



26th of August 2016

Re: Comment on the NCRIS Roadmap

To whom it may concern.

Dear Madame, dear Sir.

I am writing this letter to comment on specific aspects of the NCRIS Roadmap related to marine microbiology.

The last two decades of national and international research has revealed that microorganisms are essential for the marine ecosystem. They constitute ~90% of the ocean's biomass and are major contributors to the sequestration of CO₂, among other functions. The study of microbial diversity and function in the world's ocean is fully dependent on -omics technology, in particular DNA/RNA sequencing and proteomics.

Bioplatforms Australia's (BPA) has developed a network of facilities that are state-of-the-art and operate with high professionalism. Data generation in the -omics field has shifted in the last few years around the globe from individual laboratories or sole-organisation activities towards large-scale, cross-institutional national and/or international initiatives.

BPA has recognized this and has investment into strategic data resources that has brought the marine microbiology of Australia, including myself, together. This has not only resulted in an enhanced collaborative research environment, but a truly national and cross-institutional initiative that has gained international recognition. This initiative is set to deliver world-leading information on microbial processes in the marine ecosystem.

Omic-supported observations of important ecosystem-drivers, such as marine microbes, need to be ongoing in order to discover and describe trends and principles that will allow future, model-based predictions. Microbial-based models will have a clear value for managing important marine ecosystem functions, such as CO₂ sequestration or pollutant degradation.

I would therefore strongly support and encourage that the programs, such as the marine microbiology program, receive on-going support by BPA and NCRIS.

Sincerely,

A handwritten signature in black ink, appearing to read "Torsten Thomas".

Associate Professor Torsten Thomas