



**50,000 DIVERSE ENGINEERS
GRADUATING ANNUALLY BY 2025**



**THE 50K COALITION
LEADERSHIP CIRCLE**

American Indian Science and Engineering Society | National Society of Black Engineers
Society of Hispanic Professional Engineers | Society of Women Engineers

Presentation Overview

The demand for engineers and
why you should care

Introducing the 50K Coalition

50K: The Time is Now

Who We Are

Our Goal

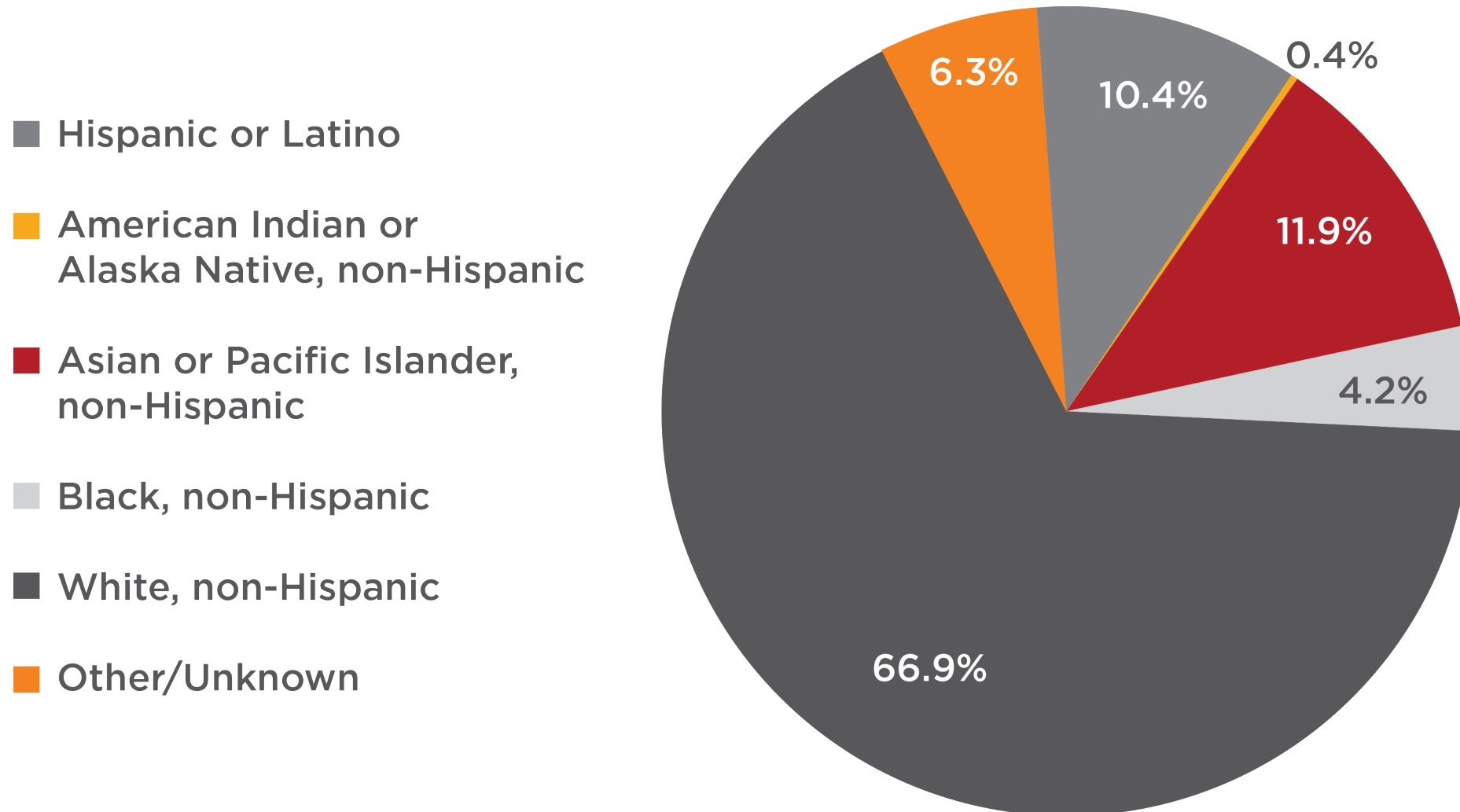
What Makes Us Unique?

- Our Leadership
- Our Members
- Our Approach & Roadmap
- Coalition Member Commitment
- Our Funders

Join The Movement!



Demand for engineers up but numbers of minorities and women engineers are flat or down



The Consequences are Great



Quality
is affected



Limitations on
workforce



Impacts
engineering's
contributions
to society

We Must
Dramatically
CHANGE
THE FACE OF
ENGINEERING
in America



INTRODUCING:



A disciplined, large-scale
collective impact coalition
of diverse engineering
community leaders

We will increase the annual number of engineering bachelor's degrees awarded to underrepresented minorities and women from

30K TO 50K

BY 2025

A 66% increase

50K: The Time is Now

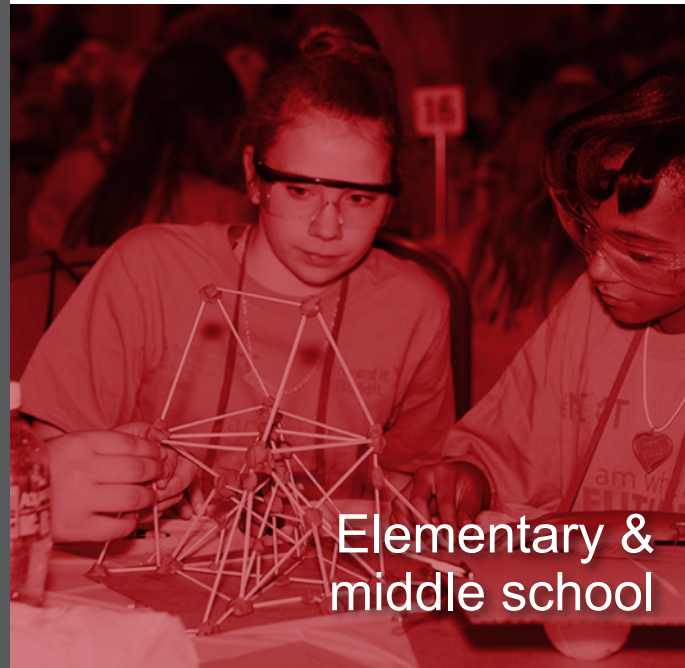
Interventions needed at all educational levels to increase number of diverse engineers:



Early childhood



High school & community college



Elementary & middle school



Retention in post-secondary institutions

What
Makes This
MOVEMENT
UNIQUE?





**50,000 DIVERSE ENGINEERS
GRADUATING ANNUALLY BY 2025**

The 50K Coalition Leadership Circle



Sarah EchoHawk
CEO, AISES



Karl W. Reid, Ed.D.
Executive Director, NSBE



Barry Cordero
Acting CEO, SHPE



Karen Horting, CAE
Executive Director & CEO, SWE



OUR: Members & Supporters

OUR MEMBERS

- Engineering Professional Societies
- Leading Schools of Engineering
- The National Academy of Engineering (NAE)
- Corporations

OUR SUPPORTERS

- The United Engineering Foundation (UEF)
- The National Science Foundation (NSF)
- The Shell Oil Company
- Advisory Board
 - Northrop Grumman (ret), AAES, NACME, ERCA, Chevron & MacArthur Fellow (Collective Impact)



An Approach Designed For Change



Collective
Impact
Approach



Agenda
Items &
Measurements

(aligned with evidence-
based research)



Project
Plans



Metrics/
Dashboard

TEAMWORK: How We'll Reach 50K





Graduate annually 50,000 female, black, Hispanic and Native American engineers by 2025.

**STRATEGIES TO HOLD OURSELVES ACCOUNTABLE
AND ALIGNED TOWARDS THE 50K GOAL**

We Can Make Engineering More Diverse

Only 1 in 4

Engineering Degrees Are Earned by Minorities or Women.



50,000 DIVERSE ENGINEERS
GRADUATING ANNUALLY BY 2025

IF YOU THINK THAT EVERY PROBLEM HAS A SOLUTION,
BE THE SOLUTION TO THE PROBLEM—**BECOME AN ENGINEER.**

Change the data. Change your life. Learn why engineering needs you at 50KCOALITION.ORG.



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COALITION COMMON AGENDA ITEMS

Undergraduate support and retention

Public awareness/marketing

K-12 support

Community college linkages

Culture and climate





COALITION: Shared Measurement


Degrees awarded
K-12, AP calculus
K-12, demographics
Transfer rates (community college)
Student demographics
Retention rates





Coalition Member Action Plans

Each organization present at the workshop was asked to put together a project plan for any initiative (current or proposed) that supported the collective impact goal of graduating 50,000 female, Hispanic, Black and Native American engineers annually by 2025. All were asked to follow the Collective Project Planning Template shown here:

Common Agenda Item	Collective Impact Initiative	Outcomes/ Goals	Shared Measurement Metrics
Reinforcing Activities	Resources Required	Start Date	End Date







50K COALITION: Dashboard and Scoreboards

 Retention and Support Services




 Export  Options  Edit  ?

This common agenda item involves Intentional support of women and underrepresented engineering students with a particular, though non-exclusive focus on the first-two-second year and transfer students. Activities may include mentoring, early-alert services, summer bridge and first-year programs. Data-driven efforts to track, identify and mitigate factors that contribute to achievement gaps also fall into this cluster. The overall focus here is on supporting students with less emphasis on “weeding out.”

50K Coalition Population Accountability

  SharedMetric	Freshman retention rates 	Time Period	Actual Value	Target Value	Current Trend	Baseline % Change
  SharedMetric	Degrees awarded 	Time Period	Actual Value	Target Value	Current Trend	Baseline % Change

50K Coalition Partner Performance Accountability

  Universities	University of Maryland - The Summer Bridge Program for Scientist and Engineers 	Time Period	Actual Value	Target Value	Current Trend	Baseline % Change
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Where We Are Today:

Standing Up the Backbone Organization

- Successful Collective Impact requires the setting up of an infrastructure and effective decision-making process that will become the backbone organization with a focus on data management, communications and dissemination
- This includes
 - Capturing and consolidating project plans;
 - Disseminating best practices;
 - Reporting out project milestones;
 - Sourcing funding opportunities and distributing grants;
 - Planning and hosting virtual and in-person convenings; and
 - Producing an annual Engineering Scorecard.
- Until the formal backbone is established, the 50K Coalition Leadership Circle will deputize members of the founding organizations to fulfill a subset of these functions until funding is available to stand up a Backbone organization



Together,
We'll Reach
the Coalition's
**AMBITIOUS AND
ATTAINABLE**
Goals





**Academic
obstacles to
retention**



**High school
math and college
"weed-out"
courses**



**STEM culture and
climate barriers to
retention. Barriers
to community
college transfer**

We Do Have Hurdles to Overcome



**Transfer rates from
community colleges to
four-year institutions
are low overall, and
lower in STEM majors**



**Barriers created by
an inadequate
public understanding
of engineering**

We Do Have Hurdles to Overcome

50K:
We Can
Do This



50K: The Time is Now

- Engineering community is slowly diversifying over time, though at a much slower rate than the overall population
- The Grand Challenges for Engineering demand unprecedented growth
- Requires a collective, measured and more inclusive US engineering community approach





JOIN THE MOVEMENT!

JOIN

Join the
50K
Coalition

COMMIT

Submit An
Action Plan

SPONSOR

Become a
50K
Backbone
Supporter

SPREAD

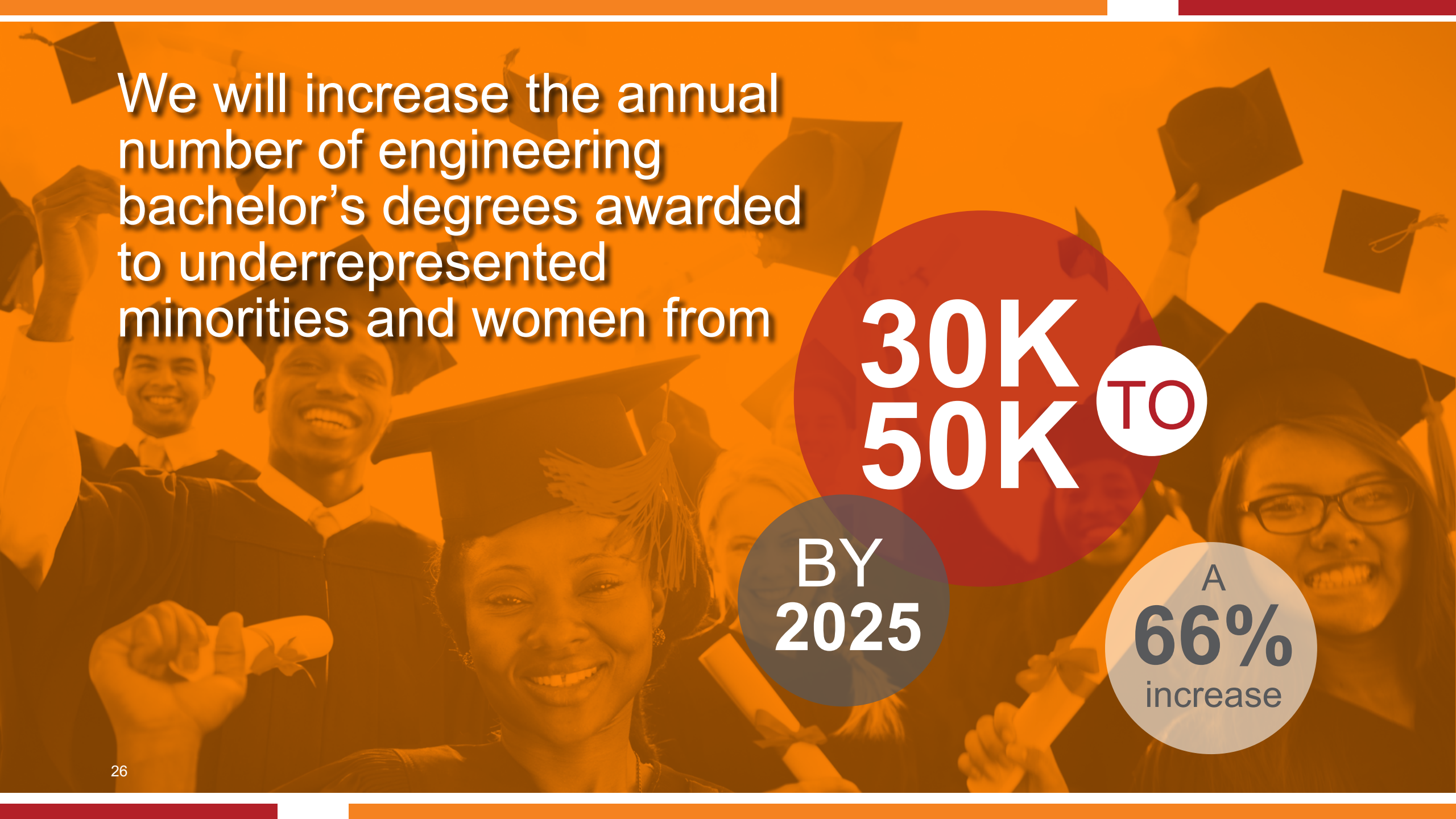
Spread the
news!

ATTEND

50K
Coalition
Annual
Convening

April 26-27 2017
Washington, DC





We will increase the annual number of engineering bachelor's degrees awarded to underrepresented minorities and women from

30K
50K **TO**

BY
2025

A
66%
increase

Your **50K** Points of Contact:



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