



**NSBE**  
NATIONAL SOCIETY OF BLACK ENGINEERS



The National  
Academies of

SCIENCES  
ENGINEERING  
MEDICINE



# Professional Societies- Shifting Cultures- Supporting Black Students through their SEM Career Journeys



**Favour Nerrise**

*Electrical Engineering Ph.D. Student — Stanford University*

*National Chairperson — National Society of Black Engineers*

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# ABOVE



Computer Engineering & Mathematics  
B.S./M.S. '21



Electrical Engineering, Ph.D. Student  
SGF, EDGE, and NeuroTech Training  
Program Fellow



NSBE National Chair, '21-'23  
NSBE Jr Leader=>Regional Leader, '10-'20



NATIONAL SOCIETY OF BLACK ENGINEERS

# *Our Mission*

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The mission of NSBE is to increase the number of culturally responsible Black Engineers who excel academically, succeed professionally and positively impact the community.



# Legacy

1975

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- Founded in 1975 by the Chicago Six at Purdue University

600+

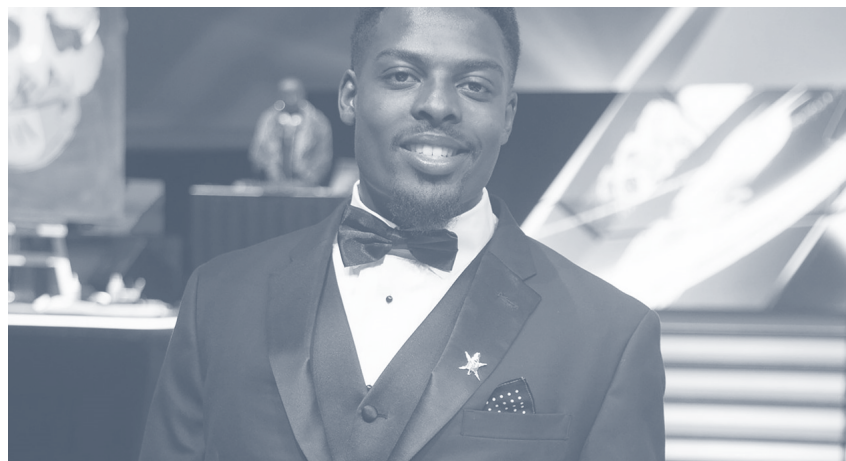
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- More than 600 Pre -Collegiate, Collegiate and Professionals Chapters

24,000+

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- More than 24,000 active members in the U.S. and abroad



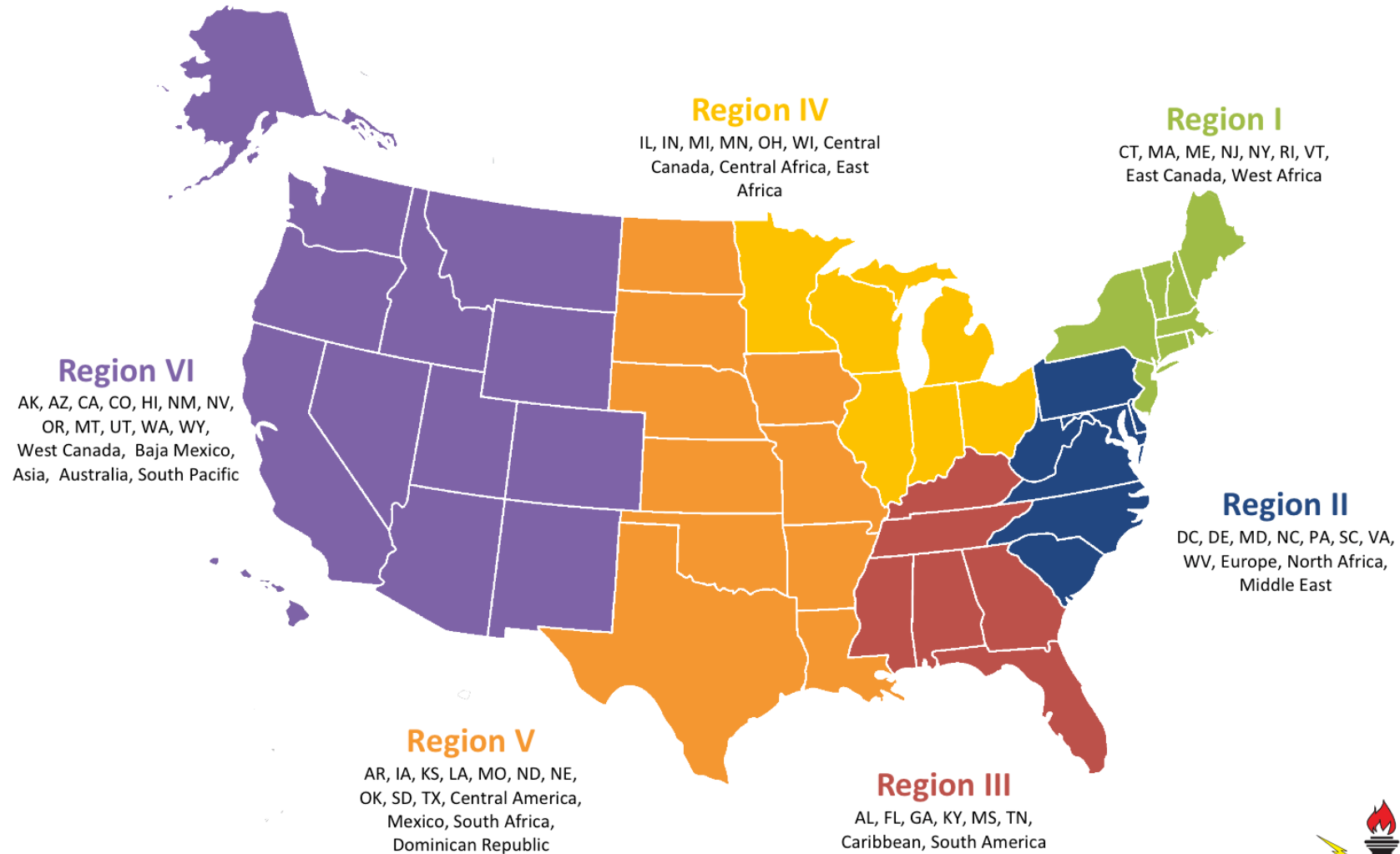
# NSBE's Uniqueness

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We are the largest *student governed* organization in the world!

# NATIONAL SOCIETY OF BLACK ENGINEERS

## MAP OF REGIONS





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Birthered Hundreds of  
Businesses



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Trained Thousands of  
Engineers



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Graduated Tens of  
Thousands of  
Engineers



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Engaged Hundreds of  
Thousands of K-12  
Students





# What We Do

Leadership

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Technical  
Excellence

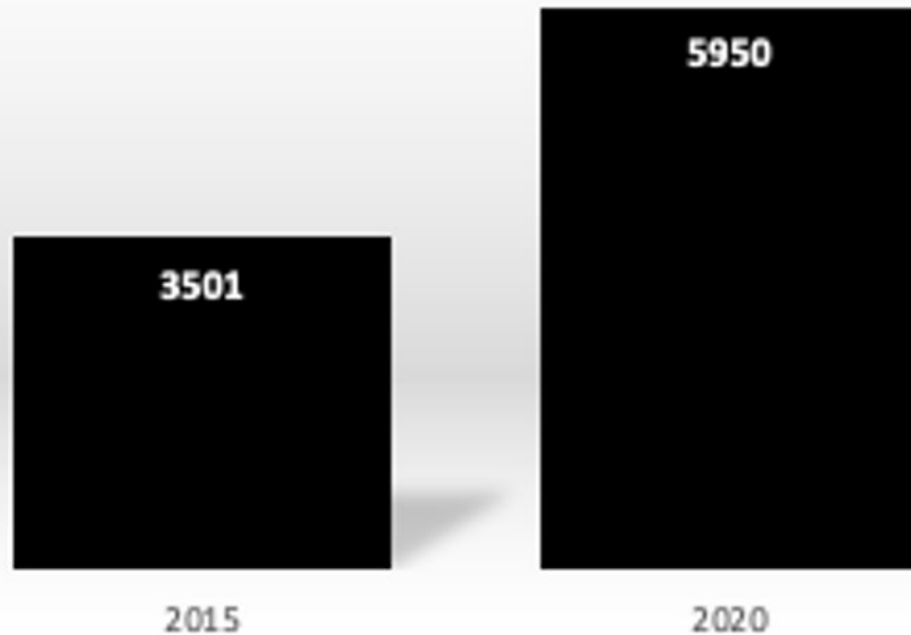
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Academic  
Excellence

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# Powering #10K By 2025

Number of Black Engineering Graduates



## Solutions: Pathways and Areas of Focus

The NSBE SPTF has charted a path that will start small, scale smart, and lead toward a vision, a path that embodies “think big.” The plan is developed around five lanes, three core programmatic pathways, and two core business areas.

The pathways align with our core demographic segments:

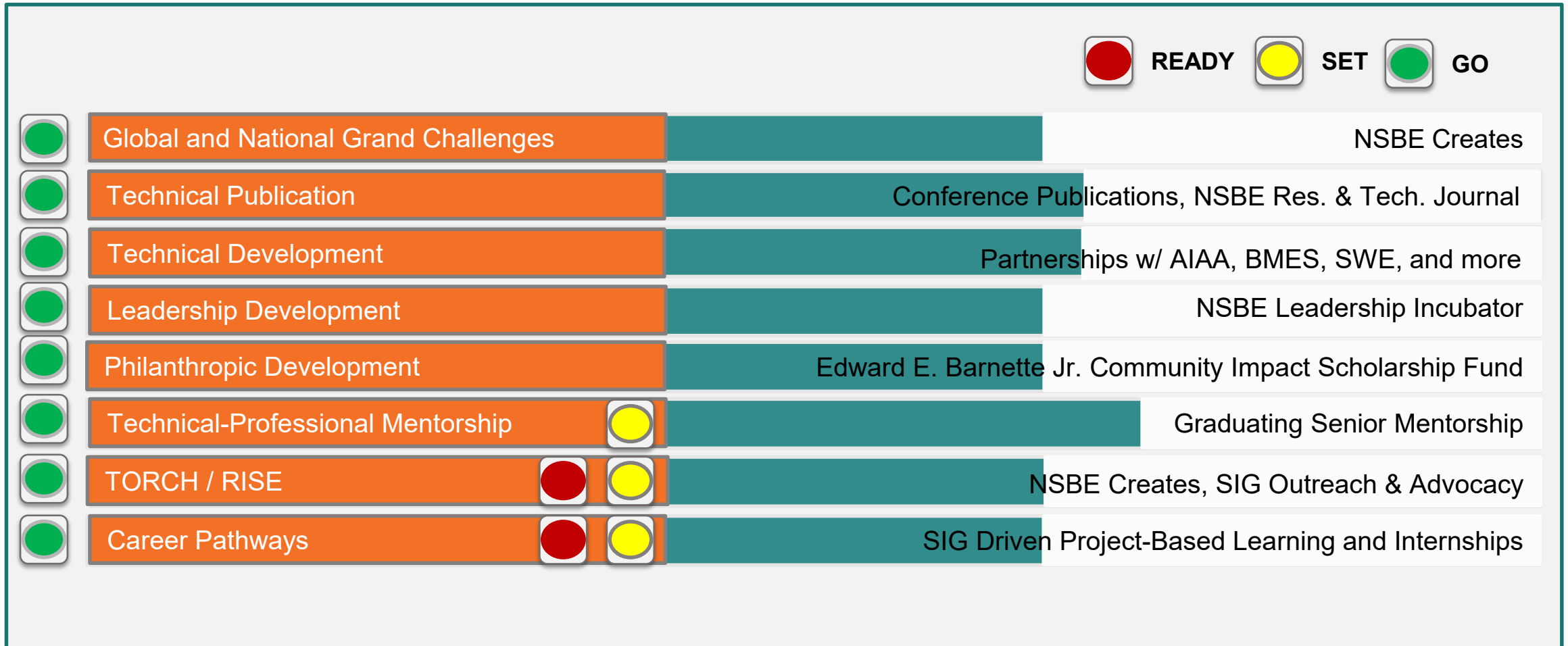
- \* **READY!** (the Pre-Collegiate Engagement pathway)
- \* **SET!!** (the Collegiate Scholastic Achievement pathway)
- \* **GO!!!** (the Professional Advancement pathway)
- \* **BRAND!** (Growing NSBE’s brand reputation and caliber among internal and external audiences), and
- \* **GROW!** (strategic investments in NSBE’s future sustainability).

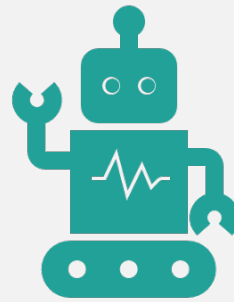
[gamechange2025.nsbe.org](http://gamechange2025.nsbe.org)

# Societal Value-added Programming

|                                                                                     |                                           |  BRAND |  GROW |
|-------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|    | Individual member and collective branding | NSBE Brand Refresh Development                                                            |                                                                                          |
|    | STEM policy and influence                 | California K-12 Math Framework, Ukraine                                                   |                                                                                          |
|    | NSBE affiliation initiative               | NSBE Ghana Affiliate                                                                      |                                                                                          |
|    | NSBE Campus Roadshow                      | GameChange2025 Virtual Roadshow                                                           |                                                                                          |
|    | Professional and technical advancement    | Certifications, Learning Opportunities                                                    |                                                                                          |
|    | Engagement plan for community colleges    | 50K Community College Partnership                                                         |                                                                                          |
|    | Diversify revenue streams                 | Affiliate partnerships, private equity                                                    |                                                                                          |
|  | Build professional services offerings     | Kanarys x INROADS Partnership                                                             |                                                                                          |
|  | Develop Research and Technology journal   | NSBE Research & Technology Journal Committee                                              |                                                                                          |

# Societal Value-added Programming





Summer Engineering  
Experience for Kids  
(SEEK)



NSBE Jr. Chapters



Scholarships



Mentorship



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Retention Program



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RISE Initiative



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Mental Health Initiative



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Mentorship



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Special Interest Groups  
(SIGs)



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Professional  
Development



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Training &  
Certifications



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Mentorship

# Partnering with NSB

# GameChange2025 - Executive Dashboard (Meaningful Data)

## GC25 Executive Summary

Summary KPI Scorecard Report

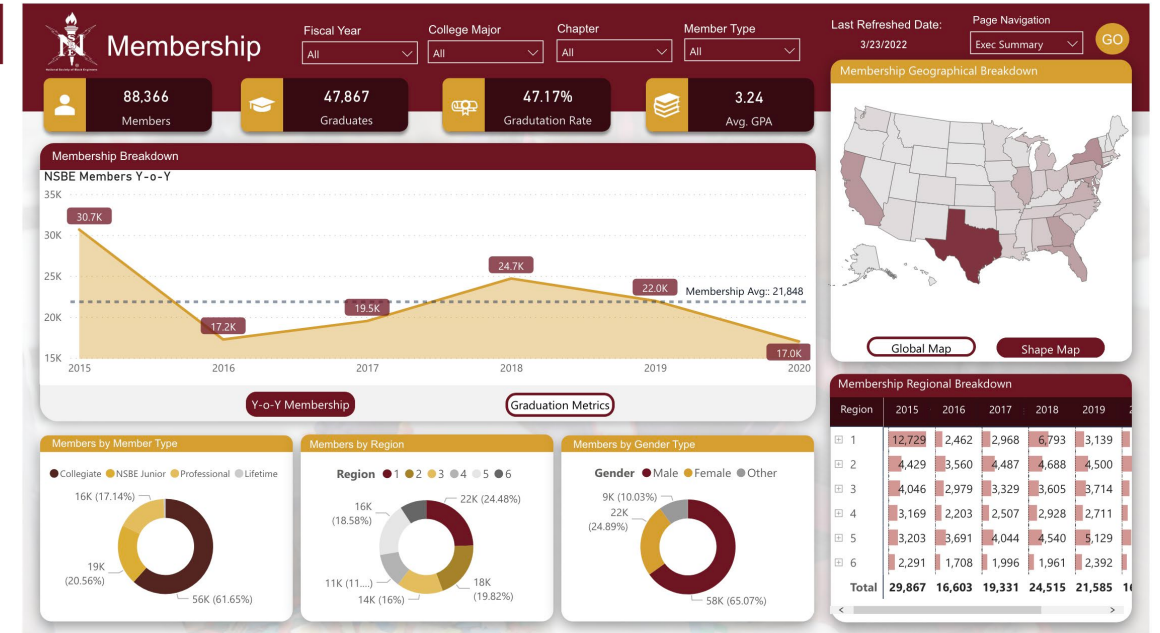
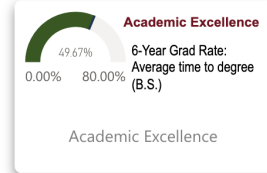
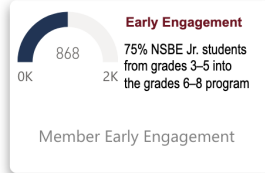
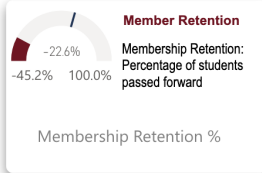
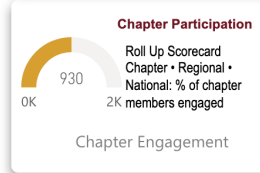
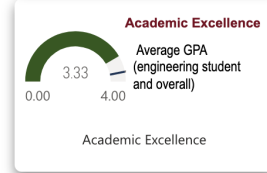
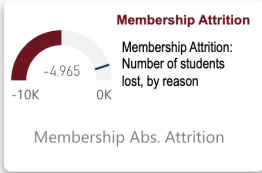
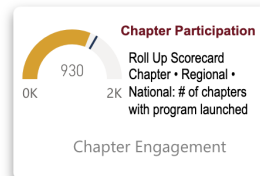
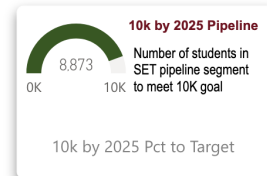
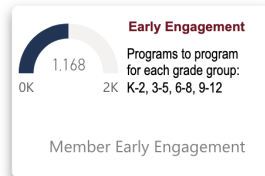
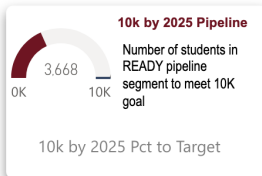
Fiscal Year

2020

Page Navigation

Membership

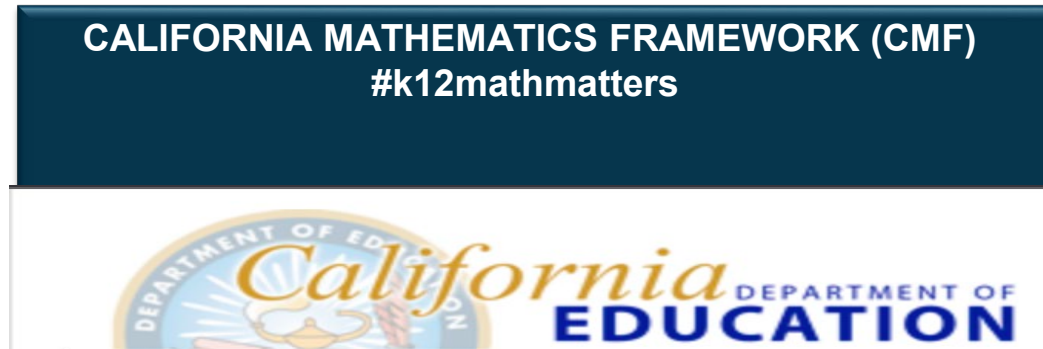
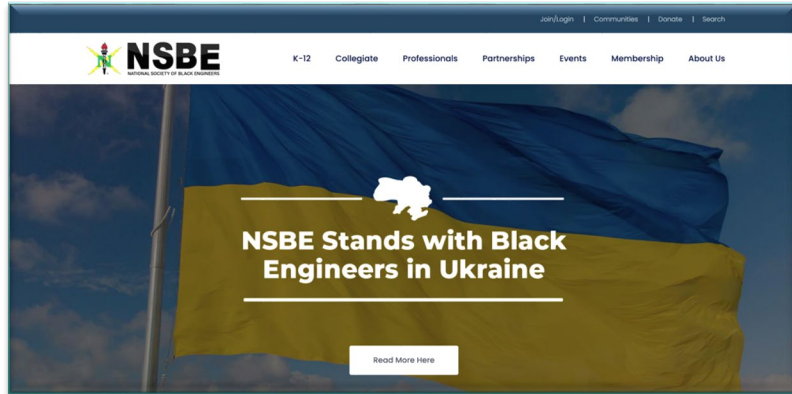
GO



LIVE at  
[gamechange2025.nsbe.org](http://gamechange2025.nsbe.org)

Work completed by: BI Solutions; led by Ikenna Egbosimba

# GameChange2025 – Public and Social Policy



[socialjustice.nsbe.org](https://socialjustice.nsbe.org)

# GameChange2025: BRAND & GROW



**NSBE Brand Refresh: #TheNext50**



**The NSBE Scientific Journal**



NATIONAL SOCIETY OF BLACK ENGINEERS

## CONTACT

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# APPENDIX

# Ready

| Critical Initiative                                   | Current Program/Activity                                                                                                                               | Suggested Changes                                                                                                                                                                                                                                                          |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Awareness of STEM<br/>(Kindergarten - Grade 2)</b> | <ul style="list-style-type: none"><li>• Informal Science &amp; Engineering via T.O.R.C.H</li><li>• T.O.R.C.H Festivals</li><li>• STEAM Fairs</li></ul> | <ul style="list-style-type: none"><li>• Formalize Informal Science and Engineering introduced through T.O.R.C.H.</li><li>• Develop curriculum that includes a toolkit and hand-on activities to be completed by K-2 students and implemented by key stakeholders</li></ul> |

# Ready

| Critical Initiative                    | Current Program/Activity                                                                                                                                                                   | Suggested Changes                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engagement in STEM (Grades 3-5)</b> | <ul style="list-style-type: none"><li>• Informal Science and Engineering via T.O.R.C.H</li><li>• T.O.R.C.H Festivals</li><li>• STEAM Fairs</li><li>• Competitions</li><li>• SEEK</li></ul> | <ul style="list-style-type: none"><li>• Convert non-NSBE Jr. members to NSBE Jr. students using SEEK</li><li>• Keep students engaged with STEM throughout the year via NSBE</li><li>• Introduce students to STEM principles that will be used as they matriculate through preparatory school</li><li>• Begin to guide students in developing their engineering identity</li></ul> |

# Ready

| Critical Initiative                                          | Current Program/Activity                                                                                                                                        | Suggested Changes                                                                                                                                                                                                                                       |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Development into STEM (Grades 6-8)</b>                    | <ul style="list-style-type: none"><li>• Mentorship</li><li>• T.O.R.C.H Festivals</li><li>• STEAM Fairs</li><li>• Competitions</li><li>• College tours</li></ul> | <ul style="list-style-type: none"><li>• Begin to develop professional skills of middle school students while further developing STEM proficiency</li><li>• New programming should be introduced at annual meetings to reaffirm skills learned</li></ul> |
| <b>Application of STEM - College Readiness (Grades 9-12)</b> | <ul style="list-style-type: none"><li>• Mentorship</li><li>• Standardized test preparation</li><li>• Competitions</li><li>• College tours</li></ul>             | <ul style="list-style-type: none"><li>• Engage students in leadership, technical development, and teamwork to prepare them for professionalism</li></ul>                                                                                                |

# Set

| Critical Initiative                              | Current Program/Activity                                                                                                                                                                                 | Suggested Changes                                                                                                                                                |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NSBE Retention Program</b>                    | <ul style="list-style-type: none"><li>• Professional Skills Workshops</li><li>• Mentorship</li><li>• Study Halls and Semester Check-Ins</li><li>• Mental Health Awareness (Introduced in 2020)</li></ul> | <ul style="list-style-type: none"><li>• Facilitated Study Halls</li><li>• Upper/Lowerclassmen mentorship</li><li>• Mental Health Awareness Development</li></ul> |
| <b>Professional &amp; Leadership Development</b> | <ul style="list-style-type: none"><li>• Engineering Diversity Competitions</li><li>• Company Sponsored Events</li><li>• NSBE Fellows Shadow Initiative</li><li>• Engineering Career Academy</li></ul>    | <ul style="list-style-type: none"><li>• ECA expansion</li><li>• Career Pathways Program</li><li>• Leadership Toolkit</li><li>• MOUs</li></ul>                    |

# Set

| Critical Initiative                                                    | Current Program/Activity                                                                                                                                                                                                                                | Suggested Changes                                                                                                                                                                    |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Community Service and Impact</b>                                    | <ul style="list-style-type: none"><li>• STEM Community Training</li><li>• Informal Engineering and Science Education</li><li>• Technical Expertise Services and Traditional Community Service</li><li>• R.I.S.E. Program (Introduced in 2020)</li></ul> | <ul style="list-style-type: none"><li>• Technical Literacy Program</li><li>• Establish RISE as NSBE Initiative</li></ul>                                                             |
| <b>Multicultural Engineering/STEM Program &amp; Faculty Engagement</b> | <ul style="list-style-type: none"><li>• The Dean &amp; Minority Engineering Program (MEP) Strategic Roundtable</li></ul>                                                                                                                                | <ul style="list-style-type: none"><li>• Quarterly Forums</li><li>• MEP and STEM Faculty Inclusion on Chapter Level via AEX</li><li>• Listserv of Engineering Program Deans</li></ul> |
| <b>Mentorship</b>                                                      | <ul style="list-style-type: none"><li>• MyNSBE Bulletin Board</li></ul>                                                                                                                                                                                 | <ul style="list-style-type: none"><li>• Structured program with formal evaluations</li></ul>                                                                                         |

# Go

| Critical Initiative       | Current Program/Activity                                                                                                                                                                                                                                                                                                                                   | Suggested Changes                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *Technical Development    | <ul style="list-style-type: none"><li>The Special Interest Groups (SIGs), in collaboration with the TechEx Chair, co-create and curate content for the society.<ul style="list-style-type: none"><li>Industry specific knowledge and relationships are leveraged to support engagement in research, outreach, advocacy and development</li></ul></li></ul> | <ul style="list-style-type: none"><li>Talent Development should continue to focus on non-technical development (i.e. general professional development) and leadership.</li><li>The Professional Executive Board (PEB), supported by the Tech Ex chair, should leverage the SIGs to support overall technical development, specifically two of the four focus areas of the SIGs, research and technical development (practice).</li></ul> |
| *Professional Development | <ul style="list-style-type: none"><li>Niche-area platform with activity at National, Regional and Chapter levels</li></ul>                                                                                                                                                                                                                                 | <ul style="list-style-type: none"><li>Increase offerings, enhance value by identifying and align content with<ul style="list-style-type: none"><li>Key places</li><li>Key moments in pipeline</li></ul></li></ul>                                                                                                                                                                                                                        |
| *Leadership Development   | <ul style="list-style-type: none"><li>Current opportunities to develop and enhance leadership skills as National, Regional or chapter leaders</li></ul>                                                                                                                                                                                                    | <ul style="list-style-type: none"><li>Connect non-profit experiential learnings to future career options in the non-profit sector</li><li>Establish formal tracking system for leadership tenure.</li></ul>                                                                                                                                                                                                                              |

\*Virtual delivery activated

# Go

| Critical Initiative               | Current Program/Activity                                                                                                    | Suggested Changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>*Community Service</b>         | <ul style="list-style-type: none"><li>STEM career promotion activities through Special Interest Group programming</li></ul> | <ul style="list-style-type: none"><li>The Professional Executive Board (PEB) and society as a whole should leverage the SIGs to promote problem-solving and diverse engagement in industry.</li><li>Enhance Special Interest Group structure to now be inclusive of human rights, civic and gender equality interests</li><li>Align community service activities at the National, Regional and Chapter levels. And connect to industry initiatives (corporate foundations like Intel Foundation)</li></ul> |
| <b>*Philanthropic Development</b> | <ul style="list-style-type: none"><li>Establishment of the Edward Barnett Jr. Endowment</li></ul>                           | <ul style="list-style-type: none"><li>Establish an effective private donor strategy and philanthropic educational program</li><li>Establishment of a Donor Pyramid that provides opportunities for members to give throughout their Professionals Journey.</li></ul>                                                                                                                                                                                                                                       |
| <b>*Mentorship</b>                | <ul style="list-style-type: none"><li>No established NSBE professionals mentorship program</li></ul>                        | <ul style="list-style-type: none"><li>Establish a formal professional mentorship program with specific, strategic matching</li></ul>                                                                                                                                                                                                                                                                                                                                                                       |

\*Virtual delivery activated

# Brand

| Critical Initiative                      | Current Program/Activity                                                                                                                                                                                                          | Suggested Changes                                                                                                                                                                                                                                                |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>New Marketing &amp; Promotion</b>     | <ul style="list-style-type: none"><li>• Social Networking: Facebook, Instagram, Twitter, LinkedIn, etc.</li><li>• Direct Marketing: eNews Promotion</li><li>• NSBE Websites (National, Convention &amp; Regional Sites)</li></ul> | <ul style="list-style-type: none"><li>• New engaging ways to promote: Storytelling through Video Marketing<ul style="list-style-type: none"><li>• IG TV</li><li>• YouTube</li></ul></li></ul>                                                                    |
| <b>Public &amp; Social Policy Issues</b> | <ul style="list-style-type: none"><li>• NSBE: A Call for Justice</li><li>• Partnership with other organizations</li></ul>                                                                                                         | <ul style="list-style-type: none"><li>• Quarterly Webinars with public policy SIG (engages members)</li><li>• Create &amp; implement process of how to respond to social issues</li></ul>                                                                        |
| <b>Uplift and Activate NSBE Members</b>  | <ul style="list-style-type: none"><li>• Membership Campaigns<ul style="list-style-type: none"><li>• WhyNSBE</li><li>• NSBE Grad</li><li>• Black STEM Like Me</li></ul></li></ul>                                                  | <ul style="list-style-type: none"><li>• Increase Membership Campaign Frequencies</li><li>• New Membership Campaigns (that highlight Strategic Plan)<ul style="list-style-type: none"><li>• More Than An Engineer</li><li>• A Day In The Life</li></ul></li></ul> |

# Grow

| Critical Initiative | Revenue Lift                                                                                                                                                                                                                                                                                           | Professional & Technical Education                                                                                                                                                                                                                                                                                                                                         |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Path</b>         | <ul style="list-style-type: none"><li>• Re-imagine Career Fair</li><li>• Implement financial management best practices</li><li>• Review membership dues pricing strategy</li><li>• Expand individual philanthropy sources and gifts strategy</li><li>• Build professional services offerings</li></ul> | <ul style="list-style-type: none"><li>• Develop a position paper to explore new ways to access advanced STEM content for Black students.</li><li>• Develop strategy, approach, and implementation plan for engaging technical, trade schools, etc.</li><li>• Establish relationships with target profile schools.</li><li>• Have NSBE leaders target engagement.</li></ul> |
| <b>Action</b>       | <ul style="list-style-type: none"><li>• Develop business/work plans to prioritize and launch revenue and growth initiatives</li></ul>                                                                                                                                                                  | <ul style="list-style-type: none"><li>• Develop NSBE engineering and Professional Education</li></ul>                                                                                                                                                                                                                                                                      |



# *Journey to* **STEM**

## K-12

- Talented & Gifted/Honors
- Competitions (Science Fair, Science Bowl, FIRST Lego, Olympiads)
- Summer Programs (JHU, NIH, MIT)
- Student Leadership

## Undergrad

- Honors & scholarship
- Internships & co -ops
- Research opportunities
- Competitions & awards
- Black engineering community
- Student leadership

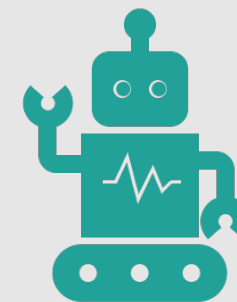
## Grad

- Bridge program
- Fellowships
- Black community
- Mentorship
- Rotations
- Student leadership

# Support



- National Society of Black Engineers
- Society of Women Engineers
- Society of Hispanic Professional Engineers
- IEEE
- Women in Electrical Engineering



- FIRE
- Louis Stokes Alliances for Minority Participation (LSAMP)
- AIRICC
- SummerFirst
- EDGE



- Application Assistance (UW, MIT, CMU)
- Fee Waiver Assistance (all)
- Fellowships (Gates, EGDE, NeuroTech, SGF)



- God
- Family & friends
- Mentorship
  - Program advisors, PIs, graduate students