

# Code ↗ Response ↘

Mangesh Patankar  
Developer Advocate  
IBM Cognitive Applications  
[mapatank@in.ibm.com](mailto:mapatank@in.ibm.com)

IBM Developer

**CALL  
FOR  
CODE®**

**COMMIT TO THE CAUSE.  
PUSH FOR CHANGE.  
ANSWER THE CALL.**

[developer.ibm.com/callforcode](https://developer.ibm.com/callforcode)

**IBM**

Call for Code Founding Partner

IBM

# CALL FOR CODE - Agenda

- Coding for a cause - CALL FOR CODE, solving real world challenges through technology
- Technology Outlook – Cloud , AI and IoT Services
- Solution to Problems
  - Cloud
  - AI
  - IoT

# Natural disasters are among the world's greatest challenges...

A photograph showing a woman walking away from the camera through a street filled with debris and rubble. In the background, more damaged buildings and hills are visible under a clear sky.

**800,000+**

worldwide deaths attributed to earthquakes since 2010

**25%**

coastline areas that met or surpassed record number of flood days

**800+**

confirmed tornadoes touched down in 2018

**17 million**

acres lost to wildfire in the United States in the last 2 years

**22**

named storms in the Eastern Pacific region this year – a record

**18**

volcanos considered a “very high threat” in the U.S. alone

# Commit to the Cause, Push for Change

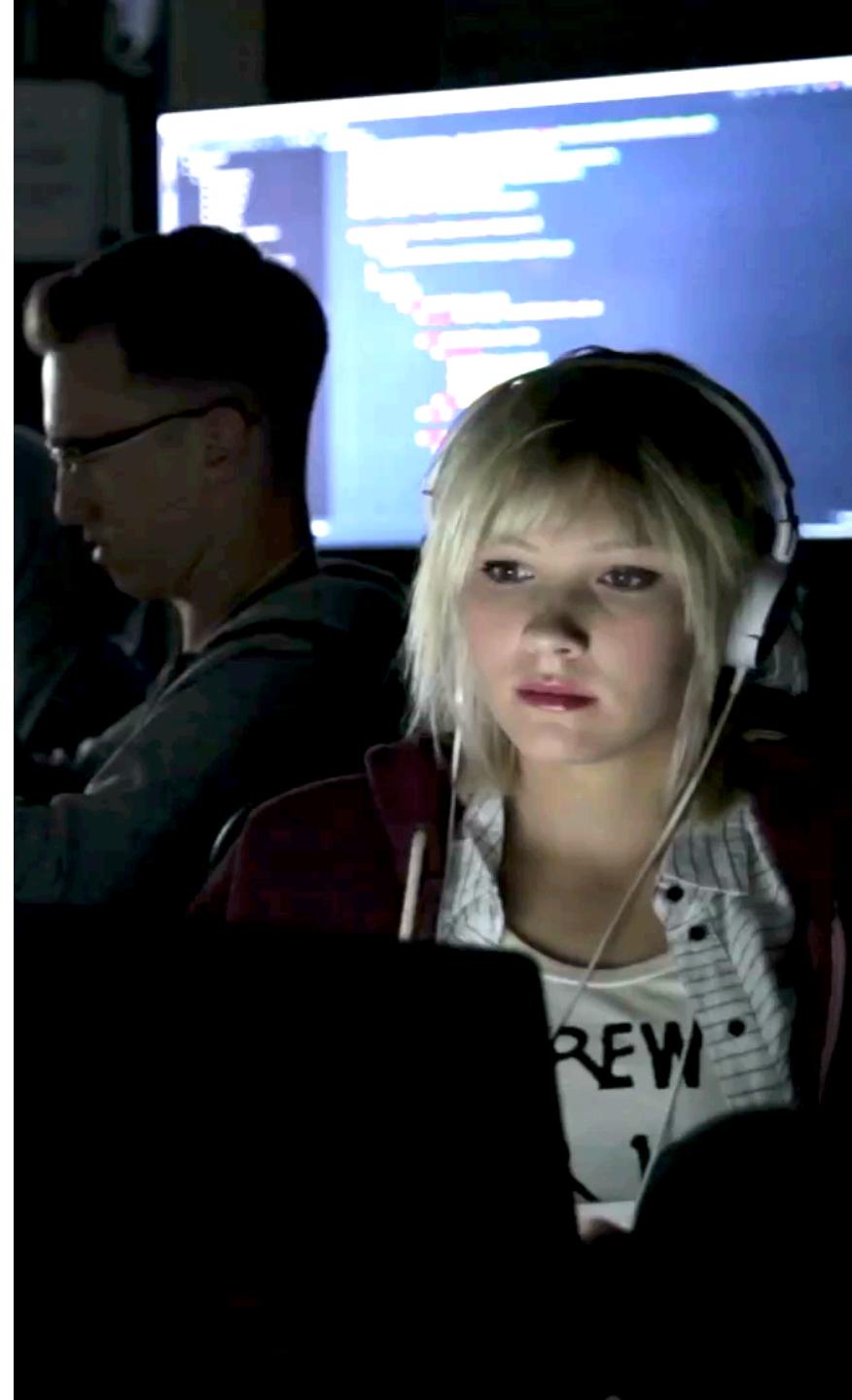
*Build a cloud, data, analytics, AI, IoT, or blockchain solution to improve natural disaster preparedness, response, or recovery focused on the **health and well-being of individuals** and communities.*

## Potential problem areas

- Reduce vulnerability by managing disaster risk over the long run
- Forecast impending threats to improve preparation in the short term
- Respond to medical needs during the disaster
- Improve the resiliency of communities to restore health services after

## Potential solutions

- Alert pharmacies to increase stocks of antibiotics, insulin, water, and vaccines based on predicted weather-related disruptions.
- Use analytics to predict the impact of disasters and educate communities on how to prepare for impending threats.
- Use visual recognition to assess the impact of a disaster and accelerate response, reducing time to build back better.
- Improve the efficiency, accountability, and resiliency of supply chains through blockchain technology.



# Schedule



- 01
- 02
- 03
- 04
- 05
- 06

## **Registrations & Team Formation**

**Jul 16 – Jul 17**

## **Enablement**

**Jul 16 – Jul 17**

## **Build Phase** for Virtual Hackathon:

**Jul 17 – Jul 22**

## **Date of Submissions** for Virtual Hackathon:

**Jul 22**

## **Final Presentations** of Participants:

**Jul 23 – Jul 24**

## **Upload to Final Submissions**

**Jul 29**

# CALL FOR CODE® 2019

**Build and submit your solution for natural disaster preparation, response, and recovery**  
[developer.ibm.com/callforcode](https://developer.ibm.com/callforcode)

## STEP 1:

**JOIN THE CALL FOR CODE 2019 CHALLENGE COMMUNITY**

LEARN ABOUT THE COMPETITION SCOPE, PRIZES, RULES, AND SCHEDULE

## STEP 2:

**EXPLORE RESOURCES AND BUILD WITH CODE PATTERNS**

USE CODE PATTERNS TAILORED TO YOUR INDUSTRY AND DIGITAL KITS TO RUN AN EVENT

## STEP 3:

**LEARN FROM EXPERTS AND FIND TEAMMATES**

INTRODUCE YOURSELF, MEET ADVOCATES, BRAINSTORM IDEAS, FIND A TEAM, HEAR ABOUT UPDATES

## STEP 4:

**SUBMIT (AND ITERATE ON) YOUR 2019 CALL FOR CODE SOLUTION**

DESCRIBE YOUR SOLUTION, LINK TO YOUR CODE AND DEMO, ACCEPT THE PARTICIPATION AGREEMENT

# CALL FOR CODE® 2019

**Build and submit your solution for natural disaster preparation, response, and recovery**  
[developer.ibm.com/callforcode](https://developer.ibm.com/callforcode)

## STEP 1:

**JOIN THE CALL FOR CODE 2019 CHALLENGE COMMUNITY**

LEARN ABOUT THE COMPETITION SCOPE, PRIZES, RULES, AND SCHEDULE

## STEP 2:

**EXPLORE RESOURCES AND BUILD WITH CODE PATTERNS**

USE CODE PATTERNS TAILORED TO YOUR INDUSTRY AND DIGITAL KITS TO RUN AN EVENT

## STEP 3:

**LEARN FROM EXPERTS AND FIND TEAMMATES**

INTRODUCE YOURSELF, MEET ADVOCATES, BRAINSTORM IDEAS, FIND A TEAM, HEAR ABOUT UPDATES

## STEP 4:

**SUBMIT (AND ITERATE ON) YOUR 2019 CALL FOR CODE SOLUTION**

DESCRIBE YOUR SOLUTION, LINK TO YOUR CODE AND DEMO, ACCEPT THE PARTICIPATION AGREEMENT

# Submissions

## Follow Presentation Template

Team Name  
Title :

### Team Members

- : Name1 – Profile(leader/working/analyst)
- : Name 2
- : Name 3
- : Name 4
- : Name 5

1

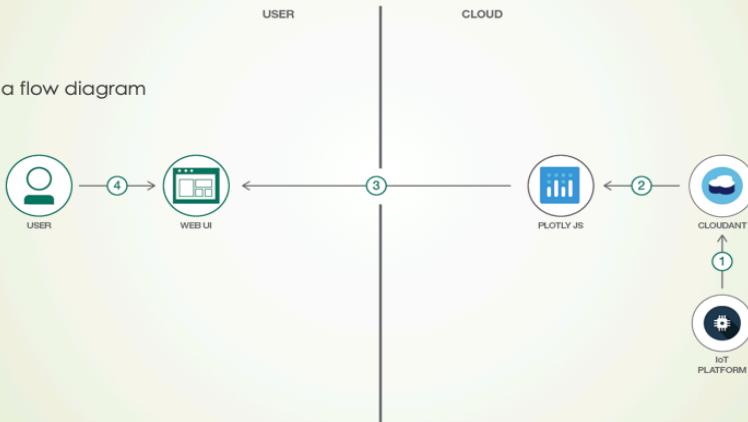
### Problem Addressed

- ▶ <limited to 500 words>
- ▶ <Whose problem are you addressing ?>
- ▶ <What are the specific pain points are you address as a part of the broader problem>?
- ▶ <your solution – how does it differentiate ?>

2

### Solution Flow

- ▶ Draw a flow diagram
- ▶ E.g



3

### Technology used

- ▶ <List IBM Cloud Services>
- ▶ <List any other services >

4

# Submissions

## **Submission name\***

The name for your solution or team in five words or less

## **Short description\***

Describe your team's solution in ten words or less

## **Long description\***

About 500 words, or about one page of text, that covers the solution in more detail

## **Roadmap\***

A document or image that shows how mature your solution is today and how you plan to improve it in the Future

## **Link to public GitHub repository\***

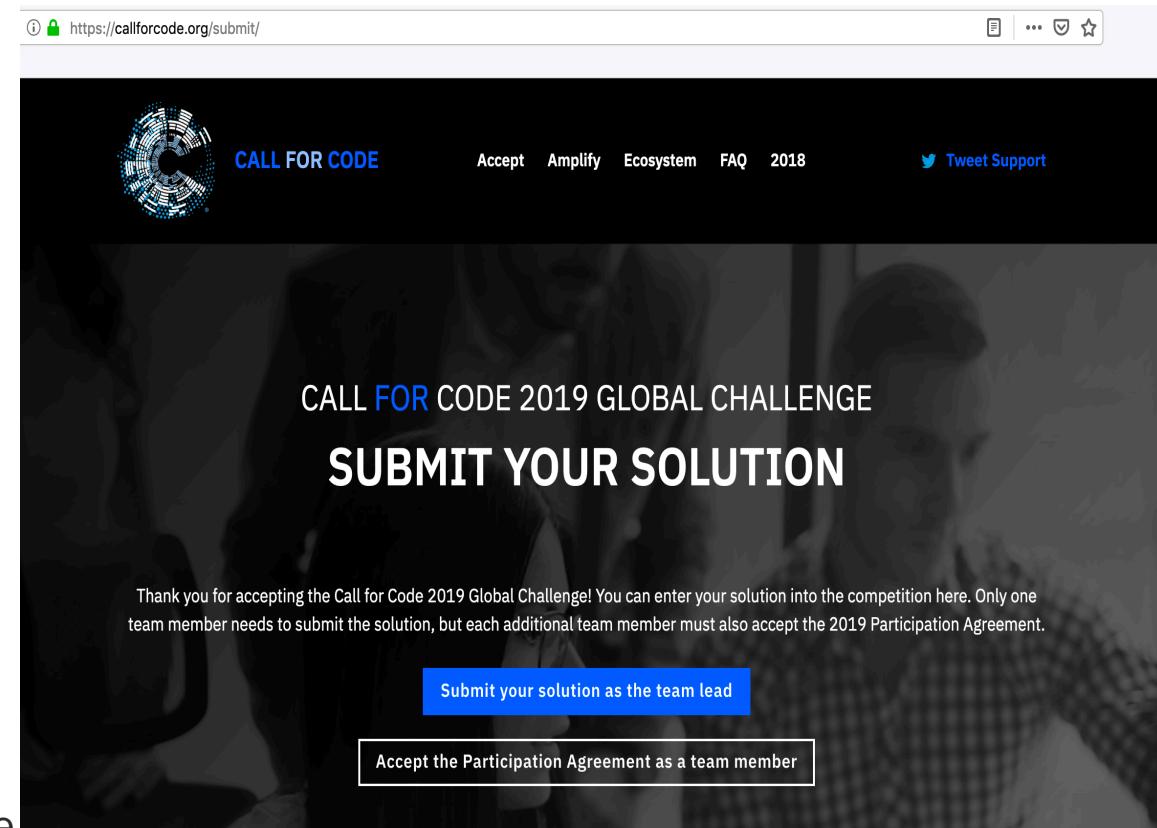
Or other publicly accessible location such as GitLab or Box where the judges can download and evaluate the solution

## **Link to 3-minute video** that describes and demonstrates your solution\*

A public YouTube, Vimeo, or other video download location

## **IBM Cloud service(s)** or IBM System(s) used in your solution\*

List one or more



# Explore types of disasters and how we can lessen their effects through technology



**Earthquakes and Tsunamis**



**Hurricanes and Typhoons**



**Wildfires**



**Volcanoes**



**Floods and Storm Surges**



**Extreme Weather**



<https://developer.ibm.com/code-and-response/disasters/>

# Solution Starters



## Building Back Better to Reduce the Impact of Future Disasters

Use technology to rebuild communities, buildings, and infrastructure after a disaster strikes.



## Improving Flood and Drought Prevention and Response

Find ways to help communities prepare for, respond to, and recover from droughts and floods.



## Humanitarian Protection in Times of Disaster

Ensure that all – including society's most vulnerable – can access resources following a disaster.



## Accountability and Centrality of Protection for Affected Populations

Prevent humanitarian crises following a disaster through enablement and training.



**Survey wildfire-damaged neighborhoods to identify burned homes and intact homes**

[bit.ly/cfchandson](http://bit.ly/cfchandson)

# Demo: IBM Cloud : Services

## - Watson Studio using Visual Recognition

Steps1: Create Watson Studio Project, Add Cloud Object Storage

Steps2: Prepare your model, Using tool:

- a) Collect a minimum of 10 images for each class in .zip files, and then upload them to your project.
- b)Train your custom model, In the Visual Recognition model builder, define your classes and add images.
- c) Test your trained model After your model is trained, you can use the Test area of the model builder to classify test images using your custom model.
- d) (Optional) Retrain your model You can improve the performance of your model by adding or removing training images and then retraining the model.

Steps3 : Use API in mobile application or Web Application.

# **IBM Cloud Services**

Demo

# Tip #1

## UNDERSTAND REAL WORLD PROBLEMS

Call for Code 2019 is looking for solutions that have a lasting impact and bring technology to bear on real problems with sustainable solutions.

Therefore make sure you thoroughly understand the problem domain and honestly consider whether technology can solve a particular problem. Honestly consider how effective technology can be, and certainly make sure it doesn't add to the problem!

- Review the UNISDR Sendai Framework

<https://developer.ibm.com/blogs/how-the-sendai-framework-aims-to-reduce-the-risk-of-natural-disasters/>



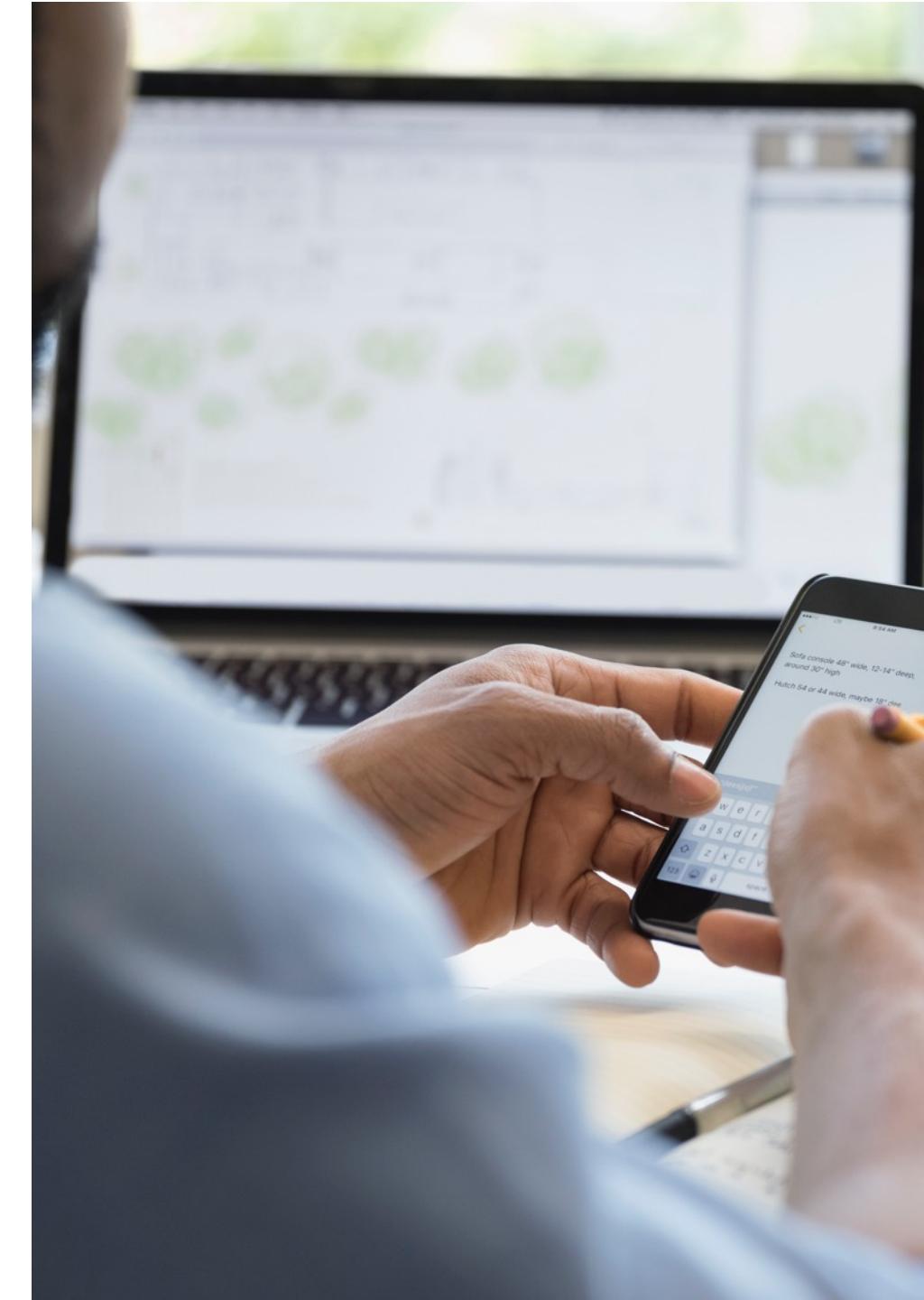
## Tip #2

### DON'T RE-INVENT THE WHEEL

As you brainstorm the solution you plan to build based on the problems, **don't forget to consider the existing tools, data sets, and APIs that already exist.**

Your solution will have the greatest impact if it addresses a long-standing problem that doesn't have an existing solution. It will also be more valuable if it builds on or integrates with an existing solution such as a commercial product with an API.

It's also important to look at standards and protocols that you can implement or leverage, such as the OASIS Emergency Data Exchange Language (EDXL) formats.



## Tip #3

### DOCUMENT YOUR SOURCE CODE REPOSITORY

The Call for Code 2019 submission form allows you to provide information about your application in various formats: a 500-word description, a project roadmap, and a demo video.

But one of the best ways to show how mature your project is - and how it can be explored by the judges in a hands-on manner – is to **create a great README file**.

Google can help you find a lot of tips. Search on “readme best practices” to find a few tutorials. You can also think about embedding your video or other visuals that illustrate the application in depth.



## Tip #4

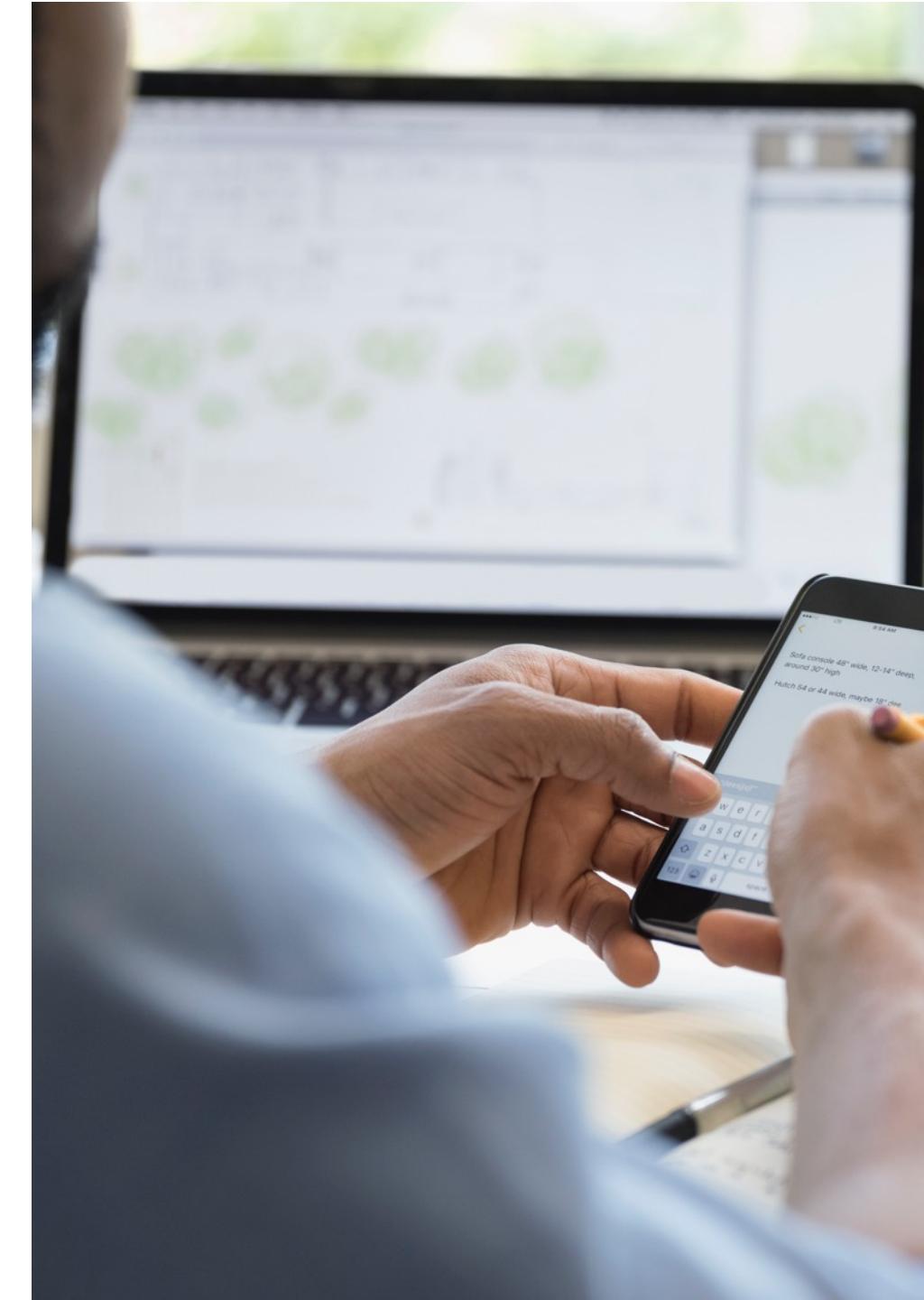
### INVEST TIME TO CREATE A POWERFUL VIDEO

One of the most powerful ways to tie your entire submission together, and one that will have an impact on various types of judges – the technical judges, the NGO judges, the eminent judges – is **a compelling video**.

Leave the deep-dive material and full implementation details in your 500-word solution description, source-code repository, and solution roadmaps.

#### A recommended format for the video is:

- 45 seconds:
  - What exactly are you trying to solve?
  - How have you solved it?
- 1:30 on the demo of the submission itself, full user flow.
- 45 seconds on results and next steps.



## Tip #5

### **DOUBLE CHECK THE PERMISSIONS**

You will, of course, want to make sure that everything you submit is free from typos and represents your team's highest quality work, but one of the key issues we've seen when running the competition is that permissions errors can prevent the judges from fully evaluating your code.

**The simplest solution is to make your source code repository and demo video publicly viewable after the July 29, 2019 deadline.** And when publishing, the most popular license today is the Apache License, Version 2.0.



# Stay Connected and continue coding !

IBM CODER

IBM Coder Platform  
<https://ibmcoders.influitive.com/>



Code & instructions available here  
<https://github.com/IBMDelConnect>

IBM  
DEV  
ELO  
PER

Check out the code patterns  
<https://developer.ibm.com/patterns/>



Join our Slack team and stay in touch with the experts  
<https://ibmdevconnect.slack.com>  
Send in your request to -  
<http://ibm.biz/slackrequest>



Call for Code 2019  
<https://callforcode.org/>



Join our Meetup groups

**Mumbai :**

<https://www.meetup.com/Cloud-Mumbai-Meetup/>

**Hyderabad:**

<https://www.meetup.com/Hyderabad-Cognitive-with-Cloud>

**Bangalore :**

<https://www.meetup.com/IBMDelConnect-Bangalore>

**Chennai:**

<https://www.meetup.com/Chennai-CodeWeekend-Meetup/>