.
Final Submission for Phase III

# COVER PAGE

**Team Name:** Enter Team Name

**Primary Submitter:** Enter Team Leader Name

**Submission Title:** Enter Submission Title

**Abstract:** Enter Short Description (<100 words, to be shared publicly.)The cover page will not count toward the 20-page limit of the proposal.

You can find more information on what to submit for this final submission on page 9 of the [**Battery Recycling Prize Rules and Scoring Criteria (Phase III)**](https://www.herox.com/BatteryRecyclingPrize/resource/630) on HeroX under “Resources.”

Submit all files in unlocked, searchable PDF form, using the following title format: **Team-Name\_BRP\_PhaseIII.pdf**.

If the submission contains trade secrets or confidential commercial or financial information, such Confidential Business Information (CBI), should be designated at the time of submission in the following manner:

* The cover sheet must identify the specific pages containing CBI and include the following language:
* “Notice of Restriction on Disclosure and Use of Data: Pages [list applicable pages] of this document may contain CBI – trade secrets or commercial or financial information that is privileged or confidential and is exempt from public disclosure. Such information shall be used or disclosed only for evaluation purposes. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source. [End of Notice]”
* The header and footer of every page that contains trade secrets or commercial or financial information that is privileged must be marked as follows: “CBI”.
* In addition, each line or paragraph containing trade secrets or commercial or financial information that is privileged or confidential must be enclosed in brackets.

Submit a 20-page maximum report that includes the components below. All assumptions used in documentation, analysis, modeling, and simulation must be explicitly stated.

# Executive Summary

A high-level overview of your end-to-end solution, the pilot validation approach, the pilot validation results, an updated estimate of the impact of the end-to-end solution based on the results, and the plans to bring the solution to full scale.

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# Pilot Validation Approach

Describe the plans for the pilot validation approach in depth. Define the duration of time required for the approach and what was accomplished during Phase III.

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# Use and Results of Voucher Funds

Describe each voucher work objective, the work results, how the work enabled the pilot validation, and any planned continuation of the work.

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# Detailed Technical Explanation of Pilot Validation Results

Describe your results from initiating pilot validation for the designated commercial use and what was achieved in the Phase III contest. Present the results against the approach plans, provide a projection of results for pilot validation based on actual results if a full demonstration wasn’t completed, and describe plans for continued work or demonstration after the end of the Phase III contest.

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# Recovered Lithium-Ion Batteries (LIBs)

The end recycler will provide verification of the recovered LIBs during the pilot validation. The end recycler must meet all EPA and state requirements. Specifically, Phase III participants should pay close attention to requirements for universal and hazardous waste and Resource Conservation and Recovery Act (RCRA) Laws and Regulations, as applicable. The end recycling facility must be located in the United States.

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# Impact Modeling

Define the following metrics:

1. The number of LIBs estimated to be recovered by pilot validation in Phase II submission
2. The number of actual recovered LIBs that resulted from the pilot validation
3. The updated projection of recovered LIBs from the end-to-end solution after operating for one year at full scale, and
4. The updated estimate of the projected number of recovered batteries when fully scaled assuming one year of operation as a percentage of the total population of the battery commercial use based on 2018 sales data.

Based on the pilot validation results, estimate the number of recovered LIBs after one year of operation of the end-to-end solution at full scale. When calculating the estimated percentage of recovered LIBs after one year of operation at full scale, utilize the 2018 sales data as defined in the Appendix. The number of recovered LIBs from the pilot validation should justify the percentage of the battery population impacted when the end-to-end solution is fully scaled. For modeling purposes, participants should assume that the number of batteries available for recycling in your fully scaled solution is equal to the 2018 sales data as described in the Appendix. Submissions should develop their own assumptions as to when their solution will be fully scaled. For the purposes of your impact modeling, a single 11 | Battery Recycling Prize Phase III Official Rules battery is defined as a single saleable unit. **Please fill out and include the table below in your Phase III final submission.**

**Table 1. Example Table. (Arial 10 Bold)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Battery Use – please include only the commercial uses that you are targeting** | **Number of batteries projected to be delivered to recyclers by your pilot validation project as defined in Phase II** | **Actual number of batteries delivered to recyclers as result of pilot validation in Phase III** | **Projection of collected batteries delivered to recyclers when your solution is scaled nationally assuming 1 year of operation****Start date of operation: \_\_\_\_\_\_\_\_** | **Estimate for collected batteries delivered to recyclers as a percentage of the total using 2018 data in the appendix\*** |
| **Consumer Electronics** |  |  |  | % |
| **Electric Vehicles** |  |  |  | % |
| **Stationary storage and/or other large industrial uses** |  |  |  | % |
|  | \* assume that the number of batteries available for recycling in your nationally-scaled solution is equal to the 2018 sales data as described in the [Phase III Contest Rules Appendix](https://www.herox.com/BatteryRecyclingPrize/resource/630) |

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# Documented Costs of the Pilot Validation

Provide the actual costs to support the pilot validation broken into the tracks from Phase I, as applicable (Collection, Separating and Sorting, Safe Storage and Transportation, Reverse Logistics, and Other Ideas) and estimate the total end-to-end solution costs when fully scaled.

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# Plans to Scale

Submissions should provide a market transformation plan based on their own assumptions as to when their solution will operate at full scale. The following items must be included in the plans to bring the solution to full scale:

1. Identification of the target market
2. Existing and potential competitors in the target market
3. Commercialization timeline to bring concept to full scale
4. Budget estimate supported by actual costs from the pilot validation
5. Financing plans
6. Challenges to full-scale implementation and mitigation plans
	1. Address the challenges of scaling to rural, suburban, and urban localities
	2. Highlight the greatest risk and plan against it
7. Identified distribution channels and product distribution plans
8. Legal/regulatory considerations.

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# Team and Resources

Provide a list of individual members and team partners, external advisers (e.g., a board), external sponsorships and established partnerships, and interested venture capitalists. Include the roles and responsibilities of each party. The team composition should demonstrate the capability to successfully implement the proposed end-to-end solution at full scale. At least one Phase III team member must have been a member of the Phase I winning team.

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# References

Chicago Manual of Style

# Bibliography

Chicago Manual of Style

References, Citation, and Bibliography will not count toward 20-page limit.