

publicly initiated scientific research

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UCL_ExCiteS | @CwB_london

Level 4 'Extreme'

- Collaborative Science – problem definition, data collection and analysis

Level 3 'Participatory science'

- Participation in problem definition and data collection

Level 2 'Distributed Intelligence'

- Citizens as basic interpreters

Level 1 'Crowdsourcing'

- Citizens as sensors

types of engagement in citizen science

different
knowledges

local
knowledge

amateur
science

civic
science

crowd-
sourcing

citizen
science
(volunteers)

institutional
science

commercial
science

indigenous
knowledge

*(Lave, Indiana
University 2012)*

local
knowledge

civic
science

**publicly initiated
scientific research**

indigenous
knowledge



Publicly Initiated Scientific Research is...

Community oriented &
developed

Community owned

Tools can be adapted &
spread in an open source
fashion

*Civic Science according to the
**Public Laboratory for Open
Technology & Science***

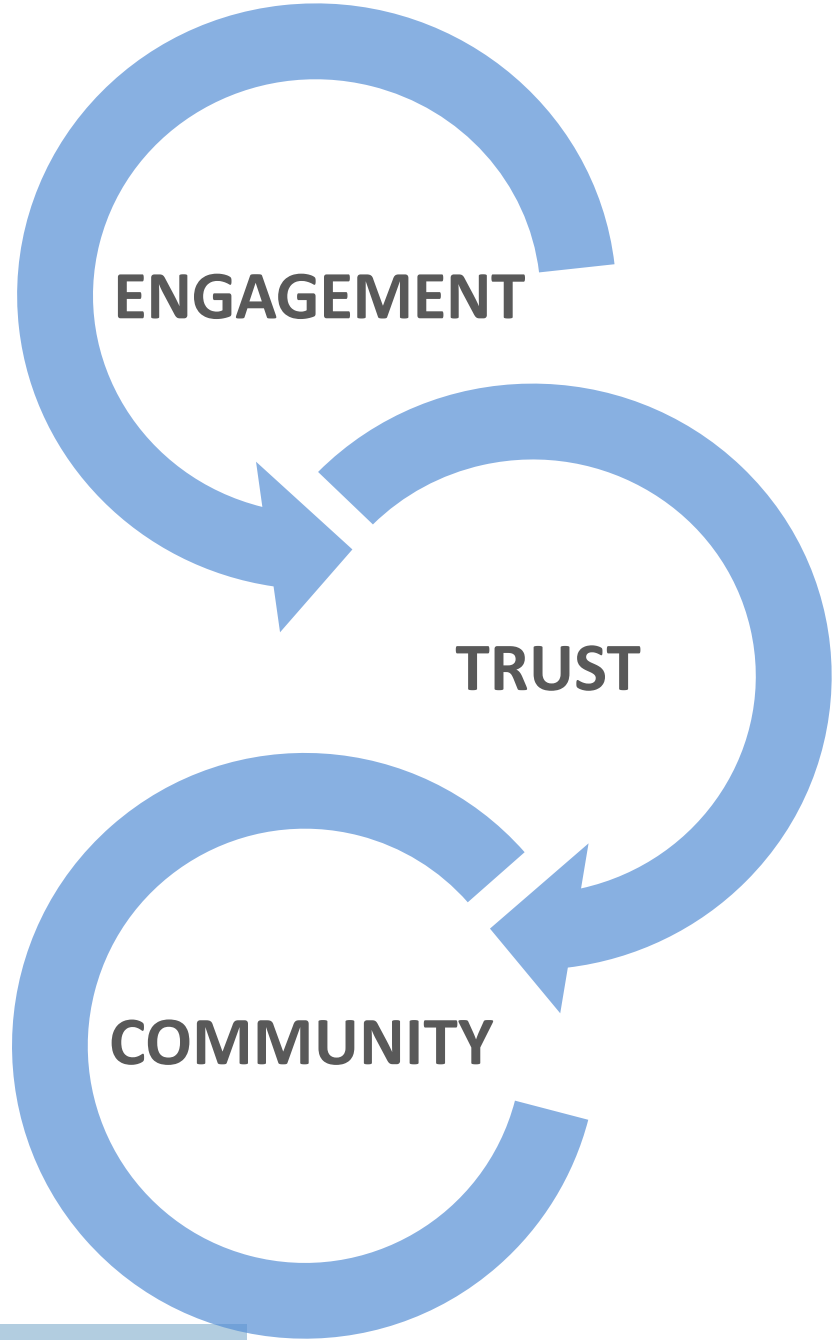


In Publicly Initiated Scientific Research...

Locals regarded as experts of their own environments

Supports public exploration & investigation of environments

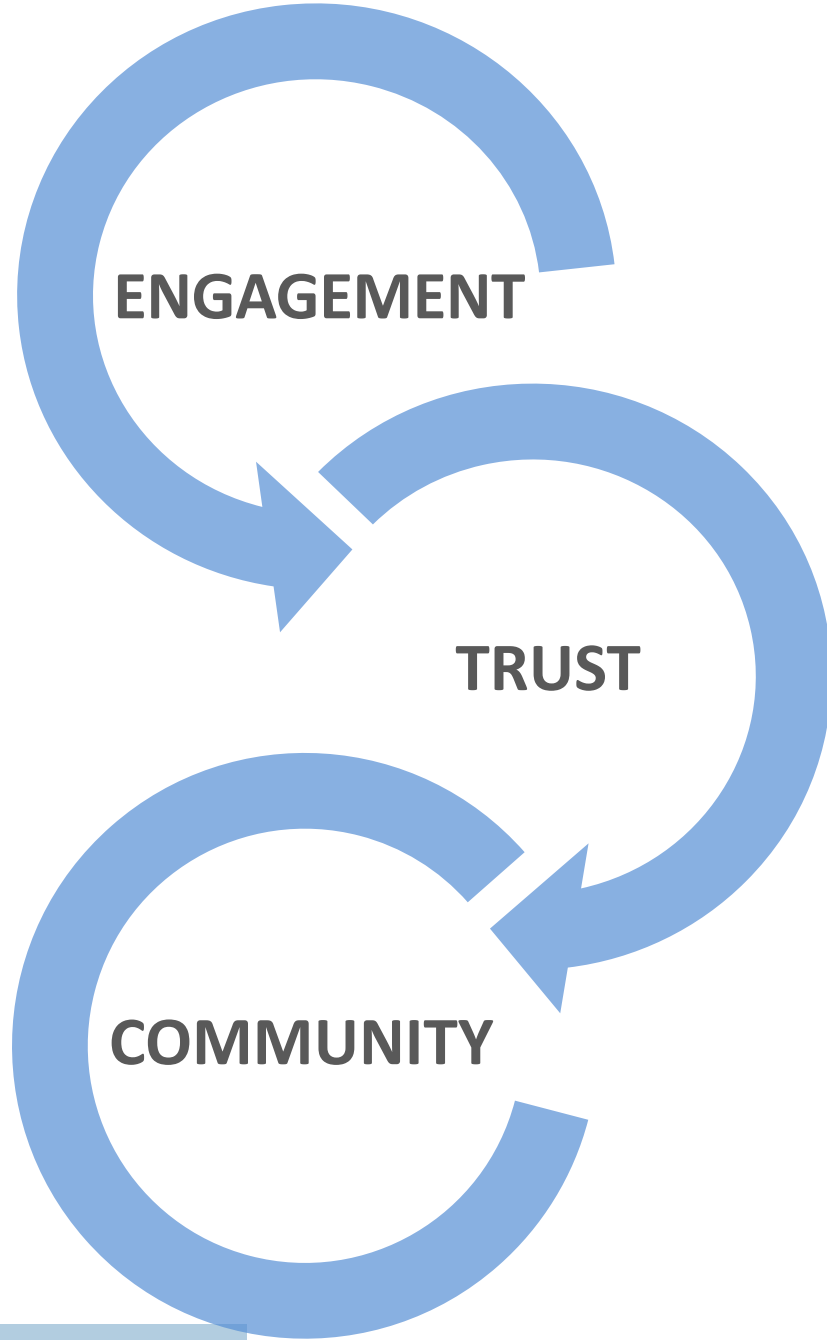
community noise mapping



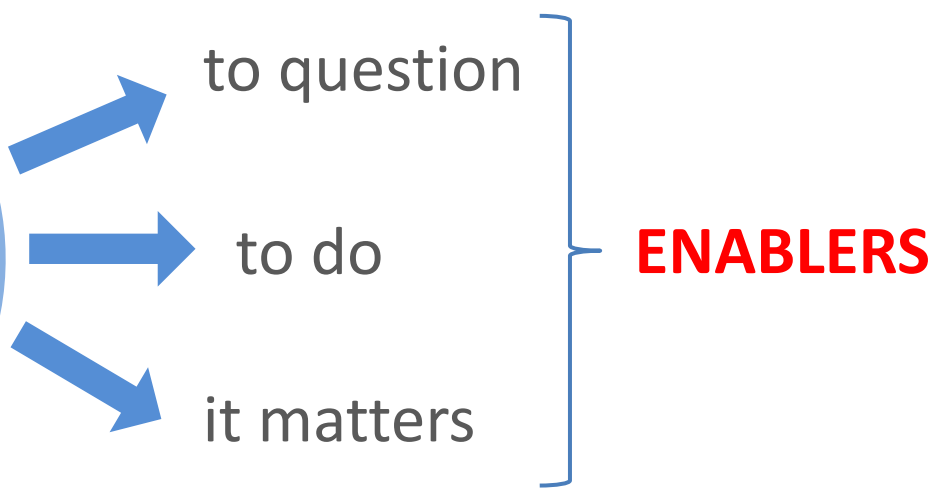
...let's focus on **FACILITATORS**

...let's focus on **ENABLERS**

...let's focus on **OUR ROLE**



...let's focus on **FACILITATORS**



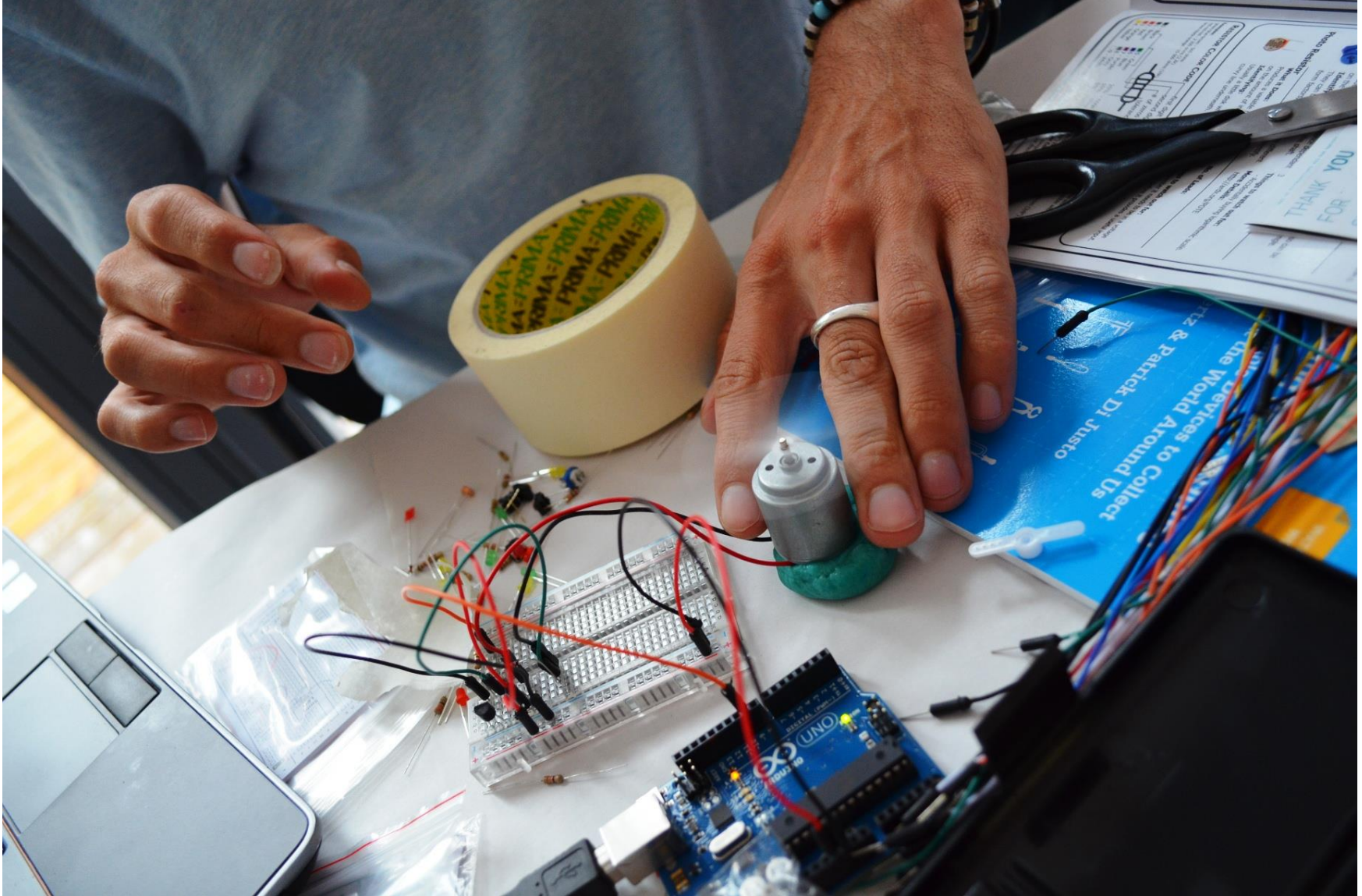
...let's focus on **OUR ROLE**



touch | play | learn



touch | play | learn



people take initiative

open-source
easy to use
programmable
micro-computer



Arduino

thank you!

ExCiteS research
group
@UCL_ExCiteS

Citizens without
Borders
@CwB_london

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Balloon Mapping

Helium-
filled
weather
balloon

camera

examples



focused community mapping

Participatory mapping is a tool for spatial data collection. It involves participatory methodologies aimed at supporting and promoting community engagement in decision-making

tackling climate change in Dorset

Preliminary process that lead to the creation of a community map online; community members assess issues of importance and device an action plan

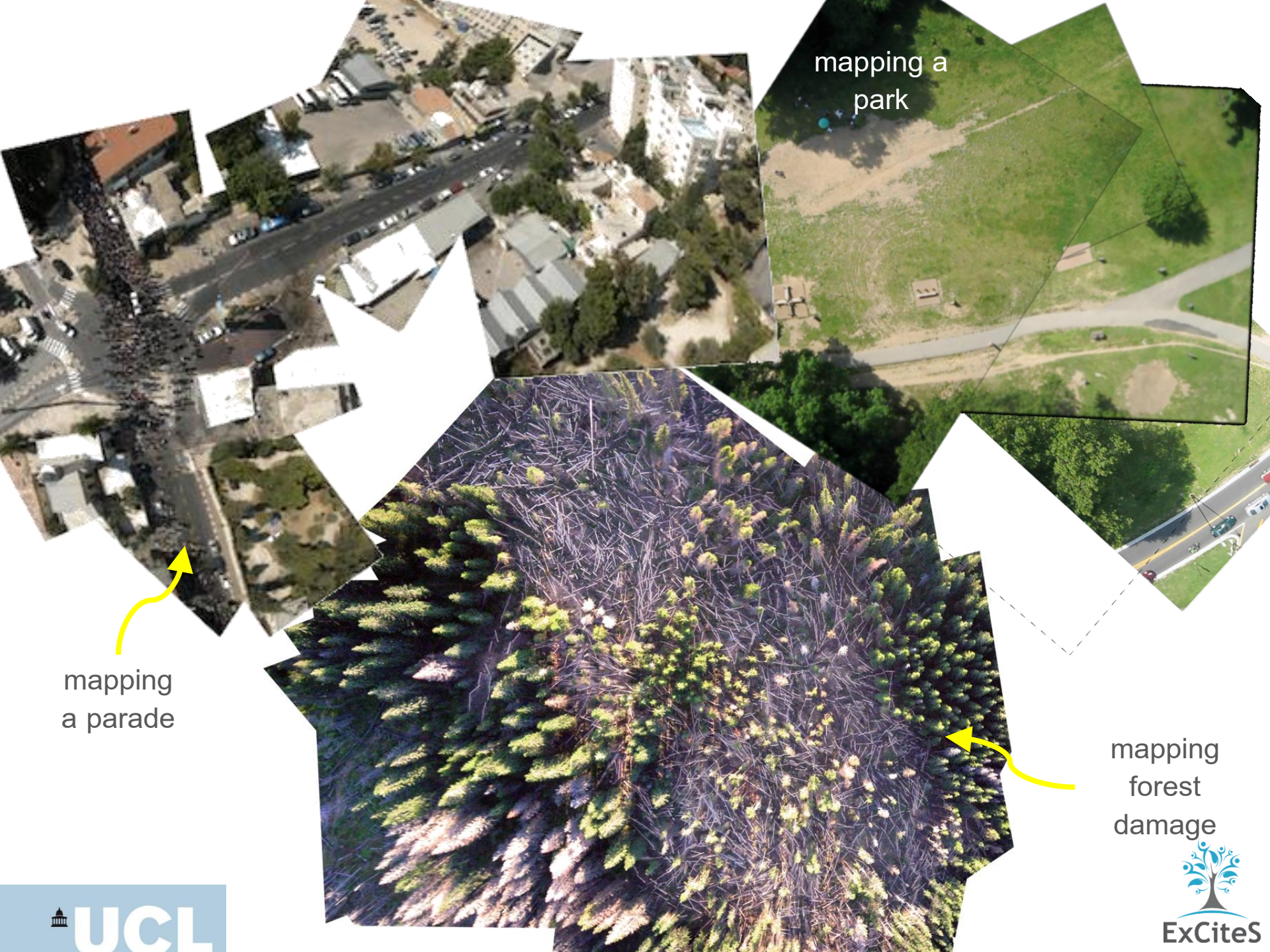


community mapping



kite mapping





mapping a park

mapping a parade

mapping forest damage

Ongoing discussions: [\(Join Public Lab\)](#)

- video (killed the radio)...
To join the growing barnstar-awarding movement<[link]>, i'd like to award a barnstar (Link: [more >](#))
- Re: [grassrootsmapping]... forwarding to publiclaboratory main list: On Tue, Feb 19, 2013 at 12:21 PM, Simcha Levental < Link: [more >](#)
- Public Lab community... This week in the Public Lab community newsletter, take a look at the new mobile spectrometer Link: [more >](#)
- New Public Lab website... Hello all - progress has been slower than we'd hoped on the user login system of the new Public Lab Link: [more >](#)

hide

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Cindy_ExCites

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 - Research note
 - Page
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- Invite a friend

Languages

- English
- Español

Links

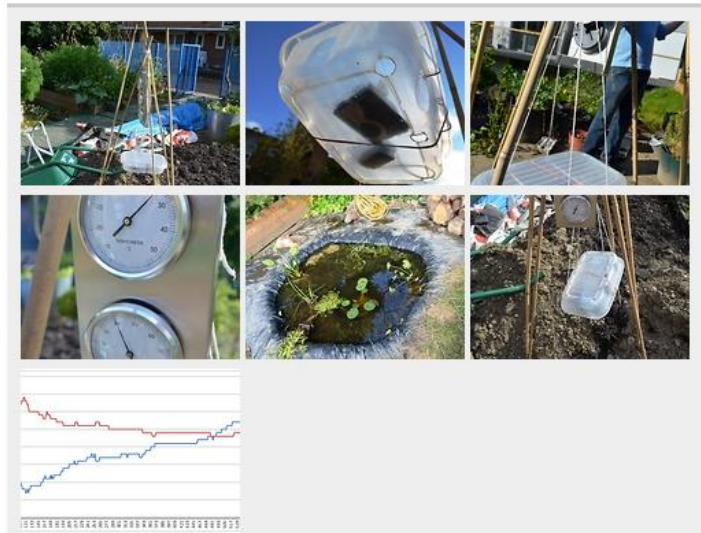
- Public Lab mailing list
- Grassroots Mapping

Home »

First reading from the humidity and temperature sensor @ the community garden

View What links here Edit

by [Cindy_ExCites](#) on August 3, 2012 - 22:11
 Mildmay Community Centre, learning from mistakes, humidity and temperature sensor, DIY, arduino.



Balloon Mapping Kit
\$95
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Desktop Spectrometry Kit
\$40
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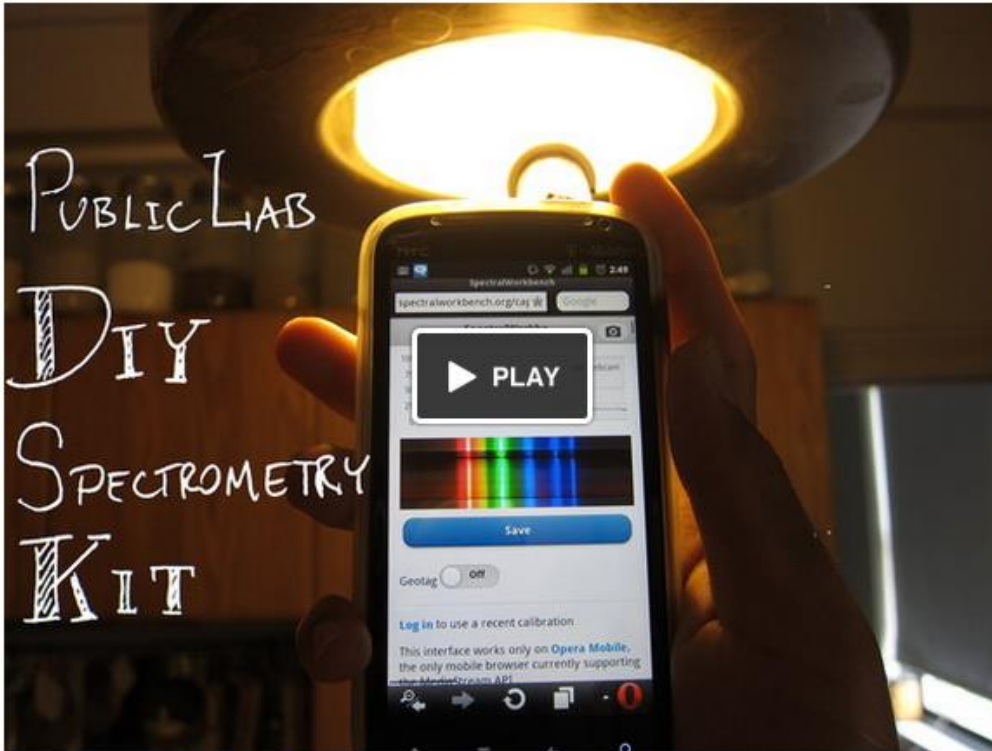
Related research


Public Lab DIY Spectrometry Kit

by [Jeffrey Yoo Warren](#) · You're a backer 

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 Somerville, MA  Hardware



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1,118

backers

\$71,291

pledged of \$10,000 goal

15

days to go

[Manage Your Pledge](#)

This project will be funded on Friday Oct 5, 11:59pm EDT. [How Kickstarter works.](#)

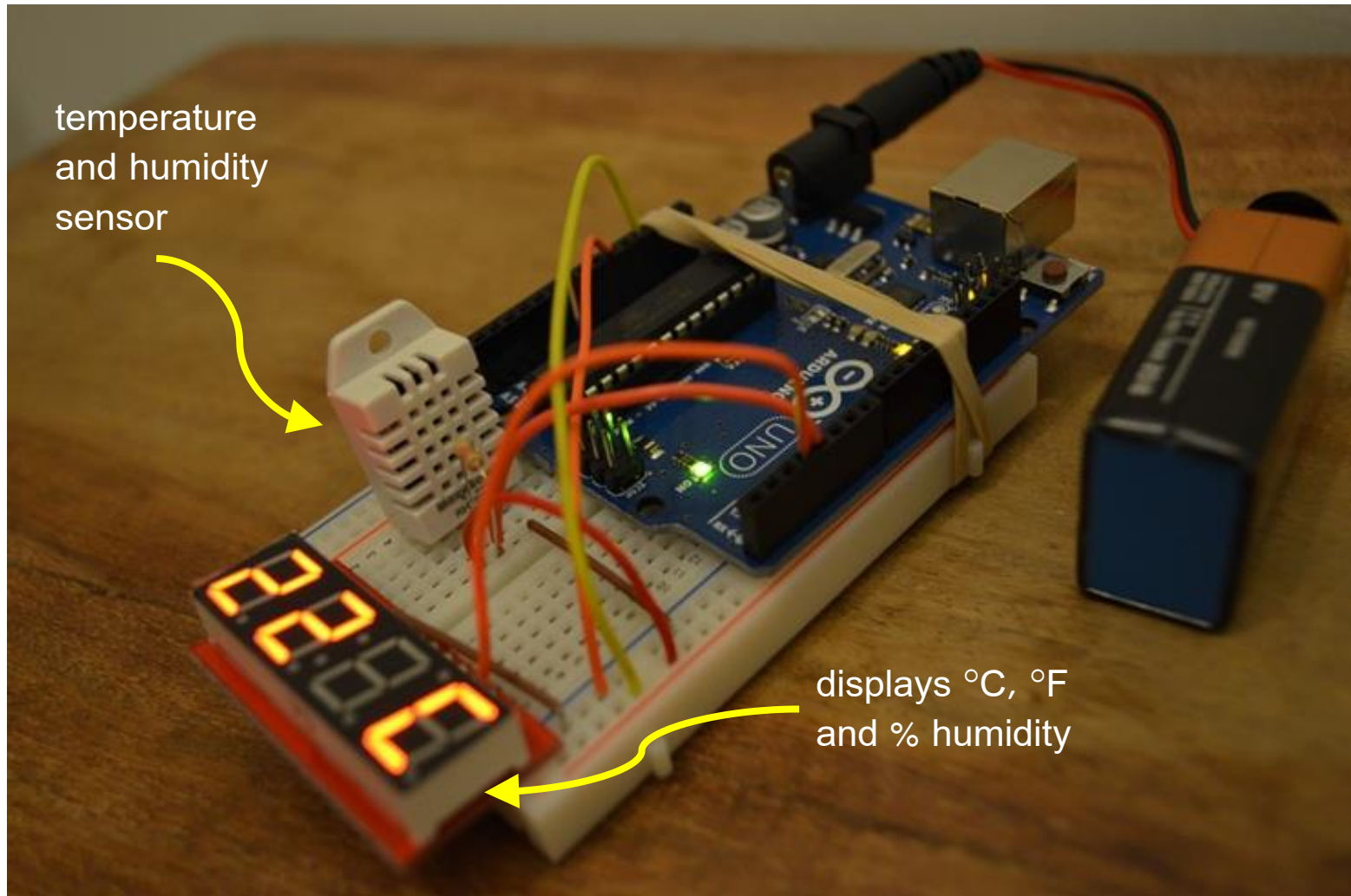


Project by
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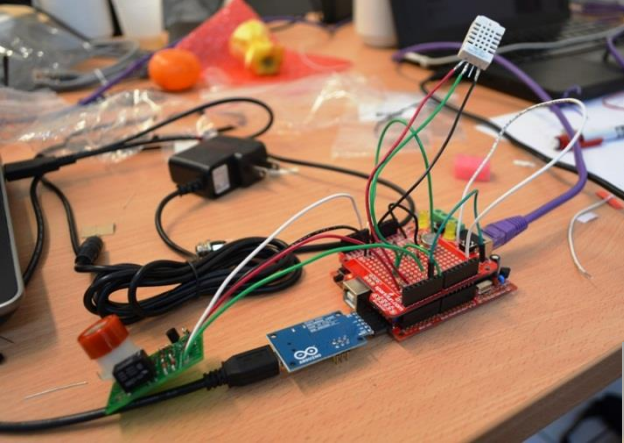
<http://www.kickstarter.com/projects/jywarren/public-lab-diy-spectrometry-kit>



temperature
and humidity
sensor

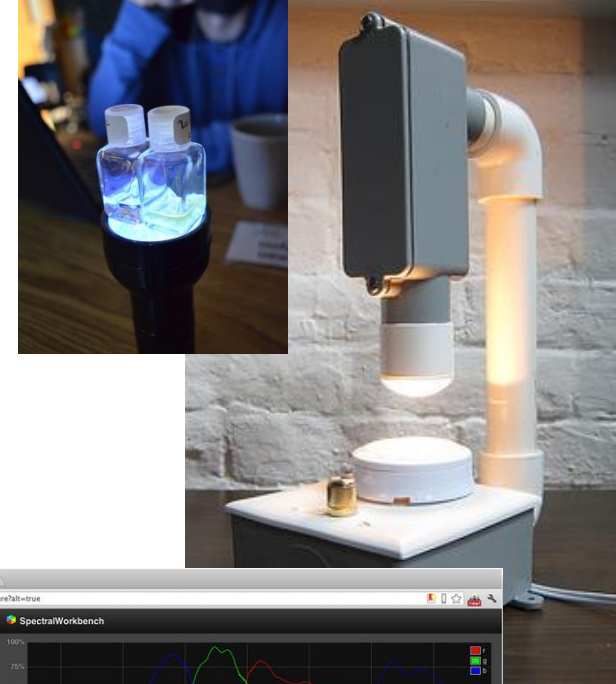
displays °C, °F
and % humidity

temperature & humidity sensor



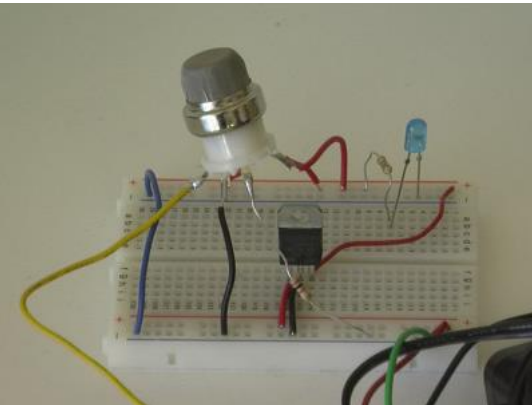
air quality egg

MQ-7 sensor for CO, DHT temperature & humidity sensor, NO2 sensor on Arduino ProtoShield connected via LAN



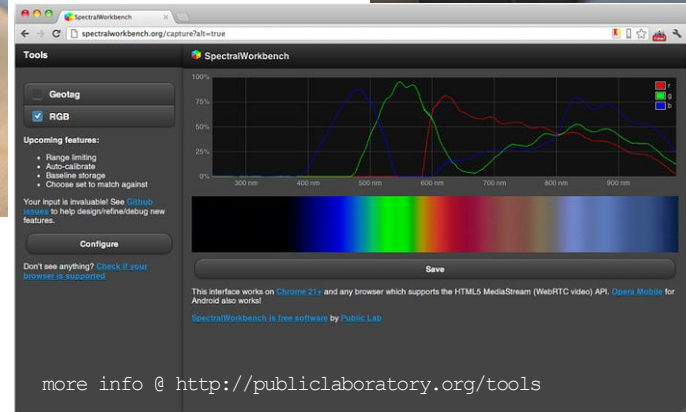
smartphones as mobile sensors

mobile applications for intelligent maps with geotagging or noise monitoring



indoor air quality sensor & imaging

MQ 135 air quality sensor to detect NH₃, NO_x, alcohol, benzene, smoke and CO₂



more info @ <http://publiclaboratory.org/tools>

spectrometer & spectral analysis

to identify & analyse unknown solid or liquid materials

other tools...

DIY manifesto

- DIY = empowerment & sense of ownership
- DIY = independence
- DIY = creativity
- DIY = understanding of things and taking charge
- DIY = the right to choose
- DIY transforms consumers into contributors
- DIY is saves you money!

...in Extreme Citizen Science

we commit to principles of participation and inclusion, openness and acknowledgement, collaboration and creativity

“...it is a kind of science that questions the state of things”

we encourage a science that reduces barriers, increases democratic participation, recognises the importance of each participant and allows all voices to be heard



Extreme Citizen Science is science by citizens, where anyone, regardless of their background, can take ownership over and investigate issues that are of concern to them to bring about meaningful change