Gen-4 ERC:
Diversity and Culture of Inclusion
NSF 19-503

Kickoff Meeting
October 14-15, 2020

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Outline

- DCI Definitions
- DCI within the scope of ERCs
- Role of the DCI leader(s)

Diversity ≠ Inclusion

"Diversity is being invited to the party;

Inclusion is being asked to dance"

— Verna Myers, Ph.D.

What is *Diversity*?

A collection of individual attributes that together help agencies pursue organizational objectives effectively. Examples:

language, national origin, race, color, disability, ethnicity, gender, age, religion, sexual orientation, gender identity, socioeconomic status, veteran status, educational background, experiences, and family structure.

Source: NSF ODI 2012 Strategic Plan

What is a *Culture of Inclusion*?

An **environment** in which **all members feel valued and welcomed**, **creatively contribute**, and **gain mutual benefit** from participating.

➤ A research and educational space where everyone feel that they and their work are **respected and supported.**

➤ Policies and behaviors **recognize and celebrate differences and equity** prevails, with everyone having the same access to opportunities.

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ERC Gen-4

NSF Working Group Recommendations
(Considering 2017 NASEM Report)

❖ FINDING: The goal of expanding *diversity in science and engineering* is not only good for the creativity and productivity of research teams, it is good for expanding the capacity of the U.S. to innovate and compete.

❖ RECOMMENDATION NSF should insist that **convergent** *engineering research* centers continue to build upon the success of ERSs in expanding diversity of the engineering workforce.

The National Academies of
SCIENCES · ENGINEERING · MEDICINE

CONSENSUS STUDY REPORT

A New Vision for Center-Based Engineering Research

CONVERGENCE

TEAM SCIENCE

GRAND CHALLENGES

The Gen-4 ERC Model

- Foundational Components:
  - Convergent Research (CR)
  - Engineering Workforce Development (EWD)
  - Diversity and Culture of Inclusion (DCI)
  - Innovation Ecosystem (IE)

- Areas of Impact:
  - Engineering Community
  - Scientific Enterprise
  - Society
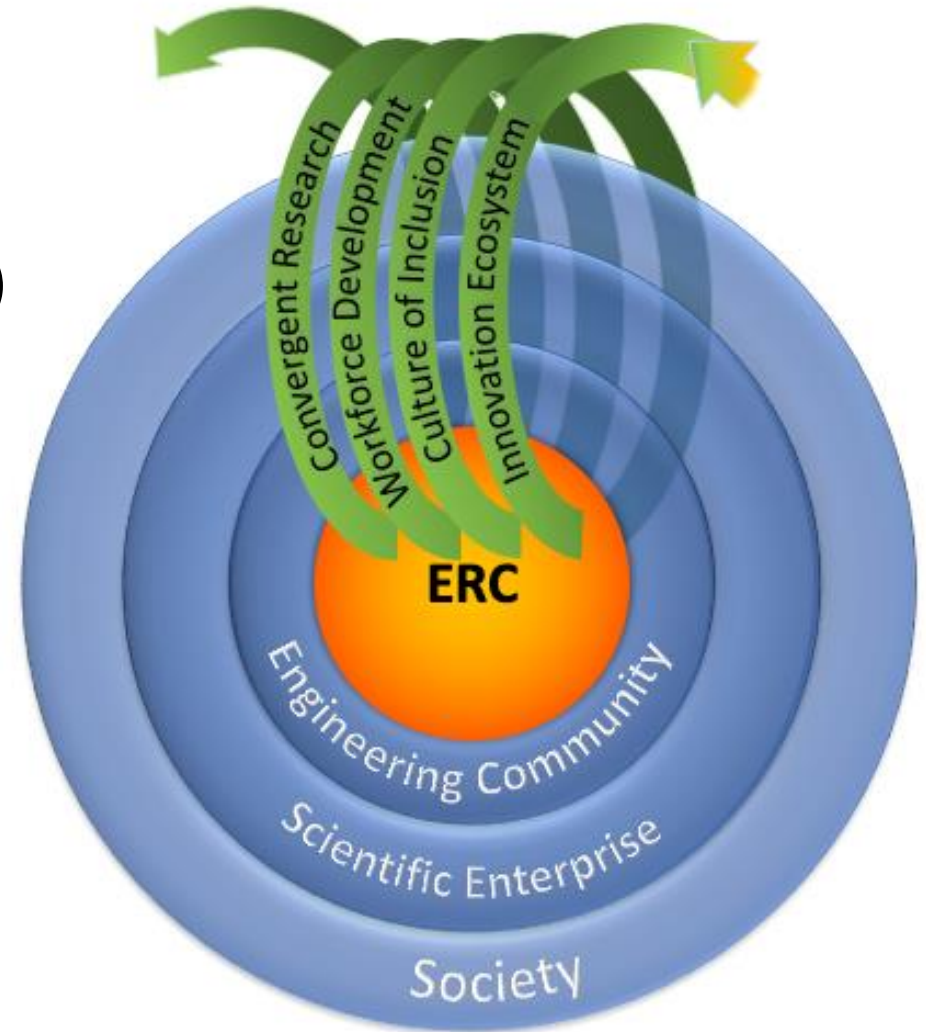
Foundational Components: DCI

- DCI is one of the Foundational Components (F.C.) which are evaluated yearly on the SV to ensure DCI is integrated across all other F.C..

- Participation from members of groups traditionally **underrepresented** in engineering as well as **diverse scientific and other perspectives** is required.

High-level DCI *goals* of ERCs

- Train a domestic workforce,
  - Majority of ERC participants should be US citizens or permanent residents (faculty, postdoc, grad & undergrad students).
  - ERC program also values international diversity

- Participation should be representative of US population diversity.
  - ERCs should **exceed national engineering average levels** of participation for URM (across sex, race, ethnicity, and disability status) across all ERC partner institutions.
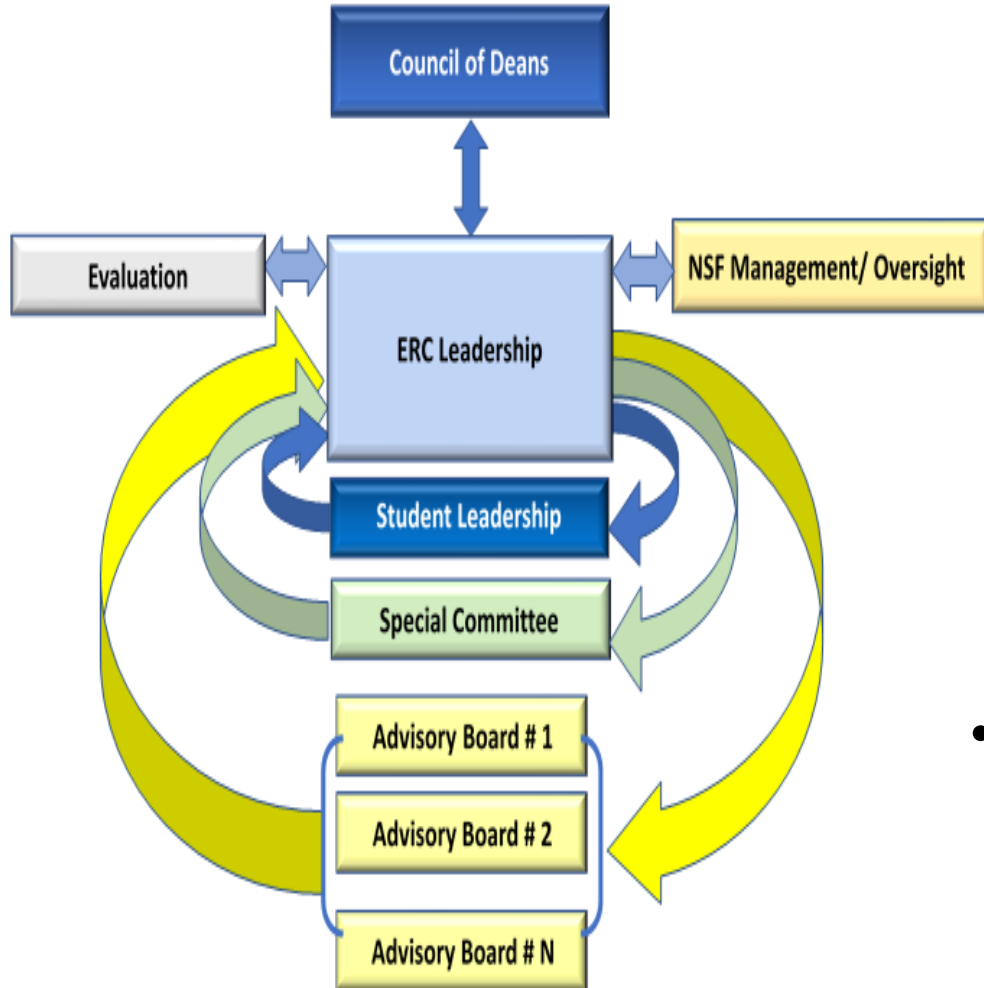
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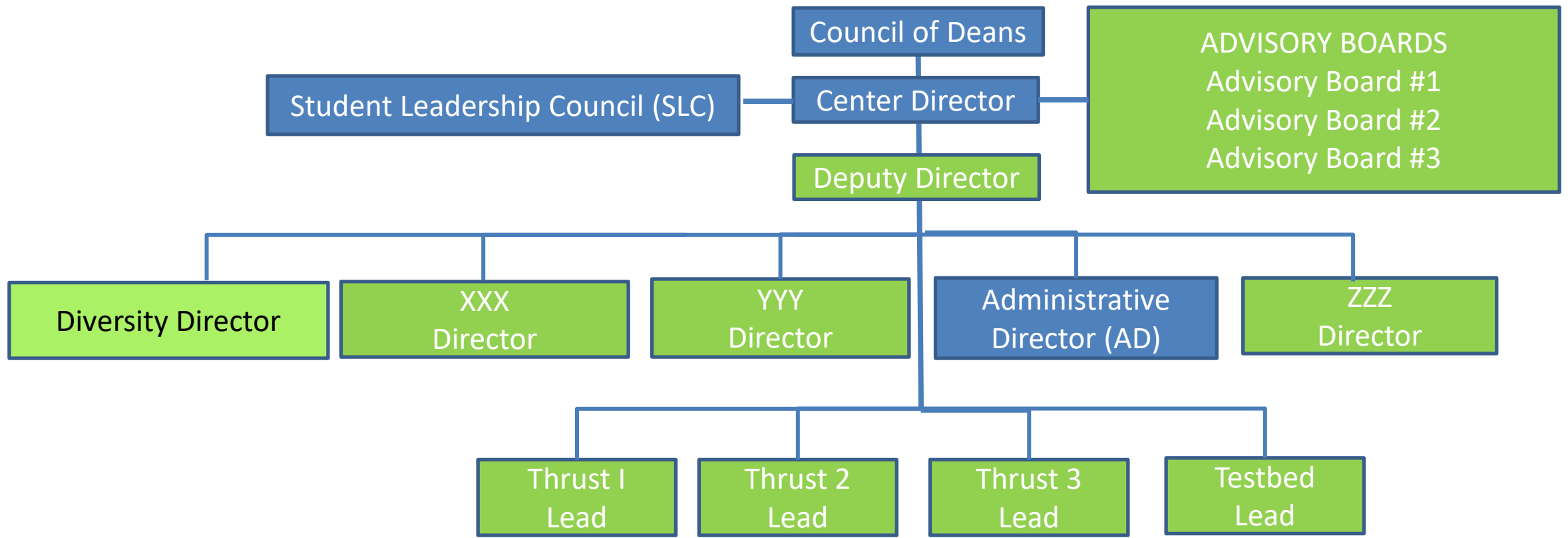
Generic Leadership Team

Student Leadership Council (SLC) Chair and co-Chair - Set and fulfill the SLC vision, develop SLC activities, membership, lead SLC SWOT analysis, attend ERC Leadership Team meetings, organize SLC SWOT meeting with NSF site visit team

- **Administrative Director** – management of reporting, database, site visits and other events

Sample Org Chart

Practices to Integrate Diversity

- Develop Practices to integrate Diversity to the rest of the ERC.

SLC & Students

other ERC constituents

Center Leadership

Diversity Director(s) Council

Researchers & Staff

Dean's Council

Example Role of the Diversity Lead

1. Leads development, implementation, and assessment of Center's diversity strategic plan.

2. Has expertise in recruitment and retention of underrepresented groups in engineering, i.e. <u>expertise in broadening participation</u>.

3. Has the ability to impact budget decisions in order to accomplish diversity and culture of inclusion goals.

4. Interacts with thrust leads, and industry/stakeholder representatives as well as education and workforce development personnel.

Examples of how to demonstrate strong Cultures of Inclusion (CoI)?

1. A **living strategic plan**
2. S**hared vision**
3. Clear **codes of conduct**
4. **Shared accountability**
5. Engaging **partners**
6. **Onboarding**

7. Ongoing **trainings/resources**
8. **Mentorship**
9. **Communicating**
10. **Rewarding and recognizing**
11. A**ssessment strategy**
12. **Retention**

And remember this is all for the benefit of the ERC since it is proven to increase innovation, creativity and aid in problem solving and conflict resolution.

Relevant DCI References

1. AlShebli, B., Rahwan, T., & Woon, W. (2018, December). The preeminence of ethnic diversity in scientific collaboration. Nature Communications. https://doi.org/10.1038/s41467-018-07634-8

2. Brox, J. (2015, August 31). **4 essential characteristics of a successful team** [Blog post]. Retrieved from *http://www.refreshleadership.com/index.php/2015/08/4-essential-characteristics-successful-team/*

3. Cho, J. H. (2016, May 25). **"Diversity is being invited to the party; inclusion is being asked to dance,"** Verna Myers tells Cleveland Bar [Blog post]. Retrieved from *https://www.cleveland.com/business/2016/05/diversity_is_being_invited_to.html*

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Relevant DCI References (cont.)

6. National Academies of Sciences, Engineering, and Medicine. 2017. **A New Vision for Center-Based Engineering Research**. Washington, DC: The National Academies Press. https://doi.org/10.17226/24767

7. National Science Foundation's Diversity And Inclusion Strategic Plan 2012 – 2016 (In Support Of The Government-wide Effort To Enhance Diversity And Inclusion In The Federal Workforce) https://www.nsf.gov/od/odi/reports/StrategicPlan.pdf

8. National Research Council. (2015). **Enhancing the Effectiveness of Team Science**. Washington, DC: The National Academies Press. https://doi.org/10.17226/19007

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10. Page, S. E. (2008). **The difference: How the power of diversity creates better groups, firms, schools, and societies.** New Jersey, NJ: Princeton University Press.

11. Refresh Leadership. (2019, March 25). **Diversity vs. Inclusion and Why They Matter** [Blog post]. Retrieved from *http://www.refreshleadership.com/index.php/2019/03/diversity-inclusion-matter/*

Additional Resources

- ERC Association Website: http://erc-assoc.org/
- *Convergence*: https://www.nap.edu/catalog/18722
- *Enhancing the Effectiveness of Team Science*: https://www.nap.edu/catalog/19007

Questions?

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