APLU Innovation & Economic Prosperity University Designees: Creating and Using Economic Engagement Metrics

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Monday, July 29, 2019
My Background

- MS Information Science, UNC-Chapel Hill
- Started working with large data sets during college
- Bus/Tech Research Analyst (20 years’ experience)
- Co-PI on US Economic Development Administration grant (3 yrs.)
- Experience with business demographics, economic development impact, database development, project management and technology roadmap planning
  - Hewlett-Packard
  - UNC Kenan Institute of Private Enterprise (business school)
  - UNC Innovate Carolina (VC IEED)
WHO WE ARE

First and only public university in the U.S. to award degrees in the 18th century

Over $1 billion in annual research expenditures

77 bachelor’s and 111 master’s degree programs

18,862 undergraduate students

11,049 graduate and professional students

Ranked #1 on Kiplinger’s list of best values in public colleges
Office of the Vice Chancellor for Innovation, Entrepreneurship and Economic Development
Organization Chart: 06/19/2019

Contractors: Michelle Goryn, Erin Hopper, Liz Chen, Jennifer Lai, Shellie Edge
Where We Are: Innovator’s Journey

Learn
- Shuford Program in E-Ship
- KFBS E-Ship Center
- Carolina Challenge
- Pathways to Impact
  * APS
  * BME
  * Comp. Sci.
  * Data Literacy/Science
  * Faculty Workshop
  * Part of Innovation Roadmap Strategy

Create
- Creativity Hubs
- Funding: Idea Development
- Proof of Concept
  * BeAM
  * APS
  * BME
  * Comp. Sci.
  * ICS
  * CUBE
  * Spaces: Incubators, Accelerators, Dry/Wet Lab

Develop
- Office of Technology Commercialization
  * 1789
  * NC TraCS
  - Kenan Institute
  - Center for Public Service
  - Law E-Ship Clinic
  - Harvey Award
  - Market analysis + patent landscape
  * Dreamers Who Do

Accelerate
- Licensing and sponsored research
  * Launch Chapel Hill
  * KickStart Venture Services
  * Carolina Angel Network
  * Carolina Research Ventures Fund
  * Pinnacle Hill
  * Spaces: Incubators, Accelerators, Dry/Wet Lab

INNOVATOR’S JOURNEY ACROSS THE INNOVATE CAROLINA CAMPUS NETWORK

Strategic Foundation
- UNC System Plan
- Blueprint for Next
- Innovation Roadmap
- Unit Plans

- Master Innovation Space Plan
- Cross-Discipline Approach
- Practitioners/EIRs
- Coaches/Mentors

- Communications
- Data + Metrics
- Social Innovation

- Development Campaign
- Managing University IP
- Patenting University Inventions

- Licensing University Technology
- APLU/IEP
IEP Framework Activates UNC’s Strategic Plan

THE BLUEPRINT FOR NEXT

Of the Public, For the Public

Innovation Made Fundamental
The national conversation
(See APLU’s Economic Engagement Framework)
How is IEP helping to advance strategic priorities at Carolina?

- Align priorities with physical space master plan
- Embed economic engagement efforts into the institution
- Elevate place as a priority for I&E efforts
- Measure and communicate I&E impact
“... The ways in which universities and their public-private partners contribute to economic growth, opportunity, and competitiveness through regional talent and workforce development; innovation, entrepreneurship, and tech-based economic development; and place development via public service, outreach, and community engagement.”
1. Institutions should **KNOW** what they’re doing well and what they need to improve with regard to economic engagement;

2. Institutions should be able to **MEASURE** the extent to which they are engaged;

3. Institutions should be able to **TELL** the story of their contributions to economic development, and

4. Institutions must **ENGAGE** with external stakeholders throughout the processes of knowing, measuring, and telling in order for their contributions to have meaningful impact.
Engagement Has Many Forms and Methods at UNC

- Community Service
- Service Learning
- Engaged Research (including community-based participatory, government-university-industry partnerships)
- Training and Technical Assistance
- Capacity Building
- Economic Development (including startups, tech transfer)
- Policy Advising, Development and Implementation Support
Innovate Carolina created and continues to grow:
  • Two Databases (Startups and Network)
  • Impact Dashboard
  • County Storyboards

To tell our associated impact stories, we built this interconnected and complementary mechanism in alignment with our IEP self-study for
  • Development of Metrics,
  • Assessment, and
  • Data collection.

The system enables special emphasis on place-making efforts, as per the IEP framework.
INNOVATE CAROLINA STARTUPS DATABASE

- Most comprehensive database of its kind across higher education
- Includes IP-based, program-supported, independently initiated and social startups
- Data: funding, revenues, jobs & volunteers, founding school, program participation, press, people impacted, products & services
- Currently tracks 641 companies, 1958 to present (continually updated)
Innovate Carolina Startups Database: Getting Started

Vision (2013)
Judith Cone, VC
IEED
Selection of platform

Implementation (2014)
Cindy Reifsnider, program manager
Database structure
Partners

Data (2014)
Scope
Sources
Data quality
Metrics
“The University’s value, measured in jobs, spending and other economic indicators shows an active and effective University system positively impacting people and communities all across North Carolina.”

“Demonstrating the Collective Economic Value of the University of North Carolina System,” February 2015

Taxpayers, Legislators, and Prospective Students want to know...

- Economic impact of commercialization and development
- Outcomes of teaching and learning, culture of entrepreneurship

- Number of Startups
  - Capital raised
  - Jobs created
  - Revenues
From spreadsheets and bits of information to a **customized CRM database**...

• Cloud-based, for multi-user access, but still secure
• Recognizable user interface for users with varying comfort levels with technology
• Flexible configuration of included objects and fields, with easy customization
• Sizable capacity
• Reasonable costs for licenses
• Built-in reports functionality
• Multiple levels of security and access
• Salesforce for Outlook
Implementation and Data

1. Information Audit: Inventory of programs, needs, data
2. Defining what is included and what is not
3. Database planning (esp. customizations)
4. Selecting initial group of partners
5. Data gathering (and cleaning!)
6. Research (i.e., fill in the gaps)
   - Company research (press, funding, and milestones)
   - Founder discovery
7. Data documentation
Sustainability

University Leaders
I&E Program Sponsors
Communications

System Administrators
I&E Program Managers

Support Staff
Student Interns

Champions

Doers
INNOVATE CAROLINA NETWORK DATABASE

- Provides back-office support to UNC I&E programs (not just startup support programs)
- Program applications linked to database, send information into processing queue
- Categorizes impact and stories by corresponding indicators and trends demonstrated, per IEP: Talent Preparedness, Industry Relations, Diversity, Multidisciplinary and/or Interdisciplinary, Innovation Skillsets
- Powers greater PLACE classification of impact and stories
Network Database for Day-to-Day Operations Across Engagement

IEP Framework: Talent, Innovation, Place

Efficiency: Process Automation from Forms as Point-of-Entry through Email Communications

User-Friendly Functionality

Inform Strategic Planning through Tactical View of System

Relationship Building

Marketable Product: Value Add to University (i.e. good data)
Remember! Engagement Has Many Forms and Methods

- Community Service
- Service Learning
- Engaged Research (including community-based participatory, government-university-industry partnerships)
- Training and Technical Assistance
- Capacity Building
- Economic Development (including startups, tech transfer)
- Policy Advising, Development and Implementation Support
Additional Partners Demonstrating Engagement Impact

- Office of Institutional Research and Assessment
- Carolina Center for Public Service
- Office of the Vice Chancellor for Research
- Gillings School of Global Public Health
- UNC Health Care
- School of Government
- More
Perspectives: Brainstorming Engagement Metrics

- Vice Chancellor of IEED – stakeholder perspective
- Innovate’s Program Staff – IEP perspective
- Communications Staff – audience engagement
- Database Administrators – data perspective
- Program Partners – engagement impact data and viewpoints
Impact Dashboard: Talent

innovate.unc.edu/impact
Impact Dashboard: Innovation

INTELLECTUAL PROPERTY

FIVE-YEAR COMPARISONS

IP-BASED STARTUPS
FY2013-17: 49
FY2008-12: 29
69% INCREASE

US PATENTS
FY2013-17: 217
FY2008-12: 127
72% INCREASE

amics

ACTIVE IP-BASED LIFE SCIENCES STARTUPS

LICENSING REVENUE
FY2013-17: $22,900,000
FY2008-12: $12,300,000
86% INCREASE

innovate.unc.edu/impact
Impact Dashboard: Place

NC ECONOMIC IMPACT

HQ OUTSIDE NC 6%
HQ IN NC 94%

Of the $10.6 billion in annual revenue earned by UNC startups, the vast majority is earned by startups headquartered in the state.

77% of ventures launched at UNC-Chapel Hill (399 of 521) are still active.

Startups from UNC-Chapel Hill are headquartered in 21 NC counties.
How does UNC-Chapel Hill make an economic and social impact in Carteret County?
Talent
DEVELOP HUMAN CAPITAL AND THE FUTURE WORKFORCE

Students

90
UNDERGRAD AND GRAD STUDENTS FROM CARTERET COUNTY ATTEND UNC (FALL 2019)

Health Care Providers

31
MEDICAL STUDENT ROTATIONS COORDINATED AT AREA HOSPITALS (FALL 2017)

783
HEALTH CARE PROVIDERS TRAINED IN CARTERET COUNTY (2017)

Citizens and Local Government

1,092
CONTACTS WITH CARTERET CITIZENS AND OFFICIALS BY THE UNC SCHOOL OF GOVERNMENT IN 2017

Courses
Publications
NC Benchmarking Project
Advising Projects
Civic Education
Teaching Sessions
Environmental Finance Projects
Innovation

87 UNC RESEARCH AND SERVICE PROJECTS TOUCH CARTERET COUNTY (2016)

UNC Institute of Marine Sciences

60,000 SQUARE FEET OF RESEARCH SPACE

12 UNC FACULTY

65 GRADUATE STUDENTS AND STAFF

6.3 ACRES OF BOGUE SOUND WATERFRONT

1 48-FT COASTAL RESEARCH EDUCATION VESSEL

4 FLAT INSHORE BOATS

Breakthrough Marine Research for Coastal Communities

- Water Quality
- Sea-Level Rise
- Storm Water Runoff
- Shoreline Management
- Oil Spills
- Fisheries
- Offshore Wind Energy
- Severe Storms

Local to Global Research Impact
Three-Team Collaboration

UNC Lineberger Comprehensive Cancer Center

UNC Cancer Care

Carteret Health Care

UNC Center for the Study of Natural Hazards and Disasters

Trillions of Advanced Computing Calculations per Second

- Better prepare for hurricanes and tropical storms
- Predict storm surge and flooding in Carteret County and other coastal communities

Community-wide screening strategy for cancer
- Early detection and treatment
- Treatment planning and professional education
- Streamlined second opinions
- Clinical trial access
What Have We Accomplished?

**KNOW**
- Active, cohesive ecosystem and network of more than 25 programs that include students, alumni, faculty and staff
- Increased operational efficiency for program staff

**MEASURE**
- Monitoring of 500 active startups and ideation teams
- Demographics of participants and points of engagement
- Increasing types of engagement, partnership data and metrics

**TELL**
- Adding visualization tool Tableau for interactive dashboard and complex analytics
- Increasing communications with industry partners and alumni

**ENGAGE**
- Enabling grant proposal applications to launch new areas of development
- Increasing participation of internal participants and external partners
Value of IEP Designation

Recognizes UNC as a premier institution in the field of innovation and economic engagement.

Enables UNC to engage with, learn from, and build relationships with the broader IEP community of campuses also committed to advancing comprehensive engagement efforts.

Revisits UNC’s founding mission as a university for the people by conducting a self-study of UNC’s expansive innovation ecosystem, its partnerships, and its relationships with communities.

Enables UNC to adopt and refine ways to better know, measure, and tell the story of its innovations and their impact and engage in meaningful partnerships to support this work.

Provides a comprehensive framework to align UNC’s strategic priorities with the physical space Master Plan through the lens of innovation and economic engagement.

Encourages holistic codification of engagement across campus, cultivating new internal and external partnerships.

Innovate Carolina
Appendix

Innovate Carolina
WHERE WE’VE BEEN

2010
- BOT: Innovation Roadmap kicked off (Chancellor Thorp)
- Innovation Showcase (ongoing)
- Innovation Roadmap released
- APS + BME targeted

2011
- BOT involved in Roadmap
- Innovation Circle Summit
- APS Task Force

2012
- BOT: 2-year progress report & Innovation Circle Summit
- CUBE at Campus Y
- Computer Science Entrepreneurs Lounge

2013
- BOT: First meeting of I&E committee
- First I&E Network meeting (ongoing)
- Launch Chapel Hill + 1789 Venture Lab
- Blackstone Entrepreneurs Network

Strategic Foundation | Educational Programs | Cross-Discipline Collision | Venture Support | Environmental Design | Faculty Translation | Development
---|---|---|---|---|---|---
BOT: Innovation Roadmap kicked off (Chancellor Thorp) | Innovation Showcase (ongoing) | Innovation Roadmap released | APS Task Force | CUBE at Campus Y | Computer Science Entrepreneurs Lounge | Blackstone Entrepreneurs Network

Launch Chapel Hill + 1789 Venture Lab | Blackstone Entrepreneurs Network

2010 | 2011 | 2012 | 2013
ECONOMIC ENGAGEMENT AT UNC

• Vice Chancellor for Research
  HPDP, NRI, IMS, Coastal Hazards

• Vice Chancellor for Innovation, Entrepreneurship, & Economic Development
  Innovate Carolina, OTC

• Provost’s Office
  Carolina Center for Public Service

• Development Office
  UNC Corporate Relations

• Vice Chancellor for Communications
  UNC Community Relations

• Vice Chancellor for Finance & Ops
  NC Policy Collaboratory

• Individual Schools
  Public Health, Govt, Law, Pharmacy

• School-based Centers & Institutes
  Water Institute, IGHID
IEP process and timeline

**Summer 2016** – UNC joins the cohort of IEP startup institutions

**Summer 2016-Fall 2017**— Led by Innovate Carolina, UNC undergoes a comprehensive and rigorous self-assessment (self-study) of the activities, resources, and partnerships required for successful economic engagement.

**Spring 2017-Ongoing** – In response to the IEP self-study, Innovate Carolina continues to expand existing Startups Database and creates and refines Network Database, the Impact Dashboard, and the County Storyboards.
IEP process and timeline

October 2017 – UNC submits application for comment only. (See IEP’s designation guidelines for more information regarding submitting for comment vs. designation.)

May 2018 – UNC submits application for designation.

June 2018 – UNC learns it has been awarded the IEP designation.

November 2018 – UNC is formally recognized at the APLU’s Annual Meeting in New Orleans.
Aligning UNC’s strategic priorities with the IEP framework

Through participation in IEP’s designation process, UNC has:

• Moved forward its strategic priorities laid out in the Innovation Roadmap and Blueprint for Next and aligned them with the physical space Master Plan.

• Taken considerable steps to institutionalize its economic engagement efforts.

• Created a first-of-its-kind Database + Dashboard mechanism for collecting data, measuring impact, and telling UNC’s story, effectively establishing itself as a national model in this space.

• Elevated the priority of place-making as a means for successful innovation and engagement efforts.

• Prioritized the expansion of capacity to build and track industry partnerships.