

# Innovación

Lo digital-lo físico

# Hola!

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@tomasdecamino

Director

Fundación Costa Rica para la

Innovación





00

Digital

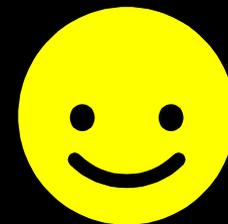
¿porqué?

A black and white close-up portrait of a man with short, light-colored hair, wearing a dark suit jacket, white shirt, and dark tie. He is looking slightly to the left of the camera with a serious expression. The background is a server room with rows of server racks and a mesh-like structure in the foreground.

**Shannon**



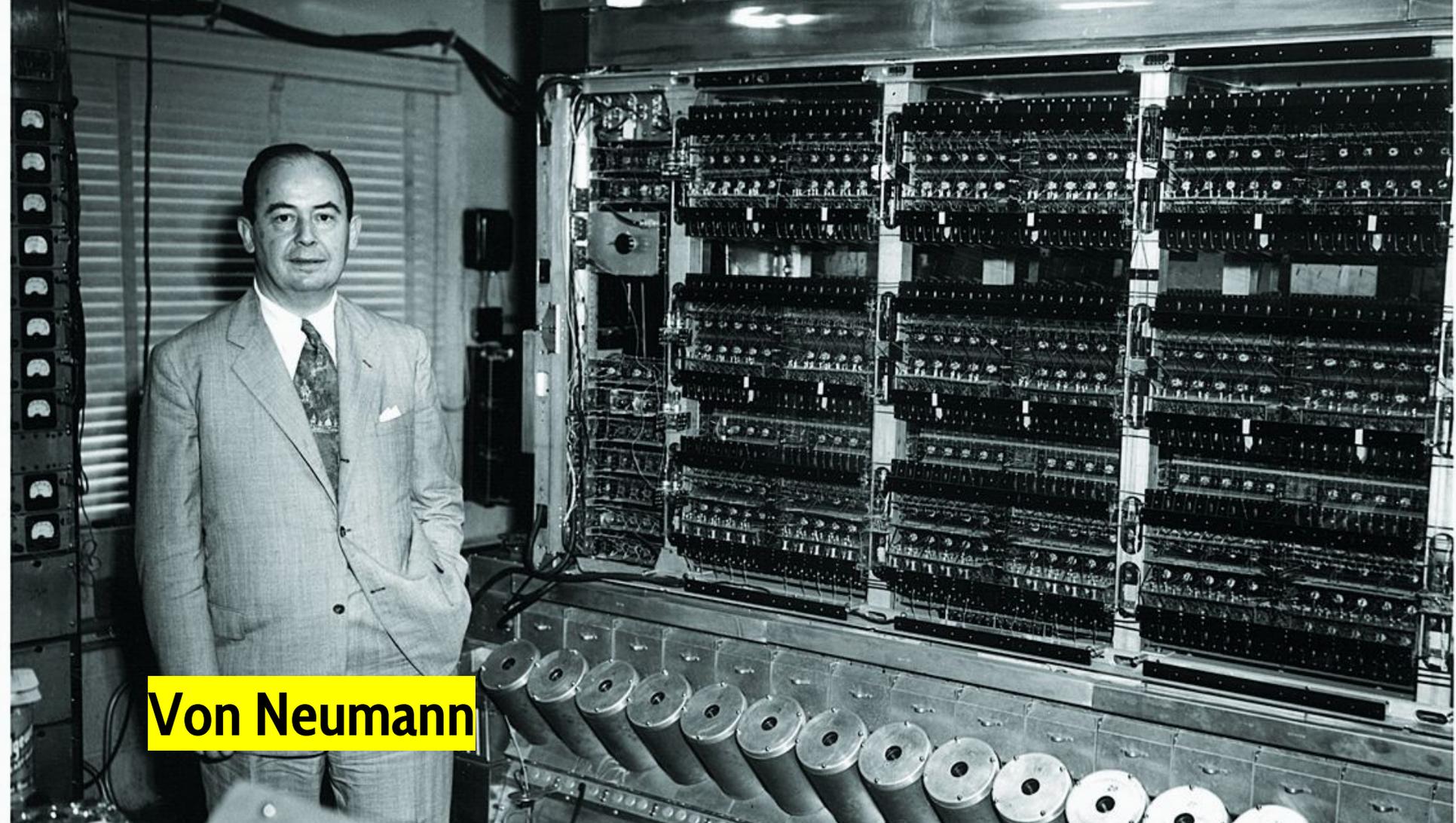
**01010101001111000**



**Aumento lineal de símbolos**



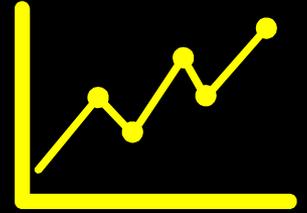
**Disminución exponencial de error**



**Von Neumann**



**01010101001111000**



**Computación en  
Bits**



**funciona incluso con  
Componentes poco confiables**

# Máquinas auto-replicables

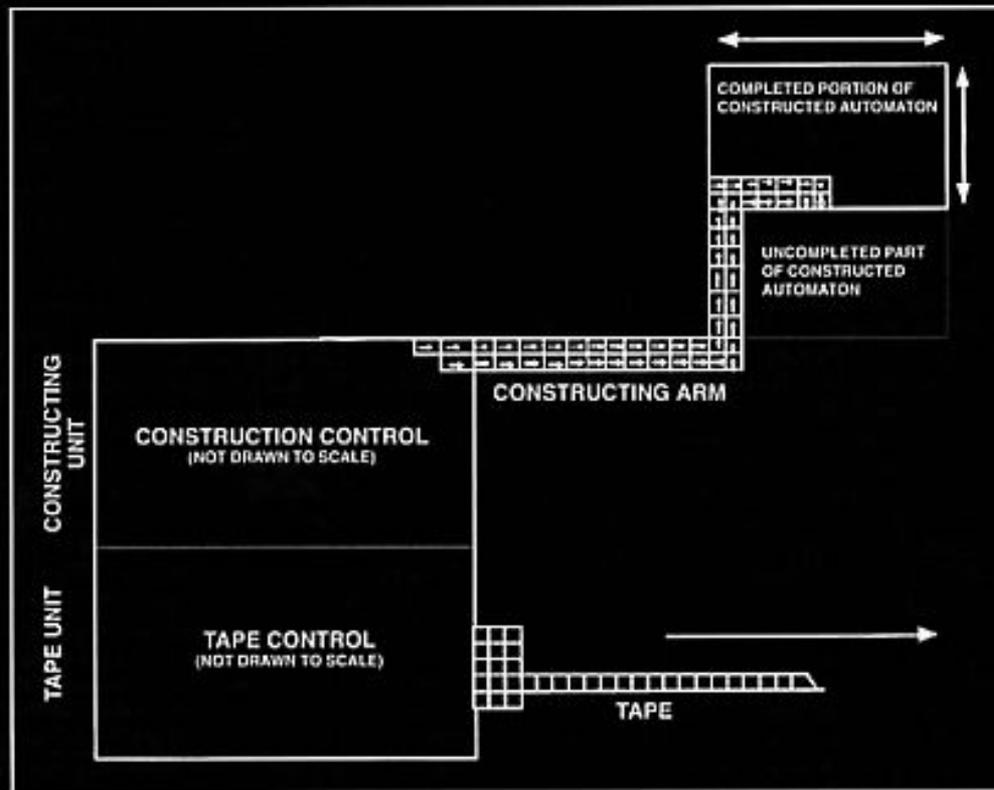


Figure 2.4. Universal construction in the cellular automata model of machine replication, from von Neumann.<sup>4</sup>

“

Comunicación y

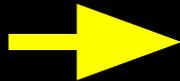
Computación

Universal

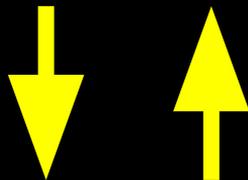
“

Construcción  
Universal

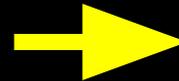
**Información**  
**Intención**



**Comunicación**



**Computación**



**Construcción**





**01**

**Fabricación**

**Regreso a lo físico**

Thingiverse DASHBOARD EXPLORE EDUCATION CREATE  SIGN IN / JOIN

### Printbot Play Auto Level Sensor Bracket

by Gruffest, published Oct 23, 2015

Thingview

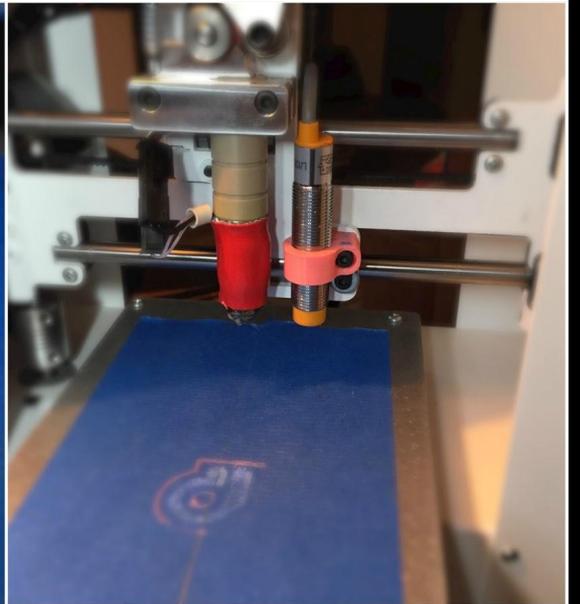
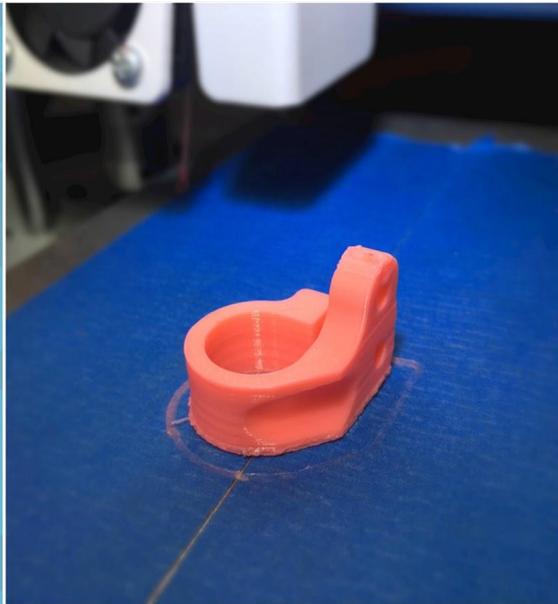
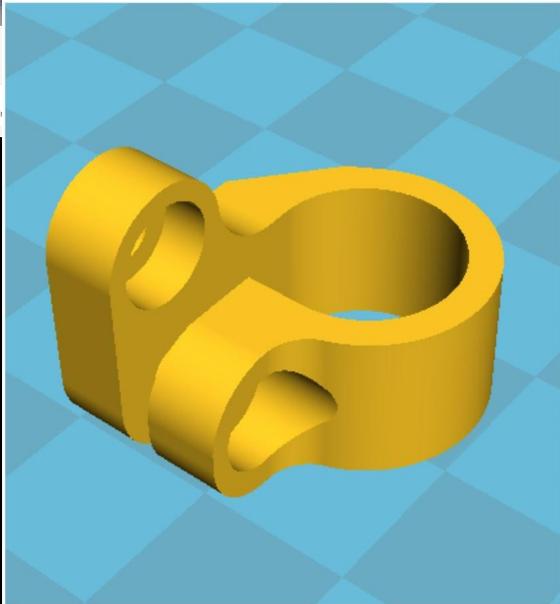
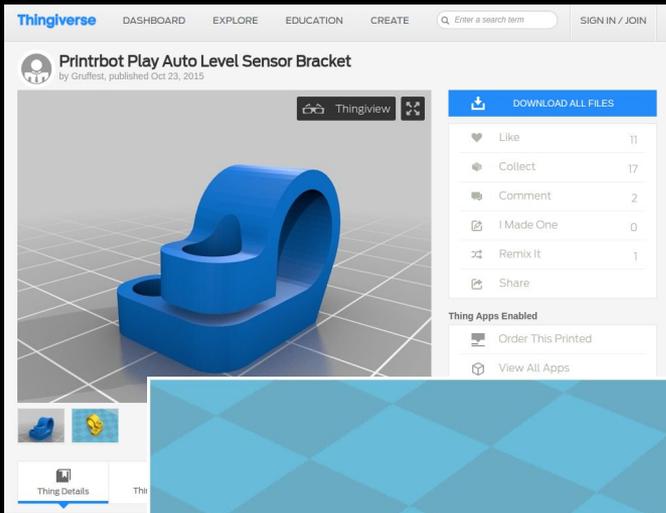
DOWNLOAD ALL FILES

|            |    |
|------------|----|
| Like       | 11 |
| Collect    | 17 |
| Comment    | 2  |
| I Made One | 0  |
| Remix It   | 1  |
| Share      |    |

Thing Apps Enabled

- Order This Printed
- View All Apps

Thing Details





**Arduino**  
**\$24**

**20 MIPS**

**0.055W**

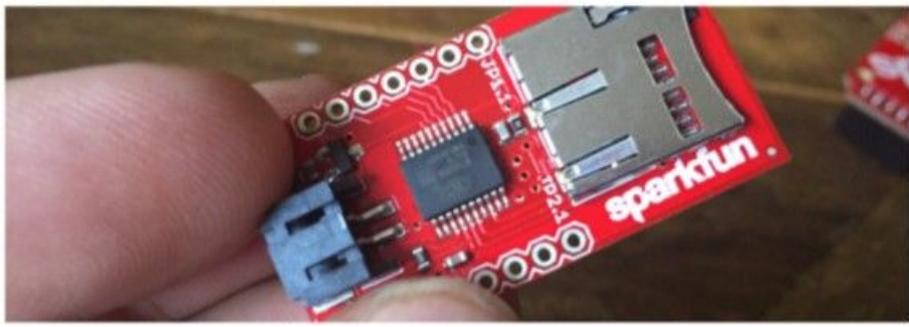
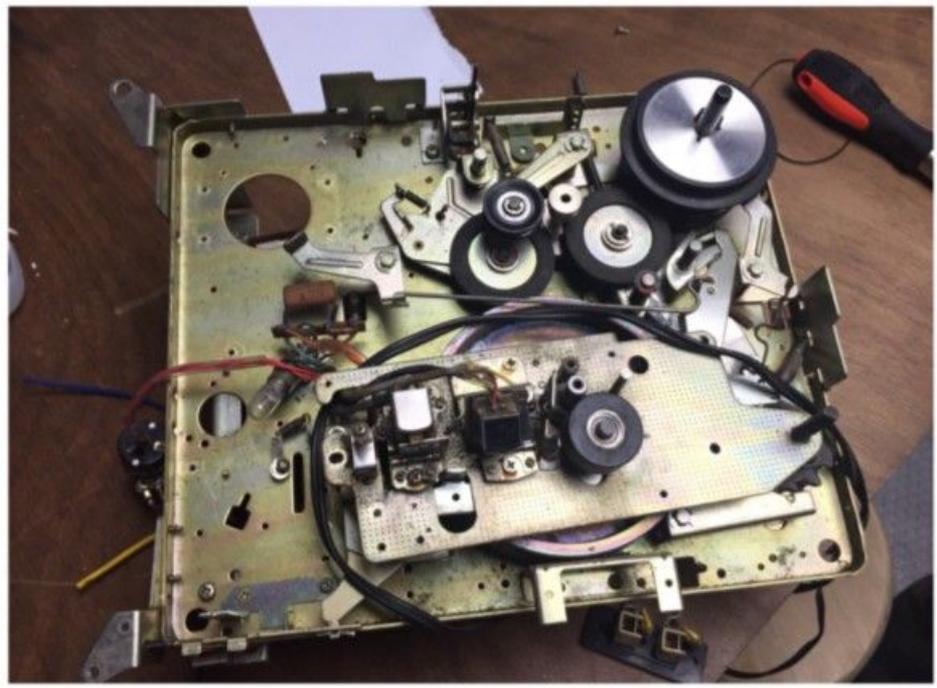
**0.0022lbs**



Cinta abierta  
(reel to reel)

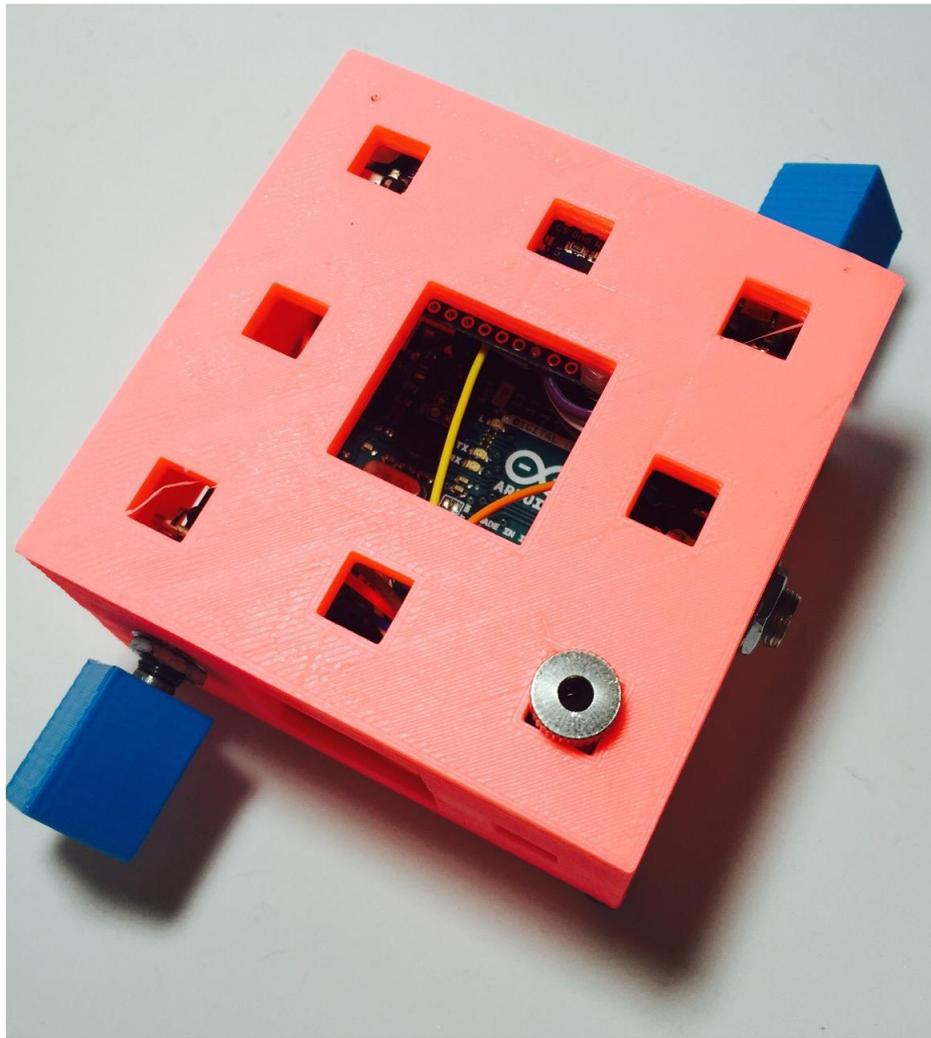
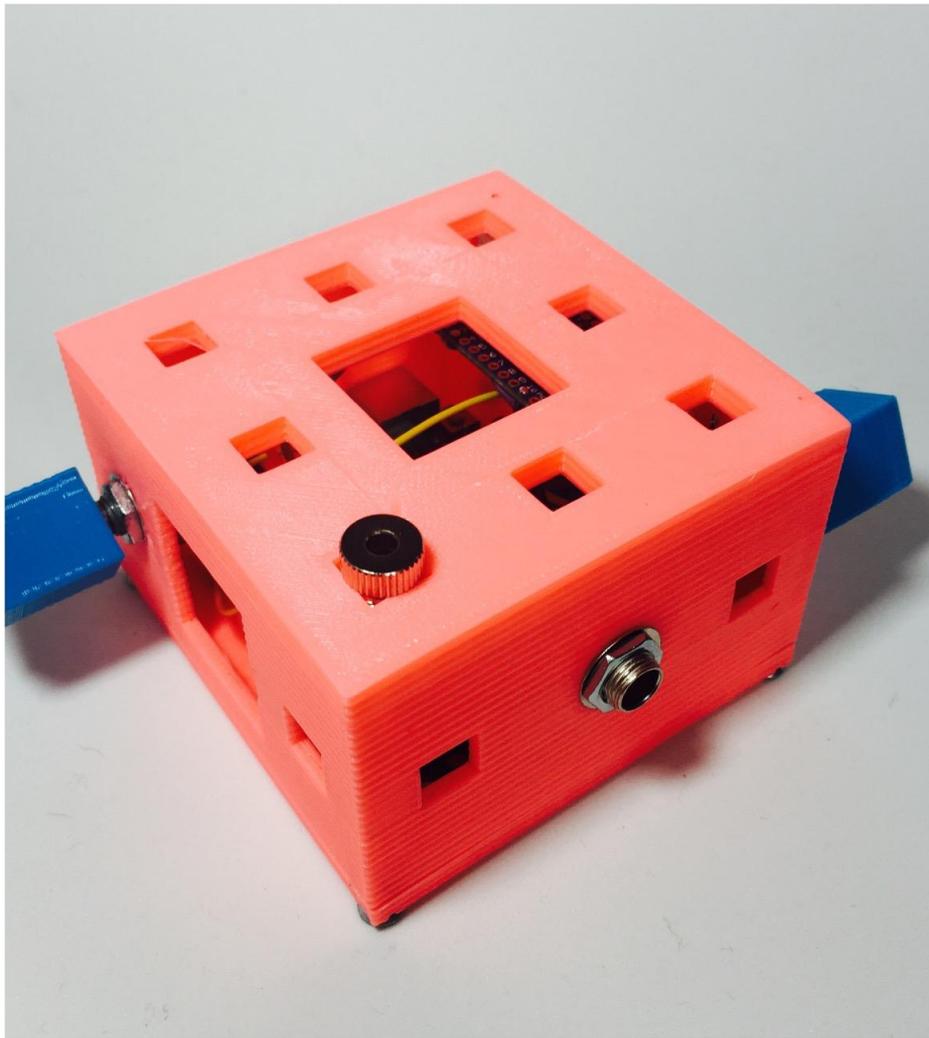
PIONEER ELECTRONIC CORP.  
GOLD

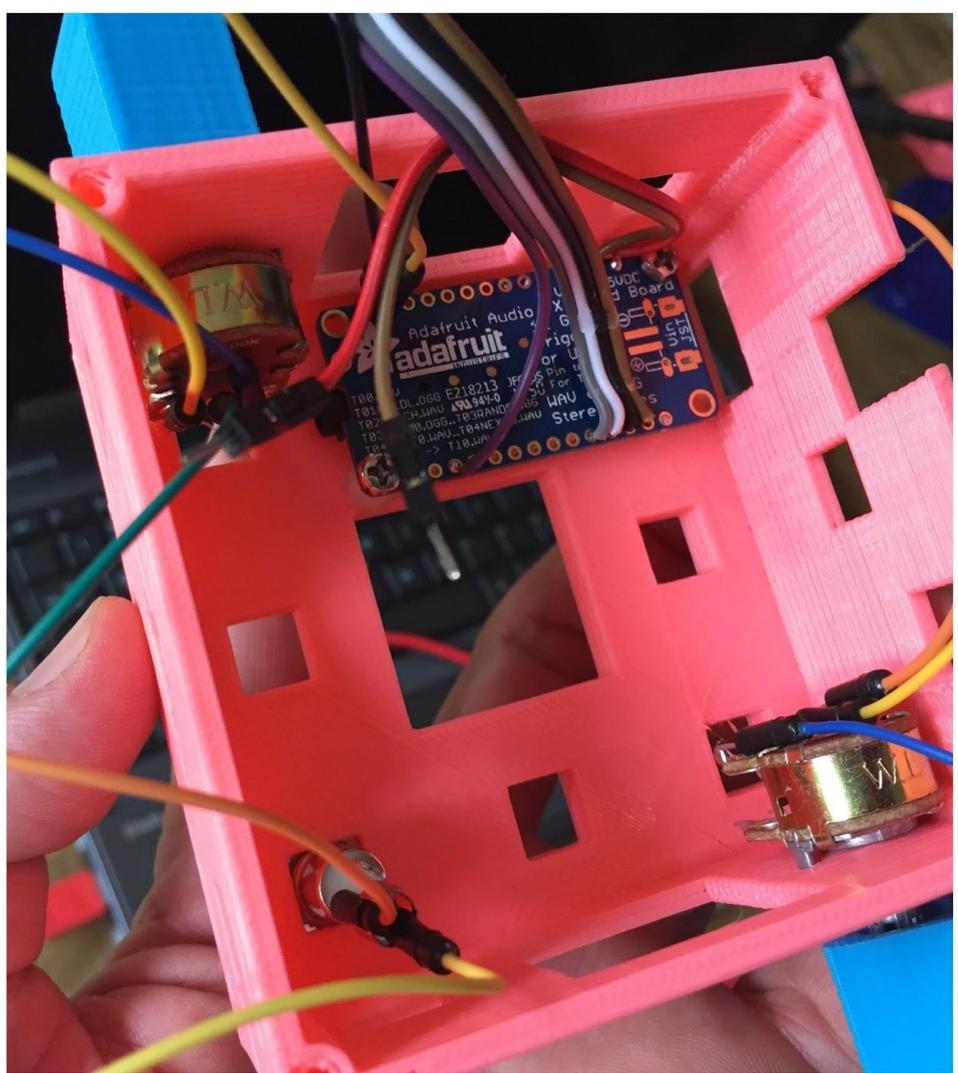
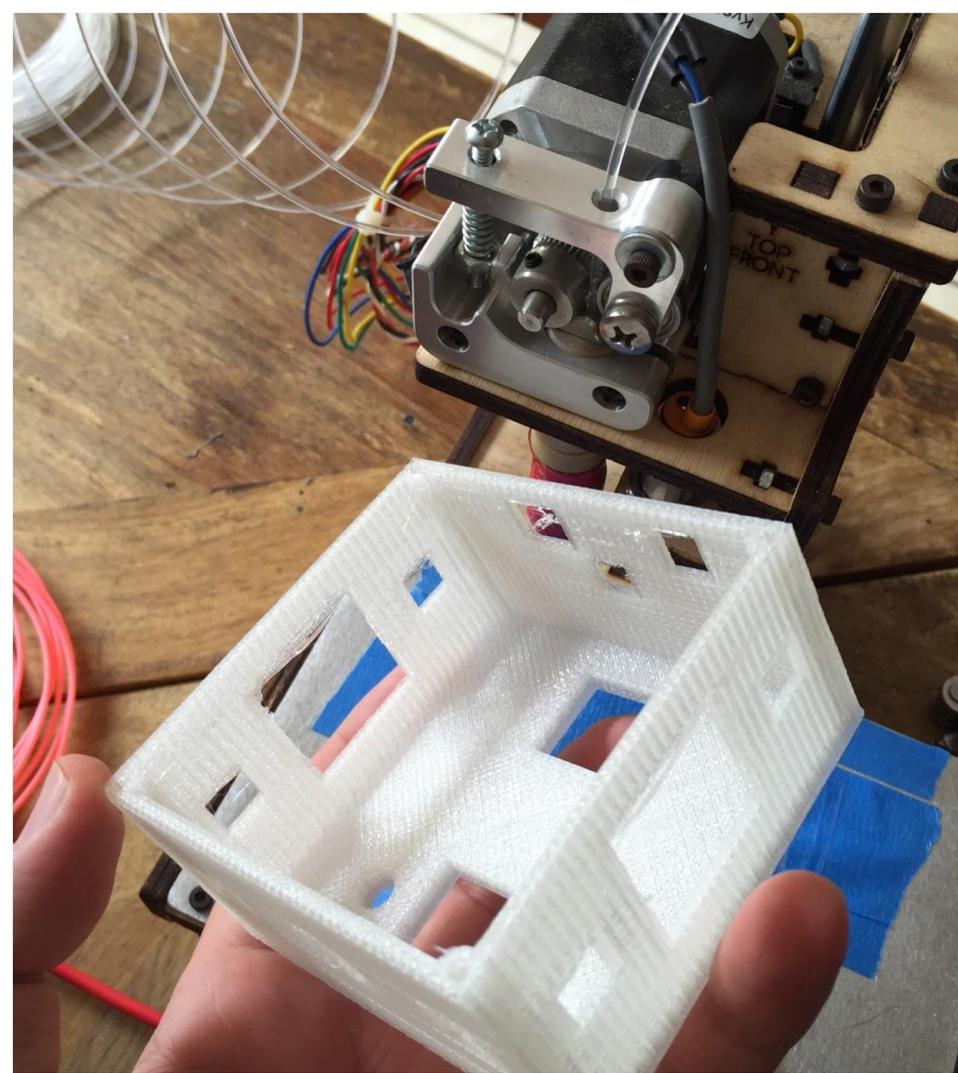
# Complejidad



“ Componentes  
Universales

Códigos Universales







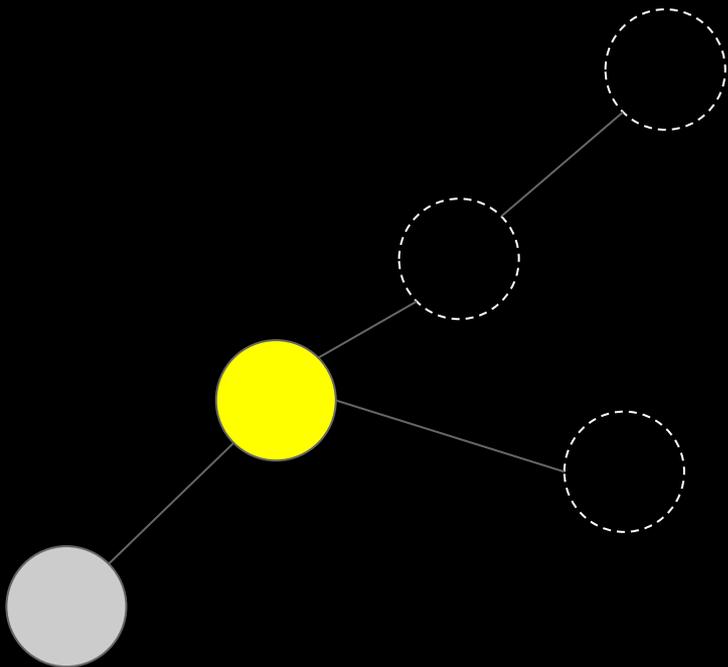


**10**

**Innovación**

**Ideas Tangibles**





**Adjacentes  
posibles**

**Novedades:**

Cosas que son nuevas en un dominio

**Innovación:**

Nuevas en todos los dominios

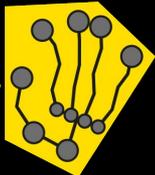
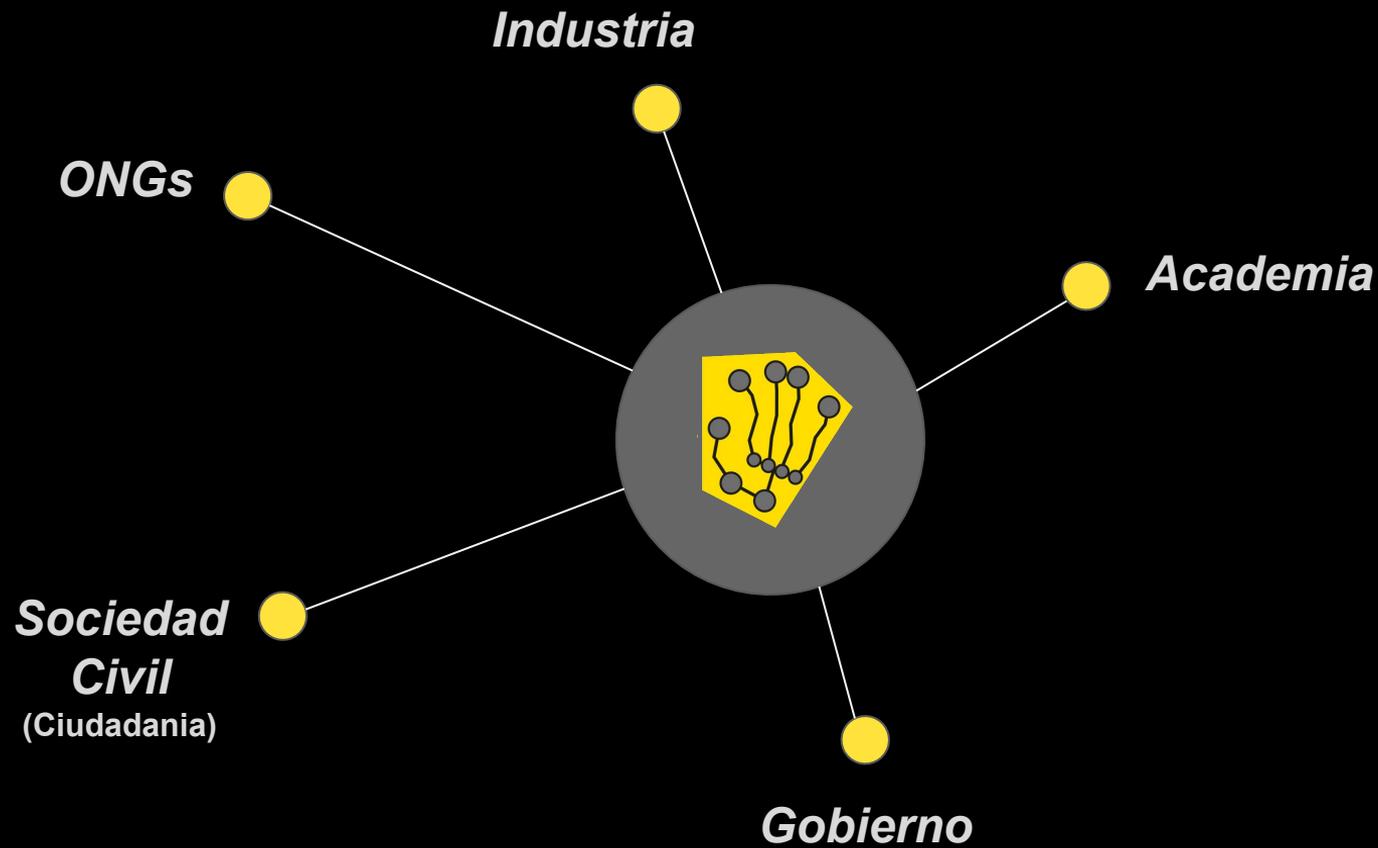
## Innovación:

Creaciones novedosas que cambian patrones y comportamientos en la sociedad.

# 11

## FunCR





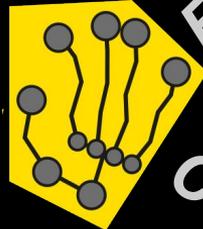
*Convivialidad*

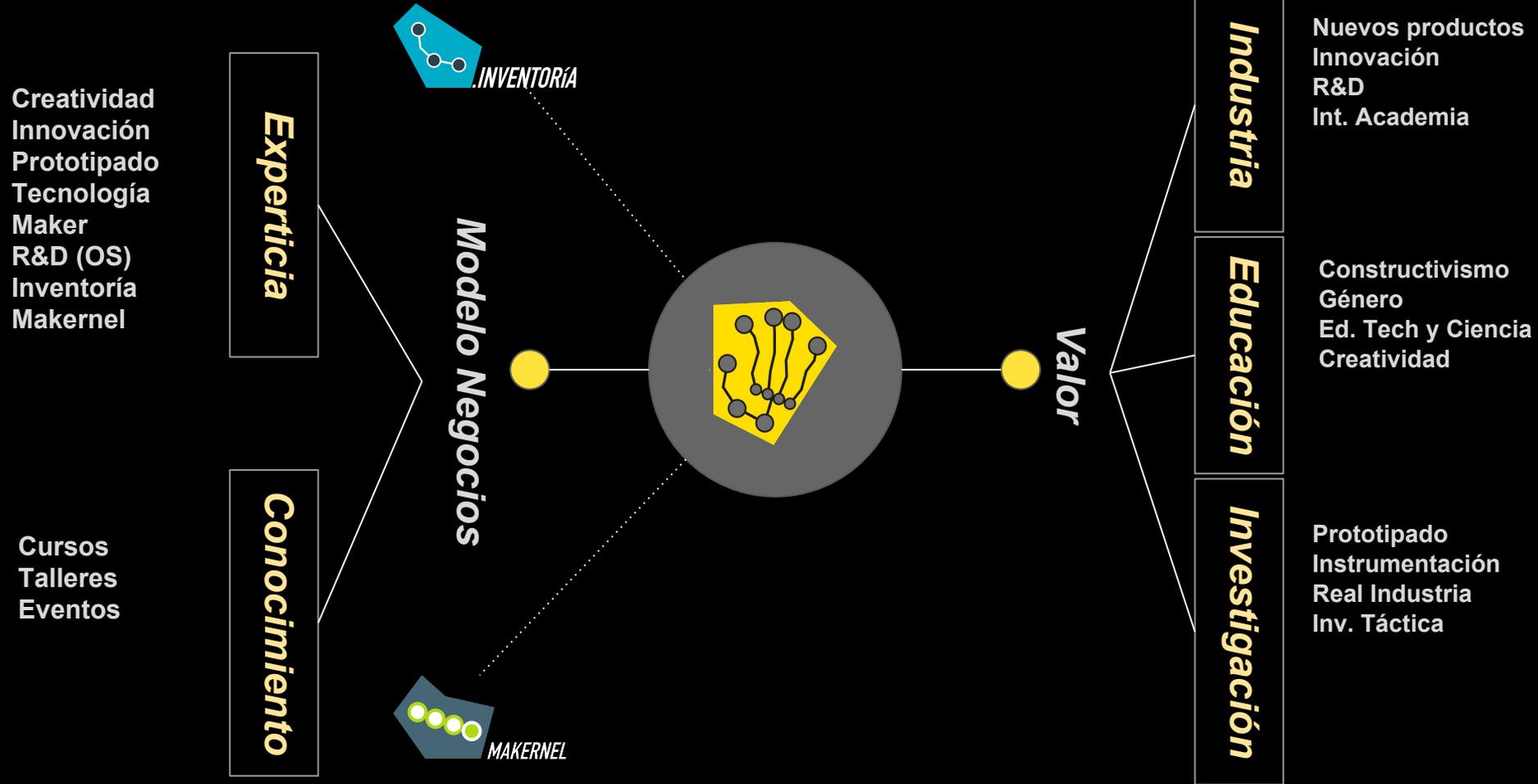
*Open Source*

*Estigmergia*

*Comunalidad*

*Autopoiesis*





**Experticia**

- Creatividad
- Innovación
- Prototipado
- Tecnología
- Maker
- R&D (OS)
- Inventoría
- Makernel

**Conocimiento**

- Cursos
- Talleres
- Eventos

**Modelo Negocios**

**Valor**

**Industria**

- Nuevos productos
- Innovación
- R&D
- Int. Academia

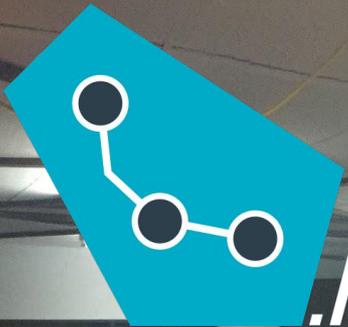
**Educación**

- Constructivismo
- Género
- Ed. Tech y Ciencia
- Creatividad

**Investigación**

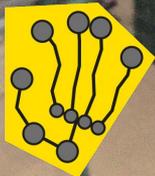
- Prototipado
- Instrumentación
- Real Industria
- Inv. Táctica





# .INVENTORÍA







**100**

**Ecosistema**

**Para Innovación**

## Pros

- País Laboratorio
- Nivel de educación
- Capital creativo
- Pocos grados de separación
- País conectado
- Juventud Informada
- Muchas organizaciones

## Cons

- Sistema educativo poco contemporáneo
- Carreras para empleos
- El experto está afuera
- Igualdad de género
- Celos académicos e institucionales
- Problemas con liderazgo
- Disrupción difícil
- Incapacidad conceptual en tomadores de decisiones
- Capital
- Poco pensamiento global
- NADIE Comparte

# Gracias!

## Preguntas?

Fundación Costa Rica

Para la Innovación

*.fundación* **COSTA RICA**  
**PARA LA INNOVACIÓN**

