CPI Subcommittee 3 –Improving Core Labs and Resources

Members (representation):

Kayla Bayless (Medicine), Candice Brinkmeyer-Langford (CVM), Craig Carpenter (AgriLife Extension), Mike Hall (Science), Christian Hilty (Science), Steve Maren (Liberal Arts), Pamela Plotkin (Geosciences), Brendan Roark (Chair)(Geosciences), Alexei Safonov (Science), David Stelly (COALS), Aaron Tarone (COALS), Lee Tarpley (AgriLife Research)

SUMMARY

The Subcommittee took on the charge of identifying and addressing barriers to improving current core labs and resources. Considerable discussion led to the following four recommendations to improve the success of core labs, which are vital to the research and education missions of the Texas A&M Research community.

I. **DEFINE AND CATEGORIZE CORE FACILITIES**

II. **ALIGN CORE FACILITY ACTIVITIES AND SERVICES WITH THE TEXAS A&M UNIVERSITY MISSION TO PROVIDE TRAINING AND INNOVATION**

III. **DEVELOP AN ADVOCACY COMMITTEE TO PROVIDE SUPPORT AND CONSTRUCTIVE FEEDBACK**

IV. **DETERMINE A FEASIBLE FINANCIAL MODEL**

I. DEFINE AND CATEGORIZE CORE FACILITIES

Rationale: Proper definition, categorization and organization of our diverse core facilities will enhance their management, user awareness, usage, impact and external fundability.

Committee Recommendation: Assemble a committee or working group of relevant stakeholders, including the Division of Research (VPR), University Research Council (URC), CPI members, core directors, and users to define and categorize Core Facilities. This definition and categorization should be shared widely with the Texas A&M Research community. Critical elements to guide the categorization of Core Facilities could include:

I. DEFINE AND CATEGORIZE CORE FACILITIES

Committee Recommendation: Critical elements to guide the categorization of Core Facilities could include:

• User base - size and distribution among colleges and departments.

• User impact - publications, grants, institutional status.

• Types of services - e.g., (*i*) turn-key (equipment and technical); (*ii*) equipment access; (*iii*) equipment and/or methods training; (*iv*) "store-front" services, e.g., outsourced analytical services (e.g., DNA sequencing); (*v*) education (workshops, etc.); (*vi*) other.

• Functional themes - such as mass spectrometry, structural biology, molecular characterization, imaging, micro/nanofabrication, irradiation services, and core services like machine shops, electronic shops, glass blowers, *et cetera*.

II. ALIGN MISSION OF CORE FACILITIES WITH THE TEXAS A&M UNIVERSITY MISSION TO PROVIDE INNOVATION AND TRAINING

Rationale: Our investments should help us address our goals.

The committee feels strongly that a significant part of the missions of University Core Facilities should be to collectively support the mission of the University, which reads:

*"Texas A&M University is dedicated to the **discovery, development, communication, and application of knowledge** in a wide range of academic and professional fields. Its mission of providing the **highest quality undergraduate and graduate programs is inseparable from its mission of developing new understandings through research and creativity**…...*

II. ALIGN MISSION OF CORE FACILITIES WITH THE TEXAS A&M UNIVERSITY MISSION TO PROVIDE INNOVATION AND TRAINING

Committee Recommendation: To align with the Texas A&M University mission, the Committee recommends that University Core Facilities should support innovation that expands the research capabilities of the Texas A&M Research Community, and, where possible, provide hands-on training opportunities. The committee's highly-valued characteristics include:

• Methods development and analytical innovation that expands the research enterprise both in terms of outcomes that address societal challenges as well as in the generation of grant funding.

• Core Facilities should be supportive of the educational and training mission of the Texas A&M Research Community by contributing to teaching courses or integrating within the services they provide hands on experience and training opportunities for undergraduate, graduate students, and post-docs.

• Long-term/full-time technical support is key to maintaining a quality core facility and is especially important when training and/or education of students/staff is a critical function.

III. DEVELOP AN ADVOCACY COMMITTEE TO PROVIDE SUPPORT AND CONSTRUCTIVE FEEDBACK TO CORE FACILITIES

Rationale: Advice and advocacy by a balanced committee could enhance development, integration, management, funding, functional relevance and evolution of cores of the Texas A&M Research Community.

Core Facilities and the greater institution must be responsive to stakeholder needs. We recommend the establishment of a Core Facilities Advocacy Committee (and/or Advisory Council) including Core Facilities directors, managers, and users along with appropriate University and College level administrators (e.g. VPR and URC). Some of the issues and actions that such a group could help address include:

III. DEVELOP AN ADVOCACY COMMITTEE TO PROVIDE SUPPORT AND CONSTRUCTIVE FEEDBACK TO CORE FACILITIES

Committee Recommendation: Some of the issues and actions that such a group could help address include:

• Criteria and protocols for the review of existing core facilities (e.g., impact, training, innovation, customer feedback, and financial sustainability).

• Best practices in developing advisory committees and how to best use them.

• Methods to enhance Core Facility outreach to improve visibility and accessibility.

• Alternative funding models.

• Processes for User-Core Facility conflict resolution.

• Identify investment opportunities in Core Facilities.

• … Among others….

IV. ESTABLISH FINANCIAL MODEL(S) FOR CORE FACILITIES

Rationale: Ensuring the long-term financial health of Core Facilities is critical to their success.

• Develop models by which various types of Core Labs could be expected to address financial needs.

- o Core Facilities are often best served by shared financial responsibilities. A single model may not suffice. But some large University-wide facilities might be funded through a mix of service center fees.
- o Infrastructure investment: Physical facilities, Equipment

• Continue the RDF to promote acquisition of state-of-the-art technologies with a wide user base to support interdisciplinary research.

• Utilize a portion of RDF or other University funds to maintain ongoing cores with a focus on maintaining full-time technical expertise, and service contracts.

Improving graduate student recruitment at Texas A&M

SUB-COMMITTEE REPORT

BY

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Sub-committee members

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- Ambika Chandra
- Kerri Gehring
- Jayanth Ramadoss (Sub-Committee Chair)
- Vytas Bankaitis
- Ulisses Brago-Neto
- Darren Depoy

- Akhilesh Gaharwar
- Zach Graseley
- Jayshree Mishra
- Wes Osburn
- Alejandro Orsi
- Frank Sottile
- Ramesh Talreja

Goal: Identify factors that affect effective recruitment and retention of preeminent graduate students to Texas A&M and determine solution(s) for promoting Texas A&M as an attractive place for graduate students to pursue their educational goals.

Limiting factors

1. A substantial shortage of definite, long-term financial support for graduate students.

2. Graduate programs are ineffectively organized/structured, as they lack uniformity and cohesiveness across departments, colleges, and programs

3. The university lacks an effective marketing approach for targeting leading graduate student prospects and the university's graduate programs also lack a relevant multimedia presence to effectively reach out to and resonate with ideal graduate student candidates.

Solution 1: Guarantee 5 funded years to PhD students

▶ The package should include a guaranteed minimum stipend, tuition, student fees, and comprehensive health insurance coverage

▶ Support should extend equally to both domestic and international students, as much as possible

▶ A standardized pay scale that is on par with national standards (specific to the discipline) will allow students to fully commit to their research and scholarship endeavors.

▶ This support will be conditional: it will be requisite for students to maintain a cumulative GPA of 3.5 or higher and an annual evaluation letter from the primary advisor regarding satisfactory academic standing.

▶ Top ranking admits can receive funding directly from the university, and another set of students can receive funds partly from the university, and the reminder from the department and college. If a college wishes to add funds to increase the number of stipends, it should be allowed to do so.

▶ The university should establish an aggressive program to attract underrepresented domestic students from across the nation.

▶ *Note: This is standard procedure in many ivy league schools in the United States.*

Solution 2: Improve marketing and recruitment approaches

▶ Graduate programs should take advantage of social media to promote their program culture (i.e. events, photos), network, professional development opportunities

▶ Example: sharing experiences of current graduate students' and alumni's successes via blogs and hashtags, which presents university programs in a way that allows students to better understand the respective graduate environments at Texas A&M

▶ An improved multimedia presence should include frequently updated websites with a streamlined user interface, search engine optimization, as well as strategic advertising campaigns.

▶ Recruitment within each discipline (i.e. life science, engineering etc.) should be consolidated, and the number of graduate students during each interview event should be maximized.

▶ Planned social events during interviews allow prospective students to interact with current successful graduate students, and are an excellent way to promote programs.

Solution 3: *Establish a centralized graduate college*

▶ A centralized graduate college with its own dean and administration that oversees academic processes and policies that ensure program integrity and uniformity recommended

▶ This institution will manage admissions and recruitment university-wide, and will provide a spectrum of support services to graduate students

▶ The graduate college should coordinate graduate student orientation, commencement, awards and recognition (in acknowledgement of graduate student accomplishments), social events (to promote meaningful interactions among students), and research symposia (to foster exchange of ideas across disciplines, augment networking, etc.).

▶ The university should also consider granting full academic advising rights to the Graduate College so faculty members from different departments may advise students from any departments without the need for courtesy joint appointments.