AHEAD was established to create world recognized center for human performance research, technology and commercialization with the objectives to:

- Expand human systems research portfolio in Ohio
- Create environment to attract top research talent
- Partner to attract private investment
- Collaborate with AFRL and NASIC to add mission value
- Increase Ohio’s share of federal research contracts
- Create new high value jobs in the Human Performance cluster
- Protect the AFRL footprint and position the organization for future BRACs
Objective:
Grow and support human performance in Dayton, State of Ohio, and surrounding region

WSRI as Lead Coordinator

OUTCOMES

Workforce Development
Science and Technology Job Creation
Technology Transition and Commercialization

State of Ohio
Industry
Other Gov’t
AFRL

• NASIC
• DARPA
• IARPA
• NASA
• Etc.

November 18, 2014
# AHEAD Collaborators

## Academia
- Carnegie Mellon University
- Case Western Reserve
- Central State
- George Mason University
- Georgia Tech
- Georgia Tech Research Institute
- Clark State
- Cleveland State
- Kent State
- Lorraine County Community College
- MIT
- Ohio State University
- Ohio University
- Penn State
- Sinclair Community College
- University of Akron
- University of Cincinnati
- University of Dayton
- University of Dayton Research Institute
- University of Illinois
- University of Michigan
- University of Toledo
- Western Kentucky
- Wright State University

## Government
- AFRL
- ARL
- City of Fairborn
- City Wide Development
- DARPA
- Dayton Development Coalition
- Greene County
- Hearing Center of Excellence
- IARPA
- ONR
- LCMC
- NAMRU-D
- NASA Glenn
- NASA Langley
- NASIC
- Ohio Aerospace Institute
- SOCOM
- State of Ohio
- ODS
- OBOR
- OTFP
- ODOT
- Transportation Security Administration

November 18, 2014
AHEAD Collaborators

Industry

361 Interactive
Advratech
AIS
AK Systems
Aptima
ATIC
Austen BioInnovation Institute
in Akron
Avetec
Azimuth
Ball Aerospace
Black River Systems
Booz Allen Hamilton
C1 Technologies
CAMO
Cleveland Clinic
Cornerstone Research
Crown
Cubic
Dayton Children's
Design Interactive
DRA

eDaptive
EWA
Greater Dayton Area Hospital Association
Henry M. Jackson Foundation
iDialogs
IHMC
IncludeFitness
Ischemia Care
IST
John Deere
Kettering Health Network
Kaleidoscope
KLSS
L3 Communications
Leidos
Lumir
MacAulay Brown
Matrix Research
Net-Scale Technologies, Inc.
Orbital Research
Perceptronics Solutions
Premier Health
Radiance Technologies
Raytheon
RCS
Riverside Research Institute
Roth Cognition
SAIC
Select Tech
SOAR Technologies
Spectral Energies LLC
SRA
SRI International
TKDC
Teledyne Scientific
Tenet 3 Technologies
The Charles Starks Draper Laboratory
The Perduco Group
Titus Human Performance Solutions
UES
Vecna
Wright Brother's Institute
Zygo Digital

November 18, 2014
Workforce Development Activities

- **APDC - Aerospace Professional Development Center**
  - Focus on Ohio aerospace and defense employers to fill their critical needs
  - Ensuring Ohio has a skilled workforce that meets the needs of employers.

- **ATIC - Analyst Testbed Hosting and Support**
  - One of a kind multi-level secure workforce training testbed in US.
  - 2000 Students from 28 Different States and most stayed in Ohio.

- **SOCHE - Hiring annually 700-900 + interns across region**
  - AFRL, AFIT, and Multiple Businesses
  - Sinclair College, Clark State College, Cedarville University, Central State University, University of Dayton, Wright State University + Many others

- **STEM Collaborative - Regional STEM Coordination**
  - Collaboratively working with Industry and Government stakeholders to implement priority solutions, to leverage resources, and to advocate for and support ways to enhance STEM programs and talent across 14 counties

- **Tenet3 - Cyber Workforce Development**
  - Developing Cyber Talent that is directly supports Sinclair College, University of Dayton and Wright State University
Jobs Creation to Support WPAFB

- IST - Modeling and Simulation for Unmanned Systems
  - Supporting multiple AFRL Directorates
- LEIDOS - Analyst Testbed and Creation of Blue Devil Test Lab
  - Only multi-level secure sensor exploitation facility in US
- Perduco - Biomedical Data Analytics
- Radiance - SOCOM Green on Blue Human Assessment System
  - Transitioning AFRL Technologies to SOCOM
- Selectech - RPA Operations and Support
- SRA - Analyst Testbed Support and Administration
- Ohio UAS Test Center - Modeling and Simulation and Test Support
Strategic Hires in the Region to Support Job Creation

- Dr. Pete Trautman (Cal Tech, and Boeing Seattle (Matrix)) - Autonomy and Robotics
- Dr Tim Broderick (WSRI) University of Cincinnati and DARPA - Biotech
- Dr Ali Reiter (ATIC) and Dr Chad Reiter (WSRI) Penn State and DARPA - Physiology and Biology
- Dr Cassie Barlow (APDC) USAF Retired
- Krissy Howard (Perduco) - Bio-science and Data Analytics
- Dr Ron Storm (Perduco) - Human Performance Assessment and Physiology
- Mike Fisher (Perduco) - IT and Bioinformatics
- Chris Evan (Cubic) - Systems Integration in Simulated Environments
- Tim Patton (Cubic) - Psychology and LVVC
- John Jannazo (Cubic) - Systems Integration in Simulated Environments
- Todd Norell (WSRI) DARPA/IARPA Classified Programs
- Bruce Howard (WSRI) DARPA/IARPA/SOCOM
- John Nehrbass (WSRI) - Imaging Processing and Analysis
- Kelly Dungan (WSRI) Computational Electromagnetics
- Dr Mike Weisend (WSRI) - Neuroscience
- Buddy Husaic (Advratech) - Big Data
- Joe DaPore (Advratech) - IT Development
- Andrew Berger (Advratech) - IT Development
Strategic Hires in the Region to Support Job Creation

- James Gates (Advratech) - Business Development
- Gene Price (Advratech) - Big Data
- Brandon Hurt (Advratech) - Big Data
- Becky Mescher (AHEAD) - Communications and Event Management
- Colin Morrow (Radiance Technologies) - Business Development
- Brendan Rice (Radiance Technologies) - IT Development
- Dr. Jeff Smigelski (SOCHE) - Mathematics
- Dr. Mike Cox (WSRI) - Human Cognition
- Jess Kane (WSRI) - Biomedical Engineering and Anatomy
- Dave Malek (WSRI) - Psychology
- Ryan Eder (Include Fitness) - Exercise Physiology and Engineering
- Mark Prevost (Include Fitness) - Business Development
- Jeff June (Ischemia Care) - Bio-testing
- Roger Edwards (Accelerant) - Entrepreneur in Residence
- Ken Edge (AIS) - Cyber Security
- Gogi Kumar (Dayton Children’s Hospital) - Neurologist
Human Performance Related Job Creation with Wright Patterson AFB

- This is all new business for the region.
  - The Ohio based human performance awards increased nearly 50%.
- Directly supported the recruitment, development, and retention of key talent in the region to support this human performance growth.
Human Performance Related Job Creation with Wright Patterson AFB

- **Analyst Testbed (ATB) Effort**
  - New Effort Awarded in FY12 for $5M
  - Team includes: WSRI, 361 INT, Aptima, ATIC, Ball, Blackwater, BAH, CAMO, Lumir, OSU, Radiance, SAIC, SRA, RCS, UDRI

- **Human Machine Teaming (HMT) Follow-on ATB Effort**
  - New AFRL/RH $43M Contract. Proposal Ongoing
  - Team includes: WSRI, 361 INT, Aptima, ATIC, Ball, Blackwater, BAH, CAMO, Lumir, OSU, Radiance, SAIC, SRA, Raytheon, RCS, Roth Cognition, SRA, TDKC, UDRI

- **Remotely Piloted Aircraft (RPA) Effort**
  - New Effort Awarded in FY 12 for $5M
  - Team includes: WSRI, APTIMA, ARA, BAH, IHMC, IST, SAIC, Selectech, SOCHE
State of Ohio through the Third Frontier Commission and Ohio General Assembly have awarded $27M to Wright State University for:

- Developing a new business model to expand research (AHEAD)
- Workforce development
- Job creation with Wright-Patterson Air Force Base
- Tech transition and commercialization

Breakout of $27M of Funding

- $5M of Third Frontier Research and Development Capital Grant/Loan in FY12
  - Created Analyst Test Best to support AFRL Human Performance Assessments
  - Built the UAV Mobile Test Environment (MTE) for Human Sciences Research
  - Established research facilities and equipment to support Human Performance Research
- $3M of ODS in FY12/13 and FY14/15
  - Used for workforce development, commercialization, and UAS Test Center Support
- $8M of OBR in FY12/13 and FY14/15
  - Used for job creation and strategic hires to better support Wright Patterson AFB needs
  - Supporting tech transition and commercialization in the Human Performance area
  - Catalyst and fuel for the development of the AHEAD Business Model
## Overall Summary

### The return on state investment to date and projected June 2015:

<table>
<thead>
<tr>
<th>Activity</th>
<th>2010 - 2014</th>
<th>June, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Federal R&amp;D Contracts to Ohio</td>
<td>$67 million</td>
<td>$167 million</td>
</tr>
<tr>
<td>Est Private Sector Investment in Ohio</td>
<td>$115 million</td>
<td>$150 million</td>
</tr>
<tr>
<td>New Jobs to Ohio</td>
<td>435</td>
<td>575</td>
</tr>
<tr>
<td>Est Annual Payroll to Ohio</td>
<td>$35.7 million</td>
<td>$47.2 million</td>
</tr>
</tbody>
</table>

Activities are ongoing to expand this collaborative business model across other AFRL, LCMC, AFMC, and NASIC directorates and technology areas.

- Data Analytics, Unmanned Systems, Cyber, ISR, Sensors, Defense Intelligence, Materials and Manufacturing, Geospatial, and Aerospace Systems
Tech Transition and Commercialization

Greater Dayton Area Hospital Association Led Example

Health and Human Performance Accelerator
(Starting Point)

Health and Human Performance Executive Committee

Health and Human Performance Accelerator Execution Team

Hospital Innovation Center

DDC

AHEAD

Advratech (Students)

WBI
Overview of Accelerator and Hospital Innovation Center

- GDAHA, AHEAD, The Entrepreneur Center and the Dayton Development Coalition are supporting the standup of a commercialization ecosystem and accelerator to support the transition of research from academic and government structures to commercial outcomes.

- GDAHA will also establish the Hospital Innovation Center capability to identify problems and intellectual property which reside within the hospital system:
  - Will operate inside the Accelerator construct
  - Role is focused on supporting the Hospitals and GDAHA
Support for The Ohio Federal Military Jobs Commission

Scope of Work

- Develop Ohio FM Jobs Commission (OFMJC) Organizational Structure and Five-Year Financial Plan
- Develop Ohio Research and Tech Transition Innovation Initiative
- Expand Small Business Federal Contracting
- Create Workforce Placement Center for Federal and Military Jobs
- Develop Federal Facility Retention and Expansion Plan

First Commission Meeting Scheduled for Nov 14ᵗʰ
Final Report is Due March 31ˢᵗ, 2015