

Transcription results:

11:38 Hello, <redacted> speaking.
Hi, this is <redacted> from <redacted>.
Hello.
You got me at last.
Yeah, that was I don't know what happened.

11:48 **If I must have dialed it in wrong twice or something.**
Yeah, okay. And you probably encountered already one of the difficulties of we have where I am in that a lot of the people we want to talk to are a different atmosphere in a different time zone. Oh yeah, this does happen a lot. So that's just yes. That's always the case when you're in <redacted>.
Yeah.

12:19 Anyway, I assume you've got your whole set of questions that you want to go through. So just take it as you would like to run the discussion.
OK, just to start off with, um, what kind of research do you do?
So I'm a microbiologist, so I do work on infectious diseases, a lot of molecular biology.
OK, and what is the goal of your research?

12:50 It's usually prevention or cure of the infections. OK, but a fair bit of it. So it's a mixture between applied and basic research.
OK, OK, so what is the average number of researchers or collaborators on projects that you've worked on in general?

13:25 Maybe five. OK, if I was going to quantify. that.
So would you count principal investigators only or the teams of those investigators as well, the teams as well located?
Well, that could be yeah. That will be more like 15 to 20.

13:51 **OK, and what's like the small, roughly the smallest and the largest groups?**
OK, the largest group that I'm involved with at the moment has just the key. It's got ten principal investigators and it would represent over 100 participants as far as if we counted their teams and students.

14:21 The smallest would be two principals with a team of five personnel.
OK, are there any challenges or difficulties with working with large, very large projects?

14:44 Well, if they're local within the state, local and I would say that is within <redacted>, a lot of the different participants who have different professional duties.

15:04 So I'm a research and teaching appointment at the university, whereas I may be working with somebody who's a infectious diseases physician, who has a caseload and research and trying to schedule opportunities for actually researchers to get together is really difficult because of the competing demands on people's times. Very few of us.

15:33 The research only OK. If it's if it's a national collaboration, then the distances in <redacted> are really huge with what is so the nearest expert could be a thousand kilometers away. So the opportunities to interact with them directly are even less.

16:05 And so people try to make good use of conferences and things to piggyback meetings onto.

OK, are there any benefits to working on large projects?

Absolutely. So I think will me the greatest benefit is that you're exposed to very different ways of thinking for people bringing quite unique perspectives to a project.

16:38 And as soon as somebody goes, we can use what you're doing and expand it to our mutual interests and benefit. Then you get the sort of opportunistic snowballing effect of what was the core idea then expanding into a much larger program. And that can be done when you start with a common point of interest, the project you've got.

17:06 But then a lot of side projects started being initiated and you build on that strength. And it's a really efficient way of accessing expertise and networks.

OK, so some of my questions are going to they may seem a little a little repetitive, but I'm asking you to try to maximize my information. I'm getting so kind of on the opposite side.

17:32 **Are there any disadvantages or challenges associated with working on smaller projects with smaller numbers of people?**

One of the advantages I feel is that you end up being able to get down to the fine detail of experimental design and direction and the sort of strategic positioning that you just can't do in a larger forum because it's not time efficient.

18:07 So some of those meetings with two or three people where you can actually fine tune things and do the sort of polishing, I guess, is that that's an advantage or disadvantage, is that sometimes the amount of effort you need to put into securing the ongoing funding for a small project is huge.

18:39 The insecurity of being able to maintain the activities is not always offset by the rewards. I don't know what funding likelihoods are in the <redacted> system, but without a sort of national competitive funding, the chances that a grant is granted is well under 20 per cent.

19:11 And so there's a lot of effort in putting proposals forward that don't actually lead to any actual research. The big collaborative ones tend to be more successful, so people are moving more to the big collaborative groups rather than the small, smaller projects, because that's basically the direction that we've been told to go in and that's where the successes are.

19:40 So we're sort of driven to do the large group's success as an interest in getting funding, getting funding. Without the funding, we can't do the research at all.

Right. Absolutely right. I've try to make sure that. Yeah, as a so it's not an outcome of

No. I mean, to make sure that it's got two elements. One is if you're a big collaborative group going for big projects, that's more likely to be successful as far as getting research support.

20:14 And then once you've got that support, it's more likely to give it research outcomes as measured by further grant publications de completions and actually strengthening the research community. I also would say is a bad outcome, not easily measurable, but you tend to see this collaborative gain.

20:45 **OK, so, um. OK, so, um. Sorry, I lost myself for a second.**

What are the general roles that you and your collaborators play on these projects?

Roles pertaining to what?

So I'm going I'm kind of going to ask you, like she says, she says the question are what in general with all of your projects and what on a current research project?

21:18 Like what?

Like what you do and what do your collaborators do when you're doing your kind of research. I'm asking you so I can establish kind of a context in which to consider the rest of the answers to the rest of the things that you discussed this interview. So, I mean, you've mentioned you're a microbiologist.

Yeah. And so, I mean, OK.

21:47 Let me describe. But I think you're asking and then you can tell me if it answers your question. Right. So what my expectations would be in a corporation is that we would have initially people would have contributed to the design of the proposed project and the arguments supporting it and working out some sort of a budget.

22:15 Once we had secured the research funding, then we would have particular components of the overall project that would fall into our portfolio and we would meet regularly to report back on progress on those. But within your own portfolio, we would be working with laboratory personnel and students, designing experiments and carrying out those experiments and essentially reporting the results back to the collaborative group.

22:49 Does that answer it?

Sort of. So what is it within these three? What is it that you do that you bring to the table in this in this process?

Well, discipline, expertise. So it's my expertise as a microbiologist. And I'm thinking of this big consortium we're in at the moment. I'm in a faculty of agriculture and veterinary science, and they needed an agriculture and veterinary element to the larger project.

23:22 So it's discipline, specific expertise, and my own network and contacts is what I contribute.

OK, so, um, so how many how many collaborators are on that project?

I think there's 10 investigators. Yes. OK, and, um.

23:52 **OK, sorry, it's one of those things where, like, I have these points that I want to hit, but I don't always necessarily hit them in a linear fashion.**

Right. That's okay. Now, you could be doing fine. It's just it's tough here. It's over the phone, too, because, like, you can't say.

Yes, I know.

It's just like I just like, silent, you know, the silence isn't bad. It's just thinking time.

OK, so what percentage of your projects have involved at least one collaborator who is at a different institution?

24:26 All of it, all of them. OK. Yeah, and in this in this when you when you're working on projects where you have collaborators at another institution, why are you choosing to work with those collaborators? Usually they've got reviews, resources or expertise that aren't available at my institution.

OK, so how do you go about finding or choosing those collaborators?

24:55 I usually use personal networks. So people that, you know, yes, I might go to somebody. Look, I need some more bioinformatics and I know that you were doing a project with good, good bioinformatics in it. How do you get that done? And so I go and talk to.

25:20 And so I would usually follow that sort of route to go and find key people locally or so. Yes. Very dependent on personal networks.

OK. Has there ever been a situation where you didn't know anybody who has the expertise, the expertise that you need?

Yes, yes. And that usually had resulted in us just not doing the project, OK, because we couldn't just say to somebody, don't worry, we'll find somebody because they didn't exist.

25:54 That was the key component that didn't able to be achieved. OK, in <redacted>, we're very well in the big cities of <redacted>, like a really huge city. But overall, we have relatively low population compared to land mass.

26:16 And there isn't another big city nearby to the yeah, the lower and where I'm located in <redacted> is sort of a degree of biological science research. So I'm in a really good position. But if I was 50

kilometers away, that would make a huge difference to my access to resources and expertise, because 50 kilometers away, there's nothing you might not even be a residential area.

- 26:52 **OK, so we kind of discussed this a little bit at the beginning of the phone call. But could you elaborate on any challenges or difficulties or disadvantages associated with working on projects where your collaborators are distributed?**
- 27:18 I think that and I think you've alluded to this yourself, that face to face meetings are a much better form of communication and then using this guy for conference calls, or will they augment those meetings? You get a lot better progress face to face.
- 27:42 And so it's I think it's necessary to at least have some opportunities for those face to face. The frequency of them, you know, has to vary according to circumstances. But the personal interaction is preferable, but not always achievable for international collaborators.
- 28:10 We would generally contact them through conferencing. So we're going for other multiple purposes on a trip.
- OK, so when you're so I mean, we're speaking on the phone, but when you're meeting with collaborators who are when you can't meet with them face to face, you mentioned using the phone, using Skype. What kind of technology to you do you use to stay in touch?**
- 28:42 So I use email, usually do conference calls. I am not finding Skype to be all that great and lots of unreliable as far as the connections dropping in and out, poor quality of sound and image to the point where we often plan a Skype meeting and replace it with a phone.
- 29:14 It's just not good enough. It's a barrier to communication. It shouldn't be, but it is within our own faculty redistributed over a number of locations. And so we have in-house video conferencing that we can use and that works reasonably well.
- 29:37 But the people at the further distance, the distant sites tend to be present in small numbers and be physically at the table. I think you get a bit of voice in conversations.
- 30:00 When you see when you're working, just focusing on when you're when you're working with people who are at night in the building with you, when you choose to use phone over email or video conferencing, where an issue via email has.
- 30:29 We use email as the first preference for reporting and communication, but when an issue is complicated, it needs the input of several people at the same time and the same conversation or is sensitive, then it's better to have a conference call where people can speak in real time.
- 31:00 **OK, so can you elaborate a little bit more on what the advantages or disadvantages are?**
- As of now versus the written word doesn't always fully reflect what the person's trying to say. OK, well, sometimes people are perhaps reluctant to fully express themselves in writing or they're more maybe more comfortable to say it's OK because emails can always be sent.
- 31:32 You don't know that your conversation is going to stop with the recipient. Yes. Right.
- So what about choosing to use email over using the phone?**
- Okay. Well yes.
- 31:52 If there was so certainly with data and so things that needed to be expressed scientifically, certainly I'd use definitely email to distribute documents or something like a Dropbox for documents, but otherwise probably back that up with email saying here is the latest.
- 32:16 So we're precisions your client and with a record of that needs to be embedded in the communication and email is good. OK. And the word is video conferencing sitting and so. Well, we have it within the faculty and we and it has been used within the university.

- 32:48 I haven't used it between institutions because usually the systems aren't compatible. But I'd prefer to have a video conference to a telephone conference because just a small human connection and you get better interactions.
- Mm hmm. OK. So and then I think I'm just a little note here and then jump back to where I was a little earlier.**
- 33:16 **So moving on from discussing distributed projects, how what percentage of your projects involves collaborators who are in very different fields from yours, research fields?**
- Yes. Yes. I'm just sort of thinking as to how.
- 33:46 Did you ask me what percentage?
- Yeah.**
- Rough percentage, but I would say 10 to 15 percent. OK, so see what I'm thinking of is I have a collaboration on a historical project. Now that's just far away from my research discipline, as I can think of.
- 34:11 But there's a common theme of the history of aquaculture's. There's the link there. But the historic element is completely out of my area of expertise. Quite like it, actually. Yeah.
- What do you like about it?**
- I like what I find interesting in your own specialized field or within the discipline.
- 34:40 Everybody's been trained to in a certain paradigm of the way we collect design report data. Scientists write the particular style that's imposed on us by our journals and if it's completely out of your area. So for the science, engineering, technology, math, they go into humanities and social sciences and the approach to research is completely different.
- 35:10 And it makes me think about, well, better, better or different ways of doing things. Just opens your mind up a bit.
- Are there any other benefits to working with on projects with collaborators who are in different fields like it does challenge your own assumptions about how research is conducted?**
- 35:36 **Like are there any challenges or disadvantages or difficulties with working with your collaborators who are in different fields sometimes?**
- So if I was working with engineers, well, it's a different field still sort of in the sort of science, engineering, medicine sort of area.
- 36:00 So the challenge there would be not so much the approach to the science, but the understanding of the capacity, what they actually do in the mechanics of the discipline. And if this can't be basic, that's what we do, is rely on experts in the field. So their expertise is what you trust.
- 36:29 So that, again, I guess comes back to that sort of personal connection that you want to establish and spend that time and investment really understanding what they want to get out of a project and what they can contribute and where they say you might be contributing to their overall gains. It's very much teamwork. OK, but, you know, I can't always embrace the technology, but, yeah, we try to communicate that that's part of our job.
- 37:03 **Yeah, OK. So are there are benefits to working on projects where all of your collaborators are in roughly the same field as you is and partly because you know what they know.**
- So you can you can actually jump over a whole lot of assumptions about background knowledge and expertise and then focus straight on the higher level objectives and goals.
- 37:39 And so you can get into that greater level of detail. And that's sometimes what you do in those sort of small specialist groups. The starting point is much more clearly, more clearly defined. Rather than exploring. They understand what I'm saying and I don't know and I don't understand what they're saying.

Are there any disadvantages or challenges?

- 38:05 Sometimes such a small group, if one person is no longer available or no longer well available for whatever reason here, that they're no longer willing, available or able to participate, then you can lose a major player in the project and that that could jeopardize the whole project.
- 38:32 And being highly reliant on a few specialized people has risks associated with it.
OK, it sounds to me like, you know, you're the size of your groups, the makeup, the background of the people who are in your groups and location are all kind of really bound together.
- 38:58 Yeah, partially because of just geography and how seeing how things are.
But I mean, and this may be a tough question, you know, to answer, but what of those are the three things the size of a group location or the disciplines of people in the group. Which do you think has the biggest impact on the success of a project? A discipline?
- 39:26 OK, yeah, but yes. So let me just expand on this a little bit. We might have since we've got a big group here. I'm a member of that group has a significant relationship with another big group. Now, that group could be in the <redacted> or <redacted> or on the other side of <redacted>, but they've already got that key relationship that's working and that we would definitely be using those to bridge between groups.
- 40:03 So you'd essentially represent small groups, representatives from each of the large groups sort of to make a bridge and so that they would pick out and identify things that are of mutual benefit. And I think that's pretty much a common way that we work like. And it's something we actively seek.
- 40:34 So that's the way you found my name because of the <redacted> proposal, right. That was that's actually a pretty good example of how big group on antibiotic stewardship through some sort of contact. <redacted>'s proposal was sort of ended up being put in contact with each other and then were able to start that interaction.
- 41:04 And then in turn, one of our members was able to say, we're always grateful we've got key contacts in <redacted> if they would also be useful in your consortium. So it's sort of nodes connecting nodes is actually very valuable. And you don't have to have all the nodes all participating as a large morass of input.
- 41:31 So the sizes of the nodes, I think is variable, but the strength of the group certainly backs them up and I think that's compelling.
OK, well, thank you for was a really very insightful. So over the last couple of questions before I move in more into technology. Have you ever had a project fail because of collaboration issues?
- 42:11 No, I've had collaboration challenges, but we've worked through this together. I was just, you know, use some of these questions are coming up because of looking at prior literature. Right. So, yeah.
- 42:28 **OK, so you've mentioned, as you've been talking, several say key steps or tasks that are being done while collaborating on these projects, such as designing the project proposal and the budget meeting to I think the word used was portfolio to work on the individual group's contributions.**
- 43:01 **I also mentioned sharing documents and data. Are there any other tasks that require collaboration or are associated with collaboration or involved with other people?**
I think what runs through a lot of our research is also research high degree student supervision.
- 43:33 OK, what do you call it? RHD research, our degree, PhD and master's students so embedded in nearly all of our projects, there would be opportunities for PhD students.
- 43:50 And so that research training is sort of I think we see as part of our professional application and having the students involved and collaborations is nearly always a very positive experience and enhances the relationship between collaborative and the students need the exposure to a variety of researchers.

44:19 And so that runs as a sort of undercurrent, but it's always very, very positive one and enhance. So small groups need to break off to focus on the needs of the students or their project. But then it's seen as essentially planning for the future. It's not always confined to the current objectives of the project.

44:47 So that that usually is an important part, not an essential part. But because I'm at the university, it's a desirable and expected part of the project. If I was that I used to work for <redacted>, which is the <redacted> for the government research body where students weren't part of our core business.

45:17 And so the profile is a bit different.

OK, OK, so. So one of the things I had to kind of work to come back with is. You mentioned that you were sharing documents and data with within your group and with your collaborators, and you mentioned using email and you also mentioned using Dropbox. Is there any of that?

45:48 So what I use for is, is Dropbox. And within our faculty, we have shared computer drives through the groups. So within the faculty certainly share drives that are secure for a group that are backed up by the university are well used. Dropbox is good.

46:11 I know a lot of people who use Google Docs, but I never really got around to using that effectively because it's linked to a Gmail account. But from where I was an email from a central repository for key documents, it is certainly a norm. And so it's just really essential.

46:42 Otherwise, you're forever searching for archives.

You're right. So when do you use used to share drives over using Dropbox?

If the activity is within our faculty, I would use that for a small group. I would use the share piece.

47:08 But if it was an activity that extended beyond my faculty, then I'd use Dropbox and it simply because the way the university is that she had drivers, they just managed the faculty level, OK, and you can't let other people into it. Right.

So what does the data security.

Yeah, that's the that's the difference that would drive the different approaches to a shared.

47:34 I know that people who use iCloud as well, but not everybody's using AI technologies that like Dropbox is easy. Yeah, OK. Ease of use is one thing. Yeah.

Have you ever had any issues with using Dropbox or using share drives to share data?

I haven't found any issues with Dropbox, but the shared drive I have, because you may have internal I.T.

48:06 management systems that change things and then your, you know, upgrade something or, you know, this changes within the I.T. environment and the data is always there is backed up. So that's really reassuring. But it may not always be at your fingertips.

OK, you mentioned that sometimes you when you were you would share a shared document.

48:36 **You share it via Dropbox and then send an email out.**

I know that's redundant, but I think it's fully reflects my age and technological love, because when you do a Dropbox, if you looked into it, it says Dropbox has been updated when you log in. But you what's been updated, if you're using it for multiple activities, you have to go into Dropbox and see what was updated.

49:03 I sent an email to a friend or collaborator sort of saying, yeah, look, I'll upload that into Dropbox, then, you know, you can expect to see it. There is probably how I'd do it. I was involved in a multi faculty project earlier this year with probably about 10 people representing a whole lot of different faculties.

- 49:35 And we used Dropbox. It was interesting. What we would do is have a physical meetings, have some actions that were decided then. But what we would say is, yes, I will prepare that part of the document and I'll, you know, upload it into the Dropbox. And then the next person who was dependent on that would take it and further develop that.
- 50:03 The document that we were research looked developing a report. And while there were some emails that said, yes, I've done the job, it's still the agreement on this is how we are going to do this task was done in person.
- Why the consensus?**
- 50:34 It might have been because it was an all female group that didn't know each other all that well and came from a wide range of different disciplines. The project was on a strategic development of different ways of delivering are actually training. And so people coming from very different perspectives.
- 51:00 And I think that for this worked group to work cooperatively, they needed to have some team building time and that that was done around the board table and they could argue backwards and forwards and then reach consensus that the actions were easy to do. And I dropped that an email. But the consensus needed to be reached in person.
- 51:32 It was reached.
- Yeah, OK. Have you been in a situation where you tried to reach that kind of consensus via like via email or you didn't have the opportunity to meet in person?**
- I'm afraid family would have resorted to a conference call after the various individual emails flashing backwards and forwards.
- 52:00 And we think when we're close to some sort of plan, then we'd have a brief conference call just to make sure that everybody is all on board, do all understand their roles and expectations. And so I would probably always endeavor to have a voice conversation, be at conference or face to face if I'm seeking commitments from other parties.
- 52:33 **OK, and can you elaborate a little bit more as to why?**
- Because you can involve multiple people. People at the same time with email is just a two way conversation, whereas in a telephone call or a Face-To-Face other, everybody is participating, even if it is listening to the exchange and have the opportunity to contribute or dispute it.
- 53:12 The limitations with email is it only goes between two people. I know you can copy it to everybody and you can lose overlain and unsynchronized part of the conversation. But it's too blocked. It's too yes. It's too complex things. That's where I want email his limitations.
- 53:41 I'd rather his voice got worked more reliably.
- Got it. Yeah, for sure. So if you could create a hypothetical future technology, you can treat this like a magic box or whatever. I have to limit it to what you think we can or can't do. That would make collaboration easier. What would it do? What features would it have?**
- 54:12 Well, it would have some nice voice recognition software embedded into it. So I use Dragon naturally speaking a fair bit for writing documents and sometimes in exchanges and it have those automatic mean.
- 54:36 It's almost written up. So it has some good voice recognition. So even if you had a voice connection and to keep humans interacting by vocally and audio that the computer is taking notes for us, I'd like that because it would be more efficient in recording outcome.
- 55:11 I think that the voices have to be some way of controlling it. So it wasn't intrusive. So if. So that people can't demand your attention and participation, you know, on your computer, you might get this little bing bing bing of the with the email and it just it's a distraction from what you're doing.

- 55:47 So it shouldn't be intrusive. You should be able to certainly control your opinion, opt out. I know. Did you see the did you see the movie The Kingsmen?
- No, I don't know it.**
- There's a scene in the Kingsmen where they need to have a meeting of a number of people.
- 56:13 The boardroom table there are to flesh and blood people at the table, but the rest of the people at the table, little holograms. That would be really cool. Yeah, that's people actually speaking and seeing each other, but maybe actually not physically there. That's very futuristic. I know.
- 56:37 And look, there's probably really good video conferencing technologies that are available that I just don't have access to so that a more accessible video conferencing would probably make a big difference to me. All right. We can go offsite book facilities, but it would be better if you could just do it in your office.
- 57:03 **OK, I'm going to wrap up with a couple of demographic questions I'm required to ask a couple of years. So what is your current position, your faculty?**