



Co-designing the governance of emerging technology in Taiwan

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Challenges

Rapid changes for innovation

- * Governance and regulations cannot catch up the changes and development.
- * Early regulations might not be meaningful

Lack of standards in the beginning

- * Largely depends on innovators and industry leaders to build their own standards
- * Common standards/ platform to accelerate the development

Lack of testing fields

- * Innovation requires actual fields to examine its effects and development
- * A great opportunity to development ethics and guided values.

Core-value governance of AI/immersive tech in Taiwan

Co-participation/ Inclusive innovation

- Inclusive of stakeholders: industry, scholars, government (VR education)
- Civil discussions (500 civils a session)
- Taiwan AI school

Digital trust as core value

- Taiwan digital trust association
- Academia and business

Sandbox governance simulation

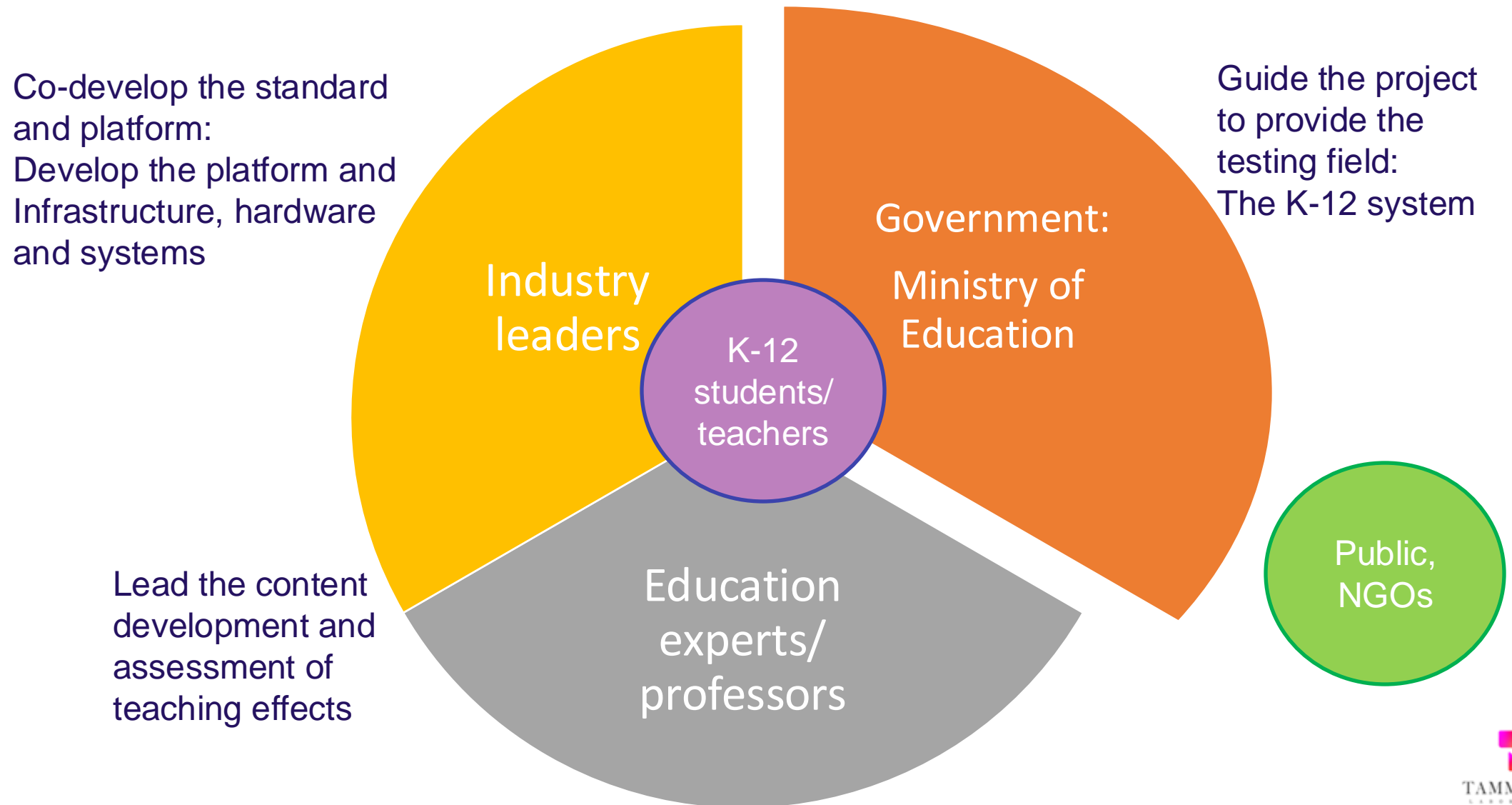
- Government sandbox
- Pol.is system for civil discussion
- TAIDE fact checker

Building testing fields

- AI courses for professors and students
- Immersive Tech government project (VR education)

Co-participation, inclusive innovation

Case: VR education project



VR case study in Taiwan co-participation

XR Digital Learning Center (each school or distant center)

The Ministry of Education has promoted the "5G New Technology Learning Demonstration School Project" with an investment of **NT\$20 billion to popularize the Education Metaverse** through mobile vehicles and portable headset XR applications. In addition to building a school **5G** application service learning environment, teachers are guided to implement innovative teaching by combining virtual reality (VR) teaching materials and the Metaverse platform.

Development of VR teaching materials

1. Analyze the curriculum-teaching objectives: analyze the teaching objectives-learner analysis. 2. Design course-teaching content: Design thinking workshop-design each teaching focus. 3. Lesson plan planning and assessment design: teaching activity design-planning VR lesson plans. 4. Teaching material development, learning testing: 3D modeling-programming. 5. Textbook testing and finished product inspection: VR teaching material finished product testing – VR teaching material online testing – VR teaching material release.

Education Market

The Ministry of Education plans to build the "Education Market" website, which integrates diverse digital teaching resources from education units in 22 counties and cities across the country, agencies affiliated with the Ministry of Education, and private units, accumulating more than 150,000 pieces of information. The content includes lesson plan design, teaching activities, teaching slides, study sheets and many other resource types.




TAMMY LIN



Taiwan VR education Ministry of Education

(Stats : 2020- 2024)



222

Participated schools



1044人次

Participated teachers



28376

participated students



3170

Immersive tech at schools (VR/AR)



Experiencing **67770** (529%) 人次

教育大市集
Education Market

Using the content

221 pieces



At-school counseling

665 sessions



Public teachings

203 sessions



Teacher training

68 sessions



Involved teachers

2251 people

VR case study in Taiwan



Taipei Ximen Elementary School—VR art graffiti

Use the sketchbook software on the iPad to pre-design and create graffiti words, and use the "Hands-on Graffiti: Street Art in Ximen" VR software to have a virtual reality experience of street graffiti, and create together with your classmates.

Taichung Municipal Pei Hsin Junior High School—biology

Curriculum-based 5G/VR integrated unit teaching material learning experience. Among them, 1. Ninth grade natural science and environmental science field: VR astronomy observation of the lunar waxing and waning phenomenon. 2. The field of natural science and biology for seventh and eighth grade students - VR explores the blood circulation of the human body.

Kaohsiung Yingming Junior High School—green source

Try to integrate university courses into the development of VR teaching materials for the 12-year national education, and create creations based on SDGs issues. Learn about metal and non-metal SDGs through the "Material Escape Room" VR teaching material. As well as the "Green Source Search" solar energy conversion textbook of Datong Elementary School.



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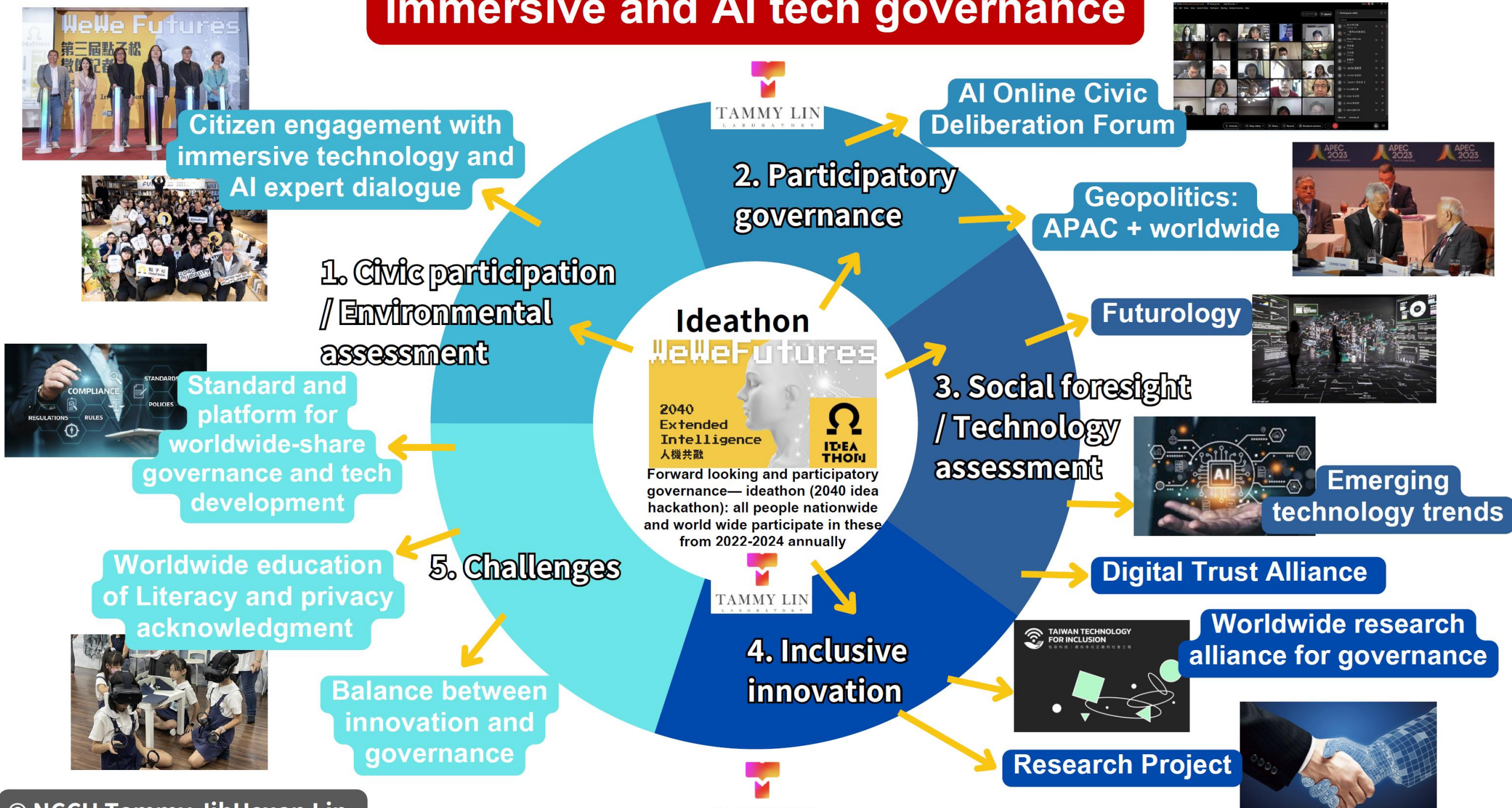
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Immersive and AI tech governance



Core-value co-development



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