Over the past years, user-centricity has gained an increasingly important role in the public sector. With technology offering more and more opportunities to take user-centricity to the next level, its importance is being highlighted in connection with digital government, such as by the principles of the Digital Nations1 (New Zealand Government, 2020b), the Organisation for Economic Co-operation and Development's (OECD) dimensions of a digital government (OECD, 2020), or the recent Berlin Declaration on Digital Society and Value-Based Digital Government, which "acknowledge[s] the public sector as […] a driving force for new and innovative technological solutions for public services and societal challenges" (Council of the European Union, 2020, p. 3). User- or citizen-centricity indicates "that governments will provide services […] tailored to the actual service [..] needs of users" (Bertot, Jaeger, & McClure, 2008, p. 137). One approach which technologically advanced governments – such as Austria (Austrian Federal Ministry of Digital and Economic Affairs, 2020), Estonia (Plantera, 2019), Norway (Norwegian Labour and Welfare Administration, 2021) or New Zealand (New Zealand Government, 2017) – are taking in this context is to integrate proactivity into public services. User-centricity being one of the guiding principles of proactive governance, proactive public services are generally understood as being pushed from the government towards the citizen2 based on their "needs, circumstance, personal preferences, life events and location" (Linders, Liao, & Wang, 2018, p. S69). They can thus be seen as a "a crucial step in the creation of a state that keeps citizens and their needs at its very core" (Plantera, 2019). As 'proactive' means to actively bring about change instead of waiting for events to occur (Cambridge University Press, 2020b), the approach follows a similar logic to the more established idea of anticipatory policy-making, where new technologies can also bring substantial advances (e.g., Maffei, Leoni, & Villari, 2020).

Research agrees with the potential of proactivity in public services (Agbozo & Spassov, 2018; Linders et al., 2018; Sirendi & Taveter, 2016), and has proposed proactivity as the next step in e-government (Brüggemeier, 2010; Linders et al., 2018). Building on these assumptions, scholars have studied selected aspects of proactive public services, such as their design (Erlenheim, 2019; Erlenheim, Draheim, & Taveter, 2020; Kõrge, Erlenheim, & Draheim, 2019; Sirendi & Taveter, 2016), impact on service quality (Kuhn & Balta, 2020), implementation (Sirendi, Mendoza, Barrier, Taveter, & Sterling, 2018), as well as general challenges of the approach (Kuhn, Balta, & Krcmar, 2020). In addition, potential benefits of integrating proactivity into public services have been pointed out, such as for example a reduction of administrative burden on citizens (Brüggemeier, 2010; Makolm, 2006), increasing the cost-efficiency of service provision (Plantera, 2019; Scholta & Lindgren, 2019; Verheijen, Bhatti, & Kusek, 2015), or ensuring accessibility and preventing the exclusion of non-users of technologies from service delivery (Scholta & Lindgren, 2019). Authors have also started studying potential drawbacks of the approach (Larsson, 2021). Few articles, however, such as those by Brüggemeier (2010), Linders et al. (2018), Scholta, Mertens, Kowalkiewicz, and Becker (2019) and Kuhn and Balta (2020), are concerned with the concept itself.

Despite – or maybe because – the growing body of research, the field still suffers from a lack of conceptual clarity, and both in research and practice, opinions regarding the characteristics of proactive public services diverge. As put by Scholta and Lindgren (2019, p. 3): "Proactivity can range from scenarios where the public sector organization performs an initiating action and still requires recipient input to complete the delivery process, to scenarios where a recipient does not need to perform any action at all to receive a service." Consequently, scholars for example have different positions on whether proactivity means not to collect additional data at all (Scholta et al., 2019; Velasco Rico, 2020), or whether prefilled forms can be used (Brüggemeier, 2010). In addition, the role of technology in proactivity is not yet clear, and while authors seem to agree that information technology is an enabler for government proactivity (Agbozo & Spassov, 2018; Brüggemeier, 2010; Lemke et al., 2020; Linders et al., 2018; Scholta & Lindgren, 2019), it has also been argued that

citizens can be informed about decisions using offline channels (Scholta & Lindgren, 2019). A third example is found in the timing of proactivity, where scholars refer to the delivery of services when a life event occurs (Linders et al., 2018), or additionally distinguish the prediction of events (Scholta et al., 2019).

This lack of clarity is not just a problem per se but can lead to operational and conceptual challenges (Podsakoff, MacKenzie, & Podsakoff, 2016). Due to this, this thesis followed a design-oriented approach and developed a taxonomy for proactive public services, applying the iterative taxonomy development method by Nickerson, Varshney, and Muntermann (2013) while integrating recommendations for developing good conceptual definitions (Podsakoff et al., 2016). The taxonomy aims to support concept clarity in the field of proactive services, and not only represent a basis for further research by allowing scholars to "generalize, communicate, and apply research findings" (Glass & Vessey, 1995, p. 65), but also allow practitioners to identify possible next and innovative steps in public services. In addition, increased concept clarity will allow researchers and practitioners to more meaningfully study benefits and drawbacks of the approach, as it has for example been mentioned that while service automation reduces the burdens for some citizens, additional burdens are placed on those not covered by the approach (Larsson, 2021).

For the purpose of this work, a wider view of proactive public services, which is not restricted to the service delivery itself, was adopted by drawing on service management and marketing (SMM) literature. Whereas there are different positions on whether private sector oriented concepts can be applied to public organizations (Grönroos, 2019; Osborne, 2020), the chosen view allows scholars and practitioners to select aspects of the taxonomy that are relevant to them and also enables a comparison between both sectors. In the private sector, the focus lies on pre- (Kotler, Keller, Brady, Goodman, & Hansen, 2019; Leggett, 2014; Nicod, Llosa, & Bowen, 2020) and post-purchase activities (Barker, Lane, Holbrook, Vadrevu, & Padalino, 2005; Challagalla, Venkatesh, & Kohli, 2009; Harris, 1996; Leggett, 2014, 2015). The need to predict customers' future orders still seems to make the proactive delivery itself technologically challenging, as the example of Amazon shows (Kaleta, 2019). The firm had filed a patent for anticipatory delivery in 2014 but has not yet achieved its goal (Kaleta, 2019). In contrast, one could argue that the characteristics of public services might allow to predict service consumption more easily. Citizens might need certain services to secure their living and thus have no choice but to receive them (Lindgren & Jansson, 2013), and other services are compulsory, which makes a delivery without interactions possible (Scholta & Lindgren, 2019).