


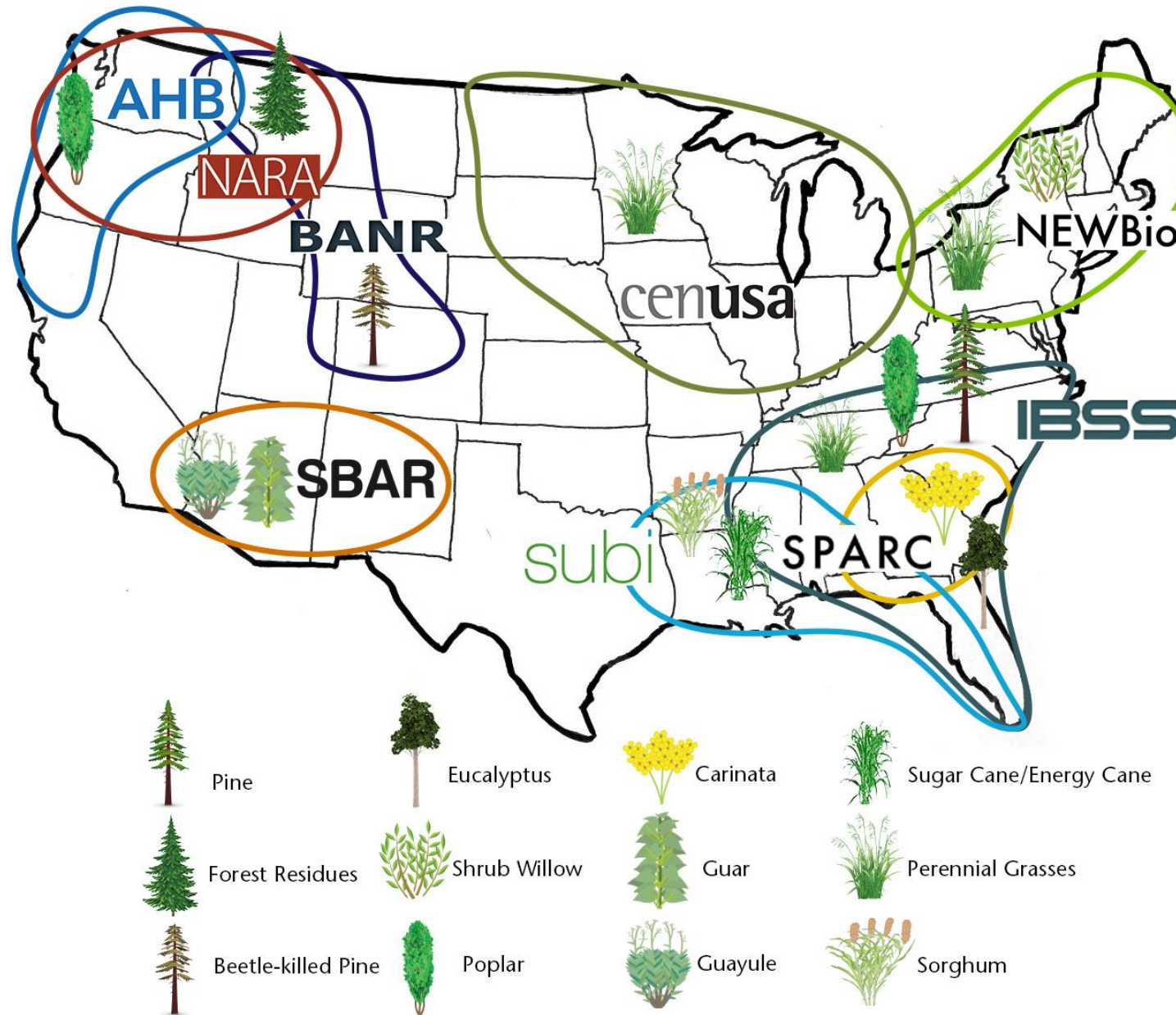




SBAR OVERVIEW 2020

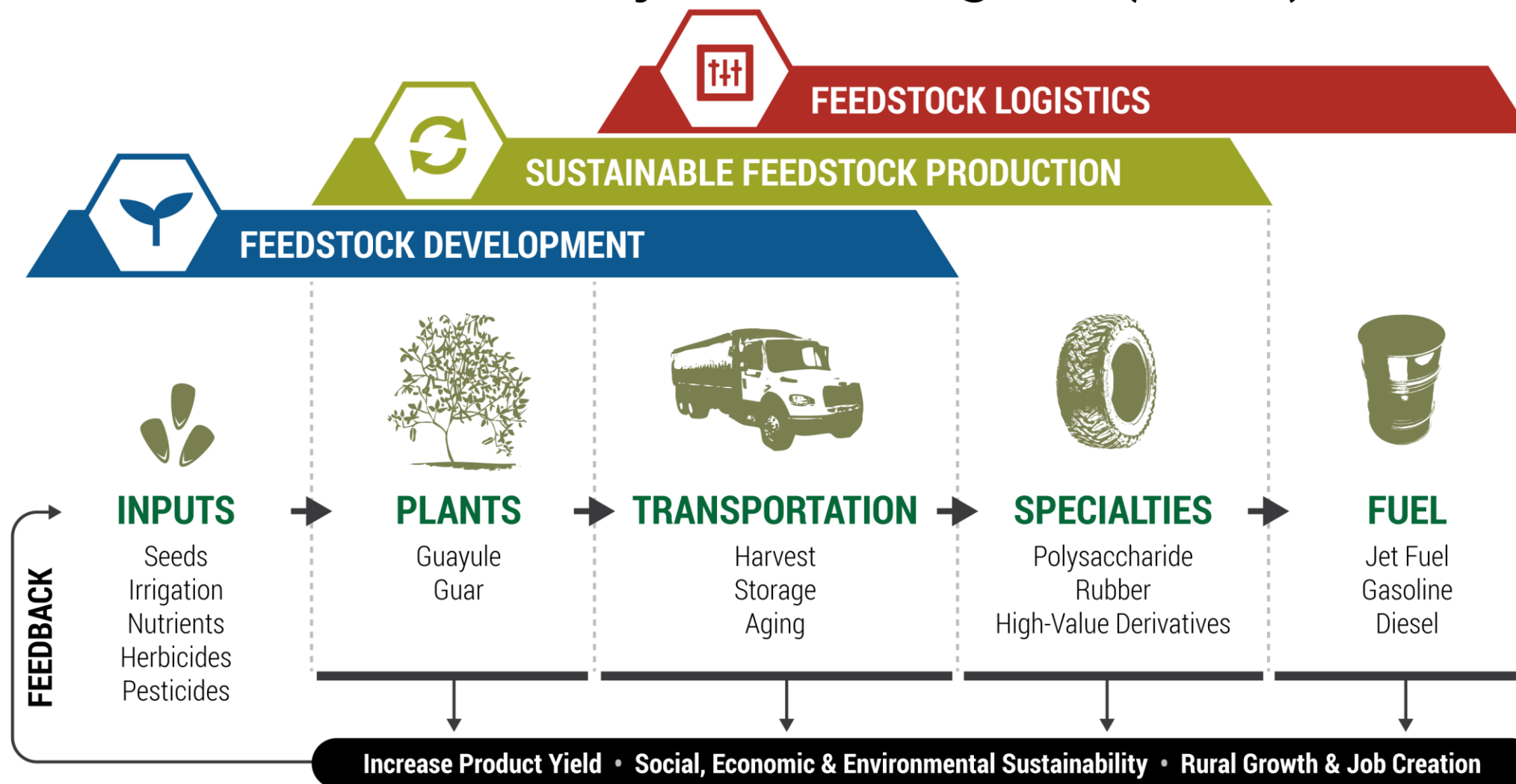
Retreat – July 27-29, 2020
Kimberly Ogden







Sustainable Bioeconomy for Arid Regions (SBAR)

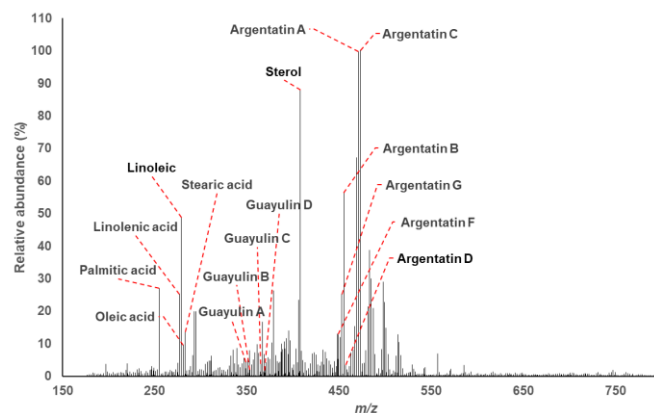


SBAR Today

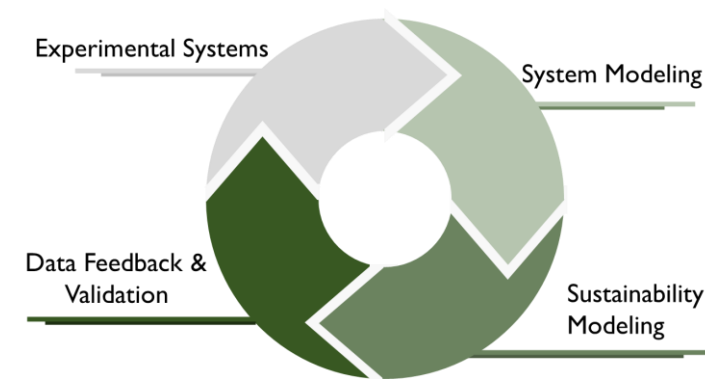
Feedstock
Development



Characterization
Coproducts





System Performance
Sustainability



Education, Extension and Outreach



Stage	Teachers
 1-Educator Professional Learning	<ul style="list-style-type: none"> -Summer PD -Recruit from urban and rural -Build Foundational Knowledge
 2-Classroom Partnerships	<ul style="list-style-type: none"> -Translate PD experiences to classroom – make content accessible, fun, interactive -Incorporate topics in curriculum -Knowledge of age group

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SBAR (Year 3)

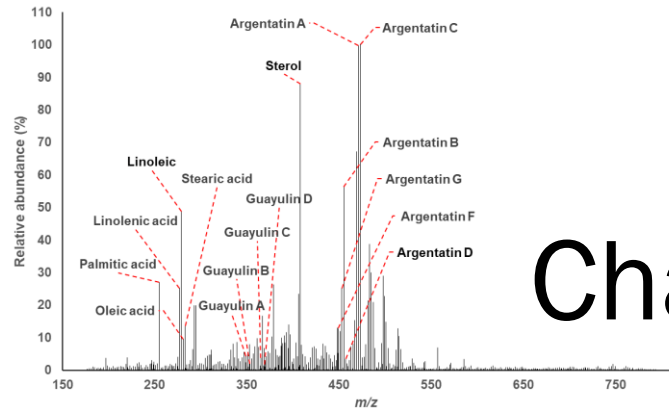




SBAR (Year 3)

Feedstock Development

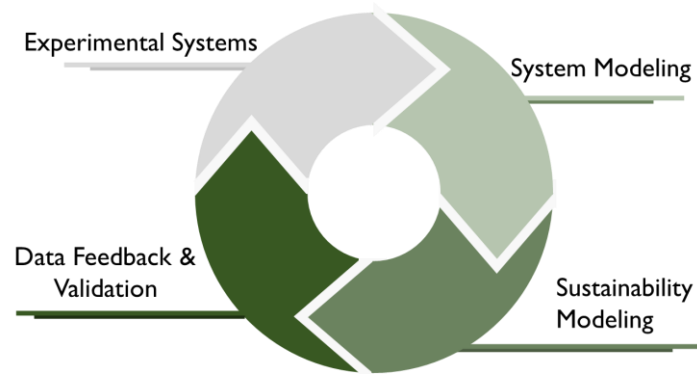
- Bridgestone Americas, NMSU, UA, USDA-ARS (ALARC and WRRRC)
 - *11 key collaborators, 92 students, postdocs, technical staff*
- Areas
 - *Biomass quantity and quality (traditional breeding and genetics)*
 - *High-throughput phenotyping (remote-sensing and interactive database/tools)*
 - *Agronomic production (herbicides, growth modeling, density)*
 - *Irrigation*
 - *Soil quality and health (microbiome)*
 - *Flowering*



SBAR (Year 3)

Characterization and Co-products

- Bridgestone Americas, NMSU, UA
 - 5 key collaborators, 40 students, post docs, technical staff
- Guayule resin, tissue, and bagasse; Guar nodules
- Areas
 - Bagasse characterization
 - HTL; conversion review paper
 - Guayule and guar biochemical analysis
 - Resin component separation (distillation, accelerated solvent extraction, supercritical fluid)
 - Metabolites, chemical and microbial transformations

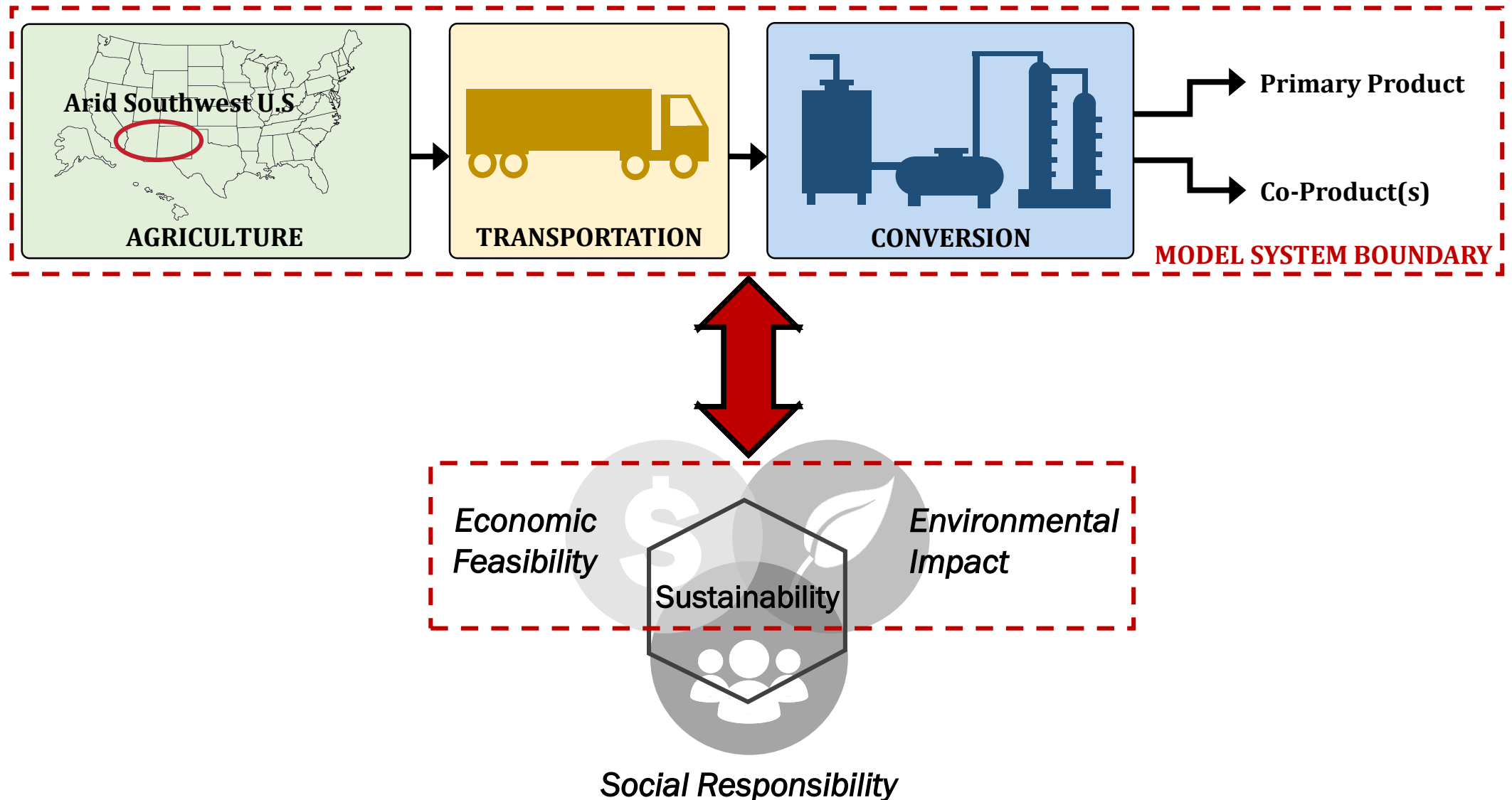


SBAR (Year 3)

System Performance & Sustainability

- Bridgestone Americas, Colorado School of Mines, Colorado State University, NMSU, Oregon State, University of Arizona
 - 7 Key Personnel, 17 students, postdocs
- Areas
 - Integrated TEA and Sustainability modules
 - Farm Level Economics – Integrated model
 - Data Integration
 - Enterprise budgets
 - Logistics optimization –transportation
 - Social sustainability





Sustainability Team Overview





SBAR (Year 3) Extension and Outreach

- NMSU, UA, Bridgestone Americas
 - *7 key collaborators, 36 students, professional staff*
- Areas
 - *Outreach to growers (field days, site visits, workshops)*
 - *Newsletters*
 - *4H (virtual summer)*
 - *FFA*
 - *Project Puente*

	Stage	Teachers
	1-Educator Professional Learning	-Summer PD -Recruit from urban and rural -Build Foundational Knowledge
	2-Classroom Partnerships	-Translate PD experiences to classroom – make content accessible, fun, interactive -Incorporate topics in curriculum -Knowledge of age group
	3-Produce/ Disseminate Educational Resources	-Various lesson editing iterations -Online educator resource library including videos, powerpoints, & bioeconomy literacy tools.
	4-Increase Student and Educator Engagement	-New Knowledge – on science tied to agriculture research in arid regions and emerging careers.

SBAR (Year 3) Education

- UA, NMSU
 - *4 key collaborators, 27 students, professional staff*
- Areas
 - *Graduate student-teacher mentor teams in both states*
 - *Educators in Native American communities*
 - *Refining lesson plans – web based*
 - *Moving to virtual*
 - *Assessment*



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Accomplishment Summary

- 147 Active Participants (25 Key collaborators, 42 Professional staff, 5 Postdocs, 34 Graduate Students, 41 Undergraduate students, 10 Fellows)
- 65 Past Participants
- Three awards for Presentations
- 9 peer-reviewed publications
- 13 conference proceedings
- 99 presentations (number does not include internal SBAR presentations)
- 2 Herbicide registrations for guayule
- 31 tabling events
- Received Haury Grant – 4H
- Bridgestone and NMSU submitted grant





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Diversity and Inclusion

- Strength of SBAR Group
 - *Team itself*
 - *Education, Extension and Outreach Activities*
- University, college and department level webinars - VPs for Diversity and Inclusion
- Key personnel involved in committees
 - *Arizona Institutes for Resilience - Diversity and Equity Committee*
 - *Presidential Faculty Fellow for Access, Attainment and Diversity – CSM*
 - *Chair Mechanical Engineering Diversity and Inclusion committee – CS*
 - *Facilitators and Committee Members for RII Racism in Research Series – UA*
 - *Member of the NMSU Diversity Council*
- Always room for improvement and we can share best practices