Mare Liberum is a collaborative, open-source boat-building project brought to you by Ben Cohen, Dylan Gauthier and Stephan von Muehlen. The project seeks to reconnect with the fourth element (after concrete, air and fire) and explore the unseen nooks of your city’s urban landscape by building boats. You can check out www.thefreeseas.org for updates.

To build a small boat out of urban waste, explore the unseen nooks of your city’s urban landscape by building boats. You can check out www.thefreeseas.org for updates.

**Parts of the Dory**

1. **Port Gunwale**: Shelf that runs along the side of the boat.
2. **Starboard Gunwale**: Shelf that runs along the side of the boat.
3. **Bow Half**: The forward section of the boat.
4. **Stern Half**: The rear section of the boat.
5. **Transom & Transom Frames**: Structure that connects the boat's ends.
6. **Bottom Board**: The bottom of the boat, only applicable to flat-bottomed boats.
7. **Foredeck**: The deck in front of the mast.
8. **Main Deck**: The main level of the boat.
9. **Shroud**: A line that supports the mast and sails.
10. **Tiller**: A handle used to steer the boat.
11. **Rudder**: A device used to steer the boat.
12. **Stern Knee**: A support that connects the transom to the bottom board.
13. **Planks, Bow Half**: Wood strips that run along the sides of the boat.
14. **Planks, Stern Half**: Wood strips that run along the sides of the boat.
15. **Port Side**: The left side of the boat.
16. **Starboard Side**: The right side of the boat.

The new waterfront building at the Gowanus Studio Space, Brooklyn, NY 11215

1. **Frame #1**: The bottom frame of the boat.
2. **Frame #2**: The second frame of the boat.
3. **Frame #3**: The third frame of the boat.
4. **Frame #4**: The fourth frame of the boat.

**Notes for Building the Dory**

- **Knot**: Speed equal to 1.15 miles per hour.
- **Thwart**: Seat crossing through the center of the boat.
- **Oarlocks**: Pivot points for oars.
- **Oar**: Rowing utensil.
- **Pine Tar**: Often called 'Stockholm tar,' a sticky material derived from pine resin.
- **Oarlock Bracket**: Pivot points for oars.

**Tips for Building the Dory**

- **Frame**: Sectional bracing of the boat. Use any solid wood (pallet wood will work well.)
- **Bottom Board**: The bottom of the boat, applicable only to flat-bottomed boats.
- **Heeling**: The direction the boat is going.
- **Draft**: Measure of the boat's depth in water.
- **Bilge**: The inside bottom of the boat.
- **Capsize**: To flip over the boat.
- **Abeam**: To either side of the boat.
- **Ahead**: In front of the boat.

**Specifications**

- ** shortly before taking any boat out on the water.**
- **Send us your comments, critiques, suggestions, remaps, or redesigns.**
- **Mail to:**
  - Free103Point9, 119 8th Street, Suite 202, Brooklyn, NY 11215
  - c/o Gowanus Studio Space, 119 8th Street, Suite 202, Brooklyn, NY 11215
  - Paula zaslavsky, Jacqueline Shilkoff at the Neuberger Museum (www.bignyc.org), build it Green NY (www.gowanusstudio.org), Washington, D.C., the Gowanus Studio Space.
- **Mare Liberum thanks:**
  - kennedy at free103Point9, Jacqueline Shilkoff at the Neuberger Museum (www.bignyc.org), build it Green NY (www.gowanusstudio.org), Washington, D.C., the Gowanus Studio Space.
- **Mare Liberum credits:**
  - youth, Peter von Muehlen (1934-2006)

For more information, please visit www.mareliberum.org.
ACQUIRE YOUR BOAT BUILDING MATERIALS. YOU WILL NEED:

- 5 SHEETS OF 1/2" PLYWOOD WITH THE OUTLINES OF THE PARTS LAY OUT ALREADY OR A COPY OF THE TEAMS. (THE LUMBER DRAW WILL HELP.)
- A GOOD SUPPLY OF 3/4" PINE - AT A MINIMUM OF 3" IN LENGTH.
- A GOODLY SUPPLY OF 3/4" PINE - AT A MINIMUM OF 3" IN LENGTH.
- WOOD GLUE, CONSTRUCTION ADHESIVE, AND SOMETHING BESIDES. (SEE DIMENSIONED DRAWINGS AND BE SURE TO CHECK FOR UPDATES TO THE GEOMETRY.)

ATTACH TRANSOM TO Stern KNEE

ATTEMPT TO MAKE THEM AVAILABLE TO ALL, BUT BE RESOURCEFUL. (NOTE: IT HAS BEEN FOUND THAT UNLESS THE 1/2" PLYWOOD IS THICKER, THE FRAMES WILL NOT STAND UP UNDER THE WEATHER. Raintight.)

ATTACH STEM AND STEM KNEE TO THE BOTTOM BOARD AS SHOWN BELOW USING BOTH ADHESIVE AND SCREWS.
ATTACH FRAMES TO THE BOTTOM BOARD IN THE SAME WAY.

LAMINATE STEM TOGETHER AS SHOWN. DO THE SAME FOR THE STEM KNEE.

ATTACH THE BOTTOM BOARD HAULES TOGETHER, THEN DO THE SAME WITH THE SIDES. USE THE "PLANKS" SECTIONS AS FOUND ON THE TEMPLES.

BEGINNING IN THE MIDDLE, AND WHILE WORKING OUTWARD, ATTACH THE SIDE S OF THE BOAT TO THE FRAMES.

FOLLOW THE ASSEMBLY AND ALONG THE EDGES CHANGED THE BOTTOM BOARD.

MAKE SURE THE BOTTOM BOARD'S EDGES ARE FLUSH WITH THE END OF THE BOAT AND THE TOP BOARD AS YOU MOVE OUTWARD.

USE THE HOLES LOCATIONS PROVIDED TO ATTACH THE FRAMES RELATIVE TO THE EDGES.

ATTACH THE FRAMES TO THE BOTTOM BOARD WITH THE SEAM LINES ON BOTH.

MAKE SURE THE BOTTOM BOARD'S EDGES ARE FLUSH WITH THE END OF THE BOAT AND THE TOP BOARD AS YOU MOVE OUTWARD.

ATTACH THE SIDES TO THE STEM AND TRANSOM IN THE SAME FASHION, USING BOTH ADHESIVE AND SCREWS.

THESE ARE THE MOST DIFFICULT PART DUE TO THE ACUMULATION OF ERROR, INCREASED FORCES, AND DIFFICULTY IN CLAMMING THE CURVES. PROCEED WITH CARE AND CAUTION. DO SLIGHT, BUT HARD HEARTY AND ALMOST THERE.

ATTACH THE "CORK BLOCKS," BITS OF 2x4 BETWEEN THE FRAMES THAT BOTH THE BOTTOM AND THE SIDES CAN SCREW TO.

SCREW PLANKS... (SEE DIMENSIONED DRAWINGS AND BE SURE TO CHECK FOR UPDATES TO THE GEOMETRY.)

ADD DESIRED TRIM TO THE OUTSIDE AND INSIDE OF THE DORY.

BUILD SOME GARS AND ATTACH TO FRAME. ATTACH TRANSOM FRAME TO YOUR LIBERUM DORY WITH CABINS, WAC'TA SKULL, RUN-NING LIGHTS, BENCHES, BARBECUE, ETC.

SHARE WHAT YOU'VE LEARNED WITH US AND DRAW US A PICTURE IF YOU LIKE...