The Alan Turing Institute

AI in Financial Services

Applications, benefits & risks, and governance considerations

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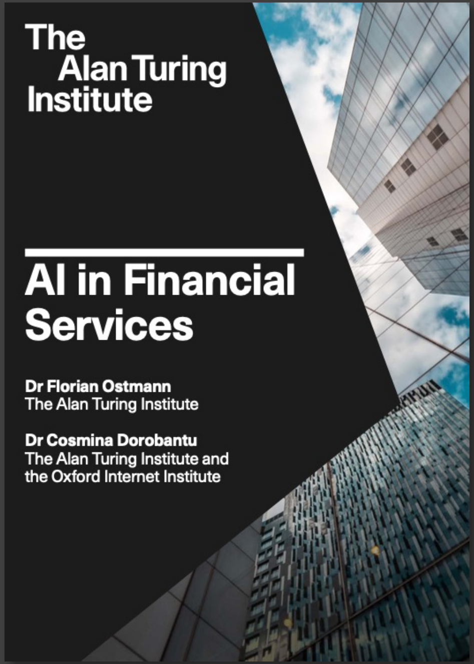
Introduction

Research commissioned by the UK's Financial Conduct Authority to inform regulatory thinking

1. Introduction to AI in the context of financial services
2. General challenges and principles for responsible AI adoption
3. Potential benefits and harms in financial services
4. AI transparency and its importance for responsible innovation

https://www.turing.ac.uk/news/publications/ai-financial-services



Report overview

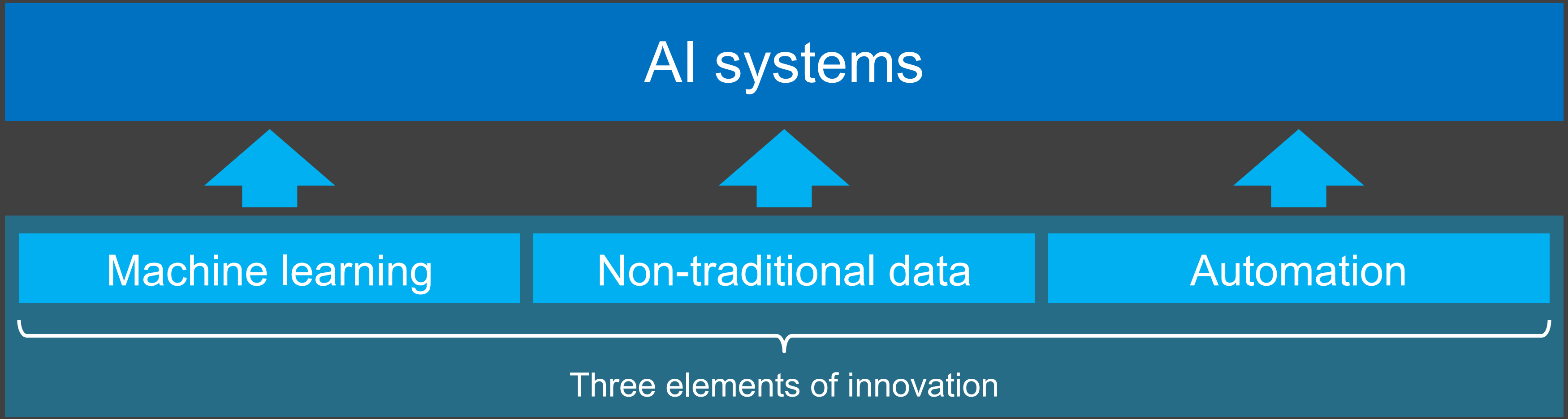
Application landscape

Banking	Insurance	Asset management

Prominent use cases

- Product eligibility decisions based on risk profiling
- Product pricing decisions (risk-based pricing, differential pricing, dynamic pricing)
- Targeted marketing
- KYC, AML, and fraud detection
- Asset management & trading (e.g. asset price modelling, advice, investment decisions, trade execution)
- Customer service (e.g. chatbots)
- Modelling and management of micro- and macro-prudential risks

Elements of innovation



Report overview

1. Introduction to AI in the context of financial services
2. Potential benefits and harms in financial services
3. General challenges and guiding principles for responsible AI adoption
4. AI transparency and its importance for responsible innovation

Potential benefits and harms in FS

Benefits	Harms

- Consumer protection
- Financial crime
- Competition
- Stability of firms and markets
- Cybersecurity

Potential benefits and harms in FS

Benefits	Harms

Consumer protection

Financial inclusion
Denials of service
Unlawful discrimination and unfair differential treatment
Mismatches between products and customer needs
Performance of investments
Consumer empowerment

Financial crime

Competition

Stability of firms and markets

Cybersecurity

Report overview

General challenges and guiding principles

Background considerations

- Understanding and managing data quality
- Novel characteristics of models
- Structural changes to technology supply chains
- Scale of impacts associated with AI systems

Specific areas of concern

- System performance
- System compliance
- Competent use & human oversight
- Providing explanations
- Responsi-veness
- Social & economic impact

Principles

- Fairness
- Sustainability
- Safety
- Accountability
- Transparency

Report overview

The role of AI transparency

Need to

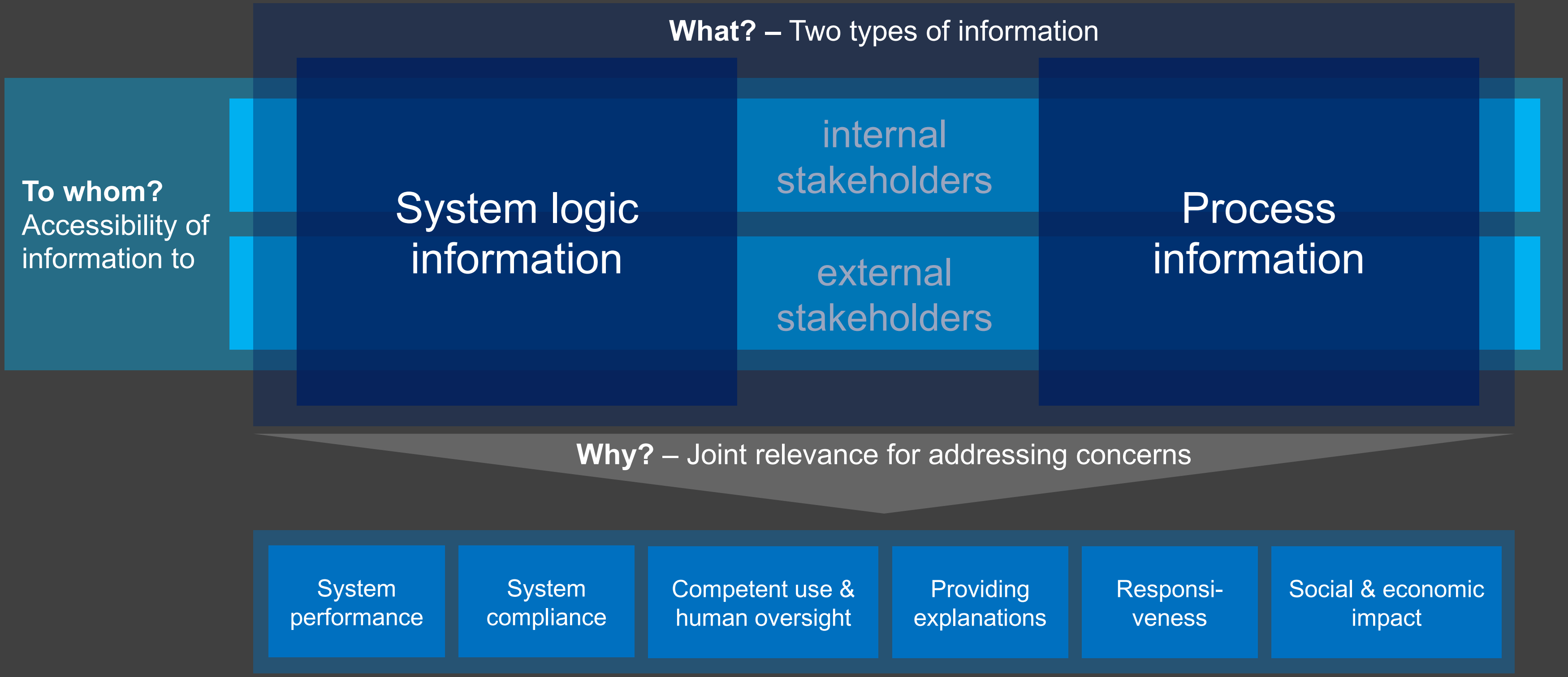
ensure & demonstrate

trustworthiness and responsible use

Accessibility of information about AI systems

To Whom? | What information? | Why?

The role of AI transparency



Thank you