



Smart Pot

Governance of the Patel Grand Challenge

Patel Center for Global Solutions

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SECTION 1: CALL FOR PROPOSALS

The need for a Smart Pot

One of the major global problems is the provision of clean and safe drinking water. In developing countries, a child dies every 20 seconds due to lack of access to clean water and safe sanitation. It is astonishing that in the 21st century we are still not able to provide these basic human needs to all people.

Most people in developing countries still collect drinking water from contaminated water sources using storage vessels such as water pots, jerrycans, jars, canisters etc. Even the water collected at standposts is often contaminated due to pollutants entering the pipelines due to deteriorated infrastructure coupled with low pressure and intermitted water supply.

The consequences of drinking contaminated water are infections like cholera, typhoid and dysentery that cause illnesses and deaths. If clean and safe drinking water could be provided these diseases could be prevented.

Point-of-use treatment technologies in combination with improved water storage and handling can significantly improve microbial water quality. However, many of the existing household point-of-use treatment technologies fail in practice as they:

- are complex to operate and require more attention than the user can provide,
- are inconvenient to use because they require long treatment time,
- have low uptake as they mostly require behavioral change of the user,
- are unsustainable because they require accessories and materials that are not locally available and
- are not affordable by poor communities.

What is required is an inexpensive, convenient, and reliable collection vessel (pot, jerrycan, jar, canister etc.) that can disinfect water at the point-of-use to make it safe for drinking. This 'smart' collection vessel is referred to herein as the 'Smart Pot.'

The Patel Center for Global Solutions of the University of South Florida, in partnership with the International Water Association invites designers, researchers, inventors and entrepreneurs to develop such a Smart Pot.

Objective of the Patel Grand Challenge

The objective of the Patel Grand Challenge is to develop a point-of-use water treatment technology that can be embedded into a water collection vessel (pot, jerrycan, jar, canister) to provide microbiologically safe drinking water from a variety of water sources including groundwater, surface water and water delivered at standposts.

Smart Pot Requirements

The proposed Smart Pot should:

- Be able to reliably remove microbiological contaminants from water (with a turbidity of up to 20 NTU), to a level that meets the WHO drinking water standard guidelines.
- Be able to treat and store a volume of 10-20 liters within 20 minutes after collection.
- Only be marginally more expensive than the commonly used water collection vessels (a typical water collection vessel costs up to US\$ 5).
- Be user friendly and require little effort to operate and maintain.
- Be robust, reliable and capable of operating under a range of water quality conditions.
- Look and weigh the same as the commonly used local water collection vessel.

Roadmap of the Patel Grand Challenge

- Phase 1 – Pre Proposal: all eligible applicants are encouraged to submit a pre proposal by March 1, 2012 (midnight EST). All submissions will be reviewed by an internal committee from the University of South Florida, the 5 most promising pre-proposals will be shortlisted and announced on May 1, 2012. Each of the 5 shortlisted proposals will receive up to US\$ 8,000 to support the development of a full proposal.
- Phase 2 – Full Proposal: the 5 shortlisted finalists will prepare detailed full proposals to be submitted by November 1, 2012 (midnight EST). The finalists will be invited to a major international event to present their full proposal to an international panel of experts. The winner of the Patel Grand Challenge will be announced during the event which is tentatively scheduled in December 2012. The winner will receive an award of up to US\$ 100,000 designated to develop the Smart Pot.
- Phase 3 – Prototype: the winner, in close collaboration with the Patel Center for Global Solutions at the Patel School of Global Sustainability, will further develop the Smart Pot into a prototype and test it. This phase will lead to demonstration field studies and ultimately to commercialization of the Smart Pot for use by the public.

Checklist for Applicants

Before preparing the proposal

- ✓ Check the eligibility criteria to make sure that you and/or your organization is eligible to apply.
- ✓ Check the eligibility criteria to make sure that any partner organization(s) that you plan to work with is eligible to apply.
- ✓ Check that the country that you and/or your organization is located in and/or registered in, is in the list of eligible countries shown in Table 1.
- ✓ Check that the country that any of your partners and/or their organization are located in and/or registered in, is in the list of eligible countries shown in Table 1.
- ✓ Check that your proposal for the Smart Pot has not already been patented in any jurisdiction.

Preparing the proposal

- ✓ Read and understand the objective and requirements for the Smart Pot.
- ✓ Read and understand the rules that govern the Patel Grand Challenge.
- ✓ Ensure that your proposal is in the format of the template provided and follows the word limits specified (www.psgs.usf.edu/patelgrandchallenge). Note that any proposals that do not strictly follow the required format/word limits will be rejected without consideration.
- ✓ Ensure that you attach your curriculum vitae (CV). If applying with partners, submit all partner CVs in one single PDF file.
- ✓ Ensure that you provide a description of your organization and your partner's organization in the proposal.
- ✓ Applications involving partners should include letters of consent from the partners with the proposal. These letters should be submitted in one single PDF.
- ✓ Applications involving partners should only submit one proposal on behalf of the group by the principal applicant.
- ✓ Sign your proposal to indicate that you agree to the terms and conditions of the Patel Grand Challenge.
- ✓ Fill out and submit the appropriate W-8 U.S. Tax Form.
- ✓ Upload your document on the Challenge website (www.psgs.usf.edu/patelgrandchallenge) by March 1, 2012 (midnight EST).

SECTION 2: PATEL GRAND CHALLENGE RULES

1. General Conditions

The Patel Grand Challenge (the "Challenge ") is administered by the Patel Center for Global Solutions at the Patel School of Global Sustainability of the University of South Florida (the "Sponsor"). The University of South Florida is a tax-exempt organization under section 115 of the Internal Revenue Code. The University of South Florida is an educational agency of the State of Florida created pursuant to Florida Statutes 240.2011, subsection (5). Each person who enters the Challenge (the "Applicant" sometimes referred to herein as "You") agrees to follow these Official Rules (the "Rules") and the decisions of the Sponsor and the Judges (as defined below). Decisions that may be made in all cases are at the sole and absolute discretion of the Sponsor and the Judges, and are final and binding on all matters relating to the Challenge.

- Check with your organization's policies regarding Intellectual Property to ensure that you may participate and allow your proposals to be published on our web site.

2. Limits on Inventions

To enter the Challenge, your submission:

- Can be a new and original invention;
- Can be an improvement or change to something that already exists;
- Must be your own original work, and not the work of someone else;
- Should not have been patented in any jurisdiction.

3. Eligibility Criteria

- 3.1 Only citizens of or organizations with their primary place of business is within the developing countries listed in Table 1 may submit a proposal.
- 3.2 All organizations applying need to be affiliated with non-profit institutions, including but not limited to academic and/or research institutions, nongovernmental organizations and foundations that are officially registered and located in one of the developing countries listed in Table 1.
- 3.3 Where a consortium is applying, each consortium partner should be registered and located in one of the developing countries listed in Table 1. Consortium applicants may not include partners from countries not listed in Table 1.
- 3.4 Individuals who apply can only submit one application; organizations that apply are limited to three submissions per organization.
- 3.5 For consortium applicants, letters of consent should be submitted by each partner. Any copyright disputes need to be handled between consortium applicants. The Sponsor is not responsible for copyright or patent disputes arising between consortium partners.

- 3.6 There is no limit to the number of partners in an application although each of the Applicants will individually have to meet the eligibility criteria. However, consortia/partners will need to identify a single lead partner who will be responsible for discussing the concept and any resulting agreement with the Sponsor.
- 3.7 The Sponsor will only enter into partnerships with organizations that demonstrate the highest standards of professionalism and integrity in discharging their responsibilities, with fiscal credibility, and a proven track record in delivering projects according to schedule and budget.
- 3.8 The Applicant is expected to provide references on their past performance record and to respond to queries that may arise as part of the Sponsor's due diligence exercise. The right to obtain past performance data from the provided Applicants references shall be at the sole and absolute discretion of the Sponsor who will take into account the different complexities of the fields in which Applicant's work, country conditions, constraints to performance beyond the control of the potential Applicants, and other factors relevant to achieving a reasonable and balanced assessment of the potential Applicant.
- 3.9 The Sponsor reserves the right in its sole discretion to prohibit participation in the Challenge of persons and or organizations whose eligibility is in question or who have been disqualified or are otherwise ineligible to enter the Challenge.
- 3.10 The Sponsor does not discriminate on basis of race, religion, color, national origin, sex, age or disability.

Table 1: List of Eligible Countries

Afghanistan	Djibouti	Jordan	Namibia	Sri Lanka
Algeria	Dominican Republic	Kenya	Nauru	Suriname
Angola	Egypt	Kiribati	Nepal	Swaziland
Bangladesh	El Salvador	Kyrgyzstan	Nicaragua	Tajikistan
Benin	Equatorial Guinea	Laos	Niger	Tanzania
Bhutan	Eritrea	Lesotho	Nigeria	Thailand
Bolivia	Ethiopia	Liberia	Pakistan	Timor-Leste
Botswana	Fiji	Madagascar	Palau	Togo
Burkina Faso	Gabon	Malawi	Papua New Guinea	Turkmenistan
Burundi	Gambia	Maldives	Paraguay	Tuvalu
Cambodia	Ghana	Mali	Philippines	Uganda
Cameroon	Guatemala	Marshall Islands	Rwanda	Uzbekistan
Cape Verde	Guinea	Mauritania	Samoa	Vanuatu
Central African Republic	Guinea-Bissau	Micronesia	San Marino	Viet Nam
Chad	Guyana	Moldova	Sao Tome & Principe	Yemen
China	Haiti		Senegal	Zambia
Comoros	Honduras	Mongolia	Sierra Leone	Zimbabwe
Congo (Republic)	India	Morocco	Solomon Islands	
Congo (DRC)	Indonesia	Mozambique	Somalia	
Côte d'Ivoire	Iraq	Myanmar	South Africa	

4. Submission

- 4.1 Submissions will be accepted between December 15, 2011 and March 1, 2012 (by midnight U.S. EST). You may obtain the application by going to the Sponsor's website at (www.psgs.usf.edu/patelgrandchallenge).
- 4.2 You must make sure you meet all eligibility requirements, fill out the submission form and then submit your proposal along with all the required supporting documents.
- 4.3 The Challenge Entry Form will ask you to provide information such as your name, home address, email address, and your telephone number. The Challenge Entry Form will ask you to describe your invention. You may also include photographs, drawings, or illustrations ("Pictures") of your invention, as long as the Pictures do not include a person and do not show a trademark or product of another company. All Pictures must be created by you (or a photograph taken by you); do not use clip art or templates. Your entry must be your work alone.
- 4.4 By submission of your Challenge Entry Form you agree to follow the stated rules and be bound by them.
- 4.5 All entries must include signature(s) from each Applicant on the Challenge Entry Form.
- 4.6 Only submit one application to represent a consortium proposal. The principal applicant in the consortium should submit on behalf of the group.
- 4.7 When the Sponsor receives your entry, all entry submission materials will become the sole property of the Sponsor and will not be returned to you. No entry will be returned upon completion of the Challenge. The Sponsor will not be responsible for, and will have the right to refuse, any entries that have been tampered with, or entries that are misdirected, incomplete, non-conforming, corrupt, lost, late, or ineligible, whether due to Internet or e-mail server failure, postal mistake or delay, or otherwise.
- 4.8 Once you submit your entry, it is your responsibility to keep your contact information with the Sponsor up to date. The Sponsor will not be responsible for any failure to contact you in the event that the contact information you provide is not kept up to date. To update contact information, please contact patelgrandchallenge@usf.edu.
- 4.9 Once you submit your proposal you will receive an automated response confirming receipt from the Sponsor. If you do not receive an automated confirmation within 24 hours of submission, it is your responsibility to contact patelgrandchallenge@usf.edu in order to ensure your proposal was received.
- 4.10 By submitting your proposal you agree to rules and conditions of this Challenge and thereby grant permission to the Sponsor to publish your proposal on the Sponsor's public website – www.psgs.usf.edu. The top 20 proposals will be posted on the site which includes the work of the five semi finalists and that of the winner.
- 4.11 To the extent there is any patentability, patent rights will remain with the Applicant.
- 4.12 The Sponsor may be able to play role in facilitating the patent process as well as identifying venture capital opportunities for the development of the Smart Pot.

4.13 Timeline

- Opening pre-proposal submission: December 15, 2011
- Pre-proposal submission deadline: March 1, 2012 (midnight EST)
- Announcement of shortlisted proposals: May 1, 2012
- Full proposal submission deadline: November 1, 2012 (midnight EST)
- Final panel presentations & award ceremony: December 2012

5. Evaluation Criteria

- 5.1 The judgment of the inventions entered into the Challenge will be based on the following criteria: (1) the viability of the entry; (2) the practicality of the entry; (3) the cost-effectiveness of the entry; (4) the marketability of the invention.
- 5.2 Internal Committee Review – will review initial applications and will select the top 5 entries. The committee comprises senior researchers and faculty from the University of South Florida.
- 5.3 External Committee Review – will evaluate the top 5 entries and select the winner. The Committee will comprise an expert panel of Judges from leading water organizations, associations and companies from around the world.
- 5.4 Decisions are final and communication with the Judges during the evaluation period is not permitted.

6. Grant Awards

- 6.1 The shortlisted proposals will win a grant amount of up to US\$ 8,000 and will be invited to prepare full proposals. Sponsor may award less than US\$8,000 and the award may be subject to milestones established by Sponsor. The shortlisted finalists will receive part of the grant immediately. The balance of the grant will be disbursed when the full proposal is submitted. The Sponsor reserves the right to discontinue disbursements if milestones are not adequately met.
- 6.2 In the second phase of the Challenge, the 5 shortlisted finalists will prepare detailed full proposals. The winner will receive an award of up to US\$ 100,000 designated to develop the Smart Pot. Sponsor may award less than US\$100,000 and the award may be subject to milestones established by Sponsor. Other entries may be given honorable mention recognitions. The award will be disbursed in several payments associated with progress of the development of the Smart Pot. The Sponsor reserves the right to discontinue disbursements if milestones are not adequately met.
- 6.3 In the third phase, the winner in close collaboration with the Sponsor, may further develop the innovation to prototype level and test it. This phase will lead to

- demonstration field studies and ultimately to commercialization of the Smart pot for use by the public.
- 6.4 All awardees will allow their proposals to be published on the Sponsor's public website as mentioned in the previous section
 - 6.5 Once the Smart Pot has been developed, the Sponsor shall be properly acknowledged on the product manufactured.
 - 6.6 All amounts awarded are gross cash values and are subject to taxation in accordance with the applicable laws.
 - 6.7 All Applicants must fill out and submit the W-8 U.S. Tax form that applies to them (and their partners).
 - 6.8 By entering the Challenge the Applicants guarantee that no human subjects will be used to develop and/or test the Smart Pot.
 - 6.9 The five finalists must attend the Challenge Award ceremony and will be responsible for obtaining appropriate documents and visas for their travel to the event location.
 - 6.10 The Sponsor reserves the right to withhold the disbursement of awards if viable proposals are not received.
 - 6.11 The Sponsor only enters into partnerships with organizations and individuals with a proven track record and demonstrate fiscal credibility, character and integrity. To evaluate these attributes, the Sponsor will conduct due diligence on Applicants. However the depth and approach to the due diligence will consider the type, conditions and potential of the Applicants. It's the responsibility of Applicants to conduct due diligence on potential partners for the Challenge and are welcome to provide any information deemed useful. Applicants may also be requested to respond to any issues that arise as part of the due diligence research. Failure to resolve serious concerns will result in disqualification.
 - 6.12 The grantee shall be subject to audit procedures prescribed by the U.S. or such other accounting principles as may be agreed to by the Sponsor in writing. During the participation process the Sponsor will require the Applicant to maintain books, records, documents and other evidence relevant to the Challenge in accordance with generally accepted accounting principles. For example Grantees that are non-profit organizations will be subject to the OMB Circular A-133 audit requirements of issued by the US Government Office of Management and Budget. Each Grantee agrees to furnish copies of its audit reports to the Sponsor along with other related information as may be reasonably requested by the Sponsor with respect to questions arising from the audit report.

7. Representations

By entering the Challenge, you represent and warrant that: (a) you meet all eligibility requirements of the Challenge; (b) you have complied and will comply in all respects with these Rules and all applicable statutes, regulations, and other laws; (c) you are not violating any agreement by which you are bound, including any confidentiality or license agreement; and (d) the entry consists entirely of your own original work in which you hold all rights, and does not infringe or misappropriate any rights of any other individual or entity.

8. Limits of Liability

By entering the Challenge, you agree that the Sponsor will not have any responsibility whatsoever for losses or damages of any kind that result from entry or participation in the Challenge or the acceptance, possession, or use of the prize. Under no circumstances will you be permitted to (and you hereby waive all rights to) claim punitive, incidental, and consequential damages or other damages. To the maximum extent permitted by law, by entering the Challenge, you release and hold harmless the Sponsor, the Judges, the Co-Sponsors and any of their affiliates, and their respective officers, directors, employees, agents and representatives, from any and all responsibility or liability (including, without limitation, for any injuries, losses, or damages of any kind, such as compensatory, direct, incidental, consequential, punitive, or other damages) arising out of or relating to: (a) the Challenge; (b) claims based on copyright, trademark, or patent infringement, or infringement of other intellectual property rights; (c) the acceptance, possession, receipt, or use of any prize; (d) any entries that have been tampered with or that are misdirected, incomplete, non-conforming, corrupt, lost, late, or ineligible; (e) computer, telephone, cable, satellite, network, hardware, or software malfunctions or failures; garbled or jumbled transmissions; Internet or website accessibility or delays or U.S. postal delays; (f) printing or typographical errors in any Challenge-related materials; (g) any other technical or human errors occurring in connection with the Challenge; and (h) any claim that the Sponsor has infringed your proprietary rights by developing or manufacturing a product similar to your entry.

9. Termination

The Sponsor reserves the right to suspend, modify, or end the Challenge at any time prior to the End Date for any reason, in its sole and absolute discretion, including without limitation in the event of fraud, abuse, or technical or other difficulties. In such cases, the Sponsor will send an e-mail notification to the e-mail address associated with each entry.

10. Advertisement and Publication

To the maximum extent permitted by law, by entering the Challenge, you consent to the use by the Sponsor, or any third party chosen by the Sponsor, of any and all information related to the Challenge in any manner permitted by these Official Rules. All such information becomes the property of the Sponsor and will not be returned. By entering the Challenge, you grant the Sponsor the right to use any of your contact information to contact you for any reason related to the Challenge, and the Sponsor, or any third party chosen by the Sponsor, may use any of your information for any other purpose if the Sponsor first receives a written consent from you regarding such other purpose, except to the extent prohibited by law. By entering the Challenge, if you are selected as a Finalist or a Winner, you grant the Sponsor and the Co-Sponsors the right to use and publish your name, city of residence, likeness, photograph, video, voice, and biographical material and any other information in the winning entry, both online and in print, for the Sponsor's or any Co-Sponsor's advertising, marketing, promotion and other purposes, except to the extent prohibited by law.

11. Applicable Law

Any dispute arising out of or relating to these Rules or the Challenge must be brought exclusively to the state courts located in Hillsborough County, Florida, and the Sponsor and you irrevocably waive any objection to the venue and jurisdiction of such courts. If any part of these Rules is held by a court of competent jurisdiction to be invalid, illegal, or otherwise unenforceable, such part will be modified by such court to the minimum extent necessary to make it enforceable while preserving to the maximum extent possible the original intent of Sponsor, and the remaining parts of these Rules will remain in full force and effect.

12. Announcement of Finalists and Winner

A list of the Finalists and the Winner will be posted at psgs.usf.edu/patelgrandchallenge.

13. Reporting

Challenge implementation reporting will be determined based on the outcome of the collaborative finalization of the planned program and the delineation of the roles and responsibilities. An annual performance monitoring plan using established baseline data and specific, measurable targets and indicators will also be agreed upon. Financial reporting will be in accordance with the requirements of the agreement document.

14. Non-Liability

The Sponsor does not assume liability for any third party claims for damages arising out of this Challenge.

15. Miscellaneous

Applicants agree to be bound by these Official Rules and by the decisions of the Sponsor and the Judges which are final and binding in all respects. Applicants who violate these Official Rules, tamper with the operation of the Challenge or engage in any conduct that is detrimental or unfair to the Sponsor, the Challenge or any other Applicant (in each case as determined in Sponsor's sole discretion) are subject to disqualification from entry into the Challenge. The Sponsor reserves the right to prohibit participation in the Challenge of persons whose eligibility is in question or who have been disqualified or are otherwise ineligible to enter the Challenge.