

ideas to impact.

LPG CYLINDER PRIZE

EVALUATION REPORT | SUMMARY

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RECOMMENDED CITATION

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SUMMARY

The Cylinder Prize ran for two months from July 2015, and was one of three¹ prizes designed to support the planned reform of Liquid Petroleum Gas (LPG) distribution in Ghana. Upon adoption of the new policy, millions of old and potentially dangerous gas cylinders would need to be recovered and re-purposed or disposed of, to be replaced by new, safer cylinders.

The objective of the Cylinder Prize was to generate ideas that could be implemented immediately, from a global pool of solvers, on how to maximise the value of the old gas cylinders recovered, as part of the cylinder exchange policy that would provide a better financial/environmental/social option than cleaning the cylinders and sending them to the smelter.

The Cylinder Prize was run on the strong expectation of the Prize Team that the Government of Ghana would soon be implementing reforms to LPG and facing an urgent question of how to dispose of millions of old gas cylinders. Any alternatives to smelting would need to be available in advance if they were to be taken up. After the Cylinder Prize was awarded, the reforms met with opposition from incumbent businesses involved in LPG supply and did not go ahead.

The evaluation of the Cylinder Prize was carried out by Itad, the evaluation partner for Ideas to Impact and is the smallest of the prize-level evaluations for the programme.

The purpose of these evaluations is to make learning about innovation prizes and challenges tested by the programme available to key stakeholders. The primary objective of this evaluation is to analyse and report on the success or failure of the Cylinder Prize to achieve its intended results.

The prize's pathway to success is illustrated in Figure 1; however, prize failure is understood by Ideas to Impact to mean either or both of: non-awarding of the prize (may not automatically be a failure if intended outcomes were achieved); failing to contribute effectively to outcome indicators (may be classed as a failure even if prize was awarded).

¹ The other two prizes were regarded as higher risk, being more acutely dependent upon the timing of the LPG policy, and were not launched.

KEY FINDINGS

- Seven awards were made for partial solutions (solutions that would require further prototyping or testing before being able to be implemented at scale) of which three different but complementary solutions related to a single idea of turning cylinders into improved cookstoves.
- The Cylinder Prize failed to achieve one of its intended effects, i.e. to find a solution that satisfactorily met all criteria, particularly being able to be immediately implemented at scale.
- The prize succeeded in attracting new entrants; while data were unavailable for non-winning applicants, at least 71% of Cylinder Prize winners were new to donor funding (five winners out of seven, with one not participating in interviews).
- There is evidence of the Cylinder Prize encouraging participation in further innovation prizes and interest in prizes with a development focus.
- Lack of progress with the energy access policy in Ghana prevents some further effects from taking place but if resources are available, the Prize Team could take action that may lead to other effects occurring.

DID THE CYLINDER PRIZE WORK?

Figure 1 summarises what success looks like for the Cylinder Prize, and the associated assumptions, and has been annotated to highlight the main conclusions of the evaluation. Overall, the evaluation finds that the Cylinder Prize succeeded in the first two stages of the prize process (receiving applications and making awards), but failed to deliver a solution that the Government of Ghana (and other stakeholders) were willing or able to implement immediately.

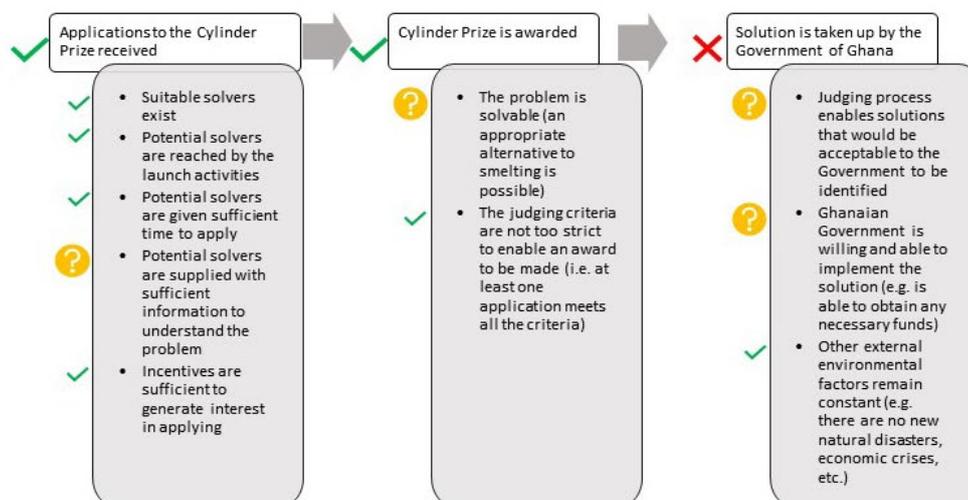


Figure 1: Intended results of Cylinder Prize

Based on the data available to the Evaluation Team, four of the assumptions did not hold up:

1. Potential solvers are provided with sufficient information to understand the problem.
2. The problem is solvable; an appropriate alternative to smelting is possible.
3. Judging process enables solutions that would be acceptable to the Government to be identified.
4. The Ghanaian Government is willing and able to implement the solution.

The first three assumptions are inter-connected: the evaluation findings suggest that **the lack of full solutions delivered by the Cylinder Prize can be explained either by no better existing alternative to smelting the cylinders, or a series of information gaps.** Solvers were not provided with details of the country context of the challenge: they only received technical information about the cylinders after the prize was launched, and the Prize Team did not communicate to potential solvers or judges its definitions of "innovative" and "new". Some of this could have been pre-empted but the Prize Team was unable to share information about the country with solvers at the time of running the prize, and the view from the Prize Experts is that too much information can stifle creativity.

Even if full solutions had been obtained, the assumption that the Ghanaian Government and other stakeholders in Ghana would be able to implement any of them is questionable, given the lack of progress with the policy since the awards were made (millions of cylinders are not yet available), and their willingness to implement the solutions cannot be tested until that point.

WHAT WENT WELL?

- All seven solutions awarded were made available to the Government of Ghana, and those relating to stoves shared with the stove manufacturing industry in Ghana.
- In the opinion of Innovation Prize Experts, the number of applications for the Cylinder Prize was above average for an InnoCentive prize of this type.
- The Prize Team successfully exposed a global pool of solvers from a range of backgrounds to information about the prize and one in every 11 people that expressed active interest in the Cylinder Prize were based in sub-Saharan Africa.
- Among winners, the Cylinder Prize attracted good quality submissions from people that DFID would have been unlikely to reach through their usual channels of procuring research.
- The unusual focus of the challenge prompted at least one winner to participate in an InnoCentive challenge for the first time.
- The length of the challenge period does not seem to have presented a barrier to solvers participating, indeed the Cylinder Prize received more submissions than anticipated by the Prize Team.
- The financial award was acceptable to solvers – all seven winners agreed to license their solution to Ideas to Impact in exchange for the award they were offered.
- Judges were positive about the process and while some of them made constructive comments for minor improvements, no major issues were identified.

WHERE COULD THINGS HAVE GONE BETTER?

- No full solutions were identified through the judging process (i.e. alternatives that could be immediately implemented at scale without prototyping or testing).
- To date, none of the solutions shared with the Government of Ghana or stove manufacturers have been taken up.
- Solvers and Prize Experts had different views on how much/what information should be made available; the Prize Team's inability (for political reasons) to disclose information about the prize's context created problems for some solvers.
- Even winners did not score highly on all the criteria, which may support other findings: that solvers wanted more contextual information and that some winners felt they were being asked for something (market information) that they felt they were not best placed to deliver.
- The Prize Team had limited success in promoting the prize directly to African audiences.
- Sub-Saharan African solvers appear to have had less success at being shortlisted for further judging than solvers from the rest of the world, despite having been more likely to submit an application after opening a Project Room.



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WHAT ELSE IS INTERESTING ABOUT THE CYLINDER PRIZE?

- While it was not reasonable to forecast its impact, in the absence of progress on the policy, the Prize Team estimated the potential for 176,000 poor or very poor people in Ghana to benefit from the Cylinder Prize by 2025 if the policy had gone ahead as expected and improved (fuel efficient) cookstoves had been produced for people on low incomes to purchase.
- Cost comparisons between the Cylinder Prize and consultancy were difficult to estimate reliably and not always directly comparable but the exercise was useful for identifying some of the issues involved in assessing Value for Money of the prizes.
- In comparison to procuring expertise from a consultant, a prize modality appears to be significantly more expensive; however, the Cylinder Prize offered several advantages over a typical consultancy including: reduced financial risk to the donor, increased number of solvers and reaching new entrants.
- The prize's failure to identify a better immediately-implementable solution to sending cylinders to the smelter suggests that the Government of Ghana's original proposal was still the most appropriate approach.
- There often appears to be a set of factors that combine to make a prize attractive to a solver, e.g. having the opportunity to earn money while applying one's theoretical knowledge to a practical problem and improving people's lives.
- About two thirds of the shortlisted solvers included an altruistic reason for taking part in the Cylinder Prize (16 out of the 22 that provided information on their motivation) and for many of these it was given as the only reason.
- Several of the winners reported that non-monetary rewards from winning, or even just participating, were a stronger incentive than the financial reward on offer.

RECOMMENDATIONS

PRIZES NEED TO BE VIEWED AS PART OF A PORTFOLIO-BASED APPROACH

Prizes should be part of a portfolio that offsets successes and failures in a managed way and considers the increased reputational risk of failure that applies to prizes, due to their higher profile. This applies to portfolios of prizes, and where prizes are used within a portfolio of other funding approaches (payment-by-results contracts, grants, etc.) that each present different levels of risk.

BE CLEAR ON WHICH OBJECTIVES ARE VIEWED AS KEY TO JUDGING "SUCCESS"

Is success judged by the number of solutions obtained? Is success searching the widest possible range of solutions and discovering that there are no clear alternatives?

CHECK THAT THE RIGHT "CROWDS" WILL BE REACHED BY A PRIZE THROUGH PLATFORM CHOICE AND PRIZE DESIGN.

Given the Prize Team would have rewarded existing solutions from another context, a more overtly desk-based research challenge might have had more success if global networks of professionals working in development could have been accessed.

CONSIDER RUNNING A POINT SOLUTION PRIZE AS WELL AS CONSULTANCY.

Paying for a research helpdesk report², might have been better value for money than a prize, given that the Prize Team could not make public any information about the context of the prize; the prize could then have been run if the helpdesk failed to identify a solution. If resources only allow for a point solution prize or a consultancy, then consider the full risks and benefits offered by each when comparing likely cost-effectiveness.

ADAPT THE DESIGN OF POINT SOLUTION PRIZES TO INCREASE THE PROBABILITY OF SUCCESS.

Winners were keen to see their ideas implemented but two of them commented on their lack of capacity to do so without technical support, or introductions to a local company with whom they could work to develop the idea further. Point solution prizes could achieve more of their potential value if they were blended with other mechanisms, such as follow-on grants, match-making with funders and companies, etc.

PRE-TEST PRIZE INFORMATION BEFORE LAUNCH.

When a potential solver visits a prize information page on InnoCentive, it signals that the prize has caught their attention and that they are interested in finding out more; opening a "Project Room" signals that the prize page has maintained this interest in the potential solver. To encourage more conversions from visits to Project Rooms, Prize Teams could pre-test the summary information with potential solvers in order to check that sufficient incentives are in place and that there are no unnecessary barriers to entry. Similarly, it is worth checking that the expectations of the Prize Team are communicated effectively in the detailed information and criteria of the prize.

CONSIDER WHAT WOULD BE APPROPRIATE REWARDS FOR SOLVERS MOTIVATED BY ALTRUISM.

Altruistic solvers prepare and submit solutions because they believe that doing so might help others, even if they themselves are not fully or partly rewarded for their efforts. In this context, large financial awards might be counter-productive while assurance that solutions would become a public good, with the solvers' consent, might be more attractive. This could also address wastage of multiple solvers investing their resources into developing a solution (possibly the same/similar ones) when only a limited number of prizes are to be awarded.

INCLUDE DEFINITIONS OF TERMS IN PRIZE INFORMATION FOR SOLVERS AND JUDGES.

The Cylinder Prize highlights the importance of ensuring that "innovation" or "innovative" is defined and shared with solvers as part of the challenge details, and for this to be the same definition used by the judging panel. Ideas to Impact defines innovation as: The application of new or improved products, processes, technologies or services that are either new to the world (novel), either new to a region or business (imitative) or new to the field of endeavour, that is, repurposed (adaptive). The definition of 'innovation' suggested by the OECD in its Background Paper (2014)³, may be another useful reference:

- *Novelty: innovations introduce new approaches, relative to the context where they are introduced.*
- *Implementation: innovations must be implemented, not just an idea.*
- *Impact: innovations aim to result in better public results including efficiency, effectiveness, and user or employee satisfaction.*

² The other two prizes were regarded as higher risk, being more acutely dependent upon the timing of the LPG policy, and were not launched.

³ Innovating in the Public Sector: Background paper - <http://www.oecd.org/innovating-the-public-sector/Background-report.pdf>



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