Agenda Item 1

Featured Start-Up
Potomac Photonics
TOPIC: Featured Start-Up – Potomac Photonics, Mike Adelstein, President and CEO (information item)

COMMITTEE: Economic Development and Technology Commercialization

DATE OF COMMITTEE MEETING: June 8, 2017

SUMMARY: The featured start-up, Potomac Photonics, has its high-tech facility located at the bwtech@UMBC Research and Technology Park and has participated in the MIPS program. The company has been recognized by both commercial and government agencies for innovation in areas such as medical devices, biotech, electronics, aerospace, and alternative energy applications.

As a leader in microfabrication, Potomac utilizes a variety of leading edge manufacturing technologies, such as lasers, 3D Printers, and hot embossing, enabling the company to micromachine most materials such as polymers, metals, ceramics, and glass with feature sizes that cannot be achieved using conventional processes. Also, Potomac offers contract manufacturing services that range from prototyping to production to more effectively assist its clients in taking products from conception through inception and ultimately market release. Potomac Photonics is ISO 9001:2008 and ISO 13485:2012 certified.

ALTERNATIVE(S): This item is for information purposes.

FISCAL IMPACT: This item is for information purposes.

CHANCELLOR’S RECOMMENDATION: This item is for information purposes.

______________________________
COMMITTEE RECOMMENDATION:   DATE:

______________________________
BOARD ACTION:   DATE:

______________________________
SUBMITTED BY: Tom Sadowski (410) 576-5742 / Suresh Balakrishnan (301) 445-2783
Potomac Photonics focuses on developing and implementing advanced micro manufacturing technologies for prototyping and production projects.
ECOSYSTEM OF INNOVATION
ECOSYSTEM OF INNOVATION

- Manufacturing Center of Excellence
- Technology Development
- Shared Infrastructure and Facilities
- Education and Workforce Development
- Outreach
ADVANCED MANUFACTURING SERVICES FOR ORGANIZATIONS LIKE:

Baxter  
NASA  
GM  
NIST
TECHNOLOGIES

Hot Embossing

Patterning

Micro CNC

Bonding
APPLICATIONS

Potomac utilizes our advanced micro manufacturing technology to fabricate devices in many industries such as:

- Medical
- Biotech
- Electronics
- Aerospace
- Automotive
- Alternative Energy
MIPS
MICROFLUIDIC DEVICE FABRICATION

Maryland Industry Partnerships
COMMITMENT TO EDUCATION

EDUCATION MANUFACTURING INTUITIVE
An example of one of the many projects that we have partnered with faculty and students at UMBC.

Piezoelectric energy harvester (PEH) generates electricity using the vibrations inside the rotating tire to power a Tire Pressure Monitoring Sensor (TPMS).

This type of energy harvester will attach to the inner surface of the tire.

PEH will replace conventional batteries which benefits from a longer lifetime and being more environmentally friendly.

We laser cut precision metal parts for this device with an extremely fast lead-time and at no charge.
Since our move to bwtech/UMBC we have successfully:

- Increased our revenues
- Added new employees (many from the USM) including our Director of R&D.
- Developed new manufacturing technologies
- Added a second shift (production runs 7 days week / 20 hours / day)
- Formed partnerships with faculty and students in the University System of Maryland
- Participated in the MIPS program
- Established the Potomac Photonics Scholarship at UMBC
Potomac will continue to develop advanced manufacturing technologies that will enable our customers to bring new micro products to the market.

We cherish our partnership with UMBC and all the schools in the USM.