

17 May 2018

Note to the Board:

Attached find the main slides of the DRAFT ENVISION 2030 brief which we think will require the most discussion and reflection on your behalf. They have been lifted right out of the longer presentation to make your preparations easier.

The majority of Envision 2030 is a conceptual strategy document that has attempted to distill two years of effort statewide, and now identifies issues of importance for the Board.

Concurrently then, we have prepared a briefing to make better use of board members' 3 hours of time which will be used for discussion during the May 23rd SBHE meeting. Feedback from the board can then be used to modify the briefing slides in preparation for the June 27th SBHE meeting, and we can also provide personal briefs about topics of interest to members of the board in the interim. The goal of this two-step process would be to discuss on May 23rd, then modify the brief for second discussion and decisions on June 27th, with a brief to the Governor and his staff currently slated for June 20th.

Remember the ENVISION process also has an element of time – next legislative session, mid-term, and by 2030. So, whether certain issues are brought to decision and how quickly that happens is up to the board.

Issues that the Board gives high priority would then roll up into the existing Strategy/SPOL (systemness, access, affordability, excellence, research categories) and then would be negotiated as to the details/timing, and once decided, enter through normal processes and become part of campus goals.

The slide or two that integrate discussion about financial models and efficiencies and task forces (SB2003, the legislatively supported Digital Initiative, Governors K20, Emerging Technology Working Group headed by Governor Schafer) or Access (dual mission model in the West) may well result in some budget ask or legislative language, but that is TBD between now and June 4th for SB2003, or mid- June, or later especially in the case of Emerging Technology Working Group or Governors K20, in which case they would probably come in the Governor's budget.

Mark Hagerott

ENVISION 2030

CALL TO ACTION

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ENVISION 2030

**Achieve scale and speed of
response through system
collaboration**

Adapting Higher Education Finances

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- ❑ Support the review of ND residency policies

HIGHER ED EFFICIENCIES

- ▣ Supports Establishment and Maintenance of Minimum Class Size to enhance campus financial resilience. (SB 2003 Legislative Study)
- ▣ Strongly Endorses additional Shared Services in the NDUS Business Enterprise (SB 2003 Legislative Study)
- ▣ Explore financing innovations for small campuses.

Access to Key Programs “When and Where Students Need it”

- It is the desire of the SBHE, that by 2025, major one of a kind academic degree programs, the NDUS campus offering such program will study and then provide options for online programs (e.g., Agriculture, Energy, Law)
- It is the desire of the SBHE, that western campuses, in response to anticipated surging workforce needs, will explore the possibility of dual mission models on their campuses (i.e. Polytechnic model)
- By 2019 the campuses offering these programs will study required steps needed to provide this option and brief out before the SBHE Retreat.

Diversity for a changing state and changing workforce

- Invites the University system and individual campuses to work to improve relations with and support of Tribal Colleges. University System office examine with the Presidents how this could be done.
- Endorse the University System to explore the possibility of In-STEM (like the successful In-MED, RAIN, and INPSYDE programs works for tribal health programs).
- Endorse more campus collaborative programs and EPSCOR funding/under-graduate research with Tribal Colleges.
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- Will work with Presidents to explore ways to attract and retain highly talented individuals (especially ethnic minorities and women) who may have multiple options, to positions of leadership (President, VP) in the ND University System.
- SBHE invites tribal college presidents to attend SBHE meetings as welcome guests

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Reaffirms the right to privacy in this digital age and seeks to balance the efficiencies of “Big Data” with privacy and will establish an IT Governance Committee with ex-officio members from NDUS system law and ethics faculty and members of the Legislature who have special knowledge in this field.

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ENVISION 2030
FIRST ROUND SBHE DELIBERATIONS
23 MAY 2018

ENVISION 2030 PROCESS OVERVIEW

- Process occurs every 15 years or so
- Roundtable was last event (2000)
- ENVISION Process started May 2016
- Ten Advisory Teams state-wide
- Listening sessions and Discussions
- Student Summit and Faculty/Staff Summit
- Process considers Timing: Issues for next biennium/medium term/2030

ENVISION 2030 PROCESS OVERVIEW

- **ENVISION Briefs to SBHE:**
- **Wednesday 23 May and 27 June**
- **Both Briefs Facilitated**

Carrie Herrig, M.B.A.; Gallup-Certified Strengths Coach

Staff Career & Personal Advancement Coordinator

Teaching Transformation and Development Academy, University of North Dakota



- 11 Unique Campuses
- More than 70,000 students served through degree-seeking, continuing education and workforce training
- 7,000+ faculty/staff
- Approx. \$5 billion impact on North Dakota

Strategy and Priorities: Serving Students Today while Adapting to Change

- **Affordability for working families (SBHE Goal 1)**
- **Access to rural areas in a big state (SBHE Goal 2)**
- **Excellence for Student Success (SBHE Goal 3)**
- **System Efficiencies (SBHE Goal 4)**
- **Research Excellence (SBHE Goal 5)**

ENVISION 2018- 2030 Serving Students Today Adapting to Change

What Has Changed since ROUNDTABLE of 1999-2000?

- Needs of Students
- Digital Revolution
- Western ND Resource Development
- ND Demographics: changes in Age, Gender and Ethnicity
 - Growth of Knowledge
 - Business/Workforce Needs
 - Fiscal Environment

ENVISION 2030 Themes

- 1. Student Education and Health
- 2. Diversity and Tribal Relations
- 3. Emerging Technology and Economic opportunity for business, work force, teaching, and research
- 4. Efficiencies and Stabilization of the Higher Education Enterprise
- 5. Governance for the 21st Century.

ENVISION 2030

Happening Right Now

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Happening Now Between Campuses

Student Education and Health

- General Education Requirement Transfer Agreement (GERTA) and common course numbering
- North Dakota Higher Education Consortium for Substance Abuse Prevention (NDHECSAP) – campuses work collaboratively with this consortium for prevention strategies
- Dakota Nursing Program
- Medical Lab Science and RN collaborative programs
- Open Educational Resources
- Cybersecurity and Data Analytics programs
- The Registered Apprenticeship College Consortium (RACC); where students completing apprenticeship experiences are able to receive college credit

Happening Now Between Campuses

Diversity and Tribal Relations

- NDUS Diversity Council – collaboration among campuses with programming and professional development
- PAR/Starfish Analytics work with CTS and shared experiences with other campuses on how to use the data.
- Some Tribal partnerships, articulation agreements and shared grants
- Working with first generation college students, low income and other diverse under-represented student populations

Happening Now Between Campuses

Emerging Technology and Economic opportunity for business, work force, teaching, and research

- Training for Regional Energy in North Dakota (TREND) – A partnership between state and tribal institutions in North Dakota whom came together as a consortium to increase training and credentialing in four main sectors - oil and gas, utility, transportation and construction.
- Manufacturing internship and cooperative education
- Precision Agriculture and Aquaponics
- Enterprise use of Data Analytics
- Northern Information Technology Consortium (NITC)
- ND/SD National Center for Workforce Development (NCWD)
Energy Workforce Consortium
- North American Electrical Reliability Corporation Operational Training (NERC)
- Collaborative, continuous Title IX training
- Pathway programs between 2 and 4 Year institutions

Happening Now Between Campuses (Contd)

Emerging Technology and Economic opportunity for business, work force, teaching, and research

- New Employee Oilfield Training (NORM and TENORM)
- Crane and Rigging/Lift Training (NCCCO)
- Wind Energy Technician partnerships
- Unmanned Systems (UAS) partnerships
- Sustainable Energy Research Initiative and Supporting Education (SUNRISE) program that was formalized to enhance research infrastructure through strategic investments in research areas critical to ND's economic future

Happening Now Between Campuses

Efficiencies and Stabilization of the Higher Education Enterprise

- Starfish Analytics, Blackboard, Strategic Planning Online, Enterprise Risk Management, PeopleSoft, and Office 365
- Telephone Services
- Collaborative Students – students take classes from more than one school.
- Software licensing, network security, and server management and storage.
- Administrative services shared between institutions, NDUSO and CTS

Happening now Governance for the 21st Century: SBHE SELF REFORM

Established Governance Committee and IT subcommittee (example: privacy issue)

Added Research as 5th goal for SBHE and metrics being worked out

Changes to Presidential Evaluations process (2 year in fall/4 year in summer)

Legislation now provides privacy for Presidential searches until finalists

Strategic Planning On-line (SPOL) Implemented.

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REQUESTS FOR ENDORSEMENT

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Student Health and Wholeness Across the Entire State

- ▣ Endorse the efforts already underway by Northern Lights Behavioral Health Center (UND) and WSC-DCB in the tele-health initiatives.
- ▣ Support MiSU Addiction studies program
- ▣ Identify resources to support on-campus medication management services
- ▣ Collaborate and share knowledge system-wide (e.g. NDHECSAP, Title IX Training, Threat Assessment)

Tomorrow's Student

- SBHE recognizes the complexity of learning in the 21st century
- SBHE endorses faculty and staff efforts to provide the education students need using the delivery method they need (face to face, hybrid, online only, etc.)

SBHE Commitment to Professional Development

- ▣ Mandating diversity and inclusion training for all staff and faculty. The SBHE and NDUS will encourage and support the campus Diversity Councils to offer additional topical events that extend individual perspectives and institutional actions to be more inclusive.
- ▣ Mandating campuses to include modules on cybersecurity and data privacy into their respective introductory general education courses focusing on digital literacy.

(Mandate requested at faculty summit)

TECHNOLOGY

- Endorse the Digital Initiative efforts
- Endorse K-20 cyber efforts
- Endorse emerging technology working group
- Endorse NDSU cyber center
- Endorse Research/Intellectual Property Initiatives with Department of Commerce
- Endorses the agreement between UND and Pearson for online course development

AGRICULTURE

- The SBHE acknowledges agriculture as the leading industry in North Dakota, and Endorses the efforts of all colleges to continue to adapt in these fields of teaching and research
- Advisory team report

Liberal Arts and Social Sciences in the Digital Age

- Endorses update of course offerings relevant to helping our students understand the impact of digital technologies and function more effectively in the digital age.
- Endorses the idea that ND should have a K-20 program in Mandarin and Chinese culture. Endorse UND cooperating with DPI to lead a feasibility study of such an undertaking, to report back to the SBHE by 2020.
- Finds value in Cabinet proposal to field “Liberal Arts/Social Sciences hubs” to ensure robust programs but also adapt to financial realities of small enrollment programs. Encourages Cabinet to work with appropriate faculty.
- Commits to work with the Legislature and Executive Branch to seek additional funding for research initiatives related to the digital society now emerging.

MANUFACTURING

- Endorses the effort of industry and two-year colleges to establish a manufacturing pathway from high school to Bachelor of Applied Science in Manufacturing to be offered on campus and online. This is to be funded from existing resources and the private sector.
- Endorse the Research Universities to expand Masters and Doctoral level programs to support 'high end' manufacturing programs from existing resources and in partnership with the private sector.
- Sees the major benefit to the state in the establishment of a Manufacturing Consortium and a Center for Manufacturing Research and Workforce in the Red River Valley by 2030.
- Endorses efforts to gain state support for tuition, research, and faculty support and will work with the Executive Branch, Legislature and Industry to this end.
- Supports development of strategies that create career awareness/recruitment opportunities in partnership with the private sector to attract students into 2 year AAS Manufacturing degrees.

HEALTH CARE

The SBHE welcomes and endorses the recent Department of Labor study on nursing and the First Lady's efforts to fight addiction.

LAW

The SBHE welcomes and endorses the recent work of the ND Legal Industry Advisory Group and its observations and considerations for the President, UND.

Cooperative Education with Industry

“Co-op Education”

- Endorses expansion of partnerships with employers (local, regional, and national) in the form of paid internships, externships, and capstone projects.
- Endorses exploring how the models such as Kettering may be adapted to the context of NDUS campuses and will seek additional legislative support for such adaptive efforts.

Energy Education Where and When ND Needs It...especially in the West.

- Endorses the work of BAKKEN U under the leadership of WSC and encourages continued regional collaboration, shared courses, certificates, and shared services.
- Endorses the energy industry to further support and partner with BAKKEN U institutions.

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ENVISION 2030

EMBRACING EMERGING TECHNOLOGY

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EMERGING TECHNOLOGY: Unmanned Systems and Robotics

- Commends UND for their establishment of Research Institute for Autonomous Systems (RIAS) and directs UND to continue to lead collaborative efforts across NDUS and the State of ND.
- Recognizes the potential opportunities in these fields and welcomes efforts made by some campuses to re-program resources, both financially and with faculty/staff positions, to accelerate program offerings and research where they show student and researcher interest.
- Will work to obtain additional funding for these related emerging fields, with the Legislature, Executive Branch and Bank of North Dakota.

Emerging Technology - Data Analytics

- Strongly encourages NDSU and UND to establish a joint program in Data Science by 2020, that could provide certificates or a 'minor' to several related fields in the sciences, engineering, or social sciences and liberal arts. These should be provided from existing resources and in partnership with industry and business.
- Commits to work with the Executive Branch, Legislature, and BND to provide full scholarships and research support for students and faculty in Data Science and related fields.

EMERGING TECHNOLOGY: Cyber Security Education of Students

K-20W Initiative

- A collaborative effort to align cabinet-level and legislative priorities with the three interrelated pillars of K-20 cyber education, workforce development priorities, and operational security.
- Led by Shawn Riley, State CIO, cabinet member to the Governor
- Chaired by Rosi Kloberdanz, Director, ND Educational Technology Council
- More than 20 state organizations
 - ▣ Higher Ed and K-12 Educators, Administrators
 - ▣ State Agencies, Policymakers
 - ▣ ND Workforce Representatives
- Public and Private strategic partners
 - ▣ NICERC (National Integrated Cyber Education Research Center)
 - ▣ Major Private Tech Company

EMERGING TECHNOLOGY: Cyber Security Education of Students

- Reaffirms support for the collaborative, system-wide initiative in Cyber Security Education and that NDSU (UND as junior partner), MiSU, and BSC lead the system response. It is directed that by 2021 all NDUS freshmen will take a live or online course providing cybersecurity literacy.
- Strongly encourages NDSU and BSC to achieve National Security Agency designation as Centers for Academic Excellence (in Cybersecurity) by 2025.
- Strongly supports NDSU and BSC efforts to field 'cyber ranges' by 2021
- Commits to work with the Legislature and Executive Branch to obtain incentive funding for such endeavors, but that campuses should pursue goals listed above by re-programming from existing resources.

EMERGING TECHNOLOGY: Cyber Security of Students, Campuses, and Data

- ▣ Directs CTS to work with ITD to enhance protections of the NDUS system, and to seek legislative changes as necessary to effect such change both in funding and authorities.
- ▣ Governance Committee and NDUS/CTS will work to further make cyber security a 'shared service' by 2021, with CTS-ITD assuming direct control of cyber security on all campuses. It is expected that CTS Cyber Staff will be co-located in both Grand Forks and Fargo to be in proximity of the state's high tech workforce.

EMERGING TECHNOLOGY: Research Networks - Digital Initiative Group

- Develop and enhance high performance computing resources that leverage higher education and cloud-based systems.
- Increase NDUS capacity to provide expert resources in advanced informatics, data analytics, and scientific computing.
- Continually improve high performance research networks that meet the research needs of NDUS and state government.
- Implement a single governance structure to support these efforts.

EMERGING TECHNOLOGY: IMPLICATIONS OF ARTIFICIAL INTELLIGENCE

- Invites the Executive Branch, the Legislature, K12 DPI, non-profits, both political party leadership organizations, tribal leadership, and the Business Community to partner in a ND-Centric study of the implications of AI and requests NDUS to work to this end.
- Will work with the Executive and Legislative Branches to obtain financial support for this effort to enable access to experts from a national and global effort that is now underway, to include MIT, Johns Hopkins, Stanford and other leaders in this emerging technology.

EMERGING TECHNOLOGY: Data Analytics and AI professional development

- ▣ Directs a Joint NDUS/CTS team to provide training and assistance to all institutions and entities within the NDUS on the existing tools available for analytics, process automation, and artificial intelligence.
- ▣ Directs CTS to expand the existing Microsoft cloud platform licensing to include data science and machine learning products.

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QUESTIONS?