

**Providers' Practices and Customers' Sensitivity
to
Ecological Aspects
of
Services involving Body Treatment.**

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Abstract

There is a growing demand for more environmentally conscious practices for the production and consumption of goods and services. This thesis deals with the verification of this trend within the scope of particular services involving body treatment. Six service providers - involving medical and non medical body treatment - and their customers were analysed in France: A massage centre, a hairdresser, a dentist, a chiroprapist, a physiotherapist and a hospital.

Based on in-depth literature review exposing the different characteristics of services and their complexity for customer evaluation, especially when body treatment is involved, the chosen services will be explored using specific methods of market research. The exploratory study focuses on service providers' environmentally friendly practices and their incentives on the one hand, and on the responsiveness of their customers to more ecological service delivery on the other. The information gathered by the primary research will be set against the observations from the secondary research regarding general production and consumption of goods and services. The results of the research will be subsequently examined in terms of the different factors influencing customers' perception of risk and acceptance of ecological practices regarding body treatment services.

After presenting hypothetical explanations for the research findings and their limitations, recommendations are proposed for further and more descriptive research to validate the findings and their supposed explanation.

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1 INTRODUCTION

In a general context of consumption and production practices becoming more environmentally conscious, one can wonder whether this trend concerns every type of goods and services. The current thesis aims to explore the consumption and production of a certain group of services and verify whether the trend for more environmentally friendly practices is applicable to them. The study focuses on six different services involving body treatment. A massage centre and a hair salon as services involving non medical body treatment, a hospital, as well as three health care practitioners (a dentist, a chiropodist and a physiotherapist) as services involving medical treatment will be studied. These six service providers are situated in the area of Château-Thierry in France, whose population is considered representative of the country, as the city is often used for conducting marketing tests.¹ The research will focus on the ecological aspects of the service provider's practices on one hand, and on the sensitivity to environmentally friendly service delivery of their customers on the other.

Firstly, a literature review in Chapter 2 discusses the different concepts around services and their particularities from a marketing and operational point of view in order to understand what distinguishes them from physical goods and which characteristics can influence their customers' responsiveness to environmentally conscious practices. Options for service classification based on different criteria are given in order to define and categorise the six services of the study in a more precise way, based on their similar and differentiating characteristics. Secondly, the evidence of more environmentally friendly production and consumption practices in general are explored, as well as the different incentives for producers to adopt more ecological production practices. Finally, the literature review

¹ Château-Thierry is a small to medium sized city and one out of three in France used as an "instrumented market" for marketing tests. (Sources: Volle, P., p. 10 & Les problématiques études, No Author Given (2009), p 21.)

exposes the concepts of market research which are used in the current thesis to study the six aforementioned services and their ecological aspects of production and consumption.

Based on the service characteristics and classifications, and on the market research concepts exposed in the literature review, Chapter 3 exposes the methodology followed to conduct the study with the six service providers and their customers (a sample of 20 customer per service were surveyed). First of all, the research explores the ecological practices of the six service providers and their incentives to green their service delivery. Then, customers' responsiveness to environmentally friendly practices are questioned when body treatment are concerned. Chapter 4 reveals the results of the study. The analysis is provided following the concepts given in the literature review and exposes hypothetical explanations to the research results based notably on customers' evaluation of the services' risk.

Finally, Chapter 5 presents a summary of the research results with the analysis and the limitations of the study. The chapter concludes with recommendations to improve certain aspects of the study for further in-depth research in order to verify the suppositions posed by the current thesis.

2 LITTERATURE REVIEW

Before conducting a concrete study of the chosen service providers and their customers, a literature review provides basis of theoretical concepts about services in general and about the services selected for the study. Part 2.1 deals with the marketing concepts concerning services, that Part 2.2 will treat from an operational point of view. Part 2.2 also proposes the first possibility for service classification based on the nature of their process, which Part 2.3 will refine based on other service characteristics. Part 2.4 suggests service characteristics such as their degree of intangibility and difficulty of evaluation. These characteristics in particular will be taken into consideration when classifying the objects of the study and when analysing the research results in Chapter 3 and 5. Part 2.5 explores the growing global interest for environmentally conscious production and consumption of goods and services. Finally, Part 2.5 exposes the methods of market research found in literature, which will be followed for the study in Chapter 4.

2.1 Service marketing

Services are subject to many different definitions in literature. Dismissed as “immaterial products” by Marshall or described as “immaterial goods” or even “goods” by economists, services present characteristics that differentiate them from goods (Hill. 1977). Part 2.1.1 exposes different possible definitions of the term ‘service’ as a product from a marketing point of view. Part 2.1.2 explores the different characteristics given to services to distinguish them from physical goods in literature and questions their applicability.

2.1.1 Service definition

Companies' offers can be classified into two different categories: products (goods) and services². Goods and services encounter the same basic principles of marketing but there are also important differences.³ Both can be defined as follows. A product is material and can be possessed: *“Anything that can be offered to a market for attention, acquisition, use, or consumption that might satisfy a want or need»*. A service, which was contrasted against goods by early marketing definitions, is generally defined as *“the action of serving, helping, or benefiting; conduct tending to the welfare or advantage of another”* by the Shorter Oxford English Dictionary (Trumble and Stevenson, 2002).⁴ A service represents the immaterial result of an action: *“any activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything”*⁵, or more simply, as often found in literature: *“something which can be bought and sold but which can not drop on your foot”* (suggested by Evert Gummerrsson, 1987, referring to an unidentified source)⁶. A more helpful and comprehensive definition of Lovelock (mentioned as “Expert 6” out of 11 experts, by Everson et. al, 2005) that can be used as a marketing guide⁷ is the following:

“Services are economic activities offered by one party to another, most commonly employing time-defined performances to bring about desired results in recipients themselves or in objects or other assets for which purchasers have responsibility. Service customers expect to obtain value from access to labour, professional skills, facilities, networks, systems, and equipment, but do not normally take ownership of any of the physical elements involved”⁸

² Bruhn/Meffert (2002), pp. 3 f..

³ Hill/O’Sullivan (1999), p. 32.

⁴ Lovelock/Wirtz (2007), p. 14.

⁵ Kotler/Armstrong (2004), p. 276.

⁶ Lovelock/Wirtz (2007), p. 14; Gabbott/Hogg (1998), p. 24.

⁷ Lovelock/Wirtz (2007), p. 15.

⁸ Edvarsson/Gustafsson/ Roos (2005), p. 112.

Services are mostly considered as “*activities, deeds or processes and interactions*” in literature, Hill (1977) defines services as “*changes in the condition of a person or something in the possession of the customer*”⁹. The value gained by customers doesn’t come from a transfer of ownership as it would for goods, but rather from the “*access to a variety of value creating elements*”.¹⁰ Identified as one of the 7 (or 8) P’s of services marketing, the “Process” nature of services seem to be recurrent in literature attempting to draw a portrait of services.¹¹

A service can be one part of an offer, or can constitute a company’s offer itself.¹² Physical products can be sold without any additional service (“pure tangible good“, such as foodstuff and commodities) or can be accompanied by basic services (such as customer service or after-sales services)¹³. The offer can also be made up of both a good and a service (“hybrid“) or can be a service only (“pure service“) that can be supported by tangible goods if applicable¹⁴ (e.g. a Hotel that differentiates its offer with special material equipment¹⁵ or language learning centres whose training courses are based on teaching material such as learning books. Supplementary services enhancing a core product (adding value to a manufactured good) must be distinguished from a service product (service is the core product itself) . This underlines the difference between “*marketing through services*” (goods marketing) and “*services marketing*”.¹⁶

⁹ Edvarsson/Gustafsson/ Roos (2005), pp. 108 & 118.

¹⁰ Lovelock/Wirtz (2007), p. 15.

¹¹ Edvarsson/Gustafsson/ Roos (2005), p. 111.

¹² Kotler/Armstrong (2004), p. 279.

¹³ Halfmann/Laker (1998), p. 114.

¹⁴ Kotler (2000), pp. 428 f.

¹⁵ Sakao/Shimomura (2006), p. 590.

¹⁶ Lovelock/Wirtz (2007), p. 15.

2.1.2 Service characteristics

Even though the marketing of goods and services present some similarities¹⁷, a service differs from physical goods for many reasons. The extension of the marketing mix (exposed in part 2.1.2) can be explained by the characteristics of services. This part focuses on the different concepts of these characteristics found in literature and their limits of application.

2.1.2.1 The “IHIP” or “Four I’s”

The particularities of services, which are distinguished from goods by their immateriality, can be described through the common “IHIP” model (Intangibility, Heterogeneity, Inseparability and Perishability).¹⁸ The IHIP model, as generic characteristics of services, have been questioned by research to find out whether or not they capture the essence of services, especially due to the emergence of new distribution channels (e.g. internet) making the necessary relation between customer and staff irrelevant. It characterises services in a general way and should be condensed and applied differently to every single type of service. Some scholars quote six characteristics instead of four, and the four characteristics of IHIP can be labelled differently. Table 2.1 shows different views.

¹⁷ Kotler (2000), p. 434.

¹⁸ Edvarsson/Gustafsson/ Roos (2005), pp. 113 f.; Hill/O’Sullivan (1999), pp. 32 ff; Lovelock/ Gummesson (2004), p. 22.

Authors	Statement of Service Characteristics (direct quotes)
Kerin et al. (2003, p. 323)	Intangibility, Inconsistency, Inseparability, and Inventory
Kotler (2003, p 446)	Intangibility, Inseparability, variability, and perishability
Pride and Ferrell (2003, p. 325)	Intangibility, Inseparability (of production and consumption), perishability, heterogeneity, client based relationships, and customers contact
Solomon and Stuart (2003)	Intangibility, Perishability, Inseparability, and Variability

Table 2.1: Service characteristics portrayed by different introductory marketing management texts

Source: Lovelock/Gummesson (2004, p .22)

As mentioned by Kerin et al. in Table 2.1, services characteristics can be classified using Four I's“ : Intangibility, Inconsistency, Inseparability and Inventory¹⁹.

Intangibility means that services aren't palpable. Customer can't see, touch, smell, taste or hear the intangible elements dominating the value creation of the service, which is then harder to evaluate and distinguish from the competition. The services are not concretely rateable by customers as long as it has not been received or bought.²⁰ The impact of intangibility on customers' evaluation of services is further developed in Part 2.4

Inconsistency (or “variability“) refers to the “heterogeneity” of the IHIP²¹ model and is the mutability of Services, whose Quality can vary from one provider to another. The service and its quality depend on the person who completes it. Inconsistency makes it harder for

¹⁹ Berkowitz/Kerin/Hartley/Rudelius (1997), pp. 347 ff.

²⁰ Lovelock/Wirtz (2007), p. 17; Berkowitz/Kerin/Hartley/Rudelius (1997), p. 347; Kotler (2002), pp. 429 f.; Becker (2006), p. 709; Halfmann/Laker (1998), p. 103.

²¹ Lovelock/Gummesson (2004), p. 25.

providers to maintain quality, consistency and reliability or to lower cost simply by increasing productivity. Customer can't be shielded from the result of a service failure.²²

Inseparability (also called simultaneity)²³: A service cannot be separated from the provider of this particular service, nor can it be passed on to a third person. In contrast to a physical good, a service takes place at the same time as it is consumed. It exists through an active participation of its user.²⁴ Customer can be involved in the production of a service, interact with the provider's facilities, equipment and systems and could hurt the productivity or spoil the service experience if the task is poorly executed.²⁵

Inventory (or „Perishability“ of services)²⁶ refers to the non-storability of Services, which can only exist and occur at a given point in time. Most Services can not be inventoried. Customers have to wait or be turned away. The only inventory costs of a service (in the case of a pure service) are those related to personnel (e.g. when a service is adjourned due to the absence of the client when the service should take place).²⁷

The applicability of the four characteristics (from both models) is evaluated in Table 2.2. The table shows how the four characteristics of both the IHIP and the 4 I's model are not applicable to every type of service. The different types of services mentioned in Table 2.2 are further explained in Part 2.2.

²² Lovelock/Wirtz (2007), p. 17; Berkowitz/Kerin/Hartley/Rudelius (1997), p. 347; Kotler (2002), p. 432.

²³ Sasser/Olsen/Wyckoff (1978), p. 17.

²⁴ Berkowitz/Kerin/Hartley/Rudelius (1997), p. 348; Kotler (2002), p. 431; Simon (1992), p. 569; Halfmann/Laker (1998), p. 105.

²⁵ Lovelock/Wirtz (2007), p. 17.

²⁶ Lovelock/Gummesson (2004), p. 29.

²⁷ Lovelock/Wirtz (2007), p. 17; Berkowitz/Kerin/Hartley/Rudelius (1997), pp. 348 f.; Kotler (2002), pp. 432 f.; Becker (2006), p. 709; Halfmann/Laker (1998), p. 104.

<i>Characteristic</i>	<i>Service Category</i>			
	<u>Physical acts to customers'</u> <i>(passenger transport, health care, beauty salon...)</i>	<u>Physical acts to owned</u> <i>(freight transport, repair, warehousing, cleaning...)</i>	<u>Non physical acts to</u> <i>(entertainment, news, education...)</i>	<u>Processing of information</u> <i>(Internet banking, accounting, research...)</i>
Intangibility	Misleading: ephemeral performance but possible highly tangible experience and physical changes	Misleading: ephemeral performance but possible physical transformation of possessions	Yes	Yes
Heterogeneity (Inconsistency)	Yes: standardisation often difficult (direct labour and customer involvement)	Numerous exceptions: Possible standardisation	Numerous exceptions: Possible standardisation	Numerous exceptions: Possible standardisation
Inseparability	Yes	No: Usual absence of customer	Only for "live" delivered performance	Numerous exceptions: Possible absence of the customer
Perishability (Inventory)	Yes	Yes	Numerous exceptions: Possible storage in electronic or printed form	Numerous exceptions: Possible storage in electronic or printed form

Table 2.2: Applicability of the 4 main service characteristics to different types of services

Source: Adapted from Lovelock/Evert (2004) p. 31

2.1.2.2 Further characteristics of services

As mentioned above, service characteristics (IHIP or the 4 I's) are criticised for offering only a general perspective and for not reflecting the new realities of the services industry. For instance, "Inseparability" is not applicable to every kind of service. Some "*separable services*" (Lovelock/Evert, 2004) such as laundry, freight transportation, cleaning and maintenance or even outsourcing of firms' activities are most commonly performed without the customer and thus don't necessitate the simultaneity of production and consumption.²⁸ Nevertheless, it seems that the characteristic of "ownership" has been identified several times in literature as a distinguishing feature of services: While a customer obtains ownership on a bought good, the ownership doesn't refer to the service itself, but only to the benefit of the service, to which the customer only obtains temporary access.²⁹

²⁸ Lovelock/Gummesson (2004), p. 29

²⁹ Gabbott/Hogg (1998), p. 29; Baker (2003), p. 591.

Recent scholars talk about “*basic*” or “*typical differences*”³⁰, or “*common differences*”³¹ between goods and services. In the number of 8, the “*common differences*” are carefully mentioned by Lovelock and Wirtz (2007, pp.16-21) as characteristics that “*may*” occur or “*often*” happen³²:

- “*Most service products cannot be inventoried*”

As mentioned before, services are perishable and can’t be stocked unless they are recordable in printed or electronic form. Reservation, promotion and pricing strategies can help match demand to capacity, thereby reducing waste of capacity, waiting time or disappointment from customers³³

- “*Intangible elements usually dominate value creation*”

Although many physical (tangible) elements are included in service value creation, the service performance value is primarily created by intangible elements, such as process and attitude of service personnel.³⁴

- “*Services are often difficult to visualize and understand*”

This particularity links well with intangibility. “*Mental intangibility*” (as opposed to “*physical intangibility*”)³⁵ is likely to present a problem and a perceived risk for a customer

³⁰ Lovelock/Wright (2002), p. 9 ; Normann (2000), p. 19

³¹ Lovelock/Wirtz (2007), p. 17

³² Lovelock/Wirtz (2007), pp. 16 ff..

³³ Lovelock/Wirtz (2007), p. 16.

³⁴ Lovelock/Wirtz (2007), pp. 16 ff..

³⁵ Lovelock/Gummesson (2004), p. 25.

with no experience of the service.³⁶ Part 2.3 explains the issues surrounding service evaluation by customers related to their degree of intangibility.

- “*Customers may be involved in co-production*” (as mentioned by Edvardsson et al., 2005)³⁷

Customers’ involvement as “*partial employees*”³⁸ in the service production (e.g. self-service or required education and competencies of users to increase the quality and efficiency of the performance)³⁹ is related to the aforementioned inseparability of production and consumption of services.

- “*People may be part of the service experience*”

Employees may be involved in the performance. Their attitude and skills often differentiate one service supplier from another. But other customers’ behaviour also plays a role in the image of the service supplier.⁴⁰

- “*Operational inputs and outputs tend to vary more widely*”

Because of the inconsistency and inseparability of consumption and production (4 I’s model), it is not possible to check a service before its delivery. This results in variation in service quality and speed. Further, people’s behaviour and competencies (customers and employee)

³⁶ Lovelock/Wirtz (2007), p. 18.

³⁷ Edvardsson/Gustafsson/ Roos (2005), p. 108.

³⁸ Mills/Moberg (1982), pp. 469 f..

³⁹ Lovelock/Wirtz (2007), p. 19.

⁴⁰ Lovelock/Wirtz (2007), p. 20.

influence the performance quality. Standardisation of procedures and training programs or rigorous quality management can help reduce the performance variability.⁴¹

- *“The time factor often assumes great importance”*

The physical presence of customers is, most of the time, necessary in order to deliver a service (inseparability). Customers nowadays see time waste as a cost to avoid and are also concerned by the time between the request and the delivery of the finish output.⁴²

- *“Distribution may take place through nonphysical channels”* (e.g. ATM, Internet)⁴³

There have been many attempts to define a service and name characteristics that capture the essence of services. It seems that both IHIP and Four I's share the main characteristics of services (the mentioned “8 common differences” cited by Lovelock and Wirtz result from these 4 main characteristics) along with the lack of ownership mentioned by other authors as a service characteristic. Nevertheless, the IHIP or 4 I's characteristics have to be used carefully since they can't be applied to every type of service (as seen in Table 2.2). Even though the lack of ownership looks like a common characteristic, this element is mentioned with the four others by Adrian Palmer (cited by Baker, 2003, p. 594) as a point of convergence between goods and services (Table 2.3), further questioning the generalisation of the aforementioned services characteristics. Table 2.3 only mentions the evolution of services.

⁴¹ Lovelock/Wirtz (2007), pp. 20 f..

⁴² Lovelock/Wirtz (2007), p. 21.

⁴³ Lovelock/Wirtz (2007), p. 21.

Intangibility:	Services are increasingly augmented with tangible evidence (e.g. brochures, staff uniforms).
Inseparability:	Service consumption is increasingly separated from production (telephone banking)
Perishability: (Inventory)	Services are becoming better at storing tangible components of a service offer and in managing the pattern of demand (e.g. restaurant)
Variability: (Inconsistency)	Industrialisation of services allows levels of reliability to be achieved that matches those of goods.
Lack of ownership:	Addition of tangibles allows customers to 'own' evidences of services (e.g. telephone 'calling cards')

Table 2.3: Evolution of the 5 main service characteristics

Source: Adapted from Baker (Editor, 2003, p. 594)

Although one can notice an evolution of services towards physical goods-like products, the four, five or eight possible differences between goods and services should be taken in consideration and result in a higher complexity of the marketing mix that is developed in part 2.1.3. Nevertheless, for physical acts to customers' bodies (Table 2.2), the 4 I's or IHIP seem to be accurate characteristics apart from Intangibility, which should be handled with caution, as the resulting experience and physical changes of this type of services can be considered tangible.

2.1.3 Service Marketing-Mix

The Marketing Mix constitutes the most important tool of operative marketing. In literature, the notions of product, price, place and promotion (commonly known as the "4 P's" of marketing) are the most frequent descriptions of the term marketing mix (the following part mentions some divergences in appellations). However, the marketing mix has been extended

with three (sometimes four) additional P's where services are concerned, due to their particular characteristics of intangibility or inseparability (for instance), which have been exposed in Part 2.1.2.

2.1.3.1. 4P's marketing Mix

One will often read about the 4 P's of marketing: product, price, place (distribution) and promotion (communication, advertising).⁴⁴

The product policy is the totality of the operational actions related to the constitution of the good or service (attributes, characteristics, brand name, packaging, additional services etc)⁴⁵.

The price policy includes the measures which contain the financial return for a service or good and parameters such as price level, price-performance relationship, effects on sales volumes, competitor's price, consumer acceptance etc.⁴⁶ In literature, the price can also form part of the offer policy (product) in the marketing mix. In this case, the marketing mix is composed of only three tools: offer policy (product, program and price) distribution policy and communication policy.⁴⁷ Price is the only variable purely considered as revenue generating and is the value that customers exchange for the value of the product.⁴⁸

⁴⁴ Thomas (1986), p. 86; Zollondz (2005), p. 8; Meffert (2000), p. 14; Geisbüsch/Geml/Lauer (1991), p. 482; Simon (1992), p. 5; Kotler/Armstrong (2004), p. 348.

⁴⁵ Thomas (1986), p. 86; Böcker (1994), pp. 189 ff.; Zollondz (2005), pp. 31 ff..

⁴⁶ Thomas (1986), p. 86; Böcker (1994), pp. 236 ff.; Zollondz (2005), pp. 52 ff..

⁴⁷ Becker (1999), p. 99; Becker (2006), p. 490.

⁴⁸ Groucutt/Leadley/Forsyth (2004), p. 300.

The place policy (distribution policy) is composed of every tool that deals with the availability of goods and services for customers such as distribution channels, transportation, storage, trading, sales force etc.⁴⁹

The promotion policy (communication policy) employs every measure such as advertising, direct marketing, public relations, sponsoring or event management, which are meant to communicate information about goods and services to potential buyers, seller or other actors in the channels to influence behaviours (brand creation or enhancement, image, views and decisions of opinion leaders etc).⁵⁰

2.1.3.2. 7P's marketing Mix

Nowadays, one can find an expansion of the concept of marketing mix as the literature refers not only to 3 or 4 elements or P's of the marketing mix, but to 7 P's⁵¹. It is then possible to conceive an interaction of 7 marketing tools in the marketing mix, as represented in Figure 2.1

⁴⁹ Thomas (1986), p. 86; Böcker (1994), pp. 293 ff.; Zollondz (2005), pp. 95 ff..

⁵⁰ Thomas (1986), p. 86; Böcker (1994), pp. 358 ff.; Zollondz (2005), pp. 67 ff.; Groucutt/Leadley/Forsyth (2004), p. 300.

⁵¹ Zollondz (2005), p. 24; Business Gateway ; Learn Marketing.net; Groucutt/Leadley/Forsyth (2004), p. 400; Hill/O'Sullivan (1999), p.36.

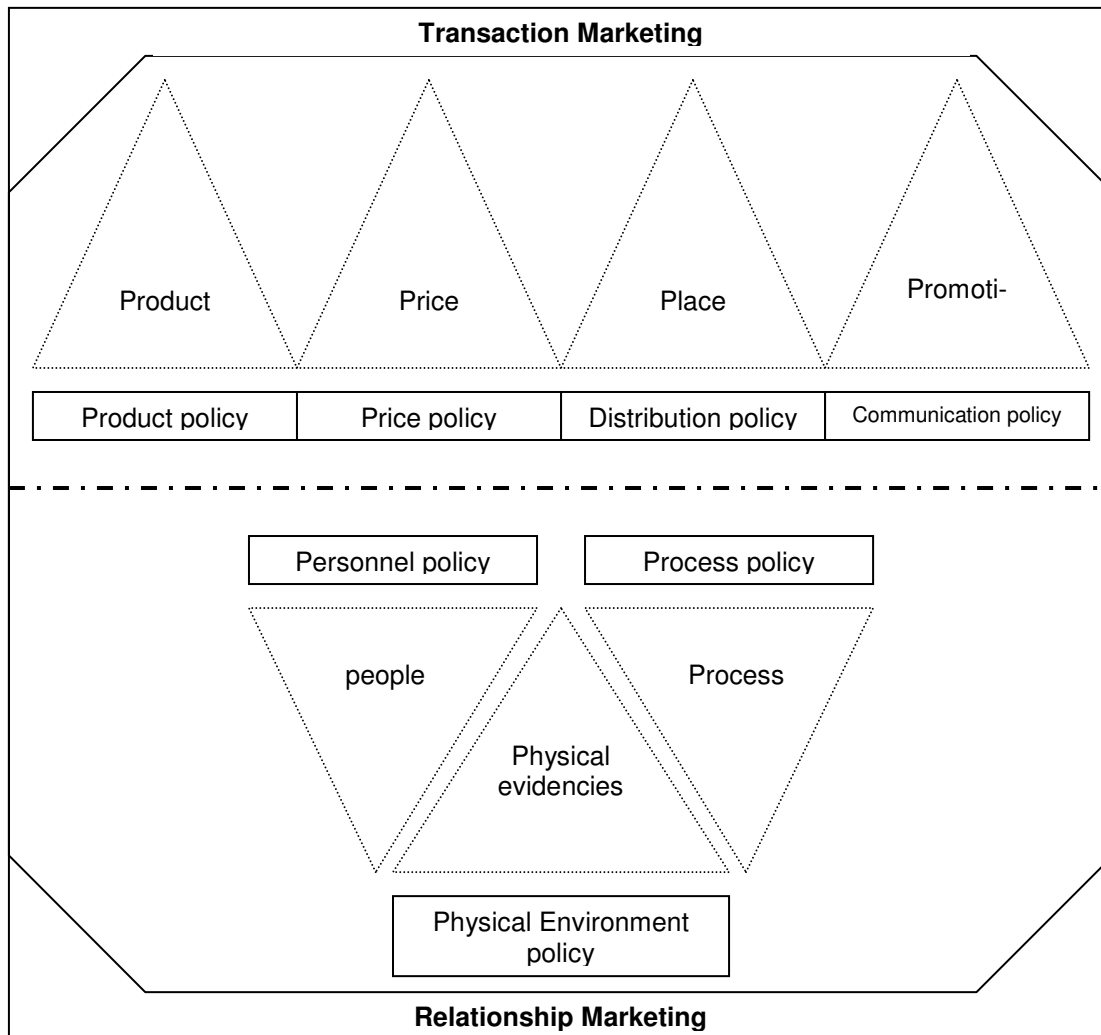


Figure 2-1: Extended 7 P's marketing mix model

Source: Adapted from Zollondz (2005), pp.10 f., p. 24.

Besides Product, Price, Place and Promotion as tools of transaction marketing (a transaction is defined as “an event during which an exchange of value takes place between two parties”⁵²), 3 more P's come into effect. These 3 P's are People (staff), Process and Physical evidence (facilities and equipment), particularly for services marketing and its “quality management”⁵³, which is also defined as an eighth “P” (“Productivity and quality”) by Christopher Lovelock (2001) in several books.⁵⁴ The personal policy (People or

⁵² Lovelock/Wright (2002), p. 99.

⁵³ Zollondz (2005), p. 106; Kotler (2002), p. 434.

⁵⁴ Lovelock/Wirtz (2007), p. 24-25; Lovelock/Wright (2002), pp. 287 ff..

“*participants*”⁵⁵ : employees, consumers, public decision-maker...) refers to staff and other involved parties creating the service. The process policy (design and implementation of the process, active customer involvement, quality of the consumption experience), is the process which enables the best response to customer demand.⁵⁶ The physical evidences policy (physical facilities or “*physicalities*”⁵⁷), corresponds to the appearance of the place (Materials, contact personnel, accommodation, building and atmosphere...) where the service occurs.⁵⁸

The three tools People, Process and Physical evidences, enhancing the marketing mix for services in particular, allow a shift from transaction marketing to so called “*relationship marketing*”, defined as “*activities aimed at developing long-term, cost-effective links between an organisation and its customers for the mutual benefit of both parties*”.⁵⁹

In most attempts in literature to describe the notion of services, a service product is different from a good, and, from a marketing point of view, different from a service that only exists to enhance a marketed physical good. Among several different attempts at defining effective characteristics of services, the terms intangibility, perishability (or inventory difficulty), inseparability or consumption and production, variability (or inconsistency of quality delivery) and lack of ownership seem to be the virtues that distinguish most services from goods, even though they shouldn't be considered in a general way and are not necessarily applicable to every service product. These particular characteristics of services (regardless of the degree and applicability of each) involve the extension of the marketing mix to a 7 P's

⁵⁵ Groucutt/Leadley/Forsyth (2004), p. 202.

⁵⁶ Zollondz (2005), p. 107; Business Gateway; Palmer (1994), p. 33; Learn Marketing.net; Lovelock/Wirtz (2007), p. 12.

⁵⁷ Groucutt/Leadley/Forsyth (2004), p. 405.

⁵⁸ Zollondz (2005), p. 108; Business Gateway; Palmer (1994), p. 34; Learn Marketing.net.

⁵⁹ Lovelock/Wright (2002), p. 102

model including Process, Physical evidences and People in addition to the basic 4 P's model of Product, Price, Place and promotion. The aforementioned complexity of services marketing leads to integration of other corporate activities such as operations management, which will be developed in Part 2.2.

2.2 Service Operations

To meet the needs of service customers, three management functions are interrelated.

Marketing, Operations and Human Resources play a central role and shouldn't be isolated in order to achieve a successful service delivery. Operations management ("*management of the activities involved in producing the goods or services of an organisation*", Hitt et al., 1986)⁶⁰

is of primary importance in the service business as it is responsible for the management of service delivery through facilities, equipment, systems and tasks of the process occurring between consumers and employees. Operations activities on one hand are not dissociable from marketing activities⁶¹ and are involved in the process design and other elements of the physical environment and improvement of productivity and quality. The functions of

Operations are significantly related to the element Process and Physical evidences of the 7 P's model of the marketing mix (and to Productivity and Quality as regards the 8 P's model).

Human resources activities on the other hand are central to the element People in the marketing mix. The function of Operations and Human resources are then significant in the delivery of services as they are directly involved in the extended marketing mix (Process, Physical evidences and People) for services, reviewed in Table 2.4

⁶⁰ Hitt/Middlemist/Mathis (1986), p. 177.

⁶¹ Bateson (1989), pp. 91 f..

Mix variable or elements	Description
People (participants)	This includes the “communities” involved in the marketing relationship
Physical evidences	This is the tangible aspects of the “delivery” of the product or service
Process	This is the assembly or flow activities that support the fulfilment of the marketing mix

Table 2.4: The 3 P’s of services

Source: Adapted from Groucutt et al. p 401

To explore the 3 P’s of services from an operational point of view, part 2.2.1 exposes the theory of the transformation process applicable to physical goods as well as service products to show the interaction of the marketing mix’s variables, followed by a first classification of services based on the nature of their process (part 2.2.2). The concept of blueprinting as a technique of service process mapping will then be exposed in part 2.2.3., illustrating the importance of the marketing mix variables (Process, People and Physical evidences) at the point of interaction between service customers and provider’s organisation.

2.2.1 Transformation process

One of the most distinctive characteristics of services is their process nature (Bitner et al., 2008, p.68). It’s been mentioned that a service is the transformation of a company’s resource. This part suggests the customer’s involvement, sometimes as co-producer (Lovelock, Wirtz, 2007, p. 25), as an input of a company’s transformation process.

Processes of all operations producing goods and services are managed to change the condition or state of something to turn it into outputs. Figure 2.2 illustrates how a set of inputs are used to transform something or the inputs themselves into goods and services (outputs) to satisfy customer needs. However, there are significant variations in the process of

different operations. For instance, a motor vehicle plant, whose operations are the manufacturing of largely physical goods, differs from a hospital, whose operation (service) produces changes in the behaviour, the feelings and physiological condition of patients.⁶²

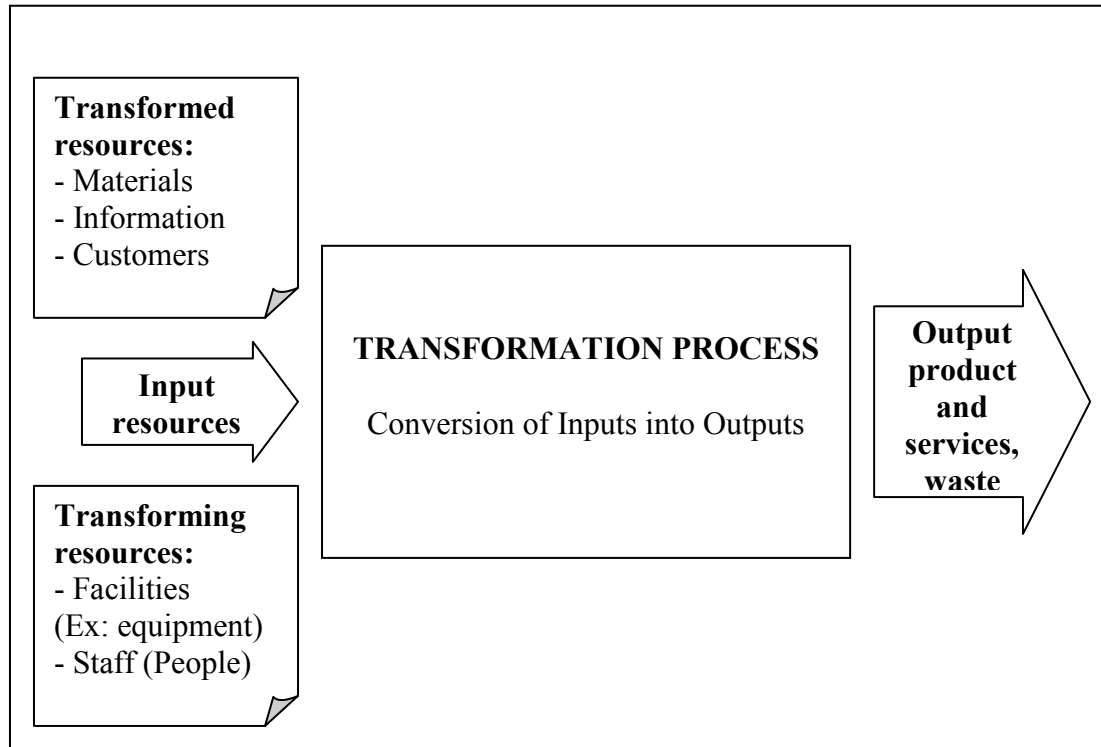


Figure 2-2: General transformation process model

Source: Adapted from Slack et al. (2004), p. 12 & Hitt et al. (1986) p. 178.

In addition to equipment differences (e.g. metal cutting and machinery versus. diagnostic and therapeutic processes), the nature of both operations' input is the major difference between the two processes. Both have staff and facilities (Figure 2.2) - that can be related to "People" and "Physical evidences" of the extended marketing mix - as transforming inputs but use them to transform material (steel, plastic, cloth etc) to produce vehicles in the first operation plant as opposed to the transformation of customers (patients) as inputs in the hospital who

⁶² Slack/Chambers/Johnston (2004) p. 12.

processes them and turn them into physiologically transformed outputs.⁶³ Hitt et al. (1986) define a service as “*something consumed during the process of its production*”⁶⁴. In a process requiring customer’s presence (“*customer processing*”) the visibility of operational functions (front office activities, described in part 2.2.3) is higher and so is the degree of overlap between marketing and operations activities.⁶⁵

As shown in Figure 2.2, the inputs of a transformation process can be transformed resources or transforming resources. Transforming resources are staff (operating people who manage, plan and maintain the operations at any level) and facilities (building, plant, equipment and process technology).⁶⁶ Their arrangements and combination constitutes the “process” of the operation.⁶⁷

The other set of inputs to operation processes are the transformed resources. These are resources that are transformed, treated or converted in the process and are usually composed of material, information and customers. The mixture of the three different transformed resources is illustrated in Table 2.5, which shows examples of different operation process, their inputs (both transforming and transformed resources) and outputs.

⁶³ Slack/Chambers/Johnston (2004) pp. 12 f..

⁶⁴ Hitt/Middlemist/Mathis (1986), p. 177.

⁶⁵ Slack/Lewis (2002), p. 335-337.

⁶⁶ Slack/Chambers/Johnston (2004), pp. 13 f..

⁶⁷ Slack/Lewis (2002), p. 22.

Operation	Process inputs	Operation's process	Process outputs
Airline	Aircraft Pilots and air crew Ground crew Passengers and freight	Move passengers and air freights around the world	Transported passenger and freight
Department store	Goods for sale Sales staff Computerized registers Customers	Display goods Gives sales advices Sell goods	Customers and goods assembled together
Police	Police officers Computer systems Information Public(law-abiding and criminals)	Prevent crime Solve crime Apprehend criminals	Lawful society Public with feeling of security
Frozen food manufacturer	Fresh food Operators Food- processing Equipment Freezers	Food preparation Freeze	Frozen food

Table 2.5:**Some operations described in terms of their processes**

Source: Slack et al. (2004), p.13

Depending on what input is to be transformed, operations' processes vary. Material processing are operations changing the physical properties of materials or their locations (e.g. delivery). It can also be a change of possession (retailer) or storage (warehouse) of these materials. The same changes can be applied to information when processing it: change of information property (form or purpose, e.g. accountancy), change of location (telecommunication, television), change of possession (sold market researches) or storage (library).⁶⁸

Changes in properties or location and storage of materials and information also occur in customer processing. Hairdressers, hospitals and various forms of medical treatment (predominantly customer processors) involve changes in the physical properties of a customer. A hotel stores, or more politely "accommodates" customers. Airline companies

⁶⁸ Slack/Chambers/Johnston (2004), pp. 14 f..

(passenger transportation, see Table 2.5) change their location. Additionally, customers can be psychologically changed through operations such as entertainment services.⁶⁹

This explanation of an operational transformation process shows the similarities between the manufacturing of goods and services. Most of the time, a combination of material, information and customers play the role of transformed resources (inputs) to result into goods and service products (outputs). Staff and facilities are required as transforming resources in every transformation process. Their higher interaction with customers as inputs in the case of services operations and the greater presence of customers in the process underline the significance of the three P's People, Physical evidences and Process in the extended marketing mix for services

2.2.2 Service Process classification

As illustrated in Part 2.2.1, the greater participation of customers in services production operations leads to the importance of specific variables (process, people and physical evidences) in service marketing. For services alone, the combination of inputs (information, material and customers) can vary. This changes the nature of the service process, and it is on this basis that some authors, such as Christopher Lovelock (in several textbooks), classify services into 4 categories with different process aspects.

A process involves the transformation of inputs into outputs, and a service process can be described considering the direct recipient of the service on one hand and the nature of the service act on the other hand.⁷⁰ This suggests a division of the inputs referred to by Slack et al. (2004) exposed in Part 2.2.1 into two categories of differentiations. The direct recipient

⁶⁹ Hill (1977), p. 321; Slack/Chambers/Johnston (2004), pp. 14 f..

⁷⁰ Lovelock/Wright (2002), p. 34.

differentiates between people and possession (material and product), and the service act differentiates between tangible and intangible actions. This allows a matrix of four possibilities as shown in Table 2.6

Nature of the service act	Direct recipient of the service	
	People	Possession
Tangible action	People processing: <i>Directed at people's bodies</i> Passenger transportation Healthcare Beauty salon Physical therapy Fitness centres Restaurant/bar Haircutting	Possession processing <i>Directed at physical possessions</i> Freight Transportation Repair and Maintenance Warehousing/storage Retail distribution Laundry and dry cleaning Landscaping/law care Disposal/Recycling
Intangible action	Mental stimulus processing <i>Directed at people's mind</i> processing Advertising/PR Art and entertainment Management consulting Education Psychotherapy	Information processing <i>Directed at intangible assets</i> Accounting Banking Insurance Software consulting Legal service Research

Table 2.6: Four categories of service processes

Source: Adapted from Lovelock/Wright (2002), p. 34.

There are two main categories. First service processes affect people and result in changes of the physical (tangible action on people's bodies) or mental condition of the customer (intangible stimulus on people's mind). Second service processes affect goods (transportation, repair, maintenance or cleaning of people's possessions)⁷¹ or assets (when information affects people's possession)⁷²

⁷¹ Hill (1977), pp. 319 ff.

⁷² Lovelock/Wright (2002), p. 34.

This illustrates the possible mix of different inputs (material, information and customers) mentioned by Slack et al. (2004). Customers and information would be required simultaneously for an educational service whose process may be supported by material elements (e.g. book, computer or even a class room)

In the case of people processing and possession processing, something tangible takes place.⁷³

People processing services on one hand act on people's bodies involving tangible actions.

Customer must physically enter the service system or the so called "service factory"⁷⁴ in order to be transported, fed or receive a haircut or dental work. On the other hand, possession processing services (tangible actions to customer's physical belongings, both living and inanimate) require the presence of the object but not of the customer in the service system (e.g. house cleaning or airfreight). Here, production and consumption of the service are separable.⁷⁵ The notion of "*inseparability*" as criteria of service classification is further discussed in part 2.3. When customers are involved in the core activity, they can't avoid the experience of the process and their satisfaction of the service factory is influenced by factors such as service personnel ("People"), appearance and features of facilities ("Physical evidences"), as well as the interaction with equipment and behaviours or characteristics of other customers.⁷⁶ In the case of data processing (mental stimulus or information processing) the process is almost entirely intangible.⁷⁷

This classification of services based on the nature of their process highlights the importance of the "Process" when considering service products. Services provided by hair salons, massage centres, healthcare practitioners and hospitals all have people as recipient of their

⁷³ Lovelock/Wirtz (2007), p. 34.

⁷⁴ Slack/Lewis (2002), p. 338; Lovelock/Wright (2002), p. 33.

⁷⁵ Lovelock/Wright (2002), pp. 34 f.; Lovelock/Wirtz (2007), pp. 35 f..

⁷⁶ Lovelock/Wright (2002), pp. 38 f..

⁷⁷ Lovelock/Wright (2002), p. 35. Lovelock/Wirtz (2007), p. 34.

service. This is of a tangible nature, where customers must physically enter the so called “service factory” (as an input of the transformation process) and consequently belong to the category of People Processing services (or “Physical acts to people’s bodies”, as seen in Table 2.1, Part 2.1.2).

2.2.3 Service blueprint

A way of mapping service processes is found in literature as the concept of blueprinting. The blueprint differentiates a so called front stage, which is visible by customers, from the backstage that customers don’t see, and further shows the importance of the variable People and Physical evidences in the service delivery process.

First introduced by Shostack (1984) as a technique to control processes, identify failures in operations and solve problems pre-emptively, the concept of “service blueprint” (visual diagram comparable to architectural projects printed on a special paper creating blue lines)⁷⁸ has evolved as a customer focused method for visualising the service process, the points of customer contact (separating the visible and the invisible)⁷⁹ and physical evidences related to the service.⁸⁰ Described as “*The flowcharting of a service operation*” by Hoffman and Bateson (1997, p. 136), or even as a more sophisticated version of flowcharting (Lovelock and Wirtz, 2007, p. 233), the concept of blueprinting distinguishes between “backstage” and “onstage” (or “front-stage”) activities⁸¹ (also called “front office” and “back office”)⁸², as represented on Figure 2.3.

⁷⁸ Fitzsimmons/Fitzsimmons (1994), p. 87.

⁷⁹ Bateson (1989), pp. 226 f..

⁸⁰ Bitner/Ostrom/Morgan (2008), p. 67; Shostack (1984), p. 133.

⁸¹ Bitner/Ostrom/Morgan (2008), p. 71; Lovelock/Wirtz (2007), p. 233.

⁸² Johnston/Clark (2005), p. 175.

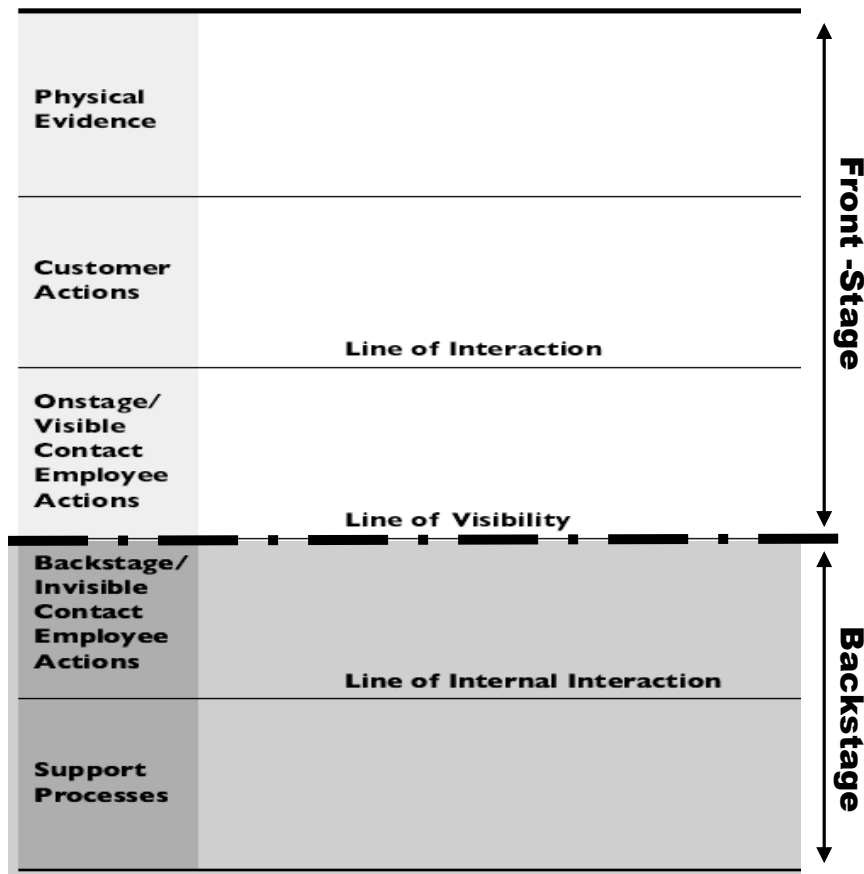


Figure 2-3: Service blueprint components

Source: Adapted from Bitner et al. (2008), p. 73 and Lovelock/Wirtz (2007), p. 236.

The “line of visibility” separates the front office processes, which are visible by the customer, from the supporting back office operations, which the customer doesn’t see.⁸³

As shown on Figure 2.3, “physical evidence” is a key component of service blueprint.⁸⁴ This constitutes the “inanimate environment” (decor, furniture, machinery) of the visible organisation (front-stage) mentioned by Hill and O’Sullivan (1999, p. 35.) as opposed to the “animated environment” (staff, helper) or “people”. Physical evidences that customers come in contact with are “*The very top of the moment of true*” and are the tangibles that can

⁸³ Fitzsimmons/Fitzsimmons (1994), p. 87; Hoffman/Bateson (1997), p. 136.

⁸⁴ Bitner/Ostrom/Morgan (2008), pp. 71 f..

influence customers' quality perception.⁸⁵ Lovelock and Wirtz (2004, p. 48) mention "interior and exterior facilities", "equipment" and "services people" as components of the "front stage" (visible) in the service delivery system.

The transformation process seen on Figure 2.2 (part 2.2.1) is reviewed in Figure 2.4 in a context of services. Figure 2.4 illustrates the service process supported by back office and front office operations.

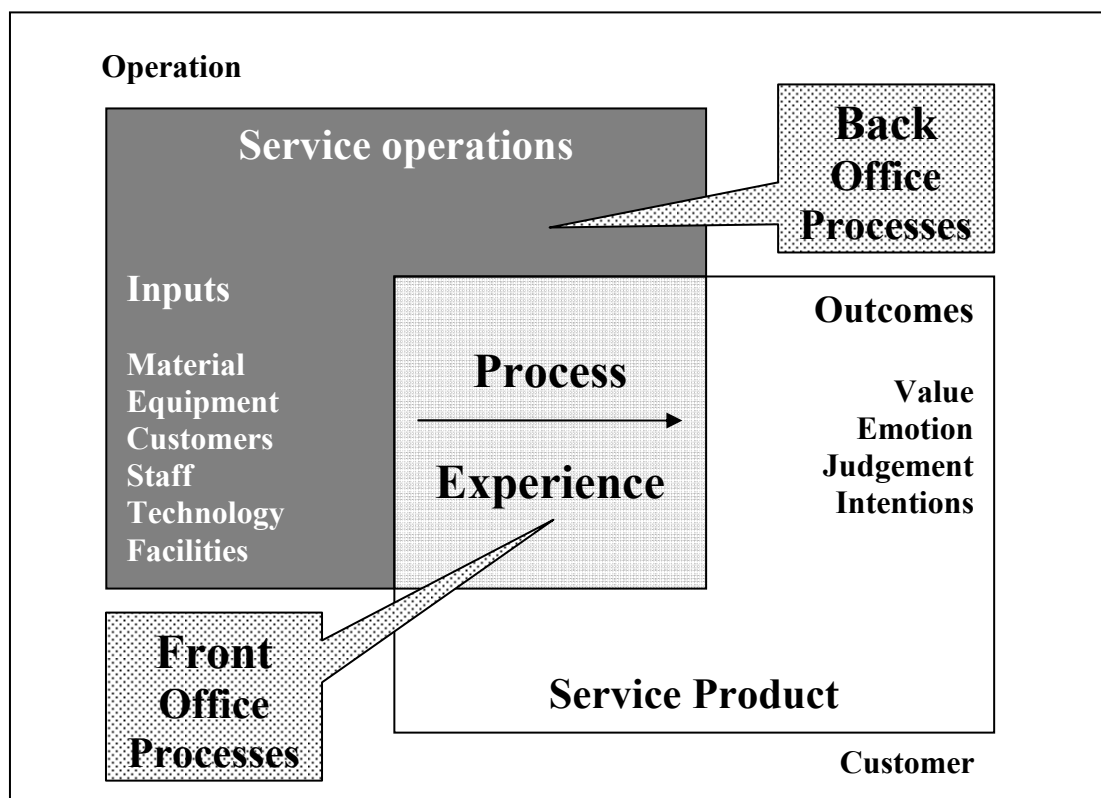


Figure 2-4: Service process

Source: Adapted from Johnston/Clark (2005), p. 175-176

Similar to most manufacturing processes that are invisible to customers, an example of back office operations can be a computer repair process or the preparation of food in a restaurant. A nurse administering drugs to a patient is an example of front office operation.⁸⁶

⁸⁵ Bitner/Ostrom/Morgan (2008), pp. 72 f..

⁸⁶ Johnston/Clark (2005), pp. 176 f..

The Blueprint, comparable to an illustration of the general transformation process, concentrates on the way a service is delivered. The concepts of front stage and back-stage operations underline the interaction of the marketing element People and Physical evidences in the service process. Due to the direct interaction of the customer with the physical organisation, People-Processing services are particularly concerned with the front-stage facilities.⁸⁷

Involving a transformation process that often uses customers as inputs, service delivery has to be considered from an operational point of view to explain the importance and interrelation of the supplementary marketing variables Process, People and Physical evidences. Their interaction with the service customer is further explained through the concept of blueprinting. It is essential to consider the importance of the visible (front stage) and the invisible (back stage) in service operations that vary depending on the nature of the process. Here the importance of the front stage and the variable People and Physical evidences have been identified, especially for People-Processing services (subject of the study). The importance of these variables will be further revealed in part 2.3 by classifying services in a deeper way, based on founded service characteristics. Part 2.4 will focus on Physical evidences to demonstrate the link between the intangibility of services and customers' evaluation of services.

2.3 Service Classification

As seen in Part 2.2, services can be classified into 4 categories based on the nature of their process (e.g. people or possession processing services). This part is dedicated to additional

⁸⁷ Lovelock/Wright (2002), p. 42

methods of service classification depending on factors exposed in Part 2.1, such as the main characteristics of service products (e.g. degree of intangibility or inseparability of production and consumption).

To determine which category a service belongs to, Lovelock and Wirtz (2007) suggested that one should know the nature of the service act (as seen in Part 2.2), the type of relationship the organisation encompasses with the customer, how much room there is for judgement and customisation for the service provider, the nature of demand and supply and the way the service is delivered.⁸⁸ According to Palmer (cited by Baker, editor, 2003, p. 595), the characteristics of services can be used as bases to classify services. The Author mentions the 5 following services characteristics (exposed in part 2.1): Intangibility, Inseparability, Perishability (Inventory), Variability (Inconsistency) and Lack of ownership. Some classification options of Palmer (pp. 595 ff.) including “*Marketable versus unmarketable services*” and “*Producer versus consumer services*” are not taken into account in the following list.

- Degree of Intangibility:

Different levels of intangibility in the service process are a way to classify services. Some services do something physical (e.g. food service or dry cleaning) and others involve more intangible elements in their process (e.g. teaching).⁸⁹ The more intangible a service is, the harder it is to provide evidence that the quality of the service will match providers’ promises.⁹⁰

⁸⁸ Bateson (1989), p. 9.

⁸⁹ Lovelock/Wright (2002), p. 30.

⁹⁰ Baker (2003), p. 595.

- The status of the service within the total product offer:

As most products are combinations of service and goods elements, the variation of the service elements' contribution to the total offer is a way to classify services or products in general.⁹¹

This refers to the composition of products through their core components and their tangibles and intangibles accompanying components, exposed later in Part 2.4.

- Extent of inseparability:

As seen in Part 2.2.2 (classification of service processes), some services can be provided with the presence of the customer while others require customers' involvement in the service production process, often of an interactive nature. For personal care services, the production of the service can not be separated from its consumption by the customer (directly involved in the service delivery, e.g. haircutting)⁹². In the case of a hairdresser, clients have to answer series of questions about their hair style and the emerging length and the quality of the service process becomes as important as its outcomes. When services are not carried out on people's body directly but on their possessions, customer involvement in the service process is lower. Listening to a radio station doesn't require the interaction of staff with customers, and car maintenance or good transportation can generally be separated from the customer, who only has to initiate and evaluate the service. Process of production should be of a great importance for highly inseparable services to ensure consistent high levels of performance by

⁹¹ Baker (2003), p. 595.

⁹² Lovelock/Wright (2002), p. 30

the employees at the consumption point (front stage operation, see part 2.2.3) while separable services processes allow more room for backstage operation (“back-room”).⁹³

Lovelock and Wright (2002, p. 70) differentiate three categories of services depending on the level of customer participation in the production which can be low (customer presence required) for services such as bus travel or a motel stay, moderate (customer inputs required) where client inputs customise the service (e.g. hair cut or physical exam), or high (customer co-produces the service product, such as personal training).

- The pattern of service delivery:

Services differ in the way customers purchase them. Some are bought on impulse or without a conscious search activity only when needed, such as snacks and taxis (low value) or funeral services (high value). On the contrary, other services cannot be supplied casually and require a continuous service supply pattern such as telephone lines or insurance policies.⁹⁴

- Extend of people orientation:

While some services require only a little human involvement (e.g. pay and display car park), others such as hairdressing or accountancy, described as “people-intensive”, are highly evaluated by customers for the quality of their serving staff (“people” of the “front stage”). Baker (2008, p. 597) draws a difference between “*people-based*” services and services based on equipment. Lovelock and Wirtz (2004) give a classification of services according to the customer contact with the service operations. Figure 2.5 groups services into 3 categories

⁹³ Baker (2003), p. 596

⁹⁴ Baker (2003), p. 596.

with different extents of interaction with physical elements (equipment), service personnel or both.

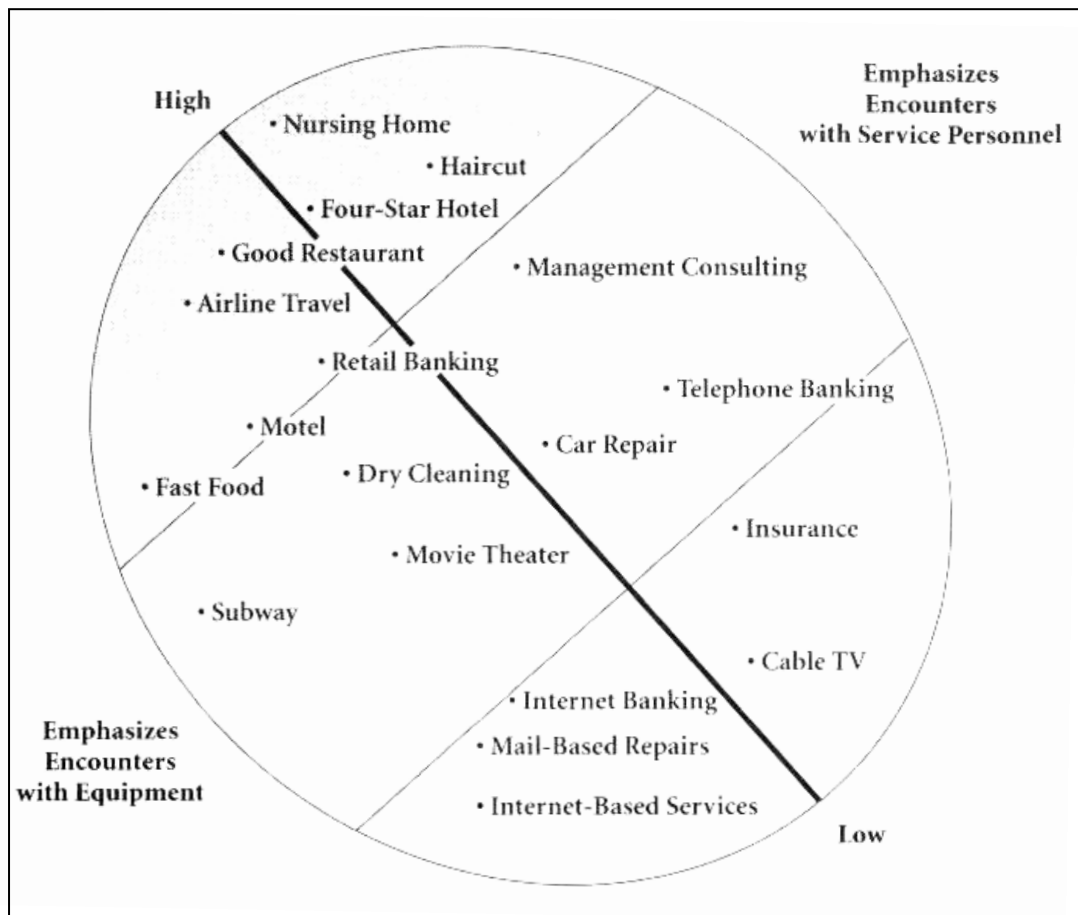


Figure 2-5: Level of customer contact with the service organisations.

Source: Lovelock/Wirtz (2004), p. 34.

The placement of services in Figure 2.5 shows whether they are more high-contact or low-contact services. A haircut for instance, as well as health care, beauty salons and exercise clinics⁹⁵ belong to the high-contact services categories and involve a high interaction of the customer with the service personnel (“people”). People-processing services (see part 2.2.2) such as hairdressing or medical services are high-contact services where customers are actively involved in the process and with the service personnel.

⁹⁵ Hill (1986), p. 314.

High-contact services raise the importance of Front-stage operations (high customer interaction in the service process and with people and physical evidences) which affects the perception of service quality by the customers.⁹⁶

- The significance of the service to the purchaser:

Palmer also proposes a differentiation of services through the lengths of customers' decision-making process. The authors draw a difference between frequently purchased services that don't represent a large portion of customers' total expenditure (e.g. lottery ticket) and long-lasting services, which might be purchased less frequently, require a longer decision-making process and involve more people, such as life insurance.

Lovelock and Wright (2002, pp. 30-32) propose further criteria for service classification such as "*Place and Time of Service Delivery*" (does the customer have to visit the service organisation?), "*Customisation versus Standardisation*" (a haircut is customised although other customer can have the same or an optometrist's analysis presents standard procedures but results in customised prescriptions), "*Nature of the Relationship with Customers*" (individually recorded transactions, memberships or fleeting transactions). The authors finally mention the "*Extend to which Facilities, Equipment, and People Are Part of the Service Experience*" (e.g. a trendy hair salon with a friendly cutter). This differentiation possibility refers to the fundamental "process" of the 7 P's that was exposed in part 2.1, giving a classification of services based on the nature of the process (people, possession, mental stimulus or information processing).

⁹⁶ Lovelock/Wirtz (2004), p. 49.

Following these classification proposals, the subjects of study can be more precisely put into services categories. Hair salons, massage centres, health care institutes and hospitals are already known to be people processing services (part 2.2.2). The service given is the core component of the product offer, that doesn't require a continuous service supply pattern except for ongoing treatment prescriptions. They can be considered as long lasting services (especially for medical treatments) and require a relatively long decision-making process (compared to taxi services). More importantly, customers are hardly separable from the delivery process of the studied services, where customer participation can be defined as "moderate" (customers' input is required). These services are certainly "high-contact services" requiring significant interaction between customers and service personnel. The decision-making process, associated with the evaluation of services by customers, will be further discussed in an analogy with the degree of intangibility in part 2.4. This exposes the last classification possibility based on different types of product attributes in relation with services' degree of intangibility.

2.4 Intangibility and risk perception

The intangibility of services ("*services are intangible dominants*", Hoffman/Batesson, 1997)⁹⁷ differentiates services marketing from marketing of physical goods.⁹⁸ As exposed in part 2.1, intangible elements such as process and attitudes create the most value of the service product, even though the service performance includes important physical (tangible) elements such as hotel beds or bank cards⁹⁹. "Physical evidences" (mentioned as a *P* of service marketing mix, see part 2.1.3) accompany services and can be used by customers in some

⁹⁷ Hoffman/Bateson (1997), p. 6.

⁹⁸ Hill/O'Sullivan (1999), p. 269.

⁹⁹ Lovelock/Wirtz (2007), pp. 16 f..

situations to “*make the product less abstract and more tangible*”.¹⁰⁰ It seems that the intangibility, making services impossible for customers to “*touch or hold onto them in the same manner as physical goods*”¹⁰¹, plays a key role in the evaluation of services by customers who encounter difficulties in visualising and evaluating them, especially for services providing few tangible clues, which increases the perceived risk.¹⁰²

2.4.1 Customers’ expectation and evaluation of risk

To explain why the risk perceived by customers is higher when services are concerned, the concept of “zone of tolerance” is often mentioned in literature to illustrate the variation in quality perceived by customers when evaluating or purchasing services, which presents a higher risk of disappointment than the consumption of physical goods, partly due to the intangible character of most services.

Customers’ expectations towards services involve several variables such as desired service (“*level of quality that customer believes can and should be delivered*”), adequate service (lower level of expectations: “*minimum level of service that a customer will accept without being dissatisfied*”), predicted service (“*level of service quality a customer believes a firm will actually deliver*”) and a zone of tolerance between desired and adequate level of service¹⁰³, as represented in Figure 2.6.

¹⁰⁰ Gabbott/Hogg (1998), p. 27.

¹⁰¹ Lovelock/Wright (2002), p. 30.

¹⁰² Lovelock/ Wirtz (2007), p. 42.

¹⁰³ Zeithaml/Berry/Parasuraman (1996), p. 35; Lovelock/Wright (2002), pp. 81 f..

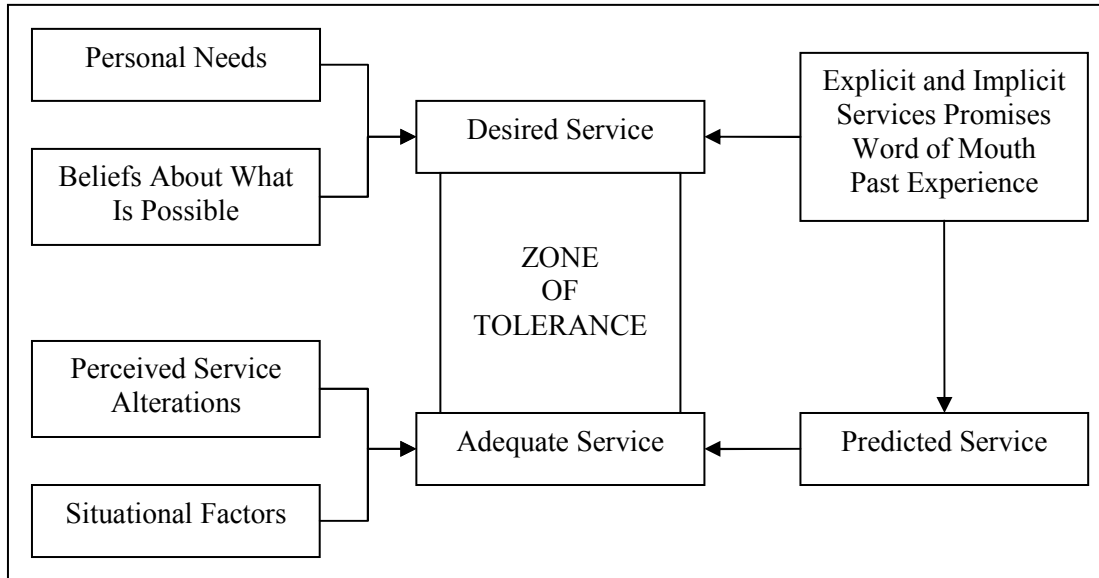


Figure 2-6: Factors influencing customer expectations of services

Source: Lovelock/Wirtz (2007) p. 48.

The level of service expected (or “*desired service*”) and adequate (or “*perceived service*”) by customers is most likely to be determined by personal needs, past experiences and word-of-mouth,¹⁰⁴ as well as promises (explicit and implicit) of the service provider.¹⁰⁵

The so called “zone of tolerance” represents the quality variation that customers are willing to accept for the service delivery and out of which a too poor or unexpectedly rich performance will result in significant negative or positive reactions.¹⁰⁶ It “*captures the range of service within which a company is meeting customer expectation*” from “*Ideal*” to “*Minimum Tolerable*” (Oliver, 1997, p.72)¹⁰⁷ and is also mentioned as a “*service-quality shortfall perceived by customers*” (Zeithaml et al., 1990, p. 36).

¹⁰⁴ Zeithaml/Parasuraman/Berry (1990), p. 36.

¹⁰⁵ Lovelock/Wirtz (2007), p. 48.

¹⁰⁶ Lovelock/Wirtz (2007), p. 49.

¹⁰⁷ Zeithaml/Berry/Parasuraman (1996), p. 35; Oliver (1997), p. 72.

As opposed to the purchase of a physical good that can be replaced in case of dissatisfaction, the risk of purchasing a disappointing service is greater, especially in absence of tangible clues to facilitate customers' evaluation. Although some services such as poor performed laundry or cleaning can be repeated ("Possession-processing services", see Part 2.2.2), other services like some People-processing services are not replaceable, as hair must grow back and a botched surgical operation can last a lifetime.¹⁰⁸

The physical intangibility along with inseparability and heterogeneity (inconsistency) of services create a so called "*mental intangibility*" making customers' evaluation difficult.¹⁰⁹

The difficulty of evaluation of services (as well as goods) is related to their product attributes (all tangible and intangible features of products that customers can evaluate) that can be divided into three categories. First, "*Search attributes*" are tangible characteristics that customers can evaluate prior to purchase and reduce the sense of risk or uncertainty (e.g. clothing or food). "*Experience Attributes*" are performance characteristics that can be evaluated only during service delivery or "*experience*" (e.g. theatre) such as ease of use and customer support. Finally, "*credence attributes*" are found impossible to evaluate by customers, even after consumption. They often are related to the benefit of the performance, are hard to document, involve a certain level of knowledge and require a trusting relationship with the service provider (e.g. consulting, legal advices, surgery or dental treatment).¹¹⁰

Figure 2.7 illustrates how the three product attributes affect the ease of evaluation of different products by customers.

¹⁰⁸ Lovelock/Wright (2002), p. 83; Lovelock/Wirtz (2007), p. 42.

¹⁰⁹ Lovelock/Gummesson (2004), p. 27.

¹¹⁰ Lovelock/Wright (2002), pp. 83 f.; Lovelock/Wirtz (2007), pp. 42 f..

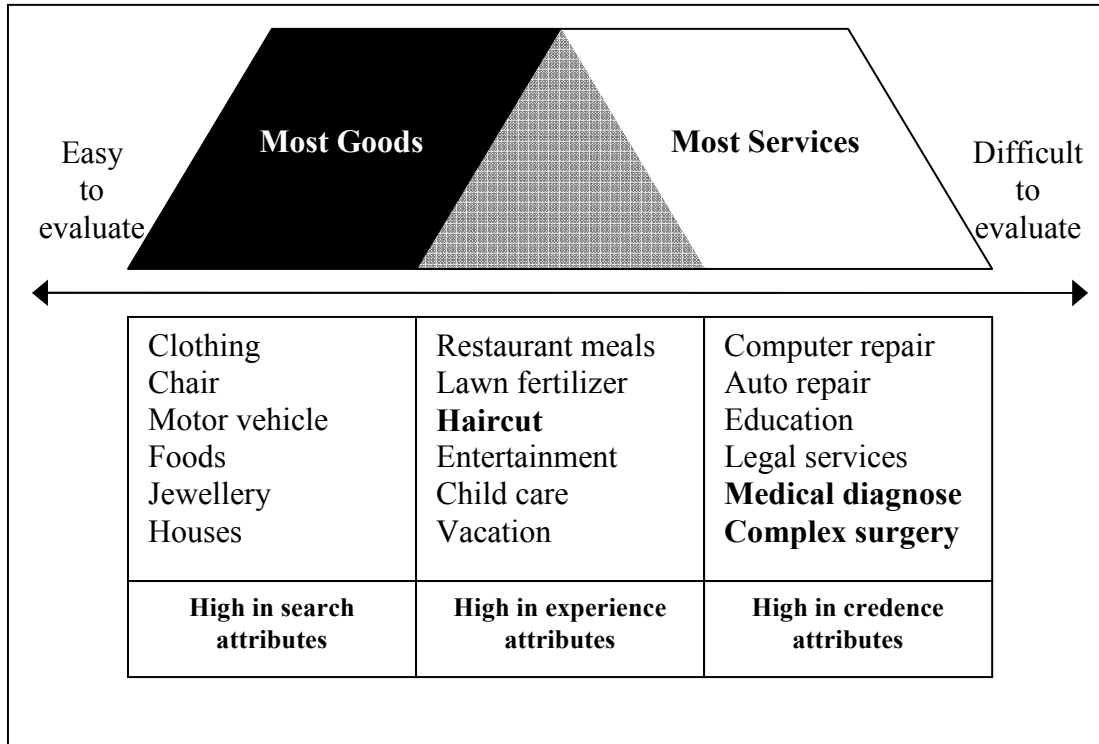


Figure 2-7: Influence of product attributes on ease of evaluation.

Source: Adapted from Hill (1986), p 314 & Lovelock/Wright (2002), p. 84

Along with experience attributes (e.g. competence, interpersonal skills, friendliness), credence attributes such as reputation and credibility are considered important by patients when choosing a healthcare provider (including the choice of a hospital in a mostly deregulated system). This information is difficult to obtain in the pre-purchase phase and therefore, patients rely on relatives or friends' advice.¹¹¹

Services that are difficult for customers to evaluate prior to purchase and consumption (high in experience or credence attributes or “intangible dominants” which “*lack the physical properties that can be sensed by consumers prior to the purchase decision*”)¹¹² increase the “*perceived risk*” or uncertainty about the outcome of a service (especially for first time users). The risk can be functional (performance), financial (loss), temporal (wasting time),

¹¹¹ Gabott/Hogg (1998), pp. 217 f..

¹¹² Hoffman/Bateson (1997), p. 6.

physical (injury or damage), psychological (fears and emotions), social (other's reaction) or sensory (impact on senses).¹¹³ The classification of products based on their ease of evaluation by customers will be used to distinguish the studied services from each other later in the current thesis.

To reduce the perceived risk for services which are high in experience and credence attributes, a strategic response could be to provide customers with tangible clues through equipment or appearance of personnel to help explain what they don't see or understand. This can be referred to as "evidence management".¹¹⁴ Hoffman/Bateson (1997) mention the Hill & Gandhi's concept of "*tangiblizing the intangible*" (1992) to make the service more concrete when advertising it and help them establish metaphors for tangible clues in order to create concrete expectations.¹¹⁵

The concepts of zone of tolerance and customers' perception explain the difficulty for customers to evaluate the quality of a service in advance (or sometimes even after service delivery) and the risk of being disappointed. The influence of the three product attributes shown in Figure 2.7 on the ease of evaluation of services by customers allows a further classification of services. Services delivered by hair salons and massage centres are high in experience attributes (difficult to evaluate before purchase without experience) and healthcare services are high in credence attributes (surgical intervention by hospitals being extremely high in credence attributes) as the quality of the core product component remains hard to evaluate even after service delivery.

2.4.2 Tangible clues and risk perception

¹¹³ Lovelock/Wright (2002), p. 89; Lovelock/Wirtz (2007), pp. 43 f.; Johnston/Clark (2005), p. 179.

¹¹⁴ Lovelock/Wirtz (2007), pp. 45 f.; Berry/Bendapudi (2003), p. 61.

¹¹⁵ Hoffman/Bateson (1997), pp. 197 f.; Gabbott/Hogg (1998), p. 54.

Using a manufactured product creates benefits through its physical characteristics but can provide intangible benefits as well, while the nature of the performance creates the services' benefits, which can also provide tangible benefits.¹¹⁶ One can consider that a product should be regarded as a good or as a service depending on the proportion of tangible and intangible elements required for value creation.¹¹⁷ Figure 2.8 presents examples of products (goods and services) on a scale defining the dominance of tangible and intangible elements in their value creation. Palmer (cited by Baker, 2003, p. 592) mentions a scale of products with varying “*degree of service orientation*” (as opposed to “*good orientation*”).

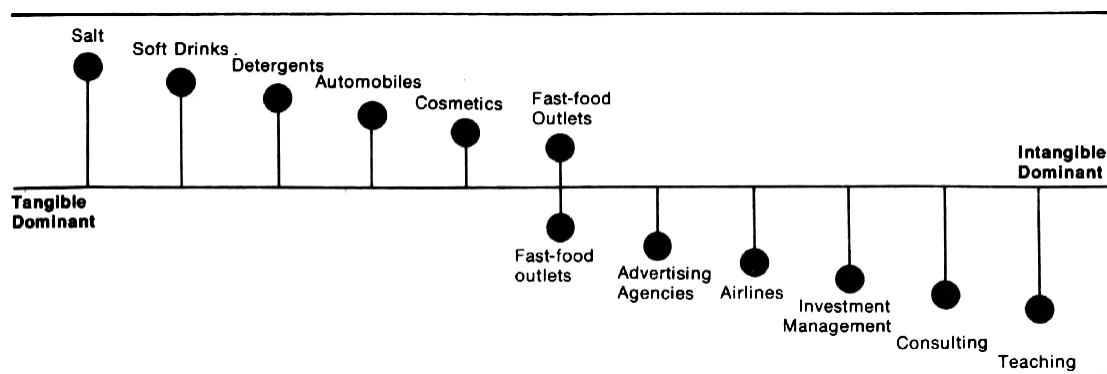


Figure 2-8: Relative value added by tangible versus intangible elements in goods and services

Source: Lynn Shostack (1977), p. 77

On this scale from high goods content to high services contents (also exposed by Fitzsimmons, 1994 and Sasser et al., 1978)¹¹⁸, a fast-food outlet (in the middle) has a high material content, while a full service restaurant may present a totally different cost structure which is more likely to be dominated by intangible elements (cooking, serving, environment, coatroom etc).¹¹⁹ On Figure 2.8, one can notice the opposition of “Automobile” and “Airline”. These two examples of goods on the one hand and service on the other have the

¹¹⁶ Lovelock/Wright (2002), p. 10.

¹¹⁷ Lovelock/Wirtz (2007), p. 18.

¹¹⁸ Fitzsimmons/Fitzsimmons (1994), p. 23; Sasser/Olsen/Wyckoff (1978), p. 11.

¹¹⁹ Sasser/Olsen/Wyckoff (1978), pp. 10 f.; Lovelock/Wirtz (2007), p. 18.

intangible aspect of transportation in common. Lynn Shostack (1977), who notes that there are very few pure services, mostly combinations of elements,¹²⁰ uses these examples to illustrate the concept of a molecule (also exposed by Lovelock and Wirtz, 2007 and Baker, 2003).¹²¹ The molecule represents the tangible and intangible elements of market entities (products) in a molecular whole shown in Figure 2.9 (a more detailed version of the molecule is given in Appendix 1).

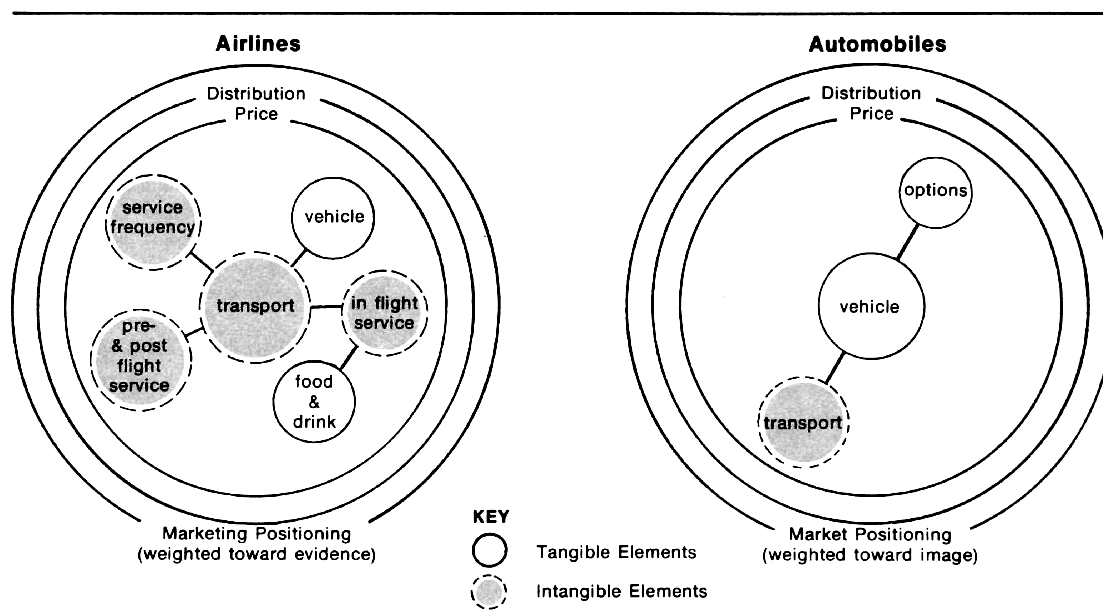


Figure 2-9: Diagram of market entities (molecular model)

Source: Lynn Shostack (1977), p. 76

The product (good or service) may have either a tangible (e.g. vehicle) or intangible (e.g. transport) nucleus or “core product”, surrounded by other tangible and intangible elements (that facilitate or enhance the core element)¹²². Shostack’s (1977) molecular model will be used to portray the studied services later in the current thesis.

¹²⁰ Lovelock/Gummesson (2004), p. 26.

¹²¹ Lovelock/Wirtz, (2007), p.69; Baker (2003), p. 893.

¹²² Lovelock/Gummesson (2004), p. 26/Lovelock/Wirtz (2007), p. 77.

Intangible resources of service operations can include the supplier relationship (contracts and understanding of suppliers' management), knowledge and experience¹²³ while so called “*service tangibles*” (Bruhn/Georgi, 2006, p. 320-321) are classified into “*Servicescape*” (design, Employees, Ambiance), “*Service environment*” (Neighbourhood, Exterior design and quality, Accessibility), and “*Service materials*” (e.g. menu for a restaurant, bedding for a hotel or handout for a university lecture). Tangible aspects of a service can be perceived physically (equipment, physical facilities, personnel or communication material) and influence customers' perception significantly.¹²⁴ In health care, for instance, it is particularly difficult to separate the service from the visual clues about the quality of care.¹²⁵

In the case of services (or a whole product dominated by intangible elements), the higher the proportion of intangible elements, the more important it is to provide customers with tangible clues about the quality and characteristics of the service, as they often use tangible evidence to verify the services' effectiveness¹²⁶.

The degree of intangibility of services makes it difficult for customers to evaluate them. It is therefore important for service providers to stress the quality of physical evidence in order to supply customers with tangible clues. Services that are high in “experience” (e.g. hairdresser and massage centre) and “credence attributes” (e.g. healthcare services) require special care of the tangible clues to help customers and patients evaluate them. Shostack's concept of molecule will be used in Chapter 3 to determine the tangible and intangible components of the services studied.

¹²³ Slack/Lewis (2002), p. 23.

¹²⁴ Bruhn/Georgi (2006), p. 319.

¹²⁵ Berry/Bendapudi (2003), p. 105.

¹²⁶ Lovelock/Wirtz (2007), pp. 69 f.; Shostack (1977), p. 74; Shostack (1984), p. 136.

Due to their particular characteristics such as intangibility or inseparability of consumption and production, services seem to be harder for customer to evaluate. Product attributes of a service help determine the risk perceived by customers. While research attributes (most goods) allow customer to evaluate services prior to purchase, products that are high in experience or credence attributes, such as the services studied in Chapter 3 and 4, are harder or impossible to evaluate and thus present a higher perceived risk. The degree of intangibility of services also influences the risk perceived by customers who tend to evaluate services based on their tangible aspects. These findings are used in Chapter 3 and 4 for the exploration of certain categories of services.

2.5 Evidence of environmental awareness in the consumption and production of goods and services

There is a desire from customers to “go green”¹²⁷. Even if customers don’t have clear criteria of what makes a product green (e.g. organic cotton is better for the earth although its production requires high water consumption and even a 100% organic cotton T-shirt can be dyed with harmful industrial chemicals)¹²⁸, they care about both sustainability and cost¹²⁹ and most of them claim that if the price didn’t matter, they would buy “green”.¹³⁰ Customers tend to be aware of environmental issues and show a willingness to improve their own actions and to respond positively to the engagement of responsible companies.¹³¹ Part 2.5 highlights the behaviour of companies providing goods and services in responding to this trend and explores their different incentives for more environmentally conscious production practices.

2.5.1 Companies’ actions

In response to customer concerns about environment or health, companies take action and more or less environment-friendly operations are noticeable among the product/service offering of many companies.

On the level of consumption of goods for example, Coca-Cola shows a willingness to improve its supply chain to minimise its environmental impact through analysis in collaboration with World Wildlife Fund. The company also works on the improvement of its water efficiency.¹³² Not only producers but also distributors are turning green tendencies into

¹²⁷ No Author Given(2008). p 16.

¹²⁸ Walsh (2009).

¹²⁹ No Author Given(2008). p 16.

¹³⁰ Braverman (2007), p. 12.

¹³¹ Baker (2009a), p. 8.

¹³² Walsh (2009).

competitive advantages. For example Wal-Mart is determined to sell “*more green products*” to better the environment as well as its image. Wal-Mart is responsible for a dampening of the U.S. electricity consumption in 2008 through the sale of 145 million light bulbs saving energy.¹³³

Service providers also work on their supply chain (or process to which the customer belongs, see Part 2.1) to improve their efficiency towards the environment. For example, Hotel chains like Marriott International are rethinking their process in order to deliver services involving more environmentally friendly operations. In Marriott’s “*five pointed environmental strategy*”, the hotel chain aims to green its supply chain through the introduction, for example, of 50% recyclable plastic keys (saving approximately 66 tons of plastic), “green” pillows (made of recycled bottles) and toilet paper eliminating packaging and water waste.¹³⁴ Another hotel chain, Carlston Hotel Worldwide, conducted “*environmental audits*” to green its basic infrastructure by reducing and recycling waste, eliminating harmful chemicals from their processes, and improving the conservation of water and energy. This “eco-friendly” trend is followed by many others like Pfister Hotel, Missouri Hotel, Joi de Vivre or Crestline Hotel & Resort.¹³⁵

2.5.2 Suppliers’ incentives

Responding to the environmentally friendly trends of consumers, companies not only adopt green practices but also push their suppliers to do the same. Wal-Mart, for example, on top of offering environmentally efficient products, is forcing its manufacturer in China to “clean up

¹³³ Aston (2008), p. 8.

¹³⁴ Baker (2009), p. 8; No Author Given (2009), p. 12.

¹³⁵ Baker (2009), p. 8.

their way” by improving their energy consumption and informing Wal-mart about the entire supply chain of products they deliver.¹³⁶ Toyota follows the same scheme and requires from its suppliers that they take some specific actions (for example obtain ISO 14001)¹³⁷. On the supplier’s side, the market doesn’t seem to regulate itself without concrete sanctions in terms of environmentally friendly operations.¹³⁸ Suppliers themselves tend to find more incentives in greening their supply chain through pressure from their downstream customers.¹³⁹

Wal-Mart is not the only one pressuring its suppliers to go green. Business-to-business relationships are more and more exposed to pressure for greening supply chains. Companies who try to improve their offer in an environmental way are concerned about the entire supply chain preceding their own operations. Actions of their suppliers play a consistent role in their own reputation as firms are acting responsively to the green expectation of their customers.¹⁴⁰

In their study of 3,152 automotive suppliers in Central and North America, Magali Delmas and Ivan Montiel (2009) reveal how relationship with their customers put pressure on suppliers to adopt the ISO 14001 certification (the standard for the “Environmental Management System” (EMS) of an organisation recognised internationally).¹⁴¹

Based on the theories of information and transaction cost, suppliers have different incentives to green their supply chain and conform their process to ISO 14001, whether their relationship with their customer is rather dependant or distant.¹⁴²

¹³⁶ Aston (2008), p. 8.

¹³⁷ The Corporate Social Responsibility Newswire

¹³⁸ King/Lenox (2000), p. 713.

¹³⁹ Delmas/Montiel (2009), p. 196.

¹⁴⁰ Delmas/Montiel (2009), p. 172.

¹⁴¹ ISO Quality Services Ltd. (2009); Delmas/Montiel (2009), p. 173.

¹⁴² Delmas/Montiel (2009), p. 171.

2.5.2.1 *Information theory*

The asymmetry of information is one of the main reasons for suppliers to adopt the management standards of ISO 14001. Information is asymmetric when one party knows the information relevant to a transaction and the other party does not.¹⁴³ ISO registered suppliers can signal to their potential customers that their management has conformed to environmental standards. New suppliers, having an increased distance with customers then have the chance to communicate their attributes in order to meet clients. This allows customers to know about their potential business partner's operations without having to perform costly and time consuming research.¹⁴⁴

2.5.2.2 *Transaction costs theory*

Dependency or "bilateral" dependency (as opposed to high distance relationships between business partners) also puts pressure on suppliers to green green supply chain operations or adopt ISO 14001. Business relations involving heavy asset investment by the suppliers create transaction costs. Transaction costs are costs associated with the negotiation of a contract or agreement.¹⁴⁵ Firms in this position have to adapt to customers' requirements primarily because of the high cost involved in losing their relationship.¹⁴⁶

Pressure for the adoption of environmental behaviour (and more officially ISO 14001) comes from different stakeholders¹⁴⁷ and mainly from downstream customers' requirements. Companies face high costs of transformation related to environmental changes in

¹⁴³ Himmelweit/Simonetti/Trigg, (2001), p. 234.

¹⁴⁴ Delmas/Montiel (2009), pp. 175 ff. & p. 196.

¹⁴⁵ Dobson/Maddala/Miller (1995), p. 368.

¹⁴⁶ Delmas/Montiel (2009), p. 178.

¹⁴⁷ Marta/Houston (2009), p. 14.

operation¹⁴⁸. The market doesn't seem to regulate itself naturally ("voluntary programs" are ineffective without concrete sanctions) and companies find incentives in greening their organisation through their relationship with customers. Companies have to deal with environmental issues for their supply chain partners.¹⁴⁹ Both long-distance and short-distance forms of relationship put pressure on suppliers due to either the need to increase the information flow to potential customers to highlight their practices, or the transaction cost faced by suppliers in dependant trade relationships where they have made significant investment linking them to their customers.¹⁵⁰ Dependency relationship allows customers to force their suppliers to change. For example, Delmas and Montiel (2009) name General Motors, Ford and Daimler, who give their supplier a deadline for the adoption of ISO 14001 with the threat of re-evaluating their sourcing decisions should they not comply.¹⁵¹

There is growing sense of environmental awareness from customers and companies are trying to take actions to respond to the evolving demand. Producers and distributors of goods such as supermarkets, and services providers such as hotel chains, use this opportunity to offer environmentally friendly products. Companies are aware of the importance of the entire supply chain and demand more and more from their suppliers to improve their operation in a sustainable way and justify their offering of green products. Different factors represent incentives for suppliers to respond to their downstream customers' requirement. Their relationship with downstream customer puts pressure on them to green their supply chain due to transaction costs in the case of dependency of operations (high specific assets) or the need to signal to environmentally demanding potential customers. Part 2.6 exposes the concepts of

¹⁴⁸ Delmas/Montiel (2009), p. 176.

¹⁴⁹ Vachon/Klassen (2006), p. 796.

¹⁵⁰ Delmas/Montiel (2009), pp. 175 ff.

¹⁵¹ Delmas/Montiel (2009), p. 179.

market research that will be followed to see if the trends highlighted in Part 2.5 apply to the chosen services of the study.

2.6. Market research

In order to conduct the appropriate research about the six chosen service providers and their customers, Part 2.6 exposes market research concepts and methods. These will be applied in Chapter 3 and 4 to study the chosen services. Part 2.6.1 explores the fundamentals of market research including the concepts of primary versus secondary research and provides a possible research process in 5 phases. Part 2.6.2 focuses on primary research methods in order to determine the best research techniques to conduct the study.

2.6.1 Fundamentals of market research

Before presenting the methods of market investigations, one should question whether the required information has to be found on the level of primary or secondary research. From the identification of information need to the decision phase, this chapter exposes the process of market studies.

2.6.1.1 Primary and secondary research

Firstly, it is relevant to distinguish the notions of “information” and “data“. Data is designated as statistical incidences (“things given”) or usually as “facts.”¹⁵² Information

¹⁵² Kent (1999), p. 26.

originates from the interpretation of the gathering and summarising of data, which is not measurable without scientific processing, as shown in Figure 2.10.¹⁵³

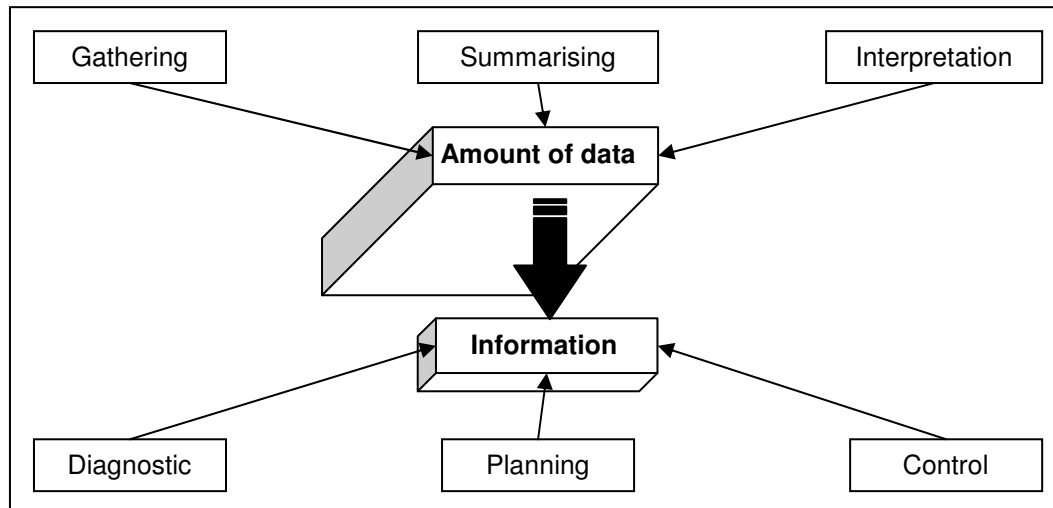


Figure 2-10: Relationship between data and information.

Source: Adapted from Kent (1999), p. 3.

Rising data can be the result of primary research or secondary research. Primary research provides information coming directly from market factors (e.g. companies or customers), while secondary research deals with the analysis of data that is already existent.¹⁵⁴

A study normally begins with secondary research and analysis of data (secondary data). This data arises from internal sources (such as corporate figures) or from external sources (such as official statistics, press, books, databases, internet etc).¹⁵⁵ One often finds the term “desk-research” because secondary research occurs at the desk using available data or

¹⁵³ Rogge (1981), p. 18.

¹⁵⁴ No Author Given (1994), p. 20; Schrader (1997), p. 74.

¹⁵⁵ Geml/Lauer (2001), p. 203; Behrens (1974), p. 11; Weis/Steinmetz (1991), pp. 60 f.; Geml/Lauer (2001), p. 203.

information.¹⁵⁶ Secondary research is the analysis of secondary data, or data coming from a past period (back data), such as official statistics or common market data (market, competition, economic and demographic figures, evolution of demand etc).¹⁵⁷ Secondary data is the result of ancient study and was collected in the past by third persons with a possibly similar aim.¹⁵⁸

Secondary research is cheaper and requires lower time expenditure than primary research. It gives a quick insight in the search area and thereby supports primary research. In contrast, secondary research needs more time until data is available and secondary data can often be obsolete.¹⁵⁹

In opposition to secondary research, primary research can establish facts that were unknown beforehand. Primary data does not exist and is delivered through proper research without secondary data and its interpretation. Thus the aim and research question of the study are entirely new and data is gathered for this particular study.¹⁶⁰

In practice, primary and secondary research are differentiated and separate, as one raises data and the other processes available data. Although, as mentioned by Kent (1999, p. 7), one should consider that *“secondary data were originally collected using the same methods“*. This means that data that are used for so called desk-research were first gathered through primary research of a past study with its own research question.

¹⁵⁶ Haunerding/Probst (2006), p. 70.

¹⁵⁷ Schrader (1997), p. 74; Graumann/Weissman (1998), p. 57.

¹⁵⁸ Norpoth/Nüßlein (1996), p. 38, Von Klaus (1995), p. 109.

¹⁵⁹ Weis/Steinmetz (1991), p. 58; Schrader (1997), p. 75; Weis/Steinmetz (1991), p. 58.

¹⁶⁰ Behrens (1974), p. 11; Geml/Lauer (2001), p. 183; Schrader (1997), p. 75.

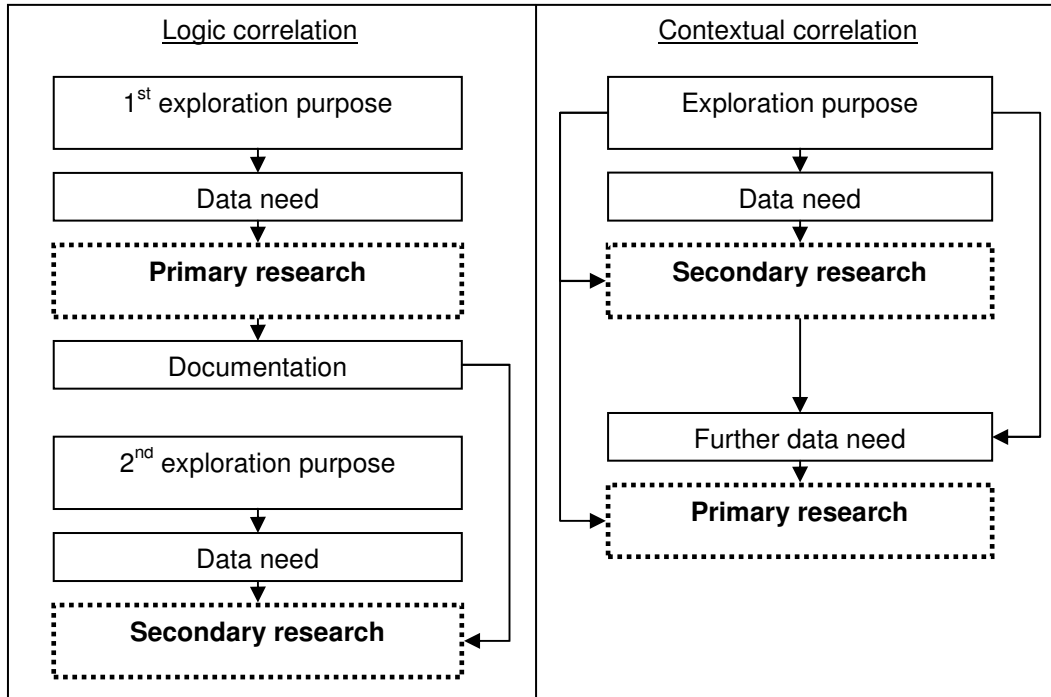


Figure 2-11: Correlation between secondary and primary research

Source: adapted from Rogge, pp. 51 f.

Figure 2.11 demonstrates that the results of primary research are later used as secondary data for another purpose in the context of desk-research.¹⁶¹ Contextual correlation of Figure 2.11 shows that secondary research is used first to find out what information is missing and establish the need for data to be gathered by primary research and thus avoid the costs and time consumption of a double search.¹⁶² Therefore secondary research occurs before primary research, and the interpretation of secondary data can be considered to be a part of primary research, as desk-research is preparation for field-research.¹⁶³ The overview given by secondary research is often not sufficient and thus a further need for data or information arises and one has to go back to primary research.¹⁶⁴

¹⁶¹ Rogge (1981), p. 50.

¹⁶² Norpoth/Nüßlein (1996), p. 38.

¹⁶³ Stock (2000), pp. 207 f.; Behrens (1974), p. 11.

¹⁶⁴ Rogge (1981), pp. 50 f.; Thomas, p. 62; Ausfelder (1991), p. 8.

Secondary data are then gathered using the same methods as for primary research. On the grounds of this idea, it is relevant to make mention of these methods as a basis for secondary and primary research in the context of purposeful market research. The three methods of survey, observation and experiment are the basic principle of “field-research”.¹⁶⁵

The purpose of a Survey is the direct extraction of information from study object people (e.g. questionnaires or interviews) resulting into qualitative or quantitative data.¹⁶⁶ Survey methods are exposed in Part 2.6.2. Observation consists of reviewing market factors and behaviour.¹⁶⁷ The last method of primary data gathering is the experiment (also called “test”) which aims at identifying the effect of a factor variation on another factor.¹⁶⁸ Every primary research method can be executed for a common research purpose.

2.1.2.1 Market study process

The process of a market study plays an important role. The identification of the information needed as well as all the following stages of research has to be conducted in a particular sequence in order to deliver the most relevant information to answer the original problem.¹⁶⁹

The process of a market study can be divided into five phases called the “5 D’s” of market research (Definition, Design, Data extraction, Data analysis and documentation phase)¹⁷⁰, exposed in Figure 2.12.

¹⁶⁵ Gomilschak/Franz/Sinkovits/Ksela (2003), p. 119; Haunerding/Probst (2006), p. 70 Weis/Steinmetz (1991), p. 71.

¹⁶⁶ Graumann/Weissman (1998), p. 71.

¹⁶⁷ Weis/Steinmetz (1991), p. 99; Beike/Christmann (1974), p. 53.

¹⁶⁸ Weis/Steinmetz (1991), p. 111; Beike/Christmann (1974), p. 44.

¹⁶⁹ Dannenberg/Barthel (2004), p. 105; Kamens (1997), p. 9.

¹⁷⁰ Koch (1996), p. 17.

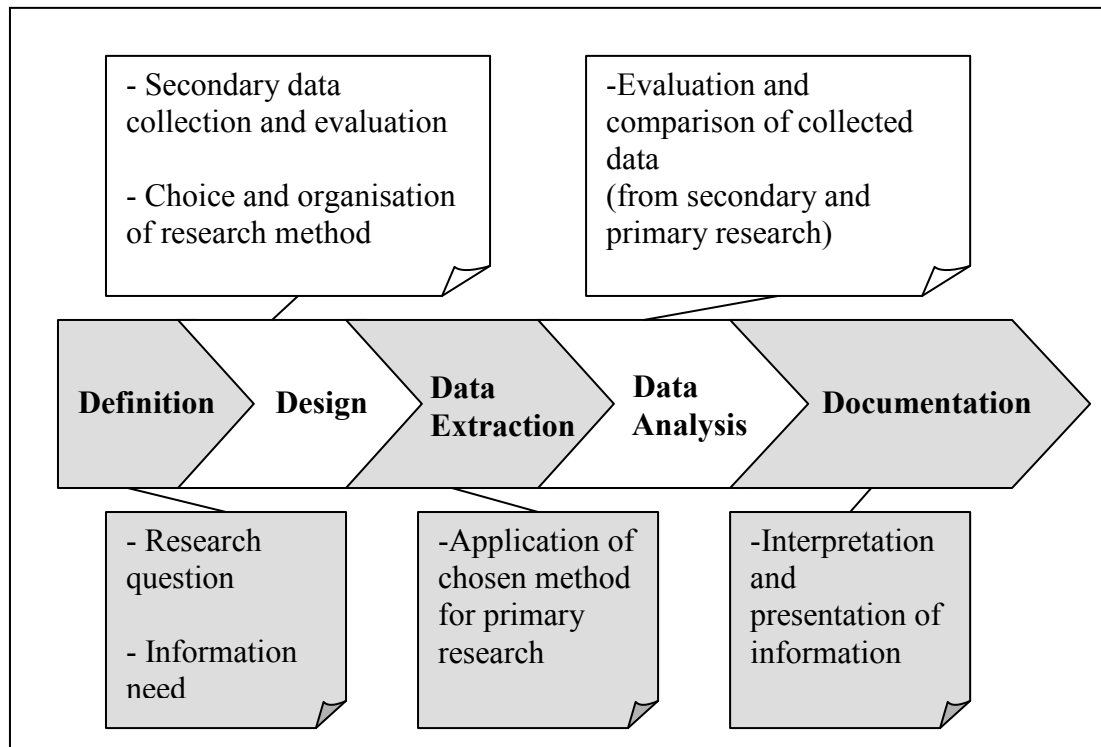


Figure 2-12: The 5 D's Model of market research process

Source: Adapted from Koch (1996), pp. 17 f.

The Definition phase names the question and the required information for the problem and formulates the research purpose. The design phase determines the methods of data collection. This is where one decides if internal or external data will be used, how relevant they are and which method of primary research should be applied. The chosen data gathering method will then be used during the Data extraction phase. Secondary data are screened and the necessary surveys, observations and experiments organised. The Data analysis phase deals with the evaluation of primary data and comparison of primary data with secondary data, in order to interpret and present the information in the documentation phase.¹⁷¹ The 5D's model will be used to expose the process of the research later in the current thesis.

¹⁷¹ Koch (1996), pp. 17 f.; Dannenberg/Barthel (2004), pp. 107 f., 117 f., 259 f., 268 f. & 310 f.; Dillon/Madden/Firtle (1993), pp. 30 f., 33 f. & 38 f..

This part exposed the basic principles of market studies. The 5 D's model as a possible interpretation of a market study process will be followed later to determine the research purpose and the combination of secondary and primary research. The choice of primary data gathering methods is explained in more details in part 2.6.2, in view of finding the most accurate information to answer the given questions.

2.6.2 Primary research

In the frame of primary research, target subjects (persons) have to be chosen and examined using different data collection methods. These methods, as mentioned in Part 2.6.1 are the observation, the survey and the experiment, illustrated in Figure 2.13.

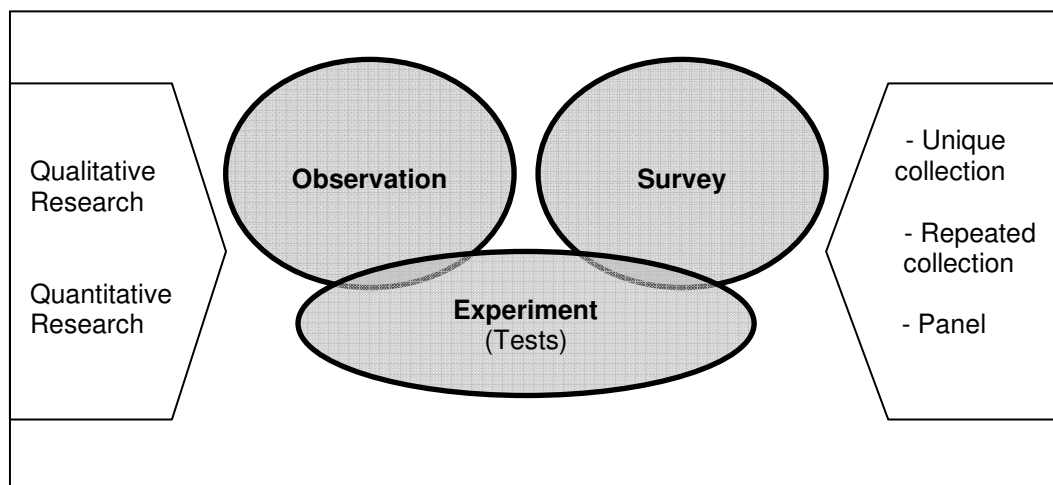


Figure 2-13: Overview on data collection methods

Source: Adapted from Kamens (1997), p. 107.

The different methods can occur once or several times or can be conducted in the frame of panel research. Panel research (especially for studies about customers) repeats itself using a constant and representative sample of people for a common a research purpose.¹⁷² The

¹⁷² Kamens (1997), p. 108; Beike/Christmann (1974), p. 118; Weis/Steinmetz (2002), p. 159; Rogge (1981), S. 113; Holm (1986), p. 174.

research can aim for qualitative (rich in insight, explanation and depth or information) or quantitative data (involving research samples, questionnaires, data processing etc). Only quantitative research is statistically justifiable.¹⁷³

2.6.2.1 Primary research methods

In any market study, it is important to determine what has to be researched or which question has to be answered in order to organise the research in the right way and find out the most relevant information.¹⁷⁴ The first possibility is to go back to secondary data and, if the result of its evaluation is not sufficient, to instigate primary research.¹⁷⁵ According to costs and research purpose, three methods are available, as shown in Figure 2.13.

The main component of empirical market study is the survey, which is explained in more detail in part 2.6.2.2, aiming at receiving answers directly from targeted people to extract the necessary information.¹⁷⁶

As a second option, the observation method is available, which captures the behaviour of targeted people and allows for the collection of non verbal information such as emotion or body language.¹⁷⁷

The experiment or test is the last primary research method. It consists of the examination of a hypothesis that compiles at least two factors under controlled conditions.¹⁷⁸ One can distinguish between survey experiment (e.g. price and buying intention) and observation

¹⁷³ Crouch/Housden (1996), p. 82.

¹⁷⁴ Methner (2004), p. 65.

¹⁷⁵ Wolf (1988), p. 29; O.V. (1998), p. 48; Dannenberg/Barthel (2004), p. 187; Rogge (1981), pp. 49 f..

¹⁷⁶ Borg (2002), pp. 9 f.; Gleißner/Mott (2006), p. 44; Furkel (2006), p. 18; Hassa (2005), p. 34; Wolf (1988), p. 33; Beike/Christmann (1974), p. 18.

¹⁷⁷ Kamens (1997), p. 72; Wolf (1988), p. 83; Kroeber-Riel/Behrens/P.Kaas/Trommsdorff/Weinberg (1983), p. 51; Friedrichs/Lüdtke (1971), p. 17.

¹⁷⁸ Wolf (1988), p. 95; Weis/Steinmetz (2002), p. 195; Beike/Christmann (1974), p. 44.

experiment (e.g.: observation of sales volumes in two different comparable shops applying different prices).¹⁷⁹

Kamens (1997, pp. 90 ff) rates the three Research methods following 5 main criteria: Costs, Time, Response rate, Quality and Representation. The experiment presents cost and quality advantages but a disadvantage in representation. Although observation is highly time consuming, the method offers the highest response rate. Surveys can be more costly and weaker in response rates (except from face-to-face interviews as each person is interviewed personally)¹⁸⁰ but is characterised by time, quality and representation advantages.

2.6.2.2 Forms of surveys

The aforementioned advantages of the survey as a method of primary data collection as well as its simplicity¹⁸¹ lead to the analysis of its different forms. Four different approaches can be distinguished: the written survey (fax, mail, e-mail) the voice to voice survey (telephone), the face-to-face survey (interview) and the more modern computer conducted survey.¹⁸²

The most important tool of a survey is the questionnaire. Its configuration varies depending on the method chosen and can be composed of different forms of questions. There can be direct (expecting an exact answer such as multiple choice questions or “numeric open end” question) or indirect questions (requiring an opinion such as “text open end” question).

¹⁷⁹ Weis/Steinmetz (2002), p. 195; Kamens (1997), p. 92.

¹⁸⁰ Brandes (1996).

¹⁸¹ Dannenberg/Barthel (2004), p. 202; Beike/Christmann (1974), p. 18.

¹⁸² Kamens (1997), pp. 82-87; Wolf (1988), p. 33; Weis/Steinmetz (2002), pp. 103 & 104 ff.

Questions can also be open (free answer) or closed (answer “yes” or “no” or use of rating scales and agreement scales)¹⁸³

The written survey requires the study subjects to answer the questionnaire themselves. Questionnaires can be sent per post, fax or e-mail or can be completed online. Hence the written survey has the advantage of being able to reach every level of the population easily and at low cost, but 80% to 90% of the target audience usually don't participate.¹⁸⁴

In contrast, the voice to voice survey is supported by an interviewer, requiring more time and higher costs, but the target audience usually give an answer as soon as they have been engaged. It is harder to engage the target audience, as they have to take the time to complete the interview, but this form of survey allows qualitative characteristics such as reactions, answers to more complex questions or spontaneous answers.¹⁸⁵

The third possibility is the telephone survey, within which the communication occurs on the phone. Both face to face and voice to voice present the same advantage and disadvantages.¹⁸⁶ Although, a telephone survey should be shorter than a face to face interview and loses the interviewer's human advantages.¹⁸⁷ Telephone survey is the quickest method and makes it easier to reach the target audience. With relatively low costs, it enables a high percentage of responses.¹⁸⁸

¹⁸³ Weis/Steinmetz (2002), pp. 116-117; Wolf (1988), pp. 46 ff; Konrad (1999), p. 93; Creative Research System (2009)

¹⁸⁴ Wolf (1988), p. 33 f; Rogge (1981), p. 145; Behrens (1976), p. 7; Kamens (1997), p. 83 f; Weis/Steinmetz (2002), pp. 94 ff.; Hafermalz (1976), p. 28.

¹⁸⁵ Weis/Steinmetz (2002), p. 101; Wolf (1988), pp. 36-37; Kamens (1997), p. 85; Konrad (1999), p. 42; Rogge (1981), pp. 149-150; Brandes (1996); Scholz (2006), p. 54.

¹⁸⁶ Weis/Steinmetz (2002), p. 101; Kamens (1997), p. 86.

¹⁸⁷ Weis/Steinmetz (2002), p. 101; Rogge (1981), pp. 142 f..

¹⁸⁸ Wolf (1988), pp. 35 f.; Brandes (1996); Rogge (1981), pp. 142 f..

Form of survey	Criteria				
	Costs	Time	Response rate	Quality	Representation
Written	+	-	-	0	0
Voice to voice	-	-	+	+	+
Face to face	0	+	0	+	+

Table 2.7: Survey methods evaluation

Source: Adapted from Kamens (1997), p. 90.

A comparison of advantages and disadvantages of the three survey approaches is available in Table 2.7, according to the same five criteria given by Kamens (1997, pp. 90 ff) and used previously in the evaluation of the three primary research methods. If the written survey presents a cost advantage, it loses in response rates against voice to voice and face to face interviews, which are higher in quality and representation. Telephone survey is less costly than the direct interview and requires less time expenditure.¹⁸⁹

Part 2.6 exposed the concepts of market research. Following the theory of primary versus secondary research, one can consider the entire Chapter 2 as secondary research, as it concerns the extraction of information from available data. Primary research will take place in Chapter 3 and 4 following the 5 D's market research process model, exposed in Part 2.6.1, and using some of the research methods given in Part 2.6.2.

Necessary to support the primary research about the chosen services and their relationship with ecology, Chapter 2 explored literature (or so called "secondary data"). Different concepts and information have been highlighted. The concepts of services and their numerous

¹⁸⁹ Kamens (1997), p. 90; Rogge (1981), pp. 142 ff.; Fuchs/Klenk (2006), p. 495.

characteristics have been exposed from a marketing and operational point of view. Some of their characteristics such as intangibility or ease of evaluation have been further explored in order to interpret the results of the research, which will be conducted applying the exposed market research methods. They will be compared to the facts highlighted in Part 2.5 concerning the general trends of environmentally conscious production and consumption of goods and services. Chapter 3 reveals the research methodology and introduces the chosen services and their characteristics. Chapter 4 exposes how the research was conducted, the results and their interpretation.

3 RESEARCH METHODOLOGY

Chapter 3 discusses the methods used to conduct the research. After summarising the information extracted by secondary research in Part 2.5, Part 3.1 exposes the purpose of the study which will be conducted with six different service providers and their customers, presented and classified in Part 3.2 based on theoretical concepts viewed in Chapter 2. Finally, Part 3.3 will explain the choice of primary research process and methods used to extract data directly from the research objects.

3.1 Purpose of the study

Observing the growing sensitivity of consumers and companies regarding environmentally conscious practices of production and consumption, the question arises as to whether all industry practices follow the same trend. The secondary research conducted in literature review shows the importance of green practices in the production and consumption of several types of goods and services such as the automotive the hotel industry.

This part also highlighted the importance of the service providers' relationship with their suppliers and customers as incentives for companies to adopt more ecological production practices as well as the misconception often observed when defining ecological practices or products (100% cotton made clothes sound more ecological without taking into account the water consumption and the chemical products needed to produce them). The examples given in Part 2.5 are from rather large organisations with complex supply chain and process of productions, and the service providers mentioned are products composed of many tangibles

elements, giving companies a large scope of possibility to incorporate ecological practices into their service process.

The purpose of this study is to explore smaller service providers, whose offer presents less tangible elements and supposedly fewer possibilities to green their processes. On top of evaluating the degree to which these service providers are affected by the observed trend of ecological concern, the study will search for the sensitivity and requirements of these organisations' customers and other incentives (such as self consciousness or relationship with suppliers) from these service providers with regard to environmentally friendly practices.

As the types of services studied involve body treatments, the sensitivity of customers will be questioned by the research as to how important environmentally conscious practices become for them when their body or even their health is engaged in the service. The research will investigate the customers' evaluation of services to find out whether the degree of tangibility influences their consideration of ecological criteria within each service process. The services that will be objects of the study are identified, described and classified in part 3.2, based on criteria exposed in Chapter 2.

3.2 Choice and definition of research objects.

The study focuses on services presenting analogies in their service process. According to the process classification given in Part 2.2.2, the objects of the study all belong to the category of People-processing services as they involve tangible actions directed at people's bodies, such as passenger transportation, restaurants or healthcare. This was confirmed during a telephone survey with Marie-Sophie Inquieté (massage therapist) saying: "*our working 'tools' is the*

*client himself.*¹⁹⁰ (customer as an input of the service process, see Part 2.2). As mentioned in part 2.3, services involved in the study are hardly separable from the delivery process, involving a moderate customer's participation. They are high contact services, which excludes passenger transportation (assuming a relatively low contact with service personnel compared with healthcare services). They usually require a long decision making process (elimination of hotels or restaurants), and more precisely, the study deals only with services involving body treatment (made by a third person), also excluding service providers such as fitness centres from the focus of the study.

As People processing services involve body treatment, the research focuses on six service providers¹⁹¹: a hairdresser, a massage centre, a hospital and three different healthcare services providers (a dentist, a physiotherapist and a chiropodist) in the area of Château-Thierry, one of the three small to medium sized French cities used as “instrumented markets” for marketing tests.¹⁹² They are divided into three categories and described above. The massage centre and hair dresser are grouped in the same category, as they don't involve medical treatment, and hospital is separated as the service is more complex, because of both the service provider's organisation and customer's service evaluation. Following the molecular model of Shostack (1977) presented in Part 2.4.2, all studied services will be presented based on their tangible and intangible elements. Part 3.2.4 proposes a classification of the research objects based on several of the criteria proposed in Chapter 2.

¹⁹⁰ Telephone survey transcript available in Appendix 7.

¹⁹¹ The contact details of the 6 service providers are available in Appendix 2.

¹⁹² Volle, P., p. 10 & Les problématiques études , (2009), p 21.

3.2.1 Hairdresser and massage centre.

Haircutting and massage are both people-processing services requiring physical acts on customer's body by a third person (haircut and massage) without involving medical treatment. Figure 3.1 and Figure 3.2 shows the molecular composition of each service (grey circle being the intangible elements and white circles the tangible).

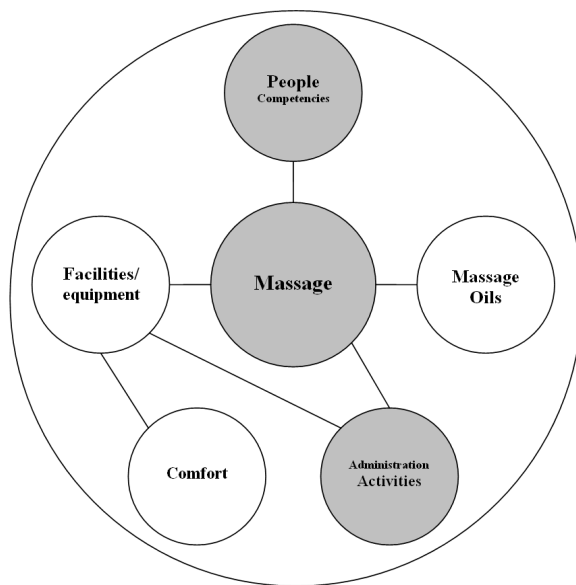


Figure 3-1: Molecular model of a massage centre service

Source: Adapted from Shostack (1977, see Appendix 1)

For a massage centre, the core product or “nucleus”¹⁹³ is the Massage itself, surrounded by tangible and intangible elements. Along with comfort, the only tangibles perceived by a customer in a massage centre would be the facilities and equipment, and the products (oils) used to perform the massage. The same characteristics are found in the case of the hairdresser (Figure 3.2), where a secondary main activity (besides the haircut itself) is the hair washing phase, allowing additional contact with tangible elements (washing products and material), along with styling products, material and facilities.

¹⁹³ See Shostack (1977), Part 2.4.2

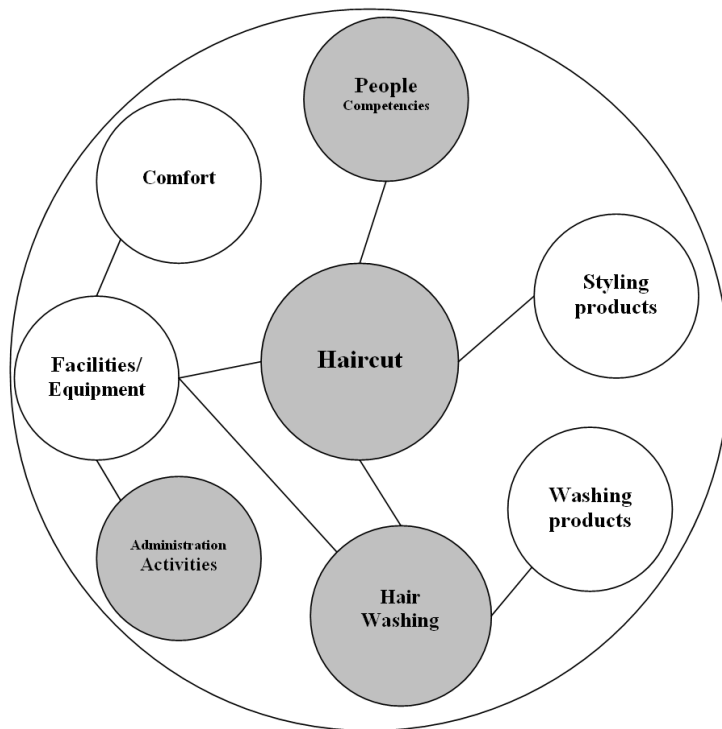


Figure 3-2: Molecular model of a hairdressing service

Source: Adapted from Shostack (1977, see Appendix 1)

The particularity of both the hairdresser and massage centre's services and their degree of intangibility is their product attributes exposed in part 2.4.2. Hairdressers and massage centres can be distinguished from healthcare services through their dominance of "experience attributes" making the evaluation of the service by the customer harder than for products that are high in "search attributes" (customers can't easily evaluate the service prior to purchase), but easier than for products that are high in "credence attributes" such as healthcare providers and hospitals, for which customers still encounter difficulties of evaluation after service delivery.

3.2.2 Healthcare services

As People processing service providers, healthcare practitioners implement medical treatments on people's body. In the case of the dentist, the physiotherapist and the chiroprapist studied, the molecular model is similar, as shown in Figure 3.3. The core product is certainly different, but is called "treatment" in Figure 3.3. Other tangible and intangible elements of the product offer are the same.

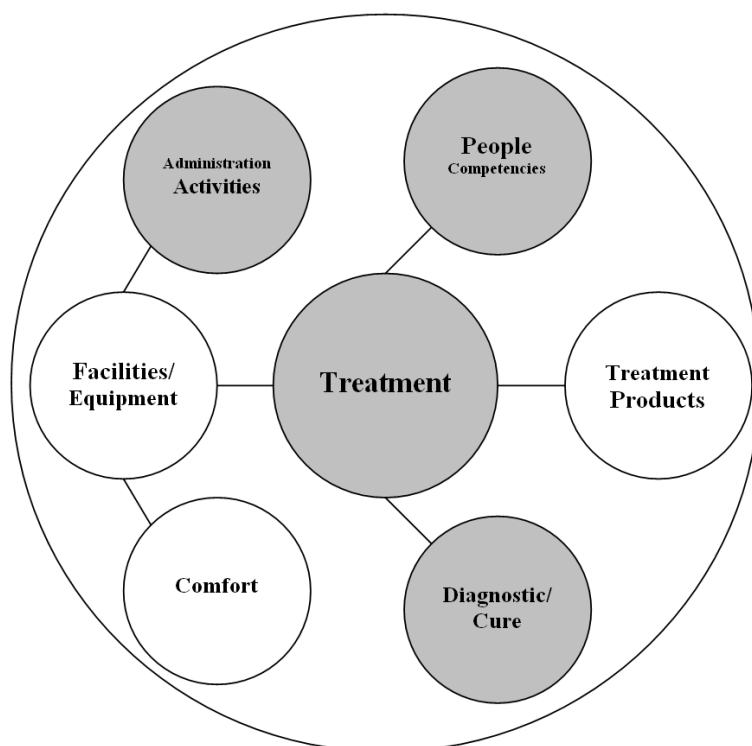


Figure 3-3: Molecular model of a healthcare service.

Source: Adapted from Shostack (1977, see Appendix 1)

Treatment as well as administration activities and people competencies (similar to hairdresser and massage centre) are intangible. So is "diagnostic" or "cure" during the service delivery (even though physical changes such as healing become tangible in the sense that customers can feel it). Physical evidence such as facilities and equipment or products used during the

medical visit are then the only tangible elements of the service process, which is similar to the hairdresser and massage centre' services.

Healthcare services such as dental, physiotherapy and chiropody differ from hairdressing and massage and present a different degree of intangibility (especially “mental intangibility”, as seen in Part 2.4.2), as they are dominated by “credence attributes” (unless customers are looking for very ordinary treatments, in which case the services present some experience attributes as well and can be evaluated thanks to customer's familiarity with the practitioner and the treatment).

3.2.3 Hospital

As for healthcare practitioners' services such as dentists, physiotherapists and chiropodists, hospital services are People processing and involve medical treatment. However, a hospital service suggests a more complex process and organisation, as exposed in Figure 3.4, which is composed not only of surgical treatment, but additional services (medical or not) linked to the stay of patients in a hospital room and the necessary care which goes with it, such as nursing activities and meal services.

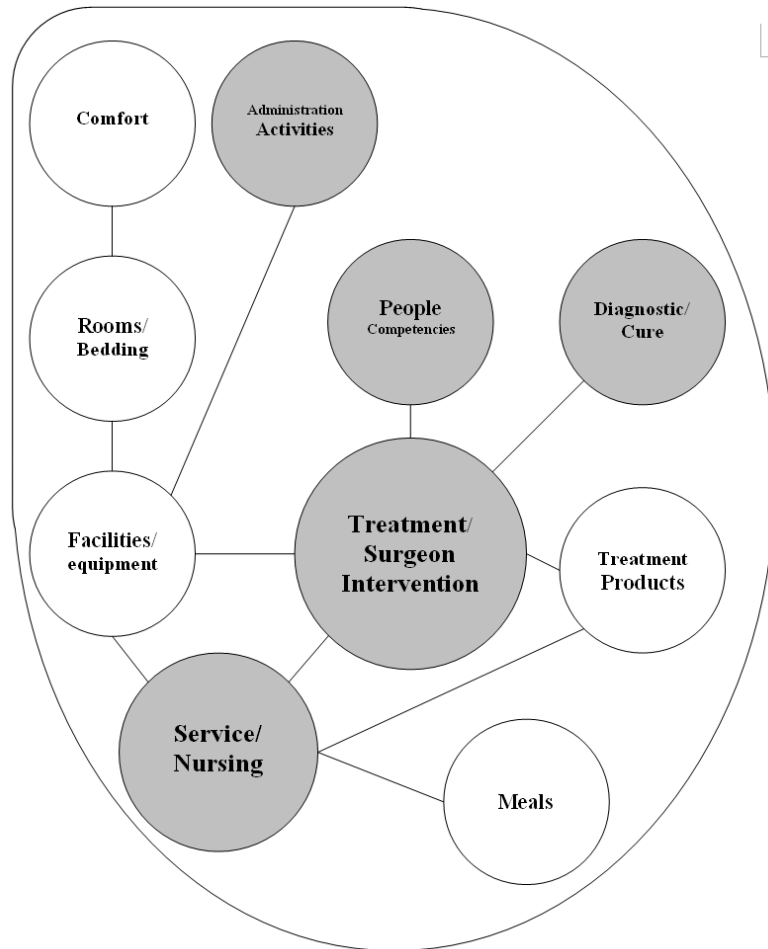


Figure 3-4: Molecular model of a hospital service

Source: Adapted from Shostack (1977, see Appendix 1)

As shown in Figure 3.4, the hospital product offer is composed of different services. There is of course the aim of visiting the hospital (treatment and intervention) accompanied with the stay of patients in the hospital facilities, involving nursing services, care, further medical treatment and the service of meals.

The particular composition of the service provided by the hospital as well as the importance of the service for customer (health of the patient is extremely involved) makes it different from massaging and hairdressing services and even from the other healthcare practitioner's services seen before. The main service (Surgeon intervention) is extremely high in "credence

attributes”¹⁹⁴, but the diversity of activities related to the hospital such as post intervention care, bedding and meals, gives the hospital offer a higher amount of tangible elements, and thus a higher degree of tangibility for the global service. The higher risk that can be perceived by the customer for the main surgeon service and the higher amount of tangible clues offered by post intervention services may lead to different research results and for more simple healthcare services.

3.2.4 Classification of the studied services

The characteristic variations of the studied services (exposed above) allow them to be classified based on their product attributes, determining the ease of service evaluation by customers. On figure 3.5, the services concerned are ranked on a scale from “easy to evaluate” to “difficult to evaluate”. As exposed in Part 2.4.1 in Figure 2.7 adapted from Hill (1986) and Lovelock & Wright (2002), the three types of product attributes (Search, Experience and Credence) are represented.

¹⁹⁴ See Shostack (1977), Part 2.4.2

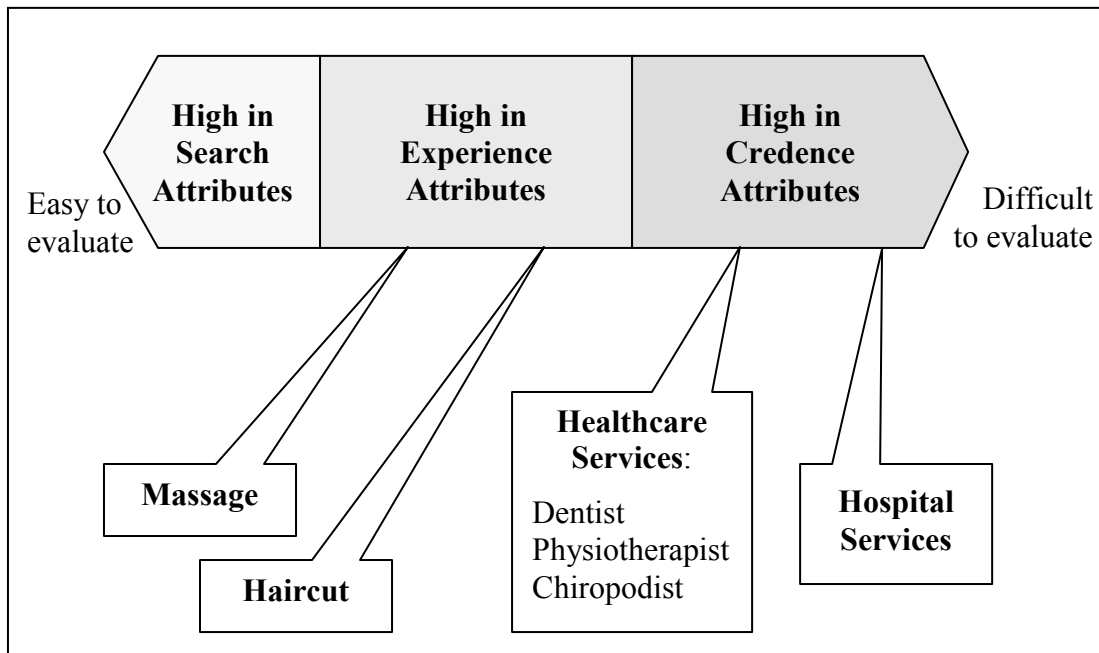


Figure 3-5: Classification of the studied services based on their product attributes.

Source: Adapted from Hill (1986) and Lovelock&Wright (2002).

As indicated in Figure 3.5, massage and hairdressing are services that are high in Experience attributes, where customers are able to evaluate the service during the delivery. Hairdressing is placed further to the right than massage, as a disappointing haircut supposedly lasts longer than a disappointing massage (some search attributes are more likely to be available for a massage centre, where the service is less personalised and more easily replaceable than a haircut and customers can reduce their risk more easily by referring to previous customers).

The studied healthcare services (dentist, physiotherapist and chiroprapist) are difficult for customers to evaluate even after service delivery and thus are high in credence attributes and very low in experience attributes (unless for very ordinary and usual treatments for patients visiting their practitioner on a regular basis). Hospital services, positioned further right are very high in credence attributes and almost impossible for customers to evaluate.

Along with their extreme position as services that are very high in credence attributes, the particularity of hospital services is the diversity of the offer, which contains many other product elements, including tangibles during post intervention recovery (e.g. bedding and meals). This additional contact with physical evidence gives the customer more significant tangible clues about the hospital services, in contradiction with the extremely high risk perceived (surgical intervention).

All the services studied present a similar product composition. The treatment (medical or not) is the core product surrounded by intangible elements and tangible elements (facilities, equipments, and products used to perform treatments). Only hospital services involve a more important exposure to Physical evidences (facilities, products and equipments) due to post intervention care. This classification approach of the research objects allows for their placement on a scale based on customers' evaluation difficulty. This scale starts with massage and then hairdressing, followed by the three healthcare services and ending with hospital services. Their position on this scale can be used to compare the results of the research to see if there is a correlation between product attributes (or ease of evaluation) and customers' sensitivity to environmentally conscious practices in the service delivery. In this context, the research about the hospital might raise contradictory results, as hospital services also offer more tangible clues.

3.3 Research process and methods

The research process of this study is based on the model proposed by Koch (1996) exposed in part 2.6.1. Phase 1 (or first *D*: "Definition") of this model has been developed with the research purpose in Part 3.1. This study aims at exploring service providers' actions and

customers' sensitivity regarding environmentally friendly practices in the delivery of services involving body treatment (related to health or not). Based on the study of a hairdresser, a massage centre, three various health care practitioners (dentist, physiotherapist and chiropodist) and a hospital, the research will also question the incentives of these service providers for ecological practices and the influence of risk perception on customers' sensitiveness to environmentally conscious service delivery.

Closing the "Definition" part of the 5 D's model, the research will look for information concerning service providers' ecological practices and their relationship with their suppliers on one hand, and for information regarding the importance given by customers to environmentally friendly practices when consuming these services on the other. This part will deal with the phases "Design" and "Data Extraction" of the 5 D's model, as specified in Figure 3.6.

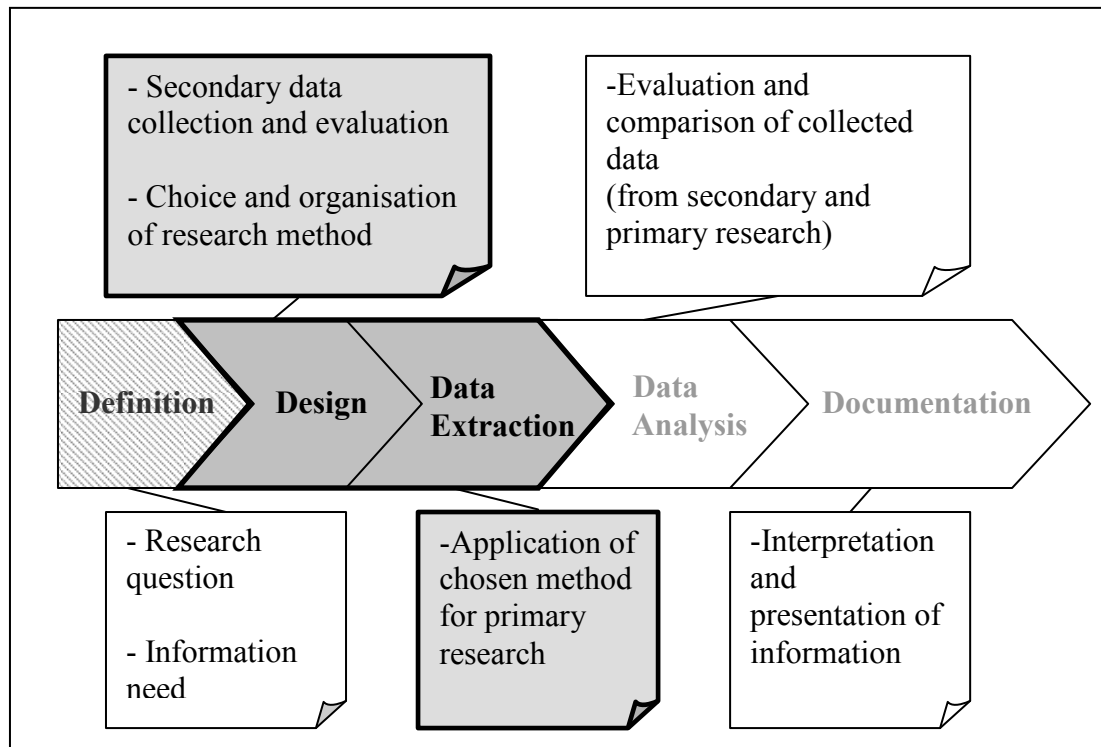


Figure 3-6: Phase 2 and 3 of the research process model.

Source: Adapted from Koch (1996)

3.3.1 Research design.

This part exposes the need for primary research to extract information about the chosen services of the study and reveals the research methods that will be applied to gain this information.

3.3.1.1 *The switch from secondary to primary research*

Part 2.5 was dedicated to the extraction of secondary data for the purpose of the study. As clarified in Part 3.1, this secondary research uncovered information concerning the production and consumption of goods and services in the context of a growing trend for more environmentally conscious production and consumption practices. The research revealed

sensitivity for ecological issues generally going up on the side of the consumer and various incentives arising for producers (pushed by their customers or downstream customers within their supply chain) to adopt more environmentally conscious production practices.

To verify these facts in the context of smaller service providers involving body treatment and thus a high risk perception by customers, the study will use primary research methods, as the required information was not forthcoming through desk-research, as shown on Figure 3.7.¹⁹⁵

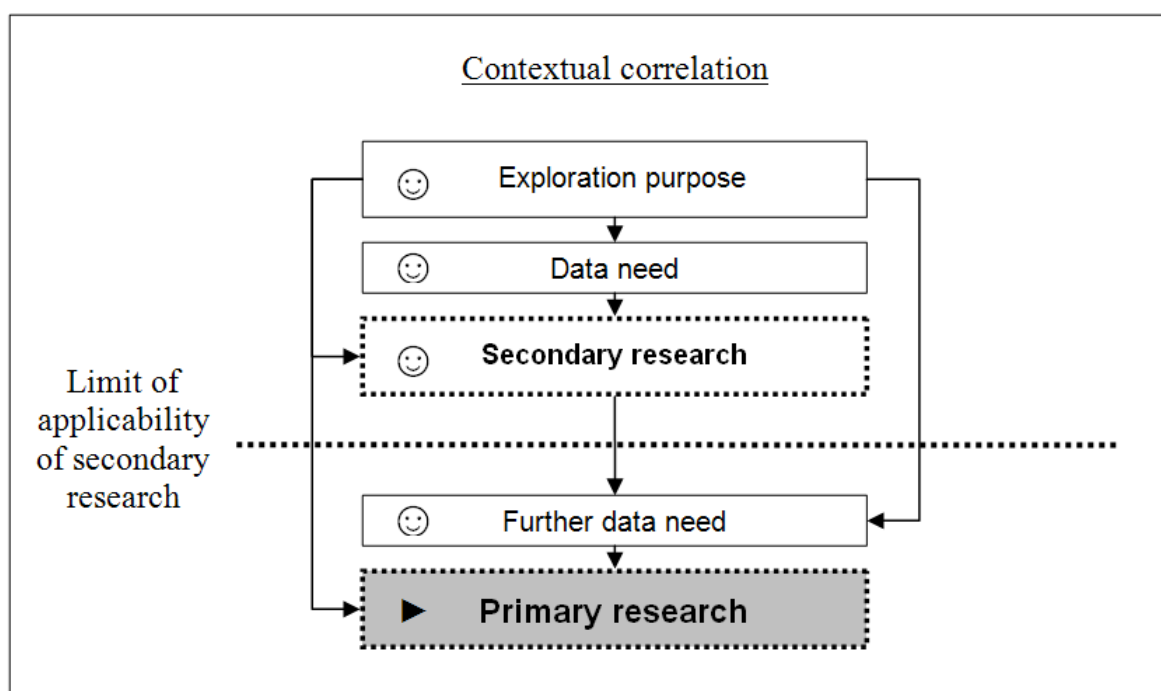


Figure 3-7: Correlation between secondary and primary research in the context of the study

Source: adapted from Rogge (1981)

Six service providers in France (hair salon, massage centre, three different healthcare practitioners and a hospital) are going to be asked about their practices and their ecological characteristics and the influence of their customers and suppliers on their practices. In the second stage of the study, the sensitivity of customers for environmentally friendly practices in service delivery will be asked directly to these providers' customers.

¹⁹⁵ See Figure 2.11, Part 2.6.1.

3.3.1.1 Selection of primary research methods.

They are two types of respondents to target in order to extract the required data. The research has to be focused on the providers of the selected services on one hand and on the customers of each of these providers on the other. The purpose of the study excludes the use of the experiment as a research method, as it doesn't strictly involve the study of one factor's influence on another factor. The observation of the service delivery would be practically impossible in the case of medical treatment and wouldn't deliver data concerning providers' relationship with their suppliers or customer. As the aim of the study requires answers directly from the two types of respondents, the survey is the most relevant approach of data extraction to obtain the required information (see Part 2.6.2).

The advantages of the telephone (voice-to-voice) survey exposed in Part 2.6.2 (high response rate, quality and representation), and the small number of respondents needed (the actual practitioners of each studied service) saving in cost and time expenditures, brought this approach to be the most appropriate to extract data directly from the service providers concerning the ecological aspect of their practices and their different incentives. Registered voice-to-voice interviews with service providers were complicated to organise, especially with healthcare practitioners who didn't dispose of much time to participate in the research. However, short discussions with some of them about the research topic lead to some refinements of the questionnaire used as a basis for the telephone survey.

On the customer side, a larger number of respondents (customers from each service) are needed. A telephone survey or face-to-face interview would then be too costly, time consuming and delicate as most of the services are medical and confidential. An anonymous written survey (questionnaires completed by the respondents) seemed to be the most feasible

option in order to ask customers directly about their environmental friendly practices when body treatments are concerned. With the participation of the service providers themselves to ensure that questionnaires are filled out randomly by 20 of their customers, the written survey disadvantages of time consumption and low response rate (see Part 2.6.2) were eliminated.

3.3.2 Application of primary research methods

As clarified above, the survey was the chosen method of primary research to extract new data directly from the respondents. This part exposes how the telephone survey for the six service providers and the written survey for 20 customers of each service have been conducted based on questionnaires.

3.3.2.1 *Service providers*

To find out about service providers' practices (equipment, materiel, products or behaviour) and the influence of their suppliers and customers regarding environmentally conscious service delivery, a questionnaire has been established. Followed by some questions about the company, the respondent and the main services delivered by the company, a series of 18 questions were asked during a telephone interview with each of the six research subjects. Table 3.1 brings together the 18 open or closed questions asked to the six service providers¹⁹⁶.

¹⁹⁶ The questionnaire is available in French in Appendix 3.

	<i>Questions to the respondents:</i>
1	Do you feel that you act favourably to the environment when practicing your profession?
2	Are your infrastructures and their construction particularly ecological?
3	Is your equipment as well as its production particularly ecological?
4	Are the products used to deliver your services and their production particularly ecological?
5	Are cleaning products (for facilities and material) and their production particularly ecological?
6	During treatments, do you and other employees act in a particularly ecological way? (choice of products, recycling, behaviour)
7	Do additional activities (administration, cleaning and maintenance) have an ecological character? (choice of products, recycling, behaviour, water and energy saving)
8	Do you expect a particularly ecological behaviour from your customers during service delivery?
9	In general, do you care about the ecological aspect of the production of all the material necessary for the practice of your profession, as well as cleaning, maintenance and administration? (facilities, furniture, equipment, treatments and cleaning products, administration material)
	As far as you know:
10	Do your customers show an interest in ecological practices concerning your profession?
11	Do your competitors use ecological practices?
12	Is ecology a selection criterion for your customers?
13	Are your suppliers (facilities, furniture, equipment, treatments and cleaning products, administration material) sensitive to ecological practices?
14	Are ecological criteria (of suppliers' products and their production) selling arguments?
15	Are you subjected to norms or privileges (e.g. subventions) related to ecological practices in your profession?
	If not, is it possible?
16	Are your hygiene norms in contradiction with those that you would consider more ecological?
17	Do you think you could improve your services by having more ecological practices and/or using more ecological products and equipment? (material and products can be considered ecological for their product characteristics and also for their production process from suppliers)
18	Do you think that some practices which are considered ecological are in contradiction with each other (e.g. use disposable material vs. clean and sterilise material)

Table 3.1: Telephone survey questions

While question 1 to 14 concern providers' practices and the influence of their customers and suppliers, question 15 to 18 are specifically asked because of previous conversation with the respondents. In the medical sector in particular, the respondents mentioned some issues related to ecological practices within the context of their profession. This could be strict hygiene norms preventing the use of ecological cleaning products or recycling systems (e.g. obligatory destruction of some material or products) or the subjection to state subventions for the adoption of environmentally friendly practices such as for the hospital. Linked to hygiene of material, they mentioned the confusion about whether they should sterilise material or use

disposables, such as the rinsing cup at the dentist, usually made of plastic and thrown away after each customer. This type of misconception about what practices are really ecological have been identify in the secondary study with the example of 100% cotton-made T-shirt in Part 2.5.

These previous conversations about the topic (where the respondents were simply asked to talk spontaneously about ecology in the frame of their services) helped establish more precise questionnaires (extension to include questions 15 to 18), that were then used for each telephone interview. Some questions were further developed for the interview with the respondent from the hospital, as facilities and services include post intervention care (nurses' behaviour, treatment product and equipment), bedding (sheets, laundry) and meals.

3.3.2.2 Service customers

The purpose of the customer oriented research is to find out what level of importance environmentally conscious practices in the delivery of those particular services has to them, and to what extent the degree of risk perception and of intangibility related to these services influences their perception regarding ecological issues. To extract this information directly from the customers, each of the six service providers was charged with randomly providing 20 of their customers with a short one-page-questionnaire¹⁹⁷ composed of a short explanation and incitement to participate, eleven questions and a question for the age of the respondents descript below. The age question (Q12) suggests a multiple choice with 6 different age group options (from 12 to 20 years old, 21 to 30, 31 to 40, 41 to 50, 51 to 60 and more than 60).

¹⁹⁷ The customers questionnaires for the six different services are available in French version in appendices 4 to 6.

Questions 1 to 4 (see Figure 3.8) are rating scales aimed at portraying the respondent in terms of their sensitivity to the environment in general, in their consumption of goods, of services, and of the particular service of the study.

Please give your opinion on a scale from 1 to 5 as indicated below:						
		1: Not important	2: Not very important	3: Fairly important	4: Important	5: Very important
Q1	In general, how important is ecology	1	2	3	4	5
	- In your everyday-life?					
Q2	- In your consumption habits?	1	2	3	4	5
Q3	- When you consume services?	1	2	3	4	5
Q4	- When you visit your dentist?	1	2	3	4	5

Figure 3-8: Customer survey (Dentist example) - Questions 1 to 4

Questions five and six are closed questions (answer with “yes”, “no” or “indifferent”) to determine whether or not customers noticed measures taken by their service providers regarding the environment and whether they wish the service delivered was more environment friendly (see Figure 3.9).

Q5	Have you noticed an ecological characteristic at your dentist concerning:			
	- Facilities (installations, heating or lighting)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Indifferent
	- Treatment equipment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Indifferent
	- Treatment products?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Indifferent
	- Their behaviour (e.g. water saving or recycling)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Indifferent
	- Administration's behaviour (e.g. paper saving)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Indifferent
Q6	Would you prefer a more environmentally friendly service?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Indifferent

Figure 3-9: Customer survey (Dentist example) - Questions 5 to 6

Question five will allow the identification of divergences between service providers' affirmations and what customer think they can see about ecological practices. Question five is more specific in the case of the hospital as it includes elements related to post intervention services such as bedding, laundry, personnel's behaviour, and the service of meals.

As shown on Figure 3.10, Question 8 is an open question requiring a free answer from the respondent which could further show his or her sensitiveness toward the environment as a customer of this type of service as well as his or her awareness of the possibilities for more ecological services. Q9 (Figure 3.10) is composed of two closed questions (answer with "yes" or "no") to ascertain if the respondents include environmental criteria when choosing their service providers, and if they would consider the environment if they had to choose.

Q7	How do you think your dentist could deliver a more environmentally friendly service?		
	<input type="text"/>		
Q8	- Do you take environmental criteria into consideration when choosing your dentist?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Q9	- If you had the choice, would you visit a dentist offering more environmentally friendly practices in their service delivery?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Figure 3-10: Customer survey (Dentist example) - Questions 8 to 9

Finally, with two agreement scales, Q10 and Q11 as well as their comparison aim to ascertain how important it is for the respondent to be delivered an environmentally conscious service. As exposed on Figure 3.11, Q10 invites respondents to agree or disagree (on a scale from 1 to 10) with the importance for their service provider to do as much as possible in favour of the environment. Q11 then asks if they agree (on a scale from 1 to 10) with the statement that the environment is as important for them as the provider's ability to deliver the service.¹⁹⁸

¹⁹⁸ The term "treat" (in French "soigner") in Q11 is not used in the questionnaires designated to customers of the hair salon and the massage centre (see Appendix 4).

Please indicate your degree of agreement on a scale from one (totally disagree) to ten (totally agree):

Q10 It is important for me that my dentist does everything possible to protect the environment:

Totally disagree 1 2 3 4 5 6 7 8 9 10 Totally agree

Q11 The environment is as important to me as the ability of my dentist to treat me:

Totally disagree 1 2 3 4 5 6 7 8 9 10 Totally agree

Figure 3-11: Customer survey (Dentist example) - Questions 10 to 11

Based on the results of the secondary research and the definition of the studied services objects of the study, questionnaires have been established in order to extract the required information directly from the target audience. This primary research (analysis will be exposed in Chapter 4) aims at exploring the six service providers involving body treatment regarding environmentally conscious practices on the one hand, and finding out how sensitive their customers are to the ecology in relation to the delivery of these services on the other.

4 RESEARCH FINDINGS

After having conducted the six telephone interviews with the service providers (hairdresser, massage centre, dentist, physiotherapist, chiroprapist and hospital) and receiving the customer questionnaires (20 for each service), Chapter 4 exposes the analysis of the data extracted by this primary research. The responses to the providers' telephone survey are listed in Appendices 7 to 12. The responses to the customers' written survey are available in Appendices 13 to 18. The quantitative data was cumulated on Excel-sheets and used for calculations required for the analysis. The answers to the open question (Q7) are listed in Appendix 20. This chapter, as well as Chapter 5 (Conclusion), refer to Phase 4 and 5 of the 5 *D*'s research process model described in Part 2.6.1 (Figure 2.12), as shown on Figure 4.1

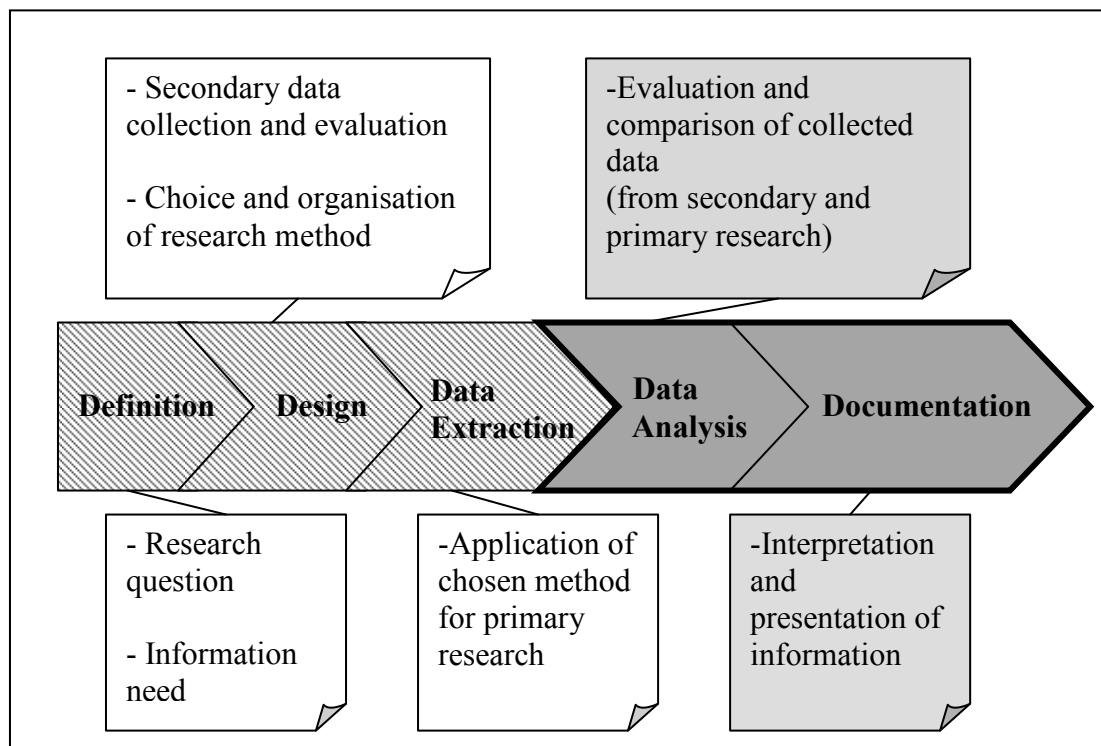


Figure 4-1: Phase 4 and 5 of the research process model.

Source: Adapted from Koch (1996)

4.1 Environmentally friendly practices of the service providers

As for the definition of the studied services in Part 3.2, the analysis of the results (answers given by the respondents are available in Appendices 7 to 12) is done in three different groups. The first category is composed of the hair salon and the massage centre as they both have the particularities of involving non medical body treatments and being high in experience attributes. The three health care practitioners (dentist, physiotherapist and chiropodist) form the second category, high in credence attributes and involving medical treatments. The hospital constitutes the third category as this service is very high in credence attributes and represents a more complex composition of tangible and intangible elements.

4.1.1 Non medical body treatment services

Neither of the two respondents feel like they act in a particularly favourable way to the environment within the context of their profession (Q1). Question 2 to 5 concern every tangible element of the product offer (facilities, equipments, products) and their ecological aspects (see questionnaire in Figure 3.1). Neither the massage centre nor the hair salon present any particularly ecological aspect in their facilities including infrastructures or equipment. The massage centre uses “bio” massage oils and environmental friendly cleaning products. The hair salon uses the *L’oréal Professionnel* product line of hair products (which aren’t known for any particularly ecological characteristics) and tries to use as few detergents as possible.

Concerning environmentally friendly behaviour related to the service delivery (Q6 to Q8), the massage centre admits prioritising the practical over the ecological but uses environmental friendly products for administration and cleaning. The hair salon follows the same recycling

rules as the rest of the community and closes chemical containers before throwing them out. None of them expect any particularly ecological behaviour from their customers.

So far, the hair salon is not concerned by the ecological aspect of their tangibles (infrastructure, equipment, treatment and cleaning products and administration material), while the massage centre says that it is of a certain importance to them (Q9).

Questions 10 to 14 concern the influence of customers and suppliers on the service providers' practices. Even though some customers of both providers might be sensitive to environmental issues, ecology is not their priority and they don't seem to take this criterion into account in the choice of their hair salon or massage centre. Neither service provider is aware of their competitors' practices with regard to the environment. Although both affirm that their suppliers don't show enough interest in ecological practices, they are offered products that seem to present ecological advantages such as the "bio" massage oils and the "Serie Nature" hair product line from *L'oréal Professionnel*¹⁹⁹. None of them encounter norms or subventions related to ecological practices.

Concerning Q16 to Q18, both service providers think of ways to improve the ecological aspect of their service delivery such as water saving or material cleaning (e.g. towels) instead of using disposables. Sterilisation of hair cutting material leads the hairdresser to throwing away numerous disposable towels. Both wonder what the most environmentally friendly practices would be (e.g. clean and wash using more cleaning products, water and energy or use disposable materials).

¹⁹⁹ This new product line is meant to use natural ingredients for its hair products and thus preserve the environment. L'Oréal Professionnel (2009).

4.1.2 Healthcare practitioners' services.

The three studied healthcare service providers (dentist, physiotherapist and chiropodist) present similar results after conducting the telephone survey. None of them feel that they act in a particularly ecological way in their profession. Their infrastructures, equipment and treatment products aren't particularly ecological. The dentist states eliminating gradually toxic treatment and cleaning products in favour of more ecological products. Some of the cleaning and treatment products used by the chiropodist and the physiotherapist (e.g. essential oils) are more ecological (Q1-Q5).

The dentist tries as much as possible to behave ecologically (Q6-Q7) during treatments and other activities (energy saving and recycling including special care of toxic products). So does the chiropodist with administrative activities (recycling and choice of ecological material). None of them expect any particular behaviour from their customers (Q8). Although the chiropodist said:

“Most of the time, customers are not sensitive to ecology regarding my services. I think we are at the beginning of the ecology movement and we don't ask ourselves questions about the environment in every area” (Pascal Prévot, chiropodist)

Concerning question 9 about the providers' care of ecological products and methods of production of their suppliers, answers vary. Where the physiotherapist cares primarily about the price, the dentist affirms paying attention to the ecological aspects of products and materials, and the chiropodist said: *“Yes, but ecology does not play an important role in my branch. Sterilisation and performance of products and materials are more important measures for suppliers.”* (Pascal Prévot, chiropodist)

Apart from a slight interest from customers for essential oils (physiotherapist), customers of the three services don't show any interest for the ecological aspect of these services. Ecology does not belong to their practitioner selection criteria. As the physiotherapist Fabienne Sandron Vandelloise mentioned: "*I think they don't care*". The three service providers are unsure of the ecological practices of their competitors and haven't noticed any sensitiveness to the environment from their suppliers, apart from the dentist who affirms that some suppliers sometimes mention the ecological aspects of their products but do not make it a priority (Q10-Q13).

The dentist and chiropodist are subjected to some norms of hygiene concerning material sterilisation or recycling of chemical products. They both mention that the use of disposable material (sometimes considered as more hygienic) or of strong disinfectants is done without considering the environment. The chiropodist mentions the role suppliers would have for a more ecological service delivery and affirms he would wish for more environmentally friendly sterilisation products and norms. They all find that some ecological practices are contradictory with some mandatory hygiene practices such as the use of disposable material or strong sterilisation products. The dentist, Anne Claire Molinari stipulates that "*technology and norms are prioritised and no in-depth consideration about the environmental impact has been made so far*" (Q14-Q18).

4.1.3 The hospital services

The respondents don't feel that the hospital acts 100 % favourably towards the environment, but all the personnel are involved in trying to recycle and avoid waste of products and energy.

Infrastructure, equipment, treatments and cleaning products are not particularly ecological. Laundry activities avoid water and energy wastage but don't avoid strong washing products. Meals are served in plastic containers that are not reusable.

The hospital does not expect particularly ecological behaviour from their patients, who don't seem to manifest any interest for the environment (which is not a selection criterion either) when requiring the hospital's services. The incentive for more ecological practices in the hospital doesn't appear to come from the suppliers' side either. Ecology has never been a selling point. The hospital would be receptive to more ecological products, equipment or infrastructure, but ergonomics, speed and hygiene are priorities. They are also unsure about the ecological practices of their competitors. The hospital is not subjected to norms concerning environmentally friendly practices, but can be offered some state subventions for new development projects if they align with environmentally conscious construction practices. They think some cleaning material and furniture could be a point of improvement for a more ecological service offer. They are aware of the noxiousness of some cleaning products but affirm that the most important consideration in a hospital is to avoid patient's contaminations.

Ecological practices of the six service providers seem to be ruled by the same principles. So far, even though they are environmentally aware, they don't adopt many environmentally friendly practices in their service delivery. Neither providers nor customers seem to show much interest in the ecological aspect of their service. Although the massage centre (not involving medical treatment) has started using some "bio" treatment products, hygiene norms and elimination of the contamination risk remains a priority in medical treatment service delivery, especially for the hospital. More generally, they don't expect any particular

behaviour from their customers and all confirm the misconceptions about best practices such as the uncertainties surrounding material sterilisation against the use of disposables.

4.2 Customer sensitivity to environmentally friendly service delivery

For each of the six service providers, 20 customers completed the written survey exposed in Part 3.2.2. The following explanation of the result is based upon the research purpose to discover how sensitive customers of these services are towards ecological practices of their providers and how this sensitivity is influenced by the product attributes (experience and credence attributes), the degree of intangibility and the evaluation of risk (Chapter 2). This analysis is separated into different segments following the order of questions in the questionnaire. Appendices 13 to 18 summarise the results of the customer written survey for each studied service provider. The exposition of the results is followed by their interpretation which is limited due to the size of the respondents' sample. Although the results of this exploratory research are strongly comparable with each other, they can hardly be generalised to the entire population.

Nevertheless, before analysing the results, one should consider the age variation of the respondents. Indeed, as shown on figure 4.2, the average age of the massage centre's respondents ("M.C") is much lower than the other services. The average age of the respondents of the hairdresser ("H.D"), the chiropodist ("Chiro.") and the physiotherapist ("Physio.") is much higher than for the dentist ("Dent") or the hospital ("Hosp."). On figure 4.2, each age range (e.g. 12-20) corresponds to a statistical range (e.g. 1). For instance, from

1 to 6, the statistical range for the age of the massage centre's customers who responded to the survey is 3.45²⁰⁰ (see also Appendix 19).

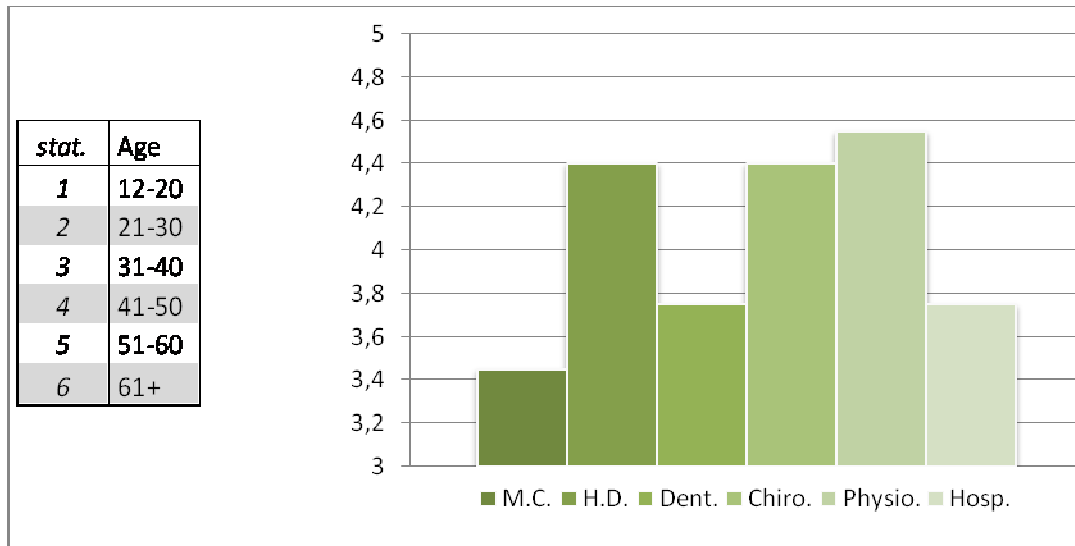


Figure 4-2: Age of the written survey respondents.

The age of the respondents seems to have influenced the answers to the survey. Figure 4.3 shows the average of answers to Q1 (“how important is ecology in your everyday-life”, on a scale to 1 “Not important” to 5 “Very important”) for respondents between 12 and 50 years old and 51 year old or older²⁰¹. Figure 4.3 concerns all 120 customers who took part in the survey and shows that respondents between 12 and 20 years of age give slightly more importance to ecology in their everyday life than respondents over 50 years of age. These results cannot be generalised to an entire population, but show the influence of age on the respondents’ answer to the survey.

²⁰⁰ From the 20 respondents of the dentist, six are between 21 and 30 (bracket 2), three between 31 and 40 (rang 3), seven between 41 and 50 (rang 4) and 4 between 51 and 60 (rang 5). Thus, the mean is $(6 \times 2 + 3 \times 3 + 7 \times 4 + 4 \times 5) / 20 = 3.45$

²⁰¹ The means shown on Figure 4.2 are computed on Appendix 19.

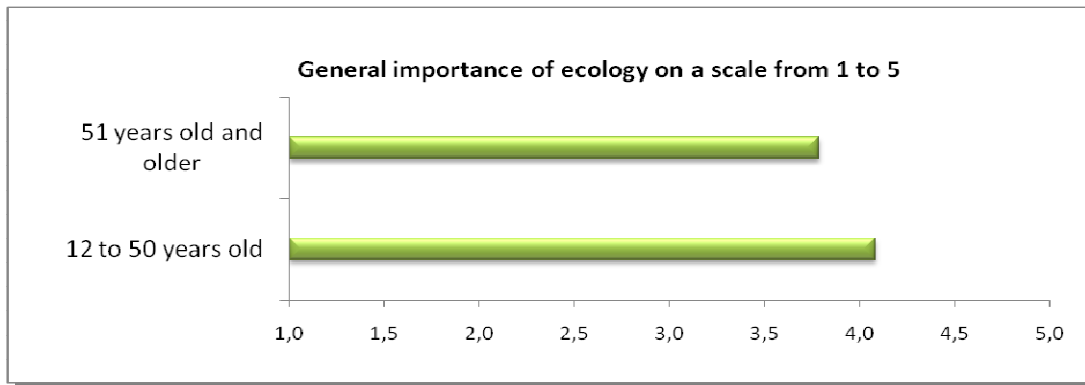


Figure 4-3: Difference in importance given to ecology depending on the age.

4.2.1 Importance of ecology to customers (Q1-Q4)

The answers to the first four questions allow an observation and comparison of the importance of ecology to the respondents in their everyday-life (Q1), in their consumption habits (Q2), in their consumption of services (Q3), and in their consumption of the six studied services. The answers all follow a specific trend. Respondents tend to answer rather favourably to ecology in Q1 (around 4 on a scale from 1 "not important" to 5 "very important") and less and less favourably towards Q4, as shown on Figure 4.4.

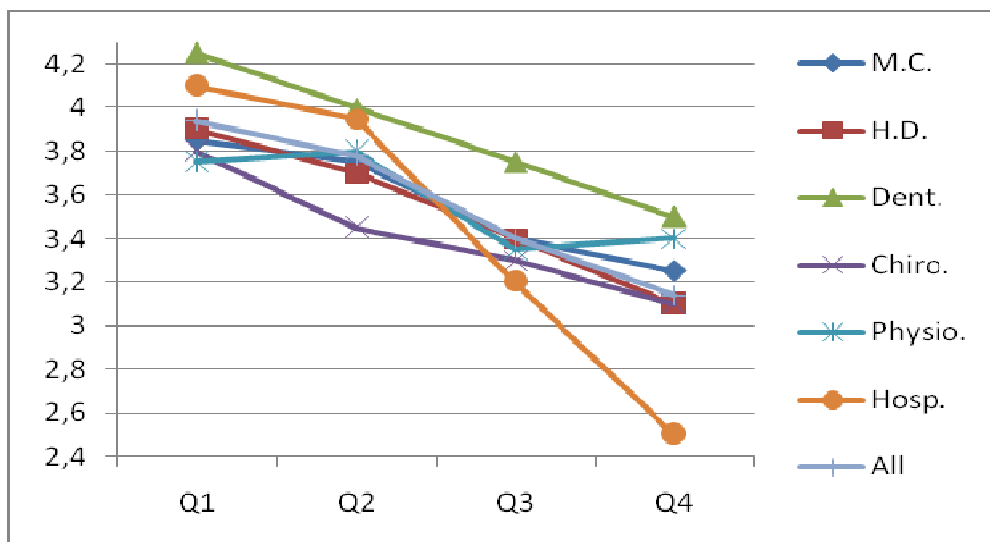


Figure 4-4: Importance of ecology to customers of the studied services.

Thus, ecology seems to lose its importance when respondents are consuming (Q2), more when they are consuming services, and even more when they are consuming the studied services. This trend is particularly obvious for customers of the hospital, as shown on Table 41, which exposes all the results of Questions 1 to 4 (means of the answers on a scale from 1 to 5).

Importance of ecology on a scale from 1 to 5							
	M.C	H.D	Dent.	Chiro.	Physio.	Hosp.	All
Q1	3,85	3,9	4,25	3,8	3,75	4,1	3,94
Q2	3,75	3,7	4	3,45	3,8	3,95	3,78
Q3	3,4	3,4	3,75	3,3	3,35	3,2	3,40
Q4	3,25	3,1	3,5	3,1	3,4	2,5	3,14
Q2 - Q4	0,5	0,6	0,5	0,35	0,4	1,45	0,63

Table 4.1: Importance of ecology: Answers Q1 to Q4

The secondary research highlighted the trend for more environmentally conscious production and consumption of goods and services. To see the importance of environmentally conscious consumption of the studied services, the difference between the answers to Q2 (importance of ecology in consumption) and Q4 (importance of ecology in the consumption of the studied services) is calculated in Table 4.1 (Q2-Q4). The gap Q2-Q4 (1.45) is particularly high for the hospital whose customers, even more than for the other services of the study, don't see

ecology as important when consuming this particular service however they may in general consumption or everyday life.

4.2.2 Customers' opinion of their service provider (Q5-Q6)

Question 5 asked the respondents if they noticed some ecological characteristics in the facilities, the treatment equipment and products, in the behaviour and administration of their service provider, as well as in the bedding, laundry and meals of the hospital. Here, listed in Table 4.2, some customers' answers coincide with their service provider's affirmations. 14 out of 20 respondents said they noticed ecological characteristics in their massage centre's treatment products ("bio" massage oils). But most of the time, respondents answered yes to points where their service provider affirms not acting in a particularly ecological way. For instance, apart from the hospital, none of the interviewed service providers has any particular infrastructure, heating or lighting system that is environmentally friendly. Nevertheless, more than a third of the respondents answered "yes" to the question of noticed ecological characteristics in their provider's facilities. These answers cannot be efficiently utilised.

<u>Ecological characteristics noticed in:</u>	M.C.	H.D.	Dent.	Chiro.	Physio.	Hosp.
- Facilities (installations, heating or lighting)?	8	7	10	8	7	6
- Treatment equipment?	4	9	6	7	8	4
- Treatment products?	14	6	5	7	10	2
- <i>Bedding and laundry?</i> *						4
- Their behaviour (e.g. water saving or recycling)?	6	11	6	9	8	7
- <i>Meals' content and service?</i> *						3
- Administration's behaviour (e.g. paper saving)?	2	5	4	8	11	3

* For hospital's customers only

Table 4.2: Ecological characteristics of service providers noticed by their customers: Answers "yes" to Q5

Even though surveyed customers seem to overestimate their service provider's ecological actions, at least half of them answered yes to Question 6 ("would you prefer a more environmentally friendly service?") as listed in Table 4.3

Would you prefer a more environmentally friendly service?			
	Yes	No	Indifferent
M.C.	16	3	4
H.D	11	4	5
Dent.	11	3	6
Chiro.	11	5	4
Physio.	10	2	8
Hosp.	11	5	4

Table 4.3: Customer's desire for more environmentally friendly service delivery: Answer Q6

Table 4.2 could be interpreted as a misconception of what is really environmentally friendly, as observed in the secondary research. Table 4.3 shows an interest from the respondent for environmentally friendly practices, especially for customers of the massage centre, which could be explained by the lower average age of the respondents.

4.2.3 Customer's suggestions for environmentally friendly service delivery (Q7)

To Question 7, only 10% of the respondents gave a concrete answer. A list of the answers is available in Appendix 20. Many mentioned points of improvement that concern mostly tangible elements of the service offer such as the use of less toxic treatment and cleaning products, heating, energy and water savings, recycling and collecting of toxic products, use of environmentally friendly packaging for treatment and cleaning products as well as for the preparation of meals at the hospital. In a more innovative sense, a respondent suggested the connection of steppers and bikes (used for physiotherapy treatments) to an electricity generator to be used for lighting and heating. A customer of the hairdresser mentioned that his service provider should demand more information from their suppliers, as mentioned in the secondary research and the suppliers' survey.

4.2.4 Ecology as service selection criteria for customers (Q8-Q9)

The result to Q8 asking respondents if they take ecology into account when choosing their service provider and Q9 asking them if they would chose a more environmentally friendly service if they had the opportunity are listed on Table 4.4 which shows only the number of positive answers (respondents had to answer “yes” or “no” to both questions)

	M.C	H.D	Dent.	Chiro.	Physio.	Hosp.
Q8	6	6	6	3	4	3
Mean	6		4,33			3
Q9	18	9	9	6	3	9
Mean	13,5		6			9

Table 4.4: Customers' consideration of environmental criteria: Answer Q8-Q9

Table 4.4 offers a division of the result into the 3 service categories mentioned before. On average, 6 out of 20 customers of non medical treatment services that are high in experience attributes (massage centre and hair-dresser) affirm considering the ecology as a service selection criteria. Only 4.33 out of 20 customers of health care services and 3 hospital customers take environmental criteria into account when choosing services that are high in credence attributes.

Three times as many hospital customers (9 out of 20) would chose a more environmentally friendly hospital service whereas on average, only 6 out of 20 from the other medical services would make the same This relatively high number for the hospital could be due to the average age of the respondents, lower than the average of the three other health care services (see Figure 4.2) or to the presence of more tangible elements in the service offering (meals and beddings) that have less influence on the evaluation of risk of the hospital service (meals and beddings are supposedly not directly associated with surgery and its risks by the customers). Although, more customers (13.5) would choose more environmentally friendly services that are high in experience attributes (M.C. and H.D.). The high figure (18 “yes”) to question 9 for customers of the massage centre could be explained by the fact that those massages, even though they are “people-processing”, are replaceable services (see Part 2.4.1).

4.2.5 Importance of ecology relative to service quality (Q10-Q11)

On a scale from 1 “totally disagree” to 10 “totally agree”, the respondents were asked how important it was that their service provider acts as ecologically as possible (in Q10) and if

ecology is as important to them as an efficient service delivery. The difference in responses for both questions is illustrated in Figure 4.5.

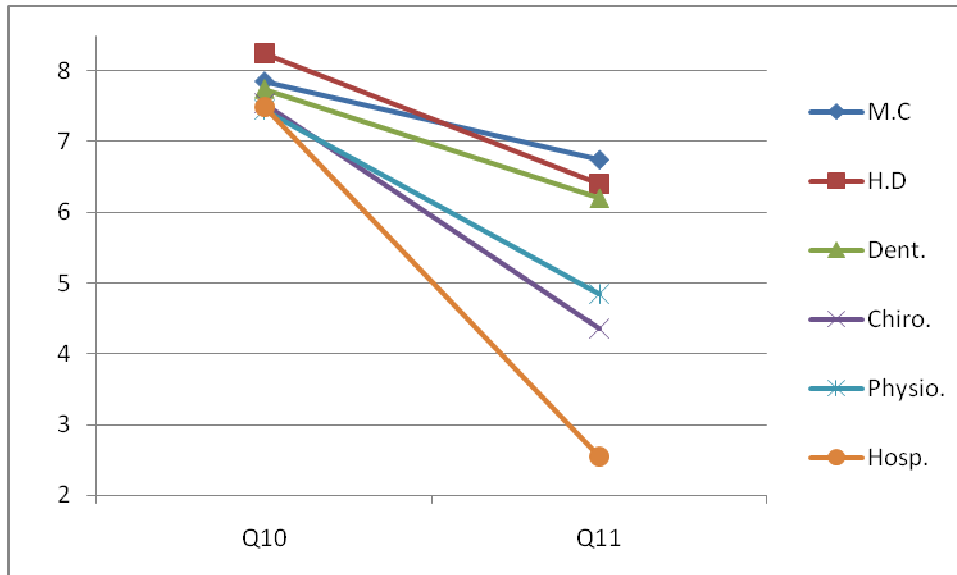


Figure 4-5: Importance of ecology compared to service quality

Figure 4.5 shows a significant drop in importance given to ecology as soon as it is compared to the efficiency of service delivery, especially for the services involving medical treatment and the hospital. This is also shown in the difference between the answers to Q10 and Q11 (Q1-Q11), given in Table 4.5 which lists the average answers (on a scale from 1 to 10) of the respondents for each studied service.

	M.C	H.D	Dent.	Chiro.	Physio.	Hosp.
Q10	7,85	8,25	7,75	7,55	7,45	7,5
Q11	6,75	6,4	6,2	4,35	4,85	2,55
Q10 - Q11	1,1	1,85	1,55	3,2	2,6	4,95
Mean Q10 - Q11	1,48		2,45			4,95

Table 4.5: Customers' degree of agreement with the importance of ecology on a scale from 1 to 10: Answers Q10-Q11

The gaps between Q10 and Q11 seem to be greater for medical services. The gap corresponding to the answers from the hairdresser's customers is relatively large compared to the massage centre's customers. Further, the gap for the dentist's customer's answers is relatively small compared to the other health care services. The hypothesis that the average age of the respondents influenced the results of the survey could explain these differences.

Indeed, as seen in Figure 4.2, the average age of the hair-dresser's customers who took part in the survey is much higher than those of the massage centre's customer. For the dentist's customer survey, the average age is lower than the customer's average age of the hairdresser and of the two other health care practitioners. Nevertheless, table 4.5 gives the average gaps (Q10 - Q11) that can be interpreted as being related to the product attributes and the evaluation of risk by the customers.

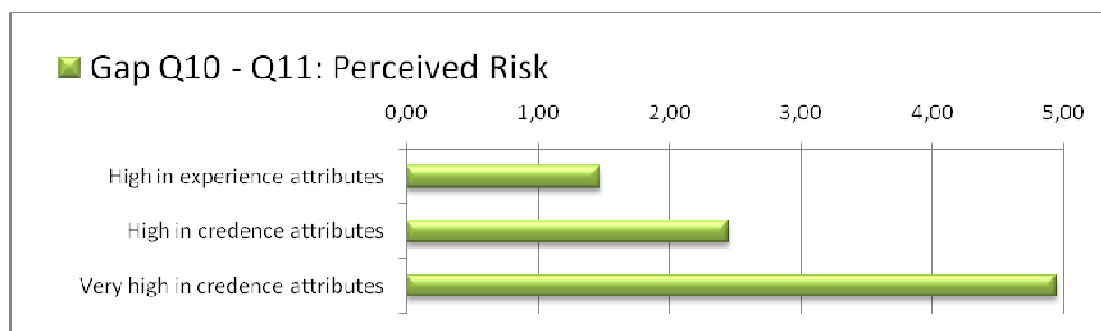


Figure 4-6: Perceived risk of the studied services by their customers in relation to ecology

Following the theory of product attributes and evaluation of risk exposed in Part 2.4, Figure 4.6 classifies the results of Q10 and Q11 into the three aforementioned categories: the non medical treatment services (high in experience attributes), the health care services (high in

credence attributes) and the hospital (very high in credence attributes). Thus, using the means of the gaps Q10 – Q11 calculated in table 4.5, the risk perceived by customers of the three health care practitioners (or the mean of the gaps Q10 – Q11 of these three services) is higher than the risk perceived by customers of the massage centre and the hair-dresser (or the mean of the gaps for these two services). The risk perceived by the customers of the hospital, higher in credence attributes (gap Q10 – Q11 for the hospital) is even greater, as shown on Figure 4.6.

Customers of the six services who responded to the survey show some environmental sensitivity and so the results of the customer survey align with the findings of the secondary research. However this environmental sensitiveness loses its importance when it comes to the studied services and their delivery efficiency. The customer survey also confirms the misconceptions about best ecological practices. Customers affirm noticing some ecological characteristics in elements of the service delivery where providers admit to not acting in a particularly ecological way. Ecology is rarely a selection criterion for the respondents but a slightly more than half of them would chose a more environmentally friendly service if they were given the choice. Although most of them would agree that their service providers should act as ecologically as possible (e.g. by reducing toxicity, recycling and saving water and energy) ecology is far less important to them than the service efficiency. These observations seem to intensify when services gain in credence attributes i.e. when the service evaluation becomes harder and thus increases the perceived risk. Non medical treatment services' customers are more receptive to environmentally friendly practices within the service delivery than customer of healthcare services and of the hospital (representing the highest perceived risk). Supposedly, age influenced the results with a slightly higher responsiveness

to ecology for respondents under 50 years of age, which can explain some variations (older average age of hairdresser's customers and younger average age of dentist's customers).

Although the primary research conducted with providers and customers of the six chosen body treatment services confirmed some of the secondary research findings, the results of this primary research highlighted the limitation of the environmental practices and sensitiveness when body treatment services are involved. Body treatment providers show some environmental awareness but admit that they don't include many ecological practices into their service delivery. They don't either feel any pressure from their customers or their suppliers as it is the case for the companies observed in the secondary research. Customers of body treatment services show a general interest in the environment, but don't consider it during service delivery. They are responsive to environmentally friendly practices but don't see them as a priority. This phenomenon increases with the perceived risk due to the intensity of medical treatment, a high level of credence attributes, the absence of tangible elements and a decrease in the ease to replace the service.

5 CONCLUSION AND OUTLOOK

The results of the surveys provide an idea of the ecological sensitivity of customers and suppliers of services involving body treatment. It seems that ecology is not as important as exposed by the secondary research about product and services' producers and customers. An attempt has been made to explain the drop in customers' ecological sensitivity when body treatment is involved but constitutes only suppositions. After the summary of the research findings and their hypothetical explanation, the limitations of the research and further recommendations will be exposed.

5.1 Summary of research findings

The analysis of the primary research results confirmed some facts given by the desk-research, such as a general sensitivity for environmentally friendly production and consumption practices. Nevertheless, the customers and providers of the six studied services don't seem to remain as sensitive to ecological practices when body treatment is involved.

5.1.1 Body treatment services providers

The six service providers show an environmental awareness but don't seem to integrate very ecological practices into their service delivery process. Producers of goods and services, observed in the secondary research, found incentives for greening their practices through their relationship with their business partners on all phases of their supply chain. Body treatment service providers don't receive any pressure from their customers for more

environmentally conscious practices; nor do their suppliers offer them any ecological solutions (apart from some products for the hair salon and the massage centre). Apart from the hospital, no subvention for more environmentally friendly equipment or infrastructure is offered, and hygiene and prevention of contamination (for medical treatment services) is a priority that often doesn't allow room for ecological solutions. More generally, the size of these companies (much smaller than those exposed in the secondary research) can be a reason for a slower ecological evolution and the absence of pressure from business partners.

5.1.2 Body treatment services customers

The research on the 120 customers of these six services (20 each) gave results that first align with the findings of the secondary research. The observed trend for environmental consciousness is confirmed by the respondents. Nevertheless, the sensitivity for ecology drops when respondents are asked how important ecology is when they receive one of the six studied services. They don't pay attention to the ecological aspects of their service delivery (they see ecological aspects in some points that suppliers don't treat ecologically and vice versa) and generally don't take the environment into account when choosing their service provider. Most of the respondents affirm that they would like a more environmentally conscious service delivery, but the environment is far less important for them than service efficiency.

In general, respondents under 50 year of age seemed to be slightly more receptive to more environmentally conscious service delivery, which explained some variation in the results. For example, the dentist's respondents, younger on average presented results that differ from those of the two other healthcare services (relatively similar in age and ecological

sensitiveness). The customers' consideration of ecological practices in service delivery tends to be commensurate with the intensity of the risk perceived by customers, which can be explained through their product attributes. Customers of services which are high in experience attributes show a higher environmental sensitiveness (massage centre and hair salon). The highest is for massage customers, as a massage is the only service of the study that is easily replaceable. Medical treatment service customers, high in credence attributes, show a lower sensitivity to ecological practices in service delivery. The lowest is for the hospital customers, as hospital services, even higher in credence attributes, represent the highest risk perceived by customers. However, the hospital product offer presents some additional tangible elements (meals and beddings) that are not related to the high risk perceived (surgical intervention). These tangible elements could explain some relatively high responsiveness to ecology from hospital customers when a relatively high number of them state that they would chose a more environmentally conscious hospital service if they were given the choice. These are only hypothetical suppositions given the limitations of the research exposed below

5.2 Limitations of the study

The influence of different factors such as age, risk perception and degree of intangibility on customers' environmental sensitivity is only a supposition. So is the affirmation that body treatment service providers in France don't act any more ecologically than other bigger producers of goods and services. Three main limitations of this exploratory research prevent the findings from moving outside of a hypothetical context.

Firstly, this unique study doesn't compare customers' ecological sensitivity when body treatment is involved to when it is not. The analysis shows a drop in ecological sensitivity from general consumption habits to consumption of body treatment services, but the first limitation (sample size) doesn't allow the identification of this drop as a trend.

Secondly, the explanation of the results is only hypothetical because they don't say why respondents show a lower responsiveness to environmentally conscious production practices when body treatment is involved.

Finally, the study concerned only one provider of each service, and only 20 customers of each. The sample population cannot be completely representative of the providers and customers of services involving body treatment. Thus, it is not possible to be 100 per cent sure that ecological sensitivity drops because a service is not easily replaceable, because the perceived risk becomes higher or because the service delivery offers less tangible clues to customers' evaluation.

5.3 Recommendations for further research

The observed lower ecological awareness and sensitivity of suppliers and customers of services involving body treatment as well as their explanation is limited by the study. To confirm these findings as well as the correlation between the different aforementioned factors and the level of ecological sensitivity, this research should be conducted with a larger sample of people and with several improvements.

The research results make one suppose that body treatment service customers are less sensitive to ecological practices. To confirm these suppositions, these customers should be

asked how sensitive to ecological practices they are when consuming other services (other people-processing services, non people-processing services or goods).

The study analysis attempts to explain the results and their variations. Although, these explanations should be validated by proposing new questions to the respondents. They should be asked why they are less responsive to environmentally conscious practices when body treatment is involved. This would explain or confirm the suppositions about the results and the differences highlighted between the six studies services.

To confirm or refuse the hypothesis given by the research results and the analysis, a different research should be conducted. First, it should involve a larger sample of body treatment service providers. Then, customers should be approached more randomly, and not when they are queuing at their hairdresser or health care practitioner. They could then convey their sensitivity to ecology regarding different types of products and services for comparison. They should also be asked why their sensitivity drops if it is the case. Nevertheless, this exploratory field research, supported by literature review, raised two hypothetical suppositions. Firstly, providers of services involving body treatment are well behind the general trend for more ecological production of goods and services. Secondly, the perceived risk – due to difficulty of service replacement, high degree of intangibility of the product offer and difficulty of evaluation or even involvement of health – negatively influences customers' sensitivity to environmentally conscious practices.

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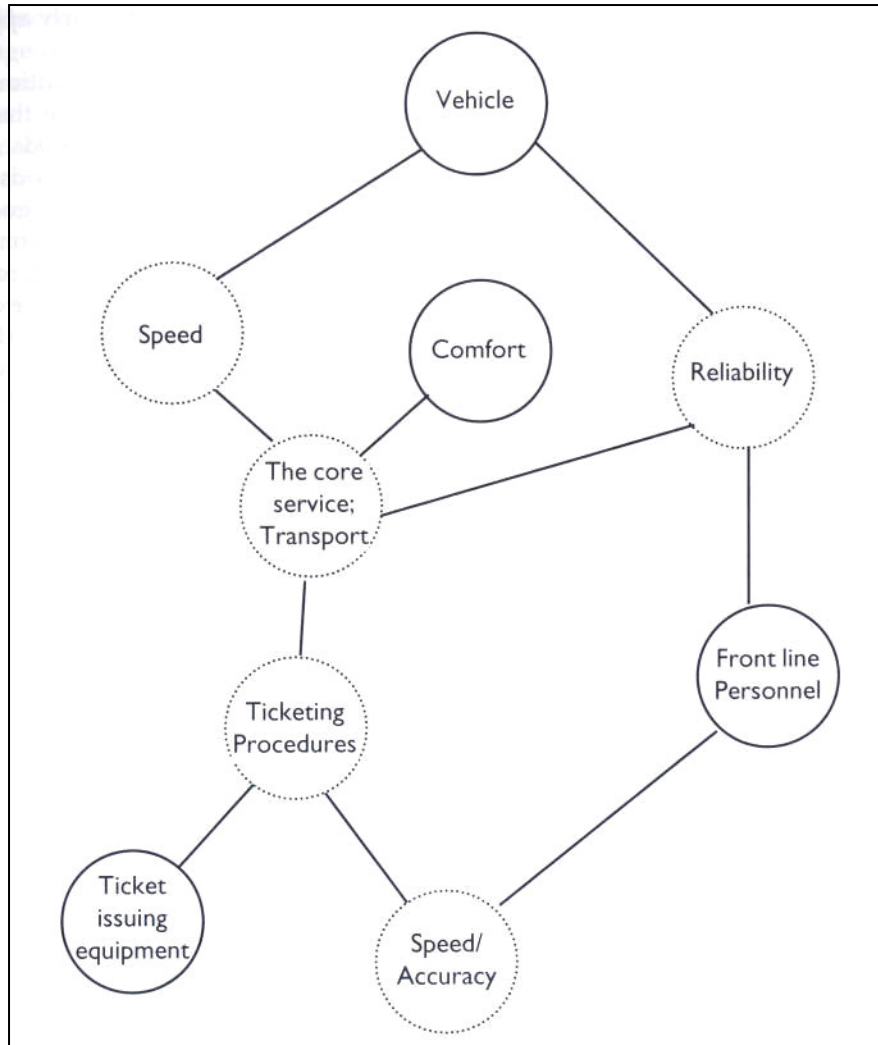
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Appendix 1: Shostack's (1997) "molecular model" of a train service
(Intangibles elements represented by circles with broken lines, tangibles elements by solid lines.)

Source: Palmer (cited by Baker, 2003, p. 593)



Appendix 2: Service Contact list

Company	Respondent name	Respondent's profession
Entre Parenthèses	Marie-Sophie Inquieté	Massage therapist
Sylvie Coiff	Sylvie Thomas	Hair dresser
Anne-Claire Molinari. Docteur en Chirurgie Dentaire	Anne-Claire Molinari	Dentist
Pascal Prévot. Podologue	Pascal Prévot	Chiropodist (podiatrist)
K.C.C. Kinésithérapeutes	Fabienne Sandron-Vandelloise	Physiotherapist
La renaissance Sanitaire Hôpital	Danielle Clouteau Guy Schneider Semegas Rouviere Janin Luerinski	President Surgeon Surgeon Nurse manager

Appendix 3: Telephone survey questions

1)

Avez-vous le sentiment d'agir favorablement à l'environnement dans la pratique de votre profession?

1b) (Only for the hospital)

Avez-vous le sentiment que votre établissement agit favorablement à l'environnement?

2)

Vos infrastructures et leur construction sont-elles particulièrement écologiques?

3)

Votre équipement et sa fabrication sont-ils particulièrement écologiques?

4)

Les produits utilisés dans le cadre de votre activité et leur production sont-ils particulièrement écologiques?

5)

Les produits d'entretiens de locaux et de matériel (et leur production) sont ils particulièrement écologiques?

5b) (Only for the hospital)

Qu'en est-il des draps, leur production de leur blanchiment ?

5c) (Only for the hospital)

Qu'en est-il des repas (personnel et patients), de leur production, du matériel nécessaire au service des repas, de sa production, et de son nettoyage ?

6)

Lors des soins, adoptez-vous et les autres praticiens et employées des pratiques particulièrement écologiques (choix des produits, recyclage, comportements)?

7)

Les activités annexes (administration, nettoyage et entretien, repas) sont-elles réalisées dans une optique particulièrement écologique (choix des produits, recyclage, comportements, économie d'énergie et d'eau)?

8)

Attendez-vous de vos clients un comportement particulièrement écologique lors de la réalisation de vos services?

9)

Plus généralement, portez vous un intérêt à l'aspect écologique de la fabrication de tout le matériel nécessaire à la pratique de votre profession à l'entretien et à l'administration (locaux, mobilier, équipement, produits d'entretien et de soins, repas, matériel administratif...)

A votre connaissance :**10)**

Votre clientèle manifeste-t-elle un intérêt pour des pratiques écologiques dans le cadre de votre profession ?

11)

Vos concurrents adoptent-ils des pratiques écologiques ?

12)

Votre clientèle considère-t-elle l'écologie comme un critère de sélection de pratiquant ?

13)

Vos fournisseurs (locaux, mobilier, équipements et produits de soin, d'entretien et d'administration...) vous semblent-ils sensible à des pratiques plus écologiques ?

14)

L'écologie (de leurs produits et de leur fabrication) fait-elle partie de leurs arguments de vente ?

15)

Etes-vous soumis à des normes ou avantages (ex : subventions) relatives aux pratiques écologiques dans votre profession ? (Si non) En avez la possibilité ?

16)

Vos normes d'hygiène (ou autres normes) entre-t-elles en contradiction avec des pratiques qui vous sembleraient plus écologiques ?

17)

A votre avis, pourriez-vous améliorer vos service en adoptant des pratiques plus écologiques et/ou en utilisant des produits et équipements plus écologiques (produits et matériel peuvent être considérés écologiques pour leurs caractéristiques mais également pour leur processus écologique de fabrication par les fournisseurs) ?

18)

A votre avis, certaines pratiques dites « écologiques » entrent-elles en contradiction les unes avec les autres (ex : utiliser du jetable contre nettoyer et stériliser du matériel) ?

Appendix 4: Customer questionnaires – Massage centre
Similar to Hair dresser

<p>Bonjour, dans le cadre d'une étude universitaire, nous souhaiterions connaître votre rapport à l'environnement.</p> <p>Merci de remplir ce rapide questionnaire en toute sincérité (les résultats sont anonymes)</p>						
<p>Veuillez cocher la case correspondante à votre opinion, de 1 à 5, comme indiqué ci-dessous:</p> <p>1: Pas important 2: Peu important 3: moyennement Important 4: Important 5: Très important</p>						
Q1	En général, quelle importance a l'écologie: - dans votre vie de tous les jours?	1	2	3	4	5
Q2	- dans vos habitudes de consommation?	1	2	3	4	5
Q3	- lorsque vous consommez des services?	1	2	3	4	5
Q4	- lorsque vous rendez visite à votre masseur?	1	2	3	4	5
<p>Q5 Avez-vous remarqué un caractère écologique chez votre masseur, concernant:</p> <p>- Les locaux (installations, chauffage ou éclairage)? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>- Les équipements de soins? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>- Les produits utilisés lors des soins de massage? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>- Son comportement (ex: économie d'eau ou recyclage)? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>- Le comportement de l'administration (ex: économie de papier)? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>Q6 Souhaiteriez-vous un service plus favorable à l'environnement? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p>						
<p>Q7 Comment pensez-vous que votre masseur puisse agir plus favorablement à l'environnement?</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>						
<p>Q8 Prenez-vous en compte des critères environnementaux dans le choix de votre masseur? <input type="checkbox"/> Oui <input type="checkbox"/> Non</p> <p>Q9 Si vous aviez le choix, décideriez vous de rendre visite à un masseur qui propose des pratiques plus écologiques? <input type="checkbox"/> Oui <input type="checkbox"/> Non</p>						
<p>Cochez la case correspondant à votre opinion, de 1 (Pas du tout d'accord) à 10 (Tout à fait d'accord)</p>						
<p>Q10 Il est important pour moi que mon masseur fasse tout son possible pour préserver l'environnement:</p> <p>Pas du tout d'accord 1 2 3 4 5 6 7 8 9 10 Tout à fait d'accord</p> <div style="border: 1px solid black; width: 100%; height: 15px; display: flex; justify-content: space-between;"> 12345678910 </div>						
<p>L'environnement est aussi important que l'efficacité de mon masseur:</p> <p>Q11 Pas du tout d'accord 1 2 3 4 5 6 7 8 9 10 Tout à fait d'accord</p> <div style="border: 1px solid black; width: 100%; height: 15px; display: flex; justify-content: space-between;"> 12345678910 </div>						
<p>Q12 Vous vous situez entre <input type="checkbox"/> 12 et 20 ans <input type="checkbox"/> 21 et 30 ans <input type="checkbox"/> 31 et 40 ans</p> <p><input type="checkbox"/> 41 et 50 ans <input type="checkbox"/> 51 et 60 ans <input type="checkbox"/> 61ans et plus</p>						
<p>Sincères remerciements pour votre participation.</p>						

Appendix 5: Customer questionnaires – Dentist
Similar to Chiroprapist and Physiotherapist

<p>Bonjour, dans le cadre d'une étude universitaire, nous souhaiterions connaître votre rapport à l'environnement.</p> <p>Merci de remplir ce rapide questionnaire en toute sincérité (les résultats sont anonymes)</p>						
<p>Veuillez cocher la case correspondante à votre opinion, de 1 à 5, comme indiqué ci-dessous:</p> <p>1: Pas important 2: Peu important 3: Moyennement important 4: Important 5: Très important</p>						
Q1	En général, quelle importance a l'écologie: - dans votre vie de tous les jours?	1	2	3	4	5
Q2	- dans vos habitudes de consommation?	1	2	3	4	5
Q3	- lorsque vous consommez des services?	1	2	3	4	5
Q4	- lorsque vous rendez visite à votre dentiste?	1	2	3	4	5
<p>Q5 Avez-vous remarqué un caractère écologique chez votre dentiste, concernant:</p> <p>- Les locaux (installations, chauffage ou éclairage)? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>- Les équipements de soins? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>- Les produits utilisés lors des soins? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>- Son comportement (ex: économie d'eau ou recyclage)? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>- Le comportement de l'administration (ex: économie de papier)? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p> <p>Q6 Souhaiteriez-vous un service plus favorable à l'environnement? <input type="checkbox"/> Oui <input type="checkbox"/> Non <input type="checkbox"/> Indifférent</p>						
<p>Q7 Comment pensez-vous que votre dentiste puisse agir plus favorablement à l'environnement?</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>						
<p>Q8 Prenez-vous en compte des critères environnementaux dans le choix de votre dentiste? <input type="checkbox"/> Oui <input type="checkbox"/> Non</p> <p>Si vous aviez le choix, décideriez vous de rendre visite à un dentiste</p> <p>Q9 qui propose des pratiques plus écologiques? <input type="checkbox"/> Oui <input type="checkbox"/> Non</p>						
<p>Cochez la case correspondant à votre opinion, de 1 (Pas du tout d'accord) à 10 (Tout à fait d'accord)</p>						
<p>Q10 Il est important pour moi que mon dentiste fasse tout son possible pour préserver l'environnement:</p> <p>Pas du tout d'accord 1 2 3 4 5 6 7 8 9 10 Tout à fait d'accord</p> <div style="border: 1px solid black; width: 100%; height: 15px; display: flex; justify-content: space-between;"> 12345678910 </div>						
<p>L'environnement est aussi important que les capacités de mon dentiste à me soigner :</p> <p>Q11 Pas du tout d'accord 1 2 3 4 5 6 7 8 9 10 Tout à fait d'accord</p> <div style="border: 1px solid black; width: 100%; height: 15px; display: flex; justify-content: space-between;"> 12345678910 </div>						
<p>Q12 Vous vous situez entre <input type="checkbox"/> 12 et 20 ans <input type="checkbox"/> 21 et 30 ans <input type="checkbox"/> 31 et 40 ans</p> <p><input type="checkbox"/> 41 et 50 ans <input type="checkbox"/> 51 et 60 ans <input type="checkbox"/> 61ans et plus</p>						
<p>Sincères remerciements pour votre participation!</p>						

Appendix 6: Customer questionnaires – Hospital

<p>Bonjour, dans le cadre d'une étude universitaire, nous souhaiterions connaître votre rapport à l'environnement.</p> <p>Merci de remplir ce rapide questionnaire en toute sincérité (les résultats sont anonymes)</p>														
<p>Veillez cocher la case correspondante à votre opinion, de 1 à 5, comme indiqué ci-dessous:</p> <p>1: Pas important 2: Peu important 3: Moyennement important 4: Important 5: Très important</p>														
Q1	En général, quelle importance a l'écologie: - dans votre vie de tous les jours?	1	2	3	4	5								
Q2	- dans vos habitudes de consommation?	1	2	3	4	5								
Q3	- lorsque vous consommez des services?	1	2	3	4	5								
Q4	- lors d'un traitement ou d'un séjour à l'hôpital?	1	2	3	4	5								
Q5	Avez-vous remarqué un caractère écologique dans votre hôpital, concernant:													
	- Les locaux (installations, chauffage ou éclairage)?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non	<input type="checkbox"/>	Indifférent							
	- Les équipements de soins (en chambre ou en chirurgie)?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non	<input type="checkbox"/>	Indifférent							
	- Les produits utilisés lors des soins ou du nettoyage des locaux?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non	<input type="checkbox"/>	Indifférent							
	- La literie et le lavage de draps et serviettes?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non	<input type="checkbox"/>	Indifférent							
	- Le comportement du personnel (ex: économie d'eau ou recyclage)?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non	<input type="checkbox"/>	Indifférent							
	- Le service et le contenu des repas?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non	<input type="checkbox"/>	Indifférent							
	- Le comportement de l'administration (ex: économie de papier)?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non	<input type="checkbox"/>	Indifférent							
Q6	Souhaiteriez-vous un service hospitalier plus favorable à l'environnement?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non	<input type="checkbox"/>	Indifférent							
Q7	Comment pensez-vous que votre hôpital puisse agir plus favorablement à l'environnement?													
	<input style="width: 100%; height: 20px;" type="text"/>													
Q8	Prenez-vous en compte des critères environnementaux dans le choix de votre hôpital?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non									
Q9	Si vous aviez le choix, décideriez vous de séjourner et de vous faire traiter dans un hôpital qui propose des pratiques plus écologiques?	<input type="checkbox"/>	Oui	<input type="checkbox"/>	Non									
<p>Cochez la case correspondant à votre opinion, de 1 (Pas du tout d'accord) à 10 (Tout à fait d'accord)</p>														
Q10	Il est important pour moi que mon hôpital fasse tout son possible pour préserver l'environnement:													
	Pas du tout d'accord	1	2	3	4	5	6	7	8	9	10	Tout à fait d'accord		
	L'environnement est aussi important que les capacités de mon hôpital à me soigner :													
Q11	Pas du tout d'accord	1	2	3	4	5	6	7	8	9	10	Tout à fait d'accord		
Q12	Vous vous situez entre		<input type="checkbox"/>	12 et 20 ans	<input type="checkbox"/>	21 et 30 ans	<input type="checkbox"/>	31 et 40 ans	<input type="checkbox"/>	41 et 50 ans	<input type="checkbox"/>	51 et 60 ans	<input type="checkbox"/>	61 ans et plus
<p><u>Sincères remerciements pour votre participation.</u></p>														

Appendix 7: Telephone survey transcript – Massage centre

Question	Respondent' answer
Q1	Pas particulièrement
Q2	Il s'agit de locaux aux normes en vigueur
Q3	Nous utilisons peu de matériel, notre « outil » de travail, ce sont nos clients...
Q4	Il s'agit d'huiles végétales bio
Q5	Oui
Q6	Nous avons la mauvaise habitude de privilégier le côté pratique à l'aspect écologique.
Q7	Oui, ce sont des produits à vocation écologique.
Q8	Un comportement décent nous suffit...
Q9	Je m'y efforce.
Q10	Ce n'est pas leur 1 ^{ère} préoccupation, mais certains clients y sont sensibles.
Q11	Aucune idée
Q12	Non
Q13	Non plus.
Q14	Oui, au niveau de la fabrication des huiles et crèmes de massage.
Q15	Non.
Q16	Non.
Q17	Nous pourrions éviter les équipements jetables (lingettes, protège table et appui tête...)
Q18	Oui, comme je vien de le mentionner

Appendix 8: Telephone survey transcript – Hair dresser

Question	Respondent' answer
Q1	Pas toujours.
Q2	Ce sont d'anciens locaux aux normes de l'époque.
Q3	Je ne pense pas.
Q4	Produits L'Oréal exclusivement (J'espère que cette maison de réputation s'en occupe sérieusement).
Q5	Nous utilisons des microfibrilles avec de l'eau et peu de détergent.
Q6	Le recyclage des produits se fait dans les poubelles communales au même titre que les autres citoyens. Je refèrme systématiquement les tubes de colorants vides. Les cheveux sont jetés dans la poubelle classique. (Je ne sais pas si c'est bon).
Q7	Pas particulièrement
Q8	Non.
Q9	Pas vraiment.
Q10	Peu.
Q11	Certainement, s'ils y sont sensibles.
Q12	La clientèle très "écologique" à cela y sera sensible, si le concurrent communique à ce sujet.
Q13	Pas encor assez.
Q14	Parfois, tel que la gamme récente "PURE, soins et shampoins" de L'Oréal.
Q15	Non.
Q16	Par exemple, les serviettes en tissu à laver systématiquement après utilisation, consommant de l'eau, de l'électricité et de la lessive. Des serviettes jetables doivent arriver, mais est-ce mieux? Autre exemple, les lingettes désinfectantes mises à la poubelle en grand nombre après désinfection systématique du petit outillage (peignes, ciseaux, rasoirs)
Q17	Oui, en évitant de laisser couler l'eau pour rien et en utilisant seulement la quantité nécessaire de produits.
Q18	Oui, comme les serviettes jetables, vaut-il mieux les laver?

Appendix 9: Telephone survey transcript – Dentist

Question	Respondent' answer
Q1	Pas particulièrement.
Q2	Non.
Q3	Non.
Q4	Tout en devant se soumettre à des normes d'hygiène drastiques, on élimine de plus en plus les produits toxiques pour des produits dits plus écologiques.
Q5	Oui, notre recherche d'achat de produits va dans ce sens.
Q6	On essaye dans la mesure du possible d'avoir une attitude écologique comme par exemple la récupération de produits toxiques comme le mercure, le recyclage des papiers et le tri sélectif. Nous essayons de consommer le moins d'énergie possible.
Q7	Oui. Nous faisons de notre mieux.
Q8	Pas vraiment.
Q9	Oui.
Q10	Non.
Q11	Je ne sais pas.
Q12	Non.
Q13	Certains.
Q14	Parfois mais ça n'est pas leur principal argument.
Q15	Oui en ce qui concerne le recyclage de produits toxiques par exemple.
Q16	Oui, notamment dans l'utilisation de plus en plus importante du matériel jetable.
Q17	Je ne pense pas que cela améliorerait mes services de soins dentaires mais il est évident qu'il faut réfléchir plus à l'impact écologique de nos produits et matériels utilisés.
Q18	Bien sûr, il y a beaucoup de contradictions car c'est la technique et les normes imposées qui priment avant tout et qu'il n'y a pas eu de réflexions approfondies à ce jour.

Appendix 10: Telephone survey transcript – Chiroprapist

Question	Respondent' answer
Q1	Pas favorablement.
Q2	Non.
Q3	Non.
Q4	Non.
Q5	En partie.
Q6	Non.
Q7	Oui. Nous faisons de notre mieux.
Q8	Oui, quand je le peux. C'est le cas du domaine administratif où il est beaucoup plus facile d' être écologique (économie des matériaux et choix des produits).
Q9	Oui, dans l'attitude et leur façon de voir les choses. Mais souvent, ils ne sont pas du tout sensibles à l'écologie quant à mes services. Je pense que l'on est au début de l'écologie et que l'on ne se pose pas les questions dans tous les domaines du quotidien.
Q10	Oui mais je suis dans un secteur où l'écologie n'a pas une place prépondérante .J'entends par là le souci pour nos fournisseurs dans le domaine de l'aseptisation (soins et désinfection des locaux et du matériel) ou dans le domaine de la performance (matériaux des semelles et perfectionnement du matériel). Par contre, je suis attentif aux nouveaux procédés moins polluants, éventuellement le recyclable.
Q11	Non.
Q12	Je ne sais pas.
Q13	Non.
Q14	Non.
Q15	Non.
Q16	Non.
Q17	Oui, les normes sont principalement orientées sur l'efficacité de la désinfection face aux virus, bactéries etc. mais beaucoup moins sur la dangerosité des produits. Pour preuve il est souvent indiqué sur les produits de ne pas les déverser dans la nature, mais rien sur la biodégradabilité !!!
Q18	Oui, si les fournisseurs jouent le jeu. Bien sûr, il est tjrs possible de limiter sa consommation de produit ou d'eau. Mais l'asepsie avec des produits « bio » pour le moment n'entrent pas dans les normes. Si cela devient le cas je le ferai sans hésiter.

Appendix 11: Telephone survey transcript – Physiotherapist

Question	Respondent' answer
Q1	Non.
Q2	Pas du tout, la toiture est encor a base d'amiante et doit être remise aux normes dans un future proche.
Q3	Non.
Q4	Non.
Q5	Non.
Q6	Nous essayons d'utiliser des crèmes de massage sans Parabène et des crèmes aux huiles essentielles, mais qui sont plus chères à l'achat, donc les collègues ne sont pas toujours d'accord.
Q7	Non.
Q8	Non.
Q9	Nous y portons peu d'intérêt. Ce qui importe, c'est le coût.
Q10	Pas vraiment, mais les huiles essentielles ont l'air d'intéresser un peu plus la clientèle féminine.
Q11	Aucune idée
Q12	Aucune idée, mais franchement, je pense qu'ils s'en fichent
Q13	Non.
Q14	Les ventes de matériel se font souvent par catalogue ou bien par téléphone. Je ne sais pas s'ils font référence à l'écologie dans leurs arguments. Je n'ai jamais fait attention. Mais pour les collègues, le prix est le plus important.
Q15	Non.
Q16	Ce sont des normes d'hygiène de tout un chacun. Ce n'est pas un hôpital avec un protocole particulier. La femme de ménage fait son ménage normal avec un peu de produit à l'eau de javel, c'est tout.
Q17	Certainement, en faisant attention aux produits employés et à leur composants.
Q18	Oui, mais nous ne stérilisons pas de matériel. Nous avons des gants à usage unique mais n'en utilisons pas beaucoup, ainsi que quelques masques pour nous protéger des microbes si les patients sont malade (ex: bronchite). De plus, nos appareils portables fonctionnent à piles rechargeables, mais plus dans un soucis d'économie que d'écologie. C'est affreux, je m'en rend compte au fil de cette conversation.

Appendix 12: Telephone survey transcript – Hospital

The survey took place with each of the four contact persons in the hospital. This transcript groups all the answers.

Question	Respondent' answer
Q1	En partie. En évitant le gaspillage, en respectant le tri des déchets et le dosage des produits.
Q1b	Oui, en équipant les locaux de double vitrage, en modérant la température des locaux l'hiver, en incitant tout le personnel à ne pas gaspiller dans tout les domaines
Q2	Non.
Q3	Non.
Q4	Non.
Q5	Non.
Q5b	Nous utilisons des lessives puissantes (normes), non écologiques, mais nous maitrisons les quantités. On évite de faire "tourner" des machines non remplies.
Q5c	La chaine de livraison des repas est se fait par liaisons froides et le passage par une cuisine centrale. Cela nécessite plus de transport. De plus nous utilisons des parquettes en matières plastiques en grosse quantité qui ne sont pas réutilisables.
Q6	Pas dans le choix des produits qui doivent rester efficaces en hygiène et éviter les propagations de germes. Nous recyclons en partie certains matériaux t nous disposons d'outils de dosage de produits qui évite le gaspillage.
Q7	En partie. Nous dosons les produits et évaluons les quantités d'eau, de produits, de « chiffonettes » etc. pour éviter les gaspillage. Les « chiffonettes » et frange de nettoyage sont lavables.
Q8	Pas vraiment.
Q9	Oui, mais dans notre métier, il nous faut privilégier l'hygiène, l'ergonomie et le temps de travail. Il faut éviter les infections nosocomiales avant tout.
Q10	Très peu.
Q11	Aucune idée.
Q12	Apparemment non.
Q13	Je n'ai jamais entendu cet argument venant de leur part.
Q14	Rarement. L'argument reste l'hygiène, le coût et l'ergonomie.
Q15	Quelques unes, comme pour des nouveaux projets, mais nous ne les utilisons pas toujours
Q16	En partie seulement. Les produits peuvent-ils être moins agressifs? Le choix est aussi budgétaire
Q17	Oui certainement au niveau du matériel de nettoyage et du mobilier
Q18	Oui. Mais en milieu hospitalier, il faut protéger les patients avant tout contre les contaminations

Appendix 13: Cumulated customer survey answers – Massage centre

Please give your opinion on a scale from 1 to 5 as indicated below:													
1: Not important 2: Not very important 3: Fairly important 4: Important 5: Very important						Mean							
Q1	In general, how important is ecology	1	2	3	4	5							
	- In your everyday-life?			3	17		3,85						
Q2	- In your consumption habits?	1	2	3	4	5							
				5	15		3,75						
Q3	- When you consume services?	1	2	3	4	5							
			2	8	10		3,40						
Q4	- When you visit your massage center?	1	2	3	4	5							
			3	11	4	2	3,25						
Q5	Have you noticed an ecological characteristic at your massage center concerning:												
	- Facilities (installations, heating or lighting)?	8 Yes	12 No	0 Indifferent									
	- Treatment equipment?	4 Yes	16 No	0 Indifferent									
	- Treatment products?	14 Yes	6 No	0 Indifferent									
	- Their behaviour (e.g. water saving or recycling)?	6 Yes	8 No	6 Indifferent									
	- Administration's behaviour (e.g. paper saving)?	2 Yes	8 No	10 Indifferent									
Q6	Would you prefer a more environmentally friendly service?	16 Yes	3 No	4 Indifferent									
Q7	How do you think your massage centre could deliver a more environmentally friendly service?												
	<input type="text"/>												
Q8	- Do you take environmental criteria into consideration when choosing your massage centre?			6 Yes	14 No								
Q9	- If you had the choice, would you visit a massage centre offering more environmentally friendly practices in their service delivery?			18 Yes	2 No								
Please indicate your degree of agreement on a scale from one (totally disagree) to ten (totally agree):													
Q10	It is important for me that my massage centre does everything possible to protect the environment:						Mean						
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	
							2	8	4	3	3		7,85
Q11	The environment is as important to me as the competencies of my massage centre:												
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	
					1	1	7	8	1		2		6,75
Q12	You are between:	<input type="checkbox"/> 12 and 20 year old	<input checked="" type="checkbox"/> 6 21 and 30 years old	<input checked="" type="checkbox"/> 3 31 and 40 years old					Mediane				
		<input checked="" type="checkbox"/> 7 41 and 50 years old	<input checked="" type="checkbox"/> 4 51 and 60 years old	<input type="checkbox"/> 61 years old and more					41-50				

Appendix 14: Cumulated customer survey answers – Hair dresser

Please give your opinion on a scale from 1 to 5 as indicated below:													
		1: Not important	2: Not very important	3: fairly important	4: Important	5: Very important							
							Mean						
Q1	In general, how important is ecology - In your everyday-life?	1	2	3	4	5	3,90						
		1	1		15	3							
Q2	- In your consumption habits?	1	2	3	4	5	3,70						
			1	6	11	2							
Q3	- When you consume services?	1	2	3	4	5	3,40						
			3	7	9	1							
Q4	- When you visit your hair dresser?	1	2	3	4	5	3,10						
		1	4	9	4	2							
Q5	Have you noticed an ecological characteristic at your hair dresser concerning:												
	- Facilities (installations, heating or lighting)?	7	Yes	9	No	4	Indifferent						
	- Treatment equipment?	9	Yes	7	No	4	Indifferent						
	- Treatment products?	6	Yes	12	No	2	Indifferent						
	- Their behaviour (e.g. water saving or recycling)?	11	Yes	6	No	3	Indifferent						
	- Administration's behaviour (e.g. paper saving)?	5	Yes	6	No	9	Indifferent						
Q6	Would you prefer a more environmentally friendly service?	11	Yes	4	No	5	Indifferent						
Q7	How do you think your hair dresser could deliver a more environmentally friendly service?												
	<input type="text"/>												
Q8	- Do you take environmental criteria into consideration when choosing your hair dresser?			6	Yes	14	No						
Q9	- If you had the choice, would you visit a hair dresser offering more environmentally friendly practices in their service delivery?			9	Yes	11	No						
	Please indicate your degree of agreement on a scale from one (totally disagree) to ten (totally agree):												
Q10	It is important for me that my hair dresser does everything possible to protect the environment:						Mean						
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	8,25
					1	2	1	1	5	2	8		
Q11	The environment is as important to me as the competencies of my hair dresser:												
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	6,40
		1	1	2	1	3	2	2	3		5		
Q12	You are between:	<input type="checkbox"/>	12 and 20 year old	<input type="checkbox"/>	2	21 and 30 years old	<input type="checkbox"/>	3	31 and 40 years old				Mediane
		<input type="checkbox"/>	4	41 and 50 years old	<input type="checkbox"/>	7	51 and 60 years old	<input type="checkbox"/>	4	61 years old and more			51-60

Appendix 15: Cumulated customer survey answers – Dentist

Please give your opinion on a scale from 1 to 5 as indicated below:													
		1: Not important	2: Not very important	3: Fairly important	4: Important	5: Very important							
							Mean						
Q1	In general, how important is ecology - In your everyday-life?	1	2	3	4	5	4,25						
Q2	- In your consumption habits?	1	2	3	4	5	4,00						
Q3	- When you consume services?	1	2	3	4	5	3,75						
Q4	- When you visit your dentist?	1	2	3	4	5	3,50						
Q5	Have you noticed an ecological characteristic at your dentist concerning:												
	- Facilities (installations, heating or lighting)?	10 Yes	6 No	4 Indifferent									
	- Treatment equipment?	6 Yes	6 No	8 Indifferent									
	- Treatment products?	5 Yes	6 No	9 Indifferent									
	- Their behaviour (e.g. water saving or recycling)?	6 Yes	7 No	7 Indifferent									
	- Administration's behaviour (e.g. paper saving)?	4 Yes	6 No	10 Indifferent									
Q6	Would you prefer a more environmentally friendly service?	11 Yes	3 No	6 Indifferent									
Q7	How do you think your dentist could deliver a more environmentally friendly service?												
	<input type="text"/>												
Q8	- Do you take environmental criteria into consideration when choosing your dentist?			6 Yes	14 No								
Q9	- If you had the choice, would you visit a dentist offering more environmentally friendly practices in their service delivery?			9 Yes	11 No								
Please indicate your degree of agreement on a scale from one (totally disagree) to ten (totally agree):													
Q10	It is important for me that my dentist does everything possible to protect the environment:												
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	
				1	1	2	2	2	3	2	7		7,75
Q11	The environment is as important to me as the ability of my dentist to treat me:												
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	
			2	2	4	1	1	3	1	2	4		6,20
Q12	You are between:	1 12 and 20 year old	3 21 and 30 years old	5 31 and 40 years old				Mediane					
		5 41 and 50 years old	3 51 and 60 years old	3 61 years old and more				41-50					

Appendix 16: Cumulated customer survey answers – Chiropodist

Please give your opinion on a scale from 1 to 5 as indicated below:													
1: Not important 2: Not very important 3: Fairly important 4: Important 5: Very important													
						Mean							
Q1	In general, how important is ecology - In your everyday-life?	1	2	3	4	5	3,80						
			3	2	11	4							
Q2	- In your consumption habits?	1	2	3	4	5	3,45						
			3	6	10	1							
Q3	- When you consume services?	1	2	3	4	5	3,30						
		1	4	6	6	3							
Q4	- When you visit your chiropodist?	1	2	3	4	5	3,10						
		2	6	3	6	3							
Q5	Have you noticed an ecological characteristic at your chiropodist concerning:												
	- Facilities (installations, heating or lighting)?	8	Yes	9	No	3	Indifferent						
	- Treatment equipment?	7	Yes	10	No	3	Indifferent						
	- Treatment products?	7	Yes	9	No	4	Indifferent						
	- Their behaviour (e.g. water saving or recycling)?	9	Yes	8	No	3	Indifferent						
	- Administration's behaviour (e.g. paper saving)?	8	Yes	7	No	5	Indifferent						
Q6	Would you prefer a more environmentally friendly service?	11	Yes	5	No	4	Indifferent						
Q7	How do you think your chiropodist could deliver a more environmentally friendly service? <input type="text"/>												
Q8	- Do you take environmental criteria into consideration when choosing your chiropodist?			3	Yes	17	No						
Q9	- If you had the choice, would you visit a chiropodist offering more environmentally friendly practices in their service delivery?			6	Yes	14	No						
Please indicate your degree of agreement on a scale from one (totally disagree) to ten (totally agree):													
Q10	It is important for me that my chiropodist does everything possible to protect the environment:						Mean						
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	7,55
				2	2	1	1	2	4		8		
Q11	The environment is as important to me as the ability of my chiropodist to treat me:												
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	4,35
		3	3	2	4	1	4		1	1	1		
Q12	You are between:	<input type="checkbox"/>	12 and 20 year old	<input type="checkbox"/>	4	21 and 30 years old	<input type="checkbox"/>	<input type="checkbox"/>	31 and 40 years old				Mediane
		<input type="checkbox"/>	5	41 and 50 years old	<input type="checkbox"/>	6	51 and 60 years old	<input type="checkbox"/>	5	61 years old and more			51-60

Appendix 17: Cumulated customer survey answers – Physiotherapist

Please give your opinion on a scale from 1 to 5 as indicated below:													
1: Not important 2: Not very important 3: Fairly important 4: Important 5: Very important													
						Mean							
Q1	In general, how important is ecology - In your everyday-life?	1	2	3	4	5	3,75						
			2	3	13	2							
Q2	- In your consumption habits?	1	2	3	4	5	3,80						
			2	2	14	2							
Q3	- When you consume services?	1	2	3	4	5	3,35						
		1	4	6	5	4							
Q4	- When you visit your physiotherapist?	1	2	3	4	5	3,40						
		1	5	3	7	4							
Q5	Have you noticed an ecological characteristic at your physiotherapist concerning:												
	- Facilities (installations, heating or lighting)?	7 Yes		8 No		5 Indifferent							
	- Treatment equipment?	8 Yes		6 No		6 Indifferent							
	- Treatment products?	10 Yes		3 No		7 Indifferent							
	- Their behaviour (e.g. water saving or recycling)?	8 Yes		4 No		8 Indifferent							
	- Administration's behaviour (e.g. paper saving)?	11 Yes		2 No		7 Indifferent							
Q6	Would you prefer a more environmentally friendly service?	10 Yes		2 No		8 Indifferent							
Q7	How do you think your physiotherapist could deliver a more environmentally friendly service?												
	<input type="text"/>												
Q8	- Do you take environmental criteria into consideration when choosing your physiotherapist?					4 Yes	16 No						
Q9	- If you had the choice, would you visit a physiotherapist offering more environmentally friendly practices in their service delivery?					3 Yes	17 No						
	Please indicate your degree of agreement on a scale from one (totally disagree) to ten (totally agree):												
Q10	It is important for me that my physiotherapist does everything possible to protect the environment:						Mean						
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	
		1			1	1	2	4	4	3	4		7,45
Q11	The environment is as important to me as the ability of my physiotherapist to treat me:												
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	
		4	4	1	2	2		1		3	3		4,85
Q12	You are between:	<input type="checkbox"/> 12 and 20 year old	<input type="checkbox"/> 21 and 30 years old	<input type="checkbox"/> 31 and 40 years old	<input type="checkbox"/> 41 and 50 years old	<input type="checkbox"/> 51 and 60 years old	<input type="checkbox"/> 61 years old and more	Mediane					
		2	1	5	2	6	6	51-60					

Appendix 18: Cumulated customer survey answers – Hospital

Please give your opinion on a scale from 1 to 5 as indicated below:													
1: Not important 2: Not very important 3: Fairly important 4: Important 5: Very important													
						Mean							
Q1	In general, how important is ecology	1	2	3	4	5							
	- In your everyday-life?			1	16	3	4,10						
Q2	- In your consumption habits?	1	2	3	4	5							
				3	15	2	3,95						
Q3	- When you consume services?	1	2	3	4	5							
			2	12	6		3,20						
Q4	- When you visit your hospital?	1	2	3	4	5							
		3	8	6	2	1	2,50						
Q5	Have you noticed an ecological characteristic at your hospital concerning:												
	- Facilities (installations, heating or lighting)?	6 Yes	11 No	3 Indifferent									
	- Treatment equipment?	4 Yes	14 No	2 Indifferent									
	- Treatment and cleaning products?	2 Yes	15 No	3 Indifferent									
	- Bedding and laundry?	4 Yes	13 No	3 Indifferent									
	- Personnel's behaviour (e.g. water saving or recycling)?	7 Yes	7 No	5 Indifferent									
	- Meals' content and service?	3 Yes	16 No	1 Indifferent									
	- Administration's behaviour (e.g. paper saving)?	3 Yes	12 No	5 Indifferent									
Q6	Would you prefer a more environmentally friendly service?	11 Yes	5 No	4 Indifferent									
Q7	How do you think your hospital could deliver a more environmentally friendly service?												
	<input type="text"/>												
Q8	- Do you take environmental criteria into consideration when choosing your hospital?			3 Yes	17 No								
Q9	- If you had the choice, would you visit a hospital offering more environmentally friendly practices in their service delivery?			9 Yes	11 No								
Please indicate your degree of agreement on a scale from one (totally disagree) to ten (totally agree):													
Q10	It is important for me that my hospital does everything possible to protect the environment:						Mean						
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	
						3	1	6	5	3	2		7,50
Q11	The environment is as important to me as the ability of my hospital to treat me:												
	Totally disagree	1	2	3	4	5	6	7	8	9	10	Totally agree	
		10	2	2	1	3	2						2,55
Q12	You are between:	1 12 and 20 year old	3 21 and 30 years old	5 31 and 40 years old					Mediane				
		5 41 and 50 years old	3 51 and 60 years old	3 61 years old and more						41-50			

Appendix 20: Customers survey Q7 – List of answers

Relevant responses	
Peut être en exigeant des informations auprès des fournisseurs	Hair dresser
Economie d'eau - utilisation de produits non "agressifs"	
Produits employés non toxiques, car rejetés dans les eaux	
Collecte des produits colorants (bouteilles vides)	
En utilisant des produits nature avec des emballages biodégradables	
Produits moins toxiques	
En nous disant quels produits sont utilisés	
En employant des produits plus écologiques pour les locaux	Hospital
Tri des déchets et recyclage	
Conditionnement des repas - chauffage - produits d'entretien	
Préparation des repas et chauffage	
Entretien - emballages	Dentiste
Produits moins polluant	
Matériaux	Massage Centre
Sur les locaux (chauffage, lumière, Isolation...)	
Produits bio	Physiotherapist
Installer le stepper et le vélo avec une génératrice pour l'éclairage et le chauffage	
Less relevant responses	
Oui, à condition que les soins proposés soient identiques	
Je pense qu'il y a déjà des contraintes concernant le cabinet	
Je lui demande d'être un professionnel avant tout	
Certainement, mais serait-ce bon pour nous (ex shampoing "bio")?	
Aucune idée, c'est son problème	
Aucune idée or "?" (8 times)	