



Engineering Research Centers

ERC

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 $\neq$ 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)

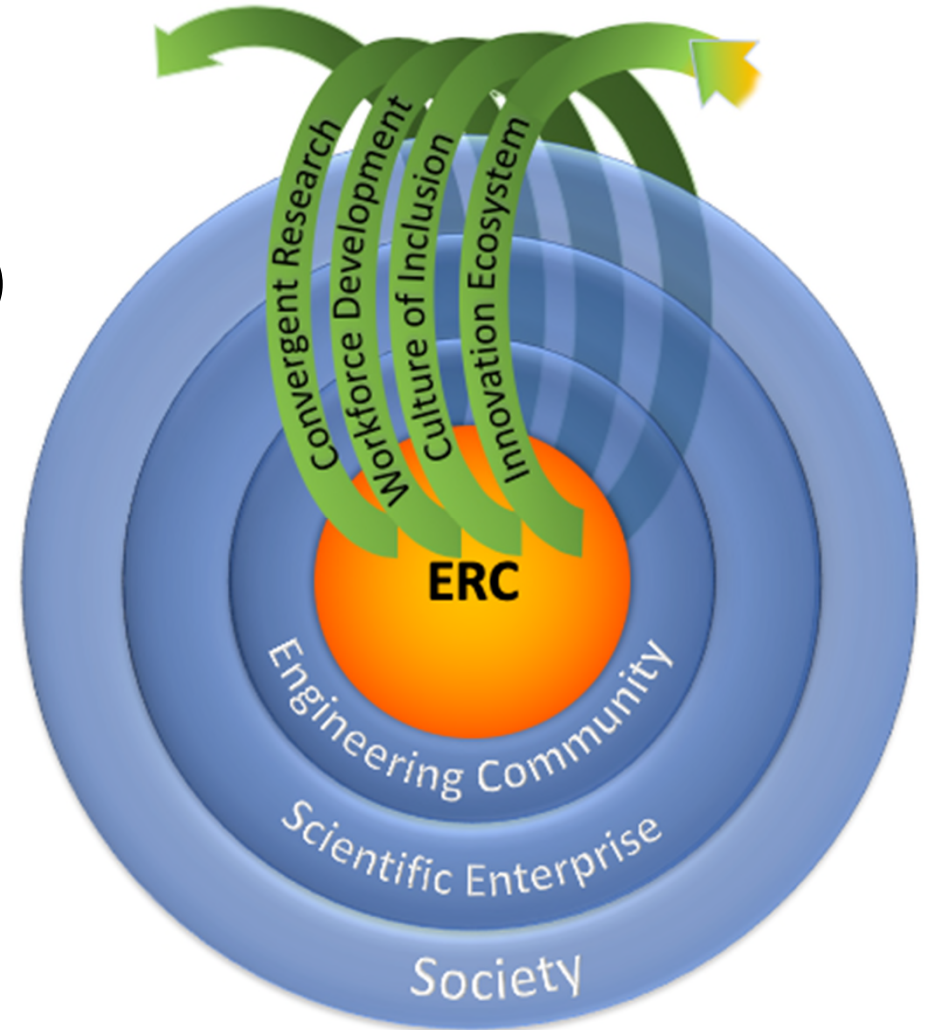
- ❖ **FINDING:** The goal of expanding *diversity in science and engineering* is not only good for the creativity and productivity of research teams, it is good for expanding the capacity of the U.S. to innovate and compete.
- ❖ **RECOMMENDATION** NSF should insist that **convergent engineering research** centers continue to build upon the success of ERs in expanding diversity of the engineering workforce.





# 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.

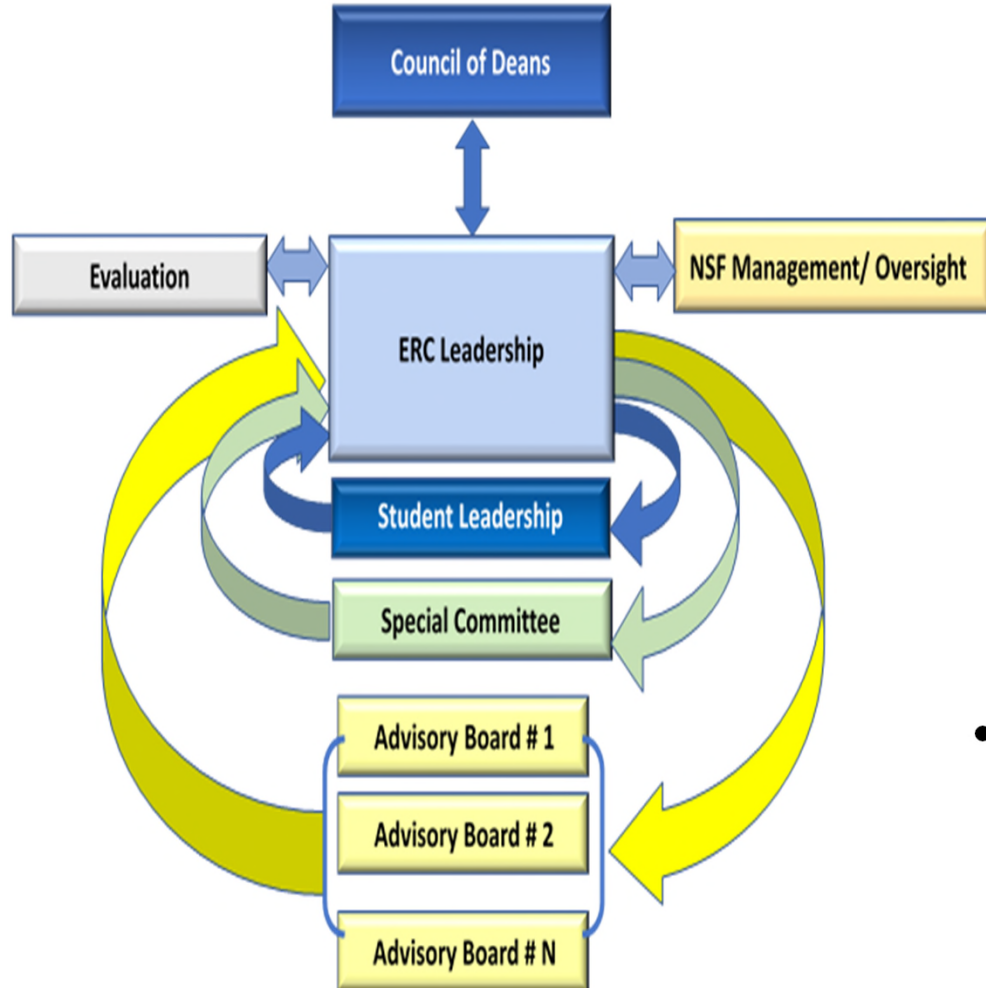
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# Generic Leadership Team

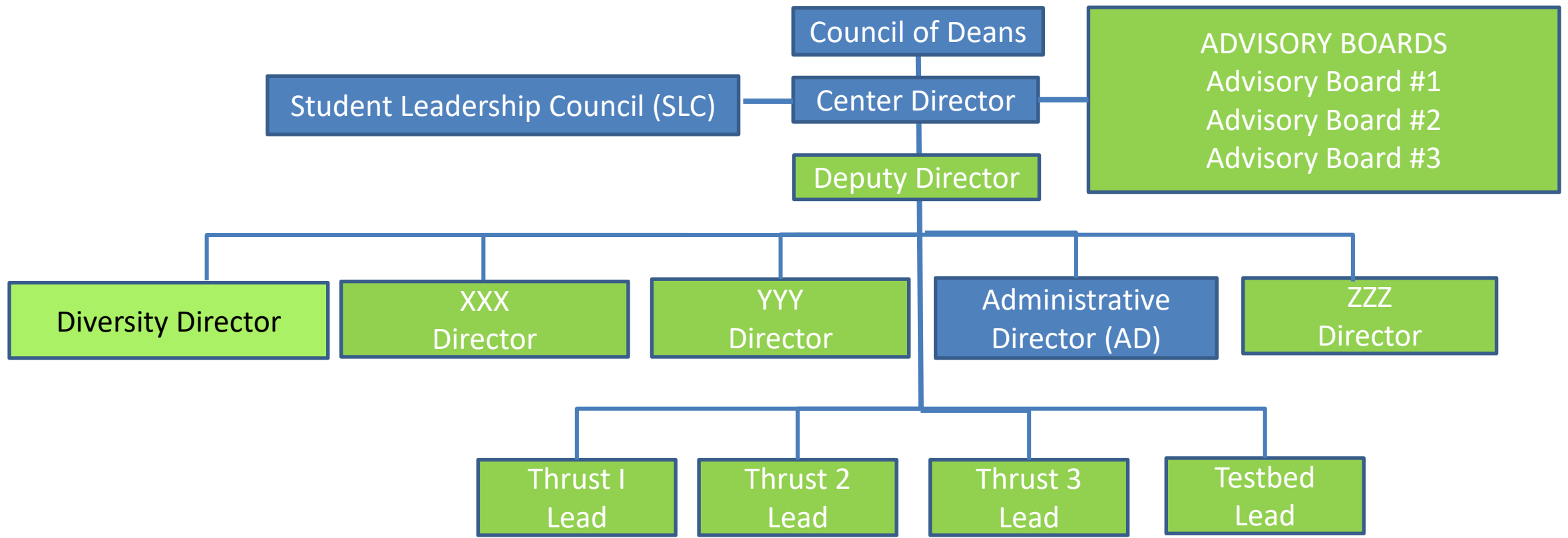


**Student Leadership Council (SLC) Chair and co-Chair** - Set and fulfill the SLC vision, develop SLC activities, membership, lead SLC SWOT analysis, attend ERC Leadership Team meetings, organize SLC SWOT meeting with NSF site visit team

- **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.





## 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. expertise in broadening participation.
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 (Col)?*



1. A living strategic plan
2. Shared 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. Assessment 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

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<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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<https://doi.org/10.1073/pnas.1700616114>
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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