HCAi **Department of Health Care Access and Information**

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hcai.ca.gov

Hospital Building Safety Board
Technology and Research Committee
June 20, 2024
10:00 a.m. – 4:00 p.m.

The Committee may not discuss or act on any matter raised during the public comment section that is not included on the agenda, except to place the matter on a future meeting agenda. (Government Code §§ 11125, 11125.7, subd. (a).)

Committee Members:	Gary Dunger, Executive Director, Design and Construction, Cedars-Sinai Health System; Committee Chair
	Cody Bartley, DPR Construction; Committee Vice-Chair
	David Bliss, MD, Faraday Microgrids
	Benjamin Broder*, MD, PhD, CPPS, Regional Assistant Medical Director of Quality and Clinical Analysis, Kaiser Permanente
	Janice Cheung, Fire Marshal, Redwood City
	Jennifer G. Cox, MHA, BSN, RN, PHN, CIC, System Director, Epidemiology and Infection Prevention, UC Irvine Health
	Teresa Endres, AIA, ACHA, EDAC, AAH, Senior Associate, Medical Planning Director, Taylor Design
	Michael Foulkes, Director, State and Local Government Affairs, Apple Inc.
	John Griffiths, PE, Electrical Engineer, CONTECH-CA
	Bert Hurlbut, VP Construction, Stanford Healthcare, Retired
	Eric Johnson*, PE, RCDD, ECOM Engineering
	Scott Mackey, AIA, NCARB, APEC, Design Manager, Hensel Phelps
	Michael O'Connor, Principal, Nichols, Melburg & Rossetto
	Belinda Young*, AIA, LEED BD+C, Assoc. DBIA, Regional Leader of Healthcare, HOK
HCAI Staff:	Elizabeth Landsberg, Director
	Chris Tokas, Deputy Director
	Richard Tannahill, Deputy Division Chief
	Arash Altoontash, Deputy Division Chief
	Veronica Yuke, Acting Executive Director
	John Gray, Attorney
	Hussain Bhatia, Supervisor
	Larry Enright, Senior Mechanical Engineer
	Joe LaBrie, Regional Compliance Officer
	Carl Scheuerman, Compliance Officer
	Jamie Schnick, Senior Electrical Engineer
	Nanci Timmins, Chief Fire and Life Safety Officer

*Consulting Member

Item #1   Call to Order and Welcome
             *Facilitator: Gary Dunger, Executive Director, Design and
             Construction, Cedars-Sinai Health System; Committee Chair (or
             designee)*

Item #2   Roll Call and Meeting Advisories/Expectations
Facilitator: Veronica Yuke, HCAI; Acting Executive Director (or designee)

Item #3	Presentation: Cedars-Sinai Marina Del Rey Replacement Hospital Technology Program

- This presentation will review process for developing a technology program in today's fast-changing technological world. The structure of the workgroups is integrated and includes enterprise leadership and subject matter experts from Cedars-Sinai Medical Center and Marina Del Rey Hospital.
- Discussion and public input

Facilitators: Alicia Wachtell, Executive Director, and Rudy Perez, Executive Director, Cedars-Sinai Facilities Planning, Design and Construction (or designees)
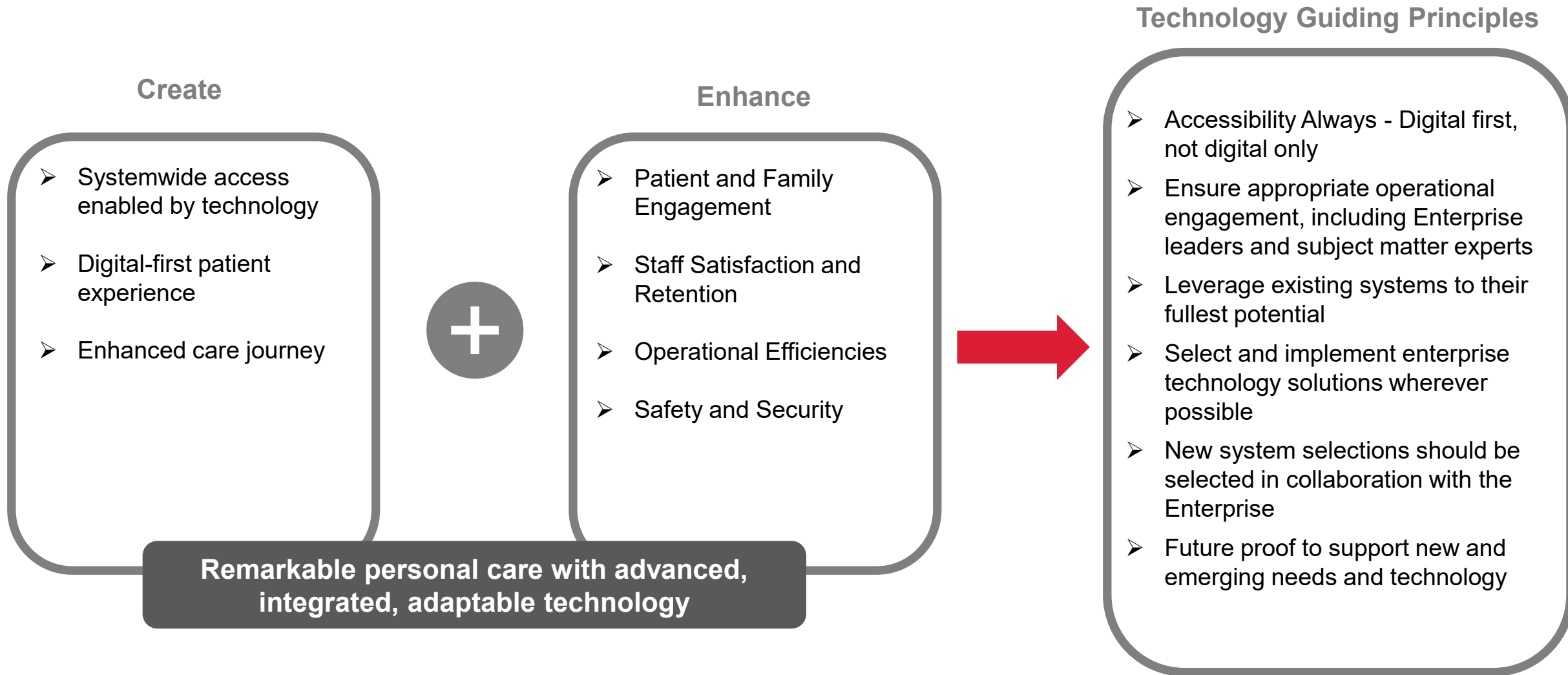
MDR Replacement Hospital
Technology Program Update

HCAI - Hospital Building Safety Board
Technology and Research Committee
June 20, 2024
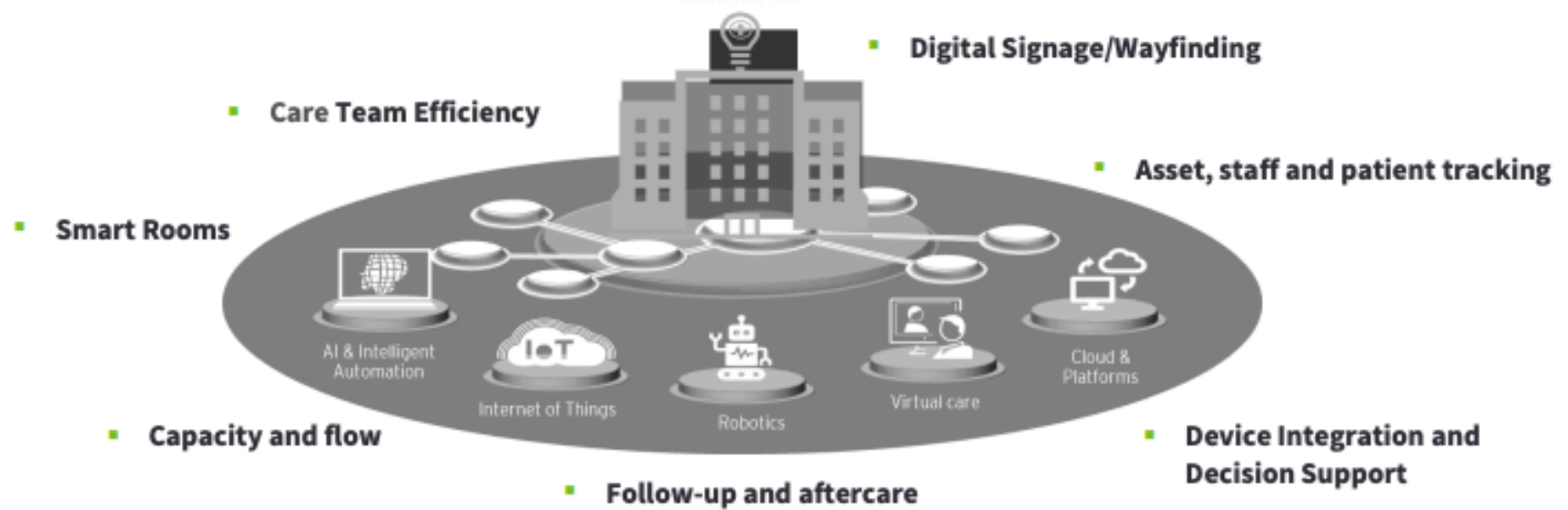
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Technology Strategic Vision & Guiding Principles

Create

- Systemwide access enabled by technology
- Digital-first patient experience
- Enhanced care journey

+

Enhance

- Patient and Family Engagement
- Staff Satisfaction and Retention
- Operational Efficiencies
- Safety and Security

Remarkable personal care with advanced, integrated, adaptable technology

Technology Guiding Principles

- Accessibility Always - Digital first, not digital only
- Ensure appropriate operational engagement, including Enterprise leaders and subject matter experts
- Leverage existing systems to their fullest potential
- Select and implement enterprise technology solutions wherever possible
- New system selections should be selected in collaboration with the Enterprise
- Future proof to support new and emerging needs and technology

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Technology Program Research and Peer Connections

- Peer Conversations
  - Houston Methodist
  - UC Davis
  - UCSF
  - Cleveland Clinic
- Vendor and Consulting Partners
  - Epic - Hospital of the Future
  - Nordic
  - Gartner
  - Various platform vendors
    - (ie. HillRom, Masimo, Apple)
- Operational Site Visits
- Room Mockup for Operations to give input
- Project Team Expertise
  - FPDC partner Vantage Consulting
  - EIS Project Director

- Lessons Learned
  - Future proof hospital to allow maximum flexibility
  - Pilot and/or install new technology ahead of opening
  - Consider future deployment to allow operations time to stabilize to new site
  - The right vendor partners allow for rapid expansion on a single platform

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What are the features of the hospital of the future?

- Care Team Efficiency
- Digital Signage/Wayfinding
- Smart Rooms
- Asset, staff and patient tracking
- Capacity and flow
- Follow-up and aftercare
- Device Integration and Decision Support

AI & Intelligent Automation

Internet of Things

Robotics

Virtual care

Cloud & Platforms

INTERCONNECTED
Connecting everyone and everything; digitally connecting patients, family, clinicians, staff, physical environments and data across the ecosystem IoT, IoMT

INTELLIGENT
Logic-driven, precise and predictive; supported by artificial intelligence to support accurate, real-time decision-making

HUMAN-CENTERED
Iterative design with the end user (and their context) in mind, transparent and predictable with a continuous improvement mindset

HIGHLY RELIABLE
Consistent, closed loop processes utilizing real-time data to drive action and automation to reduce unwarranted variation and minimize errors

SUSTAINABLE
Buildings, networks, platforms and equipment are designed to be flexible, scalable and resilient, reducing maintenance costs and increasing agility

DATA DRIVEN
Processes and decision making determined by or dependent on the collection and then analysis of data

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Technology Program Structure

MDRH Replacement Hospital Executive Steering

MDRH Replacement Hospital Technology Steering Committee

Phase 1: Integrated Workgroups

| Smart Room | Enterprise Wayfinding | Command Center | Mobile |

Phase 2: Service Line Workgroups

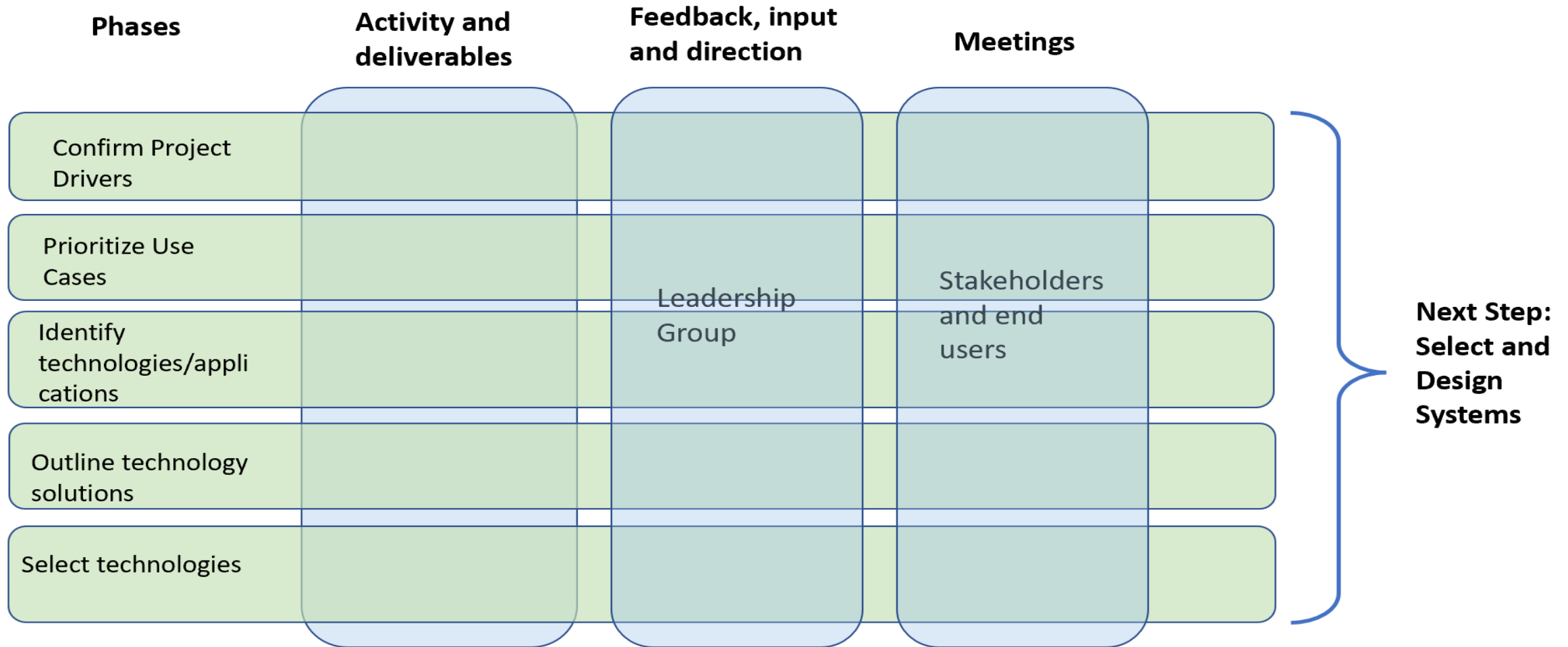| ICU | Emergency Department | Procedural Areas | Med/Surg/Obs |
Pharmacy	Laboratory	Food & Nutrition Services	Imaging
Orthopedics	Spine	Weight Loss	Minimally Invasive Surgery
Supply Chain	Cardiology	Registration & Admissions	...And Many More!

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Technology Plan Process

Phases	Activity and deliverables	Feedback, input and direction	Meetings	
Confirm Project Drivers				
Prioritize Use Cases				
Identify technologies/appli cations		Leadership Group	Stakeholders and end users	Next Step: Select and Design Systems
Outline technology solutions				
Select technologies				

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Technology Samples

Active Health System Projects Planned to be Leveraged at MDRH

- Virtual Nursing, Virtual Sitter & AI

  - Centralized Clinical Command Center

- Centralized Patient Flow Command Center

- Infusion Pump Integration

- Device Integration

- Smart Bed Integration

- Patient Meal Ordering

- Mobile & Unified Communications

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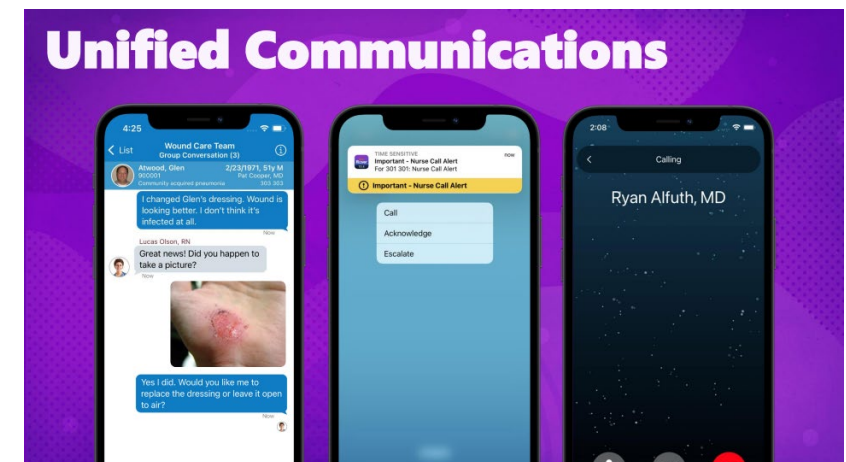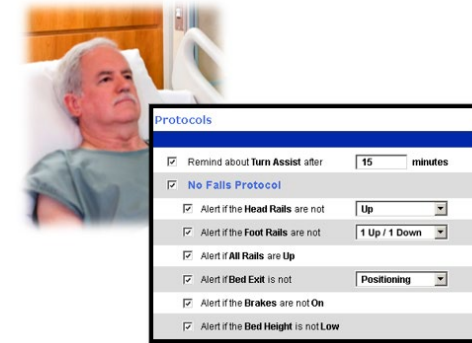
Patient Engagement and Experience

In Room Entertainment System

Electronic whiteboard displays care team, upcoming tasks and other key information.
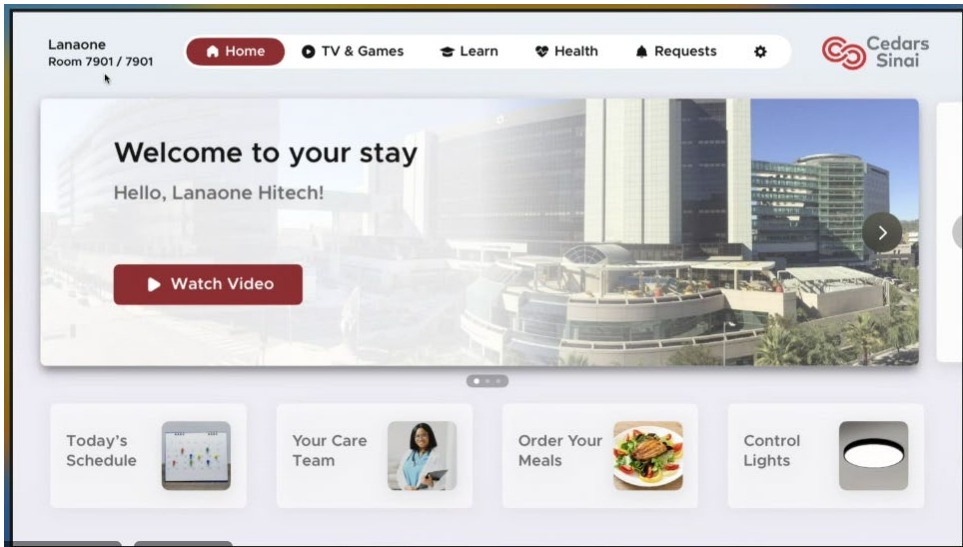
Epic based text messaging helps the care team keeping patients updated on upcoming tasks.

Entertainment is available using the pillow speaker. RTLS integration with badges can control the TV when physicians or nurses enter the room.

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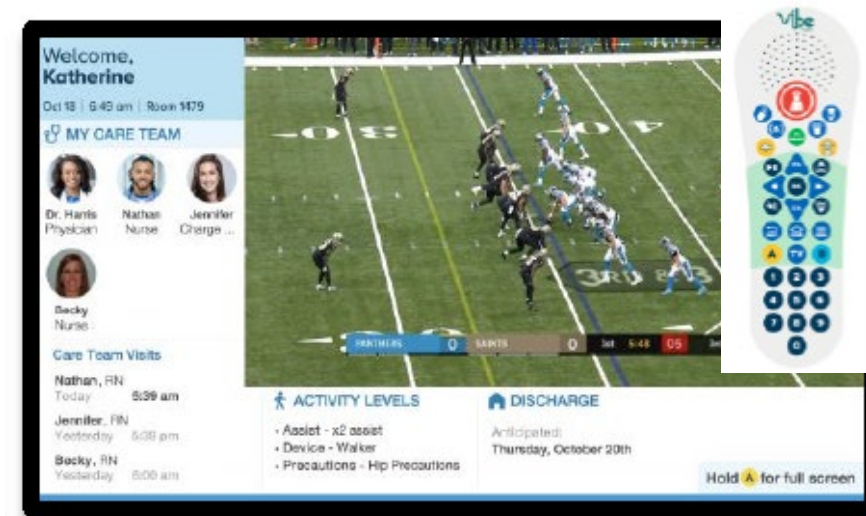
PATIENT EXPERIENCE & STAFF EFFICIENCY

PATIENT ROOM DIGITAL DOOR DISPLAY

Digital door display helps staff know how to address the patient, quickly view important information like isolation status and know where the patient is if not in their room

Patients in non-bedded areas could display on a central large monitor with the same key information for staff

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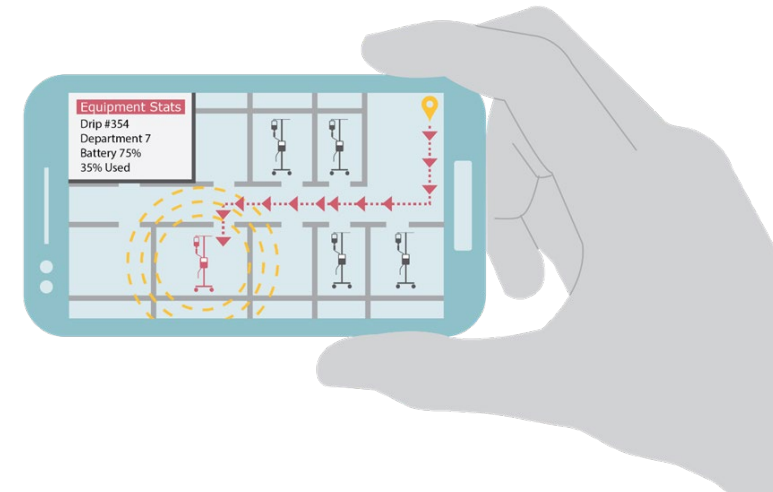# PATIENT FLOW, STAFF SAFETY & EFFICIENCY

REAL-TIME TRACKING SYSTEM

Patient tracking and management to optimize workflows and enable real-time notifications
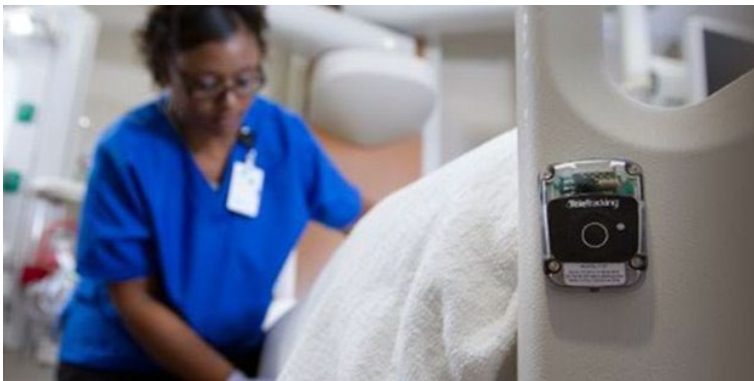
Staff Duress via push of a badge button

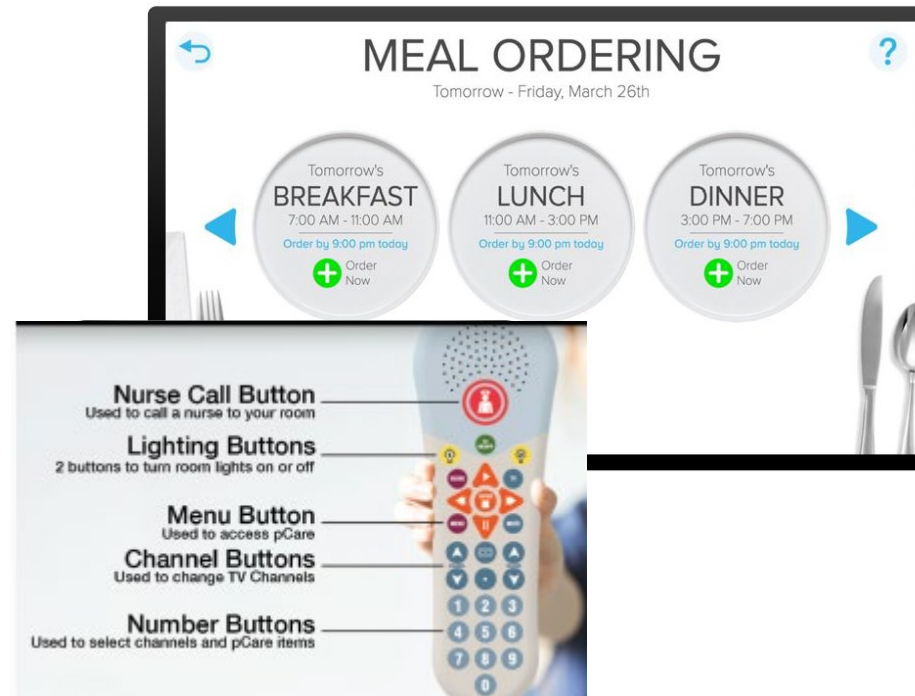Assest tracking helps more quickly locate patient care equipment
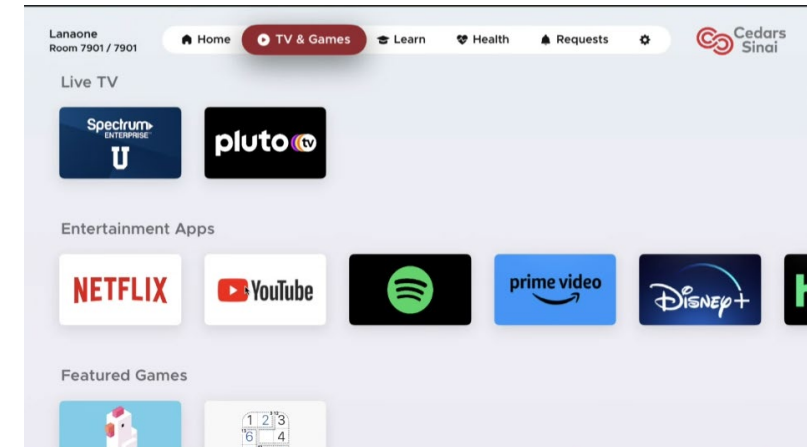

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PATIENT EXPERIENCE & STAFF EFFICIENCY
IN ROOM INTERACTIVE SYSTEM

Patients can control temperature, lighting and blinds via integration with the building management system
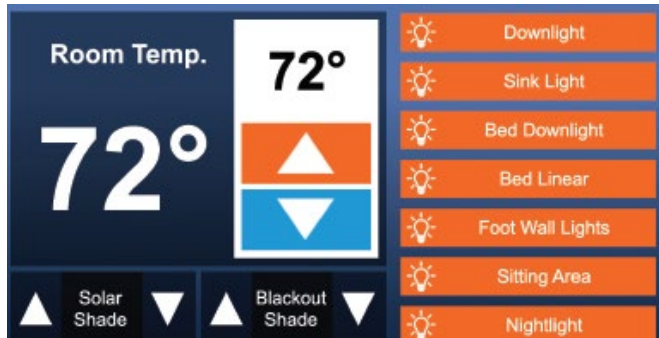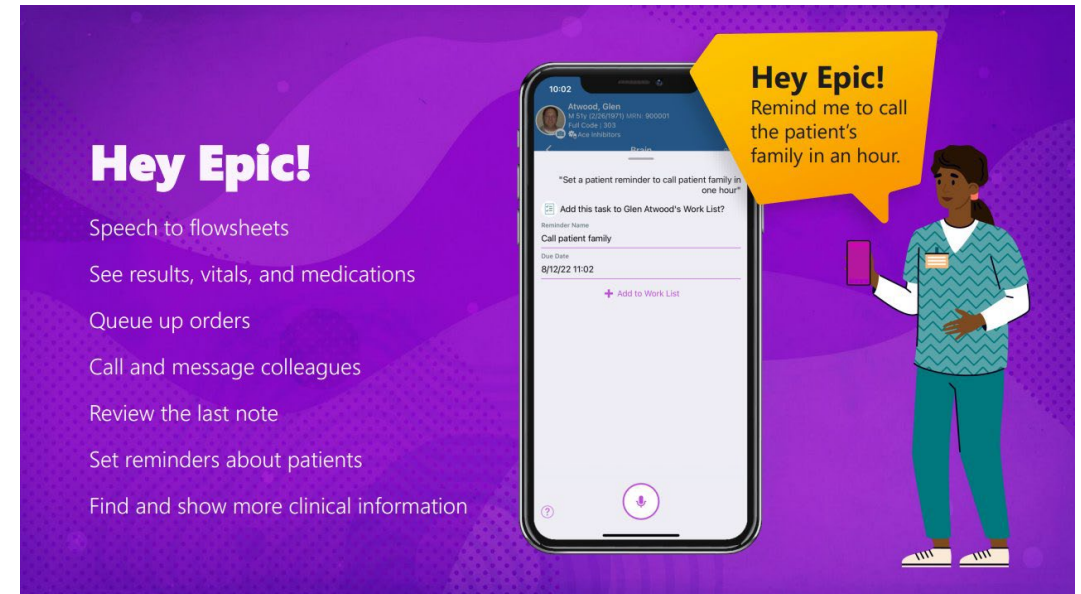
Patients and their visitors can order their meals

Full suite of entertainment options including ability to cast from their own device

Cedars Sinai

STAFF EFFICIENCY & PATIENT SAFETY
IN ROOM TECHNOLOGIES

Ambient listening and voice recognition enables streamlined documentation by clinicians.

STAFF EFFICIENCY

SUPPLY CHAIN TECHNOLOGIES

PAR management system allows for efficiency and automation with Oracle automated notifications and more timely replenishment of supplies.
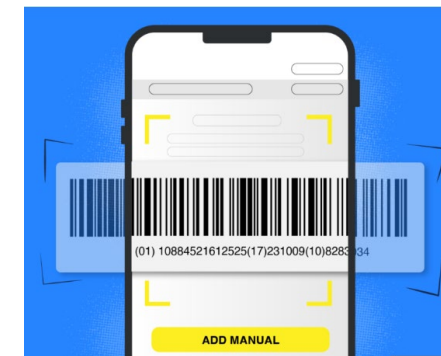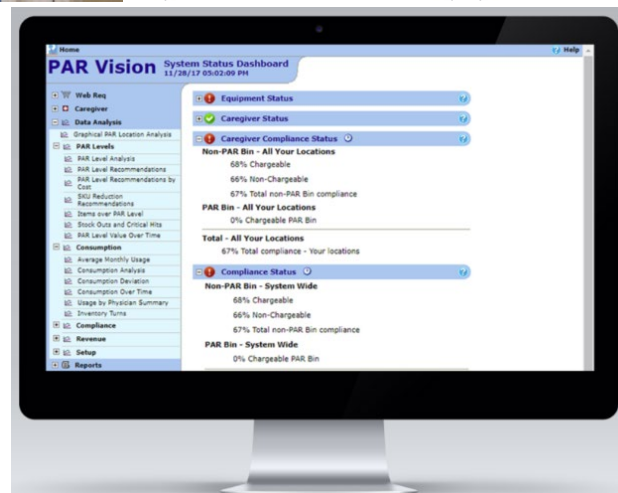
Digital labels allow dynamic displaying of key information like delivery and expiration dates.

PAR Bins Weight-Based Tracking

PAR Bar Weight-Sensing Racks

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Lessons Learned

- Develop Plan Early

- Define Decision Makers

- Clarify Capital vs Operational Budgets

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Questions & Discussion

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Health System

Item #4   Presentation: Healthcare Microgrids
- Update on developing the process for delivering Microgrids as Emergency Power Sources (EPS) for California Healthcare Facilities
- Discussion and public input

Facilitator: Jamie Schnick, Senior Electrical Engineer, HCAI (or designee)

Item #5   Technology and Research Committee Goals for 2024
- Discuss goals for the Committee
- Discussion and public input

Facilitator: Gary Dunger (or designee)

TECHNOLOGY AND RESEARCH COMMITTEE FOCUS/GOALS

Goals from 2021:

- Explore subjects of telemedicine and robotics

- Discuss the effect of technologies on healthcare equity

- Monitor CDPH electronic health records redundancy issues in the event of power failure and watch for potential effects to code

- Emerging tools
  - Technologies that help reduce the carbon footprint for healthcare facilities and implementation relative to code implementation of emerging tools relative to the code.

Current Focus/Goals:

- Explore subjects of telemedicine and robotics

- Discuss the effect of technologies on healthcare equity

- Explore emerging technologies that help reduce the carbon footprint for healthcare facilities and implementation relative to code implementation of emerging tools relative to the code.

- Address how to regulate remote services (e.g., medical records, web-based nurse call, off-site server farms, etc.)
  - Define what is a medical record
  - Monitor CDPH electronic health records redundancy issues in the event of power failure and watch for potential effects to code
  - Invite industry members to address/inform the committee on the reliability of cloud-based systems (fire alarm, energy monitoring, etc.)

- Explore wastewater solutions

Item #6	Comments from the Public/Committee Members on Issues not on this Agenda
The Committee will receive comments from the Public/Committee Members. Matters raised at this time may be taken under consideration for placement on a subsequent agenda.
Facilitator: Gary Dunger(or designee)

Item #7   Adjournment

Future Technology and Research Committee meeting:
- November 12, 2024