

Chapter 6

B2C Digital Business Models: Context



The context business model focuses on classifying and systematizing information available on the Internet. While Sect. 6.1 outlines the relevance of the context business model, Sect. 6.2 describes the various types of this business model and Sect. 6.3 presents the underlying value chain. Finally, Sect. 6.4 provides a case study of the Internet search engine Bing.¹

6.1 The Context Business Model

The context business model focuses on classifying and systematizing information available on the Internet. This function can be subdivided into search engines, web directories and bookmarking services (see Fig. 6.1). The use of context offers has been increasing for years. Google, for instance, is processing more than 3.5 billion search queries daily worldwide in 2017 (Internet Live Stats 2017).

Context providers in the e-business sector distinguish themselves in that they primarily do not offer their own content, but rather offer navigational aids and increasingly take on the role of an aggregator on the Internet. The users consequently often set a context page as their homepage through which they can access information, interaction or transaction offers of other providers. In addition to the essential navigational aid for the user, complexity reduction is also a major task of the context provider. The context provider compiles the information according to specific criteria and clearly presents it to the user in a context-specific manner. The objective is to improve market transparency and to continuously improve the obtained search results.

The e-search business model that comprises the subcategories general search, special search, meta search and desktop search generally represents Internet search engines. The basic function of a search engine relates back to the information

¹See also for the following chapter Wirtz (2018b).

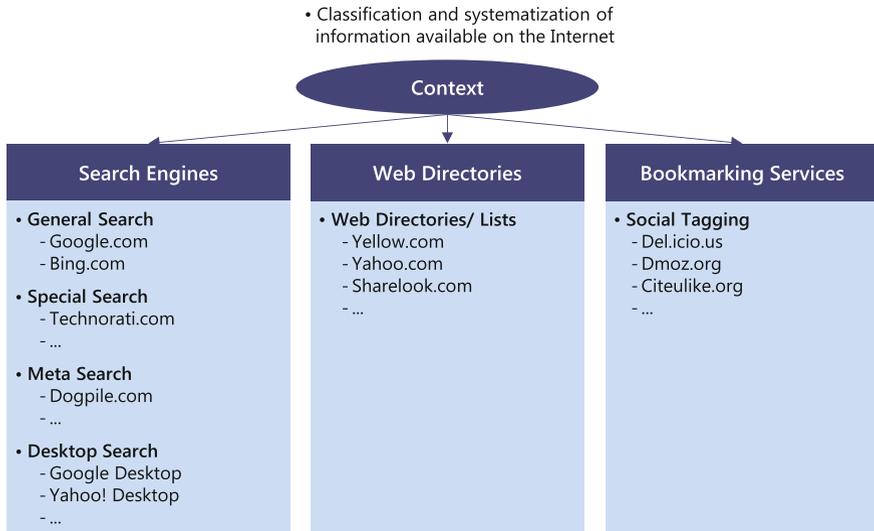


Fig. 6.1 The context business model. *Source* Wirtz (2001a, 2018b)

retrieval system. A person submits search queries to the search provider and obtains search results of the index-based inventory of the collected information sorted according to the frequency of use of other users.

In contrast, web directories as well as the offline versions such as the yellow pages are in most cases subject to editorial control and provide a better average quality or relevance of search queries than traditional search engines. Bookmarking, as a further subcategory in the context sector of the business model, has only gained special prominence due to the developments within the scope of the Web 2.0.

E-bookmarking describes the collaborative indexing of Internet-based information by the users. Therefore, one can assign keywords in the web browsers by means of Web 2.0 or social media applications, so that other users with similar search queries can find the information faster. This type of indexing is particularly successful with respect to well-defined user groups, since one can efficiently filter the information according to the relevance of the target group. Furthermore, the decentralized storage of bookmarks facilitates usage independent from the private device.

After having presented the different types of business models in the framework of context business models, the following explains the aggregated context value chain. The subsequent sections address the specific core competencies and core assets of context providers and specify the particular service offers. The presentation of the context business models concludes with a case study of the search engine Bing.

6.2 Context Business Model Types

The next sections describe the service offer of the context business models e-search, e-catalogs and e-bookmarking. These explanations address the peculiarities and specifics of each individual business model to deliver a practical understanding of the offer. In this connection, special emphasis is put on the search engines that are particularly relevant compared to the other types of business models that is e-catalogs and e-bookmarking, which will be discussed only briefly (Gay et al. 2007).

Search engines are computer systems that automatically search millions of documents according to predefined search terms. Certain programs (softbots) sort these documents into a database that is updated regularly. When a user enters a search query, this term is not searched on the Internet but in the database (Papazoglou and Ribbers 2006). In this context, one can divide search engine providers into general search, special search, meta search and desktop search. The functional principle of the search engines described remains identical in most cases.

The most popular search engines, such as Google, Bing or Yahoo are called primary or general search engines because the user searches for general information, which the selected search engine often provides directly. These general search engines are most important on the Internet as a whole. The integration into partner deals has also significantly contributed to the distribution of these search engines.

For instance, the social networking platform MySpace offers the opportunity to search through the large number of user profiles, videos or photos directly on their homepage. However, this search is not carried out by MySpace, but rather by the general search provider Google. The integration of search engines in other offers expands the circle of users and increases the information quality of the search results.

Meta search engines can be viewed as a subset of original search engines. They link several general or special search engines (Gay et al. 2007). Since no search engine alone can cover the entire Internet, meta search engines forward each request to several of the most important search services. This approach offers the user greater coverage and can be particularly useful with regard to relatively rare search terms. However, the quality of the search results may be lower when using different algorithms than when using primary search engines.

Another important category of search engines is desktop search. Desktop search programs work similarly to Internet search engines. As soon as a user installs such a program on a computer, it creates a document index in order to provide suitable results for search queries. Here, the user himself can control the indexing and, for instance, exclude particularly sensitive data from the index. As soon as the program has created a first complete index, it carries out an update on a regular basis, similar to the softbots on the Internet. Meanwhile, all major search engines also offer so-called desktop products such as Google Desktop, Yahoo! Desktop or Windows Search (Bing).

Companies with an e-search business model can use both direct and indirect revenue models, all of which are located in the area of advertising. In particular, contextual advertising with keywords represents a direct revenue model because search engine providers are paid for every click of the users. At the same time, most meta search engines also take advantage of the opportunity of indirect revenue models through advertising. In this context, banners and display ads are the most frequently used forms of advertising. The annual report of Google shows how important the advertising-related revenues for search engines are. In 2016, Google's ad revenue worldwide amounted to 79.38 billion USD (Statista 2017a). Looking at Google's total revenue worldwide of 89.46 billion USD (Statista 2017b) in 2016 reveals that about 90% of the total turnover is generated through advertising, while the rest of the revenue comes from licensing agreements and other revenue sources.

E-catalogs are address directories that are mostly subject to editorial control. Editors usually evaluate the quality of a website before it is classified into a structured keyword catalog. Users can then search the directory for keywords or categories to find commercial entries (Papakiriakopoulos et al. 2001).

In the context of commercial web catalogs, the editorial control has been repeatedly subject to criticism largely due to the revenue models of the web catalogs. Some web catalogs charge a fee for an offer to be considered at all (pay for consideration) (Gay et al. 2007). This fee can amount to several hundred or thousand dollars and is thus a high market entry barrier for start-ups and small companies. Furthermore, web catalogs charge a fee for including an offer in the index (pay for inclusion). As a result, financially strong companies can influence the positioning of their own links, so that the users of the web catalog can rarely find alternative offers.

Due to the criticism of the approach of many web catalog providers and the development of the Web 2.0 or social media, more and more user-managed web catalogs or web listings have become increasingly prevalent. Here, a large number of users carry out the editorial work who do not pursue commercial interests.

An example of a cooperative and user-managed web catalog is the Open Directory Project Dmoz.org (Dmoz 2016). Derived from the open source idea, where all users can simultaneously be active actors, the Open Directory Project has become now the largest multilingual Internet directory. The use and editing of this platform is completely free of charge.

The offer of Delicious pursues a similar user-oriented strategy, according to which users can assign keywords (tags) to all kinds of content, thus creating a web catalog. This direct, social classification or indexing of content by the users generates well-structured information particularly in the special target groups, which are primarily not driven by commercial interests. In this context, the artificial word "folksonomy" has become established, which is attributed to the creation of a systematization (taxonomy) by the entire folk (folk).

The website presents their users current links of other users, which they can easily tag or add to their own bookmarks. In addition to this offer, the users can further choose between the most used links and a search function within the tags of the users. However, the storage of own files requires a free registration at Delicious.

6.3 Value Chain, Core Assets and Competencies

The different partial models of a general business model are implicitly taken into account when looking at the aggregated value chain of the context provider. Here, it is important to note that the value chain is particularly valid for the first two types of context business models and that e-bookmarking differs from this superior value chain in some aspects. Figure 6.2 illustrates the components of the context value chain.

Operation of Server	Search Software/ Algorithm	Sale of Advertising Forms	Presentation/ Contextualization	Marketing/ Billing
<ul style="list-style-type: none"> • Hardware • Software 	<ul style="list-style-type: none"> • Reliability of Search Results • Amount of Data Included • Differentiation/ Objective 	<ul style="list-style-type: none"> • Keyword Advertising • Placement 	<ul style="list-style-type: none"> • Relevance • Integration of Advertising • Cross-Linking 	<ul style="list-style-type: none"> • Data Mining • Cross-Selling • Cost per Click/ Performance • After Sales

Fig. 6.2 Context value chain. Source Wirtz (2001a, 2018b)

The value chain of a context provider highly depends on the operated hard- and software. Here, especially the server structures are important to efficiently process the incoming search queries and to perform the other processes of the value chain. Figure 6.3 depicts the server structure of a search engine provider.

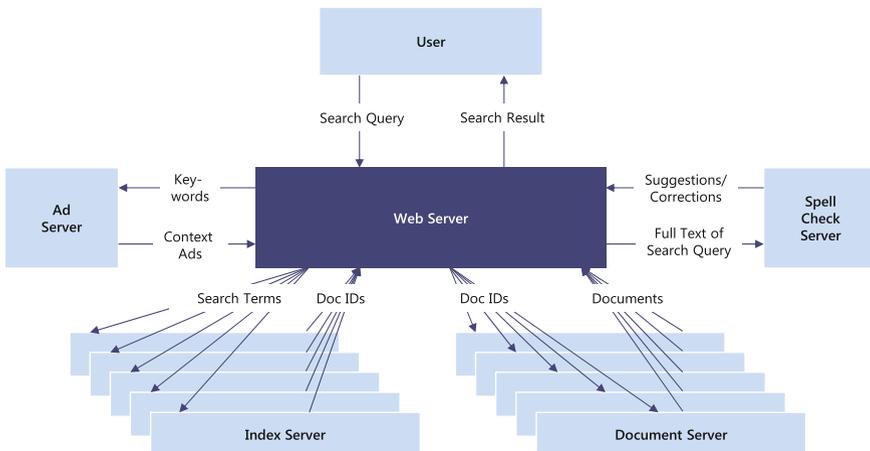


Fig. 6.3 Server structure and interaction for a search query. Source Wirtz (2001a, 2018b)

The user sends a search query to the web server that then communicates with the spell check server, checking whether the entered search terms are orthographically correct or whether suggestions for improvement need to be sent out. At the same time, the search term is redirected to the different index servers that assign document identification numbers (doc IDs) to the search term, which are already known from earlier sent queries.

The web server in turn sends these doc IDs to the document server that finally delivers the index-based documents corresponding to the search query to the web server and ultimately to the user. Another particularly important server for the other value chain processes is the ad server that delivers context-specific advertising for the search query (Laudon and Traver 2014).

Moreover, the applied software with regard to the servers or their update is very important for the context provider. While in the case of web catalogs and tagging people actively take part in the indexing process, the most common search engines like Google or Bing use software robots (softbots) that take care of the indexing (Turban et al. 2006; Chaffey 2009). These softbots periodically scan the documents available on the Internet and match these with the different relevant servers, checking whether substantial changes have emerged. Only this elaborate maintenance of the data structure and the index enables an efficient search query with current search results.

Closely connected to the server operation is the second value chain stage: the search software or search algorithm. In this connection, one can focus on different elements of value creation that are described in the following. One of the most important requirements of the success of a context provider is the reliability of the search software applied. Here, the systems needs to recognize every term entered by the user in the search box and back it with results as quickly as possible. In this connection, there are different functions available for the algorithm, which one can use to perform a reliable search, for instance, Boolean operators, phrase search and exact matching. The amount of data included also represents an important performance aspect of a context provider.

A search algorithm must be able to distinguish clearly the information desired by the user. For instance, if a user requests specific documents in a specific file type, the algorithm needs to be able to directly deliver these documents. As opposed to this, in the case of free text searching there is no specific limitation of the database. Here, it becomes apparent that search engines increasingly present search results from different areas to the user. This integrated search feature offers the user an additional benefit that the context provider can use to improve the index for search queries.

Figure 6.4 illustrates a free text search with the search engine Google and the integrated result from a comprehensive database. Google displays both general results and results from the image search. If necessary, the user can isolate or select specific data areas via the menu bar below the search box.



Fig. 6.4 Integrated search result of the search engine Google. Source Google (2018)

The narrowing down of the data areas is also important with regard to the aim or differentiation of search engines, which is why a context provider needs to consider this aspect in the creation of value. While Google provides an integrated offer of search results and represents a general interest search engine, Technorati, for instance, has established itself as a search engine specifically for weblogs. Thus, users only find publications in weblogs and primarily no commercial offers or websites.

The already mentioned ad server is a significant source of revenue within the scope of context business models. In this connection, there generally exist various forms of advertising of which keyword advertising and placement are regarded as most important (Gay et al. 2007).

Keyword advertising is a context-specific form of advertising that provides suitable advertising to a search query (Turban 2015). The ad server matches the search query to the available advertising options and provides a selection of various advertisements. This type of advertising offers the advertising company a variety of benefits. The advertisement only appears when a potential customer searches for a related search term, making it very likely that the user perceives the displayed advertisement as relevant.

Moreover, the commonly used compensation method in the context of keyword advertising is pay-per-click, which means that the advertising company only has to pay for those advertisements that the users have effectively clicked on. The costs per click depend greatly on the selected keyword because competition drives the bid price. For instance, in the case of a very frequently searched keyword, there will be higher competition among advertisers, which thus increases the price of the clicked ad. Within the scope of value creation, there arises differentiation potential for the

context provider and opportunities to achieve a price premium in the sale of keywords.

Besides keyword advertising that mainly occurs in conjunction with search engines, placement as another form of advertising has established particularly in the context of web directories. In this case, links and offers of advertising companies are integrated into the offer of the web directory. In this connection, context providers have two basic selling opportunities for the advertisement. The provider of the web directory cannot only charge a fee for considering the inclusion of a company into the index (pay for consideration), but also for the inclusion itself (pay for inclusion) (Gay et al. 2007).

Beyond the sale of advertising forms, the presentation and contextualization of search results represent stages of value creation. In this connection, the relevance of the search results play a significant role because the users link the added value of a search engine to those hits or results that are relevant to them. Here, the links on the website or of the documents to other websites or documents are highly important.

To determine the relevance of the search results, Google uses the page rank algorithm that indicates how many links exist between qualitative websites (Chaffey 2009). This assessment of relevance enables the context providers to increase their revenue through the display of keyword ads.

Within the scope of the contextualization of search queries, cross-linking is also possible to own offers of a context provider. In this way, most search engines that, for instance, also offer email services and video platforms, integrate these services into the search results and provide the user a direct opportunity to use their services.

The value chain of a context provider ends with numerous marketing tasks and billing services for delivered advertising services. There are several ways for the context provider to handle the billing. The search engine Google, for example, provides for the context-specific advertising AdWords multiple payment options depending on the region. For instance, the payment can be made subsequently, meaning that the due cost-per-click total can be debited from a credit card or bank account. Alternatively, companies can also make an advance payment to Google to have better cost control with regard to the context-specific advertising. Google only advertises as long as the respective companies have credit in their accounts.

In the context of marketing, a context provider must increasingly draw on the variety of data generated by the search queries (Chaffey 2009). Targeted data mining allows a context provider, for instance, to identify different trends and make relevant companies aware of them. This marketing directly targets the sale of advertising to these companies. Furthermore, data mining is also particularly relevant in the after-sales area. Companies that place context-specific advertising obtain very detailed statistics with regard to the respective ads and user behavior.

The core assets of context providers are manifold and include, especially in the case of search engine providers, the hardware and software (particularly the search algorithm), the data as well as the brand. The web directories expand these core assets by the relationship network.

Finally, the user base is a significant core asset particularly for e-bookmarking business models in order to be able to collaboratively create the indices. The

following describes the entirety of these core assets, before dealing with the necessary core competencies. The hardware, in other words, the servers used by the context providers, represents an important core asset. Here, the time it takes for a server to process the incoming user requests is particularly critical for success.

Google's success, for instance, originates from the use of simple and self-designed special servers, which although having an increased energy demand, can manage search queries particularly fast (Google 2010). Through this special type of server, Google has created a special core asset towards its competitors since the concrete use of technology is company-specific, although it can be bought in the market.

The situation is similar with the software or search algorithm. While the general search algorithms such as Google's page rank or trust rank algorithm are publicly known, the search engine's algorithm used in everyday business is secret. Google, for example, uses a search algorithm based on the page rank algorithm, which it has meanwhile enriched by further data volumes and thus greatly improved (Google 2010).

Another important core asset for context providers is data. The data available on the Internet is basically available for the providers in the same way. The provider that best matches the available amounts of data with its own database and is able to smoothly integrate self-generated data, develops a particularly strong core asset. An example of such a core asset is again the search engine Google. In addition to the constant alignment of the database with the data available on the Internet, Google itself generates data to provide the user with even better results.

Google collects data worldwide in the form of digital photographs of known buildings or major cities and integrates them into its own database of Google Maps. The data obtained by Google represent a particularly unique core asset in this context, which can be difficult to imitate. However, when it comes to integration and generation of data negative effects may also occur. For example, users have increasingly expressed their fear in the public debate that one provider concentrates too much data, which may potentially lead to data abuse.

The brand of a context provider can generally be considered a core asset, since it is particularly associated with the reliability and relevance of search results. However, the example of Google Street View shows that a brand may also suffer when public debates arise regarding data security or data usage and users lose confidence in the brand.

Overall, however, current surveys on search engine usage show that Google is the clear market leader in search engines and user confidence is not limited despite the public debate on data security. Although it is also important for search engines to develop and maintain cooperation partnerships, this aspect is rather a core asset for web directories.

Web directories present the various links of cooperation partners in a clear way and thus provide a guide for the user. If a web directory provider has established a network of partners that work exclusively through the web directory's offer, this relationship network may develop into a core asset. The competing web directories have difficulty to access these partners and an imitation is hardly possible.

Finally, the user or customer base is also relevant for all context providers. In e-bookmarking business models, the user base is an important core asset in order to provide the service to the user at all. Here, the users actively perform the task of indexing the relevant documents on the Internet, thus providing a list of results for specific search queries. The larger the user base of an e-bookmarking provider is, the more likely it is that the indexing provides the proper results in the context of a search query and as a result, in turn, that new users may be attracted.

Core competencies of a company are necessary to successfully use and develop core assets. In this connection, context providers particularly need to be competent with regard to the listing and structuring, service and CRM, as well as security.

The identification and presentation of relevant results for a search query is realized through the listing and structuring competence. Context providers that have strong skills in this area can provide users a special benefit and thus build long-term relationships with users. Here, the listing and structuring competence traces particularly back to the hardware and software used for the search and delivery of results. Moreover, the structuring competence is particularly important in the context of advertising. Here, the ability to optimally structure and place the context-specific forms of advertising in accordance with the desired search results is critical for success.

Another important capability of context providers is their service and CRM competence. With regard to the users, this is particularly relevant for success of the advertising company. For users, a context provider must offer a special search service that is characterized by a simple and intuitive user interface and delivers structured results. In most cases, search engine providers can only achieve reuse of their search engine among users when the latter are satisfied with the search results. Alternatively, search engine providers can integrate their search engine into different browser types by means of add-ons.

In addition to the general service and CRM competence, a context provider needs to have special skills with regard to business customers in order to be successful in the long term. The holistic service, as shown in the AdWords example, is a special benefit for companies. The context provider has to constantly monitor the companies' needs and precisely analyze or anticipate market trends. Furthermore, a pronounced CRM capability is necessary to bind business customers in the long term. For example, web directories offer business customers a detailed analysis of user behavior and thus the opportunity to better position their offers (Turban et al. 2006).

6.4 Case Study: BING

Bing is an Internet search engine by Microsoft, which replaces the company's previous search function Live Search and attacks the market leadership of the Internet search engine Google by major improvements. Microsoft understands its search engine Bing as a "decision maker", which is intended to make it easier for

the user to quickly and clearly handle the information explosion of the Internet, as well as to help the user with daily decisions, such as travel planning and shopping (Microsoft Corporation 2009).

Bing was introduced in June 2009 and is based on Microsoft's search engine Live Search that is also the successor of Microsoft's earlier Internet search service MSN. Due to the limited market reach of Microsoft's search engine Live Search that was available until mid-2009, Microsoft created the new search service Bing that can thus be seen as a response to the weak market shares of its predecessor. In May 2009, for example, Live Search achieved a market share of 8.0% in the US, while Google had a market share of 65.0% and Yahoo of 20.1% (comScore 2009).

The functions of Bing are strongly based on those of its main competitor Google. Bing also offers the possibility to categorize the search query. Here, the user can choose between the categories: web, images, videos, maps, news and explore. Other functions similar to Google include a login area, the possibility to change preferences, such as language and the access to other in-house products (MSN, Outlook.com).

One main difference between Bing and Google is that Bing generally offers the users more suggestive entry points into its search. In this connection, most search categories have a mouseover effect that displays a drop-down menu with search suggestions, such as top music videos, in-theater movies and most watched TV shows in the case of the Bing's video search category, for instance.

Moreover, Bing also has an autocomplete feature in the search box, but provides more suggestions than Google in most cases. While Google usually only presents four suggestions, Bing gives eight. This is especially helpful in order to find alternative information, for instance, with regard to travels or products.

Compared to Google, Bing also focuses more strongly on personalization and customization options for the user. In doing so, it offers the user, for instance, to save image results and add interests, like top news, stocks, weather and so on, which the user can then directly access via Bing's homepage. Bing also allows the user to customize its homepage by showing or hiding news and interests as well as the menu bar.

The most obvious difference to the market leader Google is the daily-changing background image on the Bing homepage, which addresses spectacles of nature or current events in the world, such as the Olympic winter games. In this connection, Bing also sets itself apart from Google by providing entertaining features on the homepage with regard to this background image, in order to induce the users to search and lead them into their search engine results page (SERP). In doing so, Bing has integrated two mouseover effects that display different teasers. While one teaser contains the Bing homepage quiz, the other teaser provides a link for further information on the background theme and gives the user the opportunity to share this information on social networks such as Facebook and Twitter or via its own communication tool Skype.

This connection to third-party social media platforms also distinguishes Bing from Google that exclusively links to its own services and social media platforms (e.g., Google+). Another unique feature of Bing is its rewards program Microsoft

Rewards through which users are extrinsically incentivized to use the search engine. According to this, users can earn points for searching with Bing and eventually redeem these points in exchange for electronic devices, movies, music, games etc.

In sum, Bing's strong emphasis on a visually appealing homepage with entertaining elements aims to attract users to the search engine. In addition, Bing's various suggestive entry points and rewards program are designed to induce users to search. Besides the rewards program, particularly Bing's personalization and customization features aim to bind users to the search engine in the long run.

Since Bing's core business is concerned with the classification and systematization of information available on the Internet, the business model primarily belongs to the context area. The strategic goal of Bing's business model is to organize and systematize the information available on the Internet and make it accessible to all Internet users in a user-friendly form. Particularly important is that the service is free of charge for the user and monetized almost exclusively via advertising on the site similar to Google.

By offering personalized and self-written content, such as the teasers on the homepage, Bing's business model also contains content elements. Moreover, the integration of Microsoft's chat and communication services MSN as well as the webmail provider Outlook.com partially extend the business model by connection elements.

Context business models can also be categorized according to their functions. Bing, for instance, belongs to the areas of e-search and general search. The basic function of general search services is based on the information retrieval system. Search requests go to the search provider and deliver the indexed and collected information to the user, arranged according to the usage frequency of search results.

Bing mainly obtains its input from communities, content providers and news agencies. The information transfer or interaction follows a simple structure. The pages or content are reported and upon inspection by Bing either rejected or included in the company's index. Bing generates additional input from media companies that are responsible for coordinating external communication in a kind of interaction.

The service provision of Bing is designed directly and linearly. In the area of context offers, information is first collected, systematized and classified, in order to store it and provide it to the users as a result of on-demand requests. The area of content offers is particularly characterized by the collection and systematization of third-party content that is adequately processed and made available to the user.

With a few exceptions, the service provision of context and content offers is coordinated linearly and without interdependency between the user interaction and the communication service management. Connection offers, by contrast, are characterized by a strong interdependency between the user interaction and the communication service management.

The company is particularly financed by advertisements of business customers on the Bing website. These advertisements are displayed according to the principle of a free newspaper and corresponding to the search query, but with the difference that the search engine follows a personalized approach and estimates the interests of the user based on the data input (keyword advertising). Figure 6.5 presents a simplified form of Bing's business model.

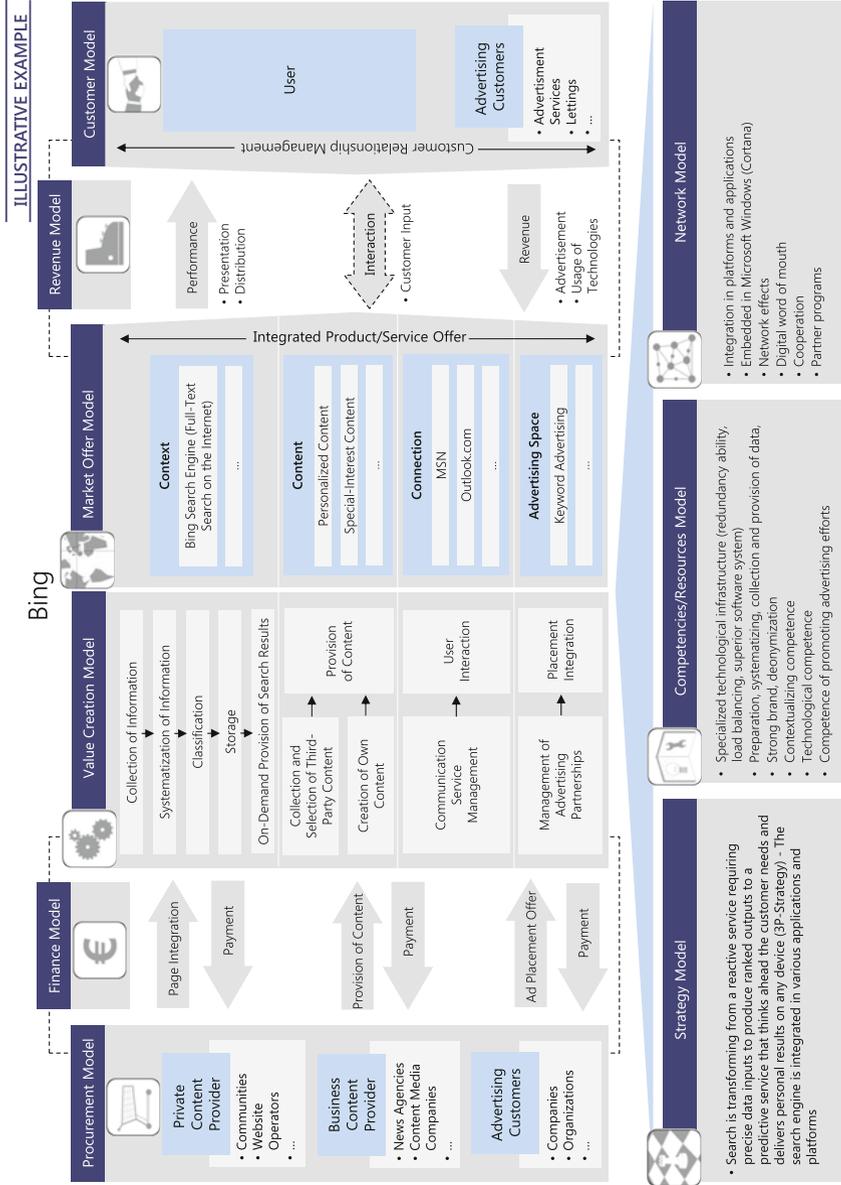


Fig. 6.5 Business model of Bing. *Source* Based on Wirtz (2010b, 2018b) and own analyses and estimations

Bing has extensive competencies and resources. Its core assets are diverse and are further strengthened by the strong company Microsoft behind it. In this connection, particularly the hardware and software stands out, which is supported by the extensive experience of the parent company Microsoft. Since Bing aims to develop today's Internet search even more towards maximizing efficiency for the user and relevance of the search results, various Microsoft search technology centers are constantly working on new developments. Bing particularly distinguishes itself by its specialized technological infrastructure, which is especially reflected in a superior software system as well as a high redundancy and good load balancing.

Another core asset of context providers is the brand. Bing as a brand is currently not nearly as strong and popular as Google. However, since the powerful company Microsoft is behind Bing, it is expected that over time the brand awareness of Microsoft will spill over to its search service Bing. In order to successfully use and further develop the core assets presented, Bing relies on various core competencies. In this connection, particularly the listing and structuring competence stands out, which primarily involves the identification and representation of the relevant search results for a search query.

Bing has well-developed and innovative hardware and software that is used to provide efficient search and delivery of results. A further key success factor and well-managed core asset of Bing is its structuring competence, which is particularly relevant to advertisers. Bing knows well how to create a good structuring and placement for its advertising customers.

A core competence of Bing is its service and CRM competence. The user interface of Bing is characterized by a particularly good handling and intuitive usability. Moreover, it also provides a benefit in the form of the changing background image combined with current events and the corresponding display of teasers. The resulting added benefit as well as the simple and well-structured handling of the search interface represent important service features for the user. The opportunity to integrate the search engine via add-ons into various browser types also allows to bind users more closely to the service. Figure 6.6 summarizes Bing's strategic orientation, business model, range of services and success factors.

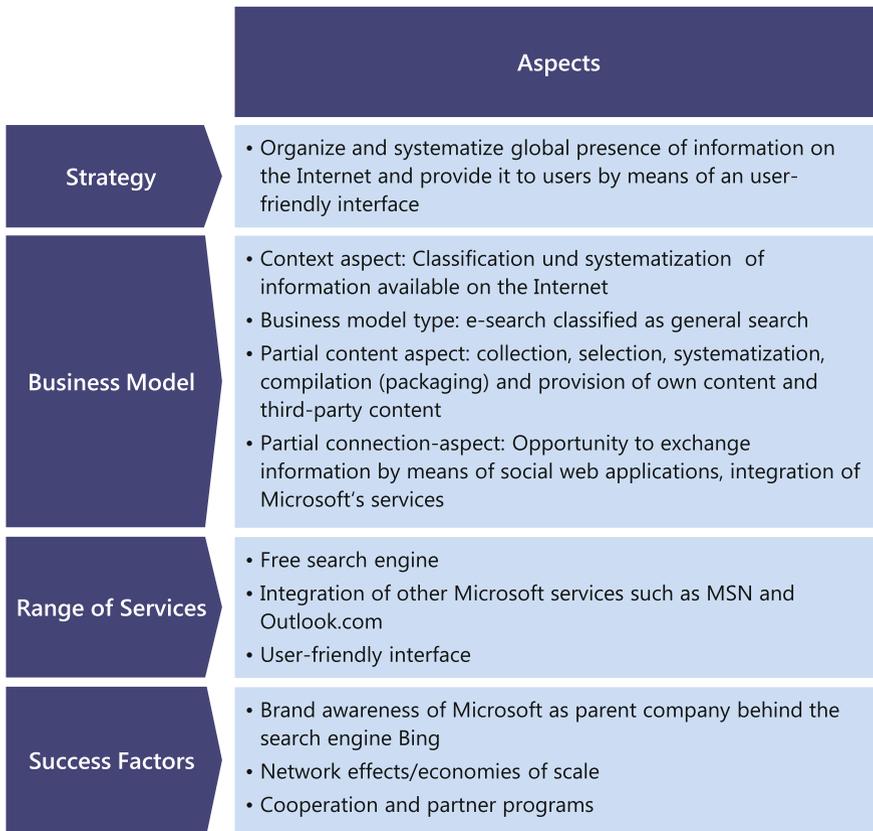


Fig. 6.6 Strategic orientation of Bing. *Source* Wirtz (2010b, 2018b)

Given that Bing with its full range of features is only available in few countries outside of the U.S., it is currently still too early to make a direct comparison with the market leader Google. However, Microsoft is constantly working to make its search engine more efficient and appealing, as well as to provide additional features to make it a serious competitor to Google.

Looking at current shares of search queries handled by leading U.S. search engine providers, shows that Bing seems to be headed in the right direction. While Bing has increased its share from about 8% in the year 2009 to nearly 22% in 2016, Google's share has stagnated around 64% in the same period.

In this context, also cooperation and partner programs play an important role. For instance, the partnership with the social network Facebook aims to increase the market share in the search engine market. In doing so, Bing processes the preferences of the users' Facebook contacts and thus offers peer group-relevant search results.