

Soluna City 2070

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Introduction

The class “Speculative Design” is a collaboration between students of the California State University of San Francisco and students of the Design Master Class of the University of Applied Sciences Mannheim. The class is held in joint video sessions and focuses on exploring the speculative themes of 6 mixed groups of students. Each group designs their own fictional, futuristic world, with its challenges and possibilities.

Methodology

What’s Speculative Design?
Speculative Design is a method to design for possible future scenarios, for example how climate change may affect human evolution. But why do we need that?
Well, usually as a designer you work with very specific guidelines: you have a target group, which you either have data about or collect new data. You do a market analysis, to compare your competitors and you usually work for a client with a specific goal, for example something they want to sell.

In a Speculative Design process you’re lacking some or all of these parameters. For a design process this is tricky. As an example: the consequences of climate change will be highly visible by 2050, but a designer cannot analyse how a possible target group might think, because there is no data yet — so you *speculate*.
You create fictional concepts or objects, that can spark inspiration and discussion about the kind of future we want to live in. The Speculative Design process does not try to solve a specific issue but generate ideas for multiple possible issues.

SEED — Knowledge Transfer Device

- **Smartwatch Dock** the drone rests inside the watch when inactive
- **Power source** solar and kinetic charging
- **Data storage** the watch functions as a local AI hub, temporary storing data before uploading to cloud
- **Gesture / voice control** the user can use simple gestures or commands like “fly”, “record” or “return”
- **Drone** flies with four micro-rotors, has a built in 360° camera lens, for environmental scanning, a microphone antenna, sensors for temperature, air quality and humidity, to monitor soil and plant health, and wireless data transfer
- **Communication** side node headphones as a companion device, a detachable ear-mounted module, that connects wirelessly to smartwatch and drone, can translate language in real-time, playback media like music, answer calls and can access AI-assistant integrated into all smart devices.
- **Data security** all data is encrypted before upload and can be reviewed by wearer

Speculations

What does the world look like in 2070?

Climate change has drastically shaped life on earth. There are now climatic zones, which are inhabitable, due to heat levels and drought. Most coastlines were pushed inland, due to rising sea levels. The inhabitable land mass has gotten smaller, people moved to more northern and southern regions. The effect was a global wave of migration. With it came resource scarcity cultural barriers, such as language and housing. At first, people faced a lot of new challenges, but they did what humans do: learned to adapt and exchange their knowledge to build new and stronger communities. This resulted in rehabilitation of the environment.

Our scenario in this future world is set in Soluna City, a metropolis based near what was once called Oslo, Norway. The citizens are migrants from all over the world, mostly southern Europe and northern Africa. Soluna City is connected to the sea with its harbor, where exchange of resources take place. The city uses former technologies for natural resources, like oil and gas, to generate energy from sustainable sources, like solar and wind. This makes Soluna City a technologically developed self-sustaining city, with a social-first societal system. Since they were no longer relying on a monetary system, they could evolve to be a community-centered society, post capitalistic and humane.



Soluna City, with fog catchers in the background to collect fresh water, floating areas for farming and community use

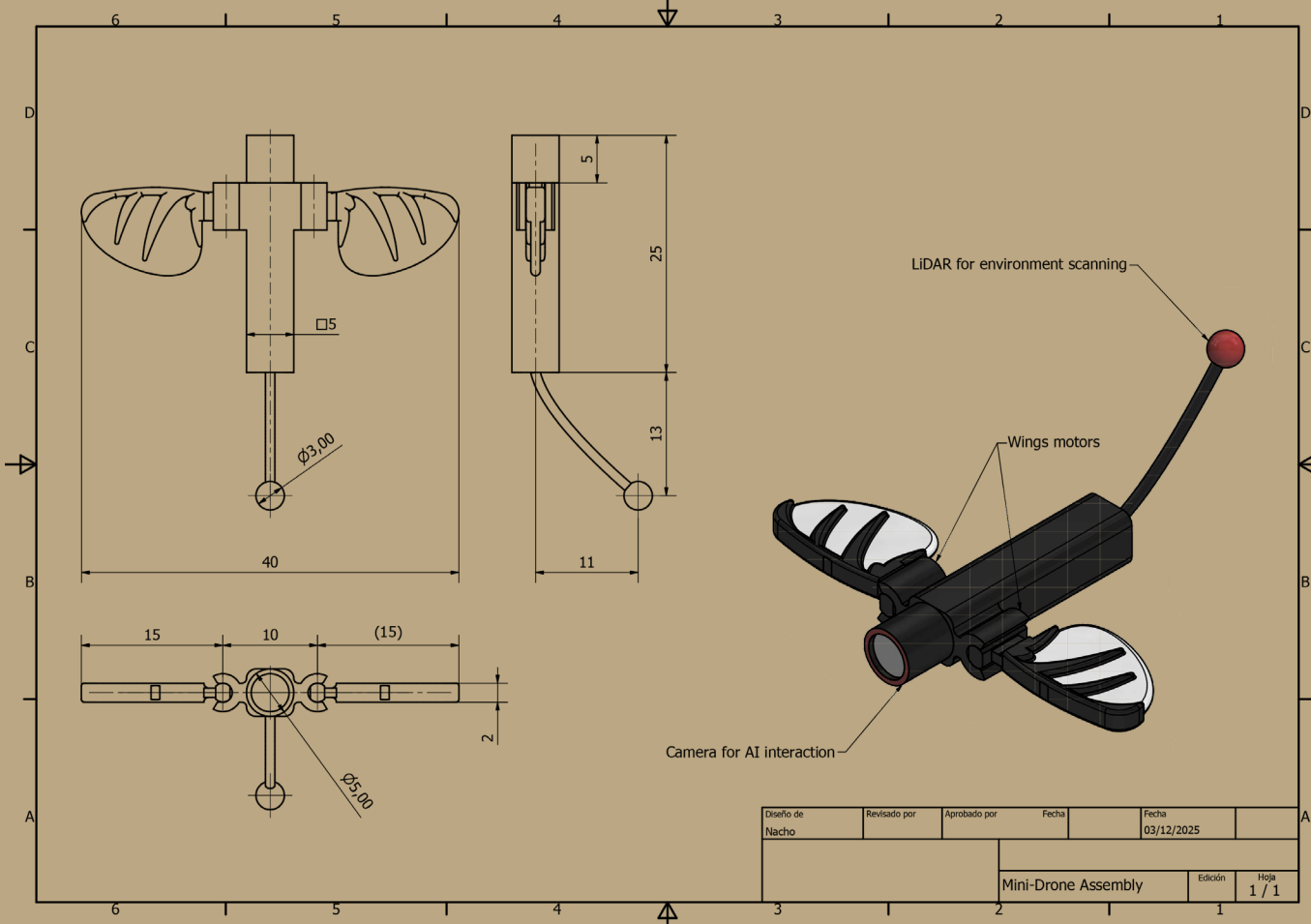


Example of a living space, lots of light and greens provide fresh air and the naturally adjust indoor climate

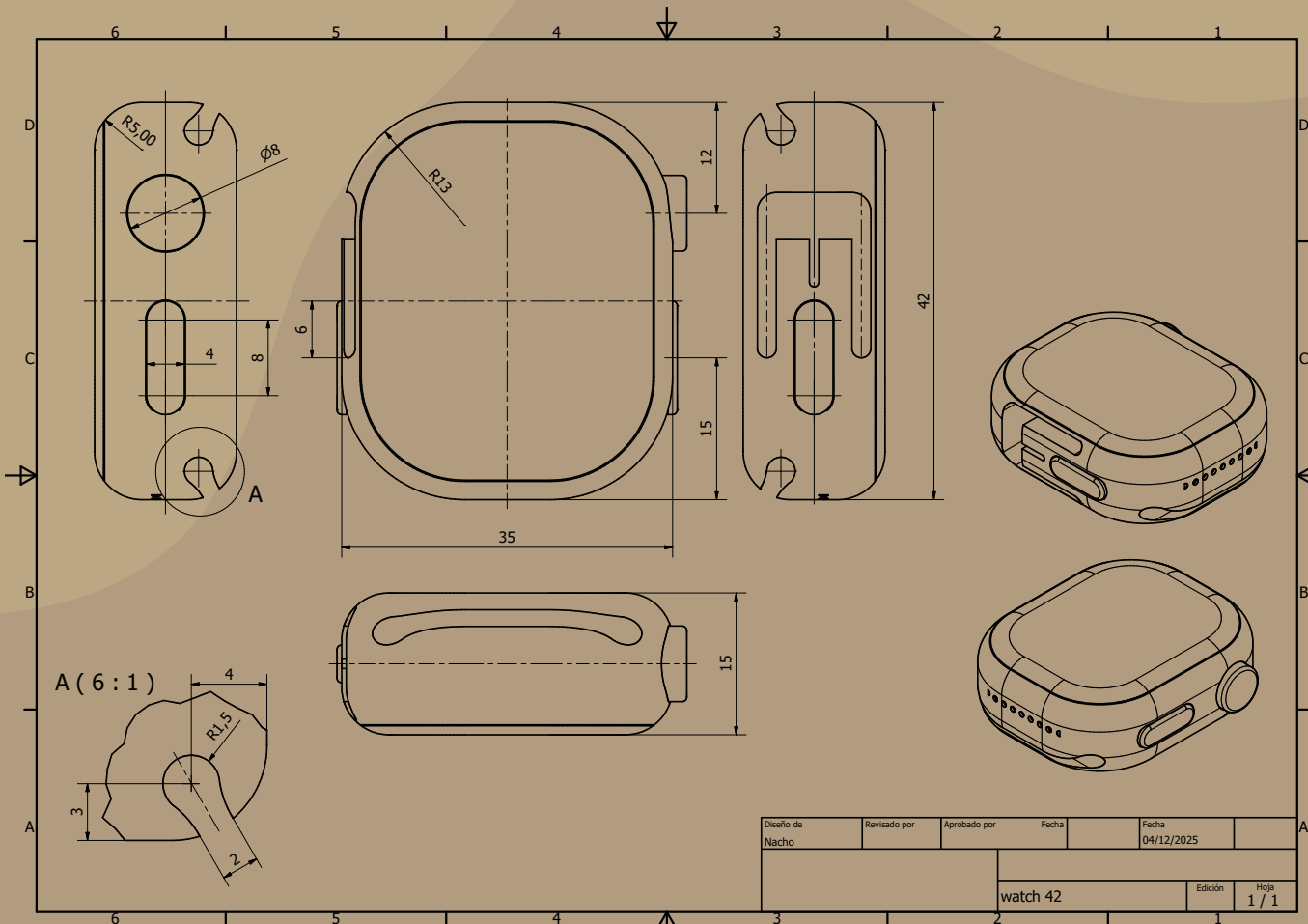


Vertical farm for food production, with drones that water and monitor the plants’ health

Prototype: SEED



Sketches of SEED, smartwatch integrated multifunctional drone



To accompany the transfer and exchange of knowledge between people, we developed a prototype of a smartwatch, that is connected to a public database, kind of like an AI-supported library. The watch is equipped with sensors that track health data, but also a communication system and access to the database, which works in both ways. The main feature of the device is a tiny built in drone to assist, share information and do small tasks, such as recordings. But the drone is multifunctional — at nighttime, when not needed by the wearer, it works as a health-monitor and artificial pollinator for plants. Hence the name of the device: *SEED*. Equipped with multiple sensors, cameras and a microphone, it can check for humidity, soil health, temperature, air quality and much more. Since insects, especially bees and moths, are sadly rare and endangered species, there are not enough natural pollinators for the amount of produce that need to be fertilized. The small drones are helping with that, especially in the vertical farming towers. So, instead of two drones, only one is needed, a more sustainable choice in terms of technology and energy. The drone and watch are connected via their network and exchange information but can both work individually.