ARC Discovery Grants Workshop

October 2018
FedUni

Prof. Leigh Sullivan

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Points covered here

- Brief introduction/overview

- Discovery and DECRA programs

- ARC Grantsmanship:
  - the ARC's assessment process,
  - elements of a successful application

Brief introduction/overview

FedUni's ARC DP20 and DECRA 20 process of EOIs, reviews etc is pretty much useless if you in the top 1 or 2% of university research academics.
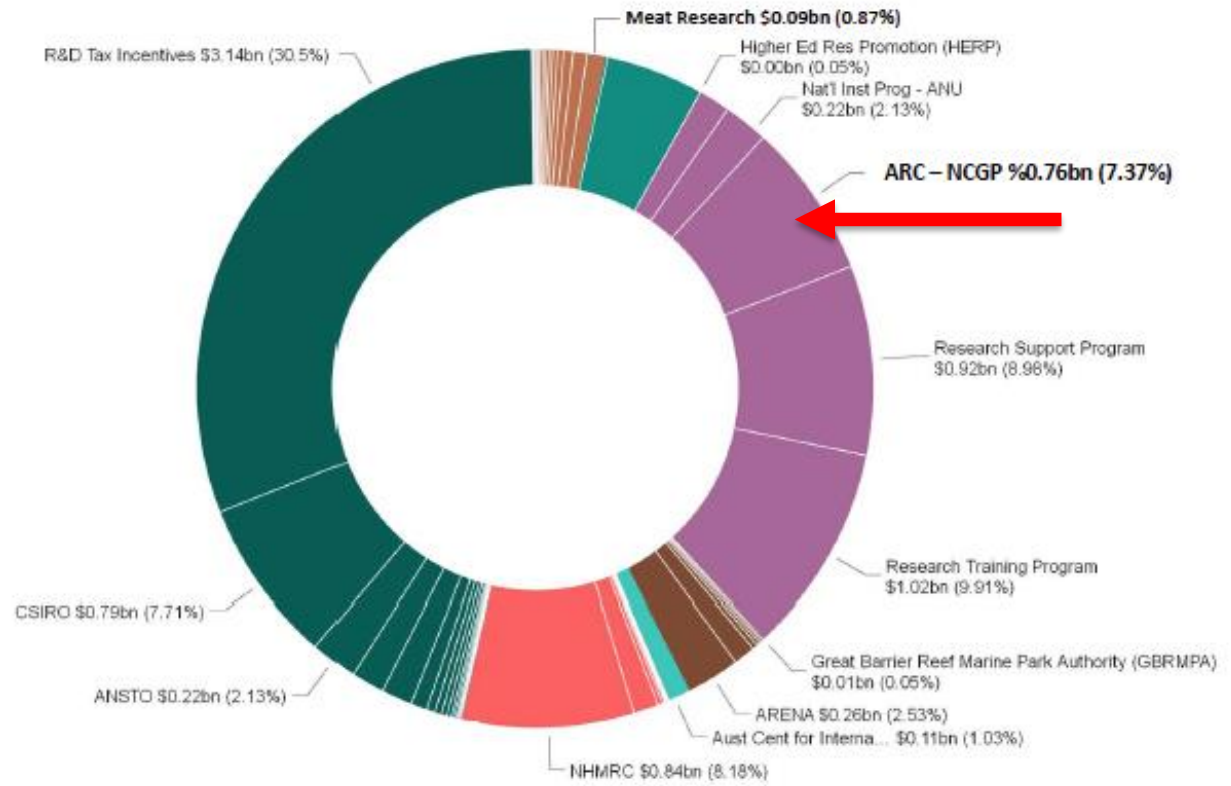
The purpose of this session and tomorrow's sessions with Emeritus Prof. Peter Baverstock, and indeed the whole process, is to provide a solid understanding of how to be successful in this highly competitive arena so that your application will have a winning 'edge'.

If your application is deemed to be <u>only</u> superior than ~80% of the other applications submitted, then your application will not be funded!
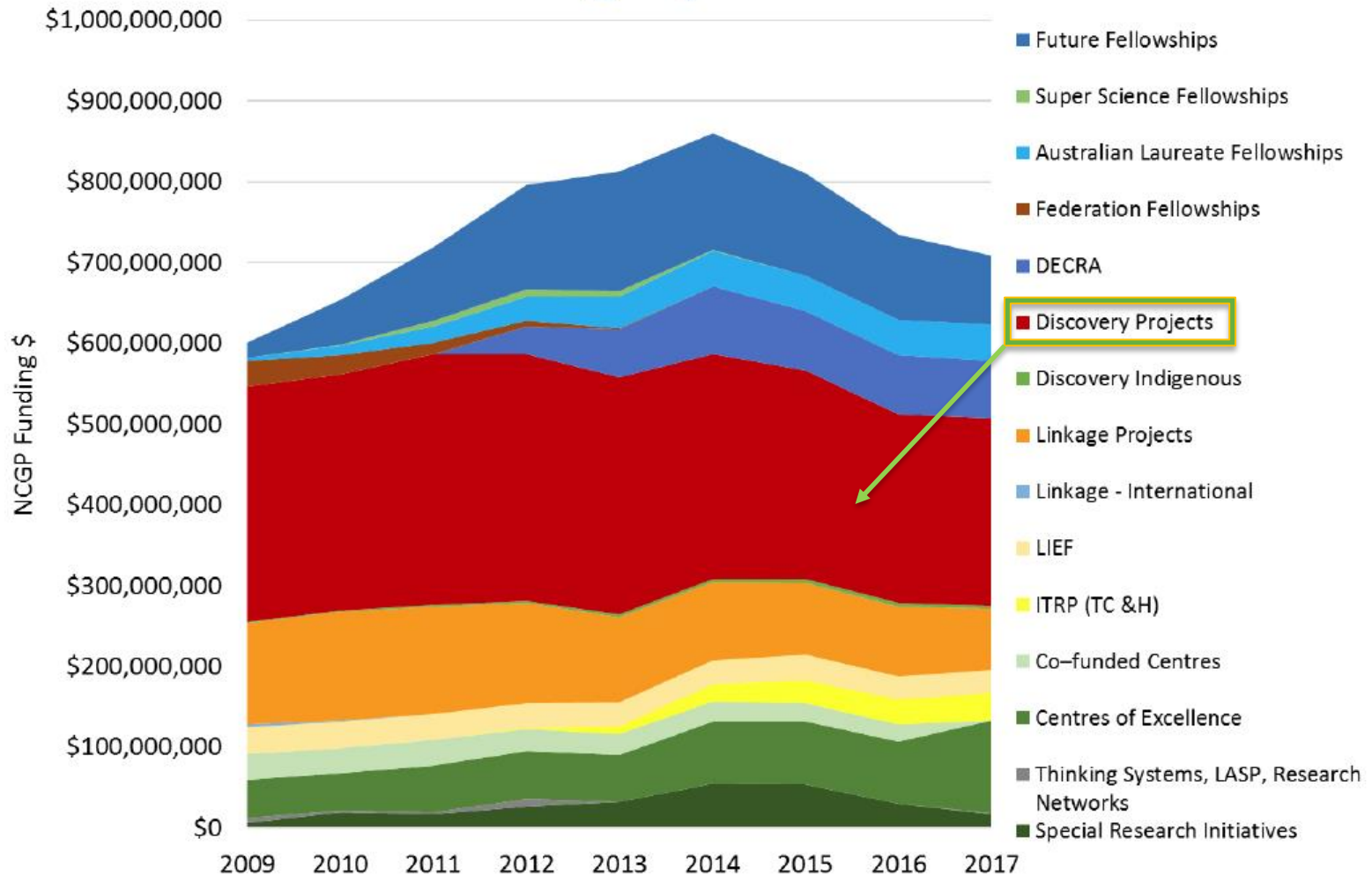
2017–18 Federal investment in R&D
(Approx. AU$10 Billion)

Portfolio

- Ag & Water Res
- A-G's
- Comms & Arts
- Defence
- Edu & Training
- Enviro & Energy
- Foreign Affairs & Trade
- Health
- Industry, Innov & Sci
- Inf & Region Dev
- PM & C
- Social Services
- Treasury
- Vets' Affairs

R&D Tax Incentives $3.14bn (30.5%)

Meat Research $0.09bn (0.87%)

Higher Ed Res Promotion (HERP) $0.00bn (0.05%)

Nat'l Inst Prog - ANU $0.22bn (2.13%)

ARC – NCGP %0.76bn (7.37%)

Research Support Program $0.92bn (8.96%)

Research Training Program $1.02bn (9.91%)

Great Barrier Reef Marine Park Authority (GBRMPA) $0.01bn (0.05%)

ARENA $0.26bn (2.53%)

Aust Cent for Interna... $0.11bn (1.03%)

NHMRC $0.84bn (8.18%)

Aust Cent for Interna... $0.11bn (1.03%)

ANSTO $0.22bn (2.13%)

CSIRO $0.79bn (7.71%)

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ARC NCGP funding by scheme 2009–2017

National Competitive Grants Program

Discovery Program

Australian Laureate Fellowships

Future Fellowships

DECRA

Discovery Indigenous

Discovery Projects

Linkage Program

Centres of Excellence

SRIs

ITRP

LIEF

LASP

Linkage Projects
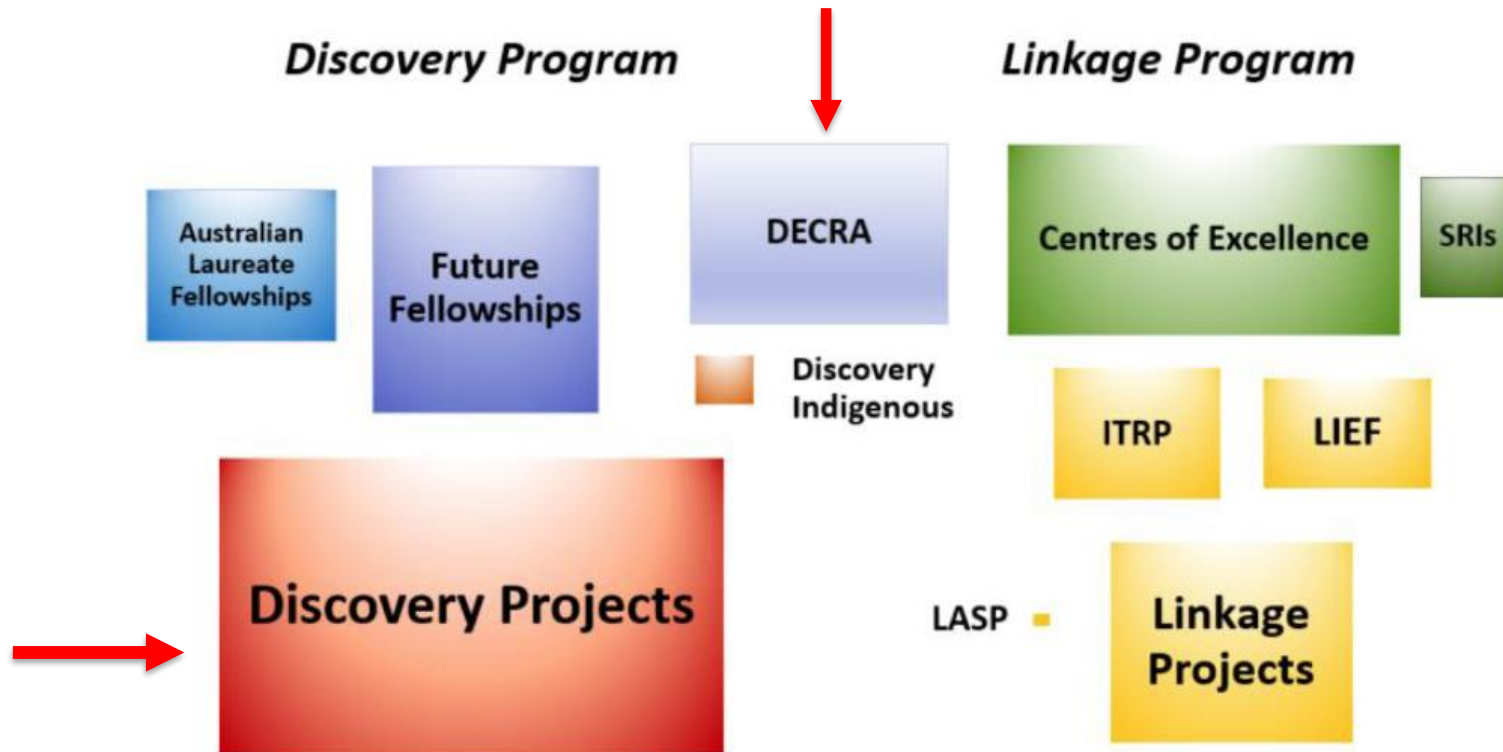
Area of box represents ARC funding by scheme (new and ongoing projects) for 2017

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Discovery Program

The ARC's Discovery funding schemes recognise the importance of <u>fundamental</u> research to the national innovation system.

Schemes:

- *Discovery Projects*
- *Discovery Indigenous*
- *Discovery Early Career Researcher Award*
- *Future Fellowships*
- *Australian Laureate Fellowships*

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Discovery Projects

The *Discovery Projects* scheme provides funding for research projects that can be undertaken by individual researchers or research teams.

The **objectives** of the *Discovery Projects* scheme are to:

- support excellent basic and applied research by individuals and teams

- encourage high-quality research and research training

- enhance international collaboration in research

- expand Australia's knowledge base and research capability

- enhance the scale and focus of research in the Science and Research Priorities.

Discovery Projects—return and success rates, 2012–2018

Return rate is the fraction of funds allocated to a successful grant to the amount requested
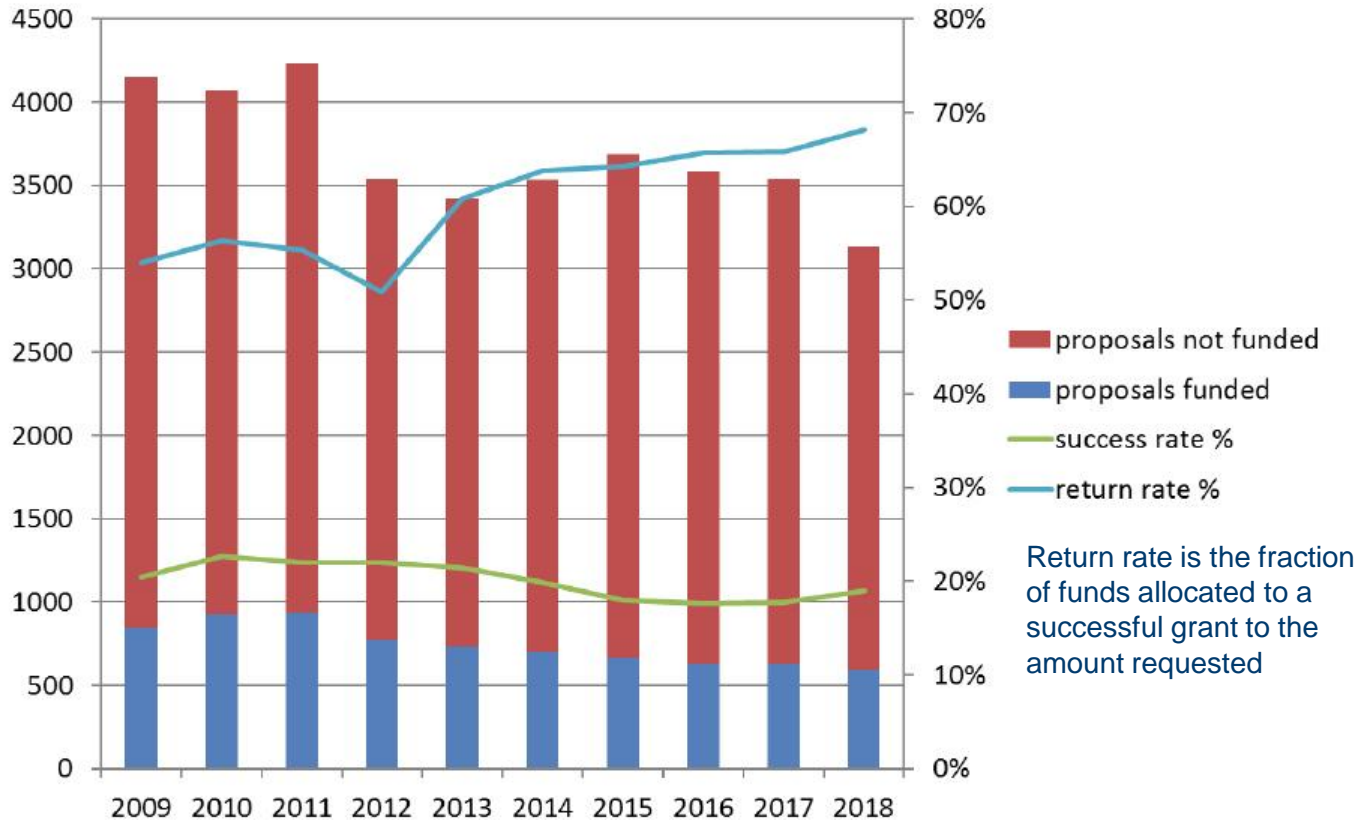
Discovery Early Career Researcher Award (DECRA)

- The DECRA scheme provides more focused support for early career researchers in both teaching and research, and research-only positions.

- Researchers may be eligible to apply if they have been awarded a PhD within five years, or longer if combined with periods of significant career interruption).

- Up to 200 three-year DECRAs may be awarded each year providing a researcher with up to $140,858 per annum.

  - This is composed of $100,858 in salary and on-costs, and up to $40,000 in project costs.

DECRA commitments

- The DECRA Recipient is expected to spend a minimum of 20 per cent of her/his time on activities at the Administering Organisation, and 80 per cent of her/his time on research activities related to the proposed DECRA. (D6.4 and D6.5)

- The DECRA Recipient may not engage in other professional employment for the duration of the DECRA without prior approval from the ARC under subsection D6.7 of the Funding Rules.

- The DECRA Recipient may spend up to 0.2 (20 per cent of Full Time Equivalent) of her/his time annually on teaching activities. The DECRA will not be extended to accommodate any periods of teaching. Supervision of honours or postgraduate students is not included in this limit. (D8.2.8)

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Average Age of Lead CI in Discovery Projects, DECRA and Future Fellowships 2009–2018
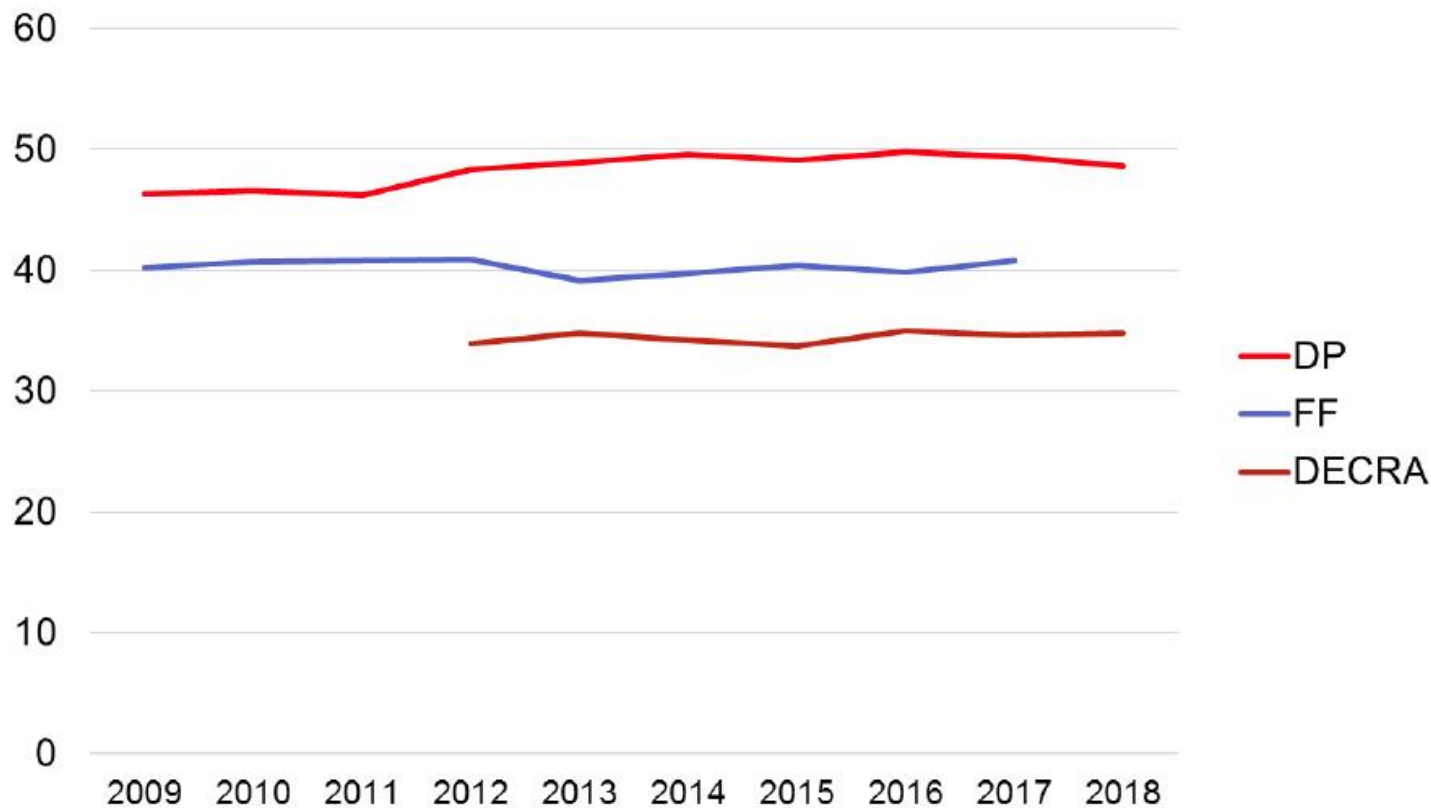
Participation and success rate of DECRA 2018 candidates by gender and career age*
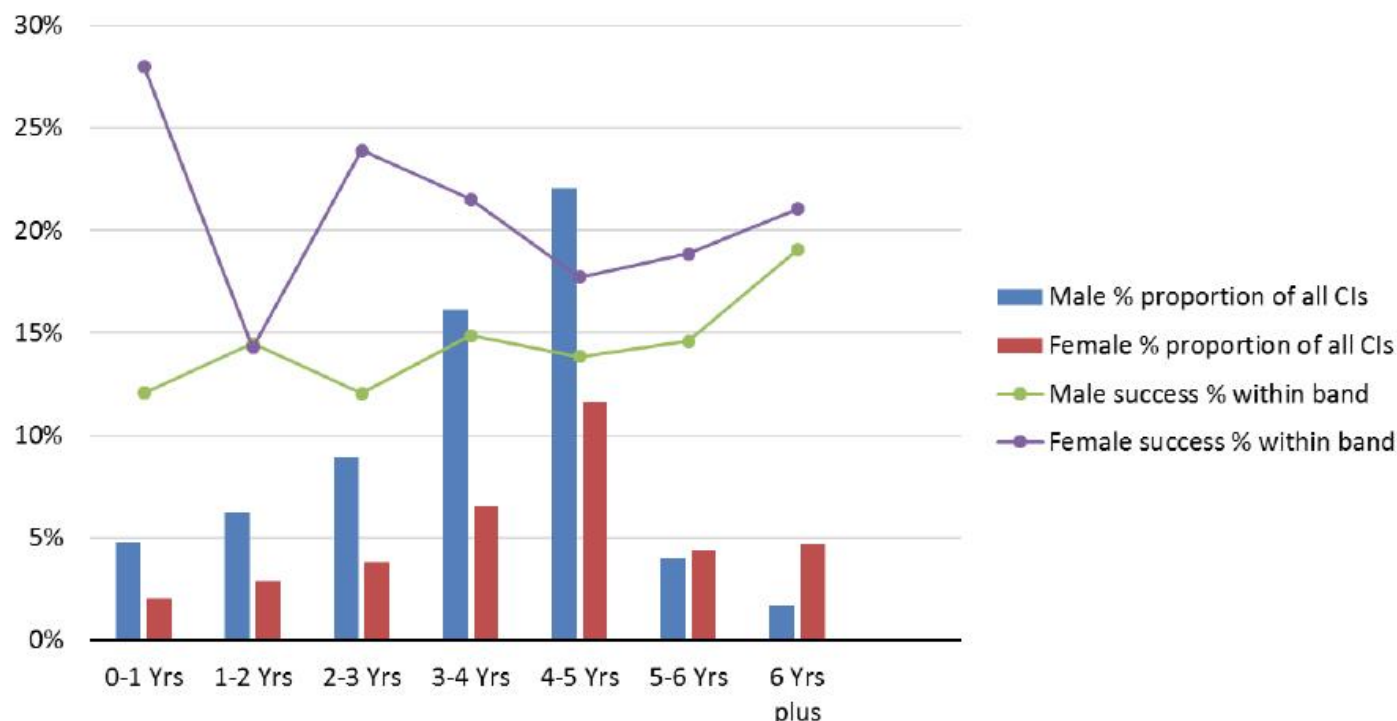
Source: 2018 Selection Report http://www.arc.gov.au/selection-report-discovery-early-career-researcher-award-2018

* Career age is calculated as years since PhD.

First-time awardees by scheme 2009–18
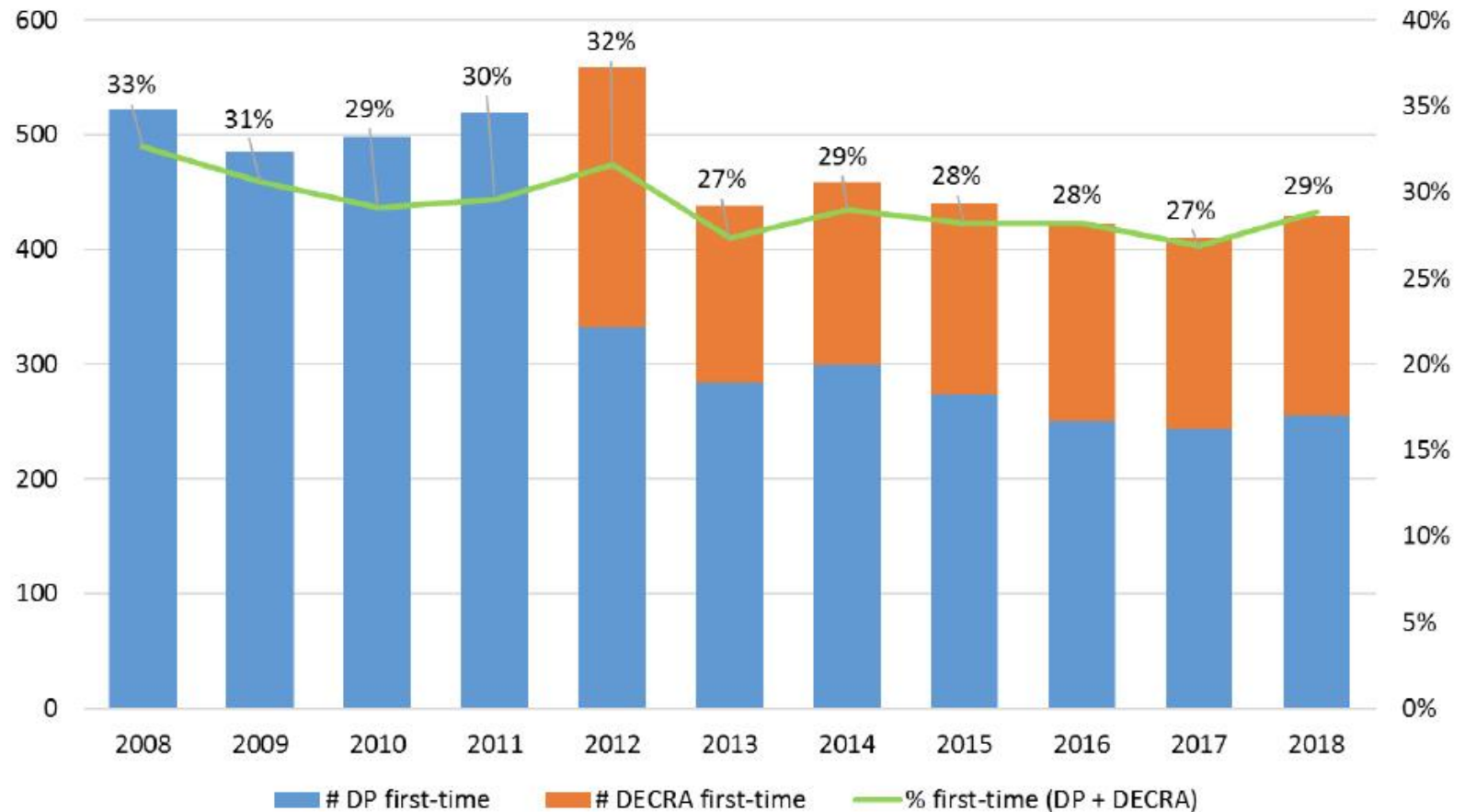
The ARC Assessment Process

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┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│ Application sent to │ ───▶ │ Application         │ ───▶ │ ARC ED assigns to   │
│ Research Services   │      │ submitted to ARC    │      │ 2 College of Expert │
│ by due date         │      │ by Office of        │      │ (COE) members       │
│                     │      │ Research via        │      │ 'internal assessors'│
│                     │      │ RMS system          │      │                     │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘
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College of Experts Panels

195 members of the ARC College of Experts at present.

Panels are usually compiled for DP selection rounds for:

- Biological Sciences and Biotech

- Engineering, Maths and Informatics

- Humanities and Creative Arts

- Physics, Chemistry, and Earth Sciences,

- Social, Behavioural, and Economic Sciences

THE ARC ASSESSMENT PROCESS

- The panel an application is sent to is largely determined by the FoR codes of application. (i.e. you largely determine WHICH College of Experts Panel assesses your application (this can be critical!)

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┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│ Application sent to  │ ───> │ Application          │ ───> │ ARC ED assigns to   │
│ Research Services    │      │ submitted to ARC     │      │ 2 College of Expert │
│ by due date          │      │ by Research          │      │ (COE) members       │
│                      │      │ Services via         │      │ 'internal assessors'│
│                      │      │ RMS system           │      │                     │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘

┌─────────────────────┐
│ First internal      │
│ assessor            │
│ selects and sends   │
│ application to 4    │
│ 'external           │
│ assessors' expert   │
│ in the field based  │
│ on COE advice;      │
│ internal assessors  │
│ assess              │
│ independently       │
└─────────────────────┘
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THE ARC ASSESSMENT PROCESS

- External assessors are determined by FoR codes, Key Words, and <u>any</u> other words especially those contained in title and summary sections.

- You can ask ARC to exclude potential External Assessors who might provide unfair assessments

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┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│  Application sent to │      │     Application     │      │  ARC ED assigns to  │
│   Research Services  │ ───▶ │  submitted to ARC   │ ───▶ │  2 College of Expert│
│      by due date     │      │   by Research       │      │    (COE) members    │
│                      │      │   Services via      │      │ 'internal assessors'│
│                      │      │     RMS system      │      │                     │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘

┌─────────────────────┐      ┌─────────────────────┐
│ First internal      │      │                     │
│ assessor selects    │      │ External assessors' │
│ and sends           │ ───▶ │   reports sent to   │
│ application to 4    │      │  applicant and their│
│ 'external           │      │      university     │
│ assessors' expert   │      │                     │
│ in the field based  │      │                     │
│ on COE advice;      │      │                     │
│ internal assessors  │      │                     │
│ assess independently│      │                     │
└─────────────────────┘      └─────────────────────┘
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- Internal assessors (COE panel members) do initial ranking based primarily upon Track Records, Significance and Innovation, and Research Environment.

- Rank at least 100 applications each!

- Mostly rely on external assessors for methodological soundness to adjust their rankings for the PQI assessment.

- You should be writing PQ&I section mainly for external assessors who are the experts in your field and ranking usually from 1 to 4 applications only.

You are writing <u>all</u> of the other sections for the two internal assessors who are not likely to be experts in your field and are reading and ranking over 100 applications!

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┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│                     │      │    Application      │      │  ARC ED assigns to  │
│ Application sent to │ ──▶  │  submitted to ARC   │ ──▶  │ 2 College of Expert │
│  Research Services  │      │     by Research     │      │   (COE) members     │
│     by due date     │      │    Services via     │      │ 'internal assessors │
│                     │      │     RMS system      │      │                     │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘

┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│ First internal assessor │  │                     │      │                     │
│  selects and sends      │  │ External assessors' │      │                     │
│ application to 4 'external│──▶│  reports sent to  │ ──▶  │      Rejoinder      │
│ assessors' expert in the │  │   applicant and their │    │   submitted to ARC  │
│ field based on COE advice;│ │     university      │      │                     │
│ internal assessors assess │ │                     │      │                     │
│    independently        │  │                     │      │                     │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘
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THE ARC ASSESSMENT PROCESS

- (Hint: make your rejoinder aimed at internal assessors to convince them to moderate their assessment of your application upwards not downwards!)

- Don't be too defensive or abusive.

- Adopt the *amicus curiae* approach (I am here to assist the internal assessors make a wise decision in their final rankings of my application.)

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┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│ Application sent to │ ───► │    Application      │ ───► │ ARC ED assigns to   │
│ Research Services   │      │ submitted to ARC    │      │ 2 College of Expert │
│ by due date         │      │ by Research         │      │ (COE) members       │
│                     │      │ Services via        │      │ 'internal assessors │
│                     │      │ RMS system          │      │                     │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘

┌─────────────────────┐      ┌─────────────────────┐      ┌─────────────────────┐
│ First internal      │      │                     │      │                     │
│ assessor selects    │      │ External            │      │                     │
│ and sends           │      │ assessors'          │      │                     │
│ application to 4    │ ───► │ reports sent to     │ ───► │ Rejoinder           │
│ 'external           │      │ applicant and       │      │ submitted to ARC    │
│ assessors' expert   │      │ their university    │      │                     │
│ in the field based  │      │                     │      │                     │
│ on COE advice;      │      │                     │      │                     │
│ internal assessors  │      │                     │      │                     │
│ assess              │      │                     │      │                     │
│ independently       │      │                     │      │                     │
└─────────────────────┘      └─────────────────────┘      └─────────────────────┘

┌─────────────────────┐      ┌─────────────────────┐
│ ARC internal        │      │ The whole COE       │
│ assessors finalise  │      │ panel meets to      │
│ scores after taking │ ───► │ discuss and         │
│ into account        │      │ finalise ranking of │
│ external assessor   │      │ applications and    │
│ reports and         │      │ level of funding    │
│ rejoinders          │      │                     │
└─────────────────────┘      └─────────────────────┘
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Ranking process in panels

At least 4 assessments used (always 2 Internal Assessors, always at least 2 External Assessors)

Rankings of A to E for all 4 selection criteria from each assessor (all different weightings to allow dispersal)

Internal Assessors assessments scaled and weighted at 50%.

External Assessors unscaled weighted at 50% regardless of number of external assessments.

Ranking process in panels

Ranking process <u>very</u> confidential and as objective as possible. COI taken very seriously.

Aggregated assessments then ranked.

Bottom-ranked (clearly unfundable) ~70% excluded after due consideration.

Top-ranked (clearly fundable) ~10% agreed to be funded after due consideration.

Ranking process in panels

Most of the panels' time is spent on the remaining (possibly fundable) ranked range 10-30% to ensure the assessments are as 'correct' as possible.

Includes detailed ROPE considerations etc.

Each of these applications is assessed individually by whole of panel (Panel members with COI excluded for each application)

Ranking process in panels

No 'quota' for any FOR code in any panel… if all best applications received were in the 0402 FoR code then all ARC grants from the PCE panel would go to the 0402 code.

No evident institutional bias!

Ranking process in panels

Budgets adjusted on basis of ranking (higher the ranking generally the better the funding %), and the tension between success rate and overall funding rate.

In the PCE panel at least, it has been MUCH better to ask for a realistic amount. 'Ambit' budgets treated harshly in terms of amount granted.

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┌─────────────────────┐        ┌─────────────────────┐        ┌─────────────────────┐
│                     │        │  Application        │        │  ARC ED assigns to  │
│  Application sent to │───────▶│  submitted to ARC   │───────▶│  2 College of Expert│
│  Research Services  │        │  by Research        │        │  (COE) members      │
│  by due date        │        │  Services via       │        │  'internal assessors│
│                     │        │  RMS system         │        │                     │
└─────────────────────┘        └─────────────────────┘        └─────────────────────┘

┌─────────────────────┐        ┌─────────────────────┐        ┌─────────────────────┐
│ First internal      │        │                     │        │                     │
│ assessor            │        │  External           │        │                     │
│ selects and sends   │        │  assessors'         │        │  Rejoinder          │
│ application to 4    │───────▶│  reports sent to    │───────▶│  submitted to ARC   │
│ 'external           │        │  applicant and      │        │                     │
│ assessors' expert   │        │  their university   │        │                     │
│ in the field based  │        │                     │        │                     │
│ on COE advice;      │        │                     │        │                     │
│ internal assessors  │        │                     │        │                     │
│ assess              │        │                     │        │                     │
│ independently       │        │                     │        │                     │
└─────────────────────┘        └─────────────────────┘        └─────────────────────┘

┌─────────────────────┐        ┌─────────────────────┐        ┌─────────────────────┐
│  ARC internal       │        │  The whole COE      │        │  ARC recommends     │
│  assessors finalise │        │  panel meets to     │        │  outcomes to the    │
│  scores after taking│───────▶│  discuss and        │───────▶│  Minister – Minister│
│  into account       │        │  finalise ranking of│        │  approves and       │
│  external           │        │  applications and   │        │  releases results   │
│  assessor reports   │        │  level of funding   │        │                     │
│  and rejoinders     │        │                     │        │                     │
└─────────────────────┘        └─────────────────────┘        └─────────────────────┘
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HINTS

Know the Funding Rules and Instructions!

http://www.arc.gov.au/sites/default/files/filedepot/Public/NCGP/Funding%20Rules/Discovery_Programme_Funding_Rules_2016.pdf

HINT!

Set right 'tone' to get assessors on-side..
Applications demonstrating EQ as well as IQ tend
to do better! (don't have an approach of:
"I am the only person in the world that could
undertake this project and if you don't fund me you
are a dill…etc etc")

Ensure the application is aligned with your track
record: "this innovative and significant project
builds logically on my demonstrably outstanding
research record in this area"

HINT!

Track record is KING! 'Flavours' all other assessments. Therefore make the most of yours (**Bolding** your sruname in full in C section at every opportunity e.g. ('Smith….**Sullivan** et al, 2017' rather than 'Smith et al, 2017'), identification of your postgrad and PhD co-authors in italics in publication lists, etc etc)

Make explicit why your publications in top 10 are outstanding, significant and especially relevant to this application.

HINT!

ROPE section very important to panels…prolonged illness, child-bearing, time in industry without opportunity to publish, etc. all seriously taken into account.

But don't make frivolous claims in ROPE or go overboard on your teaching or admin loads!!!
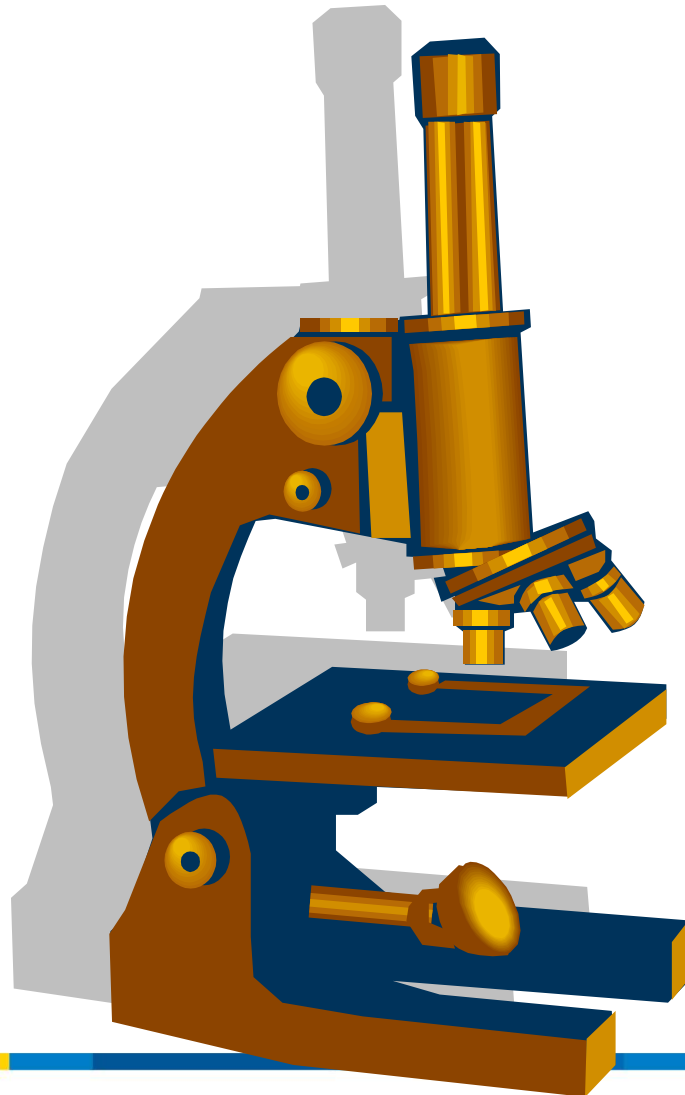
HINT!

- The application must be compelling, an easy read, and backed by a demonstrably outstanding track record.

- Give yourself time…and external input….. Pass it around to trusted colleagues for 'critical' comment etc.

"easy reading = hard writing!"

Myths and misconceptions
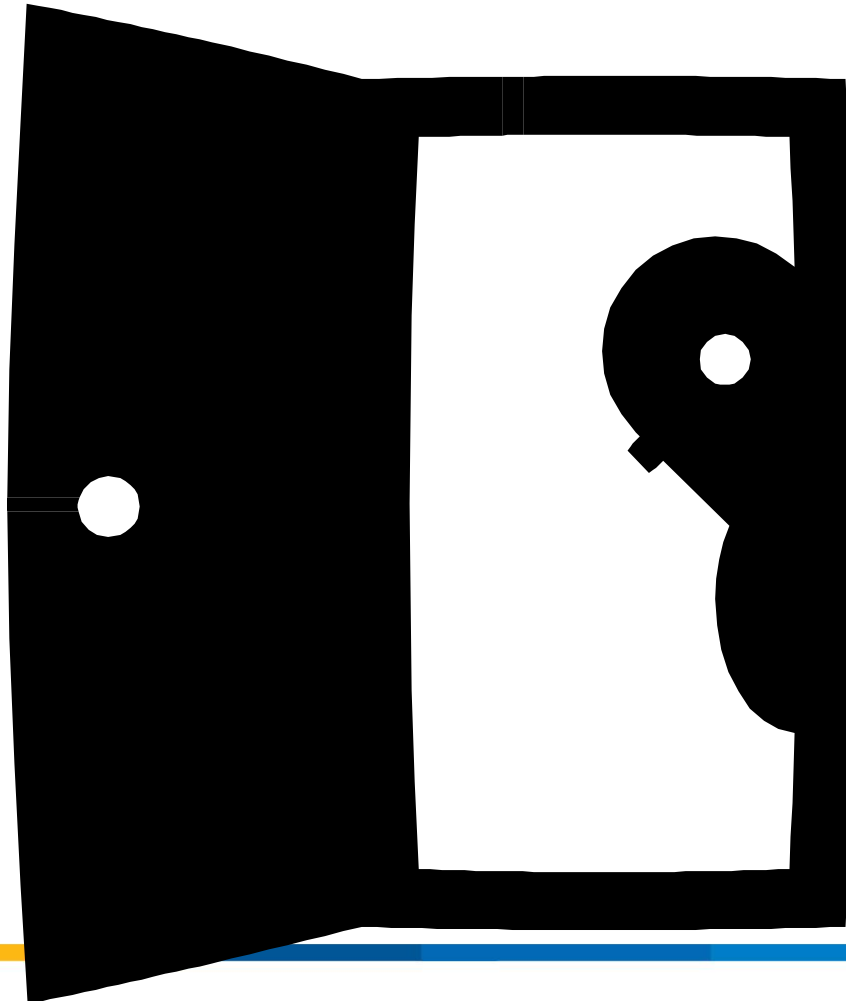
Only science gets funded

You can't get teaching relief

You will never succeed the first time

There is no connection between the Assessor's Reports and the College of Experts

You can only apply if you have an ARC track record

The College of Experts panels don't read rejoinders

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Don't bother applying if you've had a career interruption

It's all a lottery