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Reinforcing AI and Digital Transformation Competencies for Improved Service Delivery

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**DIGITAL
TRANSFORMATION**

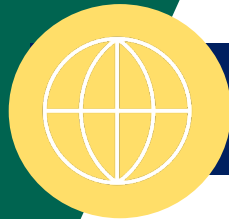
UNESCO Acts through



Awareness Raising



Standard Setting



Policy Advice



Capacity Building

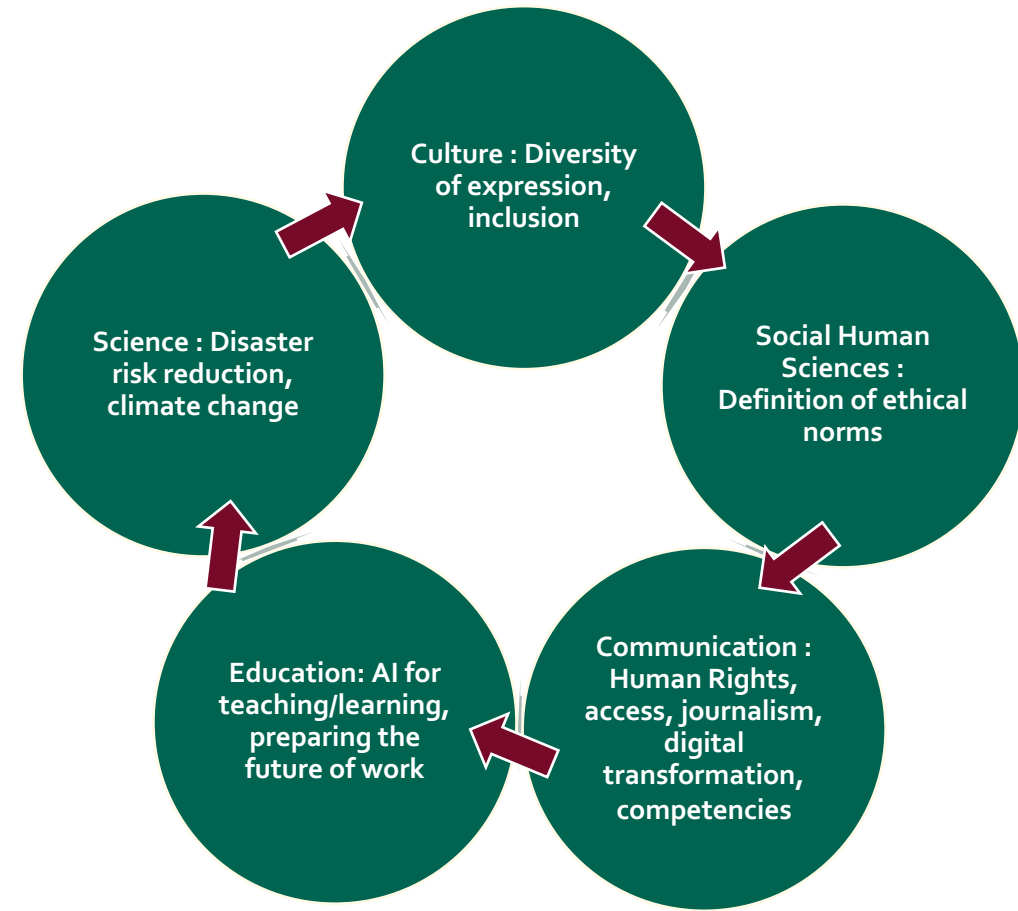


International Cooperation

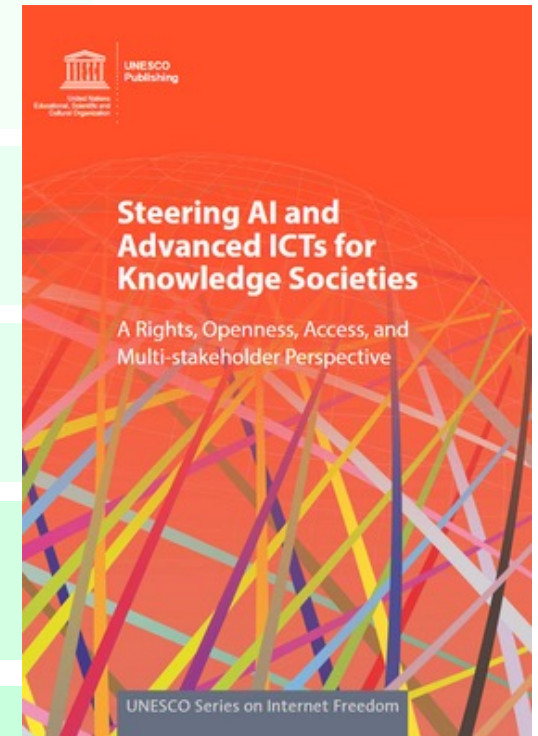
Digital Transformation

Challenges:

- Inequalities and digital divide
- Violation of human rights
- Lack of transparency, accountability and openness
- Fast changing regulatory environment
- Uneven or weak capacities



Our Approach to Digital Transformation



Capacity Building Intervention



Opportunities of Digital Transformation

Public service delivery

Complex governance problems

Public engagement

Transparency and accountability



Rosie

@RosieDaSerenata

A Robô da Operação Serenata de Amor. Analisa e identifica suspeitas em gastos de deputados federais em exercício de sua função.







Translated from Portuguese by Google

The Robot from Operation Serenade of Love. Analyzes and identifies suspicions in spending by federal deputies in the exercise of their function.

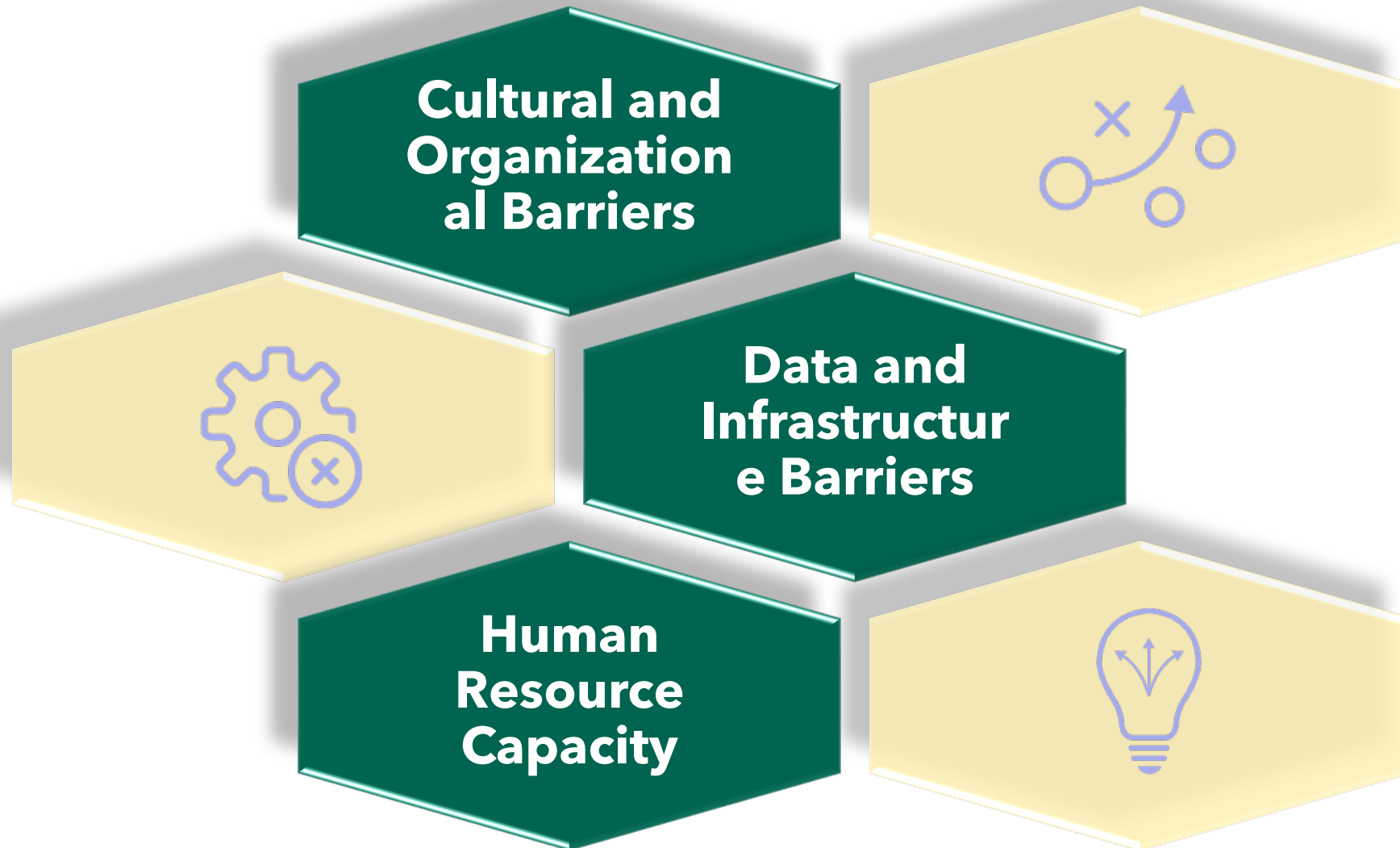
República Federativa do Brasil serenata.ai Joined January 2017

562 Following 40.2K Followers

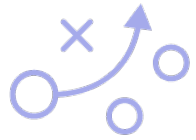
The potential of artificial intelligence for the public sector

	<i>AI type</i>	<i>Improved activity</i>	<i>Example</i>
	Computer vision	Policymaking (Netherlands)	Trash detection: The Object Detection Kit utilizes computer vision on digital imagery to detect trash on the streets of Amsterdam municipality, enabling the early detection of garbage, and optimization of collection routes.
	Robotic process automation	Public service (Sweden)	Automation of state benefits: The municipality of Trelleborg uses robotic process automation for various social benefits, and the waiting time for a decision – formerly up to 20 days – has been reduced to about one day.
	Robot	Public service (Spain)	Misty II: A pilot project is using care robots to improve quality of life for the elderly population of Barcelona. The robots will be tasked with reminding them of appointments to take medication and act as a companion.
	Virtual assistant	Public services (Singapore)	OneService chatbot: In Singapore, the Municipal Services Office (MSO) and the Smart Nation and Digital Government Group (SNDGG) launched a chatbot that enables residents to easily report municipal issues via WhatsApp and Telegram.
	Predictive analytics	Public service (Belgium)	Talent API: The Flemish unemployment agency uses an AI system to match job seekers with personalized recommendations for jobs based on both data and historical matches, so staff members can provide tailored recommendations.
	Computer vision	Public service (Argentina)	Pothole reporting: In Buenos Aires, a machine-learning based tool lets the public report urban issues such as potholes to the municipality.

Three Key Challenges



Three Key Challenges



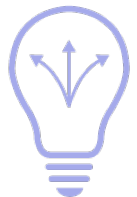
Cultural and Organizational Barriers

- Aversion to experimentation and innovation
- Low levels of leadership support for innovative ideas



Data and Infrastructure Barriers

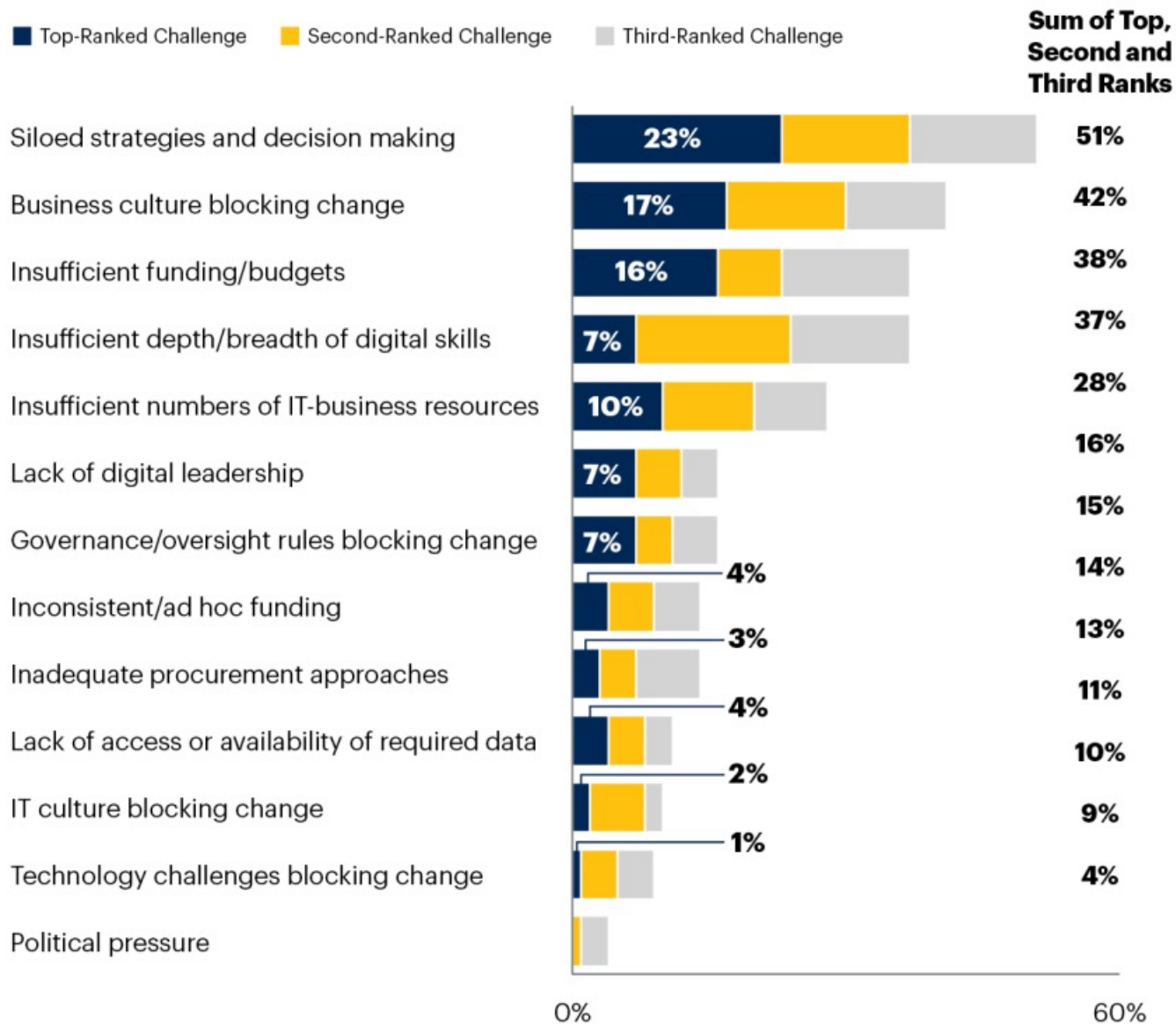
- Lack of IT infrastructure investment
- Lack of mature data organisation, data management and data governance practices



Human Resource Capacity: AI and Digital Transformation - related Competency Gaps

- Low investment into skills: digital, data analysis, IT and AI
- Lack of adaptation of procured digital technology and digital systems to fit the organisation's unique context

Top challenges for government Chief Information Officers (CIOs) to implement digital solutions



Source:
Gartner

A Global and Multistakeholder Approach



BROADBAND COMMISSION
FOR SUSTAINABLE DEVELOPMENT



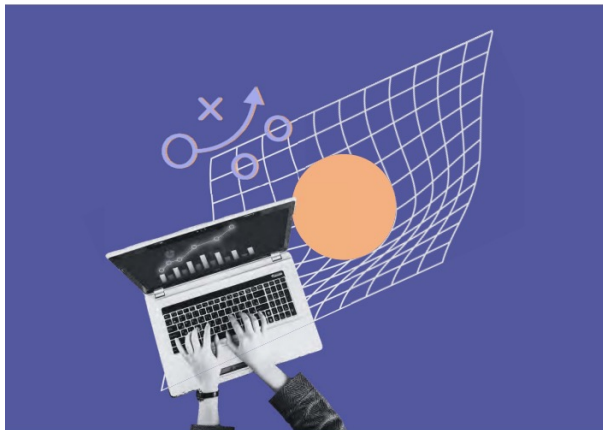
- **Regional consultations** in Asia, Africa, Latin America and the Caribbean
- **Global group** of working group members and commissioners

A focus on competencies for civil servants

Working Group Report on AI Capacity Building

Artificial Intelligence and Digital Transformation Competencies for Civil Servants

September 2022



BROADBAND COMMISSION
FOR SUSTAINABLE DEVELOPMENT



01. Digital Planning and Design

Competency areas and skills

PROBLEM IDENTIFICATION AND SOLUTIONS

Identify problems in which digital technology might be part of the solution.

SYSTEMS THINKING

Understand how problems are connected in systems.

STRATEGIC FORESIGHT

Anticipate problems and unexpected circumstances.

AGILE STRATEGY

Ability to plan initiatives while remaining flexible and adapting to unexpected circumstances.

Proficiency



Understand the complexity and interconnectedness of problems.



BASIC



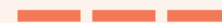
Take a holistic and long-term view, and use simple tools to anticipate, identify and solve problems.



INTERMEDIATE



Master approaches, tools and methods to anticipate, identify and solve complex problems.



ADVANCED



AI-SPECIFIC

02. Data Use and Governance

Competency areas and skills

DATA LITERACY

Understand emerging digital technology and its applications.

DATA-DRIVEN DECISION MAKING

Mine, analyze and use data in the decisionmaking process of public policies.

OPEN DATA AND OPEN GOVERNMENT

Capacity to effectively create and use open data.

PRIVACY AND SECURITY

Knowledge of potential breaches and how can they affect government and society.

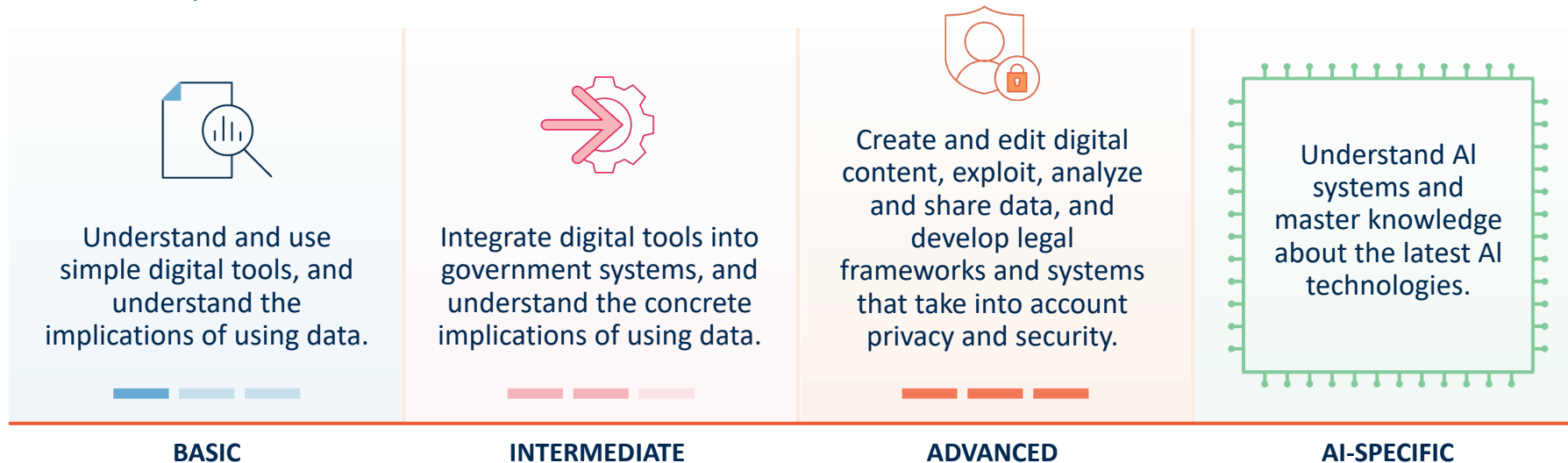
LEGAL, REGULATORY AND ETHICAL FRAMEWORKS

Capacity to adapt and change existing legislation to emerging technologies. If needed, to create tech-friendly legislation.

AI FUNDAMENTALS

Understand AI systems to a basic level.

Proficiency



03. Digital Management and Execution

Competency areas and skills

PEOPLE-CENTRICITY

Ability to take into high consideration the user experience and needs on digital public policies and technologies.

ITERATION

Learn and accept mistakes as part of the digital project cycle.

AGILE EXECUTION

Capacity to formulate technical, logistic and strategic requirements for public digital projects and execute them.

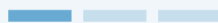
DIGITAL LEADERSHIP

Ability to develop a vision for digital.

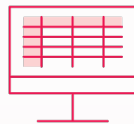
Proficiency



Understand agile management techniques and collaboration.



BASIC



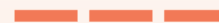
Make use of simple agile management techniques in designing and developing projects.



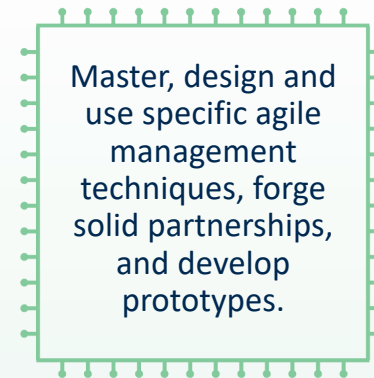
INTERMEDIATE



Understand how to incite, organize and manage the digital transformation process.



ADVANCED



Master, design and use specific agile management techniques, forge solid partnerships, and develop prototypes.

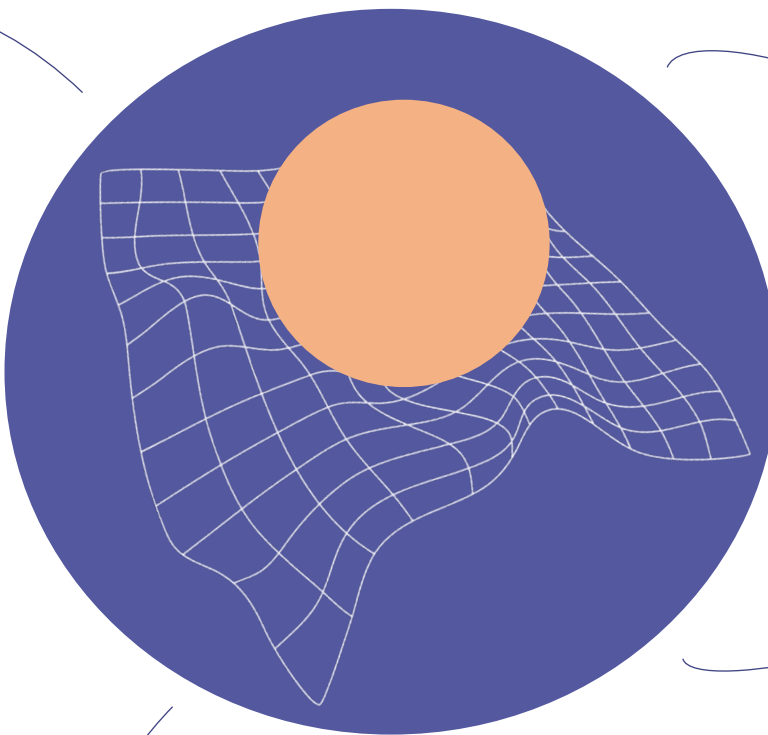
AI-SPECIFIC

Nine Recommendations

General



1. Raise **awareness** around the competencies
2. Support governments in **adaptation** of AI and digital transformation competencies
3. Make learning resources and training content **openly accessible**
4. Support governments in **monitoring the impact** of capacity building
5. Foster **cooperation** between international, regional and national organisations



For Governments



6. Adopt a **holistic approach** towards digital transformation
7. Develop capacity building **programs and trainings**

For Academia



8. Establish **curricula and interdisciplinary programs** for digital transformation related competencies

For Private Sector



9. Collaborate with governments **to share expertise and knowledge**

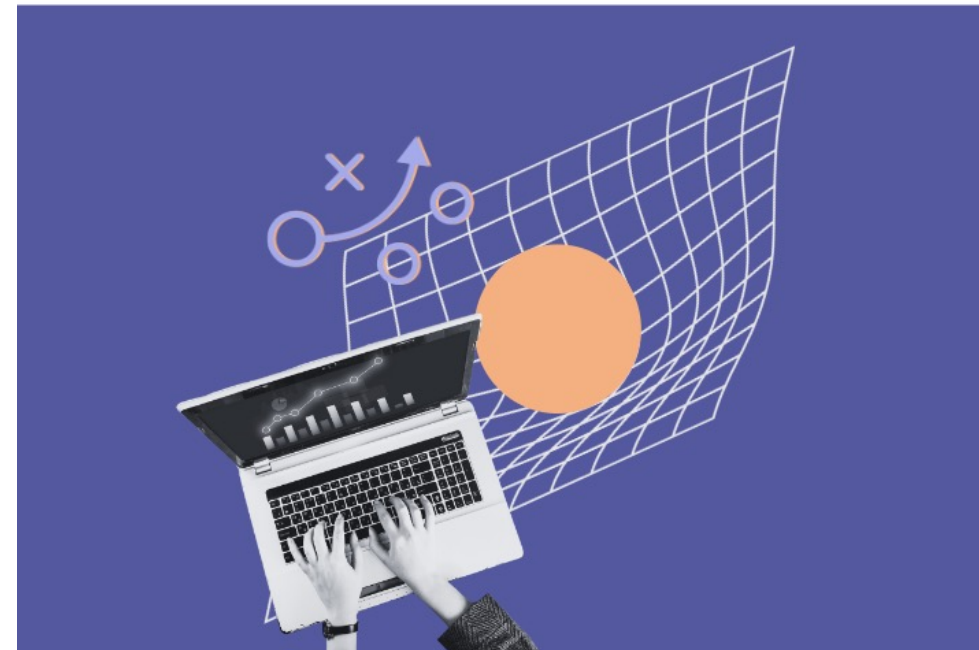
UNESCO Offering

- Digital capacity assessment in government at the level of individuals and institutions vis a vis the UNESCO Competency Framework
- Tailored in-depth training programme for government officials based on the assessed capacity needs.
- Repository of online learning resources on digital governance and digital transformation

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Artificial Intelligence and Digital Transformation Competencies for Civil Servants

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Thank you for your attention