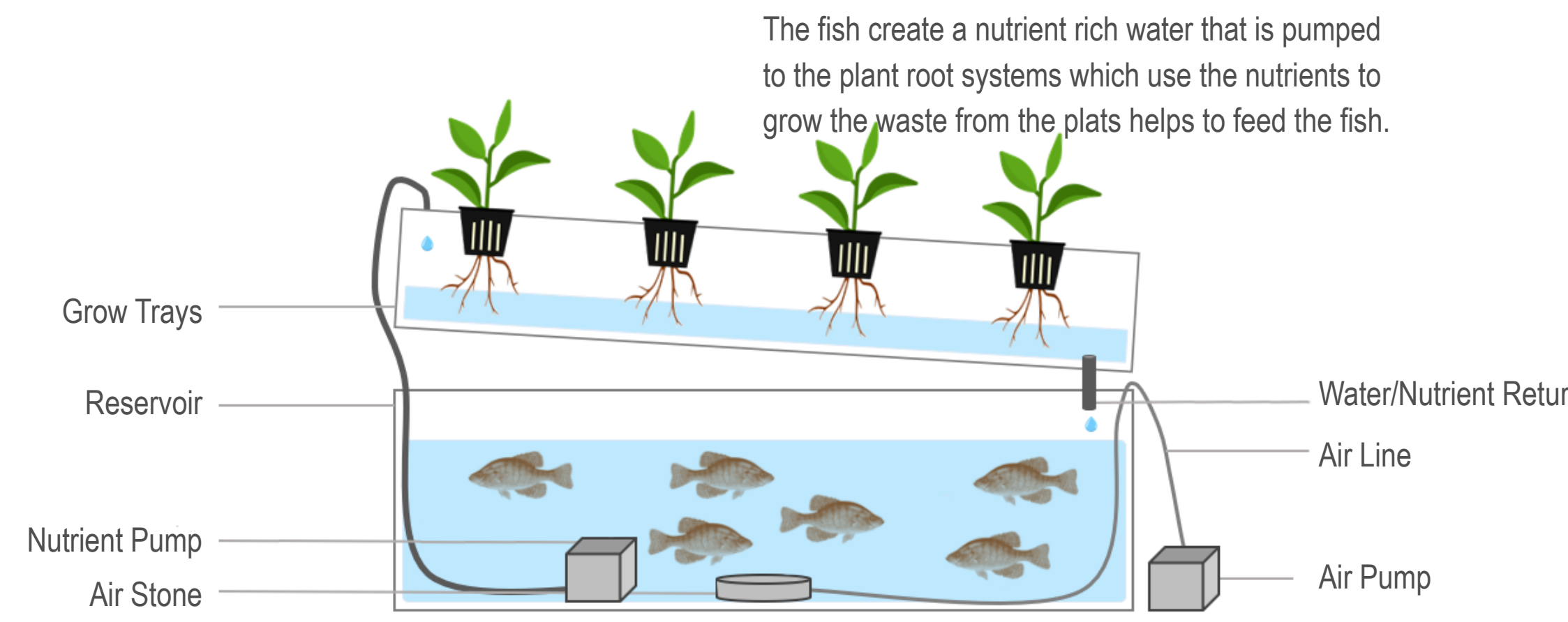
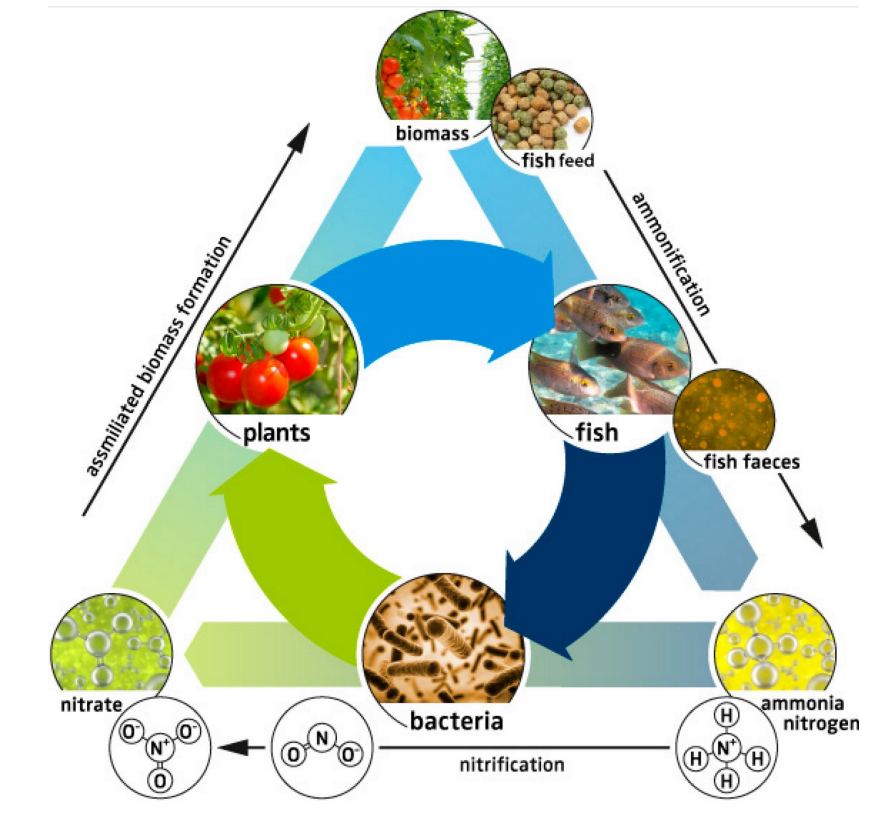


# Future Islands:

SLAB architects

**Future Islands** is the creation of Bryan Stom of SLABarchitects. It looks at developing a sustainable economic plan to create habitable islands which would provide a carbon neutral live work environment, that is adaptable to the local infrastructure and provides a community that is an active participant in the global change towards caretaker of Earth.

## The Basics of Aquaponics

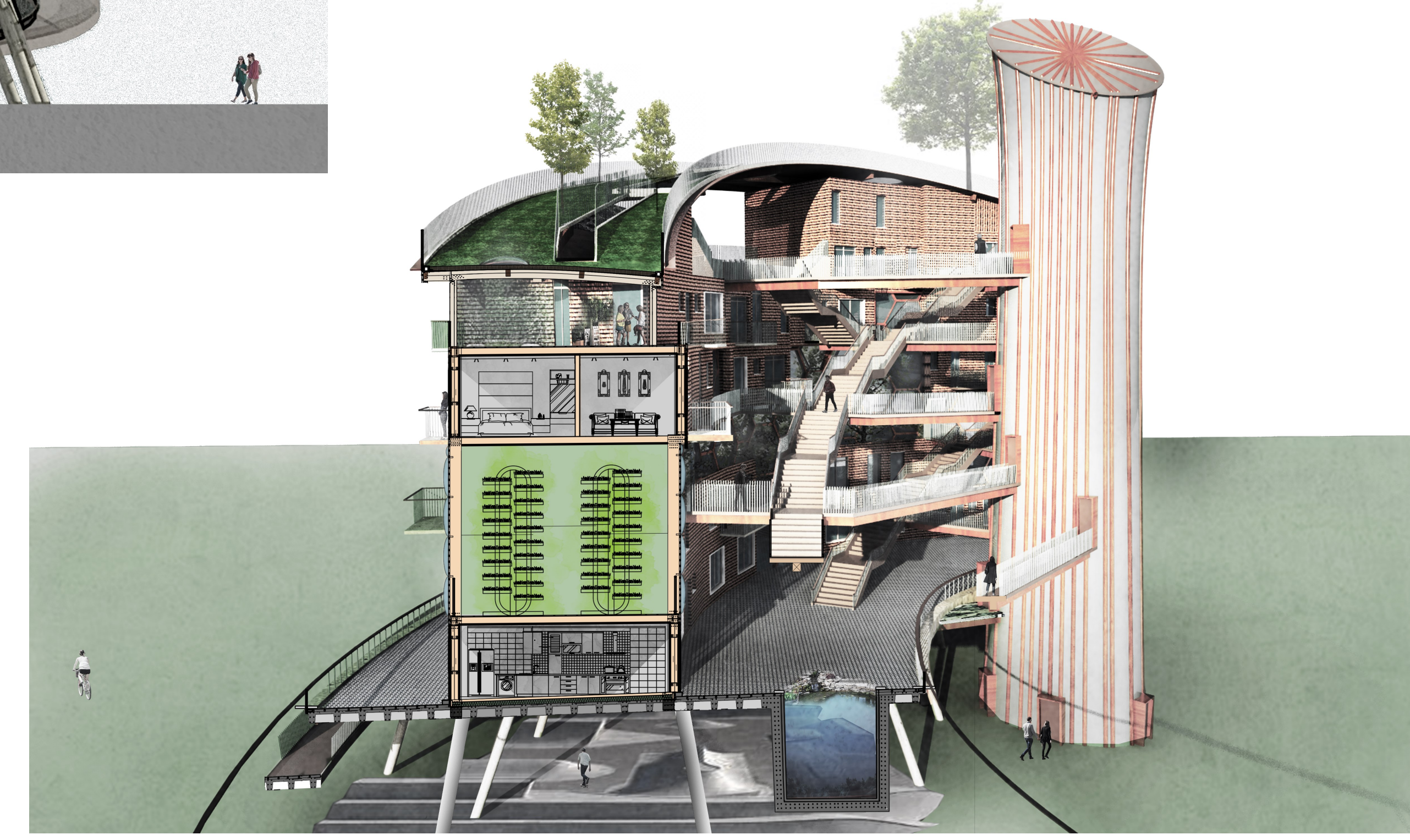
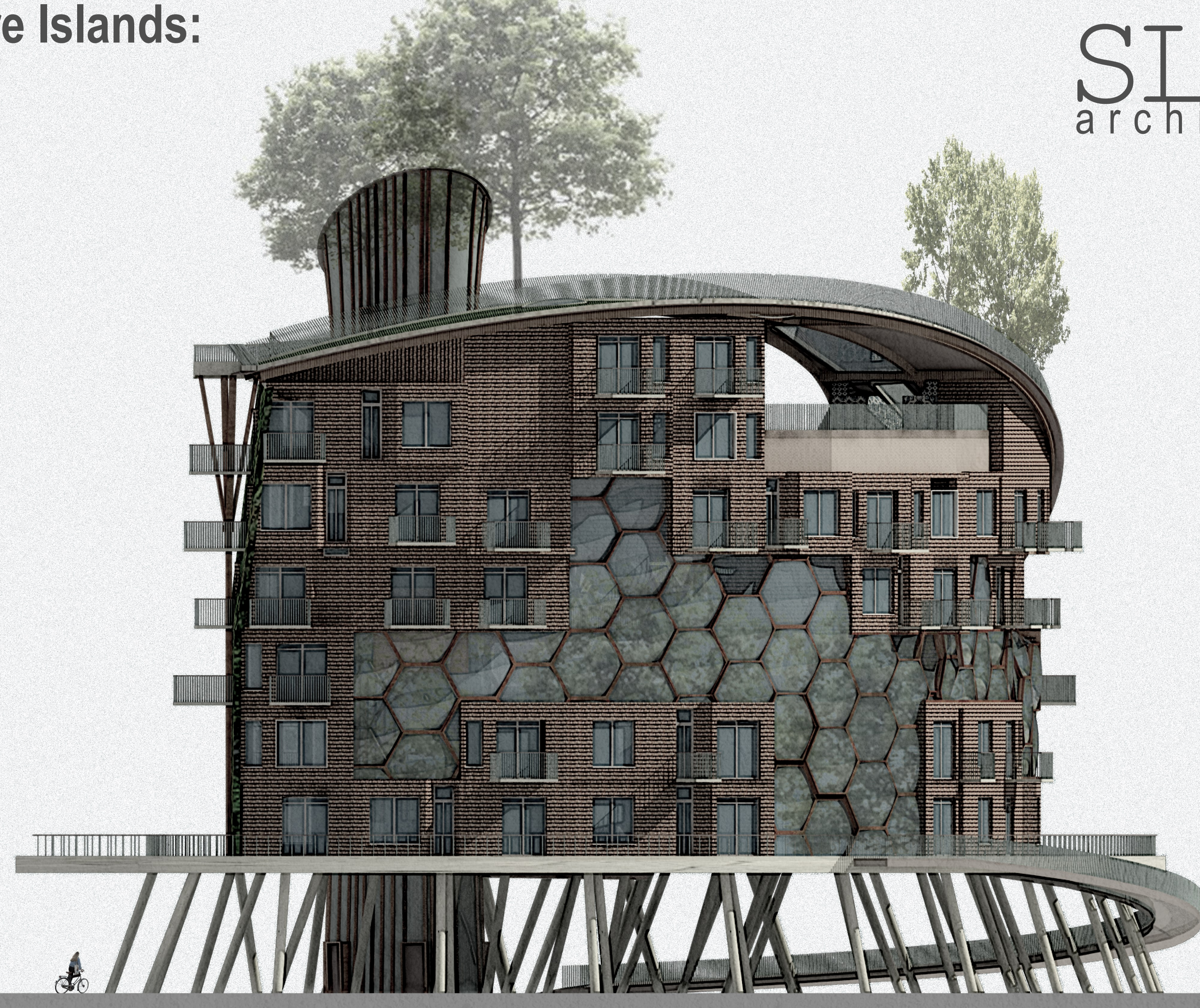


The fish create a nutrient rich water that is pumped to the plant root systems which use the nutrients to grow. The waste from the plants helps to feed the fish.



## Types of Fish that are used for Aquaponics

<b>Arctic Char</b>	Water Temp: 0-20°C Water Ph: 6.5 to 9 Time to 500g: 6-8 months
<b>Bass: Large or Small Mouth</b>	Water Temp: 18-26°C Water Ph: 6.5 to 8.5 Time to 500g: 12 months
<b>Tilapia</b>	Water Temp: 28-30°C Water Ph: 6.5 to 9 Time to 500g: 6-8 months
<b>Rainbow Trout</b>	Water Temp: 7-18°C Water Ph: 6.5 to 8 Time to 500g: 12-18 months
<b>Yellow Perch</b>	Water Temp: 18-21°C Water Ph: 6.5 to 8.5 Time to 500g: 12 months



**Live Local/Work Local/Contribute Globally**  
Creating Closed Loop Systems

Create Civic Economies Around the growing of food, and exporting of the ideas that create Future Islands

Future Islands will be carbon neutral, adaptable to the local infrastructure and provide a community that is an active participant in the global change towards caretaker of Earth.

**Future Islands: Aquaponics Workforce and Revenue**

The rule of thumb for commercial aquaponic farms is 25 hours per week per 100 square meters of plant growth area (this includes the fish) so with 2000m2 of growing area will require 500hrs/wk, divided by 33 hrs/wk/person equates to 15 persons to operate.

Average annual gross revenue for each Future Island would be around £3 Million  
Annual outflows of around £2.2 Million  
Leaving around £700k for Salaries and £100k for savings

**Crop Management: Approx 10 Persons**

**Fish Management: Approx 4 Persons**

**Deliveries: Approx 3 Persons**

Delivery services are optional as they can be outsourced

10year Financial Forecast for an Aquaponic Operation with an annual production of 3,649kg of fish supporting 200m2 of plant growth area. (Numbers need to be scaled up by a factor of 10)

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Production (kilograms of fish)	1,842	3,687	5,531	7,376	9,221	11,066	12,911	14,756	16,601	18,446	20,291
Price per kilogram	6.41	6.71	7.01	7.31	7.61	7.91	8.21	8.51	8.81	9.11	9.41
Production Revenue	11,808	24,759	38,702	52,645	66,588	80,531	94,474	108,417	122,360	136,303	150,246
Price per month	2.50	2.55	2.60	2.65	2.71	2.76	2.82	2.87	2.93	2.98	3.04
Gross Revenue	300,650	291,951	273,154	249,459	226,864	205,369	184,974	165,679	147,484	130,289	114,094
Production Costs											
Materials	73,380	74,356	75,332	77,663	79,437	81,550	82,647	84,380	85,966	87,735	89,589
Labor	24,840	25,456	26,072	26,889	27,506	28,123	28,740	29,357	29,974	30,591	31,208
Total Operating Costs	98,220	99,812	101,404	103,552	105,963	108,673	111,594	114,737	117,960	121,326	124,797
Pre-tax net revenue	101,430	192,139	271,750	345,907	419,921	493,935	567,949	641,963	715,977	789,991	863,005
Depreciation	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200	7,200
Taxes	43,200	86,400	129,600	172,800	216,000	259,200	302,400	345,600	388,800	432,000	475,200
Investment	-70,000										
Outflow	70,000	86,400	102,800	119,200	135,600	152,000	168,400	184,800	201,200	217,600	234,000
Net Revenue	-70,000	111,539	169,150	226,760	284,371	341,982	399,593	457,204	514,815	572,426	630,037
Owner's Salary	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
Net Profit		41,539	99,150	156,760	214,371	271,982	329,593	387,204	444,815	502,426	560,037
NPV @10%	422,681										
IRR		72%									

Economic Analysis of a Small Urban Aquaponic System: JM Simondt

**Future Islands**  
Space Requirements: Production Farming, Office, Wood Working

**Modern Farming for a Family of Four**

- 6m2
- 9.3m2 (1,415m2 if including Grains)
- 19.6m2 (55m2 without grains)
- Hydroponics 20m2 Fruit & Vegetables

**Grains 1360m2**  
Of which  
245m2 for Corn  
1115m2 for Wheat

**Office Provision**

**Production Provision (Wood Workshop)**

Legend: Circulation/Social (purple), Residential (grey), Working Space (blue)

**Traditional Farming 8,275m2: Family of 4**  
(7,123m2 of land to support a family of 4 Vegetarian)

**Where food in the UK comes from**

