

Benefits of Integrating Human Factors Analysis and Architecture in Control Center Design

www.SLARC.com

Smith LaRock Architecture PC works closely with industry-leading human factors companies to develop design solutions that directly address human factors issues and solutions proposed. In addition to opportunities to increase productivity by 2-5% or more with a 'HF + Architecture' approach, some of the other benefits we see from proper control center design are listed here:

Encourages Collaboration

Proper design enables and enhances internal communication: better start ups and solutions to upsets from better collaboration. Externally, video conferencing or telepresence (video conferencing) infrastructure can greatly enhance collaboration with remote facilities and outside organizations.

Enhances Safety by Designing for the Health and Alertness of Staff

The design includes plans for ergonomic solutions and workplace amenities that support the comfort, efficacy, health and alertness of operations personnel. This is particularly important during start-ups and upsets when stress increases and shifts may be extended. Design provides for fatigue-countermeasures, off-shift work, and field/board operator collaborations to occur.

Enhanced Situational Awareness

The designed environment must support better operational transparency & status display communication. In turn, this fosters better HSE, simpler monitoring & reinforced operational procedures. Issues may be identified & reconciled before they escalate.

Optimize the Human Machine Interface

Through an integrated architecture/human-factors approach to the design of these facilities, we can

help optimize the interaction and connections between people, space, and technology. Information is more accessible and easier to interpret. Reliability is enhanced and execution of proper responses is simplified.

Decision-Making Reliability

We design and equip the facility with tools and features that help with the analysis of complex problems. The built environment goal, just by being, reduces stress and evokes serenity; Operators should feel that the room creates a relaxed feeling to start with so they may make real-time critical decisions without any added stress. Adding the use of overview display walls allows for more meaningful 'dashboard' data to be presented.

Leadership

Leadership tasks are eased by providing training, briefing and crisis resolution amenities that support better operational effectiveness. The use of overview display screens can reinforce high-level operational objectives, assist decision-making and simplify daily passive supervision.

Creating Positive Visitor Experiences

Tours happen. Clients and strategic partners important to creating new business, retaining existing Clients, or demonstrating positive public relations should not make visitors feel they are invading the Operational spaces. Without negatively affecting ongoing operations, the design of a facility can create better visitor experiences for the viewers.

Improve Productivity

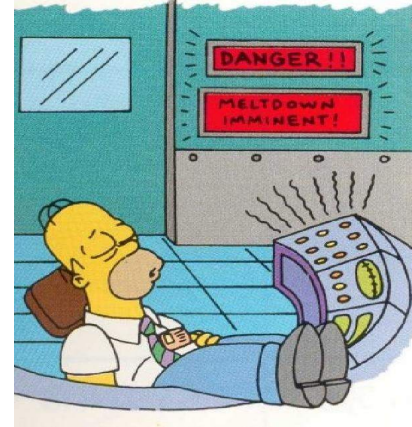
Mission critical facilities contribute to operational efficiency by streamlining procedures and enhancing team performance. Reduced absenteeism, increased alertness, and better operational effectiveness result from properly designed control facilities.



www.SLARC.com | public@SLARC.com

Simplify Maintenance Tasks

The design must anticipate the challenges of maintaining a 24/7/365 facility. Plans to allow for access to equipment and wiring for on-going maintenance increases the reliability of operations. Appropriate materials and finishes must be used for fire-resistive and durability requirements. All things being equal, control facilities must support 3 times the wear and tear of a commercial building over a period of time, and generally cannot be closed down to renovate.



Enhanced Employee Satisfaction

Facilities design with HF considerations recognize the importance of the specialists who work in these facilities: these are the top-line persons who drive bottom-line profitability. Well-designed facilities instill a sense of pride and community and offer enhanced compensation for the irregular schedules and stressful profession. Users of these facilities today must understand that the future Operators of a manufacturing plant will be the millennials and Gen-X-ers, as products of a different world, have completely different technical experiences and familiarity with advanced display technology, as well different expectations and needs. Planning for future control centers must consider a new type of User Group in the design.



Increase Recruitment and Retention

All things being equal, operations personnel have choices. Better workplace solutions are key to recruiting and retaining top performers. Better profitability, more stable operations, and increased safety for all plant personnel are some of the bottom-line results from better facility design.



Contact Smith LaRock Architecture to discuss how we may help you identify and achieve your Control Center needs.

303-534-2200 Michael Smith msmith@slarc.com