundle Microsoft OSs, software vendors include Microsoft's databases in their offerings, and so on.

Microsoft has direct and indirect IP lessor businesses with its customers. Microsoft's Solution Finder lets customers find partner solutions on its website, matching partner offerings with customers (an IP broker business). The company is extending its business models into other types of broker businesses. It partners with Yahoo in the advertising and matchmaking business and provides advertising opportunities through the Bing search engine.

Microsoft's main source of revenue is the partner ecosystem. Many hardware vendors deliver Microsoft OSs as part of their offerings, and many SaaS and SaaS software vendors base their solutions on Microsoft OSs and database platforms. In addition, Microsoft has revenue from SaaS (Windows Live) and appliance sales (for example, the Xbox).

Google

Google began in the search and advertising business and has extended its business to many other areas. Its revenue in 2010 was \$US 29 billion.⁵

Google's main business is matchmaking between advertisers and potential customers (see Figure 6). Besides its main business as a broker, Google manufactures the Google Search Appliance and Google Mini, hardware ap-

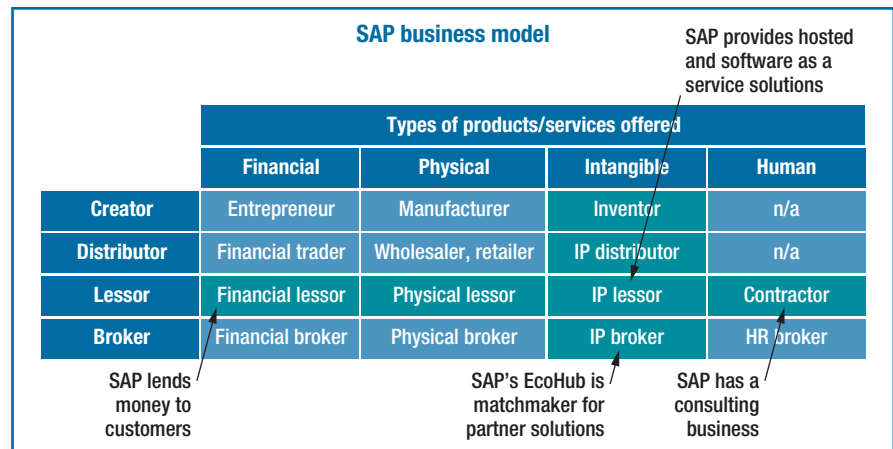


FIGURE 4. SAP's business model. Besides common business models offering SaaS, SaaS, and related services, SAP also offers emerging business models like matchmaking for partners and financing.

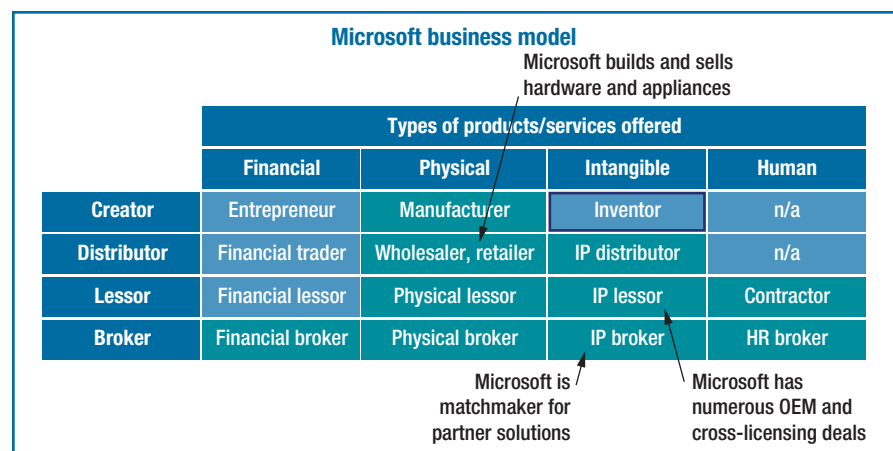


FIGURE 5. Microsoft's business model. Besides typical software business models, Microsoft also manufactures appliances (like Xbox), runs retail stores and does matchmaking for partners and customers.

pliances that include its search engine. Target customers are companies that can use the appliances for searching their intranets and websites. The inventor business at Google focuses mainly on inventing products for the broker business and for other SaaS offerings, such as Google Apps, Gmail, or Google Voice. In addition, Google acts as an IP lessor for its browser, OSs, and books.

Google's revenue comes from SaaS, its ecosystem, and SaaS, with the main revenue stream being from its broker business, on which we focus now. Google's search business provides a search service to search customers and a pay-per-click (PPC) advertising service

to its advertising customers. The compensation for the PPC service is payment per click on an advertisement. The non-monetary compensation for the search service is information about the user.

This business model has two striking advantages. First, Google receives information about the search customers for free. Second, Google sells advertising space, perfectly matched with the customer information, to advertisers through an automatic online auction. Google uses the revenue from its broker business to fund offerings such as Gmail.

Comparing the Three Models

Software business models must adapt

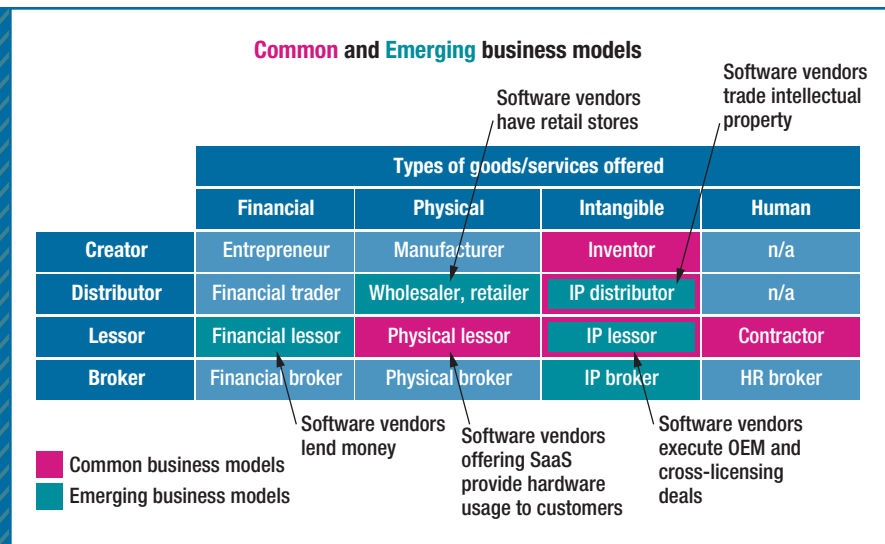


FIGURE 6. Google's business model. Google's main business is matchmaking between advertisers and customers, but they have expanded their business into several software business models and into selling search appliances.

TABLE 1

Comparing the three software vendors.

	SAP	Microsoft	Google
Main business model	Software as a product	Software as a product	Broker
Main revenue source	Maintenance and support	Indirect licence revenue from its partner ecosystem	Advertising
Emerging business model	Software as a service	Software as a service, broker	Software as a service, retailer, IP licensor for OSs
Main target customers	Businesses	Consumers	Consumers

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to a changing business environment.⁸ So, it's important to look at the status quo of the three companies' current and emerging business models. Whereas SAP and Microsoft currently focus on SaaS, their revenue models and main

target customers differ significantly (see Table 1). In contrast, Google focuses on its main broker business model and has advertising as its main revenue source. The companies have different target customers: Microsoft and Google focus

mainly on consumers, whereas SAP focuses mainly on businesses.

Different business models require different development, maintenance, and support processes and affect the software solutions' technology and architecture. Just compare SAP's SaaS offering, which has to cover architecture, quality, security and compliance requirements of businesses as customers for on-premise deployment, with Google's search and advertising business, which is a SaaS business.

This article presents a new and detailed viewpoint at the structure of business models in the software industry. Using the approach described in this article, software companies can analyze existing and create new business models to gain a competitive advantage.

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