



South African
BRICS Think Tank



NATIONAL INSTITUTE
FOR THE HUMANITIES
AND SOCIAL SCIENCES



2023 Pre-Academic Forum Meeting
15th BRICS Academic Forum

Transforming Education through AI-Powered Knowledge Diffusion and Skills Development in BRICS

THEME: LEVERAGING BRICS STRENGTHS TO TRANSFORM EDUCATION AND SKILLS DEVELOPMENT FOR THE FUTURE

*BRICS AND AFRICA: PARTNERSHIP FOR MUTUALLY ACCELERATED GROWTH,
SUSTAINABLE DEVELOPMENT AND INCLUSIVE MULTILATERALISM*

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DATE: 15 May 2023



BRICS Education Ministers called for a platform for exchanges and cooperation



Rapid gains in Generative AI – A new technology that continues to learn



US models have a Western Bias

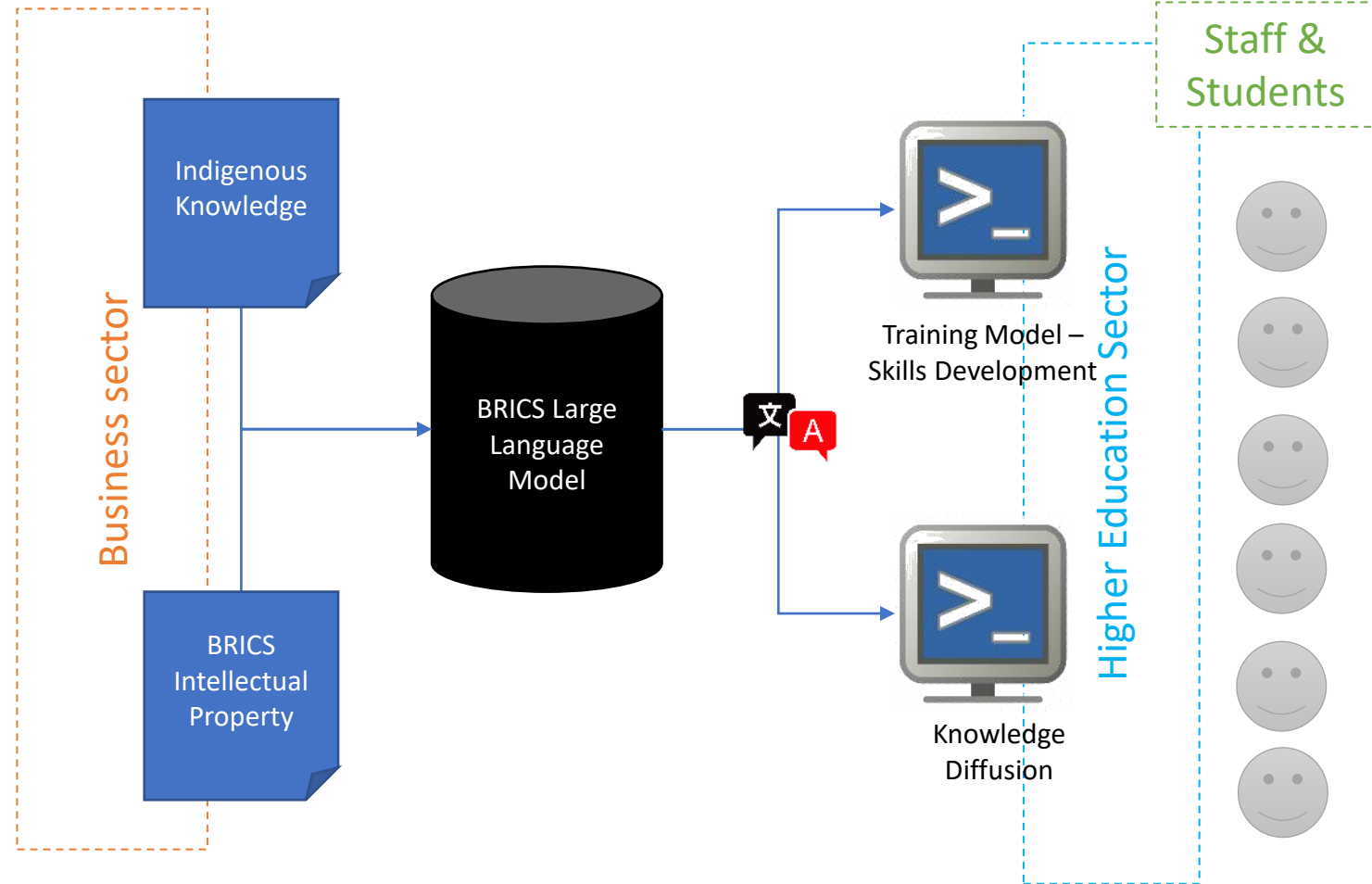


Technology is evolving faster than education curricula



Large Language Models can be used to collate knowledge and used as a tool for teaching – at speed

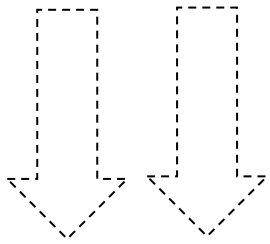
- BRICS Network University to facilitate development of a BRICS Large Language Model consolidating the advances made by each BRICS country
- ‘Feed’ system with
 - indigenous knowledge.
 - Valued Intellectual Property
- Language translation
- LLM converts knowledge into training programmes
- Simple chat interface for Q&A



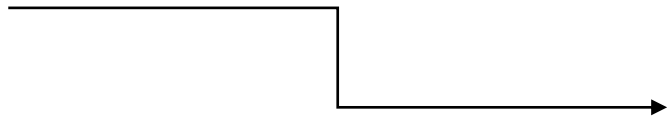
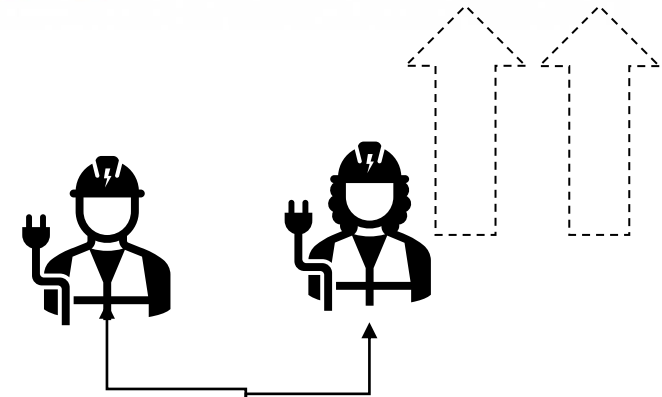
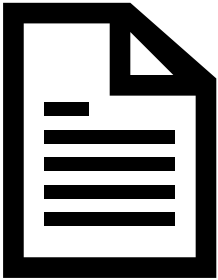
Example: Specialised Wind Turbine Technician / Engineer



Engineering & Procurement Contract



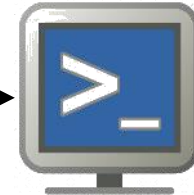
- Wind Turbine Specification
- Specialised training Materials



BRICS Network University:
Large Language Model



Curriculum,
Training Materials



South African TVET Colleges

BRICS TVET Cooperation Alliance



Strengthening communication and dialogue in TVET



Promoting substantial cooperation in TVET



Integrating TVET with industry



Enhancing research collaboration and supporting recognition of TVET standards.

BRICS LLM can accelerate research collaboration and knowledge sharing in evolving vocational skillsets and technologies

Implementation?

BRICS Skills Competition



Strengthen exchanges and cooperation among the nations.



Support the digital transformation in education and TVET

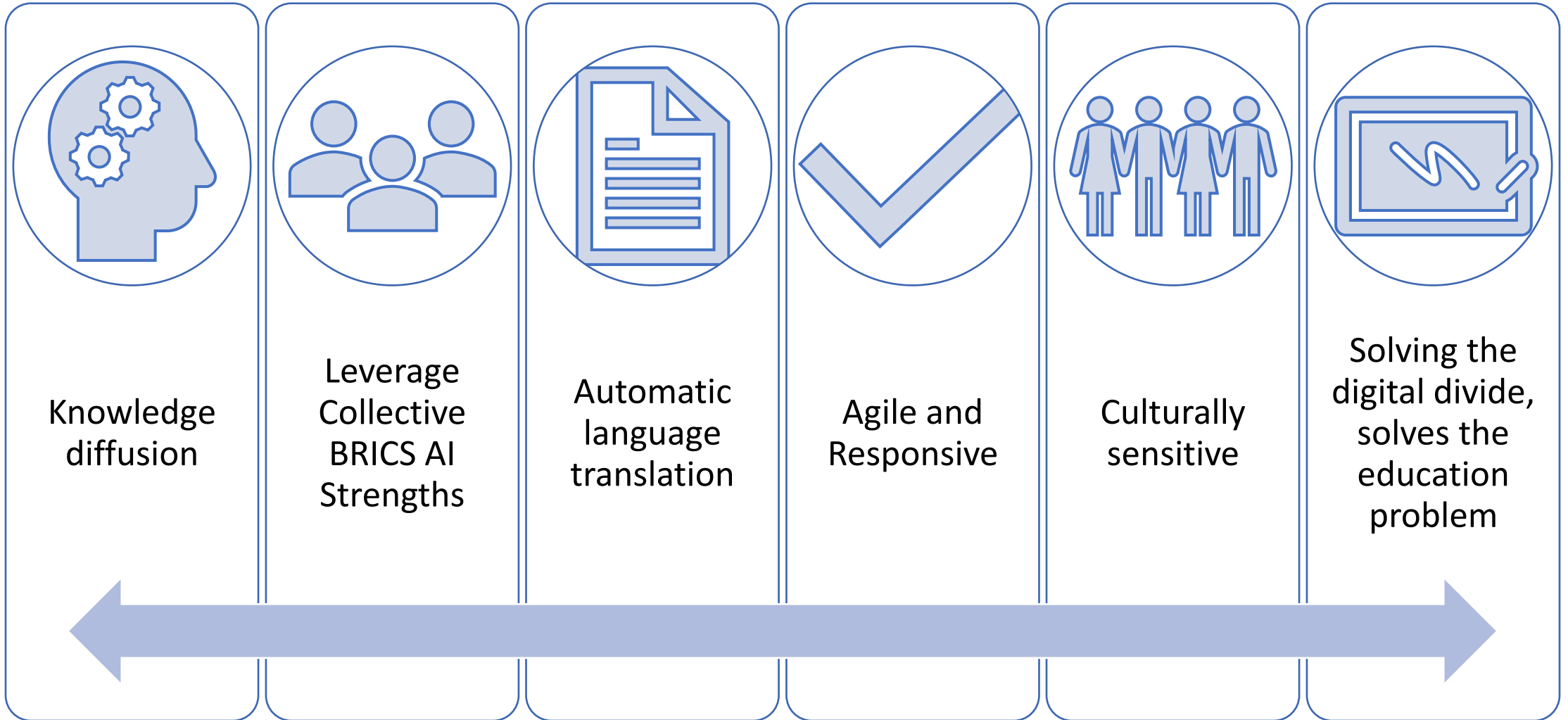


Commit to ensure education accessibility, equity, and promote quality education.



Strengthen cooperation with BRICS Network University and BRICS University League.

Knowledge Sharing through a BRICS Large Language Model





BRICS Advances in Generative Artificial Intelligence

	Progress
Brazil	<p>BERT (Bidirectional Encoder Representations from Transformers) models for Brazilian Portuguese Nicknamed - BERTimbau Improves Processing of Brazilian Portuguese</p>
Russia	<p>BERT adapted in Russia – RuBERT - Trained on the Russian part of Wikipedia and news data Launched AI Strategy – led by State Owned Enterprise (Opportunity for knowledge sharing)</p>
India	<p>Development contracted on diverse linguistic landscape Introduced a National AI Strategy and Digital India Programme Launched the IndicBERT and M2M-100 models – broadening innovations in agriculture, healthcare and finance across local languages.</p>
China	<p>BERT, RoBERTa and GPT3 are adapted for Chinese language processing Baidu (Ernie Bot), Alibaba, Tencent, Fudan University, JD.com, etc released ChatGPT alternatives Plans to Global Leader in AI by 2030</p>
South Africa	<p>Launched an AI Institute in 2023 (Tswane University of Tech & Uni of Johannesburg) Launched Lelapa AI – AI Lab concentrating on Contextual Diversity</p>

Recommendations

- BRICS Network University to facilitate development of a BRICS Large Language Model consolidating the advances made by each BRICS country
 - Establish a governance structure
 - Invest in AI infrastructure & Solve Digital Divide
 - Foster collaboration
 - Develop customized training programs
 - Monitor and evaluate the effectiveness of the model



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THANK YOU

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Human Sciences Research Council