Abstract

This request for proposal discusses an opportunity to improve the existing ablution (wudu) stations at the Toronto Islamic Centre (TIC). The TIC, located on Yonge and Bloor, is a vibrant socio-cultural hub for hundreds of Muslims in downtown Toronto [1]. Offering services such as free weekly educational and fitness programs, charity drives, and marriage registrations, the TIC brings a diverse set of people together from over 80 nationalities in Toronto [2]. The TIC is currently undergoing a series of renovations to a key element of their prayer space: the wudu stations [2]. Wudu is a compulsory cleansing ritual for Muslims before each of the daily prayers. The recurrence of the process, in addition to the high capacity of community members, makes the wudu process’ efficiency important on environmental and logistical levels; large volumes of water are used [2], resulting in safety concerns like slipping and over-crowded bathroom spaces [3]. Minimising excessive water use also aligns with Islamic principles and faith, where Islam’s prophet (pbuh) emphasised the economisation of water [2][4].

Existant wudu systems consist of a simple tap and basin design [2], making it cumbersome to adjust the tap during the intermittent steps of wudu. While wudu typically consists of twelve main steps [5], taking about one to two minutes with the tap on for the whole duration, it would take significantly longer if users continually turned the stations on and off. This leads to most individuals opting to leave the tap on for an extended period of time [2]. Additionally, the tap pressure is kept high to prevent germ growth in pipe infrastructure [2]. Preventing splashback, slippage, and high water use were key concerns outlined by the stakeholders interviewed [2].

Key stakeholders in this request for proposal include the general managers at the TIC and the Muslims who regularly visit the TIC, including families consisting of young children, as well as less able-bodied individuals and the elderly [2].

This request for proposal outlines the requirements for the potential improvement to the wudu stations, with an emphasis on higher level objectives of safety, ergonomics, efficiency, and alignment with Islamic principles (in Section 7.1). The opportunity to help improve the TIC’s wudu systems is not only feasible from a student engineer standpoint, but is also timely, as the current renovations of the TIC’s bathrooms and wudu systems allows for better assessment of space, preferred tap designs, and an opportunity to implement varying levels of improvement to the system [2].