

I commend the process and thankful for the opportunity to comment. I have restricted these comments to a few key points which I would be happy to expand on.

- I note that CRIs are the lever that government can push most strongly to create the changes in the system that are desired, and the focus of this submission is CRIs. Also note that there may be considerable variation within CRIs that might require different solutions.
- CRIs provide space where we can direct not only what CRI does, but how it does it. In particular the behaviours and motivations of scientists and management that we want to foster.
- Need to be clear on the role of CRI in the system, relative to govt departments (eg MOH, MfE, MPI), Universities and other players. Not all the same and need to be clear on the “Why” for each.
- I think for CRIs, there may be benefits to not just returning to being a govt department. The crux of that particular rationale is the role of a CRI as a provider of scientific advice, services and research which has some **independence** from direct political interference. Government departments have scientific expertise and in some cases provide services. While politically neutral, they are under the directive of ministers and certainly no empowered to make anything public which might embarrass or criticise a minister. CRIs should be encouraged to provide independent and robust science and data. Needs to be open, transparent and grow community trust. In countering misinformation, mistrust in science and in government need to make sharing data reliably and trustworthy a core CRI requirement.
- Having said that, reviewing what was wrong with DSIR, how CSIRO and others work, how CRI model has succeeded and where it hasn't, could result in a DSIR type organisation being a useful output, particularly for govt climates.
- While we can't and shouldn't restrict University academic freedom (including the freedom to incite debated, controversy), we can with CRIs mandate unbiased, well supported science, free as much as possible from political influence. Do want opinions from CRI (and other scientists) but with clear demarcation of facts from opinions.
- Current CRIs and senior management in particular driven by financial incentives never ending drive to increase revenue with focus on commercialisation.
- Research needs to include Te Tiriti and Te Ao Maori principles, with Maori researchers and team members. But these also incorporated via the advisory panels that need to inform and guide the research directions, and also provide community connections and pathways to impact.
- Noted that during this process MBIE highlighted the importance of science sector in responding to emergencies and issues whether COVID, earthquakes, volcanoes, Havelock North, whey protein, kauri dieback and whatever comes next. There are lessons from each of these, and undoubtedly be new crises that need science.
- There are many lessons from COVID. While NZ has been fortunate in science response, not necessarily been planned and perhaps overly dependent on individuals rather than established positions.
- Commend HRC and MBIE for funding rounds in response to COVID, but competitive funding too slow, key researchers not with time to apply, assessment challenging and by necessity rushed. Perhaps most importantly a lack of coordination between applicants to ensure optimal integrated research response. A response that might benefit from ongoing nudges in

different directions as the pandemic evolved and needs changed both due to the pandemic, and to evolving research findings from overseas.

### **Core function**

- Core functions should fill long-term needs that while activities within core function may change over time, almost certain the over the next 30 years NZ will need
  - Research to solve changing issues in this area
  - Expertise/capability in this area, that research will also sustain and grow capability in this core function area.
- Deciding and defining the core functions would be a challenging and crucial task.
- Rather than being driven by funding, core function can be driven by needs in an area, with research focused on where can have the greatest impact and address long term need.
- Core function should fund leadership in this area that will be well connected in NZ and internationally. When needed should be able to bring together existing networks and expertise.
- Good examples of core functions in areas of water quality, food safety, health, natural hazards, climate change, the environment. Public good benefit.
- Should not compete with private sector. If private sector can provide service or expertise then that should be encouraged.
- Core funded function may provide unprofitable but essential services and act as reference laboratory. May engage in the marketplace to maintain base level of expertise and to provide some marketplace equilibrating activities. Could you fund reference lab within commercial provider? Possibly, but management motivations of a profit maximising commercial enterprise may act counter to reference service. Need to avoid risks of just subsidising wider commercial service. Reference laboratory sits better in research context.

### **Base grant**

- Base grant could make finance of CRI and scientists simpler and therefore more efficient. Never be enough money but having identified core function within a CRI, need to fund via a base grant an “appropriate” level of capability and activity. Should be structured to need less administrative overheads
- That base grant funding of a core function may be spread permanently over researchers in that CRI, other CRIs or units within universities or other organisations.
- Reward base grant core function research teams for behaviours and impacts that you want to encourage.
- Funding for CRIs currently comes from SSIF, Competitive research grants, Contracted work for Government Departments, commercial work for councils, businesses. Determining what is appropriate from each source and the nature of that is something that needs careful consideration, and may be a range of best solutions. Forensics there may appropriately be a contract for services with police/justice. But then base grant to support capability and research to underpin services. How these are balanced with different stakeholders is important.
- Commercial work should be because it importantly fills a market and NZ need, NOT because it will fund research.
- Need to consider how increases in base funding would be justified and funded.
- Unintended consequences of any changes need to be considered and tested.

- Avoid creating complacent jobs with little innovation. Measure people on the basis of what they achieve and the impact they have, not what they promise in grant applications. Encourage students and post-docs, which ideally base grant might fund some, but more likely apply to competitive funding for these short-term stretch opportunities.