

The EPI Framework: Storyline

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Personalized Medicine



Data sharing is key

Single treatment (one-fits-all)



DIAGNOSTIC



Genetic analysis



Biomarker analysis



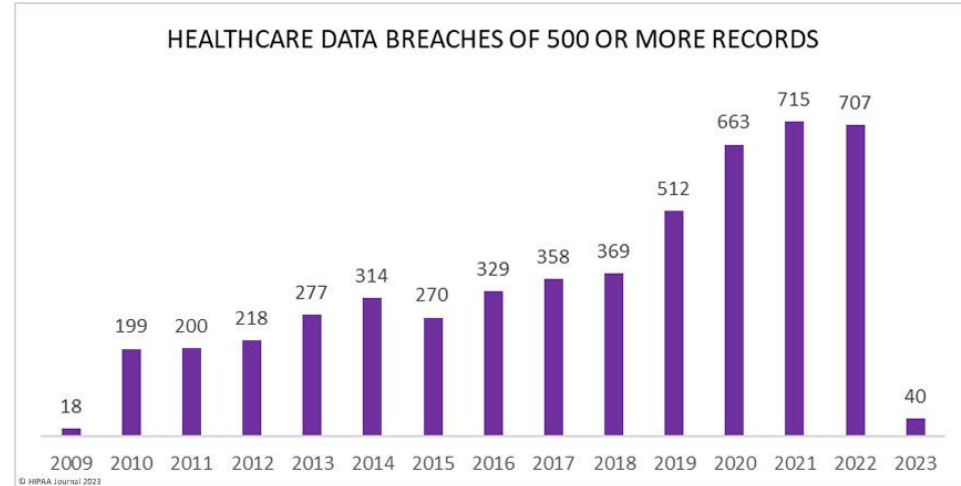
Life style analysis

Personalised treatment



Health data privacy concerns

- Ethical research and right to privacy
 - ◆ HIPAA
 - ◆ GDPR
- But attacks targeting healthcare is on the rise past decade
- Reported to the U.S. Department of Health and Human Services' Office for Civil Rights (OCR)

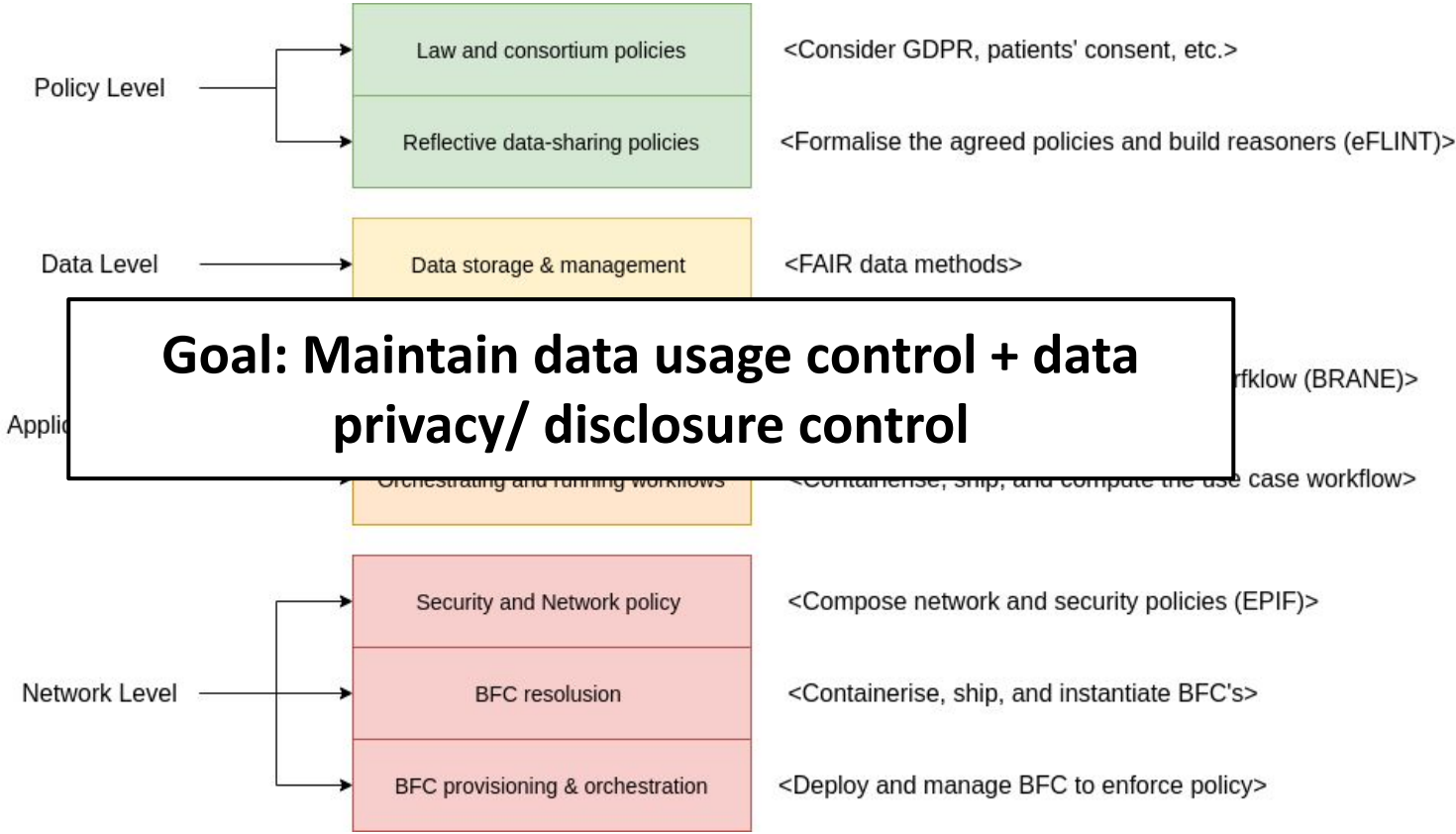


Source:
<https://www.hipaajournal.com/healthcare-data-breach-statistics/#:~:text=Between%202009%20and%202022%2C%205%2C150,population%20of%20the%20United%20States.>

Data isolation to prevent
privacy risks

With growing scepticism, how do we enable data sharing with healthcare sectors?

Data sharing challenges: divide and conquer



Framework Design

End users



Doctor

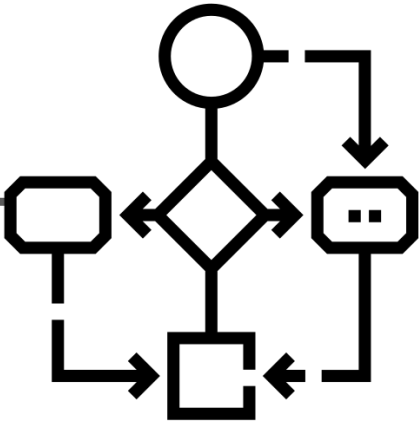


Patient



Data scientist

Workflow



Simple: Read/ Write

Complex: Statistic and ML

Data



Anonymised CVA dataset



ECG status



Psychiatry dataset



Framework Design

End users

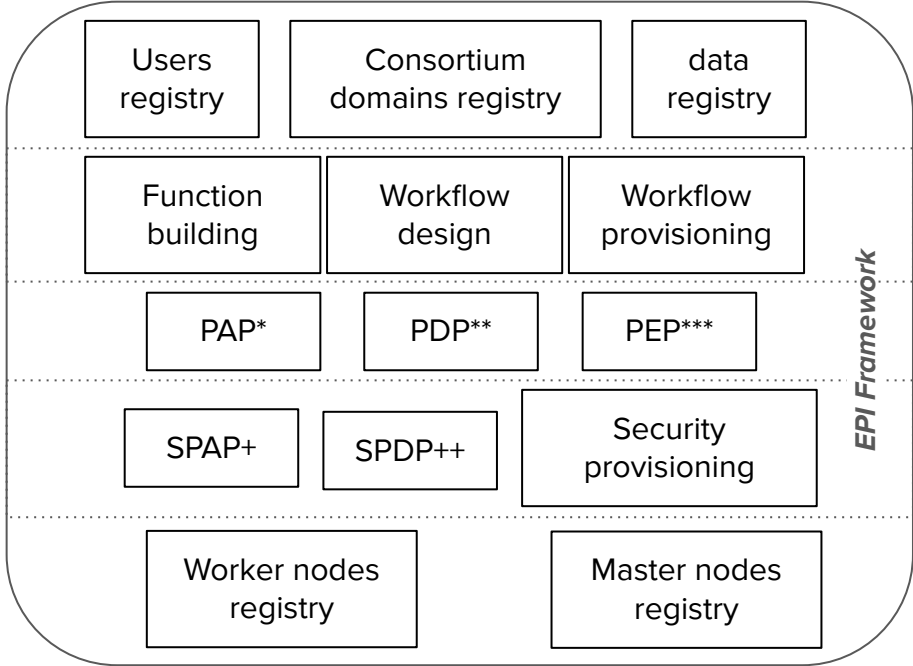
-  Doctor
-  Patient
-  Data scientist

BRANE

eFLINT

SaaS model

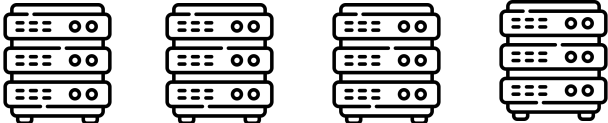
Resources



Data

-  Anonymised CVA dataset
-  ECG status
-  Psychiatry dataset

Services hosting nodes



* Policy Administration Point
 ** Policy Decision Point
 *** Policy Enforcement Point
 + Security Policy Administration Point
 ++ Security Policy Decision Point