

# DEMONSTRATING PROGRAM QUALITY

# LESSONS LEARNED FROM APPLIED BACCALAUREATE DEGREE PATHWAYS

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Presented By:

Julia Panke  
Makela &  
Collin M. Ruud

Office of  
Community  
College  
Research and  
Leadership,  
University of  
Illinois

Deborah  
Boisvert

NSF BATEC  
Center for IT,  
University of  
Massachusetts  
Boston

# WHAT IS AN APPLIED BACCALAUREATE (AB) DEGREE?

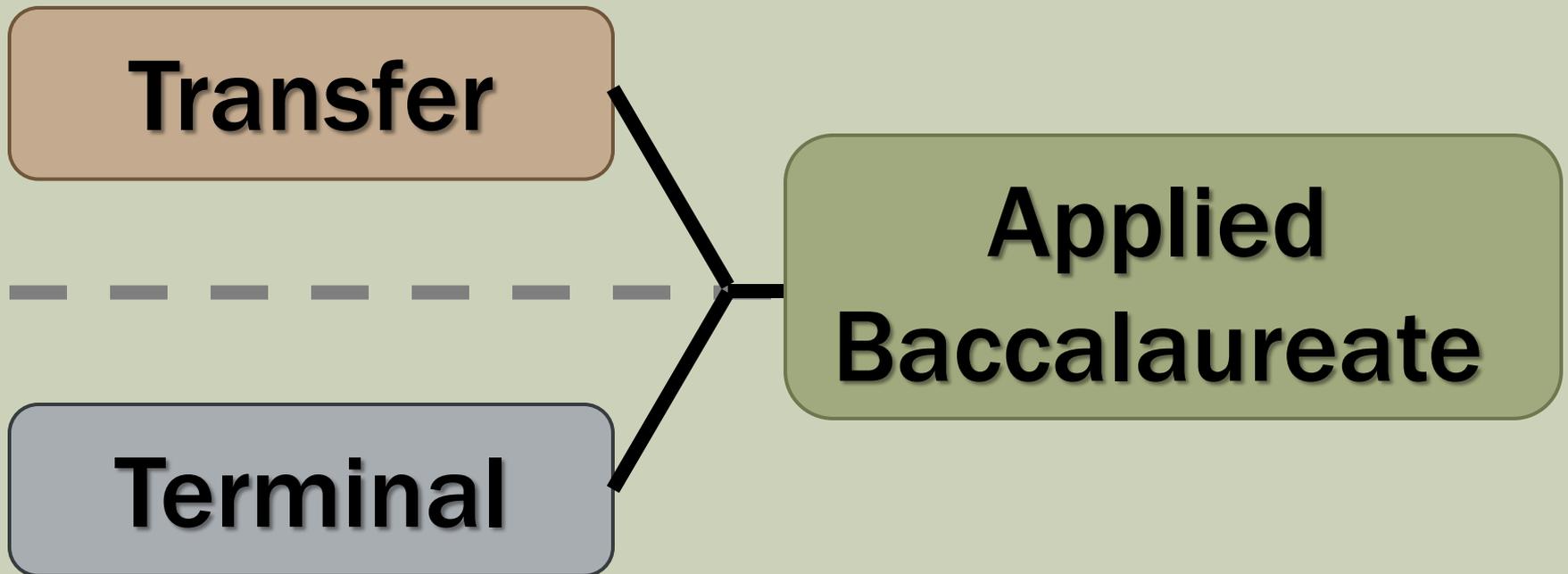
**Transfer**

**Baccalaureate**

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**Terminal**

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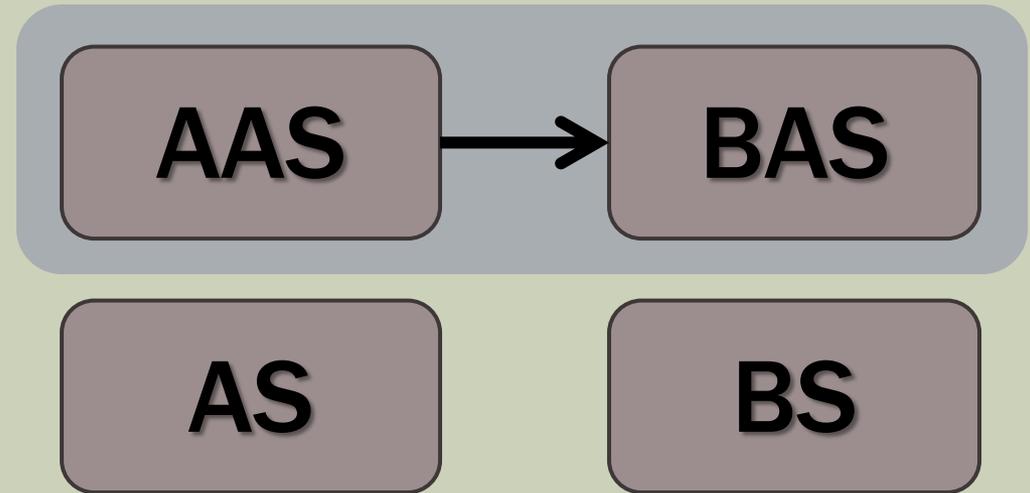
# WHAT IS AN APPLIED BACCALAUREATE (AB) DEGREE?

- **Definitions of AB degrees vary, our research draws upon these core characteristics:**
  - applied learning, courses, and degrees
  - technical associate courses and degrees, once considered “terminal” or “non-baccalaureate level,” now incorporated into the baccalaureate degree
  - providing students with higher-order thinking skills and advanced technical knowledge and skills
  - often designed to reach non-traditional and/or underserved students

# WHAT IS AN APPLIED BACCALAUREATE (AB) DEGREE?

- When we embrace these characteristics, relying on degree designations can muddy the waters.

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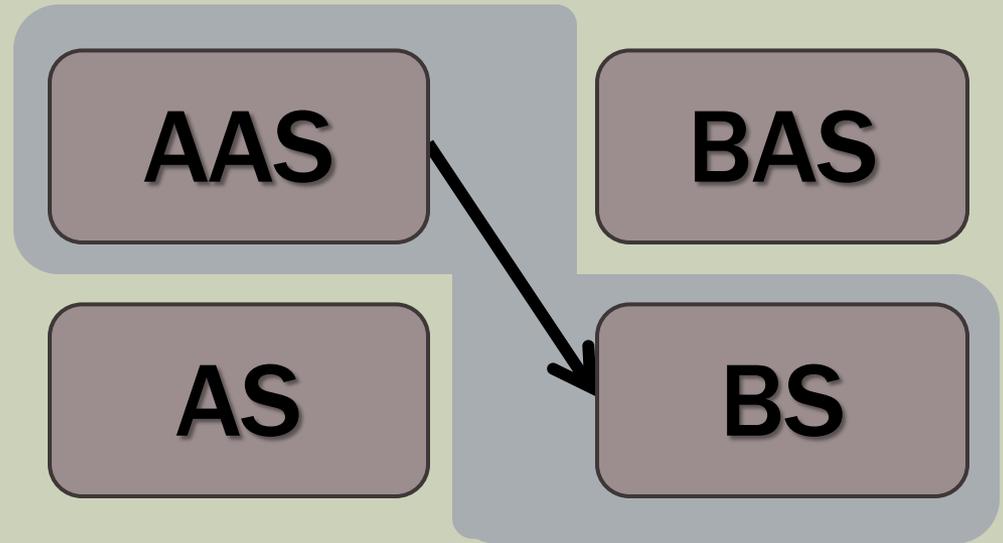
## Example

AAS in Nuclear Power Technology at Bismarck State College  
transfers to  
BAS in Energy Management at Bismarck State College

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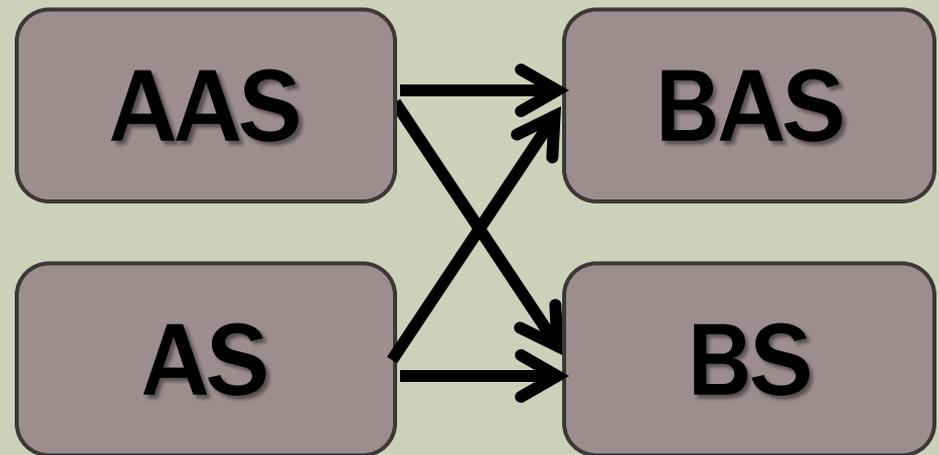
## Example

AAS in Robotics Technology at Baltimore City Community College  
transfers to  
BS in Industrial Engineering at Morgan State University

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# ABOUT OUR RESEARCH: AB THROUGH THE LENS OF NSF-ATE

- **Identify NSF-ATE projects and centers across the U.S. that are affiliated with associate to baccalaureate degree pathways**
  - Survey of NSF-ATE Principal Investigators
  - Responses from 231 ATE projects and centers
  - Identified 95 associate to baccalaureate degree pathways (41% of ATE projects and centers)
- **Explore curricula associated with identified pathways**
  - Search institutional websites of all identified pathways to examine curricular models and to compare similarities and differences among identified curricula
- **Gather detailed information on identified AB degree pathways**
  - Conduct follow-up surveys and in-depth website reviews to understand pathway structures and communication strategies

# ESTABLISHED AND EMERGING BACCALAUREATE DEGREE PATHWAYS

- Released reports of our national survey results in 2012:
  - Of the 51 cases for which we found evidence of the degree pathways in our website search, 69% were confirmed as AB degrees
  - Nearly 10% of all identified cases were in some stage of development, based on data gathered from institutional websites
  - Learn more at:  
[http://ocrl.illinois.edu/projects/nsf\\_applied\\_baccalaureate/](http://ocrl.illinois.edu/projects/nsf_applied_baccalaureate/)



# SEEKING IN-DEPTH UNDERSTANDING OF AB DEGREE PATHWAYS

- Completed case studies examining AB degree pathways affiliated with 6 NSF-ATE projects and centers, examining how the pathways are designed, organized, implemented, experienced, and evaluated. Included more than 20 higher education institutions and related organizations.
- Interviewed degree program administrators and faculty, current students, graduates, advisory board members, and local employers.

# UNDERSTANDING PROGRAM QUALITY

- How do *stakeholder groups perceive* program quality?
- What steps are taken to *establish, demonstrate, improve, and communicate* program quality?

# WHAT MAKES A HIGH QUALITY PROGRAM?

- Assessments, definitions, measures, performance indicators, and tools to identify program or college quality come in many shapes and sizes.

Furthermore, different stakeholder groups – administrators, accreditors, policy makers, students, families – express different preferences for the type of information and quality arguments that they prefer. (Sullivan et al., 2012; Stephan et al., *in press*)

**Program Quality  
is Multi-Dimensional**

# EXAMPLE PROGRAM QUALITY DIMENSIONS

## Inputs

- **Advisory board**
  - Industry partners
  - Academic partners
- **Resources**
  - Facilities
  - Equipment / technology
  - Staff, advisors, tutors, etc.
  - External funding
- **Elements of faculty quality**
  - Professional development / certifications
  - Involvement on professional boards and organizations
  - Publication and grant awards
  - Faculty and administrator diversity

# EXAMPLE PROGRAM QUALITY DIMENSIONS

## Process

- Accreditation
  - Departmental
  - Program
  - Regional
- Curriculum mapping
  - Industry certifications
  - Education standards
- Articulation agreements
- Contributions made to the community
- Program review / assessment
  - Enrollment numbers
  - Student demographics / diversity
  - Student / graduate satisfaction
- Collaborations with:
  - Industry
  - NSF-ATE Centers
  - Other higher education institutions
  - Non-profits, research centers, organizations

# EXAMPLE PROGRAM QUALITY DIMENSIONS

## Outcome

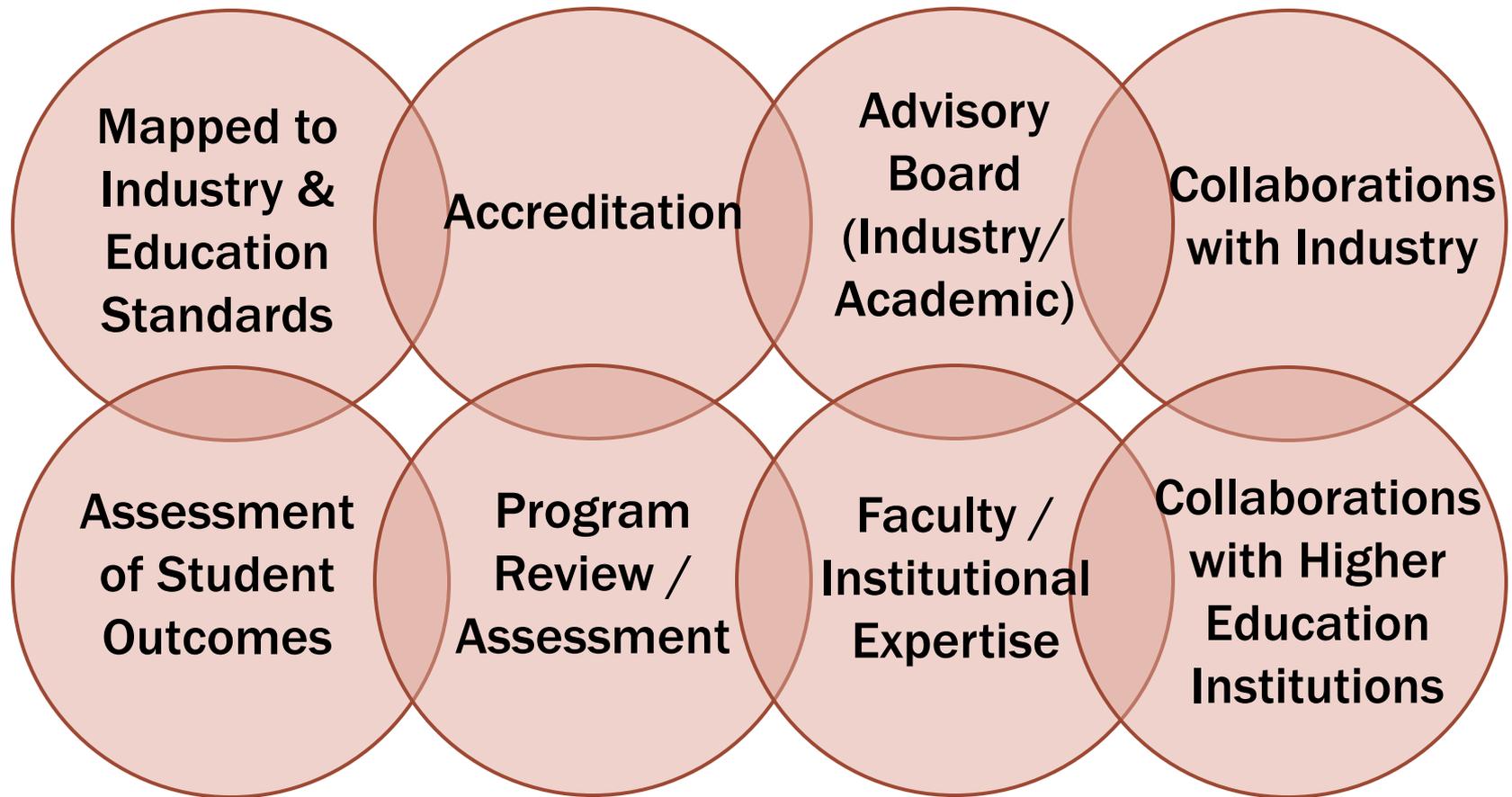
- **Direct measures of student performance**
  - Learning outcomes assessments
  - Subsequent coursework / Capstone courses
  - Internships / employment
  - Industry certification exams
  - Regional / national competitions
- **Indirect measures of student learning**
  - Persistence rates
  - Time to degree
  - Graduation rates
  - Matriculation to four-year degree / graduate school
  - Employment rates

# EXAMPLE PROGRAM QUALITY DIMENSIONS

- Affordability / accessibility
- Professional association recognitions

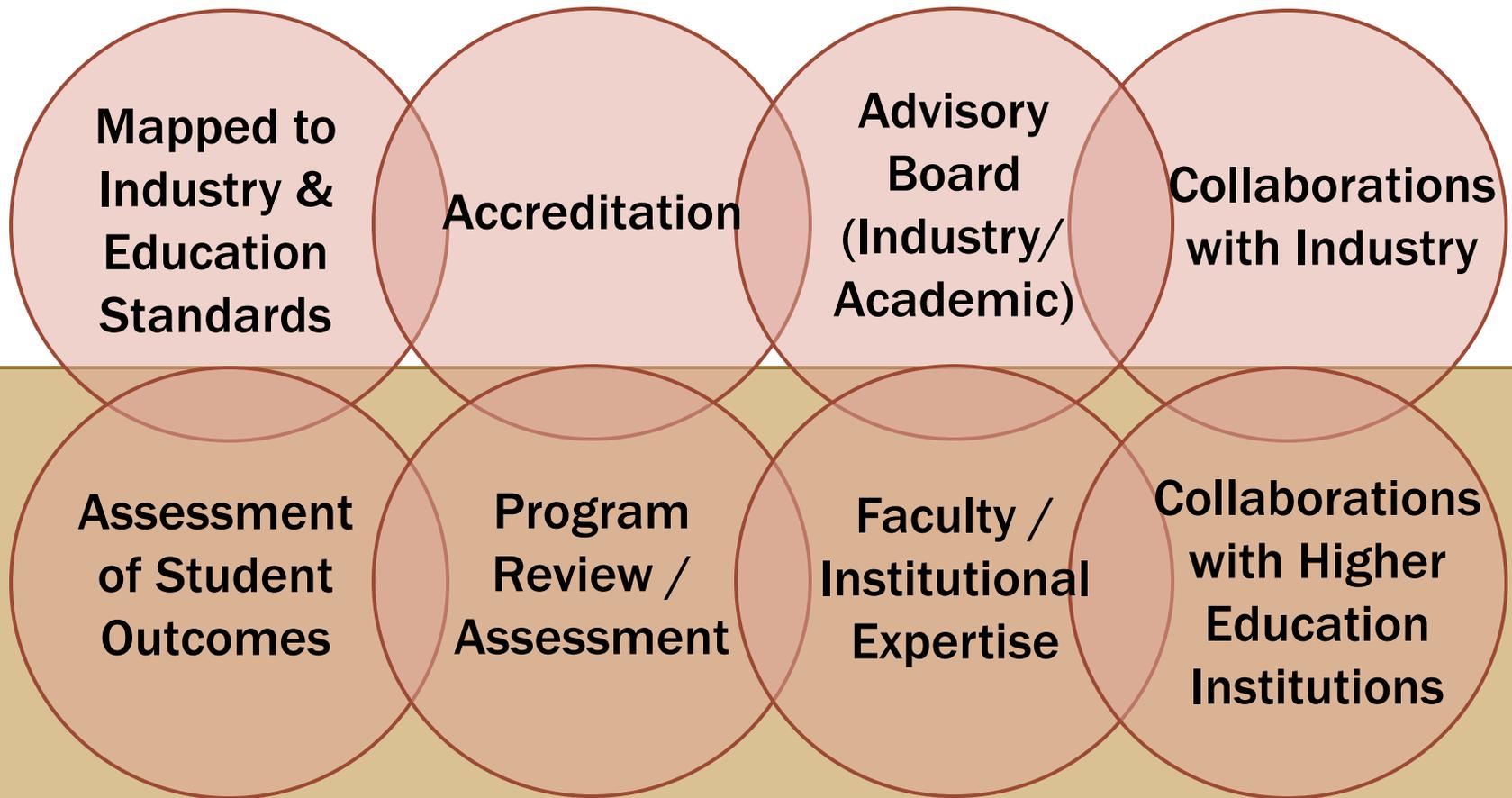
# EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE

*Components across Cases*



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Components across Cases



*Internal Influences*

# EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE

Components across Cases

## *External Influences*

Mapped to  
Industry &  
Education  
Standards

Accreditation

Advisory  
Board  
(Industry/  
Academic)

Collaborations  
with Industry

Assessment  
of Student  
Outcomes

Program  
Review /  
Assessment

Faculty /  
Institutional  
Expertise

Collaborations  
with Higher  
Education  
Institutions

# EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE

Components across Cases

## *Data Influences*

Mapped to  
Industry &  
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Assessment  
of Student  
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Program  
Review /  
Assessment

## *Interpersonal Influences*

Advisory  
Board  
(Industry/  
Academic)

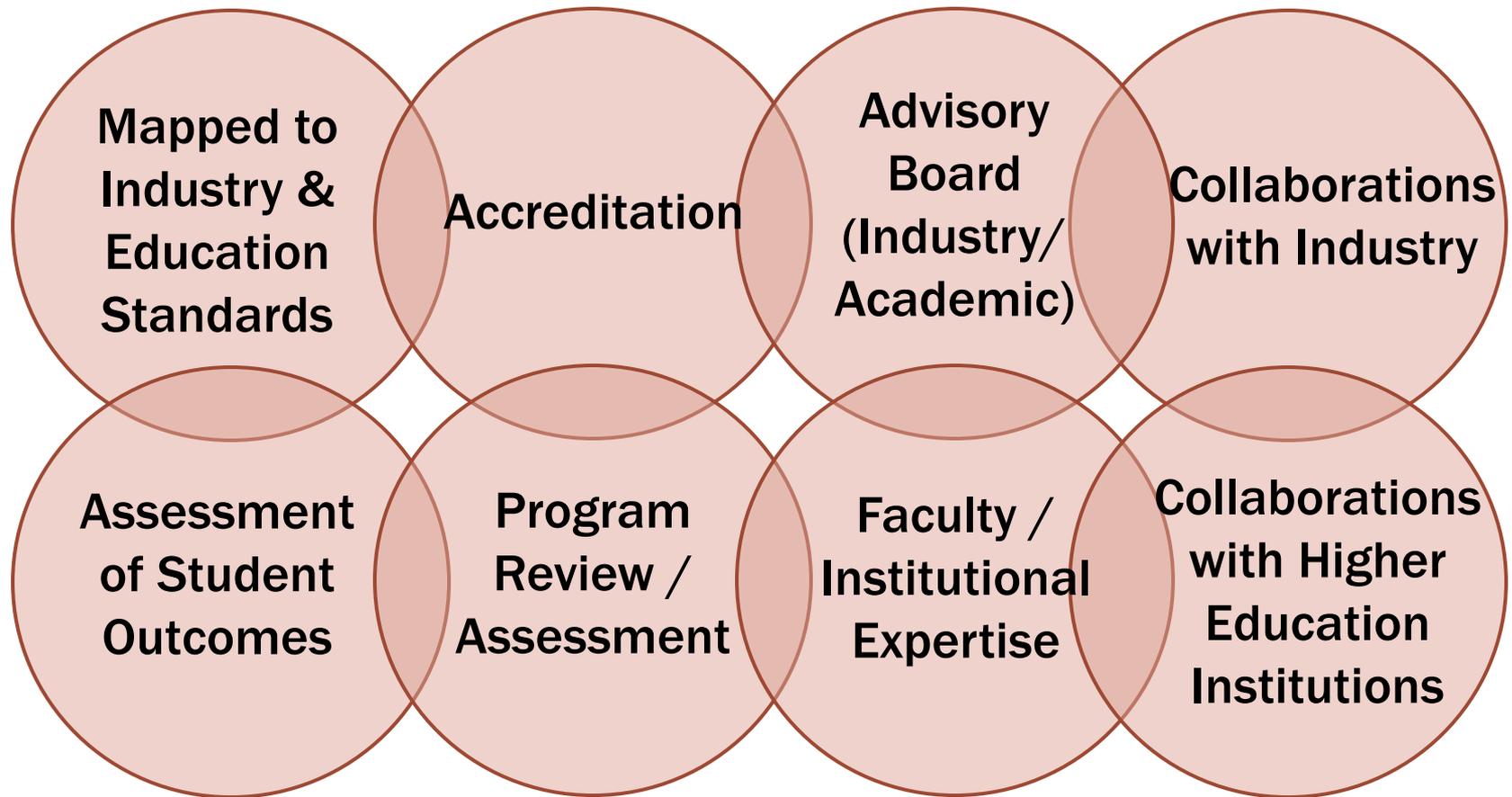
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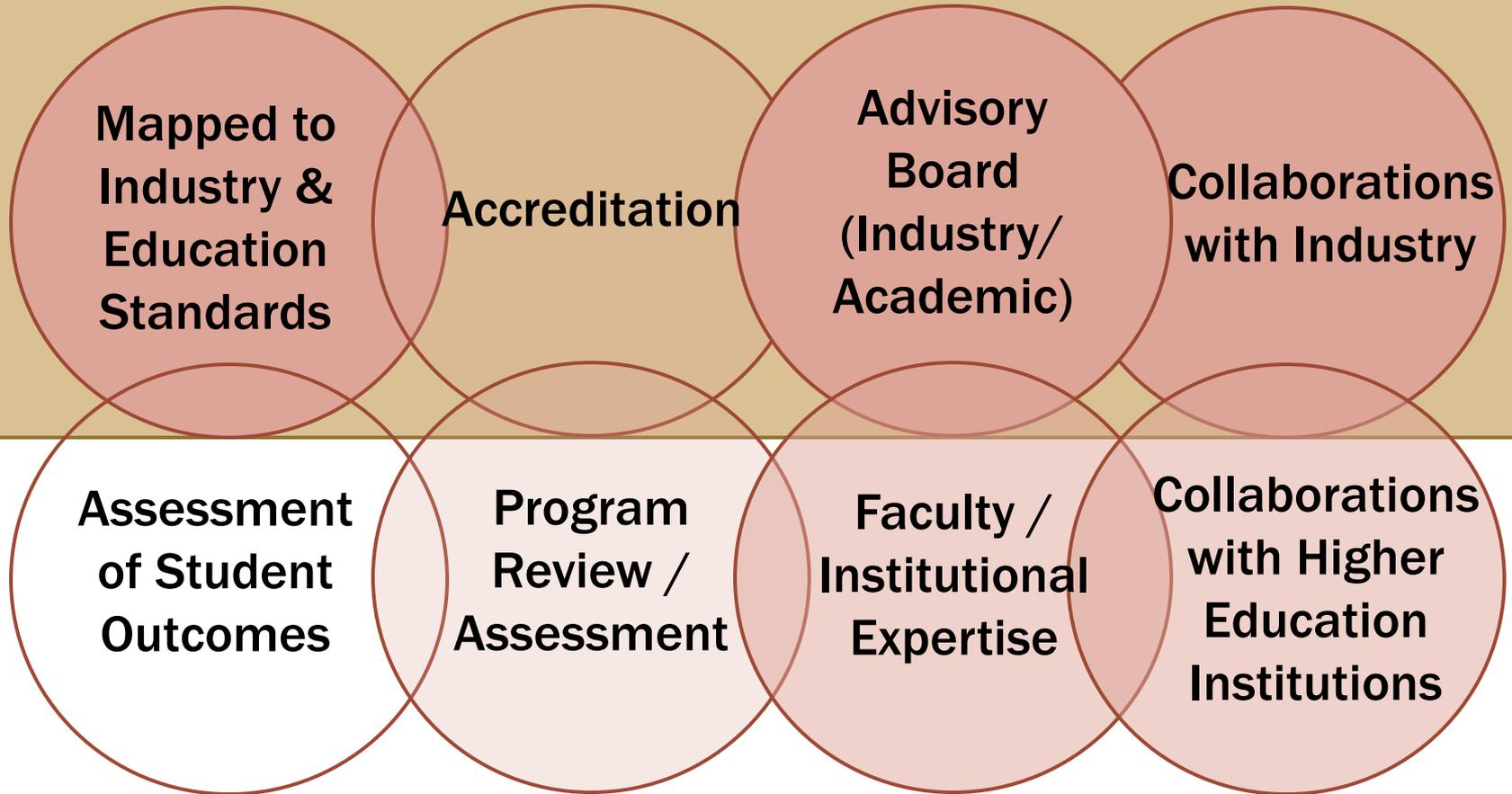
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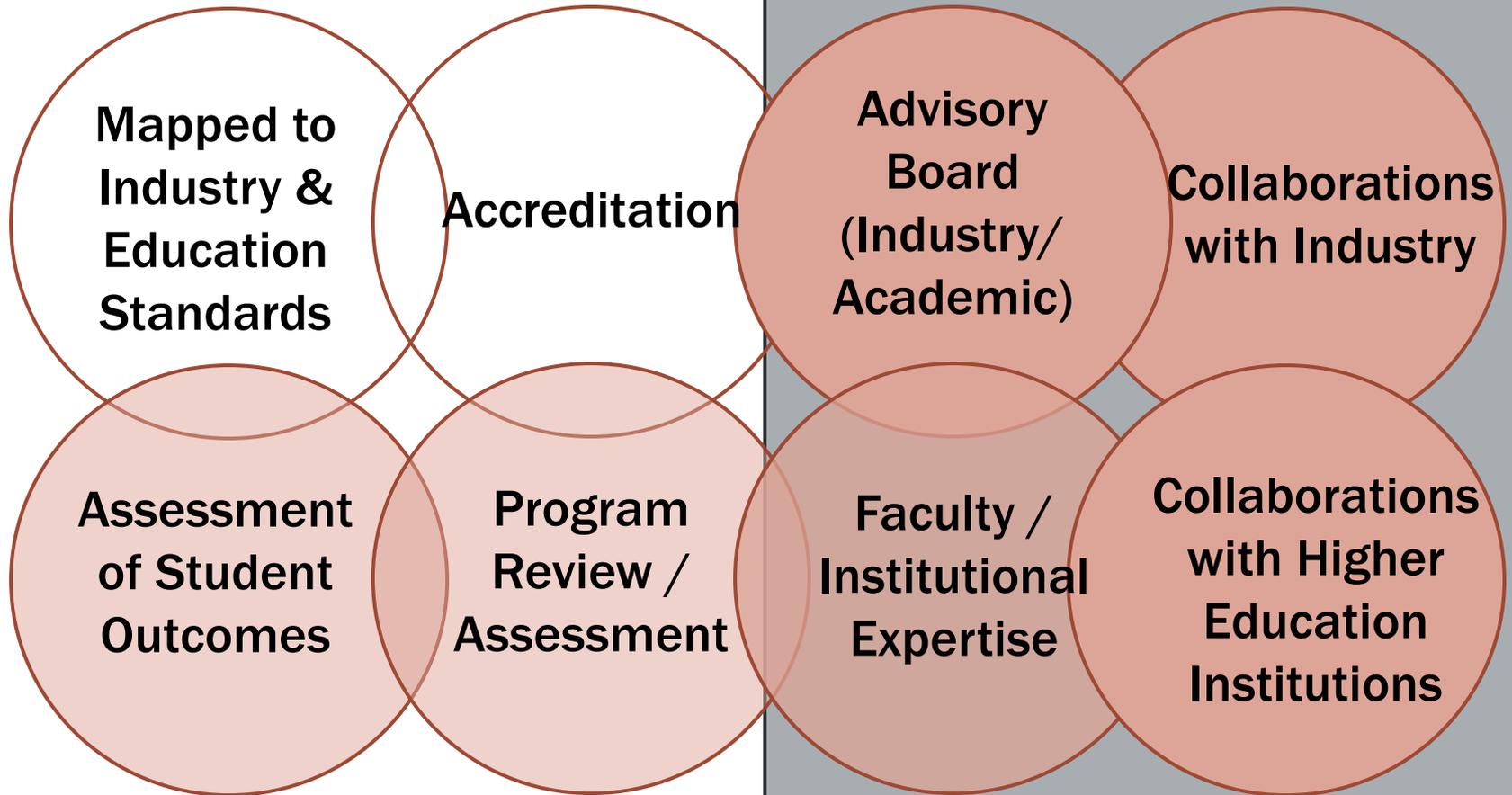


# EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE

## *External Influences*

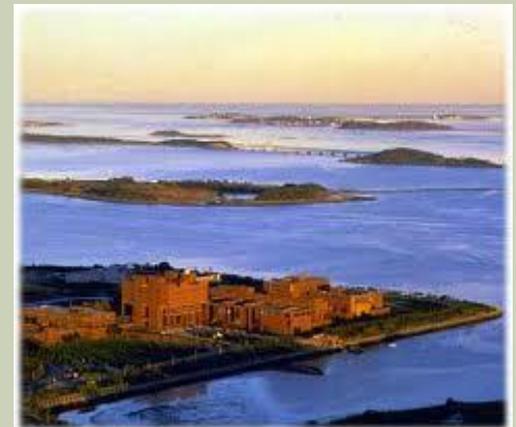


# EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE



# REFLECTIONS FROM THE FIELD: BSIT – UMASS BOSTON

- Developed in concert with community college faculty
  - Outcomes driven
  - Forward and backward designed to be transfer-friendly
- Informed by workforce indicators
  - Advisory boards
  - LMI Software
- Aligns with requirements from ABET and AACSB
- Student performance indicators
  - CC transfers often receive awards for top-performing students
  - Students highly desired by area colleges in addition to partner colleges
  - Internship opportunities



# EXAMPLE PROGRAM QUALITY DIMENSIONS – SALIENCE EXERCISE

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# SMALL GROUP DISCUSSION

- Consider the Dimensions of Program Quality for your academic program(s)
  - Which dimensions are particularly salient for you?  
Which come to mind immediately when you describe the quality of your degree program?
  - Which dimensions have you not thought about recently that could enhance your understanding of program quality?
  - Which dimensions would you like to know more about, but don't have access to right now?
  - Who are your program stakeholders?  
How might they respond to these dimensions of program quality?

# CHALLENGES TO GATHERING OUTCOMES EVIDENCE

- New programs / Little history / Few graduates
- Limitations of technology systems / resources
  - Inability to track multiple student goals
  - Limited number of staff members in institutional research offices to run special data requests
- Challenges associated with characteristics of community colleges students / culture
  - CC students have multiple intentions and goals – not always certificate or degree completion
  - CC students are often not required to declare a major, making it difficult to identify who is enrolled in the program
  - CC students can swirl between institutions or between school and work
  - Students may finish courses, but transfer early or not file for graduation
  - Graduation fees may be a barrier
- Difficulty tracking students after transfer / graduation

# NEXT STEPS FOR THE OCCRL APPLIED BACCALAUREATE STUDY

- A two-part student outcomes evaluation
  - Survey of students and graduates
  - Student-level data exploration examining progress to degree using institutional data
- Collecting data now.
  - Watch our website for these reports to come out this winter!

OR

Join our listserv to receive an email when the new reports are released.

# THANK YOU FOR JOINING US! FOR MORE INFORMATION...

- Julia Panke Makela  
[jpmakela@illinois.edu](mailto:jpmakela@illinois.edu)  
(217) 244-2457
- Collin M. Ruud  
[cruud2@illinois.edu](mailto:cruud2@illinois.edu)  
(217) 333-4856
- Deborah Boisvert  
[Deborah.Boisvert@umb.edu](mailto:Deborah.Boisvert@umb.edu)  
(617) 287-7295
- Visit our AB website at:  
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