

# Safer Illinois App: Testing, Tracing, Access in the Face of COVID-19

IAM Online  
Wednesday, November 11, 2020

Presenters:

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Isaac Galvan, Senior Application Developer, University of Illinois  
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# The Safer Illinois Story

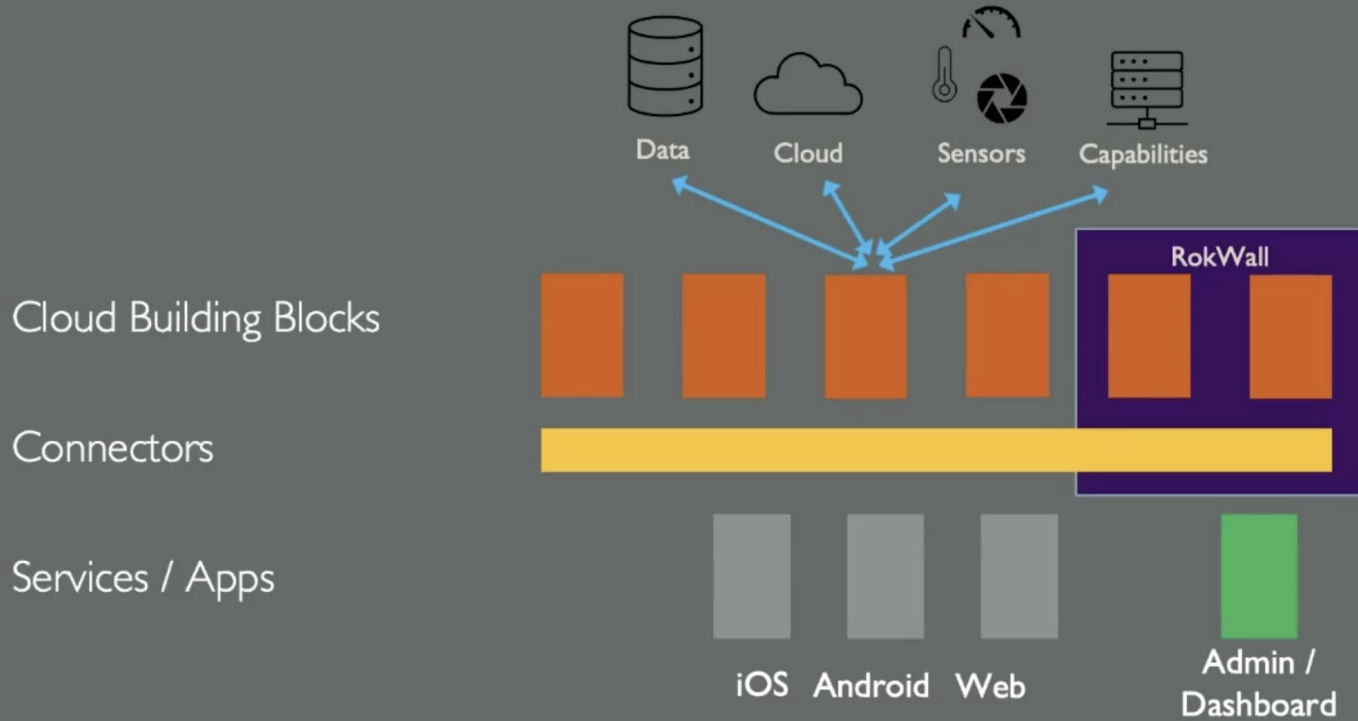
- March 2020: Moved to online instruction and remote work
- July 2020: Rapid on-campus COVID-19 testing available
- August 2020: Safer Illinois app launches



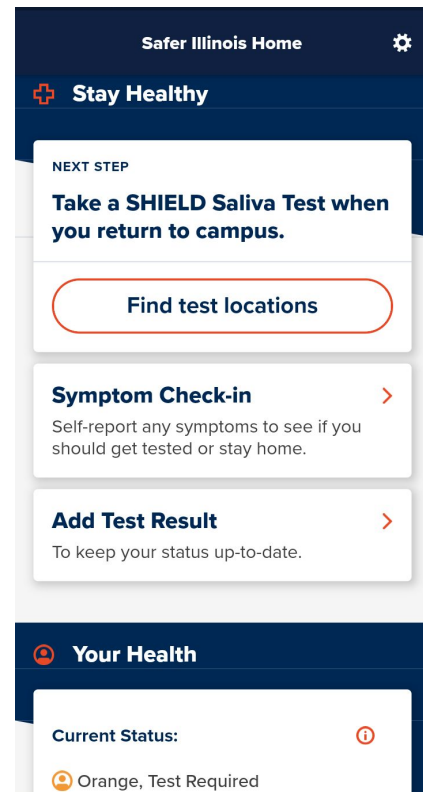
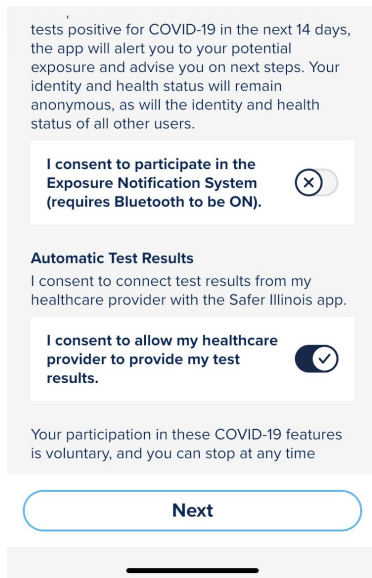
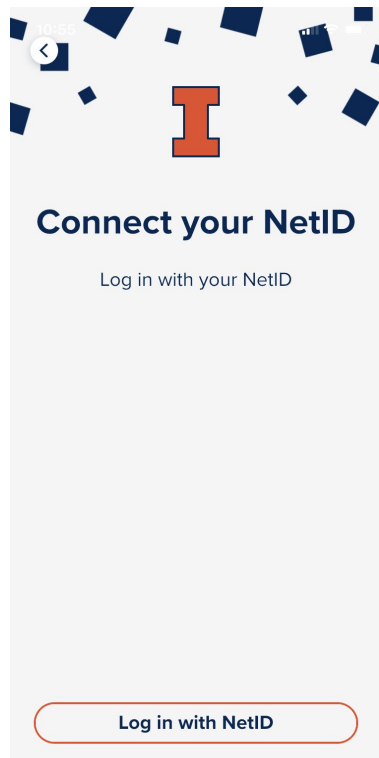
# ROKWIRE Platform

- Massive collaboration of many colleges and units
- Open-source mobile software platform
- Designed to rapidly integrate new functionality and data sources without starting from scratch each time
- Aims to dramatically lower the cost of digital services
- Privacy-first architecture and governance
- Smart, Healthy Communities
- Debuted with the Illinois App in 2018

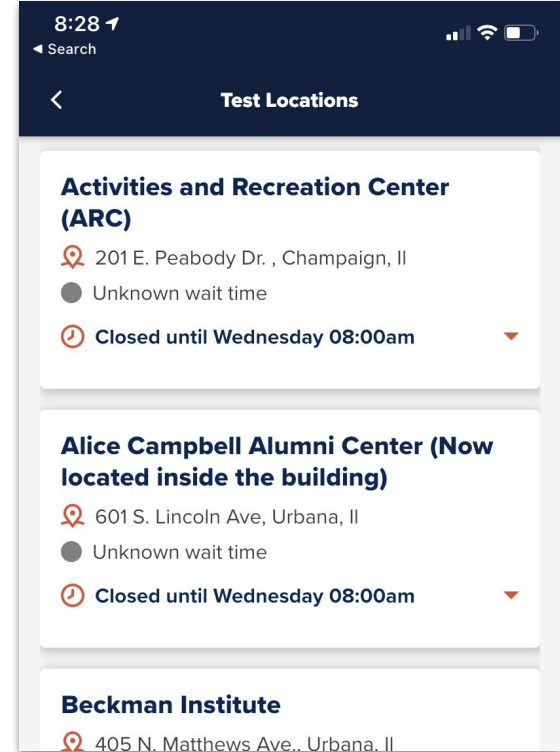
# ROKWIRE SYSTEM



# First-time Setup

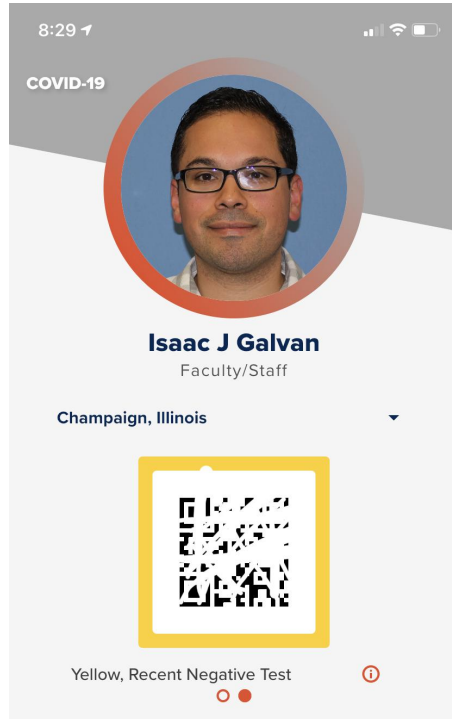


# Finding Test Locations





# Checking In




# The Test





# Getting Your Results

 **SAFER ILLINOIS**

21m ago

**COVID-19**  
You have received a COVID-19 update




## NEXT STEP

November 18, 2020

### Monitor your test results

You will turn orange/access denied if no negative test by Wednesday, Nov 18.

[Find test locations](#)


7:55   


< **Your COVID-19 Event History**


View your COVID-19 event history.


November 10, 2020

**COVID-19 PCR**

 McKinley Health Center / SHIELD





**More Info** 


 **Result:** **NEGATIVE**

November 5, 2020

**COVID-19 PCR**


 McKinley Health Center / SHIELD





**More Info** 

November 1, 2020

**COVID-19 PCR**

 McKinley Health Center / SHIELD



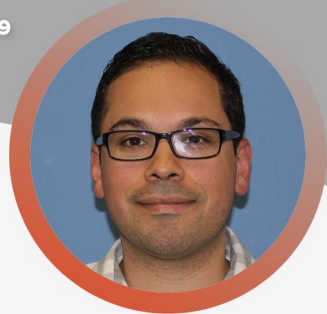
**More Info** 

# Building Access




8:35

COVID-19



**Isaac J Galvan**  
Faculty/Staff

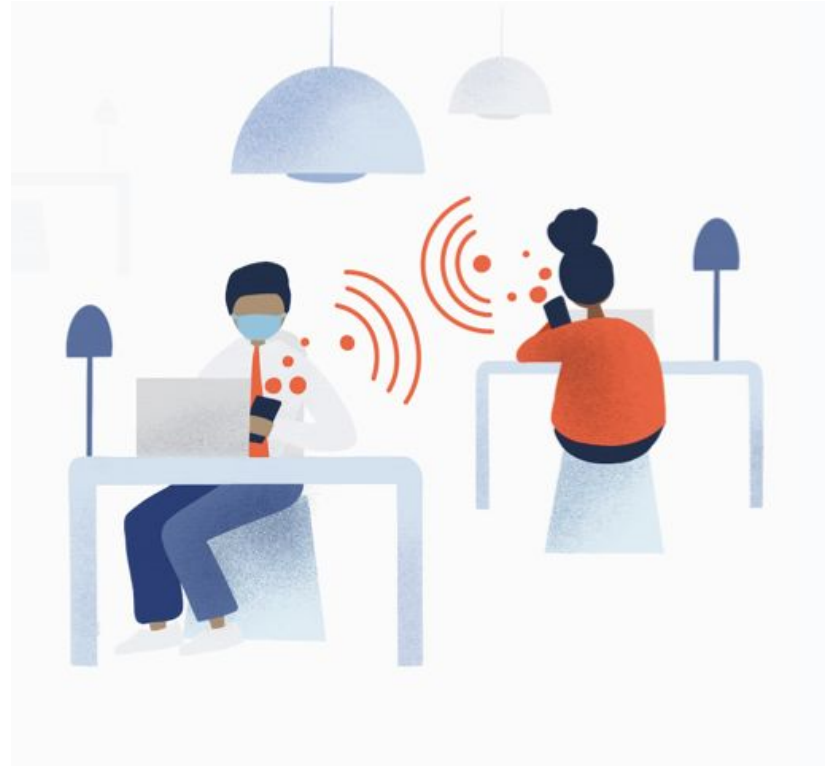
Champaign, Illinois



Building Access  
**GRANTED**

# Exposure Notification System

Privacy-preserving Bluetooth exposure notification system developed at Illinois. Completely voluntary and tuned for effectiveness.



# Quarantine and Isolation Support

## Case 1: Test Result Positive

### NEXT STEP

#### **You have been placed in mandatory isolation.**

- Stay home. Do not go to work, school, or public areas.
- Separate yourself from others in your home.
- Contact Champaign-Urbana Public Health District Immediately at [coronavirus@cuphd.org](mailto:coronavirus@cuphd.org)
- Stay in isolation until you are released by CUPHD through this app.

[More About Isolation](#) 

## Case 2: Contact Trace Quarantine

### NEXT STEP

#### **You have been placed in mandatory quarantine.**

- Stay home. Do not go to work, school, or public areas.
- Separate yourself from others in your home.
- For questions, contact Champaign-Urbana Public Health District Immediately at [coronavirus@cuphd.org](mailto:coronavirus@cuphd.org)
- Get tested on the fourth day following exposure to see if you have developed the disease.
- You can leave quarantine on the fourteenth day after exposure.

[More About Quarantine](#) 

## Case 3: Exposure Notification Quarantine

### NEXT STEP

#### **You have likely been exposed to a person who is infected with Covid-19.**

- You must quarantine yourself immediately.
- Stay home. Do not go to work, school, or public areas.
- Separate yourself from others in your home.
- Contact [shieldteam30@illinois.edu](mailto:shieldteam30@illinois.edu) for guidance
- Get tested on the fourth day following exposure to see if you have developed the disease. If you test negative at that time, you can release yourself from quarantine.

[More About Quarantine](#) 

## Case 4: Release from Isolation or Quarantine

### NEXT STEP

#### **You are released from quarantine or isolation.**

- On this day you are released from quarantine or isolation.
- You can resume your daily activities.
- Resume regular testing.

[Find Testing Locations](#)

# Authentication

- It's Shibboleth!
- Put the Shibboleth OIDC extension in production August of 2019
- Had to make a few adjustments for these clients
  - Increased refresh token lifetime
  - Releasing some values of isMemberOf manually
- New features coming in IdP will help to simplify these tasks
- Users see the usual MFA and consent UI that they're used to



# Authorization

- Grouper saves the day
- We've run Grouper since late 2019
- Running in AWS using I2 Trusted Access Platform
- App owners have their own folder
- Groups in that folder are synced to Active Directory
- Shibboleth releases any group memberships with the given prefix to the app

# Agility in Cybersecurity

- Relationships
  - Established relationships
    - Between Cybersecurity, IAMU and Development Teams
  - Agile-friendly practices in IAMU and Cybersecurity
- Frameworks
  - Rokwire - Community oriented agile open source framework
  - Rokwall - Privacy oriented research team supporting Rokwire

# Rokwire/Rokwall Adapted for COVID

Two experiences in one application:

- Exposure Notification
- Testing Center

# Privacy-first

- Health data is encrypted, only key is on your phone
- Easy to understand Privacy Policy
- Data privacy committee and several reviews from campus
- Remove your data anytime

# Safer Illinois: Just one piece of the puzzle

- SHIELD: Target, Test, and Tell
- SHIELD Team 30
- SHIELD Surge
- Student Affairs and Housing



# Lessons Learned

- Privacy first
- Test your messaging with real users
- App store approvals can be lengthy
- Expect questions at launch, lots of them
- Not all users have smartphones
- Remain flexible as the situation updates
  - Different rules for different groups, from as large as “all undergraduates” to as small as a single residence

# What's next?

- More detailed testing plans for Spring return
- Community testing
- Expanding to other communities and campuses via ROKMETRO

# Resources

- [Safer Illinois Website](#)
- [University of Illinois COVID-19 website](#)
- [COVID-19 Testing Dashboard](#)
- [COV-Course: 08. Data Security and Privacy](#)
  - William Sullivan and Sanjay Patel go in-depth
- [Safer Illinois on Github](#)

# Questions & Answers



InCommon®



**CAMP - November 16-17, 2020** - Track sessions, organization case studies, software project updates

**ACAMP - November 18-20, 2020** - Unconference, moving IAM forward internationally

**Virtual via Canvas**

**Details and Registration:** [www.incommon.org/camp2020](http://www.incommon.org/camp2020)



# IAM Online Evaluation

<https://www.surveymonkey.com/r/IAMOnline-Nov-2020>