

Strategic Research Plan

The strategic research task force team

February 6, 2019

Current Major Gaps to an R1 University

- Extramural research funding: \$36M (R1 median: in the \$300M range)
 - UoM's is not low compared to U North Texas (UNT, an R1 University)
- Doctoral degree production: 136/year (R1 median: ~300)
 - STEM: 32 (R1 median: 152; UNT: 77)
- Research staff (post-doctorate fellows and research scientists): 25 (R1 median: 387; UNT: 47)

Suggested Strategic Research Plans (three-year-plan) – Six Categories

- 1. External funding
 - Increase extramural research expenditures by 10% per year
 - At the end of year 3, increase to 48M (from 36M)
 - Improve pre-award practices (grants and contracts business practices)
 - Increase capacity of post-award services
- 2. Collaborations
 - Build key partnerships with other universities/institutes/centers
 - Build interdisciplinary teams
 - Identify three clusters in first year based on extensive cross-departmental collaboration potential and strong research funding potential
 - Add a fourth cluster in year 3
 - Develop international research partnerships

Suggested Strategic Research Plans (three-year-plan)

- 3. Faculty
 - Add a minimum of 20 new highly research-active faculty each year
 - A mixture of senior researchers with large grant funding and promising junior researchers expected to receive large research funds
 - Cluster-hire interdisciplinary teams
- 4. Graduate students and research staff (post-doctorate and research scientists)
 - Recruit outstanding STEM graduate students and post-docs

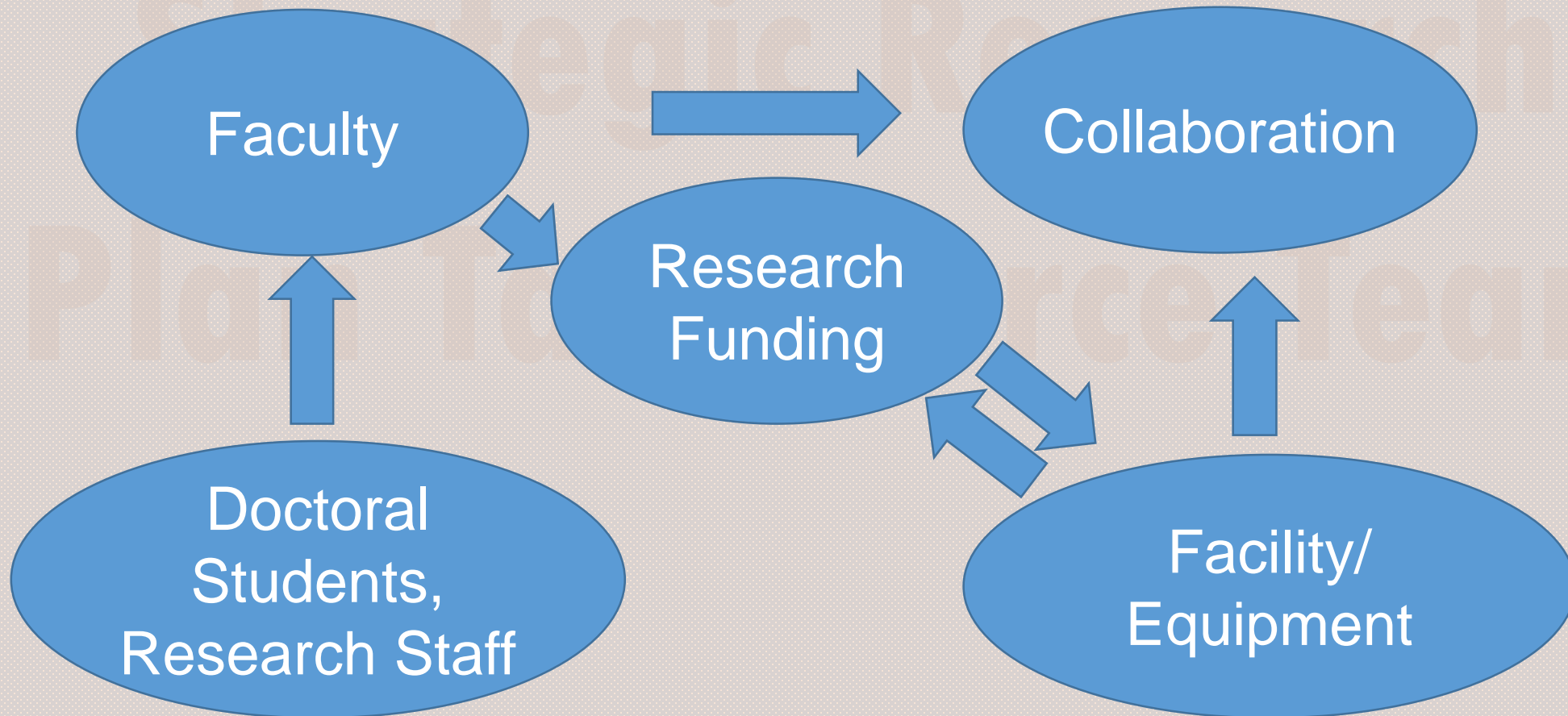
Suggested Strategic Research Plans (three-year-plan)

- 5. Facilities/Equipment/Services
 - Improve existing space utilization
 - Create spaces that provide synergistic environments that support collaboration amongst multiple users
 - Infuse spaces with cutting-edge equipment/software
 - Expand/offer supportive research services (e.g., equipment maintenance support, LSP support, HPC, statistical consulting)
- 6. Front end investment
 - A critical component required toward early success of R1 status

→ A network of these six categories

**Front End
Investment**

It is not an chicken/egg
story, but a chain of
reactions that need a
great stimulus!



Increase STEM
doctoral degree
production

Increase extramural
research expenditure
by minimum 10%/year
(3-4M/year)

Research space
expansion, Multi-user
facilities with cutting-
edge equipment,
Services

A minimum of 20
new research-
active faculty/year

**Front End
Investment**

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graph TD; A([Front End Investment]) --> B[Increase STEM doctoral degree production]; A --> C[Research space expansion, Multi-user facilities with cutting-edge equipment, Services]; A --> D[A minimum of 20 new research-active faculty/year]; A --> E[Increase extramural research expenditure by minimum 10%/year (3-4M/year)]
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Additional comments from the team members

- Scholarship (including publications, book authorships, etc) and commercialization (including patents).
- Consideration of funding in tenure.
- Invest research support in successful research faculty.
- Maintain strong research environment and R1 status

