
Citizen Science in Museums

New Approaches to Science Learning and Communication

Joseph Hernandez and Sarah Smail
Adler Planetarium
ASTC 2019

What is Zooniverse?

People-powered research

Processing large datasets through crowdsourcing



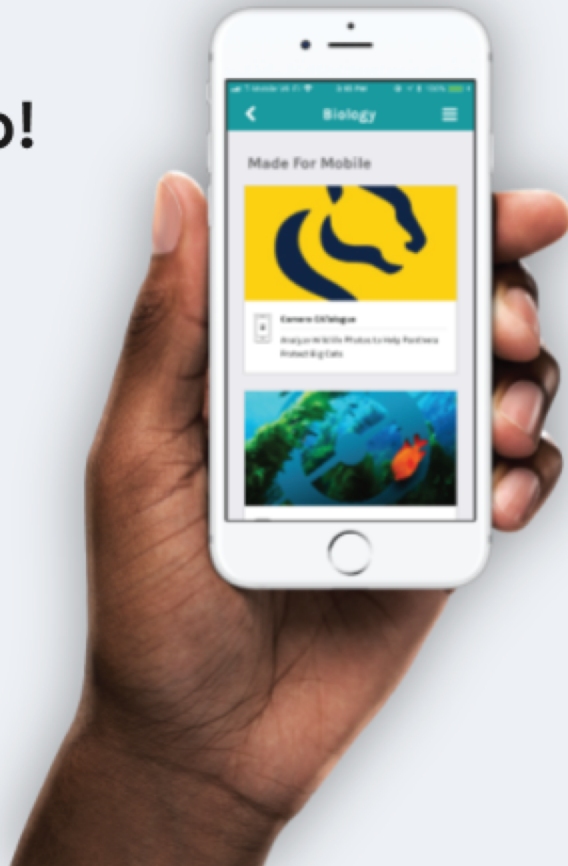
SINCE 2007

1.7 million people around the world

150+ projects across the disciplines

We also have an app!

Search **Zooniverse** in the
iOS and Android app stores



Online, Zooniverse continues
to gain popularity year after year



Reaching a new audience

Zooniverse in museums



Two approaches

Introducing Zooniverse
to Adler Planetarium guests

1. A bespoke multi-person **touch table** interactive exhibit
2. Adapting the existing Zooniverse **iPad app**

Do real science!

Learn about galaxies while contributing to research

You can help us!

There are hundreds of billions of galaxies scattered throughout our Universe, each with its own story to tell. How do we get to know them? Astronomers take pictures of them for high-resolution observations like the Dark Energy Camera Legacy Survey (DECaLS) in Chile.

It takes a lot of time to make a single day - for you may get one small beam to make "The Science"...

IMPROVED RESEARCH

How process works

Your computer program will help us to see the galaxies in the images and tell us what they are.

Our computer program will help us to see the galaxies in the images and tell us what they are.

Our computer program will help us to see the galaxies in the images and tell us what they are.

People just like you

People just like you

People just like you

What's in the picture?

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START

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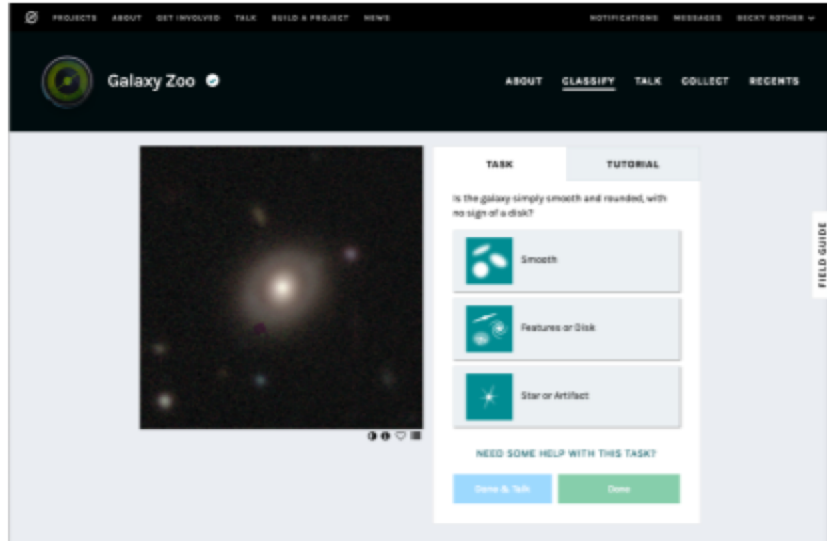
START

EXIT

EXIT



A social, interactive museum experience that encourages guests to contribute to science through Zooniverse



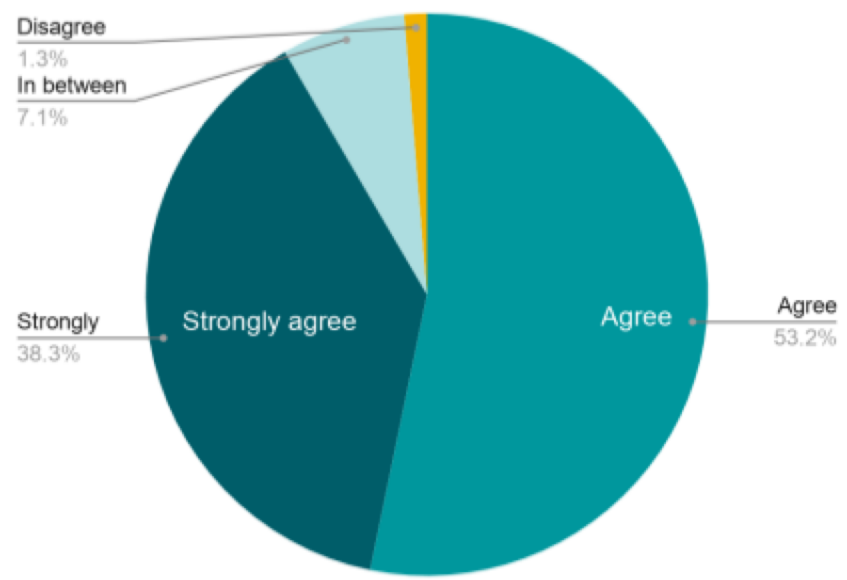
galaxyzoo.org



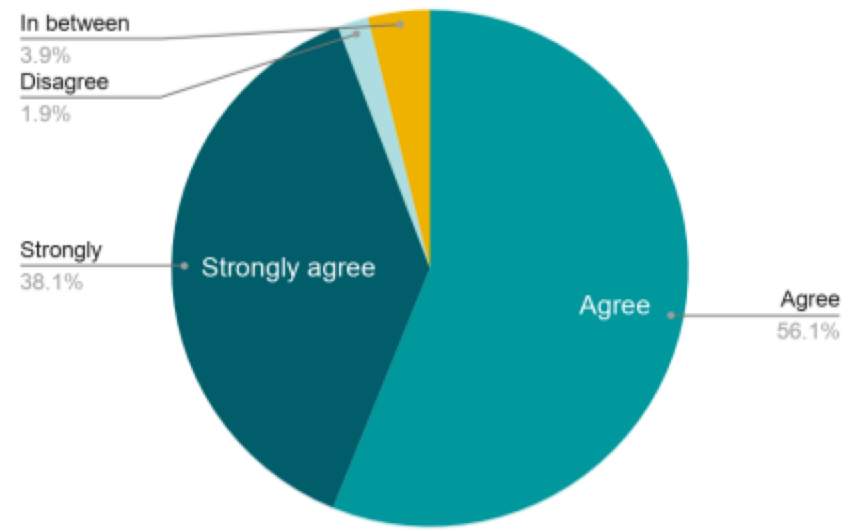
U!Scientist

PRELIMINARY EVALUATION RESULTS

I thought the exhibit was fun



In my next visit to the Adler, I would try the exhibit again



PRELIMINARY EVALUATION RESULTS

Huge numbers!

- **1000 galaxies** classified each day by Adler guests
- Typical dwell time **about 2 minutes**
- Numerous dwell times between 5-7 minutes and a few at more than **20 minutes**

URANUS



Key takeaways

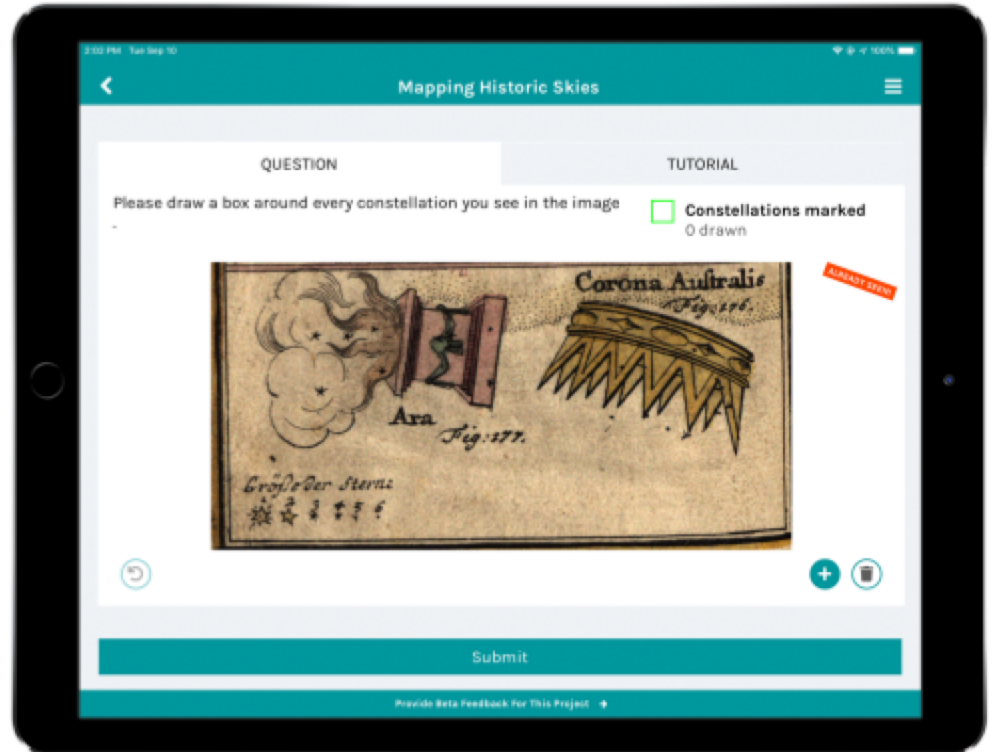
- Strategically narrow and agree upon project goals before starting design and development
- Keep it simple
- Test, iterate, test again

Mapping Historic Skies

Adapting the existing Zooniverse iPad app for installation in a new exhibit

Current app + museum mode

A work in progress



MAPPING HISTORIC SKIES

We all look up at the same sky
no matter when or where we live on Earth.
You can help us discover the diverse representation
of constellations across cultures and times.

What You Can Do

The Adler has a collection of more than
4,000 constellation drawings. With your help,
we will be able to understand more about the way
people around the world have connected
with the night sky across many centuries.

How Does it Work?

You can help identify and archive images and text
about the sky. The researchers use your input to
improve their maps.

Instructions

- Take a picture of a constellation drawing or text.
- Upload a drawing to the Adler's online database.
- Upload a drawing to the Adler's online database.

Do more science!

• Use your phone or tablet to take a picture of a drawing or text about the sky.

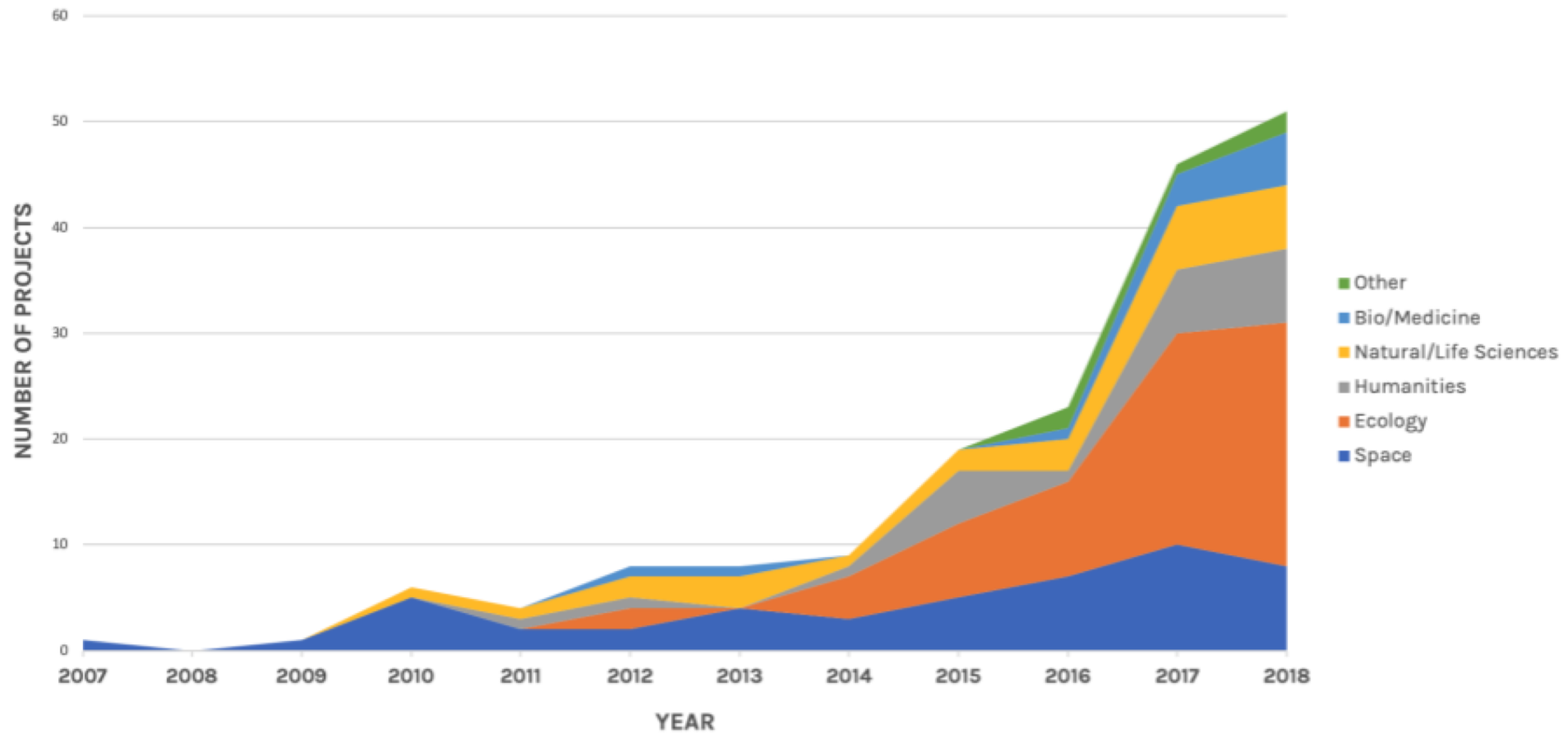
iPad

iPad



Key takeaways

- Work together across departments
 - Build in structure and agree upon roles and responsibilities before getting started
 - Write everything down so there's a record to refer back to
- Build with an eye towards the future – how can this work be reused?



Thank you!


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