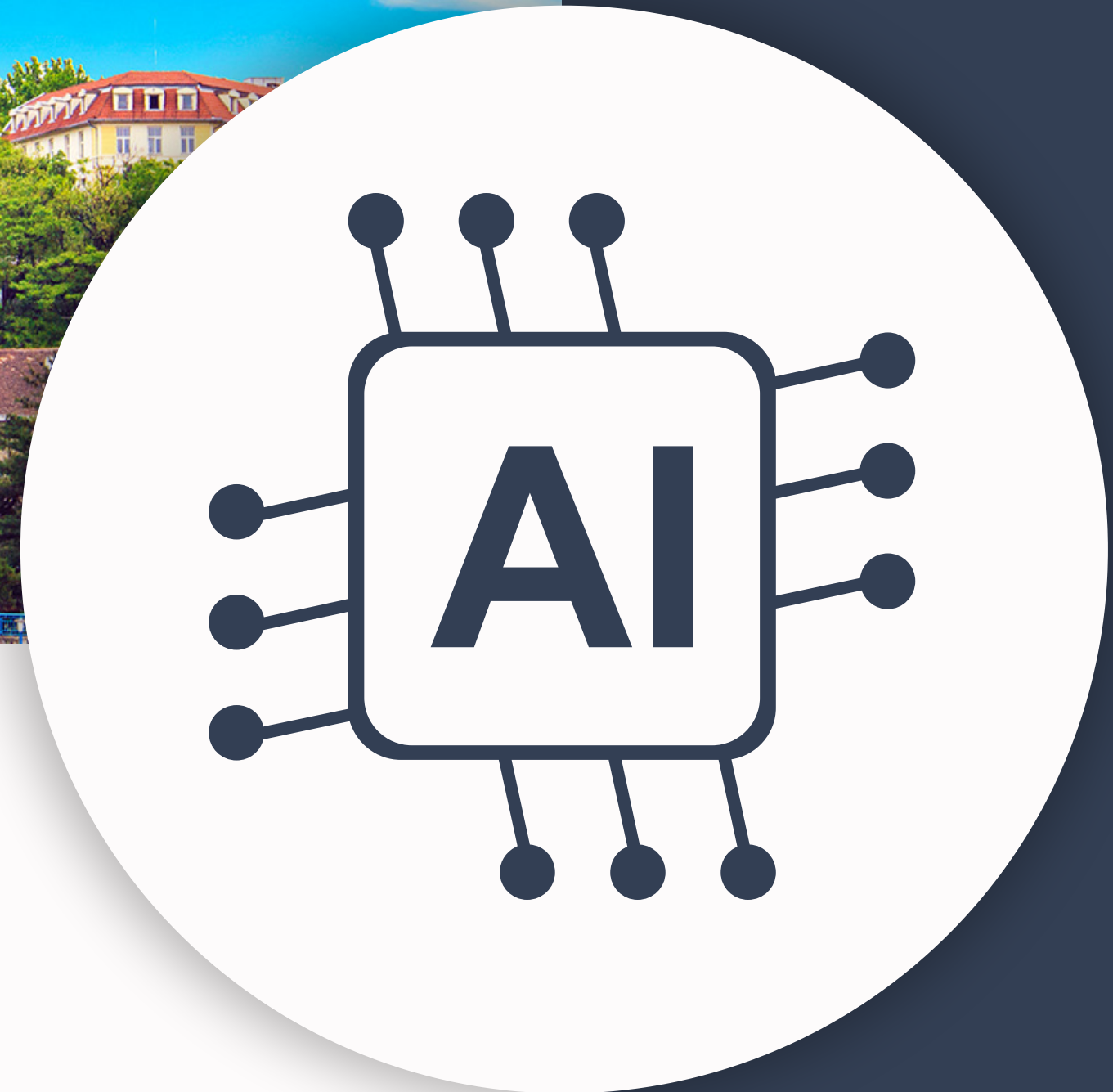


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Regional Scrum Gathering®

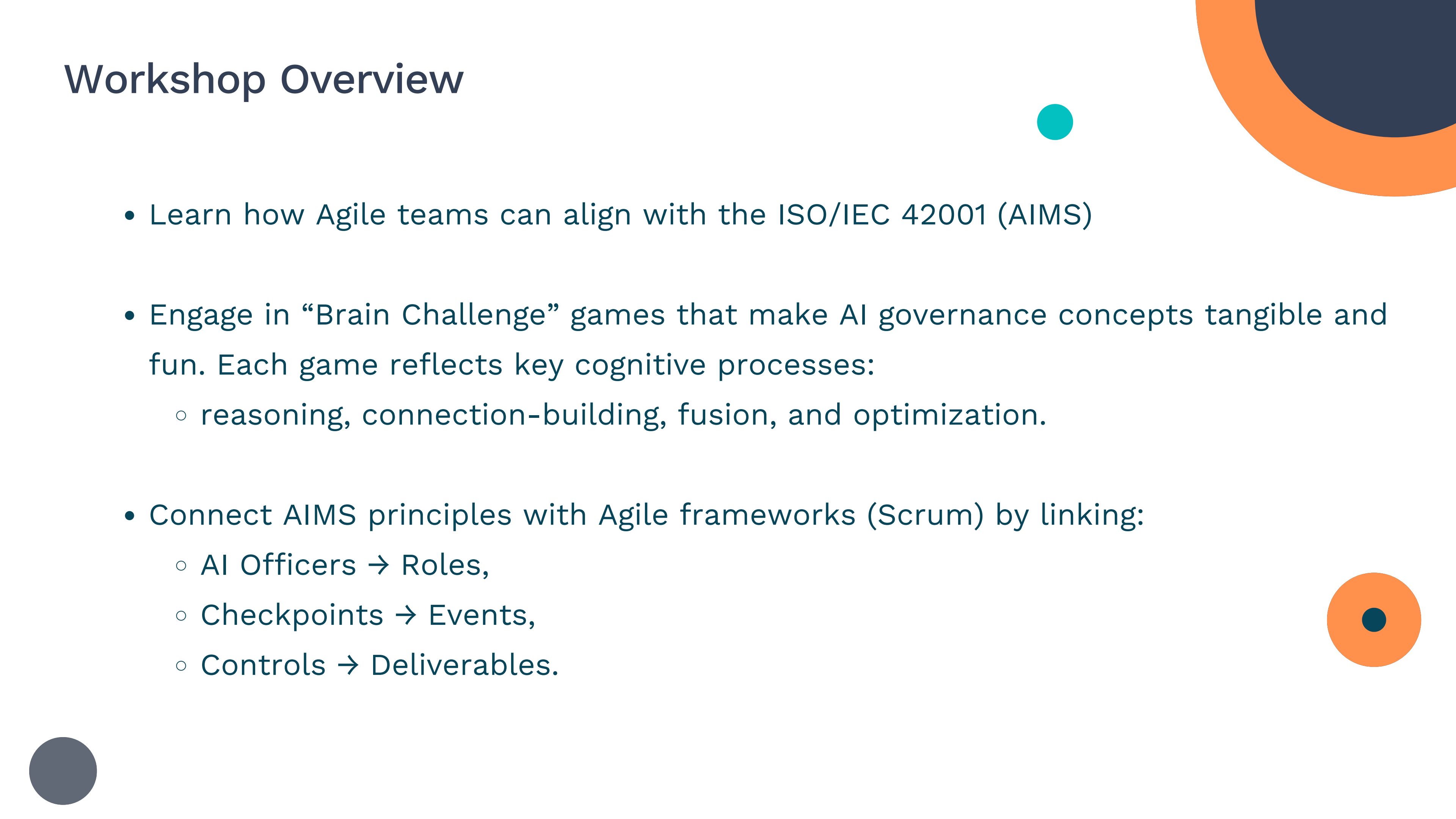
BELGRADE



Artificial Intelligence Management System (AIMS) within Agile organizations (ISO/IEC 42001)

dr Nikola Vojtek
Bojan Smuđa

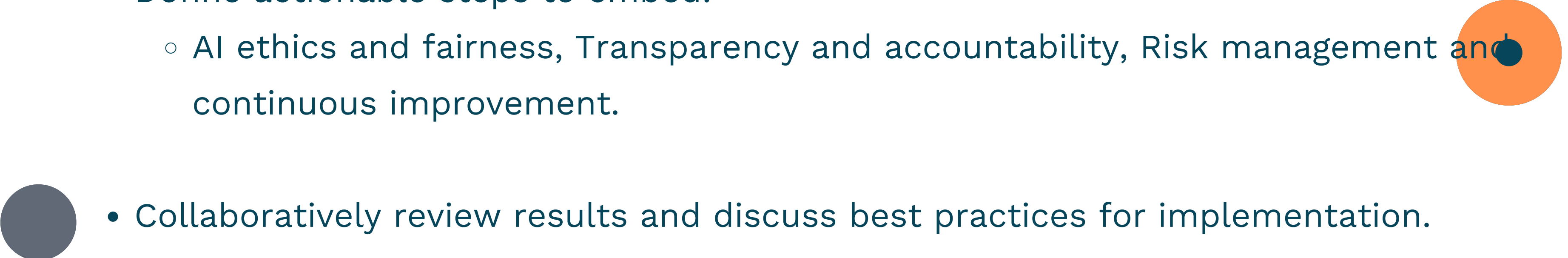
Workshop Overview



- Learn how Agile teams can align with the ISO/IEC 42001 (AIMS)
- Engage in “Brain Challenge” games that make AI governance concepts tangible and fun. Each game reflects key cognitive processes:
 - reasoning, connection-building, fusion, and optimization.
- Connect AIMS principles with Agile frameworks (Scrum) by linking:
 - AI Officers → Roles,
 - Checkpoints → Events,
 - Controls → Deliverables.

Workshop Overview



- Use a custom-designed AIMS Compliance Checklist developed for Agile environments.
 - Assess your organization's alignment with ISO/IEC 42001 requirements.
 - Identify gaps and opportunities in current Agile practices.
 - Define actionable steps to embed:
 - AI ethics and fairness, Transparency and accountability, Risk management and continuous improvement.
 - Collaboratively review results and discuss best practices for implementation.
- 

Agenda

Section 1 – Opening & Awareness

🎮 Game: Number Tower Challenge

Section 2 – From Agile to Accountable

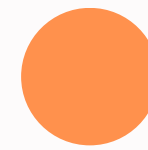
🎮 Game: Synapse Matrix

Section 3 – The Integrated Framework

🎮 Game: Neural Fusion

Section 4 – Reflection & Application

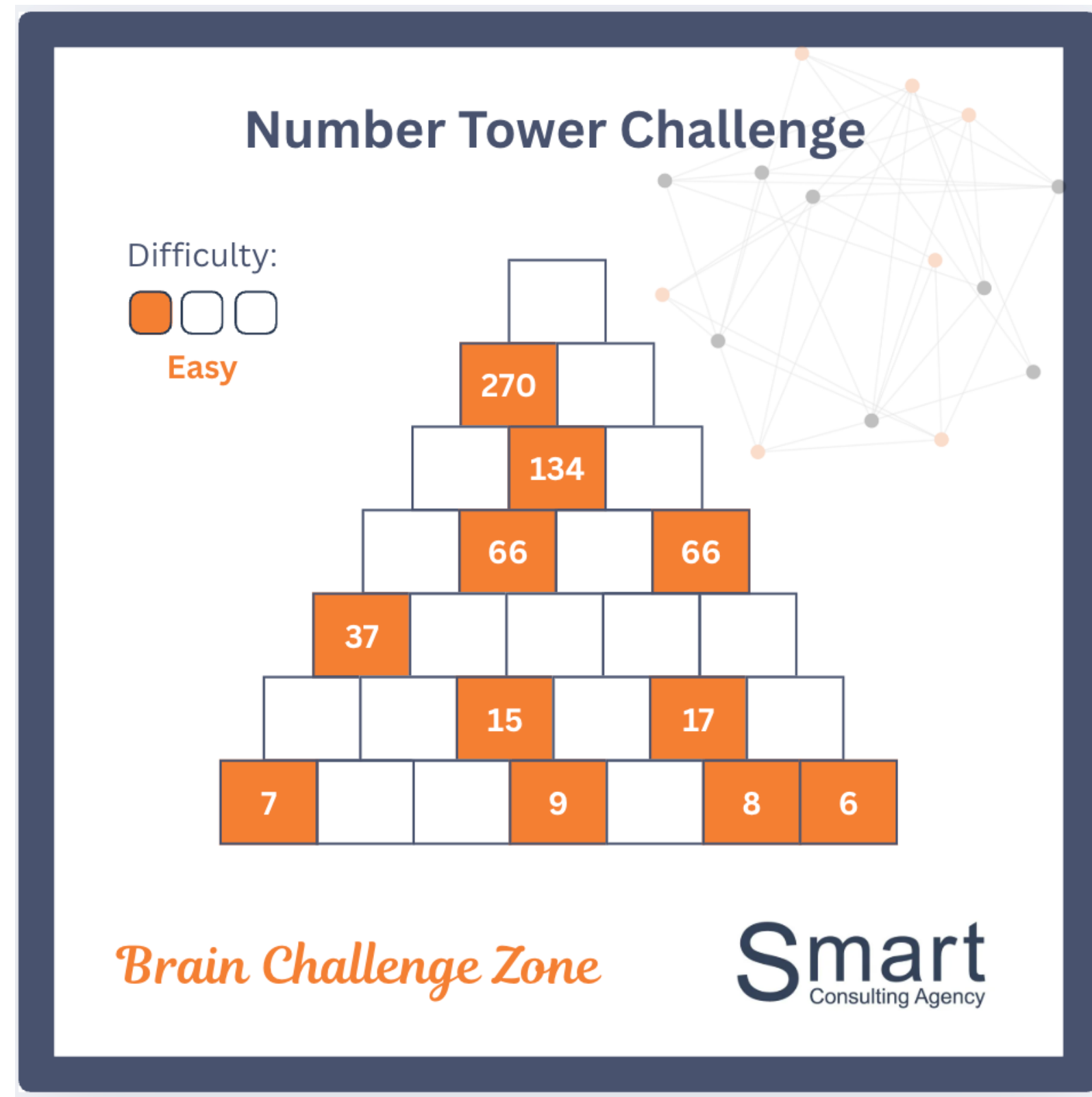
🎮 Game: Gradient Descent



Section 1 – Opening & Awareness

🎮 Game: Number Tower Challenge

→ Icebreaker & cognitive warm-up (numerical reasoning and error detection)



Section 1 – Opening & Awareness

Why do we need to talk about AI governance?

**Risks of
unmanaged AI
initiatives**

**Transparency,
accountability,
and bias
mitigation**

**How governance
ensures trust
and consistency**

Section 1 – Opening & Awareness

What does AI mean for your team?



What does AI mean for your team?

Section 2 – From Agile to Accountable

🎮 Game: Synapse Matrix

→ Pattern recognition & collaborative problem solving (mirrors neural connections in teams)

Synapse Matrix

Difficulty: 
Easy



Params	Case 1	Case 2	Case 3	Case 4	Case 5
Input A					
Input B					
Input C					
Output					

Possible outputs:  No activation  Neuron fired

Brain Challenge Zone **Smart**
Consulting Agency

Section 2 – From Agile to Accountable



Why Do We Need Standardized Processes?

**Teams need
shared rules to
innovate
effectively**

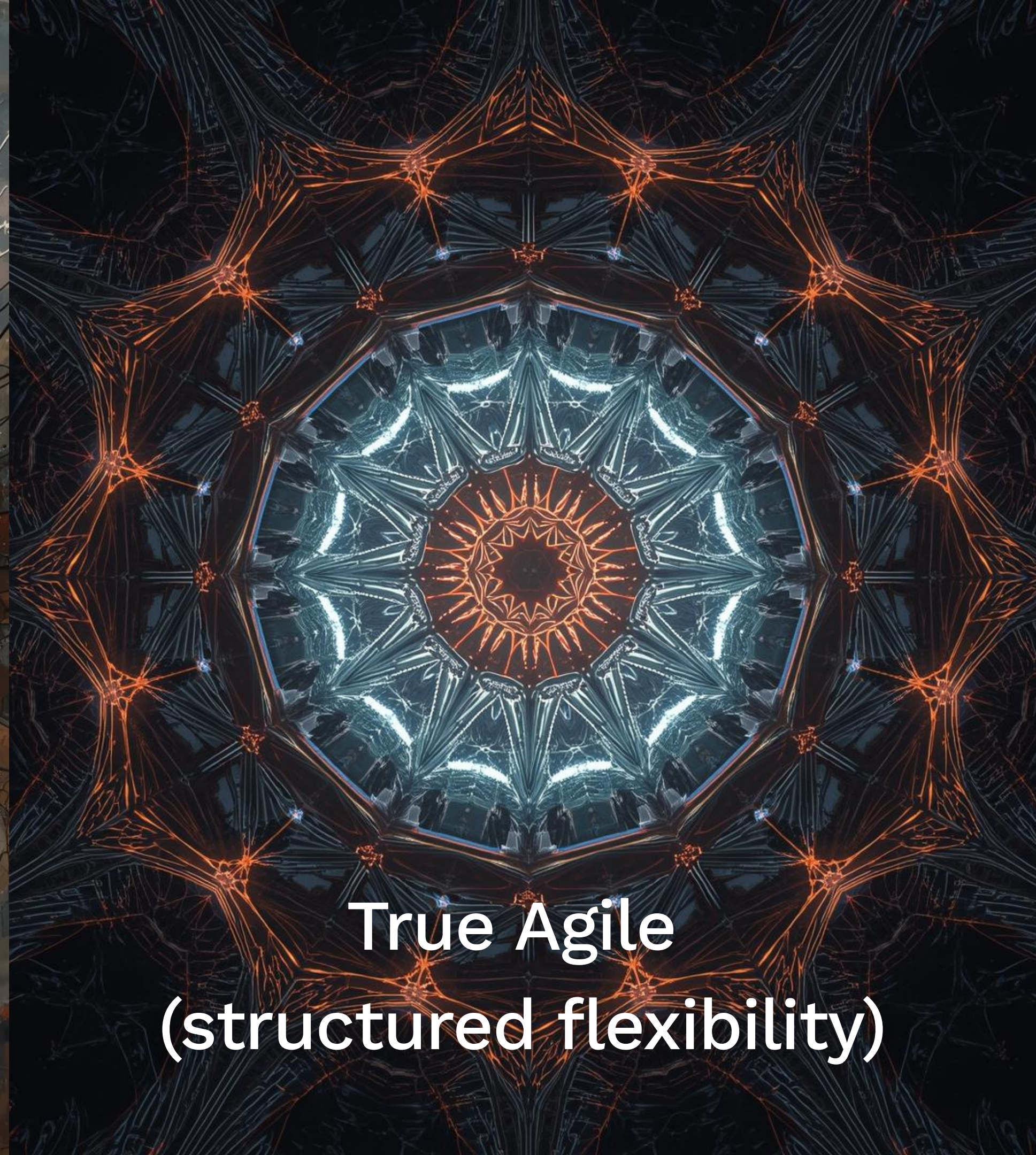
**Consistency and
repeatability
allow for scaling**

**Protect quality,
ethics, and trust
in AI-driven
decisions**





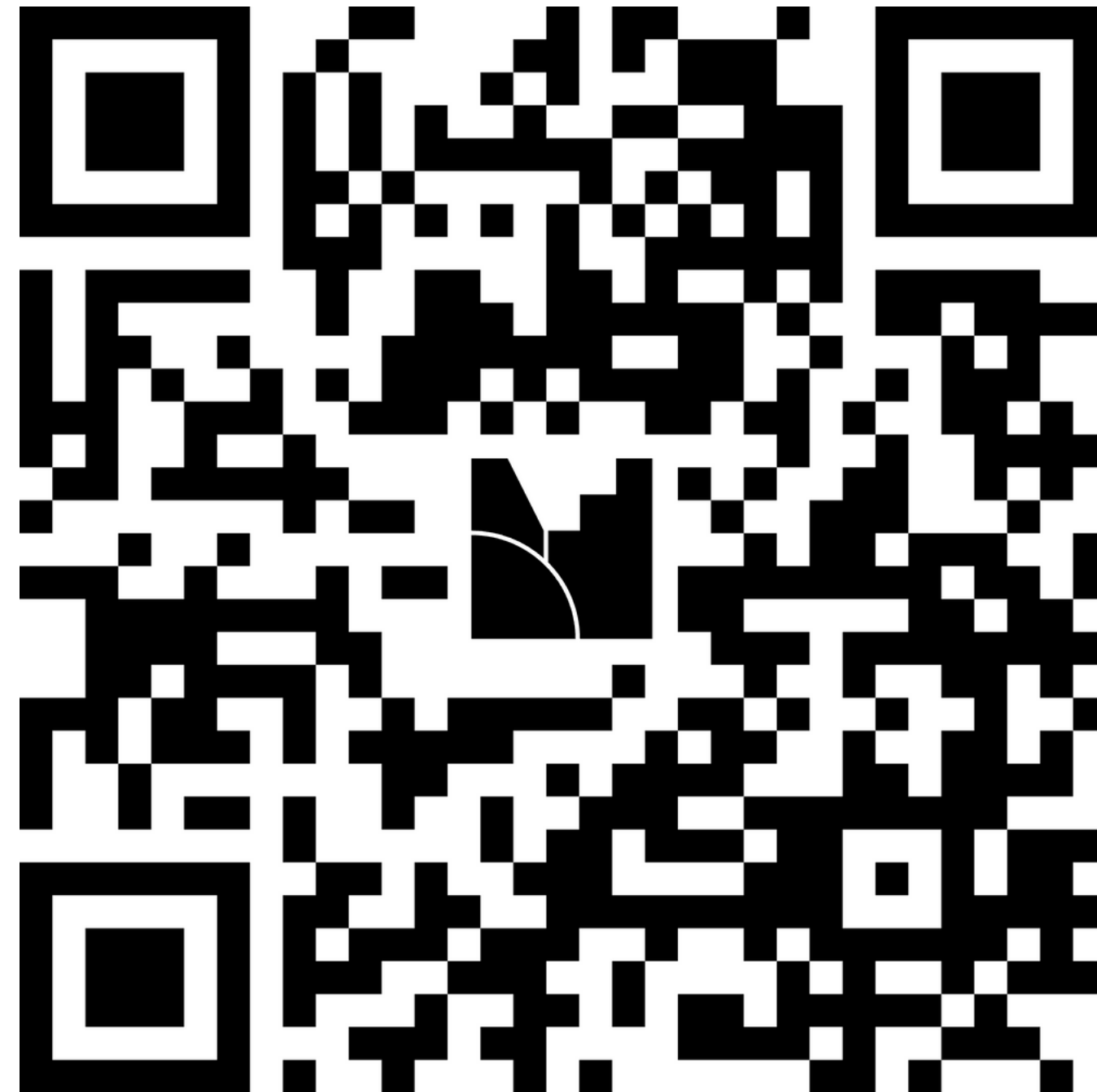
Agile Misconception
(chaos)



True Agile
(structured flexibility)

Section 2 – From Agile to Accountable

If We Don't Have AI Governance...



If We Don't Have AI Governance...what could be the issues?

Section 2 – From Agile to Accountable

Introducing ISO/IEC 42001

- Standardize Responsible AI within Agile teams
- First international standard for Artificial Intelligence Management Systems (AIMS).
- Provides a framework for accountability, transparency, and continual improvement.
- Aligns AI projects with ethical principles and organizational governance.
- Compatible with Agile and iterative development.

An abstract background featuring a dark blue field with out-of-focus orange and blue light spots (bokeh). Overlaid on this is a stylized line graph with orange nodes and a grey arrow pointing upwards, suggesting growth or progress.

Introducing ISO/IEC 42001

- Establishing **Ethical** Guidelines
- Data Authenticity and **Quality**
- **Transparency** and Accountability
- **Security** and Data **Protection**
- **Bias** Mitigation
- **Quality** Assurance and Validation
- Focus on **Risk**
- **Documentation**
- Continuous Monitoring and **Improvement**

Section 3 – The Integrated Framework

🎮 Game: Neural Fusion

→ Strategic thinking challenge (combining neural paths = integrating frameworks)

Neural Fusion

Difficulty: ●●○
Moderate

Activation = $(A \times W_1 + B \times W_2 + C \times W_3)$

zzZ No activation ⚡ Neurons fired

Neuron	Inputs (A,B,C)	Weights (W ₁ ,W ₂ ,W ₃)	Activation	Threshold	Fires?
N ₁	2, 5, 3	0.5, 0.2, 0.8		4.0	
N ₂	4, 1, 6	0.4, 0.9, 0.1		3.0	
N ₃	3, 2, 5	0.7, 0.3, 0.6		4.5	

Fusion Score = $(N_1 + N_2 + N_3) / 3$ Fusion Threshold (T_x) Fires?

Fusion Score =

Brain Challenge Zone **Smart**
Consulting Agency

Section 3 – The Integrated Framework

Implementing ISO/IEC 42001 in Agile Teams

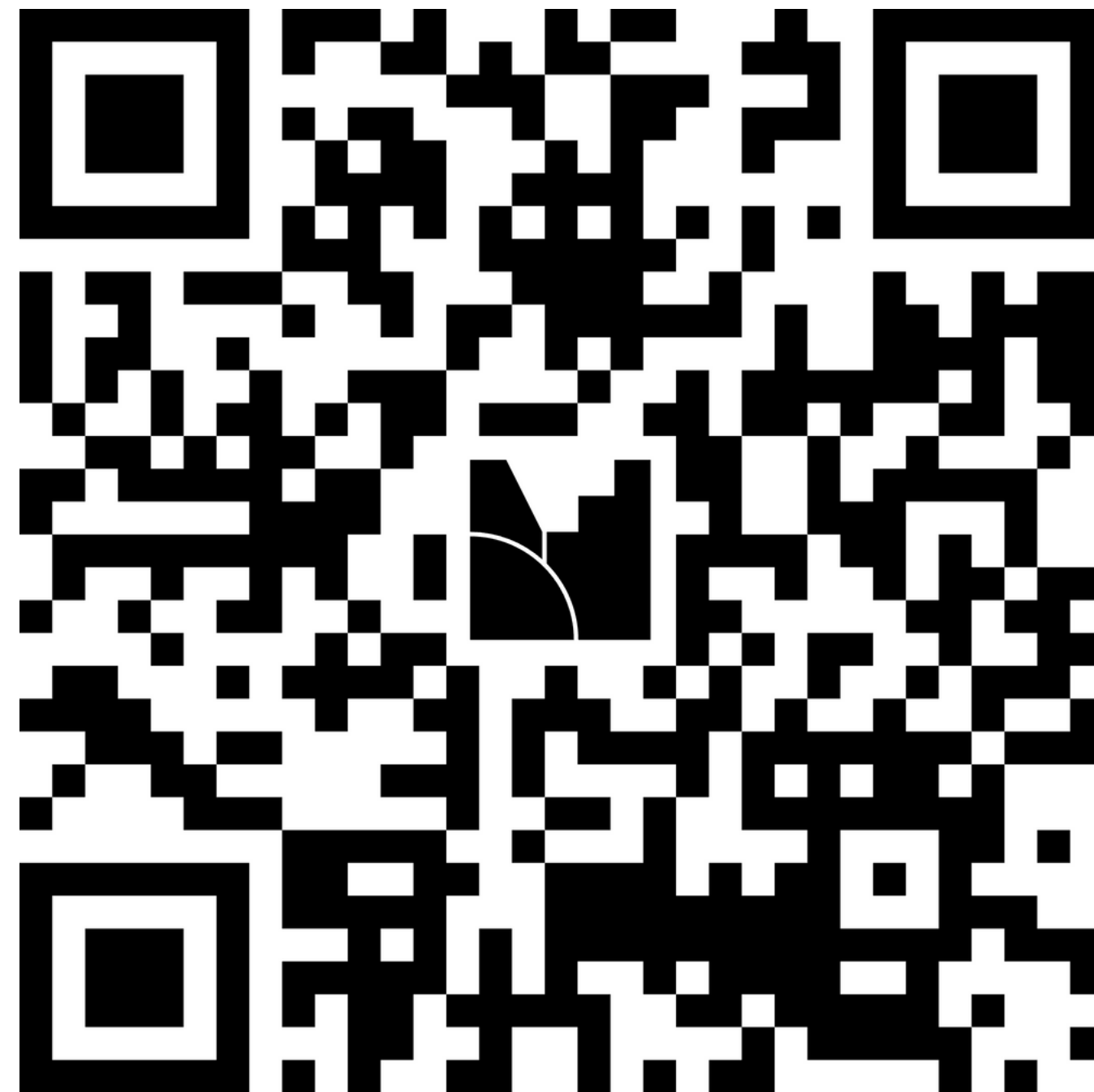
ISO 42001 Officers → Agile Roles

ISO 42001 Checkpoints → Scrum Events

ISO 42001 Controls → Deliverables

Section 3 – The Integrated Framework

Does AI governance fit into your
Agile team(s) rhythm?



Does AI governance fit into your Agile team(s) rhythm?

Sprint Planning: "Plan with Purpose"

Daily Scrum: "Monitor and Adjust"

Sprint Review: "Show, Explain, and Justify"

Sprint Retrospective: "Reflect and Improve Governance"

Never considered

Fully integrated into routine

Section 3 – The Integrated Framework



AI Officers	Agile Role	Responsibilities
AI System Owner	Product Owner	Ensures alignment of AI goals and outcomes
Risk Officer	Scrum Master	Facilitates identification and mitigation
AI Developer	Dev Team	Implements technical and ethical practices

Section 3 – The Integrated Framework



Checkpoints	Events	Guidelines
Risk planning	Sprint Planning	Risk Review Checklist for stories involving AI features or models
Surfacing concerns	Daily Stand-ups	Any blockers, concerns, AI risks?
Traceability and transparency	Reviews	Link feature to business justification and ethical review
Continuous ethical improvement	Retrospectives	Did we skip any governance activities for the sake of delivery?

Section 3 – The Integrated Framework



Controls	Deliverables	Guidelines
Ethical criteria	User stories	Add fairness and traceability checks
Include governance	Definition of Done	Add explainability and audit trail checks
Flag AI risk	Backlog Items	Identify sensitive or high-risk stories
Attach AI related docs	Sprint backlog items	Link model cards and data logs

Section 4 – Reflection & Application

🎮 Game: Gradient Descent

→ Iterative optimization challenge (learning from feedback to reach the goal)

Gradient Descent

Difficulty:
Expert

Initial weights: $W_1 = 0.5$ $W_2 = 1.0$ Bias $b = 0.0$
Prediction: $P = (A \times W_1) + (B \times W_2) + b$
Error: $e = P - t$

Example	Input A	Input B	Prediction (P)	Target (t)	Error (e)
1	2	1	2.0	3.0	- 1.0
2	1	3		4.0	
3	3	2		5.0	

Mean Squared Error: $MSE = \frac{e_1^2 + e_2^2 + e_3^2}{3}$

Now try to add Bias and/or increase/decrease existing weights to reduce the MSE below.

Brain Challenge Zone

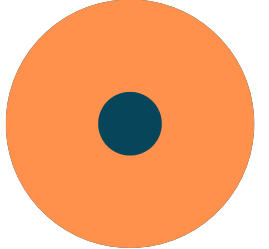
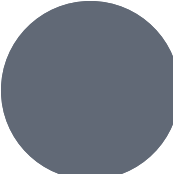
Smart Consulting Agency

Section 4 – Reflection & Application

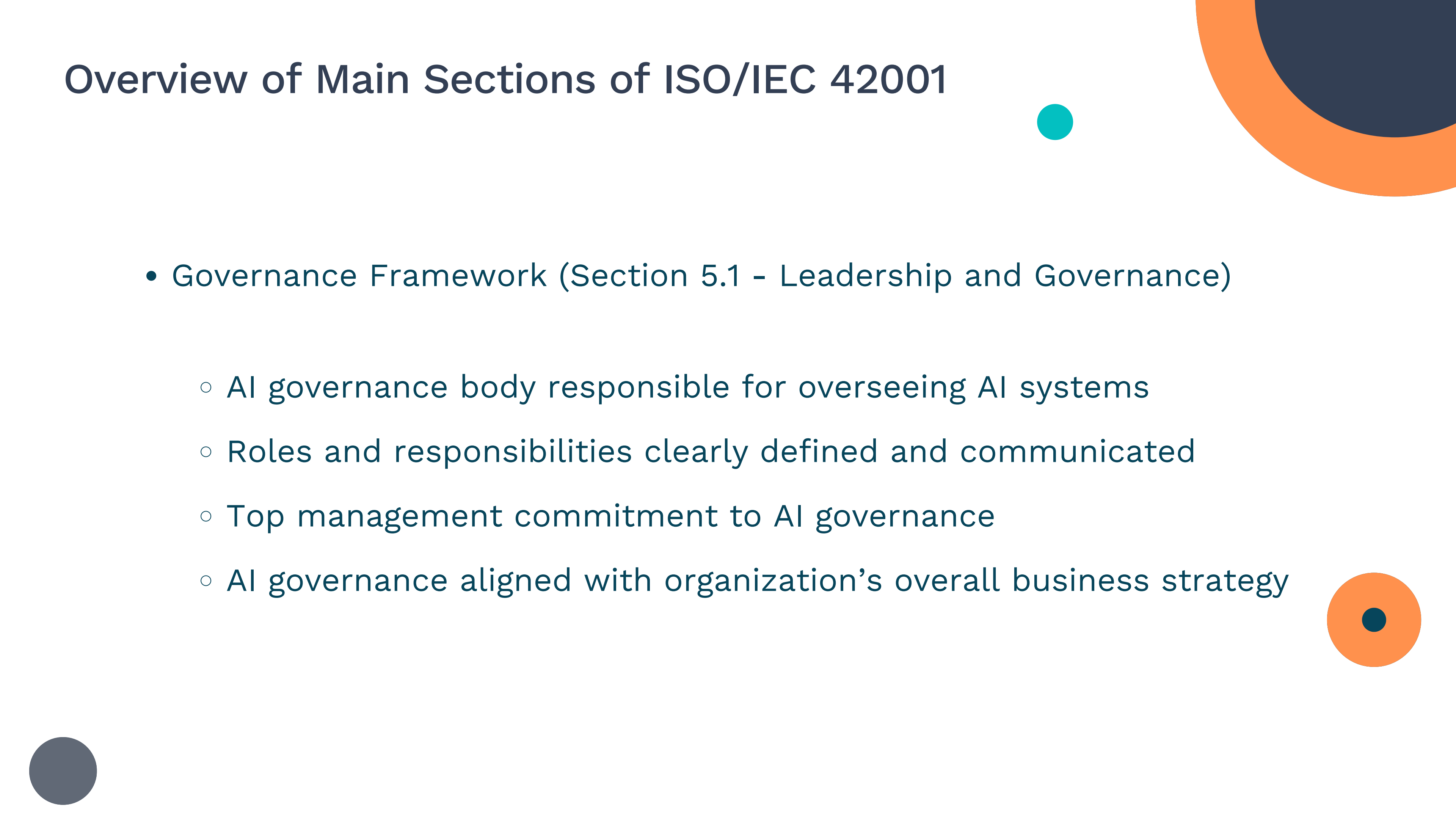
- Perform a compliance self-assessment using the checklist
- Review and discussion of key insights

Overview of Main Sections of ISO/IEC 42001



- Context, Organization and Scope (Section 4 - Organization and its Context)
 - Identification of internal and external processes and aspects related to AI
 - The needs and expectations of stakeholders relevant to AI
 - Definition of the scope related to AI management system based on its context
- 
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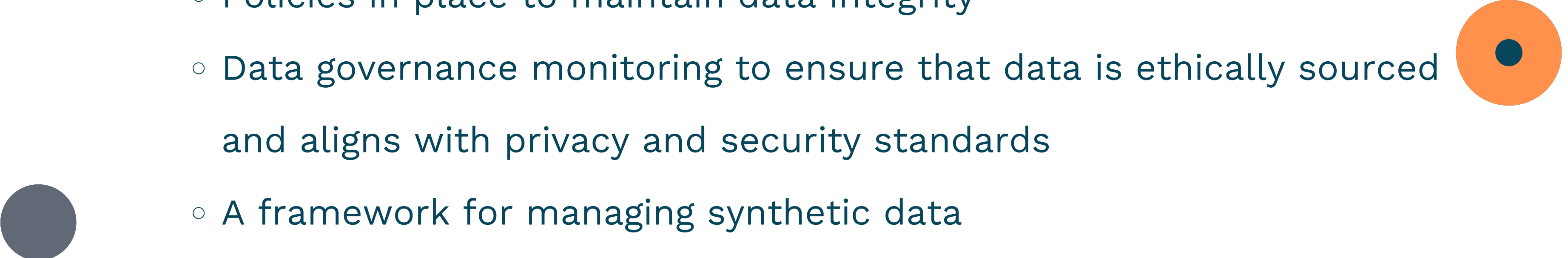
Overview of Main Sections of ISO/IEC 42001



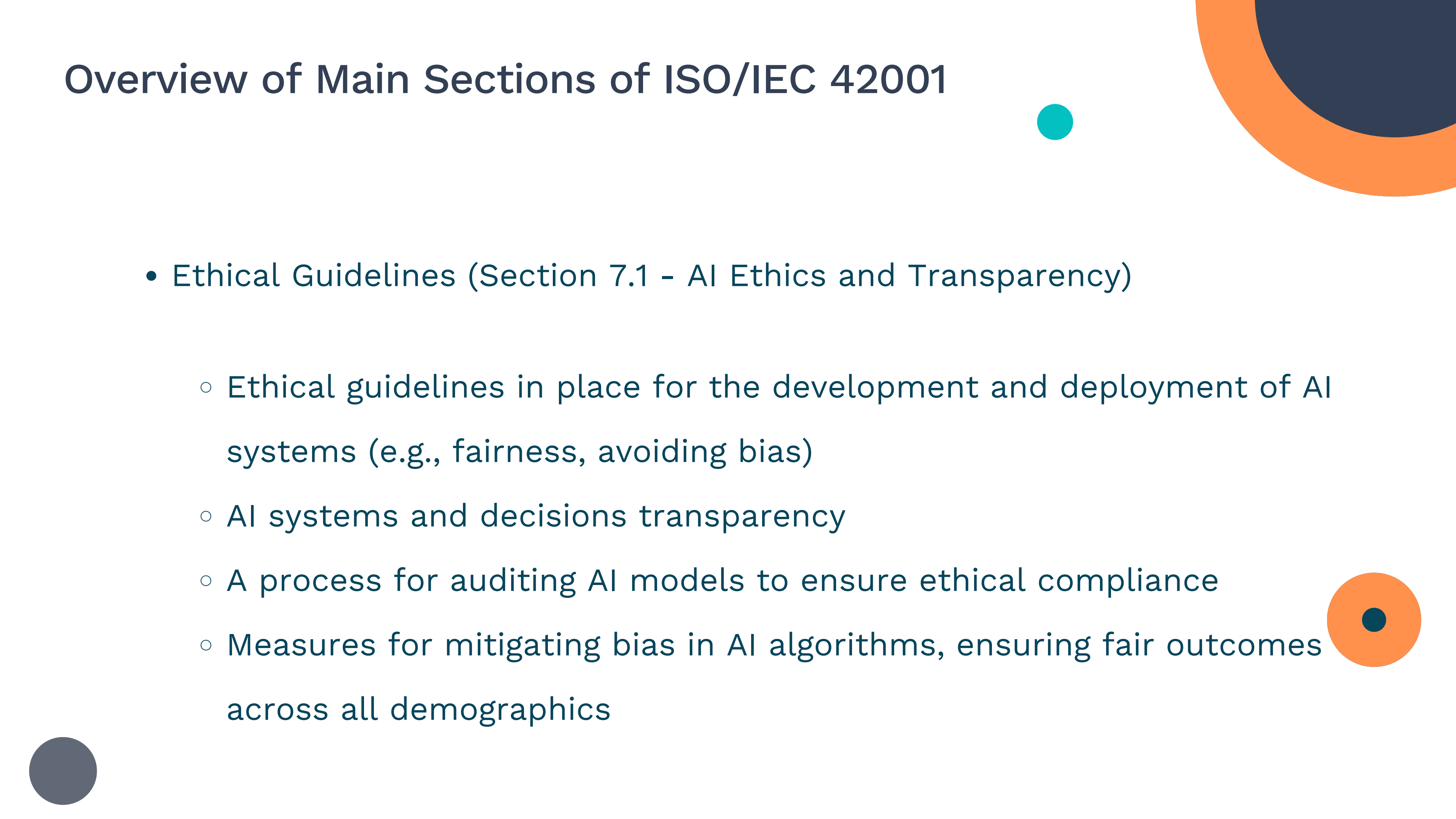
- Governance Framework (Section 5.1 - Leadership and Governance)
 - AI governance body responsible for overseeing AI systems
 - Roles and responsibilities clearly defined and communicated
 - Top management commitment to AI governance
 - AI governance aligned with organization's overall business strategy

Overview of Main Sections of ISO/IEC 42001



- Data Governance and Quality Assurance (Section 6.1 – Data Governance, Section 6.2 – Data Integrity)
 - Ensure data authenticity, meaning data used in AI models is reliable, relevant, and accurate
 - Policies in place to maintain data integrity
 - Data governance monitoring to ensure that data is ethically sourced and aligns with privacy and security standards
 - A framework for managing synthetic data
- 

Overview of Main Sections of ISO/IEC 42001



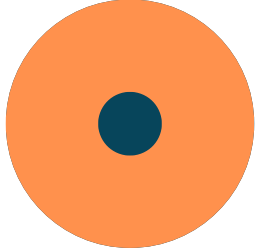
- Ethical Guidelines (Section 7.1 - AI Ethics and Transparency)
 - Ethical guidelines in place for the development and deployment of AI systems (e.g., fairness, avoiding bias)
 - AI systems and decisions transparency
 - A process for auditing AI models to ensure ethical compliance
 - Measures for mitigating bias in AI algorithms, ensuring fair outcomes across all demographics

Overview of Main Sections of ISO/IEC 42001

- Risk Management (Section 6.3 – Risk Management and Mitigation, Section 8.1 – Monitoring and Risk Management)
 - Identify, assess, and mitigate risks related to AI systems (e.g., data bias, privacy risks, security vulnerabilities)?
 - Risk assessments as part of the AI development lifecycle
 - A formal risk management plan in place to manage risks associated with AI
 - Monitor AI performance to ensure it aligns with risk mitigation measures and ethical standards?

Overview of Main Sections of ISO/IEC 42001



- Performance Monitoring and Continuous Improvement (Section 8.2 - Performance Evaluation, Section 8.3 - Continuous Improvement)
 - AI systems continuous monitoring
 - Performance metrics for measuring the success and impact of AI initiatives
 - A process for continuous improvement that ensures AI systems are periodically reviewed, updated, and optimized based on feedback and data insights?
- 

Exercise: 42001 Readiness Check (Checklist)



Exercise: 42001 Readiness Check (Scoring)



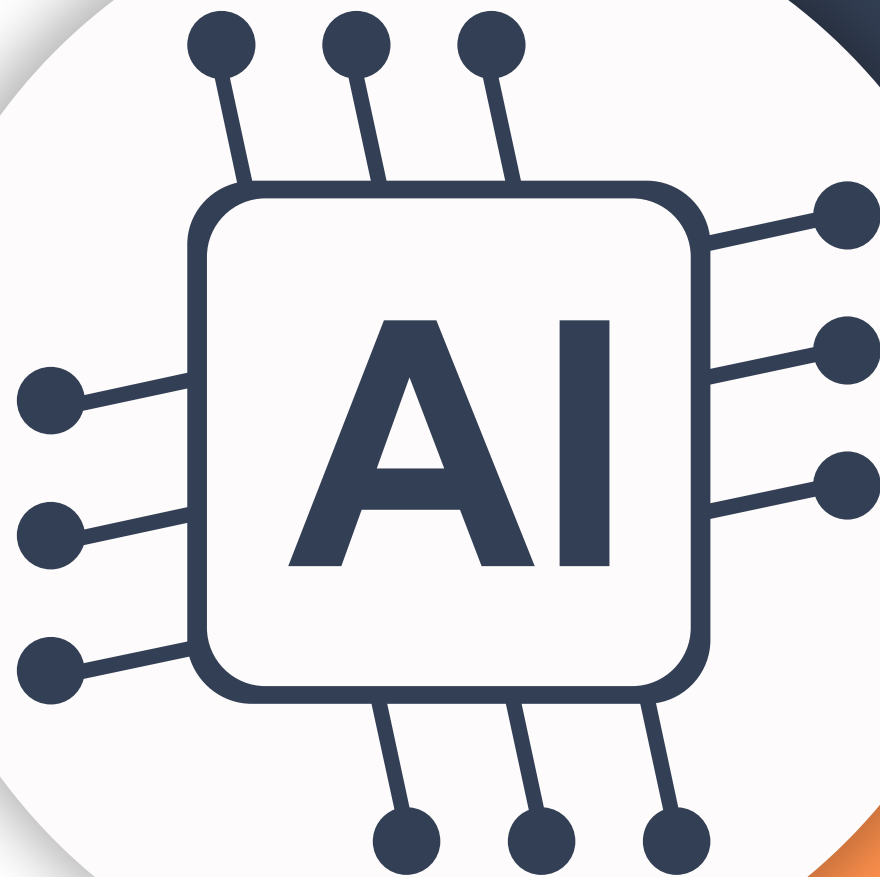
Exercise: 42001 Readiness Check (Checklist)

- Scoring Criteria: For each checklist item, participants can score themselves on a scale of 0 to 3 based on how well their organization is performing in that area:
 - **0: No Implementation** – The practice or standard is not implemented at all.
 - **1: Partial Implementation** – There is some effort in place, but it's incomplete or inconsistently applied.
 - **2: Full Implementation** (with Room for Improvement) – The practice is well implemented but can be optimized or improved in some areas.
 - **3: Excellent Implementation** – The practice is fully implemented, well integrated, and continuously improved.

Exercise: 42001 Readiness Check (Scoring)

- Scoring Range and Interpretation:
 - **0-23 points: Low Readiness** – Your organization is at the early stages of implementing ISO/IEC 42001 standards.
 - **24-47 points: Moderate Readiness** – Your organization has made progress in some key areas, but several critical aspects still need attention and development.
 - **48-62 points: High Readiness** – Your organization is well on track with implementing ISO/IEC 42001 standards. Most of the key components are in place.
 - **63-72 points: Excellent Readiness** – Your organization has fully implemented the key components of the ISO/IEC 42001 standard.

THANK YOU



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