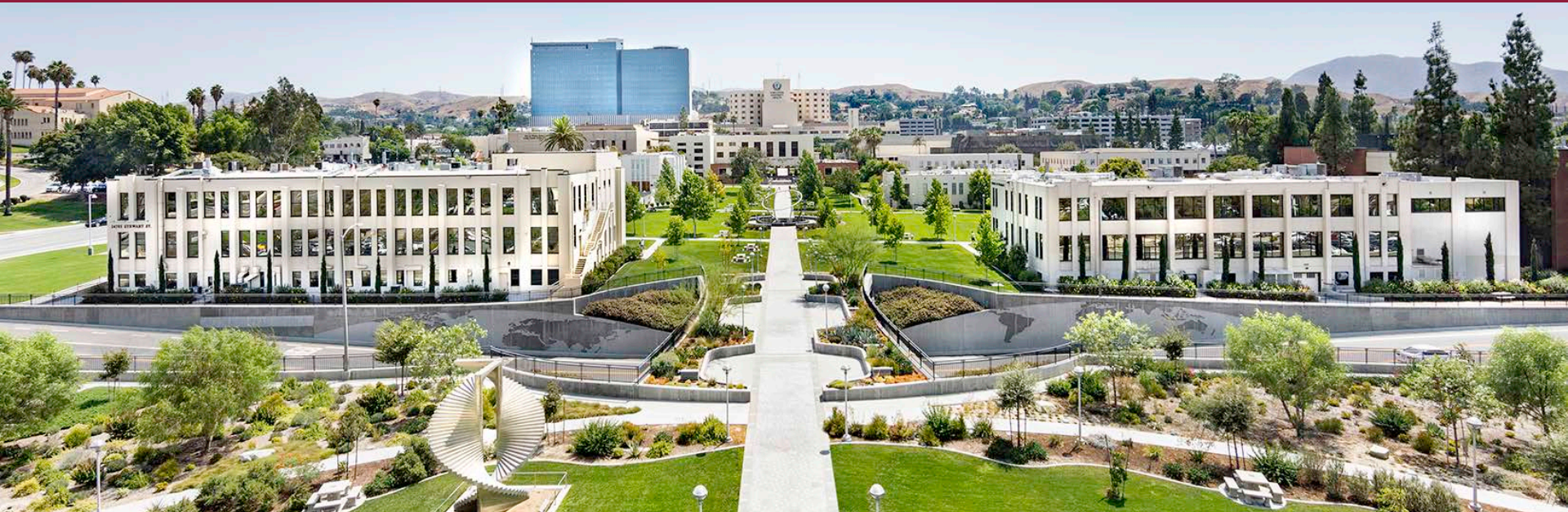


# Bringing GIS Inside

Using ArcGIS Indoors in Healthcare

February 22, 2024



LOMA LINDA UNIVERSITY  
HEALTH

Many Strengths.  
One Mission.

# Who We Are

- » Loma Linda University Health is an academic medical center operating six hospitals in Southern California, a physician practice corporation, remote clinics in the western United States, and affiliate organizations around the world.
- » Founded in 1905, Seventh-Day Adventist Institution
- » 16,000+ employees
- » More than 50,000 inpatient visits per year
- » Over 1.6 million outpatient visits per year
- » 4,500 students at the university in 8 schools
- » 650 resident physicians
- » 3500 babies born each year

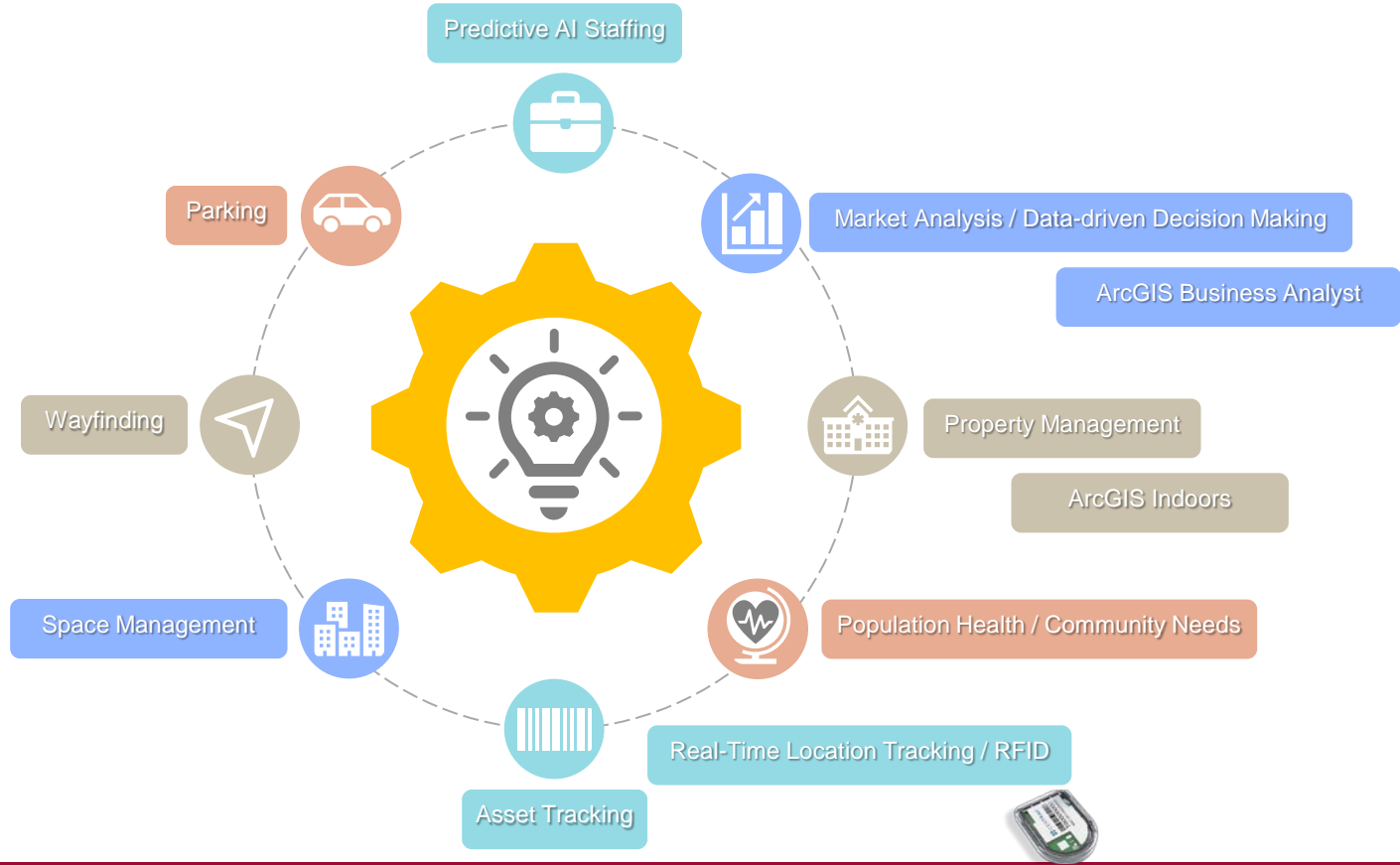


# LLUH Mission

- » We are committed to “make man whole”
  - » Physically
  - » Intellectually
  - » Emotionally
  - » Spiritually
- 
- » How can spatial thinking help promote these core values?



# Location Services - GIS Themes



# What Are We Invested In?

## Patients



Wayfinding

## Employees



Space Management

## Equipment




Asset Tracking

# GIS

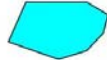


**What is a GIS?**  
(Geographic Information System)

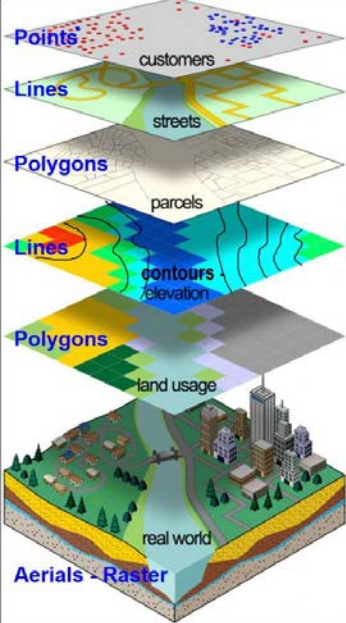
**Think Layer Cake**



**There are three types of GIS data**

1. Points - ● Fire hydrants, manholes, etc.
2. Lines - - - - - Water lines, streets, rivers, power lines, etc.
3. Polygons (area) -  Parcels, land use, lakes/ponds, etc.

A GIS will provide detailed information for any given location through any number of layers



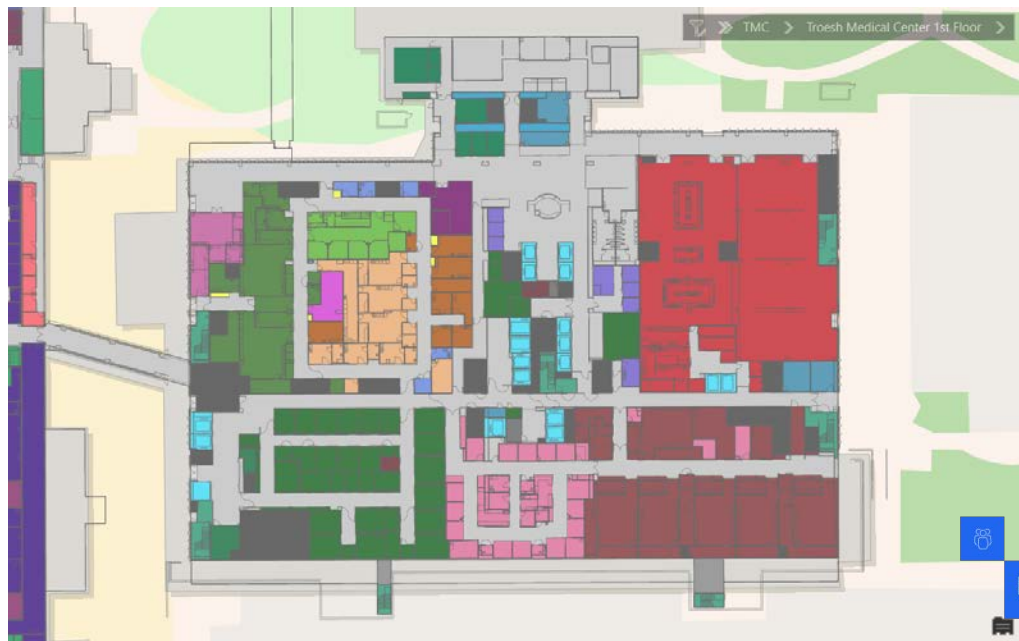


# Bring the GIS inside...



LOMA LINDA UNIVERSITY HEALTH

# What Tools Do We Need? ArcGIS Enterprise

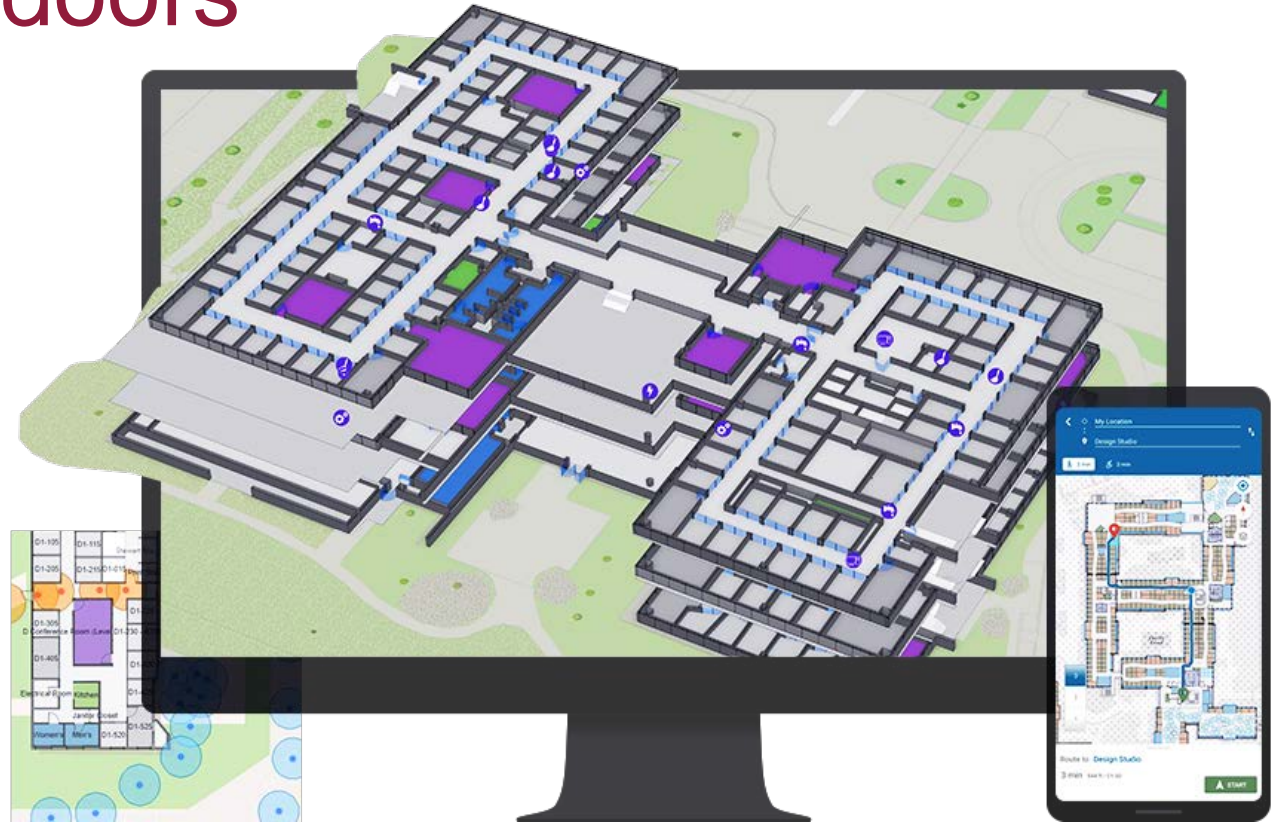


  
ArcGIS Indoors





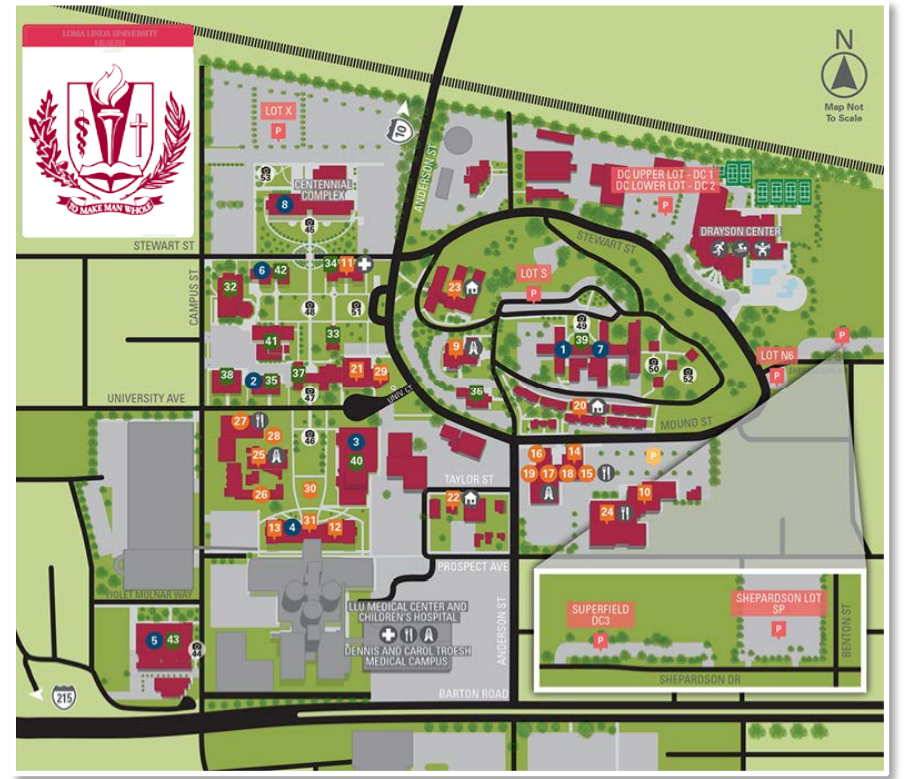
# ArcGIS Indoors



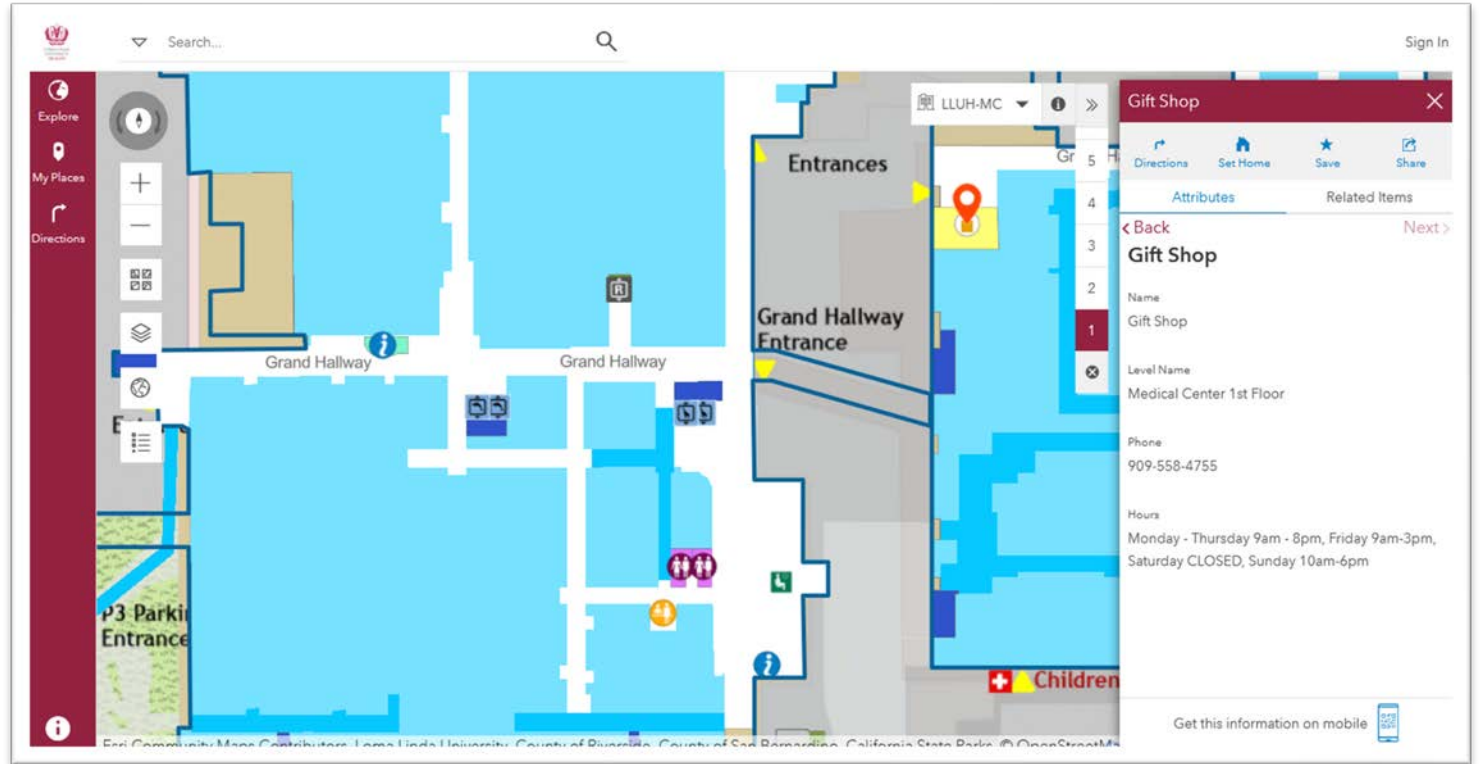
# Wayfinding



- Patient Parking
  - Employee Parking
  - Student Parking
- 



# Wayfinding Demo





# Asset Tracking in Real Time



RFID Tag Vendor: Centrak

- » Using small RFID devices, we can track assets moving throughout the hospital and find their last known location.
- » Each department is responsible for their own equipment
- » Items can be looked up and verified.



# RFID Demo





# Indoors Solutions – 125 Reservation System

- » Remote workers at LLUH
- » Easily reserve hotel workstations for on-site work
- » Future expansion to other facilities that need a space reservation solution

The screenshot displays the 'LLUH Reservations - Bldg 125' application. The interface includes a search bar, a date selector (2/9/2024 and after), and a sidebar with navigation options. The main area shows a floor plan of Bldg 125 with various workstations (e.g., 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300) and a 'Hotel' reservation form. The right sidebar shows 'Current Reservations' (1), 'All Day Reservations' (1), and 'Top reservers by type' (a bar chart). The bottom section shows 'Latest Reservations' and 'All Time Reservations' (2.4k), 'All Day Reservations' (2k), and 'Hourly Reservations' (348).



# Reservation Demo

The screenshot displays a reservation system interface. On the left, a sidebar contains navigation options: Explore, My Places, Hotel, and Meeting. The main panel is titled "Hotel" and includes a search bar, a filter for "Available" (selected) and "Booked", and a toggle for "All day". Below this, there are fields for "Check In" (2/9/24, 12:00 AM) and "Check Out" (2/9/24, 11:59 PM), along with a "Repeat booking" toggle. A dropdown menu for "Area" is set to "Desks", and a "Space Type" dropdown is set to "Any". A red "Find Hotels" button is at the bottom of this section.

The central part of the interface shows a floor plan of a building. A red location pin is placed on desk 232, which is labeled "232 AIO SLIDE DOCK". Other desks are labeled with numbers and types, such as "2500B1", "2502", "2503", "2504", "2505", "2506", "2507", "2508", "2513", "2512", "2511", "2510", "2500B", "233 AIO", "231 SLIDE DOCK", "242 SLIDE DOCK", "240 USB-C DOCK", "238 SLIDE DOCK", "248 AIO", "246 SLIDE DOCK", "244 AIO", "243", and "249".

On the right, a details panel for "Desk 232" is open. It has a title bar with "232" and a close button. Below the title bar are icons for "Book", "Set Home", "Save", and "Share". The panel is divided into "Attributes" and "Related Items" sections. The "Attributes" section lists: Use Type (Desk), Name (232), Level ID (2), Capacity, Assignment Type (Hotel), Reservation Method (Reservable), and PC Type (USB-C DOCK). At the bottom of the panel, there is a link to "Get this information on mobile" with a mobile device icon.



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# Thank you!

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