Today's Speakers

Speakers:

Ian McClure - University of Kentucky

Elizabeth Knapp – University of Kentucky

Becky Aistrup – SHARPhub PI

Krishan Arora - National Institutes of Health

Heidi Chapman - Virtici LLC

Charles G. Irvin – University of Vermont

Eugene Krentsel - XLerateHealth

AUTM
ANNUAL MEETING
SAN DIEGO
2020

Fostering Biomedical Entrepreneurship in IDeA States via Regional Accelerator Hubs

Krishan Arora, Ph.D.
Chief, Networks and Development Programs Branch
Division for Research Capacity Building
NIGMS, NIH

AUTM
ANNUAL MEETING
SAN DIEGO
2020

NIH Mission

To seek fundamental knowledge about the nature and behavior of living systems and the **application of that knowledge to enhance health, lengthen life, and reduce illness and disability**

AUTM ANNUAL MEETING SAN DIEGO 2020

Small Business Education and Entrepreneurial Development (SEED)

Major Responsibilities

SEED supports the NIH innovator community in their efforts to validate the potential health impacts of promising scientific discoveries and advance them into healthcare products that improve patient care and enhance health. Developing products across the biomedical spectrum requires NIH's collaboration with universities and research institutions, small businesses, trade associations and societies, angel investors, venture capitalists, and strategic partners. SEED leads initiatives that develop these relationships and build opportunities for NIH innovators to further their product development efforts.

Director: Matthew McMahon

https://grants.nih.gov/aboutoer/oer_offices/seed.htm

AUTM ANNUAL MEETING SAN DIEGO 2020

President's Management Agenda CAP Goal 14

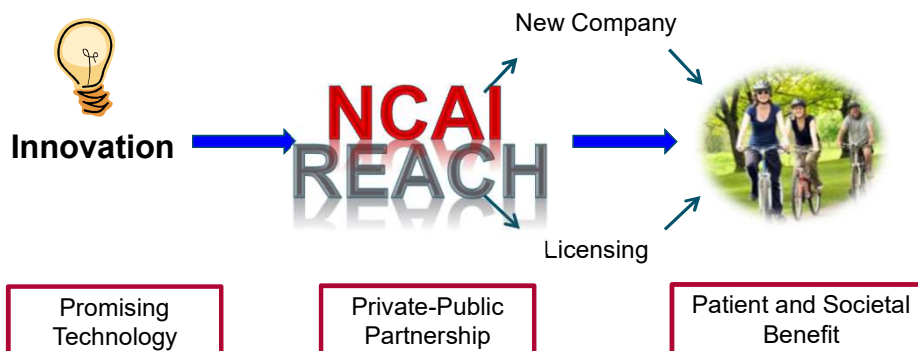**Improve Transfer of Federally Funded Technologies from Lab-To-Market**

Agencies will focus on five strategies: (1) identify regulatory impediments and administrative improvements in Federal technology transfer policies and practices; (2) **increase engagement with private sector technology development experts and investors**; (3) **build a more entrepreneurial R&D workforce;** (4) **support innovative tools and services for technology transfer;** and (5) improve understanding of global science and technology trends and benchmarks.

SPIN OUT COMPANIES - EDUCATE INNOVATORS: PHASE 0 PROOF OF CONCEPT CENTERS

NIH Centers for Accelerated Innovations (NCAI)
## Research Evaluation and Commercialization Hubs (REACH)

Innovation → **NCAI REACH** → New Company / Licensing

| Promising Technology | Private-Public Partnership | Patient and Societal Benefit |

Turning discoveries into health

Regional Technology Transfer Accelerator Hubs for *IDeA* States

❏ **A newly funded program to accelerate academic entrepreneurship in the biotech sector with IDeA states**

Western Region — Central Region — Northeast Region — Southeast Region
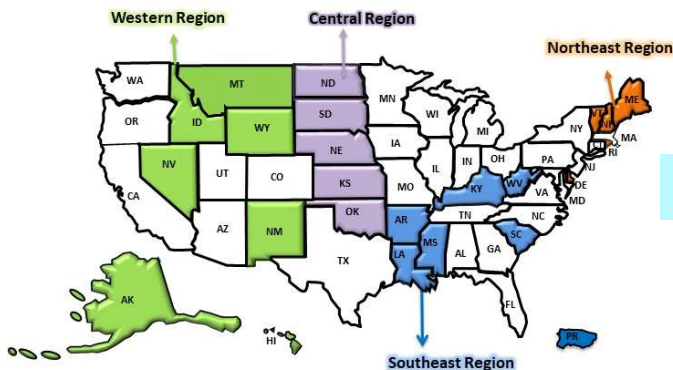
- IDeA: Institutional Development Award
- 23 States and Puerto Rico are IDeA eligible

Regional Technology Transfer Accelerator Hubs for *IDeA* States

- ❖ A new initiative in response to Congressional directive
- ❖ Funded in September 2018
- ❖ One shared Accelerator for each IDeA region to provide infrastructure and build an entrepreneurial culture at the IDeA institutions
- ❖ Provide training, mentoring, consulting services in:
  - ❑ Entrepreneurship
  - ❑ Technology transfer
  - ❑ Intellectual property protection and marketing
  - ❑ Small business finance and management
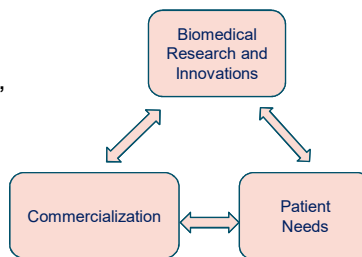 - ❑ Business development skills
  - ❑ Partnerships
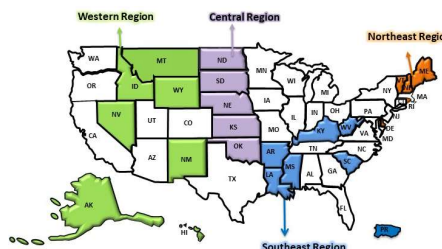
Fostering Biomedical Entrepreneurship in *IDeA* States

Regional Accelerator Hub

Entrepreneurship Ecosystem
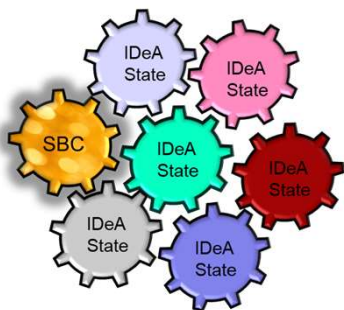
Skills Development, Mentoring, Education, Training & Outreach

- ❑ Spur innovation and build a *diverse and inclusive entrepreneurial ecosystem* in under-resourced states
- ❑ Create and amplify an ecosystem of *resources and best practices* to help academics become successful entrepreneurs

Four IDeA Accelerator Hubs and
Their Major Academic Partnering Institutions – Funded in FY 2018

IDeA Region	Program Name	Small Business Concern	Major Academic Partnering Institution
Southeast	Southeast Xlerator Network	XLERATEHEALTH, LLC, Louisville, Kentucky	University of Kentucky, Lexington, Kentucky
Central	The Sustainable Heartland Accelerator Regional Partnership (SHARP) Hub	BBC ENTREPRENUERIAL TRAINING AND CONSULTING, LLC, Chelsea, Michigan	University of Kansas Medical Center, Kansas City, Kansas
Northeast	DRIVEN: Accelerating Medical Entrepreneurship in the Northeast	CELDARA MEDICAL, LLC, Lebanon, New Hampshire	University of Vermont, Burlington, Vermont
Western	ASCEND, Accelerating Solutions for Commercialization and Entrepreneurial Development in the Mountain West IDeA States	VIRTICI, LLC, Seattle, Washington	University of New Mexico Health Sciences Center, Albuquerque, New Mexico

AUTM
ANNUAL MEETING
SAN DIEGO
2020

Southeast Hub

XLerator*Network*

Mentorship. Connectivity. Experience

www.xleratornetwork.com

Accelerating Healthcare and Biomedical Technologies from Bench to Market

XLerate**Health**

XLerateHealth aims to cultivate and grow
impactful healthcare innovation in the Midwest, Southeast,
and other areas of the country where great innovation
often goes unrecognized and underfunded

- Healthcare accelerator founded in 2012 (Louisville, KY)
- Steve Blank's Lean Startup Methodology
- Bootcamp (12 weeks) & Intersession (virtual) programs
- Mentoring & coaching (200+ mentors & subject matter experts nationwide)

Slide 1

XLerator *Network* **VISION**

Key Points:

- Bridge the divide between great ideas & the marketplace by leveraging and connecting various resources and unique expertise assets across all participating entities in the region
- Fill the gaps that constitute barriers to efficient commercialization among partner institutions
- Deliver the necessary resources, education, and business networks to foster and sustain a culture of entrepreneurship across the region

- Connect through an online hub
- Create curriculum based on current best practices
- Train the trainer, utilizing existing facilities and resources
- Sustain engagement through valuable programming & tools

Slide 2

XLerator *Network*

Phase 1 Assessment & Gaps

1. Commercialization training & curriculum
2. Lack of knowledge of how to successfully apply for commercialization grants/funding
3. Talent to support commercialization of technologies within the academic institutions

Phase 2 Major Accomplishments

1. Launched 3 virtual commercialization programs (fastPACE, LaunchIt, XLerateHealth bootcamp)
2. Created & launched 2 new commercialization funding related programs ("Ideas-to-Products" & SBIR support program)
3. Established access to commercialization talent features (XOR & SME network)

Slide 1

AUTM ANNUAL MEETING SAN DIEGO 2020 — **XLerator** *Network* XOR

"Executives-on-Roster"

- Removing regional boundaries between various subsets of XOR
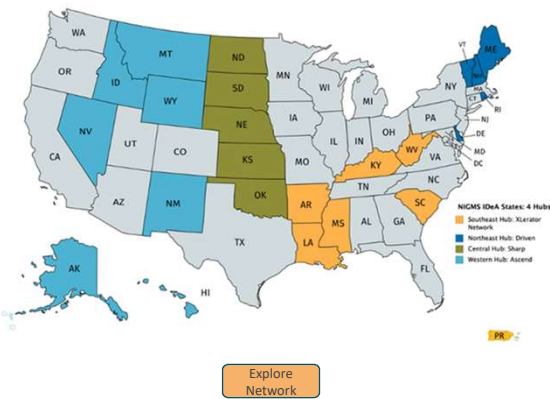
- Both executives & researchers/entrepreneurs can now register online via the Hub

- XOR will match 3 levels of "executives"
  - Management team executives
  - Advisors
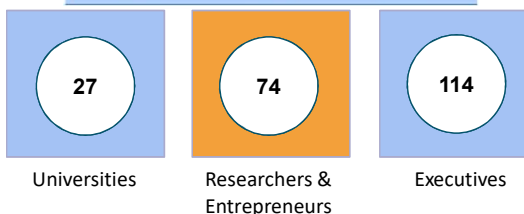 - New category: Executives able to commit 51%+ to serve as PI's on an SBIR grant

NEW ENTREPRENEUR SPOTLIGHT

Ameet Patel — University of Kentucky
Delene Taylor — University of Kentucky
Henry Jones — University of Mississippi

NEW STARTUP SPOTLIGHT

Flashtract

Flashtract, Inc — Auburn University — Southeast XOR
Mobile Motion Capture — University of Nebraska — Midwest XOR
Precision Medical Instruments — University of Nebraska — Midwest XOR

Rare-Earth Free Magnets — Case Western Reserve University — Midwest XOR
RespirAI — University of Nebraska — Midwest XOR
SH-Strap — University of Nebraska — Midwest XOR

27	74	114
Universities	Researchers & Entrepreneurs	Executives

Slide 2

AUTM ANNUAL MEETING SAN DIEGO 2020 — **XLerator** *Network* — **SME IT**

Subject-Matter Experts

- Help researchers & entrepreneurs better understand the marketplace via "customer discovery" interviews

- Domain expertise include: providers, clinicians, payers, regulatory, reimbursement, big-pharma, clinician workflow, SBIR, manufacturing, HIPAA, IP protection, successful serial entrepreneurs, etc.

Buddy Lyons MBA
CEO
Entac Medical Inc.
Clinical Research
FDA
Funding
Life Sciences
Medical Devices
LinkedIn Profile

Richard Marchase PhD
Subject Matter Expert
Independent
Clinical Research
Entrepreneurship
Life Sciences
LinkedIn Profile

Kevin Pollard
Subject Matter Expert
Entrepreneur
Consumer Engagement
Entrepreneurship
Funding
Medical Devices
LinkedIn Profile

Dov Rosenberg MBA
COO
enosix
Entrepreneurship
Intellectual Property
LinkedIn Profile

Jorge Serrano
Consultant, Network Value Delivery
Colivii
Healthcare Services
Payers
Providers
Reimbursement
LinkedIn Profile

Isabella Sledge MD, MPH
VP Research
Tides Medical
Clinical Research
Entrepreneurship
Life Sciences
LinkedIn Profile

Thomas Smith PhD
Professor of Practice
Univ. of Arkansas
Life Sciences
Medical Devices
LinkedIn Profile

Mary Tapolsky
Subject Matter Expert
University of Louisville, College of Business
Entrepreneurship
Life Sciences
LinkedIn Profile

Natalie Thurston RN, MBA,...
Consultant
Thurston Consulting
Payers
Reimbursement
LinkedIn Profile

Chris Tihansky
CEO
EndoShape
Medical Devices
LinkedIn Profile

Neha Tiwari PhD
Associate Director
PTC therapeutics
FDA
Life Sciences
Medical Devices
LinkedIn Profile

Gaylord VanGuilder
Managing Director
BlueCreek Pharmaceuticals LLC
FDA
Life Sciences
Mobile
Payers
Providers
LinkedIn Profile

AUTM ANNUAL MEETING SAN DIEGO 2020 — *XLerator Network*

IDEAS-TO-PRODUCTS (I2P) PROGRAM

AWARDEES

FUNDED BY THE NIH VIA THE

XLerator Network

Nancy Lan Guo, Ph.D. — West Virginia University
Hai Yao, Ph.D. — Clemson University
Mary Caldorera-Moore, Ph.D. — Louisiana Tech University
Joshua Sakon, Ph.D. — University of Arkansas
William C. Wimley, Ph.D. — Tulane University
Eric Berson Ph.D. — University of Louisville
Idhaliz Flores, Ph.D. — PHSU

- 55 pre-applications
- 10 finalists (50% female) invited to submit full proposals and make a live presentation in front of the EAC
- 7 best-scored applications were selected for funding
- Continuous engagement and mentorship for awardees; milestone-based tranche funding process
- 1:1 SBIR support and expectations of SBIR/STTR proposals to be submitted while still in I2P program

---

AUTM ANNUAL MEETING SAN DIEGO 2020 — *XLerator Network* — **SBIR SUPPORT**

SBIR/STTR

- 7 SBIR modules include original content (including video) & links to established resources

- "SBIR Corner": monthly column sharing thoughts & experiences about various aspects of the SBIR program

- 1:1 SBIR Assistance Program: 6-8 researchers/founders to receive mentoring and coaching from our experts on SBIR strategies and alignment

XLerator *Network*

eugene@xleratehealth.com

ian.mcclure@uk.edu

www.xleratornetwork.com

#TheBestIsYetToCome

ASCEND Western Hub

Accelerating Solutions for Commercialization and Entrepreneurial
Development
Heidi Chapman, PhD
Business Development Associate, Virtici LLC

ASCEND Project Team

virtici

THE UNIVERSITY OF **NEW MEXICO**

UNIVERSITY OF **MONTANA**

Neil Fanger, PhD
President and CEO
Virtici LLC

Eric Prossnitz, PhD
Professor, Department of
Medicine

Jay Evans, PhD
Director, Center for
Translational Medicine

Heidi Chapman, PhD
Business Development
Associate

Kathy Foster
ASCEND Program Planning
Manager

Hallie Widner
ASCEND Program Specialist

Christian Slavin
ASCEND Program Specialist

ASCEND HUB

ASCEND Partner Institutions

Montana State University

MONTANA STATE UNIVERSITY

University of Hawaii at Mānoa

UNIVERSITY of HAWAI'I MĀNOA

University of Montana

UNIVERSITY OF MONTANA

New Mexico State University

NM STATE BE BOLD. Shape the Future. New Mexico State University nmsu.edu

University of Idaho

University of Idaho

University of New Mexico

THE UNIVERSITY OF NEW MEXICO

University of Alaska, Anchorage

UAA UNIVERSITY of ALASKA ANCHORAGE

University of Nevada, Las Vegas

UNLV UNIVERSITY OF NEVADA LAS VEGAS

University of Wyoming

UNIVERSITY of WYOMING

University of Alaska, Fairbanks

UAF UNIVERSITY OF ALASKA FAIRBANKS

University of Nevada, Reno

N University of Nevada, Reno

ASCEND HUB

ASCEND Network of Collaborating Partners

Academic Partners

Program Partners

IDeA Partners

Gap Needs Assessments

Resources Mapping Survey Results

Surveyed stakeholders at each ASCEND institution to identify resource strengths and weaknesses

Areas of Opportunity	Needs Improvement
• Degree Focuses and Certificates • Networking Events • Engagement of ecosystem • Culture Change: strong to building	• Funding: TTO support, Innovation funds, Investor Access • Conferences/Seminars Guest Speakers • SBIR/STTR Training

Voice of the Customer Survey Results

Interviewed 52 Faculty/Postdocs/Students to gauge their interest level and current training in entrepreneurship

- **74% of responders** rated there interest in translating their research to a commercial product as **>/= 8**
- Most responders felt that **mentoring and consulting** would be the best way to learn more about entrepreneurship
- Barriers to successful transition:
  - **Lack of access to commercialization resources**
  - **Lack of knowledge on how to transition from lab to market**
  - **Lack of knowledge of available resources**

Researchers are interested in learning more about entrepreneurship but aren't sure where/how to do it!

The ASCEND Solution

Online Delivery Platform
- Website: www.ASCENDHub.org
- Biomedical Resource Database: http://bioentrepreneurresources.com

Entrepreneurial Training
- ASECEND Monthly Webinar Series
- Bridging the Gap: Commercialization for Biomedical Researchers

Business Advising
- Comprehensive one-on-one business advising for companies

Mentoring
- Virtual Mentor Network

Technology Development
- NIH SBIR/STTR Application Assistance
- Innovation Awards

250+ OPEN ACCESS PARTNERS & RESOURCES available through the ASCEND Hub online national database of biomedical resources at bioentrepreneurresources.com

400+ ASPIRING ENTREPRENEURS have attended specialized educational seminars, short courses, and open source virtual commercialization classes through the ASCEND Hub.

$13.3 MILLION+ GRANT FUNDING
$7 Million+ SBIR/STTR &
$6.3 Million+ Govt. Contracts and Grants generated across the ASCEND Network

$60,000+ INVESTMENT CAPITAL raised at Hub-associated companies.

29

Homepage and Searchable Databases

www.ASCENDHub.org

HOME ABOUT US PROGRAM RESOURCES APPLICATION NEWS & EVENTS CONTACT US

ACCELERATING COMMERCIALIZATION

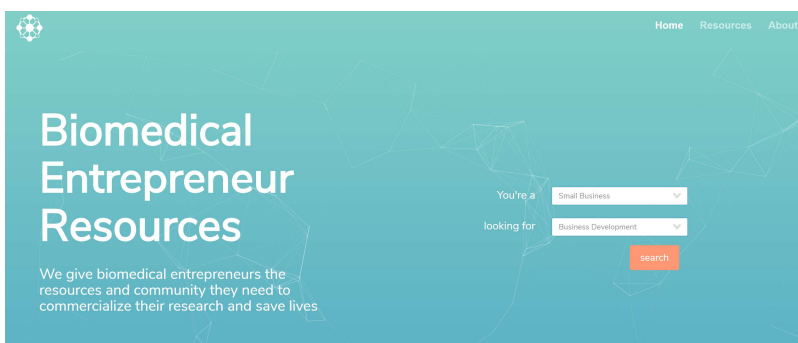Empowering innovators to accelerate biomedical commercialization through education, mentorship, and business consultation.

LEARN MORE

ASCEND HUB
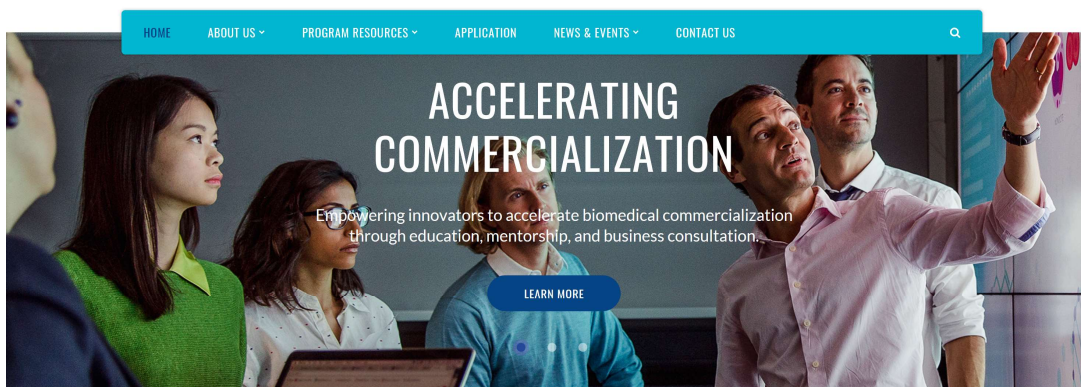
30

Searchable Resource Database

www.bioentrepreneurresources.com

Biomedical Entrepreneur Resources

Home   Resources   About

We give biomedical entrepreneurs the resources and community they need to commercialize their research and save lives

You're a   Small Business

looking for   Business Development

search

Searchable resource database built in collaboration with DRIVEN Hub

ASCEND HUB

31

ASCEND Webinar Series

All previous webinars are archived on our website!

View and register at www.ASCENDHub.org

Date	Topic Title	Host	Speaker
	ASCEND Webinar / Seminar 2019/20		
9/26/19	IP - Overview	UI	Jeremy Tamsen, U of Idaho
10/31/19	IP - In Depth	UM	IP Attorney from Michael Best Law Firm
11/21/19	Inventions/Innovatons	UNR	Ellen Purpus, UNR
12/19/19	StartUps / Business beginnings - #1	UWY	David Arthur Bohling, Wyoming
1/30/20	StartUps / Business beginnings - #2	NMSU	Scott Maloney, NMSU
2/27/20	SBIR/STTR related	MSU	Ann Peterson, MSU
3/26/20	Those PITCHES	UNM	UNM - Speaker TBD
4/30/20	Accelerator/Incubator	UH	Steve Auerbach, UH
5/28/20	Creating an Entrepreneurial Culture / University & Faculty specific issues	UAF	Nigel Sharp, Global EIR for UA
6/25/20	Biomedical entrepreneurship skills development program	UNM	Rob Delcampo, PhD
7/30/20	University Venture Investment Funds	UNLV	UNLV - Speaker TBD
8/27/20	Public/Private Partnerships Focus	Virtici	Heidi Chapman

ASCEND HUB

32

ASCEND Mentoring Network

Industry Mentors

- Virtici and the EAC, IAC, or AC will nominate industry mentors with diverse backgrounds (therapeutic, diagnostic, medical device, implants)

Academic Mentors

- An academic who successfully started commercialized their research and/or started a company
- **Looking for 1-2 academic mentor nominations from each ASCEND institute**

Mentors will be screened by the AC to:

2. Confirm their interest in serving as a mentor
2. Identify at what stage of development they would like to act as a mentor and
3. To confirm their credentials

ASCEND HUB

33

Northeast Hub

DRIVEN

https://www.drivenacceleratorhub.com

Supporting bio-entrepreneurs in their mission to improve patient outcomes and save lives

About DRIVEN

The DRIVEN Accelerator Hub is an NIH-funded consortium (NIGMS UT2GM130176) led by Celdara Medical and Simbex and includes partnerships with leading research institutions in the Northeast.

BROWN   DARTMOUTH   Maine Medical Center   MDI Biological Laboratory

UNIVERSITY OF DELAWARE.   University of New Hampshire   THE UNIVERSITY OF RHODE ISLAND   The University of Vermont

Driven Accelerator Hub
info@drivenacceleratorhub.com
Founded By:

CELDARA MEDICAL   Simbex

NIGMS UT2GM13017

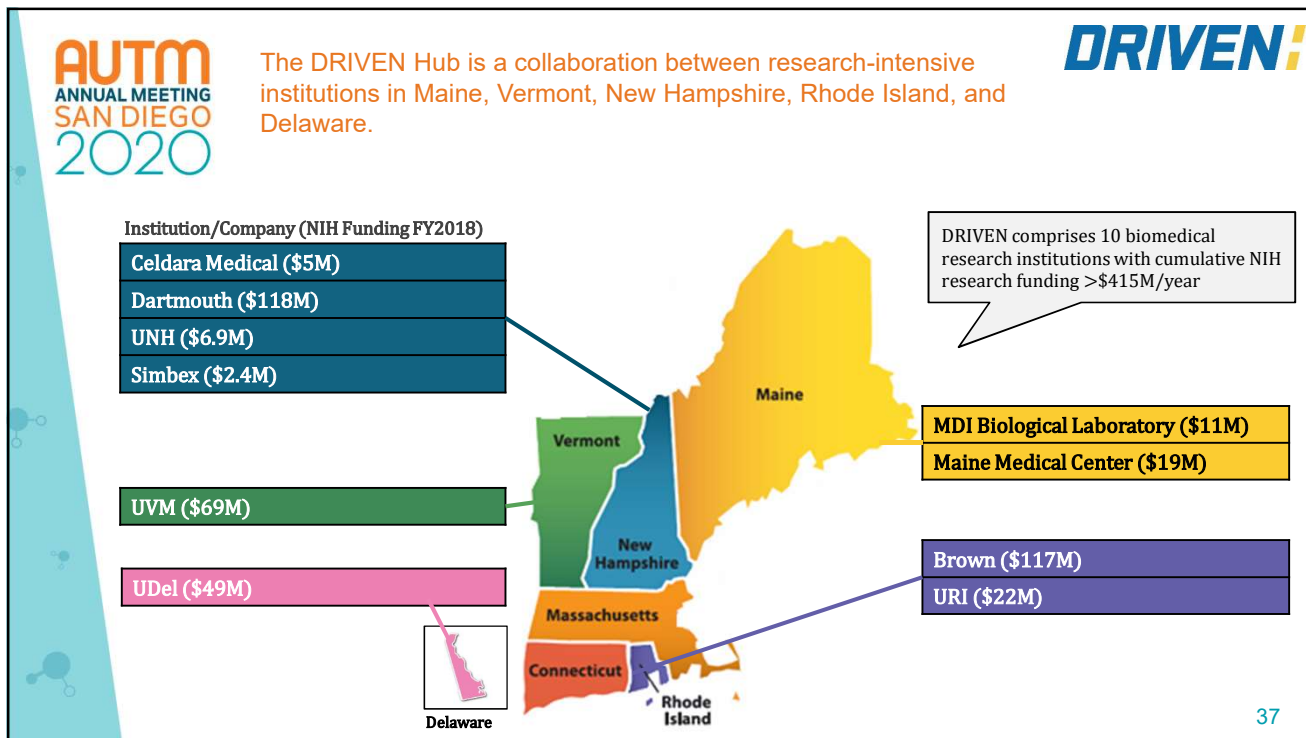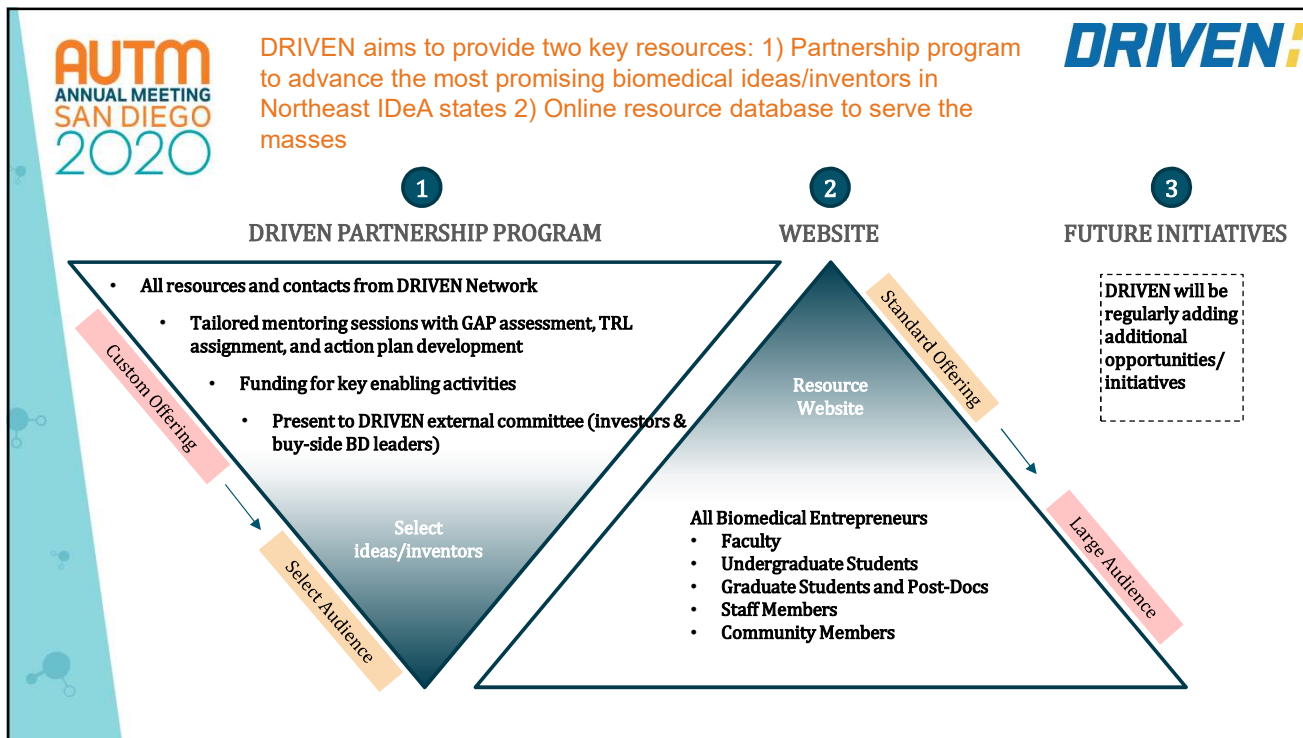**DRIVEN MISSION AND STRATEGIC GOALS**

The mission of the DRIVEN Accelerator Hub is to increase QALYs (quality-adjusted life years) and save lives.

To create QALYs and save lives by:

➢ Increasing the number of quality medical startups in the Northeast

➢ Decreasing their time to market

➢ Increasing their probability of success

The DRIVEN Hub is a collaboration between research-intensive institutions in Maine, Vermont, New Hampshire, Rhode Island, and Delaware.

DRIVEN comprises 10 biomedical research institutions with cumulative NIH research funding >$415M/year

Institution/Company (NIH Funding FY2018)

Celdara Medical ($5M)
Dartmouth ($118M)
UNH ($6.9M)
Simbex ($2.4M)

MDI Biological Laboratory ($11M)
Maine Medical Center ($19M)

UVM ($69M)

Brown ($117M)
URI ($22M)

UDel ($49M)

Delaware

37

DRIVEN has assembled an External Advisory Committee (EAC) made up of experts from angel and venture capital funds, philanthropic funds, and in-licensing professionals from biotech and pharma.

Venture Capital / Philanthropic Funds

Biotech / Pharma

ATLAS VENTURE
Biograph Venture Development
BROADVIEW VENTURES INC
COWEN HEALTHCARE INVESTMENTS
Davis ADVISORS

DEERFIELD Advancing Healthcare®
Mass Medical Angels | MA2
MPM
RA CAPITAL
springhood

agios
bluebird bio
Johnson & Johnson
Lilly
Roche

38

DRIVEN aims to provide two key resources: 1) Partnership program to advance the most promising biomedical ideas/inventors in Northeast IDeA states 2) Online resource database to serve the masses

1 DRIVEN PARTNERSHIP PROGRAM

2 WEBSITE

3 FUTURE INITIATIVES

- All resources and contacts from DRIVEN Network
  - Tailored mentoring sessions with GAP assessment, TRL assignment, and action plan development
  - Funding for key enabling activities
    - Present to DRIVEN external committee (investors & buy-side BD leaders)

Custom Offering

Select Audience

Select ideas/inventors

Standard Offering

Resource Website

All Biomedical Entrepreneurs
- Faculty
- Undergraduate Students
- Graduate Students and Post-Docs
- Staff Members
- Community Members

Large Audience

DRIVEN will be regularly adding additional opportunities/ initiatives

---

DRIVEN Grants Program

DRIVEN PARTNERSHIP PROGRAM
Process: DRIVEN partner representatives call for applications.
Nominees: Receive multifaceted and actionable feedback on their business/development plans.
Awardees: On a bi-annual basis, the DRIVEN Hub selects up to 3 teams/ideas to partner with.
- 3-month
- GAP assessment
- Action plan formation
- DRIVEN resources
- Present to DRIVEN EAC

Conclusion: invited to apply for the Acceleration Fund.

DRIVEN SEED FUNDS

1) Acceleration Fund: ($50,000). to accomplish strategic goals, undertake key value-driving experiments**; ie- "Move the Needle"**

2) Ignition Fund: ($25,000): For innovations or discoveries that need additional experimentation before company formation or out-licensing is warranted.

AUTM ANNUAL MEETING SAN DIEGO 2020

DRIVEN

SELECTED TECHNOLOGIES ARE SOURCED FROM DE, NH, AND ME

Clairways	Extrave Bioscience	Novo Biosciences
Clairways has develop a small, chest-worn lung function sensor that provides continuous, burden-free monitoring of lung function. The company initially aims to serve clinical trials for new drugs treating chronic respiratory disease (i.e. asthma, COPD, CF).	Extrave Bioscience has developed a platform technology for drug delivery utilizing extracellular vesicles (exosomes). Their initial focus is to develop the delivery of dystrophin protein and mRNA via extracellular vesicles to patients suffering from Duchenne Muscular Dystrophy (DMD).	Novo Bioscience is a preclinical drug discovery company focused on advancing its lead asset MSI-1436 to patients with ischemic heart damage and heart failure. The team has shown remarkable regenerative capacity of this small molecule in regenerating muscle in zebrafish and mice; currently, pig studies are underway.
clairways	extrave BIOSCIENCE	Novo Biosciences Unlocking Our Regenerative Power™

Three technologies were selected out of **16 nominees** for the Class of 2019 of the DRIVEN Partnership Program.

AUTM ANNUAL MEETING SAN DIEGO 2020

FOSTERING IDeA ENTREPRENEURSHIP
iTREP

Summer Course

Webinars

Travel Awards

Consulting

Internships

The program **iTREP** (NIH R25 NIGMS) provides education and skill development in entrepreneurship. No previous experience required.

Coming Soon

BIO COLLABORATIVE

Http://med.uvm.edu/itrep/

DRIVEN has two online offerings: 1) A nation-wide resources database for biomedical entrepreneurs and 2) a DRIVEN homepage containing information about DRIVEN offerings and contacts.

https://www.drivenacceleratorhub.com

SHARPhub

The IDeA Central Region Commercialization Hub

#AUTM2020

The SHARPhubTeam

SHARPhub

AUTM ANNUAL MEETING SAN DIEGO 2020

bbc Entrepreneurial Training & Consulting

KU THE UNIVERSITY OF KANSAS

Nebraska Medical Center | UNIVERSITY 1 OF

UND UNIVERSITY OF NORTH DAKOTA

The UNIVERSITY of OKLAHOMA

UNIVERSITY OF SOUTH DAKOTA

Gaps Identified/Central Region

SHARPhub

AUTM ANNUAL MEETING SAN DIEGO 2020

Rarely are there more than 5 new startups per year in any Central Region State.

- Few programs to drive and assist entrepreneurial activity at universities
- Low SBIR/STTR funding rates
  - 36 Total NIH SBIR/STTR Awards in Central Region since 2017
- Lack of experienced management talent – particularly in life sciences
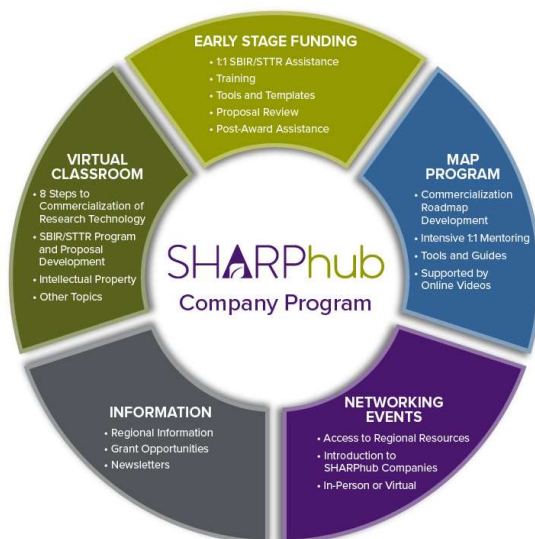
SHARPHUB GOAL

- Increase commercialization of NIH funded research in the IDeA Central Region
  - Formation of Startup Companies
    - Working with TTOs
    - Entrepreneurial Education
  - Using SBIR/STTR Program as early financing
    - Training and consulting to increase number of NIH SBIR/STTR awards in Central Region

SHARPHUB COMPANY PROGRAM

- Training provided in each state; 37 sessions (32 live, 5 virtual)
- Proposal and business mentoring of 30 cohort companies, 14 SBIR proposals submitted
- 20+ hours of webinar content
- Mentoring, Assessment and Planning (MAP) Program with intense 1:1 mentoring for Commercialization
- Networking with other SHARPhub companies and regional resources
- Information resources

SHARPHUB RESOURCE NAVIGATOR

- Connect the community
- Identify/search bio entrepreneurial resources
- Empower the ecosystem by engaging, listening, responding and collaborating to solve problems and fill gaps
- Measure impact

GET INVOLVED IN SHARPHUB

- University Partners
- Mentors
- Investors
- Academic Entrepreneurs
- Management Talent

Contact:

becky@bbcetc.com
734-930-9741

www.sharpideahub.com
@sharpideahub
SHARPHUB

SHARPhub

Regional IDeA Hubs for Biomedical Technology Transfer Acceleration

GAPS – SOLUTIONS – NEEDS DISCUSSION

Moderators: Ian McClure, Executive Director, Office of Technology Commercialization

Liz Knapp, Program Manager, Southeast XLerator Network

University of Kentucky

IDeA vs (Highly Funded) States

IDeA States
23 States + Puerto Rico
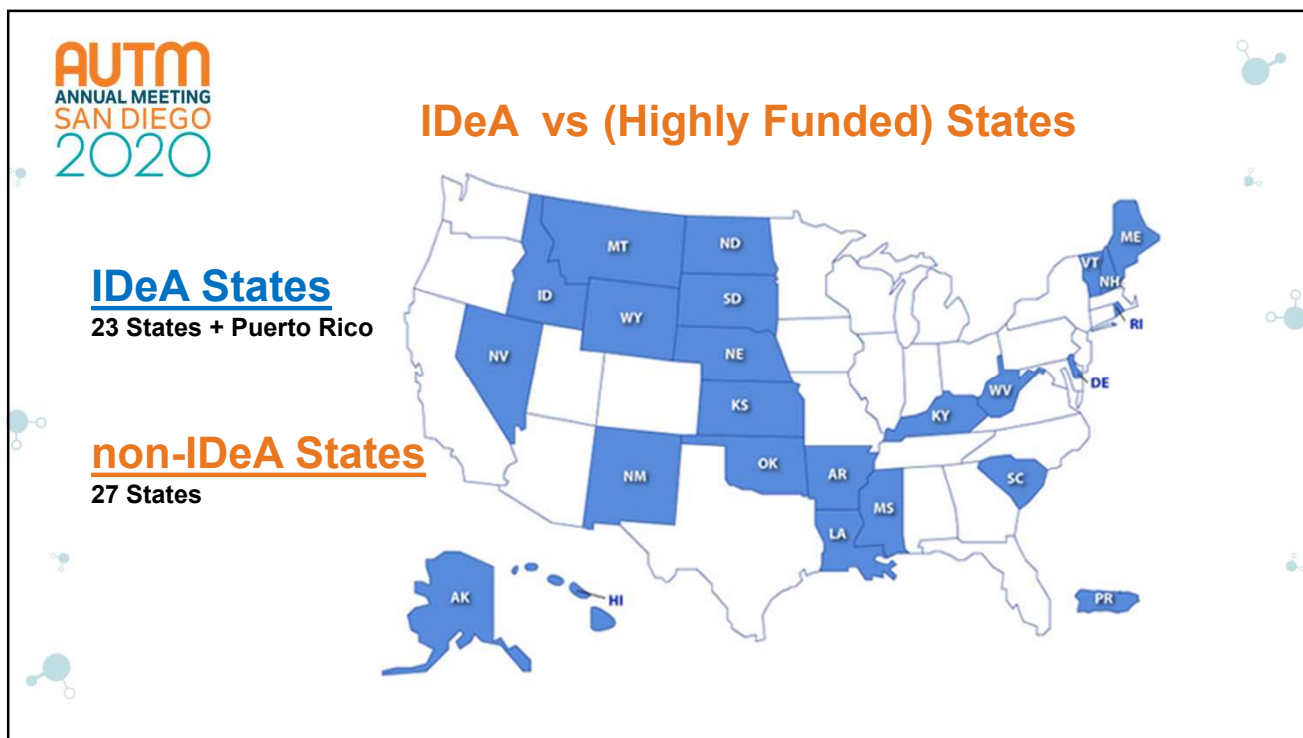
non-IDeA States
27 States

(**2017**)

PATENTS

Avg Reported / Institution

	IDeA (20 States)	non-IDeA (27 States + DC)	
PATENTS	29	98	Newly Filed
	4	16	Foreign
	22	75	Provisional
	15	48	Issued

Source: AUTM STATT Database, 2017 Licensing Survey of 186 US Research Institutions

AUTM
ANNUAL MEETING
SAN DIEGO
2020

PATENT POWER

4,000%

More Likely to Raise
Private Capital with a
Patent

AUTM
ANNUAL MEETING
SAN DIEGO
2020

(**2017**)

START-UPS

Avg Reported / Institution

	IDeA (20 States)	**"Other"** (27 States + DC)	
Start-ups	3	7	New
	20	44	Operational in 2017
	27%	18%	with SBIR/STTR Funding

% of reporting Institutions having at least 1 SBIR/STTR Grant

| **Products** | 2 | 7 | New Licensed Technologies |

Source: AUTM STATT Database, 2017 Licensing Survey of 186 US Research
Institutions

MOST COMMERCIALLY ACTIVE
IDeA-STATE UNIVERSITIES

(2017)

(those appearing most often in the Top 5 for outcome measures
of tech transfer activity among reporting IDeA States)

**are the ones with the
most Research Funding**

IDeA State Universities	# of Top 5 Appearances
Univ. of Nebraska	16
Louisiana State University System	14
Univ. of Kansas	10
Univ. of New Mexico/Sci. & Tech. Corp.	10
Univ. of Kentucky Research Foundation	7
Montana State Univ.	6
Univ. of New Hampshire	6
Univ. of Arkansas Fayetteville	5
Medical Univ. of South Carolina	4
Univ. of Louisville	4

IDeA State Universities	State	Tot Res Exp
Univ. of Nebraska	NE	$458,961,829
Louisiana State University System	LA	$330,227,000
Univ. of Hawaii	HI	$299,027,891
Univ. of Kentucky Research Foundation	KY	$292,018,222
Medical Univ. of South Carolina	SC	$250,345,000
Univ. of New Mexico/Sci. & Tech. Corp.	NM	$246,595,239
Mississippi State Univ.	MS	$240,972,000
Univ. of Kansas	KS	$236,146,681
Univ. of Oklahoma All Campuses	OK	$230,114,248
Univ. of South Carolina	SC	$208,670,000

Source: AUTM STATT Database, 2017 Licensing Survey of 186 US Research Institutions

GAPS

XLerator *Network*

Gaps, Barriers, Blockers
1. **Entrepreneurship training & education resources** for STEM faculty & graduate students (90% struggle with commercialization activities – grant writing & execution)
2. **Mentors & Subject Matter Experts (SMEs)** (Individual, Peer to Peer)
3. **Collaboration across the region/in the network** (grants, research / knowledge expertise, laboratories & high dollar equipment)
4. **Pipeline of discoveries**, which requires researcher education on IP & commercialization**; appropriate release time for research**
5. **Ownership issues around entrepreneurship programs** (business schools vs. academic stove pipes)
6. **Access to Capital & expertise** relative to obtaining commercialization funding (SBIR/STTR, Angel & Venture Capital)
7. **Promotion & Tenure policy issues** that get in the way of commercialization
8. **Technology transfer gaps** for institutions without OTT departments

AUTM
ANNUAL MEETING
SAN DIEGO
2020

SOLUTIONS

XLerator*Network*

Solutions For Commercialization Support
1. **Commercialization Curriculum**
2. **Mentors & Subject Matter Experts**
3. **Collaboration**
4. **Share IP Best Practices**
5. **SBIR/STTR Grant Writing**
6. **Share Best Practices** re: tenure policies that align with commercialization
7. **Executive and Fundraising Mentorship**
8. **TTO/Legal Support for Hubs**
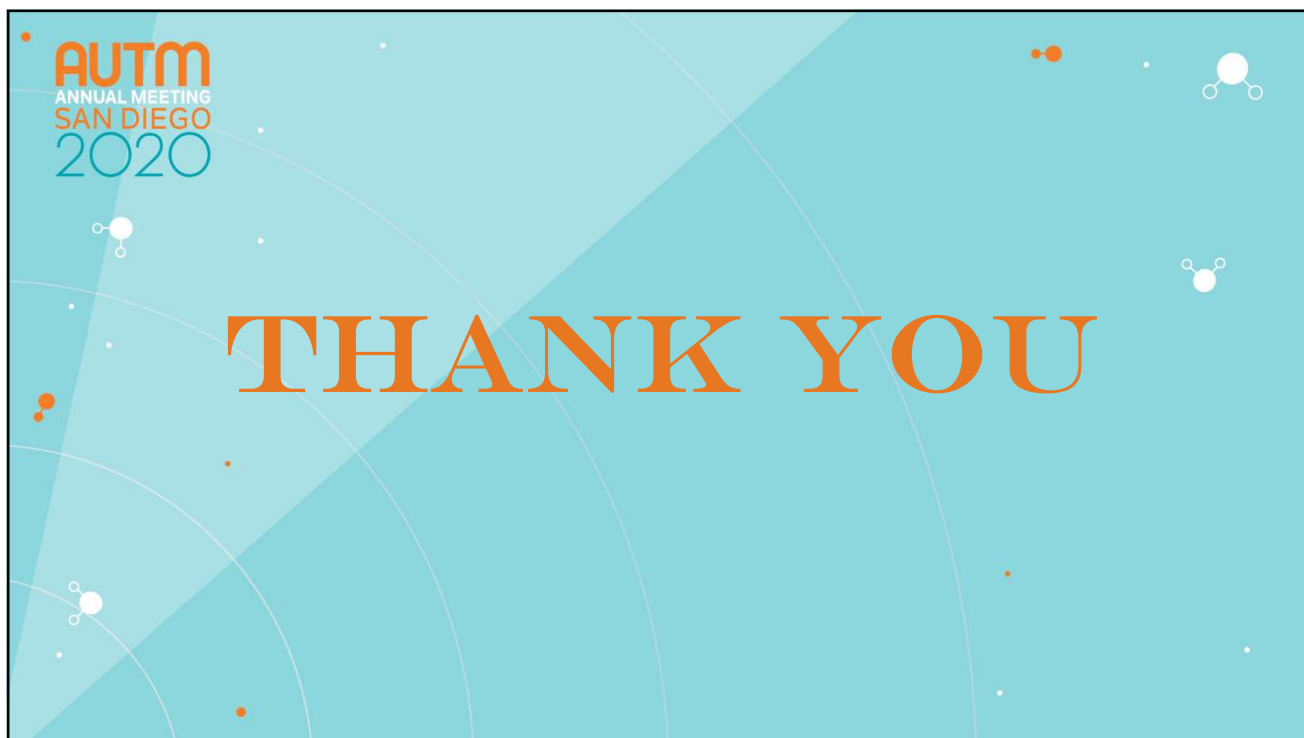
AUTM
ANNUAL MEETING
SAN DIEGO
2020

DISCUSSION

THANK YOU

GIVE:

- What are your Hub/Region's **top 3 Assets**?

  (ex: Research area, lab space, programs)

AUTM
ANNUAL MEETING
SAN DIEGO
2020

GET:

- What do you hope to achieve through your Region's Hub ?

  (ex: increase in patent applications, SBIR/STTR applications, start-ups)

AUTM
ANNUAL MEETING
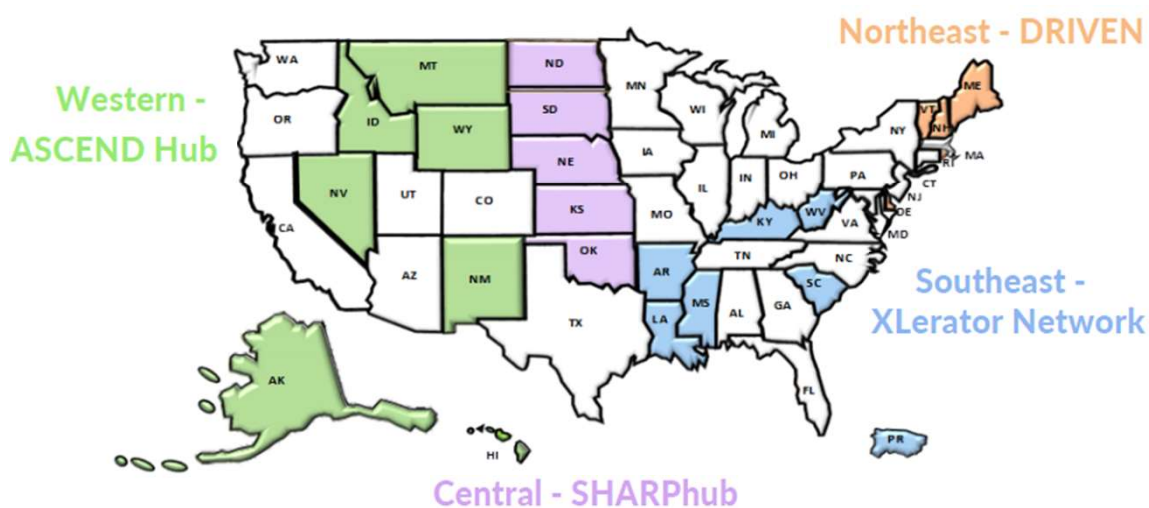SAN DIEGO
2020

NEED:

- What are your Hub/Region's **top 3 Needs**?

  (ex: areas of expertise, curriculum, policy change)

NEXT STEPS

- Collaboration Opportunities?
- Lessons Learned ?
- Phase III …….

……To be continued

NIGMS: Regional IDeA (4) Tech Transfer Hubs

Northeast - DRIVEN

Western - ASCEND Hub

Southeast - XLerator Network

Central - SHARPhub

LICENSES

Avg Reported / Institution (**2017**)

	IDeA (20 States)	"Other" (27 States + DC)	
Licenses	14	39	Executed in 2017
	95	305	Active
w/Options (types)	5	13	Exclusive
	10	27	Non-Exclusive
	1	4	with Equity
w/Options (to)	5	9	Startups
	8	24	Small Companies
	6	14	Large Companies

AUTM STATT SURVEY   (2017)

- 312 institutions invited to participate
  .
- **186 institutions** completed surveys

- Respondents included:
  - **161** Universities
  - **24** Hospitals & Research Institutions
  - **1** Technology Investment Firm

STatistics
Access for
Technology
Transfer

2017 AUTM Survey
Unique Responders from:

IDeA States

20 States

- 36 Universities (only)

| Total: 36 Institutions |

"Other" States

27 States + DC

- 121 Universities
- 24 Hospitals & Research Institutes
- 1 Tech Investment Firm

| Total: 150 Institutions |