This brief provides a high-level overview of Right-Sizing Prizes, the fourth phase of AgResults' Pay-for-Results prize competition design process. For step-by-step instructions and detailed guidance on all five phases of design, check out AgResults' Pay-for-Results Prize Competition Toolkit.

IMPACTFUL DESIGN AT A GLANCE: RIGHT-SIZING PRIZES

After structuring a prize, program designers determine the size of the prize purse for a competition. Prize sizing considers the financial motivations of potential competitors as well as the non-financial benefits of participating. Depending on the market's maturity, the prize may need to be bigger or smaller so that it does not end up overpaying and distorting the market or underpaying and failing to incentivize competitor action. 'Pressure testing' the prize size with competitors and experts can help avoid these pitfalls. Based on the design environment and available information, AgResults suggests using one of three prize-sizing approaches:

1. Competitor Investment Approach
2. Per-Unit Cost Approach
3. Program-Wide Purse Approach

Option 1 Competitor Investment Approach

With the competitor investment approach, designers estimate the types and sizes of investments that competitors might make to achieve the program's desired outcomes, and then calculate the prize purse based on the level of effort and resources needed to win the prize. In general, prizes should substantially offset investment costs for competitors and lower their barrier to entry into competition participation – without creating distortionary market outcomes that allow competitors to capture a prize much larger than the cost of investment.

Option 2 Per-Unit Cost Approach

Alternatively, using a per-unit cost approach, program designers determine the prize amount based on the estimated per-unit costs, profits, or benefits of selling or using a specific technology. This is most appropriate for a competition that aims to scale the adoption of a current or improved technology. Once designers decide the per-unit prize amount, they multiply that amount by the total expected number of units sold to develop the total prize purse. Within this approach, designers can narrow in on competitor margins or per-unit premiums upon which to base the prize purse calculations:

- **Per-Unit Competitor Margin:** This approach is most useful when there are low profit margins — competitors would only make significant margins at large scale — but there are investment barriers that prevent scaling. Anchoring prizes to competitor profit margins encourages them to overcome these barriers by increasing distribution and sustainably scaling over time.
- **Per-Unit Premium:** This approach aims to set the per-unit prize of a delivered solution equal to the expected premium of the technology or service in a more mature marketplace. Particularly useful in nascent or immature marketplaces, it incentivizes competitors to invest in a solution with less risk until the market matures and naturally recognizes the solution's value.

Option 3 Program-Wide Purse Approach

Using a program-wide purse approach, designers can develop a program budget using costs for analogous projects or a cost-benefit analysis of the desired outcome and expected benefits. This way, designers will not over-allocate funds to a prize but can still provide adequate incentives.

Analogous Project Costs

The analogous project cost approach uses the cost of similar traditional 'push' projects to determine the competition's budget. Comparable push projects should have similar goals, objectives, and/or expected activities to be valid for the comparison. Designers calculate the prize budget using these projects' costs as a precedent, adjusting to match factors specific to the competition's context, such as per capita income. This ensures that the prize does not overpay for results that traditional programs with similar goals have achieved.

Cost-Benefit Estimation

Alternatively, designers can size or validate the prize using a cost-benefit estimation that weighs the quantified economic benefit of achieving outcome goals against the expected cost of achieving those goals. A cost-benefit analysis should establish the upper and lower bound prize size of an outcome: The lower bound size equals the cost of the outcome (in other words, the cost to achieve an outcome), while the upper bound size equals the benefit of the outcome.

When using this method, designers should also consider non-economic benefits, such as improving women's market involvement, changing cultural perceptions, strengthening household nutrition, improving access to information, or formalizing markets. These may be harder to factor into a cost-benefit calculation directly, but should be considered when evaluating if the prize size is appropriate.

After designers determine the overall size of the prize using a program-wide approach, they determine individual competitor incentives, which should motivate competitors and enable program scale. The program-wide budget approach may also be considered in tandem with another approach as a check or validation to keep the prize purse and budget reasonable.

Calculating Economic Benefits for Farmers

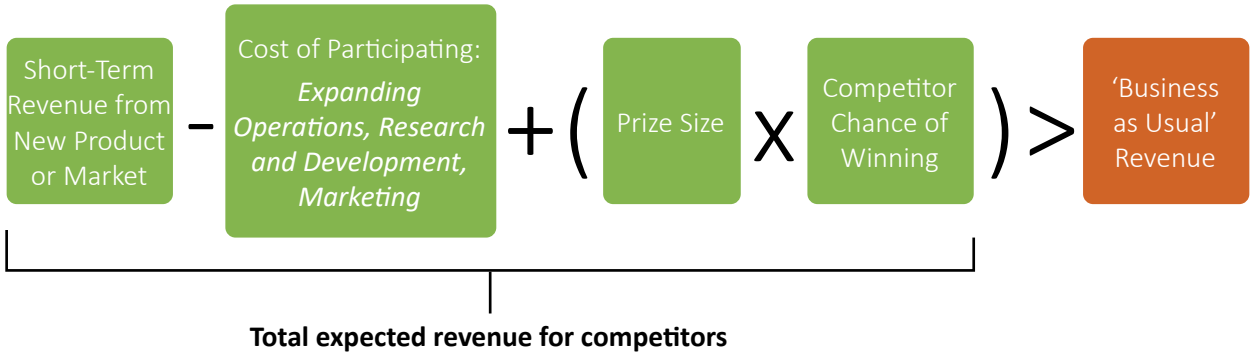
In Kenya, AgResults wanted storage providers to develop, market, and sell on-farm storage devices to smallholder farmers to reduce post-harvest losses. To size the prize, AgResults first conducted a cost-benefit analysis that showed the expected farmer benefit was $14 million. AgResults next calculated the incentive payment rate as a percentage of total economic gains by farmers who used improved storage products. This process helped us to settle on $7.75 million as the incentive payment total, which was 55 percent of that total economic gain.

Pressure-Testing Prize Sizes

Throughout the prize sizing process, designers check in with competitors and experts to 'pressure test' the prize and ensure that it motivates competitors without overpaying for results.

To do this, designers revisit the overall prize purse size and the potential payments to individual competitors. By weighing the cost of competitor participation and their likelihood of winning a prize, designers can create prizes that exceed competitors' current 'business as usual' revenue. That way,

competitors are adequately incentivized to change their business models and participate in the competition. The figure below illustrates how to assess the total expected revenue for competitors.



The Impact of Project Scale

A project's goals and the actions it intends to motivate will significantly impact the size of the necessary prize purse. For example, when developing prize sizes for competitions that aim to drive large leaps forward in research or product development, designers should know that few competitors are likely to compete and that large advances may require significant investment. As a result, larger prizes may be needed. In contrast, competitions that aim to maximize outreach and market penetration will likely use slightly smaller prizes. Designers need to accurately predict competitor growth and market penetration rates to determine program scale and the necessary size of the prize purse.

As designers consider the expected scale of the project, they should recognize that the lack of upfront funding often creates non-linear project growth as competitors may start with small investments to test and then ramp up investment after initial success.

Wrap-Up

Based on the competition's objectives and the target competitors, designers should use one of three approaches to size and validate a prize that effectively drives participation and innovation without overpaying for results. Considering the costs of participation, the short-term revenue from a new product, and the chances of winning a prize should outweigh a competitor's 'business as usual' revenue. With rigorous field research and expert verification, Pay-for-Results prize competition designers can structure a prize that is right-sized for the target competitor and the complexity of the target problem.

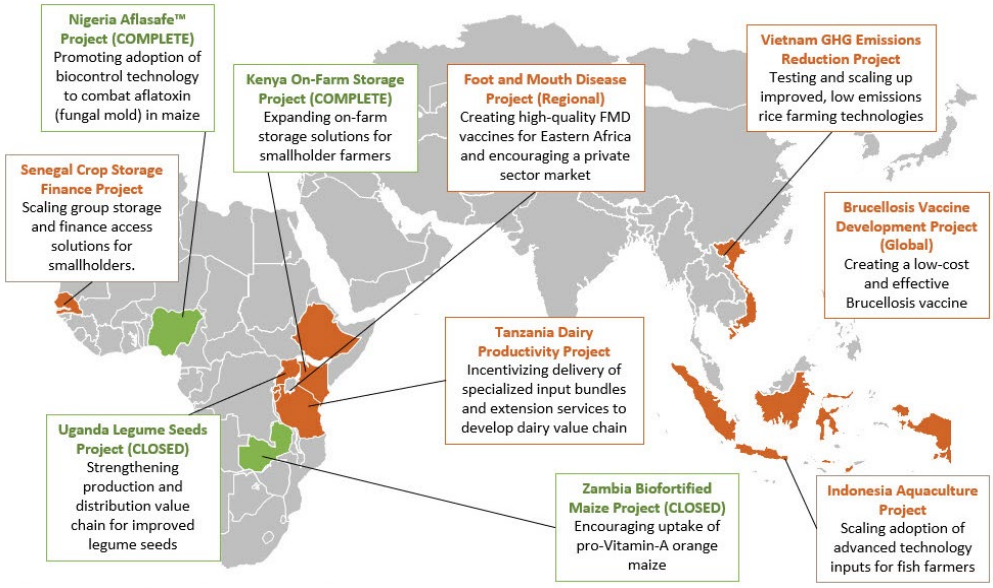
Want to learn more? For step-by-step instructions and detailed guidance on all five phases of design, check out AgResults' Pay-for-Results Prize Competition Toolkit.

About AgResults

AgResults is a $152 million collaborative program between the governments of Australia, Canada, the United Kingdom, the United States, and the Bill & Melinda Gates Foundation that funds agricultural Pay-for-Results prize competitions. Since 2013, AgResults has designed and implemented these competitions to incentivize the private sector to overcome specific market barriers and solve food security challenges — particularly for people living in poverty. AgResults competitions fall into one of two categories: 1) prizes that incentivize the Research and Development (R&D) of a new solution or product to address a market failure; and 2) prizes that encourage the development of innovative delivery models and encourage smallholder farmers to adopt an existing product or service at scale.

For more information on AgResults' approach, as well as its current portfolio and suite of learning products, please visit https://agresults.org/

Our Portfolio



Our Impact

100 Competitors Engaged

383,618 Smallholder Farmers Reached

$12.5 million Prize Funds Awarded

For more information, check out the Learning Library on the AgResults website: http://www.agresults.org/learning

AgResults
INNOVATION IN RESEARCH AND DELIVERY

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