Stretching the Rubber Band: Approaches that Meet Research Development Goals with Limited "Touch Time"

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DEFINITION

Lower Touch:

Any approach that has substantially decreased the amount of time a person or office was spending on an activity

OR

allowed a research development professional or group to accomplish something that would have otherwise been too time intensive.

Presentation Goals

- Provide some context about the specific situation that sparked interest in developing a lower touch approach
- Define the original or “higher touch” setting (if applicable) and “lower touch” solution
- Share experiences with implementing and evaluating the approach
- General considerations and advice
- Cross-cutting themes

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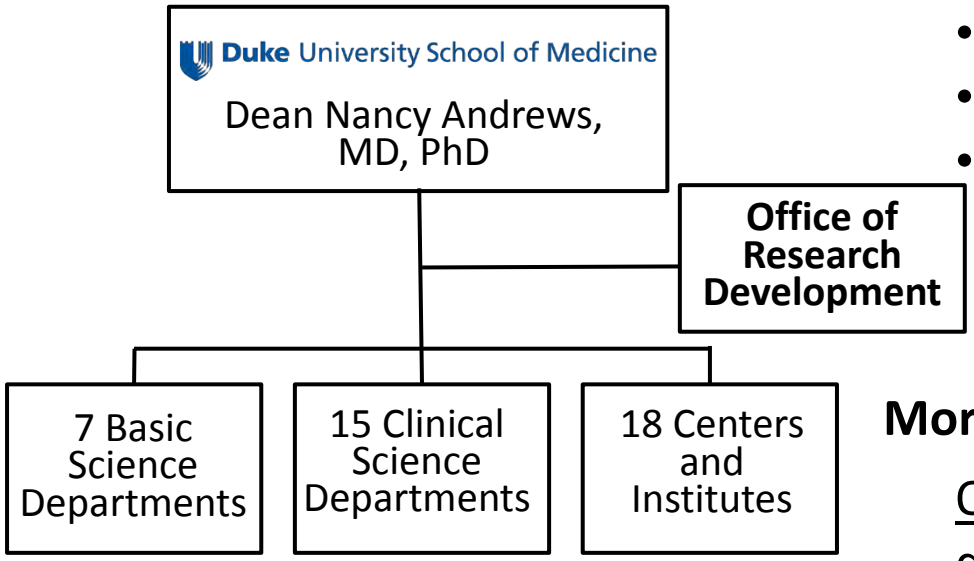
Proposal Development Support for Individual Investigator Grants

JENNIFER REININGA-CRAVEN, PHD

Setting and Demand



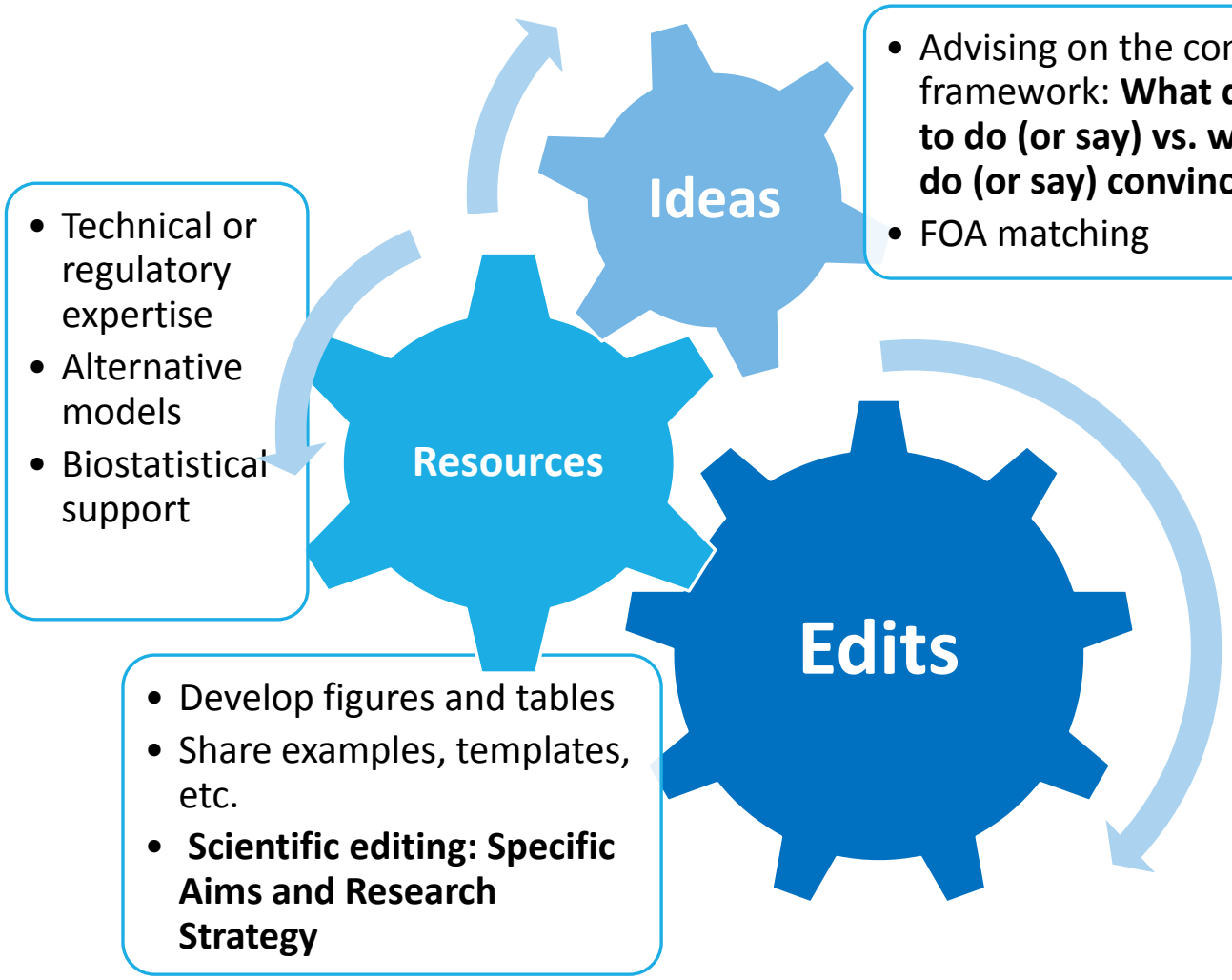
Office of Research Development

- 4 FTEs serving 2,000 investigators
- Complex grants (~20/year); NIH focus
- Limited individual investigator grant support

More requests than we can accommodate

Questions: Could we do anything different to provide more at the school level? What is the best advice for others considering how to best provide such support locally?

Higher touch proposal development workflow



- Hands on approach at all stages is time consuming
- Process is iterative
- ↑ value / ↑ time
- Rewarding work but with impact on a limited number of applications

A Lower Touch Approach:

Strategically Targeting the Resubmission Step

LINEAR WORKFLOW

Identify criticisms and planned responses

Diagnose problems and identify solutions

Edit to integrate changes and finalize proposal for submission

APPROACH OVERVIEW

Review Summary Statement, application, and response

Evaluate the proposal and responses for common issues and identify solutions; add value advising as an objective 3rd party; use rubric to focus our work

Can be more hands off

- Edit priority targets, e.g., Introduction, and do more as time allows
- Provide feedback and let the investigator make changes

TIME SPENT: With experience, ~ 4 hrs or a half day per application

Evaluation Rubric

TWO CLASSES OF REVIEWER CONCERN

- Setting the wrong stage
- Imbalanced Presentation
- Lack of detail
- Logic gaps
- Important information “hidden”
- Missing requirements

Presentation Issue

- Significance: right study/right time
- Adequacy of preliminary data
- Appropriateness of techniques, strains/systems, study population, etc.
- Strength and suitability of investigator(s) and environment

Scientific Issue

Example: Evaluation and Diagnosis

Summary Statement Quote: "Moreover, ***the PI's lab has published extensively*** on the requirement for [this] signaling pathway in mediating the activation of [certain cells] in response to injury and promoting [organ] regeneration. While this area is ***controversial***, the current proposal is based on ***largely unpublished data*** that suggest that activation of [this] signaling is required to activate [a particular] pro-proliferative pathway. This is a ***very novel finding*** both for the liver field and for the signaling field."

Insufficient foundation; Going against longstanding ideas

Example: Evaluation and Diagnosis (cont. 1)

Criticism 1. Insufficient foundation

Step 1. Evaluate the Problem

Could be a presentation [**imbalanced presentation**] and/or scientific issue [**need additional data**]

Step 2. Collect information needed to diagnose and make a plan

Determine if broader foundation exists and can be presented

→ a couple of supporting papers from other labs had just been published

Step 3. Implement the Solution

Add important new publications that extend evidence beyond the PI's lab

"Our preliminary data in [the tissue of interest] **(Figs 4-8)** and a single published paper – in a neural stem/progenitor cell line – suggest that [the pathways of interest interact]."

Example: Evaluation and Diagnosis (cont. 2)

Criticism 2. Going against long-standing ideas

Step 1. Evaluate the problem
Likely presentation issue [**setting the stage**]

Step 2. Collect information needed to finalize diagnosis and make a plan
Scan early sections of the proposal for language that may be too bold or missing acknowledgements of alternative views

Step 3. Implement the Solution.
Revise to use language that leaves reviewers room for their own biases

> "While likely to be controversial, [novel hypothesis proposed]"
> "Although not widely embraced at first…"

Evaluating Success

Notable Outcomes

- High appreciation – out of proportion with the level of effort
- Funded awards! With several showing strong gains – moving from "not discussed" to funded

Enables touch on areas we want to impact

- Relevant to all investigators – not limiting in scope
- Potential strong benefit to underrepresented minority (URM) faculty who are less likely to resubmit
  https://diversity.nih.gov/building-evidence/racial-disparities-nih-funding
- Potential to move the bottom line (in a way that feels like support)

Stretching the Rubber Band: Creating innovative approaches that meet research development goals with limited "touch time"

Templates

Martha E. Payne, PhD, RD, MPH

Research Development Associate
Office of Research Development
Duke University School of Medicine

National Organization of Research Development Professionals
Annual Conference
10 May 2017

The Challenge

- How do we serve an increasing # of customers with a small office?
- Higher touch → Lower touch
  - Less hand holding
  - Fewer iterations of review
- Drafts would come in at last minute
  - Often missing FOA-required elements
  - Other compliance issues

Last Minute Full-Court Press

- Extensive edits → days, nights & weekends
  - ↑Adherence to FOA instructions
  - Add in required elements
  - Create space for required elements

- Focus on major compliance issues in addition to final optimization edits
- Result – high-quality application but also a stressed RD professional

Creation of a Writing Template – Rationale and Preparation

- Increase compliance from start of process
  - Inclusion of required elements
  - Responsive to FOA

- Shift of some RD work to front end
- Thorough review & distillation of requirements
  - Funding opportunity
  - Standard instructions (SF424, for NIH)
  - New/revised instructions
  - Other relevant instructions

Creation of a Writing Template – Incorporate Content into Blank Document

- Formatting
- Headings
- General instructions
- FOA-specific instructions
- Other detailed instructions
- Comments

Template Preparation – Review of Funding Opportunity

PAR-15-330 Integrated Preclinical/Clinical AIDS Vaccine Development Program (IPCAVD) (U19)

Overall Component

All instructions in the SF424 (R&R) Application Guide must be followed, with the following additional instructions, as noted.

PHS 398 Research Plan (Overall)

The Program Overview of the multi-project application MUST include:

- The scientific question(s) or concepts that are being addressed in the application.
- A Research Design and a Product Development Plan, including timelines that summarize and integrate the activities in the individual projects.
- Documentation of the overall scientific and technical expertise to demonstrate the ability of the team and organization to design, conduct and analyze the proposed studies and developmental activities, including GMP vaccine production, quality assurance oversight; and GLP toxicology studies, if applicable.
- Discussion of how the PD/PI leadership skills, experience and effort proposed will contribute to the management, coordination and leadership of the program. Describe the contributions of the key personnel to the Program as a whole and the integration of those efforts to achieve the goals of the proposed research.
- The plan for clinical development that describes approaches and identifies a clinical trial partner to allow a clinical trial to begin no later than year five of the award. The plan must include a clinical protocol outline including timelines, cost estimates, major milestones, general regulatory strategy, proposed primary clinical endpoints, and statistical considerations.

Template – An Example

Research Strategy - Overall Component Approach section

Clinical protocol outline. Text here.

Proposed primary clinical endpoints. Text here.

General regulatory strategy. Text here.

Statistical considerations. Text here.

Cost estimates. Text here.

Major milestones with measurable go/no-go criteria. Text here.

Timelines. Text here or a Gantt chart.

Comment [MEP25]: From the FOA: The Program Overview of the ~~multi-project~~ application MUST include:

- The plan for clinical development that describes approaches and identifies a clinical trial partner to allow a clinical trial to begin no later than year five of the award. The plan must include a clinical protocol outline including timelines, cost estimates, major milestones, general regulatory strategy, proposed primary clinical endpoints, and statistical considerations.

MH notes: Because this Clinical Development Plan describes future activities and is thus different from the other two (not a project *per se*), more information is required here. Note that the full plan is located in the Admin Core.

Review criteria from the FOA: Is there adequate consideration of requirements to allow a clinical trial to begin no later than year five of the award?

Templates – Policy and Continuing Evolution

- From targeted use to policy in 4-6 months
- Service continues to evolve
  - Templates developed for additional sections
    - Facilities
    - Budget justification

Templates – Special Cases

- Fleshed-out templates

  e.g., Administrative Core
  - Insert content from similar grants
  - Add details relevant to team/project
  - Information from biosketches
- Combination approach –

  Template + Resubmission review

Templates – Special Case

- Combination approach –

  Template + Resubmission review

1.1. DATA ANALYSIS AND STATISTICAL ISSUES

A full description of the statistical data analysis and sample size considerations is provided in the accompanying **Statistical Analysis Plan** (see **attachment**). A brief summary is provided here:

- **Data Analysis for Aim 1:** The main focus will be the association of environmental exposures with visual acuity at 6 months and at 3 years. Visual acuity will be treated as a continuous variable as well as a binary variable indicating age-specific subnormal vison. Multivariable regression techniques will be used to account for the influence of other factors such as gestational age that may affect vision and for the impact of developmental delay. In addition, the association of other features with visual acuity will also be investigated.

Comment [MEP1]: Reviewer feedback (Aim 1):
1.The analysis plan for Aim 1 acknowledges that there is a potential for confounding and that regression models will be used to address the confounding. While this is appropriate at a certain level, it is lacking information on how confounding will be addressed.

Templates – Benefits and Measures of Success

- Benefits go beyond writing
  - Helps RD professional become familiar with FOA
  - Get investigator thinking about certain things early e.g., the need for an External Advisory Board
  - Bring in the funder's perspective (with focus on FOA and agency requirements)
- Increased quality of drafts that we receive - much less onerous editing task on back end

Templates – Benefits and Measures of Success

- High-quality drafts mean
  - Less stress, more satisfaction
  - Happier RD professional

- High-quality application but with less RD time
- Happy customers

> *"You all were a HUGE help. The template and guidance from the RFA was invaluable."*
> - delighted grant applicant

Templates – Tips and Tricks

- Must be conversant with FOA, instructions, and other relevant guidelines
- Experience helps – knowing what should be in a completed grant (esp. for that mechanism)
- Helpful to be familiar with project and team
- Develop templates while team is fleshing out their research ideas

Templates – Conclusion

- Modest amount of time up front saves tremendous amount of time later on
- Quality of finished product comparable to that achieved with our higher touch process of yesteryear but with less RD time

Acknowledgments

Duke University School of Medicine

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Joanna Downer, PhD

Jennifer Reininga-Craven, PhD

Maile Henson, PhD

Prior Grant Applicants

Questions?

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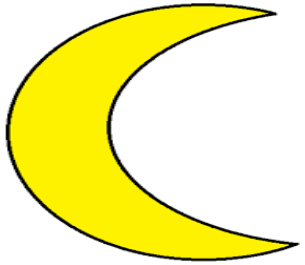
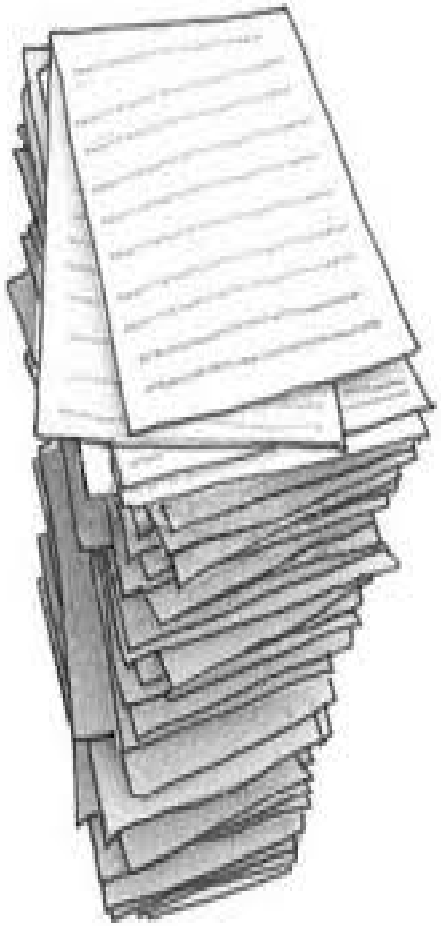
RUTGERS

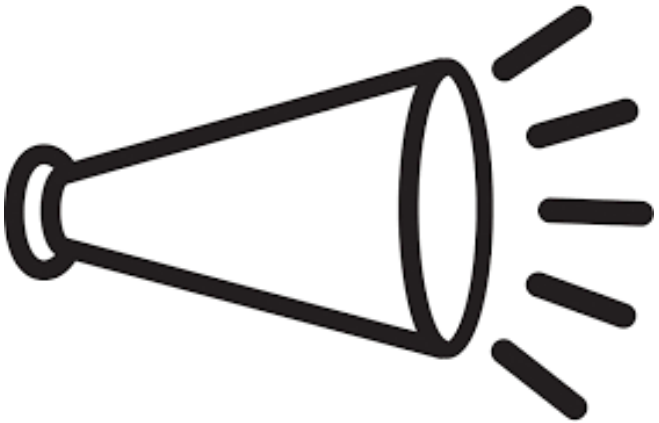
THE STATE UNIVERSITY
OF NEW JERSEY

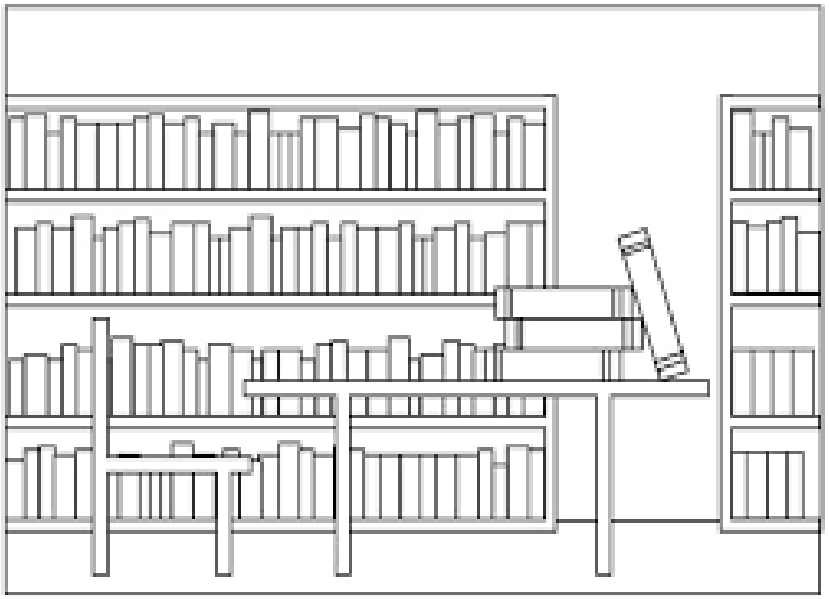
S-t-r-e-t-c-h-i-n-g the rubber band: creating innovative approaches that meet research development goals with limited “touch time”

Anda Cytroen
Director, Research Development
School of Engineering







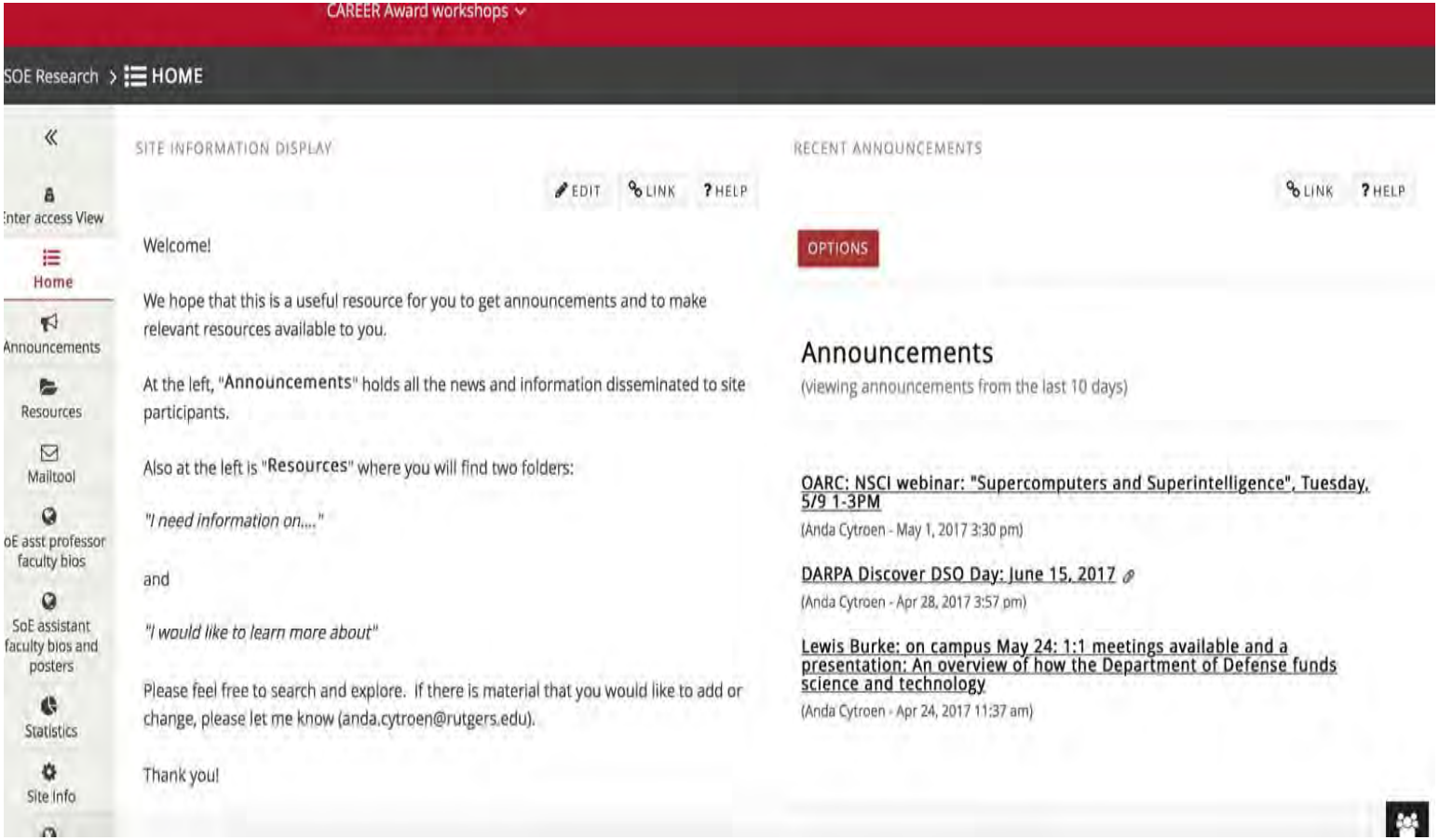

www.thelearningsite.info

Solution:

the "SOE Research" kiosk/library

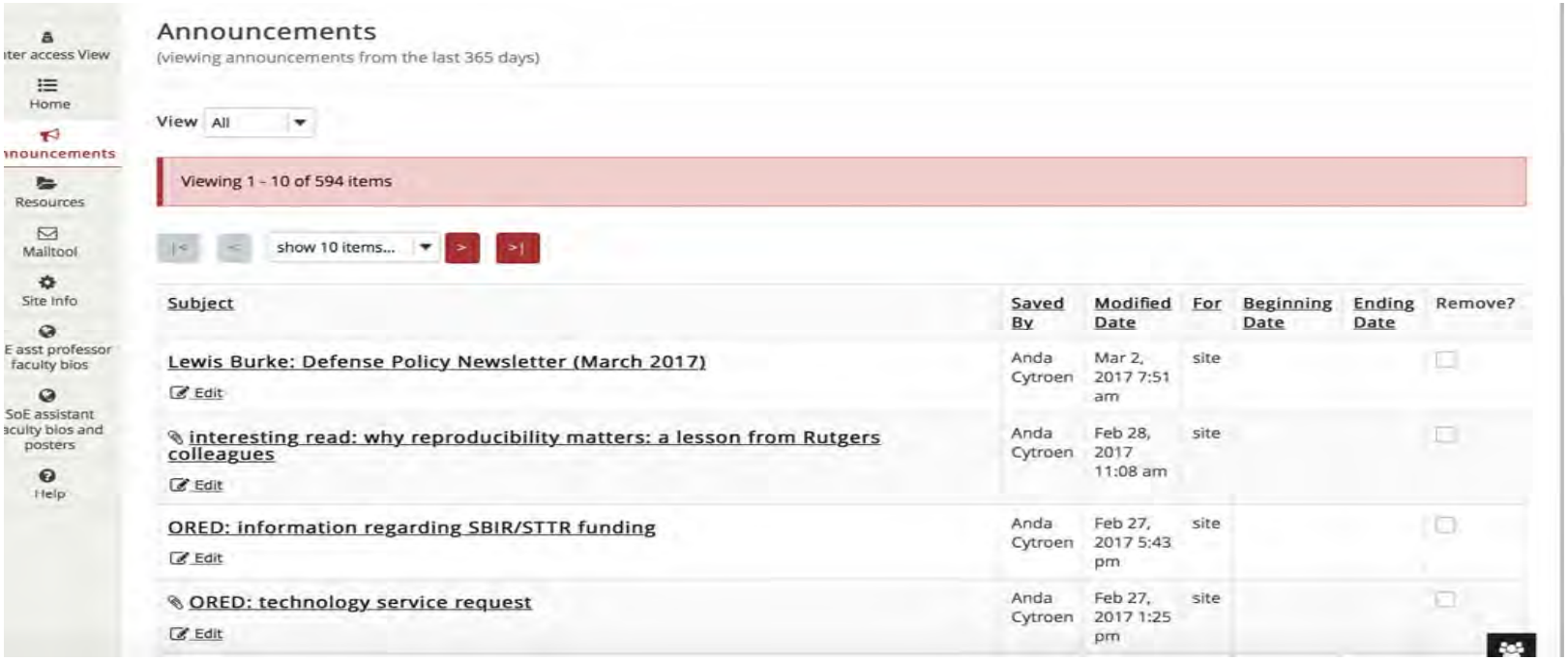
- ✓ ***Uses an already available University intranet platform***
- ✓ ***Familiar to faculty as a course management tool***
- ✓ ***Free***
- ✓ ***Secure***

This is what the welcome page looks like:



Announcements *cover broad areas of interest to PIs, grad and undergraduate students, staff. These are curated from weekly funder feeds, funding opportunity subscriptions, internal and external smaller, unique funding opportunities.*

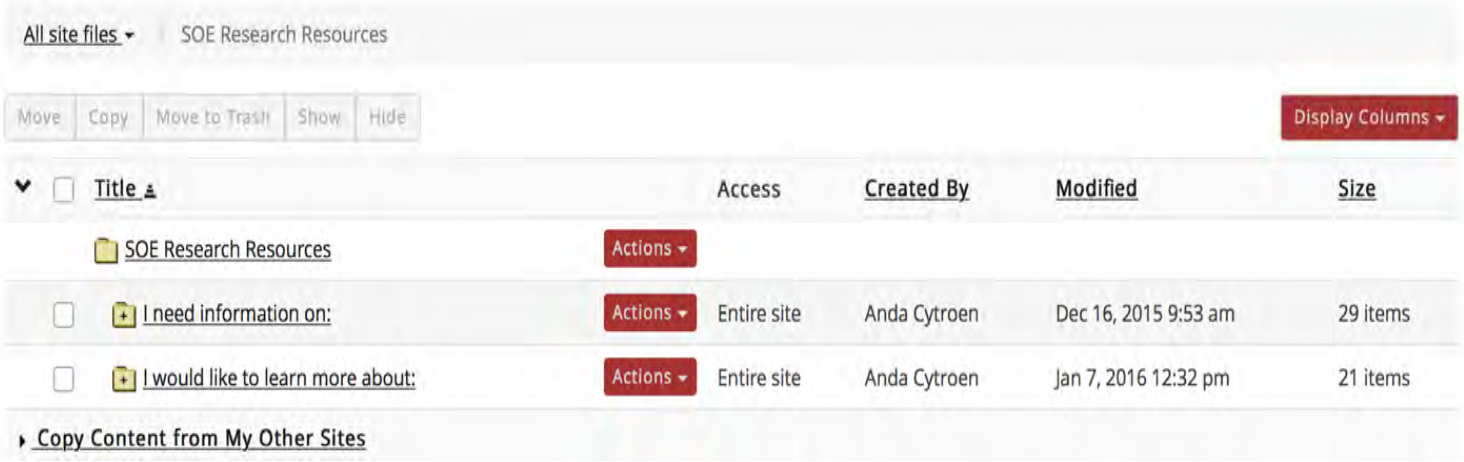
Announcements also include policy changes (e.g. NIH stipend information) and internal post-award guidance:



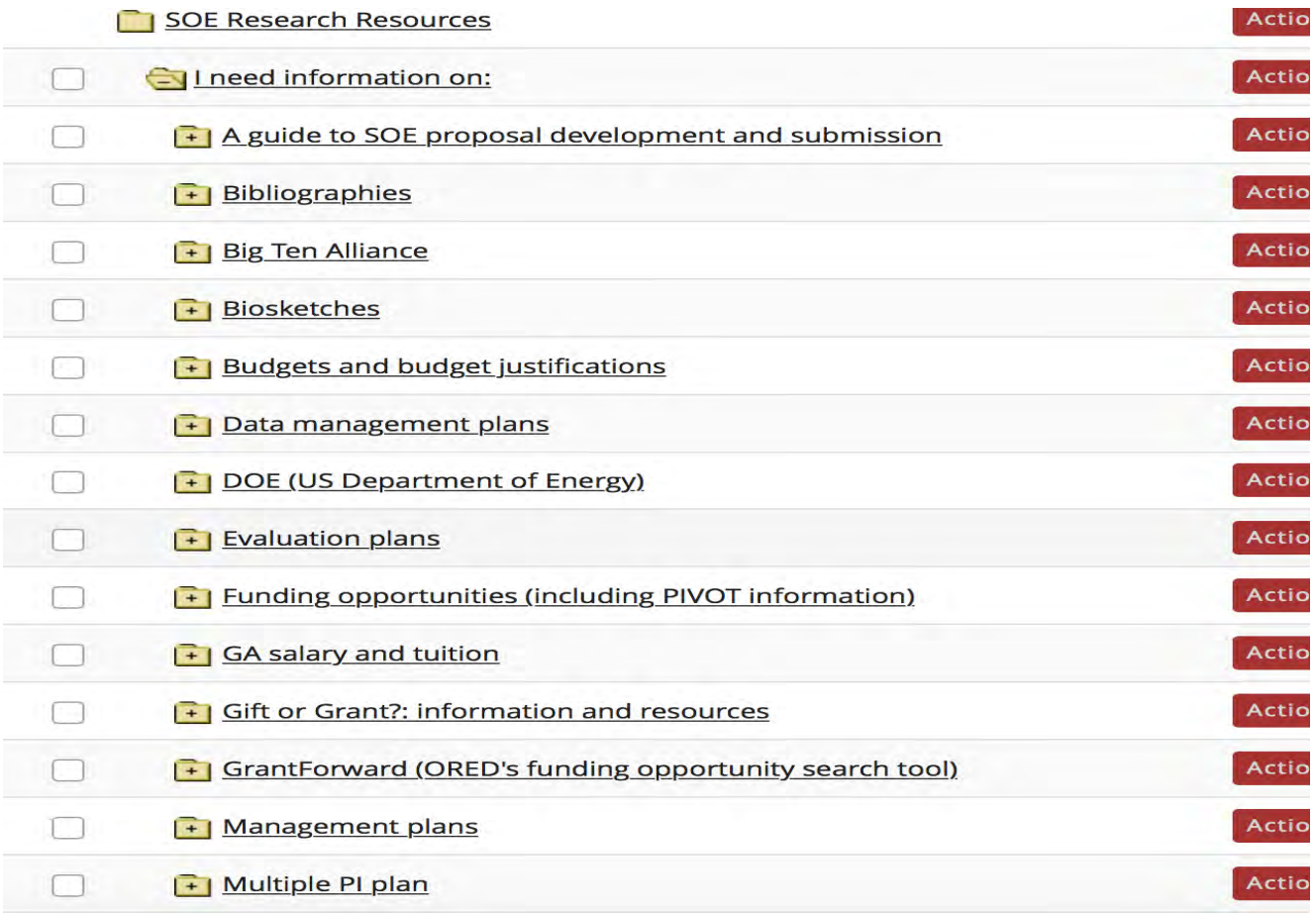
Resources *includes two sections:*

"I need information on": templates, instructions, suggested language, examples and information in common use on proposal submissions

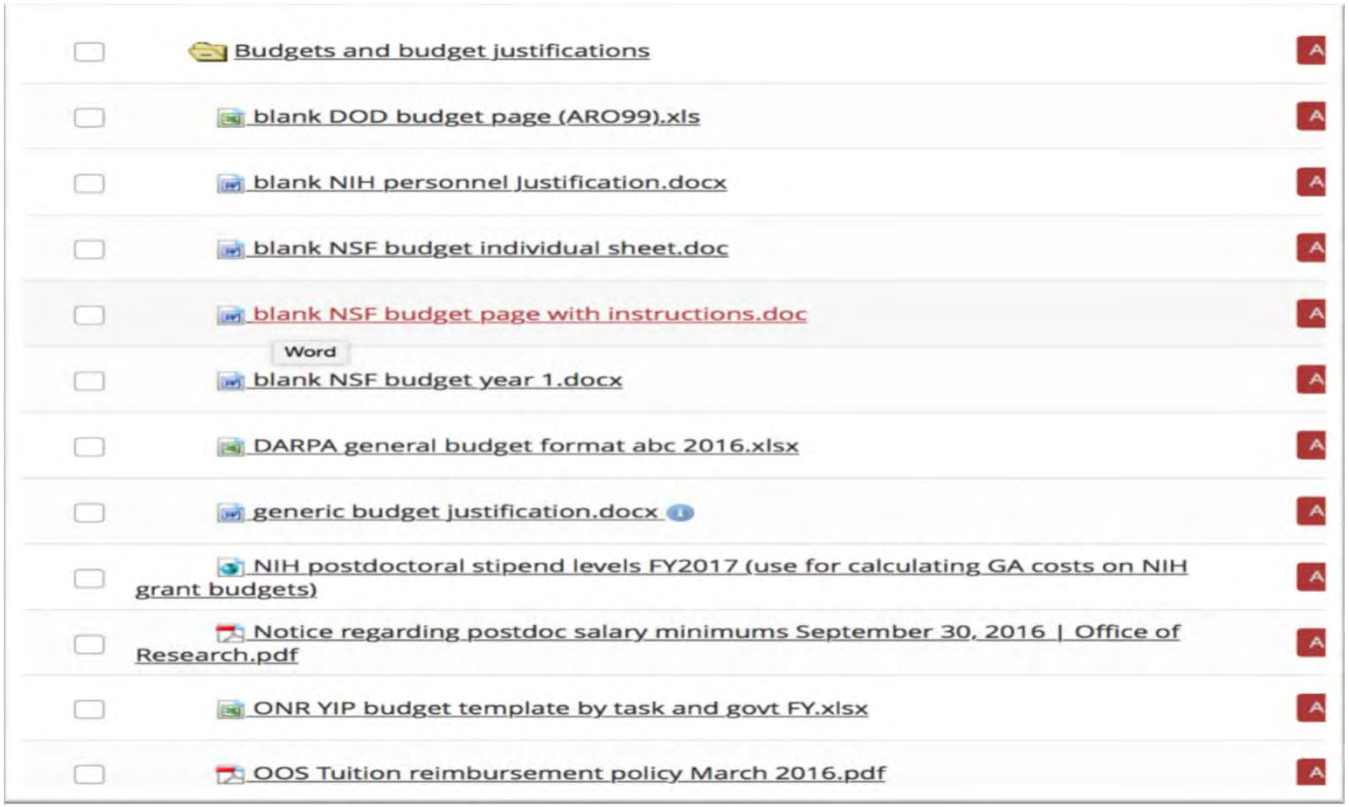
"I would like to learn more about": informational tools and articles on career development, mentoring, approaching funders with proposal ideas, broader topics



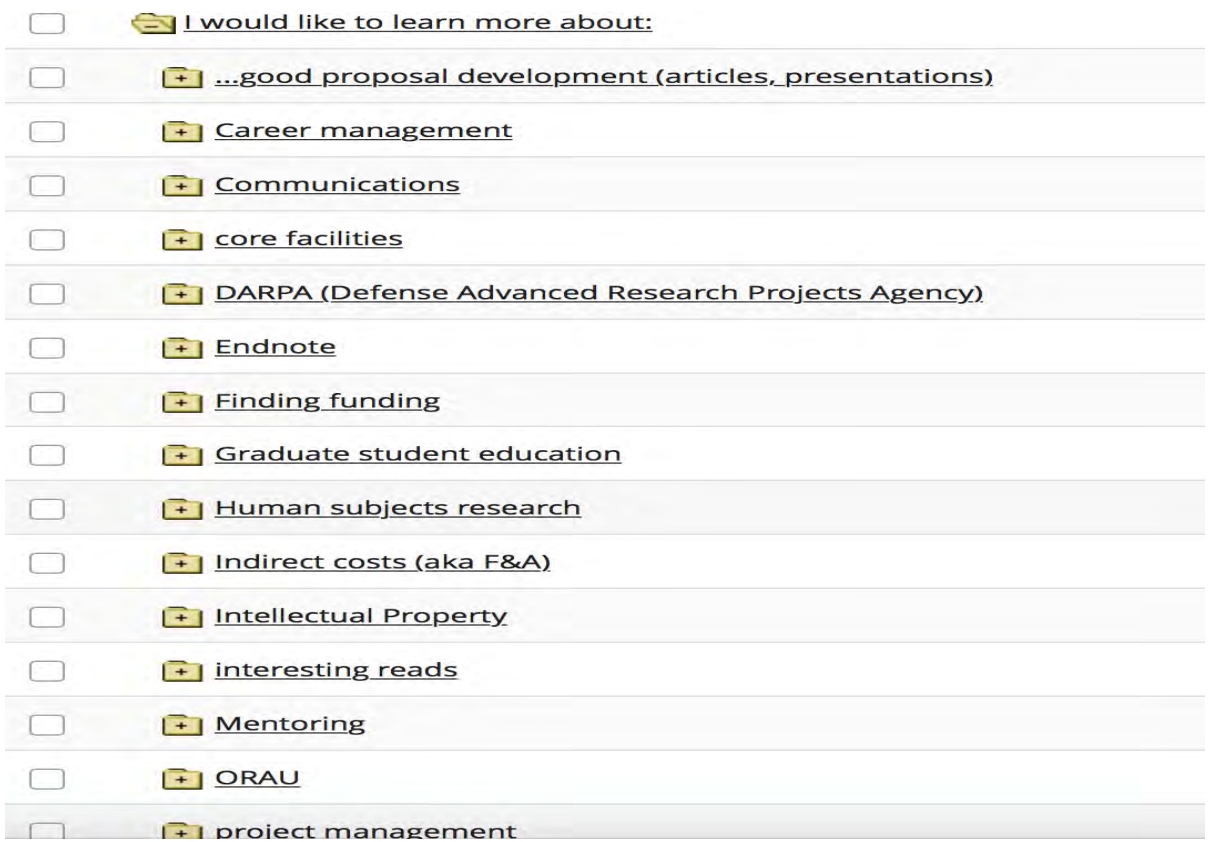
"*I need information on*": *is designed to be a quick resource*:



For example, the "budgets and budget justifications" folder includes:



The "I would like to learn more about" file includes topics about career development, communicating science, articles by topic – less emergent, but of interest:



Approach

- *Started to build it after first 2 years*
- *Goal was to keep it simple or else it would not be used*
- *Kept it offline until built and piloted with some faculty and staff*
- *Populated it with developed templates and links*

Lessons learned:

***Listen**: be mindful about what's really needed and what will be useful over time in planning: be aware of local customs*

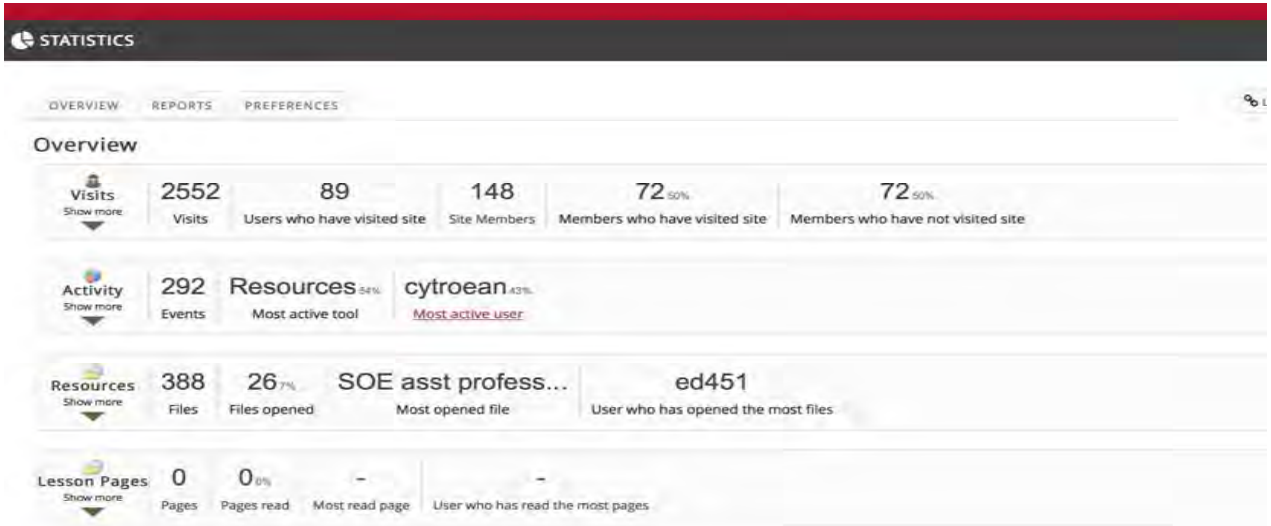
***Distill**: don't push information for information's sake*

***Tweak**: as needed: pay attention to use and to comments and quantifiable metrics to demonstrate value and inform improvements and keep content fresh*

Some unexpected benefits/outcomes:

- *Target was School faculty and staff, but central grants office and other staff now utilize and provide content to the library and announcements (e.g. Office of Corporate Engagement)*

- *Use of tracking statistics was a built-in feature that was not activated at the outset, but now is being monitored and will be used to demonstrate value:*



Thank you!

Early Career Fellowship Support
Shut Up and Write

Caroline Ang
University of Bath

Two Bath Activities

1. Fellowship support programme
2. Shut-Up and Write

Early Career Fellowship Support

Marie Skłodowska-Curie Actions Individual Fellowships (MSCA IFs)

Main priorities:

- Career development
- International & intersectoral mobility
- Transfer of knowledge and skills
- Strengthen networks – both academic and non-academic

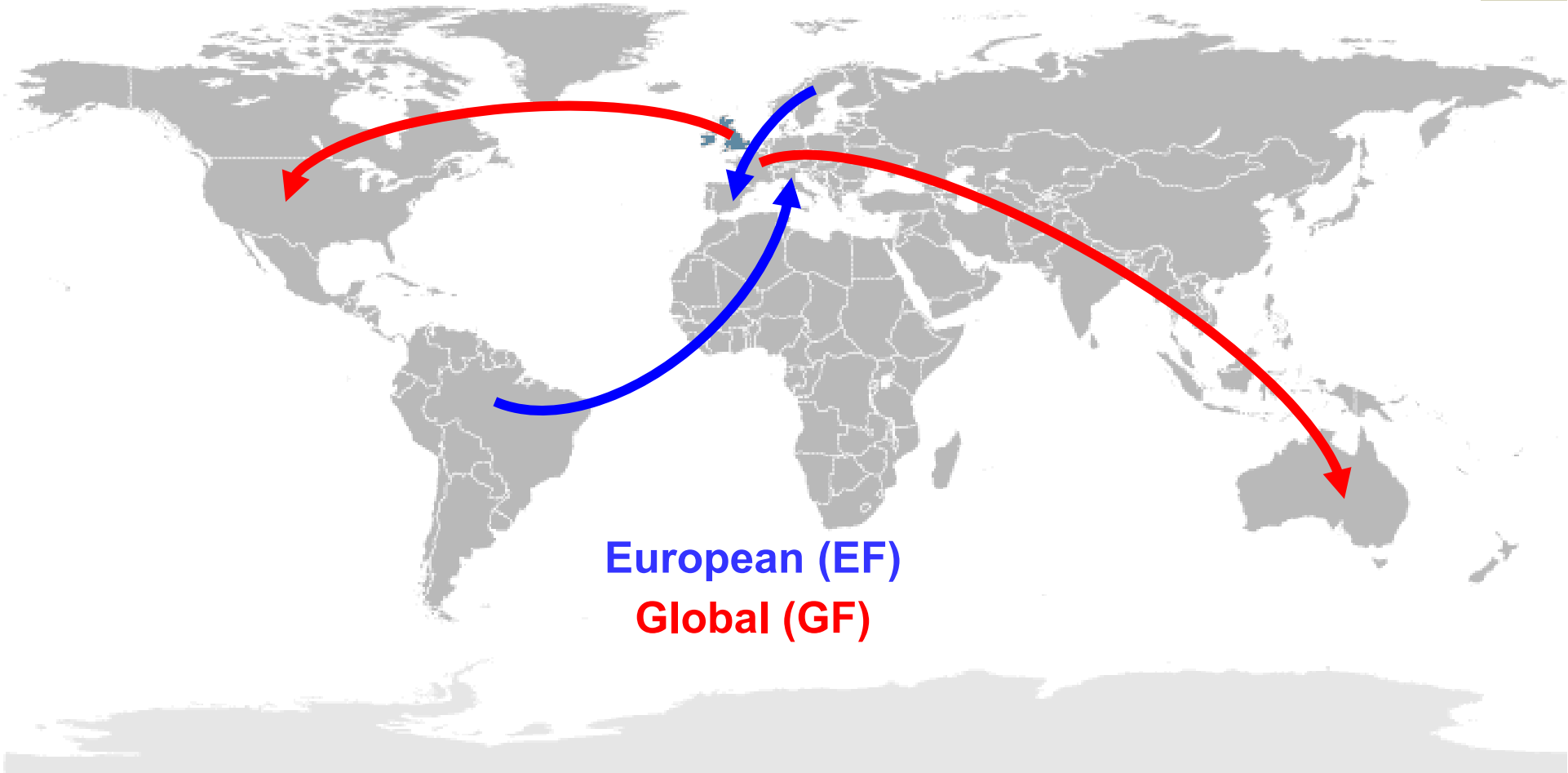
Annual total budget of ~€250M

Aimed at postdoc level and higher

12-24 month duration

Each fellowship worth up to ~€200K

Types of Fellowships



Why Support MSCA IFs?

- Prestigious
- Attracts excellent researchers from all over the world
- Generous level of funding to researchers and institution
- High number of submissions (in excess of 20/yr for Bath)

MSCA IF Challenges

- Applicants based abroad
- Fellowship value is below what Research Development team would normally engage with
- Supporting individual applicants is time-consuming as it involves:
  - Internal review (25-page long proposals!)
  - Answering (endless) queries
  - Maintaining internal deadlines

Support We Provide

1. Proposal template “cheat sheet”
2. Information podcasts
3. Internal review

Cheat Sheet

- Detailed written guidance for each proposal section based on guide for applicants and previously successful proposals
- Introduced for 2013 call

However…

- Still answering a lot of (the same) questions
- Not sure applicants read the guidance very carefully
- Some issues difficult to communicate with the cheat sheet

What more can we do?

MSCA IF Podcasts

- Short videos (no more than 5min each) focusing on the main sections
- Applicants can access externally and watch at their leisure
- Two colleagues developed the script and slides
- Recorded using in-house lecture capture infrastructure
- To be rolled out for 2017 call (September deadline)

https://goo.gl/rWu5iM

MSCA IF Internal Review

2013

Two rounds of internal review exclusively from two Research Development Managers (too much work!)

2014-2015

First review between applicant and Bath host, second review by 1-2 Research Development managers (still a lot of work!)

2016-present

Second review by panel of 4-6 Pre-Award Development Officers – reduces burden on each reviewer, new skill training for our development officers

Preparation & Evaluation

Cheat sheet – 5 days

Podcasts – 2 weeks

Proposal development process – begins 4-5 months before deadline, 2-3 weeks total work including review

- Bath's success rate ranges from 15-20% (average success rate ~15%)
- Applicants and hosts are very positive about support

Shut Up and Write (SUAW)

- Originated by writers in San Francisco to support their community, held in local cafés
- Researchers tell us that a main barrier to writing proposals is finding protected time and a quiet space
- Could we adapt this idea for campus?

Bath's Version of SUAW

Started July 2015

First Monday of every month, 10am-1pm

Drop-in

Coffee/tea and snacks available

1-2 Research Development Managers on hand to answer questions, provide advice

Name controversy!

Coffee machine controversy!

What Works Best

- Regular time, easy to reach regular venue with somewhere nearby to go for conversations
- One month prior to first session advertised with flyers posted around campus
- Bought coffee machine

- Now publicise with reminder emails and tweets 1-2 weeks prior to session, advertise at all our workshops and info sessions
- All supplies (coffee machine, coffee, tea, cups, snacks) fit in small box and tote bag

Evaluation and Preparation

- Average number of people attending 5-6 per session
- Both new and repeat participants from most disciplines
- Range from early career to senior faculty
- Unsolicited comments very positive
- Often leads to further follow-up and meetings
- Will survey annually to track submissions

Very easy to prepare & run:

- A few emails & tweets
- Three hour session
- 15min set-up/clean-up
- Time and cost of buying refreshments

Writing Retreat – SUAW on steroids

Run every six months (July 2016 & Jan 2017)

Two-days off-campus

Attendees intend to submit grants of at least £250k within six months

Full range of professional services staff on hand, including:

- Research development
- Pre-award (finance)
- Communications
- Public engagement
- Researcher development
- Commercialisation
- Library (research analytics)
- Alumni & Development

More time to write

More support

More researchers: 15-20/retreat

More expensive! £3,500/event

Currently evaluating

Thank you!

Please feel free to email me with any questions or comments:

Caroline Ang

c.w.ang@bath.ac.uk

Panel Conclusions & Advice

- Notice when services that took little time & effort routinely receive big praise or are frequently requested and think about expanding access [resubmission review; templates; intranet]
- When expanding or broadening a service area, consider specific settings where your unique perspective and/or skill set can have a big impact with minimal time and effort [resubmission review; templates]
- If you're engaging in a task repeatedly or if you represent a process bottleneck, consider creating a resource [intranet; fellowship toolkit]
- If you see recurrent problems, the solution may be to develop a preventative strategy [templates; fellowship toolkit]
- Take a step back to look at what you're doing and analyze why; see if you can identify a pattern you're following or a framework for dissemination and training in that service [templates + timeline combination; resubmission review]