



HCAC 2023

7TH QUALITY HEALTH CARE CONFERENCE AND EXHIBITION

Nov 13th-15th 2023

Globalization Toward Quality & Patient Safety
A Future Perspective

الجودة من منظور عالمي - تطلعات مستقبلية

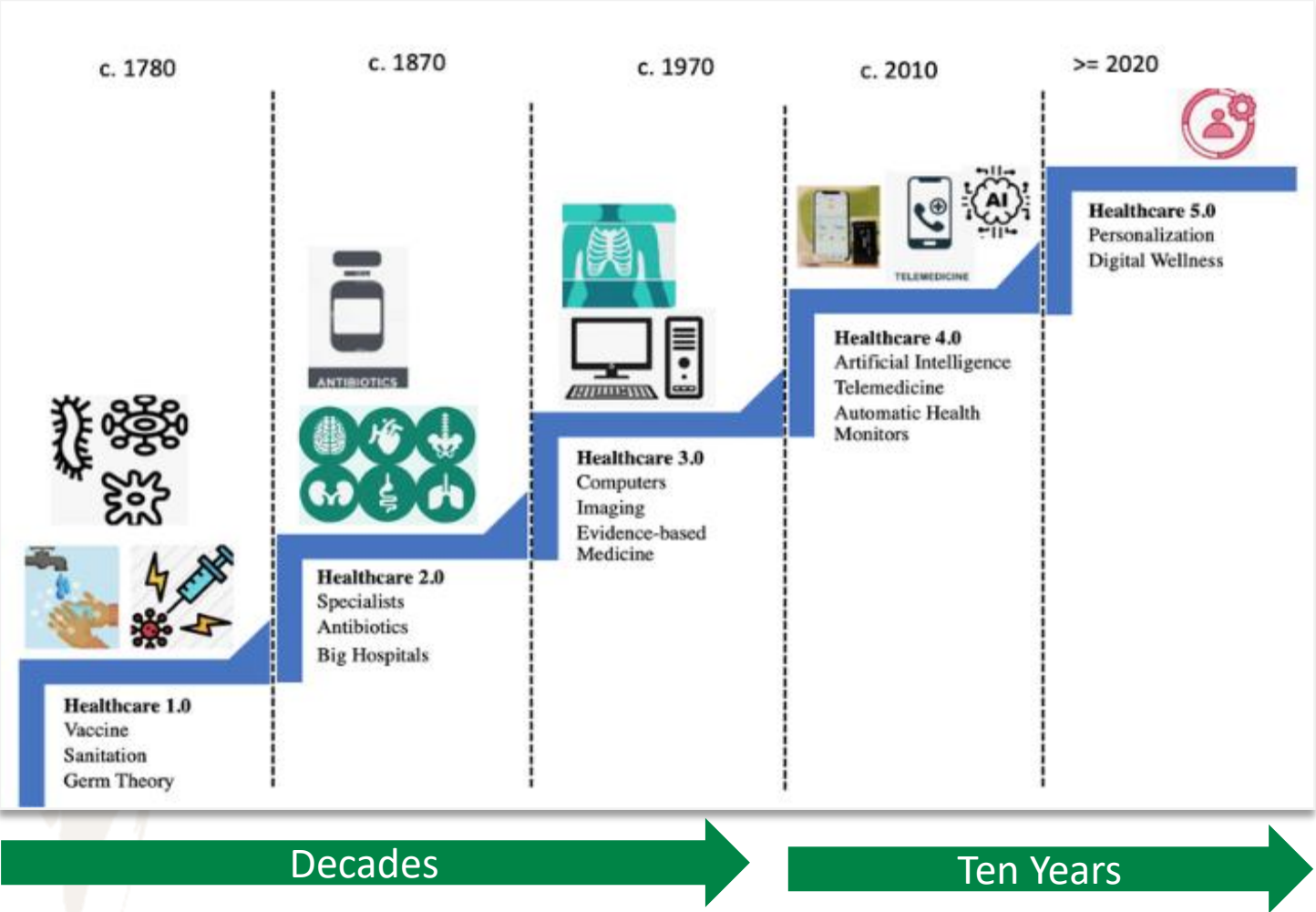
Digitalization and Process Automation: Powerful Tools in The Pursuit of High Reliability and Patient Safety

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Evolution of Healthcare Digitalization

64%
Healthcare CEOs are investing in digital health technologies



(Taimoor & Rehman, 2022)



Digitalization encourages
**consistency, reliability, quality, and
patient safety** in healthcare

ARE WE THERE YET?

Digitalization Benefits



Efficiency

- Improved documentation & communication
- Decreased order turnaround times



Accessibility

- Improved access to care
- Streamlined patient management processes



Clinical Outcomes

- Promoted standardized care and adherence to EBP
- Improved process adherence



Patient Safety

- Decreased medication errors and ADRs
- Improved Handover and transfer safety
- Reduced mislabelled specimen
- Promoted incident reporting



Patient Experience

- Enhanced Patient experience
- Improved Patient Knowledge and education



Smart Pumps



Sign Off/Handoff



Patient Portals/APP

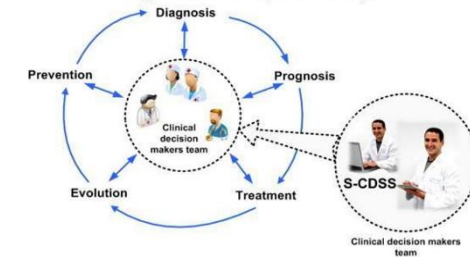


Computerized Physician Order Entry



Patient Data Management

Clinical Decision Support Systems (CDSS)



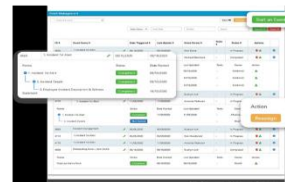
Bar Coding



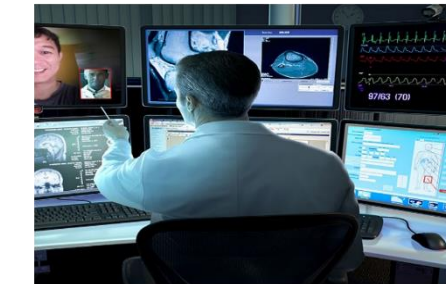
Incident Reporting



Automated Medication Administration



Electronic Health Record



Telemedicine & Virtual Care

Don't Overlook the Dark Side ...



Emergence of New Sentinel events

80% Sentinel Events are attributed to HIT Issues

(Alotaibi and Federico. 2017)



Low Error Detection

<10% Safety events accounted for Voluntary reporting

(Classen, Li et al. 2018)



Burden on Healthcare Professional

16 Mins Time Per Patient Encounter
\$ 4.6 Billions Cost of Professionals Burnout/Year

(Overhage and McCallie 2020)



Data Quality & Accuracy

84% Progress Notes contained at least 1 Error
7.8 Average documentation errors per patient

(Bowman 2013)

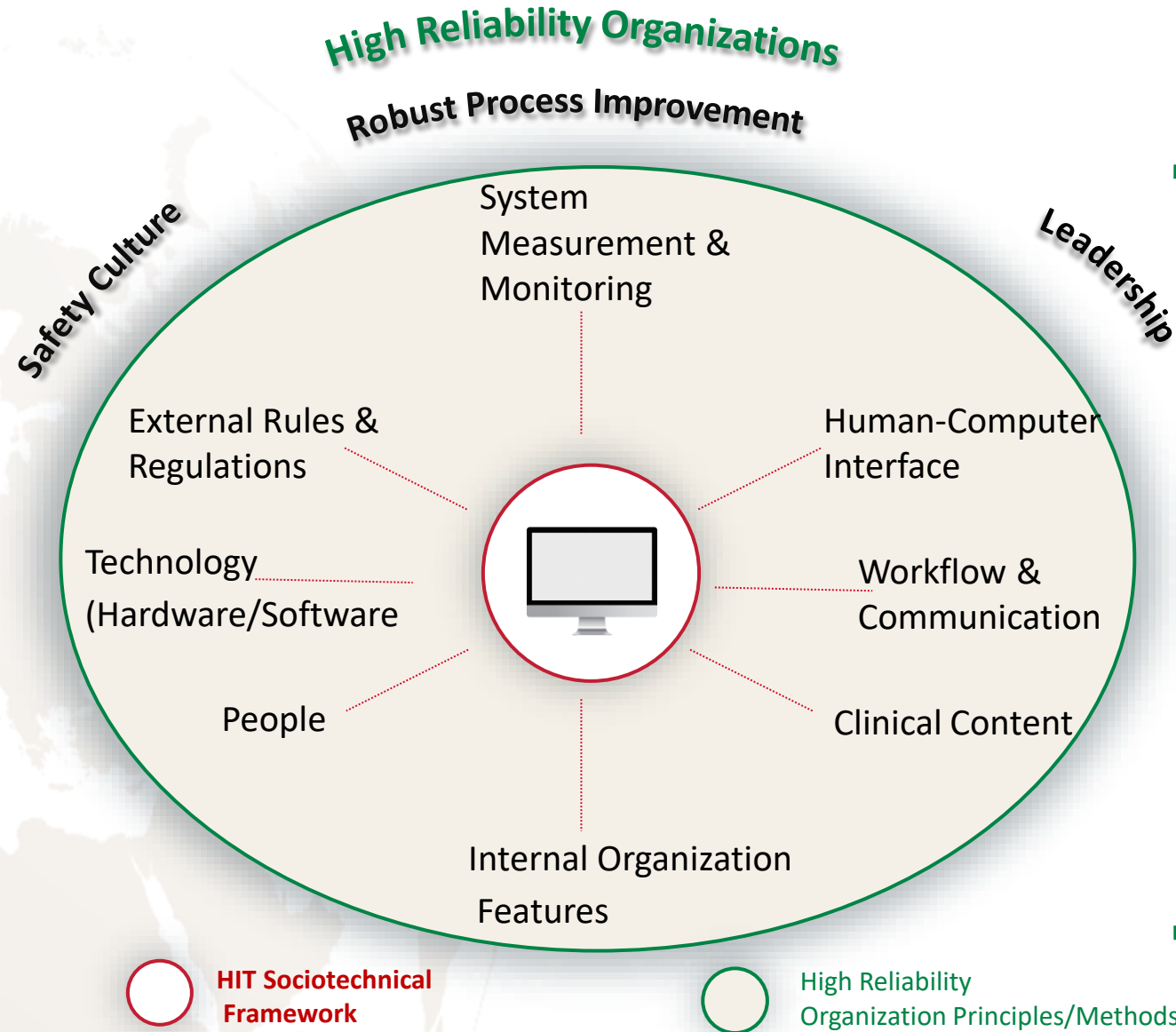


Data Security and Privacy

53% Cost of data breach increased since 2020
\$ 11 Millions The most expensive data breaches among other industries

(IBM Security Report 2023)

Framework for Effective Digitalization



High Reliability

Consistent performance at high levels of safety and quality over long periods of time

To do the **right thing** the **right way**

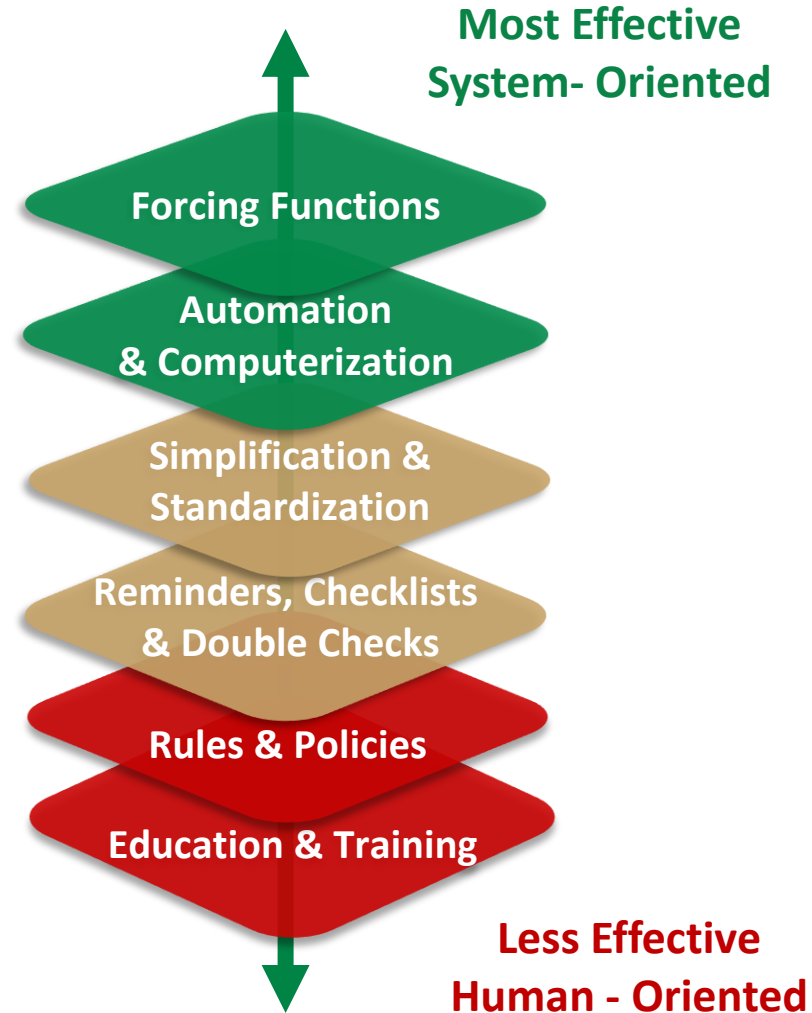
Evidence-Based Care

the **first time** & **every time**

Reliability

Designing High Reliability Systems

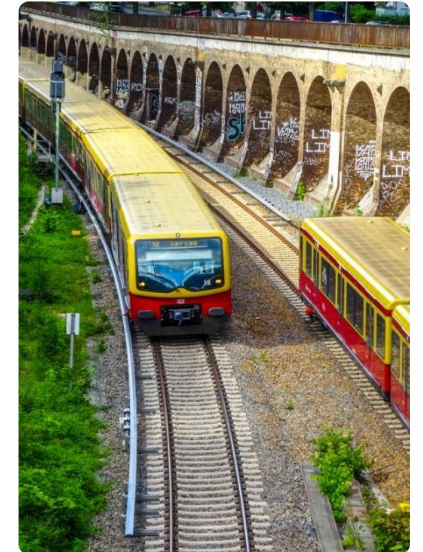
Make it **hard** to do the
wrong thing and
easy to do the **right**





What Is HRO?

High Reliability Organizations HRO that operate in high-risk, dynamic, turbulent, and potentially hazardous environments, yet operate nearly error free.





مستشفى الملك فيصل التخصصي ومركز الأبحاث
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Case Study- KFSHRC Zero Harm-HRO Journey

Harm Prevention



HRO Principles

Preoccupation with failures

Sensitivity to Operations

Deference to Expertise

Reluctance to Simplify

Resilience

Safety Culture, Leadership and Robust Process Improvement Roadmap

Universal Skills to Prevent Human Error and Improve Collegial Relationships

Learning Organization Improvements and Enhanced Cause Analysis

Structured Leadership Skills and Practices for High Reliability

Robust Clinical and Operational Process Improvement

Harm Prevention



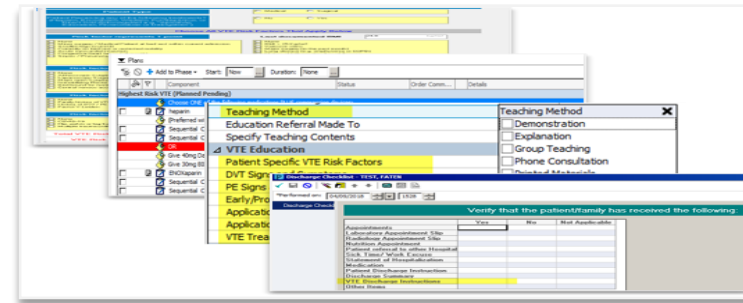
HRO Principles



Deep Dive into VTE Harm Prevention

Digitalization /Forcing Functions

- VTE Screening tool & Prophylaxis plan tailored to different patient types and linked to the VTE risk as per EBP
- A mandated field for the reasons of variation from guideline
- Reminder alert for pending VTE screening and suggested plan
- VTE education check list in ICIS



Leadership

- Commitment to Zero Harm
- Resources /Budgets allocation
- Leadership Rounding and Tiered Huddles
- Accountability mechanisms
- Regular collaborative meetings



Robust Process Improvement

- System Oriented Changes
- Multidisciplinary team
- Change Management (Physicians Coach leader for VTE)
- Daily Management System (Visual huddle boards, Standard work)
- Enhanced measurements



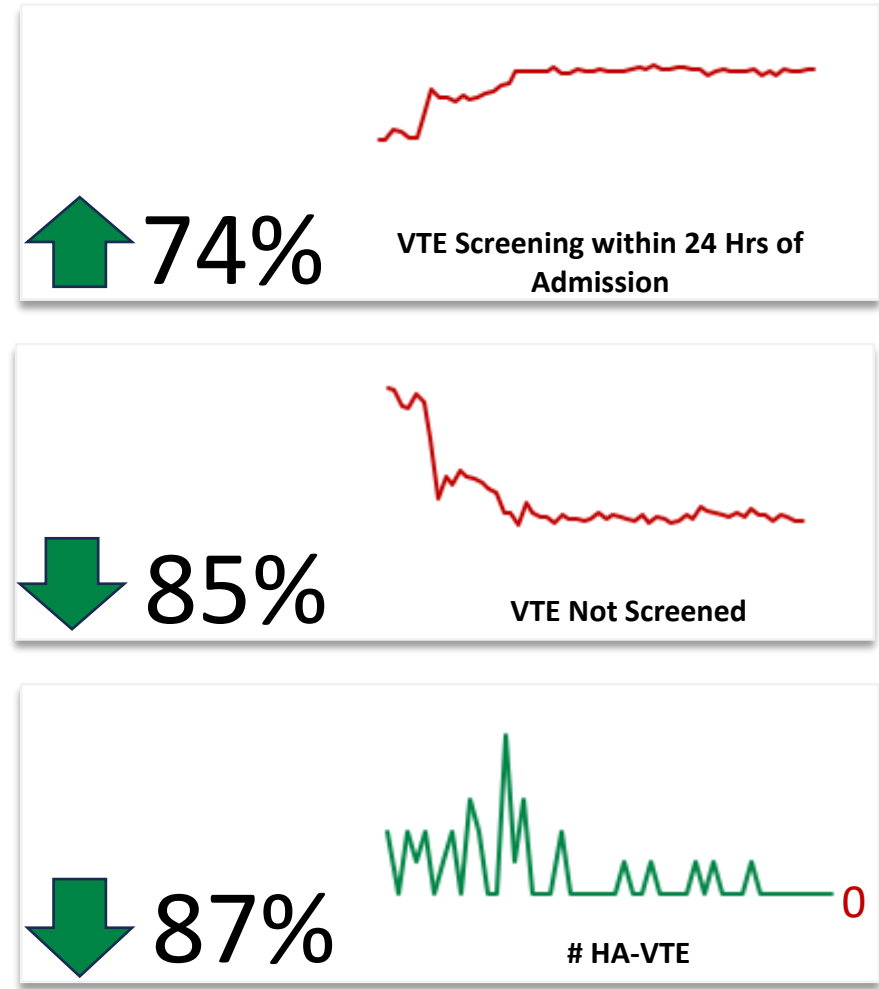
Safety Culture

- HRO Universal Skills on Error Prevention
- Just Culture
- Incident causal analysis
- Lessons learned /Safety Alerts
- Transparency /Data sharing
- Safety Coaches

VTE Measurement & Monitoring

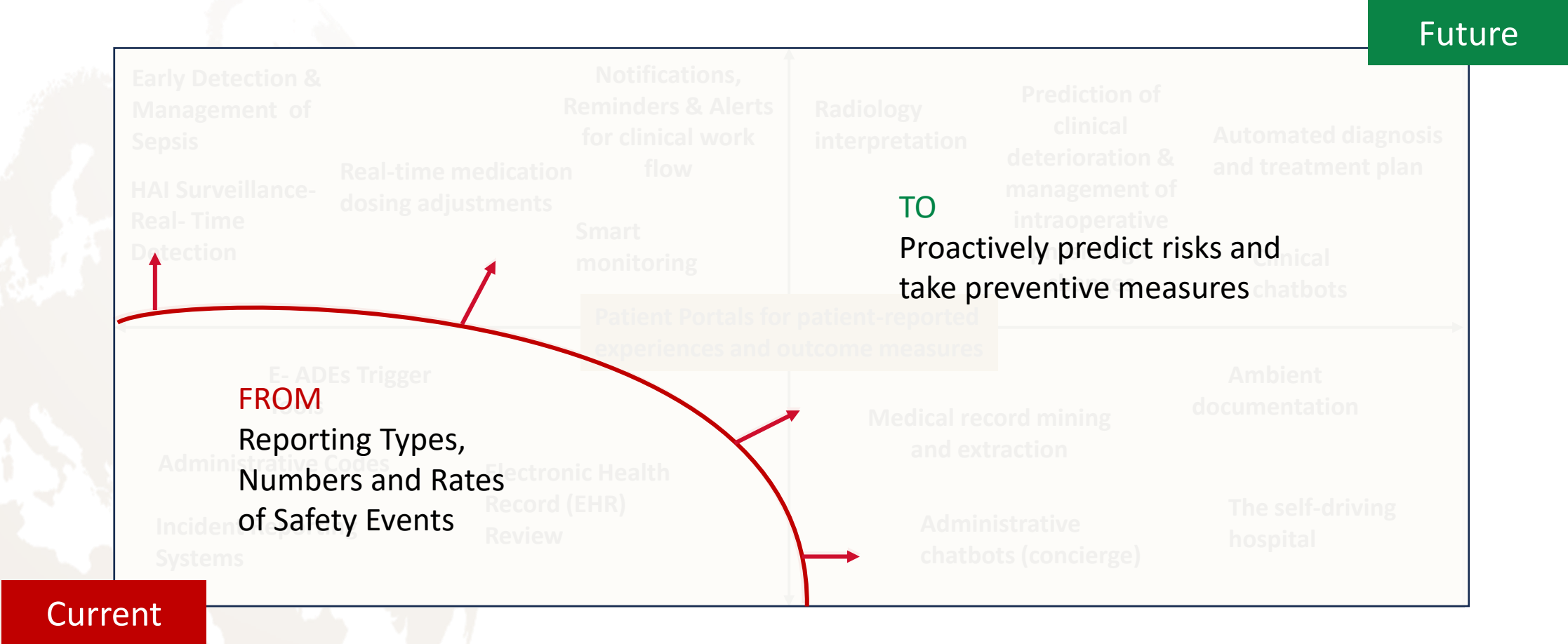


VTE Real-Time Dashboard



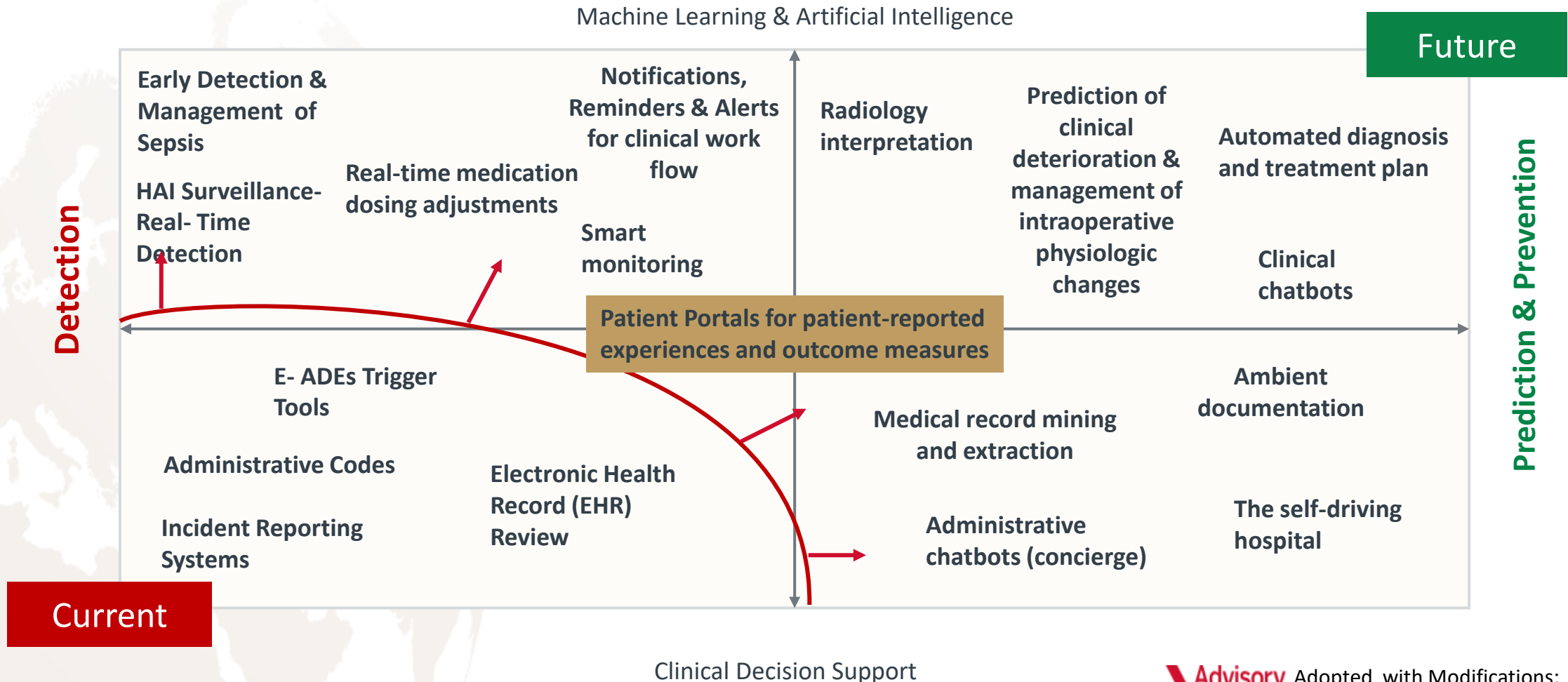
2019-2022

Reframing Patient Safety



Realizing the Promise...

Digitalization landscape for Improved Patient Safety



Global Directives

Strategic Objective 6
Information, research and risk management
Ensure a constant flow of information and knowledge

Making Healthcare Safer IV
Final Report on Prioritization of Patient Safety Practices for a New Rapid Review or Rapid Response

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Patient Safety

GLOBAL PATIENT SAFETY ACTION PLAN 2021-2030

Towards Eliminating Avoidable Harm in Health Care

Third Draft
January 2021

Strategic Objective 7
Synergy, partnership and solidarity

Develop and sustain structural and cultural synergy, and

Strategic Objective 2
High-reliability systems

World Health Organization

Global strategy on digital health 2020-2025

World Health Organization

Global strategy on digital health 2020-2025



FUTURE

Where we're going



Effective & Safe Digitalization

Clinical decision support systems to provide reminders & recommendations on best practices (assessment/ treatments)

Real-Time /Predictive Analytics

Detect safety events with real-time EHR data as they occur and predict them before they happen.

Capacity & Capability Building

Innovation, Digital Tools and informatics, Analytics, Leadership, Human Factors Engineering and High Reliability Organization HRO Practices

Research & Improvement Collaborations

Qualitative and Quantitative studies on safe use of digital technology with focus on improvements and outcomes



“Vision and leadership at the highest levels of government is required to operationalise a systems approach to improving patient safety and ensure that healthcare is a high-reliability industry.”

THANK YOU

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