

Survey Says: ATE and Economic Development work Together! What does it look like?

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*The Hidden Innovation Infrastructure: The Role of Economic Development in
Technician Education in the Changing Future of Work (NSF ATE: 2026262)*



NSF ATE-funded targeted research project on Economic Development

- Uncover how NSF ATE's development of the technician workforce through innovation in community college technician education programs contributes to economic development.

National Analysis of ATE and Community College Technician Education

- Develop a better conception of how community college education contributes to economic development in terms of skill development and support of the innovation ecosystem.

Regional Case Studies of Community College Education in Manufacturing

- Develop measures of how skill development contributes to firm-level innovation and productivity and regional economic development.



Agenda

- Project background
- ATE Grantee Review findings
- ATE EvaluATE annual survey findings



Hidden Innovation Infrastructure Project

What is the Role of Technician
Education in Economic
Development?

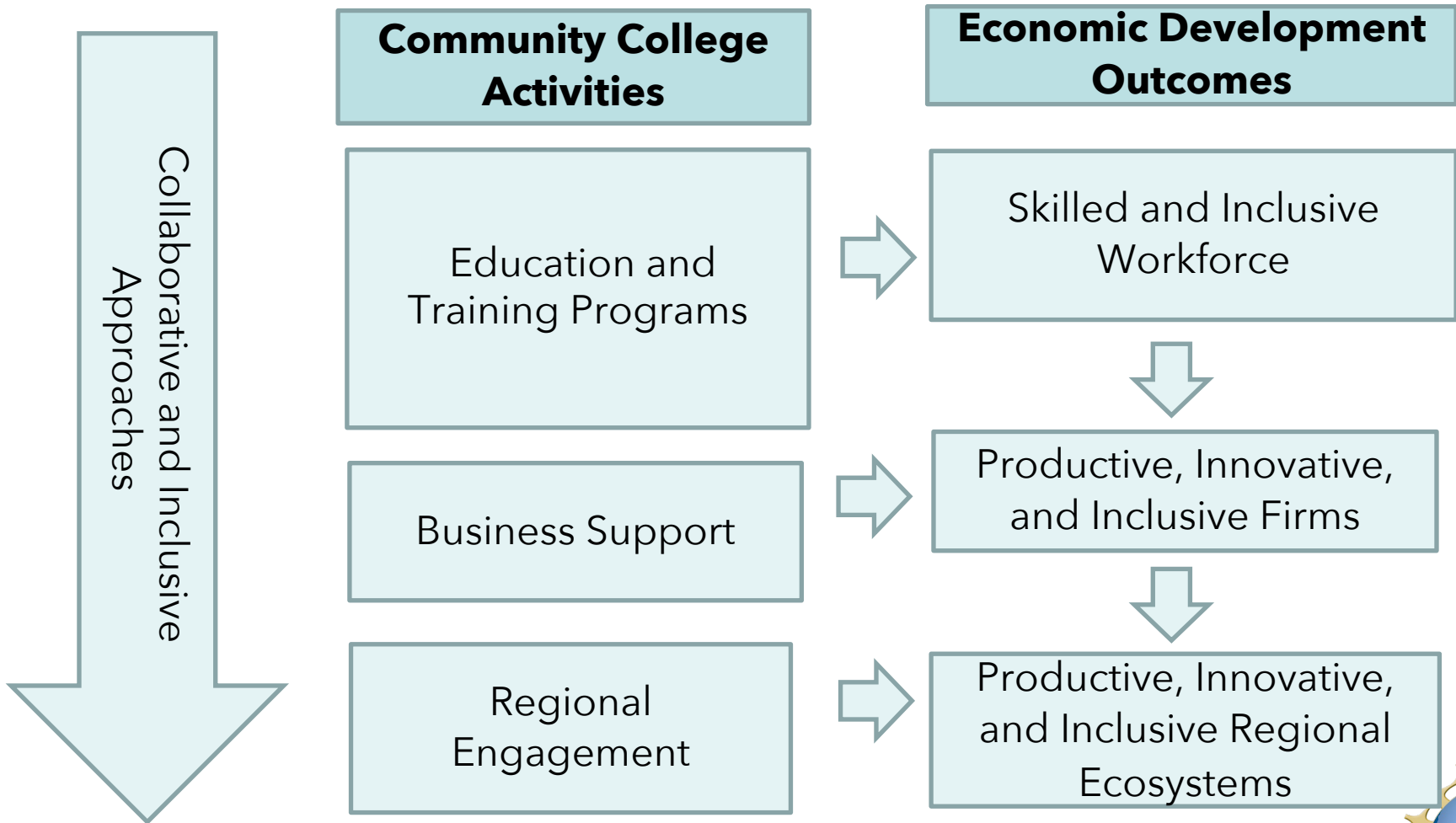


What is economic development?

- All the activities that seek to promote economic activity in a region, state, or country
- Inclusive economic development refers to access to economic growth for all actors in an economy is an important lens for economic development
- Geographic focus can include national, state, regional, or local; for community colleges it is often regional or local



Community Colleges & Economic Development



Review of ATE Grants – Key Findings

- Based on interviews conducted with 23 grantees, including national & regional centers, and projects, Mar – Nov 2022
- Most grantees are focused on workforce development.
- Most ATE centers have focus on economic development goals.
- Most collaborations with business and industry; some also with higher education, K12, public organizations, and industry associations.
- Partnerships involved different approaches: leading and participating.
- Identified a range of activities, including: small business incubation and entrepreneurship; economic research; working with universities to generate innovative uses of technology; hands-on learning; outreach to high-need communities; participating in new employer recruitment; convening both workforce and economic development regional stakeholders.



Community College Economic Development Activities

Education and Training

- Courses & programs aligned with local workforce needs
- Customized training

Business Support

- Entrepreneurship training; small-business incubation and assistance
- Opening up facilities for use by local companies
- Technology transfer
- Applied research

Regional Engagement

- Conducting economic scans
- Participation in local economic planning/policymaking
- Assistance in attracting employers to the region
- Convening regional stakeholders



ATE EvaluATE Survey

Special Supplemental Questions -

Findings for 2023



ATE EvaluATE Survey

- Annual survey
- Evaluation Center at Western Michigan University
- Surveys ATE Principal Investigators
- Main survey section asks about the activities and achievements of ATE projects and centers.
- Can inform project and program planning and or to investigate issues related to technician education.
- Occasional supplemental questions from other projects



Hidden Innovations Project Special Questions

- One-time special supplement to the 2023 ATE EvaluATE survey
- 94% Completion Rate
- Topics covered ideas and activities related to economic development



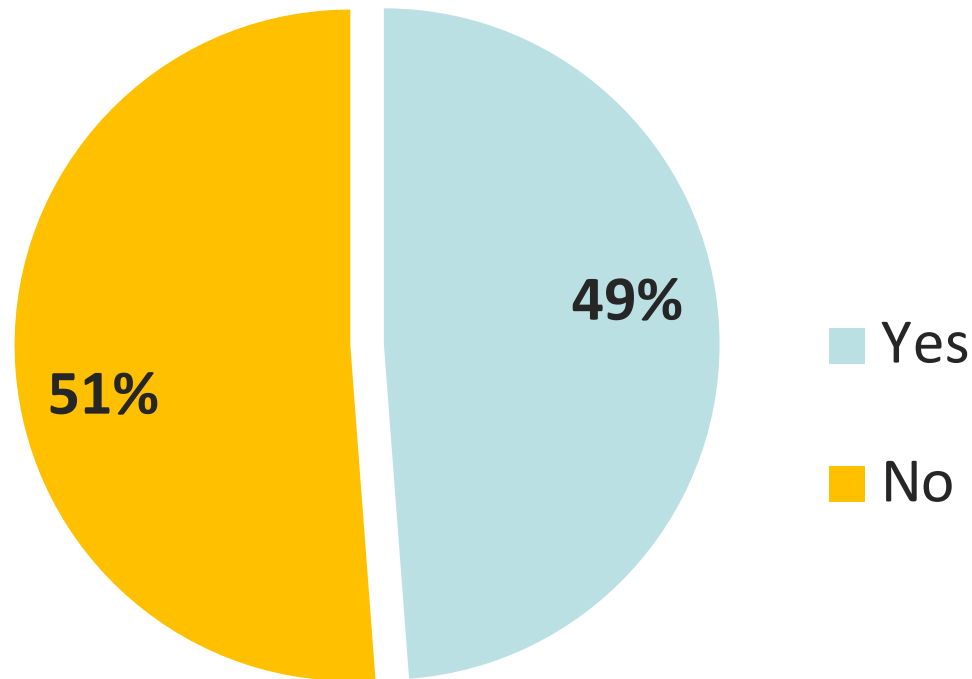
Hidden Innovations Project ED Working Definition

Community college technician education contributes to economic development when there is an intentional link between program activities and community and regional economic needs. This happens through partnerships with organizations in the community and activities that are connected to economic development goals designed to promote economic growth and prosperity regionally and nationally.



Goals and Outcomes Based Upon Hidden Innovations Project's Working Definition

ATE Projects With A Stated Economic Development Goal/Outcome



Discussion Break

How about you? Does anyone here have a stated goal for impacting Economic Development?

Anyone willing to share?



Having goals or outcomes related to economic development varied by field

Primary Field of Focus	Percentage of total projects within field with stated economic development goals (%)	Total number projects within field
Advanced Manufacturing	60%	85
Bio and Chemical Technologies	55%	40
Agricultural and Environmental Technologies	48%	29
Engineering Technologies	47%	45
Information and Securities Technologies	43%	68
General (Interdisciplinary/Cross-Cutting) Advanced Technologies	37%	71
Total Survey Respondents	48%	338



Themes Among Economic Development Goals and Outcomes

Education and training activity of grantee: 44% gave descriptions

“The curriculum and training program initiatives are directly informed by the needs of industry.”

Workforce development outcomes: 41% gave descriptions

“Local industry suffers from an acute shortage of trained technicians, and this is impacting plans for further expansion and growth of these companies. The goal of this project is to help close this regional “skills gap”.”



Themes Among Economic Development Goals and Outcomes

Inclusivity - recruiting students, diversity, socio-economic or rural focus

“Creating job opportunities for underrepresented minorities in an emerging STEM field which will lead to the upward social mobility of the local community.”

“To engage more female and minority students in the field of cyber security in the rural communities.”

Partnerships and collaborations

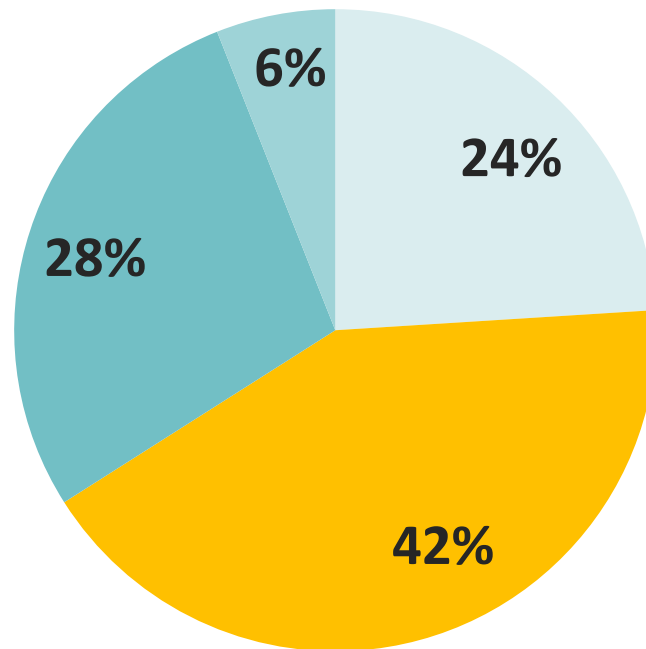
“To build a biotechnology network of opportunity including partners such as local high schools, universities, and businesses...”

Business support activities and regional engagement activities

“... to position small-scale farmers... to be able to compete in the local and regional marketplace, while also promoting environmental sustainability and contributing to the overall workforce development of the community.”



ATE Programs' Understanding of Economic Development vs Workforce Development



- Economic development is the same as workforce development
- Economic development is a particular approach to workforce development
- Economic development and workforce development are different
- Did not answer



Thinking About Economic Development

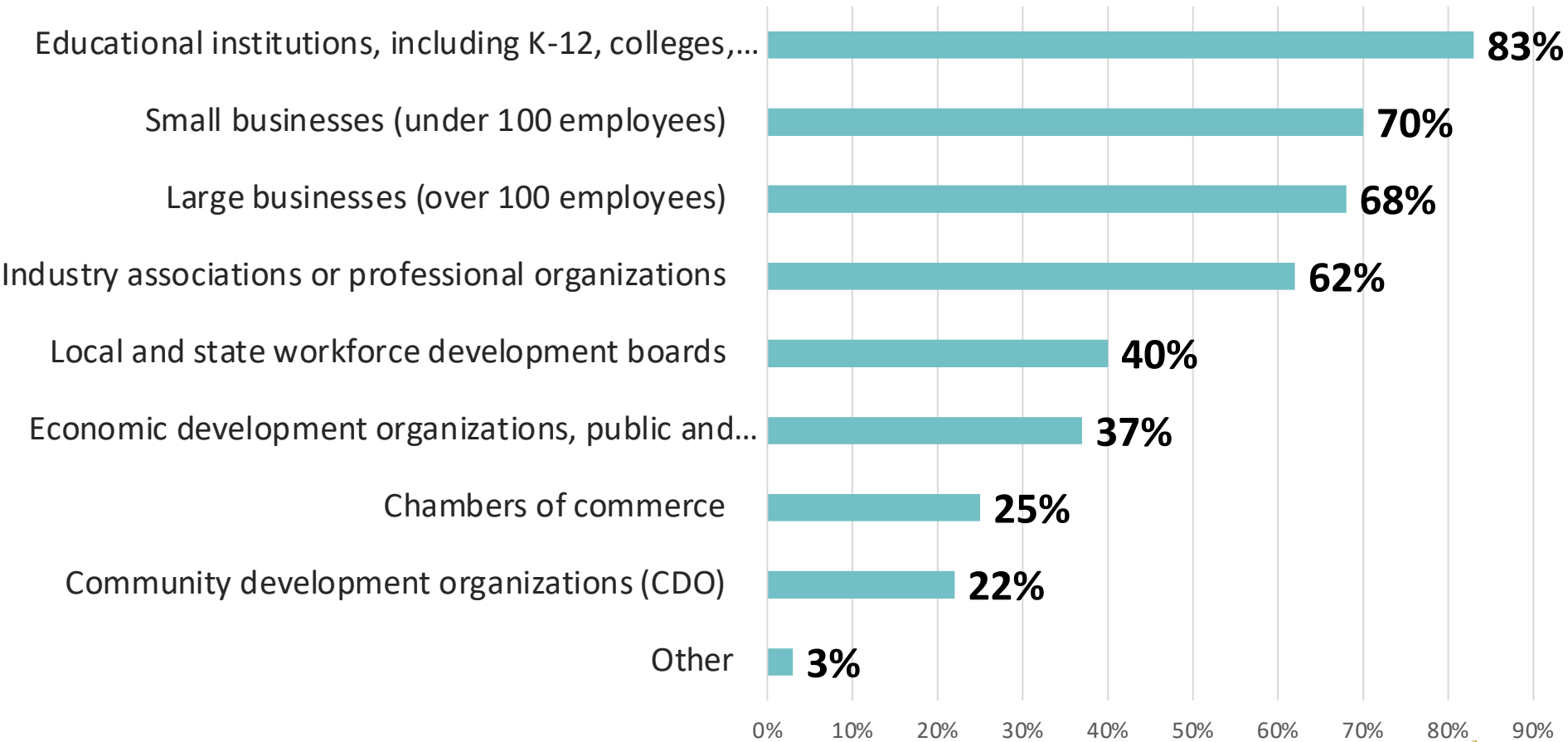
27% of respondents said they defined their project's role in economic development in a way that was different from the project definition.

PIs providing alternate definitions covered several similar themes

- Building the skilled workforce (48% of those with alternate definitions)
- Education and training activities (29% of those with alternate definitions)
- Creating a pipeline for workers by recruiting and retaining students (10% of those with alternate definitions).



ATE Programs Work with Different Organizations Regionally



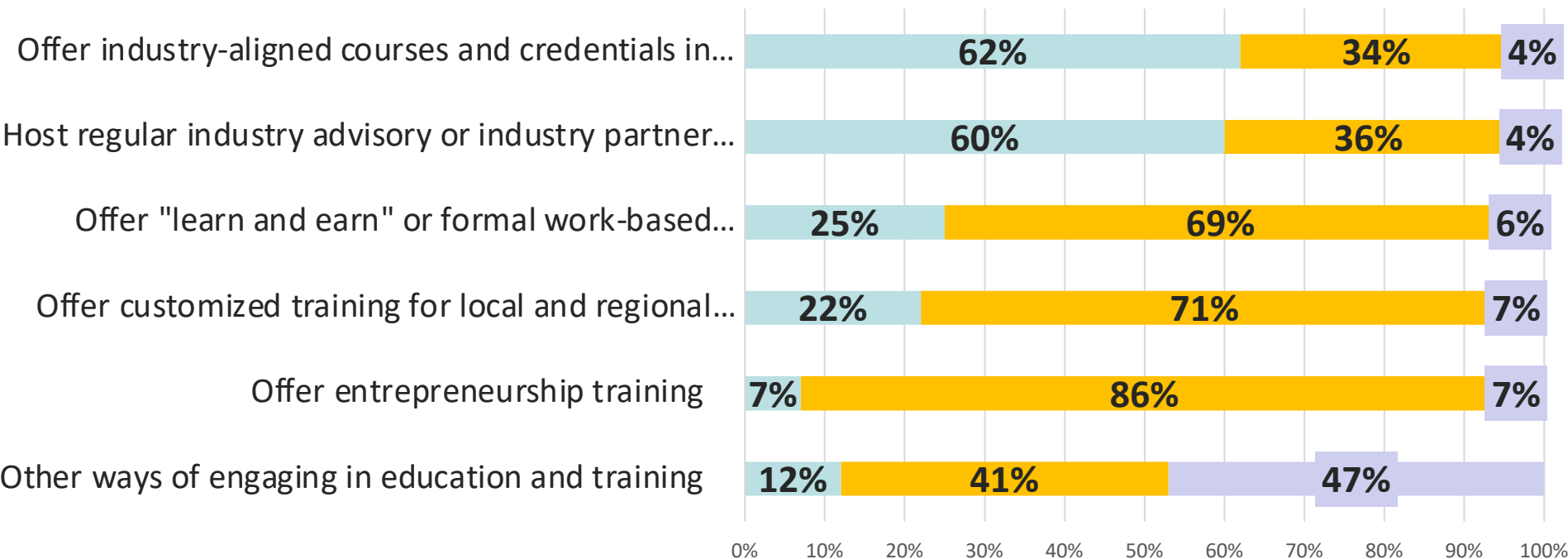
Discussion Break

Do you have formal ED partnerships with your grant project and/or program?

If so, is it connected to your college ED initiatives and how?



ATE Project Engagement in Education and Training Activities



- Does your ATE project engage in any of the following? Yes (%)
- Does your ATE project engage in any of the following? No (%)
- Does your ATE project engage in any of the following? Missing (%)

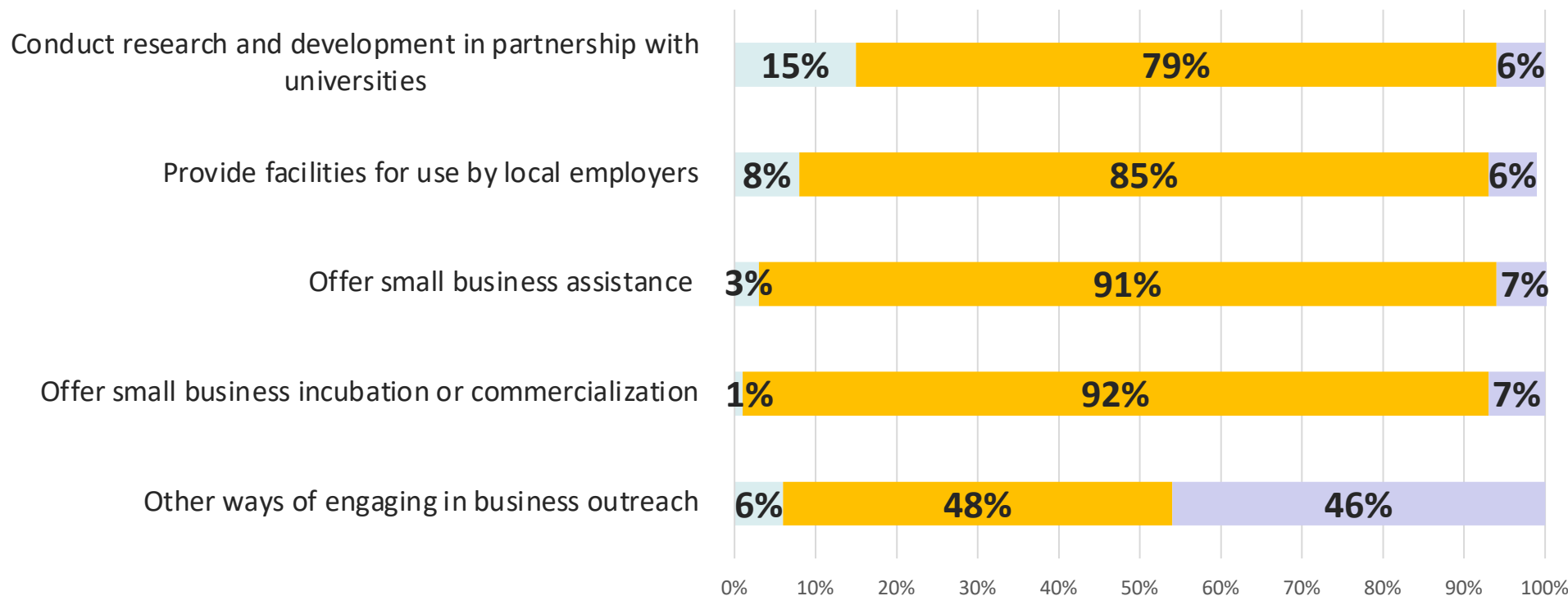


Education and Training: ATE Project vs. Institution

Education and Training Activity	% ATE project	% Institution
Offer industry-aligned courses and credentials in in-demand fields	62	82
Host regular industry advisory partner meetings to inform college offerings	60	78
Offer "learn and earn" or formal work-based learning opportunities	25	54
Offer customized training for local and regional employers	22	71
Offer entrepreneurship training	7	55
Other ways of engaging in education and training	12	17



ATE Project Engagement in Business Outreach Activities



- Does your ATE project engage in any of the following? Yes (%)
- Does your ATE project engage in any of the following? No (%)
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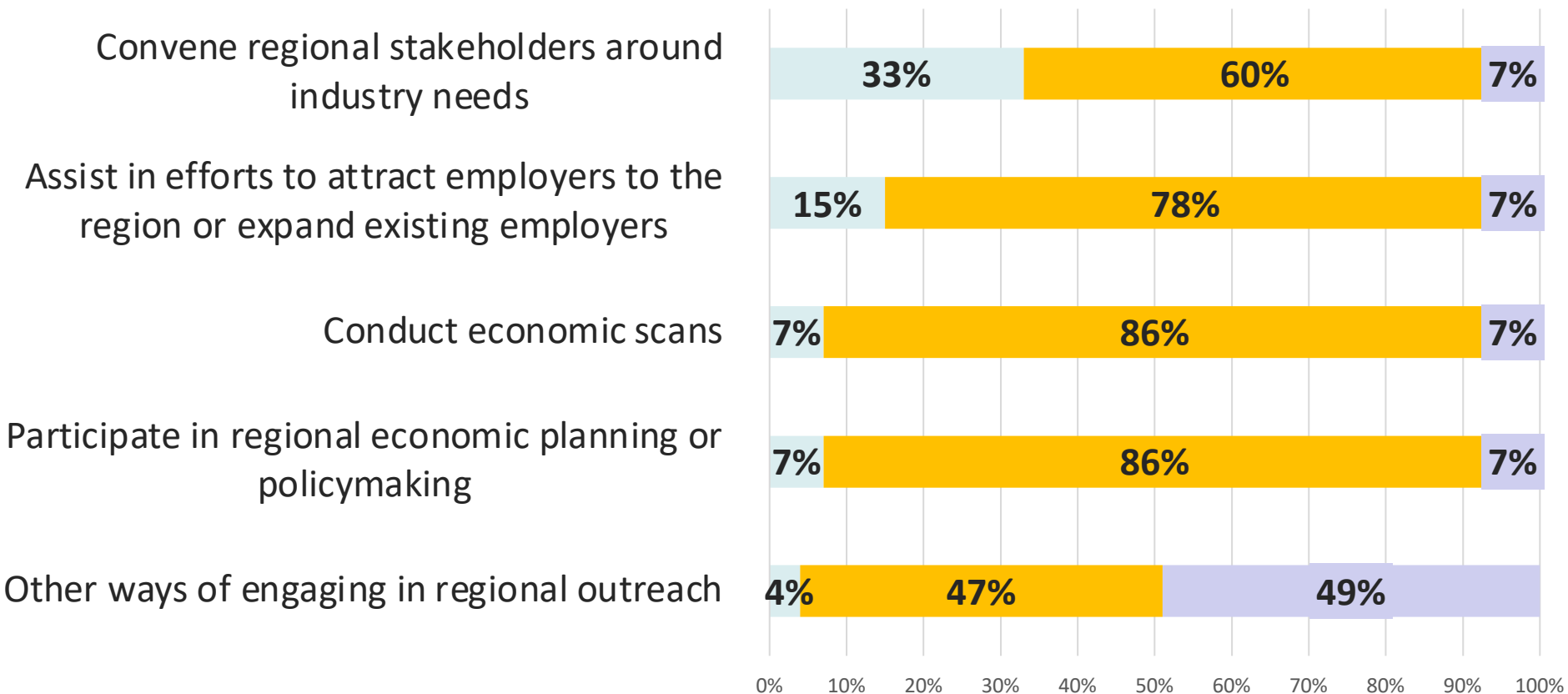


Business Outreach: ATE Project vs. Institution

Business Outreach Activity	% ATE project	% Institution
Conduct research and development in partnership with universities	15	39
Provide facilities for use by local employers	8	47
Offer small business assistance	3	39
Offer small business incubation or commercialization	1	32
Other ways of engaging in business outreach	6	10



ATE Project Engagement in Regional Outreach Activities



- Does your ATE project engage in any of the following? Yes (%)
- Does your ATE project engage in any of the following? No (%)
- Does your ATE project engage in any of the following? Missing (%)



Regional Outreach: ATE Project vs. Institution

Regional Outreach Activity	% ATE project	% Institution
Convene regional stakeholders around industry needs	33	52
Assist in efforts to attract employers to the region of expand existing employers	15	44
Conduct economic scans	7	39
Participate in regional economic planning or policymaking	7	48
Other ways of engaging in regional outreach	4	5



Discussion Break

Convening ED stakeholders seems to be an important activity. Does your project / program participate in such convenings? Are they discipline specific (or college wide)?

Who organizes your convening?



Discussion Break

Is anyone reporting ED impact or measuring it somehow? If so, how? Any ideas how we can do this for the ATE community?



Read More on Our Research on Economic Development

Illuminating Economic Development in Community Colleges: Lessons from NSF ATE Grants

June 2023, Michelle Van Noy and Radha Biswas

Lessons in Community Colleges Economic Development from the NSF ATE

June 2023, Michelle Van Noy, Radha Biswas, Marilyn Barger, and Debra Bragg

<https://go.rutgers.edu/HIIpublications>



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<https://sites.rutgers.edu/eerc-hii/data-tools/>



Visit our project website:

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Thank You!

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