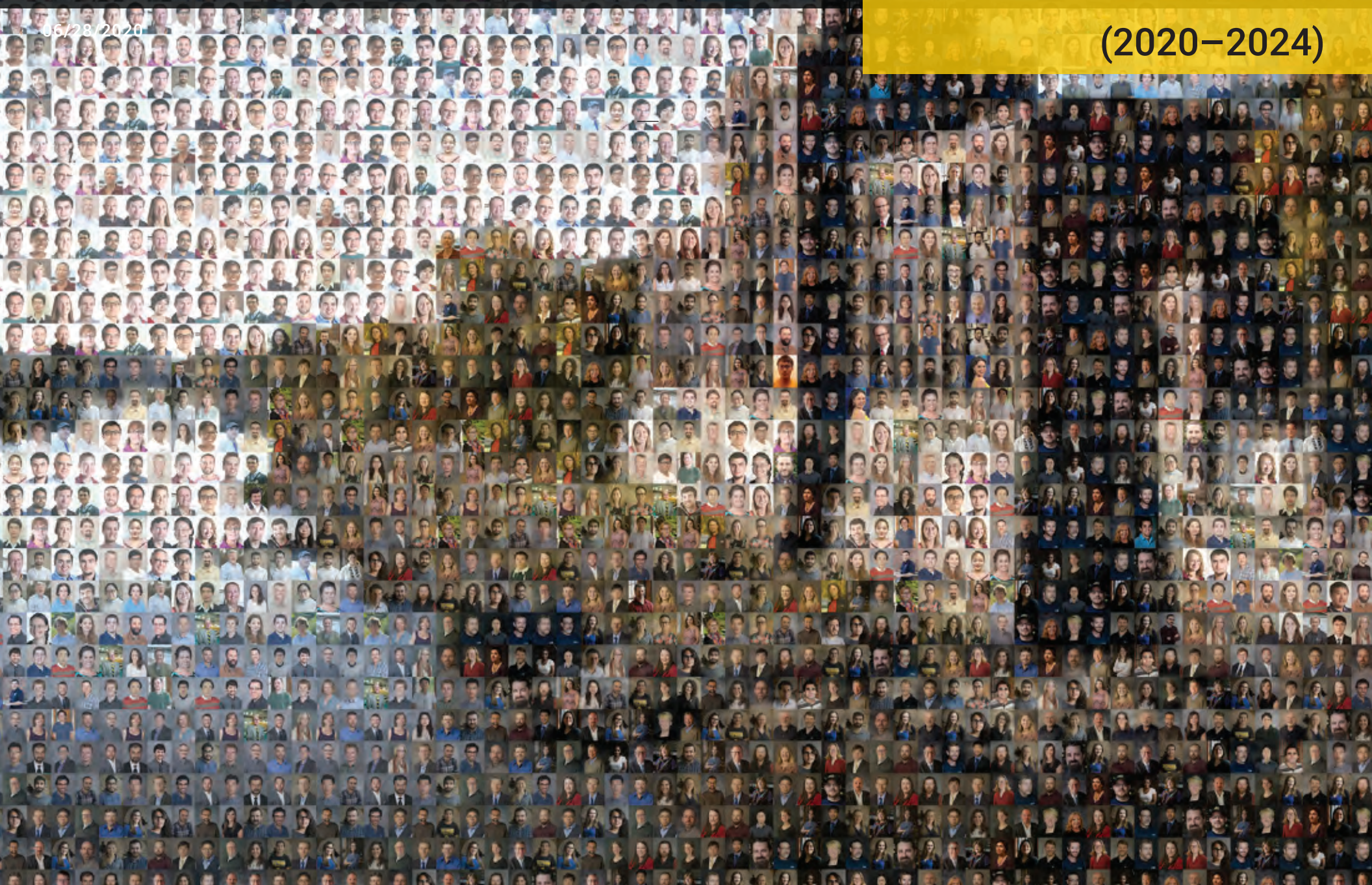
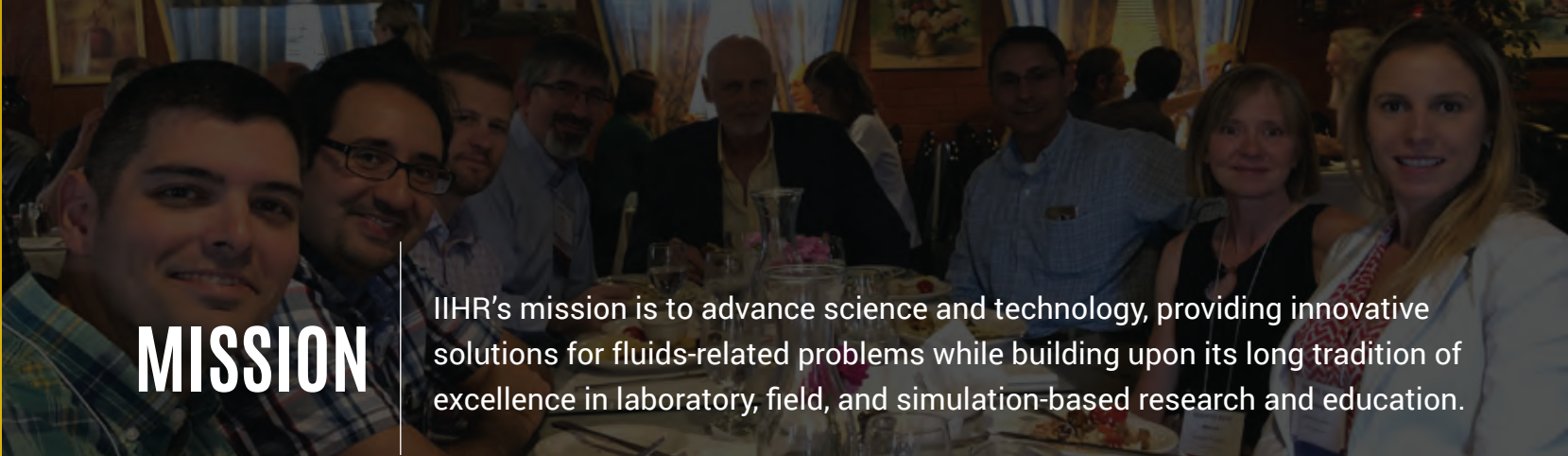


IIHR'S STRATEGIC PLAN

(2020–2024)

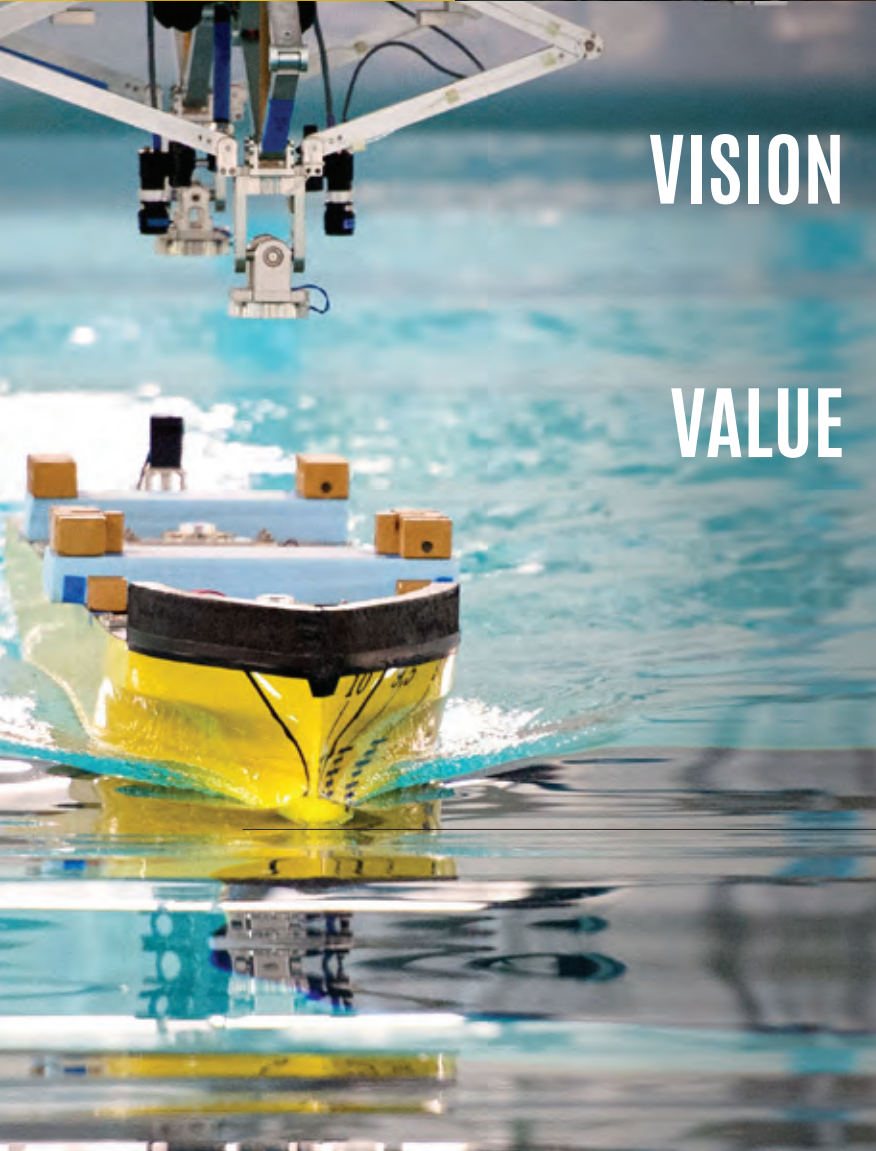






MISSION

IIHR's mission is to advance science and technology, providing innovative solutions for fluids-related problems while building upon its long tradition of excellence in laboratory, field, and simulation-based research and education.



VISION

IIHR's vision is to be the recognized leader in fluids-related science, engineering, research, and discovery.

VALUE

IIHR comprises a diverse community that values excellence through integrity, transparency, mutual support, and respect. Our culture is rooted in scientific curiosity, mentorship, service, and stewardship.

GOALS



RESEARCH

To lead in fluids-related science, engineering, research, and discovery



EDUCATION

To provide a transformative educational experience that prepares our graduates to be future leaders



ENGAGEMENT AND SERVICE

To increase our value to society through outreach to communities and involvement in professional, academic, and other relevant organizations



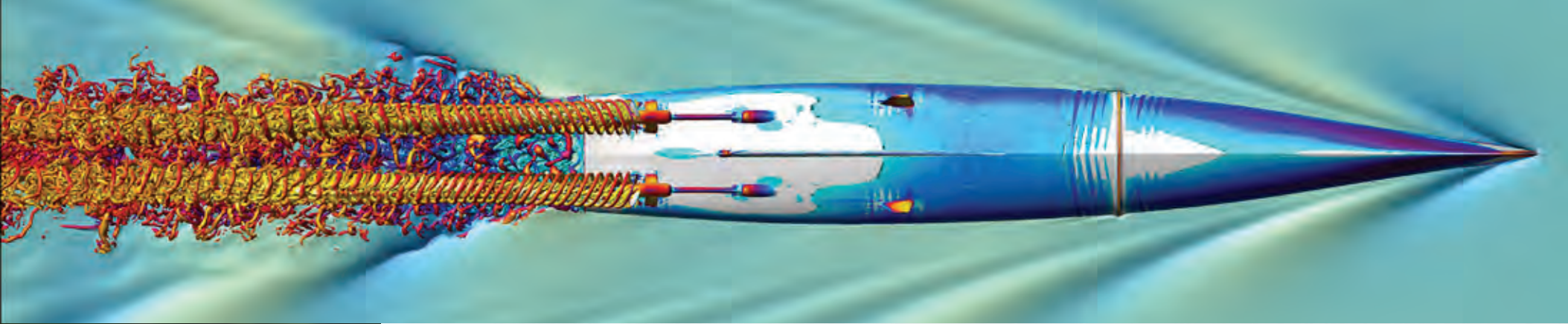
ADVANCEMENT

To strengthen relationships with our alumni and foster a culture of leadership and philanthropy



DIVERSITY, EQUITY, AND INCLUSION

To foster a culture committed to strengthening our excellence through diversity, equity, and inclusion







RESEARCH

To lead in fluids-related science and engineering, research, and discovery

STRATEGY

Enhance our reputation for excellence in solving fluids-related problems, while integrating laboratory, field, and simulation-based research

CRITICAL TASKS

- Lead and support the development of large multidisciplinary proposals
- Foster an environment for major discoveries and breakthroughs
- Diversify the sources of support for our research programs
- Foster strategic research partnerships within Iowa as well as nationally and internationally
- Monitor current trends and maintain our leadership in fluids-related research trends
- Provide world-class facilities and highly-skilled staff
- Disseminate research outcomes
- Increase the number of faculty members nominated for high-level awards and national academies

INDICATORS OF SUCCESS

- Submission of large multi-investigator, multi-institution research proposals (Definition: proposals involving more than one PI and/or more than one institution, with a total budget in excess of \$1 million)
- Support for discussions around big ideas
- A new externally funded regional or national center (Definition: research center supporting research beyond Iowa)
- Support for identifying and securing research grants and projects
- Identification of areas of current and desired strength/research focus
- Identification of and connection with new potential partners in industry and local, state, and federal agencies
- Interactions with and outreach to members of the scientific and local communities
- Expansion of the use of our research facilities, making them more widely accessible
- Peer-reviewed papers and reports (papers published in journals with an impact factor that places them in the upper half of the journals in the discipline)
- Support for and development of high-level award/academy nominations each year (Definition: highly prestigious awards as defined by the National Research Council)

2025 GOALS

- Submit 1 major proposal/year
- Establish a research center with regional or national reach
- Establish an annual IIHR retreat for brainstorming big ideas
- Maintain a diversified portfolio of funding sources related to current research and funding trends
- Identify research areas of strength
- Continue to support business development and outreach to industry and communities
- Take advantage of conferences and travel to connect with local companies, communities, and businesses
- Create a working group to identify ways to increase the use of IIHR facilities
- Achieve an average of 4 submitted papers/year per research scientist/engineer
- Submit at least 1 nomination/year to prestigious award programs

STRATEGY

Nurture a culture of research excellence for faculty, staff, and students

CRITICAL TASKS

- Develop and maintain world-class facilities and highly-skilled staff
- Provide excellent support for the submission and execution of research grants
- Effectively train and thoughtfully mentor highly-qualified students and research staff
- Value all contributions to the research enterprise
- Create opportunities for faculty, staff, and students to engage with external leaders in the field

INDICATORS OF SUCCESS

- Evaluation of and investment in our staff and research facilities
- Submission of successful proposals
- Participation and engagement of students and research staff in the development of research proposals, both as lead investigators and in proposal teams
- Recognition of contributions to the research enterprise
- Establishment of an annual "IIHR Lecture" that brings a high-level speaker (e.g., a member of the Academies) to IIHR to give a "vision" talk and to meet with our faculty, staff, and students

2025 GOALS

- Recruit at least 1 person outside the proposal team to review competitive proposals
- Implement mentorship program for junior researchers and students
- Nominate at least 1 staff member/year for an award
- Establish the "IIHR Lecture"





EDUCATION

To provide a transformative educational experience
that prepares our graduates to become future leaders

STRATEGY

Be a research center of distinction known for empowering student success

CRITICAL TASKS	INDICATORS OF SUCCESS	2025 GOALS
<ul style="list-style-type: none">• Attract, support, and graduate a talented and high-achieving student body• Encourage students to carve their own career paths and prepare them for diverse career opportunities• Provide students with individualized attention and mentoring that reflect their personal and academic interests	<ul style="list-style-type: none">• Number of graduate students who are competitive for prestigious graduate student awards (Definition: competitive fellowships supporting the student's salary and/or tuition)• Development of a pipeline of graduate students from 4-year colleges in Iowa and in nearby states• Establishment of IIHR fellowships to provide additional salary to attract the best students• Development of mentorship opportunities for students	<ul style="list-style-type: none">• 5% of IIHR graduate students submit one proposal for competitive fellowships/year• 2 presentations/year by our faculty at 4-year colleges in Iowa and nearby states• Connections established with top domestic and international undergraduate programs• Establishment of the "IIHR Fellowship"• Development of an opt-in program for faculty and staff to serve as mentors for graduate students in a multiple-mentoring framework

STRATEGY

Actively work toward and support the modernization of graduate training

CRITICAL TASKS	INDICATORS OF SUCCESS	2025 GOALS
<ul style="list-style-type: none">• Encourage leadership and preparation of education-focused grants to NSF and other funding agencies to enhance graduate training• Continue offering cutting-edge and societally relevant coursework to prepare future leaders in fluids-related science and engineering• Integrate experiential training opportunities• Pursue international training opportunities and personnel exchanges to foster global collaborations and partnerships	<ul style="list-style-type: none">• Number of proposals submitted to improve the graduate curriculum and student training (Definition: educational proposals to develop and implement new and transformative models for science, technology, engineering, and mathematics [STEM] graduate education training)• Recruitment of non-traditional graduate students (Definition: an individual pursuing a graduate degree part-time while working full-time, or one who returns to school full- or part-time after a significant break or interruption)• Number of students involved in outreach, internships, and certificates as part of their graduate training• International educational collaborations and experiences in fluids-related science and engineering	<ul style="list-style-type: none">• 1 submission of an education-focused grant• 4 non-traditional graduate students in our programs• 20% of our students pursuing outreach, internships, or certificates• Establishment of educational exchange programs with 3 or more international universities





ENGAGEMENT AND SERVICE

Increase our value to society through outreach to communities and involvement in professional, academic, and other relevant organizations

STRATEGY

Promote access to IIHR expertise

CRITICAL TASKS	INDICATORS OF SUCCESS	2025 GOALS
<ul style="list-style-type: none">• Grow IIHR's professional network through leadership and service in professional, academic, and other relevant organizations• Further develop strategic communications to inform the public about IIHR's expertise, capabilities, and resources• Continue to develop an IIHR brand, voice, and identity• Shape IIHR's web and social media presence to reach the target audience• Partner with the university and College of Engineering to help disseminate stories about IIHR research, awards, and events• Leverage stories of successful alumni to increase IIHR's national and international visibility and impact	<ul style="list-style-type: none">• Media outreach and press releases about funded projects• Continue to expand the size of IIHR's social media networks across all channels and increase interaction with content• Training for faculty and staff to work with media and news organizations to explain the impact of IIHR research and innovation• Participation in professional societies; organization of conferences and workshops; and service on editorial and advisory boards and funding agency panels	<ul style="list-style-type: none">• 50% of funded projects described to the public during their project lifetimes• <i>LinkedIn</i>: 1500 followers for IIHR; 2500 for Engineering Services• <i>Twitter</i>: 2500 followers• <i>Facebook</i>: 1500 followers• Participation in 1 media training event by 90% of the research faculty and staff• Organization or hosting of 2 local conferences / workshops• 90% of faculty serving on editorial, advisory boards, or funding agencies' review panels

STRATEGY

Pursue opportunities for engagement and outreach

CRITICAL TASKS	INDICATORS OF SUCCESS	2025 GOALS
<ul style="list-style-type: none">• Partner with the university to identify and connect with stakeholders• Advance visibility through greater community awareness and engagement	<ul style="list-style-type: none">• Faculty and staff participating in workshops on engaged teaching and scholarship• Interactions with relevant stakeholders	<ul style="list-style-type: none">• Participation in 1 workshop on engagement and outreach by 90% of faculty and staff• Continue supporting business development and outreach to industry and communities





ADVANCEMENT

Strengthen relationships with our alumni
and foster a culture of philanthropy

STRATEGY

Enhance alumni relations

CRITICAL TASKS

- Leverage domestic and international travel opportunities to reach out to alumni and friends
- Use a variety of communication channels to stay connected with alumni and friends
- Engage alumni through the university, college, and IIHR events
- Leverage technology to reach out to and involve alumni and friends

INDICATORS OF SUCCESS

- Number and quality of contacts with alumni and friends
- Number of alumni and friends following the IIHR social media channels
- Bringing distinguished alumni back to campus
- Maintaining alumni participation on the IIHR Advisory Board

2025 GOALS

- Expected deliberate effort to connect with IIHR alumni
- 90% of the alumni following the IIHR director on social media also follow IIHR's main social media accounts
- Seminar/presentation by IIHR distinguished alumni once a year
- At least two members of the IIHR Advisory Board are IIHR alumni
- Explore the viability of different technologies to connect with alumni and friends

STRATEGY

Enhance corporate partnership

CRITICAL TASKS

- Develop talent hiring pipelines for graduate students from local, state, national, and federal agencies, companies, and businesses

INDICATORS OF SUCCESS

- Number of students participating in training activities and finding employment at local, state, national, and federal agencies, companies, and businesses
- Development of a co-op program

2025 GOALS

- 50% of IIHR graduates attend one professional development workshop sponsored by the UI Graduate College or similar
- Collect data about experience and future employment to improve the programs and training
- Create a working group to explore possible venues for a co-op program for staff and students

STRATEGY

Develop a culture of philanthropy

CRITICAL TASKS

- Have IIHR staff interact more closely with the UI Center for Advancement
- Identify and share the story of need and priorities to invest in, in alignment with those of the College of Engineering
- Educate faculty, staff, and students on how they can support IIHR advancement initiatives

INDICATORS OF SUCCESS

- Number of interactions between IIHR director, IIHR personnel, and advancement center development officers
- Development of vision and priorities for advancement
- Number of faculty, staff, and students participating in discussions and information sessions about advancement
- Receiving donations and other forms of support

2025 GOALS

- IIHR director meets twice per year with people from the UI Center for Advancement
- Development and sharing of vision and priorities
- Presentation by the UI Center for Advancement to our faculty, staff, and student organizations
- \$200,000 in new donations
- IIHR director has 5 meetings with potential donors
- 20% of alumni giving participation






DIVERSITY, EQUITY, AND INCLUSION

To foster a culture and commitment to strengthen our excellence through diversity, equity, and inclusion

STRATEGY

Foster an inclusive, welcoming, and respectful environment that supports a thriving, diverse, and supportive community

CRITICAL TASKS	INDICATORS OF SUCCESS	2025 GOALS
<ul style="list-style-type: none">• Ensure that faculty and staff are effective at promoting, modeling, and implementing diversity, equity, and inclusion core values• Embed diversity, equity, and inclusion in all talent acquisition practices• Evaluate and enhance existing resources and support systems to increase the number of underrepresented minority (URM) graduate students in our programs• Recognize and value diversity, equity, and inclusion-related research and scholarship through formal and informal processes• Promote a better understanding of issues related to mental health and well-being	<ul style="list-style-type: none">• Faculty, staff, and students participate in competency-based diversity, equity, and inclusion skill-building workshops• Expansion of the reach of recruitment efforts• Examination of existing graduate student recruitment and retention programs, policies, and practices• Pipeline efforts designed for URM and first-generation undergraduates interested in graduate school• Use of data gathered by the university and the college from qualitative and quantitative formative, process, and outcome evaluations to facilitate continuous improvement• Support of college-wide symposia in diversity, equity, and inclusion-related areas of strength that bring national leaders together with faculty, staff, and students. Use these opportunities to advance scholarship, awareness, and recruitment of faculty, staff, and students• Invitations to a diverse group of seminar speakers for departmental seminars• Increased faculty and staff awareness of issues related to mental health and well-being	<ul style="list-style-type: none">• 3 workshops per faculty/staff member by 2025 on diversity, equity, and inclusion (e.g., UI BUILD series)• Attendance at professional society meetings and participation in recruitment mixers at other scientific meetings to enhance IIHR's ability to actively recruit underrepresented talent• Evaluation of existing graduate student recruitment and retention programs, policies, and practices• Identification of personal/professional contacts we have at institutions where we hope to establish a pipeline, and promotion of faculty visits to these institutions• Implementation of effective mentoring programs and practices to support URM graduate and professional students• Continued support for college-wide symposia in diversity, equity, and inclusion-related areas• Promotion and dissemination of inclusive health and well-being resources and communication materials (e.g., Kognito)



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