

# Blockchain and the Future of Democracy

Saiph Savage



HCI Lab, WVU



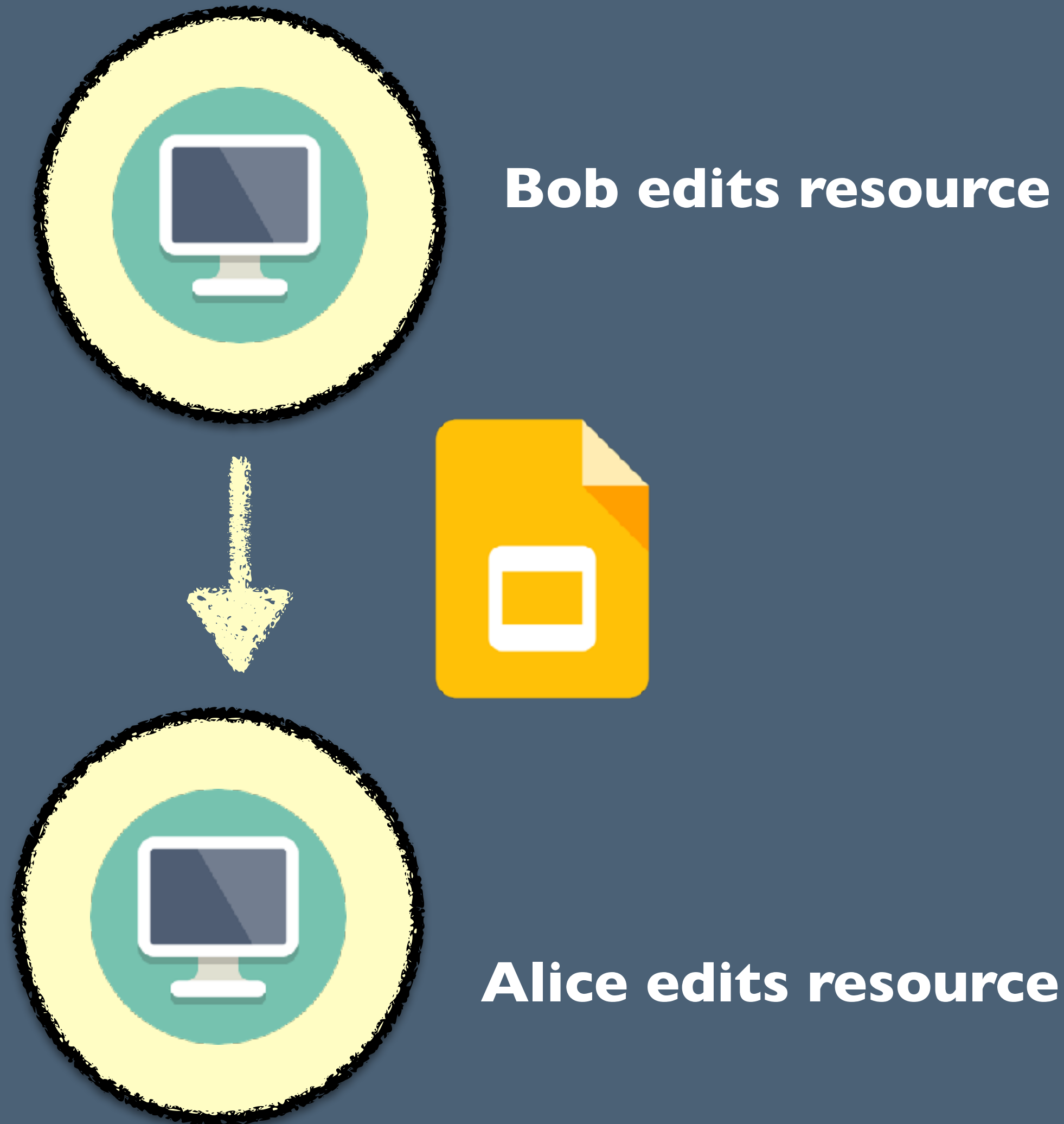
Universidad Nacional Autónoma de México

# Saiph Savage

- Computer Science Assistant Professor at West Virginia University, Research Collaborator UNAM,
- Collaborating with Mexico's Presidency on Blockchain Research
- Director Human Computer Interaction Lab.
- Research areas:
  - Crowdsourcing, Social Computing, Data Visualization, machine learning
- Press Coverage: BBC, MIT Tech Review, New Scientist, Vice News, Huffington Post.
- Over 50 Scientific Publications



# Traditional Media Sharing Workload



- Bob edits the resource and shares with Alice.
- Alice edits the resource (locking Bob)
- Two people cannot use same resource (record) at the same time.

# Blockchain Sharing Workload



- Everyone has access to the same resource at the same time (data integrity), and the single version of that resource is always visible to everyone.

**Blockchain is to bitcoin,  
what the  
Internet is to email**

# Ways Blockchain Enables Governments and Citizens

- Eliminates background check
- Fully automated legal agreements
- Supply Chain Verification (transparent and accountable shipping and logistics.)

# How is Mexico using Blockchain?

My research studies systems for enabling **trustful collaborations between citizens and governments**

# How is Mexico using Blockchain?

My research investigates intelligent systems **for better work**

# Platforms for better Citizen-Government Collaborations



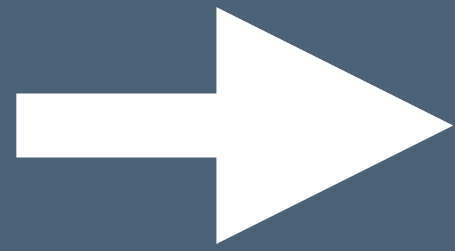
# Ways Blockchain Enables Governments and Citizens

- Fully automated legal agreements
- Transparent and accountable shipping and logistics.

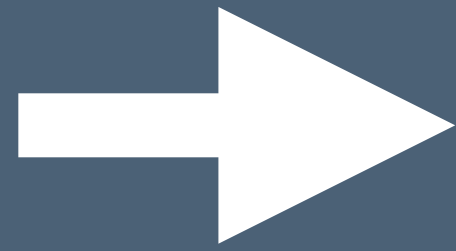
# Collaborations between Migrants and Governments



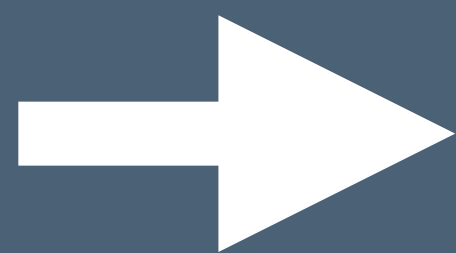
GOVERNMENT



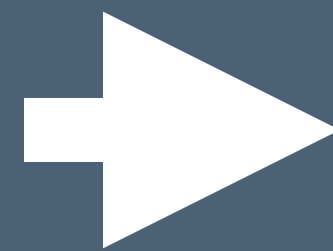
NGO



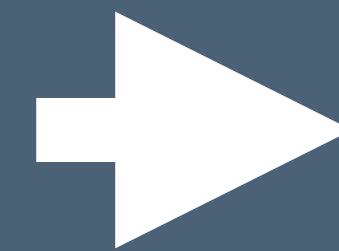
Migrant



Smart Contract



• Agreement between citizens, governments



Verified



Transparent

- Designing and building with Mexican rural villagers efficient stoves that cover people's needs.

Participatory Stoves: Designing Renewable Energy Technologies for the Rural Sector ,CSCW 2015



# Takeaways:

Our Blockchain based systems facilitate collaborations between governments and citizens by providing transparency, reducing corruption, and enabling trust protocols.

# Intelligent Systems for Better Work



# Ways Blockchain Enables Governments and Citizens

- Supply Chain Verification
- Connects people directly via a peer to peer
- Instant value transfer



John Doe  
johndoe@gmail.com

# Smart Trainings



Content



Learning Itinerary



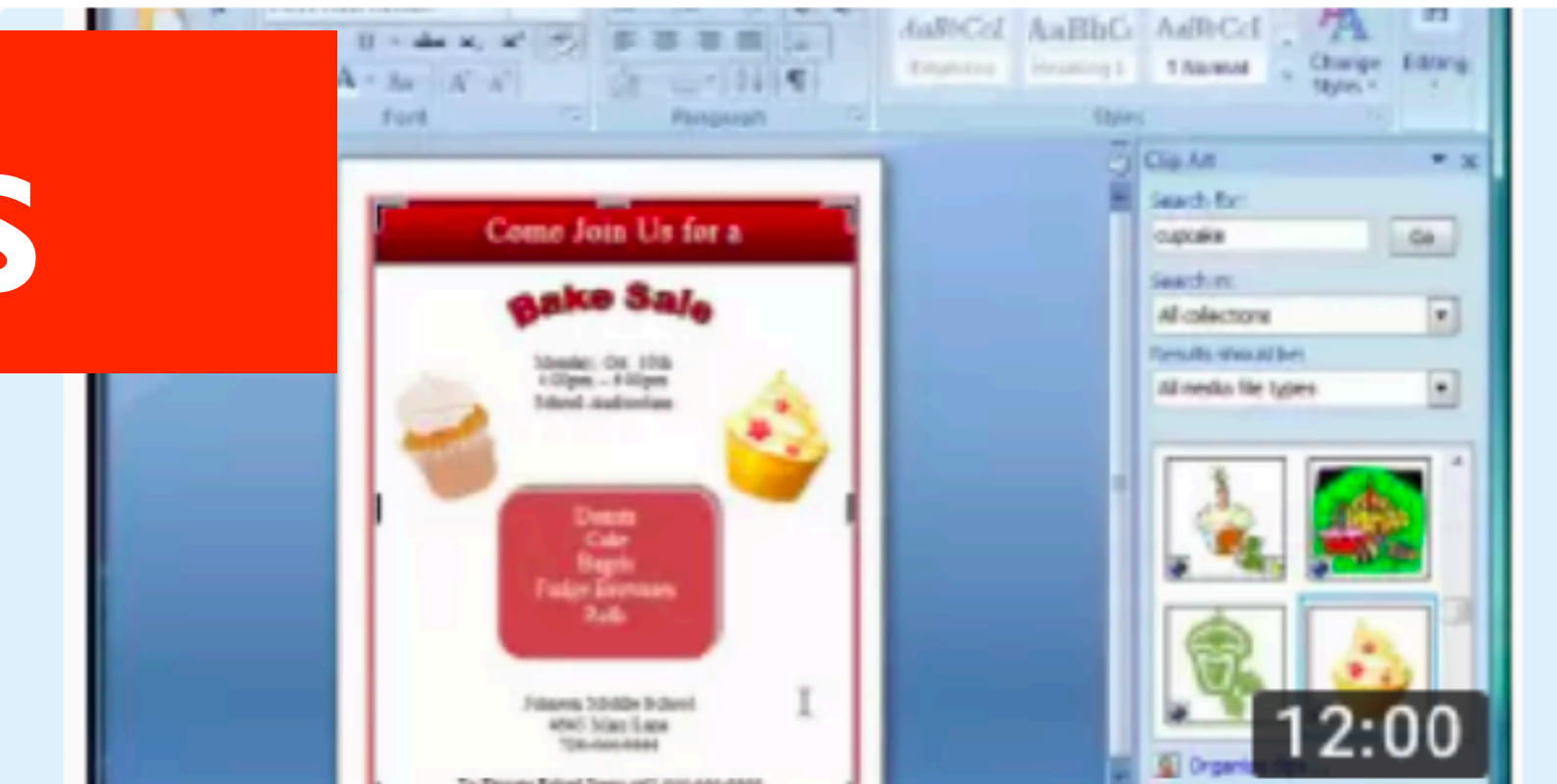
Experiences



Places

## Posters for fundraising

Useful resources for creative effective fundraising fosters for NGOs



How to create a poster ...



## Nonprofit Tech for Good

EXPLORE SOCIAL MEDIA FACEBOOK TWITTER INSTAGRAM LINKEDIN FUNDR...

SOCIAL MEDIA, FACEBOOK, MOBILE MEDIA, FUNDRAISING

### Five Online Fundraising Best Practices for Small NGOs in Developing Countries

September 10, 2013

f 313 t 249 in 71 G+ 20 F 653 SHARES

Five online fundrasing b...



The fundraising history ...



#14 – Develop a planned giving/estate/endowment program.



10:46

Fundraising ideas for n...





# Smart Trainings

## Posters for fundraising

Resources for creative effective fundraising fosters for NGOs

Details



Content



Learning Itinerary



Experiences



Places

#14 – Develop a planned giving/estate/endowment program.

10:46

Fundraising ideas for n...

How to create a poster ...

CROWDFUNDING FOR NONPROFITS

HOICES

Fundly, FundRazr.com, gofundme.com

The fundraising histor...

**Nonprofit Tech for Good**

EXPLORE SOCIAL MEDIA FACEBOOK TWITTER INSTAGRAM LINKEDIN FUNDR...

SOCIAL MEDIA, FACEBOOK, MOBILE MEDIA, FUNDRAISING

**Five Online Fundraising Best Practices for Small NGOs in Developing Countries**

September 16, 2013

f 313 t 249 in 71 G 20 P 653

Five online fundraisng b...

How to print a poster ...

Can we  
integrate  
experts to help  
learners?

# Ways Blockchain Enables Governments and Citizens

- Eliminates Background Check
- Connects people directly via a peer to peer

# Using Blockchain to verify experts and facilitate training of novices



Use blockchain and bots to rapidly identify people with verified expertise in needed areas.

Give them micro-tasks to guide the work of novices.

# Takeaways:

**Our Blockchain based systems facilitate skill development of citizens**

# Intelligent Systems for Better Work



# Ways Blockchain Enables Governments and Citizens

- Peer to peer applications that do not need a middlemen, which means no fee and no restrictions.
- Connects people directly via a peer to peer network.
- Each user controls her own store and work.

# The Gig Economy 2.0 Platform

Empowering people to build the next sharing economy platforms





## Next Generation Crowd Sourcing

The platform with a conscience that the gig economy has been waiting for. Build sustainable careers, grow your business and help make decisions about the platform's future.

CREATE ACCOUNT

SAMPLE TASKS

LEARN MORE

# DAEMO: SELF-GOVERNED WORK MARKET

Welcome to the future of CrowdSourcing!

Prototype Tasks allow to test workers and refine task descriptions

Milestone Reviews ease worker and requester relationships

An Open Governance structure helps to empower all parties

## Tasks

A variety of tasks for a variety of crowd-workers



# Takeaways:

Our Blockchain based systems  
facilitate creation of novel  
work markets and  
Gig economy platforms

# THANKS!

Dr. Saiph Savage

email: [saiph.savage@mail.wvu.edu](mailto:saiph.savage@mail.wvu.edu)

Website: [www.saiph.org](http://www.saiph.org)

[humancomputerinteraction.wvu.edu](http://humancomputerinteraction.wvu.edu)

Twitter: [@saiphchen](https://twitter.com/saiphchen)



UNAM

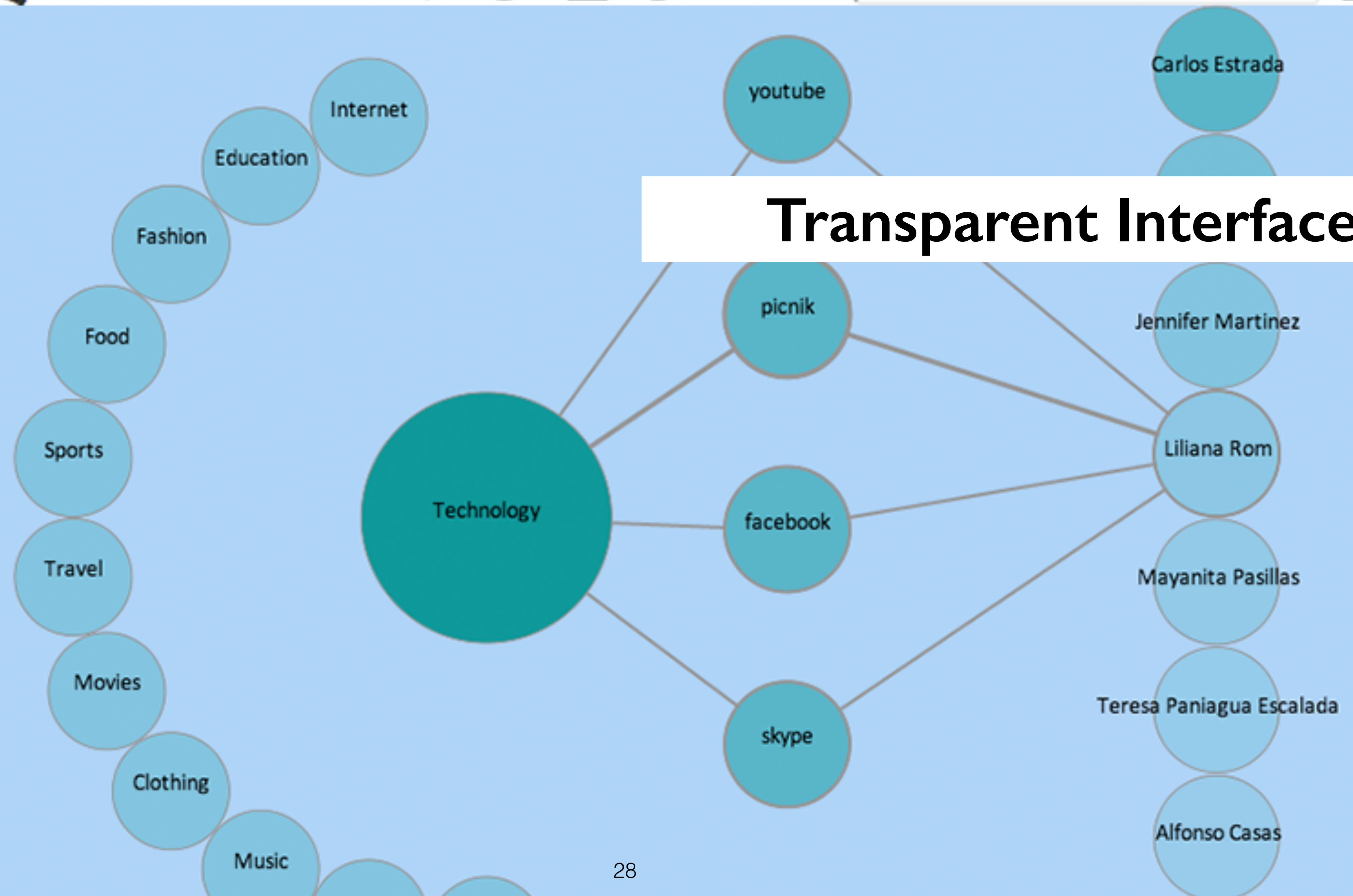
Universidad Nacional  
Autónoma de México



HCI Lab, WVU

## Like Description

Picnik was an online photo editing service which was acquired by Google in 2010.



**Transparent Interface**

# PLATFORM CREATOR STUDY 01

## Basic Information about the crowd market

**Name of the crowd market \***

It is usually the name of the company

**One sentence description of the crowd market \***

Try to explain in one sentence how do you connect offerers with requesters.

**What is offered in your crowd market? \***

- Goods
- Services

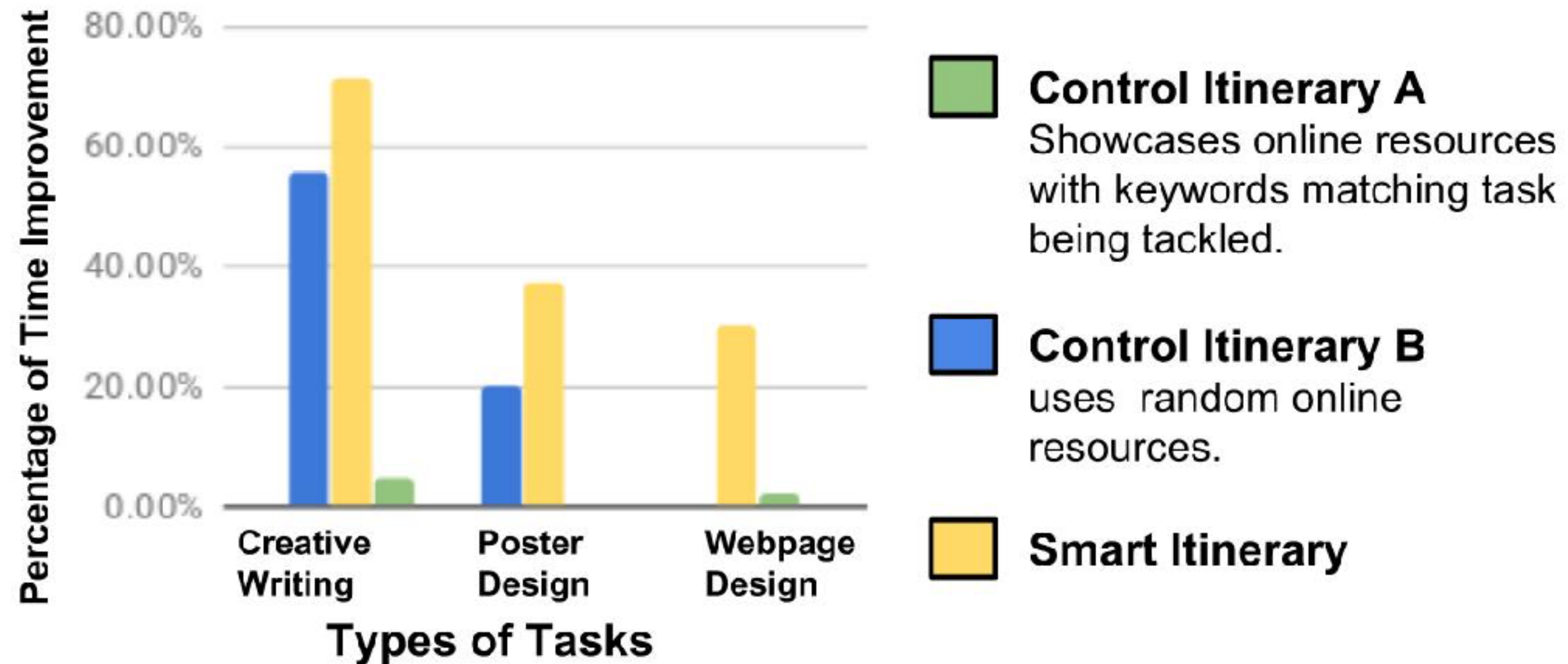
Only one option is usually selected, but there are some complex models where the 2 applies.

Back

Next

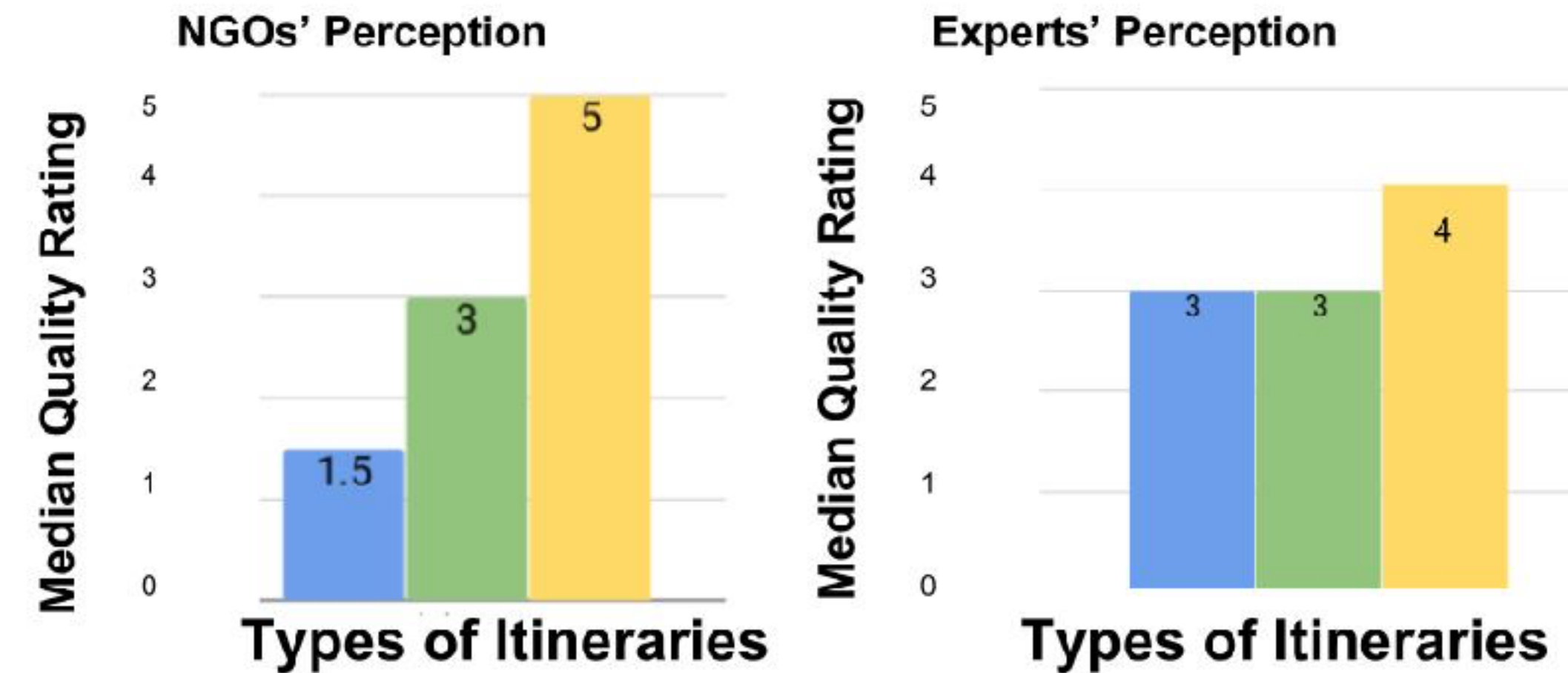
# Smart Trainings

Citizens' Median Time Improvement Using Different Itineraries



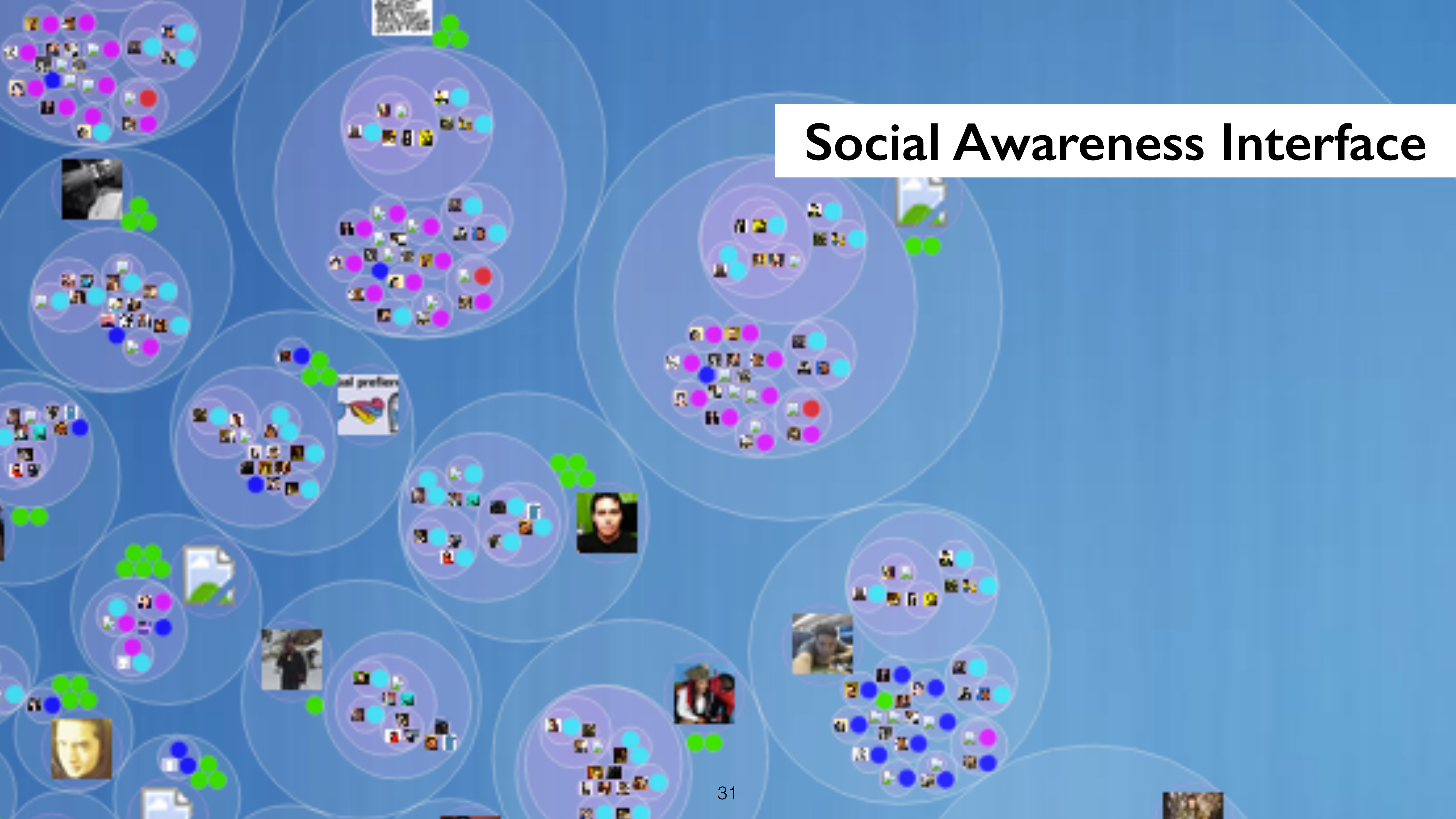
a

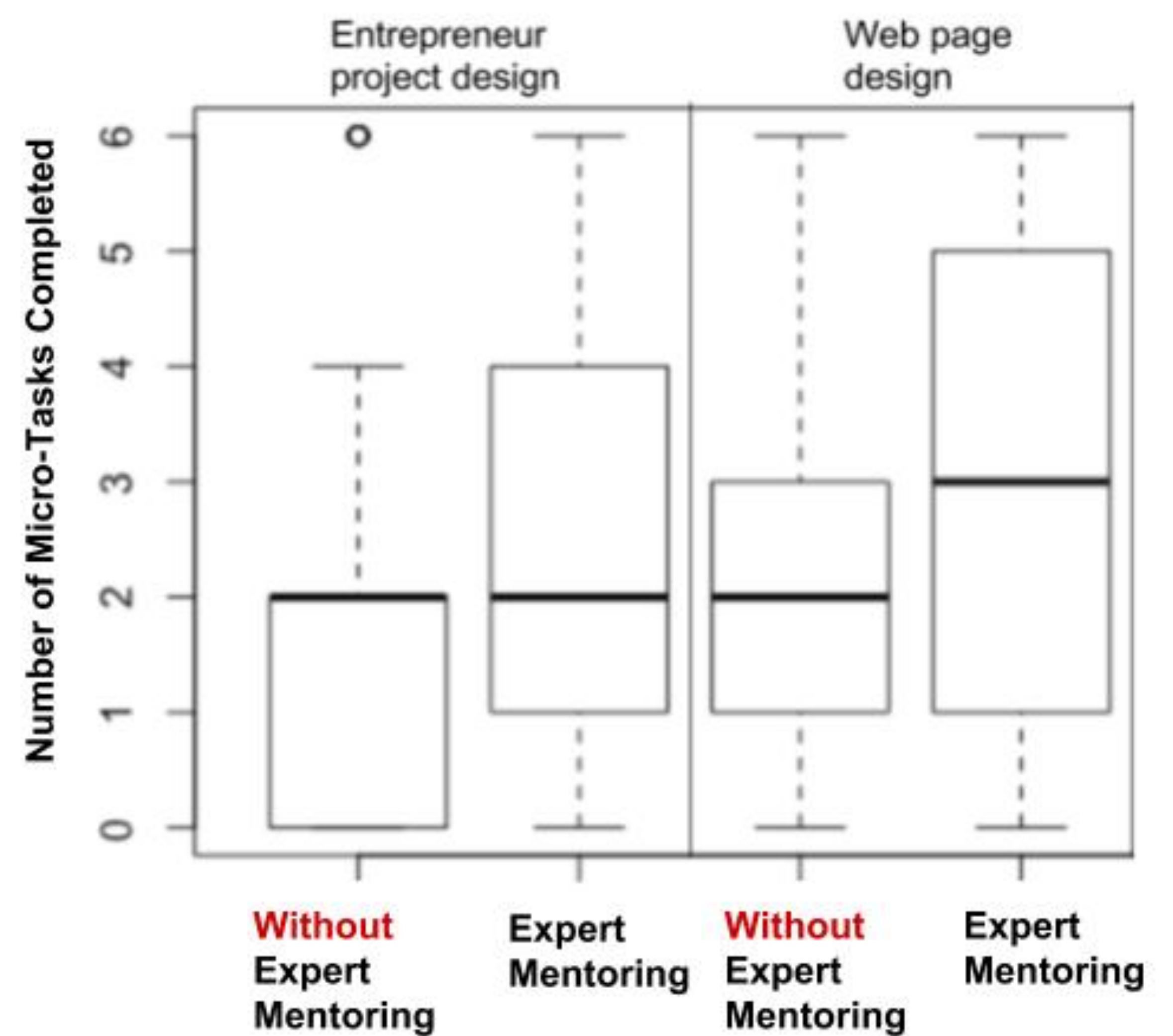
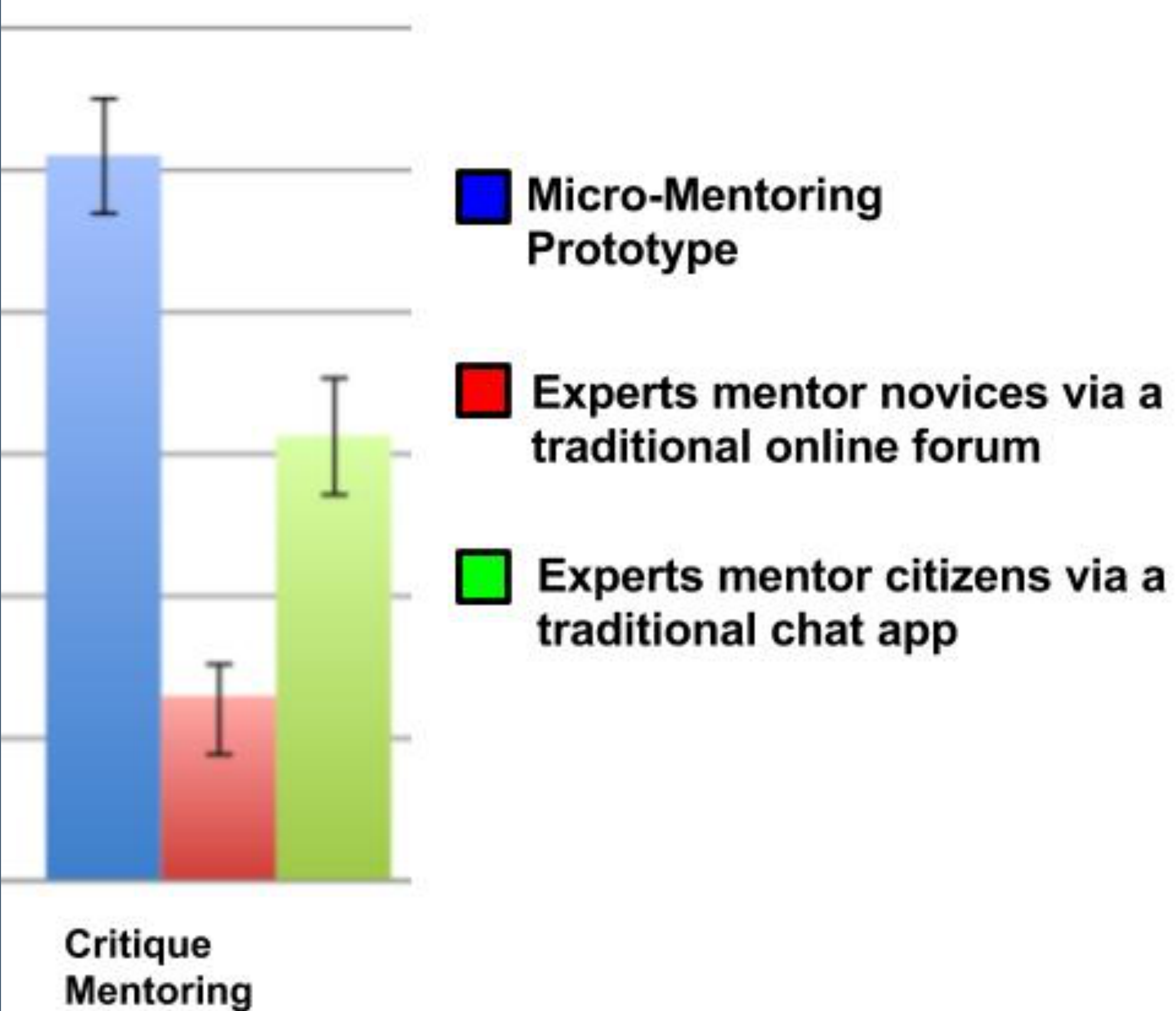
Median Quality Perceived for Citizens' Webpage Design Work



b

# Social Awareness Interface





Using Blockchain to verify experts and facilitate training of novices