Why is safety so hard?

1. Individuals act "unsafely" to optimize perceived utility by choosing a very probable small gain over a very large but highly improbable loss. This is often a rational choice from the individual perspective.

2. Individuals often feel that they can control the situation, making perceived probability essentially nil.

3. Individuals find that policies and rules exert an efficiency issue. Experience shows departing from these rules produces no harm, so there is a "practical drift" away from them. Authorities often tacitly encourage the drift because it improves efficiency and cuts costs.

4. Safety rules are usually context independent, so quite often the rules cause productivity or operational issues needlessly in many situations. This is apparent to individuals either by direct observation or by experience.

5. Many individuals exhibit a strong optimism bias. If something bad has never happened before, then it will not happen in the future.

6. The first three points are reinforced by the pervasiveness of warnings and rules for extremely unlikely and minor negative outcomes. Individuals see them as "crying wolf" and the believe that they represent nothing more than attempts at CYA ("Covering Your Ass"). The result is a loss of source credibility.

7. Objects and environments directly communicate how they can be used. Unintended affordances may direct individuals toward "unsafe" behavior.

8. High authorities who look at group behavior sum the low probabilities, so their payoff matrix is very different. They also are often looking for ways to encourage safe behavior without having to pay for it. Moreover, they act as the policy administrator. Since creating rules or policies cost authorities nothing and are beneficial, they readily create new ones that ignore human nature and that are unreasonable and unlikely to be followed on a regular basis.

9. Failure to enforce the Rules and Policies suggests that even the authorities do not believe them to be important. From the authority's viewpoint, hoping for the best may have more utility than enforcing them or performing a redesign that makes the Rule or Policy unnecessary. However, leaving safety up to individual decision making is far less certain.

10. Accident causation is often attributed to "unsafe" behavior because hindsight focuses only on payoffs and ignores probabilities. Such attributions are often counterproductive because they forestall the search for real causes such as system design.

11. Safe behavior tends to miss the mark. Safety measures reach diminishing returns because fewer accidents decrease signal probability and biases deciders even more toward saying No - acting "unsafely". If individuals feel safer and more in control, then risk compensation can increase "unsafe" behavior. There may be a practical limit to how much safety is possible solely by relying on human behavior.