

# Speech held by Dame Ann Dowling, President of Royal Academy of Engineering

During the CAETS dinner on the 26<sup>th</sup> of June 2019

Good evening ladies and gentlemen

I would like to congratulate IVA on their 100<sup>th</sup> anniversary and to thank them for inviting us to share in this celebration.

As a recent President of CAETS, I know the huge amount of organisation that goes into the annual convocations, and the very different audience expectations you need to satisfy.

There are many things out of your control, but the one parameter you can set is the scope.

So when I saw the title of the event: “Engineering a Better World: the next 100 years”- I thought, wow, that is a challenge to set yourself.

But I think IVA have pulled it off marvellously.

I have never been at a conference with so wide a lens and yet so clear a focus.

I’ve learnt so much, but the major impression I was left with was of generosity: generosity of scope, certainly, but also generosity of spirit.

What appeared to be a conference about everything, was actually a conference about ourselves.

Very cleverly, without even mentioning national academies, IVA has shared with us a story of human progress with academies at its heart.

They have made us proud of our past achievement, and set us a challenge for the future.

In Johan Norberg’s splendid keynote, national academies of science and engineering emerged as the heroes of the enlightenment and the industrial revolution.

They were the platforms to host the first meetings of the “thinkers and tinkerers”.

They upheld the cultures of openness and criticism which allowed innovation to flourish.

But then comes the challenge.

Are national academies a relic of a heroic age of discovery and innovation, or can they play a useful role today? Can academies still help unlock the innovation that will deliver a more equitable, sustainable and prosperous future?

It does appear that the challenges we face today are of a different order from those we faced a hundred years ago.

The global inequalities. The systems of systems. Misaligned incentives. The wicked problems, and the super-wicked problems.

I have never seen so many slides of knotted ropes.

But there has been a clear message about the approach that can solve these challenges—and its closer to home than we realised.

It's about providing a convening platform to bring together thinkers and do-ers, and help them engage with each other and with today's world.

And about setting the ground rules for deep exchange of knowledge and world-views, allowing stakeholders from academia, industry, government, and civil society to work together to balance incentives and jointly manage risks.

It's the same fundamental role that engineering academies have always played.

But the way we went about this task when IVA was founded in 1919 is not suited to today's world.

And perhaps as national academies we have focused too much on maintaining our mechanisms and traditions, and not enough on maintaining our core purpose.

So the challenge IVA has posed us is: how do we re-invent the way we work so that we can continue to pose the right questions, and bring together, and support and educate, those who will provide the answers.

And in hosting this fantastic conference, IVA has demonstrated in practice how we can do this.

Opening up the conversation to social scientists, economists, educationalists, philosophers as well as engineers.

Focusing on the next generation- and making sure they're in the room to participate in the discussion.

Mixing helicopter views of global challenges and trends from recognised experts, with passionate soapbox appeals by younger engineers who are making a change in the world right now.

Bringing in marvellous young musicians whose responses to the core themes of the event engage our hearts as much as our minds.

And engaging a set of moderators who challenge and provoke and treat the audience as co-creators, not consumers.

More broadly, IVA models the behaviours it wants to promote.

We have been shown a confident Academy, secure in its place at the heart of Swedish society, able to use its convening power to bring all of Swedish society around the table, and looking forward to its next 100 years.

With ambitious, but realistic, long-term goals to revolutionise engineering education and entrepreneurship across Sweden.

And with, I think we can agree, the most robust approach to timekeeping I have ever seen in an international conference.

I'm still not sure how I feel about the next 100 years, but I am, in Erik Byrnjolfsson's words, a mindful optimist.

And what I do know is that the last 48 hours have been magnificent.

Thank you Tuula, Magnus, Johann and all your team at IVA, for a wonderful experience.