

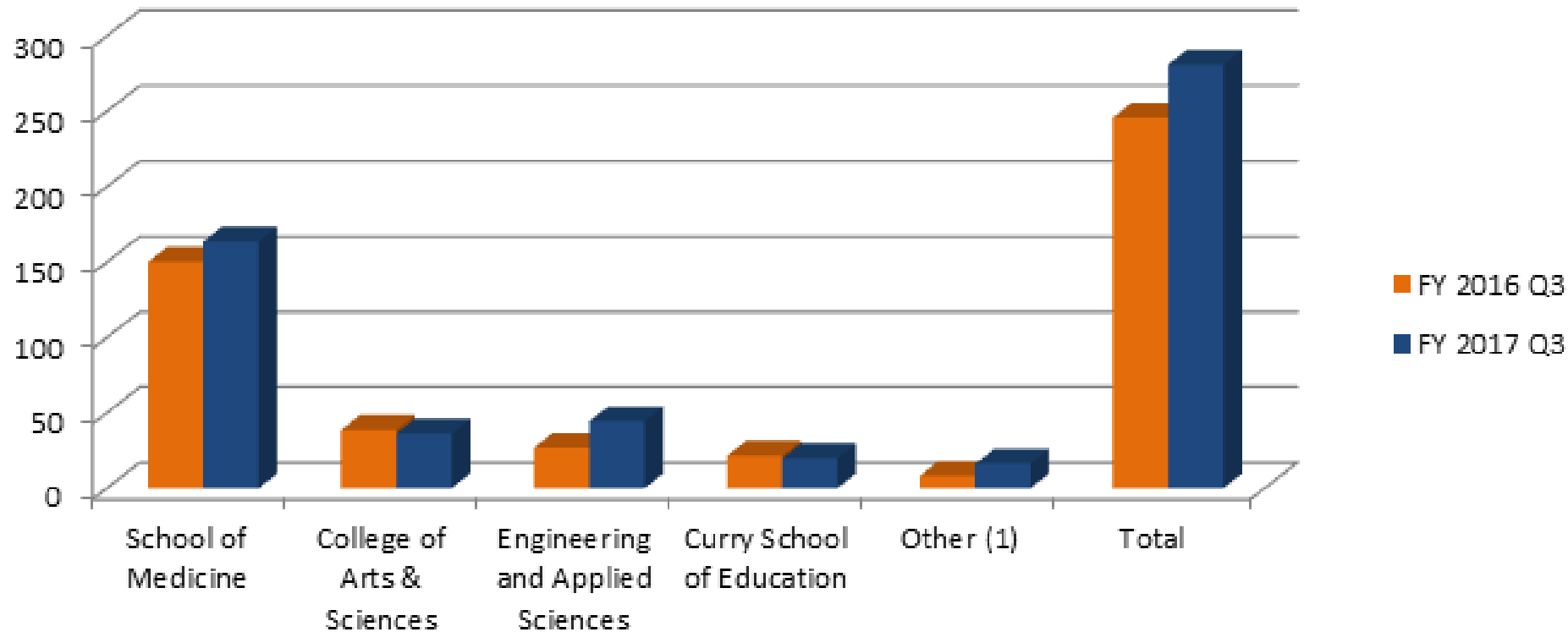
# R&D Priorities

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Phillip Parrish  
Interim Vice President for Research  
June 8, 2017



## Sponsored Research: FY 2016 & 2017 Through Q3 (in millions)



- Through March '17: \$281M in sponsored research awards

- 14% increase

- Medicine +\$14M

- SEAS +\$17M

# Ad-Hoc Committee on Research – major findings through March '17:

- **Need for enhanced professional development for faculty**
- **Identified approaches to reduce the “42%” problem for faculty**
- **Recommended best-in-class approaches to seed internal innovative, concept stage projects**
- **Determined needs, joint with Advancement, to promote institutional research priorities**
- **Research-intensive Schools – completed research space status report: critical shortage of interdisciplinary research space**
- **Need for a modern enterprise-level research management system**
- **Computing infrastructure – significant scientific and translational research computing needs**
- **Research review and metrics – identified significant process improvements – piloting new dashboard with Schools**

# #1 Professional Development: Researchers

**Group 1: BOV lead: Frank Genovese, Convener: Kerry Abrams  
(also 2A, Walker/Parrish)**

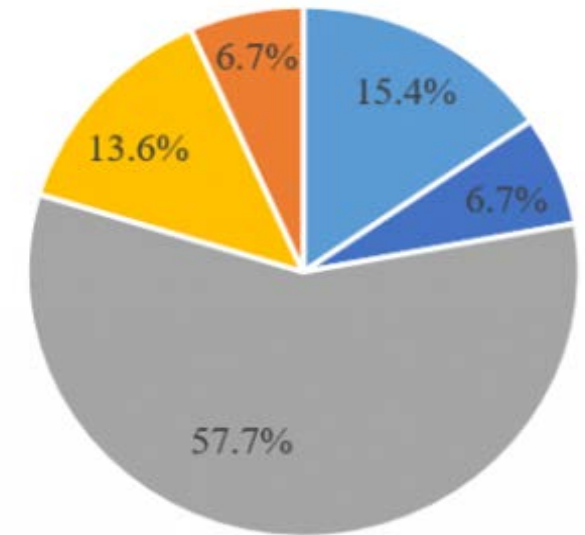
- **Establish “Research Grants Academy” – grants-writing curriculum, effective research communications (VPR)**
  - **Early stage grants (Assistant Professors)**
  - **Single PI grants**
  - **Large team interdisciplinary proposals**
  - **SIF request, next round, ~\$1.8M, VPR & OSP**
- **Create and roll out Standardized Financial Planning and Management Tool**
  - **Enables PI's to manage grant expenses, conduct "what-if" scenarios as a project unfolds**
  - **VPR/OSP lead**

## #2 Address the “42%” issue: National Academy Federal Demonstration Projects (2005 & 2012)

### Group 4A: BOV – J. Reyes, Convener – David Hudson

- **Goal: Streamlined faculty access to spendable accounts after UVA is notified of grant awards**
  - a key focus of recent OSP leadership hire
- **Enhanced administrative support:**
  - faculty with complex grants (e.g., centers)
  - faculty with 3+ significant grants
    - In discussion: VPR, Research Associate Deans

2012 Survey



- Proposal Preparation
- Pre-Award Administration
- Active Research
- Post-Award Administration
- Report Preparation

## #3 Professional Development: Research Managers

Group 1: BOV lead: Frank Genovese, Convener: Kerry Abrams  
(also Group 2B, Solenski/Brown)

- Education for all faculty who supervise other faculty (e.g., department chairs, center directors) – build upon annual retreat and “Leadership in Academic Matters” program (currently 30 faculty, 1 semester)
  - Lead: Office of the Provost (Assistant Vice Provost for Faculty Development)
  - requires buy-in and support from Deans
  - pilot curriculum @ \$100K

## #4 Strategic "Seed Funding"

Group 3D: BOV – Tammy Murphy, Convener – Steve Wasserman

(also group #1, Genovese/Abrams; #2b, Solenski/Brown; #5B/C, Genovese/Norris)

- **Collaborative Research Seed Fund**

- foster new interdisciplinary research collaborations
- simple application process, low barriers to entry
- V-Cubed Collaborative Seed Fund (modeled after MCubed at U Michigan): 10/1 ROI



- **Research Innovation Seed Fund**

- For highly research-active faculty who have at least 2 grants and have a "big" new idea for which they need support for a student to research

✦ **VPR-sponsored SIF proposal for V-Cubed, next round, \$6.5M/3 years, step-down transition to Schools**

## #5 Augment Advancement for research priorities Group 4b: BOV – Walker; Convener – K. Shevlin

- **Need added staffing for research fundraising efforts from foundations**
  - nation's fastest growing area of support for research
  - UVA is lagging significantly behind our peers in investment in this area
  - ✦ **Request for new staff (4)**
- **Invest to increase national visibility and attract research-focused private sponsors (both individuals and foundations)**
  - Recommend a pilot contract with a PR firm to promote top 5 research areas of priority going into campaign
  - ✦ **Ballpark: \$500K**



# #6 Establish scalable & secure computing infrastructure

Group 3B: BOV – Lateef, Solenski; Conveners – Hutchins, Barker

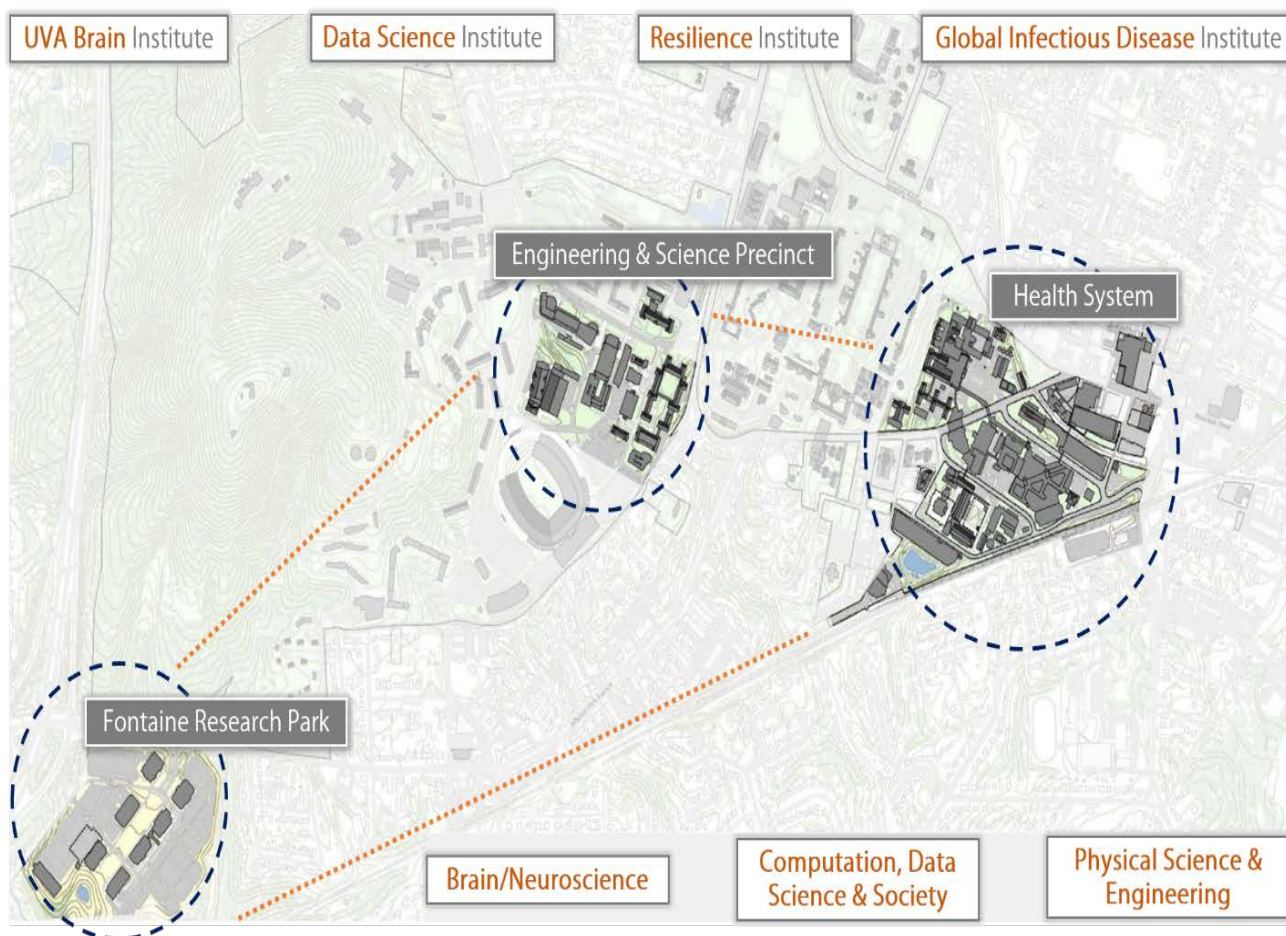


- **Affordable *scientific computing* scalable to future needs of faculty and research volume**
    - Attract and support top faculty and students
    - Make current faculty's grants more competitive
  - **World-class *computational infrastructure for health & other translational research* (patient & other protected data)**
    - Implementation of modern clinical trial management tools (online database)
    - Infrastructure for seamless connectivity with translational research partners which are separate legal organizations (e.g., the UVA Health System, INOVA)
- ✦ **VP-IT, CIO, Advanced Computing Team, 2 years**

# #7 Collaborative Research Space

# Group 3b: (Solenski/Minturn)

(+ Working Group on Transdisciplinary Research – Deans of SEAS, SOM, and A&S)



Major Transdisciplinary Research Themes have emerged, each having state-of-the-art research space needs:

- **Brain & Neuroscience** – 5 Schools; need for experimental and computational space and specialists, imaging and microscopy, behavior testing, animal vivarium, meeting space
- **Computation, Data Science & Society** – 7 Schools + DSI; virtual reality labs, visualization & imaging, teaching and clinical, computational center, Data Science Institute, offices for technology staff from academic and HS
- **Physical Science & Engineering** – 4 Schools; Advanced Biomanufacturing, MMI, Energy, Environmental Resilience, Large instruments design/build, Wireless & Optical Communications, Nanomaterials, mm-wave & THz devices and systems
  - **Near-term opportunity** to transition currently planned Thornton microelectronics clean room upgrade over the next 18 months into an integrated clean room for hard, soft and biological materials (live cells)

**Modern research space is critical for top-quality faculty recruiting and retention**

## #8 Improve Research Review and Reporting

**Group 5b/5c: BOV – B. Lateef; Convener – M. Bianchetto**

**Group 4 (Proposals Analysis) : BOV – B. Fried; Convener – E. Adams**

- **New research dashboard was developed to easily report out on proposal, expenditure and award data (e.g., proposal hit rate). Data elements are consistent with funding metrics used to benchmark with respect to peers – currently being piloted by Schools**
- **Additional comparative research metrics are tracked centrally: National Academy membership and technology commercialization data**
- **Developed strategy to use NSF Higher Ed Research & Development (HERD) survey to review and assess internal and external research expenditures by thematic areas over time**
- **Key need: development of online faculty profile system for scholarly interests, experience, activities (next slide)**

# #8 Continue building the data-enabled research enterprise management system

Group 3B: BOV – Lateef, Solenski; Conveners – Hutchins, Barker  
(+Group 1 – Genovese/Abrams)

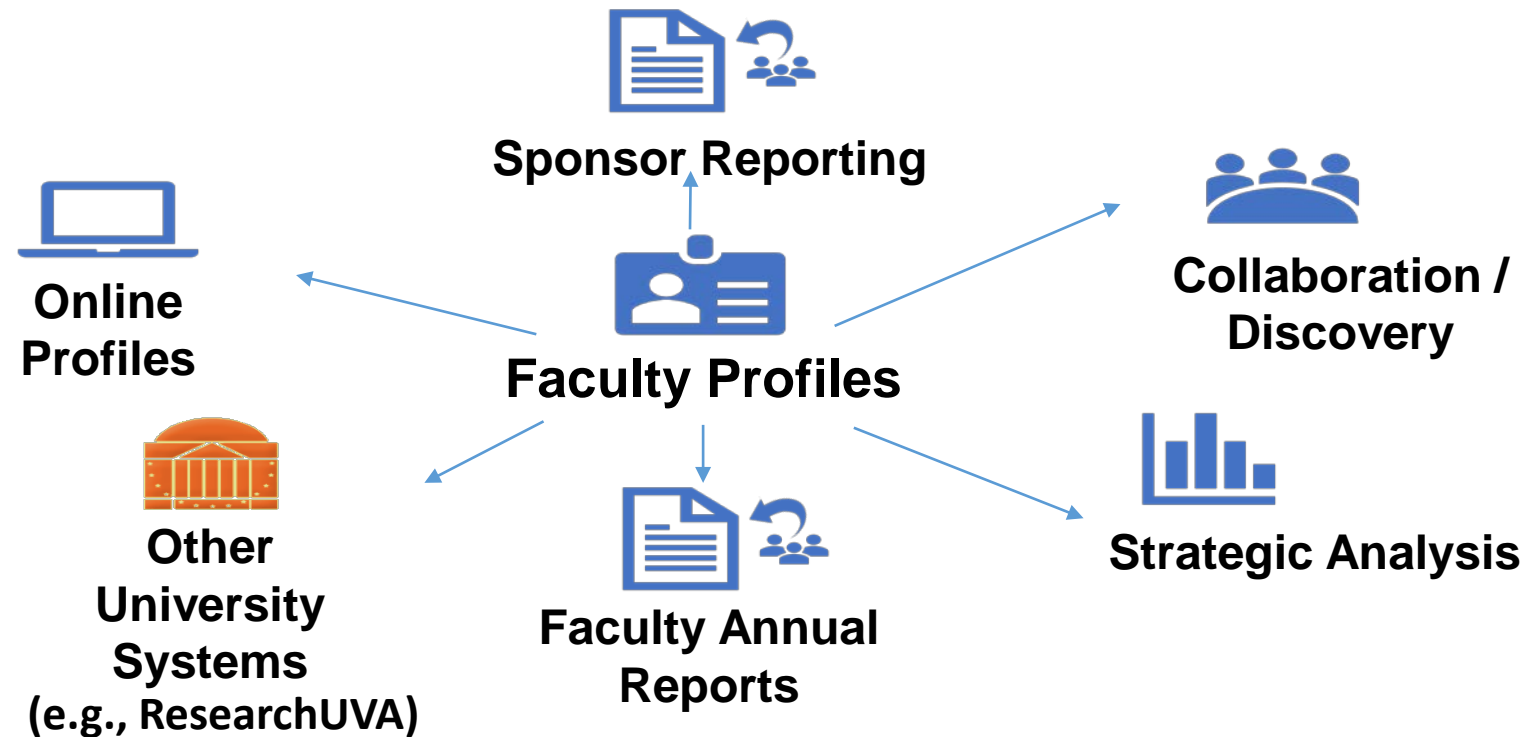
Next project: Electronic Faculty Profiles

## Benefits

- Reduce faculty burden for entering publications and other data
- Ensure data quality and consistency
- Provide data regardless of technology platform(s) chosen

## Status

- *In planning stage*
- *VPR, VP-IT, Provost*
- *Pilot with 3 Schools (18 months)*





Questions?