International collaboration and harmonization of design standards

The Eurocodes are a set of harmonised European standards for the design of buildings and other civil engineering structures, which facilitate the removal of trade barriers for construction products and services. During my 11-years at the Steel Construction Institute (SCI), I was responsible for developing UK design guidance to complement the Eurocodes, together with influencing the standards themselves as a member of the committee responsible for Eurocode 4. Two years before the existing UK standards were withdrawn and replaced by the Eurocodes, I left for New Zealand in 2008 to join the Heavy Engineering Research Association (HERA).

In comparison with my earlier UK experience, New Zealand had different steel construction standards to Australia, even though the latter is one of its biggest trading partners. In the interests of improving efficiencies and creating opportunities for engineers to export their services, it was clear that there was a need to harmonize New Zealand and Australian design standards. In 2011, I was humbled to be elected to the positon of Chair of the committee responsible for the first Australasian design standard for steel and composite bridges AS/NZS 5100.6. The publication of this bridge standard in 2017 has been a catalyst for New Zealand and Australian stakeholders to collaborate and has led to further harmonization activities, such as the development of the first Australasian design standard for steel-concrete composite buildings AS/NZS 2327. Underpinned by comprehensive reliability analyses, both AS/NZS 5100.6 and AS/NZS 2327 permit the use of much higher strength steel and concrete than Eurocode 4, thereby leading to structural efficiencies (I'm hopeful that some of the benefits will be demonstrated by Australasian case studies published in future editions of SEI!).

During our work on Australasian standards, I was introduced to IABSE by the Chair of the Australian National Group (NG). My membership of IABSE has provided me with access to the latest international developments, which influenced my work on the Australasian standards and also led to direct collaboration with engineers from around the world. The New Zealand NG was formed in 2015 to encourage greater participation with the IABSE community, and was thrilled to be awarded the 2020 IABSE Congress. I would be delighted if you could join me in Christchurch in September which, as well as offering opportunities to engage with engineers from around the world, is well placed to deliver the Congress theme of resilient technologies for sustainable infrastructure following the city's recovery from the devastating earthquakes in 2010 and 2011.

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