



Sponsor Prompt Guide:

Company	HCA Healthcare
Category	Prototype Innovation
Description of Prompt	<p>HCA is the largest for-profit Healthcare company in the US. The need to geographically view all of our facilities on a map of the US is very valuable. The participants will be developing an interactive map of the US with icons for different HCA Facility types accurately placed at each facility's physical address. Hovering over and clicking on each icon should display facility information including name, address, division, time zone, EMR (Electronic Medical Record system), etc. The ability to filter the facilities by some of these demographic values will allow the participants to score more points.</p> <p>Note, that the user persona for this map is an HCA employee who needs to search and filter HCA facilities based on demographic criteria. The persona is not an HCA patient searching for a single hospital. There are plenty of examples of those from any public hospital site including ours.</p> <p>The participants will be provided an Excel file of all of the facilities with their physical addresses and other demographics for display on the map.</p> <p>Participants can choose any technology stack they desire.</p> <p>A working interactive map would be ideal but in lieu of that, a thoughtful analysis of how to build it could be considered successful.</p> <p>We will award points for adding working features detailed in the judging section below.</p>
Submission Software	Microsoft Teams and either Google or PowerPoint are acceptable for any presentation.
Suggested Languages/Frameworks/Tools	<p>D3js.org has some good map options: https://observablehq.com/@d3/gallery</p> <p>Address geocoding will be required for this project. There are several free options for this on the internet.</p>

	This may help with the stretch goal(#7 below): https://d3-graph-gallery.com/hexbinmap.html
Midpoint Judging/Check-In	Any schedule for check-ins is acceptable with us but we recommend meeting within the first couple of hours after teams have thoroughly reviewed this guide to make sure the requirements are clear. We will take an 'office hours' approach as needed staffed by developers.
Submission Expectations	
High-Level Judging Rubric	<ol style="list-style-type: none"> 1. Create an interactive map of the continental US, including Alaska and Hawaii as an insert (like this example) that displays an icon(circle, square, star, triangle, etc.) for each of 250+ HCA facilities(10pts) 2. Use a different icon for each of the 4 different facility types(Hospital, Division Office, Supply Chain Center or Shared Service Center) (1pt each) 3. For each icon displayed, provide a hover-over that shows the facility Name, Division, and State (1pt) 4. In a narrow panel to the right side of the map, display all facility demographics that are provided in the Excel file – Name, COID, Address, Division, Time Zone, and EMR (Electronic Medical Record system) when a facility is clicked on. (4pts) 5. Prove the ability to zoom into a geographic area to show the icons in more detail. Zooming can be accomplished in many ways – the best method would be to click near a geographic cluster of facilities to display a pre-set zoomed-in view – possibly using the Division (grouping of HCA facilities). Any method of zooming provided will result in points awarded (3-8pts) 6. Create facility filters that show/hide facilities with different demographic values for – address, state or zip code, division, time zone and EMR (Electronic Medical Record system). (1pt per filter) 7. Stretch goal: The biggest issue to solve with this map is that many of our facilities are only a few miles apart and when the map is at the US level the icons would be stacked on top of each other. The ideal solution would separate the icons that are clustered in a small geographic area so that each icon is still selectable without zooming in. For example, Florida is our 2 largest state with some of the largest markets – when viewing the entire US, some of the facility's icons will need to show up in the Gulf of Mexico and some in the Atlantic Ocean. (20pts)

	<p>Excel file notes:</p> <p>Facility Type (#2 above) is determined with these rules:</p> <ul style="list-style-type: none"> • Division Office – Facility_Name contains “Hub Sites” • Supply Chain Center – Division_Name = “Supply Chain” • Shared Service Center – Division_Name = ‘HSC” • Hospital – everything else! <p>Only Hospitals will have valid EMR_MNEM and EMR_Name values that are not “Unknown” and “Need to Identify”</p>
<p>Category Judges <i>Tentative</i></p>	<p>6-8 judges from HCA including developers, analysts and management will be available to judge and help answer questions.</p>