

# The use of biometrics in DVI/terrorist incidents



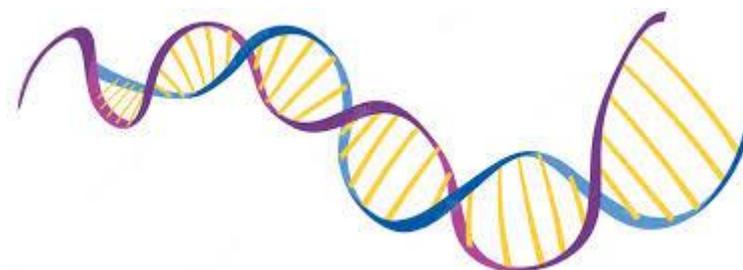
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# Topics to be addressed

- *Biometrics for forensic identification*
- *Disaster Victim Identification*
- *MH 17 use case*
- *Terrorist incidents and biometrics*
- *Utrecht tram attack use case*
- *Summary*

## Vingerafdruk gerold (BVID)



*“Every contact leaves a trace” Edmond Locard, France*



### Rechteroor.

Hoofd	voor <i>m</i>	Lid	ontzak <i>m</i>	Achtvinger	richting <i>m</i>	Vaan	breedte <i>60</i>
	teren <i>m</i>		aankuchting <i>m</i>		profiel <i>m</i>		horen <i>20</i>
	achter <i>m</i>		mond <i>m</i>		buiging <i>m</i>		
	opening <i>72</i>		grootte <i>m</i>		grootte <i>m</i>		
afmeting van <i>ovaal</i>		stand of afwijking <i>m</i>					
hijnscherbden							

Onder	haar <i>g</i>	Onder	kleur <i>m</i>	Schouderbreedte <i>72</i>	Karakteristieke trekken
	haar <i>g</i>		kleur <i>m</i>		
			pigment	- buiging <i>72</i>	
			kleur <i>m</i>	middel <i>72</i>	

Noten betreffende de meting; bijzondere teekens en uitteekens.

*I. Van 1 wijp 3 lie een schouderblad & hupen lid*

*II. Achter hand 3 uit polgen en schouderblad & hupen 25 achter hand & hupen 125*

*III. Achter hand 3 uit polgen en schouderblad & hupen 25*

*IV. Van 1 wijp 3 lie een schouderblad & hupen lid*

*III. 2 wijp 3 lie een schouderblad & hupen lid*

*IV. behaard borst*

*V. Onder schouderblad 6 uit suggestie van een mondwerk*

*VI. -*

### MELDINGEN:

PLAATS TOT AANHECHTING VAN HET PORTRET.  
(te nemen op 1/2 der ware grootte.)



#### VINGERAFDRUKKEN. RECHTERHAND.

Duim.	Wijvinger.	Middelvinger.	Ringvinger.
			





# Disaster Victim Identification

*Goal to identify the victims so that the bodies can be returned to the next of kin*

*Interpol standard for international DVI*

## **Primary Identifiers**

- DNA
- Fingerprints
- Dental

## **Secondary Identifiers**

- Face
- Tattoo
- Body description including medical procedures
- Jewellery
- Clothes
- etc





# Disaster Victim Identification

## *Missing person list*

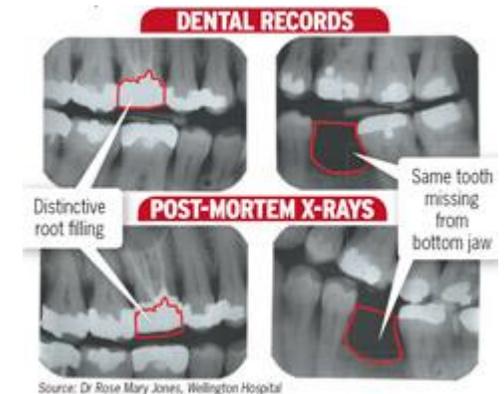
## *Ante Mortem data*

### **Collect of data from the missing person**

- *Dental: dentist of the missing person > dental records/x rays*
- *Fingerprints: passport/ID cards/travel information/personal items*
- *DNA: DNA from family*

### **Secondary Identifiers**

- *Face : pictures*
- *Tattoo : pictures or description*
- *Body description including medical procedures : pictures or description and hospital records*
- *Jewellery : pictures or description*
- *Clothes: pictures or description*
- *etc*



[Decoding forensic clues in the teeth | Stuff.co.nz](http://Stuff.co.nz)





# Disaster Victim Identification

## *Post Mortem*

### *Collect data from the bodies*

- *Fingerprints: make a fingerprint file of the body*
- *Dental: create dental records/x rays of the body*
- *DNA: take a DNA sample of the body*



### *Secondary Identifiers*

- *Face: pictures*
- *Tattoo: pictures and or description*
- *Body description including medical procedures : pictures or description of medical procedure/implants*
- *Jewellery: pictures and description*
- *Clothes: pictures and description*
- *etc*

# MH 17 plane crash





# MH 17 plane crash

- *298 person on board (passengers and crew)*
- *Crash site in active war area*
- *No possibilities to salvage the bodies on site by ourselves*
- *Bodies salvaged by local authorities under very difficult circumstances*
  
- *Return of the bodies to the Netherlands*
- *Identification by international DVI team in the Netherlands*



# MH 17 plane crash



- *Storage of the bodies and body parts*





# MH 17 plane crash

- *PM process: fingerprints*





# MH 17 plane crash

## *Results fingerprints*

- ***Total number of bodies identified with fingerprints 83***
- ***Total number of identifications 243***
  
- ***72 ID's on international database or material***
- ***4 ID's on national databases***
- ***62 ID's on Dutch passports***
- ***13 ID's on latents***





# Biometrics in terrorist incidents

Crime Scene Investigation as part of a police investigation to find the truth

Focus on

- Identification of the suspect
- Identification of the victims (DVI process)



- Fingerprints
- DNA
- Face recognition
- Digital evidence
- Chemical evidence
- etc





# Biometrics in terrorist incidents

## Classic Forensics

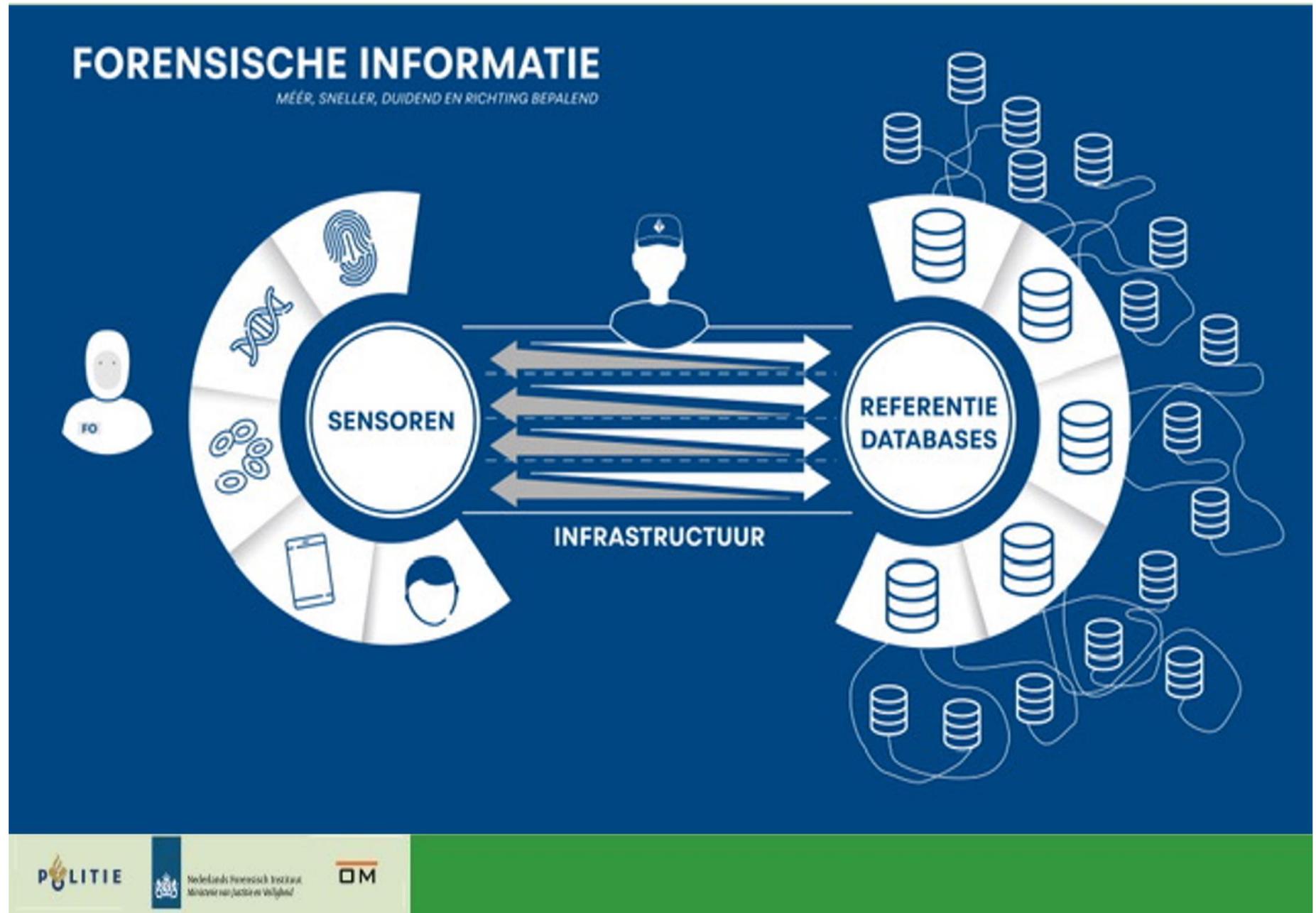
- To gather evidence to find out the truth
- To produce evidence to prosecute the attacker
- To do justice for victims and society



## Paradigm shift

### Aim to identify the attacker as soon as possible

- To arrest the attacker
- To identify a possible terroristic group
- To prevent other attacks by attacker or group



# Utrecht tram attack 18 March 2019



*Terroristic motivated attack on the tram*

*Shooting in a driving tram in Utrecht by one terrorist*

- *4 people shot and killed*
- *8 people shot and severely injured*
- *Attacker on the run after the attack*
- *Deployment of the QIT to identify the attacker as soon as possible*



# Utrecht tram attack 18 March 2019

## Man Hunt

- *Man hunt through Utrecht city with special SWAT teams*
- *General alarm in Utrecht*
- *Police on full alert*
- *Multiple tips of sightings by public*

## Fast Forensics in operation

- *Good footage from 8 cameras in the tram*
- *As sensing the images*
- *Tip on possible identity of the suspect*
- *1:1 comparison*
- *Arrested already made*

## Lessons learned

- *Invest in high quality infrastructure (face)*
- *Invest in specialized software on smart phone*
- *Invest in process and procedures*
- *Train staff*



Digitized latent fingerprint can be sent directly to the AFIS > searches to identify within max 3 hours

- Suspect
- Victims
- Witness





Thank you for your attention!

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Police of the Netherlands



