Agenda

10:00 Call to Order
   Approve 04/10/2013 Meeting Minutes
   David Goodman (Chair)

10:05 Entrepreneurial Assistance Programs – Update
   Mihaela Jekic

10:10 New Program RFPs – Update
   Norm Chagnon

10:15 Portfolio Manager Introduction
   Update on Battelle Analyses
   Keith Jenkins

10:30 Award Decisions
   Technology Validation and Start-Up Fund
   YourEncore
   Innovation Platform Program
   National Academies
   Third Frontier Internship Program
   Invantage Group

11:55 Open Innovation Incentive Program
   Guest Presentations
   Mihaela Jekic
   yet2.com; NineSigma; Oatey

12:20 Other Business

12:30 Adjourn
Entrepreneurial Assistance Programs
Entrepreneurial Signature Program Update
Incubation Program Update

• Recap from last Commission meeting

• Concept
  – Open, competitive RFP with external merit review
  – Blend of operating expenses and direct funding for most promising companies

• Follow up

• Proposed direction
New Programs
Request for Proposals
New Programs – Request for Proposals

• Commercial Acceleration Loan fund

• Technology Asset Grants

• Technology Commercialization Centers
Portfolio Manager – Keith Jenkins

Battelle Analyses
Biography

• 8 years at Battelle
  – Market and competitive research, technology evaluation, business case development, due diligence
  – Degrees from Northwestern and Ohio State

• Third Frontier metrics
  – New approach based on Metrics Framework
  – Overall and individual projects / programs
  – Need to tell a better story
Battelle Analyses

• Updated assessment of original 8 growth opportunity areas
  – Market update for 5 areas
    • Advanced materials, aero-propulsion power management, medical technology, sensing/automation systems, and situational awareness/surveillance systems
  – More detailed market trends and Ohio position profile for 3 areas
    • Fuel cells and energy storage, software applications (data analytics, health IT, etc.) and solar photovoltaics

• Detailed assessment of new opportunities
  – Unconventional oil & gas (shale) and agbiosciences
  – Soliciting input from JobsOhio for additional areas to be considered

• Updated OTF Analysis of Performance (OBR 2009)
Technology Validation and Start-Up Fund
Purpose

• Create economic growth in Ohio based on start-up companies that commercialize technologies developed by Ohio institutions of higher education and other Ohio not-for-profit research institutions

• Designed to support:
  – technologies developed at eligible Ohio research institutions that need to be validated/proven and will have the ability to support a start-up company
  – Ohio start-up and young companies that license these validated/proven technologies from Ohio institutions
Program Basics

• **Lead Applicants:**

  **Phase 1** – Ohio higher education institutions or other Ohio not-for-profit research institutions with selection by the institution’s Technology Transfer Office. Awards of up to $50,000.

  **Phase 2** – Ohio start-ups and young, emerging Ohio companies that will execute an exclusive license with one of these institutions. Awards of up to $100,000.

• **Funding:** $6 million

• **External Evaluator:** YourEncore
Technology Validation and Start Up Fund - Round 4
Overview

- Total grant dollars recommended increased to $863,636 vs. Round 3
  - $950,000 in Round 1, $900,000 in Round 2, $610,000 in Round 3
  - Round 4 increase driven by greater number of applications vs. Round 3

**Phase 1 Applications**

- April: 20
- August: 15
- December: 10
- June: 5

**Phase 2 Applications**

- April: 18
- August: 10
- December: 6
- June: 2
Overview

- 30% of grants submitted this round recommended for approval (12 of 40)
  - 35% recommended in Round 1, 52% in Round 2, 44% in Round 3
- Quality of proposal writing decreased from previous rounds, likely needing greater involvement from university TTO’s
- Proposals continued to be strong technically
- Opportunity for improvements in business rationale
  - Business Cases are in need of guidance and review prior to submission
  - Lacking clear understanding of potential market dynamics and size
- Strongly encourage potential resubmissions to take advantage of the opportunity to debrief
## Phase I

### Summary of Recommendations

<table>
<thead>
<tr>
<th>PROPOSAL #</th>
<th>Licensing Institution</th>
<th>PROJECT TITLE</th>
<th>Generation of Proof to be Licensed</th>
<th>Project Plan / Team</th>
<th>Independent 3rd Party Review</th>
<th>Reasonable Path to Mkt</th>
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Phase 1 Proposals Recommended for Funding

- 13-402: Kent State University, Easily Configurable, High Resolution, Patterned Liquid Crystal Alignment Layers via Ink-jet Printing of Metal Nanoparticles and Semiconductor Quantum Dots, $46,527
- 13-407: The University of Toledo, Nano-biosensor for Infection in Tissue, $25,000
- 13-410: The University of Toledo, Non-toxic Antibacterial Surfactant/Microgel Formulations, $44,493
- 13-413: Case Western Reserve University, Image-based Risk Score for Predicting Response to Therapy for ER+ Breast Cancer Patients, $50,000
- 13-416: Austen BioInnovation Institute in Akron, Ultra Low Volume Syringe/Pipette, $49,250
- 13-420: Kent State University, Fast Electrooptic Switches Based on Liquid Crystals, $50,000
# Phase II

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<td>13-0439</td>
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<td>The Readiness Test</td>
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<td>University of Toledo</td>
<td>IRISense LLC</td>
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</tbody>
</table>
Phase 2 Recommendations for Funding

- 13-427: Nanofiber Solutions, Development of a Tissue Engineered Small Intestine, $100,000
- 13-429: Folio Photonics, LLC, Prototype Development of a Coextruded Multilayer Polymer Film for Optical Data Storage, $100,000
- 13-433: Lucintech Inc., Transparent PV Window Prototypes, $100,000
- 13-434: Apto Orthopaedics, A Non-invasively Adjustable Implant for Treatment of Early Onset Scoliosis, $100,000
- 13-436: LARAD, Inc., Virus-Like-Particle (VLP) Vaccines, $100,000
Combined Approved/Rejected by Institution

Phase 1 Cumulative Through 4 Rounds

Phase 1 Approved/Rejected by Institution

- Kent
- OSU
- Akron
- UC
- Toledo
- Wright
- BGSU
- CWRU
- OU
- Miami
- CCHMC
- Clev Clinic
- Austen Bio
- Dayton
- Nat Child

Rejected
Approved
Combined Approved/Rejected by Institution

Phase 2 Cumulative Through 4 Rounds

Phase 2 Approved/Rejected by Institution

- Kent
- OSU
- Akron
- UC
- Toledo
- Wright
- CWRU
- BGSU
- OU
- Miami
- CCHMC
- Clev Clinic
- Austen Bio
- Dayton
- Nat Child

Legend:
- Red: Rejected
- Green: Approved
Visit our website at: www.yourencore.com
Innovation Platform Program
Purpose

To link the development and innovation capabilities and capacities of an already established Innovation Platform at an Ohio college or university or not-for-profit research institution to specific late stage development and innovation needs of Ohio client companies.

Innovation Platform – an already existing capacity that incorporates unique technology capabilities and strengths, talent, equipment, facilities, engaged industry partners, a track record of research commercialization and innovation, intellectual property, and other resources in a particular technology area that collectively can serve as a vehicle for significant, industry-defined and directed opportunities through the development and commercialization of new products and innovations.
FY2013 Proposals

• **27** proposals submitted  - **10** interviewed  - **6** recommended (green)

• Proposals based in one or more of 9 technology focus areas:
  - Advanced Materials (11)
  - Agribusiness/Food Processing (2)
  - Medical Technology (12) (3)
  - Sensing/Automation (3) (1)
  - Solar Photovoltaics (1)
  - Aeropropulsion Power Management (2)
  - Fuel Cells & Energy Storage (3)
  - IT for business/healthcare (4) (1)
  - Situational Awareness Surveillance (2) (1)

• Applicant institutions:
  - Case Western (4) (2)
  - Cleveland Clinic (3)
  - Cleveland State Univ. (1)
  - Health Foundation of Cincinnati (1)
  - Kent State (1)
  - OSU (8) (2)
  - Summa Health Systems (1)
  - University of Akron (3)
  - University of Dayton (2) (1)
  - University of Toledo (2) (1)
  - Wright State Univ. (1)
Program Basics

• **Lead Applicants** - Ohio colleges or universities or an Ohio not-for-profit public or private research institution. Proposals must include collaboration with at least two or more Ohio for-profit companies as clients of the platform.

• **Funding**
  – $24 million available (FY13)
  – Award range of $1 – $3 million
  – 1:1 cash cost share, at least half of which must come from Ohio client companies

• **External Evaluator** - National Academies of Science
Review of Proposals to Ohio’s Third Frontier Program, 2012-2013: Innovation Platform Program (IPP) 2013

The National Academies
June 12, 2013
The National Academies bring together committees of experts in all areas of scientific and technological endeavors. These experts serve on a volunteer basis to address critical national issues.

The National Research Council, which operates under the auspices of the National Academies, is committed to providing elected leaders, policy makers, and the public with expert advice based on sound scientific evidence.
Committee Membership

T. S. Sudarshan, Chair, Materials Modification, Inc.
Viola L. Acoff, Univ. of Alabama
Catherine G. Ambrose, Univ. of Texas
David E. Aspnes (NAS), North Carolina State Univ.
Carol Cherkis, NewCap Partners
David E. Crow (NAE), Pratt and Whitney (ret)
J. Eric Dietz, Purdue University
Bruce Gitter, Indiana University School of Medicine
Jahan K. Jewayni, Independent Wealth Management Consultant
Hywel Jones, Independent Consultant
Mohammad A. Karim, Old Dominion University

Chester Kolodziej, Freedom Field Renewable Energy, Inc
Laura Mazzola, Wave 80 Biosciences
Trent Molter, Univ. of Connecticut
C. Bradley Moore (NAS), Univ. of California, Berkeley
Arthur L. Patterson, Managing Member, GTI
Shalini Prasad, Univ. of Texas, Dallas
Lloyd M. Robeson (NAE), Air Products and Chemicals (ret)
Subhash C. Singhal (NAE), PNNL
Katepalli R. Sreenivasan (NAS/NAE), NYU
Norman A. Wereley, Univ. of Maryland
Committee Membership

Committee of 23 includes:

- Working engineers, scientists, academics, investors, and businessmen and women
- 6 are elected members of the National Academy of Engineering (NAE) and/or the National Academy of Science (NAS)
- 3 financial analysts
- 5 Presidents or CEOs, 2 Vice Presidents, and 1 Executive Director of private (for profit) companies
- Geographically diverse: members are from all over the United States;
- 20 previously served on the 2012 IPP review
IPP Evaluation Criteria

Technical Merit & Plan
• Can the technical challenges be met?
• Are the project goals and objectives realistic?
• Does the proposal include a plan for beyond the 3-year time period?

Commercialization Strategy
• What are the specific value propositions of the different commercial applications?
• Is sufficient evidence provided to support the contention that the market values these benefits?
• Has the Innovation Platform already achieved at least proof of principle?
• How closely matched is the project with the existing or emerging supply chain’s capabilities?

Performance Goals
• What is the project’s impact on Ohio in job creation, personal wealth, new sales of products, and follow-on investment? Are the reported numbers realistic?
• How successful was the performance of the team on related prior OTF grants?

Experience and Qualifications
• Is leadership demonstrated in all critical phases of the proposal?
• Does the applicant team have the relevant experience to perform the work involved?
IPP Evaluation Criteria

Budget & Cost Share

**Budget:**

- Is the budget justified and adequate?
- Will a supermajority of OTF funds remain with the lead applicant?

**Cost Share:**

- Is the cost share necessary and reasonable? Does a majority of the cost share come from the clients?
- Does the cost share represent a specific new commitment, and is it in the form of cash?
- Is the cost share being used directly in support of the Innovation Platform?
- Is the cost share firmly committed, with no contingencies or conditions, from known sources and available to the Innovation Platform at the time of Proposal submittal?
## Scope of Submissions

<table>
<thead>
<tr>
<th>Lead Applicant</th>
<th># Submitted</th>
<th># Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Ohio State University</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Case Western Reserve University</td>
<td>4</td>
<td>2</td>
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<tr>
<td>Cleveland Clinic</td>
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<tr>
<td>University of Akron</td>
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<tr>
<td>University of Dayton</td>
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<tr>
<td>University of Toledo</td>
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<td>1</td>
</tr>
<tr>
<td>Kent State University</td>
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<td>1</td>
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<tr>
<td>Summa Health System</td>
<td>1</td>
<td>0</td>
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<tr>
<td>Health Foundation of Greater Cincinnati</td>
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<td>0</td>
</tr>
<tr>
<td>Wright State University</td>
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<td>0</td>
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<tr>
<td>Cleveland State University</td>
<td>1</td>
<td>0</td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>27</strong></td>
<td><strong>10</strong></td>
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</table>
# Evaluation of Proposals

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>TMP</td>
<td>Technical Merit and Plan</td>
</tr>
<tr>
<td>CS</td>
<td>Commercialization Strategy</td>
</tr>
<tr>
<td>PG</td>
<td>Performance Goals</td>
</tr>
<tr>
<td>EQ</td>
<td>Experience and Qualifications</td>
</tr>
<tr>
<td>BCS</td>
<td>Budget and Cost Share</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Exceeds Requirements of the RFP</td>
</tr>
<tr>
<td>M</td>
<td>Meets Requirements of the RFP</td>
</tr>
<tr>
<td>D</td>
<td>Does Not Meet Requirements of the RFP</td>
</tr>
<tr>
<td>Proposal (Lead Applicant)</td>
<td>Rank</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>13-329 Trusted Situational Awareness</strong> <em>(University of Dayton)</em></td>
<td>1</td>
</tr>
<tr>
<td><strong>13-327 Ohio Platform for Tomorrow’s Industrial Medical Imaging Systems and Equipment</strong> <em>(OPTIMISE)</em> <em>(Case Western Reserve University)</em></td>
<td>2</td>
</tr>
<tr>
<td><strong>13-301 Innovative Technology Platform for the Development of Spinal Devices of the Future</strong> <em>(University of Toledo)</em></td>
<td></td>
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<tr>
<td><strong>13-307 Intelligent Simulation Platform for Product Commercialization</strong> <em>(The Ohio State University)</em></td>
<td></td>
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<tr>
<td><strong>13-316 Commercialization of an Innovative Neuromodulation and Neurostimulation Technology Program</strong> <em>(Case Western Reserve University)</em></td>
<td>3</td>
</tr>
<tr>
<td><strong>13-333 The Ohio Sensor and Semiconductor Innovation Platform</strong> <em>(OSSIP)</em> <em>(The Ohio State University)</em></td>
<td></td>
</tr>
<tr>
<td>Proposal (Lead Applicant)</td>
<td>Technical Merit and Plan (TMP)</td>
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<tr>
<td>---------------------------------------------------------------</td>
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</tr>
<tr>
<td>Innovative Technology Platform of Carbon Based Nanomaterials/Composites (The Ohio State University)</td>
<td>D</td>
</tr>
<tr>
<td>Concussion Management and Reduction Program (Cleveland Clinic)</td>
<td>D</td>
</tr>
<tr>
<td>Electrochromodynamic Systems (Kent State University)</td>
<td>M</td>
</tr>
<tr>
<td>Smart Sensor System Design, Development, and Commercialization (University of Akron)</td>
<td>D</td>
</tr>
</tbody>
</table>
Recommended Proposals
**Goal**

- Deliver to market an open-architecture situational awareness system that will enable smaller SA companies to test and integrate their technologies.
- Incorporate cyber security metrics into the TSA system
- Enable demonstration of new SA technologies in partnership with the City of Dayton

**Funds Requested:** $3,000,000  
**Cost Share:** $3,088,388

<table>
<thead>
<tr>
<th></th>
<th>State Funds</th>
<th>Cost Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woolpert</td>
<td>$1,050,000 (Personnel, Indirect)</td>
<td>$2,150,000 (Indirect, Equipment, Personnel)</td>
</tr>
<tr>
<td>Optica Consulting</td>
<td>$100,000 (Personnel, Indirect)</td>
<td>$100,000 (Personnel)</td>
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<tr>
<td>Greenlight Optics</td>
<td>$150,000 (Personnel, Services, Indirect)</td>
<td>$75,000 (Equipment, Personnel)</td>
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<tr>
<td>Tenet 3</td>
<td>$150,000 (Personnel, Indirect)</td>
<td>$150,000 (Personnel)</td>
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<tr>
<td>City of Dayton</td>
<td>$0 (N/A)</td>
<td>$300,000 (Personnel)</td>
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</tbody>
</table>

13-329: Trusted Situational Awareness (University of Dayton)
Market Size

- Air Traffic Control (ATC) equipment market: projected to reach $3.9 billion by the year 2017.
- Bio- and chemical sensors market could reach $21 billion by 2016.

<table>
<thead>
<tr>
<th>For-Profit Jobs</th>
<th>Non-Profit Jobs</th>
<th>Total Jobs (Year 3)</th>
<th>Year 3 Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>6</td>
<td>34</td>
<td>$3.46M</td>
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</table>

Strengths

- Strong, multifunctional team
- Targets low-hanging fruit (Woolpert’s existing customers) as well as untapped markets
- Open-architecture approach and focus on middle market enables a strong case for sustainability
- Numerous commercial possibilities – for example UAVs were recently used to locate missing persons in an avalanche and have been used for oil scouting and exploration
Goal

Commercialize two next generation products: improved radiofrequency (RF) coils for breast biopsy systems to meet new radiology standards and the use of magnesium diboride (MgB2) to respond to the shortage of liquid helium for superconducting magnets for magnetic resonance imaging (MRI) machines.

Funds Requested: $3,000,000  Cost Share: $3,356,095

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<tr>
<th>R</th>
<th>TMP</th>
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<th>EQ</th>
<th>BCS</th>
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<thead>
<tr>
<th>State Funds</th>
<th>Cost Share</th>
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<tbody>
<tr>
<td>QED $500,000 (Personnel, Supplies, Indirect)</td>
<td>$1,200,000 (Personnel, Machinery, Indirect)</td>
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<tr>
<td>Hyper Tech $500,000 (Supplies, Services, Indirect)</td>
<td>$1,500,000 (Indirect, Personnel, Supplies)</td>
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</table>
Market Size
- The MRI equipment market is expected to reach $7.9B by 2015 and annually there are more than 3000 new MRI systems installed world-wide
- Overall market for magnets in this space will be approximately $250M in the U.S.

Strengths
- QED has identified three OEM customers for its coils and has engaged in preliminary discussions with other OEM clients
- Better MRI’s can lead to better diagnosis and there is an ever increasing number of women being examined for preventive care
- Better MRI’s have the ability to prevent surgery when not needed through more careful interpretation of images
Goal

Develop orthopaedic device product concepts and advanced analytical capabilities to support additional product development, prototyping, and testing. Initial proposed products include spinal implants, an infection sensor, and a family of exercise machines.

Funds Requested: $2,355,319  Cost Share: $2,357,961

<table>
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<tr>
<th>State Funds</th>
<th>Cost Share</th>
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<tbody>
<tr>
<td>X-Spine Systems Inc</td>
<td>$450,000 (Personnel, Supplies)</td>
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<tr>
<td>Turning Point, LLC</td>
<td>$300,000 (Supplies, Services, Other Direct)</td>
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<tr>
<td>Metro Medical Innovation</td>
<td>$600,000 (Other Direct, Personnel, Supplies)</td>
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</tbody>
</table>
Market Size

- The market for spine products was worth approximately $4.8 billion in 2010, and increased at a rate of 9% from 2008 to 2010.
- By 2015, spinal implants and replacement products could represent a market of $5.5 billion

Strengths

- At least one product for each client company will achieve market entry within three years
- An exercise machine already exists; the goal is to make it cheaper to reach a broader market
- The exercise machines operate from a standing position, not a sitting position like competitors, making them more ideal for targeting lower back pain

Caveat

Should be considered only if the infection sensor work is removed from the proposal
Goal

Utilize a cloud-based modeling and simulation technology to create six manufacturing design applications. These apps would be sold through a new app store and be used by small- to medium-sized manufacturers for “digital design”. Initial apps include: ceramic matrix composites, oven temperature distribution, virtual wind tunnel, virtual crush test rig, and generalized versions of P&G apps.

Funds Requested: $2,999,936
Cost Share: $3,500,000

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<th>State Funds</th>
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<tr>
<td>AltaSim</td>
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<tr>
<td>Kinetic Vision</td>
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<tr>
<td>P&amp;G</td>
<td>$0</td>
</tr>
<tr>
<td>Intel</td>
<td>$0</td>
</tr>
<tr>
<td>Nimbis</td>
<td>$500,000</td>
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</table>
Market Size
- The size of the opportunity is very large, as it is not limited to any one industry, product or service
- ~300,000 companies in the U.S. fit the customer profile with at least 600 in Ohio, employing more than 80,000 people, as ideal initial candidate customers

<table>
<thead>
<tr>
<th>For-Profit Jobs</th>
<th>Non-Profit Jobs</th>
<th>Total Jobs (Year 3)</th>
<th>Year 3 Revenue</th>
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</thead>
<tbody>
<tr>
<td>23</td>
<td>6</td>
<td>29</td>
<td>$2.5M</td>
</tr>
</tbody>
</table>

Strengths
- Will enable small- and medium-sized manufacturers to access tools previously only accessible to large firms
- Already demonstrated the ability to simplify complex manufacturing problems into “apps” that are user friendly, do not need intensive training, and give succinct information leaving less for interpretation difficulties
- Initial apps are in high demand; project has a solid case for sustainability

Caveat
Should be considered only if the platform makes a verifiable commitment to giving priority to Ohio firms
Goal

Develop and market the OMNISTIM™ System—an implantable neurostimulation device and related software.

Funds Requested: $3,000,000  
Cost Share: $3,000,000

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<tr>
<th>State Funds</th>
<th>Cost Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>NDI Medical $1,626,000 (Personnel) $970,000 (Supplies, Services)</td>
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<tr>
<td>SPR Therapeutics $890,400 (Services, Personnel) $500,000 (Services)</td>
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<tr>
<td>Valtronic $177,000 (Supplies, Personnel, Indirect) $30,000 (Supplies)</td>
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</table>
Market Size

- The market for neurostimulation devices has an expected compound annual growth of over 18.6%, the fastest growing segment of the medical devices sector.
- Sales of neurostimulation products are expected to exceed $6.8 billion by 2017.

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<tr>
<th>For-Profit Jobs</th>
<th>Non-Profit Jobs</th>
<th>Total Jobs (Year 3)</th>
<th>Year 3 Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>3</td>
<td>25</td>
<td>$7.5M</td>
</tr>
</tbody>
</table>

Strengths

- Making good progress toward commercialization of first two targeted applications.
- Has the potential to take care of many difficult patients who have Alzheimer's, Parkinson's, or other neuro-disorders

Caveat:

Should be considered only if ODSA will require and can confirm that medical devices for both the U.S. and European markets are developed and manufactured in Ohio.
**Goal**

Pursue several cooperative sensor projects:
- Focal-plane detectors used in cameras in the infrared (IR) spectral range (with CE/L-3);
- Electro-optic modulators for use in transmission of information (with Srico);
- Remotely located surface-acoustic-wave (SAW) sensors for assessing conditions of jet engines (with Syntonics)

**Funds Requested:** $2,992,147
**Cost Share:** $3,072,653
(w/o Syntonics): $2,543,494
$2,441,126

<table>
<thead>
<tr>
<th>L-3 Communications</th>
<th>State Funds</th>
<th>Cost Share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0 (N/A)</td>
<td>$1,230,009 (Indirect, Personnel, Equipment)</td>
</tr>
<tr>
<td>Srico</td>
<td>$230,400 (Personnel)</td>
<td>$230,400 (Indirect)</td>
</tr>
<tr>
<td>Syntonics</td>
<td>$448,653 (Personnel, Indirect)</td>
<td>$631,527 (Indirect, Personnel)</td>
</tr>
</tbody>
</table>
Market Size
- Project will primarily produce components for multiple applications, thus market size cannot be specified as the technology is truly a platform on which several things will be added or built.

<table>
<thead>
<tr>
<th></th>
<th>For-Profit Jobs</th>
<th>Non-Profit Jobs</th>
<th>Total Jobs (Year 3)</th>
<th>Year 3 Revenue</th>
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<td>Year 3 Revenue</td>
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<tr>
<td>45</td>
<td>3</td>
<td>48</td>
<td></td>
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</tr>
</tbody>
</table>

Strengths
- Two of the projects clearly advance the state of the art, can be realized in the 3-year time frame, and have an excellent chance of providing the predicted revenue and jobs.
- Military and commercial markets will be pursued.
- Clear linkage between platform and clients.

Caveat:
Should be considered *only if the Syntonics element is removed*.
## Summary of Recommendations

<table>
<thead>
<tr>
<th>Rank</th>
<th>State Funds</th>
<th>Special Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-329</td>
<td>$3,000,000</td>
<td>N/A</td>
</tr>
<tr>
<td>13-327</td>
<td>$3,000,000</td>
<td>N/A</td>
</tr>
<tr>
<td>13-301</td>
<td>$2,355,319</td>
<td>Only if the infection sensor work is removed from the proposal</td>
</tr>
<tr>
<td>13-307</td>
<td>$2,999,936</td>
<td>Only if the platform makes a verifiable commitment to giving priority to Ohio firms</td>
</tr>
<tr>
<td>13-316</td>
<td>$3,000,000</td>
<td>Only if ODSA will require and can confirm that medical devices for both the U.S. and European markets are developed and manufactured in Ohio</td>
</tr>
<tr>
<td>13-333</td>
<td>$2,543,494</td>
<td>Only if the Syntonics element is removed</td>
</tr>
</tbody>
</table>
Final Remarks

Total state funds requested by the 6 proposals: $17,347,402
(or $16,898,749 if recommended changes are followed)

The remaining 21 proposals, when ranked against the RFP’s criteria and requirements, scored significantly lower than the recommended 6

Thank You!

The National Academies would like to thank the State of Ohio for placing its trust in our process and in our outstanding volunteer committee members.
QUESTIONS?
Third Frontier Internship Program
Purpose

• Develop talented workers for Ohio companies that are commercializing new products, technologies, and processes
• Prepare and expand a highly talented and technologically proficient workforce by exposing students to the strategies, practices, and processes of business
• Retain highly knowledgeable and talented students in Ohio
Program Basics

- **Lead Applicants:** Ohio nonprofit organizations representing business associations, regional economic development organizations or One-Stop employment centers; Must demonstrate ability to represent both industry and higher education interests, across the Third Frontier high-tech focus areas, in the placement of interns with Ohio companies.

- **Funding:**
  - $3 million available;
  - Awards of up to $430,000;
  - Supports the cost of individual internship stipends of up to $3,000 in state funding with a required cash match of $3,000 from the company per internship.

- **External Evaluator:** Invantage Group
Ohio Third Frontier Internship Program

2013

Proposal Evaluation Report
June 12, 2013

Invantage Group
www.invantagegroup.com
Proposal Evaluations

- Lead Applicants: Existing OTFIP Grantees
- Evaluation Criteria: Outlined in RFP
  - Organizational experience and qualifications
  - Statement of Work
  - Performance goals and history

Evaluation Criteria

Organizational Capabilities
- Structure & resources
- Company & school networks
- Outreach plans

Plan, Team, & Budget
- Key personnel
- Program plan
- Evaluation and assessment
- Budget details

Performance & Goals
- Past performance
- Projections and realistic assumptions
Evaluation Summary

• Review designed to evaluate…
  ◦ Applicant preparedness
  ◦ Performance history & capabilities

• Each applicant met RFP criteria

• Better proposals included…
  ◦ More specific program information & greater supporting details
  ◦ Clearer explanations regarding organizational design
  ◦ Identification of performance expectations & enhancement plans
# Evaluation Summary

## Ohio Third Frontier Internship Program

### FY2013 Proposals Evaluated

<table>
<thead>
<tr>
<th>Lead Applicant</th>
<th>Region</th>
<th>OTIFP Funds Requested</th>
<th>Funds for Administrative Costs</th>
<th>Funds for Internships</th>
<th>Projected Internships</th>
<th>FY13 Grant (7/1/13-12/31/14)</th>
<th>FY11 Grant (7/1/11-8/31/12)</th>
<th>FY12 Grant (9/1/12-8/30/12) Data as of 5/24/13</th>
<th>Proposal Evaluation Criteria</th>
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<tbody>
<tr>
<td>TechColumbus</td>
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<td>$277,200</td>
<td>$26,200</td>
<td>$252,000</td>
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<td>$385,916</td>
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<td>129</td>
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<tr>
<td>Community Action Organization of Scioto County</td>
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<td>$150,000</td>
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<td>Southeast</td>
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<td>$19,200</td>
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<td><strong>Total</strong></td>
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<td><strong>$2,788,755</strong></td>
<td><strong>$264,426</strong></td>
<td><strong>$2,624,329</strong></td>
<td><strong>846</strong></td>
<td><strong>756</strong></td>
<td><strong>721</strong></td>
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* Development reserves the right to reallocate Ohio Third Frontier Funds between regions and has done so during points in past funding cycles.

### Evaluation Definitions

- Strong supporting evidence
- Adequate supporting evidence
- Weak supporting evidence
Recommendations

• Recommendation for program funding
  ◦ All applicants provided preponderance of positive evidence
    • Solid organizational infrastructures
    • Workforce development experience
    • Strong business networks
    • Broad array of educational partners
    • Reasonable performance goals and support plans
# Summary

## Ohio Third Frontier Internship Program

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- **Total Funds Requested**: $2,788,755
- **Funds for Admin Costs**: $264,426
- **Funds for Internships**: $2,524,329
Open Innovation Incentive Program
Open Innovation Incentive Program

- Reduce barriers and upfront costs
- Solve innovation challenges
  - Speed time to market
  - Reduce development costs
  - Improve competitiveness
- Create economic benefits to Ohio

$10M to $1B in revenues
Open Innovation Incentive

• Subsidize half the costs of working with two qualified Open Innovation Intermediaries

• For each innovation challenge
  – Transactional costs:    $25,000
  – State support:          $12,500
• Founded in 1999 with offices in Boston, Cleveland, Liverpool and Japan
• Unique Internet presence with over 150,000+ registered users
• 16,000+ registered small businesses
• Technology scouts on the ground around the globe
• In house patent and IP transfer and sale expertise
• Yet2 venture arm
• Unique high touch business model
• Identify, vet, and consult around technology targets
• Identify later stage technologies that may already be in use in some form
• Set up introductions and meetings
• Move into NDA agreements and provide deal facilitation services
• Elmer’s is an Ohio success story utilizing OII
• Needed help with the research side of R&D and OII provided excellent opportunity
• 138 Target technology solutions identified, 20+ pending, 8 highly interested, 4 company introductions at NDA stage
• Major product line improvement that will require increased production, sales, distribution and product management in Ohio
yet2.com Links 6062 Holdings LLC and DuPont Central Research & Development in Artificial Soil Licensing Agreement

23 August 2005  6062 Holdings LLC, of Beachwood, Ohio, has licensed patents for an artificial biodegradable soil technology from DuPont Central Research & Development (CR&D). The agreement grants an exclusive global license to further develop and commercialize this DuPont technology.

yet2.com Inc. brought the two parties together five months ago when DuPont CR&D posted information about this available technology on the yet2.com website. 6062 Holdings LLC noticed and responded with interest.

The technology provides the optimum balance of water and gases necessary to sustain higher rates of plant growth through the use of in-ground bio-degradable polymer fiber balls. The fiber balls also reduce shipping and handling costs because they are lighter than the soil plants that are currently shipped. The fiber balls can also be watered from below, as opposed to being sprayed from above as traditional soils require. The fiber balls retain 30 to 50 times their weight in water, and need less than half the amount of water required in soils.
NINESIGMA OVERVIEW

OFFICES IN USA, EUROPE, JAPAN, AUSTRALIA, KOREA AND CANADA

37,000 + PROPOSALS RECEIVED FROM 116 COUNTRIES

2,500 + OPEN INNOVATION PROJECTS COMPLETED

DIVERSE CLIENTS MULTINATIONALS, MIDDLE MARKET, NON-PROFIT, GOVERNMENT

2 MILLION + SOLUTION PROVIDERS CONTACTED

PROGRAM MANAGER EXPERIENCE: 28 YEARS AVERAGE INDUSTRY EXPERTISE, 150 PROJECTS MANAGED

OUR MISSION IS TO BE

THE BEST IN THE WORLD AT UNCOVERING TECHNOLOGIES TO SOLVE YOUR INNOVATION NEEDS.
OHIO THIRD FRONTIER PROGRAM: OPEN INNOVATION INCENTIVE

- Open Innovation as means to create growth and jobs in Ohio

- OII enabled middle market search for NineSigma

- Program currently operating successfully on schedule and NineSigma pleased with receptivity of middle market companies
OPEN INNOVATION INCENTIVE CLIENTS

Congratulations to the following companies who have engaged with NineSigma in the Ohio Third Frontier Open Innovation Incentive Program.

Spartan
ELMER'S
J.T.M.
KEITHLEY
OATEYSCS
Supply Chain Services
AtriCure
THERMA TRU DOORS
TimberTech
MEGGITT
Seaman Corporation
Nearly 100 year old private company
Cleveland HQ, manufacturing and DC
Plumbing products
Nearly 1000 Associates Worldwide
~ 10,000 SKUs
Over 50 million cans of solvent cement were produced last year
Innovation Focus

- Corporate strategy focusing on growth and innovative new products
  - Investment focused on product development
  - Adding engineers/chemists/application engineers

- Open innovation concept tried with Nine Sigma/Third Frontier
  - Third Frontier funding enabled use of open innovation

- RFQ with Nine Sigma on using “specialized” coatings to make P traps that are ADA compliant
  - Received list of companies that are interested
  - Scheduling meetings to discuss details
  - Potentially major breakthrough for Oatey!!
Other Business

Next Third Frontier Commission Meeting

August 15, 2013