



**United Nations**

Department of Economic and Social Affairs  
Sustainable Development



**SUSTAINABLE DEVELOPMENT GOALS**

## AI for Engineering

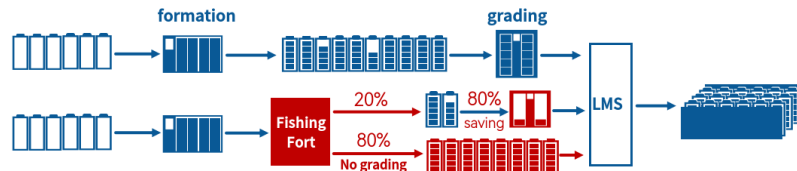
Integrating AI into engineering to transform traditional engineering and improve the capability of engineering in solving real world problems.

## Engineering for AI

Adopting engineering norms and standards for transforming AI from technical R&D to actual application, including model construction, verification, deployment and maintenance.

### AI for Engineering

Association analysis innovates the "formation & grading" process



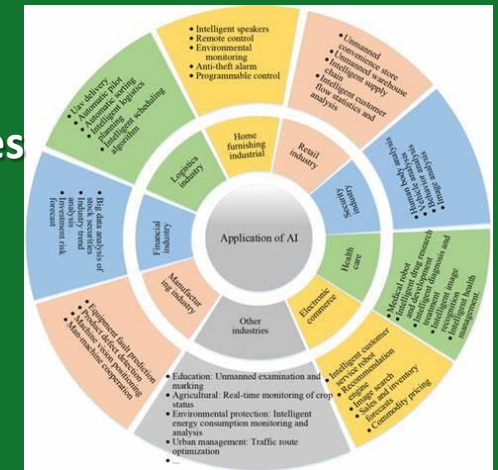
20+ hours  
Energy consuming  
Low production  
Costly: 45% of the total cost

AI = ML + Logical Reasoning  
Graph association rules (GARs)  
 $Q[\bar{x}](X \rightarrow p)$

time saving 80%  
energy saving 50%  
Error rate  $\leq 1\%$

Million-dollar / GWh cost reduction in Lithium-ion battery manufacturing

- Integrating Multidisciplinary Knowledge and Resources
- Standardizing the Application of AI
- Promoting Sustainable Development of AI



## Engineering Capacity

May 6, 2025



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## AI in Engineering Practice



*Real needs oriented*

*Academy support*

*Moderate fee*

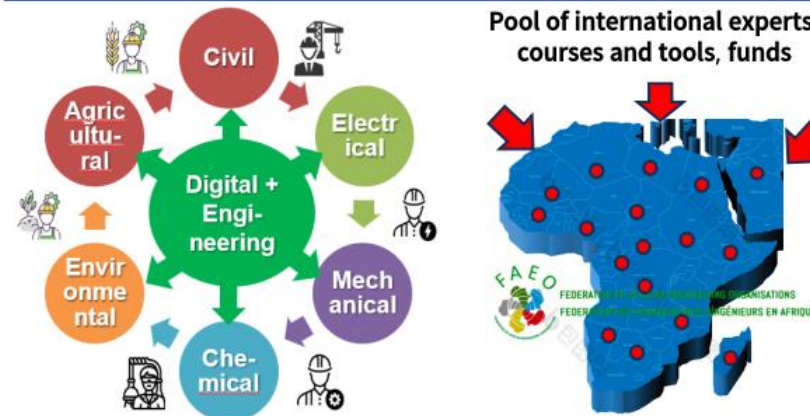
*Locally organized*

*Industry support*

*Officially recognized*



**International Programme for Africa, in Africa,  
but not by Africa alone**



**“The digital revolution and AI are changing our world and our lives. They can turbocharge sustainable development and could be a game-changer for the Sustainable Development Goals.”**



**Engineering Capacity Building for Africa Programme**

**May 6, 2025**

