



The Safe System Approach in Action

Introducing a universal call and
dispatch number in Georgia

Case study

This case study is part of a package of materials accompanying the final report of a joint International Transport Forum–World Bank Working Group, entitled *The Safe System Approach in Action*.

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Introduction

This case study was prepared by a joint International Transport Forum–World Bank Working Group convened in 2020–2021. The case study forms part of a package of materials accompanying the Working Group’s final report, *The Safe System Approach in Action* (ITF, 2022a).

The Safe System approach to road safety takes as its starting point the ethical position that there is no acceptable level of road deaths and serious injuries. The report proposes a framework for designing, implementing and assessing projects with a Safe System focus. It draws on lessons from real-world case studies to offer guidance on implementing Safe System interventions.

The Working Group analysed 17 case studies in total, paying special attention to their Safe System content. While not every case study was a perfect example of the Safe System approach, all contained valuable lessons. In addition, several common themes emerged. A separate ITF Working Paper (2022b) sets out the thematic analysis.

This case study contains four parts. First, it provides context for the specific intervention and the road-safety problems it aimed to solve. Second, it outlines the interventions implemented to solve these problems and the results. The analysis is structured according to the five key components of the Safe System framework outlined in the main report (ITF, 2022a), namely:

1. **Establish robust institutional governance.** Permanent institutions are required to organise government intervention covering research, funding, legislation, regulation and licencing and to maintain a focus on delivering improved road safety as a matter of national priority.
2. **Share responsibility.** Those who design, build, manage and use roads and vehicles and provide post-crash care have a shared responsibility to prevent crashes resulting in serious injury or death.
3. **Strengthen all pillars.** When all road-safety pillars are stronger, their effects are multiplied; if one part of the system fails, road users are still protected.
4. **Prevent exposure to large forces.** The human body has a limited physical ability to tolerate crash forces before harm occurs; the system should prevent those limits from being exceeded.
5. **Support safe road-user behaviour.** While road-user errors can lead to serious harm, the Safe System focuses on roads and vehicles designed for safe interaction with road users. It supports humans not to make mistakes and tune their tasks as much as possible to their competencies.

Third, the case study identifies lessons from the project, again structured according to the five key components of the Safe System framework. Fourth, it offers conclusions.

Access the full set of case studies on the ITF website: <https://www.itf-oecd.org/safe-system-in-action>.

Context

Until 2012 Georgia operated three emergency numbers. Co-ordination between actors relevant to post-crash response was poor. In 2012, a single emergency number (112) was launched and a new Public Safety Command Centre was established. These actions enabled improved emergency service response times, incident monitoring, evaluation of post-crash responses, and analysis of police unit activities.

Road-safety themes: Post-crash care

Effective and timely post-crash response is at the heart of both the first and second global road safety action plans. When other elements of the Safe System have failed and a serious crash occurs, good post-crash response and care can prevent crashes from becoming fatal or injuries from becoming life-changing. System failure elsewhere should not mean “giving up” on victims. A victim-centred approach is needed, focused on achieving the best outcomes.

The role of the dispatch system is central to ensuring these outcomes. The World Health Organization (WHO), in its 2016 report on post-crash response, describes a single universal access number that is valid country-wide as “optimal”. But the report also underlines the importance of well-designed and shared protocols. The case of a single universal call number for emergency services in the Republic of Georgia shows the value of this approach.

The WHO suggests that a universal emergency access number should be valid nationwide; available as a free call from any telephone; easy to remember (limited to 3 or 4 digits); linked to a rapid response dispatch centre sending trained and equipped professional care; and able to guarantee confidentiality. The example from Georgia includes all these features.

Until 2012, Georgia operated three independent emergency numbers: 111 for fire and rescue, 122 for road police and 113 for emergency medical aid. When a crash occurred, it was difficult for bystanders to know which number to ring, as all three services are often required – fire and rescue for extrication of victims, road police for scene management and crash reporting, and emergency medical care for victims. Precious time was wasted and communication between services was inadequate. A lack of unified working protocols led to shortcomings in the co-ordination of rescue activities by the different services at the scene and beyond. The result was lengthy response times with poor consequences for victims.

There was also poor co-ordination or monitoring of the work of the many different ministries and agencies relevant to post-crash response. A more systematic approach was needed to improve standards of delivery and inform decision-making.

The Georgian Government decided to rectify this in 2012 with the establishment of a national Emergency Response Centre overseen by the Ministry of Internal Affairs. A single phone number – 112 – was launched, replacing the three previously independent emergency numbers. It became possible for any person to make a call throughout the whole territory of Georgia, both from landline and mobile phone, even those without a SIM card.

As a further step to improve road safety enforcement, in 2016 a new structural subdivision, the Joint Operations Centre, was created. This is a centralised technology hub, which implemented and developed a unified system of crime and road safety control with CCTV cameras throughout the country. With automatic number plate recognition, the work of this centre included the detection of road safety offences (e.g. speeding or vehicles which have not passed the state technical inspection), wanted persons and vehicles, abandoned vehicles and other road hazards. More importantly for post-crash care, it also made

possible the monitoring of incidents and evaluation of response measures in the country and the operational analysis of the daily activities of police units – as well as unified management of the units of the Ministry in crisis situations and large-scale events. As part of the partnership, state sub-agencies such as the Emergency Management Service, other relevant ministries (e.g. Ministry of Health) and agencies such as the Animal Monitoring Agency are included in this co-operation.

In 2020, the 112 and Joint Operations Centre were merged to form a new Public Safety Command Centre, known simply as “112”. The merger aimed to provide higher quality co-ordination under one roof, and to elevate the level of the operative response to emergencies. The Centre co-ordinates emergency assistance to the population through the introduction of a rapid and flexible system that for the first time co-ordinates the work, co-operation, and timely exchange of information of all authorised emergency services. The Centre now handles over 3.5 million emergency calls annually on a 24-hour basis, including all emergencies.

Accessibility and public information have been core concerns of the 112 service. The 112 number is well-understood by the population, and continually promoted via active public advertising and communications. It is available free of cost on any phone, but also via a 112 mobile application through which users can make direct contact with an operator. With support from donors, the 112 service includes an SMS and video calling service for people with hearing impairments, with operators trained in sign language always available to take calls. Visually impaired users can use a “voiced” service to send a silent SOS alarm directly to a 112 operator who will ring them back. Moreover, the 112 application can determine the precise location of an incident without the need for information from the caller.

Funding

The 112 Public Safety Command Centre receives funds from the Georgian national budget, as well as from local self-governing units such as city administrations. It also receives a monthly service fee of GEL 0.40 (EUR 0.12) from all mobile phone users who top up their phones by more than 5 GEL (EUR 1.50) per month, deducted directly from mobile phone bills. Legal entities such as companies also pay this monthly fee. There are exemptions to this charge for people who are socially vulnerable. Actual calls to the 112 number are not charged from either mobile phones or fixed lines. The Centre may also receive income from any work performed on a contract basis.

The service has received grant support to develop particular services including financial support from the United Nations Development Programme (UNDP Georgia) and the Government of Sweden, to create the SMS and video calling service for people with hearing impairments. It also received a grant from the US Government Millennium Challenge Corporation (MCA) Small Grants Program to develop analytics, professional standards and training. In addition, the US Embassy donated 15 computers and projectors to equip and enhance the capabilities of the 112 training centre. Finally, in 2021, the Centre received financial support from the European Union for modern facial-recognition cameras.

Actors and leadership

Under public law, the 112 Public Safety Command Centre is a legal entity under the Ministry of Internal Affairs of Georgia. It is headed by a Director appointed by the Minister. Its operating protocols bring together fire and rescue, police and emergency medical aid services, which collaborate with the Centre to receive and exchange information about incidents and respond to professional dispatchers following

agreed priorities. The Centre also works in coordination with several relevant agencies, including the Patrol Police and Central Criminal Police departments of the Ministry of Internal Affairs of Georgia, as well as a state sub-agency (the Emergency Management Service); the Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia (Emergency Situations Coordination and Urgent Assistance Centre); and the Tbilisi City Hall Animal Monitoring Agency.

In 2013, 112 became a member of the European Emergency Number Association (EENA) and continues fruitful co-operation with this organisation. Internationally, the Centre works closely with the 112 services of various EU countries as well as 911 in the United States.

Interventions and results

The main road safety-related goals of the 112 Public Safety Command Centre are to provide operational emergency assistance tailored to the needs of each citizen; provide informational support for the police; strengthen road safety; and ensure a safe and secure environment for all.

The Centre considers its main achievements in these areas to include:

- The establishment of an integrated public safety management system for the first time;
- Providing the population with an easily accessible emergency assistance service of a high quality;
- Providing a service open to all citizens, with an emphasis on inclusion for people with disabilities;
- Better co-ordination between the key services and related agencies, improving the quality of service through co-operation and timely exchange of information;
- Coordinated behaviour change and communications, including on road safety issues;
- Reductions in hoax or accidental calls;
- More effective crisis management;
- Efficient data collection and analysis;
- Capacity for monitoring and evaluating service provision;
- A capacity to organise professional training; and
- Improvements in the capacity to enforce and take action to combat road crime.

Establish robust institutional governance

The establishment of the 112 Public Safety Command Centre has reduced the likelihood of system failures in the context of road crashes. It has increased public knowledge of the emergency call number by replacing three numbers with one via the easily accessible app and promotional campaigns.

In addition, the introduction of the single call and dispatch number has led to a number of specific improvements in terms of users' capacity to contact emergency assistance even when there is no mobile phone signal; accessibility for people with disabilities through the development of the service in consultation with groups of people with different impairments; and geo-location of incidents, enabling more timely and effective response to crashes.

Furthermore, less time is wasted in communication as the response of the key emergency services is co-ordinated under one system dispatching the most relevant responders. Dispatch times have therefore improved and responding emergency services are better informed about incidents before their arrival, enabling better response.

Agreed protocols reduce the potential for conflicting approaches to emergency response and rescue. There is also better communication with the public via joint campaigns aiming to improve road user behaviour. A sustainable source of funding has been identified, avoiding cuts to services in future. Finally, data for monitoring, evaluating and improving service delivery is now available.

Share responsibility

By emphasising service delivery to the public and accessible communications, the 112 Public Safety Command Centre offers a more victim-friendly and public-centred approach than the previous individual service numbers for accessing post-crash care. Moreover, the incorporation of speed cameras and other technical equipment is providing more accurate evidence of the factors in road crashes, particularly speed. More cameras linked to the 112 service will be rolled out in future, including average speed cameras.

Strengthen all parts

The 112 Public Safety Command Centre unifies different emergency response services under one roof, working to the same protocols and communicating more effectively – therefore reducing the risk of isolated interventions. Secure funding ensures the service is sustainable for the future.

Lessons

Previously, with multiple emergency call numbers, when a road crash occurred in Georgia, it was difficult for bystanders to know which number to ring. Precious time was wasted due to inadequate communication between services and the lack of unified working protocols, which affected performance. The result was lengthy response times with poorer results for victims. There was no way to effectively monitor the work of the many different agencies involved in post-crash response.

Having a unified 112 emergency call number has shown improved standards of delivery and much better public information. The key factors in the project's success include the importance of political support and sustainable funding, inter-agency co-ordination, agreed protocols, and communication between services (and with the public) for more effective post-crash response.

Conclusions

Emergency response time is critical to survival and to the level of disability in many road crashes. The development and promotion of a single emergency call number, a single emergency control centre, and improved access for those with disabilities have led to reduced emergency response times and more co-ordinated activities.

Many collaborators and initial funders made this development possible, and a smart funding model which includes a small fee from mobile phone users, as well as government funding, provides for sustainability.

A strong evaluation of outcomes to show success and determine value would be an excellent next step.

References

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The Safe System Approach in Action

Introducing a universal call and dispatch number in Georgia

This case study details the introduction of a single emergency number (112) in Georgia which, together with a new Public Safety Command Centre, improved emergency service response times, incident monitoring and evaluation of post-crash responses.

The case study is part of a package of materials accompanying the final report of a joint International Transport Forum–World Bank Working Group, entitled The Safe System Approach in Action.

The Safe System approach to road safety takes as its starting point the ethical position that there is no acceptable level of road deaths and serious injuries. The report proposes a framework for designing, implementing and assessing projects with a Safe System focus.

The report also draws on lessons from real-world case studies to offer guidance on implementing Safe System interventions. While not every case study was a perfect example of the Safe System approach, all contain valuable lessons for policy makers and road-safety actors.