Chapter 7
B2C Digital Business Models: Connection

The connection business model addresses the access to the Internet or other networks and the provision of network platforms. While Sect. 7.1 presents general information about the connection business model, Sect. 7.2 deals with the different types of the connection business model. Following this, Sect. 7.3 describes the underlying value chain based on different core assets and competencies. Finally, Sect. 7.4 gives an example of a connection business model, presenting a case study of the professional network LinkedIn.[1]

7.1 The Connection Business Model

The connection business model addresses the access to the Internet or other networks and the provision of network platforms. Thus, the services of the connection business model often enable the interaction of actors in digital networks that would not be possible in the physical world due to the prohibitively high transaction costs or communication barriers. The connection business model consists of an intra-connection subcategory and an inter-connection (community) subcategory. Figure 7.1 provides an illustration of the connection business model.

The intra-connection (community) subcategory of the connection business model describes the offer of commercial or communication services within the Internet. This includes, for example, community providers including social networks, user messages, user exchanges, as well as customer opinion portals. All these subcategories offer a platform to the users in order to establish contact with peers or friends and to share information, knowledge, opinions or data files.

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

B. W. Wirtz, *Digital Business Models*, Progress in IS,
https://doi.org/10.1007/978-3-030-13005-3_7

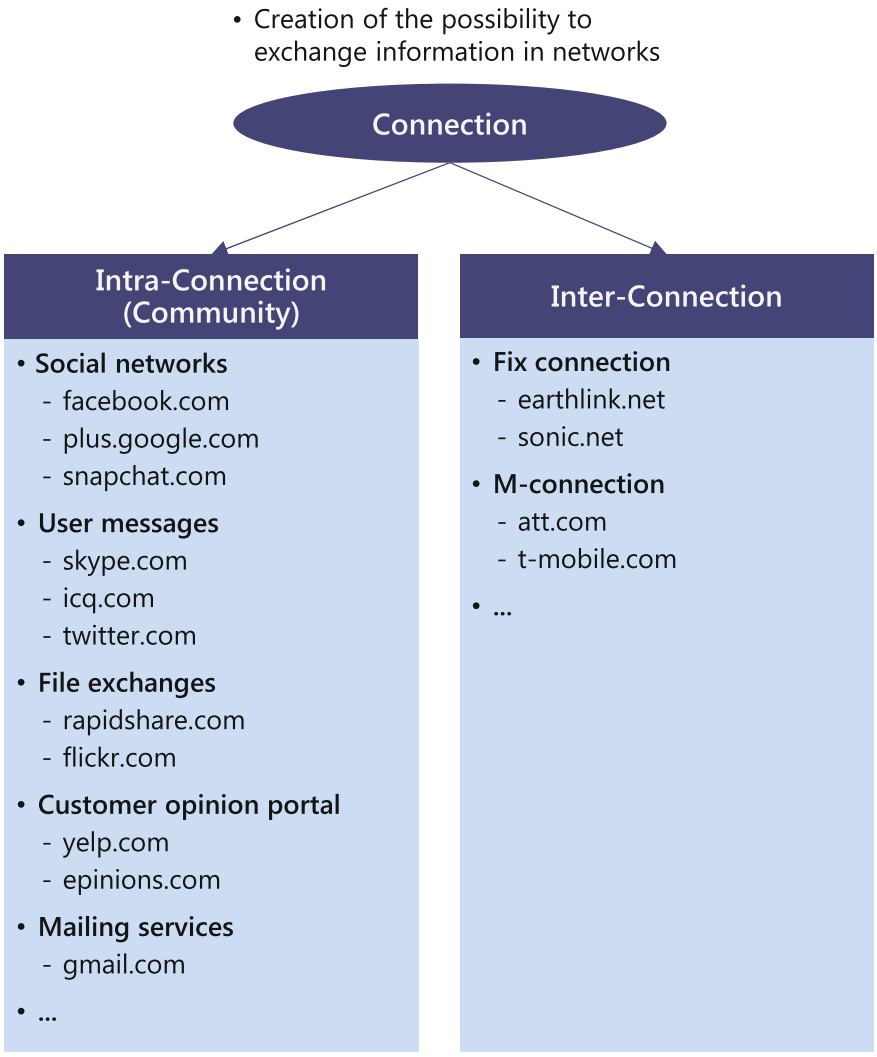

Fig. 7.1 The connection business model. *Source* Wirtz (2001a, 2018b)

Due to the hype about new Web 2.0 applications, the platforms of the social networks are currently attracting the most attention, achieving strong growth in number of users. Additionally, mailing services such as gmail.com are another subcategory of the intra-connection (community). Such providers enable to send email or greeting cards and have become part of many people's everyday life, as email has evolved as the standard form of communication in many sectors. Mailing services are mainly financed through advertisements attached to emails sent, through banner advertising or the provision of so-called premium accounts with extra features, such as increased storage space.

Providers in the inter-connection subcategory do not offer communication opportunities within the Internet, but supply access to the physical networks. This includes, for example, the Internet service provider (ISP) that enables technological access to the Internet for customers.

While a fixed connection locally bounds the user as there is only a wired dial-in option into the network at a fixed location, the M-connection user is not limited to a specific location and can access the Internet mobile via smartphone. With regard to the physical connectors, direct revenue models dominate, which usually involve transaction-independent setup and/or basic fees as well as transaction-based connections and/or usage fees. Due to the high usage intensity and the related attractiveness as advertising media and transaction agents, the companies often also pursue indirect revenue models.

7.2 Connection Business Model Types

The service offers of the intra and inter-connection business model variants as business models of the connection type are further specified in the following. Their characteristics and particularities will be discussed as a connection business model. Furthermore, current practical examples are used for illustration purposes.

- Intra-connection

The intra-connection business model types provide commercial and/or communicative services within the Internet. As already mentioned, within this business model type, a distinction can be drawn between the community area and the technical Internet services. In this context, the community can be further differentiated into the sub-business models social networks, social messages, customer exchanges and customer opinion portals.

Social networks have achieved a special prominence through the developments in the context of Web 2.0 and/or social media. The most common social networks for the predominantly private sphere are Facebook and Baidu. The LinkedIn platform is a network for more professional profiles in a more serious environment. However, the performance of the platforms is usually very much the same. The user is allowed to create his or her own profile and release various content, such as photos, music or a CV.

For some networks, such as LinkedIn or MySpace, it is possible to make the created profiles public for non-members, so that they can be found by search engines. Another important aspect of social networks is the networking idea, which means that users connect with other users and thus form an interaction and communication structure.

This interaction and communication structure is mainly due to the active participation of users in these networks. The platforms draw a large portion of their offer to the users from the contributions or the general content that the registered

users provide. In this context, trust, the sense of belonging and the urge to self-presentation are responsible for the very high activity on the platforms. All these elements are also evident in the mission of the Facebook platform: "Giving people the power to share and make the world more open and connected".

A similar service offer as the social networks are also following social messages providers. However, these do not focus on content generation or linking as in the Facebook example, but rather on communicative aspects. While in the early days of the Internet chats were particularly important with regard to interactive communication, this trend has changed significantly to private chats or messenger services.

The most widely used services in this context are Skype and Whatsapp. Both services offer the user a secure, private connection with friends and acquaintances, in order to communicate via text messages and Internet telephony, as well as to exchange data. A similar, but more public service is offered by Twitter. Twitter allows to send short messages to the platform and thus to other users of the platform to discuss current topics or to publish updates to everyday life ("microblogging").

An intra-connection service offer, which in many cases is associated with the illegal use of the Internet for sharing data of all kinds, is the customer exchange platform. One of the largest networks in this sector is the Rapidshare platform. Rapidshare offers a one-click file hosting service that promotes a particularly high data transfer speed, allowing data to be distributed quickly and securely throughout the world.

Furthermore, the company distinguishes between a free and a premium account. The free account is available to any user without registration and is limited in terms of data transmission services. The premium account, in contrast, enables a faster upload and download speed and an increased data transfer volume. The files that are uploaded and/or downloaded, are not limited by Rapidshare, which is why there are increasingly illegal down- or uploads.

Customer exchange platforms that increasingly focus on private and thus more copyrighted content, are Flickr or Picasa, for example. The providers offer the users storage space on the Internet, in particular, to exchange or link photos or videos.

The last variant of the intra-connection submodels are the customer opinion portals. The developments in the context of Web 2.0 and/or social media have also generated a special growth effect in this business model variant. Due to the increased public communication of the Web 2.0 users and the associated public opinion formation, the opinion portals are particularly important since Internet users as a whole trust the contributions of other Internet users more than the official company information. The offers of the platforms are primarily aimed at customer value.

In addition to general product descriptions, the key product reviews and evaluations are core components of the service offer. This multimedia product description, which is sometimes several pages long, allows potential buyers to get a detailed overview of the desired product and to make the purchase decision with greater certainty.

For the reviewers, the customer opinion portals provide different incentives to continue to produce product reviews. For example, the provider yelp.com, which

also offers commerce aspects such as price comparisons, gives registered reviewers the opportunity to receive scores for evaluations that reflect a status within the community.

The more product reviews the user has created and the more useful these reviews are classified by the user community, the more points the user receives. The provider also grants financial incentives, which are rather symbolic given the maximum amount of one Euro.

The business model mailing includes classic email services that have changed in the past few years, in particular, due to the increase in storage capacity. The functionality and performance of most email accounts have remained the same. Users can send messages in letter form to other email addresses for free. However, many email providers tend to integrate email services with other Web 2.0 or social media applications. Examples are Gmail and Microsoft Outlook.

While classic emails comprise only a few kilobytes, the transmission of videos and images has also become increasingly established through the dynamic development of the broadband Internet. Due to the increase in the size of the email attachments, the storage capacity of most mailboxes has also increased. For example, Microsoft Outlook now offers five and Gmail 15 GB of storage space.

- Inter-connection

The business model variant inter-connection is divided into the two types: Fixed and mobile connection. However, a clear differentiation is not always possible, especially with regard to large telecommunication providers. O^2 and Vodafone, for instance, offer fixed connection as well as m-connection services. Overall, there is a trend towards product bundling for inter-connection providers and the connection to the Internet is implemented in several ways.

These service packages, also known as triple play, combine, for example, telephone, Internet and television services. In the extended version of Quadruple Play, this bundle of services is extended by a mobile offering, which finally blurs the boundaries between fixed and m-connection. In addition to the large allround providers, there is also a large number of smaller inter-connection companies in the UK that focus on specific services such as media and mobile pre-paid services.

While traditional telecommunications companies are increasingly building on technical networks such as ISDN and DSL, smaller providers and especially Virgin Media, use the cable network to offer telephone and Internet services. When using this connection technology, the companies can then be unambiguously assigned to the fixed connection type.

Within the framework of the pure m-connection providers a considerable variety is to be found, although the actual service offer of the m-connection companies, that is the connection of the customer with the mobile Internet, is identical in total. However, it is generally possible to distinguish between a few mobile telephone providers with their own networks, such as Vodafone or O2 and the pure service providers that use these networks for their service.

At the same time, there is a large number of service providers in the m-connection segment in the UK. Figure 7.2 shows an overview of the m-connection market in the UK. There are only four mobile host networks, to which the individual service providers are assigned to.

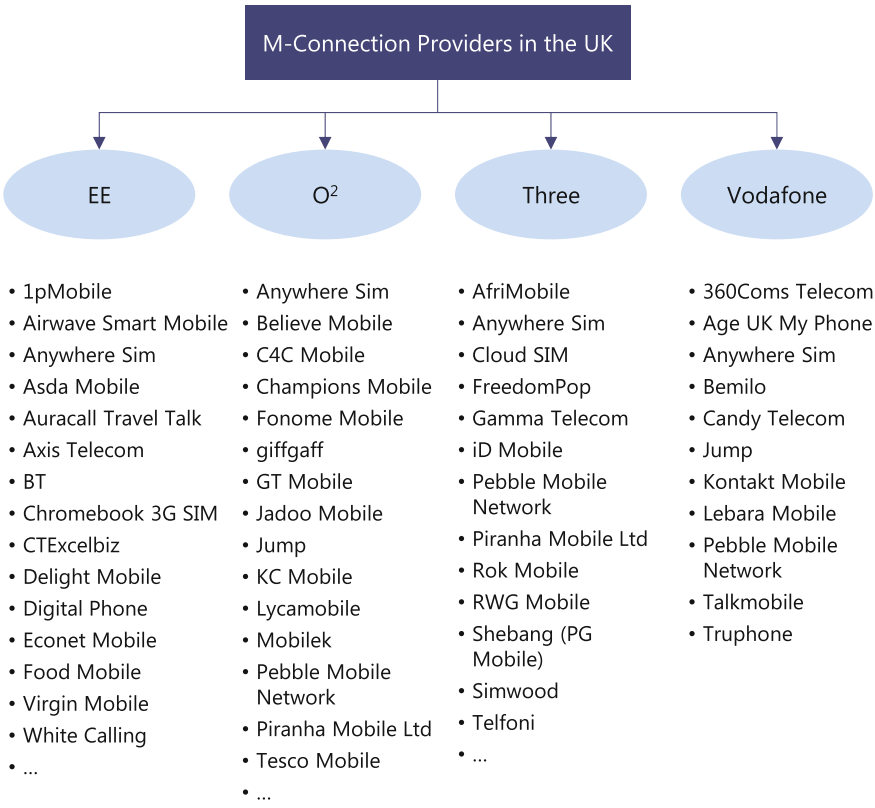

Fig. 7.2 Mobile network hosts and operators in the UK. *Source* Own research and estimations

7.3 Value Chain, Core Assets and Competencies

In addition to the relevant aspects of the value-added chain, the connection value chain is also implicitly addressed to the respective partial models of a business model in order to obtain a comprehensive understanding of the characteristic core activities. Figure 7.3 shows the value chain of a prototype connection provider.

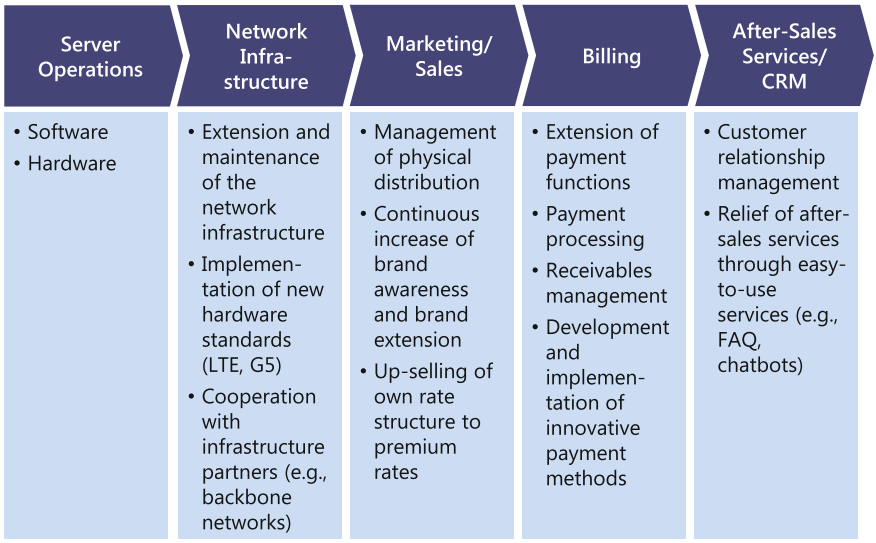

Fig. 7.3 Value chain of the connection business model. *Source* Wirtz (2010b, 2018b)

At the beginning of the value-added chain are the planning and/or structure of the server resources necessary for the operation, in order to be able to provide the customer with reliable access to the Internet or the corresponding applications and platforms. In this context, many critical decisions must be made when selecting the appropriate software and hardware components to ensure the quality and availability of the services.

In addition to the selection of the appropriate hardware and software, the network infrastructure is another essential determinant for value creation. Only a suitable network infrastructure allows to offer the user services and services in sufficient quality.

Particularly for the business model type inter-connection, the expansion and maintenance of the network infrastructure is of great importance in order not to incur strategic disadvantages by using an outdated technology in competition with other providers. In addition to the price of the products, the essential differentiation feature of the Internet providers is the actual speed of the Internet connection. If a provider cannot keep pace with competitors in the technological contest, it can give the customer only the maximum achievable (slower) bandwidth of the older technology and thus offer at a lower only benefit.

The construction and expansion or maintenance of a network infrastructure is very costly. It can therefore be useful to work together with infrastructure partners. For example, the two mobile providers O^2 and Vodafone entered into a strategic partnership in developing of the UMTS network in order to realize synergy effects and cost savings of around three billion EUR within the scope of this alliance.

However, cooperation with other companies cannot only be useful, but in the case of Internet service providers is also imperative in some areas. This is mainly due to the construction of the Internet, which is a worldwide network consisting of

many individual computer networks. The Internet Service Provider (ISP) offers the end customer an access point to this global network.

The user dials into the provider by means of a modem and thus establishes a connection. This automatically connects the user to all other users who are currently connected to this provider. In order to enable not only local, but also global access, Internet service providers have concluded a cooperation agreement. They form their own network and can thereby forward requests globally.

After ensuring the technical prerequisites, marketing and sales must ultimately ensure the implementation of the designed service and revenue models. In addition to the usual offline activities, cross-media and online marketing activities can also be carried out in order to attract potential users. If, however, users do not yet have online access or are not technologically active, the offline activities play an essential role. In this context, the traditional distribution channel should be strengthened and the classical distribution points created or expanded in the context of increasing competition.

While there are strong network effects in the intra-connection community, this is not the case for inter-connection business model types. Accordingly, the resulting lock-in effects are rather low and a customer is more willing to switch providers to pay a lower price for the product or get a higher price for the same price. In this context, a high brand identity and a high brand expansion capability are of great importance to keep customers and win new customers.

For example, Vodafone UK not only offers mere Internet access in connection with their cross-selling and up-selling activities, but also enhance the latter with complementary services such as IPTV. Besides the Vodafone brand, Vodafone markets a premium Internet TV offer under the term Now TV Entertainment, in which the customer can receive TV channel via the Internet and can continue to use special services, such as an online video library.

In this context, sales must be managed particularly in order to achieve the desired cross-selling or up-selling in higher-value rate structures with premium offers. This includes, in particular, the coordination of sales channels, pricing and pricing policies, as well as the communication policy in order to acquire users and potential customers. While the margins in the base rate of the Internet service providers are very low and owed to the intense competition, marketing and sales can contribute decisively to the profit increase by focusing on high-quality products in the sales processes.

The value-added component of the billing arises directly from sales and deals with the payment systems and receivables management associated with the acquired user contracts. Depending on the type of business model, various forms of payment may be considered. As providers of inter-connection business models typically receive regular payments, they can offer their subscribers direct debit or credit card payment or payment by invoice.

In contrast, intra-connection providers usually charge only small or very small amounts, which is why a direct debit payment or payment by invoice is usually not worthwhile because of the high transaction costs. In this case, micro-payment services such as PayPal appear to be more limited due to lower transaction fees. Furthermore, the development and implementation of innovative payment methods needs to be promoted in order to make pay-per-use offerings more convenient and thus to sustainably increase the revenues generated there from.

The last step of the value chain of the connection business model type, focuses on customer relationship management and the after-sales service. Through active customer care as well as a consistent focus on the customer and the systematic design of customer relationship processes, companies seek to satisfy customers and bind them to their brand and products/services. This can be achieved by documenting as much information as possible from the communication with the customer and clearly by assigning it to the respective customer.

In this context, the customer should be offered the best possible service at reasonable cost. The after-sales service plays an important role in this connection. In the initial phase of the customer relationship, the after-sales service has to provide advice and assistance to the customers, as problems can often occur with regard to the installation of new Internet connections or the corresponding devices. However, to ensure that the after-sales service is not contacted for trivial inquiries, the company can provide the customer with a range of "easy-to-use" services.

The after-sales service is supported and relieved, for example, by frequently asked questions (FAQs) on the website, since the customer can independently find the solution to known problems.

After having presented the value chain of a connection provider, the following describes the underlying core assets and core competencies that a connection provider requires in order to successfully and sustainably compete in the Internet market.

The most important core assets of connection providers are the network infrastructure and the underlying IT platforms. In addition, the employees responsible for this can be regarded as a core asset, since these specialists are required for the reliable operation of the servers or networks. In addition, the brand as well as the customer or user base are among the core assets of connection providers.

The network infrastructure is an important core asset, especially for the inter-connection provider, since this is the only way to establish a smooth, permanent connection to the Internet. For example, Deutsche Telekom had a long-term monopoly in the provision of Internet access. Today, Deutsche Telekom's competitors have somewhat mobilized the market and are thus eroding the core asset of Deutsche Telekom, but the downtime and network problems among the competitors are still higher than those of Deutsche Telekom. In addition, this core asset is also increasingly threatened by alternative connection standards, such as cable providers or mobile access technologies.

Similar to the network infrastructure necessary for Internet service providers, the IT platforms of the other connection business models represent a potential core asset. A community operator must ensure, for example, that the user platform always permits perfect operation. Generally, this also includes the loading times of the platform, as well as the minimization of necessary updates or restructuring measures. If a provider manages the necessary IT platforms efficiently without restricting the user, the IT platform can be understood as a core asset of the provider.

Closely linked to this core asset are the employees of the connection providers. These are key factors in the efficient operation of the platform and must ensure that,

in addition to the technical components, any emerging problems with or among users are addressed as quickly as possible. In particular, the customer service plays an important role in the context of inter-connection providers. This varies significantly between providers. However, it is also important in the context of intra-connection that unauthorized access to an email or chat profile, for instance, is recognized and remedied by the employees as quickly as possible. All these measures lead the users or customers to trust the provider, thus resulting in long-term customer loyalty.

This trust is also clearly visible the brand of the connection provider. As with other business model variants of the 4C-Net Business Model, the brand, represents a value proposition and is associated with certain product properties by the customer. While the brand names of the well-known Internet service providers are also partly associated with a poorly developed service policy, it is particularly evident in the context of the community providers that the brand plays a decisive role in determining whether the platform as a whole is trusted. For example, Facebook has been increasingly criticized because users were not satisfied with different data protection regulations. As a result, fewer users have registered on Facebook or existing users have deleted sensitive data from their profiles.

A further aspect to be associated with the brand as a core asset refers to network effects. As soon as a brand has established itself in the community area, the growing number of users also increases awareness, which, in turn increases the brand value. Thus, the customer or user base also holds a core asset function. Not only through the positive network effects, for example, in the context of further recommendations, but also through the total number of active users, a platform or a service becomes interesting to other users. For example, the actively participating users on the MySpace community platform are a core asset, since they increasingly provide self-generated content that other users receive. The passive recipients may be encouraged to become active and thus also a core asset of the provider.

Besides the important core assets, core competencies are also required to maximize the potential of the core assets for the providers. Within the scope of connection providers, the technology and integration competence as well as the customer acquisition and customer loyalty competence are essential. The technology and integration competence is of particular importance to all connection providers. In addition to ensuring the described smooth Internet access and platform access (technology competence), the use of different access technologies (integration competence) is also highly relevant in this context. For example, well-known Internet service providers have already been offering so-called bundling offers that offer customers several ways to access and become active on the Internet.

However, the integration competence is also of particular importance for intra-connection suppliers. In 2010, for example, Google announced that the new service, Google Buzz, will enable the integration of various communications services, both stationary and mobile.

In the context of customer acquisition and customer loyalty competence the focus is on the employees' abilities. In the case of inter-connection providers, customer acquisition is linked with a classic sales competence that enables to

acquire new customers or to use up-selling potentials. Within the context of customer loyalty, Internet service providers also have online and offline CRM measures at their disposal. The customer acquisition competence is different with regard to inter-connection providers. There is no direct customer acquisition in the case of community or mailing offers. Instead, here providers seek to acquire customers by means of indirect references to the service or referral marketing.

For example, Google offers an invitation service to the users of its email service, according to which users can invite friends or acquaintances to use Gmail. Figure 7.4 summarizes the core assets and core competencies of connection providers.

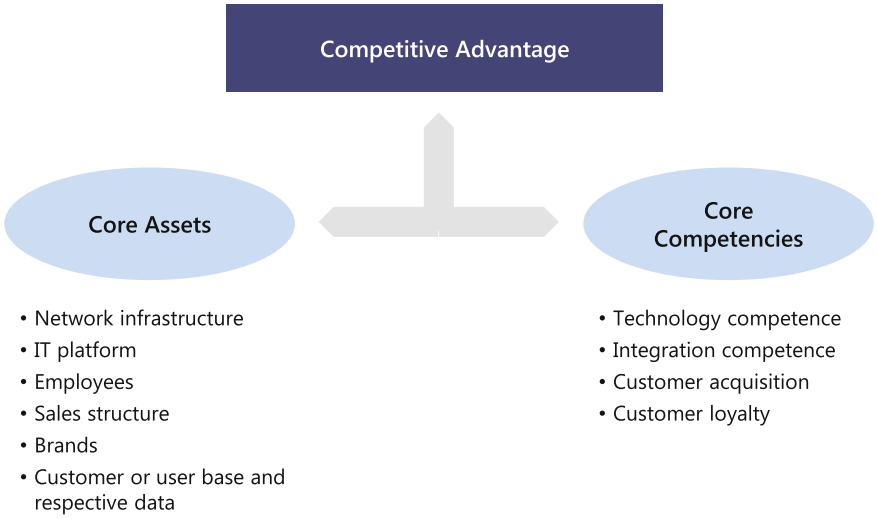

Fig. 7.4 Core assets and competencies of a connection provider. *Source* Wirtz (2010b, 2018b)

7.4 Case Study: LinkedIn

LinkedIn is one of the pioneers in the field of professional networking of specialists and executives. It was founded on December 28, 2002 by Reid Hoffman, Allen Blue, Konstantin Guericke, Eric Ly and Jean-Luc Vaillant, and went online on May 5, 2003. LinkedIn is primarily a professional networking site that presents CVs of professionals and executives, introduces employers and advertises job vacancies.

In addition, LinkedIn has also developed into a platform for the exchange of content. The LinkedIn website is the world's largest professional network platform for professionals and executives. In its mission statement, LinkedIn says, "Our mission is to make the world's professionals more productive and successful" (Weiner and LinkedIn 2016).

As a start-up, LinkedIn was financed especially by Sequoia Capital with venture capital. In January 2011, LinkedIn had its initial public offering (IPO) and by the end of 2016 Microsoft acquired LinkedIn for approximately 26 billion USD. The acquisition of LinkedIn by Microsoft shows the very successful development of LinkedIn. In the first two years, LinkedIn did not win more than 100,000 members.

Already in 2008, LinkedIn had over 15 million users and opened the first office outside of the U.S. in London. In 2011, LinkedIn reached the mark of 100 million members and had over 1000 employees in 10 locations worldwide. With its 10th anniversary in 2013, LinkedIn had over 300 million users and rose to rank 24 of the world's most popular websites. In 2016, LinkedIn had around 433 million members in more than 200 countries (LinkedIn 2017b).

Against the background of substantial membership growth, LinkedIn was also able to significantly increase its sales and profits. LinkedIn achieved profits for the first time in 2006. In 2009, LinkedIn had only sales of 120 million USD. Four years later, it achieved sales of 1.53 billion USD. In 2015, sales rose to nearly 3 billion USD, with an EBITDA of 780 million or 26% of sales, respectively (LinkedIn 2016).

LinkedIn has different revenue sources. The talent solutions division is of great importance and has already made the largest share of sales in 2015, at 1.8 billion USD. In the marketing solutions segment, LinkedIn achieved revenues of 581 million USD in 2015. The third division premium subscriptions generated similarly high revenue of 532 million USD in 2015.

The data shows that LinkedIn revenue is mainly driven by the two B2B segments: talent solutions and marketing solutions. While the solutions for the personnel search (LinkedIn talent solution) make up the largest share with 64%, the marketing solutions (LinkedIn marketing solution) account for 19.4% and the premium accounts for private users account for 16.6% (LinkedIn 2016).

In the area of marketing solutions, sponsored content is the largest sales driver. In 2015, more than half (56%) of the sales in the marketing sector accounted for the revenues that companies pay to display their content on the user profiles. Classic display banners, in contrast, contributed only 15.4 million USD to the advertising turnover, representing about 10% of advertising sales.

Talent solutions is the LinkedIn area that is dedicated to matching employees and employers. In addition to the ordinary placement of job advertisements, there are also opportunities for HR consultants to find potential specialists for their own customers in the database. The Marketing solutions division focuses on the placement of personalized advertising. The third area, Premium Solutions, offers members a paid membership model that offers an extended range of services for private customers. Premium users, for example, are entitled to send invitations and messages to unknown members.

As a market leader in professional social networking, LinkedIn is characterized by its comprehensive range of services. The homepage for non-premium users is very user-friendly and has an extensive range of functions. This is shown in Fig. 7.5.

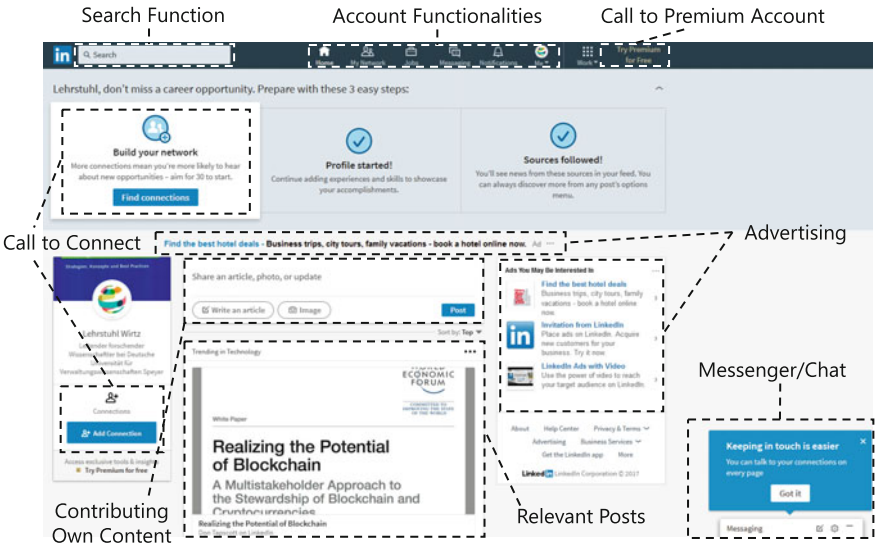

Fig. 7.5 Screenshot LinkedIn home. *Source* LinkedIn (2017a)

The homepage is build in a modular manner with many well-known functions that are also available in other social networking sites, such as search functions, account functions, a newsfeed displaying personalized content, a messenger or chat field, a contribution field to which the user can post own content, and finally fields to add new contacts.

In the stay connected and informed unit of LinkedIn, the company provides free services including: editing and presenting the profile, receiving and creating postings, messaging, network and search features, contact suggestions and address book import, access to influencer content, to groups and to the publishing platform, as well as to work in topic groups. In addition, there is also the advance my career section in the free customer account that not only allows to write job search notes or to look for company profiles and university pages, but also includes the function to post references for others and to attribute skills to other persons. Furthermore, the ubiquitous access unit provides a free LinkedIn mobile app for all popular mobile systems, as well as multiple interfaces that allow LinkedIn to share data with other software.

LinkedIn offers its business customers specific target group contacts and accurate targeting of specific target groups. For example, specific properties of the users, which allow the user-specific display of ads (micro-targeting), using that uses data from their usage behavior (for example, from the reading of specific contents) or from concrete indications in their profiles. In addition, LinkedIn provides employers the opportunity to acquire data and to do big data analysis for their purpose. LinkedIn's simplified business model is shown in Fig. 7.6.

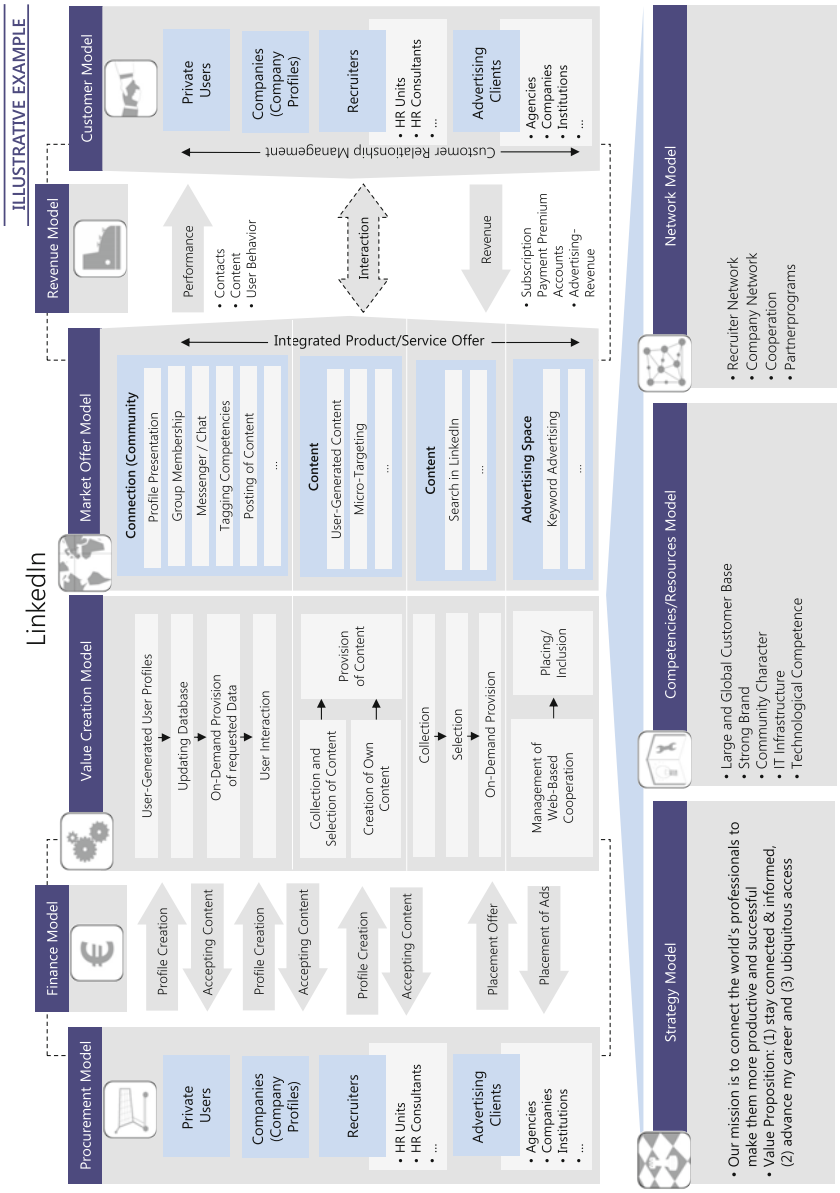

Fig. 7.6 The LinkedIn business model. *Source* Based on Wirtz (2010b, 2018b) and own analyses and estimations

The strategic focus and value proposition of LinkedIn consists of the following three core components: stay connected & informed, advance my career and work smarter. LinkedIn's strategic goal is to be the most comprehensive, accurate and accessible network for professionals around the world (LinkedIn 2014). The essence of the value creation is based on the provision of a platform that enables matchmaking and exchange among professionals and companies.

A core asset of LinkedIn, is the fact that its brand is established in the market and well-known market players or brands are using the platform. Generally, each LinkedIn user generates own content that can be retrieved by other users and recruiters. A distinctive technology and integration competence are also important core competencies of LinkedIn. In addition to ensuring smooth access to the platform (technology competence) and the associated access to the network infrastructure, the use of various access technologies is also particularly important in this context (integration competence).

As a social networking platform, LinkedIn generally belongs to the connection business model. As described in the previous chapter, the connection business model can be divided into the two ideal business model variants: intra- and inter-connection. LinkedIn and its offer belong to the variant of the intra-connection, which refers to the offer of communicative services within the Internet. In particular, LinkedIn belongs to the community area, and herein to the category of social networks, like Facebook or Google+.

Since the LinkedIn platform provides user-generated content as well as its own content, the business model can also be partially assigned to the content business model, as LinkedIn deals with the collection and selection of content. The search function and the complex linking of content from the LinkedIn database can be assigned to the context business model. When it comes to advertising opportunities on LinkedIn, it is also possible to identify aspects of the commerce business model, such as the provision of initiation and negotiation functions. Figure 7.7 summarizes LinkedIn's strategic focus, business model, service offer and success factors.

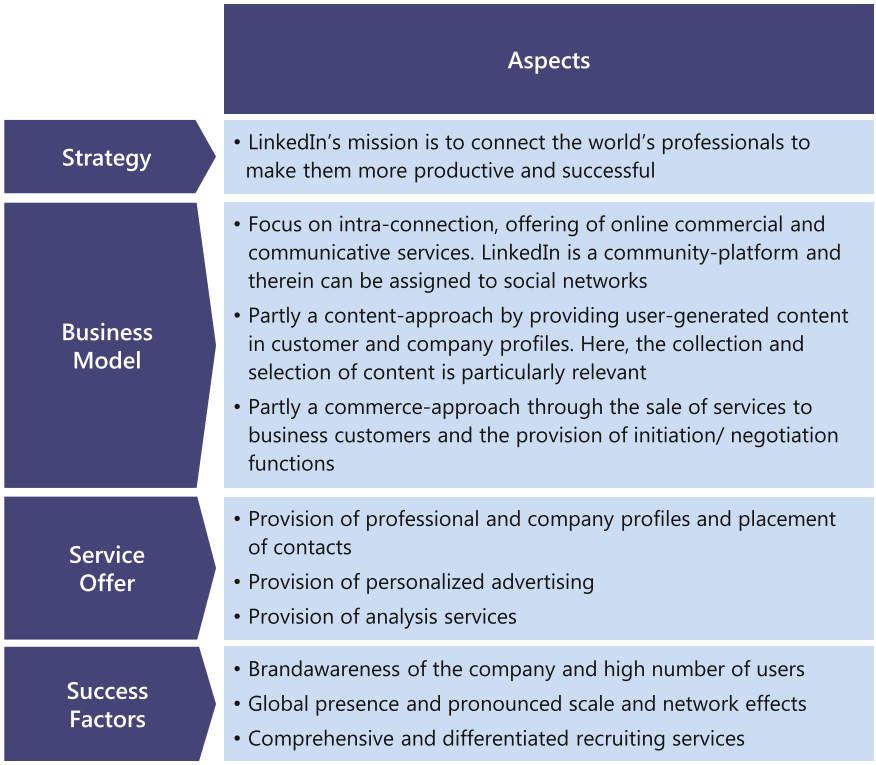

Fig. 7.7 Strategic focus of LinkedIn. *Source* Based on Wirtz (2010b, 2018b)