



DREXEL UNIVERSITY

School of

Biomedical Engineering,  
Science and Health Systems

*Our Strategy  
Forward 2030*

*INNOVATE FOR HEALTH  
AND HUMANITY*

**We educate and empower  
biomedical innovators today  
for a better tomorrow**



# An **EPIC LEAP** for Longer Healthier Lives

**E**ngineering **P**artnerships **I**n **C**ollaboration • **L**everaging **E**ducation **A**nd **P**ractice

**OUR ENTERPRISE innovates for health and humanity.**



*The Human Lifecycle*

Together, we educate and empower the next generation to address the world's most pressing challenges of today and tomorrow.

Here, as we turn to tomorrow, we build upon our foundational pillars and embrace our new roadmap forward.



DREXEL UNIVERSITY

School of

Biomedical Engineering,  
Science and Health Systems

## ***OUR MISSION***

***To educate and empower the next generations of diverse biomedical innovators through interdisciplinary research, design-thinking, and immersive learning to equitably transform the future of health and humanity.***





DREXEL UNIVERSITY

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Science and Health Systems

## ***OUR VISION***



***To inform and inspire  
discovery and  
innovation for the  
transformation of  
human health and  
well-being for all.***



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**OUR VALUES**  
**Respect for All**

**Our  
People**

**Our  
Purpose**

**Our  
Partners**

**Our  
Passion**

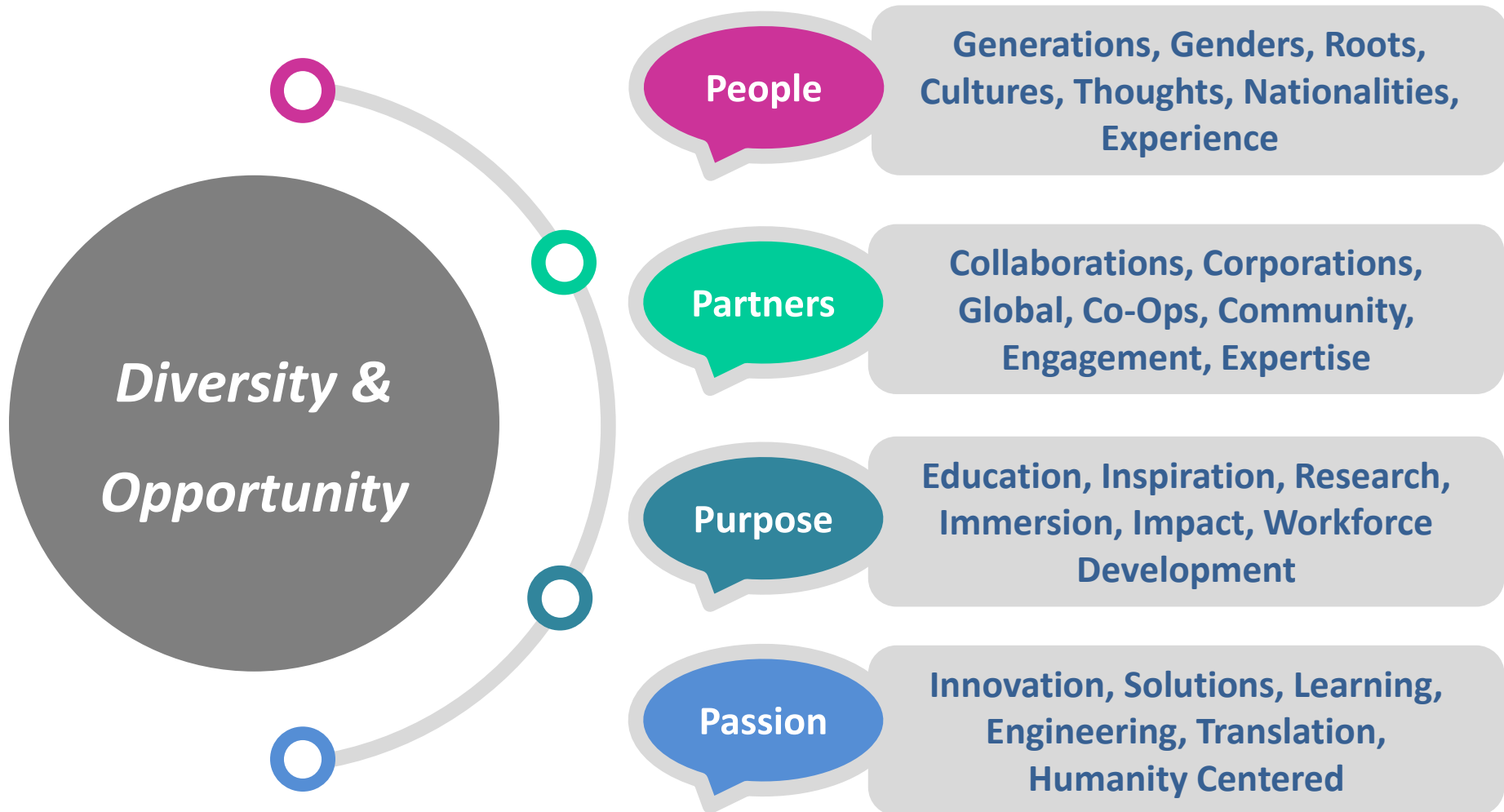


# BIOMED's VALUE PROPOSITION

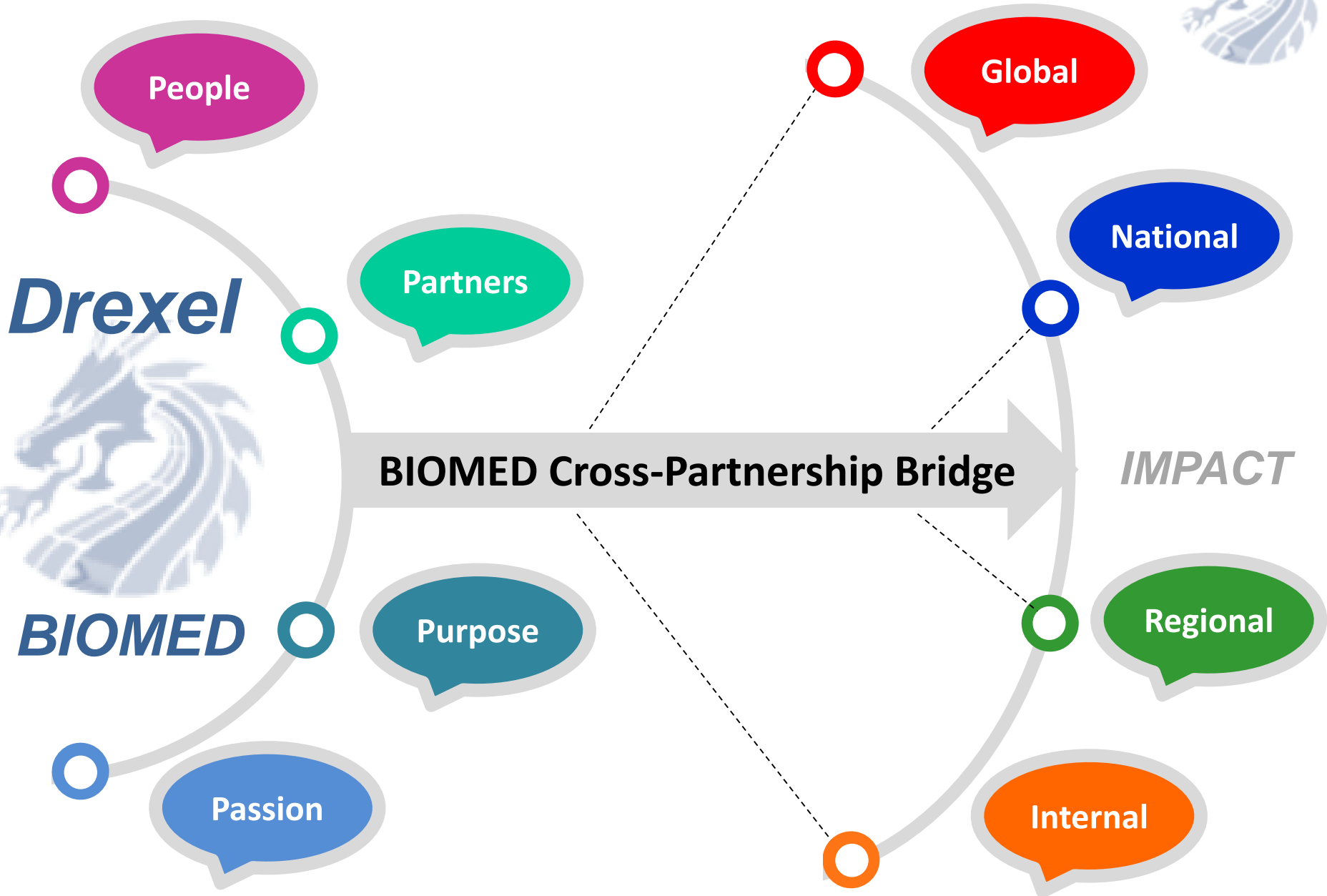


*There's diversity in our opportunity,*

*And there's opportunity in our diversity*



# BIOMED CROSS-PARTNERSHIP BRIDGES



# BIOMED's VALUE PROPOSITION



## Cross-Global Partnership Node – Impact Examples



Global Partners



Virtual Global Classrooms



International Collaborative Degrees



Seminars & Conversations

*Science serves humanity, transcends boundaries, thrives in diversity.*



**Intelligent BreastExam (iBE™)**



COMMON GOOD



Brazil  
Canada  
China  
India  
Israel  
Turkey  
UK



# BIOMED's VALUE PROPOSITION

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## Cross-National Partnership Node – Impact Examples

*Convergent research in translational immunology & bioengineering.*

**Immune Modulation & Engineering Symposium**

**380+ participants, 90+ academic institutions across US, 10+ corporate partners, 4 government and foundations**



*Translational innovations meeting unmet needs and improving patient care.*

**Bench-to-bedside translation & commercialization support.**



*Partnering Institutions: Case Western Reserve; Columbia; Duke; Georgia Tech; Stanford; Michigan; Missouri; Pittsburgh; Virginia*

# BIOMED's VALUE PROPOSITION



## Cross-Regional Partnership Node – Impact Examples

### Cell and Gene Therapy

*Global hub of research talent, capital, and entrepreneurship in Cell & Gene Therapy.*



### Immune Engineering



***Spark Therapeutics to Invest \$575M in New State-of-the-Art Gene Therapy Innovation Center at Drexel***

### Philadelphia Peds2Adults Collaboratory

*Transform pediatric health one child at a time.*

***Drexel-CHOP Alliance; PA Pediatric Medical Device Consortium  
3 Health Systems, 5 Institutions, and 10+ Clinicians and Faculty***

# BIOMED's VALUE PROPOSITION



## Cross-Internal Partnership Node – Impact Examples



### Medicine + St. Chris + Psychiatry + Education + BIOMED

*Study brain activity and cognitive function, social interaction and emotional expressivity*



### AgeWell Collaboratory

### Cell<sub>2</sub>Society Aging Research Network

*Novel ecosystem for the pursuit of use-inspired aging research: 10 Units, 50+ faculty, students & staff*

### NIH-Funded Wound Healing – Ultrasound Therapy

*↑ risk of extremity amputation for certain races / ethnicities suffering with diabetic foot ulcers*

# Core Competencies



*There's diversity in our opportunity*

*and there's opportunity in our diversity*

We stand poised for the future with exceptional depth of expertise in disciplines of biomedical science and engineering. Our **Core Competencies** constitute our defining strengths and serve as the bedrock foundation for our Strategy Forward 2030.



**Biomaterials & Tissue Engineering**



**Biomechanics & Human Performance**



**Bioinformatics & Computational Biology**

**Neuroengineering & Neuroscience**



**Biosensors & Bioimaging**

# Strategic Imperatives



To achieve our growth goals, we have established priority objectives, or **Strategic Imperatives**, that serve as our most important mandates for our enterprise initiatives. In alignment with Drexel University, our imperatives are defined to the right and drive our forward progress toward realizing our Vision.



**TRANSCEND** conventional boundaries of biomedical education.



**DEMONSTRATE** success in student learning and workforce development.



**CATALYZE** transdisciplinary and transformative scientific discovery and innovation.



**CULTIVATE** the next generation of diverse, civic-minded biomedical leaders.



**DESIGN** for the future of global health and humanity.



# Enterprise Initiatives

These **Enterprise Initiatives** reflect our action plan to translate our goals and Vision into practice. They are best described by these R-leading words.



**RESPECT**



**RESEARCH**



**RECRUITMENT**



**REVENUE**



**RIGOR**



**REPUTATION**



**RETENTION**



# Enterprise Initiatives

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-  **RESPECT**
-  **RESEARCH**
-  **RECRUITMENT**
-  **REVENUE**
-  **RIGOR**
-  **REPUTATION**
-  **RETENTION**

Goals	Strategies
<p><b>Enhance revenue generation by fund raising</b></p>	<ul style="list-style-type: none"> <li>• Increase gifts and donations</li> <li><u>Short-term:</u> <ol style="list-style-type: none"> <li>1. Need-based Scholarships</li> <li>2. Diversity Scholarships</li> <li>3. 1<sup>st</sup> Generation Scholarships</li> <li>4. Chaired Profs for Junior Faculty</li> <li>5. Distinguished Chaired Positions</li> <li>6. International Scholarships</li> </ol> </li> <li><u>Long-term:</u> <ol style="list-style-type: none"> <li>1. BIOMED Dedicated Building</li> <li>2. New Research Endowments</li> <li>3. Continued Effort to Raise for Short-term Priorities</li> <li>4. Funds for Staff Professional Development and Training</li> <li>5. Chaired Profs for Senior Faculty</li> </ol> </li> </ul>



# Enterprise Initiatives

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 **RESPECT**

 **RESEARCH**

 **RECRUITMENT**

 **REVENUE**

 **RIGOR**

 **REPUTATION**

 **RETENTION**

Goals	Strategies
Facilitate continued enrollment of our students (UG + G)	<ul style="list-style-type: none"> <li>Assess climate bi-annually</li> <li>Establish new scholarships</li> <li>Create research pipeline program</li> <li>Build a BIOMED tutoring center</li> </ul>
Preserve our talented, diverse & valued professional staff	<ul style="list-style-type: none"> <li>Assess work climate bi-annually</li> <li>Support profess. development</li> <li>Cross-train and diversify skills</li> <li>Establish career ladder pathways</li> </ul>
Retain our diverse, exceptional faculty scholars	<ul style="list-style-type: none"> <li>Assess work climate annually</li> <li>Provide leadership training</li> <li>Establish Faculty Mentorship Program</li> </ul>





# Enterprise Initiatives

These **Enterprise Initiatives** reflect our action plan to translate our goals and Vision into practice. They are best described by these R-leading words.

-  **RESPECT**
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Each initiative is sub-divided into **Goals, Strategies, Measures** and **Targets**. Details can be found in the **Appendix** at the end.



## Cross-Initiative Thematic e-Goals:

- Enrollment growth*
- E-learning expansion*
- Endowment building*
- Exceptional rigor & research*
- Elevation of reputation*



# Research Priorities

*There's diversity in our opportunity*



*and there's opportunity in our diversity*

**We demonstrate remarkable capability and ongoing global leadership in 4 emerging frontier research fields. Each of our **Research Priorities** satisfy these criteria:**

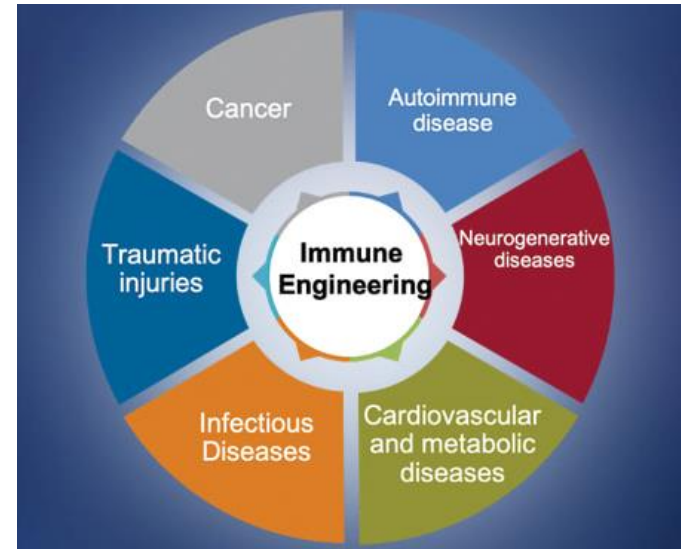
- Adheres to our mission of “educating & empowering the next generations of diverse biomedical innovators.”
- Supports our vision of “transformation of global human health and well-being.”
- Complements and enhances our existing core competencies.
- Constitutes a recognized emerging frontier field of global impact.



# Research Priorities

We demonstrate remarkable capability and ongoing global leadership in 4 emerging frontier research fields:

**Immune Engineering** - a set of tools and technologies to modulate the immune system. This frontier field merges engineering techniques with basic and translational immunology to generate innovative solutions to treat cancer, infectious disease, immunological disorders and major injuries. Two central co-fields form the foundation of Immune Engineering: Biomaterials and Cell & Gene Therapy.



**Pediatric Engineering** - flips conventional wisdom that adult therapies can simply be scaled or successfully modified for children. It commandeers design to suit the specific needs of the child, while anticipating the dynamic growth and development into adulthood. This field is forward-thinking innovation for our children, transforming global therapies and treatment paradigms for pediatric patients.



# Research Priorities

We demonstrate remarkable capability and ongoing global leadership in 4 emerging frontier research fields:

**Neural Systems Engineering** - combines molecular, cellular, circuit and behavioral tools to understand and engineer the nervous system. We investigate the power of the neuron as a component in an information processing system. The goals of this field are to inform and develop technologies to restore function in diseases and disorders of the nervous system.



**Neuroergonomics** - investigates the brain function in relation to behavioral performance in natural environments and everyday settings. This frontier field aims to expand our understanding of the human and human behavior by incorporating the brain mechanisms underlying cognitive, perceptual, and motor functioning with a focus on real-world contexts.

# ***STRONG ALIGNMENT***

## **DREXEL**

### ***MISSION***

To integrate education, scholarship, diverse partnerships, and our global community to address society's most pressing challenges through an inclusive learning environment, immersive experiential learning, external partnerships, transdisciplinary research, and creative activity.

### ***VISION***

To design the future through the innovative integration of education, scholarship, diverse partnership, and our global community.

## **BIOMED**

### ***MISSION***

To educate and empower the next generations of diverse biomedical innovators through interdisciplinary research, design-thinking, and immersive learning to equitably transform the future of health and humanity.

### ***VISION***

To inform and inspire discovery and innovation for the transformation of human health and well-being for all.



## **Shared Core Values: University Bedrock**





## **Shared Core Values: Drexel + BIOMED**





**RESPECT FOR ALL**

## ***BIOMED***

## ***DREXEL***

**Transcend conventional boundaries of biomedical education.**



**Set the standard for cutting edge adaptable curricula.**

**Demonstrate success in student learning and workforce development.**



**Enhance immersive learning experiences.**

**Catalyze transdisciplinary and transformative scientific discovery and innovation.**



**Expand Drexel's research impact.**

**Cultivate the next generation of diverse, civic-minded biomedical leaders.**



**Empower students to be purpose-driven, global citizens.**

**Design for the future of global health and humanity.**

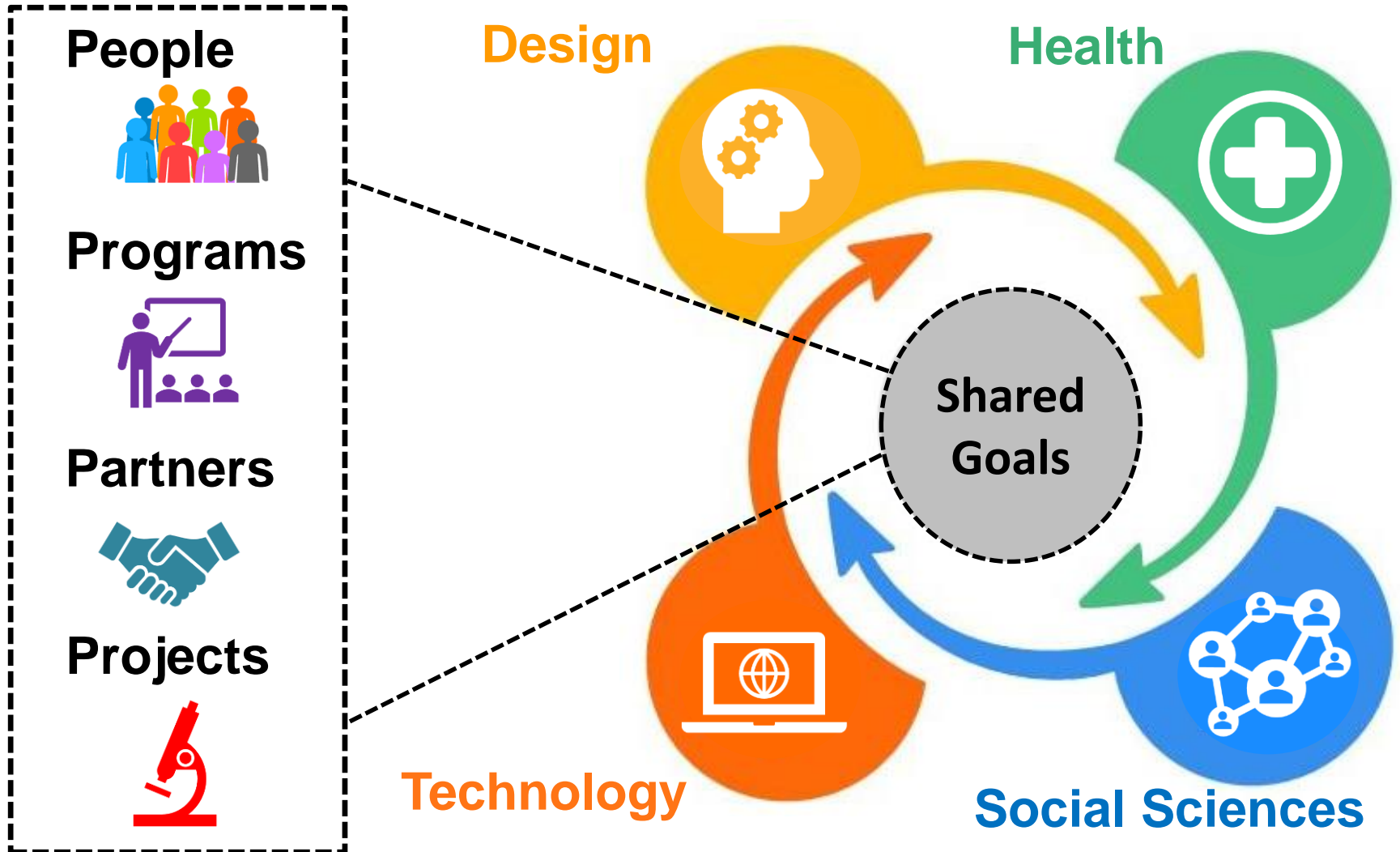


**Harness the power of partnership (to address most pressing challenges)**



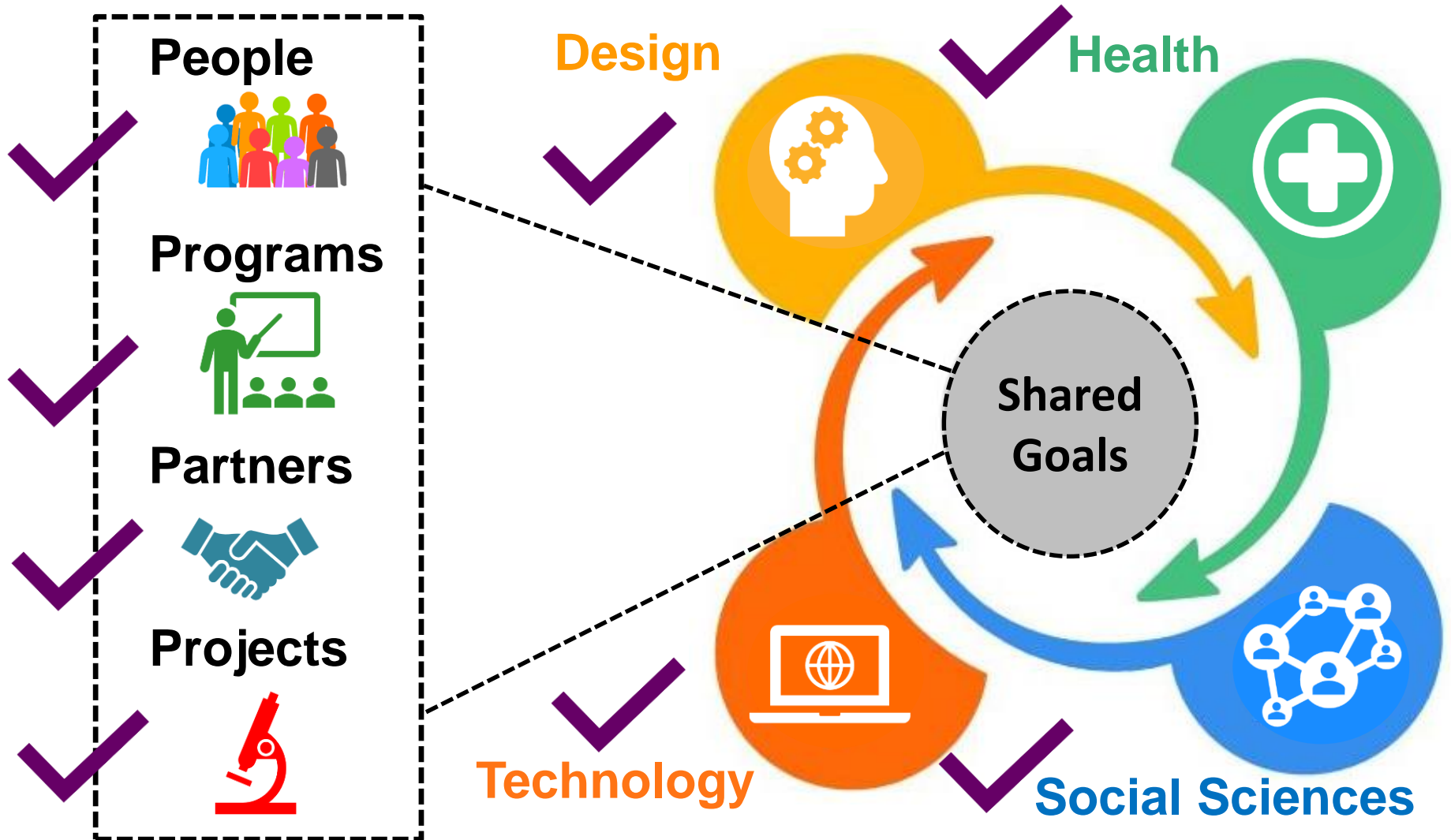


## **Transdisciplinary Cluster Unit**





## **School of Biomed. Engineering, Science & Health Sys.**

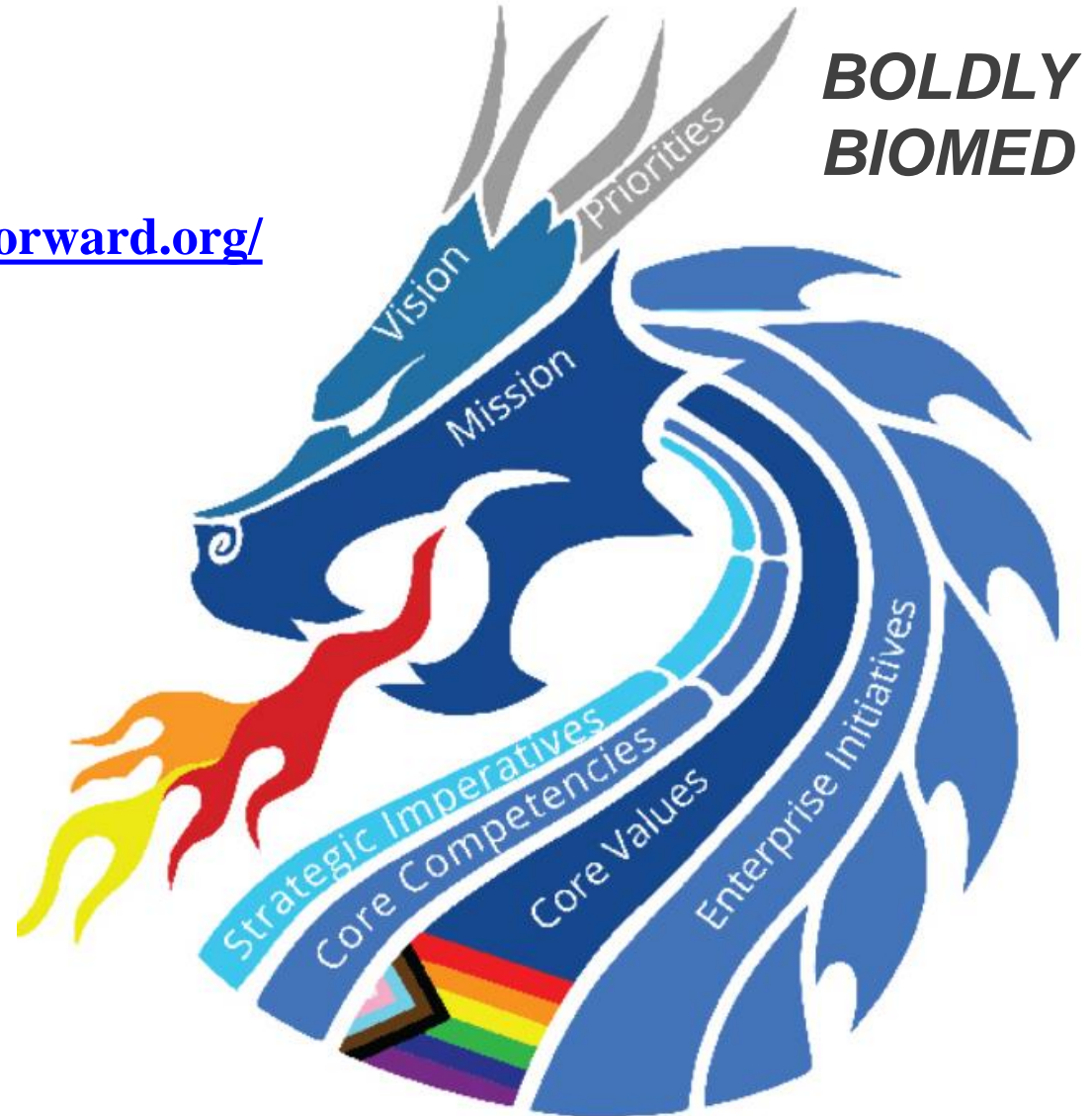


**Strategy Forward 2030** captures our **purpose** and **passion** as an Enterprise Unit of Drexel University and our roadmap toward achieving our Vision of global impact and innovation.

Please review our website:

<https://www.biomedstrategyforward.org/>

*We have designed an interactive Dragon that captures our Strategy Forward. You will be able to click on parts of the Dragon to read about our Strategy.*





DREXEL UNIVERSITY

School of

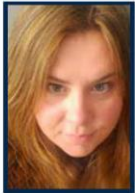
Biomedical Engineering,  
Science and Health Systems

# Steering Committee



**Amy Throckmorton, PhD**

*Professor, Team Leader*



**Natalia Broz**

*Associate Director for Graduate Programs*



**Kurtulus Izzetoglu, PhD**

*Associate Professor*



**Don McEachron, PhD**

*Teaching Professor*



**Kara Spiller, PhD**

*Professor*



**Ken Barbee, PhD**

*Professor & Senior Associate Dean*



**Lin Han, PhD**

*Associate Professor*



**Claire King, MS**

*Executive Director of Research Administration  
& Business Development*



**Joseph Sarver, PhD**

*Teaching Professor*



**Katie Von Reyn, PhD**

*Assistant Professor*

# APPENDIX MATERIALS

## Details of Strategic Initiatives: Goals, Strategies, Measures, Targets

Contact Amy Throckmorton, Professor, BIOMED  
alt82@drexel.edu 757-646-3790



## Phase I

- Survey to Key Stakeholders – 106 responses
- Single & Paired Meetings with Key Stakeholders
  - 33 meetings, 68 participants
- Research Survey



## Phase II

- 14 Group Discussions
  - 84 Participants
- Climate Survey
  - Faculty and Staff
  - PhD Students
- Design-Build Scorecard:  
Outcome Measures



## Phase III

- Full Draft of Strategy
- Graphics Designer – Website Design
- Meetings with Drexel Administrators
- Round of Feedback and Adjustments
- Vote of Approval
- Present to Drexel Leadership





# BIOMED STRATEGIC INITIATIVE

# RESPECT

Goals	Strategies	Measures*	Targets*
<b>Demonstrate a culture of respect in BIOMED</b>	<ul style="list-style-type: none"> <li>Assess BIOMED climate</li> <li>Create DEI BIOMED Resource Hub</li> <li>Model respectful behavior</li> <li>Evaluate annual teaching evals</li> <li>Assess student exit interviews</li> <li>Create and nominate students, staff, and faculty for recognition awards at School and University level</li> <li>Further elevate camaraderie among BIOMED faculty+staff+students</li> <li>Design and incorporate new respect questions into teaching evals</li> </ul>	<ul style="list-style-type: none"> <li><b>Climate surveys bi-annually</b></li> <li><b>Improved teaching evals</b></li> <li><b>↑ more exit interviews</b></li> <li><b>Identify action items &amp; address deficits</b></li> <li><b>New BIOMED awards</b></li> <li><b>More nominations for</b></li> <li><b>Conduct teaming, listening, and strategy building exercises (retreats)</b></li> <li><b>Build new questions into teaching evaluations</b></li> </ul>	<ul style="list-style-type: none"> <li>&gt; Good rating</li> <li>&gt; 15%</li> <li>Improved</li> <li>Execute</li> <li>1 new / year</li> <li>2-4 / year</li> <li>Increased</li> <li>Annually</li> <li>Plan/Execute</li> </ul>
<b>Build our BIOMED community</b>	<ul style="list-style-type: none"> <li>Assess individual implicit biases</li> <li>Train in diversity, equity, and inclusion principles and goals</li> <li>Integrate diversity, equity, and inclusion (DEI) activities into annual review and promotion &amp; tenure</li> <li>Establish BIOMED Champion for DEI</li> <li>Discuss DEI progress at each BIOMED faculty+staff meeting</li> <li>Establish thoughtful gestures</li> <li>BIOMED Community Space</li> </ul>	<ul style="list-style-type: none"> <li><b>Implicit bias training</b></li> <li><b>BIOMED DEI champion</b></li> <li><b>DEI training for all</b></li> <li><b>DEI activities added to annual review and P&amp;T</b></li> <li><b>DEI standing item on BIOMED meeting agenda</b></li> <li><b>DEI acknowledgement on materials from BIOMED</b></li> <li><b>“Thoughtful” calendar</b></li> <li><b>Fundraising for Building</b></li> </ul>	<ul style="list-style-type: none"> <li>100% comply</li> <li>Per Dean</li> <li>100% comply</li> <li>Write-Add-Update</li> <li>Include</li> <li>Write-Add</li> <li>Plan-Build</li> <li>2028</li> </ul>



# BIOMED STRATEGIC INITIATIVE

# RESEARCH

Goals	Strategies	Measures*	Targets*
<b>Grow BIOMED's transdisciplinary and transformative research enterprise into a sustainable discovery and innovation incubator</b>	<ul style="list-style-type: none"> <li>Secure more grant awards</li> <li>Enhance targeted proposal submissions</li> <li>Improve research reputation</li> <li>Formalize UG/G research pipeline matching process</li> <li>Expand national and international collaborations</li> <li>Streamline by standing regional research agreements</li> </ul>	<ul style="list-style-type: none"> <li>↑ <b>research expenditures</b></li> <li>↑ <b>research indirects generated</b></li> <li>↑ <b>PhD Degrees conferred / yr</b></li> <li>↑ <b>funding amount on proposals</b></li> <li>↑ <b>Prof Society Faculty Fellows</b></li> <li>↑ <b>NAE, NAS, NAI Faculty Fellows</b></li> <li>↑ <b>UG/G research opportunities</b></li> <li>↑ <b>National &amp; Regional Collabs.</b></li> <li>↑ <b>International Collaborations</b></li> <li><b>Negotiate agreement language for collaborating institutions</b></li> </ul>	<ul style="list-style-type: none"> <li>• &gt; 25%</li> <li>• &gt; 25%</li> <li>• &gt; 15%</li> <li>• &gt; 25%</li> <li>• &gt; 10%</li> <li>• &gt; 10%</li> <li>• &gt; 20%</li> <li>• &gt; 15%</li> <li>• &gt; 10%</li> <li>• Execute</li> </ul>
<b>Broaden BIOMED's core resources and research footprint at Drexel</b>	<ul style="list-style-type: none"> <li>Grow our BIOMED space</li> <li>Secure funding to upgrade core research facilities</li> <li>Motivate need for dedicated BIOMED building</li> </ul>	<ul style="list-style-type: none"> <li><b>Increase research sq. footage</b></li> <li><b>New research service contracts</b></li> <li><b>New Corporate Partners</b></li> <li><b>New Endowed Research Spaces</b></li> <li><b>Prioritized by President &amp; IA</b></li> </ul>	<ul style="list-style-type: none"> <li>• &gt; 20%</li> <li>• Execute</li> <li>• Secure</li> <li>• Secure</li> <li>• Execute</li> </ul>
<b>Enhance translational research innovation</b>	<ul style="list-style-type: none"> <li>Improve intellectual property protection</li> <li>Improve translation from bench-to-bedside</li> <li>More start-ups by fac/students</li> </ul>	<ul style="list-style-type: none"> <li>↑ <b>disclosures to Drexel OTC</b></li> <li>↑ <b>patent submissions</b></li> <li>↑ <b>licensing agreements</b></li> <li>↑ <b>royalty opportunities</b></li> <li>↑ <b>start-ups formed by fac/students</b></li> </ul>	<ul style="list-style-type: none"> <li>• &gt;10%</li> <li>• &gt;10%</li> <li>• Grow</li> <li>• Increase</li> <li>• Grow</li> </ul>





# BIOMED STRATEGIC INITIATIVE *RECRUITMENT*

Goals	Strategies	Measures*	Targets*
<b>Grow enrollment</b>	<ul style="list-style-type: none"> <li>• Build Recruitment team</li> <li>• Improve relationship with EMSS</li> <li>• Develop highschool speaking circuit for our faculty and student ambassadors</li> <li>• Mitigate Philly safety concerns</li> <li>• Improve ease of visiting</li> <li>• Address value proposition (cost vs benefit of Drexel)</li> <li>• Improve international recruitment</li> <li>• Create research pipeline program (rotation experience)</li> <li>• Lower tuition burden with scholarships</li> <li>• Improve connections with military and veterans for recruitment</li> <li>• Investigate and establish new national and international exchange programs with sister programs</li> <li>• Promote our student success</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Hire Champion to lead</b></li> <li>• <b>More inclusion with EMSS</b></li> <li>• <b>Earlier shift in EMSS decisions</b></li> <li>• <b>Review borderline applications for acceptance</b></li> <li>• <b>Senior Design Showcase – invite middle &amp; highschools</b></li> <li>• <b>“Students Talk Safety”</b></li> <li>• <b>Database of counselors</b></li> <li>• <b>Ambassador speaker circuit</b></li> <li>• <b>ED4USA-similar programs</b></li> <li>• <b>New Student Scholarships</b></li> <li>• <b>More work study students employed in BIOMED</b></li> <li>• <b>BIOMED Tutoring Center</b></li> <li>• <b>Drexel-Philly Treasure Hunt</b></li> <li>• <b>Virtual lab tours</b></li> <li>• <b>Civic Student Mentoring at local and regional schools</b></li> <li>• <b>Matriculation agreements with other colleges</b></li> <li>• <b>Army-Navy Day Event</b></li> </ul>	<ul style="list-style-type: none"> <li>• ↑ 1<sup>st</sup> Yr Enrollment (≥150 UG)</li> <li>• ↑ Transfer students into BIOMED</li> <li>• ↑ UG Yield to ≥ 15%</li> <li>• ↑ MS student enrollment by ≥ 20%</li> <li>• Increase #</li> <li>• &gt; 5/yr work study</li> <li>• Plan-Build</li> <li>• Plan-Design</li> <li>• Build per fac</li> <li>• Determine-Do</li> <li>• Identify-Do</li> <li>• Plan-Do</li> </ul>



# BIOMED STRATEGIC INITIATIVE *RECRUITMENT*

Goals	Strategies	Measures*	Targets*
<b>Enhance online programs and course offerings</b>	<ul style="list-style-type: none"> <li>• Assess which programs could move online (bioinformatics)</li> <li>• Engage more corporate partners to educate their employees</li> <li>• Expand Global Innovation Partnerships</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Move ideal programs to hybrid or online</b></li> <li>• <b>New relationships with corporate partners</b></li> <li>• <b>New GIP curricular develop.</b></li> <li>• <b>New activities and seminars</b></li> </ul>	<ul style="list-style-type: none"> <li>• ↑ Online courses</li> <li>• ↑ corporate attendance to senior design showcase</li> <li>• ↑ GIP participants</li> </ul>
<b>Expand Summer Academy</b>	<ul style="list-style-type: none"> <li>• Increase enrollment capacity</li> <li>• Promote BIOMED by marketing</li> <li>• Develop a virtual program</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Student ambassadors raise awareness</b></li> <li>• <b>New marketing materials</b></li> <li>• <b>Partner with Regional Medical Centers for immersive experience</b></li> <li>• <b>Design virtual curriculum</b></li> </ul>	<ul style="list-style-type: none"> <li>• ↑ local, regional, and international participants</li> <li>• Design-Deploy</li> <li>• Determine-Do</li> <li>• Plan-Build</li> </ul>
<b>Recruitment diverse, exceptional faculty scholars</b>	<ul style="list-style-type: none"> <li>• Identify strategic hires in alignment with research priorities</li> <li>• Develop collaborative hiring strategy, esp. for diverse candidates</li> <li>• Develop faculty on-boarding process</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Successfully recruit rising stars in priority fields</b></li> <li>• <b>Improve faculty diversity</b></li> <li>• <b>Design BIOMED on-boarding documents</b></li> </ul>	<ul style="list-style-type: none"> <li>• ↑ faculty recruits</li> <li>• ↑ overall fac. diversity</li> <li>• Execute</li> </ul>

**\*To be refined**



# BIOMED STRATEGIC INITIATIVE

# REVENUE

Goals	Strategies	Measures*	Targets*
<b>Enhance revenue generation by education</b>	<ul style="list-style-type: none"> <li>• Develop certificate programs</li> <li>• Enhance online offerings</li> <li>• Increase net MS tuition revenue</li> <li>• Expand summary academy</li> <li>• Establish new minor degree programs (health systems)</li> </ul>	<ul style="list-style-type: none"> <li>• ↑ revenue - certificate prog.</li> <li>• ↑ revenue - online programs</li> <li>• Increase net MS tuition</li> <li>• Add a week to summer academy (virtual week?)</li> <li>• Revenue generating minor degree programs</li> </ul>	<ul style="list-style-type: none"> <li>• Positive revenue</li> <li>• Positive revenue</li> <li>• &gt; 20%</li> <li>• Positive revenue</li> <li>• Positive revenue</li> </ul>
<b>Enhance revenue generation by research</b>	<ul style="list-style-type: none"> <li>• Improve eff indirect recovery rate</li> <li>• Increase research expenditures</li> <li>• Secure new endowments</li> <li>• Secure new end. professorships</li> <li>• Lobby for higher indirect research return from Drexel Admin</li> </ul>	<ul style="list-style-type: none"> <li>• Higher indirect recovery rate</li> <li>• Higher research expenditures</li> <li>• New endowments</li> <li>• New endowed professorships</li> <li>• Negotiate higher indirect research return from Admin</li> </ul>	<ul style="list-style-type: none"> <li>• &gt; 30%</li> <li>• &gt; 10% annually</li> <li>• &gt; 10 million</li> <li>• &gt; 10 million</li> <li>• &gt; 45%</li> </ul>
<b>Enhance revenue generation by innovation</b>	<ul style="list-style-type: none"> <li>• Improve patent royalties</li> <li>• Develop portfolio's for faculty IP</li> <li>• Secure licensing agreements</li> </ul>	<ul style="list-style-type: none"> <li>• ↑ revenue - patent royalties</li> <li>• Strategy for all BIOMED IP</li> <li>• Consultant assistance</li> <li>• New licensing agreements</li> </ul>	<ul style="list-style-type: none"> <li>• Positive revenue</li> <li>• Plan/Execute</li> <li>• Recruit/Return</li> <li>• Positive revenue</li> </ul>

\*To be refined



# BIOMED STRATEGIC INITIATIVE

# REVENUE

Goals	Strategies	Measures*	Targets*
<p><b>Enhance revenue generation by fund raising</b></p>	<ul style="list-style-type: none"> <li>• Increase gifts and donations</li> <li><u>Short-term:</u> <ol style="list-style-type: none"> <li>1. Need-based Scholarships</li> <li>2. Diversity Scholarships</li> <li>3. 1<sup>st</sup> Generation Scholarships</li> <li>4. Chaired Profs for Junior Faculty</li> <li>5. Chaired Profs for Targeted Hiring</li> <li>6. International Scholarships</li> </ol> </li> <li><u>Long-term:</u> <ol style="list-style-type: none"> <li>1. BIOMED Dedicated Building</li> <li>2. New Endowment for Aging, Pediatric or Immune Research</li> <li>3. New Endowment for Innovation Education Center</li> <li>4. Continued Effort to Raise for Short-term Priorities</li> <li>5. Funds for Staff Professional Development and Training</li> <li>6. Chaired Profs for Senior Faculty</li> </ol> </li> <li>• Establish BIOMED Online Store</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Successful and substantial increase in gifts and donations per these short-term and long-term priorities</b></li> <li>• <b>Launch BIOMED store</b></li> </ul>	<ul style="list-style-type: none"> <li>• &gt; 20% annually</li> <li>• Positive revenue</li> </ul>

**\*To be refined**



# BIOMED STRATEGIC INITIATIVE

# RIGOR

Goals	Strategies	Measures*	Targets*
<b>Demonstrate success in student learning</b>	<ul style="list-style-type: none"> <li>• Maintain ABET accreditation</li> <li>• Assess student success</li> <li>• Create tiered mentorship</li> <li>• Continued assessment of learning outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Successful ABET Review</b></li> <li>• <b>UG Graduation Rate</b></li> <li>• <b>Establish tutoring center</b></li> <li>• <b>Acad. Assess. &amp; Qual. Improve. Comm. (AAQIC)</b></li> </ul>	<ul style="list-style-type: none"> <li>• No deficits; no weaknesses</li> <li>• &gt;80%</li> <li>• Plan-Build</li> <li>• Improve student learning</li> </ul>
<b>Establish flexible and adaptable curriculum</b>	<ul style="list-style-type: none"> <li>• Develop certificate programs</li> <li>• Enhance regulatory offerings</li> <li>• Integrated student abroad with design challenge</li> <li>• Assess relevance of curriculum per market indicators</li> <li>• Consider new frontier fields as concentrations/minor</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Determine and design</b></li> <li>• <b>New regulatory courses</b></li> <li>• <b>Successful abroad studies</b></li> <li>• <b>AAQIC tasked</b></li> <li>• <b>Integrate med cybersecurity + research priorities</b></li> <li>• <b>Add GIP short courses</b></li> </ul>	<ul style="list-style-type: none"> <li>• Execute</li> <li>• Plan-Integrate</li> <li>• Grow</li> <li>• Continued</li> <li>• Execute</li> <li>• Determine-Do</li> </ul>
<b>Enhance and expand high-quality immersive learning experiences</b>	<ul style="list-style-type: none"> <li>• Assess Co-Op employer satisfaction with workforce development</li> <li>• Partner more with Drexel Solutions Institute</li> <li>• Develop international Co-Op opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Survey results from Co-Ops</b></li> <li>• <b>More project opportunities for students</b></li> <li>• <b>More international Co-Ops for BIOMED students</b></li> </ul>	<ul style="list-style-type: none"> <li>• Highly satisfied</li> <li>• Expand</li> <li>• Increase opportunities</li> </ul>



# BIOMED STRATEGIC INITIATIVE

# REPUTATION

Goals	Strategies	Measures*	Targets*
<p><b>Develop effective and aggressive marketing campaign for BIOMED</b></p>	<ul style="list-style-type: none"> <li>• Identify Outreach Champion</li> <li>• Build rapport with Drexel Communications</li> <li>• Improve presence online</li> <li>• Promote curriculum flexibility and study abroad</li> <li>• Utilize Zoom to broaden reach</li> <li>• Promote outstanding students</li> <li>• Promote exceptional alumni</li> <li>• Promote Women in BIOMED</li> <li>• Update rankings &amp; fast facts</li> <li>• “New News in BIOMED”</li> <li>• Promote Senior Design Show</li> <li>• Identify podcasts opportunities</li> <li>• Lead virtual career fair</li> <li>• Explore Local TV 30-sec Slot</li> <li>• Establish student ambassadors for promotion</li> </ul>	<ul style="list-style-type: none"> <li>• <b>New BIOMED messaging</b></li> <li>• <b>Inclusion by University</b></li> <li>• <b>Youtube Expert Videos</b></li> <li>• <b>EdX/Coursera Impact</b></li> <li>• <b>Student Instagram Takeovers</b></li> <li>• <b>Publish Co-Op data across platforms</b></li> <li>• <b>Student Success Stories</b></li> <li>• <b>Virtual lab tours</b></li> <li>• <b>Video clips of incred. alumni</b></li> <li>• <b>Create success video stories of Coulter Translations</b></li> <li>• <b>DEI statistics access quickly</b></li> <li>• <b>Faculty in podcasts</b></li> <li>• <b>Virtual career fair success</b></li> <li>• <b>Develop and post graphical abstracts with short videos</b></li> </ul>	<ul style="list-style-type: none"> <li>• Build-Execute</li> <li>• ↑ BIOMED in Drexel Ads</li> <li>• &gt; 20 expert videos</li> <li>• ↑ Takeovers 4/qtr</li> <li>• Update annually</li> <li>• Build, 5 bi-annually</li> <li>• Build per faculty</li> <li>• Update annually</li> <li>• Build, 1 annually</li> <li>• Update half-year</li> <li>• &gt; 3 faculty per yr</li> <li>• Build, annually</li> <li>• Build, 1 per faculty, update bi-annually</li> </ul>
<p><b>Raise the School’s prominence and rankings</b></p>	<ul style="list-style-type: none"> <li>• Determine which rankings are important to BIOMED</li> <li>• Elucidate how determined</li> <li>• Develop ↑ strategy</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Charge committee</b></li> <li>• <b>Identify rankings</b></li> <li>• <b>Find out metrics</b></li> <li>• <b>Build strategy to ↑ ranks</b></li> </ul>	<ul style="list-style-type: none"> <li>• Recruit-Progress</li> <li>• Determine</li> <li>• Elucidate</li> <li>• Plan-Begin</li> </ul>



# BIOMED STRATEGIC INITIATIVE

# RETENTION

Goals	Strategies	Measures*	Targets*
<b>Facilitate continued enrollment of our students (UG + G)</b>	<ul style="list-style-type: none"> <li>Assess climate bi-annually</li> <li>Secure BIOMED community space</li> <li>Establish new scholarships</li> <li>Create research pipeline program</li> <li>Build fellowship app repository</li> <li>Identify work study students and facilitate employment</li> <li>Build a BIOMED tutoring center</li> <li>Pipeline of Math Support Specialists for our students</li> </ul>	<ul style="list-style-type: none"> <li><b>Student transfers into and out of BIOMED (UG + G)</b></li> <li><b>Underrep. student retention</b></li> <li><b>School's Independence</b></li> <li><b>New Student Scholarships</b></li> <li><b>New Community Space</b></li> <li><b>More work study students employed in BIOMED</b></li> <li><b>BIOMED Tutoring Center</b></li> </ul>	<ul style="list-style-type: none"> <li>Net gain</li> <li>0 loss</li> <li>Retained</li> <li>&gt; 5/yr</li> <li>&gt; 0 sq ft</li> <li>&gt; 0</li> <li>Plan-Build</li> </ul>
<b>Preserve our talented, diverse and valued professional staff</b>	<ul style="list-style-type: none"> <li>Assess work climate bi-annually</li> <li>Support professional development opportunities</li> <li>Cross-train and diversify skills</li> <li>Establish career ladder pathways</li> </ul>	<ul style="list-style-type: none"> <li><b>Staff departures</b></li> <li><b>Staff work climate</b></li> <li><b>Training activities</b></li> <li><b>Underrep. staff retention</b></li> <li><b>School's Independence</b></li> </ul>	<ul style="list-style-type: none"> <li>0 loss</li> <li>&gt; Good rating</li> <li>Plan-Build</li> <li>0 loss</li> <li>Retained</li> </ul>
<b>Retain our diverse, exceptional faculty scholars</b>	<ul style="list-style-type: none"> <li>Assess work climate annually</li> <li>Provide leadership training opportunities</li> <li>Establish New Faculty Mentorship Program</li> </ul>	<ul style="list-style-type: none"> <li><b>Faculty departures</b></li> <li><b>Faculty work climate</b></li> <li><b>Underrep. faculty retention</b></li> <li><b>School's Independence</b></li> <li><b>Faculty Mentorship Program</b></li> <li><b>"Talk Early - Talk Now" Early Program</b></li> </ul>	<ul style="list-style-type: none"> <li>0 loss</li> <li>&gt; Good rating</li> <li>0 loss</li> <li>Retained</li> <li>Plan-Build</li> <li>Implement</li> </ul>

# BIOMED Draft Scorecard

**50.41**

<b>Research</b>	<b>16%</b>	<i>example input</i>		<b>12.8</b>
External Funding Expenditures (directs)		10,000,000	\$\$	
External Total Indirects Generated		5,000,000	\$\$	
New Provisional & Full Patents		20	#	
Total BIOMED \$\$ on Proposals Submitted		25,000,000	\$\$	
New PhD Degrees Conferred		25	#	
BIOMED Research Space		10,000	ft^2	
<b>Retention</b>	<b>10%</b>	<i>example input</i>		<b>10.7</b>
TT/T Faculty Departures		0	#	
Staff Departures		0	#	
Student Transfer Into BIOMED (UG + G)		7	#	
Student Transfers Out of BIOMED (UG + G)		10	#	
<b>Rigor</b>	<b>15%</b>	<i>example input</i>		<b>10.22</b>
ABET Accreditation Active & Successful		100	%	
Co-Op Employer Satisfaction		4.0	#	
At Graduation, Employed or Heading to Prof School?		92	%	
UG Graduation Rate (6 year calc, latest number)		77	%	
<b>Respect</b>	(Climate Survey: Students, Faculty, Staff) <b>10%</b>	<i>example input</i>	<i>surveys</i>	<b>12.00</b>
"The work environment in my School is respectful."		4	<i>ave rating</i>	
"There is a strong culture of community in my School"		3.7	<i>ave rating</i>	
"My advisor or supervisor encourages and supports a healthy work-life balance."		3.67	<i>ave rating</i>	
"My School outwardly demonstrates that diversity is a priority and is critical to our future success."		4.0	<i>ave rating</i>	
"The process for career advancement/graduation is transparent to all."		4.67	<i>ave rating</i>	
<b>Reputation</b>	<b>10%</b>	<i>example input</i>		<b>12.32</b>
USNWR BIOMED Ranking		43	#	
International Insitutional Collaborations		21.0	#	
National Institutional Collaborations		15	#	
Professional Society Faculty Fellows		5	#	
Graduate/Postdoc Training Fellowships (active)		10	#	
Diversity Fellowships		8	#	
NAE, NAS, NAI Faculty Fellows		3	#	
Average Page Ranking - Google		32.23	#	
<b>Revenue</b>	<b>14%</b>	<i>example input</i>		<b>11.87</b>
Final Unit Margin		-1,500,000	\$\$	
Gifts & Donations		300,000	\$\$	
New Endowments		0	\$\$	
New Endowed Chairs		0	\$\$	
Patent Royalties & Licenses		0	\$\$	
Effective Indirect Recovery Rate (\$indirects/\$directs)		24.50	%	
<b>Recruitment</b>	<b>25%</b>	<i>example input</i>		<b>4.75</b>
1st Year Enrollment Fall AY - UG		150	#	
1st Year Enrollment Fall AY - G		85	#	
Average entering GPA - UG		4.11	#	
Average entering GPA - G		3.70	#	
Transfer Students Into BIOMED (UG+G)		3	#	
UG Confirms/Offers Yield Rate		15	%	
MS Student Enrollment		34	#	
Student / Faculty Ratio		25	%	
New TT/T Faculty Lines		0	%	





DREXEL UNIVERSITY

School of

# Biomedical Engineering, Science and Health Systems



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