

Social Medicine

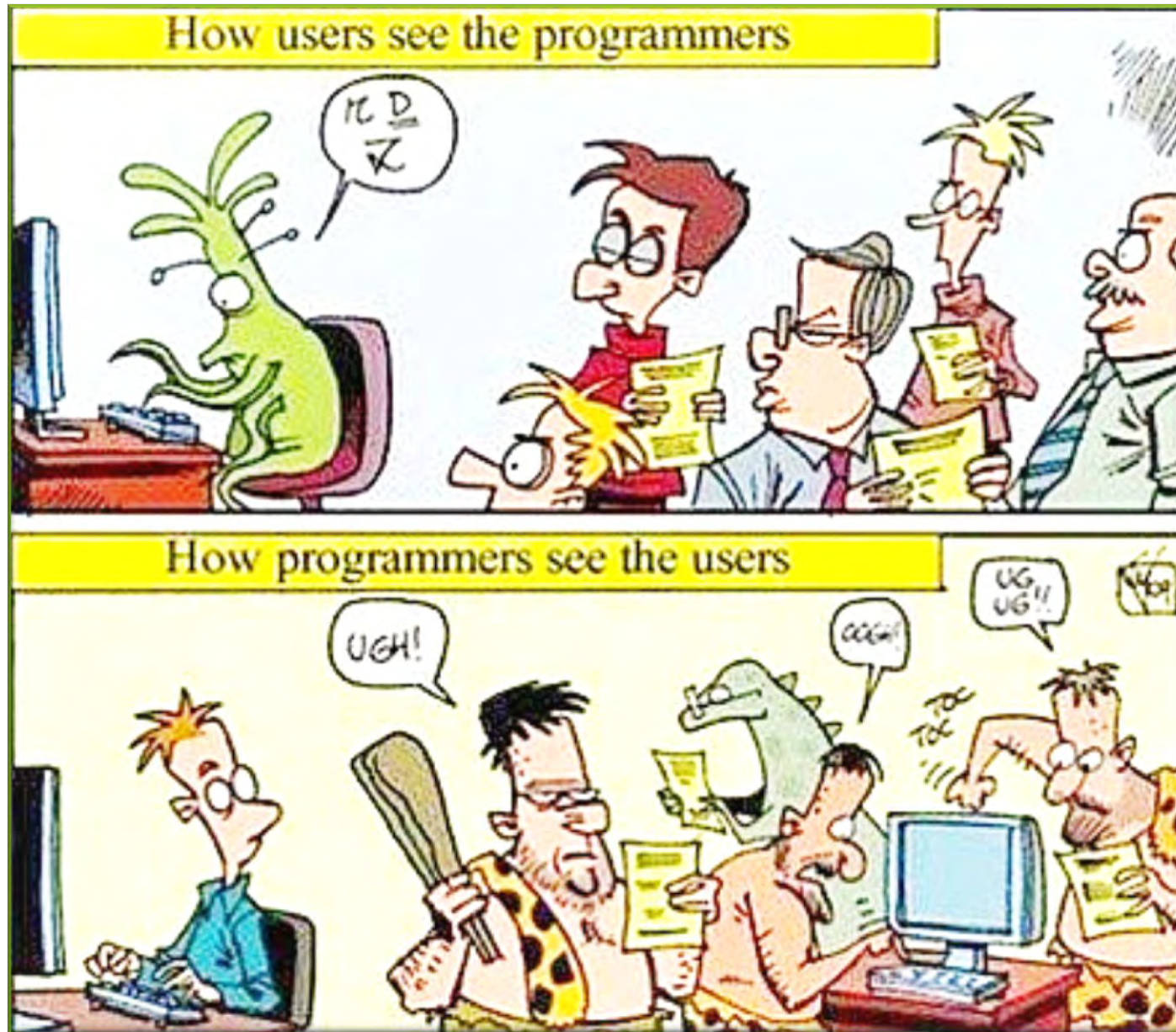
IWEEE 2014



Medical Devices
OPEN & MODULAR FOR HEALTH- OM4H
HACK 4 HEALTH- H4H

Prof.Dr. O. Ferrer-Roca MD PhD.

How doctors & nurses see mHealth & Health 4.0



How specialists in mHealth & Health 4.0 see doctors

Literacy

The **Device Divide** consequence of the Digital divide and socio-economic constrains.

Multicultural Misalignment directly linked to the economic neoliberalism where minorities will not have access.



ePATIENT
2015

Theme I:
Health HyperEfficiency



ePATIENT
2015

Theme II:
Personalized Healthcare Digital Peer-to-Peer Movement



ePATIENT
2015

Theme III:
Digital Peer-to-Peer Healthcare

CareHacking to copy, implement and improve easy solution demonstrated by others.

Virtual Counseling to get counseling at distance not only from doctors but from other ePatients.

**Patient
driven**

DIY
Do it yourself



REVERSE INNOVATION

The cellphone has become more of a tool and less of a toy, especially among the poor, and those trying to help them, in emerging markets. It helps deliver, via text message, water, energy, financial services, health care and even education.



Drones



eHealth platform
Arduino & Rasperi-Pi





Strategy

Compete on all three strategic dimensions at once. Enter the market better, cheaper and customized; innovate constantly.



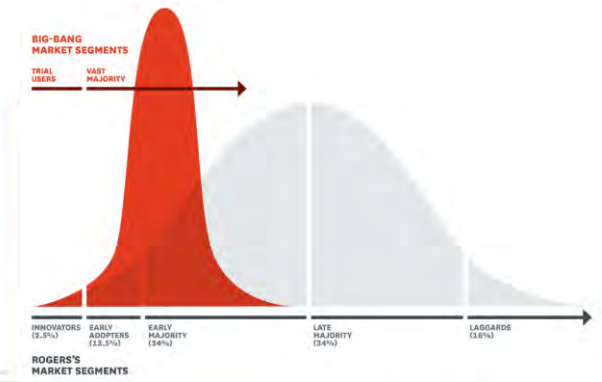
Marketing

Market to all customers immediately, and be up and then exit - switch.



Innovation

Launch low-cost experiments directly in the market. Combine reusable components rather than designing from scratch.



I hack health

What would you expect?

BYOD



S/C file 12-4-2013

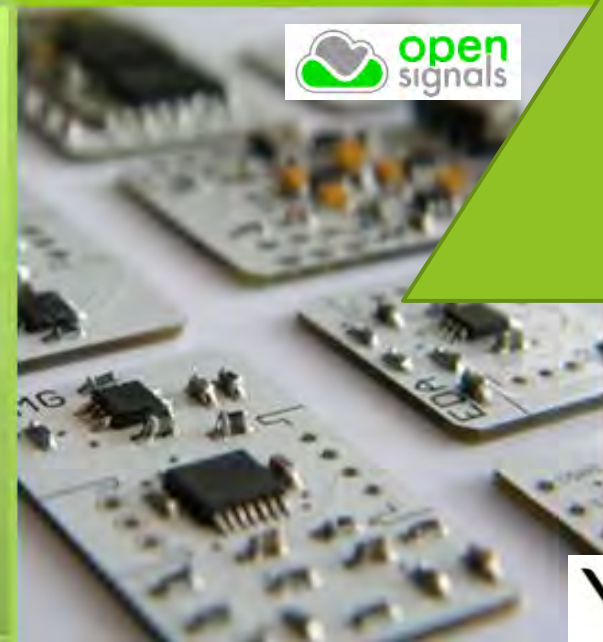
WOW! TOO MUCH

VENUS



Reverse innovation

IS FANNY - IS FRIENDLY



Renovation



BIG BANG DISRUPTION

LARRY DOWNES | PAUL NUNES

Big Bang Wisdom:
Launch low-cost experiments directly in the market.

INNOVATE
Combine reusable components rather than designing from scratch.

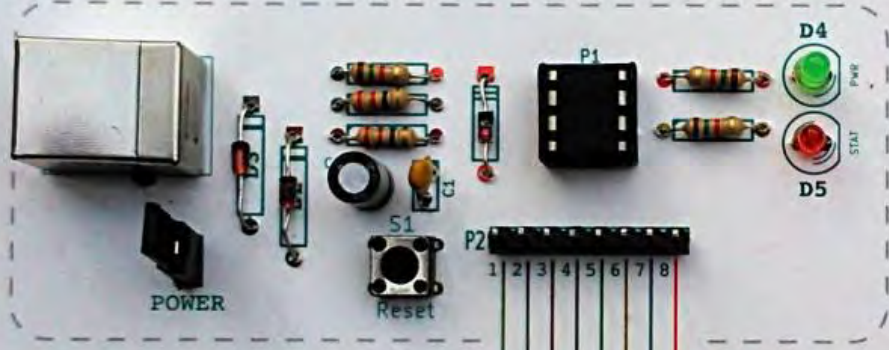


www.accenture.com/bigbangdisruption

Paperduino Tiny



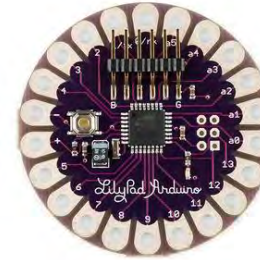
<http://digistump.com/wiki/digispark>



<http://www.paperduino.eu>



paperduino-cards.jpg



Open hardware



paperduinotiny-bottom.png

The following Arduino commands should be supported:

- pinMode()
- digitalWrite()
- digitalRead()
- analogRead()
- analogWrite()
- shiftOut()
- pulseIn()
- millis()
- micros()
- delay()
- delayMicroseconds()
- SoftwareSerial

Partlist

- D1 1N4148
- D2 ZD 3V6
- D3 ZD 3V6
- D4 LED
- D5 LED
- P1 ATTINY85+socket
- P2 8 PIN HEADER
- J1 USB B socket
- S1 TACT SW
- C1 100nF
- C2 10uF/16V
- R1 1k5
- R2 1k5
- R3 22R
- R4 22R
- R5 1k5

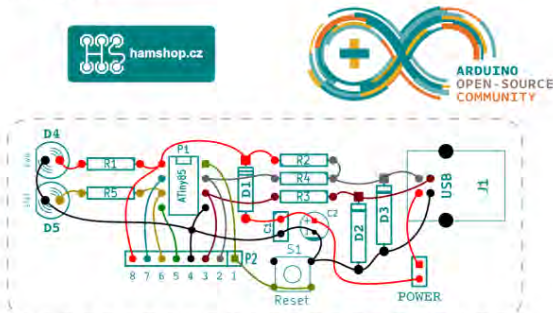
Burning bootloader to ATTINY85

It is very important to use the correct fuses bit when burning bootloader to ATTINY85, below list the fuses bit for burning bootloader:

- Extended: 0xFE
- High: 0xDD
- Low: 0xE1

Please note that these fuses setting will not enable reset pin (ATTINY85 pin 1) as I/O, so you only have 5 I/O.

If you are experienced user you can set RSTDISBL to enable 6 I/O pins.



open source hardware

Google phone




\$50 the lower facility

Ara Project



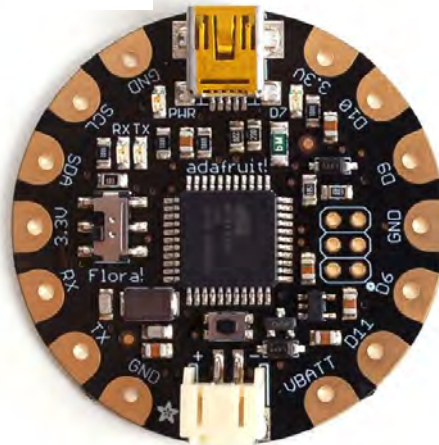
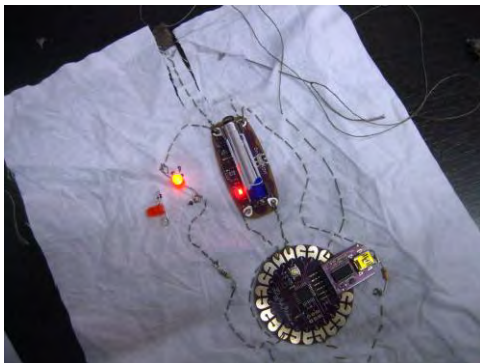
PHONEBLOKS
A PHONE WORTH KEEPING

COMMUNITY

NAME	DATE JOINED	POINTS
	UNESCO-TELEMEDICINE	Member since 08 April 2014



€ 19



\$ 24,95

Modular Hardware



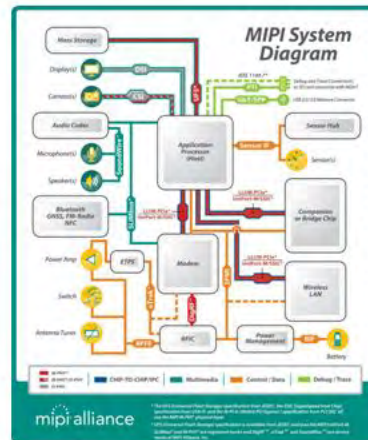
ALERTS	▼
CODED MESSAGES	▼
PROXIMITY	▼
INDIVIDUALITY	▼
COLLECTING	▼
GAMING	▼
TRACKING	▼
SHARING	▼



- USB Charge
- Haptic Feedback and vibration motor
- Bluetooth 4.0 low energy
- Rechargeable lithium polymer battery
- Apple iOS and Android compatible



- API and SDK available for third party developers
- Smoked lens with multi-colored LED
- Custom laced mod bases in materials ranging from chrome to gold
- Easy snap on and off
- Power Cycle



Application-specific Protocols

Scope of UniPro Specification

Device Management Entity (DME)

Transport (L4)

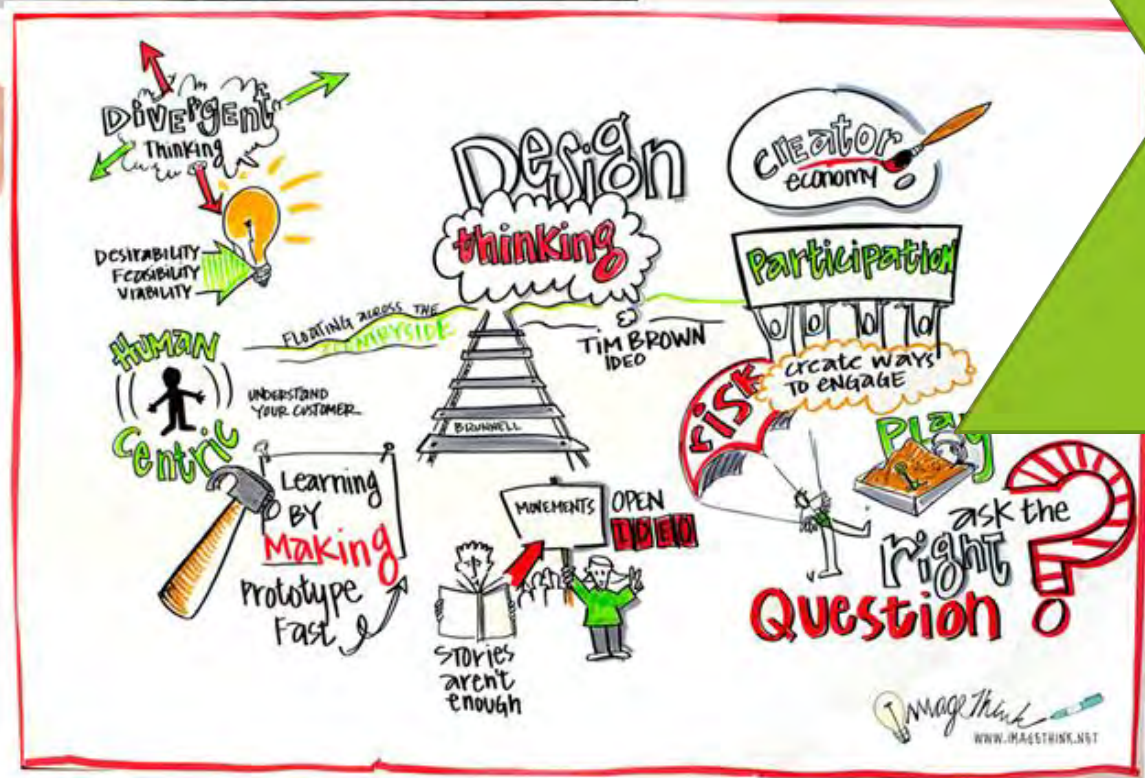
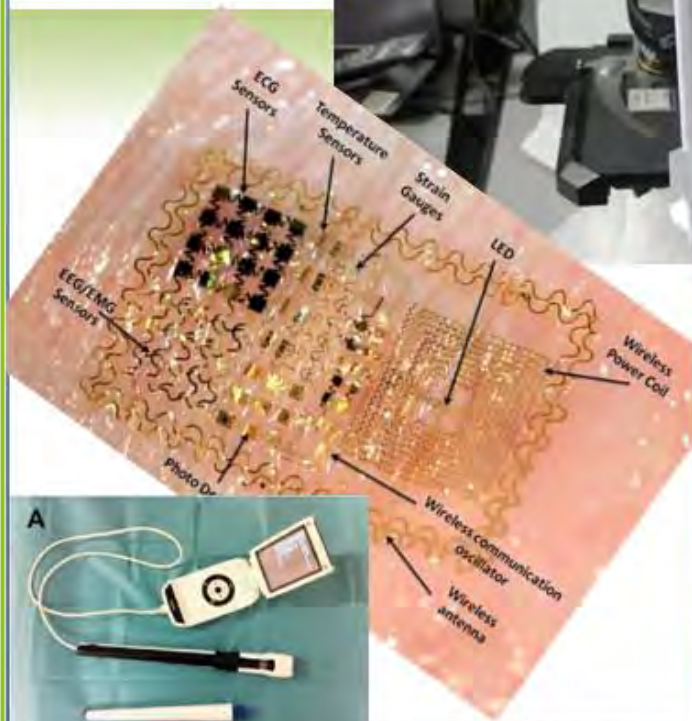
Network (L3)

Data Link (L2)

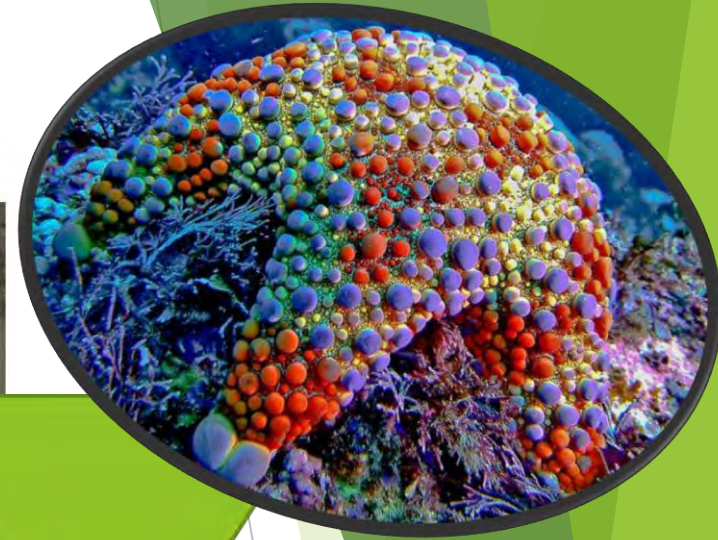
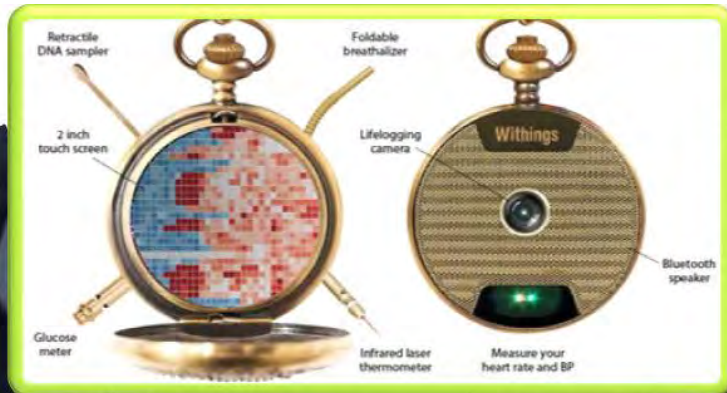
PHY Adapter (L1.5)

PHY (L1)

Medium



Design thinking



Timeless tracking.



Withings Puck
Check. Log. Live.
A pocket watch to perform a full electronic medical diagnosis, monitor your activity (407) and your life.
★★★★★

Dandy

Withings Shaft
Wander. Relieve.

A haptic knob cane to monitor your activity, take your pulse and support you.
★★★★★



Collection

Integrate poeple



Withings Peek
Ogle. Surf. Log.
A video microscope connected to a smartphone with optical, audio and motion sensors.
★★★★★
Available in copper or gold.



Retractable
DNA sampler

Foldable
breathalyzer

2 inch
touch screen

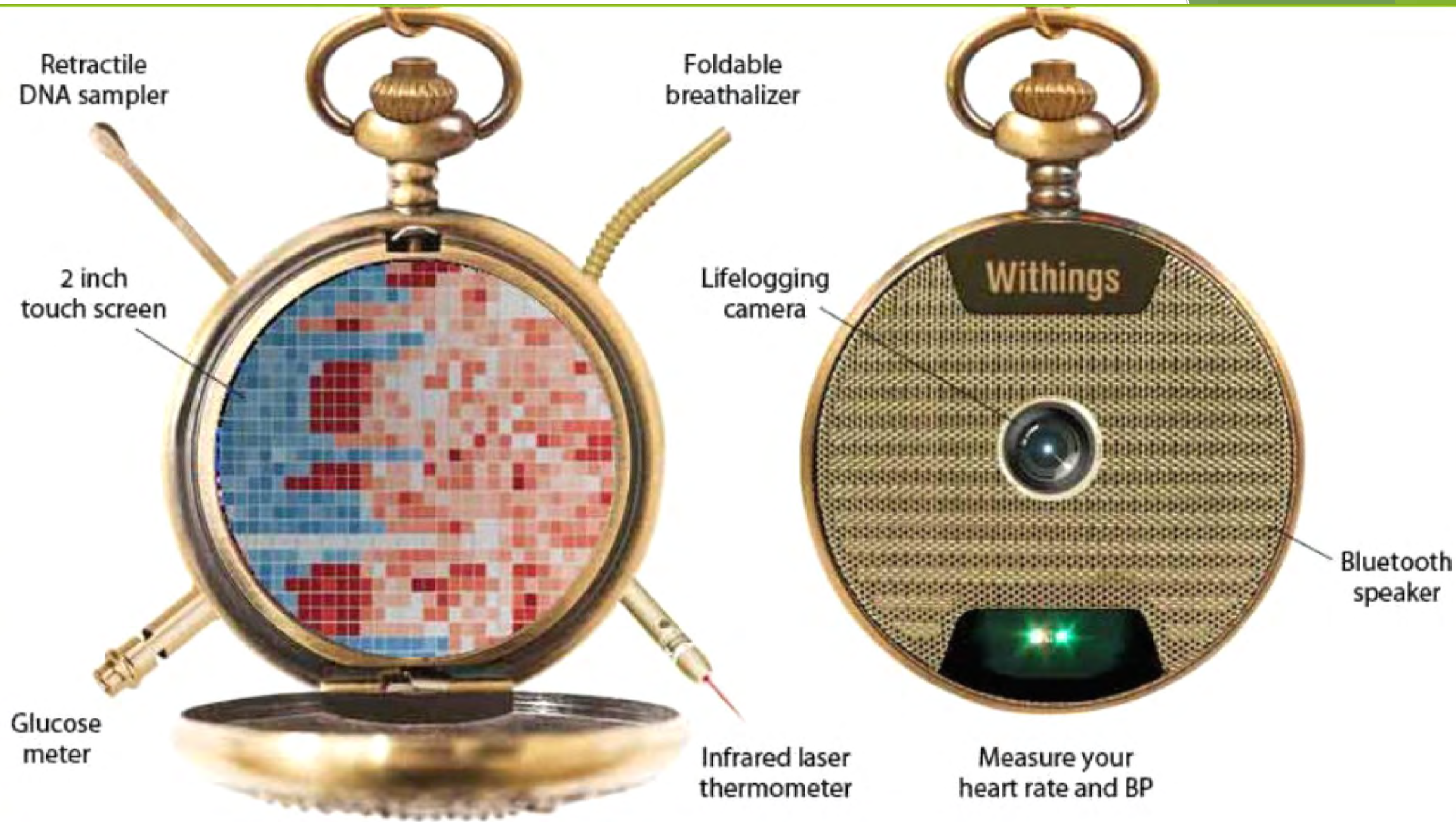
Lifeloggging
camera

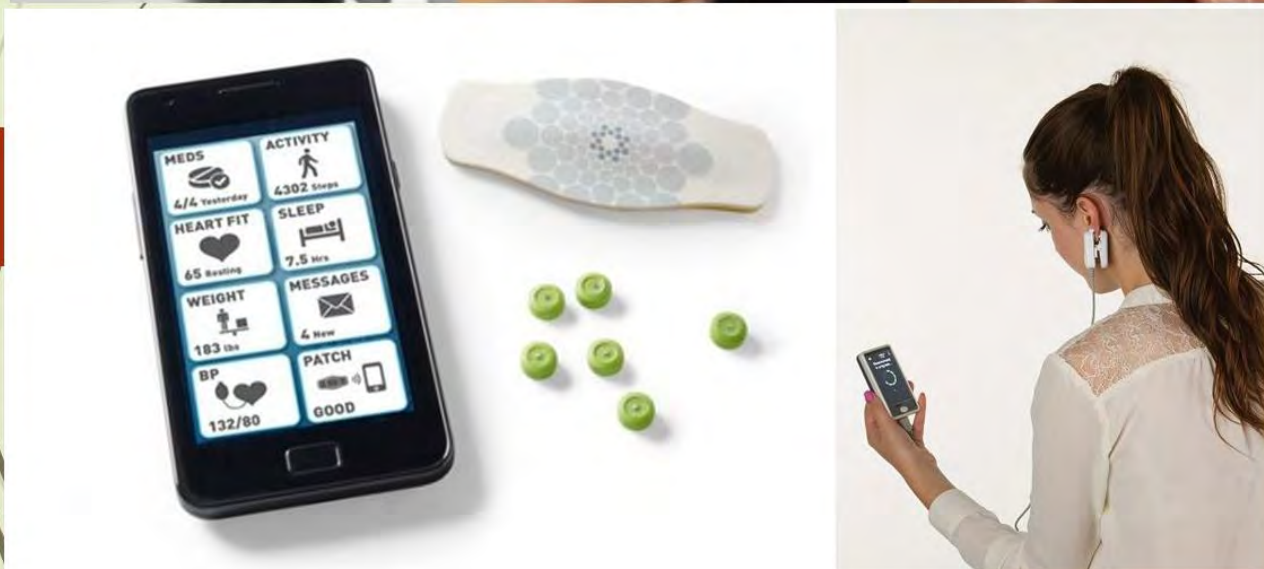
Glucose
meter

Infrared laser
thermometer

Measure your
heart rate and BP

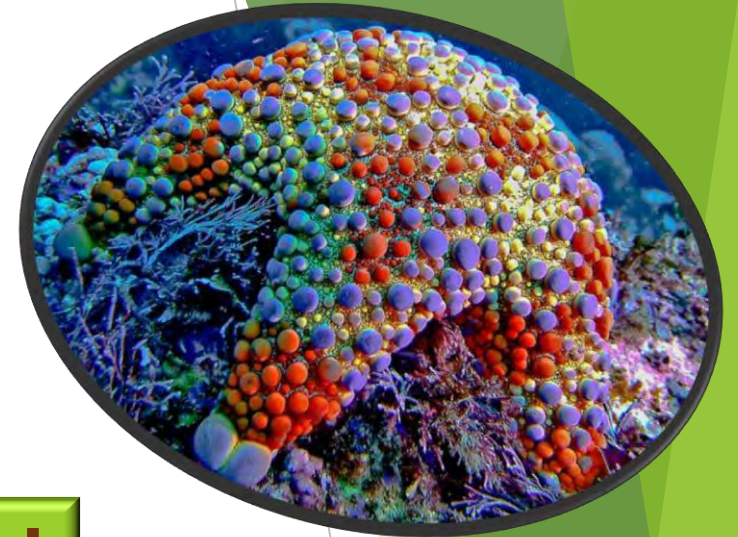
Bluetooth
speaker





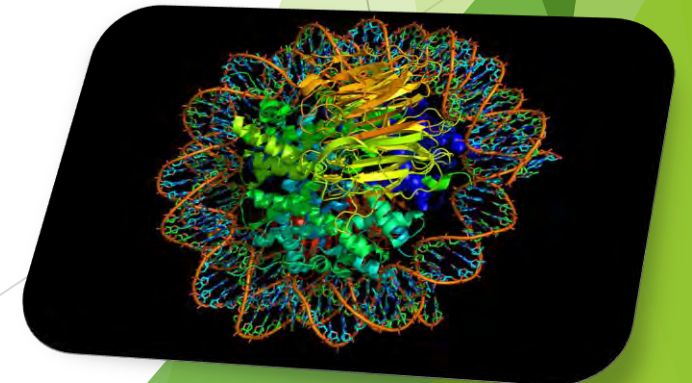
Health 4.0

IoE



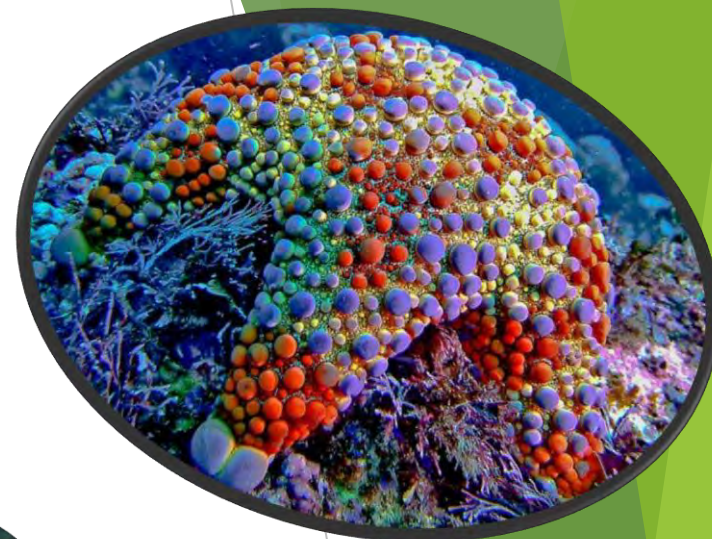
la belleza de un diseño no va en contra de su funcionalidad

**functionality is NEVER
against beautiful design**

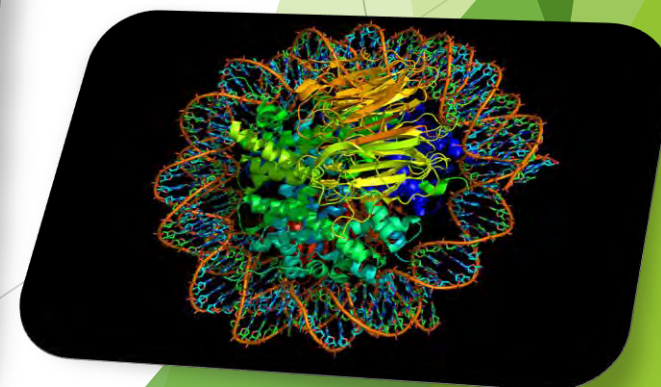




2-Gammify
Do it 4 fun



1-Design



Design



EDUCATION

How schools are grabbing a slice of Pi

As the new Computing curriculum set to come into effect in September, David Crookes looks at how teachers are looking to get in on the Raspberry Pi action

Last year, Carrie Anne Philbin was a head not just any teacher. In becoming a Raspberry Pi ambassador, she has become a key figure in the world of Raspberry Pi. Philbin, who has been teaching in East London, has had growing interest in the power of the Raspberry Pi. She is also the author of the book 'Raspberry Pi for Dummies'.

Today, however, she has taken her passion further, assuming the role of Education Pioneer at the Raspberry Pi Foundation. With teachers having just a few months left to truly nail the principles of computers before they unleash their knowledge on classes of children, it is her job to show educators the true value of the £25 machine she appears to love so much. "A year ago, these teachers were not even aware of the Raspberry Pi," she says. "Now, it's a clear resource that is aimed at kids of all ages and a fair few adults too."

The education conference in Manchester worked well for the Raspberry Pi Foundation and the dedicated team it has assembled with the aim of supporting teachers. Carole O'Donoghue was sectioned off in its own room in the vast space of Manchester Central. This year, with O'Donoghue still at the helm, things Pi were thrown into the main conference arena. Teachers walking around the venue spotted a classroom of the future on one corner of the exhibition stand.

What's in the curriculum?

Although it's not the sole aim, coding is at the heart of the new curriculum and it plays a much larger role than it ever has done before. In Key Stage 1, for example, pupils should be taught to understand what algorithms are and how they are implemented. Children will be asked to create and debug simple programs. At Key Stage 2, pupils need to be taught to design, write and debug programs that accomplish specific goals and understand computer networks. By Key Stage 3, they will be expected to use two or more programming languages and by Key Stage 4, they need to develop and apply their analytic, problem-solving, design and computational thinking skills.



Carrie Anne Philbin is a big supporter of the new curriculum, experiencing first hand the effect of the Pi

We're looking to put across the point that computing is fun

has to be done. But the time you have as a teacher to do anything is so small. The government does need to give teachers time to skill up."

Primary school teachers will feel the strain more than secondary. They need to teach a much higher number of subjects, so devoting extra time and expertise to an area as complex as computing will be felt more keenly among them. Making matters worse is that they are surrounded by computers that they can do very little with in practical terms – that yet the Raspberry Pi can change that.

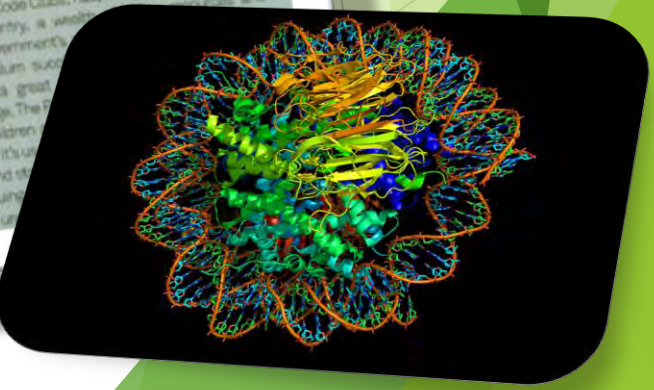
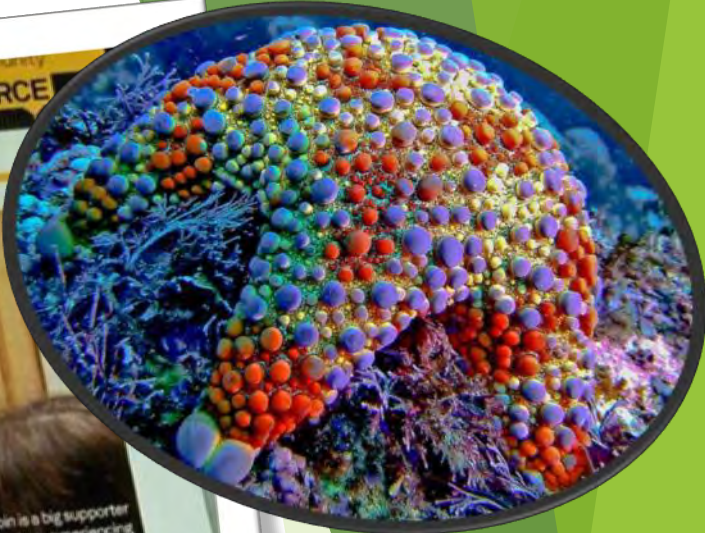
"You have to consider the environment in which teachers work: schools typically have computers around five years out of date based on Windows," says Philbin. "The network administrators, keep that tightly locked down. You can't ping someone, run an executable or compile code. It has been difficult to teach with that equipment."

And yet, although the new curriculum emphasises coding more than it has ever done before, programming isn't, Philbin asserts, entirely the reason behind the change. It is as much about demystifying coding, which is why the curriculum that is about to come into effect is flexible to a large extent, allowing for differing

Scratch, but we're looking to encourage teachers to be more creative and to put across the point that computing is fun," says Philbin.

Certainly, the new curriculum outlines what needs to be done at the various key stages. And while the government has said that it hopes to have bred a new generation of creators rather than consumers in a few years, just being able to open pupils' eyes to the possibilities is seen as progress. It is the reason why initiatives such as The Hour Of Code exist. So far it has given a crash course introduction to programming and has around 20 million participants in the USA. It has, to date, also had around 1.7 million people taking part in the UK.

With Code Clubs, Raspberry Jam, up and down the country, a week of the government's curriculum success have a great change. The Pi in children's lives is how it's used – and it's issuing a call to use it.



Gammify



3-Simplify

4- Keep it functional

- Coherence

- Cognitive participation

Sense making

Relationships



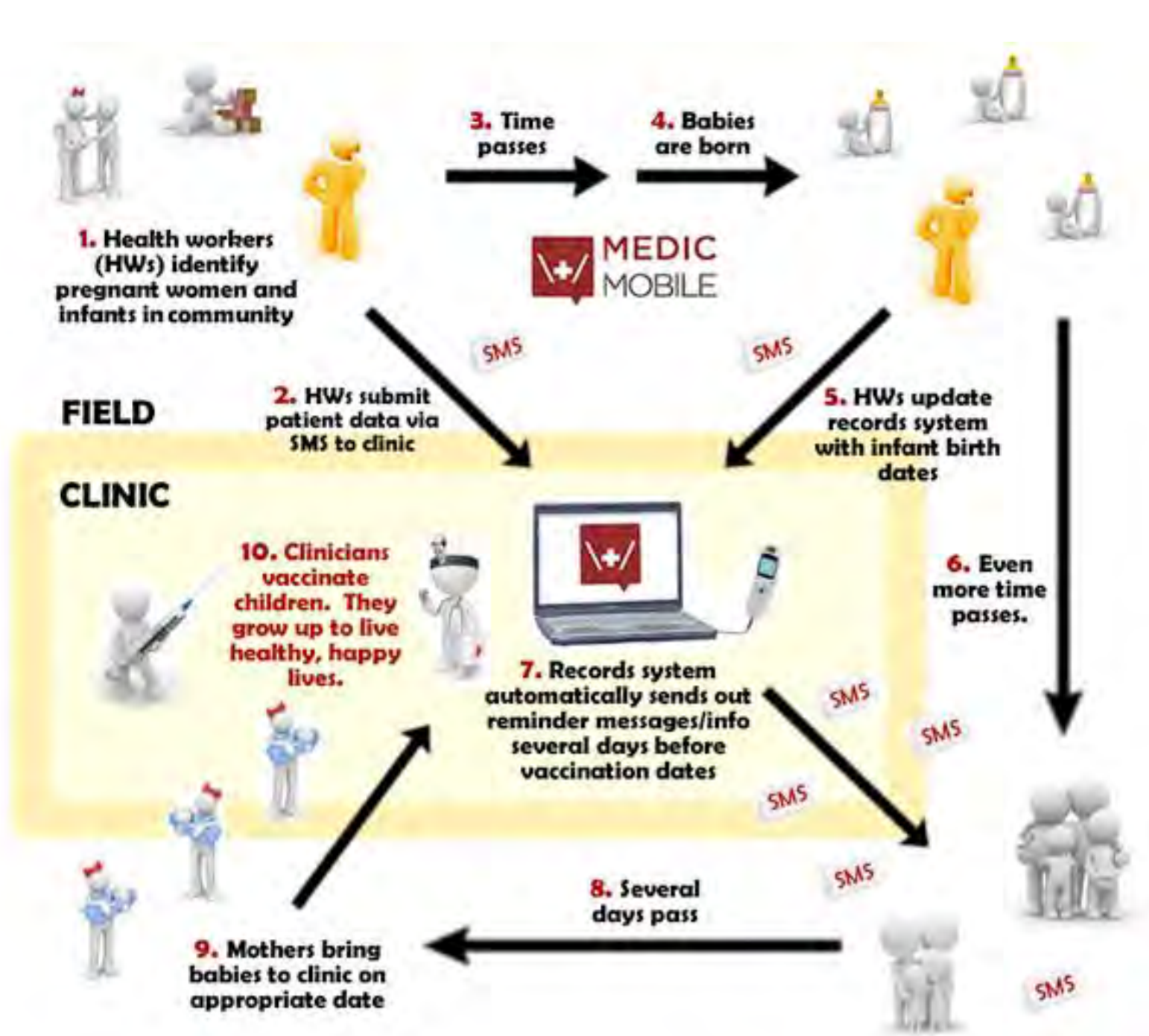
Enacting work

Appraisal work

- Collective action

- Reflexive monitoring

5-Organize



Africa,
Honduras
Nepal,
Colombia



OpenMRS ATLAS

Types Mapa Satélite



Legend

- Research
- Clinical
- Development
- Evaluation
- Other

Términos de uso

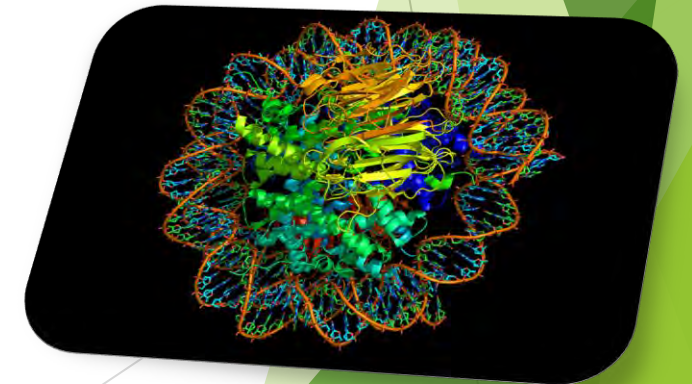
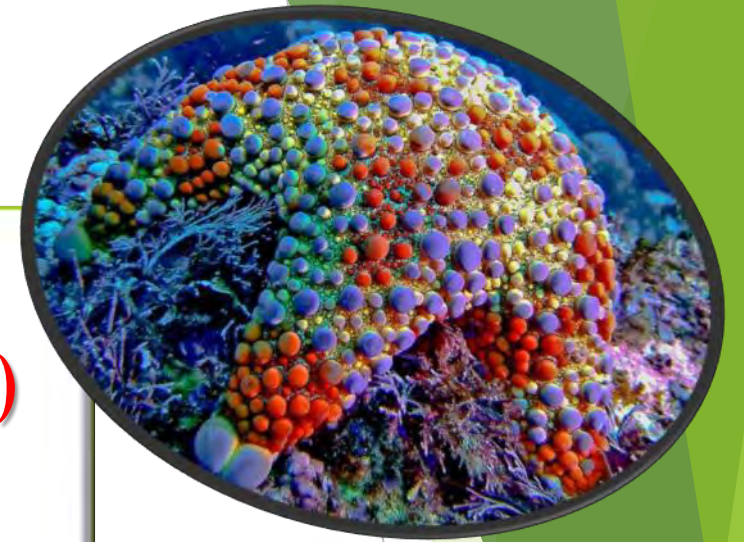


Mobile Phones for Better Health

Hope Phones lets individuals, organizations, and companies give their old phones a new life on the frontlines of global health. If we can recycle just 1% of disposed phones each year, we can outfit 1 million health workers, improving the lives of 50 million people.

HEALTH 4.0 - IoE

- ▶ 1.- DESIGN (Take your time)
- ▶ 2.- GAMMIFY (Do it for fun) (Use it with fun)
- ▶ 3.- SIMPLIFY (Hack, reuse)
- ▶ 4.- KEEP IT FUNCTIONALLY STUPID
- ▶ 5.- ORGANIZE SUPPORT



THANKS