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Introduction

- Founded in 1911, Anderson University is one of the fastest growing private universities in the country
- Now offers 92 major degree programs, with 61 minors and 68 major-embedded concentrations; and the University offers 30 master's degree programs, 16 doctoral programs and 10 certificate programs
- The College of Engineering began in 2020, offering Mechanical, General, Electrical, and Computer Engineering undergraduate degrees
- Required internship or co-op for all students
- Generous support from local industry
- Currently undergoing ABET accreditation
- Offering a hands-on twenty-first century curriculum

Procedure

- The syllabi for existing courses were analyzed and faculty interviewed to identify EOP learning outcomes we are already teaching
- Developed a new engineering elective course on sustainable design
- Other university's courses on sustainable design and environmentally conscious design and manufacturing compared
- Our aim is to teach our students how to design more sustainable products by considering such issues as recyclability and environmental impact, while using evaluation tools such as Life Cycle Assessment

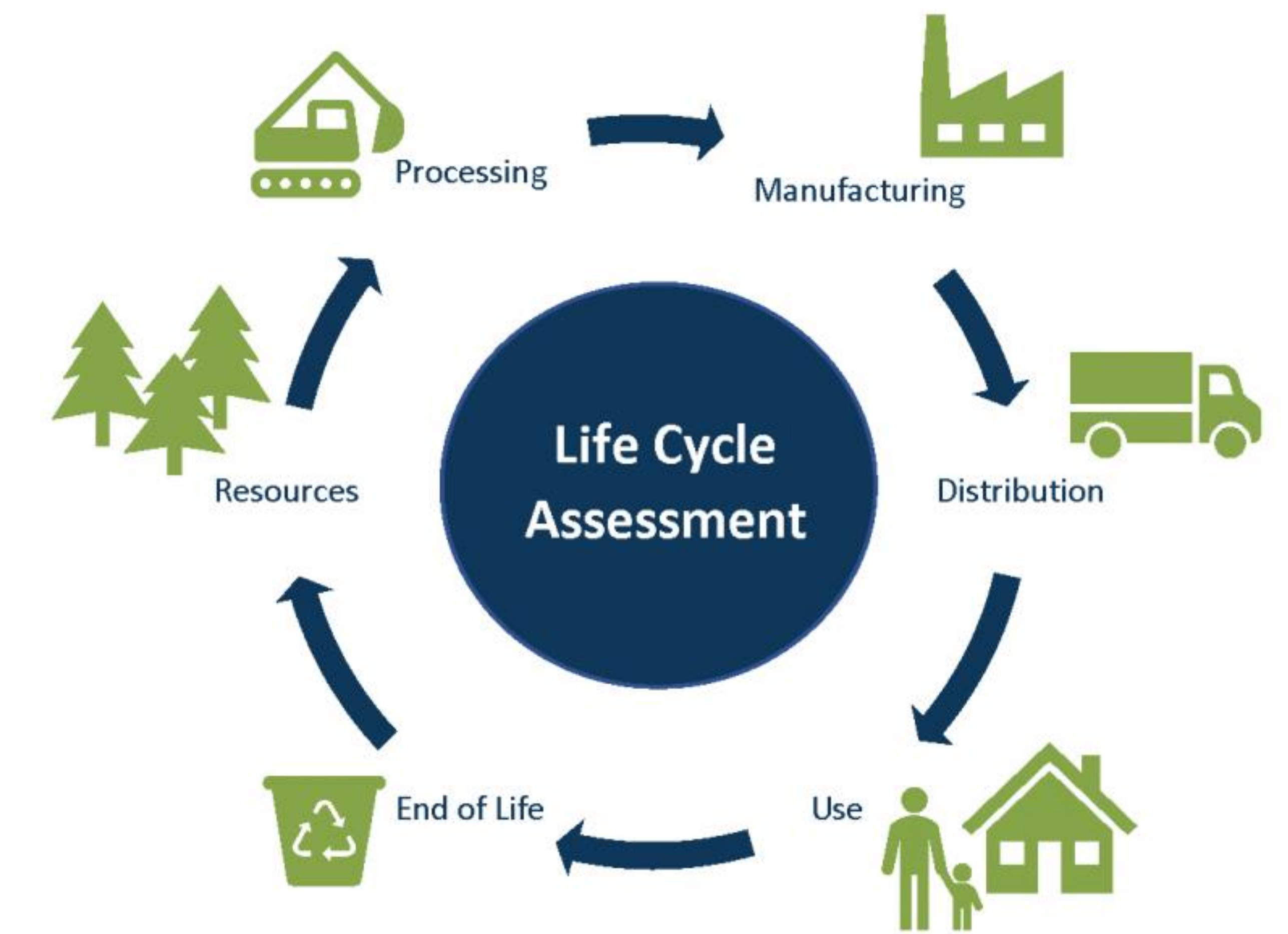


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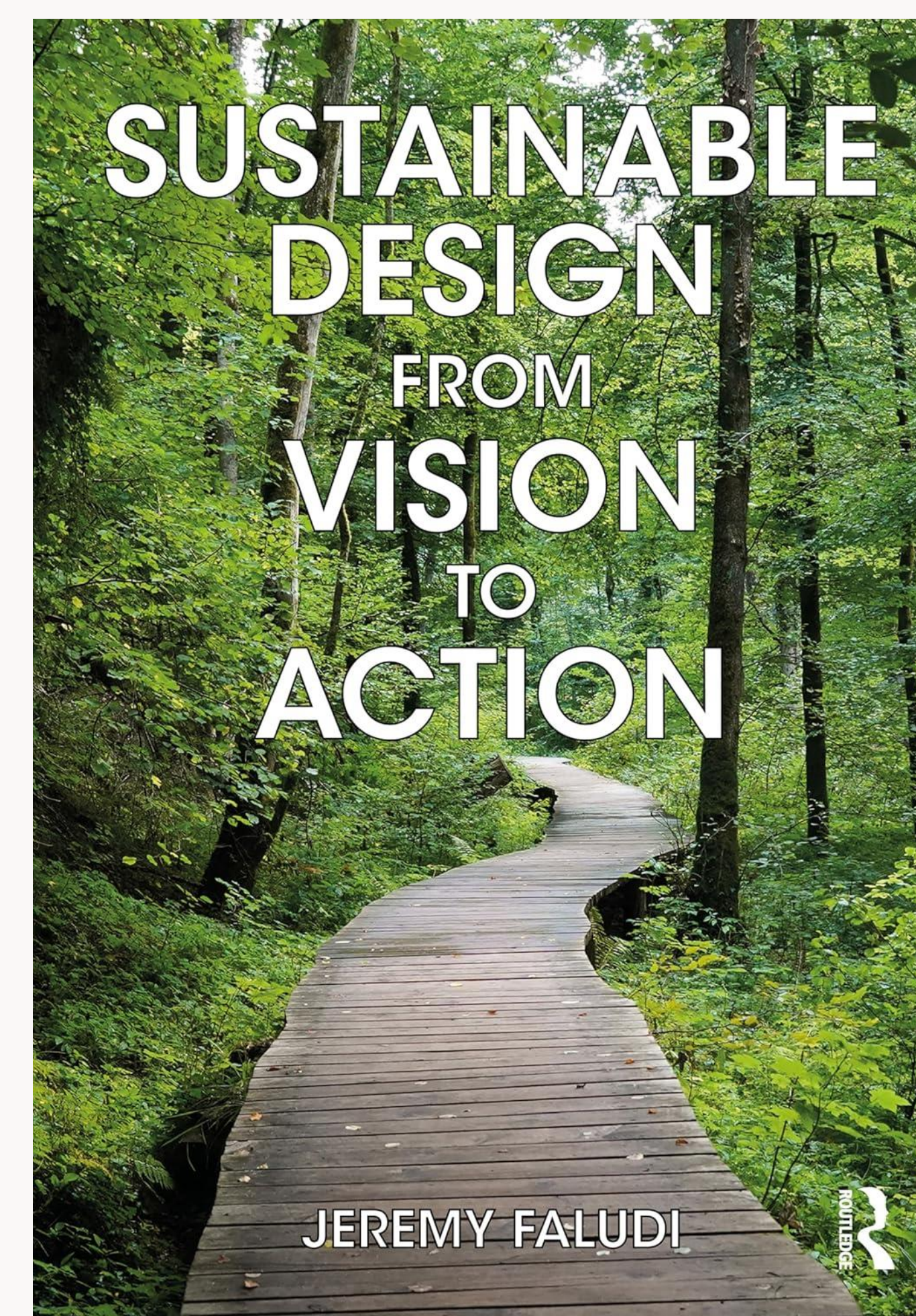
ME Curriculum EOP Mapping

	Systems Thinking	Design	Critical Thinking	Communication and Teamwork	Environmental Literacy	Responsible Business and Economy	Social Responsibility	Environmental Impact Assessment	Materials Selection
ENGR 110 / 111									
ENGR 120/121									
ENEE 230									
ENME 230									
ENME 220/221									
ENME 320									
ENGR 220									
ENME 250									
ENME 240									
ENGR 400									
ENME 350									
ENME 360									
ENME 321									
ENGR 330									
ENME 310									
ENGR 350									
ENGR 210									
ENGR 365									
ENGR 399									
ENME 410									
ENGR 450									
ENME 451									
ENME 420									
ENGR 460									
ENGR 461									
ENGR 440									

- Critical thinking embedded in all engineering courses
- Opportunities identified to add EOP framework, especially least covered topics such as environmental literacy
- Curriculum revision underway
- New ENGR 399 elective will cover the most EOP topics
- Most topics introduced at freshmen level and reinforced at upper levels

ENGR 399 Sustainable Design Learning Goals:

1. Students should be able to select eco-friendly materials such as renewable or recycled materials
2. Students should be able to reduce material usage
3. Students should be able to design to reduce pollution
4. Students should be able to design parts for disassembly and recycling
5. Students should be able to select energy-efficient manufacturing processes
6. Students should be able to perform a life-cycle assessment (LCA)
7. Students should be able to design systems integrated in an industrial ecosystem
8. Students should be able to comply with relevant environmental regulations and standards, such as ISO 14000



We'll use as a textbook the new book by Faludi

Evaluation and Impact

- EOP framework, especially core learning outcomes, introduced to all engineering faculty
- Curriculum analysis shows all nine topics of the EOP framework are covered
- Opportunities revealed to strengthen coverage of Environmental Literacy and Social Responsibility, in particular
- New ENGR 399 Sustainable Design elective will impact roughly a third of future upperclassmen cohorts
- Enhanced preparation in sustainable design and environmental stewardship supports the needs of our corporate sponsors

Acknowledgments

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- The Anderson University College of Engineering faculty, staff, and students
- Our corporate partners, including Dodge Industrial, RBC Bearings, Timken, Michelin, First Quality Paper, Mavin Construction, Sargent Metal, and Circuit Board Medics



Progress and Scale-Up Plan

- Course created (syllabus, Canvas shell, and assignments)
- Open for enrollment for Spring 2026
- May be cancelled due to low enrollment
- Will be offered again in Fall 2026 and/or Spring 2027 and future semesters
- Demand will increase as our cohort sizes increase each year

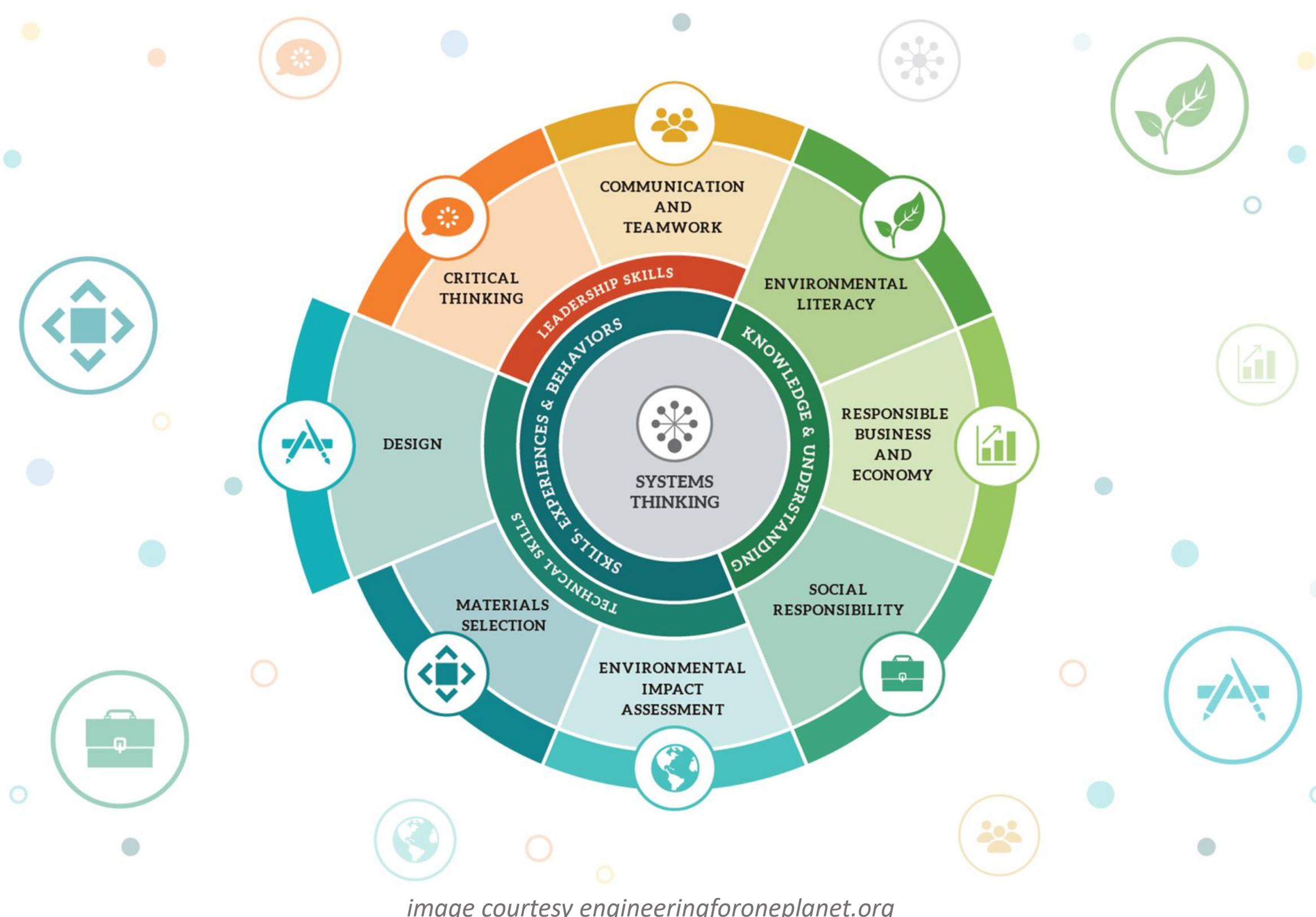


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