FACULTY OF SCIENCE AND ENGINEERING
RESEARCH COMMITTEE MEETING

8 March 2017, 12:00 – 2:00 pm, E6A-242

Agenda

1. Welcome and Apologies
2. Matters arising from Minutes of the previous meeting
3. Reports
   a. ADR/FRM report
   b. AD International and Corporate Engagement report
   c. Macquarie Park Innovation District (MPID)
   d. AD Higher Degree Research report
   e. Research Office report
   f. PURE update (Roz Howard)
   g. ERA 2018 update
   h. Department reports
4. Matters for discussion
      To target major research opportunities we need to build scale, and foster
      collaborations including interdisciplinary teams. In 2014, the Research
      Framework process identified research themes and streams that spanned
      departments/faculties (extract of Research Framework attached and briefly listed
      below).
      1. Are the themes and streams still right for FSE in 2017?
      2. What areas should we focus on for 2017?
      3. What is the best way to facilitate collaboration across disciplines?
   b. Nature Publishing Group – is a Nature Masterclass the right way to support
      people to publish in the highest impact journals?
   c. ERA Plan-B: what is our Plan-B re PURE & alternative systems?
   d. Barlow Report. Findings for MQ.
5. Next Meeting – Wednesday 12 April, 12-2 pm, E6A-242
Themes and Streams of most relevance to FSE:

FUTURE-SHAPING RESEARCH PRIORITY 1: HEALTHY PEOPLE

THEME:
Translational medical research
- Cancer detection, treatment, prognosis and survivorship
- Infection and immunity
- Neurological disease
- Cardiovascular disease and treatments
- Biomedical and surgical innovations

FUTURE-SHAPING RESEARCH PRIORITY 3: PROSPEROUS ECONOMIES

THEME:
Organisation sustainability, productivity and competitiveness
- Sustainable use of resources and technologies
- Energy security

FUTURE-SHAPING RESEARCH PRIORITY 4: SECURE PLANET

THEME:
Living in a changing environment
- Evolutionary biology and animal behaviour
- Climate change – risk, impact, adaptation and mitigation
- Environmental management and environmental health
- Science communication
- Coupled human-nature systems
- Understanding life on our planet
- Complex biological and ecological systems

THEME:
Exploring planet Earth and beyond
- **Exploring planet Earth, its internal processes and origin**
- Experimental and comparative planetology
- **Understanding planets, stars and galaxies**

FUTURE-SHAPING RESEARCH PRIORITY 5: INNOVATIVE TECHNOLOGIES

THEME:
Science and engineering technologies for the 21st Century
- **Quantum science and technology**
- **Wireless** and photonic technology
- Bio-engineering, nanotechnologies and synthetic biology
- Biomolecular technologies and ‘Omics’
- Smart, safe and sustainable systems
- Securing and managing **water** and food quality in a changing environment

THEME:
Big data: Acquisition, analysis, application and assurance
- Big fast data: data Acquisition and manipulation
- Data science and analytics theory
- Big data: Theory, analysis and application
- **Cyber-security** and privacy