

# Personal Health Train

analyseren van gedecentraliseerde data

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**VWdata**

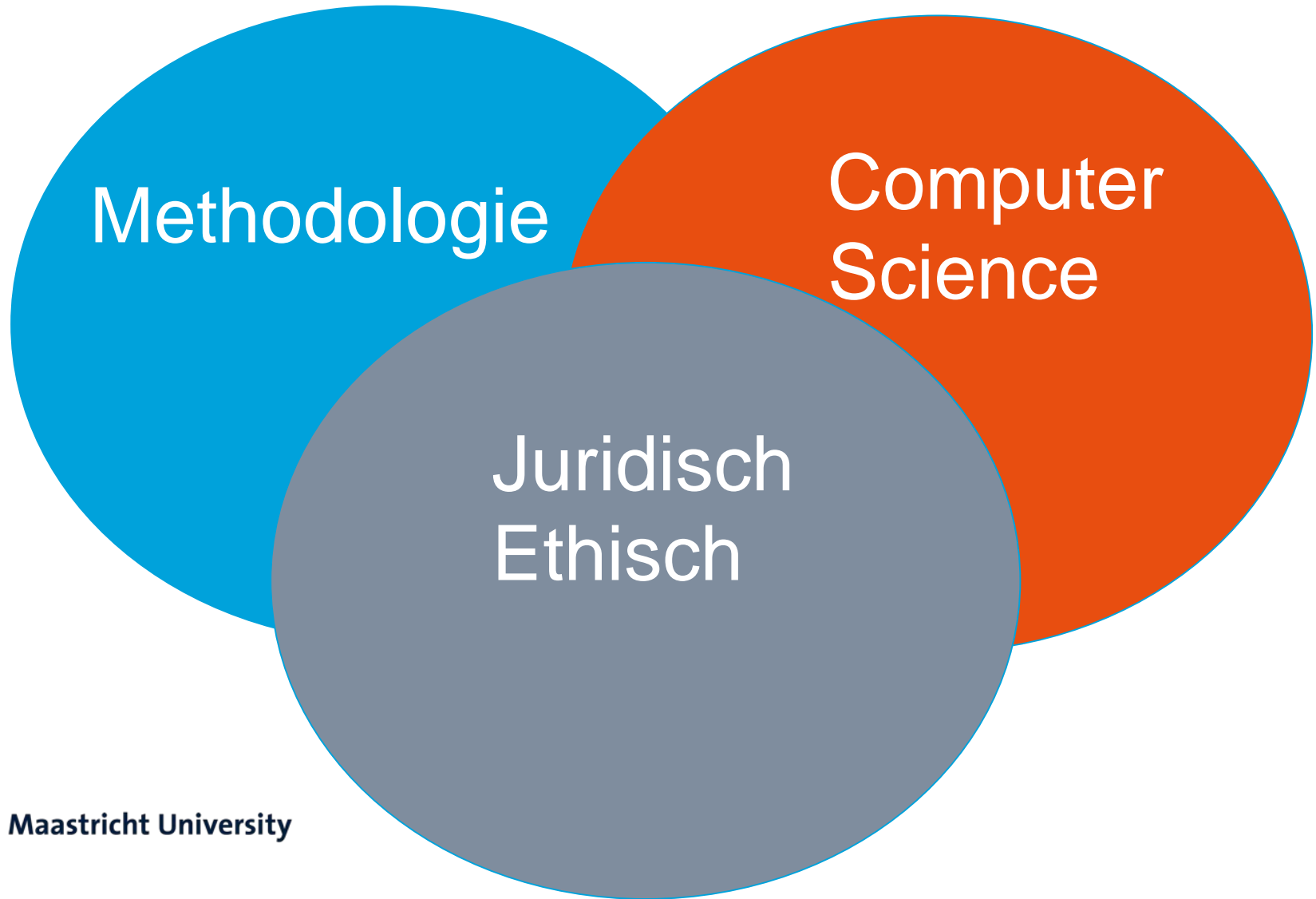
nationale  
wetenschaps  
agenda



 Maastricht University



# In een notendop:

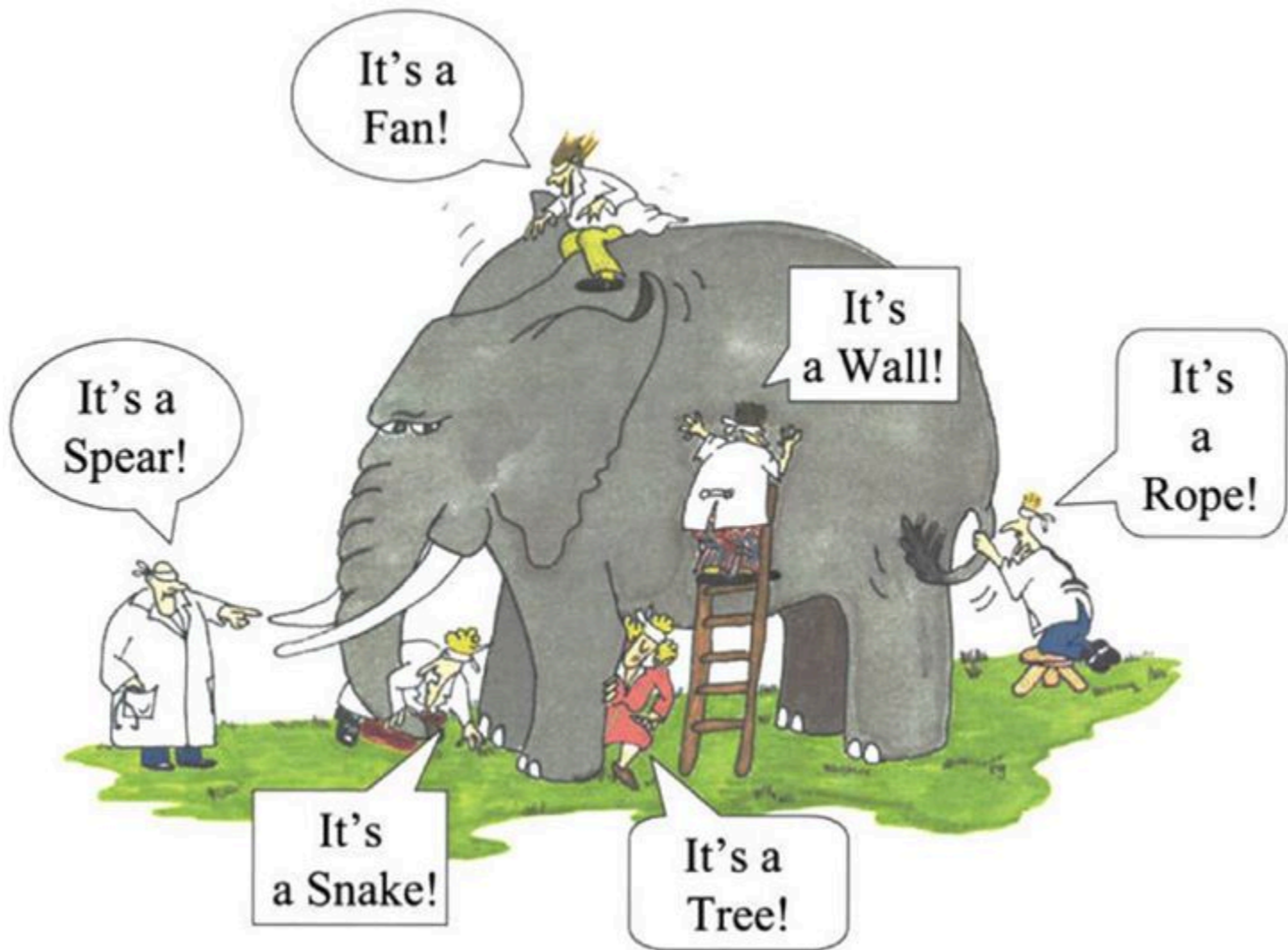


# Horizontaal verdeelde data

ID	AGE	Employed	Type 2 Diabetes	Wellbeing	Education
1	56	1	1	3	4
2	25	0	0	2	4
3	31	1	0	4	3
4	45	0	1	2	1
5	32	1	0	5	2
6	60	0	1	1	2
7	55	1	0	3	5

# Verticaal verdeelde data

ID	AGE	Employed	Type 2 Diabetes	Wellbeing	Education
1	56	1	1	3	4
2	25	0	0	2	4
3	31	1	0	4	3
4	45	0	1	2	1
5	32	1	0	5	2
6	60	0	1	1	2
7	55	1	0	3	5



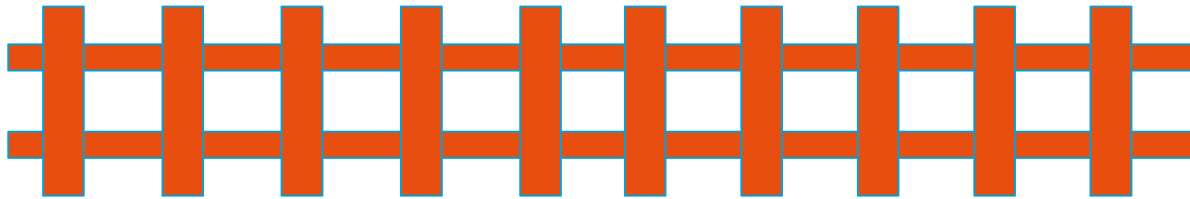
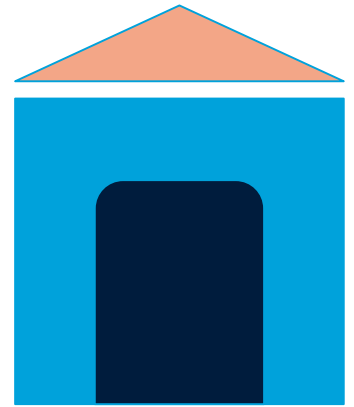
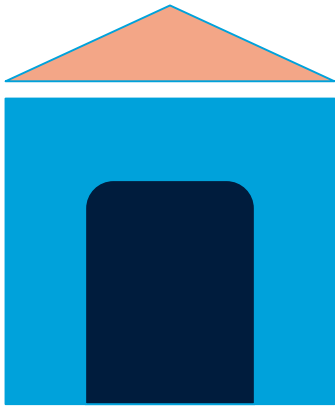
*The blind men and the elephant.*

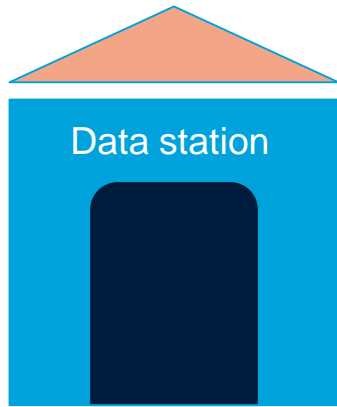
Poem by John Godfrey Saxe (Cartoon originally copyrighted by the authors; G. Renee Guzlas, artist).

# Personal Health Train

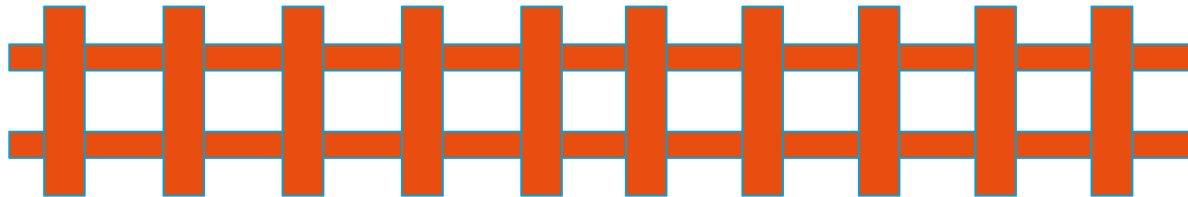
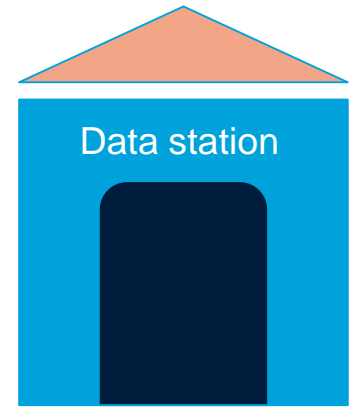
“Als de berg (**data**) niet naar Mohammed (de **analyse**) komt, dan moet Mohammed (de **analyse**) maar naar de berg (**data**)”







Analysis train



Compliance track



# Moeilijkheden

- privacy:
  - identiteit van patiënten
- record linking:
  - match 17mil met 3000 patienten
- model checking:
  - outliers, model assumptions

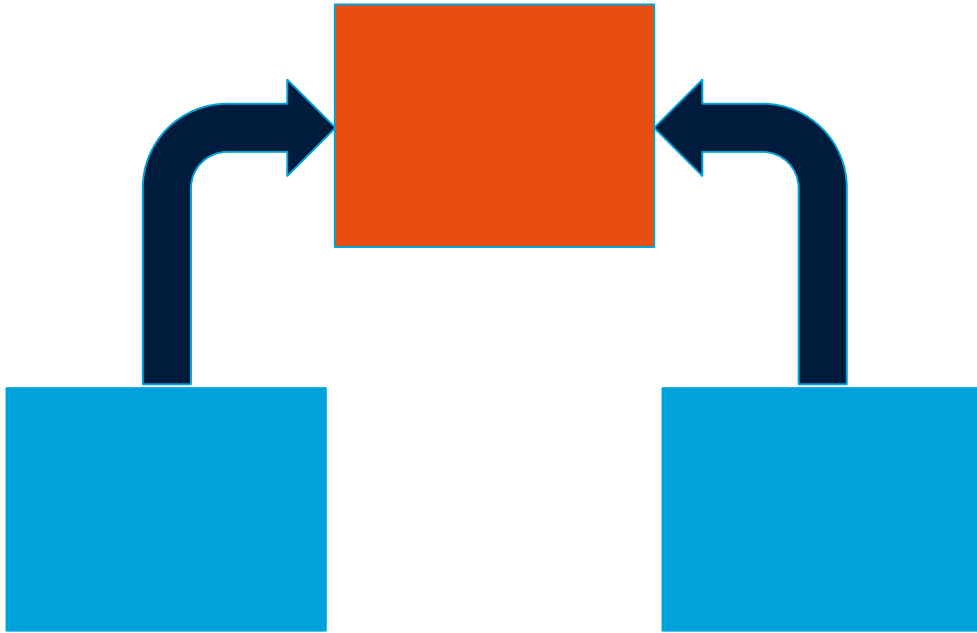
# Oplossingen

- Ruis toevoegen aan de data
- Minder specifieke gegevens
- Trusted third parties
- Secure multiparty computation

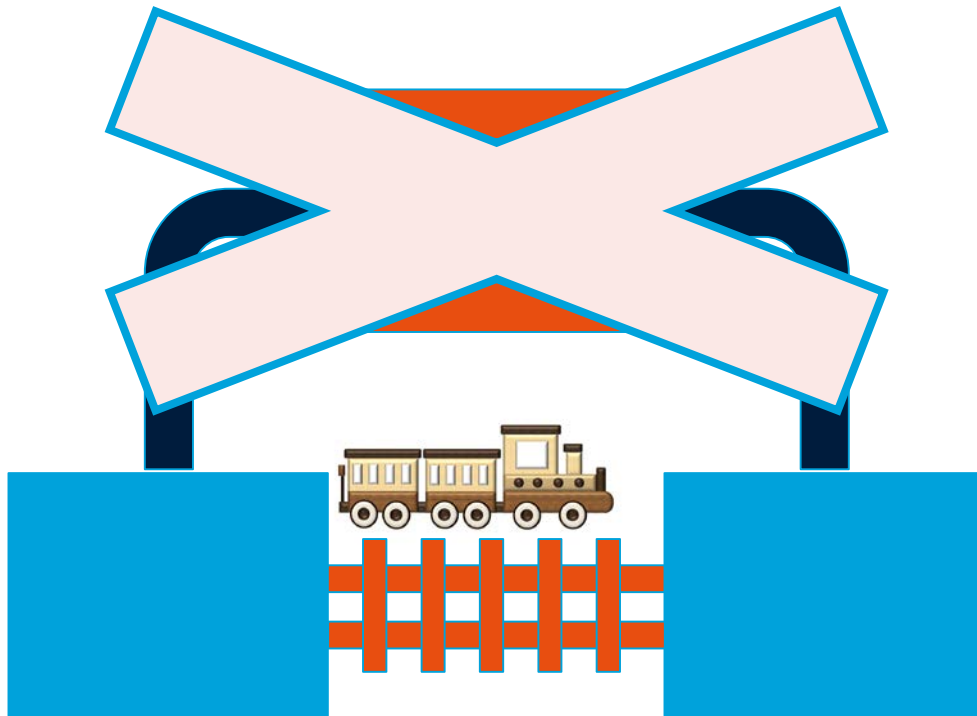
# Stappenplan



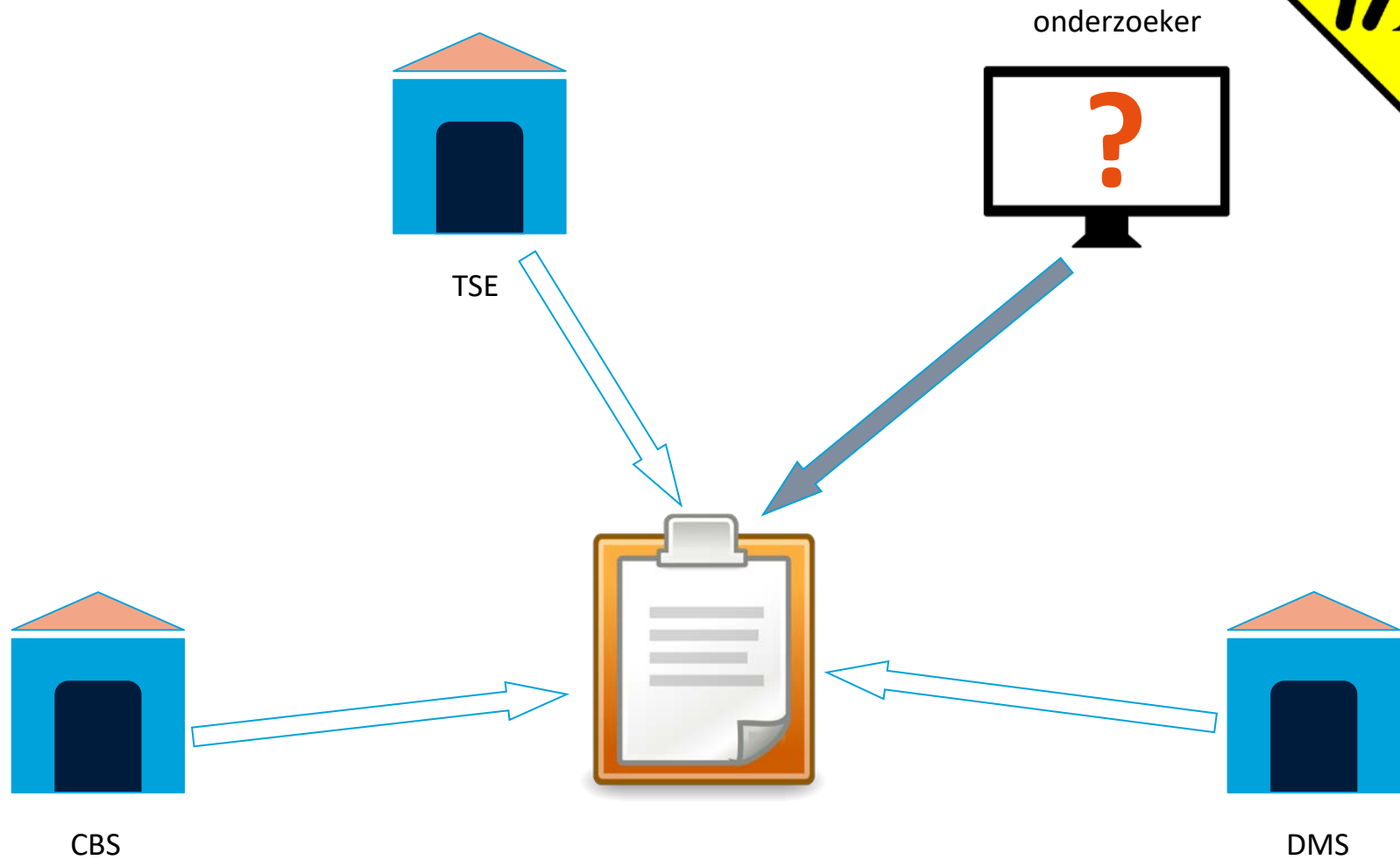
# Stappenplan I



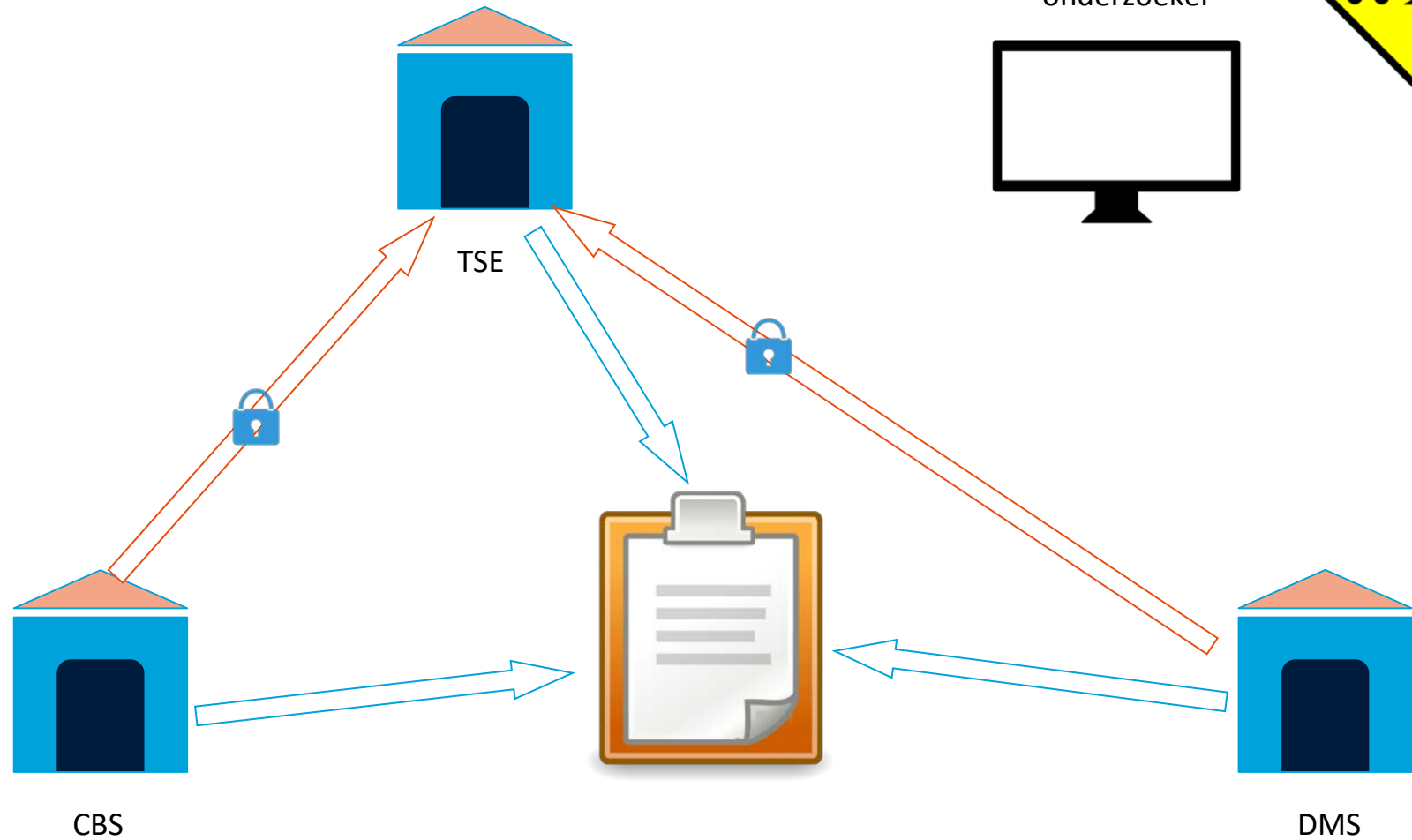
# Stappenplan II



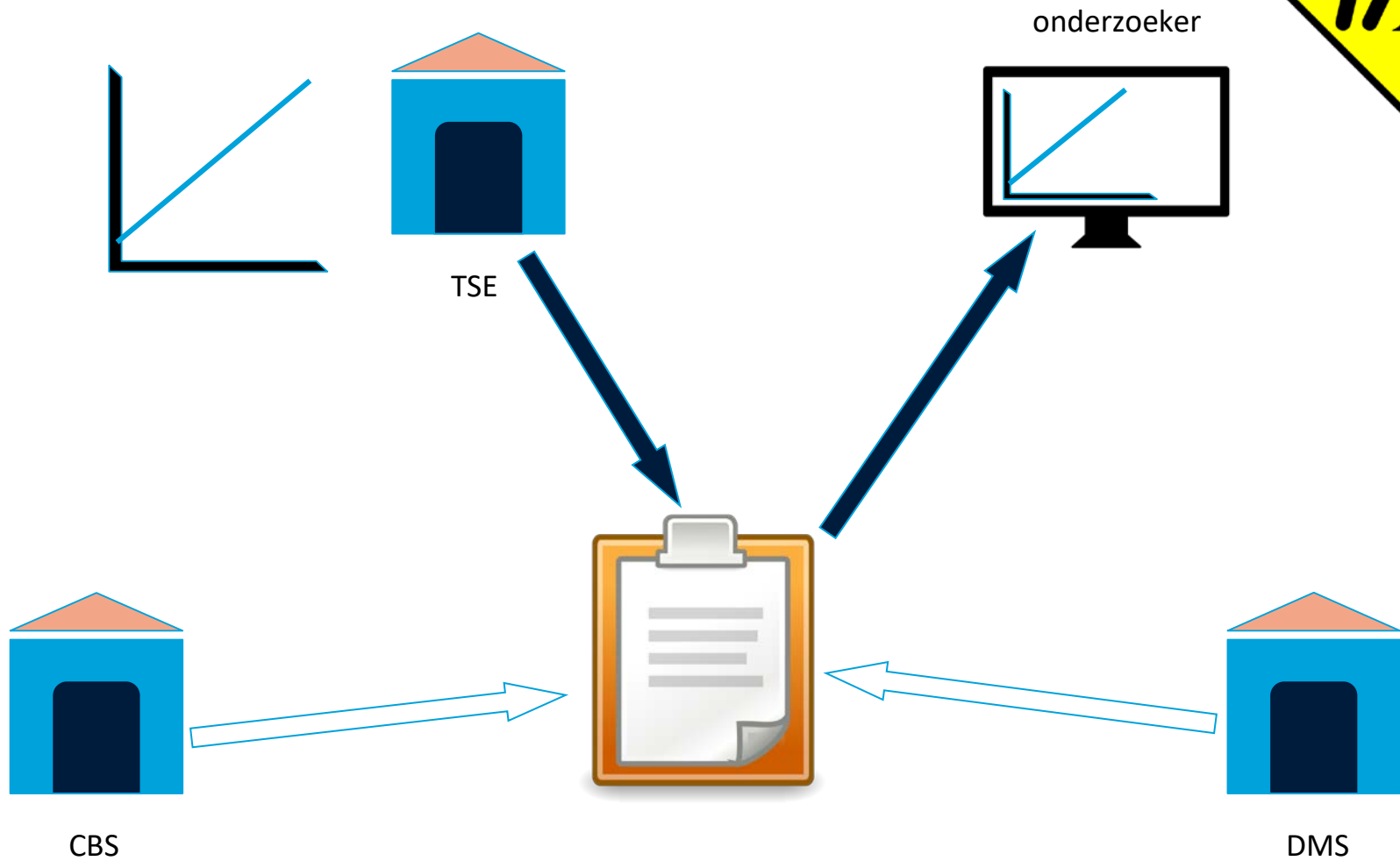
# IT infrastructuur



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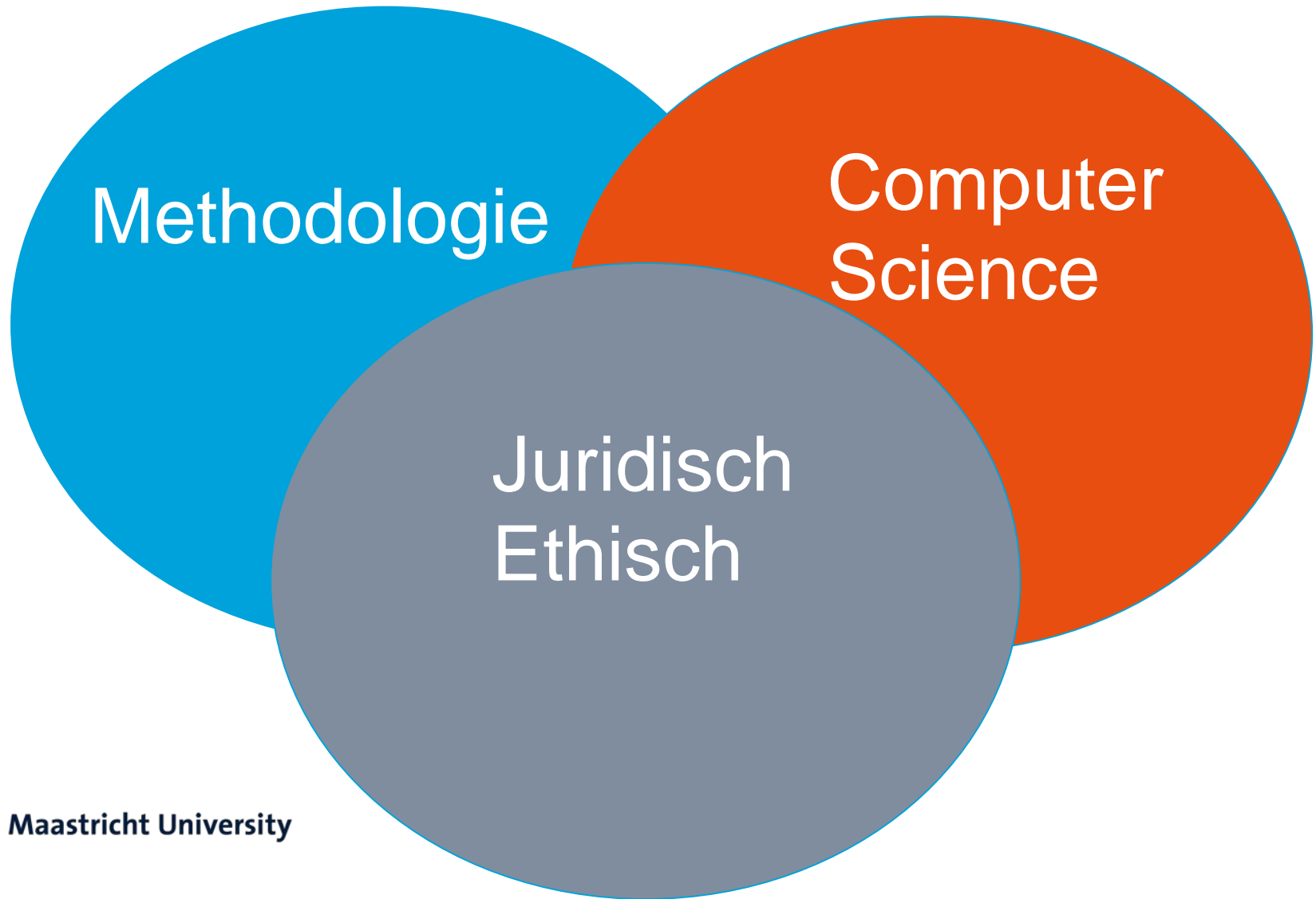


# IT infrastructuur





# Wetenschap versnellen door samenwerking!



# Like?



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