

## 2015 HP - OSU Seed Fund Request for Proposals

HP and OSU have a long history of collaboration and this request for proposals seeks to further this partnership by seeking projects (proposals) which best advance the intersection of our strategic interests. Our goal is to find the next big thing within the intersection of HP’s interests and OSU’s interests. For context, the evolution of our interests is summarized in the table below.

Table 1: The evolution of SEED Fund areas of interest

	2012	2014	2015
HP Interests	<ol style="list-style-type: none"> <li>1. Grow Print: deliver new inks to new media</li> <li>2. New content consumption with print like technologies</li> <li>3. New businesses with print technologies</li> </ol>	<ol style="list-style-type: none"> <li>1. Grow Print: deliver new inks to new media</li> <li>2. 3D</li> <li>3. IoT as applied to printing</li> </ol>	<ol style="list-style-type: none"> <li>1. Grow Print</li> <li>2. Digital Manufacturing</li> <li>3. Internet of Things</li> </ol>
OSU Interests	<ol style="list-style-type: none"> <li>1. Sustainable living in natural systems</li> <li>2. Promote health, wellness and quality of life</li> <li>3. Advance economic and social well-being</li> </ol>	<ol style="list-style-type: none"> <li>1. Sustainable living in natural systems</li> <li>2. Promote health, wellness and quality of life</li> <li>3. Advance economic and social well-being</li> </ol>	<ol style="list-style-type: none"> <li>1. Sustainable living in natural systems</li> <li>2. Promote health, wellness and quality of life</li> <li>3. Advance economic and social well-being</li> </ol>
Approved for full funding	<ol style="list-style-type: none"> <li>1. Electrocaloric Cooling</li> <li>2. Magnetic Nanocomposites</li> </ol>	<ol style="list-style-type: none"> <li>1. ALD for resistor protection</li> </ol>	

This call seeks up to 3 additional projects at the intersection of HP’s and OSU’s interests.

HP’s first priority is to seek innovations **which improve our success in the world of home, office, and industrial printing**. HP’s interest is in growing its printing business with new technologies by formulating new inks and delivering them to existing or new media. Proposals ranging from improving the utility of print, to accelerating knowledge worker productivity, to improve package messaging, to enrich life in some way will stand out. Of special interest is for proposals which blend physical with digital worlds.

Printers today produce a useful physical object. **Digital manufacturing** refers to software controlled fabrication of goods of various sorts with special emphasis on using 2D and 3D printing in their creation. Proposals that extend HP’s print technology to enable 2D and 3D digital manufacturing of even more useful physical objects are sought. Interest in digital manufacturing ranges from materials and processes, jettable chemistries, and digitally applied material gradients through modeling the economic impact of “deliver and fab” to small scale micro factories.

**Internet of Things** refers to creating systems of just smart enough devices that interact with objects in the real world (that may be marked or tagged), software services, and people that create rich outcomes

that would be impractical with or less efficient than more dedicated purpose solutions. HP has millions of printers and personal computers in use all over the world. How could this installed base be exploited and networked in the internet of things era? Interest ranges from new forms of sensors and actuators, to new ways to mark or tag objects, to models of the complex behaviors that are enabled by very large systems of “things”.

OSU’s primary interests can be found in the strategic plan and the Research Agenda’s focus on answering the following questions: How do natural systems work and how can we live sustainably within them? What factors and systems influence and promote health, wellness and long-term quality of life? What fundamental understanding, discoveries and solutions are needed to advance economic and social well-being?

### **Terms of the Grant Program**

HP and OSU Deans of Engineering and Science pooled \$60,000 from which up to three grants of up to \$20,000 will be awarded. The proposed collaborative work must include faculty from the College of Engineering or College of Science and a team member assigned from HP. The following is the schedule for the program:

- Request for proposals to be issued by May 22, 2015.
- Proposals are due to OSU Research Office by July 9, 2015.
- Proposals evaluated by joint reviewers by July 31, 2015.
- Selection Committee recommends proposals for funding to HP & OSU by August 14, 2015.
- HP & OSU leadership will make final funding decisions by September 4, 2015.
- Reports addressed to OSU VP Research are due to the Research Office by May 1, 2016.

### **Proposal Guidelines**

Grant proposals should be no more than 3 pages in length and include the following information:

- Executive Summary
- Description of how the proposed research advances both HP’s and OSU’s strategic interests
- Work plan
- Description of how the seed investment can be leveraged toward greater opportunities (e.g. federal funding, state funding, or potential HP development funds).
- Budget (Assume no IDC).
- Rationale for the team including complementary knowledge and skills needed for success.

### **Selection Criteria**

Proposals will be evaluated by joint reviewers and the selection committee and scored with the following weighting (100 points total):

- Potential to advance HP/OSU strategic interests: 50 points
- ROI: leverage toward future opportunities: 25 points
- Strength of team: 25 points

The selection committee will adjust the total score using an estimated probability of success.

### **Selection Committee (recommends to Tim Weber (HP) and Ron Adams (OSU VPR - acting))**

- HP: Jim McMahon, Ken Abbott, and Lonnie Mandigo
- OSU: Brian Wall and Douglas Keszler

### **Joint Review Committee (reviews and scores proposals)**

- HP and OSU senior technical staff and faculty

The ideal proposal would serve HP's interests, OSU's interests, the interests of a potential third party funder. It will also feature a team with a strong HP/OSU relationship. Proposals which are close to the center of this overlap will compete best.

Scoring matrix: Evaluators will score each item on a scale of 1-10 for each of the 3 categories.

1 Potential to advance HP/OSU strategic interests (this carries half the weight of the evaluation)		Proposal score
HP's interests	Grows HP's print business Delivers new digital manufacturing opportunities adjacent to HP print business Opens Internet of Things opportunities, particularly those that apply print related technologies	1-10
OSU's interests	Increases the understanding of natural systems and living sustainably with them Promotes health, wellness and long term quality of life Advances economic and social well-being with fundamental understanding, discoveries, and solutions	

Total  
Comments

**2 ROI: (25% of total evaluation)**

Leverage toward future opportunities  
Potential for third party funding

Comments

**3 Team Strength (25% of total evaluation)**

And relationship strength

Comments