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Menara Felda, Platinum Park KLCC

Innovative Leadership in Engineering: Shaping the Future of Malaysia's Industry

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SIRIM Berhad

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PRESENTATION AGENDA

Content

- ENGINEERING THROUGHOUT THE AGES
- ENGINEERS NOW
- CHALLENGES
- NEEDS FOR FUTURE ENGINEERING LANDSCAPE
- SIRIM ROLES IN SHAPING INDUSTRIES
- KEY TAKEAWAYS



Pre-historic engineering



Renaissance engineering



Industrial Revolution engineering

ENGINEERING THROUGHOUT THE AGES

- Human have engaged in engineering since early civilisation
- Engineering is a human endeavor

FORTUNE 500



More than 30% of Fortune 500 CEOs have a degree in engineering

Source:

<https://www.careerfair.io/reviews/engineer-to-ceo>



“Our industry does not respect tradition - it only respects innovation” Satya Nadella, Microsoft CEO 2014-Present



Estimated Net Worth \$1.68 bil
as of 5 June 2024

Holds a degree in Metallurgical Engineering
from the Indian Institute of Technology
Kharagpur.

As the CEO of Google and Alphabet, Pichai has
overseen the growth of Google's search engine,
Android, and cloud businesses, focusing on AI
and machine learning.

Sundar Pichai
CEO of Google and Alphabet





Studied a dual-degree program in the United States, receiving a Bachelor of Arts and Bachelor of Engineering

Ranked 57th on Fortune's list of "The 100 Most Powerful Women in Business of 2023"

Included in Time's list of "The 100 Most Influential People in AI 2024"

Mira Murati
Former OpenAI's CTO

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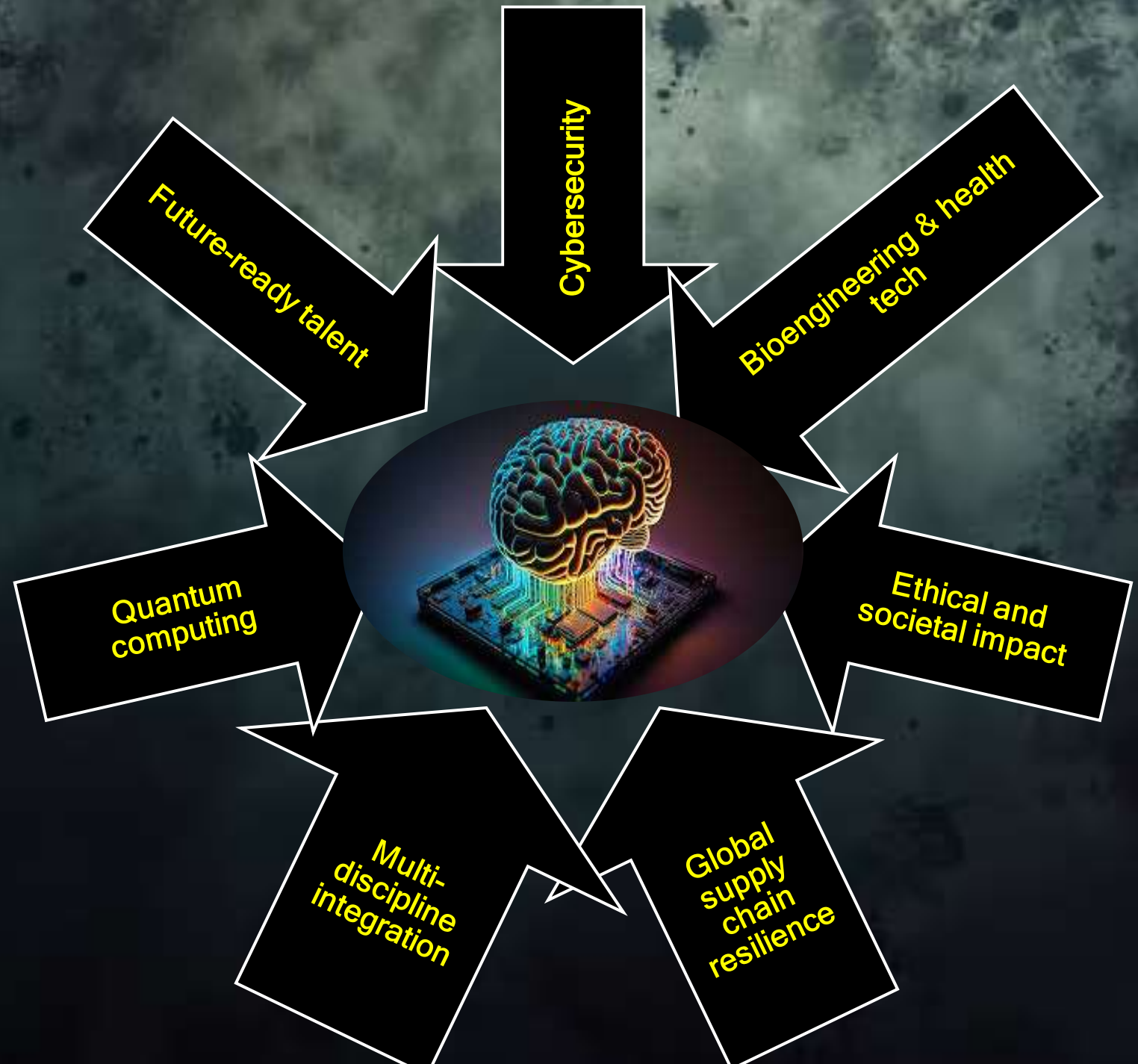
How can I help you today? Is there anything you need help with or want to learn more about? I'm here to help you with any question.



Innovative Engineering **Leaders**

- **Drive the adoption** of cutting-edge technologies and stay at the forefront of technological advancement across industries.
- **Enable transformation** - to build resilient supply chains
- **Foster collaboration** between government bodies, private sector, and educational institutions to create an ecosystem that nurtures innovation

Challenges
current
engineers need
to adapt...



CHALLENGES OF INNOVATIVE LEADERS

RESISTANCE TO CHANGE

Resist of new ideas or processes to uncertainty & risk



TALENT ACQUISITION AND RETENTION

Competitive compensation, professional development, supporting work environment etc



BALANCING INNOVATION WITH DAILY OPERATIONS

Focusing too much on innovation disrupt operation



KEEPING UP WITH TECHNOLOGICAL ADVANCES

Rapid tech. changes – difficult to keep pace with trends



RESOURCE CONSTRAINTS

Innovative projects often require significant investment – time, money and people



REGULATORY AND COMPLIANCE CHALLENGES

New products may face legal and regulatory hurdles that delay/ prevent implementation.



Imagine Innovative Leaders



Needs for Future Engineering Landscape



Evolution of
**engineering
education**,
interdisciplinary



Exponential adoption of
**Automation and
Robotics**



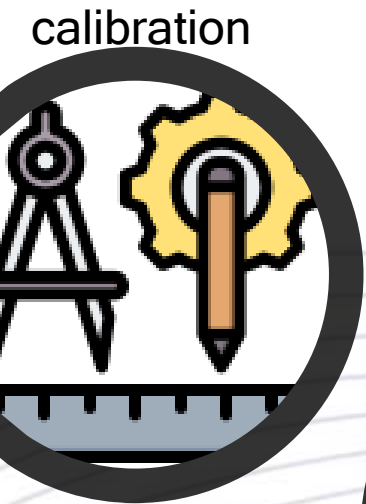
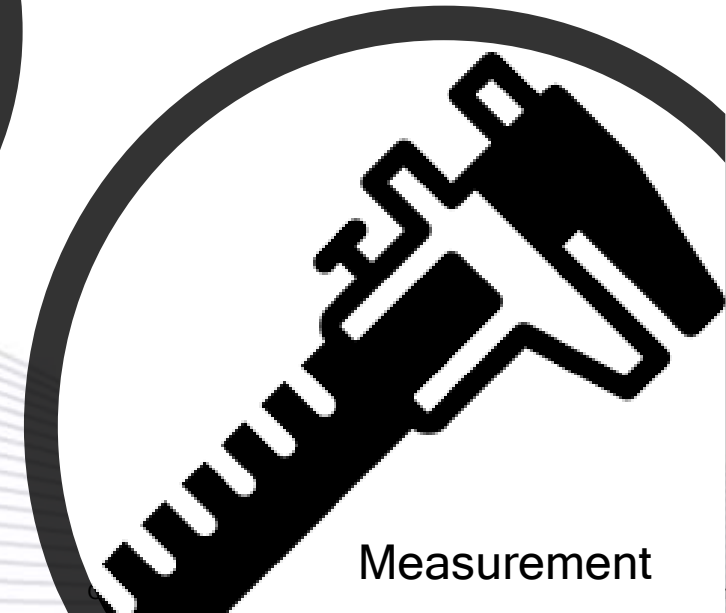
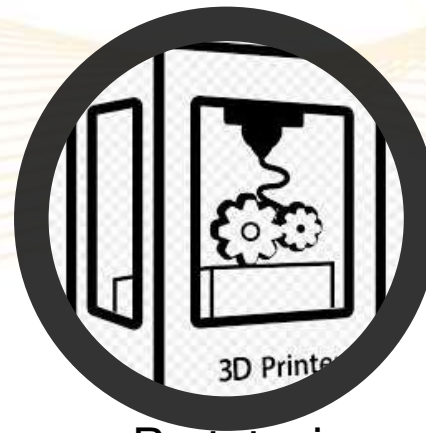
**Sustainability and
Green Agenda** are
compulsory



**AI & machine
learning** - an integral to
engineering problem
solving

SIRIM ROLES IN SHAPING THE INDUSTRIES

SIRIM is responsible to provide and ensure the **innovation ecosystem** in SIRIM is **inclusive** and **sustainable** to support the industries



Key Takeaways

1. Innovation will drive long-term economic growth
2. Inclusive and innovative leaders enable transformation
3. Stay at the forefront of technological advancement
4. Innovation is the sustainable' s culture



THANK YOU

“Committed To Engineering Excellence”

BOARD OF ENGINEERS MALAYSIA

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