

Työryhmä/komissio	CTIF Extrication & new technologies
Raportoiija	Samuli Piipponen
Kokousajankohta ja – paikka	13.-15.5.2025 Poitiers Ranska

CTIF Extrication & New Technologies- kokous järjestettiin 13.-15.5.2025 Poitiersissa Ranskassa. Kokouspaikkana toimi Valdiviennen pelastuskoulutuskeskus.

Kokouksessa osallistujat:

- Michelle Gentilleau, Ranska
- Mark Bokdam, Hollanti
- Arjan Bruinstroop, Hollanti
- Joël Bieber, Luxembourg
- Francois Christnach, Luxembourg
- Wolfgang Niederauer, Itävalta
- Klemen Repovs, Slovenia
- Nikolaos Vythoulkas, Kreikka
- Samuli Piipponen, Suomi
- Mateo Trop, Kroatia
- Dimitri Pelletier, Ranska
- Yvonne Näsman, Ruotsi, etänä
- Ivana Kruijff, Saksa, etänä
- Jörg Heck, Saksa, etänä

Kokouksen asialista sekä käsitellyt asiat:

- Komission uuden puheenjohtajan, varapuheenjohtajan ja uusien jäsenten esittelyt
- Kahden eri projektin esittely, jotka keskittyvät akkujen elinkaaren aikaiseen turvalliseen käsittelyyn. Projektit hakevat rahoitusta Euro Horizon ohjelmasta.
 - Keskusteltiin CTIF-komission mahdollisuudesta osallistua esiteltyihin projekteihin ja millaisessa roolissa osallistuminen olisi mahdollista. Osallistuminen vaatisi työaikaa ja vastuullisen henkilön komiteasta.
 - Päätettiin, että pyydetään molemmilta projekteilta tarkemmat tiedot, millaista roolia he haluaisivat CTIF-komissiolta. Osallistutaan molempiin projekteihin, jos rooli hankkeessa on CTIF-komissiolle soveltuva. Hankkeiden yhteyshenkilöiksi esitetty Nikolaos Vythoulkastaa sekä Samuli Piipposta.
- Robotiikan hyödyntäminen pelastustoimessa.
 - Esittely, miten eri tavoilla Euroopassa hyödynnetään robotiikkaa pelastustoimen tehtävillä. Käsiteltiin niin ilmassa, maalla kuin vedessä liikkuvia robotteja. Esittelyssä myös Luxemburgin pelastuslaitoksen kehitys ja tutkimustyö robottien hyödyntämisestä.
 - Keskusteltiin robottien hyödyntämisestä sekä robottien autonomisten toimintojen hyödyntämisestä pelastustoimessa. Tekoälyn avulla roboteille voi määritellä itsenäisiä tehtäviä.
- Pelastuskorttien laadintaan liittyvä ohjeistus
 - Jörg Heck esitteli pelastuskorttien laadintaan liittyviä kehitystarpeita. Tavoitteena yhtenäistää pelastuskorttien sisältö ja määritellä tarkemmin asioita, mitä tulisi olla mainittuna pelastuskorteissa ja mitkä asiat eivät ole olennaisia pelastustoimelle.
 - Keskusteltiin, että CTIF-komissio voisi määritellä asiat, mitkä ovat ns. perus pelastajan taitoja, joita ei tulisi erikseen mainita pelastuskorteissa.
- Michel Gentilleau esitteli kirjoittamansa artikkelin Euro NCAP 2026 suosituksista
 - Michel toivoi, että komission jäsenet kääntäisivät artikkelin omalle kielelleen ja jakaisi artikkelin kansallisessa pelastusalan julkaisussa. Tästä Suomen osalta ollut jo puhetta palopäälystöliiton kanssa, jotta artikkeli jaettaisi heidän lehdessänsä.
- Euro NCAP 2029 kyselyn tulosten läpikäynti.
 - Käytiin läpi Euro NCAP kyselyn tulokset ja luokiteltiin kyselyn tuloksella saadut ehdotukset edistettäviin ja ei edistettäviin asioihin. Luokittelun perusteella saadut edistettävät asiat valmistellaan pienemmällä ryhmällä Euro NCAP:lle toimitettavaksi.
- Shark Roboticks esitys pelastusroboteista
 - Esittely maalla liikkuvien robottien hyödyntämismahdollisuuksista pelastustoimessa.

- Automaattinen maastopaloilmoitusjärjestelmä
 - Esitys Ranskassa toiminnassa olevasta järjestelmästä, missä kameroita ja automatiikkaa hyödyntämällä voidaan valvontatorneista saada havaintoja maastopaloista aikaisessa vaiheessa. Järjestelmän avulla saadaan valvotulta alueelta heräte mahdollisesta maastopalosta. Tämän jälkeen päivystäjä tarkistaa havainnon oikeellisuuden ja tarvittaessa hälyttää pelastustoimen kohteeseen. Järjestelmän avulla on mahdollista lyhentää maastopalojen havainnointiaikaa ja näin rajoittaa maastopalojen leviämistä. Tämä on tärkeää alueilla, joissa maastopalot leviävät helposti, sekä uhkaavat asutusta tai muuta suuren riskin aluetta.
- Vierailukäynti Futuroscope elämyspuistossa sekä Forsee Powers akkutehtaassa.
 - Käynnin tarkoituksena oli tutustua turvallisuuskulttuurin johtamiseen, sekä käytännön toteutukseen erityisriskikohteessa. Akkutehtaassa tutustuttiin ajoneuvojen akkujen valmistukseen.

Seuraava kokous:

Seuraavan kokouksen ajankohdaksi päätettiin marraskuu 2025. Kokous pidetään Kreikassa, Ateenassa.

Kansallisesti jaettavat huomiot:

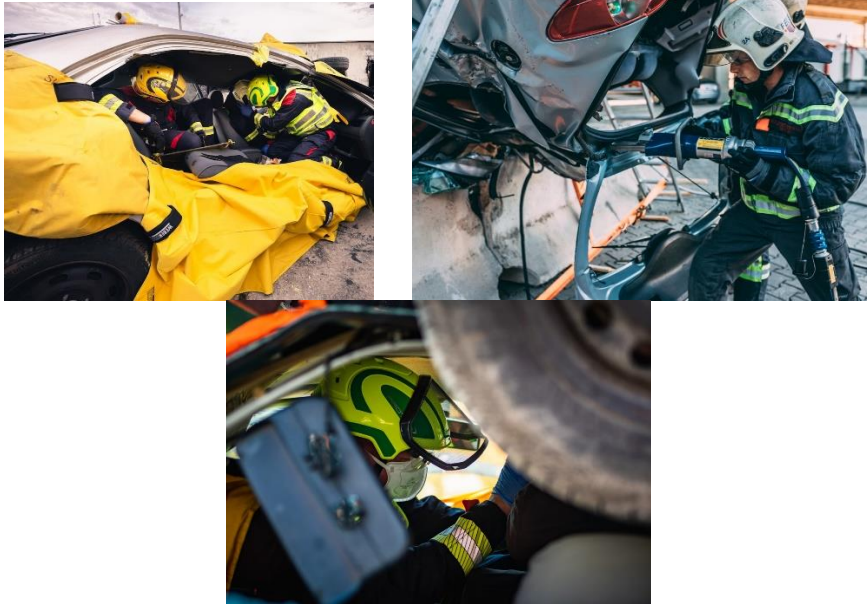
- CTIF tekee tiivistä yhteistyötä Euro NCAP:n kanssa ajoneuvoturvallisuuden kehittämisen eteen. Tämä yhteistyö on tärkeää ja hyvä kanava saada ehdotuksia läpi uusiksi Euro NCAP suosituksiksi.
- Suomessakin olisi hyvä pohtia, missä eri käyttötarkoituksissa voisimme hyödyntää niin robotteja sekä automatiikkaa palojen aikaisessa havaitsemisessa sekä sammutuksessa. Robottien avulla on mahdollista suorittaa työsuoritteita vaarantamatta pelastajien terveyttä.
- CTIF:n tunnettavuus kansallisesti olisi hyvä nostaa esille alan sisällä.

Materiaalit:

Shark Robotics jakoi esityksen osallistujille, mutta esitys on luokiteltu luottamukselliseksi, niin sitä en voi jakaa. Palon havainnointikameroiden toimittaja lupasi jakaa oman esityksensä, mutta tätä ei ole vielä toimitettu. Alla Michel Gentilleaun kirjoittama artikkeli Euro NCAP suosituksista.

Euro NCAP's 2026 protocol: advances for firefighters

Text : Michel Gentilleau (CTIF) - Relecture Pierre Castaing (Euro NCAP)



Euro NCAP's 2026 protocol includes major advances for rescue services worldwide.

For many years, Euro NCAP has been a major player in improving road safety. Euro NCAP created the five-star safety rating system to make it easier for consumers to compare vehicles, and to help them make the safest choice for their needs.

Aware of the importance of taking into account criteria that make it easier, quicker and safer for emergency services to intervene in road accidents, Euro NCAP has decided to include a “post-crash” part among the 4 parts (boxes) of its vehicle classification regulations.

Euro NCAP's 2026 protocol, which follows on from the 2023 protocol concerning the criteria for awarding safety stars, now incorporates numerous aspects relating to tertiary safety, and very directly to the emergency services.

This work has been carried out in close collaboration between CTIF (“Extrication and New Technology” commission) and Euro NCAP managers, in particular with Mr. Pierre Castaing (former Euro NCAP president), who now heads the working group dedicated to the “post-crash” part of Euro NCAP (“safety, extrication and rescue” group).

Michel Gentilleau (“Euro NCAP project leader” in CTIF's “Extrication and New Technology” commission) and Jörg Heck, a German firefighter, are full members of the “safety, extrication and rescue” group.

Substitute members are : Wolfgang Niederauer (Austria), Joël Bieber (Luxembourg), Matéo Trop (Croatia) and Dimitri Pelletier (France).

As a reminder, the main advances achieved in the previous protocol (2023) were as follows :

- **The availability of rescue sheets (RS) and emergency response guides (ERG)**

Rescue sheets are made available to Euro NCAP and must comply with the ISO 17840 standard (4 pages maximum). Rescue sheets must be translated into the 22 languages covering the Euro NCAP application zone.

The aim of these measures is to make the rescue sheets available to rescuers directly on the scene, via the Euro Rescue application..



- **Automatic door locking**

The tests verify that, in the event of an accident, locked doors unlock automatically after impact. The aim of this measure is to enable occupants to extricate themselves quickly from the vehicle, but also to facilitate access to victims by emergency services.

- **Additional requirements for electric door handles or retractable handles offering no possibility of physical grip**

The tests ensure that the handles on all side doors are accessible and operable immediately after the test (out/ready to open).

The aim of this measure is to make it easier to open doors from the outside after an impact, without rescue personnel having to operate a door handle release device or deploy door handles by connecting an external power source. Once again, the aim is to facilitate access to occupants from the outside, without the need for special tools..



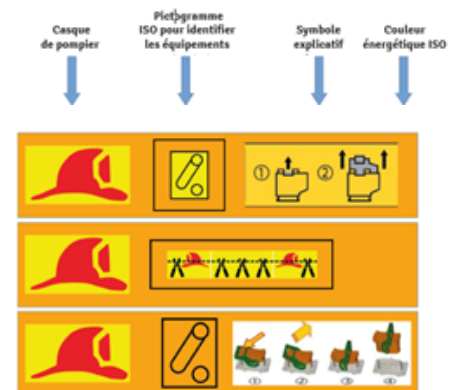
- **Seat belt buckle release**

The aim is to ensure that the seatbelt can be unlocked normally to allow the occupants to extricate themselves after an accident.

This measure is designed to make it easier for occupants to unlock their seatbelts directly after an impact (even if the belts are under tension), particularly if they are physically affected by the accident or are children, and to enable the seatbelts to be released by emergency services.

- **Identification of energy neutralization equipment**

Securing/deactivating on-board energy (high-voltage electricity, pressurized or liquid gas, etc.) is a major challenge for the safe execution of rescue operations. In response to the growing number of different manufacturers' instructions on energy neutralization, and the absence of harmonized procedures, stickers/labels need to be applied to equipment in vehicles to identify the equipment used to isolate energy.



• ECall

eCall is an on-board device used to manually or automatically activate the emergency services in the event of an accident.

The eCall criteria are to encourage manufacturers to use this alert system to transmit additional data (in addition to the mandatory regulatory data) useful to the emergency services.

The data to be transmitted (in addition to the mandatory regulatory data) includes the potential number of occupants present in the vehicle at the time of impact, the vehicle's location before the impact at two close but distinct times (to determine the direction of travel), the direction of impact (front, side, rear) and, finally, the vehicle's deceleration at the time of impact.

• Freinage « collision multiple »

Euro NCAP vérifie la présence et l'efficacité d'un système installé sur certains véhicules, visant à activer en cas de collision d'une gravité suffisante, les freins. Ces dispositifs servent à empêcher ou atténuer un deuxième impact (en évitant le roulage du véhicule sur la voie opposée par exemple).

• Vehicle immersion

Last but not least, safety criteria include requirements in the event of a vehicle entering water during or after an impact. Certain vehicle systems must continue to operate in order to help occupants escape from the vehicle (e.g. opening the doors, or opening the electric windows after the service battery (12V battery) has been disconnected). In the absence of any guarantee that the side windows are still functional, the OEM must propose a method enabling the occupant to open or break a side window in order to escape from the vehicle before it is completely submerged (window-breaking tool supplied with the vehicle, pyrotechnic device, mechanical system, etc.).

The main advances in this 2026 protocol, which have a direct impact on firefighters, concern :

• Easy-to-understand rescue sheets

In response to the proliferation of rescue sheets and procedures proposed by vehicle manufacturers, and in order to guarantee the operational effectiveness of these documents, Euro NCAP has published a technical bulletin (TB030) for vehicle manufacturers, in order to clarify the expectations of emergency services, within the scope of the ISO 17840 standard.



The aim is to provide rescue sheets that are easy for firefighters to read and understand on the scene.

This technical bulletin can be consulted online on the Euro NCAP website (Euro NCAP / For engineers / Technical papers / Technical bulletins).

CTIF representatives play an active role in updating this document, incorporating feedback from the fire brigades.

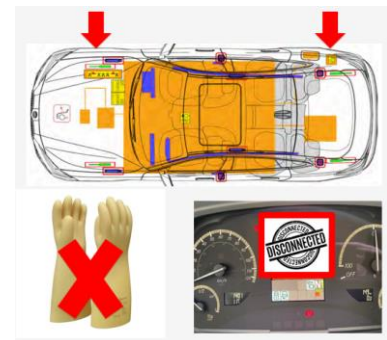
• Energy deactivation protocol for emergency services

Considering the various protocols for deactivating vehicle energy, and the difficulty of implementing them for emergency services (different energy deactivation methods, numerous and not easily operable safety devices to be used by emergency services, numerous and not always easily accessible locations for these devices, etc.), Euro NCAP has introduced the following rules:

- *Simple and safe protocols covering all possible scenarios are promoted.*
- *automatic deactivation, with status indication (energy deactivated) visible to first responders (airbags deployed, for example) is recommended*
- *manual deactivation must be possible in 2 different parts of the vehicle (a deactivation device in the trunk and another in the passenger compartment, for example)*
- *specific PPE for this deactivation protocol is prohibited. Energy deactivation protocols must not lead rescue services to purchase specific equipment.*

The rescue sheet must indicate the risks deactivated (HV batteries, 60 volts, 12 volts, pyrotechnics, etc.). This indication should be included in chapter 3 ("Neutralizing direct hazards") of the rescue sheets.

On this last point, CTIF promotes the automatic deactivation of all risks (HV batteries, 60 volts, 12 volts, pyrotechnics...), while maintaining electrical equipment useful for roadside rescue operations (automatic activation of hazard lights / electric doors, windows and seats / warning light for risk of thermal runaway...)(1)



• Manual opening device for tailgate or luggage compartment

When responding to road accidents, the tailgate or trunk can be used by firefighters to access and extract victims, or to access safety equipment (e.g. service-plug, e-plug, isolation loop, etc.).

Opening the tailgate or trunk is not always easy.

In order to facilitate opening by the emergency services, Euro NCAP will promote equipment that enables firefighters to open the tailgate or trunk quickly and easily in the event of a traffic accident (guaranteed electric opening or manual interior opening).



When a manual interior opening is integrated into the tailgate, it must be able to be used without tools.



• Batteries thermal runaway

Thermal runaway remains a problem for emergency services worldwide. The kinetics of the initiation and propagation of thermal runaway depend on a number of factors (origin, rate of charge, power, battery chemistry, type of casing, etc.). Extinguishing this phenomenon is often complicated. The context of a road accident accentuates the impact on the emergency services.

To limit this impact, Euro NCAP has introduced the following rules:

-If there is a risk of thermal runaway after an accident, the thermal runaway indicator on the dashboard must be visible. This indicates to the emergency services the imminent risk of the appearance and development of the effects of thermal runaway (smoke, flames, etc.). This information will have a direct impact on the rescue teams' choice of operation.



-Greater battery stability after detection of thermal runaway (20' / 40' / 90')

When the risk of thermal runaway is detected in a roadside rescue context, the thermal stability of the battery concerned is essential to enable emergency services to intervene. In this context, Euro NCAP is encouraging car manufacturers to offer batteries with greater stability (and therefore lower propagation speed). 3 levels are highlighted in this 2026 protocol: 20', 40' and 90'. The last level (90') will give the battery concerned the equivalent of intrinsic stability.

In addition to the traffic accident situations that are at the heart of Euro NCAP's considerations, the latter, aware of the safety issues linked to thermal runaway problems, has decided, at CTIF's request, to extend some measures to "parked" situations (in charge or not). The following measure is therefore promoted:

-When the vehicle is parked (in charge or not), the owner of the vehicle is informed of the detection of a risk of thermal runaway, via an associated telephone. In the same situation, a sound (and/or light) signal warns people in the proximity of the vehicle.

The "early detection of thermal runaway" component highlighted in this disposition will make it possible to:



-provide early warning to vehicle owners, enabling more efficient emergency response

-warn people in the immediate area around the vehicle, thereby ensuring their safety

• Automatic activation of hazard warning lights in the event of an accident



*In the event of an accident, hazard warning lights can help prevent another one.
Hazard warning lights can also help rescue services to localize a vehicle that is difficult to see in hilly or mountainous terrain, for example.*

In this context, Euro NCAP introduces the following rules:

- the requirement for automatic activation of hazard warning lights in the event of an accident

• Ecall informations

In addition to the measures already taken in the 2023 protocol, Euro NCAP is extending the amount and type of information to be transmitted to the emergency services, in the event of an accident, via the E-call system or the TPS (third party service) system if available.

The information rated by Euro NCAP is as follows:

In addition to providing emergency services with better information on the nature of the accident (type of vehicle, number of victims, location, etc.), the ultimate aim of this approach is to be able to deliver an accident severity “score”, based on criteria and algorithms still to be defined.

This severity score could suggest a typical “departure plan” when the emergency services are called..

Post crash intervention
Advanced eCall – 112
Potential number of occupants
Direction of impacts – Front, Side and Rear
Delta V (1pt per direction)
Direction of impacts - Rollover as 1 st impact
Advanced eCall - TPS
Country coverage (all EAA)
Multiple languages - 4 languages EN, GE, FR, ES
Multiple languages - 4 additional languages
Hazard detection after crash
Telephone pairing
Vehicle information
Vehicle final position
Any additional information, e.g. TVV
AACN, e.g. dCall, OEM severity index

Finally, it should be noted that **trucks** are now included in the EuroNCAP protocols by 2025, with the first measure taken concerning firefighters: the promotion and valorization of rescue sheets for trucks and their integration in the Eurorescue application.

Other post-crash criteria could be included in the future, such as energy symbols on the various sides of the vehicle:





- (1) see articles on CTIF website : <https://www.ctif.org/news/disabling-direct-hazards-vehicle-crash-what-does-it-mean-emergency-responders>