

## Attributes of an Innovation Project

*Good projects start with an idea that is rooted in a problem or opportunity.*

The relationship between your idea and the problem or opportunity is likely to evolve. However, significant innovation cannot occur without a significant problem or opportunity that is addressed by a potent idea. Hence the first step is to find a good problem or opportunity.

A problem or opportunity is a circumstance in the external world (not in the mind of the innovator) that can be changed by the successful implementation of an effective idea.

*The team develops the idea to act on the problem or opportunity*

To achieve the goals of the project, the team must understand and embrace the idea. Competing ideas, ill-defined or ill-conceived ideas, or a poor understanding of the idea will reduce the effectiveness of the team.

*The team must possess or have access to the means to implement the idea in order to solve the problem or capitalize on the opportunity*

The means will include the experience and skills of the team members.

The means will include physical assets like tools, space, computers, materials and instrumentation. The cash award from the Innovation Council is most often used to acquire physical assets.

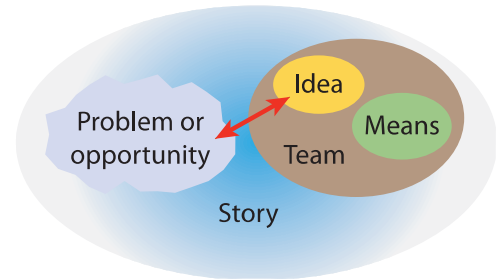
Innovation Council members provide some mentoring and will try to connect the team to physical assets (e.g. lab space or instrumentation) and to other skilled collaborators and advisors.

*The story holds the project together.*

The story is a way for the team to develop and talk about its goals, and it helps the team stay focused on its goals.

The story is how the team explains its idea to others who may be customers or collaborators or sponsors.

The story binds the idea to the problem or opportunity. It is the mantra or mission and vision statement for the group.



# Developing an Innovation Project Proposal

## *Problems, Opportunities and Ideas*

Start with a problem or opportunity. Find something that bugs you. Find a process or technology or environmental circumstance that would be improved by your idea. It's better to work on problems and opportunities that matter to you personally. It's even better to work on problems and opportunities that matter to you and to many other people.

Don't start with an idea and then look for problems and opportunities to solve with that idea.

Be flexible in developing your ideas. Let your mind wander. Think crazy thoughts. Dare. Don't worry about the challenges in the early stages of thinking about the problem or opportunity. Of course, by the time you write the proposal, you should understand and be able to describe a plan for overcoming the challenges.

Come up with as many ideas as you can. Make a model out of cardboard. Draw lots of pictures. Cobble together junk that you imbue with magical properties. Use cartoons or take pictures or play with toys to explore your idea. Use whatever stimulates your creativity and your problem-solving thinking. Buy a notebook to record your creative process.

Explain your idea to anyone who will listen, then shut up and really listen to his or her feedback. Spend some time using Google to search for your idea or your problem. Maybe someone has already solved it. Maybe you can improve their solution.

Give your idea a rest and think about it again tomorrow.

## *Means*

Know your skills. Find others who complement your skills. Ask the Innovation Council about resources.

As part of your proposal development, identify the physical assets necessary to reach your goals: the primary equipment, the materials, the space. The \$1000 available budget should cover materials, sensors, actuators, software, and hardware. Assume that the Innovation Council can find space for your project if you need it, but be sure to identify any unique space requirements.

## *Team*

Look for people who complement your skills. Look for people who know how to communicate and share and trust each other.

Ideally your team should have the basic skills needed to make progress on the problem or opportunity. It is OK to identify some missing skills and to ask the Innovation Council for suggestions.

Student learning is an important goal of the Innovation Program. Therefore, your team does not have to be experts or even have a lot of experience working on

your idea. Understand how your skills and experience prepare you for the project, and whether your team will need additional support.

### *Story*

Reduce your story to a 60 second pitch. Refine the idea to its essence.

Explain your idea to people who understand the technology. Ask them if they can see problems or weaknesses or whether they have suggestions for how to achieve your goals.

Explain your idea to people who don't understand technology. Keep your explanation short. Don't try to make them care. If they don't care, that tells you something. Try to understand what parts of the idea or problem or opportunity they do care about.

### *The Proposal*

Make sure your proposal clearly describes (1) the problem or opportunity, (2) your idea, (3) the means, and (4) the team. Those four parts are essential to the proposal, but those parts do not need to appear as section headings.

The statement of the problem or opportunity should be short: two sentences. The description of your idea needs one or two paragraphs. An accounting of the means should take one paragraph of text and include a list of physical assets and a rough estimate of the cost. In one paragraph describe the skills and experience of the team.

Identify any unusual hazards in using or developing those ideas. If there are safety concerns, include one or two sentences explaining how you will keep participants and bystanders safe. If possible, cite existing safety protocols for the technology or process.

Include a list of references for specific ideas not fully explained in your proposal.

Make sure it all fits on one page.

### *Intellectual Property (IP)*

Portland State University has rules about the development and ownership of intellectual property, i.e. patents, copyrights and trademarks. Within those rules, the Innovation Council wants to give students the maximum opportunity to create and develop their own IP.

If you think your idea is patentable, be sure to indicate to the council that you wish to keep the proposal confidential. If your project is funded and if there is the potential for the creation of IP, we will direct you to the PSU Office of Research and Strategic Partnerships. For background, visit <http://www.pdx.edu/research/innovation>.