

WHEN I GROW UP, I WANT TO BE...

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MAURA SCHMIDT  
CLASS OF 2035

# Preparing for North Dakota's Future

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**SBHE Retreat**

**May 29, 2024**

# ENVISION 2035 PROCESS

- **Kickoff: May 2023**
  - Nine study groups: ag, energy, health, digitization, student, teacher, human capital, infrastructure, values
- **Mid-study summit: Nov 2023**
- **Call to action, endorse, commend:**  
study group reports: Apr 2024
- **SBHE review: May 2024**



# SERVING STUDENTS TODAY WHILE ADAPTING TO CHANGE

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- *Financials:* student affordability while maintaining campus financial health
- *Responsive:* provide access to programs people want, where and when they need them
- *Student success:* prepare students for success
- *Unified System:* maximize the strengths of the unified system
- *Research:* research excellence and innovation
- *Workforce:* workforce development



# DRIVERS OF CHANGE

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- AI and digitization
- Energy
- Inflation
- Human capital crisis
  - Career long productivity
- Student behavioral issues
- National Security Crisis: SBHE/NDUS Role?





retool and upskill now  
for North Dakota

## **STUDENT VITALITY**

- Clear minds: learn how to learn
- Strong Bodies: addiction free
- Resilient spirit: ND civic values
- Enrollment: Lumina 2.0

## **WORKFORCE**

- More Productive
- Urban-Rural; Energy; Ag; Health; Defense

## **INTELLIGENT MACHINES**

- Make AI a tool for all Dakotans
- Robotics
- Increase productivity

## **INFRASTRUCTURE**

- Digital
- Physical

# AGRICULTURE OF THE FUTURE

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# CALL TO ACTION

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- **Include topics such as carbon sequestration into curriculums within agriculture**
- **Develop targeted certificates and online offerings to provide training for students who cannot move to a residential campus**
- **All NDUS institutions providing agriculture coursework participate in the Ag Articulation work of the NDUS to ensure transferability of credits**
- **Seek creative and innovative ways to retain top faculty**
- **Develop strategies to reach middle and high school students (especially urban and suburban areas) to get them interested in agricultural careers (\$500K)**

# ENDORSE

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- Invest in education and training related to renewable energy, sustainable agriculture, and precision technology
- Offer expanded apprenticeships, internships, and hands on experience to prepare students for careers in these fields
- Provide modern equipment, laboratories, and classrooms equipped with the latest technology for training
- Expand curricular offerings in precision agriculture and data analytics
- \$27.75M for precision ag, data analytics, ag communication, sustainability/climate resiliency, renewable fuels and energy sector, and livestock development



# COMMEND

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- **Foster collaboration between industry stakeholders, educational institutions, and government agencies to address workforce shortages**
- **Provide hands on training in a broad variety of agricultural disciplines**

# ENERGY OF THE FUTURE

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# CALL TO ACTION

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- **“Right-Sizing” Energy Approach:**
  - Intensify efforts to align energy with programmatic needs
  - Fold non-oil/gas sectors...hydrogen/coal/wind/solar/water into discussion
  - Expand TrainND in western North Dakota to Minot/Bottineau & Dickinson (\$10M)
- **Grand Energy: (i.e. Grand Sky & Grand Farms): Research Grants (\$10M)**
  - Automation & Robotics & Applied Research
  - AI & Upskilled workforce
- **Intensified Workforce Development:**
  - Oil/Gas Scholarships (Re-Energize ND)...expand to Teaching & Nursing (\$10M)
  - “Keep our own”: Engage K-12 sectors at an early age
  - “Keep our own”: Locality pay adjustment for western ND (\$2M)
  - Recruit net new in-migration (Metro areas & Abroad)

# ENDORSE

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- **Dual mission; Polytechnic mission**
- **“Keep more of our own” by engaging K-12 education sector at an earlier age**
- **Intensify efforts to align energy with programmatic needs**
- **Intensify workforce development**
- **The Dept of Career and Technical Education funds approx. 130 career development program/counselors in about 135 schools. Counselors provide documentation on the career exploration with grades 7 - 12. In addition, the platform RUReady.ND.gov has a tab called, "Energy Careers in North Dakota." Educators can use that as a resource to inform students of the state's energy industry**

# DIGITAL SCIENCES/AI

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# CALL TO ACTION

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- **Bold state-wide investment in affordable, accessible, and trustworthy AI and digital tools**
- **Rapid curricular change in overall digital literacy, the digital sciences, and all fields touched by AI**
- **Significant incentives to attract and retain faculty and staff in fields connected to and impacted by AI**
- **Premier investment in technological backbone and infrastructure**
- **Adoption of novel governance and organizational structures to be a national leader in AI**

# ENDORSE

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- **Enhance the role and presence of AI activities, including the Dakota Digital Academy, the NDUS AI Forum, the Challey Institute, and the TTaDA Roundtable on AI**
- **Increase the computational power and commitment to our system of high-performance computing assets and all-campus connectivity to Internet 2**
- **Foster additional creative partnerships with industry**

# COMMEND

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- **Kudos to campuses for their commitment to preparing students for the workforce, graduate school, and life, along with their efforts to weave AI and digitization into their programs and systems**
- **NDUS and CTS have taken bold steps to explore and adopt new AI-based applications**
- **Campuses have initiated communications on appropriate AI use and have clarified campus-wide expectations**



# FUNDING PROFILE

Area of Investment	Amount (millions)
Core IT Infrastructure	\$2.6
Tech workforce development	\$3
AI and Maching Learning tools	\$3
High Performance Computing	\$13
Digital Sciences hiring incentives/start-up packages	\$10
Instructional Design/Technologists	\$5
Professional Development Small Grant Program	\$2
AI Institute start-up	\$25
AI Software/Cloud Environment/Metaverse	\$8
<b>Total</b>	<b>\$71.6</b>

# HEALTHCARE OF THE FUTURE



# CALL TO ACTION

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- **Make simulation experience available throughout the NDUS and in rural areas of the state through the implementation of the North Dakota Nursing Research Cooperative (NDNRC) and mobile simulator-equipped van (SIM-ND) proposals (\$2M)**
- **Emphasize cross-NDUS cooperation and coordination**
- **Make artificial intelligence an integral part of healthcare education, clinical experiences for students, and research throughout the NDUS**

# ENDORSE

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- **Expand the proposed GROW agenda:**
  - **Get more students and scholarships**
  - **Emphasize resource sharing**
  - **Seize opportunities**
  - **Enhance working partnerships**
- **Focus on enrollment by:**
  - **Attracting students using more intentional pipeline approaches (e.g., high school/college credit, 4+1 programs)**
  - **Providing more financial incentives, scholarships, and loan repayment options for all health professions and graduates that commit to stay in ND**

# ENDORSE

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- **Augment faculty recruitment and retention approaches by:**
  - **Providing competitive salary/compensation**
  - **Appropriately adjusting workload**
- **Expand curricular content and programming by:**
  - **Emphasizing public health, behavioral/mental health, elder care, and virtual care exposure/experiences**
  - **Increase and improve cross-NDUS cooperation for shared expertise and reduced duplication**
- **Enhance experiential training**
- **Build well-being into various curricula**

# ENDORSE

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- **Expand training of non-traditional care giver models**
- **Leverage appropriate telehealth/simulation training**
- **Expand training sites with partnerships**

# COMMEND

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- **Interdisciplinary training, including collaborative care**
- **Early exposure to healthcare as a career option**
- **Build on public/private partnerships – grants/scholarships**

# STUDENT OF THE FUTURE

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**Competency-Based Education  
Working Group**

UNIVERSITY OF TEXAS



# CALL TO ACTION

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- **Institutions may design, develop, and implement competency-based education courses and programs**
- **Ensure competency-based education (CBE) courses are integrated with K-12 and CTE CBE efforts**
- **Institutions may design, develop, and implement competency-based education stackable certificates and degrees**
- **Institutions may design, develop, and implement accelerated CBE degree programs such as 90 credit baccalaureate degrees**
- **Institutions may design, develop, and implement time compressed CBE degree programs such as scheduling summer semesters to accelerate time to completion**
- **Institutions may design, develop, and implement subscription-based tuition models that facilitate CBE courses, disciplines, and programs**

# CALL TO ACTION

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- **The NDUS should investigate SBHE policy and procedure modifications necessary to execute CBE, 90-credit baccalaureate degrees, and subscription-based tuition models**
- **To support these efforts, the North Dakota legislature should appropriate \$250,000 to each NDUS institution to design, develop, and implement a subscription-based CBE model at each campus**

# ENDORSE

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- **NDUS needs to offer CBE courses or degrees**

# COMMEND

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- **NDUS needs to offer CBE courses or degrees**

# STUDENT OF THE FUTURE

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**Stackable Certificates and  
Credentials Working Group**

# CALL TO ACTION

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- **Address individualized needs of students and adjust policy/procedure/academic calendar to support multiple tuition models and timelines**
- **Investigate subscription-based tuition models that facilitate stackable credentials courses and programs**

# ENDORSE

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- **Design, develop, and implement stackable credentials leading to associate and baccalaureate degrees or industry recognized credentials**
- **K-12 and CTE integration with stackable credentials and certificates model**

# COMMEND

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- **Higher education's commitment to working with K-12 and CTE partners to create career-ready and choice-ready graduates**



# STUDENT OF THE FUTURE

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**Dual Credit/Early Entry**



# CALL TO ACTION

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- **Create a clear, easy, and standardized process for enrollment, billing, and reporting of high school students enrolled in dual credit**
- **Find collective ways to promote dual credit enrollment throughout all North Dakota high schools**
- **Sustain current dual credit offerings while at the same time develop more CTE courses as dual credit**
- **Address accessibility:**
  - **Develop processes to better serve students in rural communities**
  - **Address affordability and accessibility issues**

# CALL TO ACTION

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- **Enhance relationships with all stakeholders to inform on the value of dual credit as related to post-secondary education**
  - **Superintendents, teachers, counselors, family members**
- **Enhance high school access to collegiate support systems while enrolled in dual credit programs and courses**

# ENDORSE

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- **Continue to market to and inform high school counselors about dual credit**
- **Explain the difference between advanced placement and dual credit to high school counselors and students**
- **Explain transferability of credit within NDUS institutions**
- **Continue to promote collaboration between NDUS institutions, policymakers, and community stakeholders to address barriers to entry for prospective dual credit high school students**

# ENDORSE

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- **Continue to build out multiple delivery methods for dual credit courses including online, on the college campus, in the high schools, and at CTE centers**
- **Continue promoting the advantages of taking dual credit classes**

# COMMEND

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- **Provide seamless transferability of general education courses among NDUS institutions**
- **Students are and will continue to do well in dual credit courses offered**
- **Current data shows:**
  - **Students in the graduating class of 2022 who took dual credit courses completed an average of 10.9 credits**
  - **Most common NDUS dual credit courses taken are general education. For example:**
    - **Fundamentals of Public Speaking, College Algebra, College Composition I and II, Intro to Psychology, etc.**
  - **79.2% of students who took NDUS dual credit courses in high school were more likely to enroll in NDUS**
  - **A student who has taken a dual credit course in high school has a higher rate of completing a bachelor's degree within four years**

# COMMEND

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- **Data collected from the Envision 2035 Dual Credit survey, administered in 2024, shows:**
  - **51% of students taking dual credit are doing so to earn college credit/get a jumpstart on college**
  - **81% of students taking dual credit had no problem registering for courses**
  - **88% of students taking dual credit stated the course expectations or needs were explained ahead of time**
  - **78% of students taking dual credit plan to continue taking dual credit courses in the future**
  - **48% of students indicated they were enrolled in one course; 26% in two courses; and 25% enrolled in three or more courses**

# STUDENT OF THE FUTURE

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**Enrollment, Recruitment and Retention  
Lumina-type effort  
(RUN-ND; focusing on upskilling existing  
workforce – some college, no certificate/  
degree)**



# CALL TO ACTION

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- **Centralized Marketing Fund for NDUS**
  - All of state effort
  - Some college, no certificate
  - Debt forgiveness
  - Building new programs
  - Marketing, scale – reduce barriers to bring students back (RUN-ND initiative)
  - Seek Lumina grant
- **Addressing the Changing Demographics Students**
- **Explore North Carolina Model for some college, no certificate/degree**
- **Student recruitment; some college no degree (\$20M)**

# ENDORSE

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- **Advocate for the Economic Diversification Research Fund (\$25M)**
- **Eliminate ND High School graduation requirement from the State Grant criteria (\$1M)**
- **Enhance Scholarship Opportunities**

# COMMEND

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- **Provide Financial Assistance for Students**
- **Implement Early Intervention Strategies**
- **Invest in Technology**
- **Foster On-campus Activities and Experiences for Students**
- **Support the Challenge Grant**
- **Enhance Veteran and Military Benefits for Students**

# STUDENT OF THE FUTURE

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**Serving the Student:  
Wellness, Emotional/Mental Health**

# CALL TO ACTION

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- **Funding to Promote Student Well-being while Fulfilling Workforce Demands**
- **The Impact of Sports Gambling on Students – continue to support gambling-free sports across NDUS by working with student groups and campuses**
- **\$4M for student wellness/behavioral health**

# ENDORSE

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- **Identifying why Students Withdrawal**
- **Expanding Mental Health Services**
- **Meeting Students Where They Are**
- **Collaboration with State Agencies to Enhance Student Well-being**

# COMMEND

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- **Proactive Measures to Prohibit Alcohol and Other Drugs on Campuses**
- **Enhancing Student Accessibility**
- **Collecting Systemwide Data**
- **Expanding Peer Counseling and Embedded Counseling**
- **Promoting Initiatives such as the Green Bandana Project**

# TEACHER OF THE FUTURE

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# CALL TO ACTION

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- **Support teachers who enter the profession with emergency credentials**
- **Produce a comprehensive system to share technical expertise and professional development**
- **Participate in the removal of barriers to teacher relocation**
- **Elevate tenure/post-tenure review to call to action – provide leadership a more adaptive/responsive and agile faculty model to follow the ongoing tenure review study**

# ENDORSE

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- **Provide flexible delivery, including accelerated degree programs**
- **Enhance support for student teachers**

# COMMEND

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- **Evaluate tenure and post-tenure review processes to maximize effectiveness**
- **Support early career teachers with continued educational opportunities**

# INFRASTRUCTURE OF THE FUTURE



# CALL TO ACTION — IT

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- **Planned Obsolescence of Technical Infrastructure – Core IT Infrastructure**
  - **Network, compute, storage and classroom resources**
  - **Information security**
  - **Reliability and Connectivity**
  - **Compute resources**
  - **Storage solutions**
  - **Continuous and ongoing investment**
  
- **Legislative funding request - \$2.6M**

# CALL TO ACTION — IT

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- **Technical Workforce Development**
  - **Maximize impact of advanced technologies**
    - **Artificial intelligence, machine learning**
    - **Adopt strategies for distinctive workforce requirements; student workers, apprentices, internships, consultants**
    - **Leverage workforce solutions**
- **Legislative funding request - \$3M**

# CALL TO ACTION — IT

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- **AI (artificial intelligence) and ML (machine learning)**
  - **Transformative for NDUS institutions**
  - **Personalized learning**
  - **Operational efficiencies**
  - **Data analysis**
  - **Research**
  - **Curriculum development**
  - **Student support services**
  
- **Legislative funding request - \$3M**

# CALL TO ACTION — IT

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- **Enterprise Resource Planning System (ERP)**
  - **Cloud-based ERP system – human capital management, finance, student information**
  - **Benefits will increase operational efficiency, reduce operating costs, enhanced accountability and transparency, improved customer service**
  - **Modern resource systems designed to integrate industry best practices**
  
- **Legislative funding request - \$10M**



# CALL TO ACTION — PHYSICAL

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- **Reduce NDUS facility portfolio by 45%**
  - **Comprehensive, system-wide evaluation**
  - **Facility conditions expressed as a percentage of replacement value**
  - **Space utilization assessment by function**
  - **Removal and relocation plan**
  - **Facility management software**
  
- **Legislative funding request – TBD by Legislature**

# CALL TO ACTION — PHYSICAL

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- **Reduce deferred maintenance to 20% of replacement value over 10 years**
  - **Production of low-maintenance green space after building removal**
  - **Right sized and modernized classrooms and laboratories – hybrid teaching, multi-departmental utilization**
  - **Shared administrative spaces**
  - **Centralized building automation**
  
- **Legislative funding request - TBD by Legislature**

# CALL TO ACTION — PHYSICAL

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- **Renovation and Relocation**
  - **Compressing facility utilization to achieve 95% classroom/lab utilization**
  - **Centralizing facility procurement**
  - **Implementation of hybrid work environments**
  - **Incentivize work environment to reduce vehicle infrastructure**
- **Legislative funding request - \$200M (estimated 5-6 year time frame, then amount would reduce to \$100M)**
- **Congee Cyber Centers of Excellence, NDUS institutions, National Guard, U.S. Force, Canadian Royal Air Force (NATO 5 Eyes), Grand Sky into National Security Crossroads to meet develop capacity for UAS innovation and user training\***

\*Brought forward outside of Envision 2035 process

# ENDORSE

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- **Enterprise Resource Planning System**
  - **The North Dakota University System (NDUS) will gain a competitive edge with the introduction of a cutting-edge, cloud-based Enterprise Resource Planning (ERP) system. This comprehensive system encompasses modules for human capital management, finance, and student information.**

# HUMAN CAPITAL OF THE FUTURE

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# CALL TO ACTION

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- Focus on a nationally competitive compensation value plan that addresses the shortcomings of the funding formula in accounting for inflation and includes locality, benchmarking, and cost of living increases to ensure NDUS institutions do not start the biennium behind the previous biennium (TBD by legislature)
- Sell advantages to living and working in North Dakota valuing human connection
- Address challenges to work-life balance and mental health, including adequate daycare, wellness, transportation, housing, and food costs and insecurities.
- Prioritize training and education opportunities for employees to maintain an educated workforce
- Stabilization fund (TBD by legislature)

# ENDORSE

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- **The NDUS Total Rewards Package is generous, but work can be done to enhance and strengthen the total compensation package outside of wages, including expanding the employee waiver program (Compensation/salary increases TBD by legislature)**
- **There have been significant increases in awareness and funding for student mental health. Ensure those increases expand to faculty and staff who are front-line caregivers for students**
- **Individual institutions continue to reflect and announce the success of employees, but a central effort from the NDUS would expand on those efforts**

# COMMEND

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- **The committee commends the effort of the State Board of Higher Education ad hoc committee working to strike a balance in the benefits of tenure, protecting academic freedom, and allowing institutions to remain nimble and efficient**
- **Making meaningful and impactful mission statements and then understand, follow, and promote those in day-to-day operations.**
- **Continue to have strategic pathways to promotion and succession planning at each institution to facilitate potential upward mobility within the organization.**



# ANY FINAL ISSUES

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**We are asking the NDUS to update the inflation report presented by UND faculty from the May 2022 retreat with current information and then complete a detailed comparison of inflation vs. pay increases over the past 10-15 years for part of what is presented to the legislature**

**Outside of wage concerns, the committee would like the NDUS to explore topics surrounding overall operational budgets and compare those to increases in inflation**

**Multiple areas of crossover with Teacher of the Future and Values of the Future**

# VALUES OF THE FUTURE

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# CALL TO ACTION

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- **Development of a Dakota Humanities Academy (DHA) to share applied Humanities classes across the eleven institutions throughout the state (\$500 K)**
- **Consideration of a Civic Education/Engagement Certificate**
- **Study to explore AI's impact on language, especially in the workforce**
- **Study, consider, and research further a relationship with Complete College America**
- **Explore further FIRE, Chicago Statement, Neutrality Statement (Kalven Report), and the overall concern about free speech and how this relates to NDUS and individual institutions**
- **Explore LEAP, Liberal Education & America's Promise, from Association of American Colleges and Universities**

# ENDORSE

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- **Engaged-learning styles for students which will help them develop, enhance, and demonstrate the 'values' list 'we have developed'**
- **Students are developing, enhancing, and demonstrating these values from their first year of college throughout to graduation**
- **A survey of "Best Practices" from the Institutions which would likely provide a list of commending actions/ statements for the future**

# COMMEND

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- **Engaged learning that enhances opportunities to increase the values below**
- **The list of values/ soft skills is seen and recognized across nearly all of the other committees working within the Envision 2035 groups. The list was narrowed and grouped into the following categories:**
  - **Effective communication**
  - **Social & emotional engagement**
  - **Creative thinking**
  - **Critical reasoning**
  - **Volunteerism**
  - **Professionalism**
  - **Civic responsibility**
  - **Ability to understand different viewpoints and engaging in civil discourse**
- **• UND participates with UnifyAmerica. Further inquiry with UnifyAmerica is possible to determine values for other institutions**

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