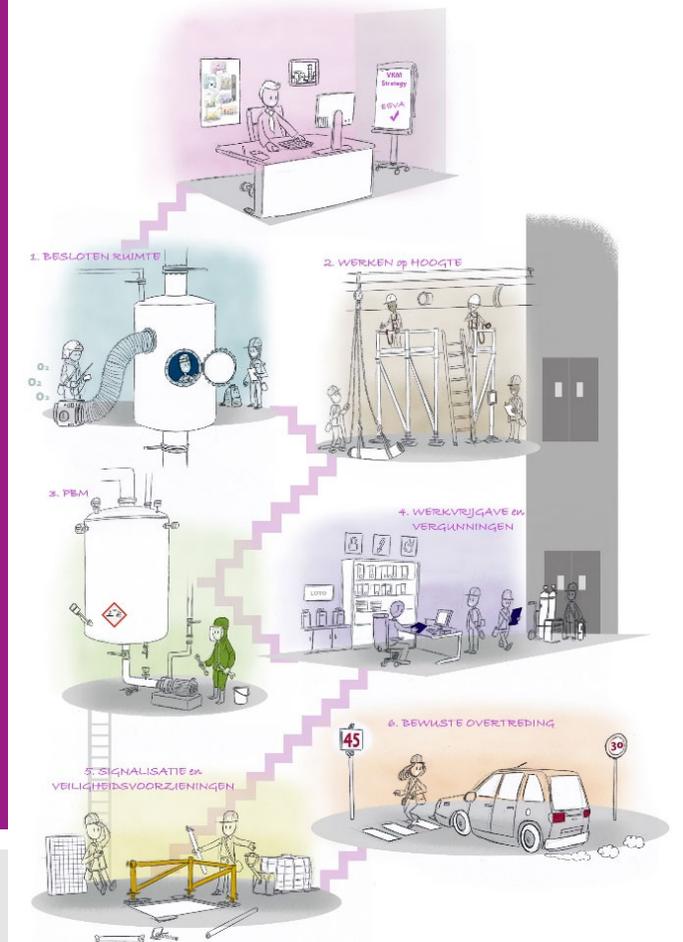


EEVA

2021



EEVA: definition

What is EEVA?

EEVA is an abbreviation that stands for:

Evonik's **E**ssentiële **V**eiligheidsregel voor de site in **A**ntwerpen (Evonik Essential Safety rules for the site in Antwerp)

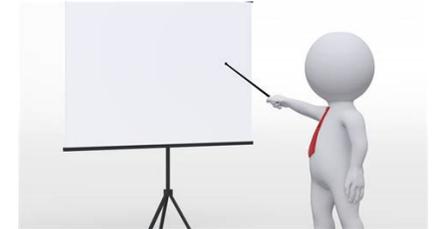
This is a rule that helps ensuring that everyone who was present on the Evonik site in Antwerp can leave the company healthy and well.

It deals with the more serious risks and is not focussed on the smaller ones.

The sense or non-sense is no longer discussed, as everybody accepts and agrees the need to always adhere to it.

It fits perfectly into the general Safety, Health and Environment framework.

In the event of a non-compliance, there may/will be a consequence, this depending on the outcome of the investigation.



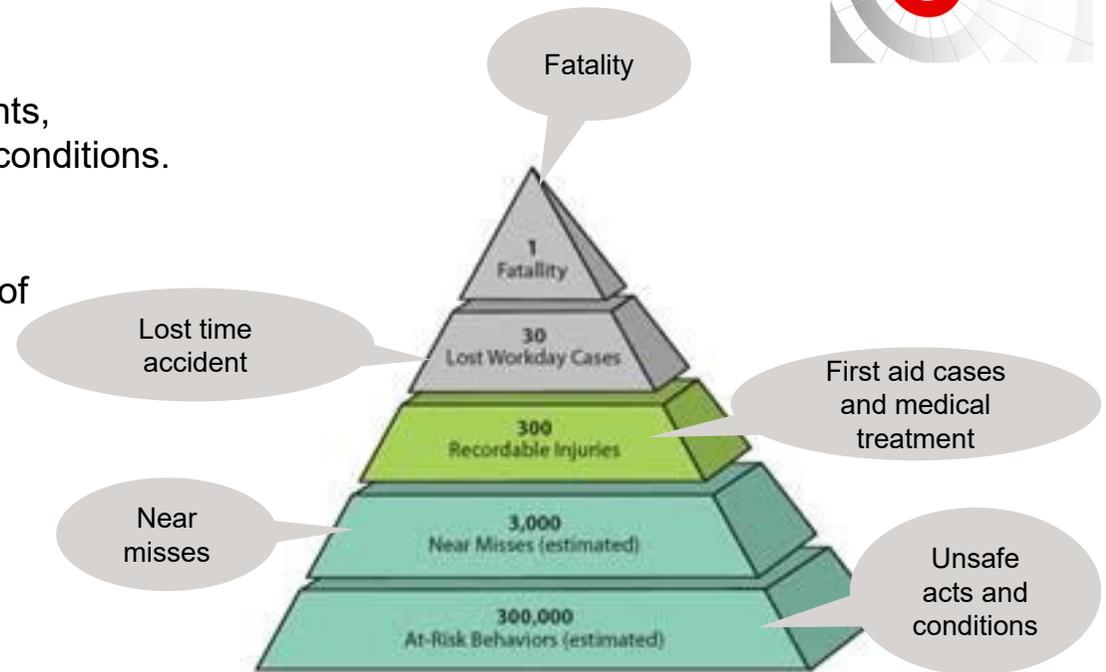
EEVA

Why did we start with the introduction of EEVA?

In the past people believed that there exists a statistical correlation between the different severity levels of accidents.
(Pyramid of Bird/ Triangle of Heinrich)

Statistically for each fatality there were 30 lost time accidents, 300 recordable injuries and thousands of unsafe acts and conditions.

Therefore the prevention strategy consisted out of reducing the basis of the pyramid in order not to have any of the top events.



EEVA

In practice this appears not to be fully correct.

Some companies which started to work on sizing down the basis of the pyramid still had from time to time severe incidents and accidents.

The underlying reason for this is that not every unsafe act and condition has the same risk potential.

The task is to filter the ones out with the highest potential for negative consequences and to define adequate measures.

EEVA is part of these.

For less critical activities and conditions it is sufficient to reduce the basis of the pyramid.

One needs to work on both concepts however.



EEVA

Who is EEVA for?

Everyone who will work or visit Evonik Antwerp is expected to respect and apply EEVA.

Both employees and managers have their responsibility.

Own employees are equally important as contractor people when it comes to safety.

Implementing these rules will be instrumental in achieving an open, proactive and fair culture.

EEVA

For Evonik Antwerpen the concept is rather new, does it already exist at other companies?

The concept is not new, other and especially larger chemical companies have developed a similar set in recent years.

Names that circulate are: “Golden Rules”, “Cardinal Rules”, “Life Saving Rules” ...

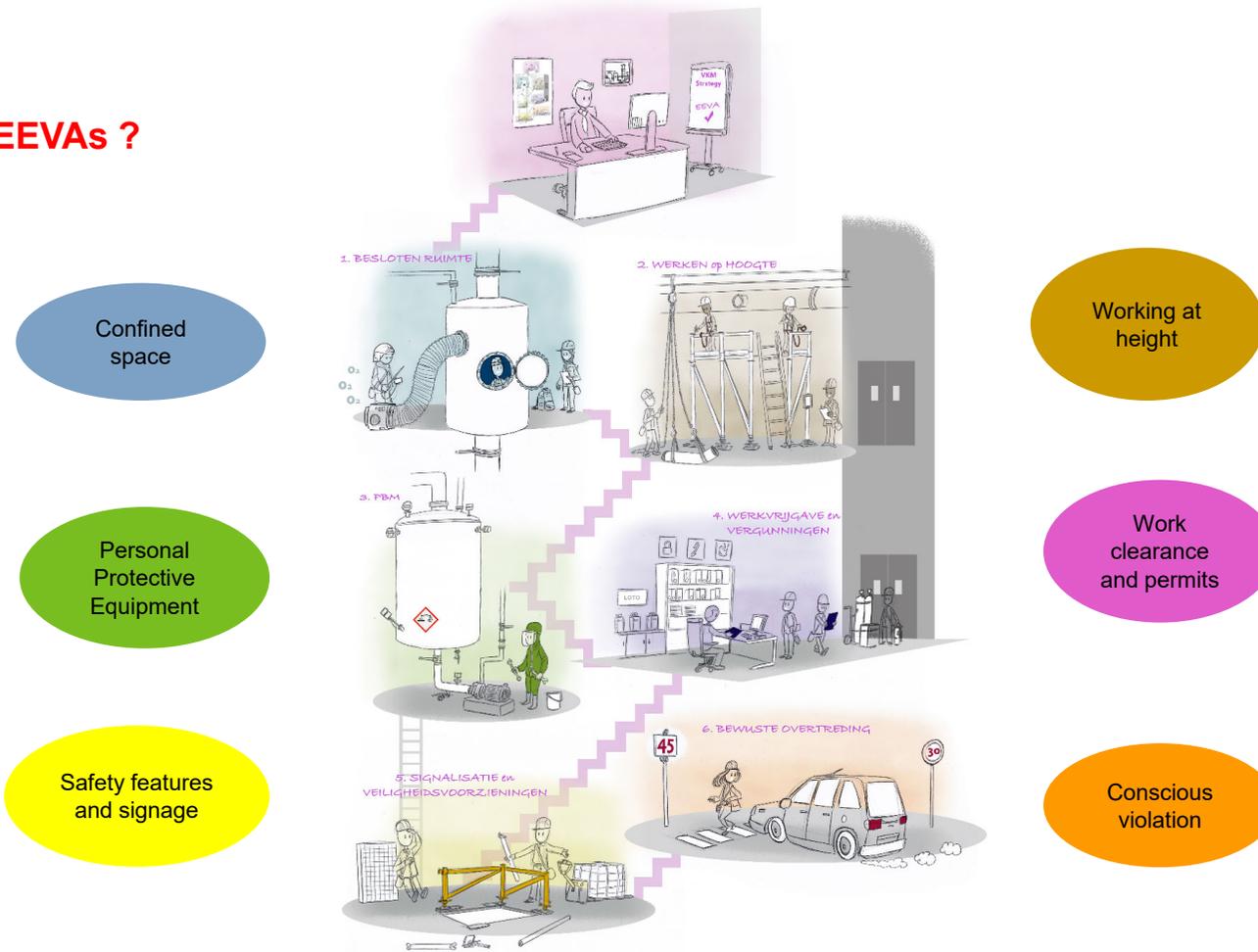
The number varies between about 5 and 20 and ranges from purely safety-related to welfare and personnel matters. Rules with regards to alcohol and drug abuse, theft, uncollegial behaviour may be included herein.

Evonik choses to introduce a safety-related set, consisting of a limited number of rules, so that everyone can easily understand, remember and apply them.

6 EEVAs have been defined and are currently being rolled out.

EEVA

Which rules are EEVAs ?



EEVA

1. The procedure for entering confined spaces must always be complied with.
2. When working at heights, everyone is obliged to use fall protection.
3. When carrying out work, the prescribed PPE must be worn.
4. Nobody is allowed to carry out work without a work-clearance and the required permits.
5. It is forbidden to unjustifiably remove or circumvent safety features and signage.
6. Putting colleagues, employees and contractors in “life threatening situations” as a result of a deliberate violation is prohibited.

EEVA

Rule of conduct:

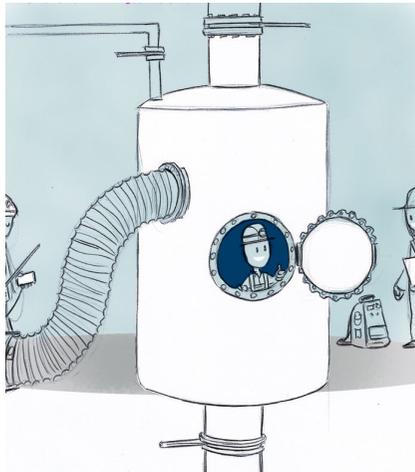
In order for the concept to work, everyone must be honest and it must be possible to investigate any incident.

Withholding facts, concealing and/or manipulating information or lying, which make the investigation of incidents more difficult, will not be tolerated.

This rule of conduct is already in place, but is because of its importance being reinforced in this context.

EEVA 1: some more background information

1. The procedure for entering confined spaces (CS) must always be complied with



A CS is a space with a private character.

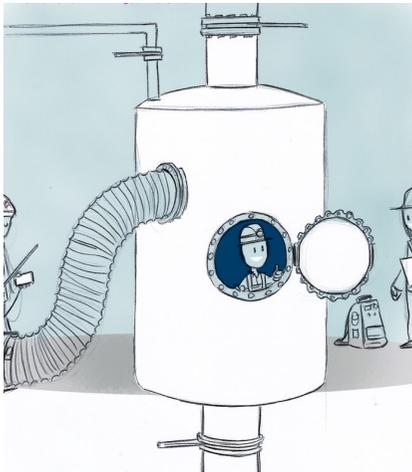
This means that there is a limited or difficult access and a limited natural ventilation.

The CS is not designed and intended to allow people to work in it permanently.

A risk analysis must be carried out in advance to determine the special measures for surveillance and evacuation.

This applies as soon as there is or may be a dangerous atmosphere or if people can not easily get out of the CS on their own.

EEVA 1: some more background information



Relevant documents:

VEI-RB/INS/ 620: Betreden van besloten ruimten

VEI-RB/FORM/6202: Risicoanalyse voor het betreden van een besloten ruimte (werkblad)

VEI-RB/FORM/6200: Toegangsvergunning

T-E-B/INS/550: Instructie graafwerken

VEI-RB/INS/630: Werken met elektrische toestellen in tanks en geleidende besloten ruimten

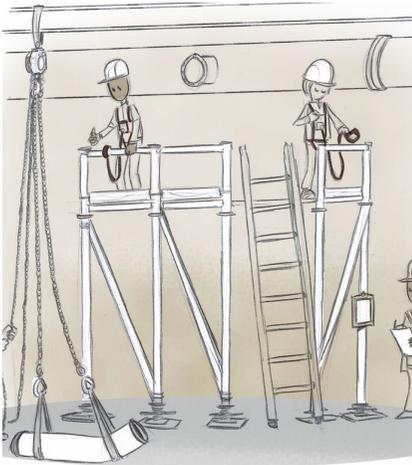
The above-mentioned documents must be checked and used.

The link to the documents can be found on the intranet under Antwerpen > VKM > EEVA and by clicking on the relevant tile.

For contractors, this information will be made available via the contractor portal on the internet (the link to the document can be found under Internationaal > Evonik in België > Info voor contractoren > EEVA).

EEVA 2: some more background information

2. When working at heights, everyone is obliged to use fall protection



Accidents involving falls from a height have the relatively highest mortality rate of all.

These three factors are decisive:

The **height** from which one falls. The higher the worse.

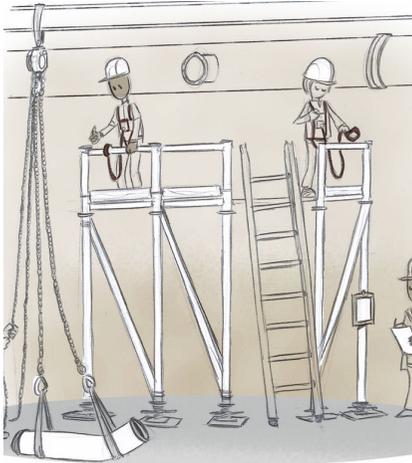
The **position**: head first or feet first?

The **impact**: or the surface: whether one falls on concrete or on soft sand will help determine the severity of the injury.

Fall protection consists out of all possible means that ensure that people do not fall or reduce the potential consequences.

This ranges from platforms, approved ladders, railings, scaffolding, loading bridges and cages... to the individual fall harness that is worn and attached in the correct manner.

EEVA 2: some more background information



Relevant documents:

- VEI-RB/INS/ 710: Valbeveiliging bij werkzaamheden
- BW/INS/800: Aankoop, gebruik en keuring van ladders
- S-TS/INS/800: Werkzaamheden aan roosters
- VEI-RB/INS/610: Vergunning tot het betreden van daken

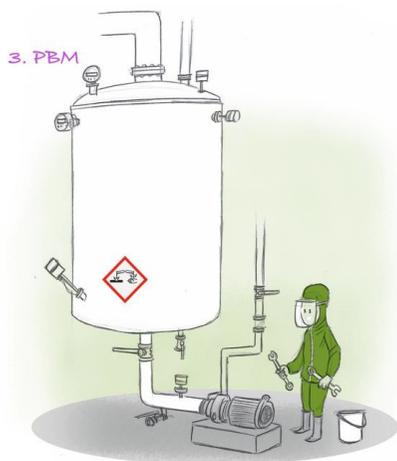
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For contractors, this information will be made available via the contractor portal on the internet (the link to the document can be found under Internationaal > Evonik in België > Info voor contractoren > EEVA).

EEVA 3: some more background information

3. When carrying out work, the prescribed PPE must be worn



Personal protective equipment is the last barrier between yourself and the residual risk.

In most cases, the existing safety measures and provisions in technical, structural and organisational fields are of such a level that getting at risk is reduced to a strict minimum.

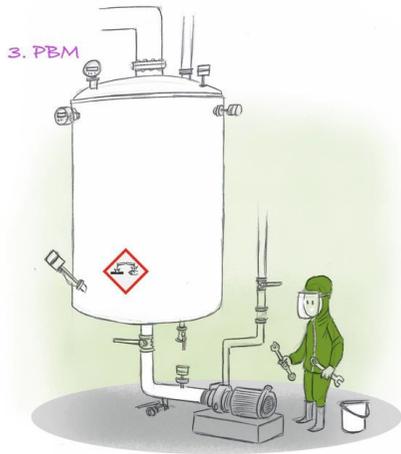
However, the residual risk is not zero.

To minimize the effect on people, PPE form an additional layer of protection.

The correct use of the right PPE is therefore seen as very important.

A distinction is made between standard PPE (safety helmet, safety glasses, safety shoes, respiratory protection, hearing protection) and specific PPE (chemical suit, safety harness...) The use of the latter category is described in specific task- or product related work instructions.

EEVA 3: some more background information



Relevant documents:

VEI-RB/INS/700: Gebruik van standaard PBM

VEI-RB/INS/781: Ademluchttoestellen

VEI-RB/INS/720: Gebruik gaswerkpakken

PBM-catalogus

PBM-matrixen

The above-mentioned documents must be checked and used.

The link to the documents can be found on the intranet under Antwerpen > VKM > EEVA and by clicking on the relevant tile. For contractors, this information will be made available via the contractor portal on the internet (the link to the document can be found under Internationaal > Evonik in België > Info voor contractoren > EEVA).

PPE matrices are only consultable by people who have the correct authorisation. This can be requested from management.

EEVA 4: some more background information

4. Nobody is allowed to carry out work without a work-clearance and the required permits



Work may only be performed after an official permission is given.

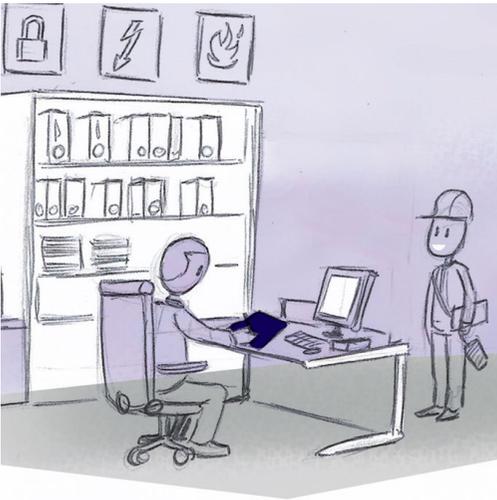
This can consist of:

- Presenting themselves at the control room (cleaning service, visual inspection tour, exchange of IT equipment...) In other words the more house, garden and kitchen jobs.
- Assignment from the hierarchical line to the production workers.
- For more complex jobs: one starts with a workorder, followed by a detailed description (scripts, checklists...) supplement with, if applicable, additional permits and finally put back into operation after a thorough check.

Within EEVA the emphasis is on correctly and completely following this process.

A work release (or clearance) is the official approval that the work may start.

EEVA 4: some more background information



Relevant documents

VEI-WP/INS/120: Vrijgeven en uitvoeren van werken

VEI-RB/INS/622: Vrijgave voor het openen van installatiedelen

VEI-RB/INS/410: Doorslijpen van leidingen

WP/FORM/0010: Ondertekening bevoegdheid voor orderaanvragen/vrijgaves/vergunningen

EMR-WP/INS/110: Toelating voor overbrugging en verandering van instellingen van veiligheidsapparatuur

VEI-RB/INS/535: Beveiliging van installaties door middel van EMR- technische maatregelen (Z-Functies)

VEI-RB/INS/600: Vergunning voor warmwerk/ Ex-zones

VEI-RB/INS/620: Betreden van besloten ruimten

VEI-RB/INS/610: Vergunning tot het betreden van daken

VEI-RB/FORM/6200: Toegangsvergunning

T-E-B/INS/550: Instructie graafwerken

VEI-RB/INS/180: Lockout/tagout(LOTO) van gevaarlijke energieën en chemicaliën

WP/INS/121: Code van goede praktijken voor werken aan flenzen

The above-mentioned documents must be checked and used.

The link to the documents can be found on the intranet under Antwerpen > VKM > EEVA and by clicking on the relevant tile. For contractors, this information will be made available via the contractor portal on the internet (the link to the document can be found under Internationaal > Evonik in België > Info voor contractoren > EEVA).

EEVA 5: some more background

5. It is forbidden to unjustifiably remove or circumvent safety features and signage



Safety features
and signage

Safety features or provisions are part of the hardware : they are usually technical means that help reduce risks. Examples include balustrades or the use of safety valves.

If these are incorrectly removed, this can immediately lead to an incident.

Signage on the other hand has as function to notify everyone.

What is the risk?

How serious is the risk?

Examples are safety labels on recipients and piping descriptions.

Others are safety ribbons and scaffolding plates or signposts "Do not enter. Confined space."

Traffic signs also belong to this category, just like the signage at the level crossings.

Signage should support everyone's correct behaviour and is therefore extremely important as a preventive tool.

EEVA 5: some more background



Safety features
and signage

Relevant documents

- VEI-RB/INS/622: vrijgave voor het openen van installatiedelen. (rood en groene label)
- VEI-RB/INS/410: Doorslijpen van leidingen (rode en groene positioneringssticker)
- VEI-RB/INS/525 : Veiligheids-en gezondheidssignalering op het werk
- VEI-RB/INS/565 :Beveiligen van vrije stopen (gele kleur aanbrengen op blindflenzen)
- BEW/INS/800 : Verkeersregels
- VEI-RB/INS/520 : Beveiliging tegen ioniserende straling bij radiografisch materiaalonderzoek
- VEI-RB/INS/820 : Gebruik van een industrieel voertuig
- UT-ST/INS/130 : Te nemen maatregelen tijdens de uitvoering van regelmatig wederkerende schakelingen bij stroomvoorziening
- T-E-B/INS/ 500 : Veilig werken met en op stellingen
- VEI-RB/INS/ 545 : Asbest
- WP/INS/112 : Afspraken bij hijswerkzaamheden
- VEI/RB/INS/170 : Code van goede praktijk en beheer van flexibels
- S-L/INS/ 610 : Voorschriften voor derden t.o.v. CV bij spoorwerkzaamheden
- L-CV/INS/ 013 : Beveiliging laad- en losstations met spoor aansluiting
- VEI-RB/INS/180 : Lockout/tagout (LOTO) va gevaarlijke energieën en chemicaliën
- T-E-B/INS/ 550: Graafwerken
- VEI-RB/INS/ 100 : Richtlijnen voor aannemers (afspanlinten)

The above listed documents must be used and /or can be consulted. The link to the documents can be found on the intranet under Antwerpen > VKM > EEVA and by clicking on the relevant tile. For contractors, this information will be made available via the contractor portal on the internet (the link to the document can be found under Internationaal > Evonik in België > Info voor contractoren > EEVA).

EEVA 6: some more background

6. Putting colleagues, employees and contractors in “life threatening situations” as a result of a deliberate violation is prohibited

By knowingly committing a violation or allowing it to happen one makes it very clear that there is no value for respecting the rule.

This can however lead to very serious or even deadly consequences and should therefore not be allowed.

At Evonik, it is assumed that there is no one present at the company who consciously wants to endanger people's lives. After all this is criminal behaviour and should be dealt with in a criminal court.

The objective of this EEVA is to create awareness that deliberately violating the agreed rule can lead to a serious accident and that we do not focus on the consequence but on complying with the rule itself.

An example of this is refusing to stop at a pedestrian crossing the moment somebody wants to use it.

An other example is to instruct people to work on a pipe rack without fall protection being present.

Another example: the release of toxic or corrosive products (let them run down) when people standing underneath.



Conscious violation

In case the job cannot be performed in a safe manner, solutions must be developed which are feasible and in line with the agreements.

EEVA 6: some more background



Relevant documents:

There are no specific documents for this EEVA.

The main regulations were already reviewed in the previous EEVA.

In addition there are the Evonik House Rules that everyone must also adhere to.

Conscious
violation

Why people break rules or fail to follow procedures?:

- **Expectation** : the idea that the rules will have to be bent to get the work done.
- **Powerfulness** : the feeling that one has the ability and experience to do the job without slavishly following the procedures.
- **Seeing the opportunities** that present themselves for short cuts or to do things “better”.
- **Inadequate work planning and advance preparation**, leading to work “on the fly” and solving problems as they arise.

These reasons are sometimes understandable but will not be tolerated.

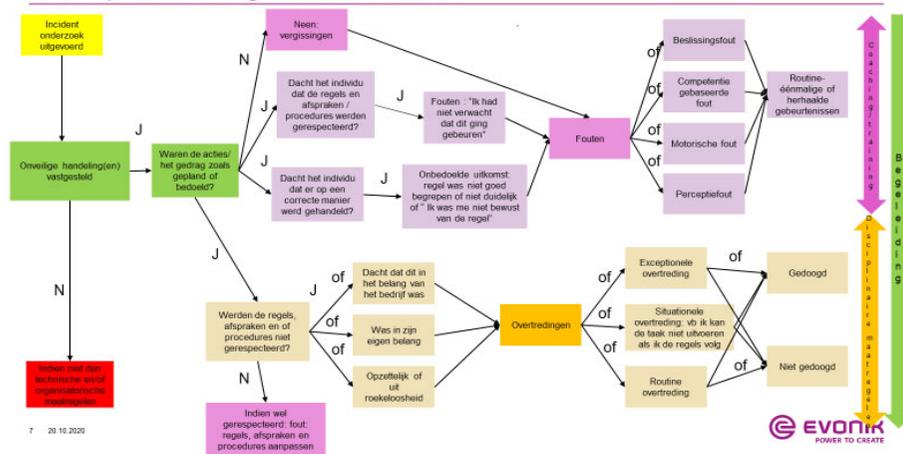
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There is being sinned against an EEVA... what happens then?

If a non-compliance with an EEVA is observed, an attempt will always be made to conduct an incident investigation as soon as possible. It is therefore expected that reporting is done as quickly and accurately as possible.



Consequence management: dimensies



It is very important to understand why people did not live up to the rule in order to avoid the same or similar from happening again in the future.

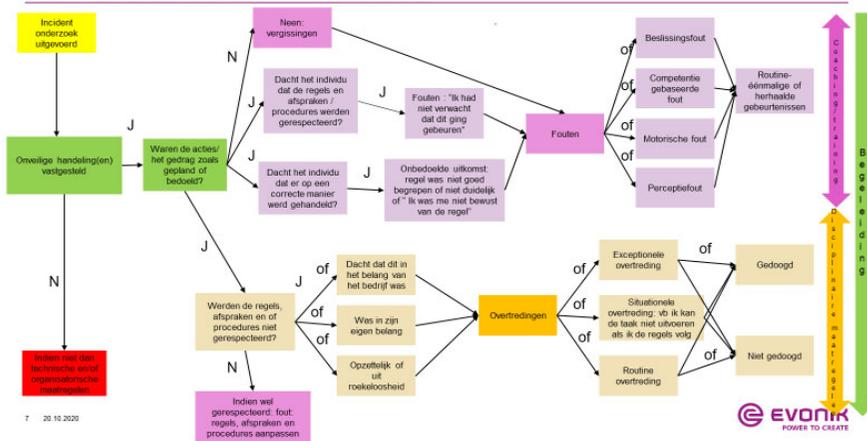
The objective is to determine the corrective measures.

EEVA

During the investigation we will, amongst other things, look deeper into the unsafe acts that took place.



Consequence management: dimensies



This can be one or more, committed by one or more people and or from different levels and companies or departments.

An important distinction must be made between an error and a violation. A violation is similar to driving through a red traffic light.

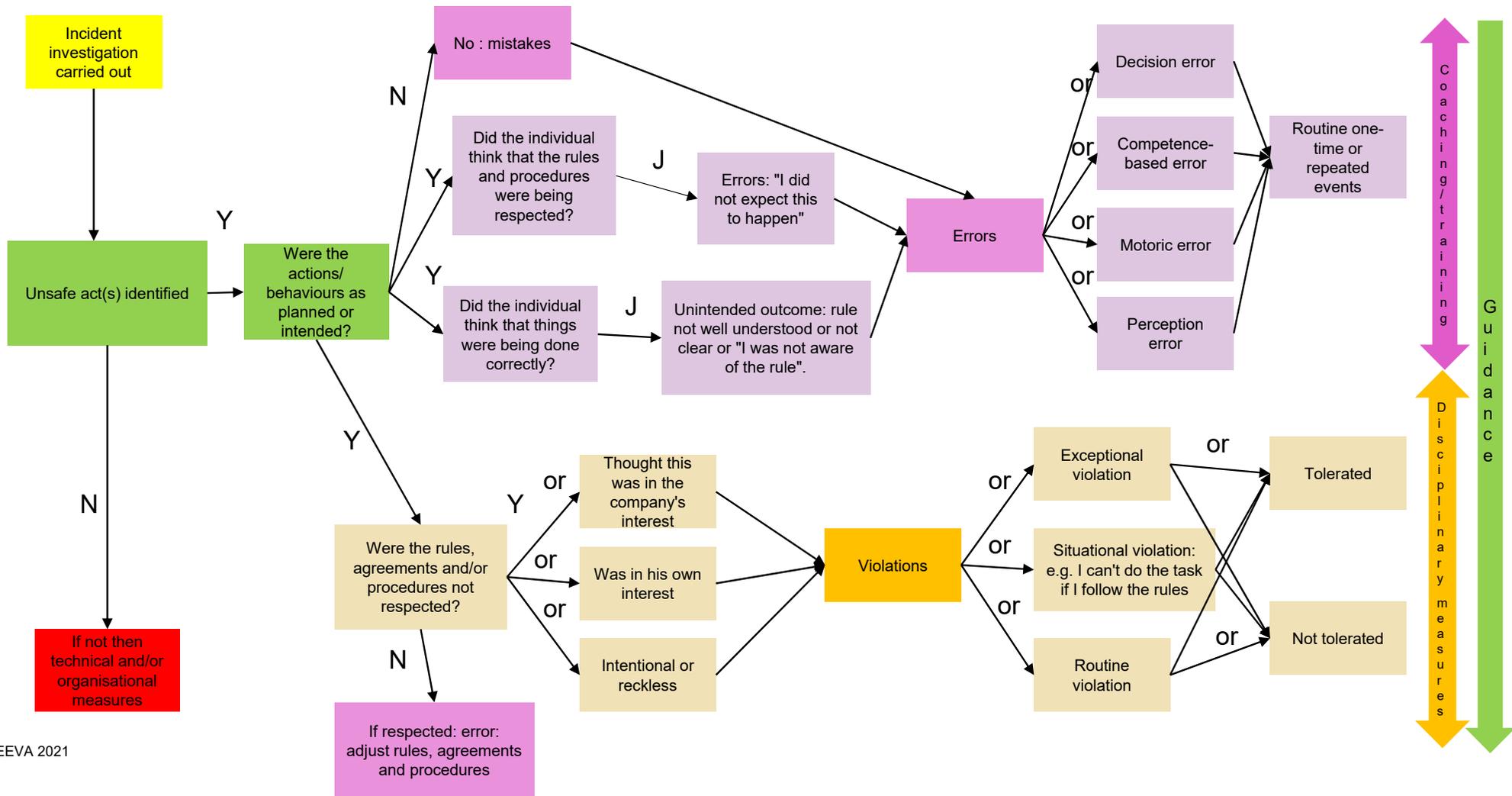
Everybody knows the rule and what behaviour is expected but for some reason one decides not to comply.

A sanction can follow.

Errors are all the rest.

In the event of errors, adjustments are made to the system or to the procedures. This includes the provision of coaching and training.

EEVA



EEVA

Process:

Very important is the preparation phase:

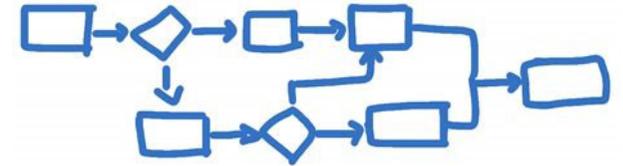
EEVA is introduced 2 by 2 to allow everybody to make the necessary adjustments and arrangements in a way the rules can be applied.

Before EEVA was rolled out, the different stakeholders received the request to have a closer look at the infrastructure, the procedures and the structures and to adapt if needed.

This is probably a never ending process:

The decision was made to start with the introduction with what is available at that very moment.

In case the incident investigation highlights the fact things need to be improved, this will be taken care of with the right priority.



EEVA

Process:

How is the communication to third parties carried out?

During VKM meetings.

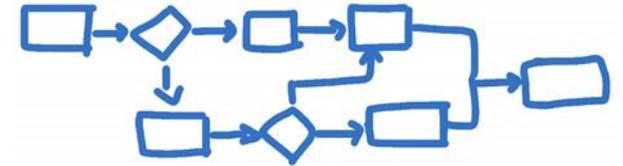
All relevant documents and information regarding the EEVA concept will be uploaded on the internet site.

The visualization campaign will be continued.

Poster, banners, movies ...

The Evonik coordinators have the task to discuss EEVA with the site managers of the various contractors for which they are responsible.

Further transfer of information within the contractor organization must take place internally.



EEVA

Process:

Is EEVA “a stick behind the door” ?

No, absolutely not.

Evonik Antwerpen does everything in its power to offer everybody the possibility to be able to follow the rules. Everybody is by consequence expected to do this.

In case the rule can not be complied with, everybody has the right to refuse to carry out the job in an unsafe way and inform leadership and look mutually for solutions.

Evonik Antwerpen will have reached a more mature safety culture:

when everything is reported and investigated,
there are no longer EEVA incidents
and no sanctions had to be issued.

