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Living Building Challenge

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The objective of the Responsible Industry imperative is to improve the industry’s social and environmental impacts of their practices. The standard wishes to promote awareness within the industry and reduce reliance on harmful ingredients and extraction of natural resources. The requirement is that there be at least one Declare product for every 500 square meters of gross building area.

The objective of the Red List imperative is to factor out the materials with the greatest negative impact on human and environmental health. This imperative is intended to provide accurate and consistent measurements.

The Living Economy Sourcing imperative intends to promote growth of local economic structure while reducing negative transportation related effects on human and environmental health. Requirements for material sourcing distances are presented in this imperative, as seen in the map below. From Portland, OR, the manufacturer location is defined as the place where the final product is fabricated and assembled. A distribution facility does not qualify as a products’ manufacturer location.

Methods of improving and localizing the total sourcing radius should be researched.

The objective of this research is to investigate, in depth, the Materials Petal of the Living Building Challenge and present a methodology to easily navigate the Petal. The Multnomah County Courthouse building was used as a case study for the methodology. This research hopes to affect the building specifications to create a more sustainable and environmentally conscious procedure for building material selection.

The objective of the Net Positive Waste imperative is to divert waste stream through reuse and reintroduction as product attributes.