



FIELDLAB

EVENEMENTEN

Recommendation Request

REOPENING EVENTS

TYPE I

INDOORS, PASSIVE

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Management summary

The main goal of Fieldlab Events is to bring the events industry back to the old normal. Fieldlab is a joint initiative from the events sector, united in the EventPlatform and the Alliance of Events Builders and the Government. The programme is supported by the Dutch Ministries of Health, Welfare and Sport, of Education, Culture and Science, of Economic Affairs and Climate and of Justice and Security (VWS, OCW, EZK and JenV).

A research programme was developed in order to investigate the possibilities of organising safe events and collecting data to this end, whilst waiving the 1.5 metre measure. This programme focuses on four different types of events:

- Type I - Indoor events with a passive audience
- Type II - Indoor events with an active audience
- Type III - Outdoor events with an active audience
- Type IV - Outdoor events with an audience that can move around freely (festivals)

This distinction has been introduced so that generic recommendations can be made for the different types of events, taking air quality and visitor dynamics into account. In this document we present the data collected during the Type I pilot events of Fieldlab Events, i.e. the indoor passive events.

As a basis, a risk model has been developed that answers the question of what the risk of COVID-19 contamination or hospitalisation is for visitors, in comparison with other situations in daily life. The risk model calculates the influence of various measures that can be taken.

We would like to ask the Dutch Outbreak Management Team (OMT, advisory body for VWS) to advise whether this risk model can serve as a basis for making further adjustments to the prevention measures that are currently proposed and in the future.

In collaboration with our research partners Radboudumc, BUAS, TU Delft, UTwente and TNO and supported by parties such as Bureau Franken, Bureau Brandeis, BBA Binnenmilieu and DCM, we have been able to collect relevant data and incorporate it in the risk model. In the short term, we will assess our conclusions with regard to Types II, III and IV against the risk model and also submit these conclusions for assessment.

Based on our data and the risk model, we draw the following conclusions for Type I events.

With the right set of measures in place, Type I events can take place safely, even with high prevalence of SARS-CoV-2 or COVID-19. The maximum numbers as indicated in older versions of the roadmap should be replaced with Fieldlab's recommendations. The generic measures, including the 1.5 metre distance, can be substituted within the location by pre-event or access tests and other recommended measures.

In this document we demonstrate that the hourly risk at Type I events, during Fieldlabs (measures and pre-tests) is equal to the risk in social situations at home or with a visit to the house (without a test).

The proposal is that Type I events resume as soon as possible, even with a high prevalence, provided that the conditions of the following set of measures are met:

- Rapid test at a decentralised location, close to home
- Rapid test within up to 24 hours before the end of the event
- Use of an app or alternative access control for a negative test result
- Attendance at the location limited to 50% capacity, thus without the 1.5 metre measure
- Use of group separation options based on location
- Use of a mask during the movement phase on location
- Ventilation in accordance with building regulations
- Active communication with the visitors, in order to share relevant information and to draw attention to compliance with the measures.

Based on the data collected, we will demonstrate that these measures, supplemented by the recommendations at the end of this document, do not present an additional risk of the virus or increased hospitalisations for Type I events. This is evident from the risk model that has been specially developed for this purpose. These measures are based on the building blocks as applied and described in Fieldlab Events' research approach entitled **Pilots for 'Low-Contact Events'**, which will be explained in more detail.

Given the importance for the events sector, we are now submitting the findings and the recommendation request for Type I events. Based on the results from the other pilot events, we will make a similar request at a follow-up stage for the other events.

We call upon the Dutch ministries concerned to consider this document with the results and the proposal and to submit it to the OMT within the shortest possible delay for it be assessed or to have it broadly evaluated, including societal considerations and the consequences of implementation on a large scale.

We also invite a recommendation request regarding the applicability of the risk model in relation to the other types of events and at lower prevalences, so that further adjustment of the measures based on the model is made possible at other risk levels.

Steering Committee and Programme Team

Fieldlab Events

Type I events

This document relates to the events described in **Pilots for 'Low-Contact Events'** as Type I, Indoor Passive.

Visitors are calm, controlled and/or business-like. Seating is either allocated or free. Examples include a business meeting, congress, theatre show, musical, circus, cinema and classical concert

These are events that take place at an indoor location and where the public behaves calmly and generally speaking, experiences the event from one fixed place.



I. Binnen passief

Bezoekers zijn rustig, beheerst en/of zakelijk.
 Bezoekers hebben een toegewezen of vrije zitplaats. Voorbeelden zijn een zakelijke bijeenkomst, congres, theater, musical, circus, bioscoop en klassiek concert.

For the purpose of researching the options for organising this type of event in a safe, responsible, but also economically viable way, two pilot events were set up, both at the Beatrix Theatre in Utrecht:

- 15 February – Congress 'Back to Live' organised by Eventplatform
- 20 February – Guido Weijers theatre show by Stage Entertainment and Loens BV

At the time of the pilots, the risk level was 'very severe' with a prevalence of 200 to 250 per 100,000.

Demand for events

As the survey conducted in September 2020 already showed, there is a strong demand for events¹.

All 500 tickets sold out within a few days. These results demonstrate how important (cultural) events are to society and that they are part of the essential necessities of life.

The visitors to the theatre rated their experience at the event with an average of 9.1, abandoning the one and a half metres during the event doesn't seem to present a problem and is rated with an 8.8. So, people soon feel safe again within 1.5 metres.

¹ See Appendix 1 – Survey results

Safety measures

A number of precautionary and safety measures were introduced in order to make these pilots possible. These consist of:

- PCR test in advance, up to 48 hours prior to the event
- Triage questions
- Temperature readings
- Group size limitation
- Events logistics
- Rapid test on location (also logistics research) in 1:10 ratio
- PCR post-test on day 5 after the visit to the event
- Refrain from visiting vulnerable groups for up to 10 days after event, or until in receipt of a negative test result
- Ventilation in accordance with building regulations
- Exclusion of vulnerable groups
- Request installation of CoronaMelder app

In the pre-tests (PCR conducted at a maximum of 48 hours before the event), approx. 0.75% (9 visitors) of the participants are tested positive. In addition, 2 participants are excluded from participation whose tests returned as indetermined.

Event	Pre-tests	Positives	Indetermined	Post-tests	Positives	Rapid tests
15-2	634	6	0	482 (76%)	1	103
20-2	564	3	2	444 (79%)	0	89

There were no positive cases in the on-site rapid tests.

The PCR post-test was also introduced to measure the visitor's willingness to test. The PCR was carried out among approx. 80% of the visitors afterwards.² The fact that this result was achieved, despite the fact that there are only four locations available for the visitors, for one half-day session, to undergo this test, presents a very positive picture of the willingness to test.

In the pre-tests, 0.95% and 0.89% of people tested positive, respectively.

Building blocks

As can be seen in the research plan drawn up for these pilots, research was carried out into the following building blocks for the pilots:

1. Behaviour
2. Triage, Tracking and Tracing
3. Visitor dynamics
4. Air quality
5. Personal protection
6. Cleaning and disinfection of surfaces and materials
7. Vulnerable groups
8. Rapid testing

For each building block, we investigated how data can be collected that can contribute to improving the risk model.

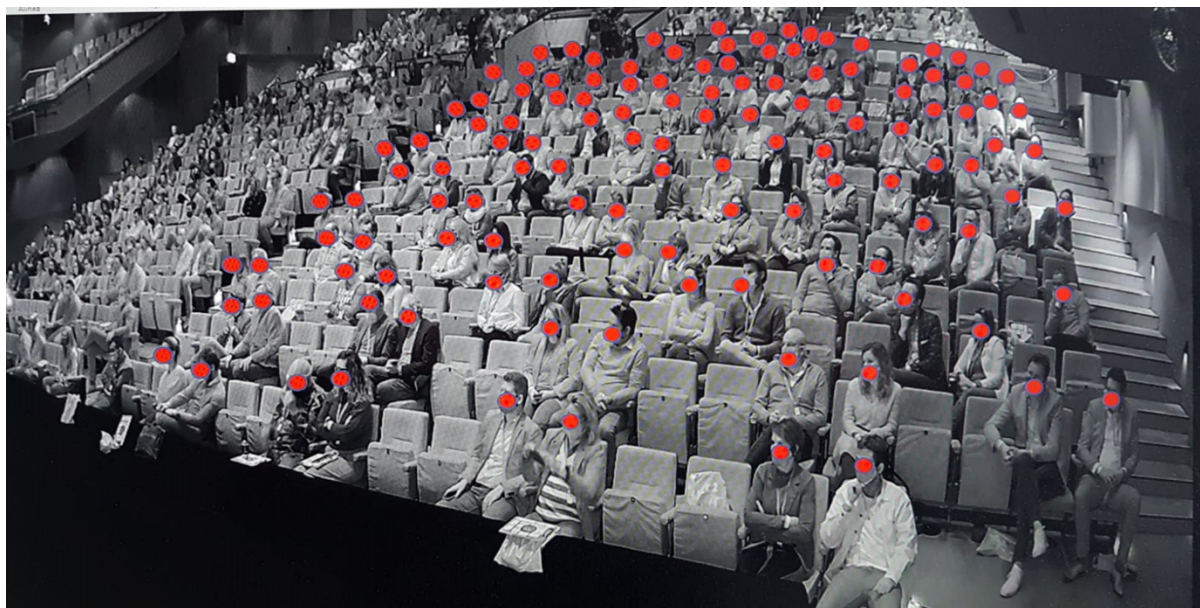
² See Appendix 2 – test results Type I events

Behaviour

For this building block, research focused on whether people adhere to the prescribed measures.

Research question

- Compliance regarding the question: "Does the visitor keep his/her mask on?"



Result

In the theatre setting, **98.4%** of visitors adhere to the instructions and wear a mask throughout the performance. Experiences indicate that active communication via the app used (Close App) prepared visitors well for the measures in place. Communication takes place by sharing relevant information with the visitors before, during and after the event, and asking the visitors questions.

Recommendation

1. Given the high rates of compliance and acceptance during Type I events and pending the outcome of TNO and UTwente's aerosol dispersion studies, it is recommended that masks be made mandatory at this time.

Triage, tracking and tracing

For the triage, tracking and tracing building block, research focused on whether good triage could prevent people from coming to the event whilst infectious and how people with a positive test result afterwards can be found post event.

Research questions

- Can we ensure that each visitor registers individually for source and contact research (BCO) afterwards?
- How can a health check based on RIVM triage questions take place most efficiently?
- What result does a temperature reading (37.5 degrees) have at the entrance?
- How large is the percentage of visitors who are refused access to the event as a result of:
 - The pre-test (PCR) in the 48 hours before the event?
 - The results from the health check?
 - The rapid tests conducted on site?
 - The temperature reading upon entering?

During the design of the Fieldlab pilot events, a number of focus areas were added:

- What is the legal framework for exchanging data for source and contact research?
- What readings or data are important to test on-site infectiousness?
- Can we persuade visitors to install the Corona Melder app?

We deal with these aspects in the recommendations.

Result

By setting up ticket sales and registration correctly, we ensured that we had contact details of all individuals. The starting point is that one person can purchase multiple tickets but will then personalise the tickets for communication on an individual basis. Adding an app (in the case of the pilots the Close App) to establish the communication on an individual basis served to facilitate this. Respectively, **92%** of the visitors and staff of the congress and **95%** of the visitors and staff of the theatre performance installed this app.

- 92% of congress visitors and 95% of theatre goers install the communication app
- 100% of visitors are individually registered (including staff)

A health check based on the triage questions took place via the communication app four hours prior to the event. Due to privacy legislation, the data of the answers are not stored. The question is repeated at the entrance. In both cases, no visitors are known to have pulled out on the basis of the triage questions.

- Health check by triage questions 0% cancellations at the entrance.

The temperature check took place by means of entrance pillars. No visitors with raised temperature were found.

- Based on the temperature readings, no visitors were refused entry.

Cancellation rates based on:

- Pre-test: 6 out of 634 (0.95%) at the congress, 5 out of 564 (0.89%) at the theatre
- Health check at the entrance: 0 people
- On-site rapid tests: 0 positive tests
- Temperature reading on entry: 0 people

Recommendation

Triage

2. Given the fact that the percentage of positive tests among asymptomatic visitors to Type 1 events was even slightly higher than the incidence estimated by the RIVM, access tests prior to an event should be made a requirement. During Fieldlab 1 to 8, PCR tests were used within 48 hours before the event, but also AG rapid tests (preferably with the least delay before the event as possible, but a maximum of 24 hours before the end of the event would be a suitable replacement here (OMT recommendation).
3. In the customer journey, the triage questions at about four hours before the event work as a reminder to make an informed choice whether or not to travel. We recommend this as part of the communication with the visitor.
4. Triage questions at the event itself and temperature readings do not detect infected persons. Rather, they are found to have a counterproductive effect, by causing congestion in the influx of visitors and thus generating additional contact moments. Working with passive reminders seems sufficient in this respect.

Tracking

5. Outside the scope of a research study, it is not permitted to track visitors in order to conduct a very detailed BCO, in the event of a possible contamination.³ We therefore recommend beginning with the separation options that locations naturally offer in order to be able to sub-divide into smaller groups within the proposed maximum capacity.
6. By making it clear to the visitor which subcategory he or she belongs to, the BCO can be limited to that subcategory in the event of a contamination and not all visitors need to be contacted.

Tracing

7. A call to download the Coronamelder app leads to an increase from 59% to 80% of the visitors who have downloaded this app⁴. We would encourage this when communicating with visitors, in order to simplify BCO.
8. As a precautionary measure, another PCR test was carried out on day 5 after the Fieldlab pilot events. This resulted in 1 possible contamination, other positive indicators were found to be old infections based on BCO. Extensive BCO also indicated that the source of the possible contamination probably lay elsewhere⁵. We advise you to discuss a protocol with **the national GGDs** that includes: Ask about visits to events, including the visitor's subcategory. Check for CT values related to old infections. Events organiser offers local GGD to email visitors in support of BCO. The basis for this protocol has already been developed by GGD and Fieldlab Events in collaboration with RIVM and GGD Amsterdam. Event organisers must be facilitated to be able to contact visitors at the request of the GGD for BCO.

³ Research privacy Bureau Brandeis commissioned by Fieldlab events

⁴ Research data Close communication app

⁵ Appendix 2 - Radboud UMC report – report test results Type I events

Visitor dynamics

For the visitor dynamics building block, the study centred on how many contact moments are created when visiting a Type I event, and the duration and distancing involved. In order to be able to test different methodologies, a classification in bubbles⁶ was used, which looked at differences in:

- Inflow and outflow processes
- Seating configurations
- Use of catering

The study was conducted by BUAS, support by Bureau Franken and video analysis by DCM. Each visitor is equipped with an Ultra Wideband tag, which continuously stored the distance from other visitors.

Research questions

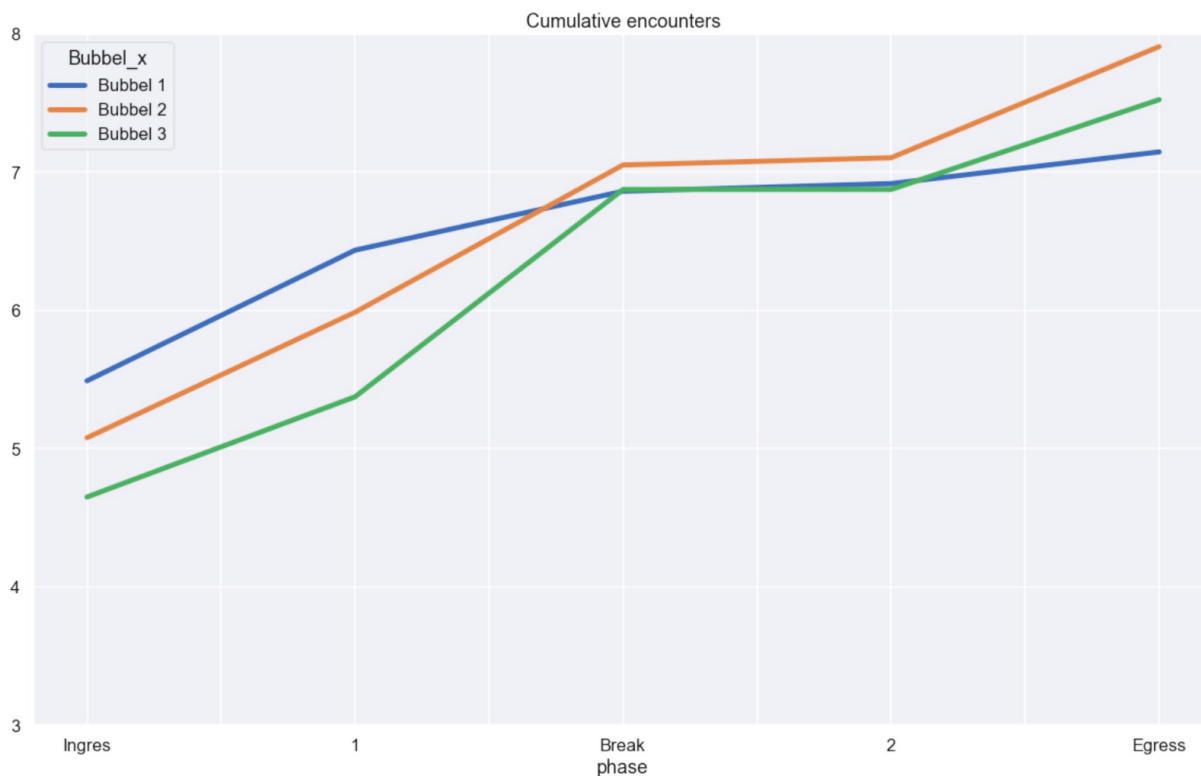
- How does the visitor arrive at his/her allocated seat?
 - How much contact is there with others?
 - Is everyone also in their own seat?
- What are the contact moments and what is the contact duration?
- What are the contact dynamics?
- Do the prevention measures work?
 - Routes and arrowing
 - Does the stimulation of desirable behaviour work?

⁶ Annex 3 – Bubble classification at the time of the study

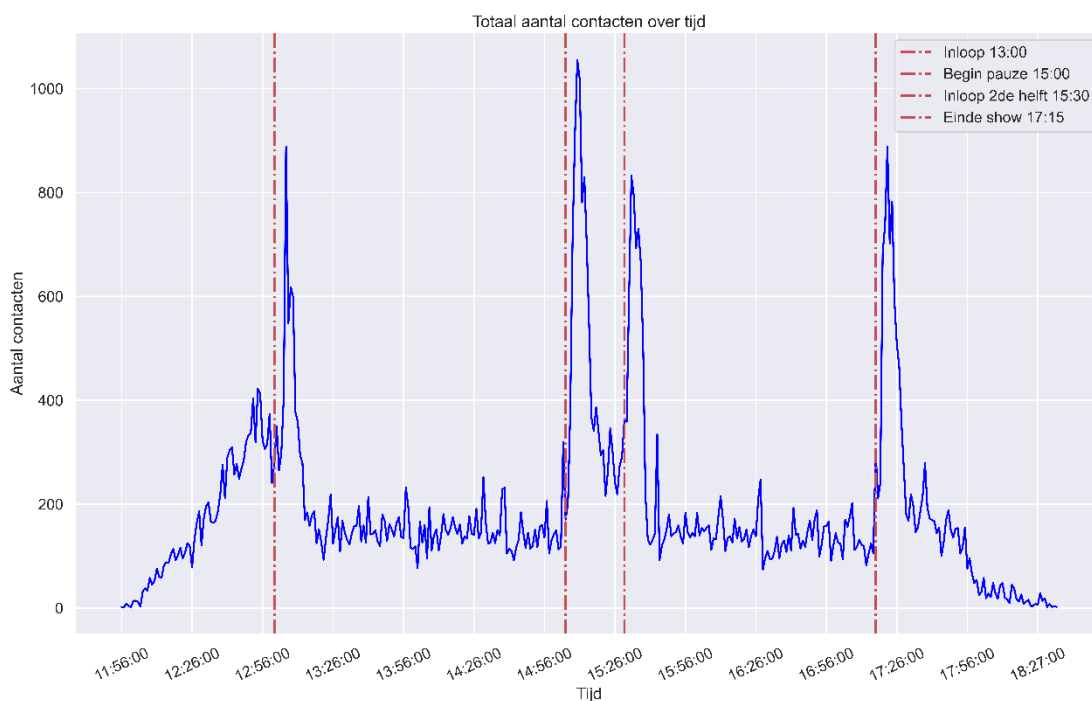
Result

Congress

The average number of longer contacts (> 15 minutes in total) at short distance (<1.5 metres) that visitors to the congress had is indicated below per bubble.

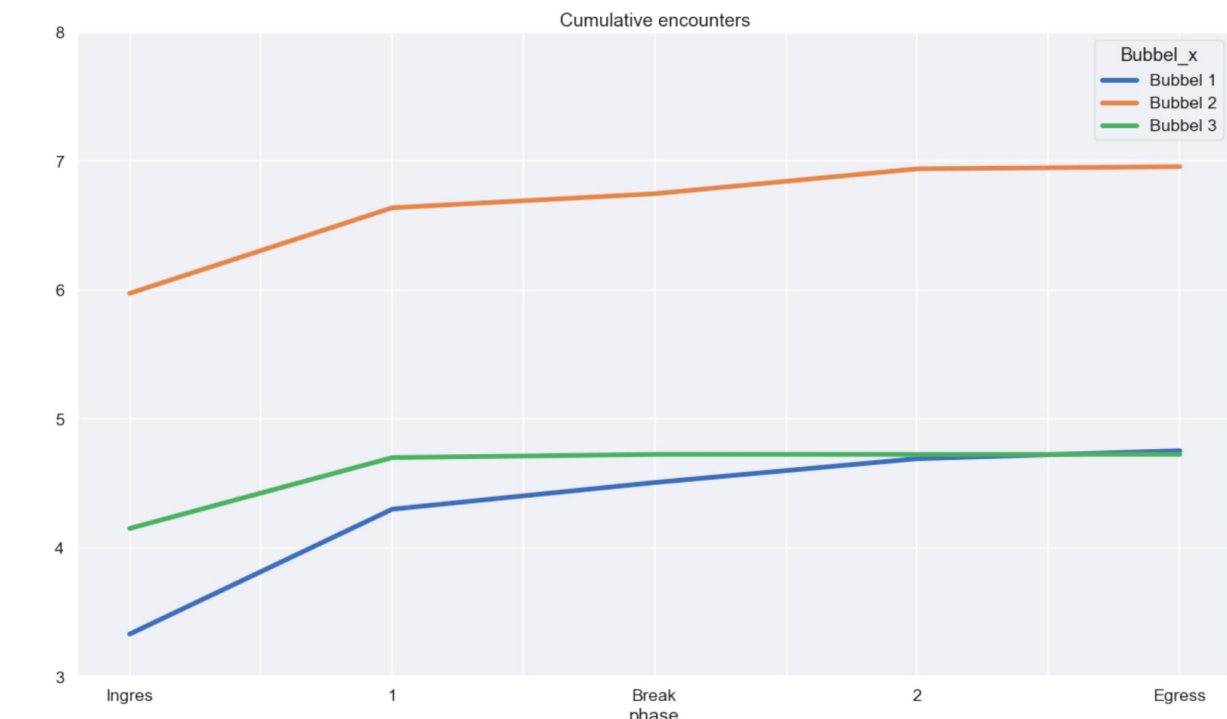


What is striking is that there is little to no difference between the bubbles. The number of contacts that fall within the set limits is relatively limited. Most encounters occur during the period when circulating in the foyer. This is due to the fact that this is an event with a large number of peers from the same industry who have actively sought each other at the location.

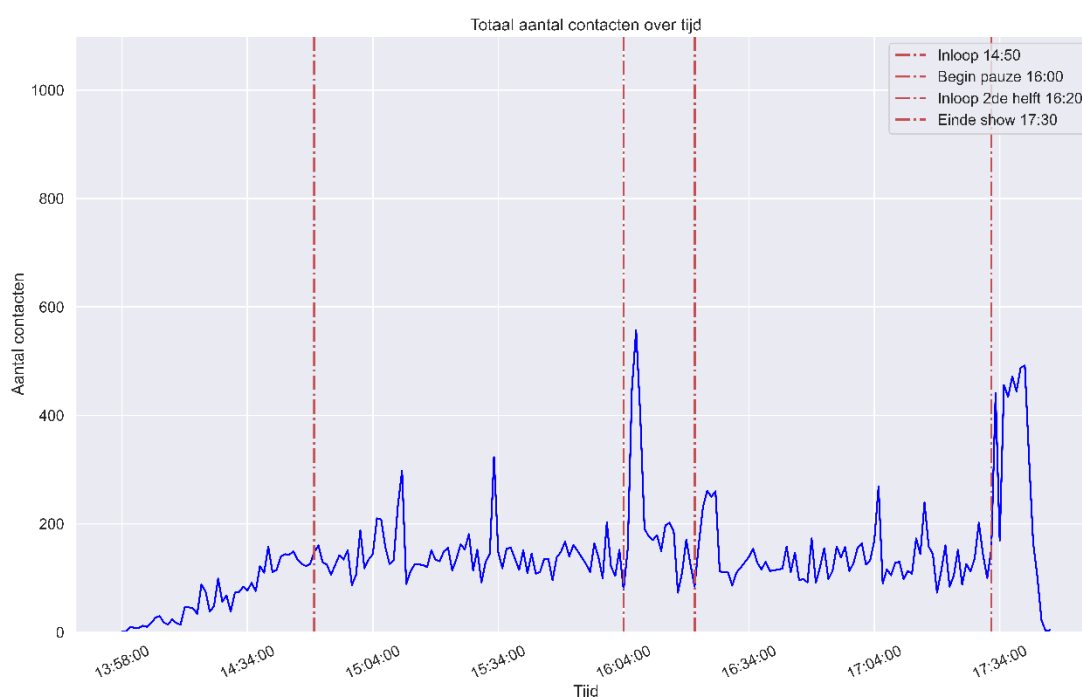


Theatre

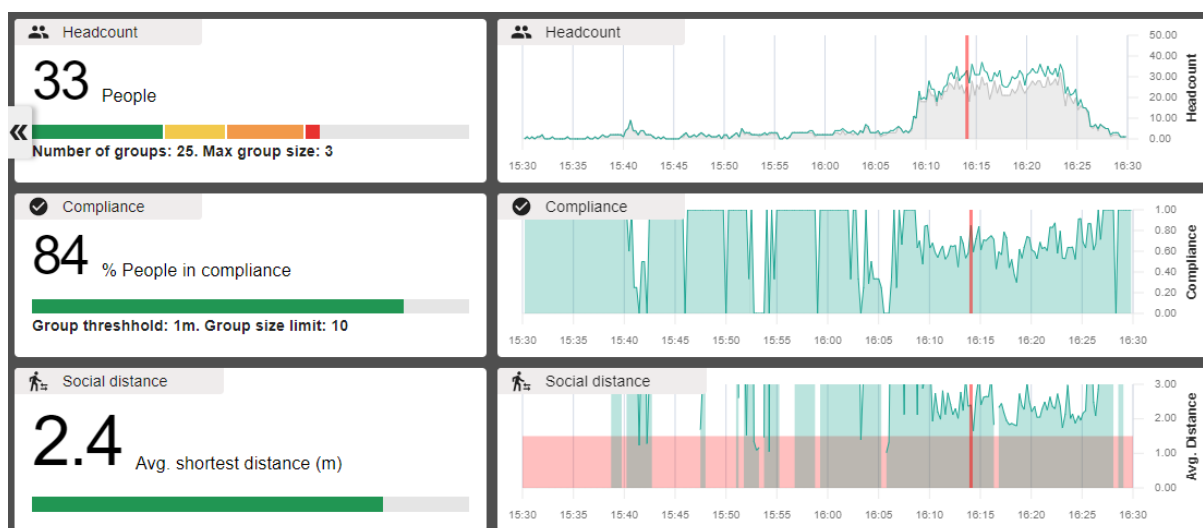
The average number of longer contacts (> 15 minutes cumulative) at a short distance (<1.5 metres) that the visitors to the theatre performance had is indicated below per bubble.



It is striking that the number of contacts is even lower than during the congress. Bubble 2, the setting without an intermediate seat, is expected to yield the highest number of contacts. Blue is the group that goes to its seat immediately after entering with a nibble box and therefore does not use catering during the intermission. This ultimately results in two contacts less than visitors who sit next to each other without a gap. It is striking that bubble 3, green, with gap and use of the foyer, comes to the same number as blue.



Bubbles 2 and 3 go to the foyer during the intermission, yet - as can be seen in the graph of bubble 3 above – that provides hardly any extra long-lasting contact moments. This can be explained by the video analysis. It appears that people stay in their own group/company and therefore maintain reasonable distance from others.



Recommendation

9. Based on the results, we recommend setting the occupancy rate at 50%, leaving it to the location to choose a checkerboard layout with either one or two intermittent free seats, because differentiation between the two settings is negligible.
10. In view of the fact that a visit to the foyer during the theatre intermission provides hardly any additional contact moments within 1.5 metres for more than 15 minutes, we recommend that there be no restriction on this. Also for the congress, although the number of contacts in the foyer is higher than in the theatre, we would not advise a restriction on 50% occupancy.

Air quality

For the air quality building block, the focus was on how the presence of visitors influences the air quality in the theatre. Research was conducted by bba binnenmilieu.

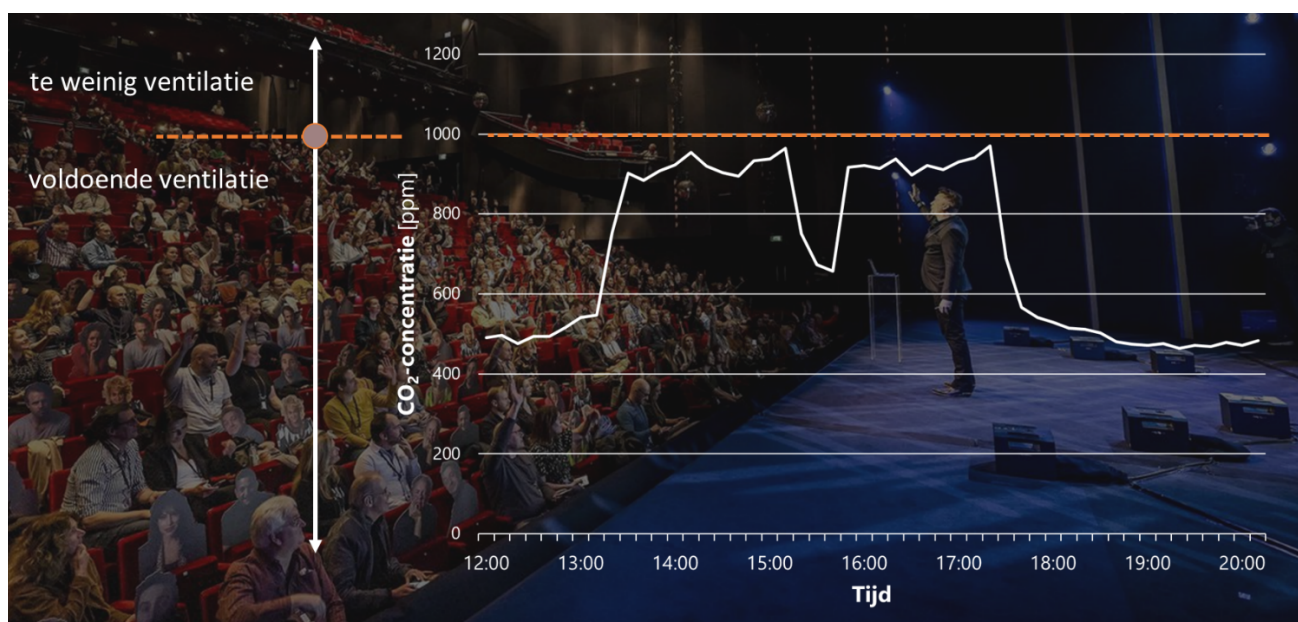
Research questions

- Does the existing air-conditioning system comply with the Dutch building regulations and the RIVM directive?
- What is the effect of face shields?
- What are the levels of ventilation and CO₂ at rest?
- What are the levels of ventilation and CO₂ during the event?

Result

Ventilation

Ventilation in the Beatrix Theatre complies with building regulations. Measurements indicate that the threshold of insufficient ventilation is not reached during the theatre performance and that the conditions of the building regulations are sufficient.



Face Shields

The effect of face shields was not measured, this is currently being investigated under laboratory conditions at TNO. However, it was investigated how the visitors experienced the face shields. These were rated with a 5.7. 15% rate a face shield as positive or very positive, 21% as negative to very negative; 58% are neutral.

Recommendation

11. Based on the results, we recommend that no additional measures be applied. This achieves a sufficient degree of air conditioning in theatres, even with an audience present.
12. With regard to face shields, we would like to wait for the results of the TNO study before introducing them in theatres.

Personal protection

For this building block, research was conducted into the effect of a mask on the event experience and the influence on the emission and inhalation of aerosols in an event environment. The research was conducted by BUAS, DCM focused on compliance and experience. Research into aerosol dispersion by TNO.

Research questions

- How does the visitor experience wearing a mask?
- Use of disinfection at entrance and impact on flow?

Result

Mask

The effect of masks was not measured, this is currently being investigated in a laboratory setting at TNO. However, it was investigated how visitors experienced the masks.

Different variants were used in the bubbles. One bubble wore the mask throughout the stay, the other bubble only wore it when moving around.

	Very negative	Negative	Neutral	Positive	Very positive
Entire stay	5%	34%	46%	14%	1%
On the move	3%	15%	62%	18%	2%

Disinfection

The use of disinfection is 100% enforceable for smaller locations with fewer visits by using an entry procedure in which this is mandatory. However, this results in a delay at the entrance and can lead to additional contact moments when entering the event.

Face shield

The survey conducted in September 2020 by Radboudumc found that 49% of visitors turned down the face shield, while 76% accept the mask as an option. That is why we have not taken the face shield into account as an option.

Recommendation

13. Based on the results, we recommend that disinfectants be made available at the entrance of the event and at various locations in the building. However, due to the flow and chance of increasing contact moments, we would not make this mandatory at, for example, the entrance of the building.

Cleaning and disinfection of surfaces and materials

No research was conducted on this subject in the Type I pilots.

Vulnerable groups

Vulnerable groups were excluded from participating in Type I events. However, this is the type of event that the 70+ age group would normally attend.

Recommendation

14. Given the fact that it is not yet 100% certain whether a vaccinated person is still able to transmit the virus, we recommend that a test also remains a requirement for vaccinated persons.
15. As long as a person from a high-risk group has not been vaccinated, we advise him or her to exclude him-/herself from attending events with high prevalence.

Rapid testing

For the building block of rapid testing, a percentage of visitors are subjected to a rapid on-site test to analyse the logistics of testing. This investigation was carried out by the Rapid Testing Task Force. A comprehensive report can be found in the final report prepared by the Task Force⁷.

Research questions

- Is the rapid test logistically deployable?
- Are there any discrepancies between rapid test results and negative PCR tests?
- How do visitors react to the test and a potentially positive test results?

Result

The deployment of on-site rapid testing is only limited. The fact that people have to keep a distance of 1.5 metres until the moment that the result is known means that almost all locations can only use this option on a very small scale.

An additional disadvantage is that visitors have already travelled when they have a rapid test carried out on location. In the event of a positive test, they must make the return journey again before quarantining.

The rapid test results did not yield any positive tests and therefore showed no deviation from the PCR tests carried out 48 hours earlier.

The people who had to undergo a rapid test rated it with an 8.9. The sense of security is clearly appreciated. Almost 9 out of 10 visitors to the theatre performance are willing to have themselves retested in advance for each event, with a clear preference for a rapid test.⁸

Recommendation

16. Based on the results, we recommend the decentralised organisation of rapid tests. It must be possible for the visitors to be tested as close to home as possible. An important reason being the avoidance of unnecessary travel in the event of an infection. In this way, the capacity can also be more evenly spread and this does not affect the logistics or visitor flows at the location of the event.
17. On location or in the immediate vicinity, we recommend a rapid test capacity, so that in extreme cases there is an opportunity to test someone who has to enter the event unexpectedly, or where the result is not available.

Based on Track 2A, this rapid test capacity combined with the controlled environment of a Type I event would soon create an opportunity for these events to resume.

⁷ See Appendix 4 – Final report Rapid Testing Task Force

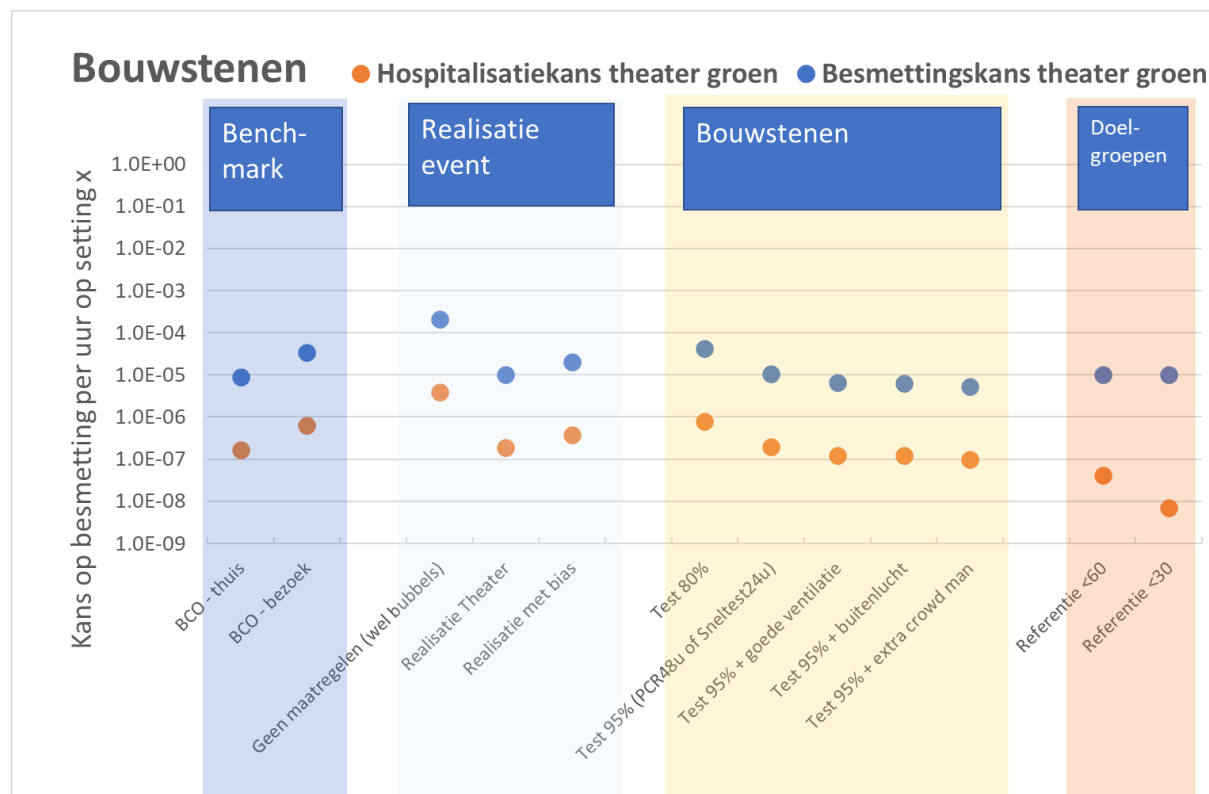
⁸ For both results, see Appendix 1 Survey Results RadboudUMC

Risicoanalysemodel

Ultimately, the research in the Fieldlab Events pilots revolves around answering the main question: "How do we reduce the residual risk that arises from events?"

Impact of building blocks on risk

TU Delft has developed a risk analysis model⁹ for this purpose, which answers this question based on the building blocks. To this end, the impact of the building blocks on contamination risk and hospitalisation risk per hour was initially compared to the BCO setting 'at home'.



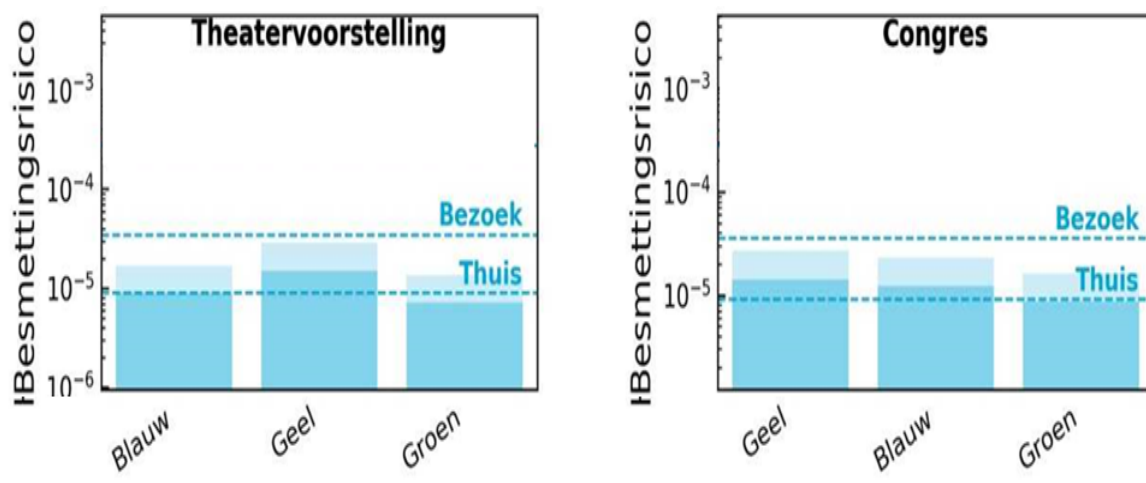
Result

The risk model shows the impact of the building blocks and measures taken during the events on the risk of contamination and hospitalisation per hour. Whilst there is a significantly higher risk at an event without any measures, it has been found that at the test event the risk is almost equal to the BCO setting at home.

The greatest impact is achieved by a high-quality test, with additional impact of intelligent design and logistics of the event and adequate ventilation or fresh air.

⁹ See Appendix 5 – TU Delft Risk Model

Risk ratio of Type I events



Each graph presents the number of infections per 100,000 people per hour. For the two events, this varies per bubble:

- Theatre performance from 0.6 to 1.2
- Congress from 0.7 to 1.2

References:

- BCO home 0.9
- BCO visit 3.5

Result

The results do not appear to display any major differences in the different bubbles. Although the theatre performance scores slightly better in the risk model, the risk profile of the congress is also lower than the BCO setting 'Visit' and almost equal to the BCO setting 'At Home'.

Recommendation

- Based on the risk model, events are possible, also with the substitution of generic measures, including the 1.5 metres. We recommend using the measures from the building blocks included in the risk model for the organisation of events. Pre-testing, ventilation in accordance with building regulations and intelligent design of the event based on the location provide a sufficiently safe environment.

Recommendations

No. and building block	Recommendation
1. Behaviour	Masks are mandatory when visitors move around, pending the results of the TNO and UTwente's ongoing studies on aerosol dispersion. They can be removed when seated.
2. Triage	Mandatory COVID-19 test prior to the event. In case of high prevalence, adhere to the current VWS recommendation of a rapid test up to 24 hours before the end of the event.
3. Triage	In the customer journey, the triage questions at about four hours before the event work as a reminder to make an informed choice whether or not to travel. This must be part of the communication with the visitor.
4. Triage	Triage questions at the event itself and temperature readings do not detect infected persons. Rather, they have a counterproductive effect, by causing congestion in the influx of visitors and thus generating additional contact moments. Allow these measures to lapse.
5. Tracking	Due to legal restrictions (privacy) on the exchange of detailed personal data, to support very detailed BCO in the event of a possible contamination, it is recommended to assume the separation options that locations naturally offer in order to be able to sub-divide into smaller groups, within the proposed maximum capacity.
6. Tracking	By making it clear to the visitor which subcategory he or she falls into, the BCO can be limited to that subcategory in the event of an infection and not all visitors need to be contacted.
7. Tracing	Routinely urge visitors to download the Corona detector app to simplify BCO, immediately after purchasing an admission ticket.
8. Tracing	<p>Establish protocol with GGD to discuss approach including: Questions about visits to events, including which subcategory the visitor belonged to. Check for CT values related to old infections.</p> <p>Arrangement between events organiser and GGD to email visitors to facilitate BCO. Events organisers must have the means at their disposal to be able to easily contact visitors at the request of the GGD for BCO.</p>
9. Visitor dynamics	The occupancy rate at 50% of the maximum capacity, whereby the location may opt for a checkerboard layout, keeping gaps of one or two seats free seats, because this seems to make little difference.
10. Visitor dynamics	No restriction to a visit to the foyer during the interval, as this provides hardly any additional contact moments within 1.5 m, of longer than 15 min.
11. Air quality	No additional measures in addition to the existing building regulations. This achieves a sufficient degree of fresh air ventilation in theatres, even with an audience.
12. Air quality	Advice on face shields depends on the results of the ongoing TNO study before introducing them into theatres.
13. Personal protection	Make disinfectants available at the entrance of the event and at various locations in the building. Due to the flow and chance of increasing contact moments, do not make it mandatory at, for example, the entrance of the building.
14. Vulnerable Groups	Given that it is not yet 100% certain whether a vaccinated person can still transmit the virus, a test is also a requirement for vaccinated persons.
15. Vulnerable Groups	As long as a person from a high-risk group is not vaccinated, he/she is excluded from attending events at high prevalence.
16. Rapid testing	Rapid testing to be organised in a decentralised way. Test visitor as close to home as possible. As a result, no unnecessary travel movement is made in case of possible contamination. In this way, the capacity can also be deployed in a more even

	spread and nor does this affect the logistics or visitor flows at the location of the event.
17. Rapid testing	Rapid testing on site or in the immediate vicinity a, so that in extreme cases there is an opportunity to test someone who has to enter the event unexpectedly.
18. Risk model	Based on the risk model, events are possible, also without the 1.5 metre restriction. Use the measures from the building blocks that are included in the risk model for the organisation of events. Pre-testing, ventilation in accordance with building regulations and intelligent design of the event based on the location provide a sufficiently safe environment.