

Vision Zero Plans: Developing Evidence-based Metrics and Planning Action

An effective plan is rooted in scientific principles, aligned with the broader community vision, and organized with a hierarchy of connected vision, goals, objectives, agency actions, and performance measures (Figure 1).



Figure 1. Vision Zero Planning Framework

Four Underlying Principles of Injury Prevention

- (1) **Adapt transportation systems to the complexities of human behavior.** Safe transportation systems assume that human mistakes will occur, and they are designed to reduce the likelihood of mistakes and mitigate the effects of those that occur.
- (2) **Manage kinetic energy transfer among road users.** Communities characterized by safe road systems effectively manage speed and, therefore, energy transfer in the event of a crash, reducing the likelihood of death and serious injury. Vehicle speeds determine both the likelihood and severity of traffic crashes (Figure 2).
- (3) **Be proactive and population oriented.** Traffic injury is the result of a complex blend of interacting societal factors. Impacts on road user safety at the level of the population require addressing the social determinants of traffic injury, such as poverty, physical and cognitive disability, and other socioeconomic factors.

- (4) **Foster the creation of a shared vision and coordinated action.** Effective Vision Zero communities consistently seek to improve coordination and integrated approaches.

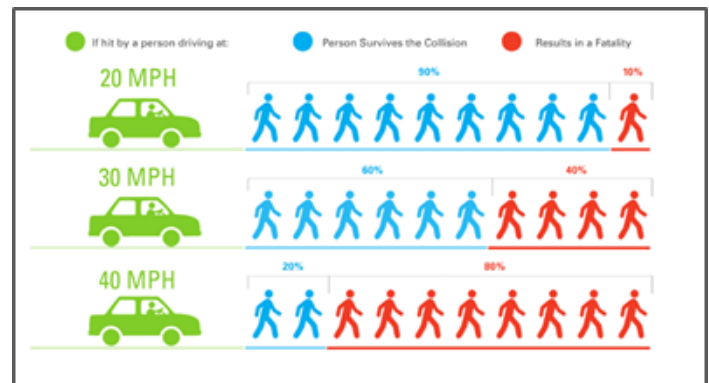


Figure 2. Average pedestrian survival by crash speed (reference)

Developing Goals - Framing, Prioritizing, and Writing and Connecting Them

Framing Goals: To realize a future without serious and fatal road user injury, diverse and inclusive coalitions of stakeholders must both develop more comprehensive ways to uncover common causes of traffic injury and institute more integrated and creative ways of addressing road users' safety.

Prioritizing Goals: Using an organized and collaborative process, the Vision Zero task force should prioritize community concerns toward creating a community-driven Vision Zero Plan. Both quantitative and qualitative information should be discussed.

Writing and Connecting Goals, Objectives, Agency Actions, and Performance Measures: The goals, objectives, agency actions, and performance measures are informed by Safe Systems principles and a community's vision for the transportation system as one designed for and protective of all road users. To ensure the community develops a goal framework that provides pathways to realize zero serious and fatal traffic injuries, it is helpful to define these terms (Figure 3).

Term	Definition
Goals	They offer the desired end states or outcomes of the community's transportation system.
Objectives	They provide the standards to determine the extent to which each of the Vision Zero goals have been achieved. The objective can be process or outcome oriented.
Agency Actions	They are activities and procedures that flow from associated goals and objectives.
Performance Measures	They quantify the result of activities that indicate how much, how well, and what level the agency actions produce desired results over a given period of time.

Figure 3. Definitions of Terms

Example "Goal Package"

Organizing Safe Systems Principles: Be proactive and population oriented.

Example Goal: "Members of the city's Vision Zero task force draw systems maps to illustrate how changes in technology, demographics, and agency actions may interplay with the city's vision of zero serious and fatal traffic injuries."

Process objective: By the end of 2022, members of the Vision Zero task force engage in quarterly "systems mapping" exercises designed to describe interactions among changes in technology, demographics, and city agencies' Vision Zero-related actions.

Agency action: Starting in the first quarter of 2022, the Vision Zero task force engages with University partners to practice drawing systems diagrams and maps.

Performance measure: Internal release of systems maps that illustrate interactions, reinforcing, and balancing feedback loops for two Vision Zero goals.

Outcome objective: "By the end of 2023, Vision Zero task force members will have developed a series of Vision Zero systems maps, one map for each articulated Vision Zero goal."

Agency action: In each quarter of 2022 and 2023, Vision Zero task force members will engage elected officials and resident stakeholders in drawing goal-oriented systems maps.

Performance measure: Public release of a series of Vision Zero systems maps that illustrate leverage points in the system, opportunities for public engagement with the system, and agency actions designed to address different aspects of the system.

Iterating on the Process

- A draft of the proposed Vision Zero Plan goals, objectives, agency actions, performance measures, and other plan details should be shared with the community for feedback and comment, ideally at multiple times throughout the planning process.
- Communities should share a complete draft of the Vision Zero Plan with the public. Understanding existing barriers prevent underrepresented groups from providing feedback is crucial in equitably engaging all affected populations for feedback.
- After receiving public feedback on the draft Vision Zero Plan, the task force should evaluate the feedback and implement Plan revisions. Following these revisions, a final Vision Zero Plan is drafted for plan adoption.

Key Considerations to Help Self-assess

- Are plan activities and agency actions consistent with Safe Systems principles, the community's vision, and goals?
- Do goals represent desired end states or outcomes of the Vision Zero program and transportation system?
- Are objectives specific, measurable, achievable, realistic, timely, inclusive, and equitable (SMARTIE)?
- Do performance measures quantify the result of activities (i.e., how much, how well, and at what level agency actions produce desired results over a given time period)?
- Does the plan include measures of fair distribution of the benefits resulting from Vision Zero plan activities?