Using Current and Emerging Technology in Citizen Science
- Tech Demo -

Rachel McIntosh-Kastrinsky
ASPPH Fellow
mcintosh-kastrinsky.rachel@epa.gov

Barbara Martinez
ORISE Fellow
martinez.barbara@epa.gov

Connecting Sensors and Citizen Science

Do you know of other sensors or tools that could also measure this?

What other sensors, tools or technology are you aware of that have been used for citizen science?

Are there sensors, tools or technology you know of that have not been used for citizen science, but you think could be utilized?

What is your "dream" sensor or technology for citizen science?

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Sensors

Cost

Media

Availability

Today's Sensors

Water Quality Meter

Sensordrone

Air Quality Monitor

Vaavud

Nitrate Kit

Air Quality Egg

Osorb

Today's Sensors

Water Quality Meter

Sensordrone

Air Quality Monitor

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Nitrate Kit

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What to look for?

Cost

Sensor Availability

Portability

Durability

Battery Life

Data Availability (Extraction and Display)

Precision, Accuracy and Bias

Calibration

Ease of Use

Response Time

Cost

Sensor	Cost
EPA Equipment	$70,000
Sensordrone	$198
Vaavud Wind Meter	$50
Nitrate Kit	$35

What to look for?

Cost

Sensor Availability

Portability

Durability

Battery Life

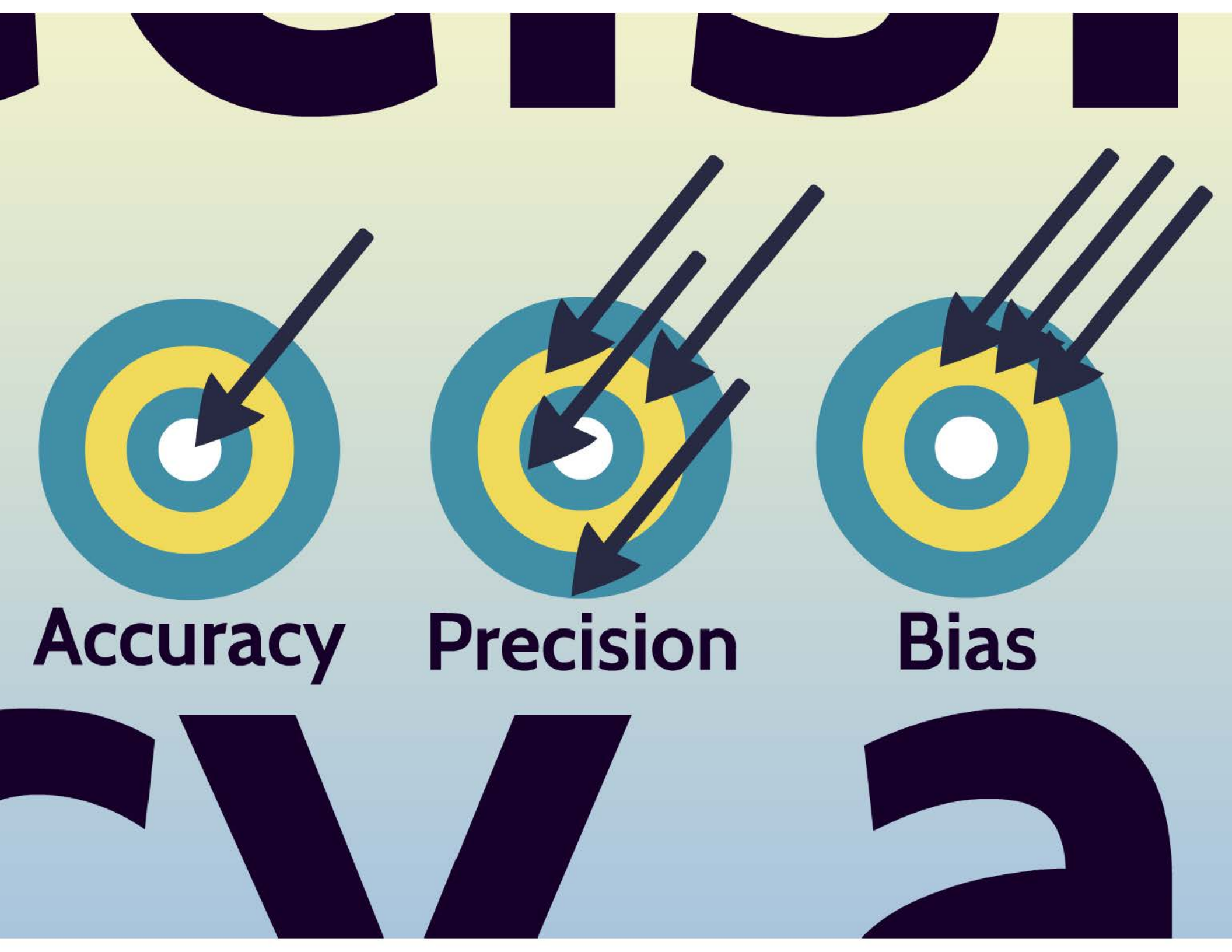
Data Availability (Extraction and Display)

Precision, Accuracy and Bias

Calibration

Ease of Use

Response Time


Accuracy
Precision
Bias

What to look for?

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Data Availability (Extraction and Display)

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Ease of Use

Response Time

Using Sensors

What does the sensor measure?

Why is that important?

How does the sensor measure?

What are the positives of the sensor?

What are the negatives of the sensor?

What to measure?

-What do you want to measure?

-Where and when do you want to measure?

-What does the sensor measure?

-How long do you want to measure and at what time frame?

-What things could influence your measurements?

-What do you think will happen?

-What do you want to do with this information? Education, community engagement, regulation or enforcement?

Air Sensors

Sensordrone

Positives

Portable Many parameters
Durable Data Availability
Ease of Use

Negatives

Battery Life
Need Device

Air Quality Monitor

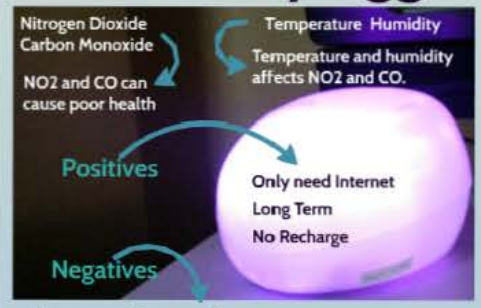
Positives

Portable Data Availability
Durable Ease of Use

Negatives

Battery Life
Need Device

Air Quality Egg



Accuracy Response Time
Portability Data Availability Need Direct Connection

Vaavud

Positives

Ease of Use Portability
No Battery History Price

Negatives

Need Device Only Wind Speed
Data Availability

Sensordrone

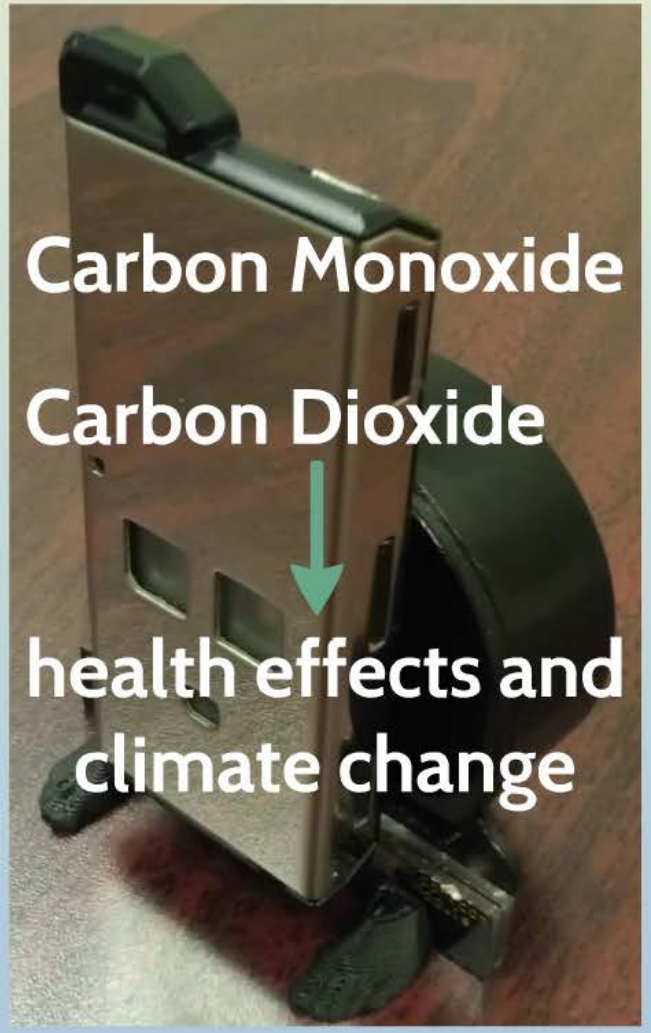
Positives

- Portable
- Many parameters
- Durable
- Data Availability
- Ease of Use

Negatives

- Battery Life
- Need Device

Air Quality Monitor



Positives

Portable

Durable

Data Availability

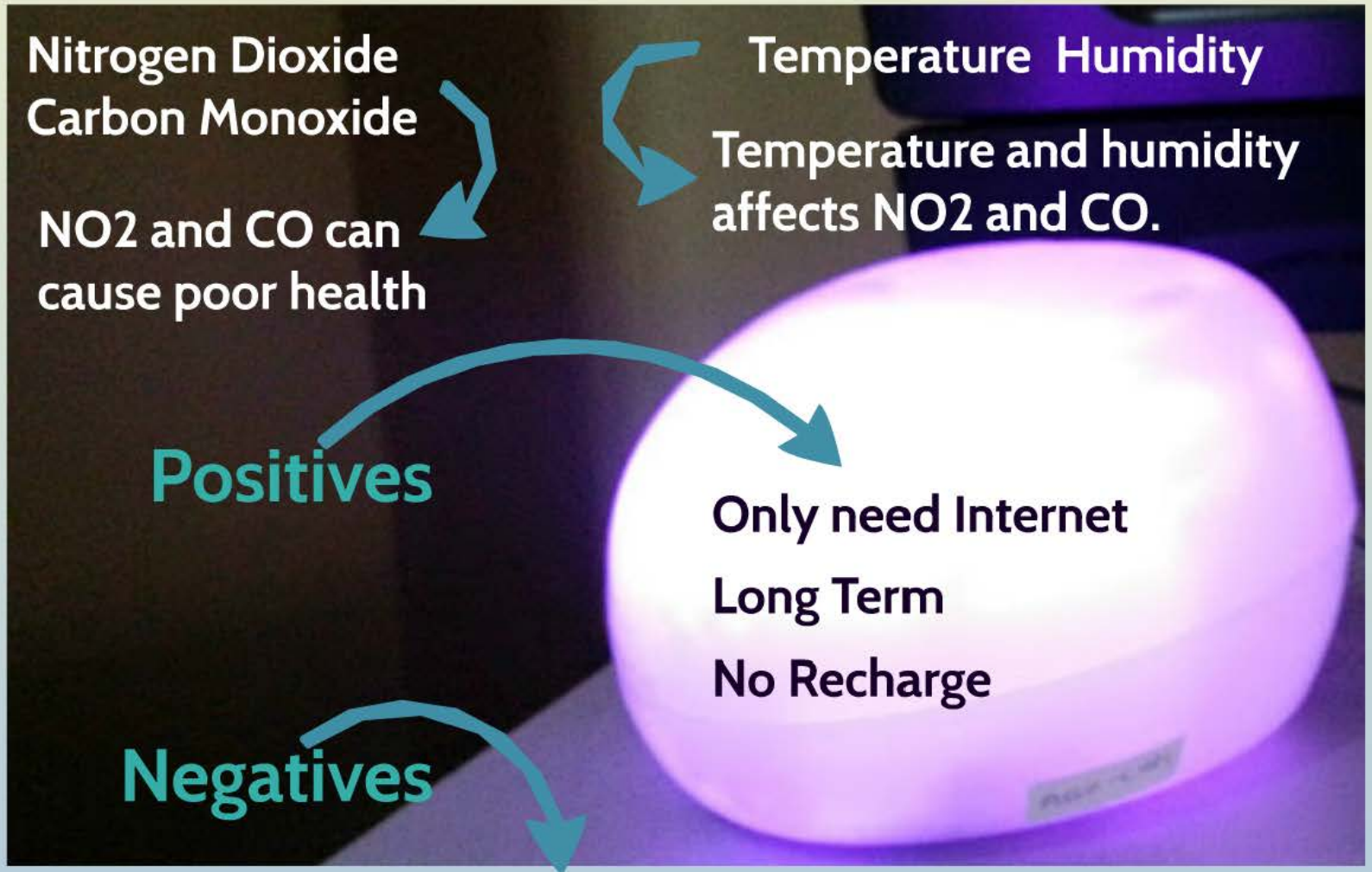
Ease of Use

Negatives

Battery Life

Need Device

Air Quality Egg



Accuracy
Response Time
Portability
Data Availability
Need Direct Connection

Vaavud

Positives

Ease of Use

Portability

No Battery

History

Price

Negatives

Need Device

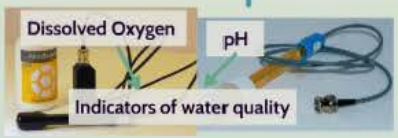
Only Wind Speed

Data Availability

Water Sensors

Water Quality Meter

Positives		Negatives
Portable	Parameters	Battery Life
Durable	Data Availability	Need Device
Ease of Use		Extra attachments



Nitrate Kit

Positives

Price

All included

Negatives

Limited Quantity

Many Steps

Single Measurement

Osorb

Positives		Negatives
Easy to use	Durable	Response Time
Portable		Data Availability

Water Quality Meter

Positives		Negatives
Portable	Parameters	Battery Life
Durable	Data Availability	Need Device
Ease of Use		Extra attachments

Indicators of water quality

Nitrate Kit

Positives

Price

All included

Negatives

Limited Quantity

Many Steps

Single Measurement

Osorb

Positives		Negatives
Easy to use	Durable	Response Time
Portable		Data Availability

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