in the future, kitchen countertops will have algae gardens— smart, synced, sensing objects providing fresh, healthy food to users.

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Tilapia encrusted in a spirulina-paprika panko, algae infused rice and salsa.

Use cycle

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In the future, harvesting spirulina is made easy with algae gardens. The system contains sensors that track the tank pH level, temperature, access to sunlight, and level of fertilizer. The use cycle is as simple as approaching the interface, telling the interface how much algae is desired, and then collecting the algae from a sieve once the harvest is complete.

The use cycle to the right describes the typical function of the system. Other algae garden use cycles exist, including assessing the health of the algae, replacing the water in the tank (which must be done every 8 months to reset the pH level in the tank), as well as the process for transferring a sample of live culture into a bottle to start another algae tank for a friend.

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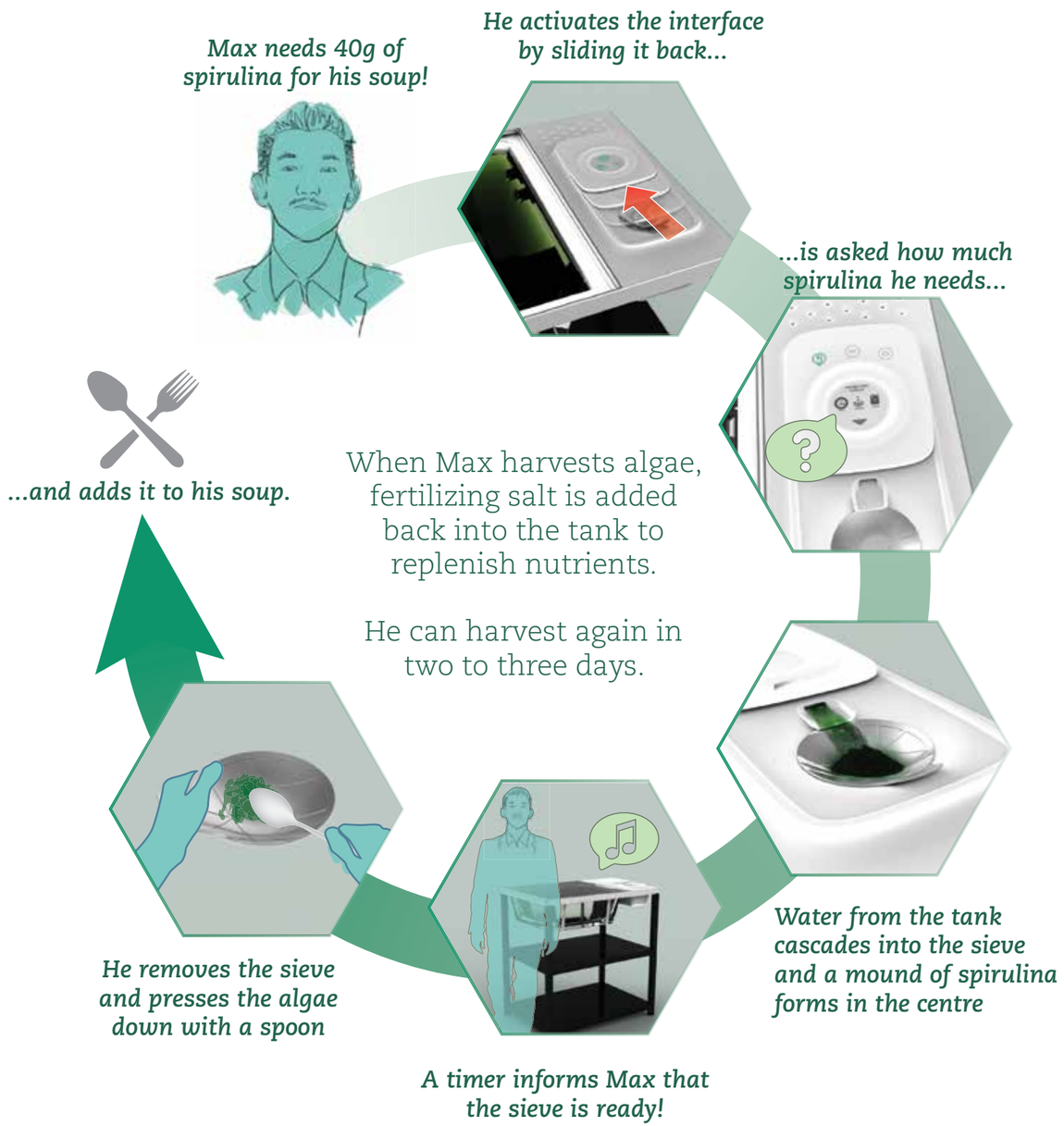
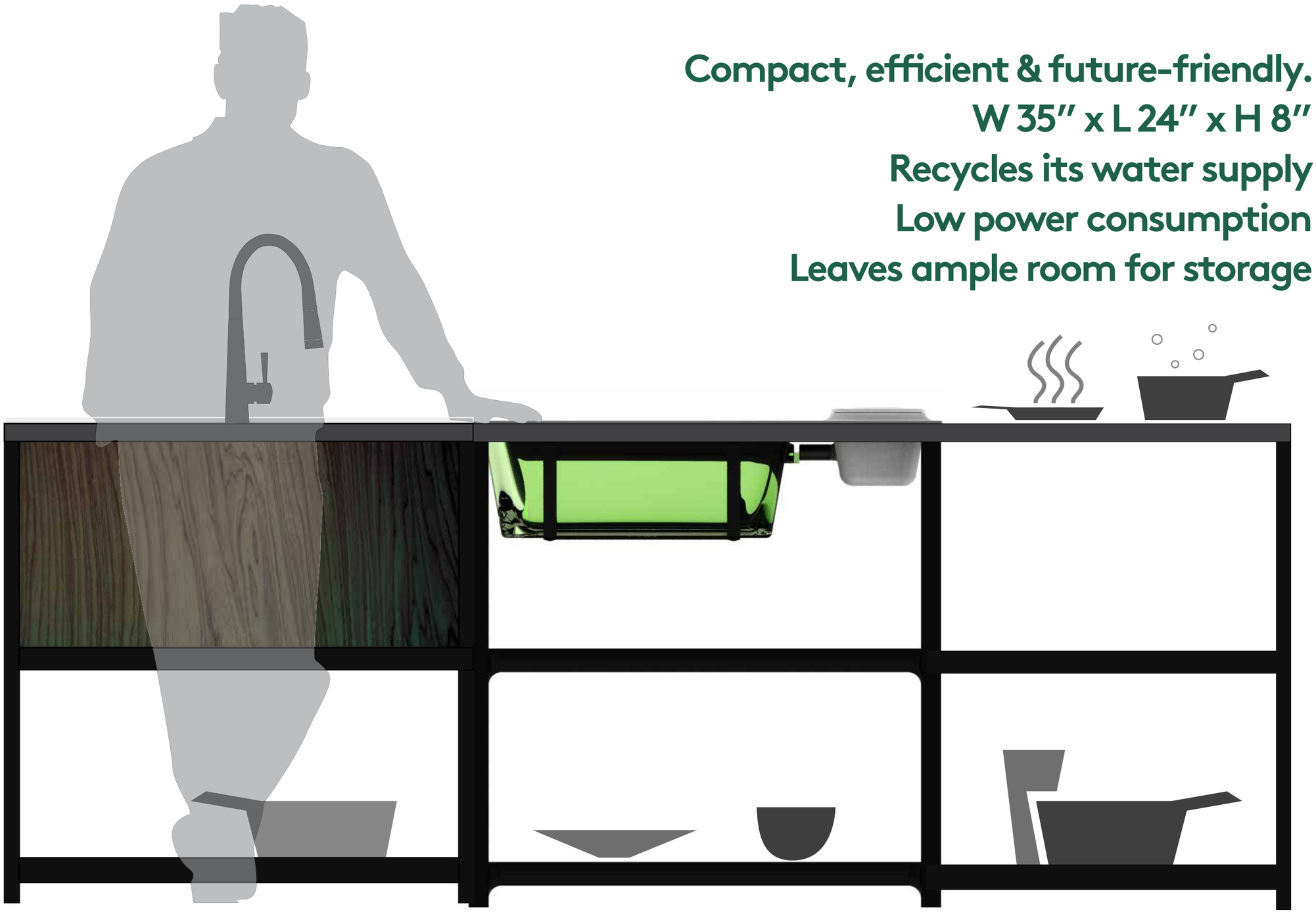
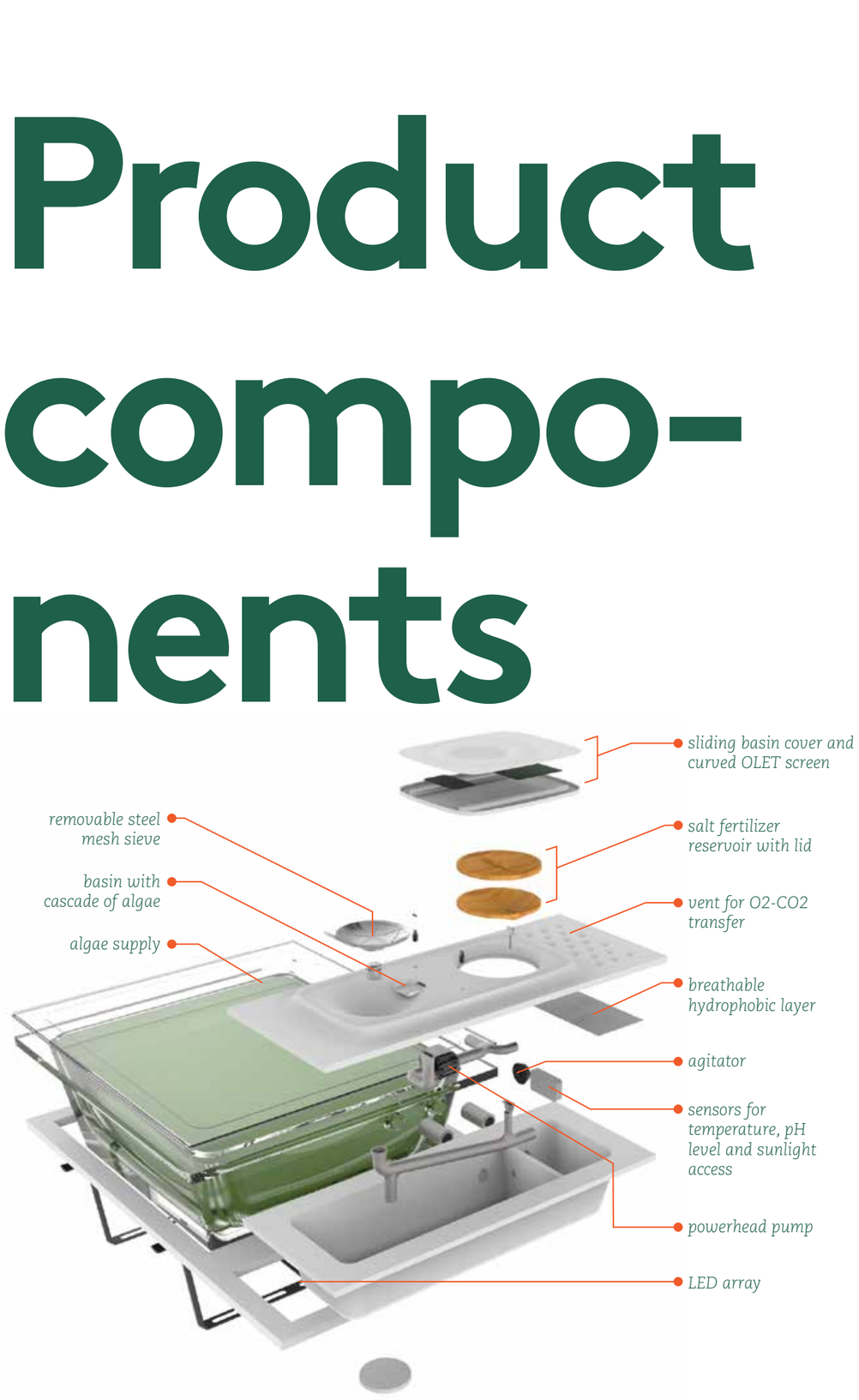




Compact, efficient & future-friendly.
W 35″ x L 24″ x H 8″
Recycles its water supply
Low power consumption
Leaves ample room for storage

Fresh spirulina spread
on warm crostini.

Product compo-nents



Invisible interfaces & smooth, soft forms.

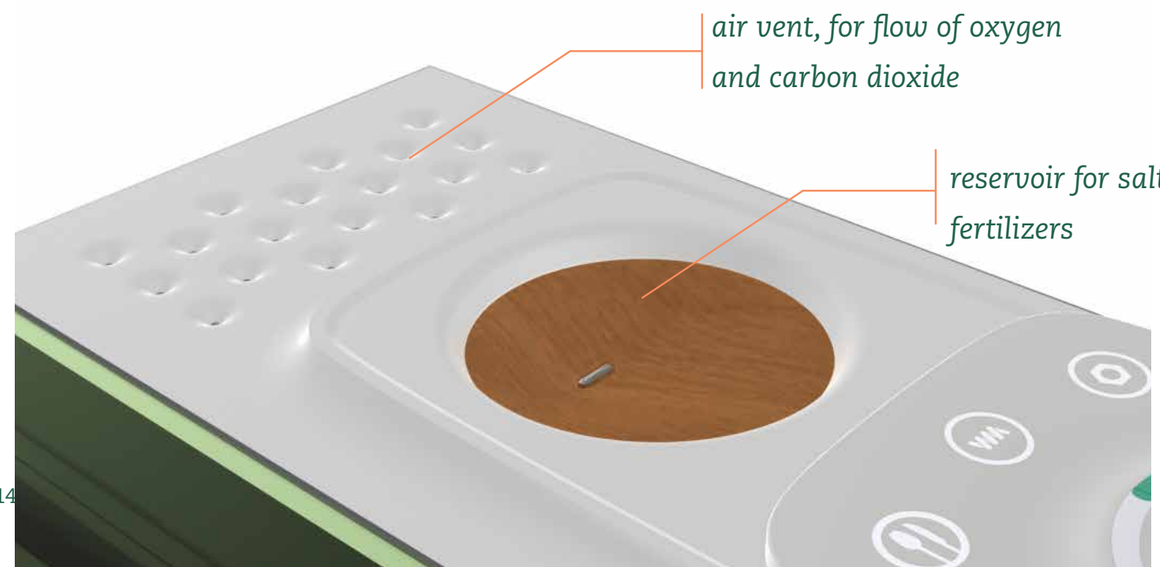
SIEVE

Spirulina is harvested by cascading water over a stainless steel sieve. A mesh of 50 micron holes is cut through the surface of the steel, while non-meshed ribs provide stability.

USER INTERFACE

The UI is activated by sliding the rippled plate cover to open the basin.

When not in use, the interface disappears from view.



HEALTHY ALGAE!

NOT HEALTHY.

CHOOSE.

MEASURE.

WAIT

. . .

EAT!

WIREFRAMES

The UI features three main buttons for harvesting, monitoring algae health, and settings. The interactions make use of the bowl shaped impression in the centre of the basin cover.

Clams in a spirulina
garlic-butter sauce.

Design features

What *do* algae gardens do?

1. The tank will grow fresh spirulina algae, a healthy foodsource currently commercially unavailable due to its perishability.

2. Algo will also be able to dispense the algae in several different ways depending on the taste and texture desired by the user.

3. Algo will replenish its own nutrients and manage its own access to sunlight, water, and adequate pH level.

4. An interface will be incorporated into the product so that algae farmers can better track their cultivation and consumption patterns. This interface can also serve as a general hub for all kitchen-centred tasks.

5. Algo will encourage present-day consumers to consider algae farming in the future by solving present day issues of inconvenience of home farming and misconceptions or unfamiliarity with algae products.

Success metrics

What *should* algae gardens do?

1. Algo should act as a roadmap to the future by designing not only for the tomorrow's consumer but to also appeal to the desires and motivations of forward-thinking people in the present day.

2. Algo should also present the cultivation of algae in a way that seems fun and appealing to a user, and to portray the consumption of algae in an equally intriguing manner.

3. Algo should display information about the health of the spirulina culture in a way that is easy for the user to understand.

4. Algo should connect users with the food they eat. That is, to remove the distance created between the food on one's plate and the raw food sources it came from.

5. Algo should succeed in lowering one's ecological footprint. This means that the production of Algo should have as little impact on the environment as possible and that algae farming must have a big enough effect.

futurelab
2030

Algae garden kitchen concept.

This is futurelab.

futurelab 2030 T. Jason Ham 10 April 2013 IDES 4310 (S. Field)