

# Opportunities and Challenges in HTM

## Are You Ready?

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**April 16, 2025**

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# Opportunities and Challenges in HTM – Are You Ready?

## Session Overview

The HTM landscape is very dynamic, making it susceptible to numerous challenges but at the same time opening doors to many opportunities. While this may vary based on the hospital's size, type, and location, HTM departments should develop strategies to address our profession's evolution. This ranges from learning from the past, working collaboratively with other healthcare stakeholders, developing a “survival toolkit” and smart performance measures and goals, to employee retention and more.

Your ideas and best practices are highly valued as we collectively enrich this meaningful conversation.



# Opportunities and Challenges in HTM – Are You Ready?

- **Agenda**

- Introductions
- Current HTM Landscape
- Opportunities and Challenges – different perspectives
- What does the future hold for HTM?

- **Objectives**

- Review past, present and future landscape of HTM
- Explore resources needed to support the ever-evolving HTM landscape
- Explore Opportunities and their Challenges



# Izabella Gieras MS, MBA, CCE, CSSBB, FACCE, AAMIF

- Currently the Director of Clinical Engineering at Huntington Hospital in Pasadena and Cedars-Sinai Medical Center in Beverly Hills, CA
- Worked as the Director of Clinical Engineering with ARAMARK Healthcare/Mount Sinai Medical Center, New York, NY; Director of Technology Management at William Beaumont Hospital in Royal Oak, MI
- Past President of ACCE (American College of Clinical Engineering)
- Fellow of ACCE, AAMI
- Certified Clinical Engineer (CCE)
- Holds a B.S. in Electrical Engineering from the University of Cape Town in South Africa, M.S. in Biomedical Engineering from the University of Connecticut and an MBA from Walsh College in MI



## Huntington Hospital Affiliation with Cedars-Sinai Becomes Official

Published on Wednesday, August 4, 2021 | 12:18 pm



The affiliation between [Huntington Hospital](#) and [Cedars-Sinai Health System](#) became official Wednesday, with the completion of the appropriate regulatory approvals. The affiliation will strengthen Huntington's long-term commitment to providing affordable, accessible, high-quality care to the San Gabriel Valley.



# Cedars-Sinai Medical Center - Clinical Engineering



- Located in Beverly Hills, CA
- Licensed for 889 beds
- Over 14,000 employees
- 91,014 patients seen in the ED annually
- Over 32,000 surgeries annually
- Over 105 anesthesia locations
- 4500+ end user computing devices
- 34 members strong (BMETs, CEs, Imaging Specialists, Manager, Director, Support Staff)
  - Over 33,000 medical devices
  - Reports to Enterprise Information Services

# Huntington Health - Clinical Technology



- Located in Pasadena, CA
- Level II Trauma Center with 619 licensed beds
- Bariatric & Stroke Center
- 18 Operating Rooms
- 3 DaVinci Robotic Systems
- 6 Cath Labs & IR Suites
- 6500+ personnel
- 300+ applications
- 4500+ end user computing devices
- Affiliate of the Cedars-Sinai Health System
- 12 members strong (BMETs, CE, Manager, Director, Support Staff)
  - Over 10,000 medical devices
  - Reports to Enterprise Information Services



# Donald Armstrong, CHTM, CBET, CABT

- Currently the Technical Training Manager at Renovo Solutions
- Life long Biomed and feel we are all put on this earth to share our gifts.
- Love the HTM Field and what it has meant to me and my family.
- 42 years as a Biomed, many of those in the OR
- Have worked at Stanford Health Care, UCSF, GE Healthcare and Aramark
- On Facility with AAMI teaching the CBET Review Course.
- CBET, CHTM, CABT
- AAMI TMC, Editorial Board BIT, AAMI Standards Committees
- Past President of HTMA Texas
- CABMET, CMIA, HTMA Texas, FBS

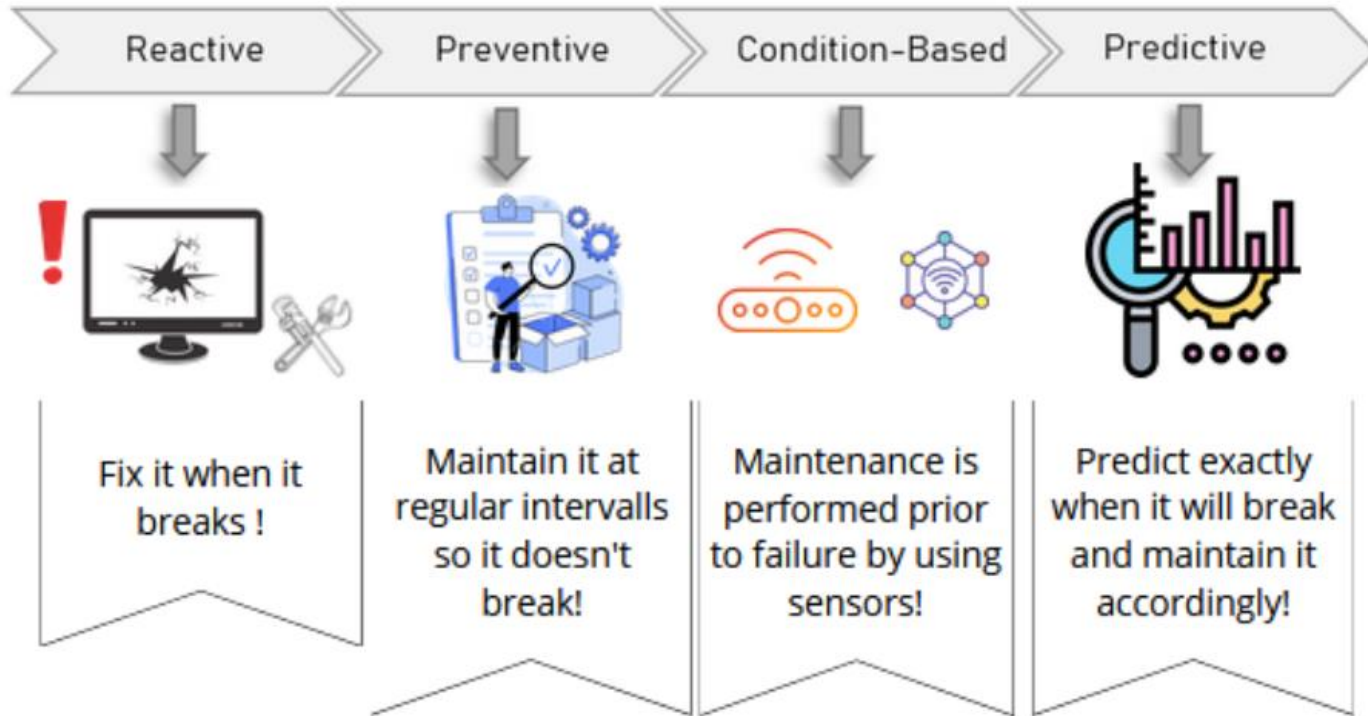


# January 2025 Renovo University Phase I Class at CBET College in San Antonio



- January Phase I Capstone from 2/24/25 to 2/28/25
- From Left to Right  
Mat Colson (Instructor),  
Donald Armstrong (Instructor) Chris Farsee,  
Arie DeJong, Seth Page,  
Michael Jenkins, Rohan Patel,  
Diana Castagna, Sasha Caceanov,  
Megan Hoover, Daniel Rodriguez,  
Alan Nordstrom, Josue Munos,  
Curtis Prater, Kyle Nguyen,  
Paul Rohling (instructor)  
Brian Rommel-Lopez

# Past, Present and the Future



Discovering the Possibilities



# Artificial Intelligence In Medical Devices Global Market Report 2024

## TBRC GROWTH FORECAST

2024 – \$22.3 billion  
2028 – \$97.07 billion

## EXPECTED GROWTH RATE THROUGH 2024-2028

44.4 %

## NORTH AMERICA

was the largest region in the AI in medical devices market in 2023

Increasing emphasis on the **continuous monitoring of patients'** health parameters is a key driver

Leading medical device manufacturing companies are strategically **integrating advanced AI assistance** into their imaging devices



As per the report by Fortune Business Insights, the global U.S. medical devices market size is projected to reach USD 291.04 billion by 2030, at a CAGR of 6.1% during the forecast period

Pune, India, June 07, 2023 (GLOBE NEWSWIRE) -- According to Fortune Business Insights, the [U.S. Medical Devices Market size](#) was valued at USD 184.61 billion in 2022 and is projected to grow from USD 192.78 billion in 2023 to **USD 291.04 billion by 2030**, exhibiting a **CAGR of 6.1%** during the forecast period. The rise is due to an escalating

## Healthcare Technology Trends



Key Management Group

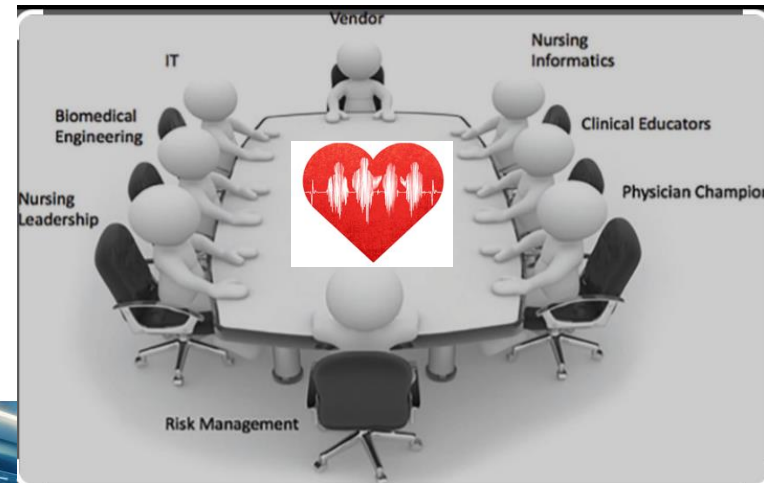
The **average** biomed tech is responsible for up to

**1,200** devices



## The Future Outlook for **Biomedical Equipment Technicians**

The need for skilled technicians to maintain life-saving medical equipment is increasing rapidly, driven by an aging population and continuous technological advancements. This means a bright future awaits biomedical equipment technicians, with the U.S. Bureau of Labor Statistics projecting a *13% job growth from 2022 to 2032.*



# Focus Areas – Opportunities and Challenges in HTM

- **Set smart goals**
- **Optimize scope/workflows**
  - Use of Data and Technology
  - Communication
- **Customer satisfaction & skill set**
- **Invest in your staff: 3 R's**
  - Training
  - EQ



# Focus Areas cont.

- **Technological advancements**
  - Are you prepared?
- **Manage budgets**
  - Do more with less
- **Networking: internal and external**
- **Put the dept. on the map**

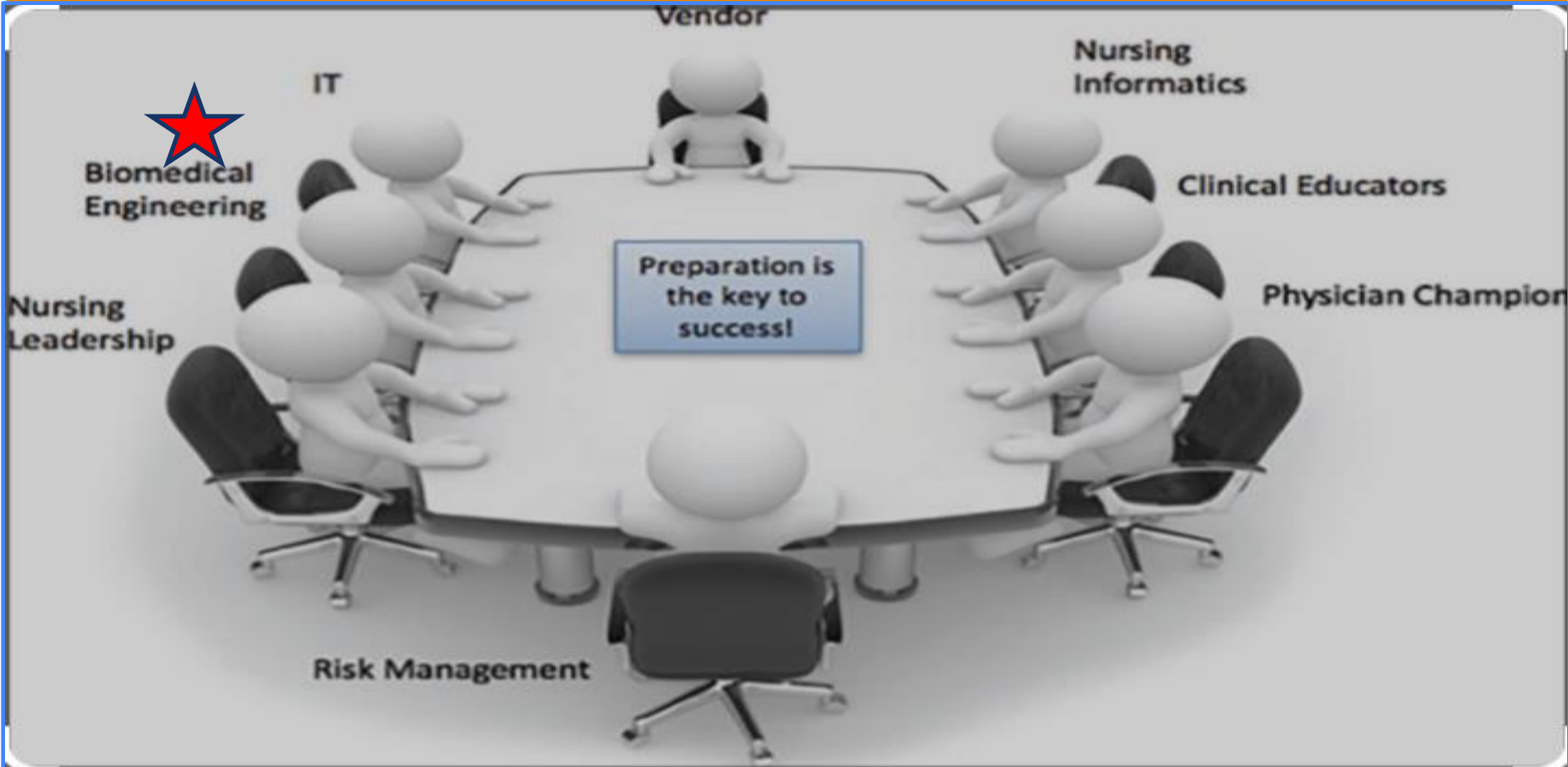


“ Smart Companies recognize their employees as their greatest advantage. ”

What is on your list?



# Relationship Building with HTM



# Relationship Building with HTM cont.

- **Increase Visibility & Engagement**

- Make your department visible
- Join multidisciplinary meetings (committees, events, orientations)
- Host an **HTM Open House** & participate in **HTM Week**

- **Opportunities to Strengthen Connections**

- Engage with hospital leadership
- Build internal team relationships
- Strengthen clinical partnerships through:
  - **Daily rounding**
  - **EOC & Safety meetings**

- **Challenges to Address**

- Small department size
- Changing perception from "repair team" to **trusted partners**



# Increased need for Customer Service and Communication Skills

**COMMUNICATION**

*The Most Important*

**SKILL**

**in CUSTOMER SERVICE**

# Increased need for Customer Service and Communication Skills cont.



- **Identify your customer**
  - Internal and external
- **Do you have the right customer satisfaction skill set?**
  - Does your staff need more training?
- **Damage control**
  - How do you come back from a bad customer experience?
  - What's in your bag of tricks?

## The 2024 Most In-Demand Skills

1. Communication
2. Customer service
3. Leadership
4. Project management
5. Management
6. Analytics
7. Teamwork
8. Sales
9. Problem solving
10. Research

Top skill of the moment: Adaptability



# Increased need for Customer Service and Communication Skills cont.

## ● Opportunities for Growth in HTM

- **Customer service and communication** can be **taught and learned** with the right approach.
- Understanding the **difference between interpersonal and intrapersonal communication** improves team dynamics.
- Elevated **customer service leads to higher employee satisfaction** and engagement.
- **Effective communication bridges the gap** between HTM professionals and clinicians, fostering stronger collaboration.
- Investing in **growing new and emerging leaders** ensures long-term success

## ● Challenges in Implementing These Skills

- **HTM is primarily a technical career**, requiring a shift towards soft skills development.
- **Training both new and legacy staff** in communication and customer service can be difficult.
- The need to find **innovative and effective ways** to teach these crucial skills



## Using Data as a Driver



# Using Data as a Driver

- What data is meaningful?
- How to track the data?
- Where to obtain the data?
- How to make the data meaningful?
- Where does AI fit into HTM?



How HTM can leverage AI to enhance efficiency & productivity



Complimentary webinar to ACCE members  
Leveraging Standardized CMMS Data  
to Collaborate Towards Smarter HTM Decisions

Thursday, March 25, 2021; 12 pm - 1pm (ET)



**Matt Baretich**  
President  
Baretich Engineering, Inc.



**Rob Mayer**  
Sr. Director  
Service Product Management  
PartsSource



Moderator  
Kamecia Bruce

Sponsored by



# Using Data as a Driver cont.

- **Opportunities**

- Using data to determine **department and individual performance**
- Identifying **important indicators** for success
- Measuring **KPIs** to improve efficiency
- Utilizing data for **purchasing and parts budgeting**



- **Challenges**

- **Losing touch with the work** by focusing too much on data
- **Losing touch with staff** due to over-reliance on metrics
- **Assessing performance only through data** instead of real-world insights

# Acquiring and Using Networking Skills



# Acquiring and Using Networking Skills

- **Get involved early on**
  - Member on the Board, Committee, Project, etc.
- **Engage and mentor others**
- **Stay connected**
  - Attend national, state, local conferences/meetings
  - Present
- **Become a Fellow**
- **Sign up today!**



# Acquiring and Using Networking Skills cont.

## ● Why IT Skills Matter in HTM

- Modern healthcare technology is heavily integrated with IT systems, making IT proficiency essential for biomed. Key areas include:
  - Networking & Connectivity – Medical devices connect to hospital networks. Biomed. should understand basic IP addressing, VLANs, and wireless connectivity.
  - Cybersecurity Awareness – Protecting devices from malware, unauthorized access, and data breaches is critical.
  - Operating Systems & Software – Familiarity with Windows, Linux, and medical software helps in troubleshooting and system configurations.
  - Database & Asset Management – Using CMMS (Computerized Maintenance Management Systems) for tracking maintenance, logs, and compliance.
  - Interfacing with IT Teams – Understanding how medical devices communicate with EHR and other hospital systems.



# Acquiring and Using Networking Skills cont.

- **How to Develop These IT Skills**
  - On-the-Job Learning – Work closely with IT teams to gain hands-on experience.
- **Certifications (Recommended for Biomed):**
  - CompTIA ITF+ (Basic hardware/software troubleshooting)
  - CompTIA Network+ (Networking fundamentals)
  - CompTIA Security+ (Cybersecurity awareness)
  - CBET (Certified Biomedical Equipment Technician) – Some IT topics included.
- Online Courses & Training – Platforms like Coursera, Udemy, and LinkedIn Learning offer networking, cybersecurity, and medical IT courses.



# Staffing: Recruiting, Recognizing and Retaining



# Past, Present and Future

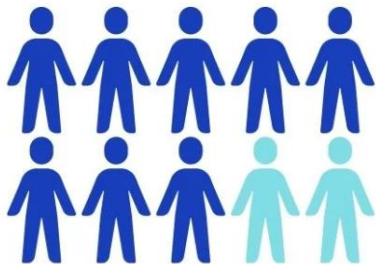
- Past
  - Adequate candidate pool
  - Stayed till retirement
  - Happy with a THANK YOU and a regular paycheck
- Present
  - Options with many open positions
  - Short tenures
  - High expectations
- Future
  - Predictive analytics/AI
  - Large retention incentives
  - High expectations with fast promotions



94%

of employees would stay longer if their company invested in their professional development

Source: LinkedIn Workplace Report



Source: Owl Labs

84% of employees shared that working remotely would make them happier.

HiringThing™

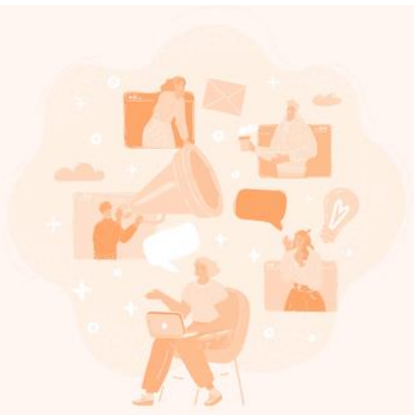
98%

of employees said they wouldn't work for a company whose values didn't align with theirs.

via City of London Economic Research

4.1 YEARS

is the average time an employee stays with an employer.



McKinsey

40%

of employees who left jobs last year did so within the first six months.

HiringThing™



42%

of employees seeking new work didn't feel like their company was maximizing their abilities and skills.

HiringThing™

Source: Deloitte

57%

of employees have quit a job because of a poor relationship with their manager



# Recruiting Talent

- Match right title and JD
- Partner with your recruiter (internal/external)
  - Job Fairs
  - Internships
  - Local schools
- Assess competition
- Ensure your benefits offerings are competitive
  - Comp
  - Medical and related
  - Professional growth



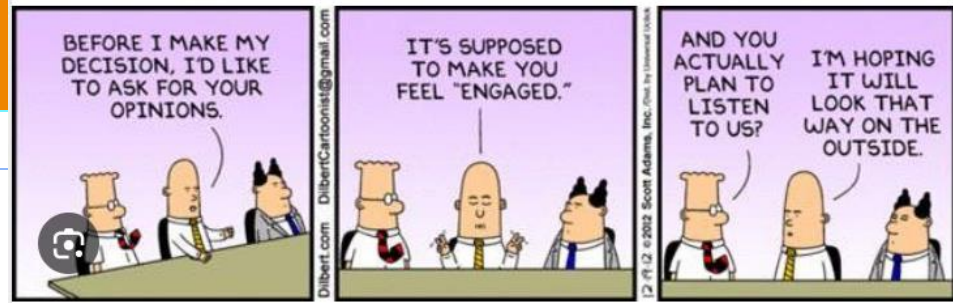
# Recognizing Talent cont.

- Regular awards/public recognition
  - Employee of the month/quarter
  - Peer to peer
  - Spot on/on-time/step up approach
- Personal/handwritten THANK YOU cards/notes
  - Send to home address
- Internal promotions
  - Recognize talent



# Recognizing Talent cont.

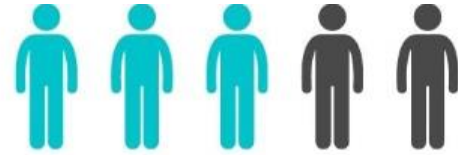
- Engage with your employees
  - Learn what they like and dislike
  - Listen, meet regularly
  - Celebrate successes/b-day/special events
  - Decorate the dept for special occasions/Holidays
- Check on internal policies on gift giving
  - Who does not like Starbucks ☺



## THE IMPACT OF EMPLOYEE RECOGNITION PROGRAMS



SelectSoftware  
REVIEWS



**3 in 5**

employees would rather work for a company that had a culture where people were praised and thanked regularly for doing good work, than for a company that paid **10% more** but offered no praise or thanks.

**54%**

of employees prefer verbal "Thank you" for their day-to-day accomplishments

**47%**

of employees prefer growth opportunity for a significant accomplishment

### Employee Recognition & Productivity



**69%**

of employees would work harder if they felt their efforts were better appreciated



**MD  
EXPO**



# Retaining Talent

- Cost of turnover
- Loss of company knowledge
- Interruption of operations
- Turnover often leads to more turnover
  - Decreased morale
  - Impact on productivity
- Regaining efficiency
  - May lead to restructure



# Training our Leaders

## LEADERSHIP DEVELOPMENT



# Training our Leaders

- What kind of leadership training your institution offers?
- Have you attended?
- How was your experience
- How do you transfer the knowledge to others?

## METHODS OF DEVELOPING LEADERSHIP SKILLS



SELF  
AWARENESS



FORMAL  
TRAINING



HANDS ON  
EXPERIENCE



360 DEGREE  
FEEDBACK



COACHING  
/MENTORING



SELF DIRECTED  
LEARNING



# Technical Training and Certifications



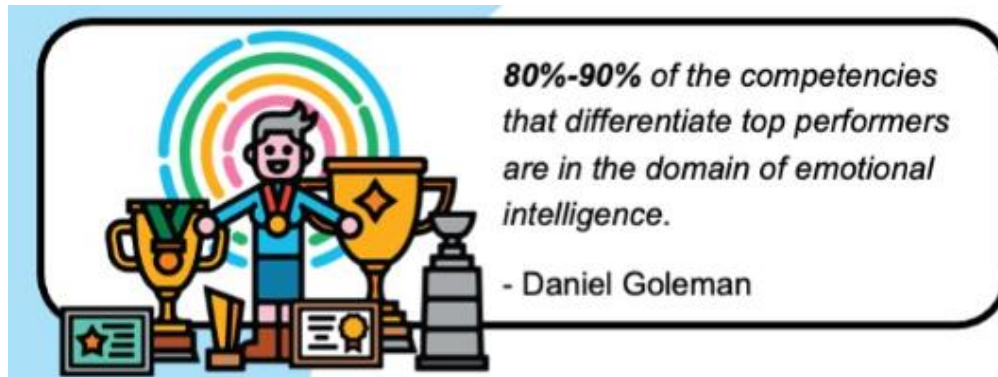
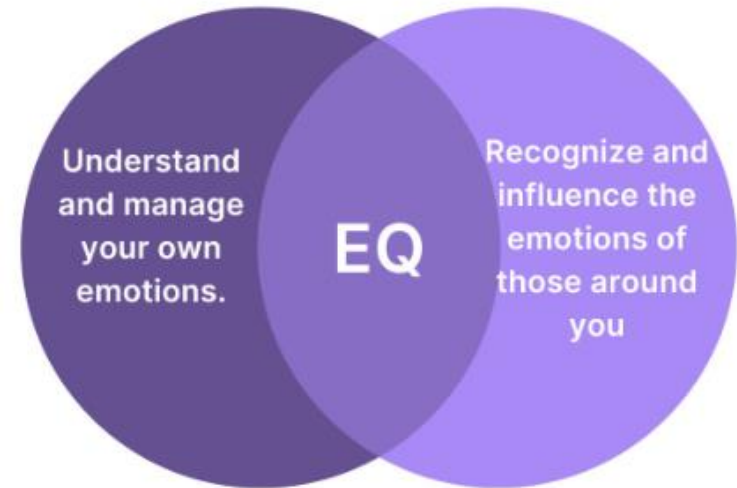
# Technical Training and Certifications

- Don't be afraid to create alphabet soup
- Consider an advanced Degree
- Attend OEM Training
  - Make a strong business case to attend
  - Keep track of all training certificates
  - Share your knowledge
  - Use your new skills
- Why get certified?
  - Maintain high level of knowledge and skill set
  - Show you can do it
  - Show commitment to the field
  - Motivate others
  - **Join the elite club**



# EQ – Emotional Intelligence & Support

- Get to know your employees
  - Celebrate b-days/special events
  - Make time
  - Be patient
- Work life balance
- Mental health
- Diversity



# Social Media and Exposure



# Social Media and Exposure

## Why Social Media & Exposure Matter for HTM

*Unlocking Growth, Recognition & Innovation in Healthcare Technology Management*

- **Raises Awareness**
  - Educates the public & healthcare staff on HTM's role in patient care.
  - Highlights HTM's impact on safety, uptime, and cost savings.
- **Attract New Talent**
  - Inspires students to explore HTM careers.
  - Supports workforce development & succession planning.
- **Strengthen the HTM Community**
  - Enables networking, idea sharing, and collaboration.
  - Builds morale through celebrating certifications, wins, and milestones.
- **Gain Visibility Within Healthcare**
  - Showcases HTM contributions to hospital leadership.
  - Helps secure budget, resources, and recognition.
- **Amplify Advocacy & Innovation**
  - Supports national efforts like Right to Repair.
  - Encourages creativity by sharing solutions and tech trends.

*HTM doesn't just support healthcare—it powers it. Social media makes that visible.*



What have we learned?




**WHAT HAVE WE  
LEARNED ?**

# What have we learned?

- Opportunities at our fingertips
  - Right place, right time, right people
  - We have the tools and desire to meet this opportunities and challenges
  - Up to all of us in HTM to find ways to change and grow. Staying still is not a good plan
  - Be a driver in your Hospital or organization
- Challenges
  - We are problem solvers, and we know how to strategize around these challenges
  - Stepping out of own conform zone to confront the new landscape



# Share Your Experiences



**Questions**



**Comments**



**Feedback**



# Share Your Experiences



Thank You for attending



# HTM Week 2025: May 18-25



# Thank You for attending

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