

# Changing the conversation about science through citizen communicators

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Initiatives to help citizen science projects communicate about their results are paving the way for ordinary people to take the lead as effective and trustworthy science communicators.

While citizen science is blossoming, partly as a result of [social media](#), so too are the channels we use to communicate. In response, we sometimes create a filter bubble around ourselves, tending to gravitate towards communications that reinforce our own view of the world while blocking out others.

## Selective listening

The tendency towards selective listening prevents consensus-forming on the big issues of our time. At its worst, [misinformation, fake news and bias](#) infiltrate the discussions and undermine trust.

Dr. Jason Pridmore, Associate professor at the Erasmus School of History, Culture and Communication, is coordinating the [TRESKA](#) project that looks at how to develop trust in science through improved communication about scientific discoveries.

While his team did encounter a growing distrust in established institutions and media, the news is not all bad.

"We tend to trust our friends and family, their political viewpoints or their perspectives on science, before we actually go to the next step of looking at science communicators," said Dr. Pridmore.

At the same time, his team also found that we have a surprisingly high willingness to fact check a piece of information.

"People don't just willingly listen to everything. They have become a bit more cautious," he said. "I think the COVID-19 pandemic has made us question the information we receive, and people are willing to fact check and see things for themselves."

## Quality counts

The TRESKA project partnered with [Kurzgesagt—In a Nutshell, an animation studio](#) and YouTube channel with over 18 million subscribers.

Using stylized animations, the German-based Kurzgesagt channel specializes in explaining complex scientific topics in an easily understandable way. The channel's videos have had nearly 2 billion views.

On the subject of challenges faced by experts and science communicators, Kurzgesagt created a highly successful [video about science communication](#) with more than 9 million views at time of writing.

"One of our most interesting findings was that the degree of production actually correlates in our research with the trust that we have," said Dr. Pridmore. Kurzgesagt's world-class animations and production values have a direct effect on how much trust people place in them.

Rosa Arias is CEO & founder of [scienceforchange.eu](#) and coordinator of the [NEWSERA](#) project, which aims to boost the potential of citizen science as a tool to communicate about science. She agrees that prioritizing high quality and tailored communication material is key, in particular for citizen science projects.

"As citizen science practitioners, you need to know how to communicate effectively with the citizens if you want to engage them, with policy makers if you want to have impact on policy, with industry if you want to get them on board, and with fellow scientists to share and validate data," Arias said. "This means you need to adapt your messages, your channels, your strategies all the time."

## **All subjects apply**

There are 38 citizen science initiatives taking part in the NEWSERA project, based in Spain, Italy and Portugal. The multitude of topics they address demonstrates that a citizen science approach can be applied to a surprisingly wide range of societal challenges and scientific fields, including social sciences and humanities.

RiuNet, for example, is a citizen science app that guides citizens in diagnosing the ecological status of a river. This data can contribute to better management and conservation of freshwater.

Genigma involves citizens in the construction of genomic reference maps that will help researchers understand which parts of the human genome play a role in the development of cancer.

The Cities at Night project invites people to explore a catalog of nocturnal images of cities and help classify them. This can have implications in the field of human health, light pollution and ecology.

"The projects generate a lot of data that is not immediately accessible for citizens. But the data is relevant for society because they address matters of concern for citizens," said Arias.

NEWSERA helps projects come up with tailored communication plans with indicators to measure the effectiveness and impact of the communication activities towards specific target audiences.

This support helps projects understand how to present and communicate their findings in a way that makes it more digestible to the public, scientists, policymakers and industry.

## Tapping into the personal dimension

With an engineering background, Arias is an expert in odor pollution from industrial sources. She developed an app, OdourCollect, that gives people the ability to record their perception of odors, wherever they are, so it can be monitored and acted on.

"With a subject like odor pollution, citizens get engaged because they are concerned about the kind of pollution they are exposed to in their daily life and they want to do something about it," Arias said. "And by using an app like OdourCollect, citizens become science communicators themselves."

Active participants use communication differently than scientists, journalists or policymakers would, with messages that are targeted to fellow citizens.

"They also use different channels," said Arias. "For example, they talk with each other in their neighborhood on a daily basis."

The personal dimension citizen science brings to [science communication](#) is also highlighted by Silke Voigt-Heucke. She is responsible for citizen science research at Berlin's Museum für Naturkunde.

"For trust, you need to build personal relationships, and that's why local citizen science initiatives are so important," said Voigt-Heucke. "They can help people meet around one activity that might be decoupled from all the other things that divide them."

## Science is open

"Citizen science projects can show how science is open for suggestions

and ideas and co creation," she said.

She coordinates the development of the [EU-Citizen.Science](#) project, a platform to connect all existing citizen science projects in Europe.

"The idea was that the platform would be a network of networks," said Voigt-Heucke. In the past decade, citizen science has become established all across Europe. Projects have achieved important funding and many national platforms have been established.

"What was lacking was one platform that could connect them all," she said.

NEWSERA will use the EU-Citizen.Science platform as an open access repository for the communication blueprints they will produce. The blueprints are detailed guidelines about how to communicate about citizen science results and benefits that practitioners and curious citizens can consult.

"This helps [citizen science](#) practitioners feel they are not alone anymore," said Arias.

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