It is with pleasure that we present the first iEXCEL℠ Annual Report, covering the period of July 2015 to June 2016. This report illustrates the achievements that are reflections of the extraordinary support received from the University of Nebraska Medical Center (UNMC) leadership team, faculty, staff, students and community stakeholders. We appreciate the University of Nebraska Foundation and generous philanthropists that share our vision and are committed to making it a reality.

At publication of this report, the design for the Global Center for Advanced Inteprofessional Learning (Global Center) is near completion and has been approved by the Board of Regents. The Global Center will serve as the headquarters for the Interprofessional Experiential Center for Enduring Learning (iEXCEL), the transformative program that will connect community and rural training sites in Nebraska to foster collaboration across the region.

In addition, due diligence is being conducted related to the technology selection and integration for the project. Most importantly, the iEXCEL team is working with faculty, students and the staff of UNMC and Nebraska Medicine (NM) to ensure that the use of simulation of all kinds, including visualization, is adopted and that there is a sense of readiness for when the Global Center opens in 2018.

Important next steps include the completion of fundraising, the coalescence of key community entities around the development of educational programs that train the future workforce in the technical and content development aspects of 3D and Virtual Reality, and the continued engagement of UNMC and supporting communities.

Finally, our sincere gratitude goes out to everyone who is helping take iEXCEL from vision to reality.

Sincerely,
Pam Boyers, Ben Stobbe & Suzanne Torroni-Roberts
The iEXCEL Leadership Team
The Interprofessional Experiential Center for Enduring Learning (iEXCEL) is a transformative program that will create a new model for education, training and research for health care professionals.

“iEXCEL represents a transformational concept for the way to educate the next generation of health care professionals. This new model is designed to ensure relevance in health education so that those who will provide care to our families and friends continue to maintain the very best knowledge, skills and interprofessional expertise - as well as deliver the highest quality, most compassionate care.”

Jeffrey P. Gold, MD, Chancellor, University of Nebraska Medical Center

Leadership hired

Pamela J. Boyers, PhD
Associate Vice Chancellor, Clinical Simulation, iEXCEL (July 2015)

Dr. Boyers is leading iEXCEL’s executive team to accomplish the vision of transforming human performance and effectiveness through advanced simulation technology. She recently served as the executive director of The University of Toledo Interprofessional Immersive Simulation Center (UT-IISC) and as assistant professor in the Department of Surgery. She received her MA in counseling and education with special emphasis on medical education, and a PhD in counseling and education with a minor in preventive medicine from The Ohio State University College of Medicine.

Benjamin Stobbe, RN, MBA
Executive Director, Clinical Simulation, iEXCEL (October 2015)

Mr. Stobbe’s responsibilities for iEXCEL include the administrative, operational and fiscal management for UNMC clinical simulation centers, including the oversight of the design, construction and equipping of the Global Center for Advanced Interprofessional Learning, iEXCEL’s physical entity. Mr. Stobbe is a registered nurse with a MBA from the University of Phoenix.

Suzanne Torroni-Roberts, BSBA
Executive Director, Business Development, iEXCEL (October 2015)

Ms. Torroni-Roberts manages iEXCEL’s new business development as well as programmatic marketing efforts. She directs strategic collaborations (government/military, industry and academia) to assist in the sustainability of the Global Center for Advanced Interprofessional Learning. Ms. Torroni-Roberts holds tremendous experience within the simulation community.
Staff hired

Jaclyn Ostronic, MA
Administrative Associate II
(September 2015)

Shaunna Briles, BS
Program Associate
(January 2016)

THREE STUDENT INTERNS

Collin Peterson
UNO/PKI – Computer Engineering
(March 2016)

Drew Peterson
UNO/PKI – Computer Engineering
(May 2016)

Max DiBaise
University of Arizona
– Biomedical Engineering
(May 2016)

SIX JOB DESCRIPTIONS
PREPARED AND
FINALIZED FOR FY17
(June 2016)

Graphic Arts Visualization Specialist
2D/3D Rendering Visualization Specialist
Director, Visualization & Technology
Advanced Simulation Education Specialist
Advanced Simulation Technology Specialist
Manager, Advanced Simulation Operations

Guiding Board & Work Groups formed

iEXCEL Advisory Board
Community leadership appointed by Chancellor Gold

STRATEGIC ADVISORY GROUP

Pamela Boyers, PhD
H. Dele Davies, MD
Jennifer Larsen, PhD
Deb Thomas, MPA
Kenneth Hansen, MBA
Juliann Sebastian, PhD
Kyle Meyer, PhD

Bradley Britigan, MD
Michael Ash, MD
Rod Markin, MD, PhD
Janet Guthmiller, DDS
Kendra Schmid, PhD
Chris Shaffer, PharmD
Amy Volk, MA

Ben Stobbe, MBA
Suzanne Torroni-Roberts, BSBA
Howard Liu, MD
Ron Schaefer, BS
Bill O’Neill, BS

THE STRATEGIC ADVISORY GROUP HELD 8 MEETINGS IN FY16 AND
OVERSEES THE FOLLOWING WORK GROUPS:

• Education & Clinical Outcomes Group (Leaders: Kelly Caverzagie, MD;
Dean Collier, PharmD; Jan Tompkins, MPH; Connie Miller, PhD)

• Research Group (Leaders: Ken Bayles, PhD; Laura Bilek, PhD)

• Business Development Group (Leaders: Suzanne Torroni-Roberts, BSBA;
Michael Dixon, PhD; Deb Thomas, MPA)

• Communications & Outreach Group (Leaders: Suzanne Torroni-Roberts, BSBA;
Denise Britigan, PhD)

• Student Ambassadors Group (Leaders: Daniel Cloonan, Kristin Wipfler,
William Payne)

• Technology Selection & Integration Group (Leaders: Ben Stobbe, MBA;
Dan Moser, PhD; Patti Carstens, MS; Marge Kaiser, PhD)
Philanthropy

The University of Nebraska Foundation worked closely with the iEXCEL team to foster philanthropic support to make the Global Center a reality. The Foundation was tasked with raising $72 million in private funding to combine with $30 million in public funding to meet the $102 million required for the project. Potential donors were engaged and informed by the Foundation on the iEXCEL program and its evolution. Many community philanthropists had the opportunity to experience iEXCEL in its early stages at the iEXCEL Visualization Hub. These efforts have been fruitful with $62 million of the private funding secured thanks to nine generous and visionary donors who are empowering iEXCEL and UNMC to lead the way for creating a healthier future.

“...will change the way we educate in health care and may be applied to other NU academic programs. The center will also serve as an economic driver for Nebraska, fostering new opportunities in public-private partnerships and helping to attract and retain top talent to our state.”

James Linder, MD, Chief Strategist, University of Nebraska
The Global Center for Advanced Interprofessional Learning (Global Center) will be a highly advanced interprofessional clinical simulation facility on the UNMC campus and serve as headquarters for the iEXCEL program.

Global Center milestones:

**January 2016**
- AVI-SPL selected as technology integration company
- University of Nebraska Board of Regents approved the selection of The Clark Enersen Partners and RDG Planning & Design to provide design services for the new Global Center

**February 2016**
- AVI-SPL conducted stakeholder interviews

**March 2016**
- Design Groups formed with faculty and staff representation
  - Surgical Skills
  - Advanced Clinical Simulation
- 3D/VIR Simulation
- Technology Development/Transfer

**Spring 2016**
- Measures of Success drafted and collaboratively created
November 2015
SIM-NE/Helmsley Grant
Principal Investigator and College of Medicine’s Associate Dean for Clinical Skills, Paul Paulman, MD, led successful efforts to secure a $5.5 million Simulation-in-Motion Nebraska (SIM-NE) grant. iEXCEL will collaborate with SIM-NE to provide much needed training opportunities using simulation to improve Nebraskans’ health.

Statewide Network Assessment
Initiated to assess the networks available and the capabilities of sharing rich 3D images to key cities statewide. Outcome will be the basis for next step discussions.

March 2016
University of Nebraska at Omaha (UNO)
Visit to the Biomechanics Building, College of Information Science & Technology, Scott Data Center and The Peter Kiewit Institute.

University of Nebraska at Kearney (UNK)
Visit to the Health Science Education Complex.

Lincoln, Nebraska
Visit to the Nebraska Innovation Campus, UNL College of Engineering and UNMC College of Dentistry.

April 2016
UNMC West Nebraska Division
Visit to the UNMC College of Nursing West Nebraska Division campus in Scottsbluff.

Veterans Affairs
Visit from Edward Bope, MD, Acting Director, Medical and Dental Education, Office of Academic Affiliations with the U.S. Department of Veterans Affairs, to explore opportunities for expansion of primary care residency programs. Dr. Bope and iEXCEL visited VA facilities in Scottsbluff, Grand Island and Omaha.

May 2016
Metropolitan Community College
Explored collaborations in visualization education.

February 2016
University of Nebraska-Lincoln (UNL)
Planning began for IEEE Conference to be held in 2017 with UNL College of Engineering; Dr. Boyers serves as co-chair for the newly added Health Sciences track.
“We can lead the world. The world is changing around us, and if we’re not aware of the changes, we’re going to wake up one day and realize we’ve been left behind.”

H. Dele Davies, MD, Vice Chancellor for Academic Affairs, UNMC, when speaking about iEXCEL’s potential to transform how we teach

iEXCEL Business & Military Collaborations

Business Development

Activities

October 2015  Visit to EventWorks4D to view Holographic Theater

March 2016  Omaha Chamber of Commerce Meeting

Visit to the Chamberlain Group with Chancellor Gold

Tripp Umbach Report completed – an economic and workforce development report

April 2016  Follow up visit to EventWorks4D to explore Holographic Theater possibilities for the Global Center

May & June 2016  Industry Collaborator Events:

CAE Healthcare, AVI-SPL, EON Reality and Karl Storz Endoscopy

June 2016  Business Talking Points created – a reference document to ensure all business aspects remain consistent

Agreements

May 2016  MOU signed with CAE Healthcare

MOU signed with AVI-SPL

MOU signed with EON Reality

June 2016  MOU signed with Karl Storz Endoscopy
Military

Agreements
Educational Partnership Agreements (EPA) with Wright State Research Institute (WSRI) and Wright-Patterson Air Force Base (WPAFB)

Activities
November 2015
WSRI visits UNMC to explore opportunities for collaboration

April 2016
Visit to Xenia, Ohio to see Esterline’s dome system
Visit to WSRI to discuss EPA and collaborative research opportunities

June 2016
Visit to WPAFB with Chancellor Gold to discuss collaboration in research, Live Virtual Constructive Exercises (LVCEs) and the EPA

Government Relations

January 2016
Meetings with Senators Hilkemann and Stinner

March 2016
Tour/Demo for Congressman Adrian Smith
Meeting with City Councilman Chris Jerram
Meeting with City Councilman Franklin Thompson

May 2016
Meeting with City Councilmen Ben Gray and Chris Jerram

Lower left: Karl Storz Endoscopy with Chancellor Gold and Dr. Boyers
Lower right: AVI-SPL and EON Reality sign MOUs with Chancellor Gold
33 Presentations given

Highlights include:

**August 18, 2015**  
Premier Education Banquet at UNMC

**September 3, 2015**  
UNMC Education Council Strategic Planning Retreat

**October 12, 2015**  
UNMC Board of Counselors

**February 17, 2016**  
Nebraska Medicine Guild Board of Directors

**February 26, 2016**  
University of Nebraska Board of Directors

**March 10, 2016**  
“Medical Modeling & Simulation 2016: Opportunities for Collaboration” Presenter and Moderator at National Modeling & Simulation Coalition’s (NM&SC) Leadership Summit & Annual Meeting in Chesapeake, VA

**April 21, 2016**  
“Transforming Health Care” at AVI-SPL’s Digital Forum for Digital Natives and Digital Immigrants in Detroit, MI

**May 18, 2016**  
“Using VR in Inter-disciplinary Medical Training” at EON Reality’s Future of Virtual and Augmented Reality in Sports and Health Care Conference in Manchester, UK

**June 6, 2016**  
National Association of State Energy Officials (NASEO) at UNMC

**June 22, 2016**  
“Simulation and its Role in Medical Quality, Practice and Learning” at the American Board of Medical Specialties (ABMS) Conference in Chicago, IL
Conferences attended

**November 2015**  
Council of Medical Specialty Societies (CMSS) in Orlando, FL

**November/December 2015**  
Interservice/Industry Training Simulation and Education Conference (I/ITSEC) in Orlando, FL

**January 2016**  
International Meeting on Simulation in Healthcare (IMSH), Society of Simulation in Healthcare (SSH) in San Diego, CA

**March 2016**  
National Modeling & Simulation Coalition (NM&SC) Annual Meeting in Chesapeake, VA

**June 2016**  
InfoComm in Las Vegas, NV

Events held

**October 2015**  
iEXCEL Expo featured during UNeMed’s Innovation Week

**Demos (vendor-related)**

**December 2015**  
Simulation Capture Demo (B-Line, CAE Healthcare, EMS, Studiocode) – 15 attendees

**March 2016**  
Supported the College of Nursing’s Equipment Demo Day – 32 attendees

**June 2016**  
BodyViz Demo – 25 attendees

**June 2016**  
Bluescape Demo – 20 attendees

Social Media

**June 2016**  
Launched Twitter social media platform

- **6** Tweets
- **32** Followers
- **10** Likes

Follow us @UNMC_iEXCEL

This metric will help iEXCEL measure engagement and influence via social media
iEXCEL Technology

Highlights include:

December 2015
Purchased iWall, a curved 2D interactive wall with 12 touch screens

January 2016
The transformation of MSC 1012 into the iEXCEL Visualization Hub began. The Hub is a home for visualization technology to encourage innovation, interaction and early adoption

January 2016
Installation of and training on the iWall

May 2016
Purchased two HoloLens, self-contained holographic head-mounted computers engaging users in mixed reality

April 2016
Purchased the 3D CADWall, two iBenches, five developer workstations, iMirror, 3D software and two AR head-mounted displays

“The iWall offered great opportunities for active learning with students up and out of their chairs, interacting with other professional students and using creative approaches to help each other arrive at the correct diagnosis.”

Feedback from the Medical Nutrition and Diagnostic Medical Sonography IPE course faculty after using new technology provided by iEXCEL
As of June 30, 2016
approximately 900 unique visitors

33 Educational & Content Development Activities including:
- Interprofessional Education Courses
- M1 Neurosciences Core led by Robert Norgren, PhD, Professor in the Dept. of Genetics, Cell Biology & Anatomy, UNMC
- Makers Group Inventathon to promote interactive brainstorming sessions
- EPIC chart training held by Nebraska Medicine

9 Equipment Training Sessions held for faculty/staff of UNMC/NM

2 Special Events with guest speakers from EON Reality, Karl Storz Endoscopy and AVI-SPL

40 Tours & Demonstrations Highlights include:
- University of Nebraska Foundation Board of Directors
- Recruitment activities for the University of Nebraska
- Omaha Chamber of Commerce
- AHEC Omaha for high school students interested in health careers
- USAF Surgeon General and team
- Beatrice Community Hospital and Health Center
- eHealth Africa with the UNMC Dept. of Pediatric Infectious Disease
- Various interested faculty and staff, government officials, philanthropists and foundation representatives
“iEXCEL represents a great opportunity for students at UNMC. The simulation and technology iEXCEL aims to integrate into the classroom will allow students to learn not only the content of their studies but the context in which their field operates. This represents a fundamental shift towards a practical and functional model of education that will benefit students and, in turn, their patients and the community at large.”

Daniel Cloonan, UNMC Student Senate President, UNMC Student Regent and leader for iEXCEL Student Ambassadors

**November 2015** First edition of the iEXCEL “TOME” created – a comprehensive description of the iEXCEL vision, mission and business plan

**Defence Global**
A quarterly print and digital publication with global readership providing an essential link between government and military sectors, academia, and defense manufacturers and suppliers

**August 2015** Introduction: UNMC (written by Chancellor Gold)
- Unique visitors: 102,387

**November 2015** Backcover Ad: “Being Prepared Takes More than Words”
- Unique visitors: 178,992

**February 2016** Case Study: “Training for Readiness: Learning Together” & Ad: “Readiness Takes More than Words”
- Case Study: 103,112 unique visitors
- Ad: 281,609 unique visitors

**May 2016** Case Study: “Leadership in Combating Weapons of Mass Destruction (CWMD) by delivering relevant, mission-essential research and development solutions to the warfighter, Department of Defense (DoD) and other national security agencies”
- Metrics not available at time of report

Ad featured in Global Defence
Lower left: 2016 iEXCEL student interns

Lower right: iEXCEL demostrates LVCE capabilities at the SOCOM Conference

Opposite page: Students treat ‘patient’ wearing a cut suit at iEXCEL Expo 2015

Right: iEXCEL’s iWall in use by Nebraska Medicine for training
2016 iEXCEL student interns

iEXCEL demonstrates LVCE capabilities at the SOCOM Conference

Opposite page: Students treat 'patient' wearing a cut suit at iEXCEL Expo 2015