How We Built It: Application Index

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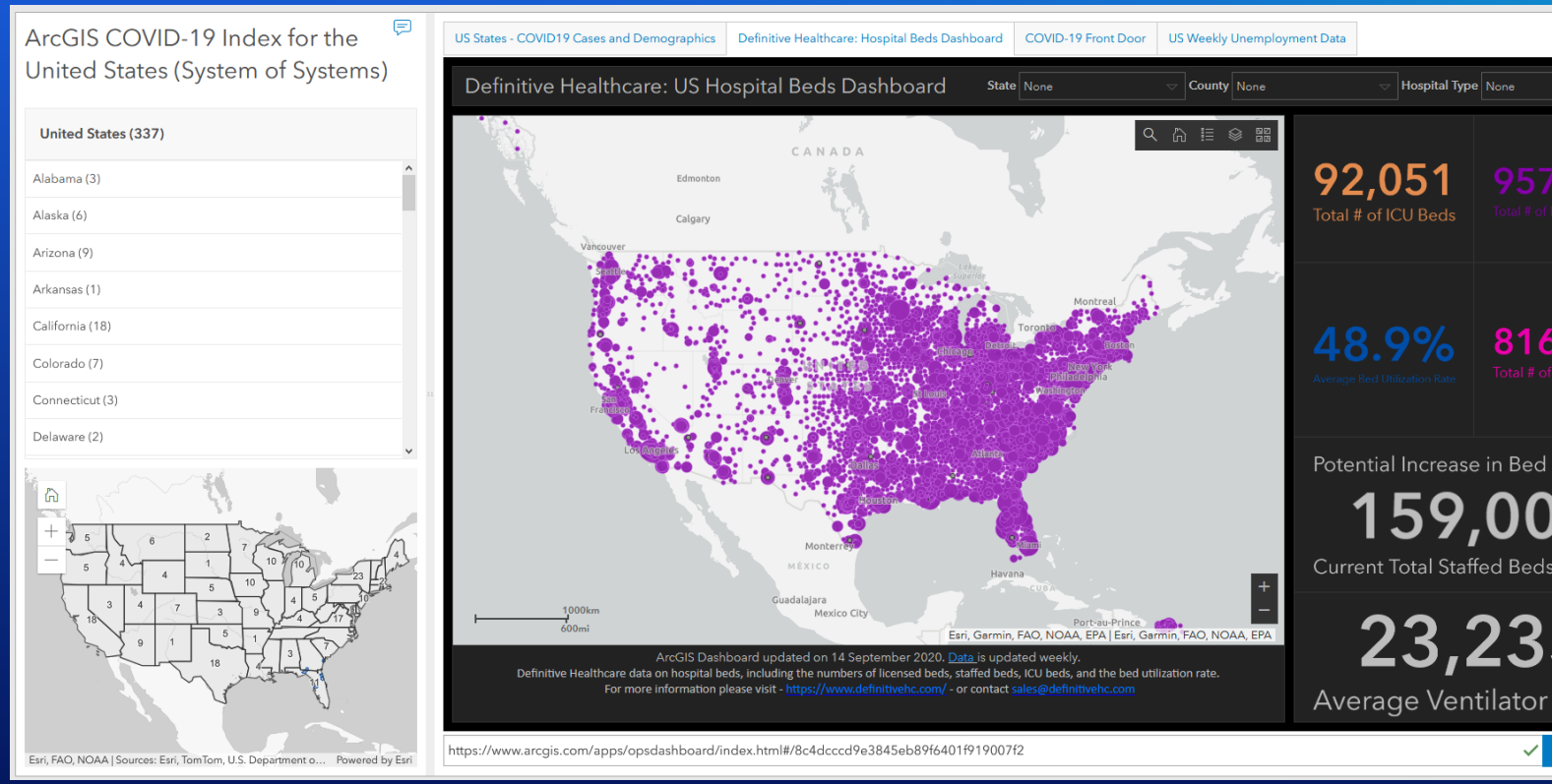
2021 ESRI
DEVELOPER SUMMIT

Application Index: What is it?

- Index of covid-related resources
- Multiple Levels:
  - National
  - State
  - County
- Goal: Allow citizens to find covid-related information quickly



- See it live: https://coronavirus-resources.esri.com/
  - Then click “Index of USA Applications related to COVID-19”

ArcGIS COVID-19 Index for the United States (System of Systems)

United States (337)

- Alabama (3)
- Alaska (6)
- Arizona (9)
- Arkansas (1)
- California (18)
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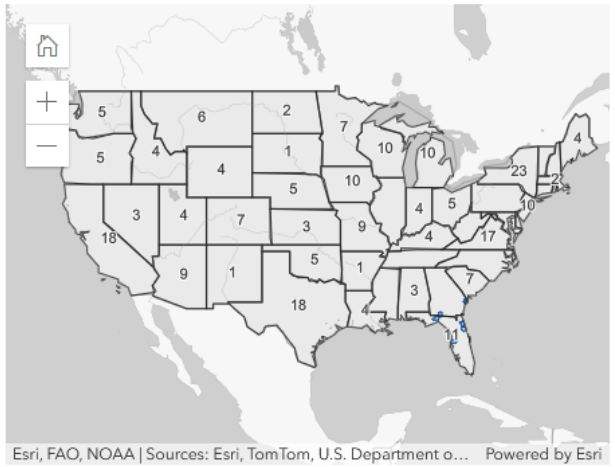
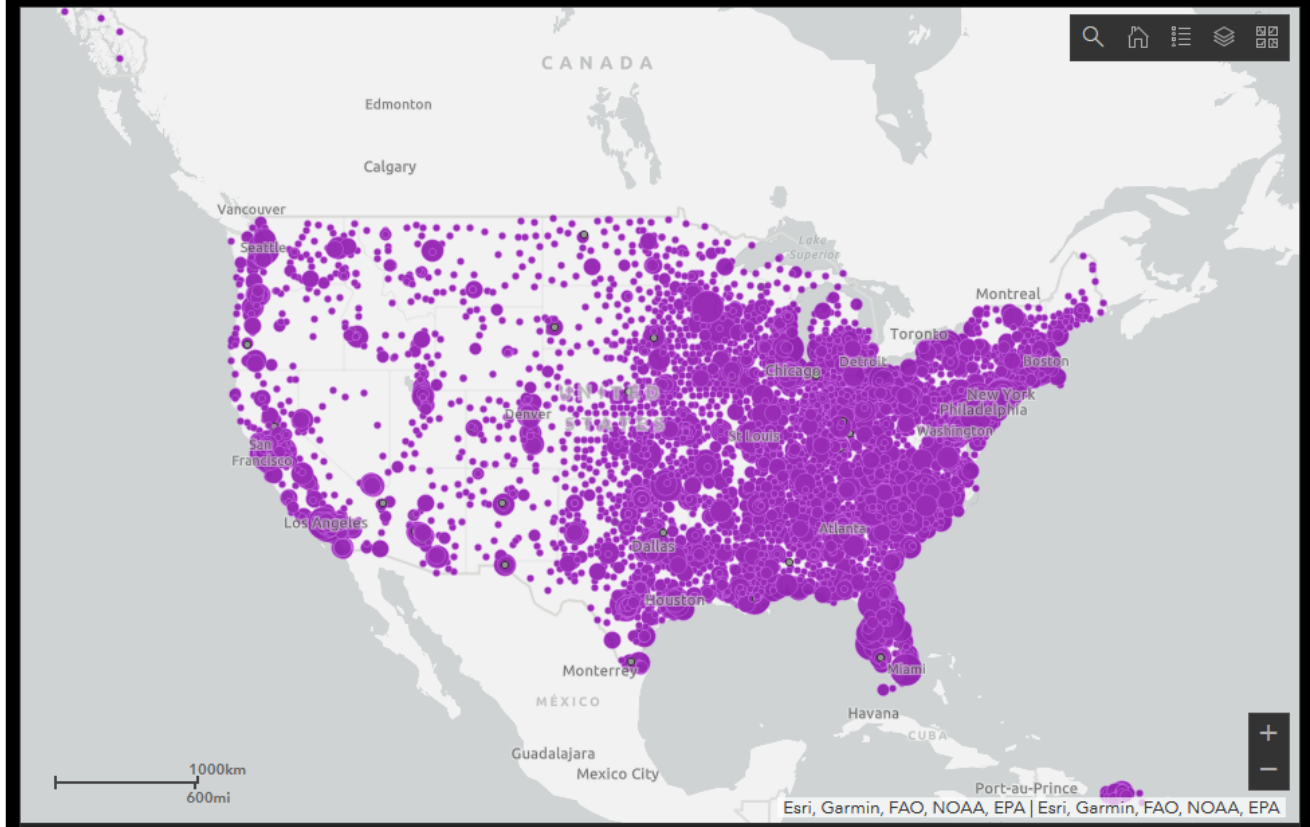


US States - COVID19 Cases and Demographics | Definitive Healthcare: Hospital Beds Dashboard | COVID-19 Front Door | US Weekly Unemployment Data

Definitive Healthcare: US Hospital Beds Dashboard

State: None | County: None | Hospital Type: None



92,051
Total # of ICU Beds

957,621
Total # of Licensed Beds

48.9%
Average Bed Utilization Rate

816,653
Total # of Staffed Beds

Potential Increase in Bed Capacity

159,008

Current Total Staffed Beds 816,653

23,233
Average Ventilator Usage

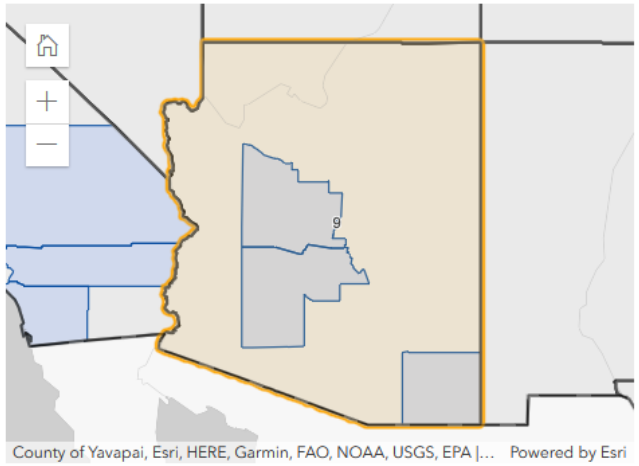
ArcGIS Dashboard updated on 14 September 2020. Data is updated weekly.
Definitive Healthcare data on hospital beds, including the numbers of licensed beds, staffed beds, ICU beds, and the bed utilization rate.
For more information please visit - https://www.definitivehc.com/ - or contact sales@definitivehc.com

https://www.arcgis.com/apps/opsdashboard/index.html#/8c4dcccd9e3845eb89f6401f919007f2 Copy Open

ArcGIS COVID-19 Index for the United States (System of Systems)

United States > **Arizona (9)**

- Cochise (1)
- Maricopa (4)
- Yavapai (1)



AZ ESF/RSF Operations Dashboard | Navajo Epidemiology Center Coronavirus Response | Arizona Coronavirus COVID-19 Tracking

AZ ESF/RSF Operations Dashboard

SERRP

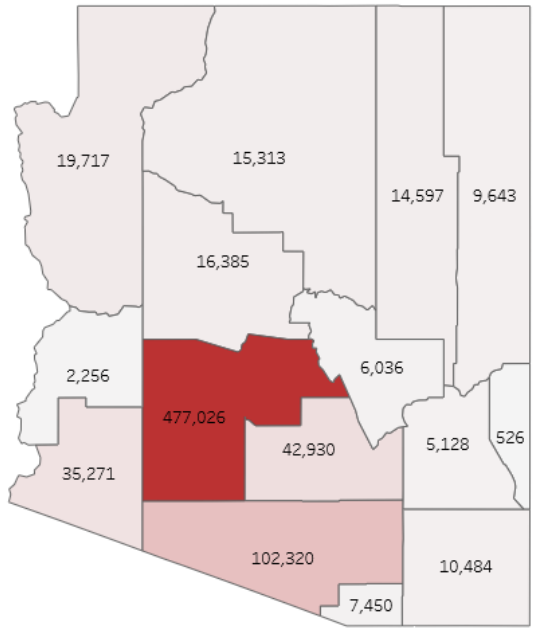
COVID-19 Arizona | COVID-19 Worldwide | Weather | Flooding | ESF 4 - Firefighting DFFM | ESF 5 - Emergency Mgmt DEMA | ESF 6 – Mass Care DEMA

Show case counts or population rates in the map below?

Cases

Select a county to filter the other numbers.

Deaths will not be shown for counties with fewer than three deaths.



Date Updated: 2/2/2021

Number of Cases	Number of Deaths	Number of COVID-19 Tests
765,083	13,362	3,895,885
Number of New Cases reported today*	**Number of New Deaths reported today***	**Number of New Tests reported today***
2,938	238	9,814
Rate of cases, per 100,000 population	**Rate of fatalities, per 100,000 population**	**Total Percent Positive****
10,642.4	185.87	14.3%

Total COVID-19 Diagnostic Tests***	New Diagnostic Tests reported today*	Diagnostic Tests Percent Positive**
3,476,921	9,584	14.8%

Total COVID-19 Serology Tests	New Serology Tests reported today*	Serology Percent Positive**
418,964	230	11.3%

*Counts of new cases, deaths, and numbers tested reflect increases in the total numbers compared to the previous day.

**Percent positive is defined as number of people with a positive test result, reported electronically out of all people with COVID-19 testing reported electronically completed in AZ

***Diagnostic tests include PCR and antigen testing.

https://azdema.maps.arcgis.com/apps/MapSeries/index.html?appid=62e6bfa682a34e6aae9d9255ac865467 Copy Open

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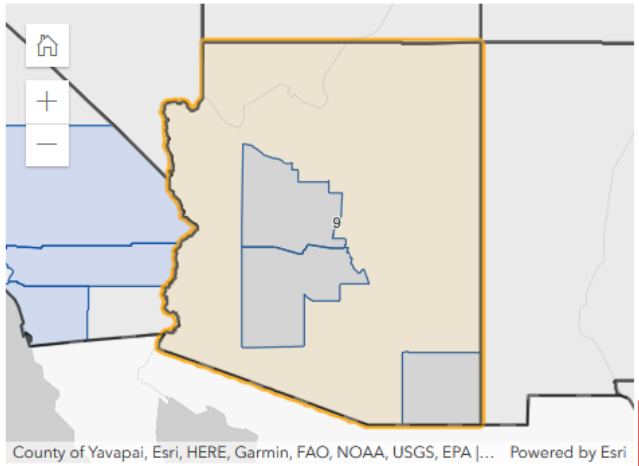

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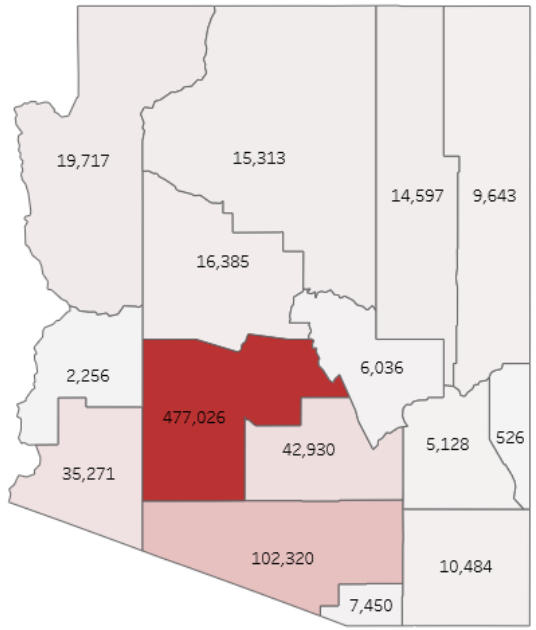

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Technologies

- ArcGIS REST JS (esri.github.io/arcgis-rest-js)
- ArcGIS API for JavaScript (developers.arcgis.com/javascript)
  - Loaded via esri-loader (github.com/Esri/esri-loader)
- ReactJS
- React-split (npmjs.com/package/react-split)
- SASS

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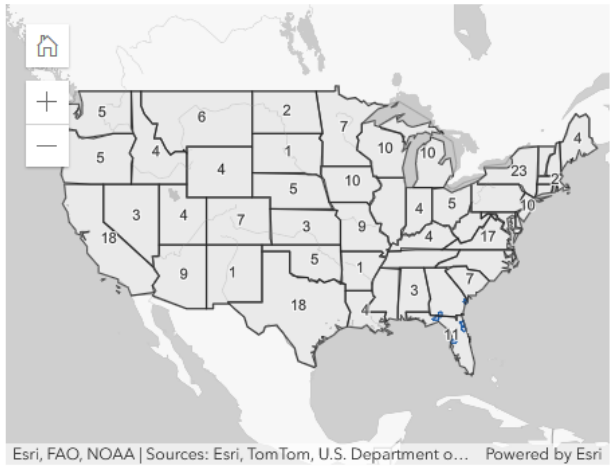

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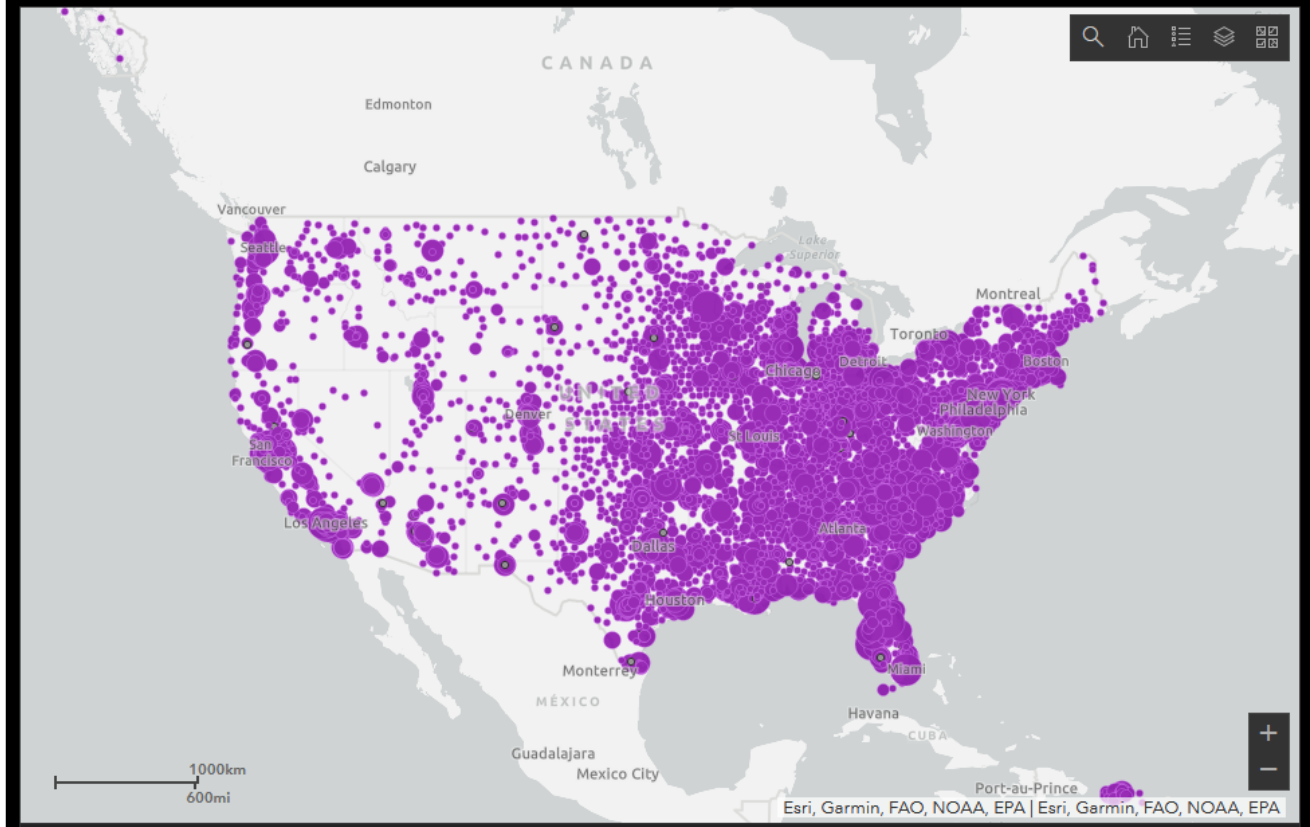

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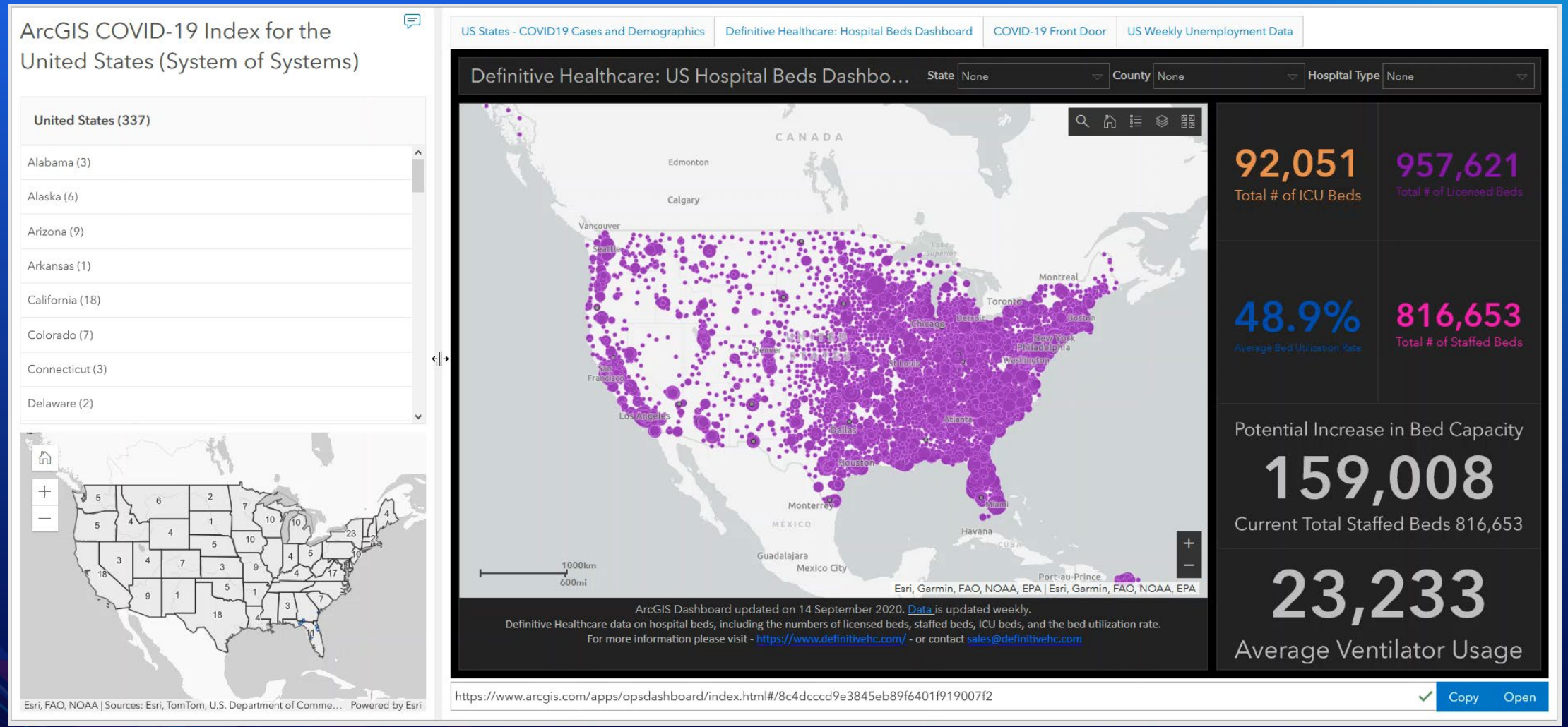
```
import { request } from "@esri/arcgis-rest-request";

const getGroupCategorySchema = async (portalUrl, groupId) => {
  return new Promise((resolve, reject) => {
    request(
      `${portalUrl}/sharing/rest/community/groups/${groupId}/categorySchema`,
      {
        params: { f: "json" },
      }
    ).then(
      (res) => {
        resolve(res.categorySchema);
      },
      (err) => {
        reject(err);
      }
    );
  });
};
```

React/JSX/React-Split

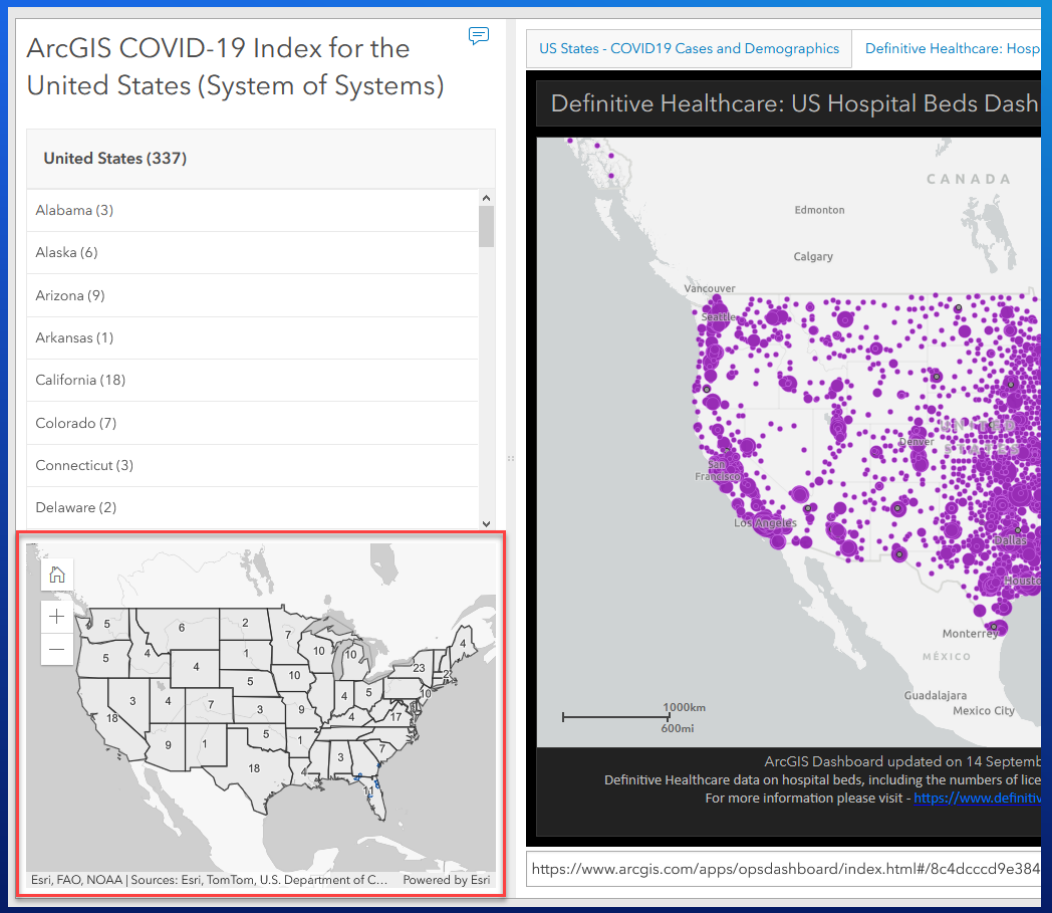


React/JSX/React-Split

```jsx
<Split
  className="App"
  sizes={[25, 75]}
  minSize={100}
  expandToMin={false}
  gutterSize={10}
  direction="horizontal"
  cursor="col-resize"
>
  <div className="split">
    <Modal
      title={application.title}
      content={application.customConfig.initialModalMessage}
    />
    <Sidebar
      title={application.title}
      portalUrl={application.portalUrl}
      webmap={application.webmap}
      currentCategory={currentCategory}
      onCurrentCategoryChange={onCurrentCategoryChange}
      onCurrentCategoryChangeByName={onCurrentCategoryChangeByName}
      layerInfosConfig={application.customConfig.layerInfos}
      categoryDataByLevel={categoryDataByLevel}
      emptyListMessage={application.customConfig.emptyListMessage}
      showFilterInList={application.customConfig.showFilterInList}
      rootCategory={application.customConfig.rootCategory}
    />
  </div>
  <div className="split">
    <MainArea
      currentContent={currentContent}
      noPanelMessage={application.customConfig.noPanelMessage}
    />
  </div>
```

ArcGIS API for JavaScript

- Loaded via esri-loader
- Can be clicked, or responds to category selection above



ArcGIS API for JavaScript

```
useEffect(() => {
  loadModules(["esri/WebMap", "esri/views/MapView"]).then(([WebMap, MapView]) => {
    const webmap = new WebMap({
      portalItem: {
        // autocasts as new PortalItem()
        id: webmapid,
        portal: {
          url: portalUrl
        }
      }
    });

    const v = new MapView({
      map: webmap,
      container: ref.current
    });
    v.when(() => {
      onUpdateChange(v);
      setMapView(v);
    });
  });
}, []);
```

SASS

```
import React, { useState, useEffect } from "react";
// import logo from "./logo.svg";
import Sidebar from "./sidebar/Sidebar.js";
import MainArea from "./mainArea/MainArea.js";
import Modal from "./Modal.js";
import "./Split.scss";
import "./App.scss";
import Split from "react-split";
```

```
.MainArea,
.Sidebar {
  padding: 10px;
}
.Sidebar {
  box-sizing: border-box;
  position: relative;
  .List {
    margin-bottom: 10px;
    .filterInputWrapper {
      &>input {
        width: 100%;
      }
    }
    .SideNav {
      overflow-y: auto;
      height: 400px;
    }
    .currentTab {
      font-weight: bold;
    }
  }
  .Map {
    cursor: pointer;
    .esri-view {
      height: 400px;
    }
  }
```

Deployment

- Create React App – Export
- AWS S3 and CloudFront
- Back-end: Handled by ArcGIS Online!

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