

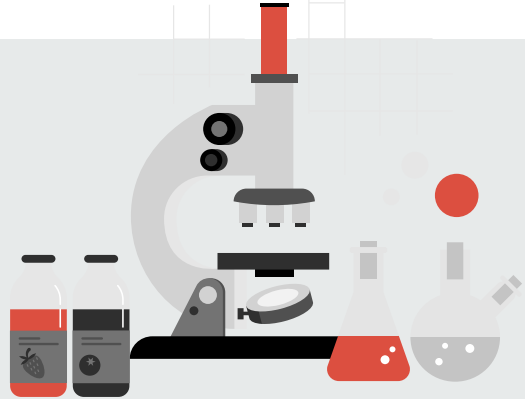
Revolutionizing **Clinical Trial Monitoring** with AR/VR Data Visualization

TCS ADD Research & Innovation

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Medical monitoring is the ongoing oversight of clinical trial participant's **safety, health, and medical data** throughout the study.

Clinical trial Patient monitoring plays a vital role in medical monitoring



Patient Safety



Data Quality



Early Detection



Regulatory Compliance

Medical monitoring is a dynamic, ongoing process essential to the success and ethical conduct of clinical trials.

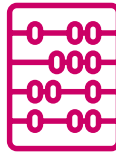
Problem



Traditional **2D data visualization** methods are inadequate for **comprehending complex clinical trial data**, potentially leading to oversight and delays in **decision-making**.



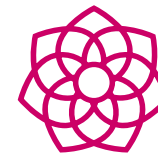
Limited Data
Representation



Cluttered
Dashboards



Limited
Interactivity



Difficulty in patten
recognition



Challenges in Cross
domain analysis



Lack of Dynamic
Collaboration



Limited Depth
Perception

These issues slow downs **risk identification** and **decision making**

Current Situation

Current approach's mostly relaying on 2D based data visualization techniques, which are

- Dashboards
- Trend Analysis Charts
- Threshold Alerts
- Geospatial Data Visualization



Data Visualization

Data Visualization
plays a crucial role in
medical monitoring



**DATA UNDERSTANDING
AND EXPLORATION**



**EARLY DETECTION OF
MEDICAL CONDITIONS**



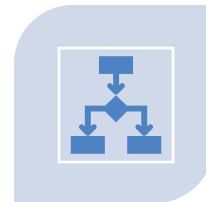
**DATA QUALITY
CONTROL**



**REGULATORY
COMPLIANCE**



COMMUNICATION



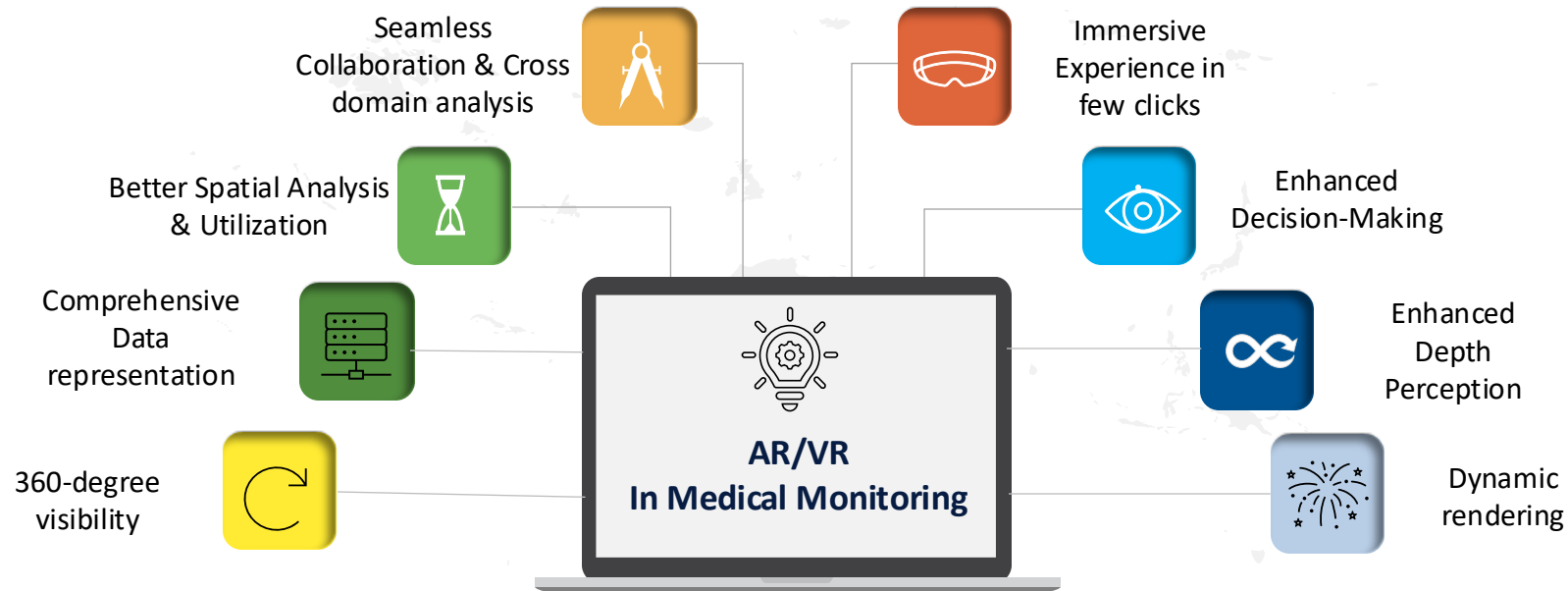
DECISION-MAKING

Why AR/VR

- Current industry looking for innovative approaches for data visualizations
- Immersive technology provides better visibility and understanding of the data points
- Real-time 3D rendering
- To enhance user experience

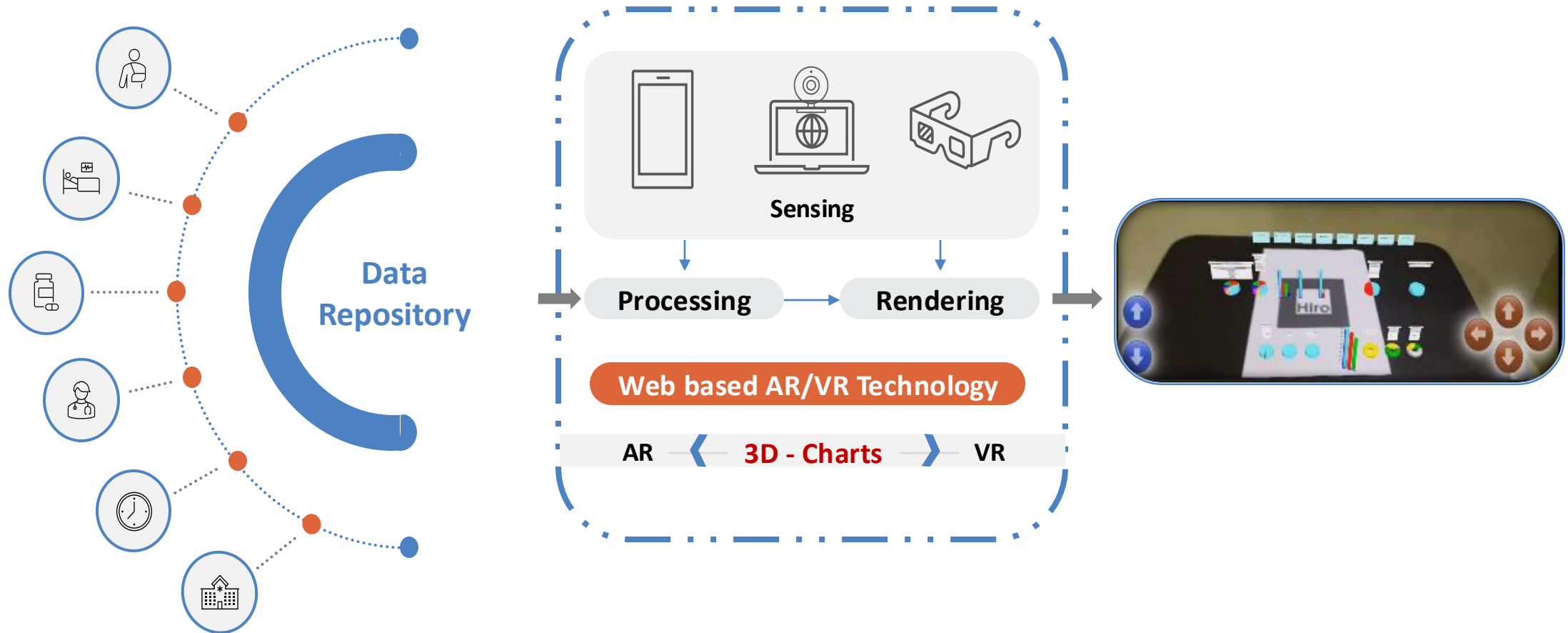


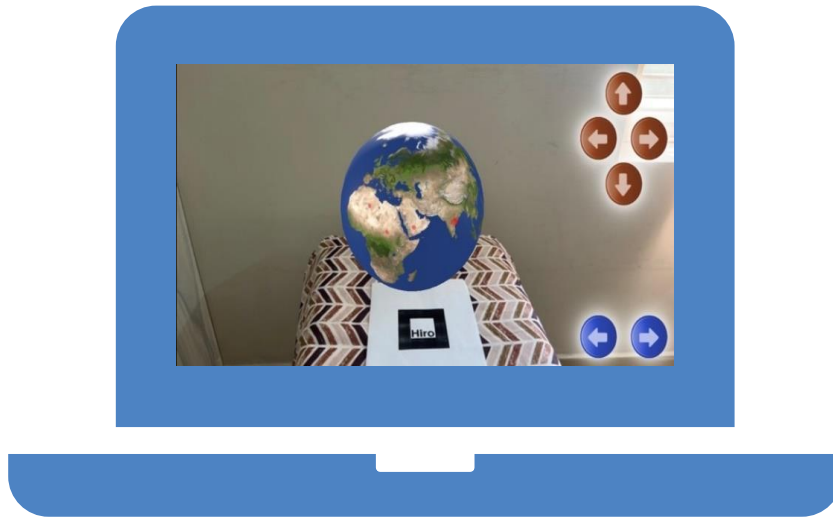
Augmented reality is an interactive experience that combines the **real world** and **computer-generated** content. We can access the solution through **web-browser**.



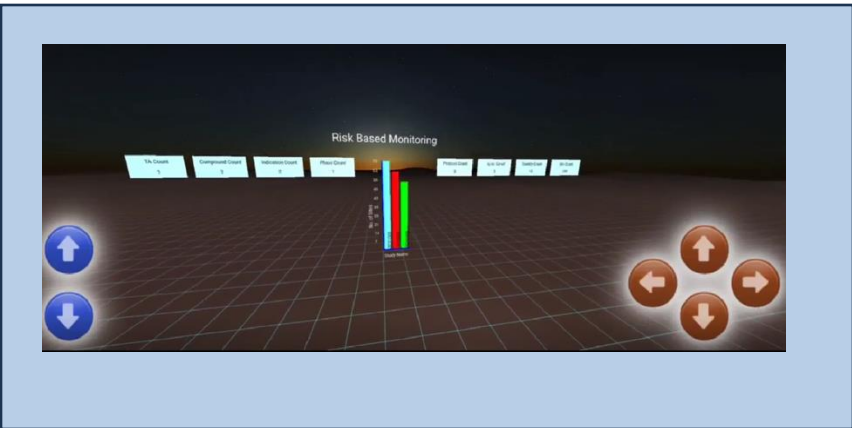
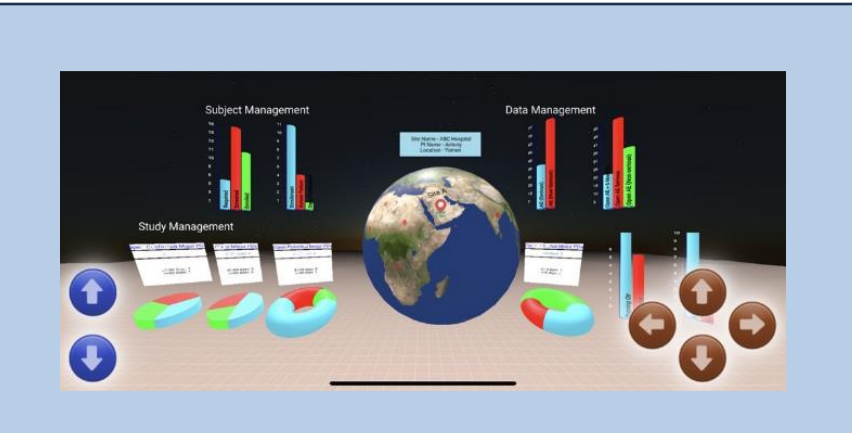
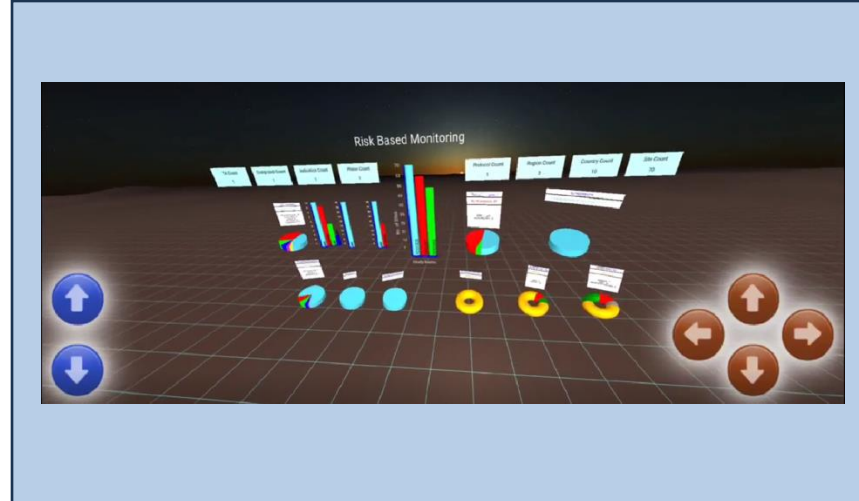
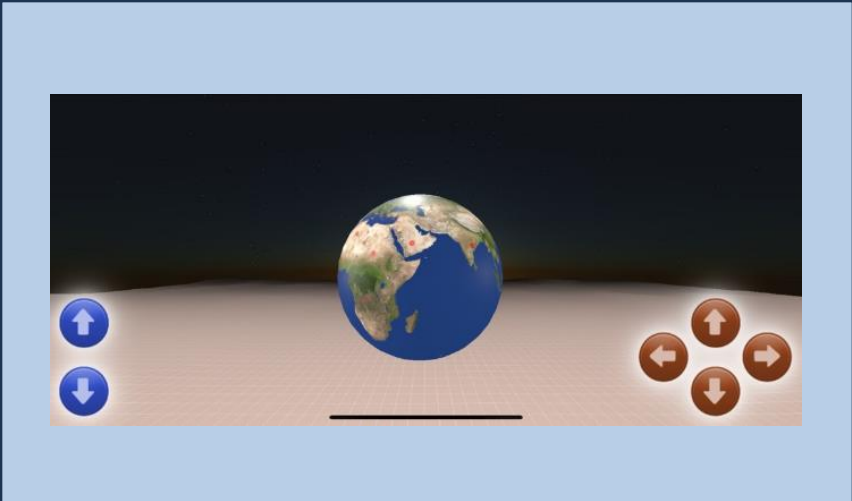
Virtual reality is a simulated **3D environment** that enables users to explore and **interact with a virtual surrounding** in a way that approximates reality

Leveraging **Augmented reality** and **Virtual reality** technologies for data visualization in medical monitoring. Implemented **Marker-based** Augmented reality and virtual reality Solution.

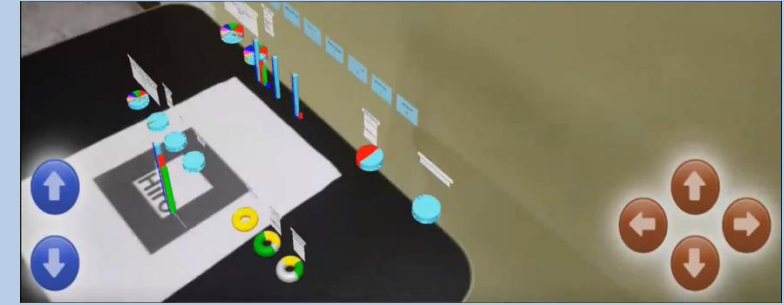
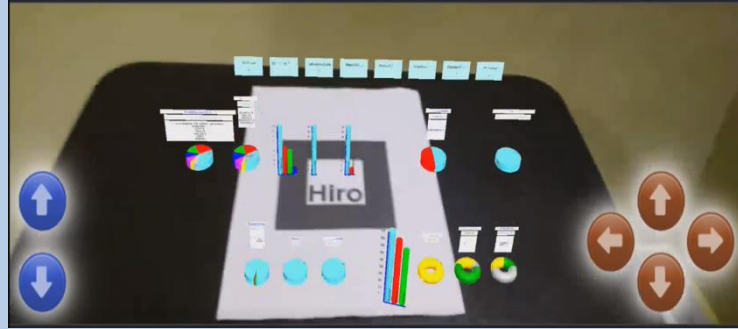
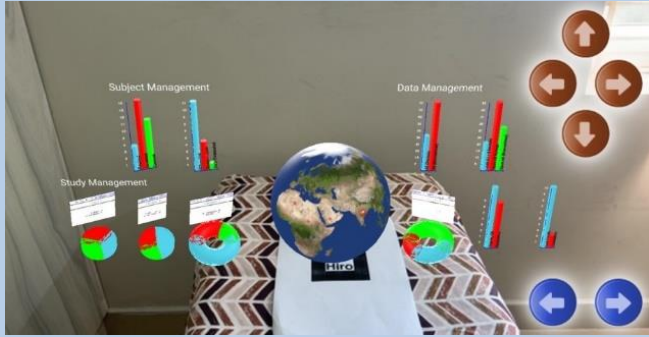




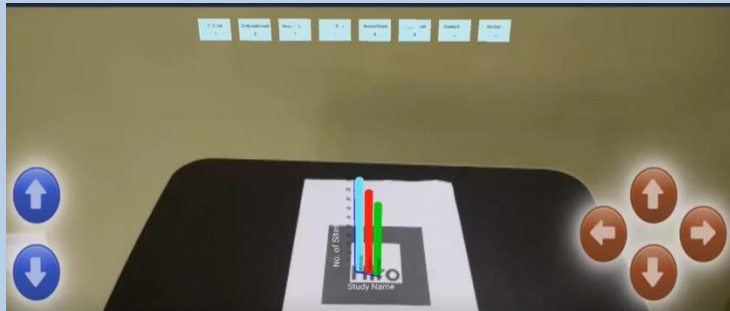
Screens Walk through

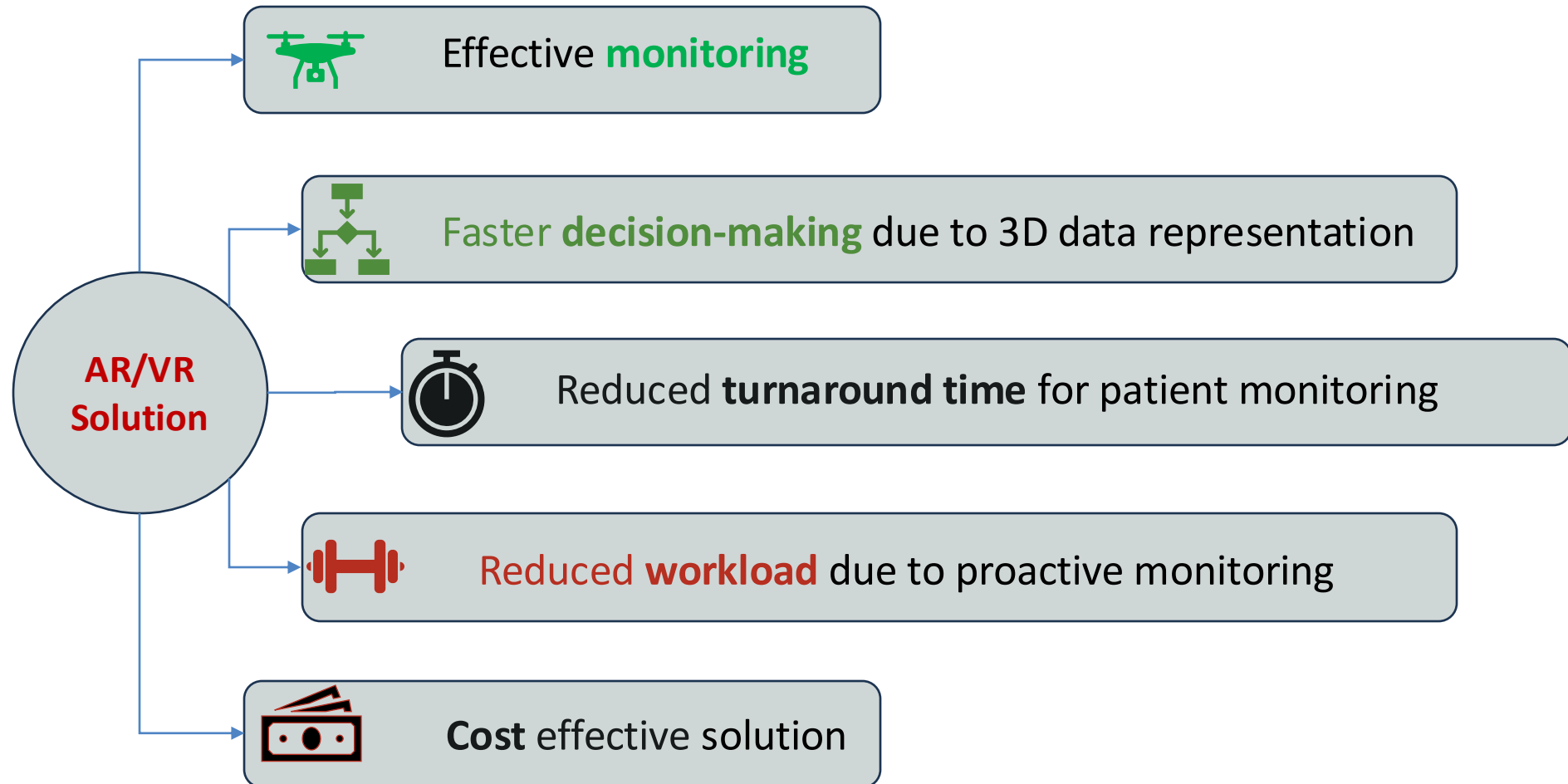


VR Screens



AR Screens





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Thank you

