Jean-Baptiste Alphonse Karr is not only blessed with having a very cool name, he is also credited with providing the phrase: “the more things change, the more they stay the same”. This statement has never been more relevant when we consider the current status of the civil design discipline. While as a sector we have identified concerning trends in the capacity and capability of this critical cohort, little has been done to address the issue. In an industry that has embraced technology and innovation, we have experienced no change in the way we engage and develop our most valuable resources – our people.

Research has shown that the demand for design engineers across Australia continues to climb even as graduate numbers slow. At the same time, industry reports have identified that there is a low number of highly skilled designers that are capable of developing specialist or innovative designs through a robust engineering process using first principles to achieve the objectives of road design. The limited pipeline of future designers combined with the concerns over the existing capability within our sector is cause for alarm.

The impact from these issues are being experienced on a daily basis. All too often projects are delayed due to the inability to access a designer in a timely manner when clarification is required. The increasing practice of outsourcing design capacity and expertise on a project basis can exacerbate the problem with a lack of continuity of project knowledge once construction commences.

Another major concern is the reluctance to apply accepted practices such as Extended Design Domain (EDD) to existing roads with constraining factors. The cost differential between upgrading a road to a level within the normal design domain compared to a level within the EDD is likely to be high. The potential financial benefits derived from applying EDD can be significant while maintaining safety standards.

In the past, industry has relied heavily on the Department of Transport and Main Roads to develop the capability of technical staff through a number of initiatives aimed at attracting new talent to the sector and providing a nurturing environment to learn from experienced practitioners while also being supported by a robust technical development program. In more recent times, the TMR Design School was a good conduit of suitably skilled cadet designers entering the workforce. As a sector, we can no longer expect TMR to develop our civil designers, we need to proactively address this area of need.

In his Engineering for Public Works article in 2017, Tony Gallagher from the Harrison Infrastructure group noted that “the civil design community is in need of a systematic and coordinated approach for training of their design and engineering staff at all levels”. To achieve this we must have a sector-wide approach to developing and delivering solutions that will meet both the immediate and long-term needs of relevant staff.

IPWEAQ is working on a strategic approach to address this issue. While we have the capability to develop and manage a model that provides the systematic and coordinated approach mentioned previously, we required all of the key stakeholders to become invested in a practical and holistic fashion if we are to achieve tangible and sustainable outcomes.

IPWEAQ welcomes industry feedback into this initiative. We encourage you to contact Craig Moss, Director, Professional Services craig.moss@ipwaeq.com to discuss further.