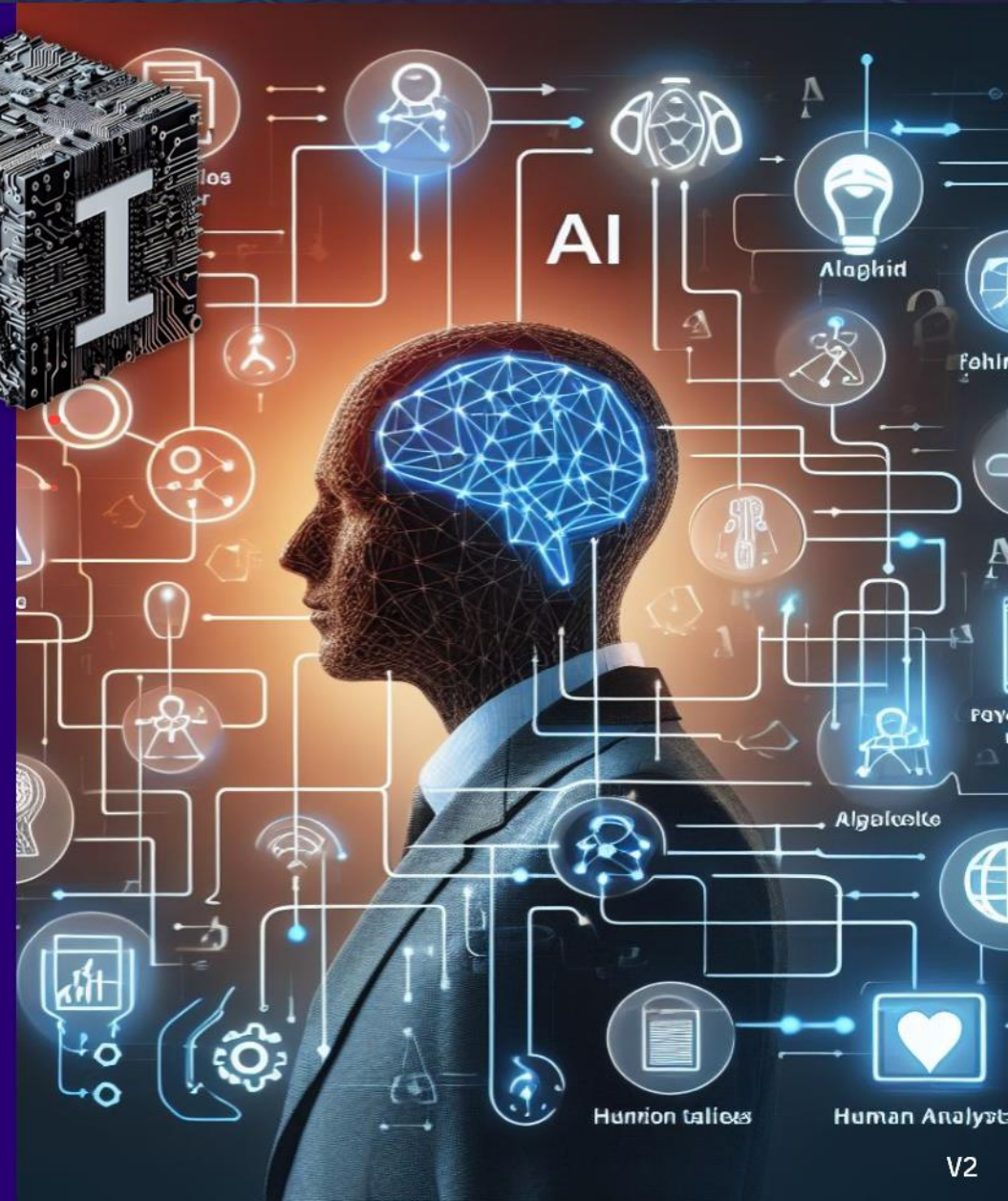


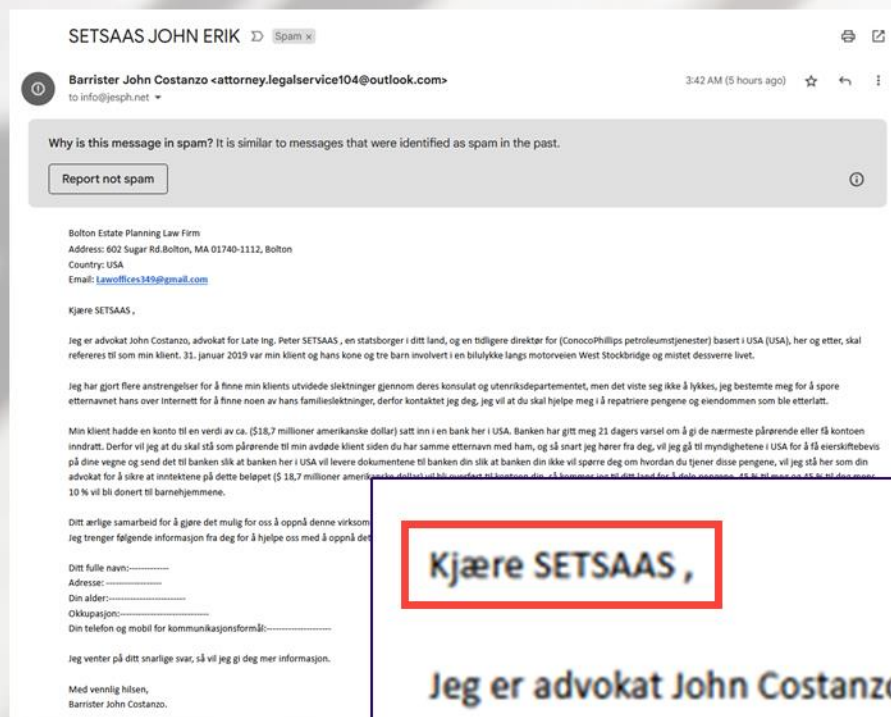
The double-edged sword of AI: Committing and preventing fraud

2025-03-13 – John Erik Setsaas
Director of Innovation – Financial Crime Prevention
Tietoevry Banking





AI generated deep-fake



Kjære SETSAAS ,

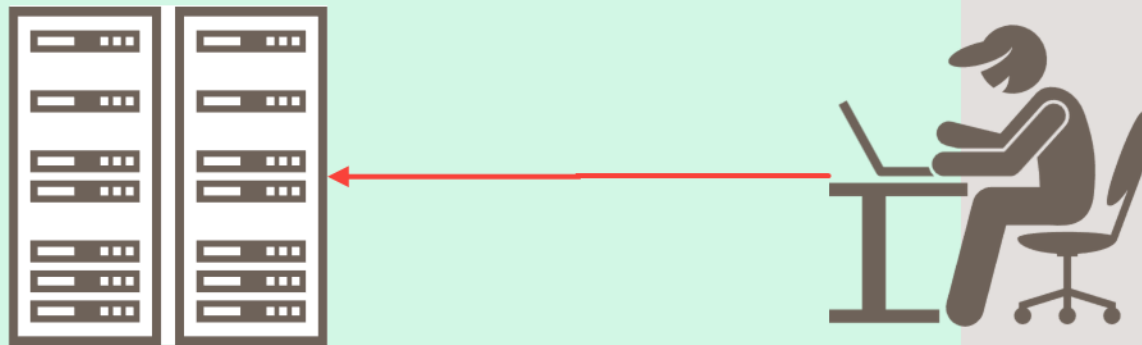
Jeg er advokat John Costanzo, advokat for Late Ing. Peter SETSAAS , en statsborger i ditt land, og e refereres til som min klient. 31. januar 2019 var min klient og hans kone og tre barn involvert i en

Jeg har gjort flere anstrengelser for å finne min klients utvidede slektninger gjennom deres konsulat etternavnet hans over Internett for å finne noen av hans familieslektninger, derfor kontaktet jeg d

Hacking systems

Complex and resource intensive

High return



Hacking systems

Complex and resource intensive

High return

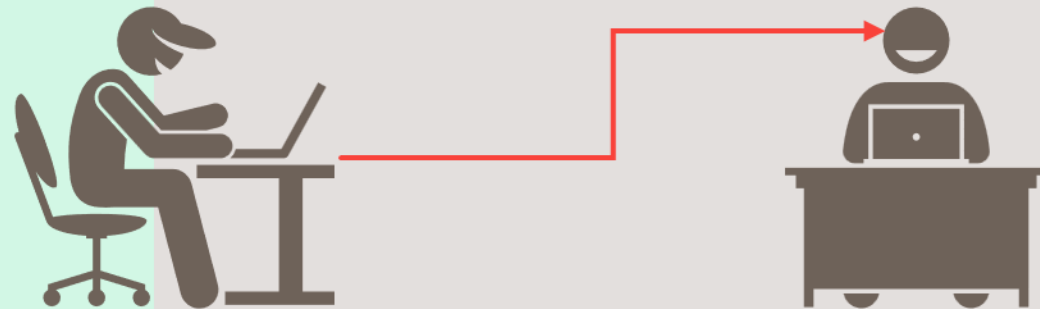


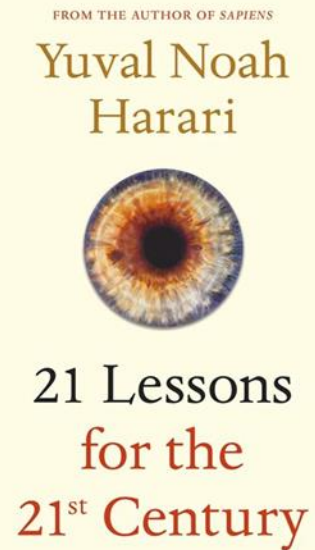
Hacking people

Simple

Automation with AI

Low return X many victims = High return





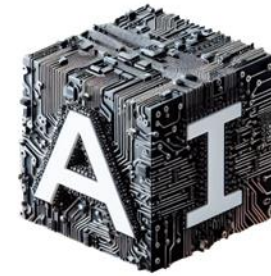
“To hack a human being is to get to know that person better than they know themselves.

And based on that, to increasingly manipulate you.”

Yuval Noah Harari
2021-11-05



Smart profiling



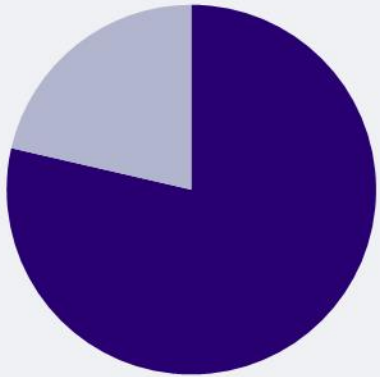
The criminals will know
your weaknesses



Doctors VS ChatGPT: Who is more empathetic?

Researchers compared **doctor and AI** responses to nearly 200 medical questions submitted by patients via social media

Best quality



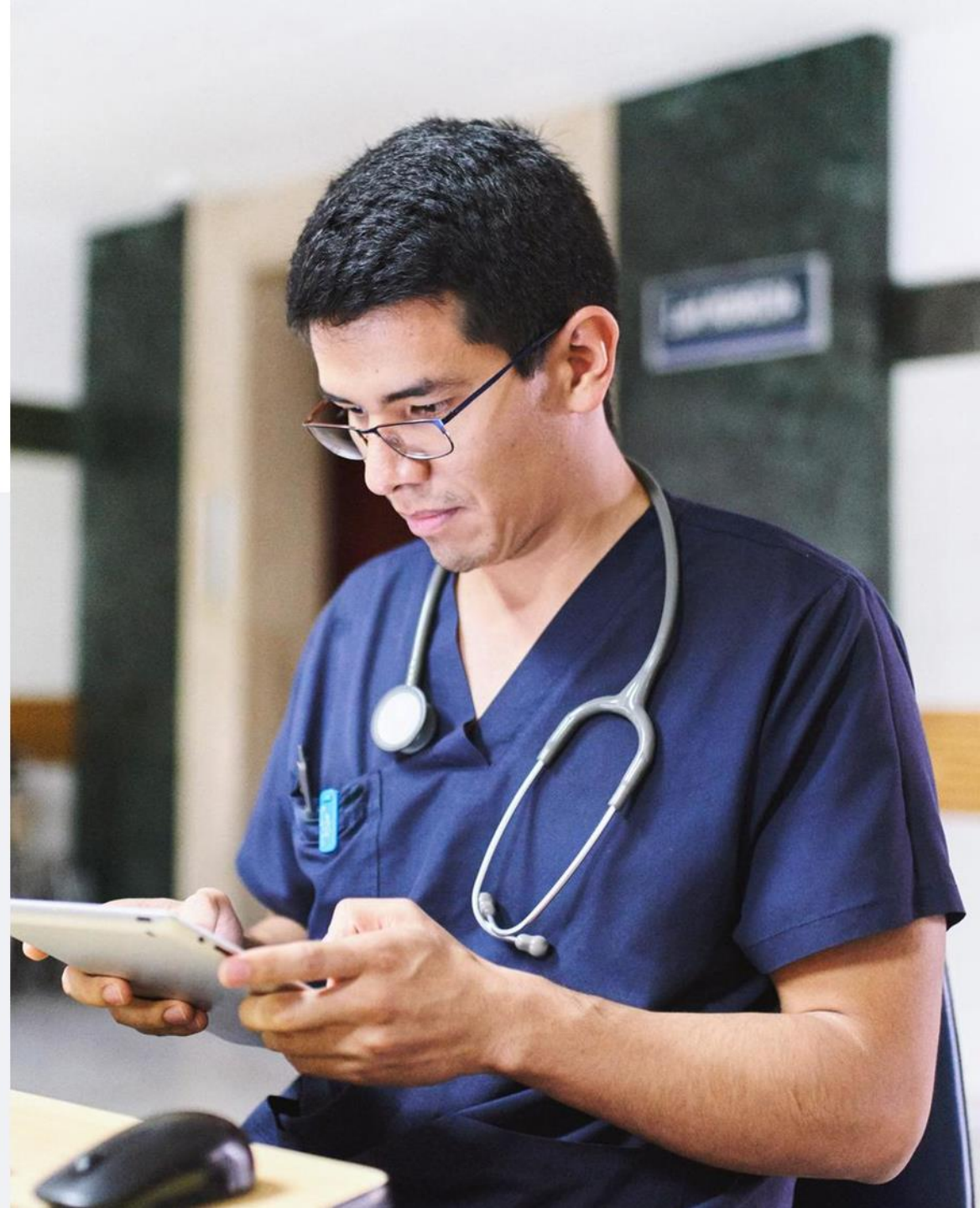
■ ChatGPT ■ Doctor

Most empathy



■ ChatGPT ■ Doctor

2023-06-01 - <https://pubmed.ncbi.nlm.nih.gov/37115527>



Playing on emotions

Example of a Family Emergency Scam Call

Hi Grandpa, it's me.



Sebastian? Is that you?



Yes, it's me, Sebastian.
Grandpa, I'm in trouble,
and I need money for bail.

What happened?

Please don't tell
Mom or Dad. I'll get
in so much trouble.

Please help me!

Scammers Use Fake Emergencies To Steal Your Money



Someone calls or contacts you saying they're a family member or close friend. They say they need money to get out of trouble. Not so fast. Is there really an emergency? Is that really your family or friend calling? It could be a scammer.



Healthcare Scams Are on the Rise. Here's How to Protect Yourself

CBS MORNINGS

Online blackmail scams are utilizing your public information. Here's how to spot the rising threat

Is Your Kid Really in Trouble? Beware Family Emergency Voice-Cloning Scams

Fraudsters are using voice-cloning technologies to scam thousands from people who are duped into believing their loved ones are in trouble and need bail money or other funds, the FTC warns.



by Michael Kan Mar 20, 2023



SexTortion



Erum Salam

Wed 14 Jun 2023 21:05 CEST

US mother gets call from 'kidnapped daughter' – but it's really an AI scam

Mother says 15-year-old daughter's AI voice used to stage fake kidnapping

By [Andy Sansom](#) last updated April 21, 2023

AI clones teen girl's voice in \$1M kidnapping scam: 'I've got your daughter'

By [Ben Cost](#)

Published April 12, 2023 | Updated April 12, 2023, 1:00 p.m. ET

'Mom, these bad men have me': She believes scammers cloned her daughter's voice in a fake kidnapping



By [Faith Karimi](#), CNN

Updated 9:26 AM EDT, Sat April 29, 2023



Erum Salam

Wed 14 Jun 2023 21:05 CEST

US mother gets call from 'kidnapped daughter' – but it's really an AI scam

Mother says 15-y
used to stage fak

By [Andy Sansom](#) last updated April 21,

You only need 1 minute of audio
to create a convincing deep-fake

voice in \$1M
've got your

m. ET

'Mom, these bad men have me': She believes
scammers cloned her daughter's voice in a
fake kidnapping

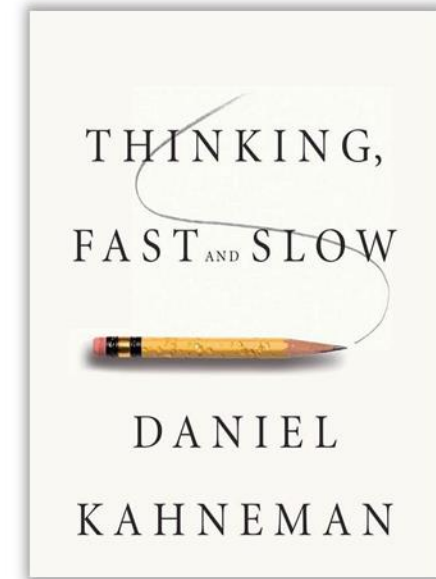


By [Faith Karimi](#), CNN

Updated 9:26 AM EDT, Sat April 29, 2023



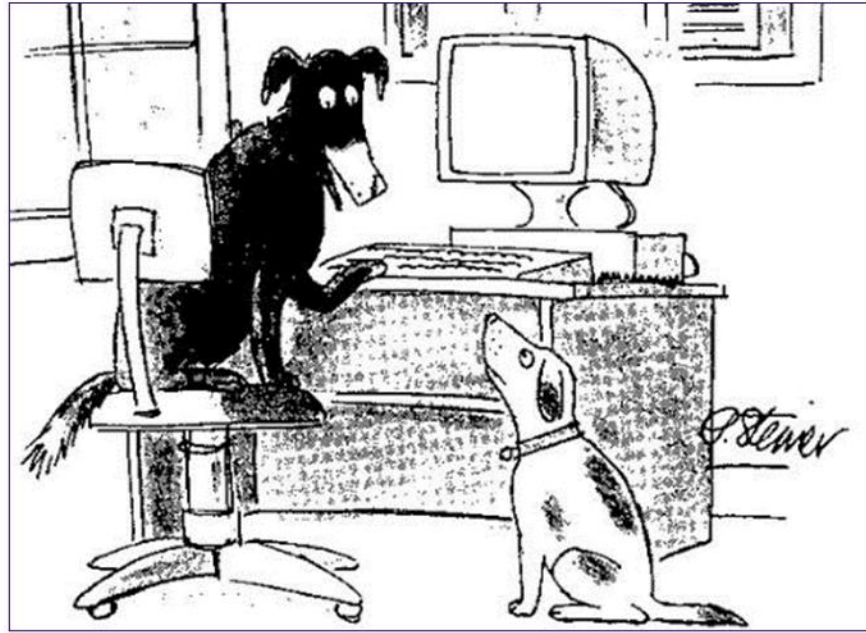
AI generated voice



*“If System 1 is involved, the
conclusion comes first
and the arguments follow”*

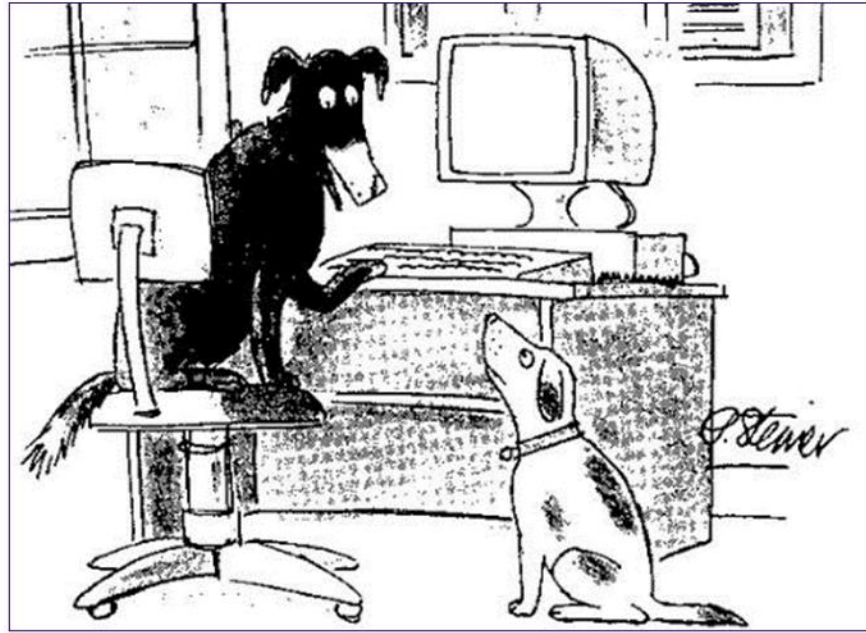
*“Survival: **How are things going?**”*

Are you sure you cannot be manipulated?



“On the Internet, nobody knows you’re a dog”

Peter Steiner - 1993



“On the Internet, nobody knows you’re a dog”

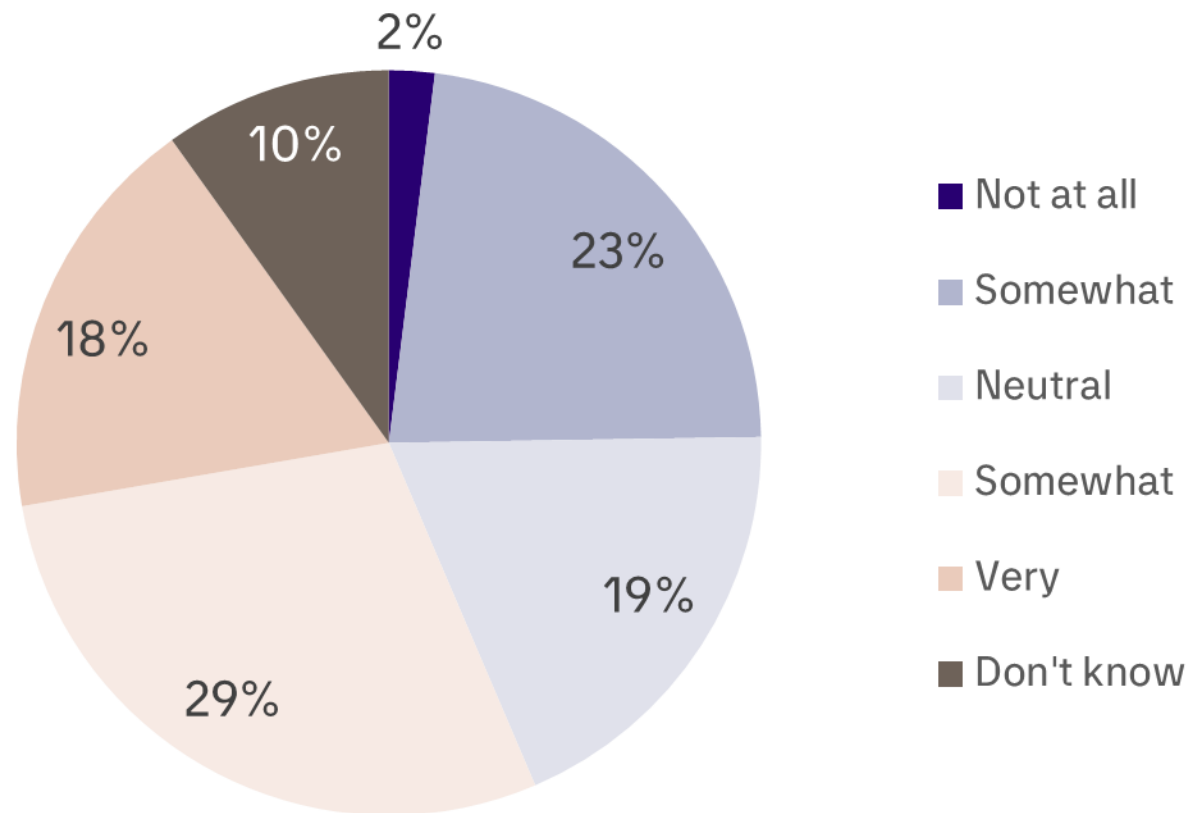
Peter Steiner - 1993

“With AI, you can be anyone on the Internet”

John Erik Setsaas - 2023

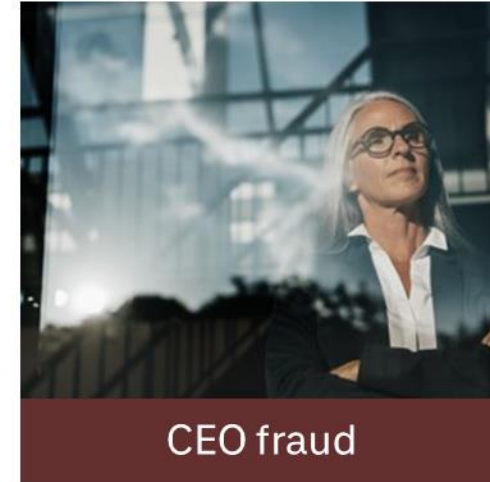
47%

are worried that
AI will increase the
risk of fraud



2024 Tietoevry survey by YouGov in Norway and Sweden

Short term



Long term



Finance worker pays out \$25 million after video call with deepfake 'chief financial officer'

By Heather Chen and Kathleen Magramo, CNN
2 minute read · Published 2:31 AM EST, Sun February 4, 2024



2024-02



*"...attending a video call with what he thought were several other members of staff, but all of whom were in fact **deepfake recreations**..."*

The New York Times

2024-08

How 'Deepfake Elon Musk' Became the Internet's Biggest Scammer

An A.I.-powered version of Mr. Musk has appeared in thousands of inauthentic ads, contributing to billions in fraud.

Business / Tech 

2024-05

British engineering giant Arup revealed as \$25 million deepfake scam victim

By Kathleen Magramo, CNN
3 minute read · Updated 4:53 AM EDT, Fri May 17, 2024



*"...we can confirm that **fake voices and images** were used..."*



2025-02

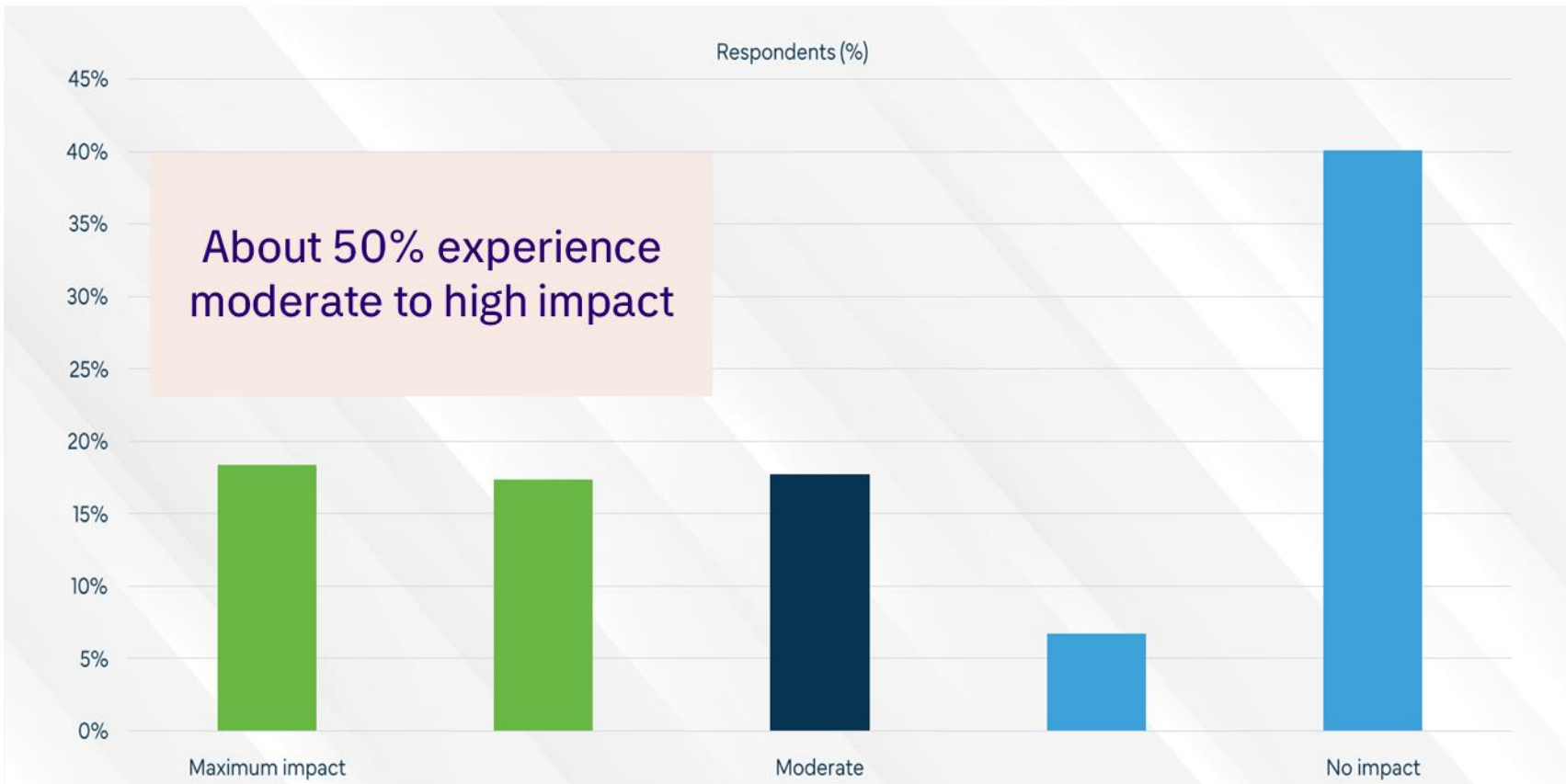


DnB Norway attempted fraud 23MNOK

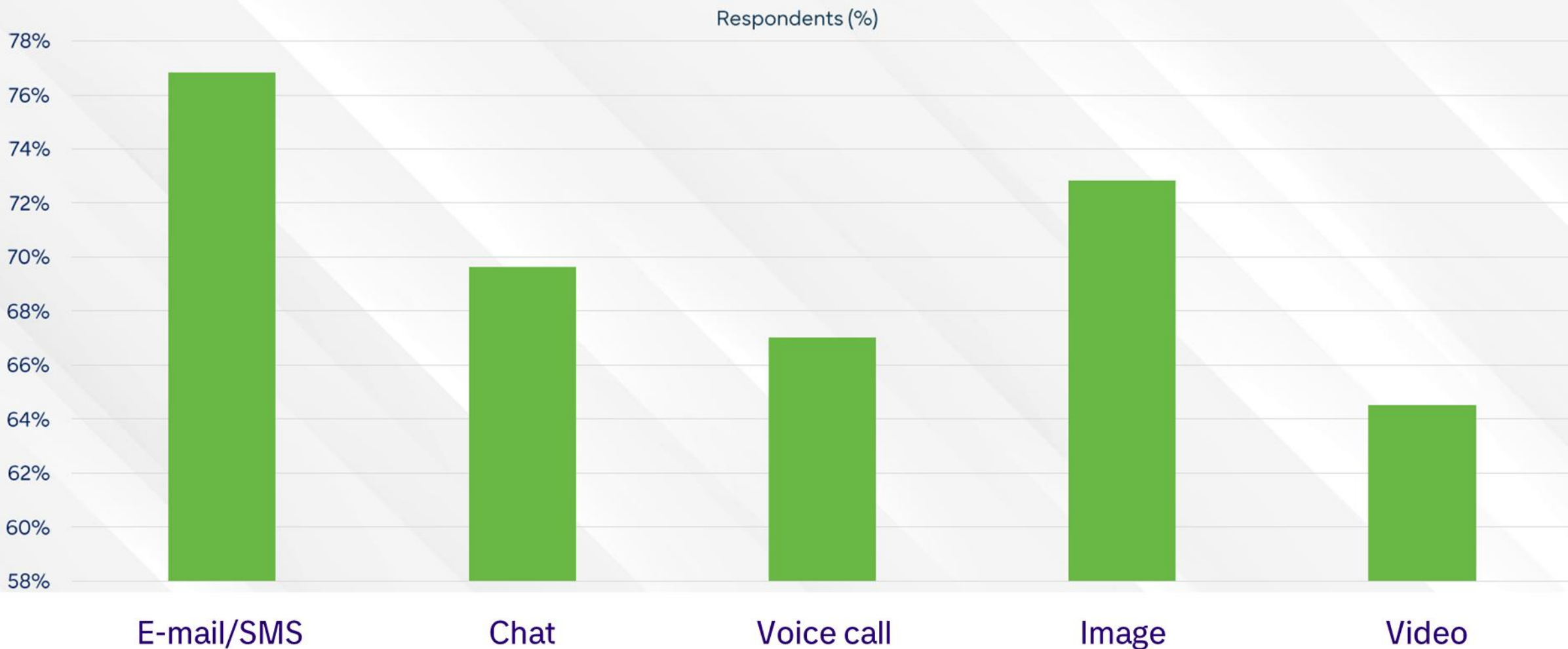
US\$1.03 trillion
stolen by scammers globally

Spend \$1 million/day → 2740 years

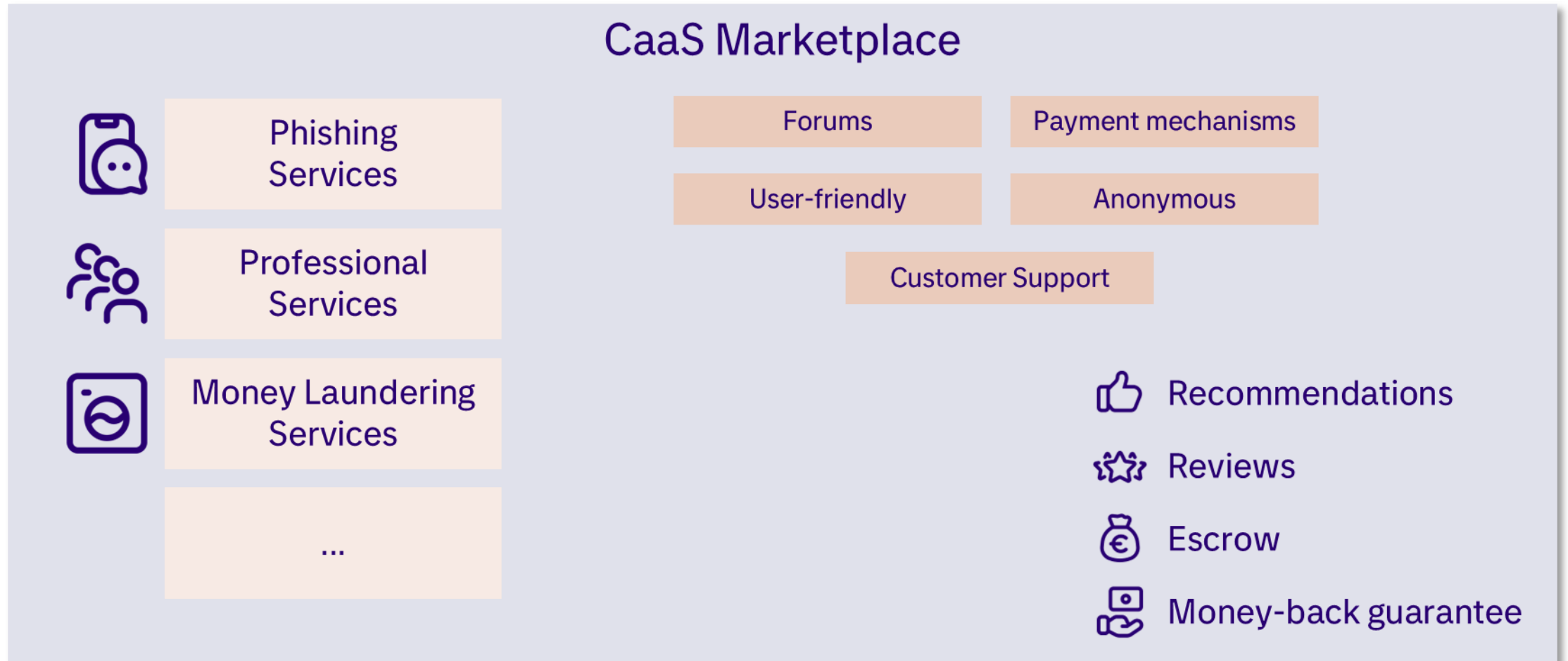
Emotional Impact of Scam



Overall awareness of AI threat capabilities

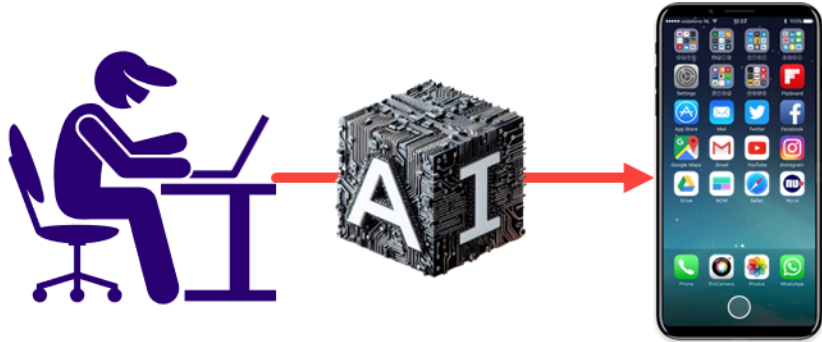


Cybercrime-as-a-Service (CaaS)

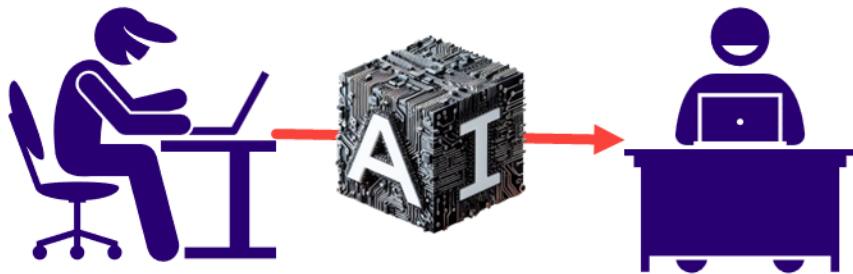


Modus operandi

Identity theft/infringement



Technical attack



Ask for credentials

Criminal has control of user account



Transfer money
Sign for a loan
Apply for credit card
etc

Classic fraud prevention mechanisms

Verified by VISA

Authenticate using password
Please enter your password below.

Merchant: My Online Shop
Amount: EUR 3.00
Date: 2022/02/20 09:52:32
Card Number: XXXX XXXX XXXX 0173
Personal Message:
Password:

[Help](#) [Cancel](#) [Submit](#)



Onboarding

Passport
NFC scanning

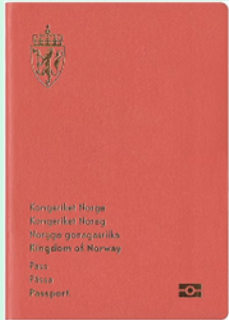


Photo
w/liveness detection



User present?



Compare and save

**Trusted
storage**



Trusted image

Onboarding

Passport
NFC scanning

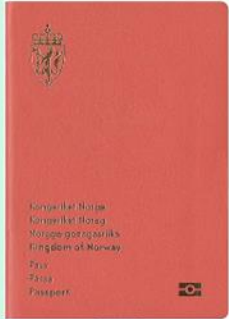


Photo
w/liveness detection



Compare and save

**Trusted
storage**



Trusted image

User present?

Photo
w/liveness detection

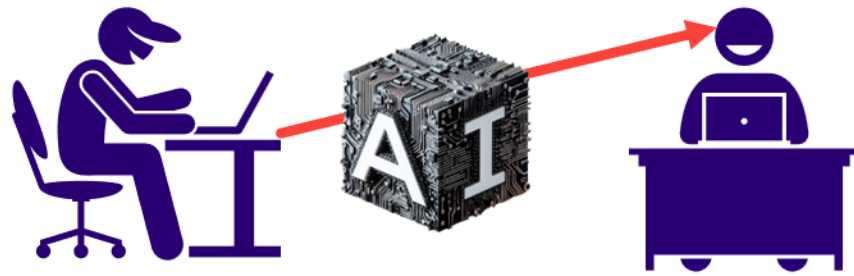


Compare

User is
present!



APP fraud



Hack the user

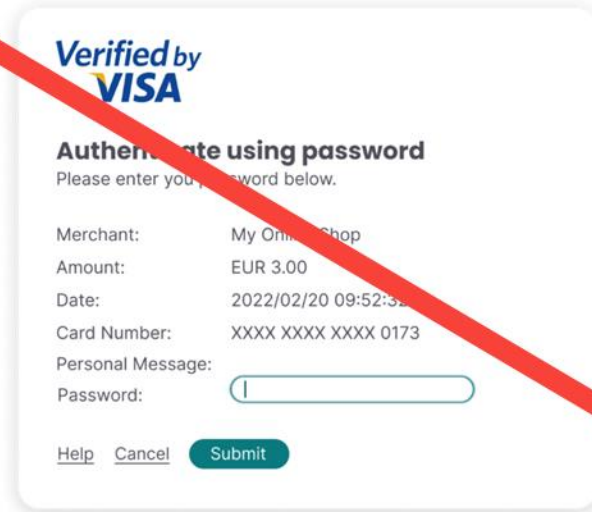
Trick the user into making a payment

APP = Authorized Push Payment



Transfer money

Classic fraud prevention mechanisms

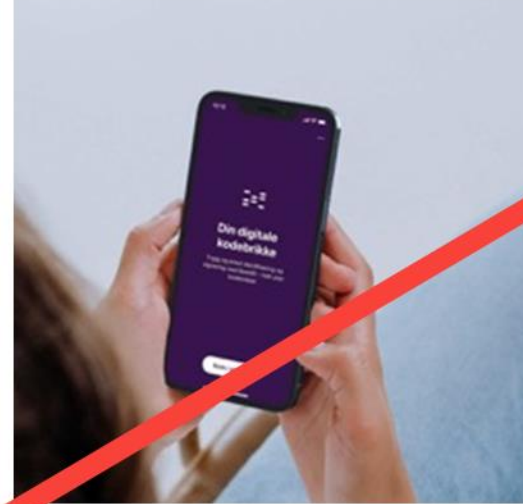


Verified by
VISA

Authenticate using password
Please enter your password below.

Merchant: My Online Shop
Amount: EUR 3.00
Date: 2022/02/20 09:52:35
Card Number: XXXX XXXX XXXX 0173
Personal Message:
Password:

[Help](#) [Cancel](#) [Submit](#)



Who is doing the transaction?

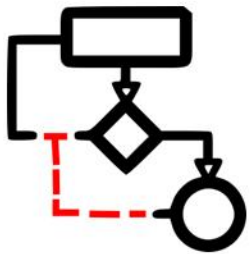


Are they doing it for the right **reason**?

We cannot install fraud
monitoring in people



We monitor their behavior



Rules



People



AI

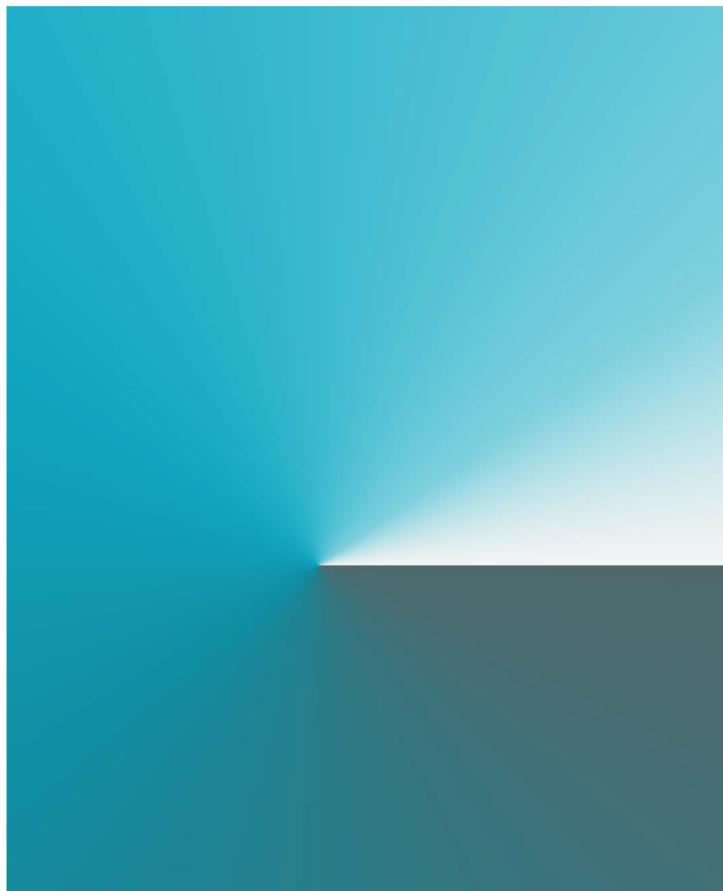




FINANSTILSYNET
THE FINANCIAL SUPERVISORY
AUTHORITY OF NORWAY

Financial Institutions' Use of Information
and Communications Technology (ICT)

RISK AND VULNERABILITY ANALYSIS 2023



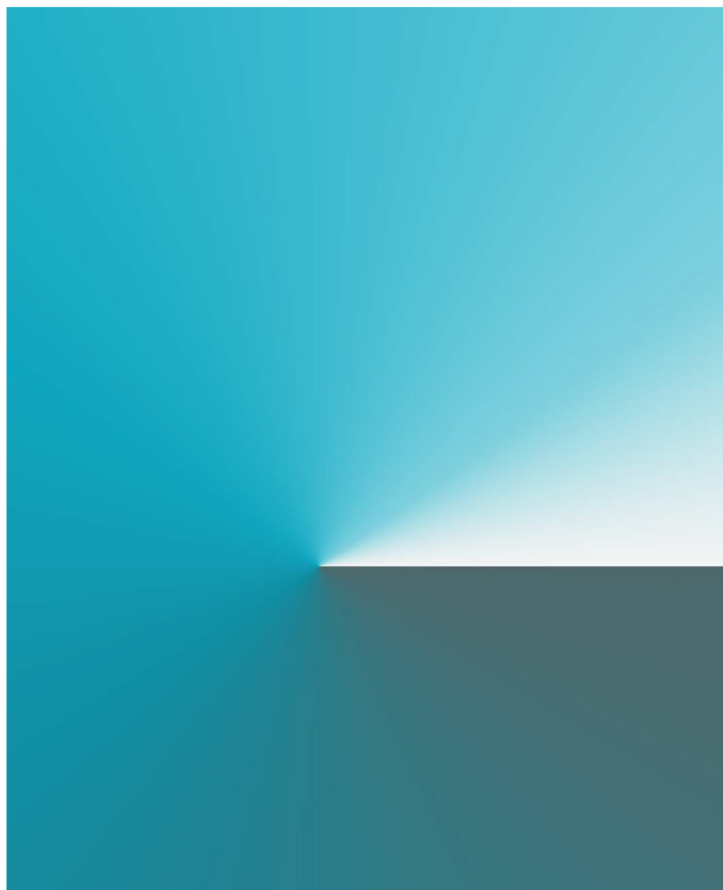
Fraudulent transactions
value: **35 M€**



FINANSTILSYNET
THE FINANCIAL SUPERVISORY
AUTHORITY OF NORWAY

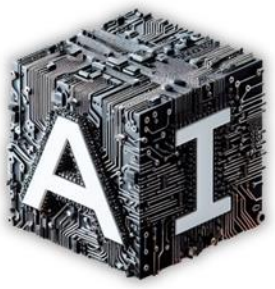
Financial Institutions' Use of Information
and Communications Technology (ICT)

RISK AND VULNERABILITY ANALYSIS 2023



Fraudulent transactions
value: **35 M€**

Total transactions
value: **3.900.000 M€**



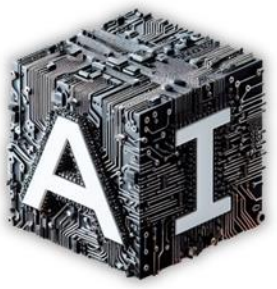
“

"In 2024, we **stopped fraud** for more than **400MEUR**.

This is more than **90% of the attempted** fraud, and was stopped with a combination of people, rules and AI"

André Moen Eide – Head of Defence Centre
Financial Crime Prevention – Tietoevry Banking
2025-02

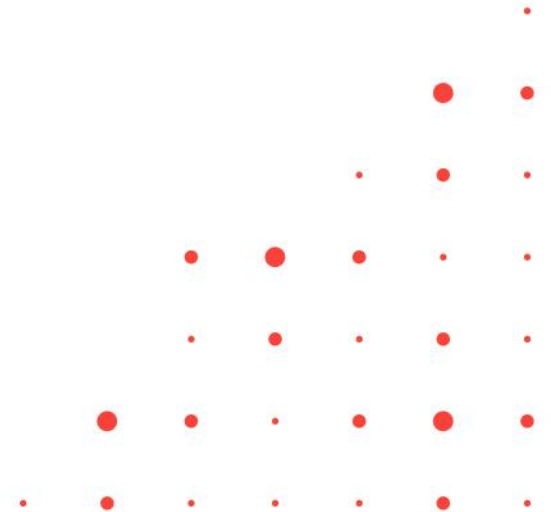
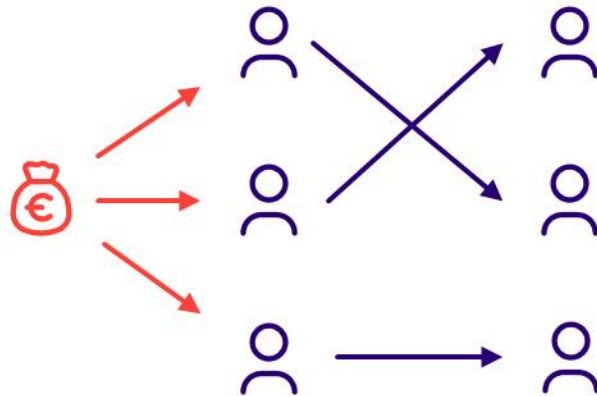
Next-Generation Financial Intelligence - LFM



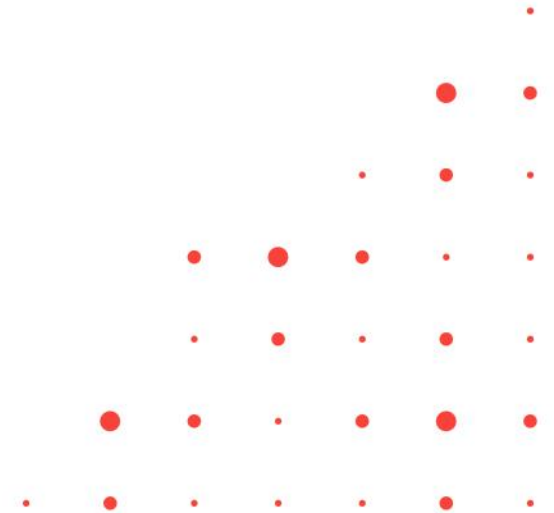
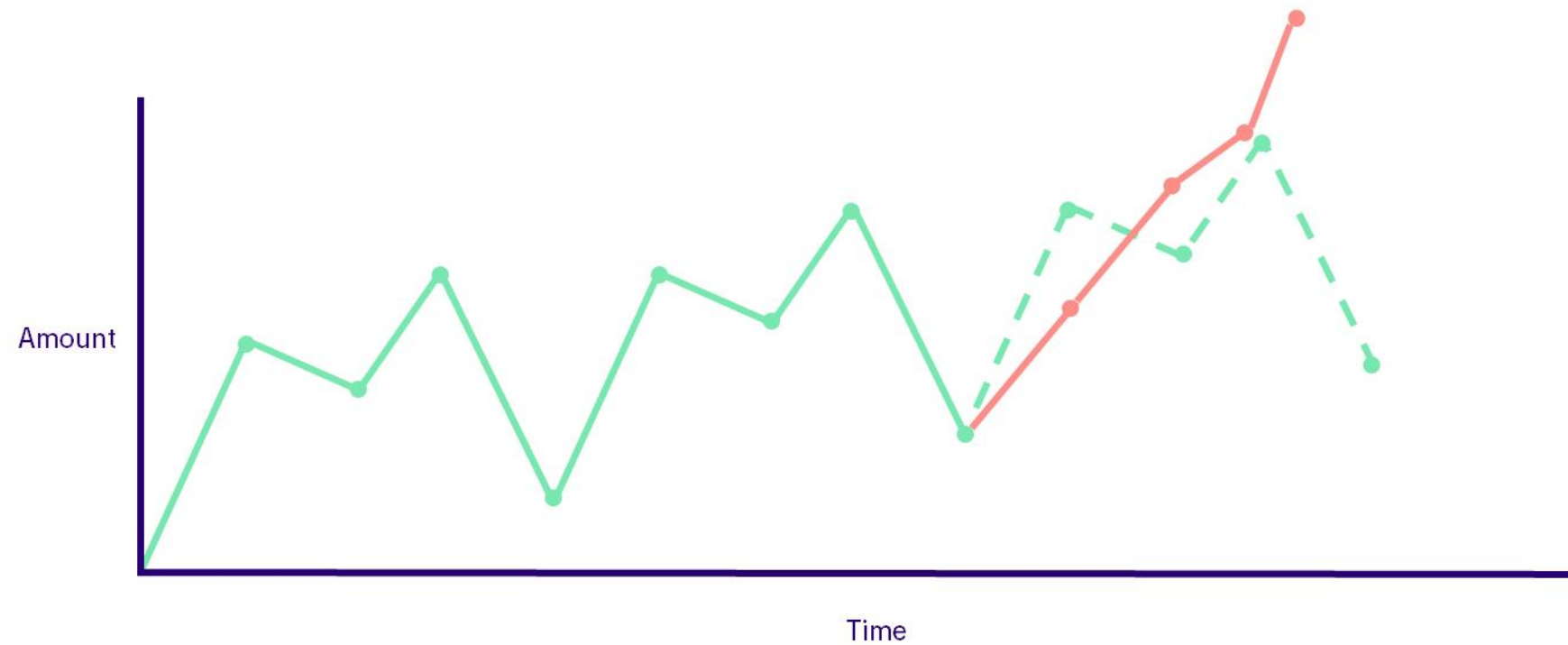
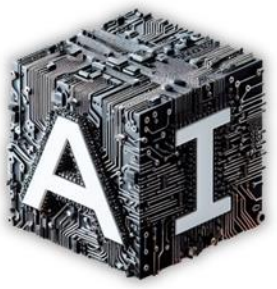
- LFM – Large Financial Model (Finance version of LLM)
 - Understands the dynamics of financial networks

- All individuals' history

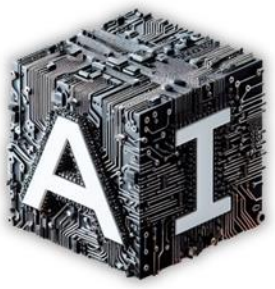
- Transactions
- Relations
- Assets



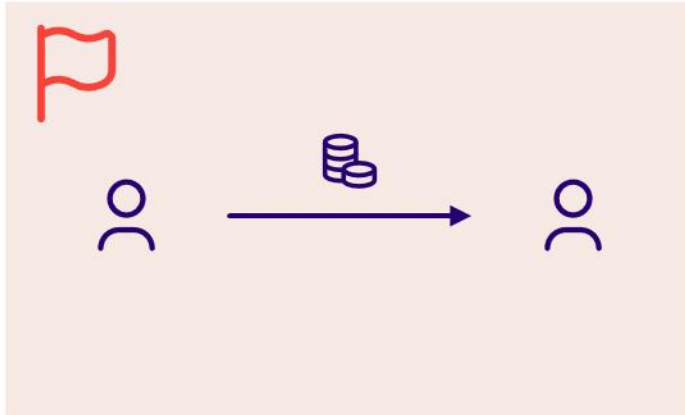
Predict a customer's future transactions



Less Time on False Positives (XAI)



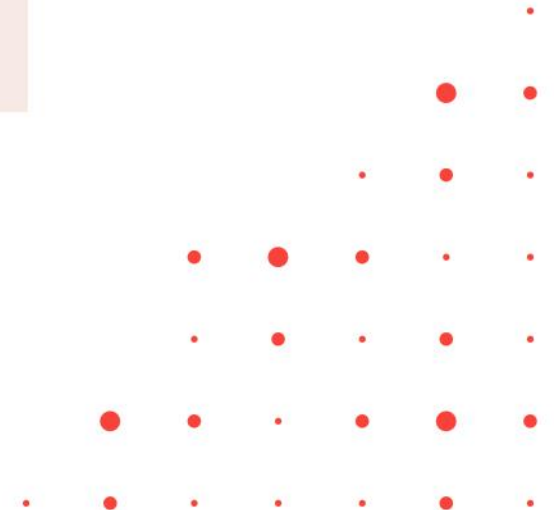
Flagged Transaction



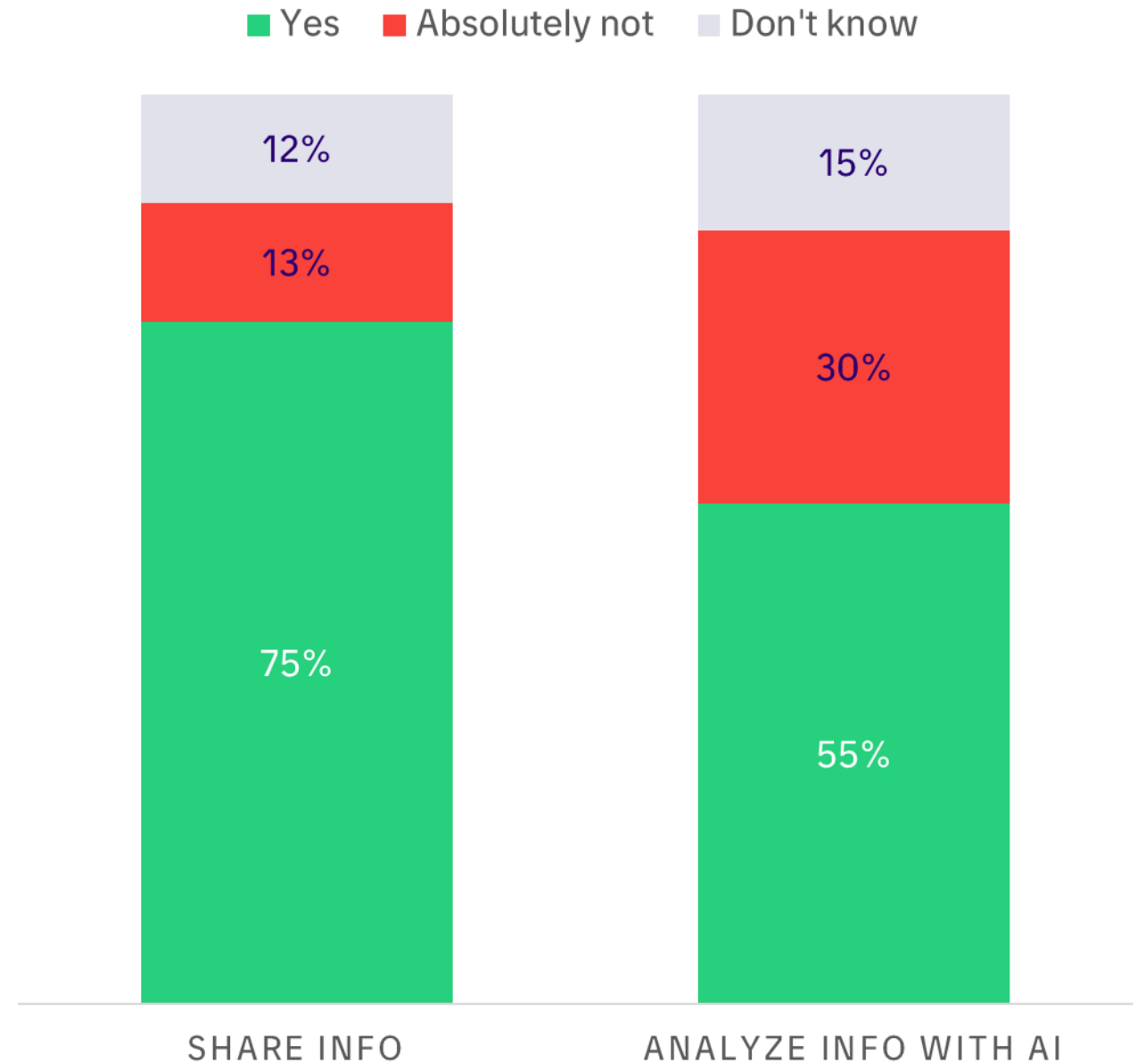
XAI Summary

89% Likely False Positive

While 100,000 NOK is an unusually large transaction amount, the customer regularly makes such payments to a loan account.



“Would you be willing to
share your financial information
and **let AI analyze it**
to help fight fraud?”



2024 Tietoevry survey by YouGov in Norway and Sweden

Who is responsible for preventing financial fraud?



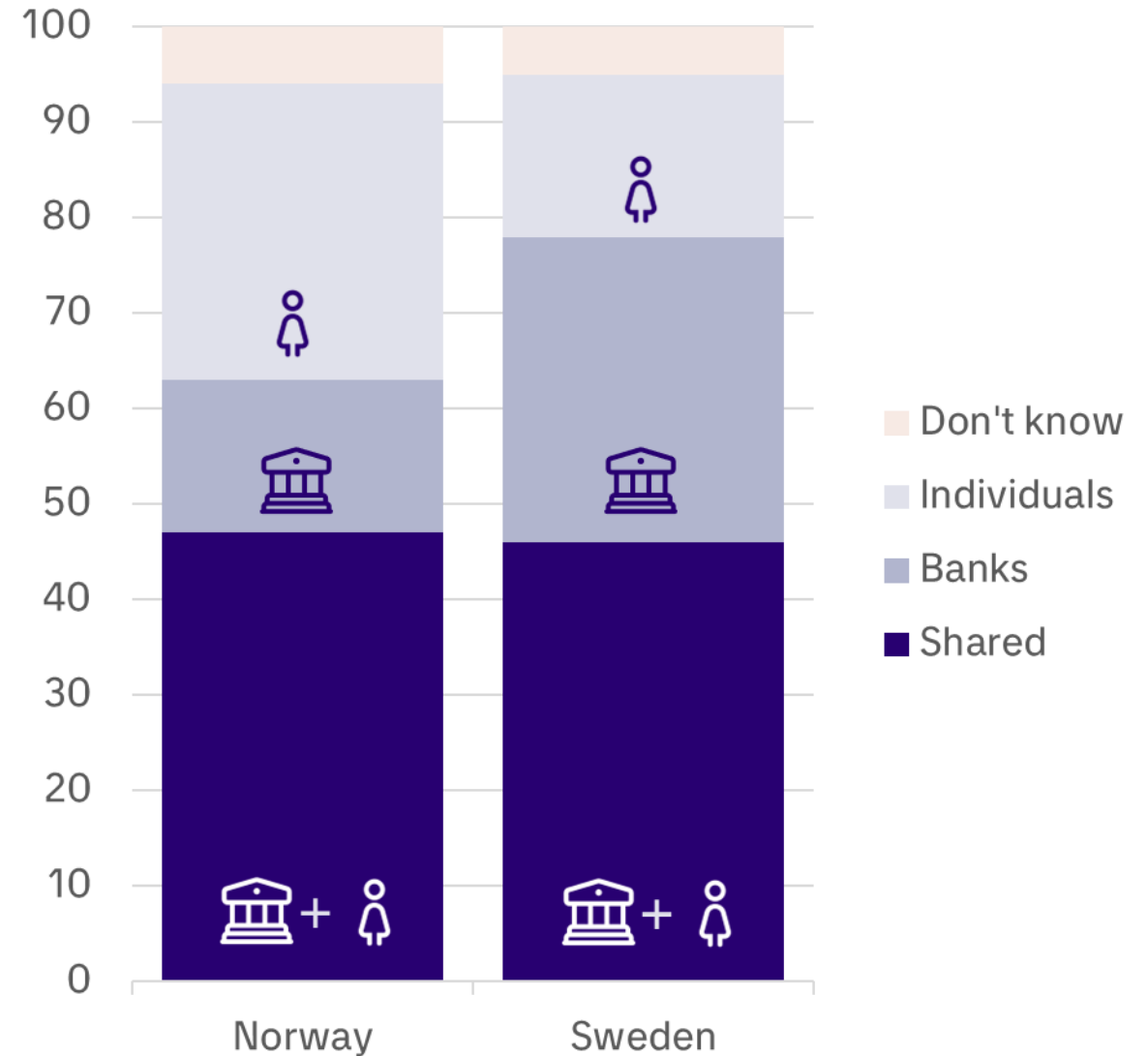
Banks as the main responsible



Norway 16%



Sweden 32%



2024 Tietoevry survey by YouGov in Norway and Sweden

Education

Stop

Think

Check

<https://www.svindel.no/>







Meet dAlsy

The AI granny designed to waste scammers' time

<https://www.o2.co.uk/swervethescammers>

This 'lifelike' AI granny is infuriating phone scammers. Here's how - and why

If you're tired of dealing with scammers, take heart in knowing that this AI grandma is fighting back.

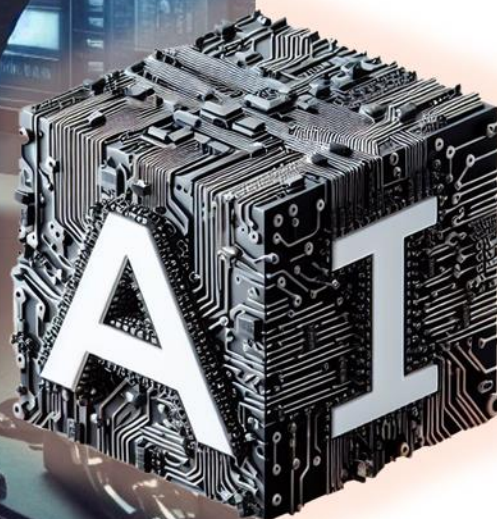
Last words

There is no such
thing as 100%





Using AI to test defenses



Find weaknesses in the
defense and detection
systems

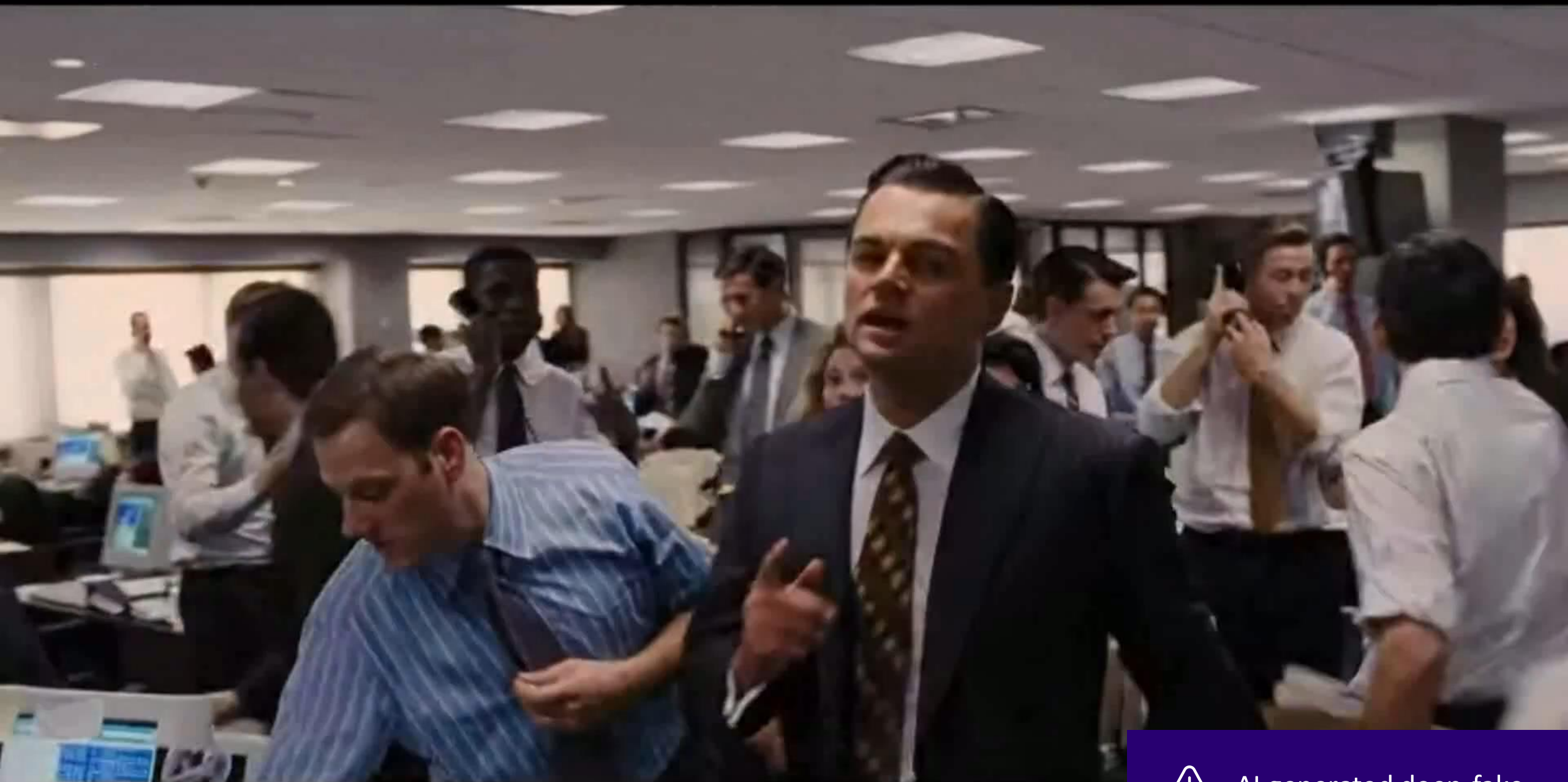
The EU AI act



- The AI-Act is a big step forward
 - Risk based classification
- Should we slow down with AI?
- AI is a race
 - Will give the fraudsters an advantage
 - Not all countries will slow down

Risk	Mitigation
Unacceptable	Prohibited
High	Strict regulations
Limited	Transparency
Minimal	Unregulated



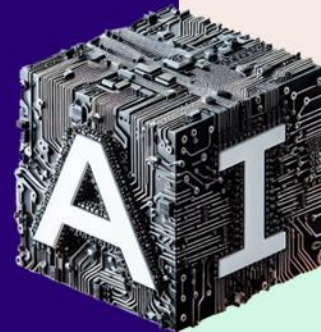


AI generated deep-fake

Thank you!

The double-edged sword of AI:
Committing and preventing fraud

John Erik Setsaas
Director of Innovation – Financial Crime Prevention
Tietoevry Banking



Hacking people
Profiling and emotions

Deep fakes

\$1.03 Trillion/year
+ Emotional impact

CaaS

Identity infringement → APP fraud

Monitoring

AI for catching fraud

Education

The AI Act