

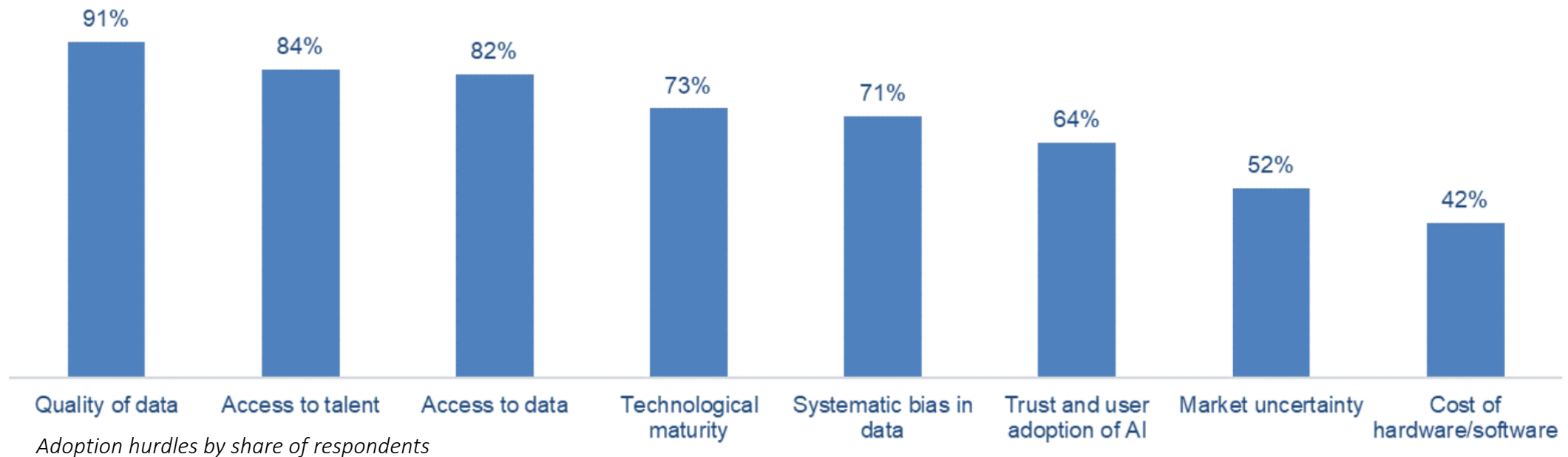
# Responsible AI-enabled Financial Services

Leveraging the SC 42 Work Program for Financial Applications

# 01 | The AI challenges

# AI challenges for Financial Services

*What are the obstacles blocking adoption of AI?*



Extract from WEF's publication: "AI has started a financial revolution - here's how", 2020

# A need to adapt existing processes

*“AI model governance  
can be more complex  
than traditional model governance.”*

2023 OSFI & GRC Report on “The ethical, legal, and financial implications of artificial intelligence (AI) on financial services institutions”

## 02 | How Standards can help

# Leading international best practice on AI

17

Standards published

30

Standards under development

56

countries involved

6

working groups

>150

Experts involved



Liaisons with all major  
international initiatives  
(OECD, ITU, PAI, EC)

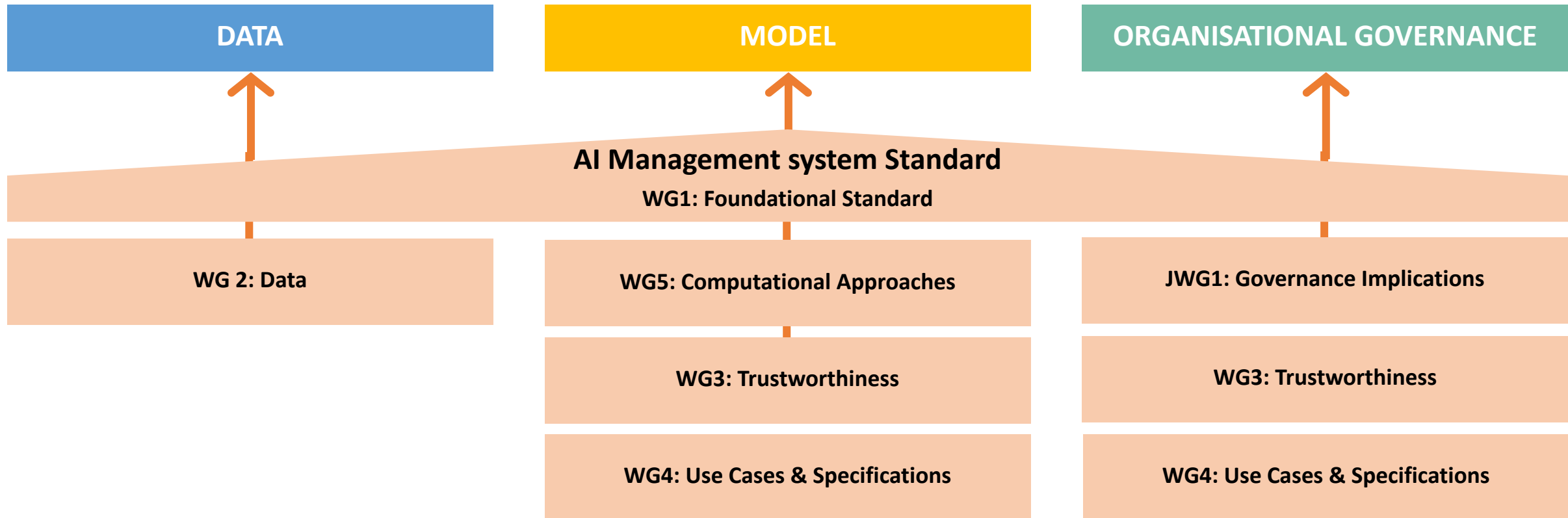
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pathway to certification:  
AI management system  
standard



# Providing an AI Assurance Framework

## AI Assurance Framework



AI is not easy to develop

**CHALLENGE**



# The Technology

- > Building a Proof of Concept or a simple AI tool might take two months
- > Getting underlying processes and data ready for the next stage might take 6–18 months

Source: Best Practice Artificial Intelligence Ltd, 2019

To be AI ready, organisations need to ensure they have the appropriate:

- (1) Data
- (2) Technology architecture



# Helping getting started with AI

## DATA

*What kind of data do I need to get started with AI?*

ISO/IEC DIS 5259 series - Data quality for analytics and ML

- 5259 -1 - Overview , terminology and examples

ISO/IEC FDIS 8183 - Data life cycle framework

## MODEL

*What do I need to know and what processes should I follow to develop and implement an AI model?*

ISO/IEC 23053:2022 – Framework for AI Systems using ML

ISO/IEC 24372: 2021 - Overview of computational approaches

ISO/IEC DIS 5392 - Reference architecture of knowledge engineering

## ORGANISATION

*Where do I start for my organisation to better understand AI and consider AI initiatives?*

ISO/IEC 22989:2022 – AI concepts and terminology

ISO/IEC DIS 5339 - Guidelines for AI applications

AI can be dangerous

**CHALLENGE**

# The Risks

Keeping AI systems on a tight leash using dynamic risk management:

- Identifying the acceptable range of variation for performance of AI systems
- monitoring
- Adapting controls as required





# Managing Risk and ensuring appropriate oversight

## DATA

*How do I know if my data is good enough to be processed by an AI system?*

ISO/IEC DIS 5259 series - Data quality for analytics and ML

- 5259 -2 - Data quality measures
- 5259-3 – Data quality requirements and guidelines
- 5259-4 – Data quality process framework

## MODEL

*How do I build safety functions?*

ISO/IEC CD TR 5469 - Functional safety & AI systems

ISO/IEC CD TS 8200 - Controllability of automated AI systems

ISO/IEC 24029- Assessment of the robustness of neural networks

## ORGANISATION

*What are the AI risks I should consider? How do I manage them?*

*How can an organization have appropriate oversight of its AI systems?*

ISO/IEC 23894:2023 – Guidance on risk management

ISO/IEC 38507:2022 - Governance implications of the use of AI by organisations

ISO/IEC FDIS 42001 – Management system

# The Ethics

From

*“Can we do it?”*

to

*“Should we do it?”*

# Addressing Ethics

## DATA

*How do I identify and manage algorithmic bias?*

ISO/IEC TR 24027:2021 - Bias in AI systems and AI aided decision making

ISO/IEC CD TS 12791 – Treatment of unwanted bias in classification and regression ML tasks

## MODEL

*How do I ensure AI systems are trustworthy?*

ISO/IEC AWI TS 6254 - Objectives and approaches for explainability of ML models and AI systems

ISO/IEC CD 12792 – Transparency taxonomy of AI systems

ISO/IEC TR 24028:2020 - Overview of Trustworthiness in AI

## ORGANISATION

*What are the key ethical and societal concerns I need to consider? How can I address them?*

ISO/IEC TR 24368:2022 - Overview of ethical and societal concerns

ISO/IEC AWI 42005 – AI system impact assessment

# Standards' work relies on the 3Rs formula

**R**obust repeatable process + **R**ecognised internationally = Scale AI **R**esponsibly





Trust