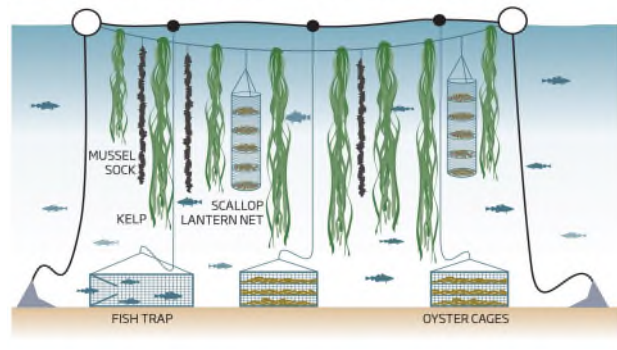


Low-impact Aquaculture Cable, Eliminating Poly- rope and Marine Mammal Entanglement Issues

Vertical thinking

By utilising the entire water column, 3D ocean farms can produce a lot in a small area



Composite Recycling Technology Center

We design, develop, and manufacture products that utilize carbon fiber scrap to make clean products that positively impact people's lives and our environment.

The CRTC

Our Mission is to inspire and grow the global composite recycling community through innovation in technology and manufacturing that transforms carbon fiber scrap into products that positively impact people's lives and our environment.

The project developed capabilities to manufacture and re-use scrap pre-preg carbon fiber from Washington's aerospace industry, which previously was all going to landfill. The project enabled installation of three compression molding presses, a large walk-in oven, 5-axis CNC machining equipment, a waterjet cutter, rapid composite molding process technology, and chopping technology to convert the scrap pre-preg to usable formats for molding. The combined capabilities of these pieces of equipment, along with CRTC's other processing equipment, created a capability to manufacture completely finished goods in-house. The key roadblocks specific to the project were long lead times for some of the equipment, building modifications necessary to install and operate, and the difficulty in creating a chopping system that can work across several different types of scrap being received from industry. Key lessons learned would be to focus carefully with prospective clients for the market size and production rate of their products.

The Clean Energy Fund allowed us to leverage and gain funding from Department of Energy's ARPA-E group and from the Institute for Advanced Composite Manufacturing Innovation (IACMI). The advanced materials and scrap handling capabilities developed in the project have achieved national recognition within the composites industry well beyond our aerospace community. The Clean Energy Fund has enabled process and product developments in a new wood/carbon fiber hybrid CLT (cross-laminated timber) product for smaller homes; a recycled fiber/green marine cable for vertical multi-species aquaculture farming removing plastic rope from the marine environment; as well as product manufacturing and sales for sporting goods and prosthetics.

Large-scale ocean aquaculture and mass urban housing built to Passive House standards are the two high-volume, clean technology/clean energy areas of the future that this could have a substantial, transformational impact on!



With CRTC's scrap carbon fiber we can build thinner and lighter CLT panels for housing, utilizing thermally modified western Hemlock for a solid, durable wall system which enables achieving and maintaining Passive House standards over a greatly extended lifetime, eliminating drywall and mold/mildew issues.

Contract Number: 16-92201-007

Contract Amount: \$1,726,533

Amount Expended:

Amount De-obligated