

Future Education and Education Policy Objectives

1.

The Rise of AI Era

2.

**Overseas Status of
Promotion of AI as
National Strategy**

3.

**AI Era, Key Ques-
tions in Education**

4.

**High Touch, High
Tech (HTHT) Edu-
cation**

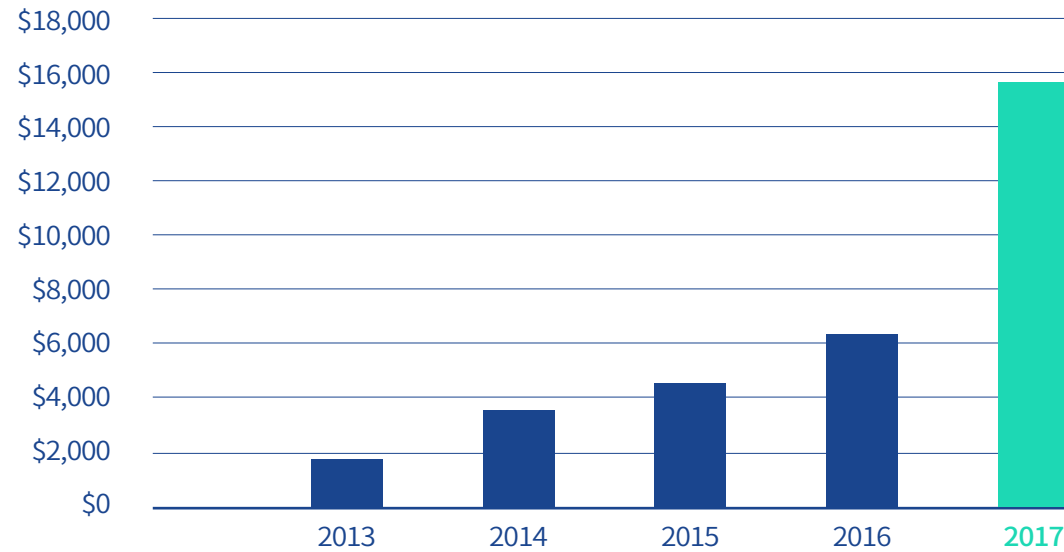
1 The Rise of AI Era

1) The Definition of Cloud Computing

AI is a driving force in the early 21st century.

Practically all industries are expected to be affected naturally.

Businesses and governments all over the world invest more than billions of dollars of funds in countless start-ups in various fields.



Funding of AI startup companies worldwide, from 2013 to 2017 (in millions of U.S. dollars)

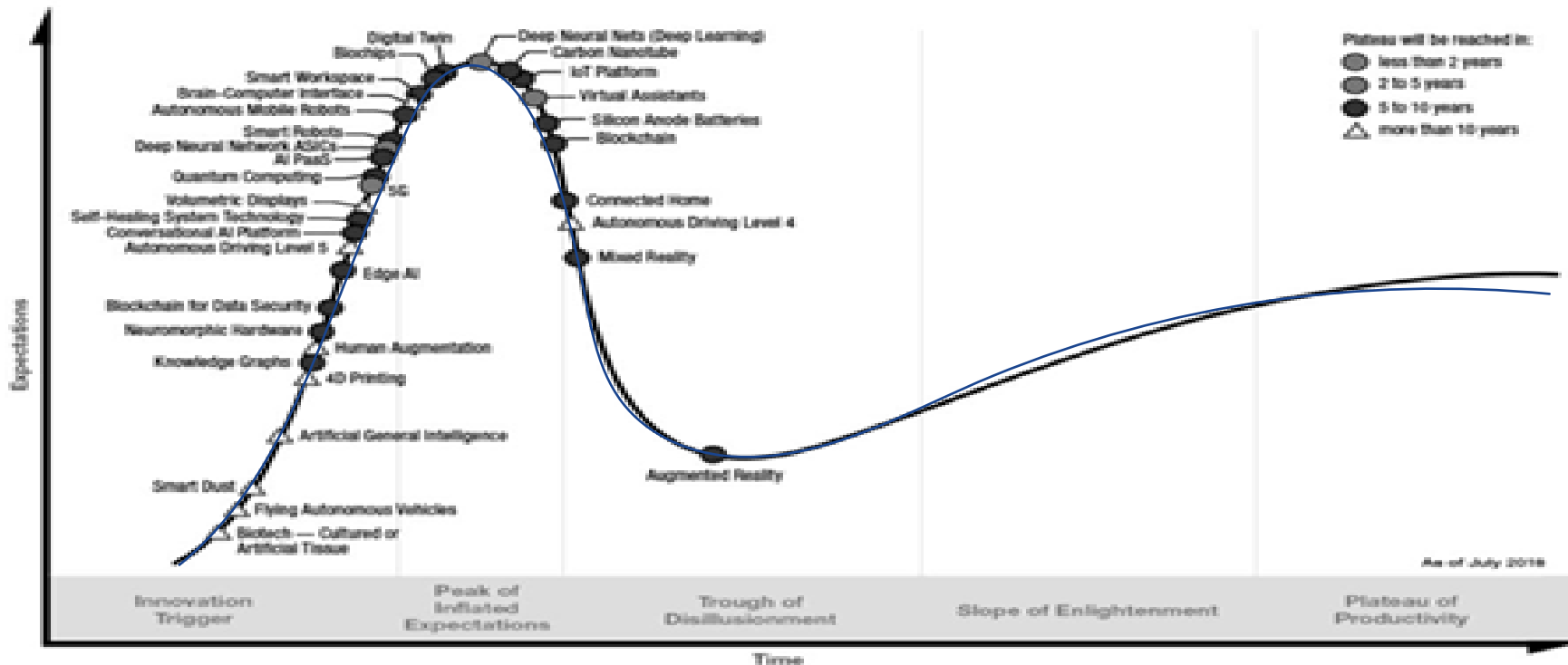
Source : Statista

1 The Rise of AI Era

2) Overestimation and Underestimation of AI

Any new technology experiences a growth spurt of fame and expectations and if it fails to meet the expectations, dramatically deteriorates

AI technology also exists somewhere in Gartner's Hype Curve



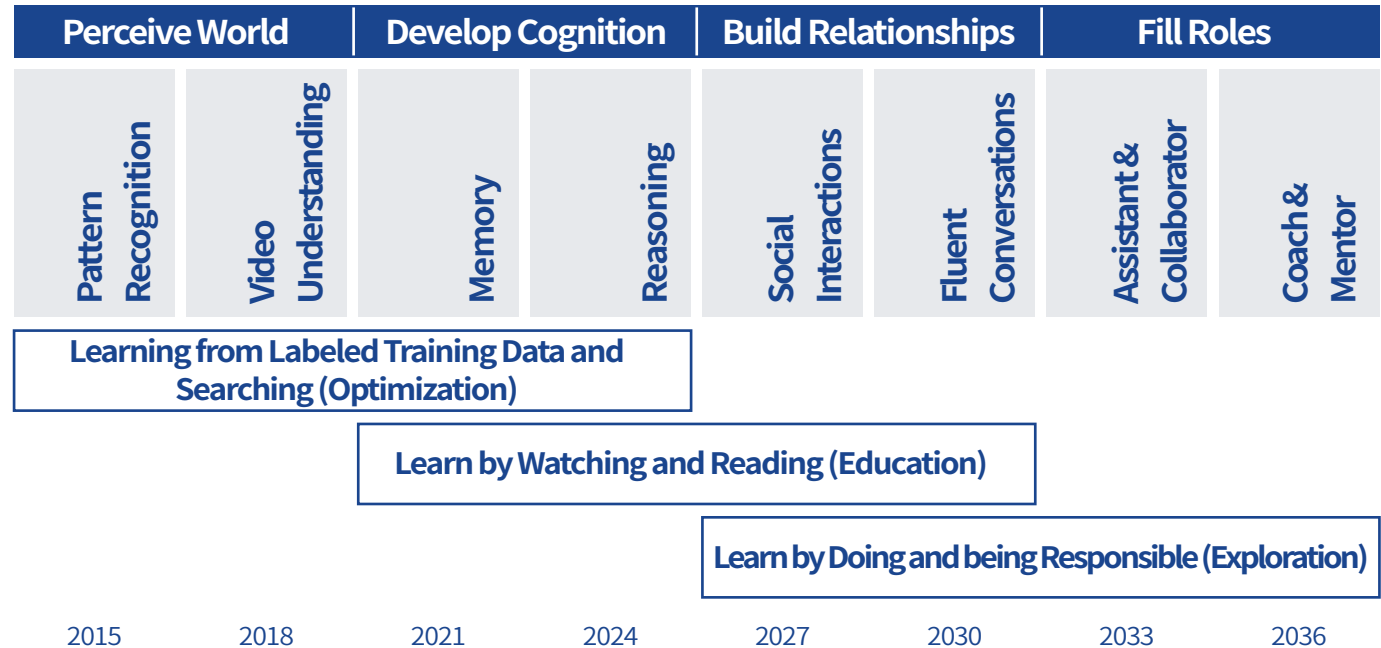
Source : Gartner Inc.

1 The Rise of AI Era

3) Predictions about AI's Development

Development of AI is expected to continue at a fast pace

IBM's Leaderboard predicts that AI will acquire a deeper learning capability by the early 2020's and attain the capabilities of assistance, collaboration, coaching and mediation by the early 2030's



Source : Jim Spohr, IBM

2 Overseas Status of Promotion of AI as National Strategy

1) Status of the US's Promotion of AI as National Strategy

Suggested as one of the five R&D priorities in 2019 the US's leadership in the forthcoming industrial society. AI will bring changes to all aspects of daily life of Americans such as medical diagnosis, agriculture, defense and transportation.

In 2020, about USD 850m was heavily invested as **AI initiative budget**

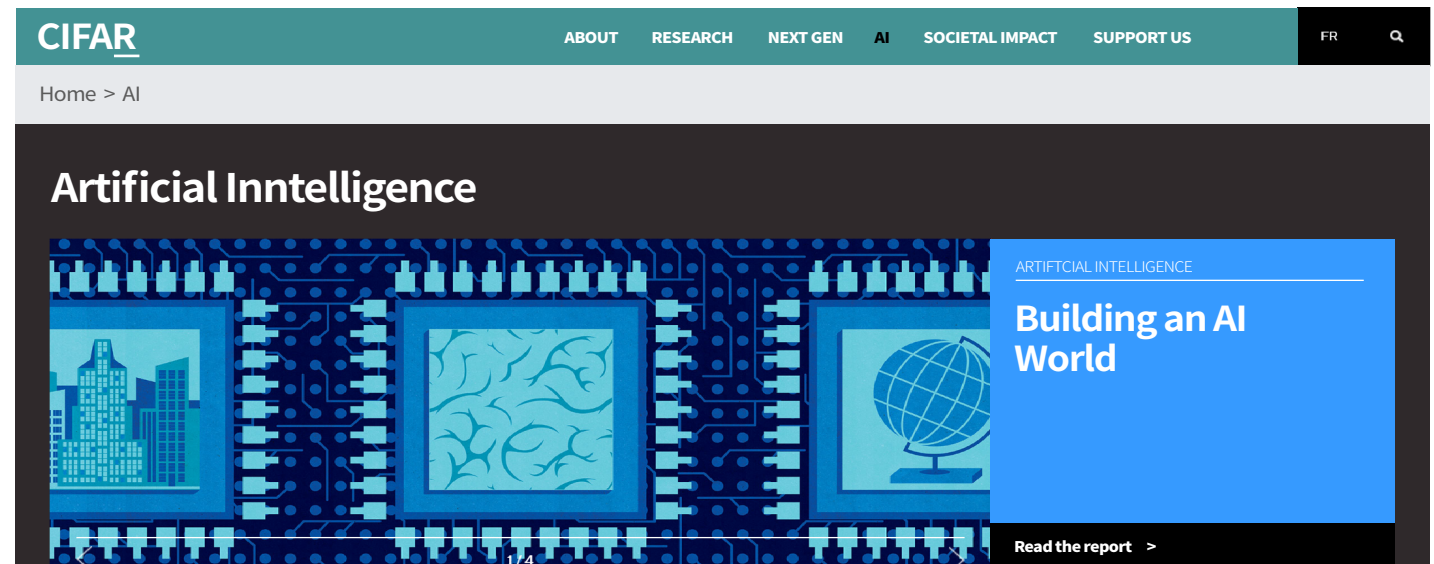
8 Strategies of the 2019 Trump Report

- Make long-term investment in AI research
- Develop effective methods for human-AI collaboration
- Understand the ethical, legal, and societal implications of AI
- Develop shared public datasets and environments for AI training and testing
- Measure and evaluate AI technologies through standards and benchmarks
- Understand the national AI R&D workforce needs
- Expand public-private partnerships to accelerate advances in AI

2 Overseas Status of Promotion of AI as National Strategy

2) Status of Canada's Promotion of AI as National Strategy

Canada entrusted matters about enforcement of 2017 national AI policies to Canadian Institute for Advanced Research (CIFAR). CIFAR studies how each country takes AI strategies and provides a framework which helps understand various forms of strategies



2 Overseas Status of Promotion of AI as National Strategy

2) Status of Canada's Promotion of AI as National Strategy

CIFAR analyzes each country's AI strategies in 8 policy areas

	Research	AI Talent	Future of Work	Industrial Strategy	Ethics	Data	AI in Gov't	Inclusion
Australia	Dark Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
Canada	Dark Green	Medium Green	Light Green	Medium Green	Light Green	Light Green	Light Green	Light Green
China	Dark Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
Denmark	Medium Green	Light Green	Dark Green	Dark Green	Light Green	Light Green	Light Green	Light Green
EU	Dark Green	Medium Green	Light Green	Dark Green	Dark Green	Medium Green	Light Green	Light Green
Finland	Dark Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
France	Dark Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
Germany	Dark Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
India	Dark Green	Medium Green	Light Green	Light Green	Light Green	Light Green	Light Green	Dark Green
Italy	Light Green	Light Green	Light Green	Light Green	Medium Green	Dark Green	Dark Green	Light Green
Japan	Dark Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
Mexico	Dark Green	Medium Green	Dark Green	Light Green	Light Green	Medium Green	Light Green	Light Green
Singapore	Dark Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
South Korea	Dark Green	Medium Green	Light Green	Medium Green	Light Green	Light Green	Light Green	Light Green
Sweden	Dark Green	Medium Green	Light Green	Light Green	Dark Green	Light Green	Light Green	Light Green
Taiwan	Medium Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green
UAE	Light Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Dark Green	Light Green
UK	Medium Green	Medium Green	Light Green	Dark Green	Light Green	Light Green	Light Green	Light Green

Its analysis of AI strategies of 18 countries found that Korea is leaning toward research, industrial strategy and AI talent and relatively weak at future of work, ethics, data, AI in government, etc. (as of 2018)

- **Research** : Creatio of research centers, hubs or programs in basic and applied AI research
- **AI Talent** : Funding to attract domestic and international AI talent or creation of related degree programs
- **Future of Work** : Helping students and the overall labor force develop skills for the future work, such as investments in STEM education, digital skills, or lifelong learning
- **Industrial Strategy** : Programs to encourage private-sector adoption of AI technologies
- **Ethics** : Creation of a council, committee, or task force to create standards or regulations for the ethical use and development of AI
- **Data** : Funding for open data partnership, platform, etc. and commitments to create regulatory sandboxes
- **AI in Government** : Pilot programs to improve government efficiency
- **Inclusion** : Ensuring that AI is used to promote social and inclusive growth

3 AI Era, Key Questions in Education

1. (Why) Why future innovation education? → Recognizing the need (Purpose)

- What does the ideal future innovation education look like?
- Why does there need to be innovation and change in the schools?

2. (What) What will be taught? → Education process (Content)

- Will the current education process be maintained when access to all knowledge and information is increasing?

3. (How) How will it be taught? → Educator – Learning – Evaluation (Method)

- Will an AI that can replace human educators be possible?
- What is an effective method for educator – learning that utilizes AI?

4 High Touch, High Tech (HTHT) Education

1) 6C competencies (1C + 5C)

Conceptual
knowledge



Creativity



Character



Convergence



**Critical
thinking**

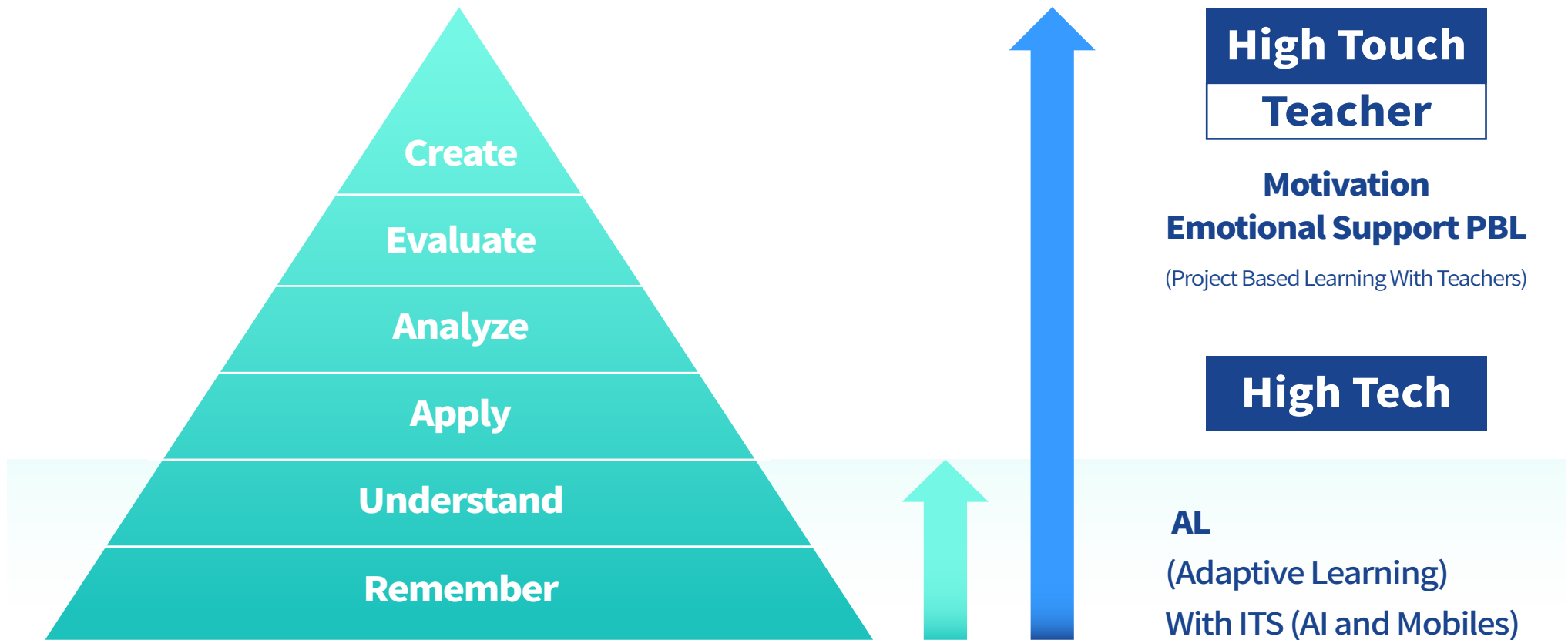


**Computational
thinking**



4 High Touch, High Tech (HTHT) Education

2) Hybrid Learning classes using AI



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