

# *Follow-up evaluation social safety aboard trains and at stations*

ASSESSMENT OF SET OF MEASURES AIMED AT IMPROVING  
SOCIAL SAFETY ABOARD TRAINS AND AT STATIONS

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# Management summary

## 1 Reason and problem definition

Central to this follow-up evaluation is a set of additional measures aimed at improving social safety aboard trains and at stations. Social safety in public transport has been on the political agenda since the Nineties, but the immediate reason for these additional and sped up measures was a seriously violent incident, involving a NS conductress who was severely assaulted aboard a train. In March 2015, the government, the NS, ProRail and the unions agreed on the adoption of eight additional and faster measures to improve social safety aboard trains and at stations:

1. Additional support aboard trains on high-risk routes and during high-risk periods;
2. Increased camera surveillance in stations and a trial with video monitors.
3. Camera surveillance aboard trains.
4. An accelerated introduction of electronic, card-activated access gates.
5. An intensified cooperation between NS and the police.
6. An accelerated introduction of the station ban.
7. A zero-tolerance approach for violations.
8. Greater attention paid to care and assistance for troublemakers.

At the start of 2016, the DSP Groep has executed a quick scan, commissioned by the WODC (the Research and Documentation Centre of the Ministry of Security and Justice) to examine the current situation regarding these measures (their implementation) and the first results.<sup>11</sup> However, at the time of this quick scan, the measures had only just been introduced or had not been (completely) implemented, making it impossible to say much about the policy's results and its effect on social safety. For this reason,

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<sup>11</sup> Abraham et al., 2016.

the then minister of Security and Justice, Van der Steur, announced during the general consultation on social safety in public transport on 13 September 2016, that he would commission a follow-up on the quick scan. As a result, the WODC then commissioned the Verwey-Jonker Institute to carry out this follow-up evaluation.

The goal of this follow-up assessment is to provide insight into how far the implementation of the eight measures has progressed and into the developments in (both subjective and objective) social safety in recent years. Furthermore, we will examine the extent to which the eight measures influence social safety.

The problem definition of the follow-up evaluation is:

*What is the current situation regarding the implementation of the measures taken to improve social safety aboard trains and at stations; what development do both subjective and objective safety show since the measures were introduced; and what may be concluded about the influence of the measures?*

We have answered this problem definition by means of the following research questions:

1. What did the development of subjective and objective safety aboard trains and at stations look like during the 2014-2016 period?
2. What is the current status of the implementation of the eight measures?
3. To what extent can the implementation of the eight measures (both separately and as a set) be related to the (possibly) found developments of subjective and objective safety?
4. To what extent is it advisable to make adjustments to realize a greater influence on subjective and objective safety?

In this summary, we will discuss the findings of this follow-up evaluation for each research question. First, however, we will examine the research methods and set-up we

have used (section 2). Next, we will discuss the development of social safety (section 3), the implementation (section 4), the influence on social safety (section 5) and a number of adaptations likely to succeed (section 6). We will round the summary off with a concluding section.

## 2 Research method and set-up

### Realistic method of evaluation

The eight measures do not fall into a vacuum, but are implemented in connection with other interventions. Numerous internal and external factors and circumstances exert an influence on their effect. At each station other contextual factors are at play, while the implemented measures differ as well. Because of this fragmented implementation of the measures and the lack of well-defined, SMART-formulated goals<sup>12</sup>, for this study it was impossible to use a classic evaluation method, starting from a (quasi) experimental design with a pre-test, a post-test and a control group.

For this reason, we have chosen a realistic evaluation method. This approach assumes that an intervention's outcome depends on the working of the underlying mechanism, combined with the context in which the intervention takes place. In this study, for all the measures in the set, we have looked at the underlying mechanism, the role played by the context in putting these mechanisms into action, and to what extent it is *likely* that the measure will exert a positive influence on social safety. Yet, since the focus is on the context and the mechanism, the realistic evaluation method provides additional insight into the ways in which, and the reasons why, measures work, as well as into possible improvements to attain the desired effect.

Another advantage of the method is that, even if measures have not been (fully) implemented during the evaluation, it is still possible to provide valuable insight into the likely influence of measures on social safety.

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12 This means that the goals are specific, measurable, assignable, realistic and time-related.

### Limitations of used data and data triangulation

The use of both qualitative and quantitative sources for analyses in this study calls for some comments. Qualitative research makes it impossible to sketch a representative picture, since this can only be done by interviewing a great number of people, which would be a too time-consuming and extensive effort in the context of this study. In quantitative methods such as the analysis of incident registrations, other factors beside the measures influence the number of registered incidents as well. Such factors are, for example, the willingness to make mention of incidents or report them and the use of enforcing officers. Moreover, it may also be possible that the measures result in a greater visibility of the incidents, which causes a rise in their registration. To conclude, a stable situation, when the number of registered incidents remains the same, may in fact indicate a positive result. After all, it is possible that the situation would have deteriorated without any intervention.

In this study, we make use of more than one method of data collection: data triangulation. Here, data triangulation means not only that we consult both qualitative and quantitative sources, but also that we include different qualitative and quantitative sources in our analysis. This ensures that the information yielded by this follow-up evaluation is more reliable. If, for instance, different sources yield the same finding, it is very plausible that this finding is reliable.

### Set-up of the study

Table 1 provides an overview of the research methods used to answer the four research questions. We have also made use of the literature study carried out during the 2016 quick scan.<sup>13</sup>

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13 Abraham et al., 2016.

*Table 1 Overview of research methods used per stage and per research question*

Overview	Stage 1		Stage 2	Stage 3	
Research questions	Document analysis	Nineteen interviews	Analysis of available quantitative data	Three case studies: analysis of the figures, group conversations, passenger survey	Two focus groups
1. Development of social safety	X		X		
2. Current situation regarding the eight measures	X	X		X	X
3. Relation between the eight measures and social safety developments	X	X		X	X
4. Desired adjustments		X		X	X

This follow-up evaluation focuses exclusively on the eight measures mentioned. It has been carried out in the February-May period of 2017. We have limited this evaluation to the social safety at NS stations and aboard NS trains, and to the experiences of NS employees and passengers. We have not included data and experiences of employees of other concessionaires since the measures only involve NS, although the closed access gates and camera surveillance at stations, for instance, may slightly affect other transporters as well. This follow-up evaluation has been supervised by a supervisory committee and the preliminary results have been submitted to a feedback group for a check of the facts.

### 3 The development of social safety

Although the immediate reason for the set of measures was a serious incident of aggression and violence, the new measures serve a broader purpose, that is, greater social safety for NS employees and passengers. In addition to decreasing the number of incidents of physical violence, this also involves increasing both objective safety in a broad sense (the number of incidents) and subjective safety (feeling of safety). In this study, we

have therefore extended our range of examination to the development of objective and subjective safety between 2014 and 2016.

#### The development of objective safety

The number of registered incidents and reports of physical aggression and violence against NS personnel has decreased between 2014 and 2016 (table 2). The improvement shows in particular aboard the trains after 22 hrs. This follow-up evaluation also shows that the willingness among employees to report incidents involving physical violence is great, making it likely that the number of incidents involving physical violence has indeed decreased. The number of registered incidents and reports of verbal aggression, on the other hand, has increased.

*Table 2 Total number of registered incidents and reports of aggression and violence 2014-2016\**

	2014	2015	2016	% 2016 compared to 2014
Registered incidents of physical aggression and violence	628	544	579	-8%
Reports of physical aggression and violence by NS Reizigers personnel	774	642	690	-11%
<i>cases involving bodily injury</i>	220	189	188	-15%
Registered incidents of verbal aggression	1.410	1.565	1.747	+24%
Reports of verbal aggression by NS Reizigers personnel	1.180	1.304	1.223	+4%

\* Mind that more reports may have been submitted of one incident. Source: NS

With respect to other incident categories, we have observed an increase in registration between 2014 and 2016 (table 3). The strongest increase concerns the number of registered nuisance incidents. This mainly involves an increase in the number of registrations of begging aboard the trains, supposedly by so-called 'handkerchief droppers': people begging in the train by handing out little notes and packets of tissues to the passengers with the request to buy them. NS has indicated that it has made an extra effort to drive

this phenomenon back, making it likely that this increase has (in part) been caused by a registration effect.<sup>14</sup>

*Table 3 Total number of registered incidents of theft and pickpocketing, nuisances and vandalism, 2014-2016\**

	2014	2015	2016	% 2016 compared to 2014
Theft and pickpocketing	1.672	1.909	2.135	+28%
Nuisances	6.611	8.333	12.193	+84%
Vandalism	488	559	575	+18%

\* Source: NS

### The development of subjective safety

We have gained insight into the development of subjective safety from different sources: data from (periodic) surveys and monitors by NS and ProRail, earlier research and a travellers' survey, carried out at three stations for this evaluation.

Studies by Utrecht University<sup>15</sup> and Meet4research (2016) show that, in general, NS employees feel relatively safe. Later in the evening and at night, however, this feeling of safety decreases. Between 2015 and 2016, the feeling of safety of the employees has stayed almost the same.

From the customer satisfaction study and the 'Stationsbelevingsmonitor' (Station Perception Monitor), which are conducted periodically, we can deduce that passengers feel generally safe aboard the trains and at the stations, and that, in recent years, their feeling of safety has improved. The passenger study at the three case stations also shows that the majority of passengers feel safe. We did notice, however, that passengers feel a little less safe at the stations than they do aboard the trains.

14 The number of registrations depends, not just on the actual number of incidents, but on other factors as well, such as the use of enforcing officers. An additional use of such officers will at first result in an increase in the number of registrations. Only later is a decrease likely to occur.

15 Grimmelikhuisen & Van Harten, 2016.

## 4 The current status of the implementation

The first measure concerns the additional support aboard trains on high-risk routes and during high-risk periods. During this assessment, the trains on the Night Network and the Early Bird trains<sup>16</sup> had been doubly staffed. The expectation is that double staffing of trains riding on Thursday, Friday and Saturday after 22 hrs will be implemented in the second quarter of 2017 (as of 12 June). On the other days, after 22 hrs, NS will deploy flexible Safety & Service teams as information dictates. This means that the measure has been implemented according to plan.

The second measure concerns more camera surveillance at stations. During this evaluation, 30 stations have been equipped with video cameras: at 27 stations these are permanent cameras and at 3 stations these cameras are temporary. Their installation stands on itself, independent of the fifty large stations equipped with video cameras outside the context of the measures set. The measure has been implemented (with a delay).

The second part of the second measure concerns a trial at The Hague HS station and Rotterdam Lombardijen station with video monitors on which people can see, among other things, exactly what the camera is registering. Three measurements were taken to evaluate this monitoring pilot.<sup>17</sup> Based on the evaluation's outcomes, NS has decided not to extend the monitoring trial to other stations just yet. ProRail discusses with the Ministry of Infrastructure and Environment for how long the video monitors will remain hanging at the trial stations. Thus, the measure has been carried out and evaluated.

Measure 3 involves the placing of cameras by NS aboard newly acquired trains and aboard trains already in its possession at the moment they get a facelift. In May 2017, around a third of the trains had camera surveillance, 229 train compositions in total. Expectations are that all trains will be equipped with cameras by 2024. The original intention was for trains to be equipped with cameras that can be watched live by the end

16 Trains riding the night network in the Randstad and a specific number of first trains (early birds) riding on Sunday morning.

17 Flight, 2016.

of 2016. An NS key respondent indicates that, in 2017, a pilot will be carried out with the remote collection of camera data. Thus, the measure has been partly implemented, while further implementation is proceeding according to plan.

The fourth measure is that NS will start using the access gates at stations as quickly as possible. To prevent improper use of the gates by people not in possession of a valid railway ticket, NS will deploy security personnel at high-risk times for an immediate enforcement. During the evaluation, NS closed the access gates at 70 stations. Expectations are that this number will have increased to 76 by the end of 2017, of the 82 stations originally planned. NS key respondents indicate that, at this moment, access gates have been closed or will be closed soon at the stations where accelerated closure is possible. According to them, such acceleration is impossible at the remaining stations. This means that, as far as possible, the measure has been implemented.

The fifth measure consists of three parts that should result in an intensified cooperation between the police and NS. The first part concerns the additional deployment of police officers aboard trains and at stations with the highest risk of aggression, and the police picking up a report of aggression and violence aboard trains as a 'priority 1' case. The second part concerns an additional presence of the police at large stations where this is needed. The third part concerns the structural, strategic consultation between NS and the police. During the evaluation, 20 area police officers were appointed who can be deployed at 22 problem stations, jointly identified as such by NS and the police. Additional FTE is used as needed during joint actions with NS. Both parties exchange information more frequently, while structural consultation has been realized between the police and NS on a strategic, tactical and operational level. As of 1 July 2016, the function of 'area police officer' has become a permanent appointment with the Central Unit. Thus, the measure has been implemented according to plan.

Measure 6 concerns the accelerated introduction of the possibility to impose a station ban on notorious troublemakers. The introduction of the ban has been sped up, to 1 May 2015 instead of 1 July 2015. The ban targets people who, by their presence, repeatedly cause nuisances for personnel and travellers. Depending on the seriousness of the nuisance, these people are banned from the station for a specified period. During the

evaluation, a total of 62 bans were imposed: 12 in 2015, 43 in 2016 and 7 in 2017 up until and including March. This means that the measure has been implemented according to plan.

Measure 7 concerns the zero-tolerance approach for violations by means of the ZSM dispatch (the Dutch abbreviation ZSM stands for Meticulous, Quick and Tailored),<sup>18</sup> which makes it possible to immediately punish wrong behaviour. Beside the ZSM protocol, the policy framework VPT (Public Task Safety), an approach to deal with violence against employees in public functions, is applicable to NS personnel as well. In practice, this measure falls within the regular zero-tolerance approach and method of the police and the Public Prosecutor. Thus, it does not involve the implementation of a new measure, but existing, nationwide policy.

Measure 8 concerns a greater effort with respect to care and assistance for repeat troublemakers. To this end, the national Taskforce on Confused Troublemakers (now called the Linking Team) has been set up in the fall of 2015. In April 2015, the Ministry of the Interior has consulted with NS, the police and several other chain partners about repeat troublemakers in the railway system. Since November 2015, the Linking Team and NS structurally meet one another for consultation. At the time of this assessment, no concrete measures have been issued by these different consultations that focus specifically on limiting the nuisances caused by this group aboard trains and at stations.

Table 4.1 summarizes the findings on the current status of the implementation of the eight measures. It presents a positive picture. The first six measures have been fully implemented during the evaluation or their implementation is on schedule. Implementation does not really apply to measure 7 since the zero-tolerance approach came from an already existing policy. With regard to measure 8, we see that, on the national level, measures have been taken to deal with confused persons. Although this may have a

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<sup>18</sup> Central to the ZSM working method is dealing with often occurring crime decisively, speedily, appropriately and efficiently. The settlement of the criminal case should be appropriate, doing justice to the victim while the sanction is tailored to the personality of the perpetrator and the seriousness of the offence. To this end, the Public Prosecutor cooperates with chain partners, the police, rehabilitation organizations (3RO), the Dutch victim support service and the Child Welfare Council. <https://www.om.nl/onderwerpen/werkwijze-van-het-om/>

positive influence on the safety of the railway system, as of yet there are no measures specifically focusing on that system. In this sense, this measure has not yet been implemented.

Table 4 Summary of the current status of the implementation

Measure	Current status
1 Double staffing	The measure has been implemented as planned.
2a Camera surveillance stations	The measure has been implemented (after a delay).
2b Video monitors	The measure has been carried out and evaluated.
3 Camera surveillance trains	The measure has in part been implemented; further implementation is taking place as planned.
4 Access gates	As far as possible, the measure has been implemented.
5 Cooperation NS with police	The measure has been implemented as planned.
6 Station ban	The measure has been implemented as planned.
7 Zero-tolerance approach	No implementation at all, this involves nationwide policy.
8 Care and assistance for notorious troublemakers	No implementation at all, this involves nationwide policy.

## 5 The influence of measures on social safety

In this follow-up evaluation, for each measure we have looked at its influence on social safety at this moment, focusing on the *likelihood* of that influence based on our analysis of the different sources. To this end, we have first looked at how plausible it is that underlying mechanisms inventoried and formulated in the quick scan carried out in 2016 will actually start working. We have done so because these mechanisms constitute the policy logic behind the intervention. Next, we have examined the likely influence exerted by the measure on social (subjective and objective) safety.<sup>19</sup>

We have based this analysis on the findings from the interviews, focus groups and case studies (group conversations and travellers' survey). For more detailed information

such as the sources on which we have based our findings, we refer the reader to the chapters of the report.

### Measure 1: Additional support aboard trains on high-risk routes and during high-risk periods

This follow-up evaluation shows that the supposed mechanisms behind the measure of double staffing may sometimes start to work: this depends on the conductors, the type of perpetrator and the circumstances. Whether conductors go through the doubly staffed train after 22.00 hrs depends on the persons involved as well as the situation. Double staffing will deter more rational perpetrators, yet more impulsive perpetrators will be deterred less or not at all.

Perceptions differ on the influence of the double staffing measure on objective safety. The number of incidents may decrease because of the deterrent effect on perpetrators. However, if conductors refrain from working their way through the train more often, there probably will be very little to no effect at all. To conclude, the number of registered incidents may very well increase, because conductors will check tickets more often or will carry out their tasks more vigorously when the train is doubly staffed.

With respect to the influence on the subjective safety of passengers, we have also encountered a varied picture. The additional support may produce a heightened feeling of safety among travellers, in particular in case of a proportional deployment. However, if conductors will refrain from working their way through the train more often, it is implausible that there will be an influence on the feeling of safety of passengers. The measure may also result in a lower feeling of safety because travellers feel that 'something is going on', making it necessary to have their tickets checked by two persons.

A more univocal picture emerges with respect to the feeling of safety of employees. Double staffing makes them feel safer.

### Measure 2a: Increased camera surveillance at stations

This follow-up evaluation shows that various assumed mechanisms underlying the measure 'more camera surveillance at stations' will only start working in specific situ-

<sup>19</sup> We have focused only on the influence of the measure, not on its accelerated introduction.

ations. Camera surveillance only has a deterrent effect in case of rational offenders. Enforcement officers at the scene of an incident will only get better directions if the video footage is being watched live. There is a greater chance of catching the perpetrators through immediate enforcement only if Safety & Service employees are present who are able, through directions given by the person watching the camera footage, to spring into immediate action. We did find, however, that offenders can be tracked down and prosecuted more easily with the aid of the camera footage.

With respect to the influence of this measure on objective safety (registered incidents), different perspectives have emerged. It is possible that more camera surveillance at stations will have a positive influence because it deters rational offenders. Yet, this influence may also be limited because irrational offenders are responsible for most of the incidents. Finally, the increased ability to enforce by watching video footage live may generate more registered incidents; a decrease in objective safety.

A varied picture has also emerged regarding the influence of this measure on the subjective safety of travellers. Passengers may indeed feel safer because of this measure. Yet, if only rational perpetrators are deterred, who are the least responsible for the occurrence of incidents, such influence is implausible. It is possible, too, that this measure will lead, on the contrary, to a lower feeling of safety among travellers, because they perceive the camera surveillance as something unpleasant.

Our findings are univocal, however, with regard to the influence of this measure on the feeling of safety among personnel. This follow-up evaluation clearly shows that they feel safer because of the camera surveillance at stations.

#### Measure 2b: A trial with video monitors

This follow-up evaluation proves that one part of the mechanism underlying the measure 'trial with video cameras' does start working as presupposed in the quick scan: travellers are more aware of the presence of cameras at a station with video monitors. The second part, however, (almost) never starts working. The argument of this mechanism is that potential offenders and troublemakers are aware of the camera surveillance present, which makes them assess their chance of getting caught as being greater.

This follow-up evaluation shows that such a deterrent effect mostly applies to rational offenders. This type of offender was probably already aware of the presence of cameras before the video monitors were installed. This evaluation does not prove any influence of the video monitors on the number of incidents and the feeling of safety of travellers and employees. A heightened awareness of camera surveillance thus does not influence feelings about safety.

#### Measure 3: Camera surveillance aboard trains

This follow-up evaluation shows that two mechanisms underlying the measure 'camera surveillance aboard trains' (almost) always start to work. By using saved footage to make sense of incidents, it is possible to track down and prosecute perpetrators. Such tracked down and prosecuted offenders are less inclined to cause an incident again. One mechanism, the deterrent effect on potential offenders, will sometimes enter into operation, in particular with more rational perpetrators.

Although the underlying mechanisms do regularly start to work, the influence of this measure on objective safety is only limited. The first reason for this is that only a limited number of (prosecuted) offenders are involved. The second reason is that there is only a potential deterrent effect on more rational perpetrators.

The study shows that camera surveillance aboard trains is likely to have either a limited influence or no influence at all on the perceived safety of travellers. Awareness of the surveillance is low and when passengers do know about it, it does not make them feel any safer. Since watching live footage is not yet a reality, at this moment, it is unlikely that camera surveillance has a positive influence on employees' feeling of safety.

#### Measure 4: An accelerated introduction of electronic, card-activated access gates

The two mechanisms at work behind measure 4, the accelerated introduction of electronic, card-activated access gates, will start to work. Closing the access gates will result in fewer fare dodgers aboard the trains, while there will be fewer non-travellers and potential troublemakers at the stations as well.

The number of fare dodgers has decreased, yet this probably concerns the fare dodgers who are responsible for relatively few incidents during checks, not the notorious fare dodgers who are expected to cause more incidents and who will keep on passing the access gates without a ticket. If the enforcement is going to take place at the access gates, the incidents will be relocated from the trains to the gates (displacement effect). For this reason, the influence of the access gates on the total number of incidents, objective safety, will probably be small. Surveyed travellers at three stations were, however, more positive: a majority expected less crime and nuisances because of this measure.

Employees indicated that this measure has not made them feel any safer. They argue that the notorious fare dodgers, who cause more incidents, can be fought best by combining the measure with enforcement at the access gates. In that case, the employees think the measure may have a positive influence on their feeling of safety.

This follow-up evaluation proves that, at this moment, it is already likely that the access gates will contribute to the perceived safety of travellers.

#### Measure 5: An intensified cooperation between NS and the police

Regarding measure 5, the intensified cooperation between NS and the police, the findings of this study show that three out of four of the presupposed mechanisms will start to work. An improved exchange of information between the police and NS will generate more precisely targeted joint actions and deployments, as well as quicker and more adequate interventions. The visible presence of the police deters potential offenders. Yet, a fitting and quick response driven by an improved exchange of information will not contribute to deterring potential offenders.

It is plausible that the intensified cooperation between NS and the police will have a positive influence on objective safety when the exchange of information and cooperation result in the organization of joint actions at 'hot spots' and 'hot times'. This influence depends on the local interpretation of the cooperation; it is possible that there will be no effect at some locations. In the short term, this will result in an increase of the number of registered incidents (registration effect); objective safety seems to decrease because of this.

This measure has a positive influence on the feeling of safety of passengers when the visible presence of the police is proportional and fitting. Too many visible or too heavily armed police officers can also have a negative effect on passengers' feeling of safety. With respect to the feeling of safety of employees, a positive influence of the visible presence of police or other security officers is plausible.

#### Measure 6: An accelerated introduction of the station ban

Of the two mechanisms underlying measure 6, the accelerated introduction of the station ban, one almost never starts to work: the mechanism that structural troublemakers adapt their behaviour to avoid getting a station ban. In reality, these troublemakers are not aware enough of the station ban. A lot must happen before the ban is imposed and, subsequently, the chances of getting caught are low (recognizing banned people is difficult). Moreover, impulsive offenders do not adapt their behaviour rationally. Yet, the second mechanism may actually start to work: structural troublemakers with a station ban may (temporarily) stay away from the station.

Any influence of the measure on social safety is not plausible, neither on objective safety nor on the subjective safety of travellers and employees. The reasons for this are that it is difficult to enforce the ban since it is imposed only now and then, and the ban does not seem to work as a deterrent to potential offenders. By contrast, the quick scan does argue that the measure may be effective in theory, in combination with other measures such as an individual approach.

#### Measure 7: A zero-tolerance approach for violations

The rationale behind measure 7, a zero-tolerance approach for violations, is that it will lead to a behavioural change in convicted offenders. Some respondents do think that a zero-tolerance approach may result in such a behavioural change. Others think that this will only apply to the more rational offenders.

We are unable to indicate decisively whether this measure will contribute to more social safety aboard trains and at stations. After all, it involves a generic intervention that has not been developed specifically for the railway and its surroundings and that

is the product of an already existing policy. Although there may sometimes be a positive influence, more specifically on rational offenders, it is impossible here to make this influence plausible.

### Measure 8: Greater attention paid to care and assistance for notorious troublemakers

At the national level, there is a Linking Team, which focuses on providing care and assistance to notorious troublemakers. Although NS is involved in the work of this team, no concrete measures, directly targeting the railway system, have as yet been formulated or put into practice. For this reason, we are unable to discuss any likely effect of the measure on the safety or perceived safety aboard trains and at stations.

### Contextual factors

To conclude, it is useful to pay attention to the importance of contextual factors. This follow-up evaluation, especially the case studies, shows the relatively big influence of contextual factors on the working of measures as well as on safety and perceived safety. Factors such as the interior design of the station, the neighbourhood where the station is located and the coverage in the media may all be of considerable influence. An example of this is a single incident that attracts a lot of media attention, making travellers feel less safe. Another example, just the opposite, is the renovation of a station that makes travellers feel safer.

### Conclusion

Table 5.1 summarizes the extent to which it is plausible that the eight measures will have an influence on social safety; the objective safety and subjective safety of employees and travellers.

Table 5 Summary of plausible influence of measures on social safety

Measure	Influence on social safety
1 Double staffing	No univocal picture of influence on the objective safety and subjective safety of passengers. Positive influence on subjective safety of employees.
2a Camera surveillance at stations	No univocal picture of influence on the objective safety and subjective safety of passengers. Positive influence on subjective safety of employees.
2b Video monitors	No influence on the objective safety and subjective safety of passengers and employees.
3 Camera surveillance trains	Little to no influence on objective safety and subjective safety of passengers and employees.
4 Access gates	Limited influence on objective safety. No influence on the subjective safety of employees. Positive influence on the subjective safety of travellers.
5 Cooperation between NS and police	Possible positive influence on objective safety and subjective safety of travellers. Positive influence on subjective safety of employees.
6 Station ban	Little to no influence on objective safety and subjective safety of travellers and employees.
7 Zero-tolerance approach	--*
8 Care and assistance for notorious troublemakers	--*

--\* It is impossible to make any statements here since measures specifically targeting the railway system have not yet been drawn up.

Of three of the nine measures<sup>20</sup>, it is implausible that they will contribute to improving social safety aboard trains and at stations. These are the measures a trial with video monitors (2b), camera surveillance aboard trains (3) and the accelerated introduction of the station ban (6).

For two of the nine measures it is quite impossible, based on our findings, to make plausible that they will have an influence on social safety aboard trains and at stations: the zero-tolerance approach for violations (7) and greater attention paid to care and assistance for troublemakers (8). These measures are the product of a more generic policy. Although they apply to the railway system, too, they do not (just yet) target that system

20 In this table, we count measure 2b, video monitors, as a separate measure.

specifically. Thus, it is impossible to establish to what extent these measures contribute to social safety aboard trains and at stations.

For four of the nine measures we have been able, based on this study, to make plausible that they will be of influence on social safety aboard trains and at stations. In most cases, this involves an effect on only a single element of social safety, usually the feeling of safety of employees. With regard to the influence on objective safety and the feeling of safety of travellers, our findings often are not univocal: there may be a positive or negative influence, or no influence at all. Some influences, however, have proven to be unambiguous:

- The measure of double staffing (1) is likely to have a positive influence on the employees' feeling of safety.
- The measure of camera surveillance at stations (2a) is likely to have a positive influence on the employees' feeling of safety as well.
- The measure of the accelerated introduction of electronic, card-activated access gates (4) is likely to have a positive influence on the travellers' feeling of safety.
- The measure of an intensified cooperation between NS and the police (5) may have a positive influence on both the objective safety and subjective safety of travellers. This depends on the local interpretation, for instance on whether or not the cooperation results in joint actions at 'hot spots' and 'hot times.' In addition, it is likely for this measure to have a positive influence on the subjective safety of employees.

## 6 Adjustments likely to succeed

In this section, we will discuss a number of possible adjustments of the set of measures, likely to succeed, which have emerged from this follow-up evaluation and may realize a greater influence of the set of measures on both objective and subjective social safety. Here, we do not take into account the (im)possibilities of the adjustments, for example because of limited capacity or rules and legislation. The adjustments below are meant as suggestions, directions for action to talk about for all people involved.

### Do not end double staffing after an incident

We have learned during this follow-up evaluation that whenever an incident occurs on a train that is doubly staffed with a conductor and a Safety & Service employee, this may lead to the latter having to leave the trajectory. This effectively means the end of the double staffing. In practice, it would be an improvement when the double staffing is not ended after an incident, for instance by seeing to it that the second person has a different function (such as conductor), or by rearranging the process in such a way that there is no need for the Safety & Service employee to leave the train.

### Watch footage from cameras aboard trains live

With respect to the camera surveillance measure, it would be an improvement if the footage could be watched live. In 2017, a pilot with watching live footage from trains will start. The effect of these adjustments on objective safety may be limited, as most potential offenders will not be deterred by camera footage and already prosecuted offenders only constitute a small portion of the entire group of potential offenders. However, this adjustment will probably have a positive influence on the feeling of safety of employees.

### More enforcement around the access gates

This follow-up evaluation shows that the electronic, card-activated access gates may have a greater influence on social safety if enforcement were to take place more often at these access gates. In particular the employees' feeling of safety may increase because of this measure.

### More alignment between the expectations of NS and the police

With regard to the intensified cooperation between NS and the police (measure 5), we have observed many differences in the local interpretation of it. Some area police officers are present more often at the station and possess more knowledge of the railway system than others. Whether a neighbourhood police officer joins the structural consultations with NS differs per station. This means that the intensity of the cooperation differs per station. Because of this, the expectations of NS employees will not always be met, which will interfere with good cooperation. This also plays a role in the speed with which the

regional units respond to the emergency call of a NS employee. In urgent situations, a 'priority 1' report, they will come directly, but in case of less urgent situations they will make a comparative assessment, based on other reports received by the regional unit. Not all NS employees understand this. By a better alignment of the expectations, the cooperation between NS and the police may be improved, and the influence of this measure on social safety may increase.

#### Develop specific measures for the railway system concerning confused persons

The Taskforce on Confused Troublemakers, and subsequently the Linking Team, provide care and assistance to confused people nationwide. It is possible that the activities developed by this national initiative have a positive effect on the railway system as well. However, no specific measures for the railway system have (yet) been formulated. In view of the specific context of the railway system, it is plausible that the development of measures meant specifically for the railway system results in a greater positive influence of this measure on social safety.

## 7 Conclusion

This follow-up evaluation shows that the implementation of the additional and accelerated measures to improve social safety aboard trains and at stations has, in general, been realized according to plan. This does not mean, however, that each measure has a (positive) influence on social safety: the objective and subjective safety of passengers and employees. With regard to four of the measures, we have been able to make a reasonable case, based on this study, that they do have a positive influence on social safety aboard trains and at stations. Yet, this mostly involves a positive effect on just a single element of social safety, for the most part the perceived safety of employees. Thus, at this moment, the influence of this set of measures on social safety aboard trains and at stations is limited, especially where the objective safety and perceived safety of travelers is concerned. Yet, this follow-up evaluation does present a number of adjustments which are likely to succeed, and with which it seems possible to realize a greater positive effect of a part of the measures.