



WASHINGTON STATE UNIVERSITY
Office of Commercialization

Commercialization Gap Fund

Application Materials and Information FY
2018-2019

commercialization.wsu.edu

What you need to do?

1

Disclose Invention and Assign Technology

The technology under development must first be disclosed to the Office of Commercialization (OC), with rights assigned to Washington State University (WSU). The disclosure should be made as early as possible so that the OC staff have time to fully understand the invention, evaluate the disclosure, and evaluate possible commercial opportunities.



2

Contact WSU OC Technology Licensing Associate (TLA)

After disclosure, discuss the project with your TLA to identify the tasks to move towards commercialization. Your TLA can provide guidance throughout the CGF application process.



3

Submit Letter of Intent (LOI)

LOI is due:

July 27, 2018, by 5:00 pm

Please fill out the LOI form and email to:

commercialization@wsu.edu

with the full name of the PI, descriptive title of the project (in layman terms), and OC TLA's name.

4

Submit Pre-proposal

The Pre-proposal Form includes 4 sections and is due **September 21, 2018 by 5:00 pm**

- A. Lean Canvas
- B. Measurable milestones and timeline for the project
- C. Budget worksheet and budget justification
- D. Funding worksheet
- E. Reach out to at least three potential customers.

Pre-proposals are submitted to the ORSO via an eRex Form.

5

Internal Committee Review

The internal committee review will be conducted from **September 25 - October 9, 2018**

Invitations for full proposal will be sent via email in the week of **October 15, 2018**.

8

Proposal Presentation and Review

Week of November 13, 2018

A specific date/time will be assigned to each participant. Come prepared to present a 10 minute pitch of your technology and the commercial opportunity to a panel of experts.

7

Submit Full Proposal

Selected teams will be invited to submit a full proposal. Full proposals are due on **November 2, 2018 by 5:00 pm**. The eREX from STEP 4 and supported materials should be submitted to ORSO.

6

Obtain More Customer Feedback

Teams are expected to reach out to **at least 8-10 potential customers** for full proposal. Names, affiliation, and specific feedback are required.

9

Award Distribution

Award Announcements - Week of November 26, 2018

WSU Commercialization Gap Fund (CGF) Key Dates and Materials

2018 Important Dates:

Letters of Intent Due <i>Email completed form to commercialization@wsu.edu</i>	Friday, July 27, 2018, 5:00 p.m.
Pre-proposal Due <i>Submit to ORSO using eREX Form</i>	Friday, September 21, 2018, 5:00 p.m.
Internal Committee Review	September 25, 2018 – October 9, 2018
Full Proposal Invitations	Week of October 15, 2018
Full Proposals Due <i>Submit to ORSO using updated eREX Form. Please see STEP 7 for additional instructions.</i>	Friday, November 2, 2018, 5:00 p.m.
PowerPoint Slides for Invited Pitches Dues	Friday, November 9, 2018, 5:00 p.m.
Full Proposal Review	Week of November 13, 2018
Award Announcements	Week of November 26, 2018
Funded Projects Begin	January 1, 2019

Required Application Materials:

Please review this document in its entirety before completing and submitting the required application materials.

All necessary forms are available on the OC web site:

*<https://commercialization.wsu.edu/commercialization-gap-fund/>
and through the links in this document.*

- [Letter of Intent](#) (LOI) – Due Friday, July 27, 2018, 5:00 p.m.
- [CGF Pre-proposal Form](#) – Due Friday, September 21, 2018, 5:00 p.m.
- Full Proposal – Due Friday, November 2, 2018, 5:00 p.m.
 - [CGF Application Form](#)
 - Revised CGF Pre- Form (may be requested after the pre-proposal review)
 - [Executive Summary](#)
 - [CGF Pitch Template](#) & [Pitch Outline](#)

WSU CGF Application Process:

1. Disclose and Assign Technology
2. Contact your WSU OC Technology Managers to discuss your potential proposal
3. Submit a Letter of Intent (LOI)
4. Submit Pre-proposal Form
5. Internal Committee Review
6. Obtain More Customer Feedback
7. Submit Full Proposal
8. Proposal Presentation and Review
9. Award Distribution

STEP 1. Disclose Invention and Assign Technology

The technology under development must first be disclosed to the WSU Office of Commercialization (OC), with rights assigned to WSU. The disclosure should be made as early as possible so that the OC staff have time to fully understand the invention, evaluate the disclosure, determine any obligations of underlying funding, assess intellectual property (IP) rights and landscape, and evaluate possible commercial opportunities.

STEP 2. Contact Your OC Technology Manager to Discuss Your Potential Proposal

After disclosure, communicate with your Technology Manager to discuss your project and what you may need to accomplish to move it toward commercialization. Your Technology Manager can provide guidance throughout the CGF application process. The OC staff will communicate with you frequently to help gather concrete market information, assess the competition landscape and potential licensees, and conduct a patent landscape analysis. This team effort will lead to a strong, commercialization-focused proposal.

STEP 3. Submit a Letter of Intent (LOI) for the CGF Application Process

Letters of Intent **will be accepted until 5:00 p.m. on July 27, 2018**. Please fill out the LOI form and email to commercialization@wsu.edu with the following information:

- PI full name
The designated PI must be affiliated with WSU for the duration of the funding cycle.
- Descriptive title of project in layman terms
- OC Technology Manager's name

STEP 4. Submit the Pre-proposal

The **Pre-proposal Form** includes the following four sections:

A. Lean Canvas and Customer Discovery List

Please fill out the Lean Canvas concisely to outline your business model. In a few sentences, and in *layman language*, describe the problem you are trying to address through your innovation.

- What are the end product results you are striving for?
- How is the product unique?
- What advantages does it contain compared to the current market offerings?
- How might you outcompete other potential competitors?
- Who is the customer? Please list the names, organizational affiliation, and specific

feedback for the customers you contacted (minimum of three). Do you have a prototype or completed solution? Describe what stage the technology is at in its development.

- What still needs to be done after this funding to get to license and to market?
- Why is CGF funding *necessary* to advance this technology towards commercialization?
- Describe the current intellectual property (IP) landscape. Are you aware of any potential conflicts with existing IP holdings?
- Do you see this as a license given to an existing company or as a new WSU spin-out? Why?
- If a spin-out, what specific role (if any) would you want to play with the new company? List the roles of anyone else participating in the new company.

Information on how to fill out a Lean Canvas can be obtained from

<https://leanstack.com/LeanCanvas.pdf>.

Sample Lean Canvas:

Problem	Solution	Unique Value Proposition	Unfair Advantage	Customer Segments
<p>Top 3 relevant problems in bullets</p> <p>1. Milk output during lactation is a critical parameter for infant nutrition and growth, and this information is of interest to both mothers and researchers.</p> <p>2. The methods primarily used for measuring milk output have been stable isotope techniques and/or 24-hour infant weight-back protocols, which are difficult to implement and provide slow and low resolution measurements.</p> <p>3. Currently, there are no accurate, user-friendly devices designed to provide information about milk production and infant milk consumption that can be used by women and/or researchers.</p>	<p>Top 3 features</p> <p>1. The IntelliBra, a comfortable and washable nursing bra, features a thin-salt sensor containing a non-volatile, conductive liquid within a silicone body. This sensor can detect changes in breast volume which have been shown previously to be tightly correlated with milk production and output.</p> <p>2. It can also measure changes in breast temperature which is an indicator of mammary health, including mastitis.</p> <p>3. Data will be transmitted to a smartphone app for easy access.</p> <p>Key Metrics</p> <p>Key activities you measure</p> <p>Accuracy of milk production, milk consumption and temperature measurements. Comfort, product life time.</p> <p>Units sold</p>	<p>Compelling message on how this technology is different and its strengths</p> <p>The IntelliBra is a "smart" nursing bra which allows its wearer to continuously monitor her milk production, her baby's milk consumption, and breast temperature via a smart device such as a smartphone. Unlike other products aiming to measure milk production or consumption, The IntelliBra works without affecting the nursing experience and offers the comfort of a regular nursing bra.</p>	<p>What factors provide the idea an edge over others?</p> <p>Why can't it be easily copied or bought?</p> <p>Continual monitoring of milk production and breast temperature as well as milk consumption, non-invasive nature and interface with smart devices.</p> <p>Provisional patent application filed on this technology. Considerable R&D has already been conducted for development of a prototype and proof-of-concept.</p> <p>Channels</p> <p>Path to customers</p> <p>The IntelliBra will be sold directly to customers as a physical product. We envision the technology being licensed by a bra manufacturer/distributor and becoming a part of their product line.</p>	<p>Target customers</p> <ol style="list-style-type: none"> 1. Everyday mothers breastfeeding healthy infants. 2. Mothers providing milk to at-risk infants, such as those born prematurely. 3. Researchers conducting studies related to understanding milk production and infant milk consumption. 4. Women wishing to monitor changes in breast temperature over time.
<p>Cost Structure</p> <p>Customer acquisition Costs, Distribution Costs, Hosting, People, etc.</p> <p>The primary cost will be associated with the production of IntelliBra. In the current prototype stage, it costs < \$0.40 to fabricate one sensor module without dedicated electronics and the rest of the nursing bra. If scaled up, these costs will further reduce due to high volume material discounts. We envision that the overall production cost for a single product not to exceed \$5 at the final product stage, particularly if the technology is licensed by a bra manufacturer with an already established production, marketing, and distribution infrastructure.</p>		<p>Revenue Streams</p> <p>Revenue Model, Life Time Value, Revenue, Gross Margin</p> <p>The IntelliBra will produce revenue through sale of the physical product to private individuals, with a profit margin. The physical product can be an entire nursing bra or a module that can be integrated with an existing nursing bra. We envision it to be a one-time buy per customer. It is possible that several capabilities such as smart phone connection capability and associated app can be sold as optional products as different channels of revenue. Current smart bras that aim to measure milk consumption by infant cost around \$100 per unit. Product pricing will likely be dictated by the licensee if going through the licensing route.</p> <p><small>Adapted from The Business Model Canvas (http://www.businessmodelgeneration.com)</small></p>		

Problem	Solution	Unique Value Proposition	Unfair Advantage	Customer Segments
<p>Top 3 relevant problems in bullets</p> <p>Currently, analysis of cellular staining is inhibited by three main problems:</p> <p>First, analysis is time intensive when done by hand. Analysis for a typical project can take days to weeks.</p> <p>Second, analysis is biased and variable when conducted without use of software. Fatigue, subjectivity, and conflicts of interest limit human ability to collect clean data from images of tissue.</p> <p>Third, current products on the market are prohibitively expensive. Additionally, most software applications are not intended to perform this type of analysis and do not utilize advanced computational power to automate the task.</p>	<p>Top 3 features</p> <p>We propose to develop our beta image analysis software, called PIPSQUEAK, to include:</p> <p>Artificial intelligence-driven image analysis.</p> <p>Advanced image space algorithms targeting signal co-occurrence.</p> <p>Machine learning for accuracy and speed of target detection.</p> <p>Key Metrics</p> <p>Key activities you measure</p> <p>PIPSQUEAK incorporates Google Analytics to generate detailed reports on variables such as user location, update adoption, and feature utilization. The proposed product will add metrics for cell-target detection accuracy, image analysis speed, and measurement sensitivity. Customer feedback will be collected in order to inform product updates.</p>	<p>Compelling message on how this technology is different and its strengths</p> <p>Automated and standardized analysis of cell signal intensity with PIPSQUEAK greatly improves the speed and reproducibility of data collection. Current techniques to identify and measure cell physiology require a lengthy process of image preparation followed by identification of cells that is vulnerable to bias, subjectivity, and fatigue. PIPSQUEAK reduces the amount of time needed to process images by 99% compared to skilled humans. Integration of artificial intelligence makes PIPSQUEAK stand out from the competition by offering completely automated cell detection and analysis.</p>	<p>What factors provide the idea an edge over others?</p> <p>Why can't it be easily copied or bought?</p> <p>We have developed PIPSQUEAK as a tool to benefit our own research. We understand the issues that researchers face in their analyses, and the difficulty small- to medium-size labs face affording expensive analysis tools. Our software will provide unmatched analysis power through artificial intelligence integration.</p> <p>Channels</p> <p>Path to customers</p> <p>Through our connection to Rewire Neuroscience, we have access to direct-to-customer online sales mechanisms. We plan to advertise PIPSQUEAK through research conferences, such as the Society for Neuroscience, and through online advertising.</p>	<p>Target customers</p> <p>PIPSQUEAK was developed in a university setting, making academic research laboratories a natural market for our product. Commercial research laboratories are a second target for our technology. Any institution performing analyses of cellular physiology will benefit from the PIPSQUEAK technology. Additionally, PIPSQUEAK has been acknowledged by ophthalmologic surgeons as a potential tool to analyze viability of corneal tissue donations. We see high commercial potential in targeting PIPSQUEAK for use in clinical diagnostic applications.</p>
<p>Cost Structure</p> <p>Customer acquisition Costs, Distribution Costs, Hosting, People, etc.</p> <p>Customers will be acquired through marketing by the licensing partner, Rewire Neuroscience, LLC. Rewire Neuroscience specializes in direct-to-researcher laboratory products and has a wide network of Primary Investigator contacts. Distribution will be conducted using Rewire Neuroscience servers and database resources. Rewire owns and operates its servers, keeping hosting costs minimal. Development of machine learning integration is the major cost of this proposal. Software development will utilize two Rewire Neuroscience database and software engineers, but requires the addition of one artificial intelligence (AI) expert.</p>		<p>Revenue Streams</p> <p>Revenue Model, Life Time Value, Revenue, Gross Margin</p> <p>Revenue will be generated through an annual subscription fee model. A tiered pricing structure will allow us to monetize user access to advanced functions, but maintain an approachable value proposition to casual users. Customer lifetime value is expected to be high, as laboratory loyalty to analysis tools often spans multiple grant cycles. We anticipate maintaining and building customer subscriptions through responding to feedback and adapting to customer needs. Direct costs will be derived from the addition of an AI expert, but will remain low as database and server infrastructure is already in place, thereby maximizing gross margin.</p> <p><small>Adapted from The Business Model Canvas (http://www.businessmodelgeneration.com)</small></p>		

Additional information on how to create a Lean Canvas can be found in the following links:

<https://xtensio.com/how-to-create-a-lean-canvas/>
http://www.vto.at/wp-content/uploads/2013/10/Why-the-Lean-Startup-Changes-Everything_S.Plank_HBR-052013.pdf

As part of the pre-proposal, applicants are required to identify at least three potential customers who will be contacted during the application period. Applicants are expected to collect feedback from these potential customers as a summary of the feedback will be required as part of the full proposal.

Identifying customers:

- Differentiate between “User” (those who use the product) vs. “Customer” (those who will pay for the technology)
- Identify the target audience
 - Target experienced users
 - Understand their role/functions
 - Know the company
- Use personal network, LinkedIn, social media networks and reach out to people across geographical boundaries.

Customer survey questions:

- Validate the problem and your approach to solve, so not advertise your product?
- Try to understand your target customer’s motivations and needs so you can craft your pitch accordingly.
- Understand the current solution/process to the problem you are addressing.
- How is the current solution a step up from the solutions they might have in place?
- How much time and money might they be willing to invest in a solution?
- What do they like about the current solution/process?
- What improvements are they looking for with the current process/technology they use?
- Develop open-ended questions.

More information on market research is available here:

<https://venturewell.org/i-corps/team-materials/>
<https://www.inc.com/guides/2010/06/defining-your-target-market.html>
<http://www.nolo.com/legal-encyclopedia/define-target-market-small-business-29950.html>
https://hbr.org/2008/01/the-five-competitive-forces-that-shape-strategy?referral=03759&cm_vc=rr_item_page.bottom

B. Measureable Milestones and Timeline for the Project

Commercialization includes meeting goals in a timely manner. Provide measurable milestones and their dates. If you are given a CGF award, a brief progress report documenting the successful completion of each funded milestone will be required before releasing the money for the subsequent milestone.

C. Budget Worksheet and Budget Justification

Applicants may request an award of up to \$50,000. Award amounts may vary and/or be adjusted based on the number of projects funded and other budgetary

considerations. No CGF award will exceed \$50,000. The technology development or research budget is limited to \$45,000. Prepare your budget accordingly. An additional \$5,000 will be available for WSU related business development activities (e.g., marketing studies, reimbursement for regulatory consultation, customer contacts and feedback). Please be sure to work with your Technology Manager to ensure your proposed business development activities are allowable expenses.

D. Funding Worksheet

Provide a comprehensive list of all previous and planned funding for this technology including: the funding source (e.g., NIH, NSF, DOE, DOD, USDA), the funding mechanism (e.g., RO1), the dates of funding (for proposed funding, estimate the date you expect to receive the funding), all previously funded milestones, and indicate whether each milestone was achieved. You may attach additional pages for the funding worksheet.

E. Customer Feedback

There is an expectation that teams (e.g., the PI and other researchers, graduate students, interns, entrepreneur or industry partners) will make direct contact with at least three potential customers to submit with the pre-proposal documents. Names, organizational affiliation, and specific feedback are required in the pre-proposal. The team should work as a unit to get the greatest value from customer interactions. See Step 6 below for more information.

Pre-proposals will be accepted until 5:00 p.m. on September 21, 2018. Please submit proposals to ORSO using an eREX Form. Please upload your pre-proposal as an attachment to the eREX Form.

Pre-proposals will be reviewed internally for compliance and alignment with the rules and goals of the CGF program. Any pre-proposal not conforming to the specific instructions on the form will be rejected and applicants will be required to wait until the next funding cycle to resubmit. Unless the pre-proposal fails to comply with the rules above, all projects will advance to the Internal Committee Review, STEP 5.

STEP 5. Internal Committee Review

The internal committee review will be conducted from **September 25, 2018 – October 9, 2018**. **Invitations to submit a full proposal will be sent via email during the week of October 15, 2018**. Feedback on the strengths and weaknesses of submitted proposals will be made available upon request.

STEP 6. Obtain More Customer Feedback

There is an expectation that teams (e.g., the PI and other researchers, graduate students, interns, entrepreneur or industry partners) will make direct contact *with at least 8-10 potential customers* to be submitted at the time of the full proposal. Names, organizational affiliation, and specific feedback are required in the pre-proposal. In this step, the team should work as a unit to get the greatest value from customer interactions.

The customer feedback will be different for every project. We are looking for an understanding of the market potential surrounding your technology.

- Who is the customer, purchaser, and end-user?
- What are the current strategies in place for solving the problem? When talking to the

customer, try not to start with introducing your technology/idea to them.

- What accomplishments or milestones would motivate the customer to change from their current practice to adopting your technology?
- What is the minimal viable product that might serve as a market entry point?
- What is the initial customer base?
- What do they say about overall commercial potential?
- Do they confirm your view of the stakeholders?

Ask questions like:

- Tell me more about that.
- When does that happen?
- Who do you listen to for market trends? (market research)
- Who are my competitors and what do you think of them? (Competitive analysis)
- What problems have you experienced with your current technology?
- What would you like to be improved upon in the current technology/product?
- Ask leading questions like “ if this is done this way.....will it help your cause?”
- Introduce your idea at a later stage – “we have this idea, what do you think?”

STEP 7. Submit Full Proposal

CGF full proposals will be accepted only from teams invited to submit a full proposal. CGF full proposals are due on **Friday, November 2, 2018 by 5:00 p.m.** Please resubmit your eREX from STEP 4 and attach the documentation outlined below. The eREX and supported documentations should be submitted to ORSO.

Full proposal submissions include the following:

Note: the full proposal submission also includes an executive summary.

- **CGF Application Form** for each PI signed by the PI's Dean and chair
The designated PI must be affiliated with WSU for the duration of the funding cycle.
- **Executive Summary** (1-3 pages) containing:
 - Overview
 - Give a clear and concise overview of what your innovation is and why the reviewers should be interested in learning more.
 - Problem and Solution
 - Describe the solution your innovation will deliver and the value it offers to customers. Don't go overboard in describing the technology at the expense of adequately addressing the business opportunity.
 - Market
 - Describe the minimum viable product.
 - Describe the market you will target.
 - Summarize customer feedback, *at least 8-10 potential customers* for full proposal.
 - Who is the customer? Please list the ones you contacted in STEP 6 and their specific feedback.
 - Competition and Differentiation
 - Who/what are the competitors in the market?
 - What differentiates you from the rest of the companies competing against you for market share?
 - How is the market fragmented and who are the big players?

- Traction
- Intellectual Property
 - Describe the intellectual property landscape.
- Regulatory and Reimbursement (if applicable)
 - Include a plan with a clear path to clinical approval and payment.
- Management Team
 - Briefly list team members.
 - Why are they the best possible team to achieve the next value-added milestone?
 - Identify any key hires that could complete the team.
- Technical Plan: With each milestone, include an argument for how it will add value.
 - Milestone 1 and associated activities
 - Milestone 2 and associated activities
 - Milestone 3 and associated activities
- Needs/benefits of CGF support, including a plan to attract follow up funding.

Any figures or tables MUST be included within the three-page limit. Any pages over the three-page limit will be removed and not considered. References should be limited to one additional page.

STEP 8. Proposal Presentation and Review

Final reviews will be held during the week of **November 13, 2018**.

A specific time will be assigned to each participant. Come prepared to present a maximum 10 minute pitch of your technology and the commercial opportunity to a panel of experts. PIs must use the [pitch template](#) at the end of this document as a guide for preparing the presentation. A PowerPoint based on the slide outline below is also permitted. PowerPoint files must be emailed to commercialization@wsu.edu by 5:00 p.m. on November 9, 2018.

PowerPoint Outline

Slide 1: Introduction

Slide 2: Description of the Problem

Slide 3: Solution (benefits)

Slide 4: Traction

Slides 5-6: Market Size and Customers

Slide 7: Market Plan

Slide 8: Competition

Slide 9: Team

sSTEP 9. Award Distribution

The OC staff in collaboration with the PI and departmental fiscal personnel will make the necessary arrangements prior to the disbursement of funds.

Outline for Pitch for WSU OC CGF application

Times listed are suggested guidelines. Prepare for a 10-minute pitch with 10 minutes of discussion. You may prepare [PowerPoint slides](#) to assist in conveying the below information. A PowerPoint template will be provided and are not to exceed nine slides (please see STEP 8), Email prepared PowerPoint slides to commercialization@wsu.edu by 5:00 p.m. on November 9, 2018

Introduction (15-20 seconds)

- Introduce yourself
- In one sentence, tell what your technology is

The Problem (30 seconds)

- Describe the qualitative and quantitative view of the problem. A story or scenario can be helpful
- Describe any gap in the market that could provide an opening for your technology

The Solution (1-2 minutes)

- Describe your product or service in terms of societal level benefits

Traction (60-90 seconds)

- Do you have a prototype or completed solution? Describe where the technology is in its development. What still needs to be done after this funding to get to license or market?
- Discuss milestones
- Patents filed or signed contracts with partners, if any

Market Size and Customers (1 minute, 30 seconds)

- How large is the addressable market?
- How is the market structured?
- Number of customers; summary of customer feedback
- Describe any disruption in market that might provide an opening for your technology

Go to Market plan (30 seconds)

- How long?
- Who are the decision makers and influencers of your customer?

Competition (30-60 seconds)

- Orient reviewers to direct and indirect competition
- Highlight your differential advantage

Team (30-60 seconds)

Why is CGF funding necessary to advance this technology towards commercialization?