An investigation into the viability of Personal Knowledge as a Service (PKaaS) consultancy service provision for a Finnish company

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An investigation into the viability of Personal Knowledge as a Service (PKaaS) consultancy service provision for a Finnish company

Master's thesis of
Darren P Ingram

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Author:
Darren P Ingram
2220343
e-mail: darren@ingram.fi

Supervisor:
Prof. Dr. Hofmann, Georg Rainer

Second supervisor:
Prof. Dr. Aho, Anne-Maria

TH Aschaffenburg
university of applied sciences

TECHNISCHE HOCHSCHULE ASCHAFFENBURG

FACULTY OF BUSINESS AND LAW

WÜRZBURGER STRASSE 45

D-63743 ASCHAFFENBURG

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Abstract

The primary role of this thesis was to conduct preliminary research into the viability of the possible introduction of a Personal Knowledge as a Service (PKaaS) professional service offering by a Finnish company. Examination was made into the theoretical background and literature concerning knowledge firms/professional service firms as well as services, knowledge, KaaS, and branding and marketing to support the thesis and its objectives. Quantitative research was used to canvass opinions towards the proposed offering, examining respondents' own workplace experiences, issues and needs. The research helps determine whether further planning for such a service should be undertaken before a decision for any commercial launch activity is made. The research should also give other indications about the possible service's dimensions, scope and usage. A recommendation is formed concerning possible additional research and development of the proposed service as a route to commercialisation.

Keywords: Consultancy, Knowledge Management, PKaaS, Professional Service Firm, Services

Tiivistelmä

Tämän opinnäytetyön ensisijaisena tehtävänä oli suorittaa alustava tutkimus suomalaisen yrityksen tarjoaman henkilökohtaisen tietämyksen palvelun (PKaaS) mahdollisen käyttöönoton kannattavuudesta. Opinnäytetyön ja sen tavoitteiden tueksi tutkittiin osaamisyrityksiä / ammattimaisia palveluyrityksiä sekä palveluita, tietämystä, KaaS: ta ja brändäystä ja markkinointia koskevaa teoreettista taustaa ja kirjallisuutta. Kvantitatiivisesta tutkimuksesta käytettiin apuna mielipiteiden käsittelyä ehdotettua tarjontaa kohtaan tutkimalla vastaajien omia työkokemuksia, kysymyksiä ja tarpeita. Tutkimus auttaa määrittämään, onko tällaistä palvelua vielä suunniteltava lisää ennen päätöksen tekemistä kaupallisesta lanseerauksesta. Tutkimuksen tulisi antaa myös muita viitteitä palvelun mahdollisista mitoista, laajuudesta ja käytöstä. Työssä laadittiin myös suositus ehdotetun palvelun mahdollisesta lisätutkimuksesta ja kehittämisestä reitiksi kaupallistamiseen.

Avainsanat: Konsultointi, tiedonhallinta, PKaaS, ammattimainen palveluyritys, palvelut

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Abbreviations

B2B	Business to Business
B2C	Business to Consumer
B2G	Business to Government
KaaS	Knowledge as a Service
KIF	Knowledge Intensive Firm
PKaaS	Personal Knowledge as a Service
PKM	Personal Knowledge Management
PSF	Professional Service Firm
SME	Small and Medium-sized Enterprise

1 Introduction

This chapter includes a short background of the research topic, being research into the viability of the possible introduction of a Personal Knowledge as a Service (PKaaS) offering by a Finnish company. It will also examine the purpose of this research, specify the research question and consider broader limitations that affect the research.

1.1 Background

New service development is the ‘process of adding new services to an organisation’s existing services’ (Clow & Stevens, 2009, p. 95) and can be part of an innovation-led development process. The six stages of new service development are idea generation, feasibility analysis, programme development, client tests, test offering and full-scale programme offering.

This thesis concentrates on the feasibility analysis of a previously generated idea and should advise on potential programme development and possible onward progression. A vision or idea already exists, being ‘the ability to see opportunities, and the capability to seize them’ (Aquila & Marcus, 2004, pp. 41-42) and this thesis is the first stage in validating whether the vision can become a reality before possibly developing a business plan and marketing plan to realise the vision further.

The development of new products or services can be complicated and a high-risk. Organisations usually adopt a procedural approach called a New Product Development Process (NPDP) shown in figure 1 that consists of several processes that enable progress to be monitored, trials conducted, and results analysed before any real commitment and launch (Baines et al., 2013, pp. 210-212). The idea under consideration by this thesis has already passed the ‘idea generation' and 'screening' stages of the NPDP and sits within the 'business planning and marketing analysis' stage. It may be said that this thesis will generate a form or outline of an (informal) business plan, or something of substance capable of being transformed into a business plan if the undertaken market analysis reveals a favourable approach to the generated idea.

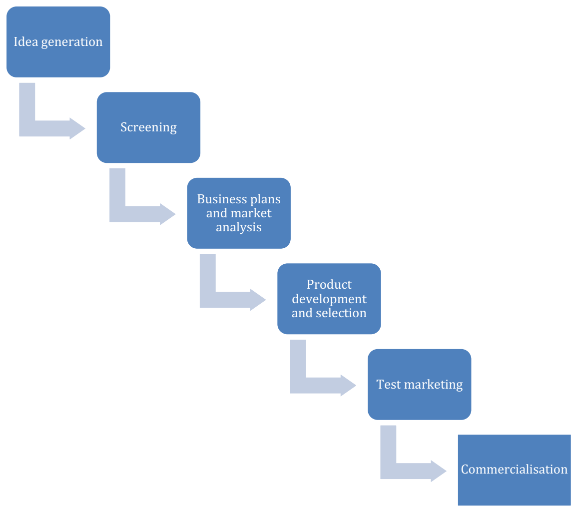

Figure 1. New Product Development Process (Adapted from Baines, Fill & Page (2013, p. 210))

New service development often is gradual, offering incremental innovation to an existing service concept or offering. More aggressive ideas are viewed as radical service innovation, being 'concerned with value creation generated through novel or unusual service concepts […that…] requires new technologies, offerings, or business concepts (Baines et al., 2013, p. 214).

This thesis can be viewed as being part of a blueprinting exercise insofar as the development of a (potential) service is concerned (Blythe & Zimmerman, 2018, p. 194). Even with data gathered from the research element of this thesis, there would be a degree of 'trial and error' with any commercial launch due to customers '[perceiving] higher risks for new services [that] are intangible and un-testable by the purchaser.' (Blythe & Zimmerman, 2018, p. 194). Where possible an element of pre-launch testing would be desirable to enable, with any subsequent launch, a 'start strong' approach to leave a lasting impression in the marketplace and achieve word-of-mouth positive opinion and feedback (Blythe & Zimmerman, 2018, pp. 194-196).

The proposed service would be a small-scale service operator (Baron, 1995, p. 9), being deliberately so, with it being incapable of being scaled significantly upwards as it otherwise takes away the personal part of the proposed service. It relies on a specific personality and their experience, knowledge and insight, and expansion of the providing company could only be made with ancillary support personnel. Another route to expansion may be to have other key consultants who have their own specific personal knowledge and experience that could be marketed under the same branding and service description. However, for this thesis, that scenario will not be considered.

There is potential for this kind of proposed service, at least according to the literature, with De Brentani (1995) saying that the 'customised expert service', being a service that 'leverages the firm's capabilities, but is customised to fit the needs of customers [using E]xpert personnel who can find out from buyers what they require in order to tailor the service to them are crucial to the success of the strategy'.

1.2 Purpose

The purpose of this thesis is to examine, through quantitative research, perceived interest in a Personal Knowledge as a Service (PKaaS) offering that may be launched by a Finnish company. The research would determine whether further planning for such a service should be undertaken before any commercial launch activity. The research should also give other indications about the possible service's dimensions, scope and usage.

The proposed PKaaS offering would allow companies to obtain, by telephone, e-mail or Internet-based video service, on-demand opinion, insight and intelligence about key business activities from an experienced business consultant and entrepreneur. Examples of usage may include advice about marketing, an opinion about a business activity, a contribution to a decision-making process, and gaining insight into a new business area. The proposed service offers companies the benefit and equivalent of having a knowledgeable on-call 'employee' to provide assistance, discuss plans, and assist with day-to-day tasks that may be apparent.

PKaaS as a service offering can be viewed as a marketing wrapper for a solo consultant offering management consulting services on the one hand. However, the service itself would be marketed to have a lower threshold for usage with it being akin to having an expert resource 'on-demand' rather than being retained for a more-extensive assignment programme. PKaaS itself builds on and modifies the concepts of Knowledge as a Service (KaaS) to some part, individualising its concepts and moving the nexus of Knowledge from the database to the individual consultant.

1.3 Research Questions

This study seeks to provide interesting managerial implications and valuable insight by answering the following research questions:

- What is the possible demand for a PKaaS offering?
- What usage may be possible exist for a PKaaS offering?
- How may a PKaaS be developed and enhanced post-launch?

1.4 Limitations

Limitations exist with any research project. The primary limitation with this research is the number of responses to the quantitative research study and the potential accuracy and honesty of participants. Even a positive response will not necessarily translate into latter-day commercial usage.

This thesis and its research component have been carried out during the coronavirus global pandemic. There is a risk that respondents will view the *current* business environment when giving their opinions rather than focussing on ‘normal times’.

It is assessed that such risks are manageable and common to all similar research studies. More details of research limitations are contained within sections 3.1 and 3.2.

2 Theoretical Background

In this chapter, a broad review of the literature is presented, performed to describe the principle concepts and elements that are relied upon within this thesis. The literature review also helped shape the research questions and the underlying quantitative research study.

2.1 Knowledge Firm/Professional Service Firm

Knowledge and information can be gathered and retained by a company (whether a sole trader/entrepreneur or a larger professional service firm such as a consultancy business that retains individual consultants. These Knowledge Intensive Firms (KIFs) are 'firms within which knowledge is the key asset [and] [i]n such firms, different forms of knowledge are capitalised and exchanged' (Creplet et al., 2001), with knowledge coming from 'experiences gained in missions carried out in client firms and from codified sources.'

KIFs see knowledge being most important of inputs to the firm (Starbuck, 1992). KIFs may be better known as Professional Service Firms (PSFs) or consultancies, being firms 'that may be highly successful examples of organisations whose ability to manage knowledge is critical to their success' (Greenwood et al., 2005).

A PSF's primary assets are a 'highly educated (professional) workforce whose outputs are intangible services encoded with complex knowledge' (Greenwood et al., 2005). Starbuck (1992) has considered the role of knowledge within KIFs and reached five conclusions to the definition and role of information within a KIF:

1. A KIF may not be information-intensive (knowledge is a stock of expertise, not a flow of information, and some

activities draw on extensive knowledge without processing large amounts of current information).

2. In deciding whether a firm is knowledge-intensive, one ought to weigh its emphasis on esoteric expertise instead of widely shared knowledge (everybody has knowledge, most of it widely shared, but some idiosyncratic and personal, and every firm has some unusual expertise).
3. Even after excluding widely shared knowledge, one has to decide how broadly to define expertise (one can define expertise broadly, recognize many people as experts and see the expertise embedded in many routines).
4. An expert may not be a professional, and a KIF may not be a professional firm (professionals have a specialized expertise that they gain through training or experience and KIFs may employ people who have specialized expertise).
5. KIFs' knowledge may not be in individual people (beside the knowledge held by individual people, one can find knowledge in capital, routines and cultures, and professional cultures.

Clark and Nixon (2015, pp. 9-13) state that there are ten key characteristics of a PSF:

1. Perishability – PSF consultants' time is perishable and cannot be sold once it has expired.
2. Professional pyramid – different tiers of employee within the (larger) PSF will have different challenges, expectations, uses, and roles within the consultancy and client-side experience.
3. Intellect and challenge – a highly intelligent 'product' for which consultants can be passionate and professional about what they do.
4. Consistency – People are different in the way at a product is not, leading to differences in the consultancy product being delivered by an individual or team that

may need streamlining or 'standardising' to deliver a consistent product.

5. Intangibility – There is no real 'sample' of a consultancy product, other than a minor commission for service provision by a client, so a PSF needs to minimise the client's fear of intangibility and demonstrate expertise and experience and empathise with client requirements.
6. Project risk – in many instances the cost of a PSF's advice in a project is a small fraction of its overall costs, but the cost of getting wrong or bad advice outweighs the fees paid. Helping manage the risks and reassure the client that there is a good, professional fit is important.
7. Client concentration – while all clients are important some may be more strategically or financially important, with it being important to service well all clients regardless of size and financial billing.
8. Switching costs – switching professional advisors has a financial and emotional cost for clients, so ensuring client satisfaction is important and working on making the relationship 'sticky' and switching undesirable is recommended.
9. Purchase complexity – there can be complexity in the purchasing procedure with a client, so understanding a client's business and procurement capabilities is key and that will show if the right people are known to drive the relationship or not.
10. Brand – The PSFs brand is what it stands for and how it is different to everyone else, yet it is not defined in reality by the PSF but by how clients and other key stakeholders see the PSF. The PSF can communicate what it stands for and how it is different, but there is need to understand how others see the PSF and take action to ameliorate any divergence.

Consultants, working for PSFs of all shapes and sizes, are 'transmitters of business techniques and carriers of organisational change methods' (Armbrüster, 2006, p. 2) and can 'obtain knowledge from a wide variety of sources and, potentially, apply experiences gained in other industrial sectors or parts of the world' and delivered to client organisations who are not assumed to not 'have the human resources, analytical skills, and procedural potential' to undertake tasks and assignments (Armbrüster, 2006, p. 3).

Bessant and Rush (1995) consider two knowledge-based roles for consultants, namely: an intermediary one that supports clients' acquisition of knowledge and technological developments, and a capability-building one that supports clients' adoption and implementation of changes. Table 1 shows the various roles of consultants within a PSF that can benefit client businesses, as articulated by Bessant and Rush (1995).

Table 1: Role of consultants (Bessant & Rush, 1995)

User needs	Bridging activity of consultants
Technology	Articulation of specific needs Selection of appropriate options
Skills and human resources	Identification of needs Selection, training, and development
Financial support	Investment appraisal Making a business case
Business and innovation strategy	Identification and development Communications and development
Knowledge about new technology	Education, information, and communication Locating key sources of new knowledge Building linkages with the external knowledge system
Implementation	Project management Managing external resources Training and skill development

A PSF has two particular managerial challenges it faces with its external relations and activities (Greenwood et al., 2005), being namely the need to convince clients of its superior and actual competency, and to employ a highly educated workforce to intricate knowledge to client situations. There is also an interesting shift in hierarchical dynamics with service-led firms since the person at the point of contact with the client is the most important person to the customer, and they reflect the firm's values and attitudes to the customer (Mudie & Cottam, 1999, p. 27).

There are barriers to entry for new PSFs that can pose issues for both firm and client alike. Clients 'cannot judge the expert's advice or reports on substance' (Starbuck, 1992), or sufficient social proof of reputation or status may not be present (Greve & Davis, 2001). Clients may, due to information asymmetry, need to use proxies such as a PSF's employee's education and stated experience, to assess the potential quality of a firm (Hitt et al., 2001). This is, of course, a problem for larger PSFs with multiple employees, but the same issues can exist even for a single person PSF too.

A reluctance or inability to undertake marketing activities (to good effect) is also an issue for many PSFs (Amonini et al., 2010), despite stated desires and wishes to the contrary. Gaining the business of a large external client is often seen as a way of gaining legitimacy and extended relational capital that can be utilised throughout a broader marketplace (Hitt et al., 2006). New firms that 'fail to gain social legitimacy are more liable to weak performance and lower rates of survival' (Jennings et al., 2006), and these firms need to develop reputations for unique services and/or for unique ways of providing services to gain success.

Innovation capability within PSFs can be an important issue, especially for smaller entities who are keen to carve out a boutique niche for themselves. Within knowledge-intensive services, the capability to transform existing knowledge into new (innovative) knowledge is a crucial form of competitive advantage (Watson & Hewett, 2006). Koc (2007) views innovation capability as ‘the continuous improvement of the overall capabilities and resources that the firm possesses to explore and exploit opportunities for developing new products to meet market needs.’ This complements Jensen et al. (2010), who states that managing PSFs is about managing the knowledge embedded in its professionals and that through this management innovation and other positive developments may be made.

For some service providers, however, innovation appears to be a challenge compared to that experienced by B2B product firms, with service providers managing less explicitly for innovation, have lower expectations and favour incremental innovation activities (Biemans & Griffin, 2018).

2.2 Services

A service is essentially an act, a process and a performance, described as economic activities that create ‘added value’ and provide benefits for customers (Gilmore, 2003), yet they cannot be touched or seen in the same manner as goods can. Businesses can market and provide their services to business (B2B), consumer (B2C) and government (B2G) markets, dependent on the intrinsic nature of their services and their applicability to the target market.

Buckley et al. (1992) notes that marketing theorists have generally stated that there are five distinct characteristics of services -- intangibility, inseparability, heterogeneity, perishability, and ownership.

- Intangibility: services do not always consist of physical attributes which can be judged by consumers by sight, taste, smell or touch, but are ‘experiences’ which cannot be clearly assessed prior to consumption.
- Inseparability: many services are supplied and consumed simultaneously.

- Heterogeneity: the production of services is embodied in a company's personnel, so there is, potentially, wide variation in the way and quality of service provision.
- Perishability: some services are perishable, e.g. an airline seat, and cannot be stored.
- Ownership: some services only give the customer the right to use, access or hire the service and does not convey any permanent ownership rights.

Adapted from Buckley et al. (1992)

The marketing literature also uses a variant of the foregoing, omitting 'ownership' from the list to form the acronym IHIP (Moeller, 2010). The effectiveness and universality of these four (or five) characteristics have been challenged as not all services possess all elements and they can even possess high levels of opposite characteristics, e.g. tangibility, homogeneity, separability and durability (McDonald et al., 2011, p. 23). Regardless the foregoing does remain, arguably, a valuable point of consideration for the purposes of service definition, as long as a degree of flexibility is retained (Lovelock & Gummesson, 2004; Vargo & Lusch, 2004).

Kotler (1997) identified four categories to define products and services and that in between, being described in table 2.

Table 2: Kotler's description of products and services (Kotler, 1997)

Pure tangible product	A tangible offer, such as sugar, coal or tea. No services are bought with the product.
A tangible product with accompanying services such as commissioning, training, or maintenance	The offer has built-in services to enhance its customer appeal, e.g. computers, machine tools
A service with accompanying minor goods (or services)	The offer is basically a service but has a product element, e.g. property

	surveyor, whose expert inspection is encapsulated in a report, or airlines offering in-flight meals.
A pure service, where one buys expertise	The offer is a stand-alone service such as psychoanalysis.

Grönroos (1983) describes services as 'objects of transaction offered by firms and institutions that generally offer services, or that consider themselves service organisations', whereas Silvestro et al. (1992) says that there are six service dimensions that a service can be compared against, namely:

1. Does the service have a people focus (e.g. an accountant) or an equipment focus (e.g. an automatic teller machine)?
2. What is the length of customer contact time in a typical service encounter?
3. What is the extent of customisation of the service, i.e. is it tailored to the specific needs of individual clients?
4. To what extent are the customer contact personnel empowered to exercise judgement in meeting customer needs?
5. Is the source of value added mainly 'front office' (e.g. a hairdresser) or 'back office' (e.g. in a bank)?
6. Does the service have a product focus (e.g. a car mechanic) or a process focus (e.g. a higher education course)?

From the foregoing Baron (1995, pp. 15-16) adapted the work of Silvestro et al. (1992) to develop a classification of service categories, as shown in table 3. Here can a prospective or actual service be localised into one of three service processes with their typical volume of customers and individual characteristics. The proposed service under consideration by this thesis would fall within the professional class of service process.

Table 3: Classification of service categories (Baron, 1995, p. 16)

Class of service process	Volume of customers	Characteristics
Professional, e.g. accountant	Low	People focus High contact time High customisation High level of empowerment Front office value added Process focus
Service shop, e.g. bank, hotel	Medium	People and equipment focus Medium contact time Medium customisation Medium level of empowerement Front and back office value added Process and product focus
Mass service, e.g. transport	High	Equipment focus Low contact time Low customisation Low level of empowerment Back office value added Product focus

Lovelock (1983) defined a substantive classification framework that can be used to yield marketing insights, being:

1. What is the nature of the service act?
2. What style of relationship does the service organisation have with its customers?

3. How much room is there for customisation and judgement?
4. What is the nature of supply and demand for the service?
5. How is the service delivered?

Wirtz & Lovelock (2016, p. 61) defines four broad categories of services – people processing, possession processing, mental stimulus processing and information processing – that focus on the type of services being offered. There are many other ways of classifying a service, such as tangibility (Shostack, 1977), customer-employee presence during the service (Bitner, 1992), customisation/empowerment (Lovelock, 1983), and other scholars no doubt have other interpretations and evaluations to offer.

Ng et al. (2007) produced a typology of mass services that provide additional classifications. The distinction between services and goods is not necessarily black and white, depending on the 'extent to which the service is embodied in physical attributes within the overall "package" implicitly based on the degree of tangibility/intangibility of the good or service' (Buckley et al., 1992).

Services need an 'operating and delivery system' to function, being designed to offer effective customer services through an efficient process (Mudie & Cottam, 1999, pp. 44-47), with this service design featuring 11 key factors that may feature:

1. Customer contact – how much contact will the customer have with the service and what will its nature be.
2. Service mix – what service is provided in terms of breadth and depth.
3. Location of service consumption – where will the service be provided.
4. Design of service facility and accessories – how will the facility and all other customer interactions look.

5. Technology – what will the balance be between technology and people and whether it is ‘hard’ or ‘soft’.
6. Employees – how many will be required, what type of employees will be employed, what skills are required and how flexible will working be.
7. Organisation structure – how will the organisation look and how are various functions to be arranged.
8. Information – what information is desirable to run the organisation and how will it be acquired, stored and accessed.
9. Demand and supply management - how much knowledge is there about demand patterns and levels, how may demand be influenced, how flexible is capacity for meeting fluctuation in demand.
10. Procedures – will the service be mainly standardised or customised.
11. Control – what systems are in place and what procedures will ensure the smooth running of the organisation and provision of quality output.

The needs of clients have not stood still either, requiring PSFs to change their business models and recognise that they are ‘no longer in business just to provide technically excellent products and services’ (Clark & Nixon, 2015, p. 1).

> [PSFs] need to go the extra mile to anticipate, understand and deliver commercial solutions to their clients. This has to be done in a manner and style that not only resolves their clients’ challenges, but also delivers a great experience in the process. Clients want relationships with their advisors that cover all points – technical excellence, service provision, and client experience – not just a narrow set defined by the firm’s technical disciplines. They are looking for a partner that cares about business outcomes as much as they do.
>
> (Clark & Nixon, 2015, pp. 1-2)

Indeed, the service user also participates in the production of the service along with the service provider states (Blythe & Zimmerman, 2018, p. 189), making it critical to understand customer expectations throughout the process.

There is a critical degree of trust between B2B service providers and customers as ‘buyers face the complexity of examining many intangible aspects of a service firm’s offering’ (Arnott et al., 2007), along with ‘trust in a partner’s credibility is based on the belief that one’s partner stands by its word, fulfils promised role obligations, and is sincere.’ Trust plays a prominent place within a business relationship of quality, with commitment, satisfaction and service quality being other attributes (Rauyruen et al., 2007), and service providers must ‘pay attention to the quality control of their service delivery systems and put much effort into creating high perceptions of service quality and high satisfaction.’

Relationship value, from the consumer’s perspective, has a positive influence on supplier trust, commitment and satisfaction too (Gil-Saura et al., 2009). Managing expectations and the relationship is essential as there has been a trend for fewer B2B relationships to be held (Ulaga & Eggert, 2006), making it necessary to provide a valuable, trustworthy, flexible and dependable service to one’s clients. As potential clients face the problem of evaluating a service before they purchase and consume it, one way to provide assurance may be to offer satisfaction guarantees as part of their marketing messaging (Ferrell & Hartline, 2013, p. 156)

As the proposed service under evaluation by this thesis would be provided by one person, utilising their knowledge and experience, the issue of service variability being dependent on other third-parties would not be extant, removing the risk of variations in quality and inconsistency (Ferrell & Hartline, 2013, p. 156). However, there is the undoubtable risk that the principal can be sick or otherwise indisposed and thus unable to provide the service as required. This is an unavoidable risk. In other service-based companies, there may be the opportunity to otherwise call in extra staffing resources, whether internally or additional external labour (Blythe & Zimmerman, 2018, p. 189), a feature not available to the proposed service but this is not felt to be a significant restriction.

The nature of the service and that of the company providing it may change over time within the scope of a lifecycle as shown (Forsyth, 2003, p. 41):

- The introductory phase is normally one of heavy investment in researching, creating, developing and testing the service on the one hand; and creating client awareness and acceptance on the other.
- The growth stage involves promotion and ‘distribution’, during which a level of high quality must be maintained, and a reputation established.
- The maturity stage is potentially the most rewarding as revenues and profits reach their peak. Growth slows down as a market demand is saturated and competitors enter the arena. It can also be the most dangerous phase as complacency sets in and conscious observation of market trends subsides.

If nothing is done, the service goes into decline as demand decreases, and competitors introduce more compelling offerings. In extreme cases, the firm can come under severe pressure as it attempts to revamp the service or develop replacements.

The PSF needs to remember that long-established, mature services may remain essentially the same over a long time, even if some details need to change to meet client needs. Besides, new services may need to be developed to meet new client needs, keep out competition and to provide diversification for client and PSF needs. Competition and other external factors such as the national economy may place pressures on all services and the firm-at-large (Forsyth, 2003, p. 43).

Potential competitive pressures that may face the PSF offering a PKaaS are outside of the scope of this thesis.

2.3 Knowledge

Defining knowledge may be a complicated and philosophical question. For this thesis, the focus is on knowledge within a business-related context.

Knowledge is, according to Chew (2011), paraphrasing Fahey & Prusak (Fahey & Prusak, 1998), 'information combined with experience, context, interpretation, reflection, intuition and creativity' and information 'becomes knowledge once it is processed in the mind of an individual. This knowledge then becomes information again once it is articulated or communicated to others in the form of text, computer output, spoken, or written words or other means.'

Wang & Noe (2010) define knowledge as 'information processed by individuals including ideas, facts, expertise, and judgments relevant for individual, team, and organisational performance.' Alavi & Leidner (2001) consider knowledge is information 'processed in the mind of individuals, and knowledge becomes information once it is articulated and presented in the form of text, graphics, words, or other symbolic forms'.

The terms knowledge and information may be used interchangeably in common parlance, even if some scholars, e.g. David & Foray (2002) disagree, stating that knowledge 'empowers its possessors with the capacity for intellectual or manual action' while information 'takes the shape of structured and formatted data-sets that remain passive and inert until used by those with the knowledge needed to interpret and process them.' Knowledge can be more subtle and harder to transfer than mere units of information. Unlike information 'knowledge may be tacit (i.e., not codified), highly context specific, and may require specific capabilities in order to be absorbed.' (Fritsch & Kauffeld-Monz, 2010). Nonaka (1994) states that there are two dimensions of knowledge (contextualized within organizations), being tacit (knowledge with a personal quality that is hard to formalize and communicate) and explicit (knowledge transmittable in formal, systematic language).

Knowledge is a scarce resource or commodity that can have value (Drucker & Wartzman, 2010, p. 139), both to the owner and also to those who seek to acquire it. An individual knowledge worker is characterized by a high degree of personal knowledge, possessing both formal and applied knowledge that is shown in the form of 'knowledge capital' that is developed and acquired throughout their professional life through a 'constant, ongoing process of learning new knowledge and applying it as part of daily work' (Ju & Shen, 2010).

Knowledge held by an individual knowledge worker is not necessarily perishable. It can be repeatedly used, repurposed and utilised as a service to external parties, being offered as a commodity at variance to traditional knowledge supply routes such as consultancy, as provided through PSFs and freelance providers alike. The commoditised knowledge would be offered as a service, offered either in-person through a physical meeting or virtually through various online services such as videoconferencing, email or telephone. The difference to a traditional consultancy arrangement is that the knowledge worker can be treated effectively as an employee-at-will, being asked for specific information input, evaluation and response to presented information, opinion, assessment and more.

There may be issues related to knowledge management by clients whose expectations have not been managed as 'clients are frequently unaware of how much time it takes to collect data, analyse them and formulate remedies' (Armbrüster, 2006, p. 165). Gathered information and data may be ambiguous, and solutions not immediately apparent, so formulated approaches must be compared to other models and possibilities before a knowledge-led conclusion may be presented to the client (Armbrüster, 2006, p. 165).

Organisations, however, may acknowledge that knowledge is an asset to be captured and managed, with a view of enhancing its innovation and corporate performance (López-Nicolás & Meroño-Cerdán, 2011; Zheng et al., 2010), suggesting that a degree of openness to additional sources of information is present. Knowledge management is used within organisations, being split into the four elements of knowledge creation and/or acquisition (Alavi & Leidner, 2001), knowledge storage (Massa & Testa, 2011), knowledge sharing and distribution (Massa & Testa, 2011), and knowledge utilisation (Gharakhani & Mousakhani, 2012).

2.4 KaaS

Knowledge as a Service is already an established paradigm within computing circles, offered as a knowledge service provider through a hosted knowledge server that answers queries posed by a knowledge consumer (or user) (Xu & Zhang, 2005).

KaasS was envisaged to be based on 'knowledge typically extracted from large volumes of data owned and maintained by different parties' (Xu & Zhang, 2005). Collaborative Knowledge as a Service (CKaaS) is also located within the computing realm, being a 'generic architecture that integrates disparate cloud knowledge through collaboration among distributed KaaS entities with the goal of satisfying consumer knowledge needs' (Grolinger et al., 2015). Other variants on the theme include Wisdom as a Service (WaaS), being a multi-level 'open intelligent IT architecture and oriented to the contents of IT applications, i.e., big data [that is] independent of cloud computing and focuses on the DIKW (the data, information, knowledge, and wisdom) organisation and transformation to realise wisdom from big data.' (Chen et al., 2016, p. 158). As a hierarchy shown in table 4, DIKW describes the information assets available for integration into any knowledge management or managed service, whether automated or a manual process.

Table 4: DIKW hierarchy descriptions (modified from Kortelainen, Happonen & Hanski (2019))

DIKW hierarchy	Description
Data	Saved facts, i.e. values and observations about selected variables
Information	Data transferred to a form that is meaningful and useful to a human
Knowledge	Ability to interpret trends or other signs and to recognise when actions are needed
Wisdom	Ability to recognise relevant options in the current situation and to compare those as pros and cons with a skill set to utilize tools to make optimal decisions

KaaS has also been referenced in more general knowledge texts as being ‘where knowledge is available on-demand, from a remote expert with scarce expertise’ (do Rosário Cabrita et al., 2011, p. 75). This knowledge is tradeable, based on IT platforms, that provides to ‘trade disembodied knowledge as a service’ (Antonelli, 2019, p. 82) as a benefit for knowledge-intensive businesses (Antonelli, 2019, p. 117).

Chew (2011) notes that two types of knowledge can be transmitted – explicit knowledge (codified information that can be transmitted between individuals both formally and systematically) and tacit knowledge (highly personalised and harder to formalise). Acknowledging that explicit knowledge can be transmitted through an online KaaS platform. Chew (2011) notes that tacit knowledge transfer is to be usually transferred by a face-to-face interface, such as professional consulting or by telephone; in today’s society, an online platform may be used to communicate the tacit knowledge personally rather than it being something accessed online from an online database or service, such as share prices or an online research database.

For the proposed service being investigated by this thesis, there would be an element of resource repurposing, with the server or ‘cloud’ resource being the (human-orientated) specialist knowledge service provider and the data being personal knowledge in general that can be provided, researched or acquired at-will, marketed under the PKaaS (Personal Knowledge as a Service) label -- in other words, acting as the human equivalent of a computer node within a broader KaaS environment, being able to utilize and dispense on-demand personal knowledge, insight and opinion that is subject to personal knowledge management (PKM).

This PKM ‘assumes that individuals have developed a self-awareness of their limits and abilities, i.e. what they know and what they can do’ and ‘personal self-awareness is an understanding of how much they know, how to access the things they know, strategies for acquiring new knowledge and strategies for accessing new information as needed’ (Avery et al., 2001). An individual will need ‘to be able to manage their information, so that is meaningful, accessible when it needed, and can be easily exploited’ (Jefferson, 2006). The information capable of being exploited is personal and practical, not necessarily being something capable of being stored within a computer database. However, there is a risk that artificial intelligence (AI) may, in the future, be a competent competitor to the individual, at least for specific tasks.

Chew (2011) takes a service-centred view of KaaS (which can be applied to PKaaS I argue), with service provision being a ‘process of applying the provider’s competence (i.e. knowledge and skills) for the benefit of, and in conjunction with, the customer.’ Noting that ‘a service offering is produced using the provider’s resources which include both tangible (such as computer systems) and intangible (such as knowledge, competence and relationship) assets,’ Chew (2011) states that the ‘value characteristics of the service provisioned are co-created through the interactions of the client’s competences (knowledge and skills) with that of the service provider; thus, the client is (pro-)active in service interaction and it co-creates value for itself with the provider.’

A business model would need to be developed to sustain any PKaaS offering, demonstrating commercial viability and defining how it may deliver value to customers and encourage usage (Teece, 2010). Zott & Amit (2007) state that novelty-centred business model design is the ‘conceptualization and adoption of new ways of conducting economic exchanges, which can be achieved, for example, by connecting previously unconnected parties, by linking transaction participants in new ways, or by designing new transaction mechanisms. There are four antecedents of business model design that need to be considered (Amit & Zott, 2015) – goals (for the operation to create and capture value), template (for design of the model, that may include borrowing concepts from elsewhere), collaboration (a defining characteristic of the business model), and constraint (elements of challenge and restriction to the model).

Gronum et al. (2016) observed that there is a relationship between innovation and firm performance, as defined by the firm’s business model, and that ‘innovation without clarity in the business model leads to modest or negligible performance outcomes.’ Novelty-centred design themes are advocated as they ’unlock and translate the value from innovation to firm performance to a greater extent than transaction efficiency and user simplicity’ (Gronum et al., 2016).

Research conducted for this thesis would be one element of the business model development and implementation process, utilising its quantitative survey to determine potential interest and other attitudes towards the proposed offering, helping determine if there is a market for such a service and gathering vital intelligence about specific attributes of service provision. After this point, assuming a positive outcome, the business model's development would lead to the creation of a methodological framework for any PKaaS design. An unfavourable response may either indicate that the proposal is untenable or needs to be subject to further modification, research and trialling.

In due course work by Chew (2011) may be adapted to develop a proposed framework for designing a commercially viable PKaaS service. The following activities should be gone through iteratively, and each step needs to be satisfied congruently with each other. It could be visualised in the form of an inverted pyramid or funnel.

a) The service meets an un-served or under-served market segment;
b) A clear customer value proposition highlighting benefits to customers can be articulated, showing what may be superior to what's available or expected in the broader marketplace;
c) A pricing and revenue mechanism that is simple, appropriate and reinforces a perception of fairness and engaging to the customer;
d) If (eventually) using a network of partners, associates or employees to deliver the service, the creation and deployment of an agile and dynamic network that fulfils the customer value proposition.
e) Experiment with customers and quickly learn from feedback and redesign or amend, if necessary, the service to meet customer expectations.
f) Monitor eternal environmental factors, e.g. regulatory, market or technology, and be prepared to redesign or amend the service offering to ensure compliance.

Information may be taken and transformed from existing cloud-based KaaS implementation literature as an aid to potential implementation, replacing cloud-based elements with a human element and scaling appropriately delivery and expectation components.

2.5 Branding and Marketing

It is envisaged that any PKaaS offering will be targeted towards businesses, making any activities a B2B proposition instead of a B2C activity. Any service offering would need to be branded for eventual marketing and sales activities. Branding is more than just a logo or trademark, being a device to communicate 'succinctly the firm's values, culture, objectives and positioning in the marketplace' (Grove, 2015, p. 30) with marketing being a device to communicate the brand's messaging.

As a people business, a PSF is very different from consumer product suppliers since it must have an authentic brand as 'if the brand is little more than an artificially manufactured veneer, the organisation is unlikely to deliver on its promises to its clients' (Grove, 2015, p. 31).

Branding traditionally adds a competitive advantage or point of difference within the purchasing decision of potential clients (Beverland et al., 2007), meaning a client may select and prefer a stronger or clearer brand when evaluating service offerings. A brand makes a promise of uncertainty in an uncertain world, acts as a bad of origin, and implies a promise of performance (Forsyth, 2003, p. 37).

Marketing is 'the management process responsible for identifying, anticipating and satisfying customer requirements profitably' (Chartered Institute of Marketing, 2015, p. 2). Marketing's central idea is to match the firm's capabilities with the needs of customers to achieve the objectives of both parties (McDonald et al., 2011, p. 8). Clow & Stevens (2009) define professional service marketing as:

> the analysis, planning, and management of voluntary exchanges between a professional service organisation and its clients/patients to satisfy the needs of both parties. It concentrates on the analysis of clients'/patients' needs, developing services to meet these needs, providing the services at the right time and place, communicating effectively with clients/patients,

> and attracting the revenues needed to meet the needs of the service provider.

McDonald et al. (2011) gives a thoughtful definition of marketing as being:

- Defining markets
- Quantifying the needs of the customer groups (segments) within these markets
- Determining the value propositions to meet these needs
- Communicating these value propositions to all those people in the organisation responsible for delivering them and getting their buy-in to their role
- Playing an appropriate part in delivering these value propositions to the chosen market sequence
- Monitoring the value actually delivered

Whatever the size of the PSF, the needs for branding and marketing activities is the same. However, the smaller PSF may have greater freedoms to be agile, ultra-responsive and even ‘daring’ with their promotional activities, compared to a larger PSF. The same can be said to be true about other business attributes such as relationships and management too.

Care should be taken to focus a firm’s marketing messages to reach a perceived target group of potential customers, since ‘exceptionally few companies can be equally competent at providing a service for all types of customers’ (McDonald et al., 2011, p. 8). The PSF may benefit from marketing-based effects such as an existing public reputation that allows them to be connected by unconnected clients, experienced-based trust that enables them to retain existing clients, and word-of-mouth effects that can acquire business from existing clients’ business contacts (Armbrüster, 2006, p. 141).

Most are familiar with the oft-stated 4Ps of the marketing mix (product, price, place, promotion) (McCarthy, 1960), but for services marketing this is extended to the 7Ps – adding process, physical environment and people (Booms & Bitner, 1981). Wirtz & Lovelock (2016) elaborate on the 7Ps for service marketing, and this is summarised in table 5. It should be noted that other scholars give slightly different names to the three extra Ps, although the core sentiment remains the same.

Table 5. Summary of 7Ps for service marketing (adapted from Wirtz & Lovelock (2016))

Product	Service products are central to a firm's marketing strategy. If a service product is poorly designed it won't create meaningful value for customers, even if the other 7Ps are well executed.
Place (and time)	Service distribution may take place through physical or electronic channels (or both), dependent on the nature of the service. Speed and convenience of time and place have become important determinants of effective distribution and delivery of services.
Price (and other user outlays)	A firm's pricing strategy affects how much income is generated, with pricing often being highly dynamic and adjusted over time according to factors such as customer segment, time and place of delivery, level of demand, and available capacity.
Promotion (and education)	Marketing programmes require effective communication and promotional activity to succeed. Promotion provides needed information advice, persuades target customers to buy the service product, and encourages them to take action at a specific time.
Process	The creation and delivery of product elements that feature effective processes to ensure timely delivery of services.

	Poor service design leads to slow, bureaucratic, and ineffective service delivery, wasted time, and a disappointing customer experience.
Physical environment	If a job in a service business requires customers to enter the service factory one must consider the design of the physical environment as elements such as the appearance of buildings, landscaping, interior furnishings, staff uniforms and other visible cues provide tangible evidence of a firm's service quality.
People	Even with technology, many services will require direct interaction between customers and service employees and the attitude and skills displayed by employees can make a difference to the customer and service experience.

A reputation needs to be established and promoted as part of a service's marketing activities in order to aid the company's tangible branding process (van Riel et al., 2005). Price, delivery and quality are said to be critical attributes within the branding proposition, and they are capable of adding value overall (Bendixen et al., 2004).

Brand equity, being the intangible value of a product or an organisation above and beyond of its physical assets, helps produce awareness, perceived quality and loyalty (Clow & Stevens, 2009, p. 13). Responsiveness and trust-building are highlighted as essential elements that can be built with clients, leading to ongoing, repeat business opportunities (Roberts & Merrilees, 2007). Brand-related attributes can matter to B2B decision-makers although research (Gomes et al., 2016) suggests that purchasers are likely to consider 'more functional aspects than emotional and intangible features' when determining whether to conduct business with a supplier, with reputation and brand awareness being important elements.

Some research (Reijonen et al., 2015) has suggested that B2B SMEs, particularly those operating in emerging markets, should focus on entrepreneurial activities rather than brand building; the proposed service being arguably an emerging market or concept in itself. There is said to be a 'notable difference' between emerging and developed markets, with brand orientation and value contributing to growth in the latter category. Deployment of brand orientation -– the management philosophy of placing the brand at the heart of an organisation's decision-making activities – has less of a performance benefit for B2B SMEs than commonly anticipated, found Hirvonen et al. (2016). That said, the importance of a good brand name cannot be overstated, with careful consideration needing to be given towards its brand orientation, international appeal and usability, pronunciation and overall usability (Clow & Stevens, 2009, pp. 14-15).

A marketing focus on the coordination of activities and concentration on clients' needs is most effective as if clients receive the right communications the amount of marketing can be reduced, note Clow & Stevens (2009, p. 12). Wirtz & Lovelock (2016, pp. 67-68) note managerial implications of eight standard features of services that show marketing-related impacts that need to be considered and these are shown in table 6, being born out of a difference between the marketing of services to that of goods.

Table 6: Managerial implications of eight common features of service (Wirtz & Lovelock, 2016, pp. 67-68)

Differences	Implications	Marketing-related topics
Most service products cannot be inventoried (i.e., output is perishable).	Customers may be turned away or have to wait.	Smooth demand through promotions, dynamic pricing and reservations.

		Work with operations to adjust capacity.
Intangible elements usually dominate value creation (i.e. service is physically intangible)	Customers cannot taste, smell or touch these elements and may not be able to see or hear them. Harder to evaluate service and distinguish from competitors.	Make services tangible through emphasis on physical clues. Employ concrete metaphors and vivid images in advertising and branding.
Services are often difficult to visualise and understand (i.e., service is mentally intangible)	Customers perceive greater risk and uncertainty.	Educate customers to make good choices, explain what to look for, document performance, offer guarantees.
Customers may be involved in co-production (i.e., if people processing is involved, the service is inseparable)	Customers interact with providers' equipment, facilities and systems. Poor task execution by customers may hurt productivity, spoil the service experience and curtail benefits.	Educate customers to make good choices, explain what to look for, document performance, offer guarantees.
People may be part of the service experience	Appearance, attitude and behaviour of service personnel and other customers can shape the	Recruit, train and reward employees to reinforce the

	experience and affect satisfaction.	planned service concept. Target the right customers at right times; shape their behaviour.
Operational inputs and outputs tend to vary more widely (i.e., services are heterogenous	Harder to maintain consistency, reliability, and service quality or to lower costs through higher productivity. Difficult to shield customers from results of service failures.	Set quality standards based on customer expectations; redesign product elements for simplicity and failure-proofing. Institute good service recovery procedures. Automate customer-provider interactions; perform work while customers are absent.
The time factor often assumes great importance	Customers see time as a scarce resource to be spent wisely, dislike wasting time waiting, want service at times that are convenient.	Find ways to compete on speed of delivery, minimize burden of waiting, offer extended service hours.
Distribution may take place	Information-based services can be	Seek to create user-friendly,

through non-physical channels	delivered through electronic channels such as the Internet or voice telecommunications, but core products involving physical activities or products cannot. Channel integration is a challenge; that is to ensure consistent delivery of service through diverse channels, including branches, call centres and websites.	secure websites and free access by telephone. Ensure that all information-based service elements are delivered effectively and reliably through all key channels.

A challenge to identify the relevant marketing segment(s) can exist (Blythe & Zimmerman, 2018, p. 197), since the potential audience is quite broad when it concerns PKaaS, even if one tries to segment by types of aid being possibly available, e.g. marketing advice to marketing executives and directors, and business advice to senior managers and directors. Suitable pricing for the service, acknowledged as a problematic activity (while outside the scope of this thesis), would be tied to marketing activity, being used as a tool *among other things* to manage demand; pricing can also be seen as an indicator for perceived or presumed quality and exclusivity (Moorthi, 2002).

Marketing activity would need to be considered on a geographic basis too, with internationalization being a riskier strategy overall. On the other hand, with today's modern internet-connected society it could be argued that past barriers to entry or reticence (Carman & Langeard, 1980) have been reduced or flattened with companies able to accept assignments from anywhere in the world, even if they have not directly marketed their service to a specific country or territory.

One form of marketing activity that seems likely for PKaaS promotion is content marketing, being the creation, distribution and sharing of ‘relevant, compelling and timely content to engage customers at the appropriate point in their buying consideration processes, such that it encourages them to convert to a business building outcome’ (Holliman & Rowley, 2014). A thought leadership approach ‘can be used as a legitimate reason to contact clients and engage in a deeper conversation about likely challenges and issues. The right content, framed in the right way, can indeed be a catalyst to a conversation with a client and work-winning’ (Bryce, 2015, p. 135).

Social media platforms, such as the B2B-focussed LinkedIn, can be one such venue to attract, engage and inform potential service users, with it having a positive benefit for sales-related activities through communicating information to potential and actual clients (Agnihotri et al., 2016). An informative corporate website and the opportunity to subscribe to a newsletter providing relevant business content, acting as a sales funnel, are also valuable work tools. More enhanced elements such as white papers or webinars are also elements that may be used within B2B marketing activities (Järvinen & Taiminen, 2016). Audio in the form of podcasts and even video have a place in modern-day business life. This content marketing activity is different to other marketing approaches, e.g. advertising-based marketing, as it does not seek to persuade customers of the specific benefits of the product sold (Wang et al., 2017), but it offers valued content that can reinforce the credentials of the provider, enhance trust, build relationships, and act as a marketing aid in its own right.

Service providers can offer guarantees for their provided services, acting as a sign of good faith and confidence in their activities, with it being an essential marketing differentiation. Such activities may also reduce the barriers to purchase for service users, especially when contracting for service with an unfamiliar provider or service concept. The guarantee may be a written guarantee of performance, with compensation elements extant in the event of non-performance (McColl et al., 2019). Research suggests that service guarantees can 'play a compelling role in signalling added value to industrial buyers' with customers willing to pay a substantial premium for a guaranteed service compared with a non-guaranteed service, (McColl et al., 2019).

Nevertheless, marketing PKaaS, in keeping with all services, can be a challenge. Zeithami et al. (2018, p. 24) pose 11 questions (reproduced below) that they say can be difficult questions for managers with responsibility of service marketing to answer.

- How can service quality be defined and improved when the product is intangible and non-standardised?
- How can new services be designed and tested adequately when the service is essentially an intangible process and one that is frequently cocreated with customers and networks of providers?
- How can the firm be certain it is communicating a consistent and relevant image when so many elements of the marketing mix communicate to customers and some of these elements are the service providers themselves?
- How does the firm accommodate fluctuating demand when capacity is fixed and the service itself is perishable?
- How can the firm best motivate and select service employees who, because the service is delivered in real time, become a critical part of the product itself?
- How should prices be set when it is difficult to determine actual costs of production and price may be inextricably intertwined with perceptions of quality?
- How should the firm be organized so that good strategic and tactical decisions are made when a decision in any of the functional areas of marketing, operations, and human resources may have significant impact on the other two areas?

- How can the balance between standardization and personalization be determined to maximize both the efficiency of the organization and the satisfaction of its customers?
- How can the organization protect new service concepts from competitors when service processes cannot be readily patented?
- How does the firm communicate quality and value to customers when the offering is intangible and cannot be readily tried or displayed prior to the purchase decision?
- How can the organization ensure the delivery and cocreation of consistent quality service when both the organization’s employees and the customers themselves can affect the service outcome?

Some of the foregoing questions may be less relevant for smaller firms, such as a single employee/single principal organisation, although the critical message does remain relevant and appropriate. A ‘best-effort’ attempt at answering the questions may be necessary

3 Research Methodology

This chapter aims to provide an overview of the study's methodological approach and research design. The selected methodology is believed to be the best available to provide insight into the proposed service's viability and give additional information based on recipient's responses that can be useful to possibly shape and design the service offering.

3.1 Research Structure

This thesis takes an inductive reasoning, data-driven approach, seeking not to test an academic theory or explicit hypothesis. Instead, it seeks to evaluate a theory (that a service may have a specific market or demand) where data is collected and the theory developed (whether advanced or denied) through the results of data analysis (Saunders et al., 2015, p. 51).

Inductive reasoning rather than deductive reasoning has been selected as the approach as there is 'a gap in the logic argument between the conclusion and the premises observed, the conclusion being "judged" to be supported by the observations made' (Ketokivi & Mantere, 2010). Saunders, Lewis & Thornhill (2015, p. 145) state that one uses an inductive approach if one's research 'starts by collecting data to explore a phenomenon' and that one can generalise from the specific to the general within one's research. An inductive approach also lets the researcher 'get a feel of what was going on, so as to understand better the nature of the problem' (Saunders et al., 2015, p. 147), giving, in other words, a much-closer understanding of the research context.

Qualitative research is often used as part of an inductive reasoning-led approach to research. However, for this thesis, a mono method quantitative research study is undertaken and is an appropriate choice (Saunders et al., 2015, p. 166).

Quantitative research is designed to ‘describe the nature, attitudes, or behaviours of customers empirically and to test specific hypotheses that a service marketer wants to examine. [Studies] are key for quantifying the customers’ satisfaction, the importance of service attributes, the extent of service quality gaps, and perceptions of value’ (Zeithaml et al., 2018, p. 117). The previous definition, of course, can equally apply to prospective customers.

This research form is said to be probably the best available method to observe and describe a population (comprising of individuals working within a business field) that is too large to observe directly (Babbie, 2016, p. 247), being capable of measuring attitudes and orientation whether probability sampling is used (or not).

Quantitative research always has the risk of a low-level of response which can affect the perceived reliability of data, although it need not invalidate gathered data in any case. There can be many reasons why a quantitative research survey yields a low response with many reasons being beyond the control of the researcher.

It is acknowledged that sometimes qualitative research is used as a form of research before a quantitative research study. However, it was felt that in this case, it might have been limiting and more challenging to actualise with the potential for greater insight being present with a well-responded to piece of quantitative research. Consideration was given to alternative sources of research (Saunders et al., 2015, p. 439) before deciding that a quantitative approach was the best solution. However, equally, research can be conducted in reverse to ‘make the numbers in computer printouts meaningful by giving managers the perspective and sensitivity that are critical in interpreting data’ (Zeithaml et al., 2018, pp. 116-117). No research method is without its limitations and risks that may affect the degree of response received (Adams et al., 2014, p. 118).

The research conducted for this thesis can be viewed as an exploratory study, helping ascertain reactions to the proposed service and its viability, before additional planning and research elements are undertaken (Saunders et al., 2015, p. 392) that will use additional forms of research including qualitative-led interviews, even if the research is not readied for publication elsewhere, e.g. a scholarly journal.

Concerns over the validity of any responses received exist since the self-reporting nature of the quantitative study's questionnaire is based on 'the implicit assumption that people have the information being asked about and that they will answer based on their core values and beliefs' (Adler & Clark, 2011, p. 224). The accuracy of validity of survey data is affected by memory, motivation, communication, and knowledge (Sudman, 1983), being 'material [that] may be forgotten, or the time at which something happened may be remembered incorrectly; respondents may be motivated not to tell the truth because of fear of consequences or because they want to present themselves in a favourable light; respondents may not understand what they are being asked and answer the question in terms of their own understanding; and, finally, they may just not know the answer to the question and answer it without indicating their lack of knowledge.'

3.2 Selection

Two disparate but representative sources of potential quantitative survey respondents have been identified for this research, being:

- The author's LinkedIn network connections
- Members of the SurveyCircle online research platform

It has been judged that the mixture of the two data sources should, subject to previously stated limitations, provide a sufficiently diverse but relevant potential sample that should yield insight. The representative sample gathered is not limited to a specific industry because every company could need the proposed service. The only limitation is the ability to calculate a response rate for the study due to the problems of knowing or calculating the ‘reach’ of the call-for-participation.

An invitation to participate in the study was posted on both LinkedIn and SurveyCircle, with the former having several different announcements over a one-month interval. SurveyCircle included the questionnaire within its daily e-mail bulletin.

3.3 Data Collection

A questionnaire (see appendix 1) was designed and hosted on the Webropol survey web platform, featuring a structured approach to data collection. Both open and closed questions forms were used (Bryman, 2012, pp. 246-252). Care was taken to make the questionnaire less onerous to the respondent, hopefully removing the risk of a response being abandoned due to fatigue or a failure to understand the study.

Questions utilising the Likert scale and attitude statements were used liberally within the questionnaire (Adams et al., 2014, p. 125). The use of ranking questions was avoided since there can be a difficulty in understanding the margin of difference between individual ranking positions (Adams et al., 2014, p. 124).

Care was taken to avoid specification error or construct validity, that is to say, a failure to collect information that is essential to answer the research question (de Leeuw, 2008, p. 315), by means of using simple words, avoiding ambiguity, asking one question at a time, etcetera. An attempt was made for the questionnaire to contain ‘instructions and texts to keep the flow of information going and to keep the respondents motivated. It also should be pleasant to use, avoid unnecessary routing errors, and correctly guide from question to question’ (de Leeuw, 2008, pp. 316-317).

Extensive pre-testing the quantitative survey was not undertaken on this occasion since it was felt after review that the designed questionnaire was appropriate and satisfactory for the task-at-hand (Adams et al., 2014, p. 72). A limited external test of the study did not yield any areas of concern.

4 Results and Data Analysis

This chapter presents the results of the collected data with analysis made therein.

4.1 Distribution and Sample Size

The questionnaire was made available to respondents during May 2020. During this period the number of respondents was 201. The questionnaire is provided as appendix 1.

4.2 Questionnaire Results

Prior to completing the questionnaire only 7.46% of respondents report hearing of the term PKaaS, suggesting a broad unawareness of the specific term and underlying topic.

Yet the use of consultants and consulting firms for expert knowledge provision was used by 31.34% of respondents' companies, and not used in 49.75% of cases. Surprisingly 18.91% of respondents did not know about their company's use of consultants and consultancy firms, suggesting a broad information disconnect within many companies.

The stated use of consultants and consulting firms was varied, with marketing being the dominant field (55.56%) followed by financial activities (42.86%), and Technology (41.27%). Operational Management, Management/Company Direction and Innovation/Future Development activities accounted for just over one-quarter (25.4%) of the multiple responses received. The 'Other' category attracted 11.11% of responses with free-text descriptions stating uses such as consultation on law and tax regulations, human resources, security, health, self-development, and event management as additional consultancy services. These are shown in figure 2.

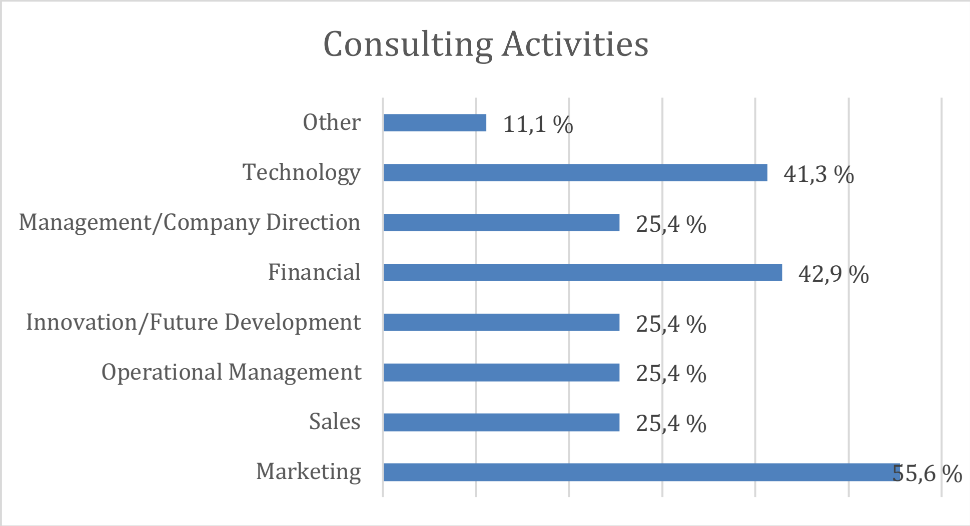

Figure 2. Use of Consultants and Consultancy Services

There appears to be a need for external advice being provided, with 70.65% of respondents saying that they feel they would personally benefit, from time-to-time, from external advice being provided to help them remedy problems encountered with their work.

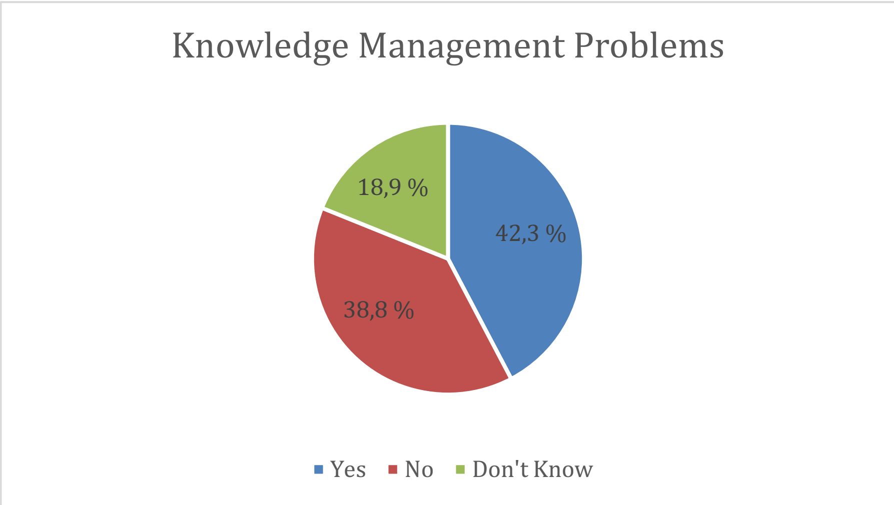

Figure 3. Problems with Knowledge Management

A majority of respondents (42.29%) believed that there is a problem with knowledge management within their company, with a further 18.9% being unsure. This is shown in figure 3. Similarly, problems seem to exist regarding the sharing of information and expertise within respondent companies, with 46.27% of respondents admitting an issue being extant and a further 10.45% not knowing for certain.

There was a variety of responses to the free-form question as to how a company manages its internal knowledge and expertise. Responses included the use of an internal knowledge management system, group chats, forums and emails, brainstorming in teams, group meetings, specific training, hierarchical distribution, and the use of external experts. A majority number of negative responses were also received that shed insight into the issue of knowledge management within companies, with responses including: 'I am not sure but it is clearly a problematic part where I work', 'instinctively rather than by proper management, last minute rather than planning and organisation', 'We are a university so… poorly', 'the communication internally does not go well, everyone keeps information for themselves', and 'Very poorly. Knowledge is lost with resigning employees. Knowledge is stored in disparate locations, which means it is hard to find (if saved at all)'

A majority of respondents (58.71%) believe that there is no problem with gaining external expertise or assistance for their company, with a further 24.38% being 'don't knows', yet for 16.91% there is a perceived problem. For this latter group stated reasons include trust issues, money and bureaucracy, lack of internal interest from superiors and a desire to solve matters in-house, finding the right type of assistance at an effective cost, and reliability. A majority of respondents (65.18%) lack a budget or the ability to acquire a budget for the acquisition of consulting services, with only 25.37% having the potential.

How consultants and consulting firms perform and whether they fully understood their client requirements was considered, with 39.88% believing that requirements were satisfactorily met, but 9.45% were of a negative opinion. Negative reasons included ‘consultants don’t understand our business and usually come up with generic solutions we already have thought of’, ‘they deliver with their mindset’, ‘misunderstandings occur mainly because of lack of communication’. ‘don’t know the specific market enough’, and ‘it is the brief – we are not always clear on what we want’. The remaining 50.75% had not used a consulting company.

These results broadly mirror whether a consulting company has fully met their client’s requirements with 36.32% of respondents agreeing with the statement and 13.93% disagreeing (leaving 49.75% who have not used a consulting company). Freeform negative responses included ‘I think their strategy doesn’t match to our criteria’, ‘they deliver what they think is right’, ‘promised more than the ability to deliver’, ‘they often come with their standard offering and require the company to bend its needs to meet their existing offering’, ‘they are too general and not really motivated’, and ‘because decision makers within my own company don’t do their due diligence, they don’t even know what they want or need.’

Responsiveness, or the lack thereof, of external consultants is a small but significant issue for many with 19.4% of respondents observing that they have experienced difficulties or delays in gaining assistance, with 29.85% not observing an issue (and 50.75% not using a consulting company at all).

The size of an assignment can be an issue for some consulting companies it appears, with 28.36% of respondents observing that they have had assignments that are perceived to be ‘too small’ for a consulting company to consider and a further 30.84% not knowing for sure If that is an issue. This is shown in figure 4.

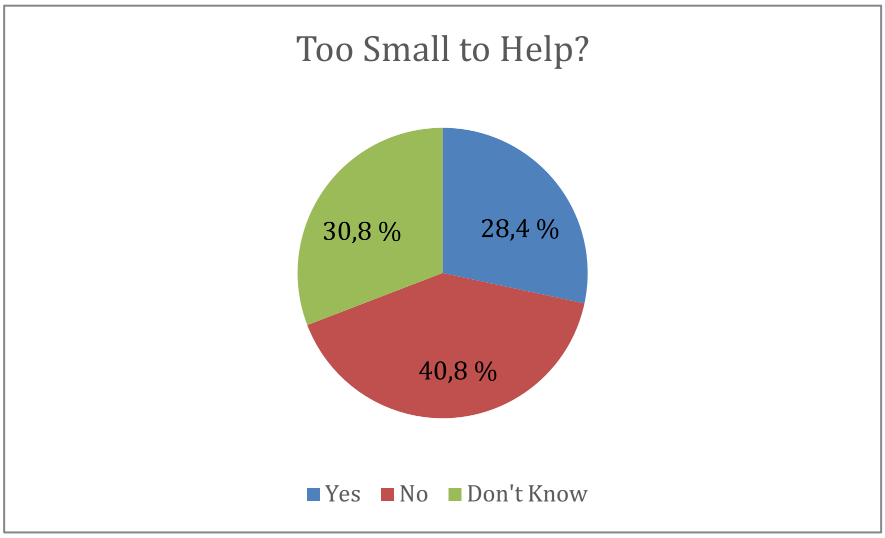

Figure 4. Size of Consulting Assignment a Problem?

A variety of freeform responses were given to an open-ended question seeking feedback about the use of consultants in general. Positive comments included ‘positive as sometimes some of the feedback they have provided is similar to that of what employees have said, however, the consultants are taken more seriously and their suggestions actioned’, ‘positive experience but as soon as they were gone things when back to “normal” due to lazy management’, ‘enlightening and beneficial’, ‘the help has been very valuable and we have built significant product models with the help of. outside expertise’, and ‘frustrating at first but the end result was beneficial’. Negative comments included ‘sometimes consultants have no idea about your processes and it is very time-consuming for employees to provide this knowledge to consultants and to check their documents after’, ‘consultants believe they know more than us, while they have never worked in a business long-term’, ‘slow complicated processes with a lack of quality deliverance of services’, and ‘we had to fit into the existing “mould” of the consulting company’s programmes, and if we wanted something tailored to our needs the costs were exorbitant’.

The manner and type of interaction with a consultant and consulting firm was considered by respondents within a multiple-choice question, with 70.15% preferring a physical face-to-face meeting. Electronic mail was favoured by 54.73% of respondents, followed by online video, e.g. Zoom/Teams by 46.27% and telephone by 35.32%. This is shown in figure 5.

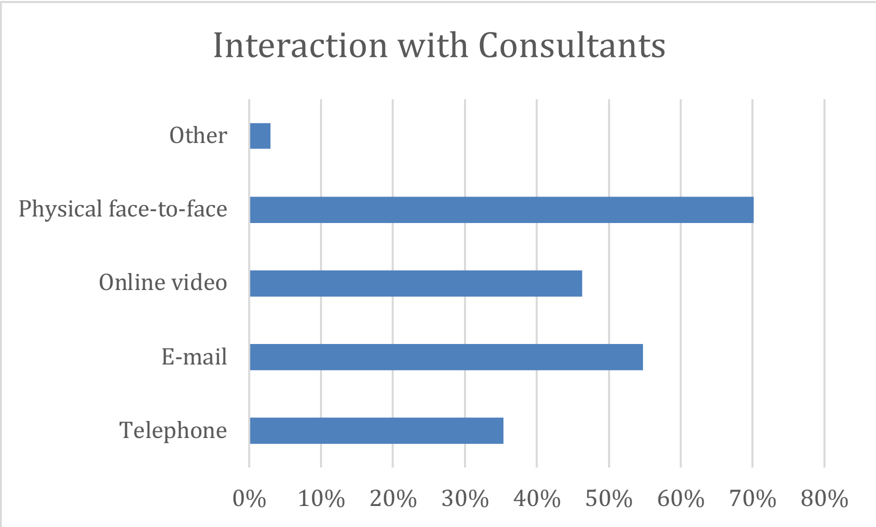

Figure 5. Interaction Method with Consultants and Consulting Firms

Respondents to the questionnaire were overall positive to the potential of using a PKaaS offering, with 50.25% stating they could see themselves or their company engaging with a PKaaS provider in the future, with a further 34.83% being 'don't knows'. This is shown in figure 6.

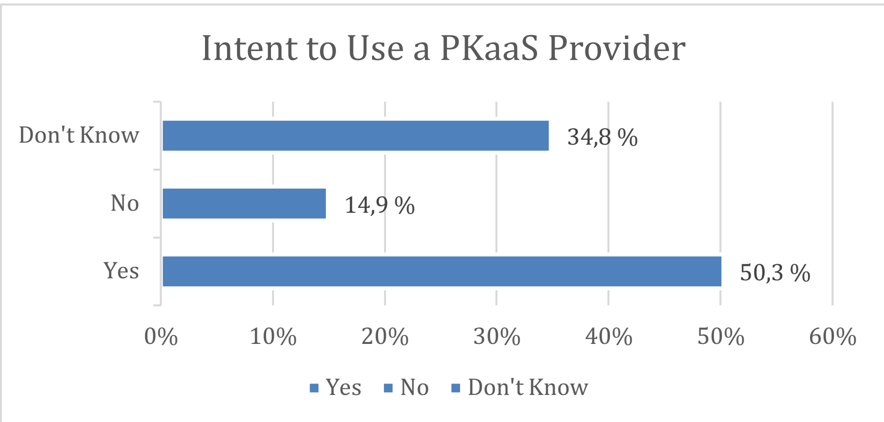

Figure 6. Intent to use a PKaaS Provider

The nature of services being potentially provided as a PKaaS to respondent companies was varied, according to the multiple-choice question, with marketing-related tasks being the most popular (63.37%) followed by innovation/future development (52.48%) and sales and technology tasks were jointly ranked (45.54%). Other rankings were financial (38.61%), operational management (35.64%), management/company direction (31.68%), and other (5.94%). This is shown in figure 7.

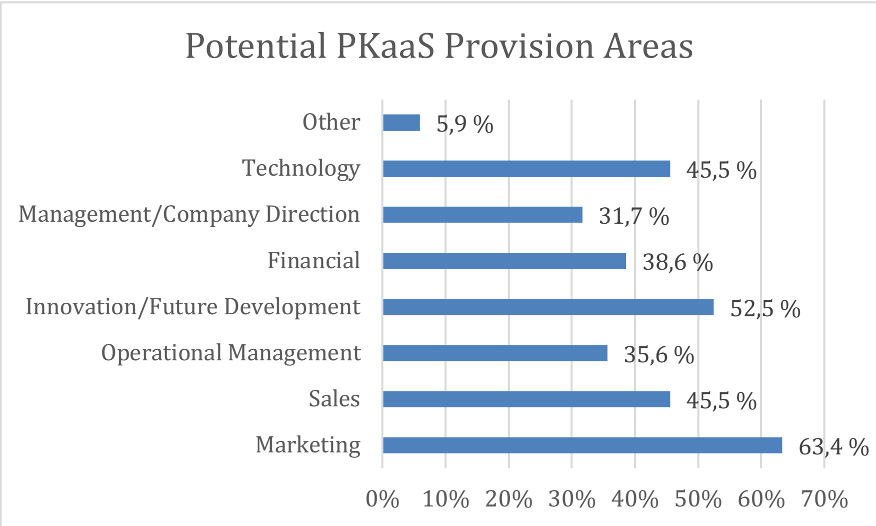

Figure 7. Potential PKaaS Provision Areas

When it concerns the method of billing for PKaaS offerings, there was an overwhelming preference to pay per project or assignment (89.11%), followed by per hour (14.85%) and per day (5.94%). Multiple responses were permitted for this question. When asked to consider whether a yearly subscription would be an option to consider, prepaying for a discounted block of PKaaS consultancy time, 40.6% were positive to the idea and 28.71% did not know. Only 30.69% were negative to such an idea.

Respondents were asked whether the presence of a satisfaction guarantee would make it possibly easier to use a

PKaaS offering and reduce any perception of risk. This seemed to be a popular offering with 60.2% being positive to the potential offering, with a further 25.87% not knowing a specific opinion. Only 13.93% responded in the negative.

Free text responses were invited to the question ‘what reasons do you have not to consider the use of a PKaaS offering. Apart from responses stating no need for such a service, other negative or neutral reasons cited included the liability of the consultancy is not practical, internal capacity has not been exceeded to warrant such a service use, budgetary issues, the value has to be proven and referrals from other users would be desirable, there might be cases for the consultant to obtain in-depth knowledge which would be quite expensive to pay for, data protection issues.

Trust is an important element to have in a PKaaS provider, with respondents rating on a scale from 1-10 an average of 8.79 and median of 9: 47.37% of respondents rated a 10. Having knowledge contained within a PKaaS provider was rated on a similar scale with a 7.81 average and median of 8.

On-demand access to a PKaaS provider is important but not essential, respondents noted with responses on a scale from 1-10, with an average of 7.08 and median of 7. Delegating tasks to a PKaaS provider was seemingly less important, at least in the bigger picture, with respondents rating an average 6.79 and median of 7 on a scale from 1-10. Utilizing a PKaaS provider within internal activities on a similar scale yielded an average response of 6.33 and median of 7.

Interestingly, a majority of respondents agreed that a service partnership depends on both the service assignee and the service deliverer to succeed, with an average 1-10-rating of 8.03 and median of 8.

Can a single-person PKaaS be viable? According to respondents 52.5% stated that such could be beneficial and 35.5% had no explicit opinion. Only 12% of respondents felt that a single-person PKaaS offering would be a liability. Response to the question whether a single-person PKaaS may be better able to give a personal in-depth service to clients was a little mixed, with 47.26% responding yes and 42.29% responding don't know/no difference. Only 10.45% were of a negative opinion.

Honesty about a possible business fit was surveyed, with respondents asked whether they would value the candour of a PKaaS provider who admits an inability to undertake a certain task, rather than a attempting to 'muddle through' and possibly deliver a substandard job, with 65.17% being positive to the concept, 24.38% not knowing, and only 10.45% being negative to the concept.

The location of the PKaaS provider was viewed as being important to many (45.27%) even if any interaction was made by telephone or online service, but the majority (54.73%) saw this not to be an issue.

5 Conclusion and Discussion

This thesis has introduced and examined the concept of PKaaS, being a service that is capable of being provided by a sole trader company to a national and international audience of clients. PKaaS, being a variant service delivered by a professional service company, is not a well-known concept at-large, even though respondents to quantitative research appeared to be favourable to the concept.

The use of external consultants represents a reasonably sizeable element amongst respondent companies, assisting within a wide range of service areas led by the marketing, technology and financial sectors. An even-greater number of respondents indicated that they encountered situations within working activities that they feel would benefit from external advice being provided, especially since there is a perceived and considerable problem with knowledge management and the sharing of information and expertise within their companies.

A dichotomy exists, however, with less than one-fifth of respondents stating that there is a problem getting external expertise or assistance when required. This is made more noticeable when nearly two-thirds of respondents said that they do not have a budget, or the ability to obtain a budget, for consultancy services to provide assistance.

There appears to be broad satisfaction with the use of consultancy companies and that they have understood tasking requirements, with some notable exceptions that can be negatives capable of being transformed to positives with the right approach in any PKaaS implementation. However, nearly one-third of respondents have had assignments perceived as being “too small” for traditional consultancy providers that may be an ideal fit for a PKaaS offering, as well as more traditional, more significant assignments.

The virtually delivered nature of a possible PKaaS offering seems to be compatible with the methods of contact desired by respondents for consulting services with the exception of face-to-face meetings. That being said, PKaaS is capable of being provided in an in-person format as well as the original virtual format. However, face-to-face consultation would only suit larger projects and, in any case, may only form a small part of the overall larger project.

Respondents were directly positive to considering engaging with a PKaaS provider in the future with a further significant element being a “don’t know” and thus being capable of conversion. Of course, there are no guarantees in life, and there is a difference between a possible wish and a practical ability to engage (perhaps on budgetary or internal grounds), but indicative signals are encouraging. The envisioned PKaaS offering would focus on several key areas, while not providing service to certain other areas on the grounds of perceived core competency. Nevertheless, there is a degree of harmonisation between the areas of potential demand for PKaaS service provision and the ability to provide service.

One issue to consider may be the subject of renumeration as an overwhelming majority of respondents indicated a preference to pay on a per-project/assignment basis rather than on an hourly or daily rate. The original concept behind the PKaaS offering was to offer smaller, bite-sized consultancy services (at least as one of the core offerings), making it to be a different offering than traditional consulting services and their desire for longer, more in-depth assignments. A sizeable number of respondents were also open to the idea of paying a yearly subscription for a pre-paid, discounted block of PKaaS consultancy time, which is a further consideration.

The idea to offer a ‘satisfaction guarantee’ as a benefit to PKaaS customers, allowing a reduced barrier to entry and acceptance, was an appreciated consideration for a majority of respondents, with a further significant number being ‘don’t knows’. Customer satisfaction should be, in any case, a standard offering, but it is harmless to emphasis and promote such a service guarantee, particularly within a professional services management offering. Respondents emphasised the importance of having trust with their PKaaS provider, and it is felt that offering a satisfaction guarantee with clear terms would be mutually beneficial to all parties. This mutual connection was supported by respondents' reaction to a specific question about service partnership within the quantitative research. Respondents appeared to appreciate that a PKaaS provider would feel able to admit an inability (and decline) to undertake a particular, specified task rather than attempt to accept the commission and muddle through, possibly delivering a substandard service in the process.

The envisioned PKaaS offering would be operated by a single-person company, and it was pleasing to note that a majority of respondents felt a single-person PKaaS to be a benefit, with a further sizeable number having no opinion. A quite small minority felt such a small company to be a liability. A similar response was received to the question of whether a single-person PKaaS could offer a personal, in-depth service to clients. The location of the PKaaS provider was perceived to be an issue for a sizeable number of respondents. However, the original questionnaire failed to identify how local one may need to be for it not to be an issue, e.g. being in the same country may be sufficient for the client, rather than being on the other side of the world.

The quantitative research yielded much valuable insight into the potential viability and demand for a PKaaS offering, indicating that further research and development for the concept may be justified. Some qualitative research, conducted through extended interviews, may give additional information to help the justification and development process.

It may be concluded that there is potential to offer and provide PKaaS to a B2B-based audience, although the standard challenges of founding and developing a business would remain a valid concern. The concept of PKaaS would require clear marketing and promotion, showing the subtle differences between PKaaS and traditional consultancy/professional service management services. Highlighting the single-person personal contact would be essential, rather than being a hindrance to hide behind with the attempted ‘bolstering’ of the company behind a larger-sounding name, e.g. XYZ Consultants or XYZ Associates.

Financial modelling and projection would be necessary at some stage to ascertain possible fees and the overall viability of the proposal, with the expectation that the offering will not be utilised for 100 per cent of time due to administrative overheads and, of course, the variable usage of potential clients.

However, thus far, there appears to be sufficient grounds to further explore this proposed service offering with a view of transforming it into a commercial reality.

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Appendix 1: Questionnaire

1. Have you heard of PKaaS before this survey?
2. Do you (or your company) use consultants or consulting firms for expert knowledge provision?
3. What activities do consultants or consulting firms aid you or your company with?
4. Do you personally (from time to time) encounter problems with your work that would benefit from external advice being provided?
5. Do you believe that there is a problem with knowledge management within your company?
6. Do you believe that there is a problem sharing information and expertise within your company?
7. How does your company manage its internal knowledge and expertise?
8. Do you believe that there is a problem with gaining external expertise or assistance with your company?
9. Do you personally have a budget for, or ability to an obtain a budget for, consulting activities?
10. Where you (or your company) has used a consulting company, do you believe that they have fully understood your requirements?
11. Where you (or your company) has used a consulting company, do you believe that they have fully met your requirements?
12. Have you experienced difficulties or delays in gaining assistance from external consultants?
13. Have you (or your company) had assignments perceived to be “too small” for an external consultancy company that you would have liked to have had assistance with?
14. What feedback can you give about your company’s use of consultants, e.g. was it a positive experience? Negative? Frustrating? Beneficial?
15. When working with a consultant/consulting company, what forms of contact would you prefer?

16. After reading about the description of a PKaaS offering, could you see yourself/your company engaging with a PKaaS provider in the future?
17. What services could PKaaS help you/your company with?
18. How would you/your company prefer to pay for a PKaaS assignment?
19. Would you consider paying a yearly subscription for a pre-paid and discounted block of PKaaS consultancy time?
20. Would the presence of a satisfaction guarantee make it possibly easier to use such a PKaaS offering/reduce any perception of risk?
21. What reasons do you have to not consider the use of a PKaaS offering?
22. It important to have trust in a PKaaS provider [Likert scale]
23. It important to have knowledge contained within a PKaaS provider [Likert scale]
24. It is important to have on-demand access to a PKaaS provider [Likert scale]
25. It is important to be able to delegate tasks to a PKaaS provider [Likert scale]
26. It is important to be able to utilise a PKaaS provider within internal activities [Likert scale]
27. A service partnership depends on both the service assignee and the service deliverer to succeed [Likert scale]
28. I consider a single-person PKaaS to be a… [selection]
29. Do you consider a single-person PKaaS may be better able to give a personal, in-depth service to its clients?
30. Would you value the candour of a PKaaS provider who admits an inability to undertake a certain task, rather than a larger consultancy company who would attempt to “muddle through” and possibly deliver a sub-standard job?
31. Would the location of the PKaaS provider be a critical issue for your use of the service, assuming that any interaction would be by telephone or online service?