



FIRST2 NETWORK



www.first2network.org



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THE PROBLEM: WE LOSE TOO MANY STEM STUDENTS

- Only **25%** of WV rural, low-income STEM students graduate with a STEM degree.
- **41%** of first-generation STEM students not only drop out of STEM, but drop out of school entirely.
- Only **39%** of all WV STEM majors graduate with a STEM degree.

This problem was identified in West Virginia, but is seen across Appalachia, rural places, and low-resource states.

THE SOLUTION: KEEP STEM STUDENTS IN SCHOOL

- Students impacted by the First2 Network at seven colleges and universities show an **83-100%** STEM persistence rate.
- Over **6,000** students have been impacted by First2 Network activities.



**U.S. National Science
Foundation INCLUDES
Alliance since 2018**



**An expanding group of
people and organizations
in West Virginia,
Kentucky, and beyond**



**Working to double the
graduation rate of rural,
first-generation, and
low-income STEM
students**

WHAT WE DO



WORK IN TRUE PARTNERSHIP WITH STUDENT LEADERS



TEST AND LEARN WITH STAFF AND STUDENTS TO SHARE AND SCALE HIGH-IMPACT PRACTICES



WORK TO DRIVE SYSTEMIC CHANGE THROUGH INFORMED POLICY AND RESOURCE ALLOCATION

CENTERING STUDENTS

Student Leadership Components

- Co-mentoring
- Community Building
- Career Development
- Introduction to content-area research and on-the-job training

To date, we have provided over
\$1.12 MILLION in stipends (not loans)
for over
309 students





FROM OUR STUDENTS

“Participation with First2 allowed me to access professional and educational channels within the network itself, to further my efforts in my other scientific and professional endeavors. My participation has also allowed employers and internship recruiters to acknowledge my experience in research.”

“Without the support from the network, both emotionally and financially, I would not be able to effectively pursue my college degree.”





CREATING A CULTURE OF LEARNING

First2 funds institutional change teams made up of:

- students;
- STEM faculty, deans, chairs, and other administrators;
- career services personnel;
- student success professionals; and
- academic affairs professionals.

Teams learn from each other and test, share, iterate, and scale high-impact, achievable change ideas centered in our members' lived experiences.

The improvement science methodology we use consists of diagramming the problem, identifying Drivers of Change, and testing change ideas through data-driven Plan-Do-Study-Act (PDSA) cycles.



IMPROVEMENT SCIENCE

Higher Education Institutional Teams test CHANGE IDEAS

that center lived realities of students, faculty, and others

- Templates for high impact practices
- Coaching Requests to Improvement Science Team
- Data-sharing for cross-institution learning and scaling

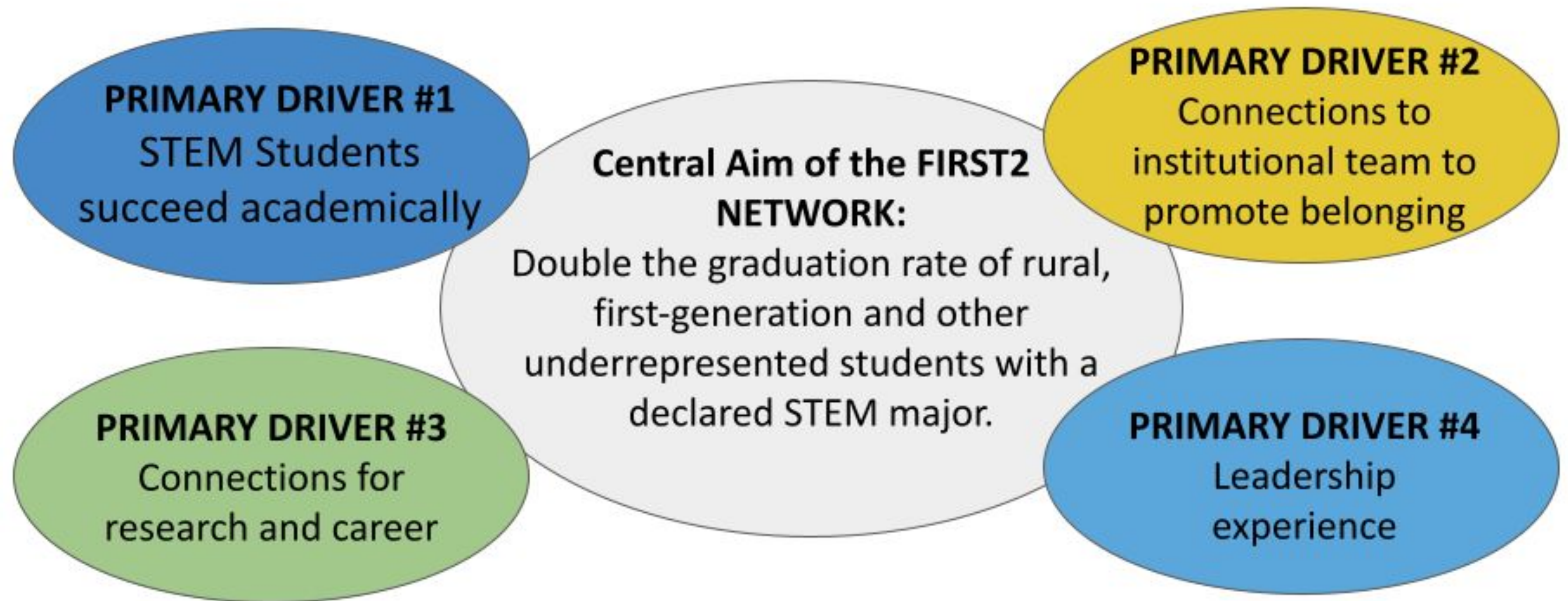
GOALS:

SUSTAINABILITY

**SYSTEMS
CHANGE**

SCALABILITY

FIRST2 Drivers: how First2 Network achieves its central aim



POLICY WORK FOR SYSTEMS CHANGE



WV AMERICORPS TUITION WAIVER

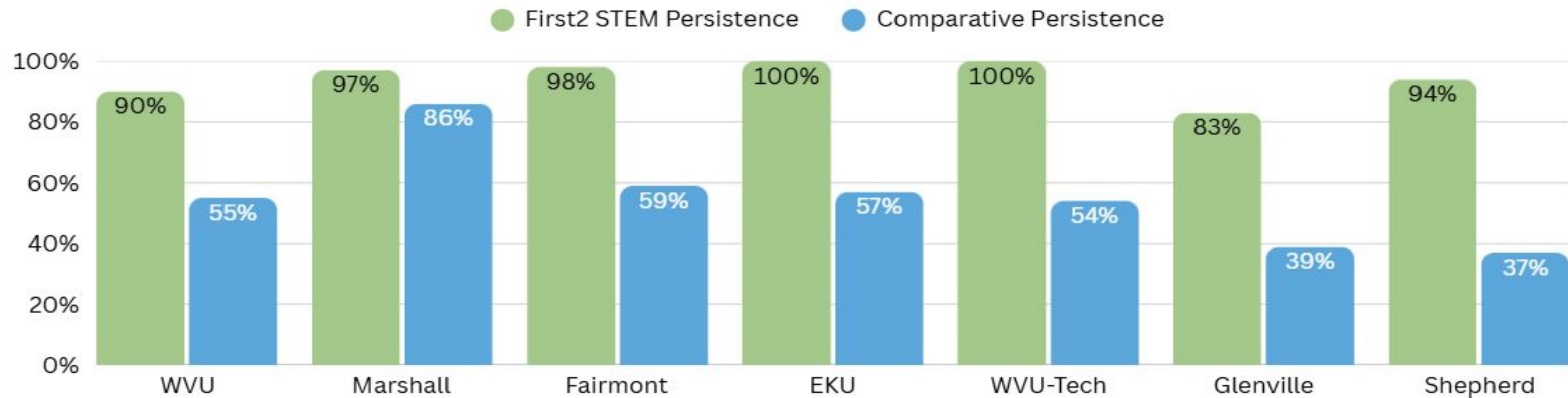
Provides a year of undergraduate or graduate education at any WV public college/university for a year of AmeriCorps service in WV.

SECOND CHANCE PROMISE

Provides college students who lose the Promise Scholarship a second chance to re-meet the eligibility requirements.

PERSISTENCE and FIRST2 ENGAGEMENT

In 2024-2025, our campus teams enacted 75 change ideas impacting more than 4,000 students, which included interventions ranging from events to build faculty-student relationships, student-led events to promote belonging, changes in STEM course practices, supplemental instruction, peer mentoring, internships, and professional development for students and staff.



PERSISTENCE and FIRST2 ENGAGEMENT

If First2 change ideas are implemented each year, we predict that **83-100% of students participating in First2 activities will persist, and graduate, regardless of major.**

This would reduce non-completion rates to just 0–17%, compared to the estimated rate of 48% of entering WV college students who do not graduate within six years.

DRAFT

PROJECTED TUITION INCOME PER PARTICIPATING COLLEGE/UNIVERSITY

	STEM students impacted by First2 in 24-25	persistence rate for students impacted by First2 in 24-25	percentage gain (compared to 48% of students who do not graduate in 6 years)	potential difference in tuition income
WVU	2152	91%	39%	\$9,023,939
Marshall	400	97%	45%	\$1,689,840
Fairmont	111	98%	46%	\$444,630
EKU	67	100%	48%	\$167,875
WVU-Tech	30	100%	48%	\$133,402
Glenville	19	83%	31%	\$50,041
Shepherd	114	94%	42%	\$433,027

1300+

network members engaged

30+

organizational partners¹

OUR NETWORK

700%

increase in network membership from Year 1 to Year 6

309+

student leaders have received stipends

6000+

students have been impacted by First2 change ideas

90%+

STEM retention rate for 3,000+ WVU students impacted by First2 (24-25)

OUR IMPACT

\$1.12M+

in stipends have been given to student leaders

120+

tests of change ideas have been completed

THERE IS MORE TO BE DONE

- **Scaling across WV and KY**
- **Expanding our work so that all STEM students, and all students overall, persist at increased rates**
- **Moving STEM graduates into meaningful STEM careers in Appalachia**
- **Better supporting the people that are driving this work on the ground**

