CONCEPT NOTE FOR EXPERIENCE CENTER
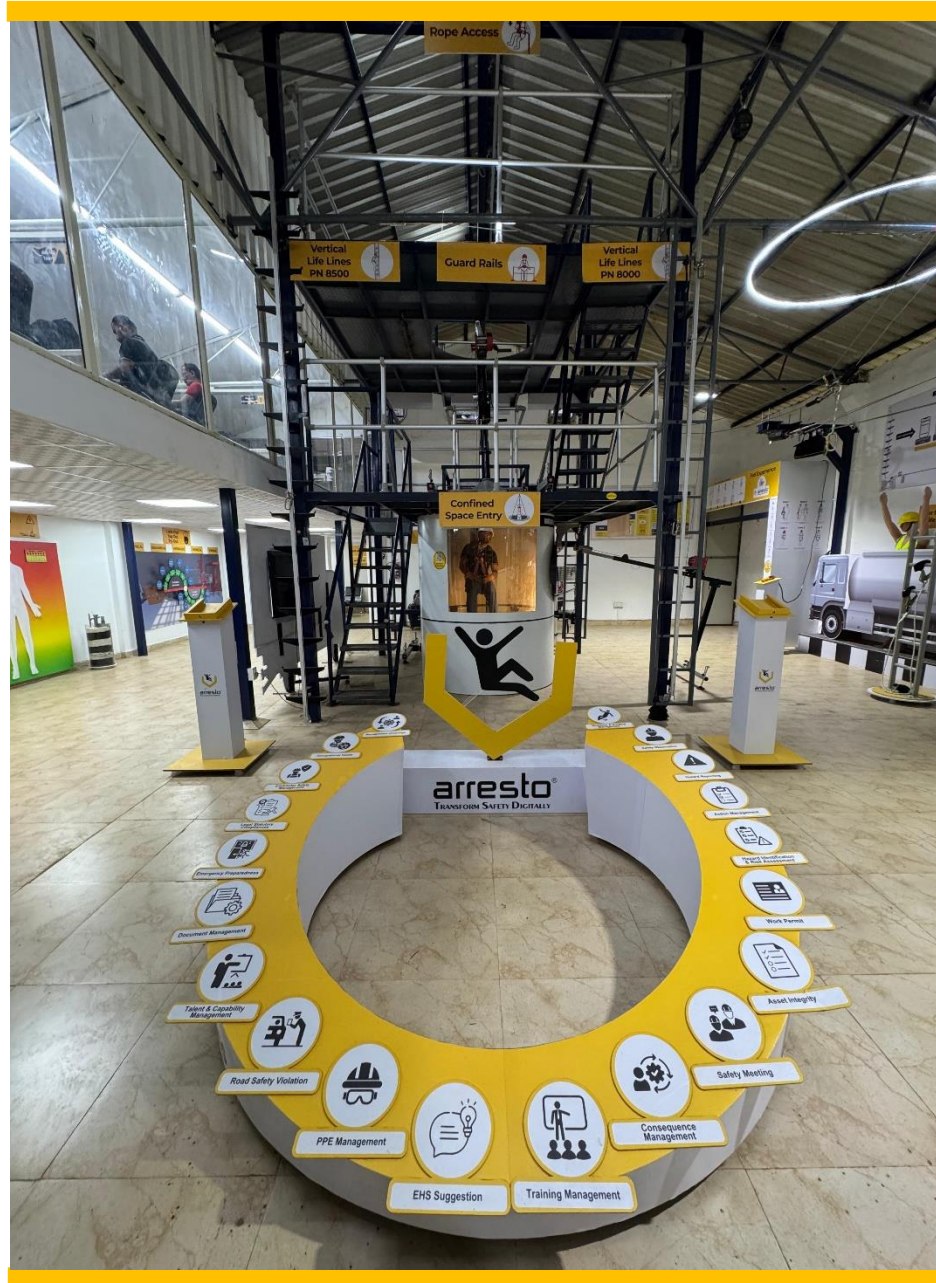

| Version	Date	Changes	Author	Approver
0.1	30.September.2024	1st draft	Murtaza Zariwala	Mohammad ZA

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1. **Purpose of the document**:

The ultimate goal of the leadership team is to ensure that their industry remains incident free. Training and involvement of workforce in good safety practices go a long way in achieving the goal of maintaining the industrial unit incident free.

Traditional training through printed course content, Classroom trainings, PowerPoint presentations and videos are effective learning tools.

Modern Training methods in addition include creating an Experience Center using digital interventions to provide experiential learning through physical models and immersive learning through Augmented reality, Virtual Reality and Artificial Intelligence.

This document outlines a proposal to create a state-of-the-art Experience Center fully equipped with Models, that are linked with digital interventions.
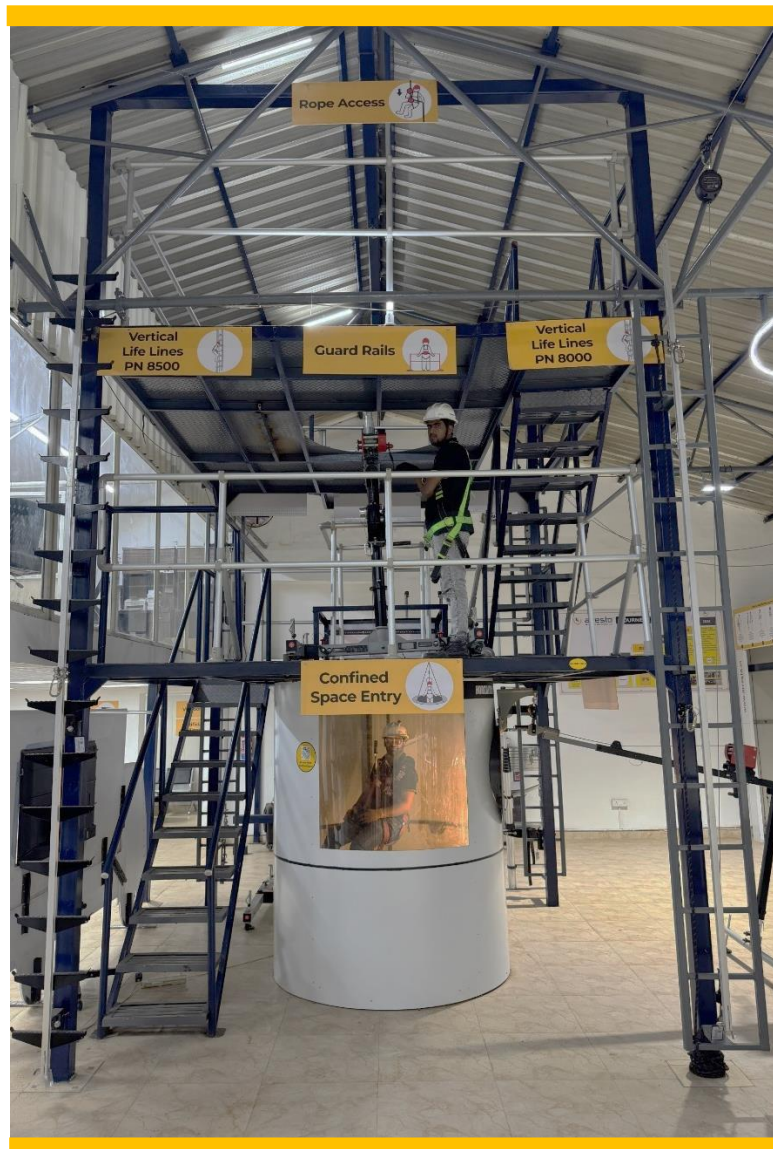
## 2. Product Information:

Following Components help to create an immersive experience centre.

2.1   Models of Safety Processes

The models are designed in collaboration with industry experts and leadership team of clients. The models are displayed using physical demonstrations, Animation films and sensors.

Examples of models to explain working of processes are displayed in figure below:
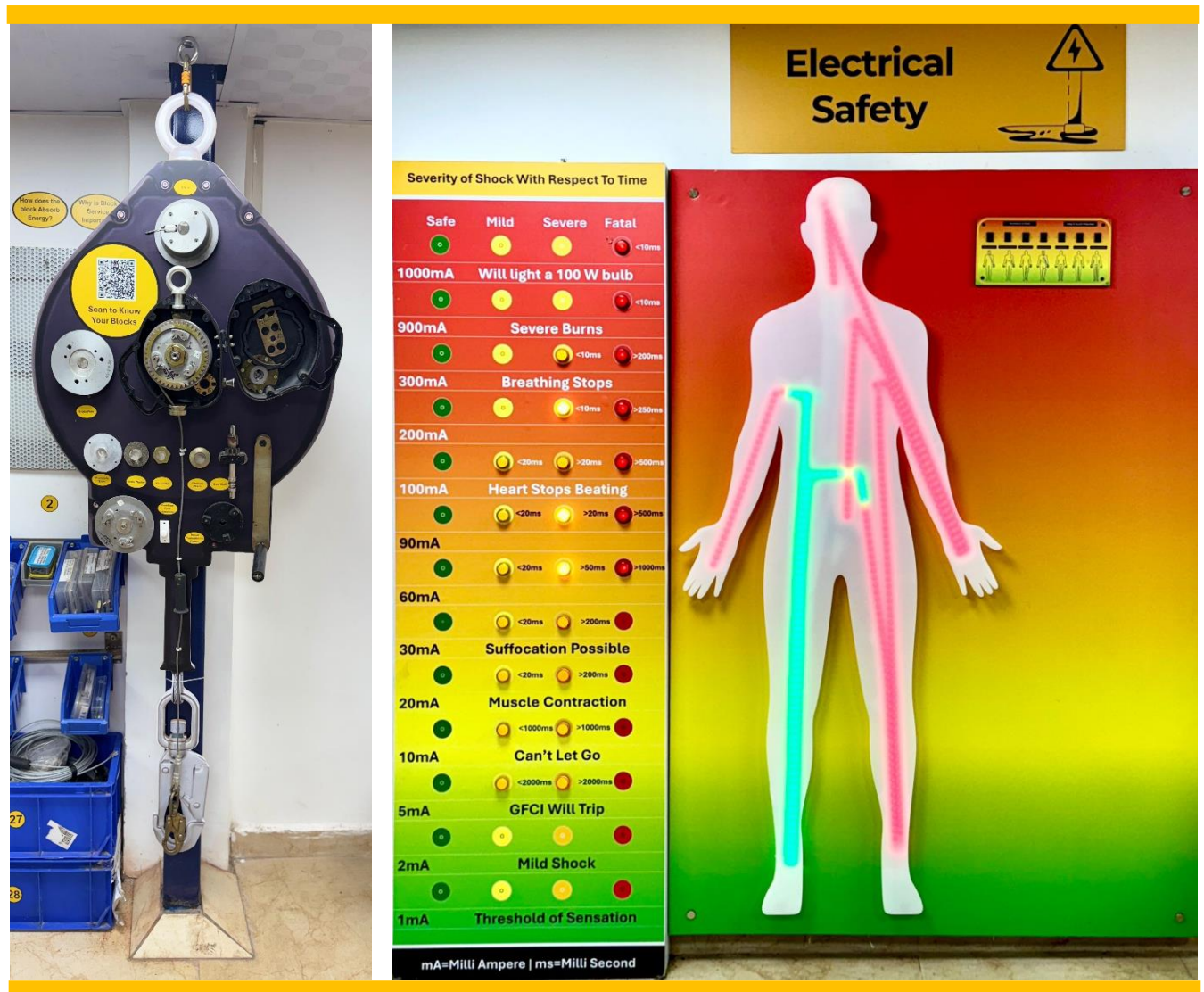
2.2 Simulation Models

For training purpose, it is sometimes dangerous to access industrial sites like chimneys, confined paces etc. It is also difficult to train workmen in a running plant. This is where simulations are helpful. The figure below demonstrates various simulations for different hazardous situations.

2.3 Digital Interventions:

2.3.1   Augmented Reality

The workmen are able to view models of their processes in augmented reality by placing their model in an augmented workspace using tablets/ iPads.

The augmented reality feature does not require the workmen to be physically present near the machines. The augmented reality feature demonstrates the machines right in front of the workmen and allows them to operate the machine virtually. Thus, saving a lot of time and effort in physically being present in front of the machines.

The Arresto augmented program allows a unique try on feature which allows participants to try on the PPE. The participants may select PPE (Harness, helmet, eyewear, arc flash suit etc.) in front of a vertical display monitor. The monitor will show the participant wearing the PPE selected.

2.3.2   Virtual Reality

Learn in the safety of virtual reality space

Teleport the users in virtual space to areas which are dangerous to access and allow participant to perform activities safely.

One experience center for all the business unit (Plants)

The entire experience center is mapped in the virtual reality program, thus allowing workmen of different business unit to view the experience center using a VR headset without having to physically travel to the experience center.

2.3.3   Visitor Monitoring System (Mobile Application)

The experience center is equipped with a program that monitors the visit of the participant to different modules/ area, the time spent and digital content accessed. The digital application provides a report of participant visit to the experience center and also reminds the participant if any module is missed.

The program also provides audio and visual guide in the tablet the participant is carrying during his visit to the Experience Center. Alternatively if the participant is viewing the Experience Center on a VR headset then he is able to hear the technical commentary when he visits each module.

A virtual tour of inaccessible or dangerous workplace and experience the consequences of accidents in a safe virtual environment.
✓ Enhance industrial safety by providing realistic training, mitigating risks, improving emergency preparedness.

Behavioral Safety Training	**Risk-Free Learning**
Simulation of real-world scenarios that test and reinforce safe behaviours	An environment where employees can make mistakes and learn from them without real-world consequences
Hazard Visualization	**Customizable Training Scenarios**
Experience hazard virtually and understand the importance of safety measures and precautions	From our vast 3D asset library recreate your own industry environment for an effective connect
Remote Training and Collaboration	**Equipment Familiarization**
Employees can teleport to the plant while present at multiple locations	Allow workers to explore, interact with machinery & equipment virtually before encountering them in actual workplace
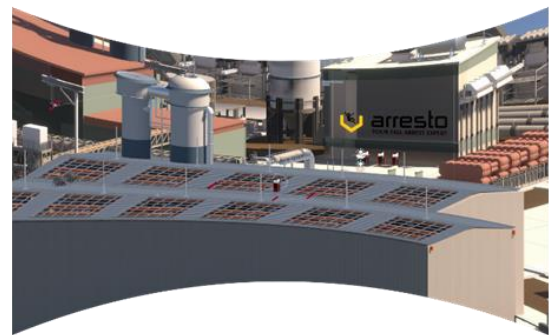
2.3.4 Information transfer through dynamic QR codes.

The Arresto patented digital platform works seamlessly on android phones, iPhone, tablets, iPad and web computers.

The knowledge tree module of the Arresto digital platform creates Dynamic QR codes and are displayed in the Experience Center at appropriate places. The user may scan the QR codes to get more information on the subject. This information is dynamic and can be easily updated using the Arresto admin panel.

3. Modules:

Following modules are available with Arresto:

1. Work at height
2. Confine Space
3. Gas detection
4. Working on scaffolding
5. Rope Access
6. Rescue
7. Working on roof
8. Window cleaning and painting
9. Loading/ Unloading
10. Guard Rail and walkways
11. Fall experience
12. Vertigo Test
13. Digital Vertigo Test
14. Maintenance of fall protection equipment
15. Electrical safety
16. Lockout Tagout
17. Material handling and lifting
18. Road Safety
19. Welding simulations
20. Machine and conveyor safety

All these modules are linked to Arresto digital interventions.

4. Deliverables

1. **Construction of the experience center.** The scope of the client may be as little as providing a built up shed. Arresto's scope would be to build the entire experience center in the space provided. It will include design, development and installation of creatives, models, displays and samples.
2. **Creating a virtual reality program** to exactly replicate the experience center.
3. **Providing virtual reality modules** for each experience center subject.
4. **Providing virtual reality module on Vertigo test** with assessment and moderation.
5. **Providing a mobile application for providing audio-visual guidance** to participants and monitoring the visit by alerting the participant of modules missed and creating a visit report. The application will display the layout of the experience center and through artificial intelligence mark the places on the layout which are visited by the participant and also provide audio-visual guidance to the participant based on the current location.
6. **Providing augmented reality programs** as per client's requirement and uploading them on participants tablets.
7. **Providing augmented reality try on programs** on PPE.
8. **Creating client specific augmented reality and virtual reality** programs.
9. **Providing knowledge tree access** of Arresto patented application and generating dynamic QR codes of knowledge pockets to be displayed in the experience center. The participant will get updated information by scanning the QR code displayed in the experience center. The admin portal of the knowledge tree allows the client to update the information as and when required.

5. Timelines:

S No.	Activity	WEEKS															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Setting up of scope	█															
2	Creating proposal		█														
3	Construction of Experience center			█	█	█	█	█	█	█	█	█	█	█	█	█	█
4	Configuration of existing AR/ VR program in client's environment			█	█	█	█	█	█	█	█						
5	User Acceptance Test for AR/ VR programs											█	█				
6	Creating new AR/ VR programs			█	█	█	█	█	█	█	█						
7	User Acceptance Test for new AR/ VR programs											█	█				
8	Soft Go-Live of AR/ VR programs													█	█		
9	Updating of AR/ VR program on play store/ app store/ unity														█	█	
10	Creating mobile app for visitor audio-visual guidance/ monitoring															█	
11	Configuration of knowledge tree module of Arresto app			█	█	█											
12	Training on digital interventions to the clients experience center team																█
13	Go-Live of experience center and inauguration																█

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6. Conclusion:

Industry 4.0 recommend digital intervention in all core processes. The Experience Center of Arresto tries to follow Industry 4.0 framework to make learning interesting, experiential and immersive. We look forward to meet you in person and together we can design, develop and implement a world class Experience Center.

The Arresto Digital Platform

OHSMS

ARRESTO CONNECT+

Management of Change
Occupational Health
Contractor Safety Management
Legal Statutory Compliances
Emergency Preparedness
Document Management
Training Management System
Audit & Inspection
Safety Suggestion
PPE Management

Nearmiss & Incident Management
Safety Observation
Hazard Reporting
Action Management
Hazard Identification & Risk Assessment
Work Permit
Asset Integrity
Safety Meeting
Consequence Management
Road Safety Violation