

A close-up, front-facing photograph of a bird of prey, likely a hawk or eagle, with a sharp, hooked beak and intense eyes. The bird's feathers are dark brown and grey. The background is dark and out of focus. Overlaid on the lower half of the image is white text.

DÓNDE SE PUEDE APLICAR LA BIOMÍMESIS

EMULAR LA NATURALEZA

TRES NIVELES CON DIFERENTES FORMAS

EMULAR LA NATURALEZA



PRODUCTOS

Una función particular de un reto puede encontrar estrategias específicas en la naturaleza que permite hacer una emulación para desarrollar innovación.



PROCESOS

La incorporación de una ética basada en el funcionamiento de la vida en el planeta permite que conectemos la manera de hacer las cosas para generar procesos bien adaptados.

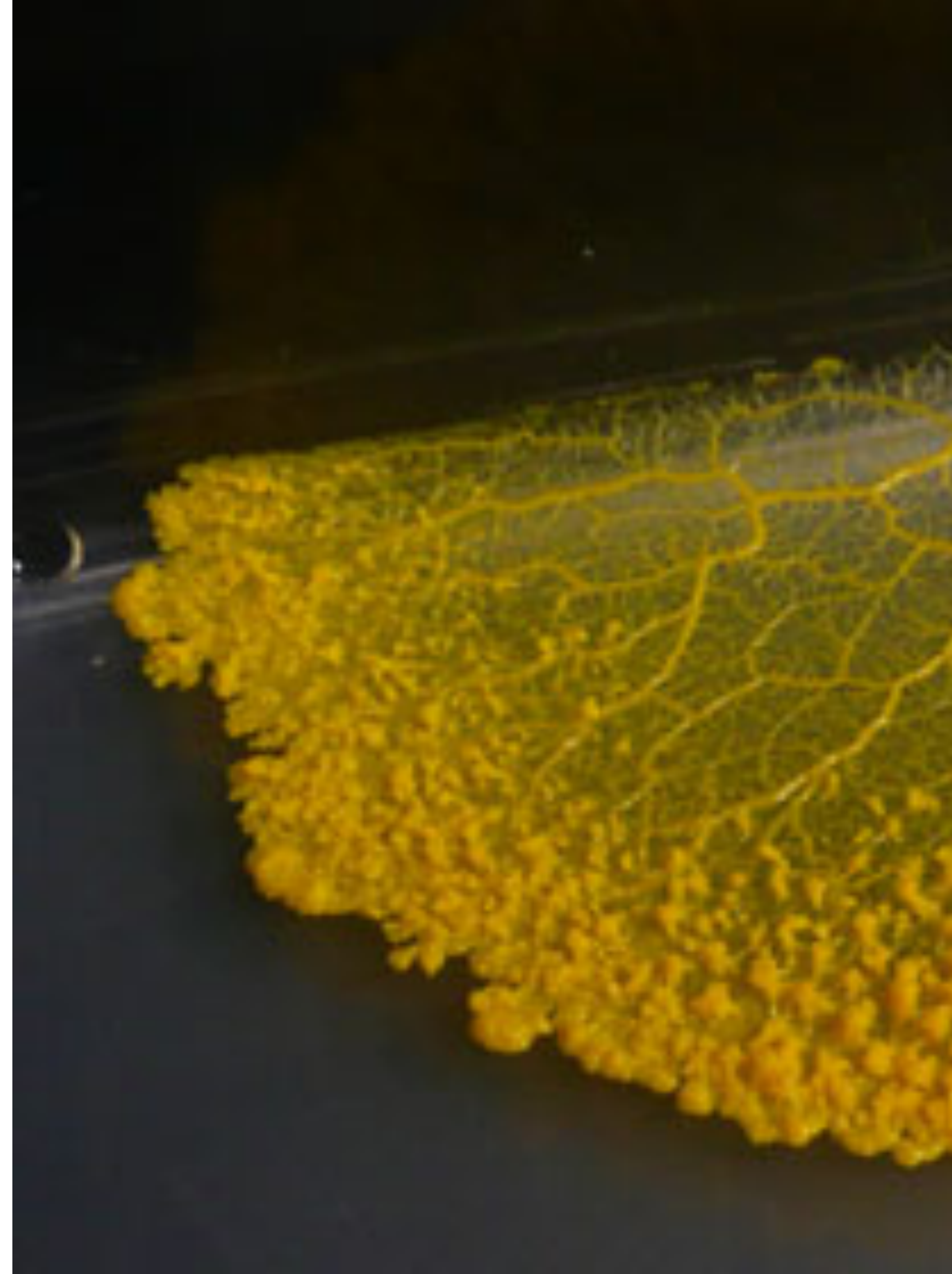


SISTEMAS

La profunda abstracción de las estrategias y patrones naturales nos llevan a observar principios que permiten elevar la emulación a los sistemas organizacionales, de gobernanza y económicos.

AREAS DE ACCION ACTUAL

- Diseño industrial
- Arquitectura
- Innovación médica
- Agricultura
- Organizaciones
- Economía
- Ingeniería
- Negocios
- Restauración ecológica
- Gobernanza

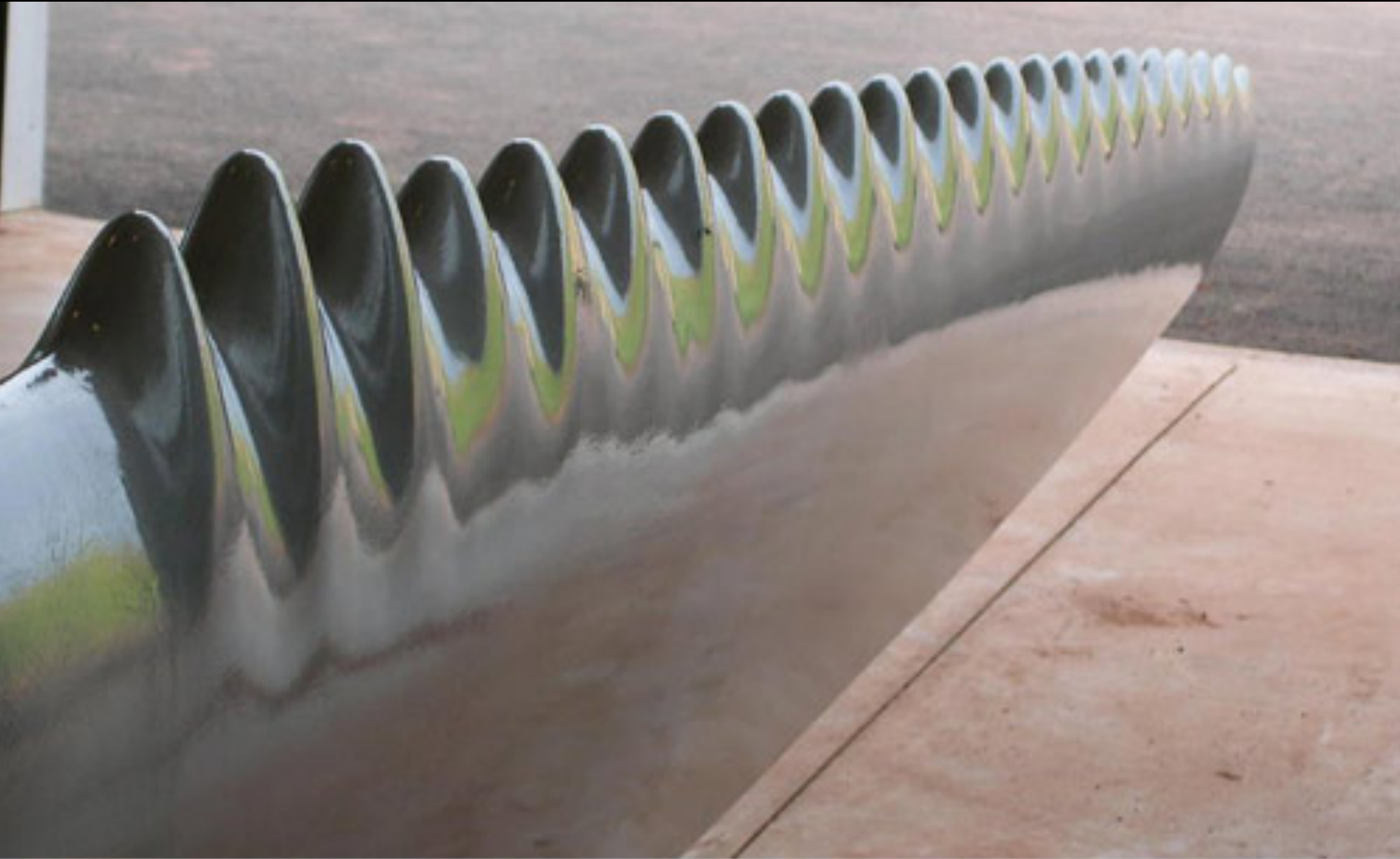


The background features a complex, abstract pattern of swirling, organic shapes. The top half is dominated by purple and magenta tones, while the bottom half transitions into deep red and orange hues. The overall effect is a dense, textured field of interconnected lines and loops.

APLICAR ESTRATEGIAS EN RETOS TECNOLÓGICOS

PRODUCTOS







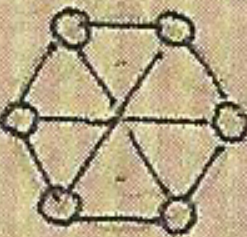


APLICAR ESTRATEGIAS EN RETOS DE INFRAESTRUCTURA

ARQUITECTURA







100%

82%

20%

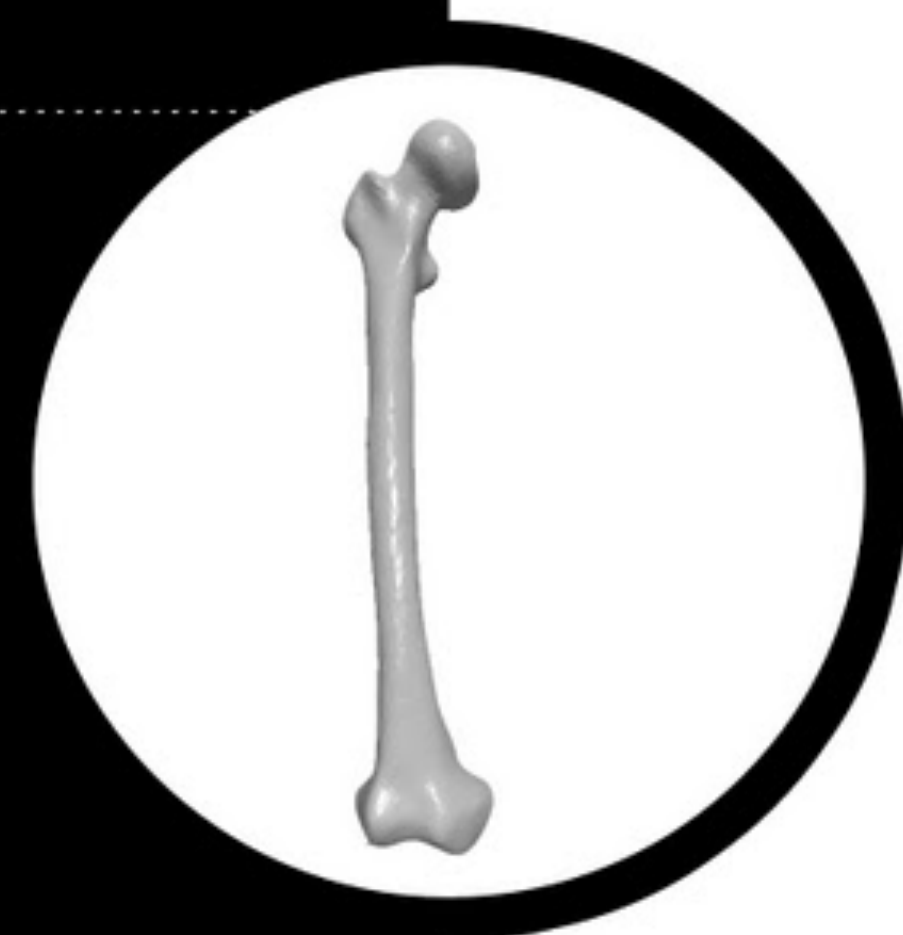
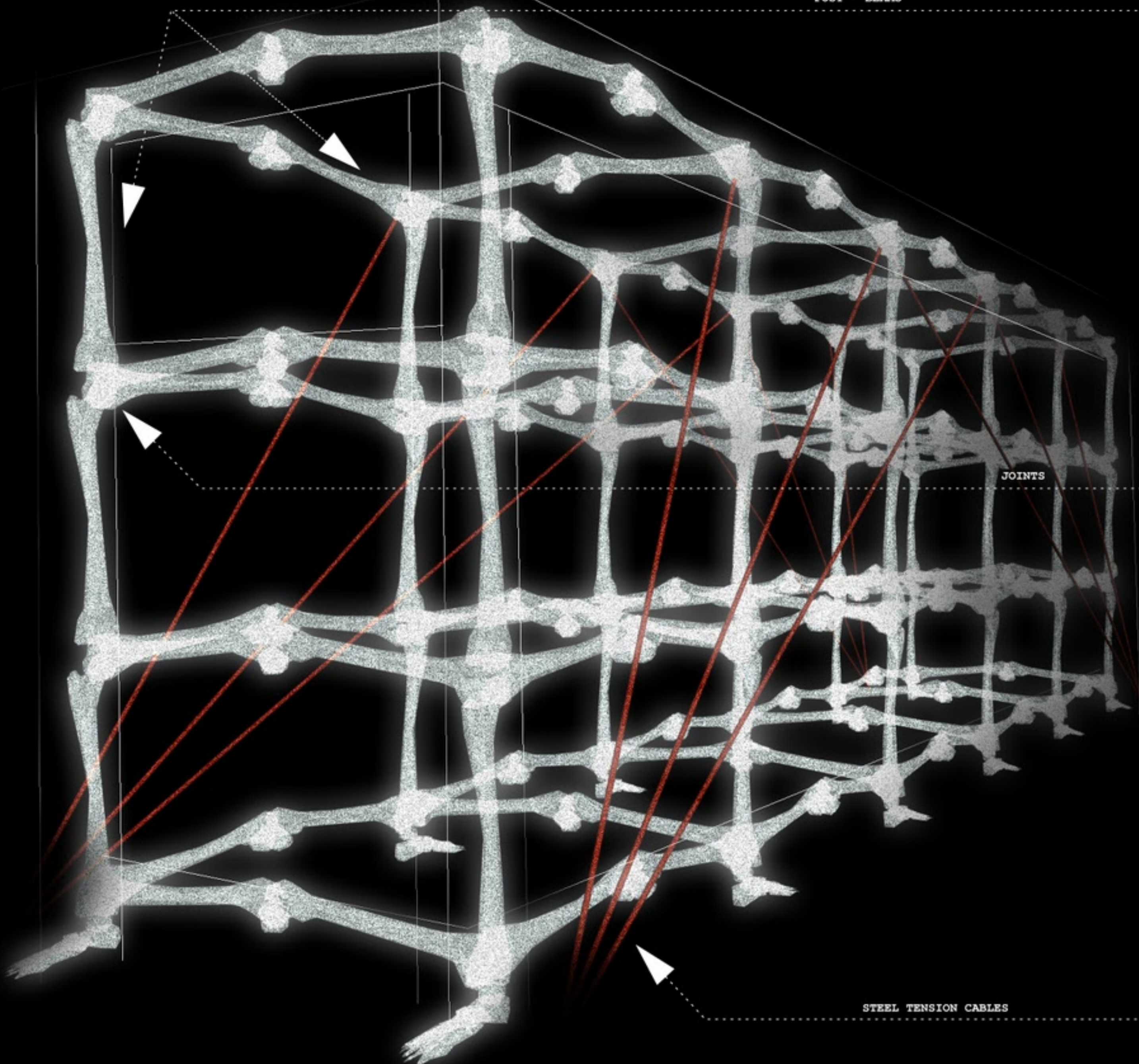
14%

5%

2% ?

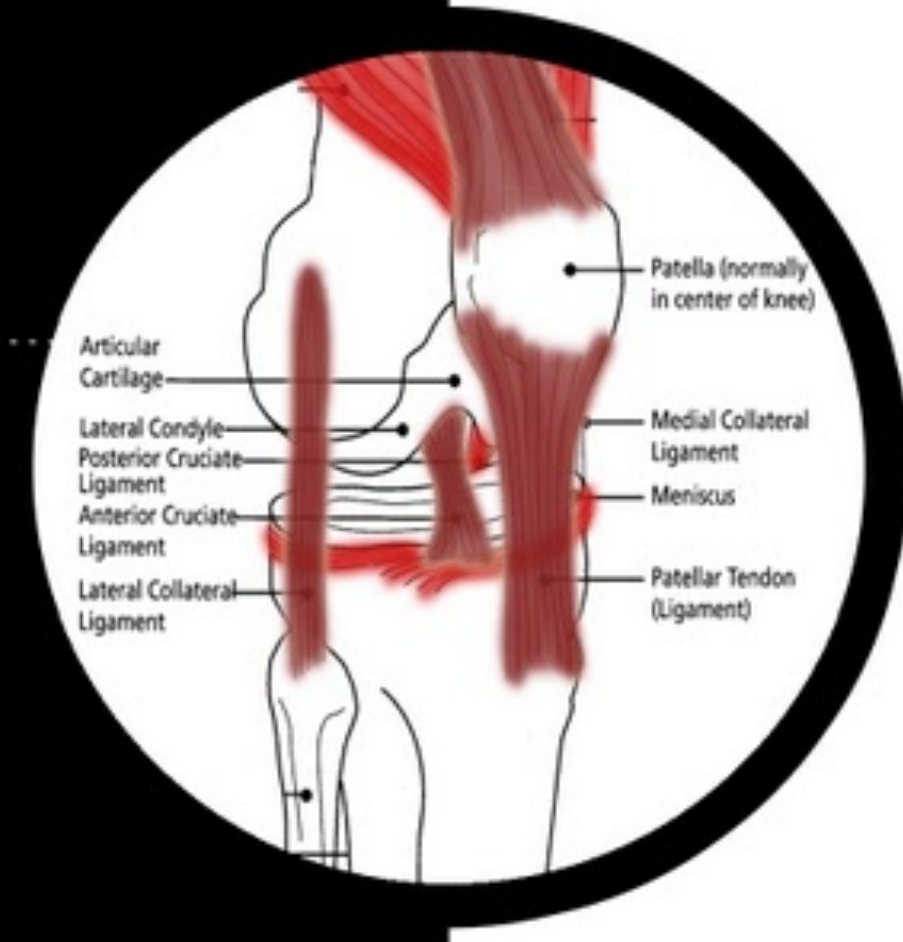






FEMUR

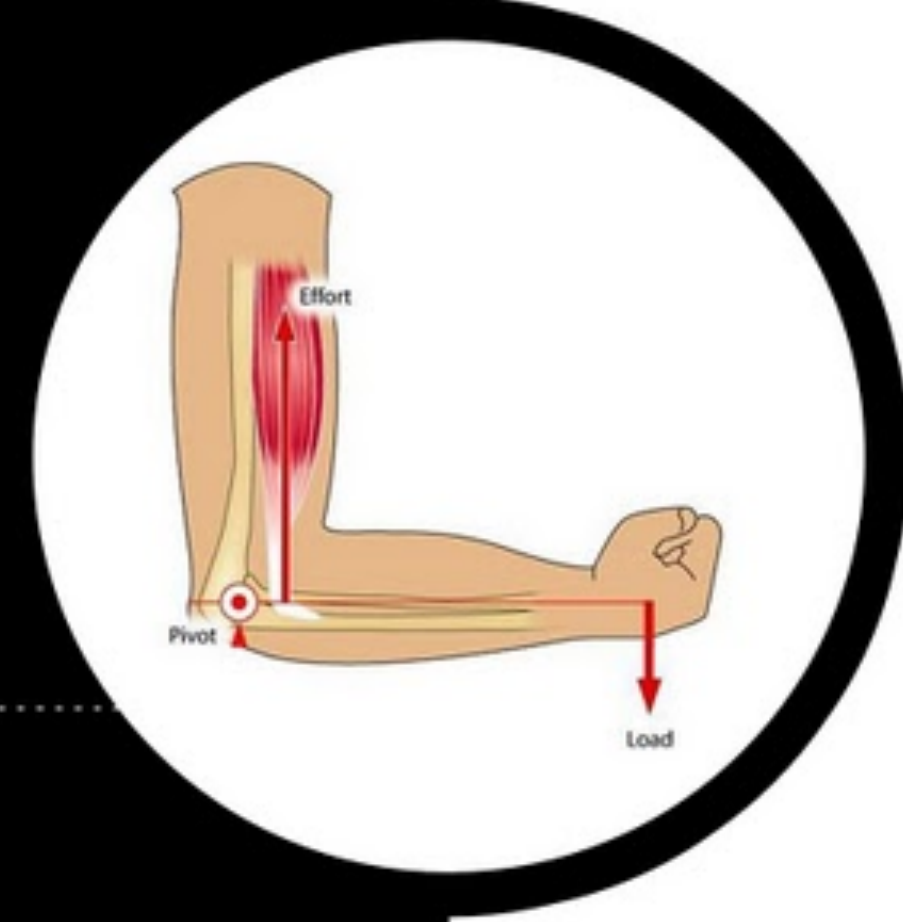
The femur is the strongest human skeleton bone and its hollow cylinder design provides maximum strength with minimum weight. These features represent ideal parameters for structures located in seismic vulnerable zones because they imply the reduction of the earthquake intensity on a structure.



ARTICULATION

Articulations give the skeleton mobility and they hold it together, sometimes playing a protective role in the process.

The joints in skeleton aren't rigid. In fact flexible joints act as shock absorbers which dissipates energy because of impacts to the body.

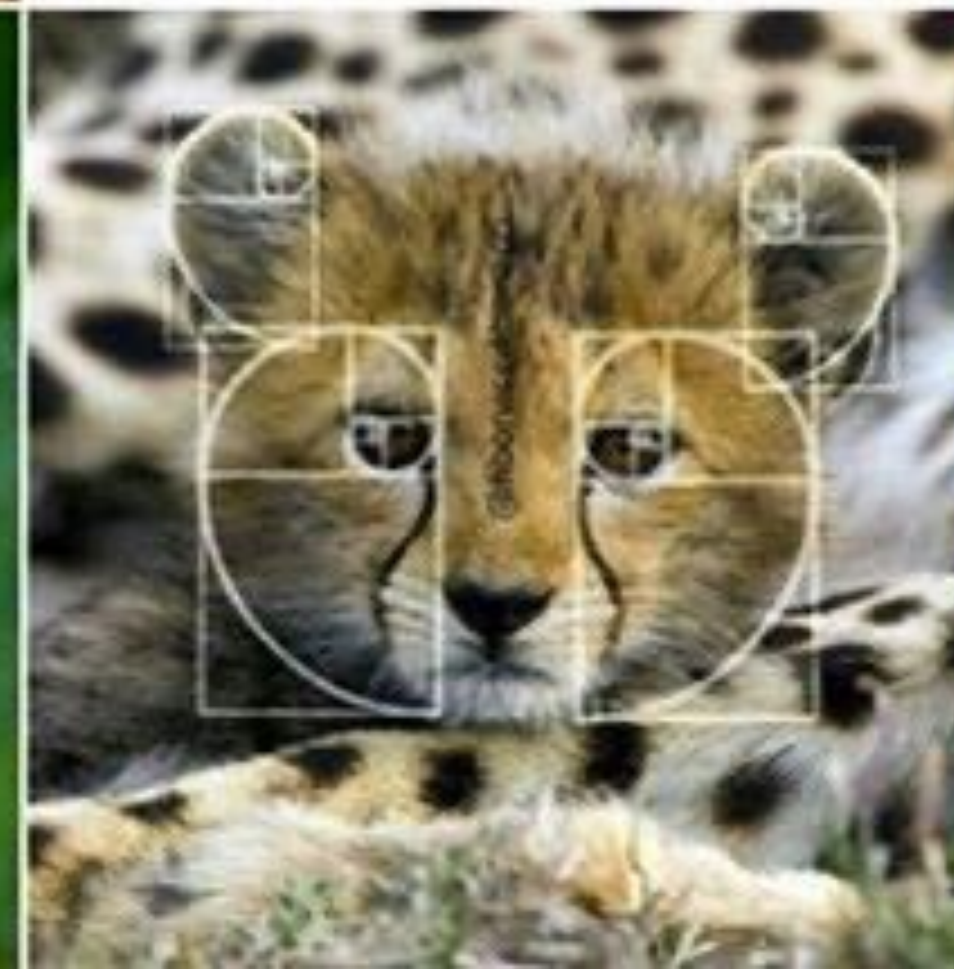
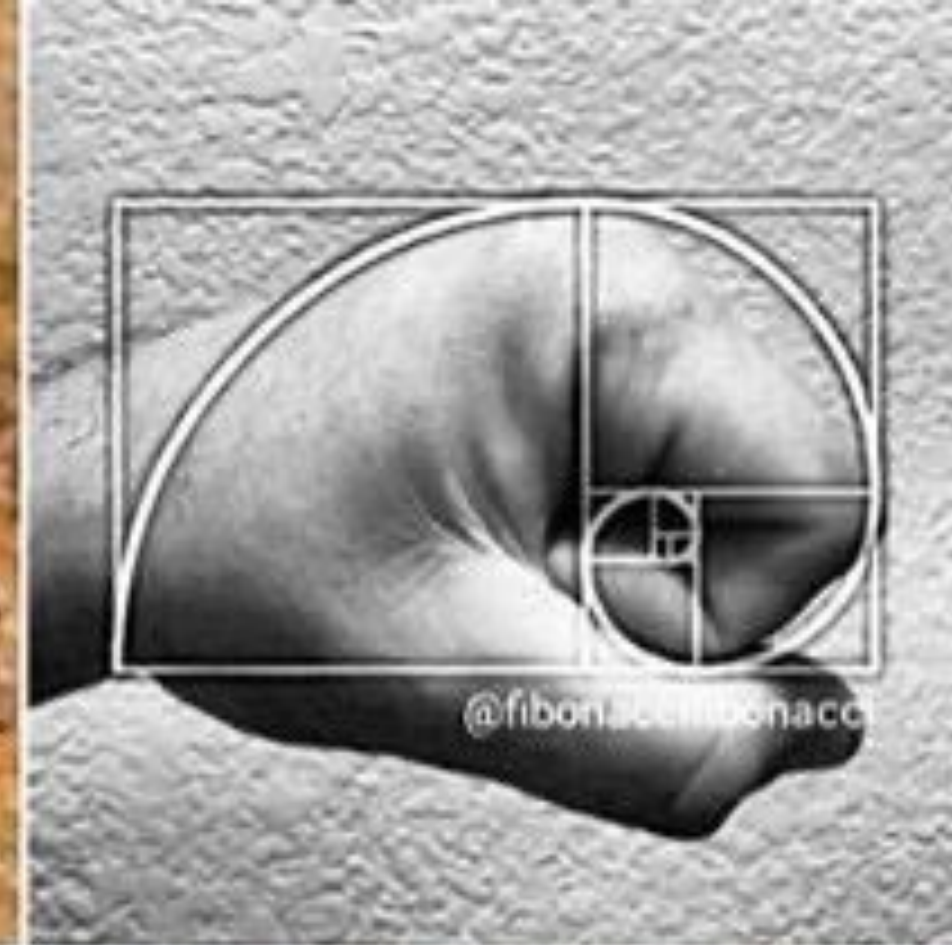


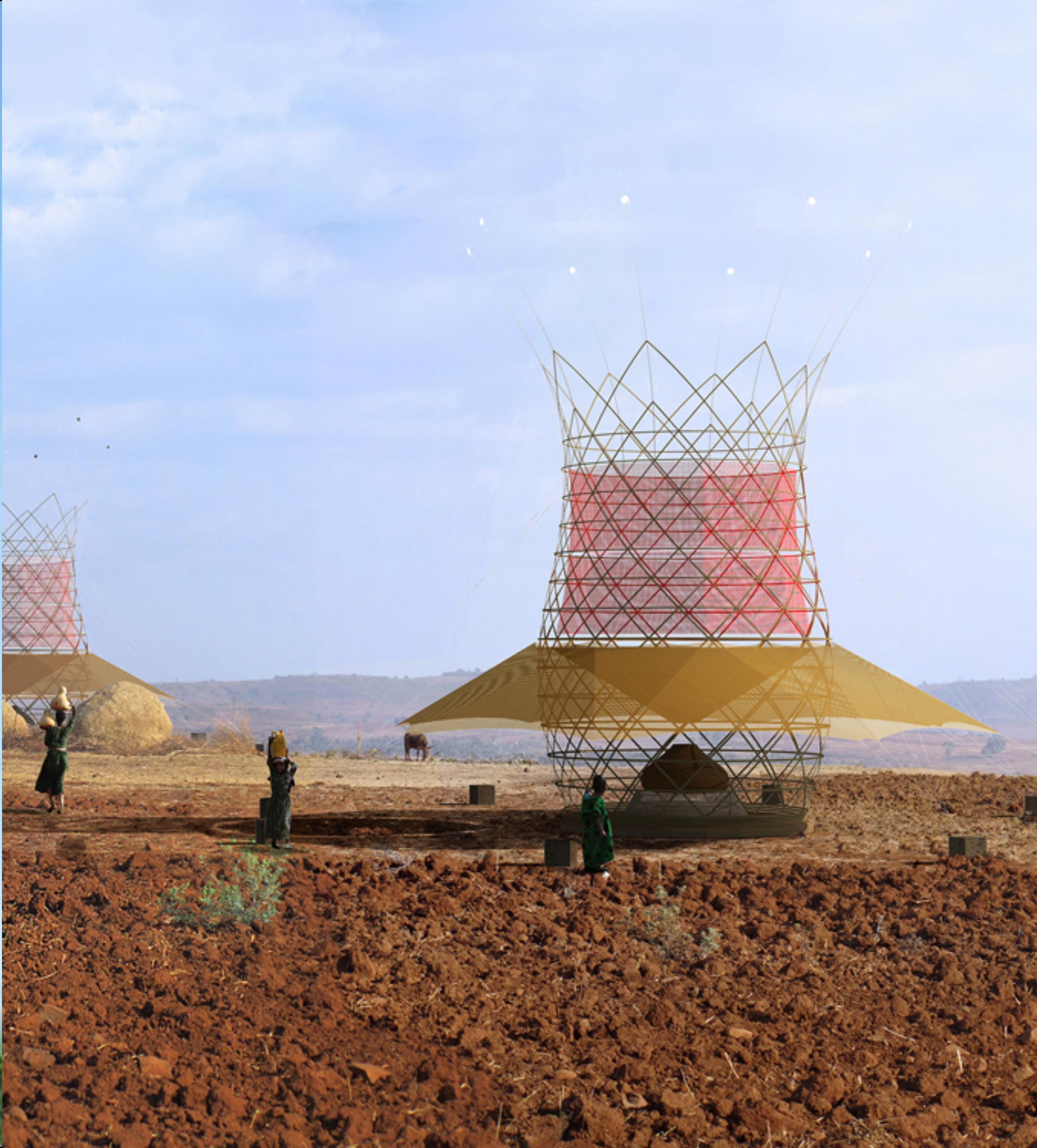
SKELETAL MUSCLES

Allows manipulation of the environment, locomotion, and maintains posture.

In fact, the operation of most skeletal muscles involves the use of leverage or lever systems (partnerships between the muscular and skeletal system).

LA
PROPORCIÓN
ÁUREA
CORRESPONDE
AL FLUJO DE
LA VIDA

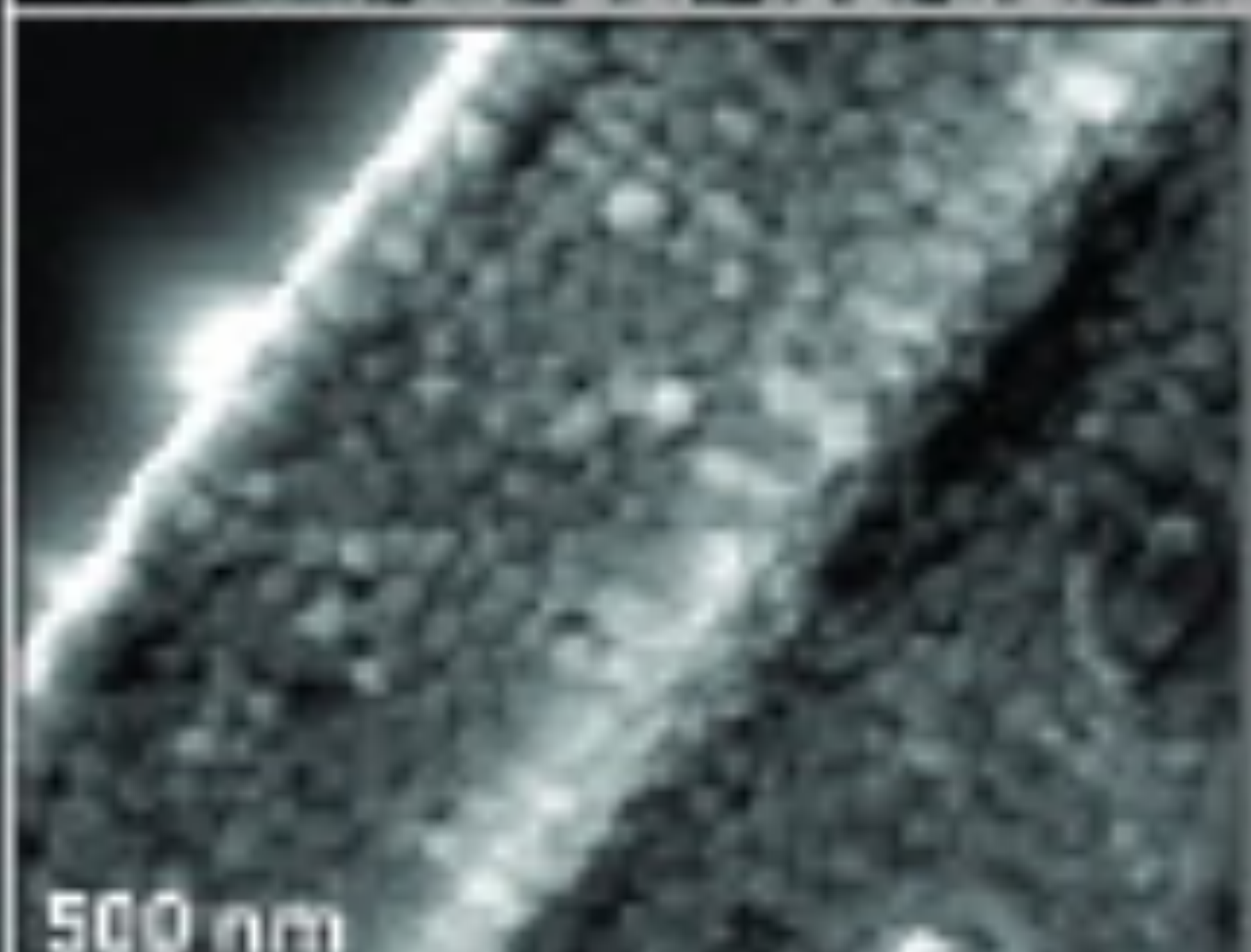
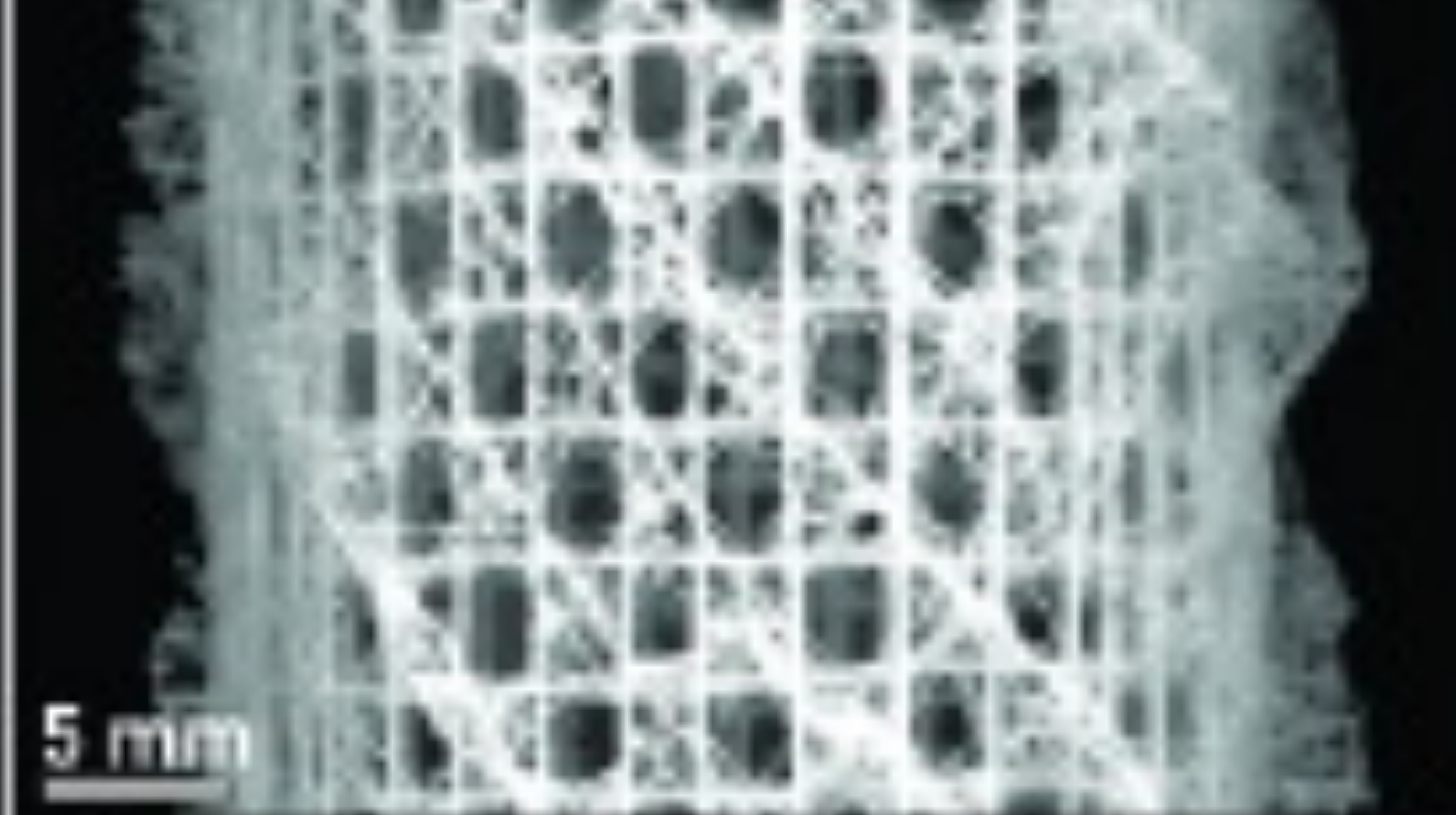


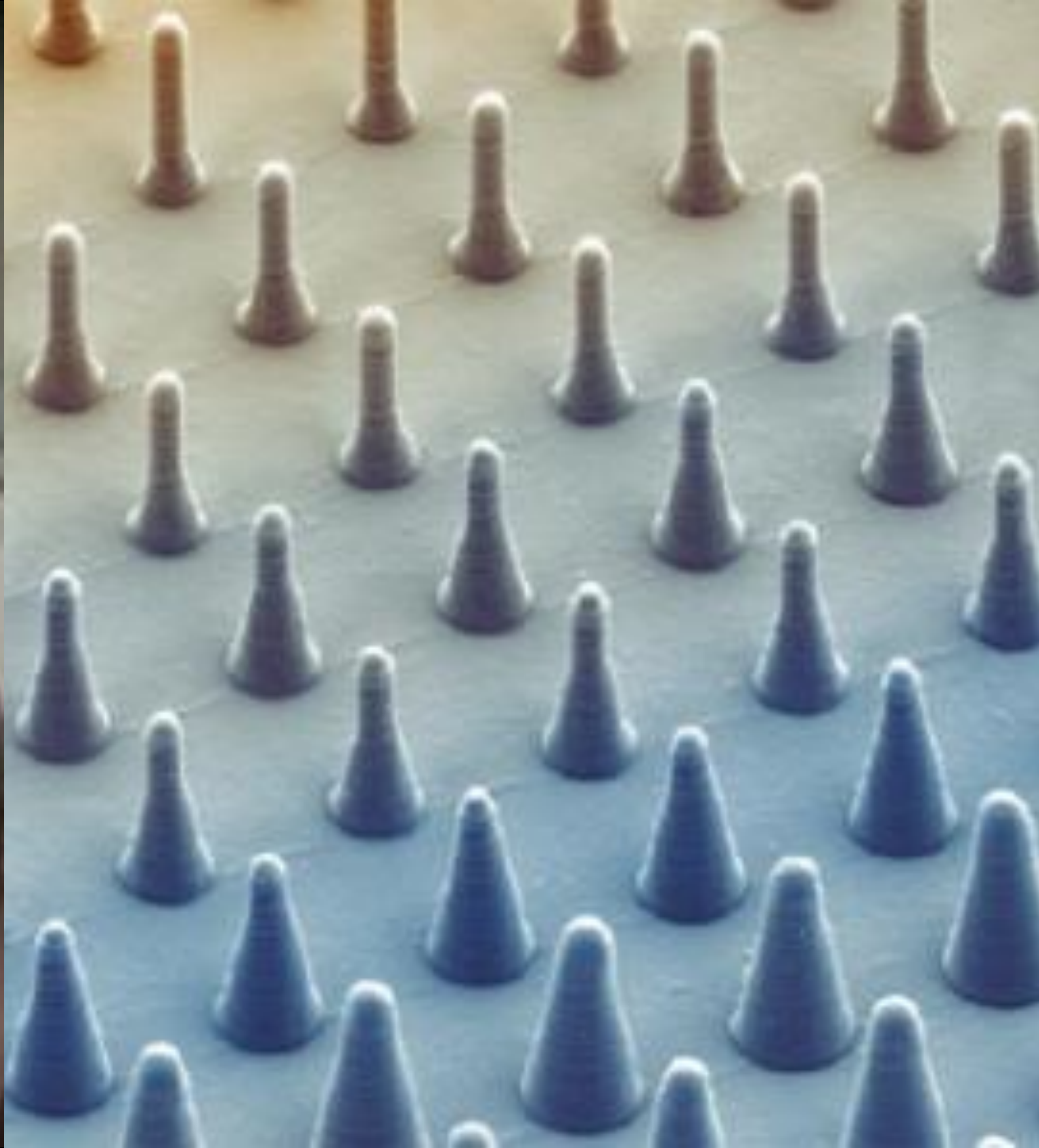




APLICAR ESTRATEGIAS EN LA FABRICACIÓN DE

MATERIALES





QUÍMICA DE LA VIDA

O

C

H

N

S

P

Ca

Na

K

Mg

Cl

I

F

Fe

Cu

B

Mn

Zn

Si

Se

Mo

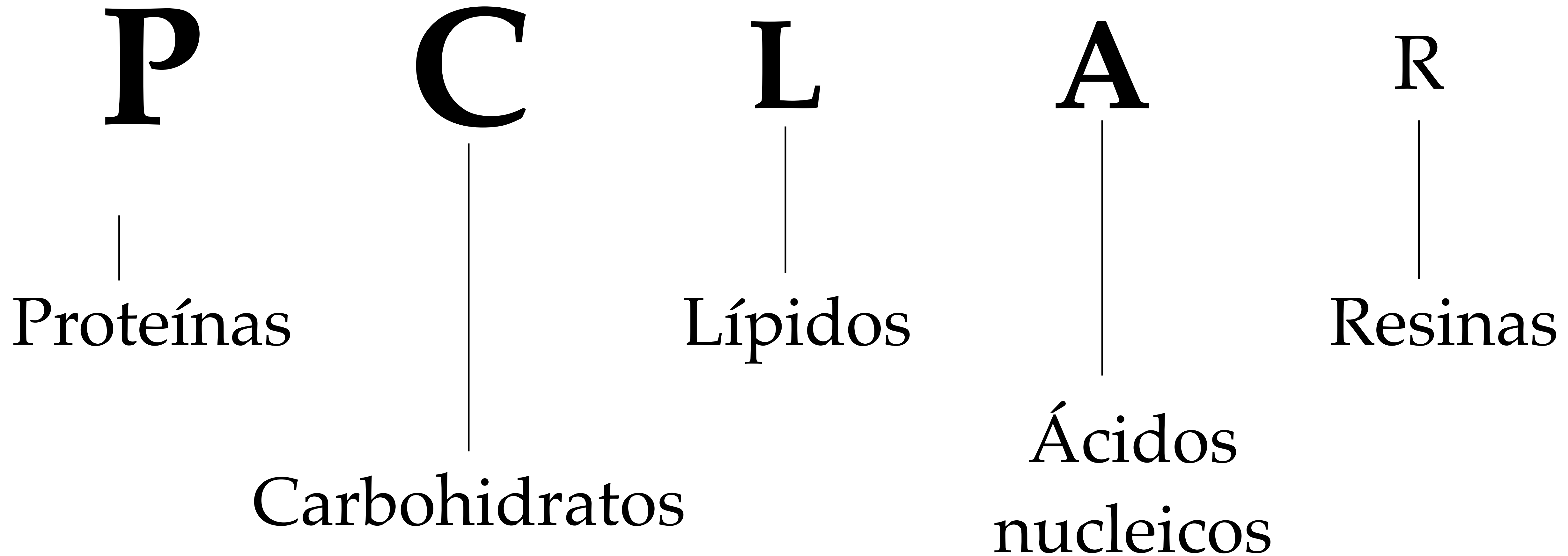
Al

Cr

Co

Br

QUÍMICA DE LA VIDA









EMULAR PRINCIPIOS NATURALES EN ORGANIZACIONES

SISTEMAS

Regenerative*



CO₂

H₂O



No-Till

*In concert with other regenerative practices can help rebuild healthy soil.

Degenerative*



CO₂

H₂O



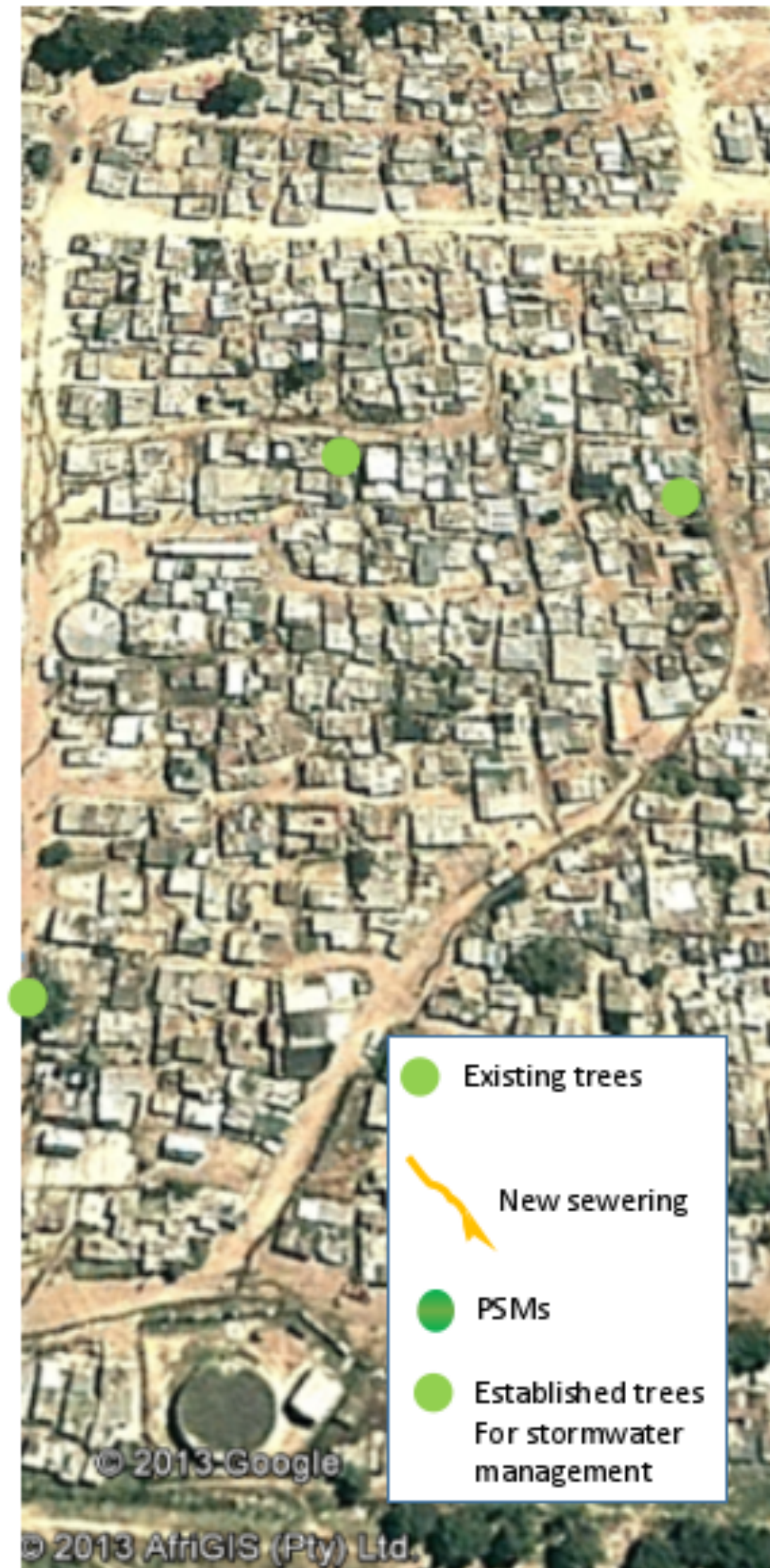
Till

*In general this practice leads to degeneration of soil health.





Current locations of trees in Mandela Park



Trees and soil are scarce, the settlement smells of sewage, winter rains cause flooding and erode the roads creating deep trash filled gullies.

Living sewer with locations of PSMs



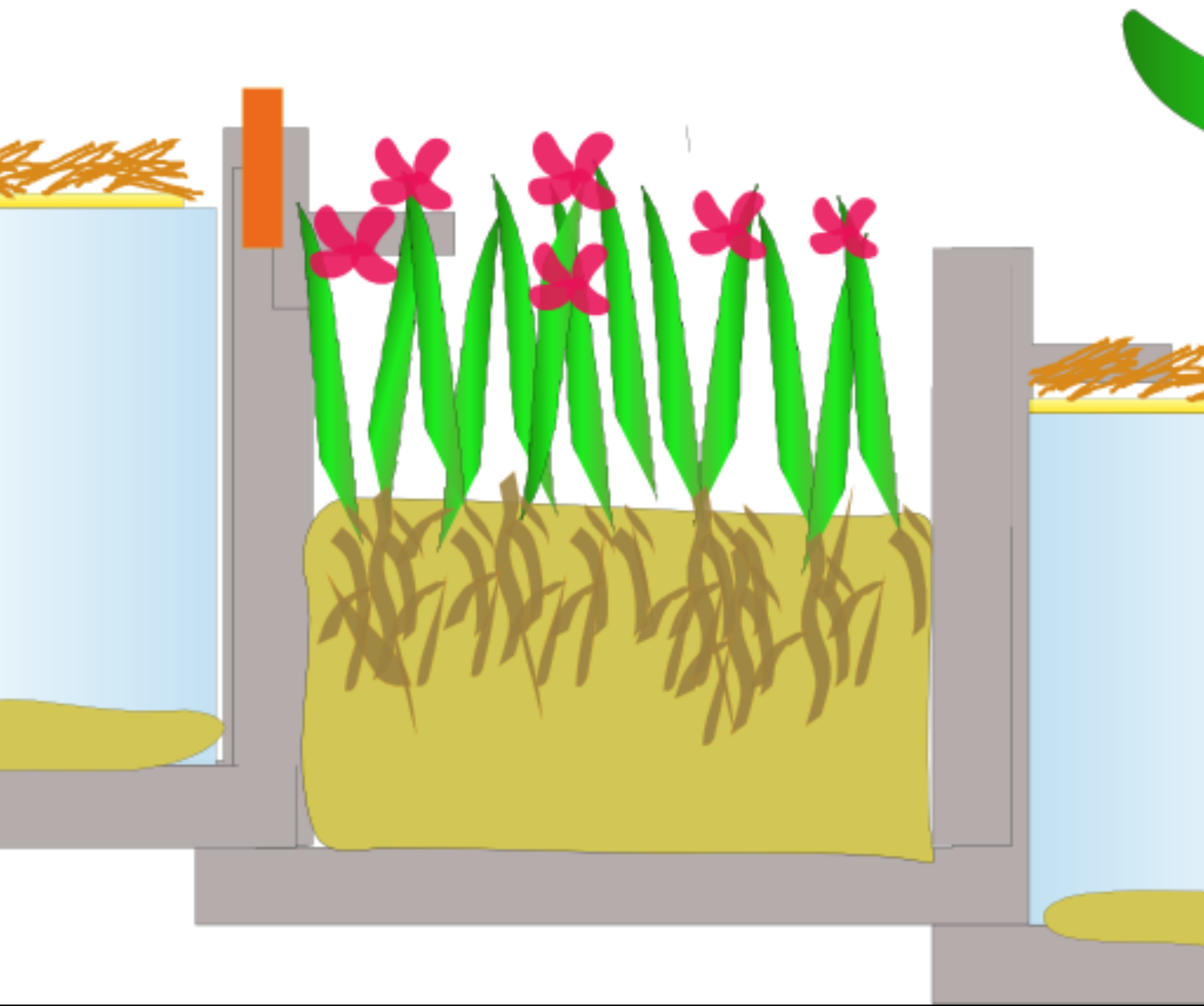
Sanitation throughout the community, trash and liquid waste are separate, new tree wells in public spaces and small wetland gardens in the alleyways.

15-25 years Later



Established trees form the spine of a new stormwater infrastructure. Water retaining soils are more common and tree shade can be found among many of the roads. New PSMs are located where needed in response to the shifting of the sewers.

Cells in fallow condition







BUURTZORG