**Project History**

The CART project began as a subsidiary of the Basic Utility Vehicle project in the Fall of 2013 and became its own project in the Fall of 2014.

The original goal was to use the small motorcycles that were already present in developing countries to perform tasks for which horses were used.

The original motorcycle search involved looking for a 100 - 125 cc scooter. However, it was determined that a small motorcycle would more accurately represent rural transportation of developing nations.

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**What’s Being Done**

The CART project team has recently purchased a motorcycle with a similar frame to those commonly used in our rural target areas. The physical presence of a motorcycle (Kawasaki 100cc) will aid the design and brainstorming processes as the project continues to progress.

The CART project has brainstormed and used SolidWorks CAD software to model a universal hitch attachment. The drawing below is an assembly of the three components of the initial design. This design can be tested using SolidWorks Finite Element Analysis to determine maximum stresses and strains under realistic loads.

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**Future Work**

1. Use purchased motorcycle and find general connection points for hitch that will match most other models
2. Design cart to attach to hitch and provide towing ability on small motorcycles
3. Analyze motorcycle frame to find weak points and potential durability improvements
4. Explore further attachment applications (depending on client’s geographical location) such as: plow, power take-off, small refrigeration unit, etc.

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**Sustainability**

All designs and improvements created by the CART team must be easily repaired in the area of implementation. Awareness of locally available materials and machinery will be necessary for the project’s success.

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**Client**

Client potential in Cambodia

**Acknowledgements**

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**Further Information**

www.thecollaboratoryonline.org/wiki/CART