



# RAPID

Research and Project Innovation & Development

A fast-moving initiative from the School of Creative Industries  
to encourage cross-disciplinary research, innovation and industry engagement



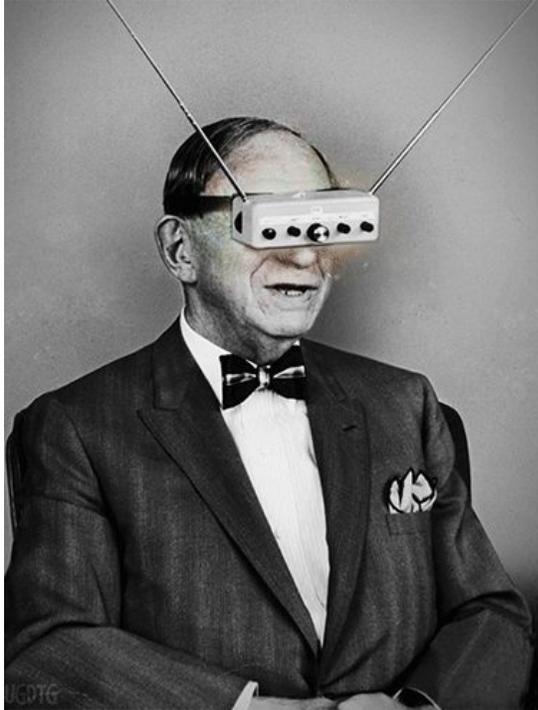
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# IN A WORD



- RAPID is series of research ‘sprints’ conducted over a 3-6 month period.
- Each RAPID sprint is a research project carried out between UoN researchers (from at least two different disciplines) and an external partner (a community, business or NGO).
- RAPID will provide financial, human and technological resources to enable these partners to work together on user-driven real-world problems.

# THE SPIRIT OF RAPID



- Discover problems that matter
- Play, innovate and experiment
- Fail fast and move on
- Build relationships with other researchers & industry partners
- Look for IP & value opportunities
- Spot alternative pathways to the endgame

It's a great fit with the School of Creative Industries 'promise': "We collaborate with our partners across the spectrum of creative professions to drive innovations that contribute to the cultural and economic transformation of our regions."

# THE PROCESS AT A GLANCE



# WHAT YOU NEED TO WRITE



## PROPOSAL FORMAT

### 1. *written proposal - due midnight Sunday 14 October*

- *Objectives*
- *Background & Significance*
- *Research Design & Methods*
- *Resources involved (including people)*
- *Plans for external funding*
- *Budget details*

### 2. *5 minute pitch – 6-9pm Wednesday 17 October*

- *Pitch to a panel*
- *Time constraint strictly enforced*
- *No more than 7 slides*
- *2 minute question time at end*

# WHAT YOU NEED TO SAY



## PITCHING SESSION

*6.00-8.30pm, Wed 17 Oct, (Room TBA)*

Presentation of ideas as 5 minute pitch

Pitching Panel feedback (from written proposal + pitch)

### Outcomes

Winners announced

Recommendations for alternate pathways & other development given

PITCH  
Winners  
Announced



# CRITERIA



To be eligible, a RAPID project must

- be based on the collaboration of two or more SOCI members from at least two different academic units. The collaborators may be designated as Project Investigator or co-PI(s).
- be multidisciplinary or transdisciplinary in scope.
- demonstrate that all work can be completed within a 3-6 month period
- Include a budget that does not exceed \$10,000
- show substantial promise for developing a larger proposal for external funding and include strong evidence that the PIs have identified external funding agencies with potential interest in the proposal.
- not be used to supplement existing grants or contracts

# Appendix A – RAPID PROPOSAL FORMAT

## **Objectives: (350 words)**

List the broad, long-term objectives and what the specific research proposed is intended to accomplish.

## **Background and Significance: (500 words)**

Briefly sketch the background leading to the proposed work, critically evaluate existing knowledge, and specifically identify the gaps that the project is intended to fill. State concisely the importance and relevance of the proposed work by relating the specific aims to the broad, long-term objectives. Include reference to relevant preliminary studies or progress reports, if applicable.

## **Research Design and Methods: (700 words)**

Describe the research design and the procedures to be used to accomplish the specific aims of the project. Include how the data will be collected, analysed, and interpreted.

Describe any new methodology and its advantage over existing methodologies.

Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims.

As part of this section, provide a tentative timetable for the project considering that all work is to be completed as a research 'sprint' within the allotted 3-6 months of RAPID.

## **Resources, Facilities, and Collaborations: (350 words)**

List individuals involved in the development or execution of the project and their qualifications. (Please paraphrase these – no need for full CV's other than that of the PI. Just tell us why people are on the team and what they're bringing to the party!)

## **Plans for Seeking External Funding: (500 words)**

Describe the proposals that will be developed after the conclusion of the RAPID project. List the funding agencies and/or industries targeted, provide an estimate of the expected funding level and the potential for funding. State how the resources requested from RAPID will enable the development of these external proposals.

## **Budget and Budget Justification:**

Include a budget that does not exceed \$10,000 (Inc. GST).

Include justification and explanation of how the expenditure of RAPID funds would assist in developing strong proposals for external funding agencies.

## **Other Support:**

If relevant - include a list of current and pending support for all investigators.

## **Appendix:**

Include a two-page curriculum vitae of the RAPID project lead (attachment).

# Appendix B – OTHER INFORMATION

## **Support and mentoring**

There are a number of support mechanisms in place for those bidding, delivering and disseminating RAPID projects. These include short workshops led by people active researchers within SOCI and are designed to cover a range of bidding topics.

FEDUA support is also available to assist with a range of bid activities. These include costing proposals and seeking external follow-up funding to continue the work beyond the initial 'sprint'.

Mentors drawn from various areas of UoN can support in a number of additional ways. For example, support can be accessed on initial advice on bid concepts and continued support during the development phase. Mentors will also be on hand to advise during the delivery and write-up/dissemination phases.

## **Proposal review and funding decisions**

The proposal review may include the DVC R&I, PVC Innovation, Head of the School of Creative Industries, Faculty Director of Research, Leads, industry professionals and colleagues with discipline expertise from across the university. Timeframes for review will vary depending on the size and scope of the proposal, and availability of the review panel. The RAPID lead will be in contact with applicants during this process, and will notify you of the final decision.

The School of Creative Industries is under no obligation to fund a proposal. As part of the RAPID process, the panel may suggest alternative partners, or funding sources, such as competitive grants or venture capital investments.

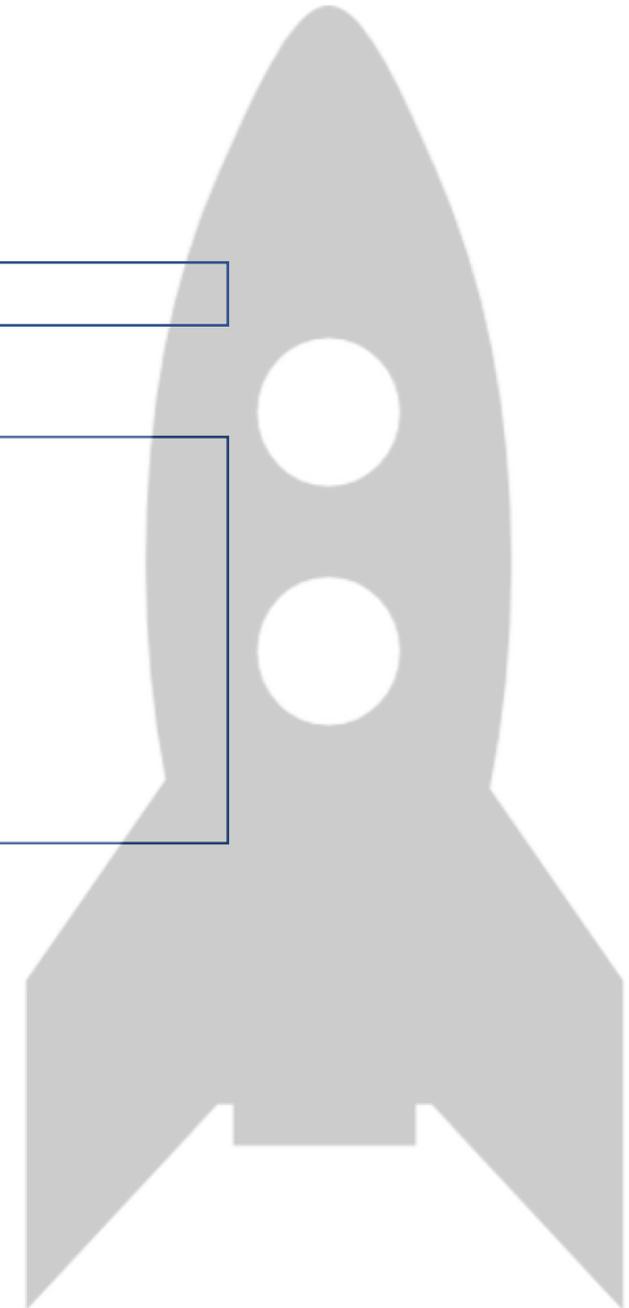
# RAPID IDEA

I am a  Industry Partner  Researcher  Technology Partner or Other

I am interested in... *what's your idea for a Rapid research project*

I am looking for a  Industry Partner  Researcher  Technology Partner

Name	<input type="text"/>
Email	<input type="text"/>
Phone	<input type="text"/>



# LAST YEAR'S SUCCESSFUL RAPID PROJECTS

## BACKYARD DETECTIVES



The broad long-term objective of the project is two-fold: First, a public health intervention. Second, an educative outcome related to Newcastle's smart city strategy.

Ultimately, the aim is to harness known local public health concerns through a crowdsourced methodology to both prove the local reality of the coal dust phenomenon through indicative data sampling, and to build community momentum towards social change. A successful outcome would be generation of an indicative evidence base and community sentiment providing an adequate foundation for effective advocacy towards further investment in research, and ultimately a public policy solution.

Our practical objective for the RAPID project is to develop a fine grain sensor-based DIY kit that can read how much coal dust is dispersed into the atmosphere from uncovered coal train loads. The project will design and deploy Internet of Things (IoT) sensor-based technologies to enable crowd-sourced data as a citizen science project. The IoT core sensor kit will be so simple that a 5 year old can assemble it, and be designed to be supplemented by everyday household items (toilet rolls, coat hangers, pvc pipe etc).

The DIY and tech hardware components will be supported by an online dashboard where participants can log in their home coal dust kit and monitor the aggregated data as the project progresses. The dashboard will be designed utilising 'gamification' design principles to encourage repeat visitation, ongoing participation, and ultimately an educative process.

The project will engage families via school-age children who are able to assemble kits during workshops and according to open source instructions, to create a particulate matter sensor for measuring coal dust. Citizens' will install the kits across the region to crowdsourcing the desired data.

## KOALAS & DRONES



Koalas populations are in decline in NSW. It may not be possible to ensure all koala populations continue to persist in all locations in NSW (NSW Chief Scientist & Engineer, 2016). The stated objective of the NSW government is to stabilise and then start to increase koala numbers in NSW.

More accurate estimates of koala abundance are needed to make effective conservation decisions. The Office of Environment and Heritage (OEH) is creating three types of maps for NSW indicating:

- occurrence of koalas (from records or models),
- threats and resulting trends in the populations
- maps of suitable habitat

Detecting koalas in the field is the major limitation to this endeavour. Koala's are widespread, but patchily distributed and can be hard to detect (Lunney et al., 2009).

We propose to trial a new method of koala detection using drones. Drones or Unmanned Aerial Vehicles (UAVs) allow for the remote capture of thermal imagery and lidar at night to detect koala heat signatures. The results will present new opportunities for data processing (crowd sourcing and artificial intelligence) and new media for digital artists.

It is difficult to take on projects that involve risk or innovation in an operational environment. RAPID funding would allow use to acquire new knowledge in preparation for further grant applications.

## VR: TIME FOR CONTENT



The long-term objective of this project is to develop a Newcastle-based capability for the creation of virtual reality (VR) content that engages users with a sophisticated understanding of the unique nature of the VR experience, rather than the application of linear storytelling techniques adapted to, or forced upon, the medium.

The long-term intention of the project is to create a specialist VR production company backed by proprietary research that creates commercially valuable content and processes for the consumer, education, tourism, immersive journalism and other commercial markets.

The specific research of this RAPID project will focus on understanding how the medium of VR can best be used for creating dramatic and emotional immersive experiences. The project will involve the writing, planning and production of a short VR work that leverages the immersive environment of VR for its impact on the user, rather than force-fitting traditional moving-image narrative techniques to guide the user in the direction of a linear experience (most commonly done with signs, sounds, in-story narrators/avatars, and use of darkness/light/physical boundaries that guide the viewer to the place the storyteller must be to follow the narrative).

The project will also create research outputs that help fill the current gap in understanding the "grammar" of VR "storytelling" which we theorise as being less reliant (for the production of emotion/affect) on narration than existing moving image content. The current cinema experience is dominated by cinematography & editing techniques that control the viewer's time and space (what they are looking at and when they see it). In a virtual environment, the "storyteller" (better described as an experience creator/curator) can no longer fully control where a viewer chooses to be and what they look at. It's our contention – to be explored in the research – that the pleasure that comes with immersion in a virtual world is less aligned with traditional narrative structures and satisfaction and more about the aesthetic experience of sensory immersion – driving empathy, memory creation and a sense of the sublime. What VR offers, but is yet to deliver in full, is a deeply aesthetic experience that reworks the power of narrative to create curiosity, compulsion and intrigue in a 360 degree storyworld.

# CONTACTS

- For more information, email Dr. Simon Weaving
  - [simon.weaving@newcastle.edu.au](mailto:simon.weaving@newcastle.edu.au)
- To be included in the RAPID events, email Christy Hay
  - [christy.hay@newcastle.edu.au](mailto:christy.hay@newcastle.edu.au)