AI Credit Underwriting and Scoring
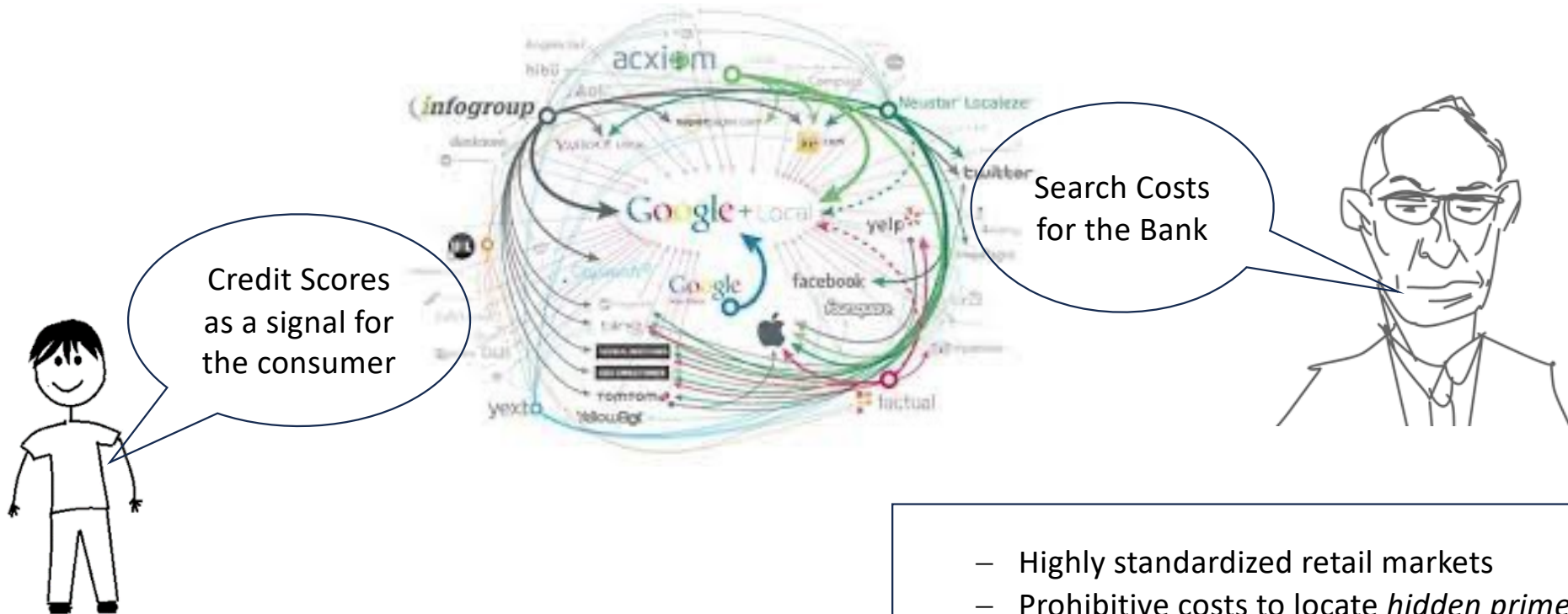
Prof. Dr. Katja Langenbucher

The information asymmetry problem:
Bank and potential Customer

Credit Scores as a signal for the consumer

Search Costs for the Bank

- Highly standardized retail markets
- Prohibitive costs to locate *hidden primes*
- *Data analytics* **offers huge potential**
- At the same time: **bears important risks**

# The traditional strategy to overcome information asymmetry

➢ Historically, loan decisions were based on a mix of qualitative and quantitative information (the "3 Cs")

*"During the 1960's **character** was still considered the foundation of consumer creditworthiness, and the ability to judge this elusive personal quality still at the top of a credit manager's skill set"*

Source: Lauer, Creditworthy, A History of Consumer Surveillance and Financial Identity in America, 2017, p. 199

Character   Capital

Capacity
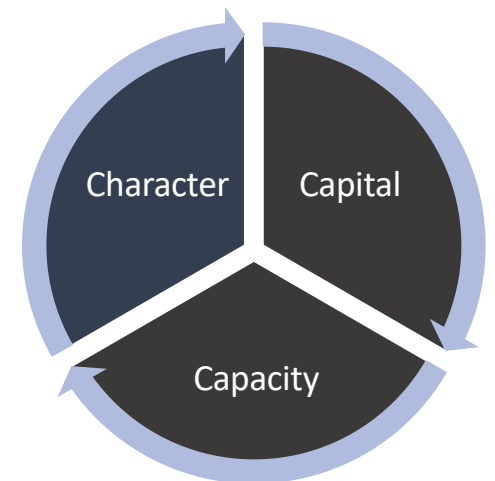
The new strategy: AI and big data
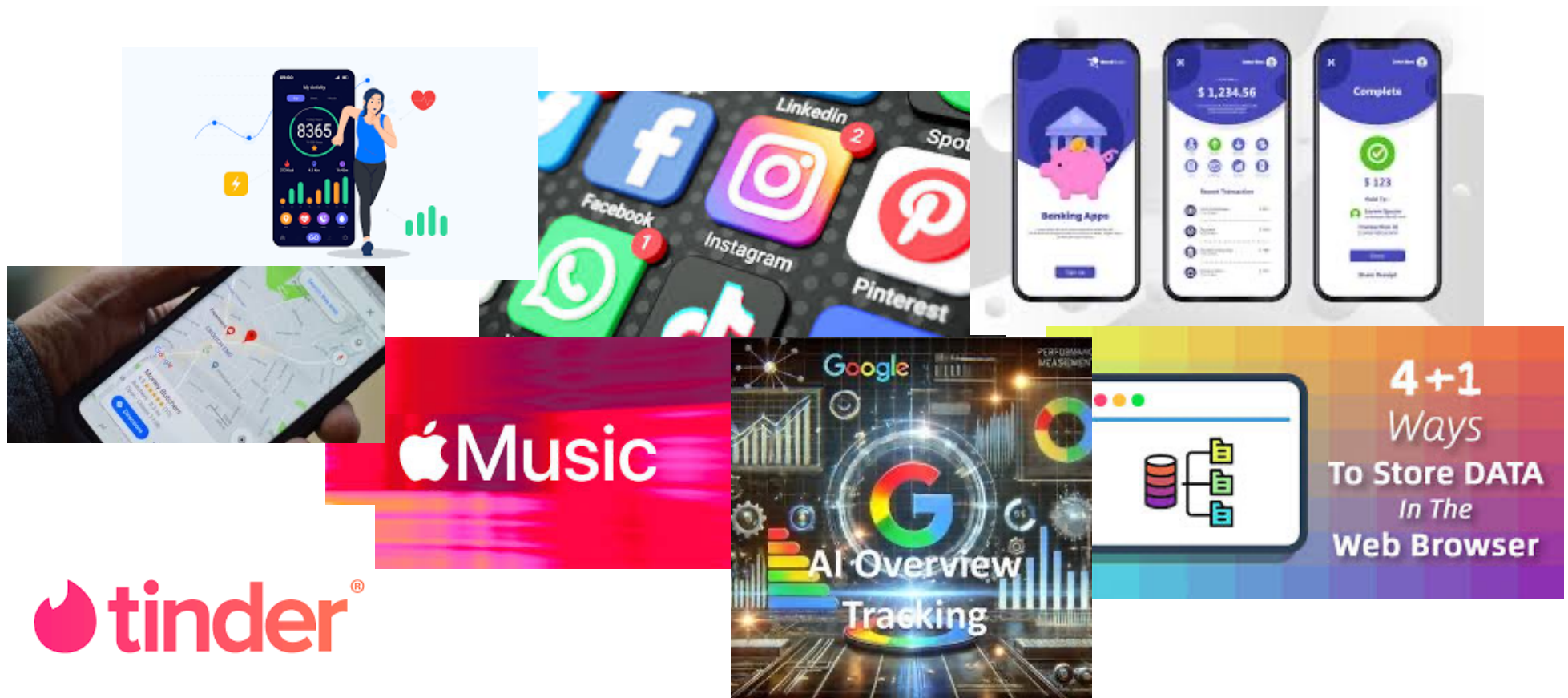
Overall legal framework

The Consumer Credit Directive	The GDPR	The AI Act

- Anti-Discrimination rule
- Explainability and human oversight (Art. 18 para. 8)

- Data protection
- Special protection for sensitive data
- Information & verification rights
- Explainability
- Human Oversight

- Mostly: Risk-adjusted compliance for AI developers and deployers
- Basic explainability for consumers on role of AI in decision-making

GDPR/1: Automated decision-making and black-box AI – the „logic involved"

The Consumer Credit Directive	The GDPR	The AI Act

Article 22

Automated individual decision-making, including profiling

1.   The data subject shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.

Article 15

Right of access by the data subject

1.   The data subject shall have the right to obtain from the controller confirmation as to whether or not personal data concerning him or her are being processed, and, where that is the case, access to the personal data and the following information:

(h)   the existence of automated decision-making, including profiling, referred to in Article 22(1) and (4) and, at least in those cases, meaningful information about the logic involved, as well as the significance and the envisaged consequences of such processing for the data subject.

GDPR/2: Sensitive data and the problem of inferences
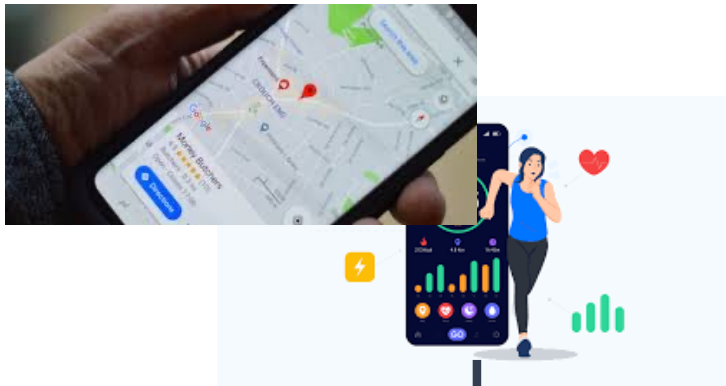
Home, health, habits, gender, age…

Race, gender, age, income…

Race, gender, age…