

Speech by Minister Seán Sherlock, Department of jobs, Enterprise & Innovation and Department of Education & Skills with responsibility for Research & Innovation:

I didn't compose a speech; I deliberately didn't do so because I wanted to spend some time listening to the speakers before me to get a sense of what EcCoWell is. I'm absolutely delighted to be here because I have a sense now of what it is. Sometimes when people like myself come into a room we have a vague sense, we're not fully attuned; it's only when we start engaging that we get the full sense of what the full potential of this is.

What I have to do then is to assist this group in terms of its process, in how this takes shape for the future. I see my role in terms of Minister for Research and Innovation as perhaps acting as Facilitator, acting as someone who can maybe open the doors, break down the silos that Denise¹ talked about. That has been a mantra of mine for the last two years. If we can break down the silos, open up the doors, get things going God knows what the potential can be.

So I'm really delighted to be here because I think what you've done here is capture the Zeitgeist.² There's a strong sense now in Ireland that we want to break down the barriers that exist.

If you take the very lay-out of this room as a metaphor of where EcCoWell wants to go, you have up here the hierarchical; you take the traditional City Hall infrastructure, the Minister comes in, the Lord Mayor, high-backed chairs, and we're on a sufficiently high podium that we are talking down to you, not in a pejorative sense, but that has been the traditional mode of communication. And if you look at the back of the room and you see the way the seats are structured³ - that is where we want to go. That's where EcCoWell needs to be, that's where government needs to be, that's where all the stakeholders need to be.

So if I give you a sense of where I'm at, of where you need or want to go, I'll look at my own brief as Research & Innovation Minister. Recently we held the Presidency of the EU. I chaired the negotiations around Horizon 2020, which is the next Framework programme for Research & Innovation across the now 28 member states. That's a €70 billion package that Ireland negotiated; it's a tri-partite negotiation - you must decide with the members of the European Parliament, the European Commission through Máire Geoghegan-Quinn⁴ and through myself representing the 27 Ministers for Research across the European Union.

¹ See Denise Cahill's presentation, Introducing EcCoWell Cork.

² The Zeitgeist = 'the spirit of the age or spirit of the time'

³ In circles ready for the Open Networking sessions

⁴ Máire Geoghegan-Quinn, Irish politician, is the current European Commissioner for Research, Innovation and Science.

In those negotiations was a very clear and tacit policy provision whereby we would look at the grand societal challenges. When we think of the grand societal challenges, those are things like Health, ageing populations, smart specialisation, how our populations are going to integrate with the new technologies, the key enabling technologies that are emerging. A number of themes that will affect citizens into the future and that Europe has to gear itself up for in terms of how it funds into research in those areas. Ageing is one of the key ones.

So we ensured that there has to be a mechanism, that it's not just about creating research funding about purely commercial entities, it's also about meeting the grand societal challenges of our time, and that we fund smartly into those areas.

It just so happens that those grand societal challenges marry with our own national policy prerogatives. We have recently identified and mapped 14 key areas that we are going to fund into, where the taxpayer is going to fund into. Those are things like connected health, things like big data, data analytics, medical devices, things like business processes and so on.

The big challenge in my mind is how do we get the citizen to be engaged in that process, how does the citizen become an active participant, a stakeholder in that process. Take, for instance, Food for Health, which is one of the things. As Research Minister, Science Foundation Ireland is within my remit, and we have engaged industry to fund into a cluster, which is based in Cork primarily, which is called APC, it's based out at UCC with the involvement of CIT - some of you will know Fergus Shanahan at UCC, people like Paul Ross... Part of that funding and the grand societal challenge is how are we going to deliver healthy food for the future, which is for a growing population. It's happening here in Cork. We talk about mapping the digestive system, the gut, we've mapped the human genome - the next big challenge is going to be mapping the gut and good and bad bacteria.

You're asking yourself what has this got to do with where we are today. If we're going to be serious about EcCoWell, for instance, there has to be some sort of translational element such that, if government is funding into Science Foundation Ireland and is funding activity here that's going to have a major impact on populations, we have to find some way such that the stakeholders here can engage with that process.

Because if EcCoWell is going to be successful it has to have a sense of what is going on within academia, within the Cork landscape as well. It has to have an in depth knowledge of that.

Food is one of the areas that Denise spoke about and food innovation. If we're talking about food are we talking about how we consume food, are we talking about obesity, are we talking about whether or not there's food poverty within a city?

I think, if we're going to be serious about that, we need to have a strong academic linkage into that as well, and this is where the silos need to be broken down, and this is what the big challenges are, and this is an area where maybe I can help.

There is big science going on in Cork City, which has a global impact. The seven SFI (Science Foundation Ireland) centres and all the activities of those new centres which map onto the 14 priority areas, which map onto Horizon 2020 – they're all going to have a global impact. And it's all happening within institutions within this city and beyond as well in Teagasc in Moore Park in Fermoy, that's around the food space. So it's about maybe opening doors and all of us knowing exactly what everybody else is doing, so we can create those synergies and perhaps build linkages to innovate and to make for a better life for all, which ultimately is what this is about.

If I take data, we have created an entity of which Cork is a major part of from an academic point of view around data analytics. The big challenge in my mind is how do we get access to the data sets that we speak about? If we can mine those data sets and bring people such as this stakeholder grouping into that process, what we could do with those data sets if we had access to them. That means knocking down the door of the Department of Health, knocking down the door of the HSE, collaborating then, bringing the population in ... can we mine, analyse, those data sets to see where there are deficits in terms of how health policy is actually brought to bear on the population? Can we form new methodologies around mining the data sets, so the population has access to them, so you can bring technology to those data sets in a way that it causes behavioural change.

What I mean by that is that we have the Tyndall National Institute here, which is a national institute, and it has expertise on surface technologies, on micro-electronics, on nano technologies. Think of the mobile space, primary care, secondary care, tertiary care; think of how we can get our population within this city, and beyond – because this shouldn't just be about Cork City, it has to be about Cork-Mitchelstown, Cork- Mallow, Cobh, Carrigtwohill. There's a tendency for Cork people, and I'm saying this as a Mallow man, to think inside the city. Cork is not a big city in global terms and Cork has to start reaching out a bit, cascading its thinking out as well, and vice versa. That's just a message from me, if I may use this opportunity to impart that message.

What I'm trying to say is that for EcCoWell to potentially succeed we need to have a greater interplay between it and, for instance, the Tyndall National Institute and what it's doing in terms of mobile technologies. Mobile technology can become a major platform for people of all ages. I know you have digital natives, but I'm not going to patronise older people, I believe very strongly that older people have the capacity to engage in mobile technologies. We can use the mobile technologies to access the data sets to create new innovations around communicating with everybody through social media, through our mobile phones. It's just something to impart as a thought for maybe today during the afternoon sessions.

I was at a meeting last night with a community group and it was about water shortages and leaks in a small community in North Cork. They couldn't understand why Cork County Council wasn't communicating with them via social media. There's no excuse why a local authority, or a municipal authority, cannot use social media now to communicate to a wider populace and vice versa, that the populace can communicate back to the local authority, not necessarily bypassing the political structure but you politically empower the populace to start feeding back and influencing how the local authority imparts its policy or changes its policy in relation to delivering better services to people. To me it's about empowering the population now and utilising the technology. But we're not doing it quickly enough in this region, maybe that's my fault.

Maybe we need to bring people to the institutions to have a conversation. I don't blame the institutions, the academics or the principal investigators, they're drilling down into their technologies, they are innovating in their own ways, in their own silos. But if we can bring you guys in to talk to those guys then you have all sorts of challenges which can be met through a collaborative process. That's essentially the point I'm making about how this (*patting EcCoWell banner*) is really going to take shape.

I hope I'm not being too verbose and I hope there's an understanding of what it is that I'm trying to say. Essentially what I'm saying is what Denise has really encapsulated for me – it's about breaking down the silos, getting greater flows of communication, flattening the structures, so that people have access and new ideas. It's the academics coming to meet people such as yourselves in this room and maybe creating new modes of communication, so that Cork then becomes a region that will be looked at globally as having natural synergies that build up informally and formally, in a way that makes Cork a natural test bed then for new global innovations into the future. That's essentially where I see the Cork landscape going.

I'm attending a conference at Tyndall after this, and we're looking at new ways of creating smart systems, smart systems using technology around energy, health, food, and the environment. And that's at a technological level, but in order to do that at a technological level you have to have a societal understanding of what the challenges are. I think it's true that the stakeholder group here at EcCoWell, the technologists and the scientists, will be able to rise to those challenges that exist.

So I'm absolutely delighted to be here and thank everyone who has organised this. I believe that Cork has the capacity and the ability to become a global leader when it comes to innovation of this nature. I honestly believe that you've captured the Zeitgeist here because in government I was thinking as Minister for Innovation how are we going to democratise what it is that we're doing from a national policy point-of-view. We're putting taxpayers' money into meeting the grand societal challenges and I'm quite confident that Ireland will be able to draw down quite significant funding under Horizon 2020 to meet those grand societal challenges. But how do we

engage the people in this room and what will be learned from this afternoon around those challenges?

My clear intention is to follow up, and I think Martin⁵ is facilitating this afternoon, but I have to skip away, and I've already said to him that there will be a follow up with myself around this to see how we can break down some of those silos.

I see Michael Loftus of CIT is here, and in fairness to CIT they have an Entrepreneur in Residence Kieran Moynihan, and I know that they way CIT and UCC thinks it's outward looking, it's lateral, so I believe something can come of this engagement. I see Siobhan from Cork Innovates is here; and Conor from the Cork Chamber – people who are thinking of the Cork landscape, how we can up the ante if you will– I see people from Mitchelstown as well, and don't forget that it's not just about the city. If this is going to be successful we have to think regionally as well.

The other thing I will say to conclude is that there is a Health Innovation Hub in Cork. It exists precisely for the reasons Denise outlined earlier. It's funded by my department and the Department of Health. There is so much innovation going on at present around delivering new technologies around Health and what we found was there was the silo of the Department of Health and the silo of the HSE, and when I use the word 'silo' I don't mean it in a pejorative sense. What we've done is created an entity, which is a demonstrator model for the whole country. It's called the Health Innovation Hub. It brings industry, academia, together with those people who are active in the health space. The purpose of it is to drive new innovations, to see if we can create economic opportunities and create new ways of delivering better services for people within the Cork landscape and hopefully to trial it here and then roll it out. I think there could be a role here for a conversation for EcCoWell at some stage.

Because the key to delivering better health outcomes for all citizens is the ability to mine the data that exists within the Department of Health through Primary Care, Secondary Care, Tertiary Care. Mining those data sets, see how we can deliver healthier outcomes for the population, but you have to have access and sometimes there are issues around access to people, to information, and we need to cut a swathe across that if we can.

There are two other big announcements coming around the Marine and Renewables in this region. It's about us in government refocusing our relationship with the sea. If you look at the Cork coast, look at our ability to be able to deliver new innovation there. And then there's also the whole area of Photonics, the use of light, Cork is a major, major influencer globally in terms of the research that it's doing through CIT, Tyndall, UCC. I think Seamus O'Tuama of UCC is here, and UCC is another area where that excellence in Science going on.

⁵ Martin O'Donoghue, facilitator for Open Networking Sessions.

I just wanted to give you a flavour of where we are in terms of that kind of high level policy perspective. I would love to work with you then - in a way that we can create new outcomes for people, better outcomes for citizens, and empower citizens in that political sense, and I understand the distinction. Okay, yes, we all operate within our big P political silos, but really it's about people, and the more you can empower people, and I think Technology is the key, enabling piece, on that one.

Technology is the great leveller, it has democratised. I think Peter Kearns⁶ in his paper may have quoted Eric Schmidt (and I'm paraphrasing now) saying that Google has created a new anarchy. I don't believe that it has, and no offence to Google, it's a big corporate structure and they're creating bucks. What the web has done is it has created new forms of innovation, and it's citizen science, citizen research, citizen activism, and where we in government in Ireland want to be at the moment is at the cusp of that, not behind the curve, we want to be on the cusp, so we're funding smartly to enable that to take shape.

Thank you for your time, and I will be following up, there's no question about that.

⁶ Peter Kearns's paper *Learning Cities for the Future; Some Implications and Directions for Cork City of Learning* was included in delegate packs.