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# The Sustainable Development Goals and the Actuarial Profession

Webinar Session

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Thought leadership  
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Community  
Sessional Meetings  
Education  
Working parties  
Volunteering  
Research  
Shaping the future  
Networking  
Professional support  
Enterprise and risk  
Learned society  
Opportunity  
International profile  
Journals  
Support

- Marjorie Ngwenya, Immediate Past President, IFoA
- Bigknown Shiriyapenga, Actuarial Supervisor, Old Mutual
- Ronald Mukanya, Sustainability Specialist, Western Cape Government





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# The UN's Sustainable Development Goals

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# No one left behind

- The goals were adopted by the UN in September 2015. There are 17 goals and 169 associated targets.
- The goals are aimed at eradicating all forms of poverty, in both developed and developing nations, by 2030.
- The goals and targets were chosen for their ability to stimulate action in areas of critical importance for humanity and the planet - people, planet, prosperity and partnership.



# Goal 1: No poverty

- Half of the global population live in poverty, but how much do they live on per day?
  - Less than \$2.50
  - Less than \$5
  - Less than \$20



# Goal 12: Responsible consumption and production

- How many tonnes of food are lost or wasted yearly?
  - 13 million tonnes
  - 130 tonnes
  - 1.3 billion tonnes



# Goal 6: Clean water and sanitation

- Clean water can prevent what percentage of deaths by disease globally?
  - 9%
  - 2%
  - 5%



# Goal 2: No hunger

- What percentage of the global population is hungry?
  - 5%
  - 2%
  - 11%





# Goal 7: Affordable and clean energy

- Reducing the intensity of which energy is a key objective in halting climate change?
  - Wind
  - Carbon
  - Solar



# Goal 14: Life under water

- How much of the planet's oxygen is produced by marine plants?
  - 2%
  - 28%
  - 70%





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# Sustainable Development Goals Campaign

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# The role of the financial services industry

- Policymakers, business, the third sector and industry all have a role to play in achieving the goals, as does the financial services industry.
- There is £300 trillion in capital markets which could be harnessed to support, rather than undermine, sustainable development globally.
- Actuaries are being looked at to make a valuable contribution. Can the profession rise to the challenge?



# Call for evidence

- We asked, ‘how are actuaries relevant to the SDGs and how can they, and their employers, contribute to the goals being met?’
- The response has been overwhelmingly positive.
- Submissions have been wide-reaching, having been sent to us from all over the world.
- Submissions relate to a wide variety of practice areas including investment, pensions, general insurance and resource and environment.



# Case study 1: Environmental Risk Solutions in China

- China's rapid industrialisation and urbanisation has resulted in widespread man-made water pollution. It has caused:
  - damage to wildlife and nature
  - crop failure
  - health consequences for those who do not have access to safe drinking water.
- Mr Xiaoxuan (Sherwin) Li, FIA, and his actuarial team used actuarial and catastrophe modelling methodologies to evaluate and place a cost on environmental risk.
- This cost is to be recouped from the entities causing the pollution via an insurance premium.



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# Case study 2: Road Safety in India

- The UN's SDGs include a target to halve the number of road accident-related deaths and injuries by 2020. This target is particularly relevant in India where road safety presents a significant problem.
- In 2013, the World Health Organisation (WHO) estimated the number of fatalities which resulted from road accidents to be 238, 562.
- WHO also estimates that India loses 3% of its GDP annually due to road accidents.
- To address this, actuarial expertise can support the development and application of innovative motor insurance products which incentivise and encourage good driving behaviour in India and other developing nations.



# SDG Campaign outputs



## Sustainable Development Goals

Workshop guide



- Global webinar
- Workshops
- Informing IFoA's narrative
- Please contact [policy@actuaries.org.uk](mailto:policy@actuaries.org.uk) if you would like more information about the campaign



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# The role for actuaries

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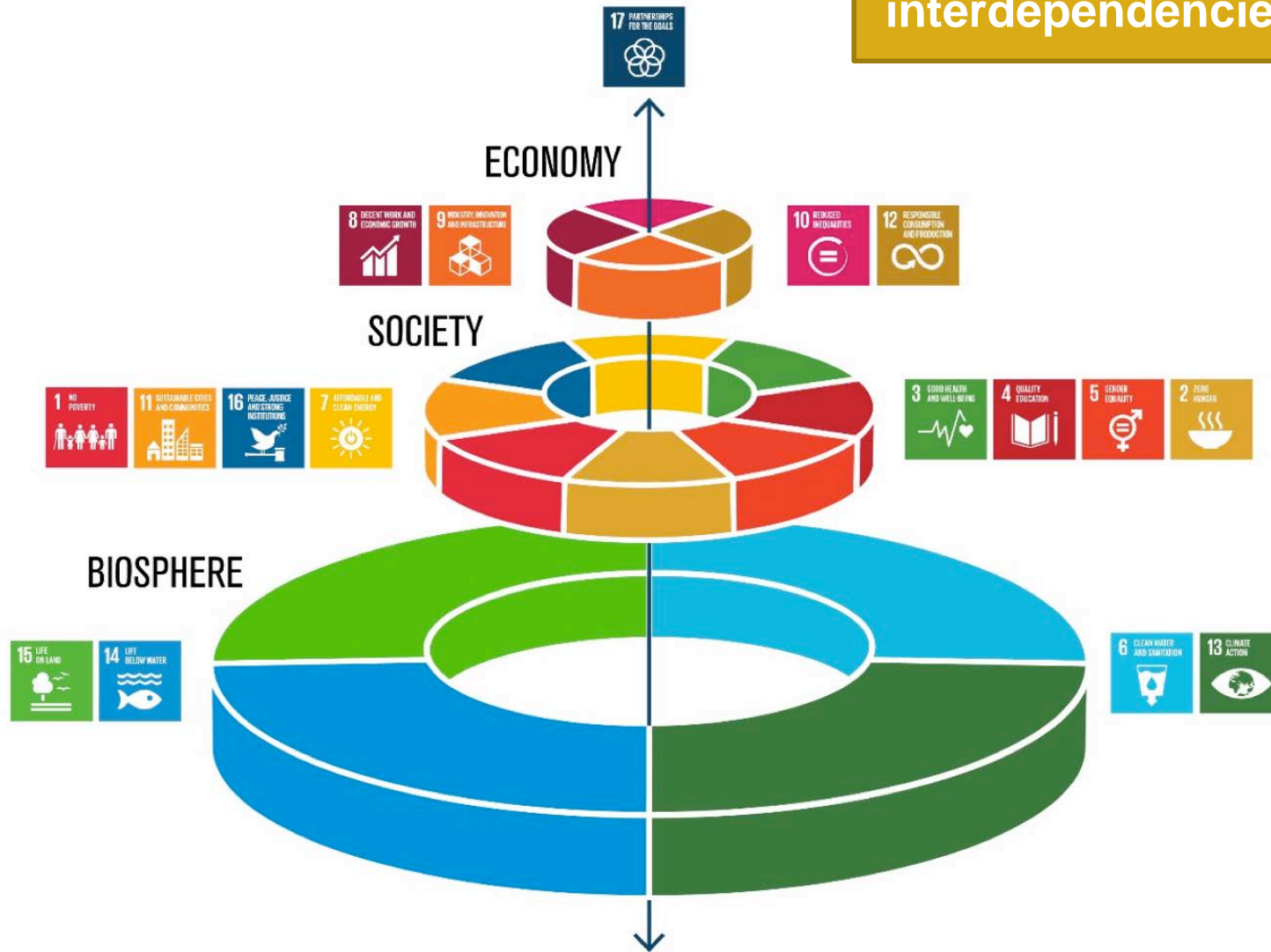
# SDGs of the 2030 Agenda

- 193 heads of state and government in 2015, **agreed to set the world on a path to a more sustainable future, through the pursuit of 17 Sustainable Development Goals (“SDGs”)** of the 2030 Agenda for Sustainable Development (United Nations General Assembly, 2015).
- These **goals are predominantly quantitative: aiming to eradicate poverty and forms of deprivation, prevent environmental degradation and level inequalities by 2030.** They are backed up by a comprehensive set of targets and indicators that rely upon access to high-quality, granular data (Harris, P., 2017).



# SDGs defined

Environmental, Economic & Social interdependencies / interrelatedness



Economic

Social

Environmental



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# Practical examples of actuaries already considering SDGs

- In December 2012, before the SDGs were even set, the International Working Group on Actuarial Sciences and Sustainability (IWGASS), held a summit to discuss climate change, sustainability and the actuary's role.
- IWGASS was formed by the Society of Actuaries' (SOA) research department to identify research needs on sustainability and examine how actuaries could assist in analysing, measuring and mitigating the associated potential risks (The Actuary Magazine).



# Impact on the actuarial profession and upon the industries actuaries work in

- Over the last few years, we have heard time and time again about the potential of new business practices (*incl. new approaches of doing business*), **sustainability and innovations to transform the way we do business within both the private and public sectors** (Sustainable Development Solutions Network [SDSN], 2017) .
- Clearly, there is need for actuaries to consider new approaches of doing business.





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# How can the actuarial profession help their clients and employers contribute towards the SDGs being met?

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# Traditional actuarial fields

Traditionally actuaries worked in the fields of Investment, Health, Pension, General Insurance and Life Insurance.

- Thus, **actuaries already have a competitive advantage in these particular fields** and hence **could use this to make an influence regarding SDGs**.
- In all the above fields, **actuaries have worked closely with regulatory boards**. Thus, **actuaries have the ability to lobby the regulators to include Social Responsible Investments (“SRI”) as prescribed assets by statutory instruments**.
- As a result, **whenever actuaries are required to perform an Asset Liability Modelling**, there will be an **opportunity to allocate a relevant position of asset towards SRI**. This supports various SDGs like Goal 7, 9, 11, 12 and 17.



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# Pension funds

- Actuaries already work with the schemes' member level data. As an add-on in pension fund valuation reports, actuaries can assist employers by assessing the level of decency of various roles of employees in that scheme and then make relevant recommendation.
- This will aid to achieve Goal 8 which seeks to have decent work for all. Moreover, actuaries may assess and comment on any gender inequalities evident in the membership data for instance benefits or salary differentials between males and females with the same role and comparable work experience. This will aid in achieving Goal 5 which encourage gender equity

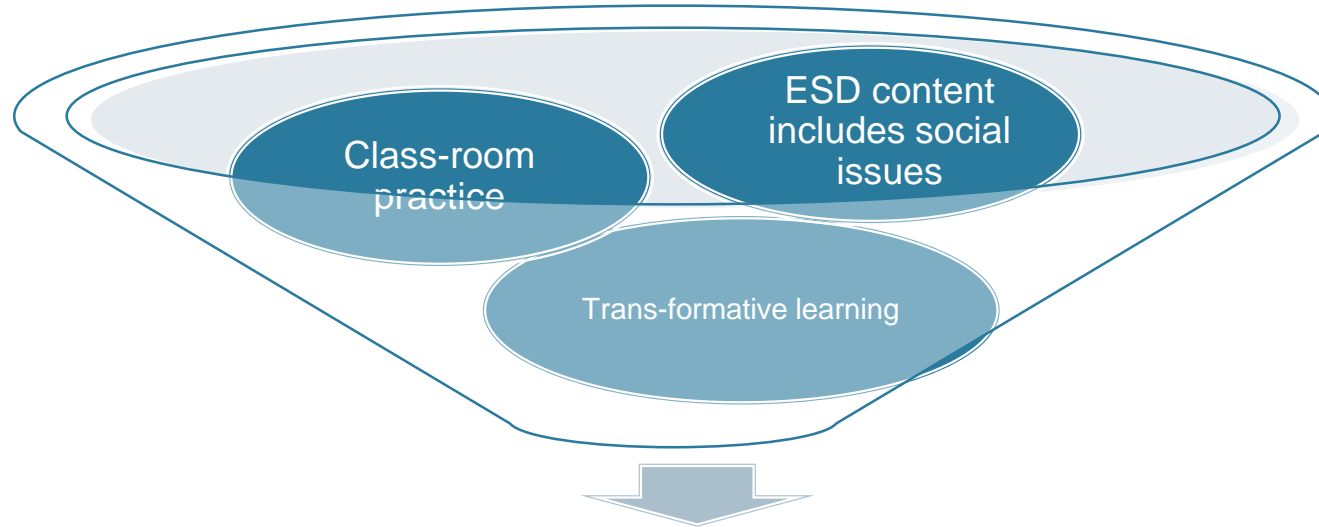




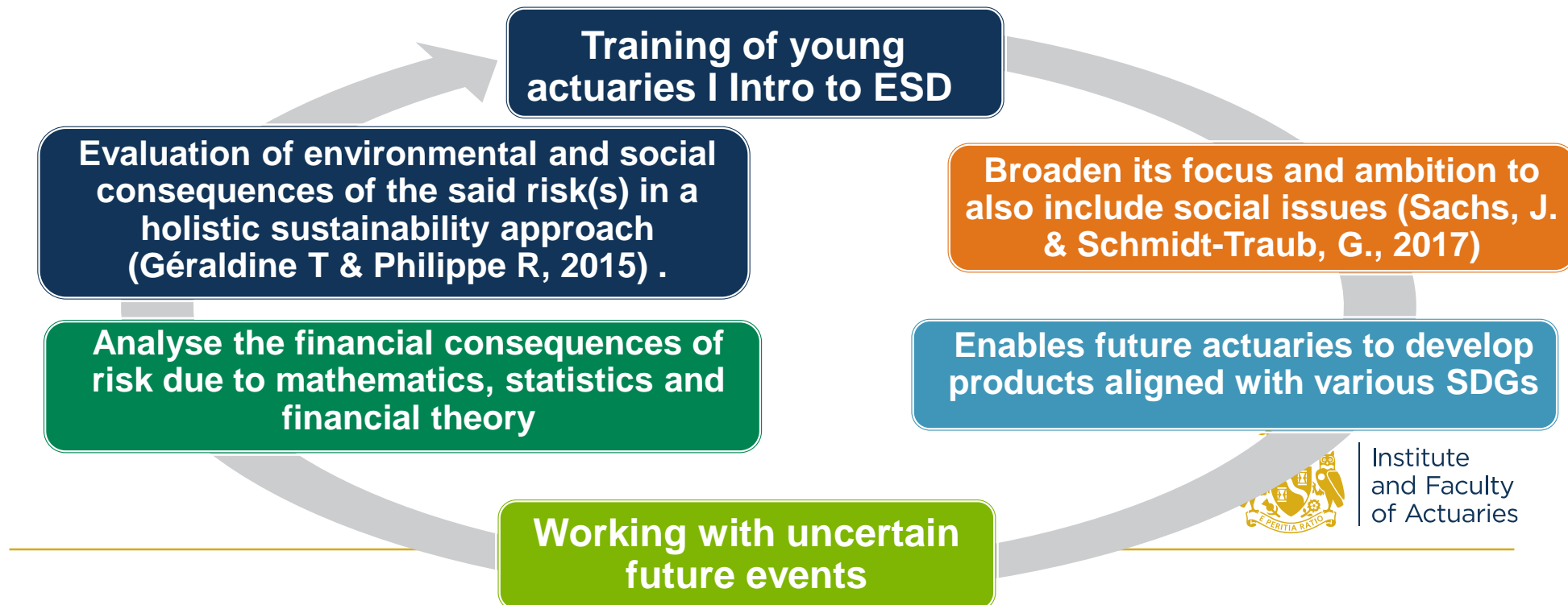
# Training of young actuaries

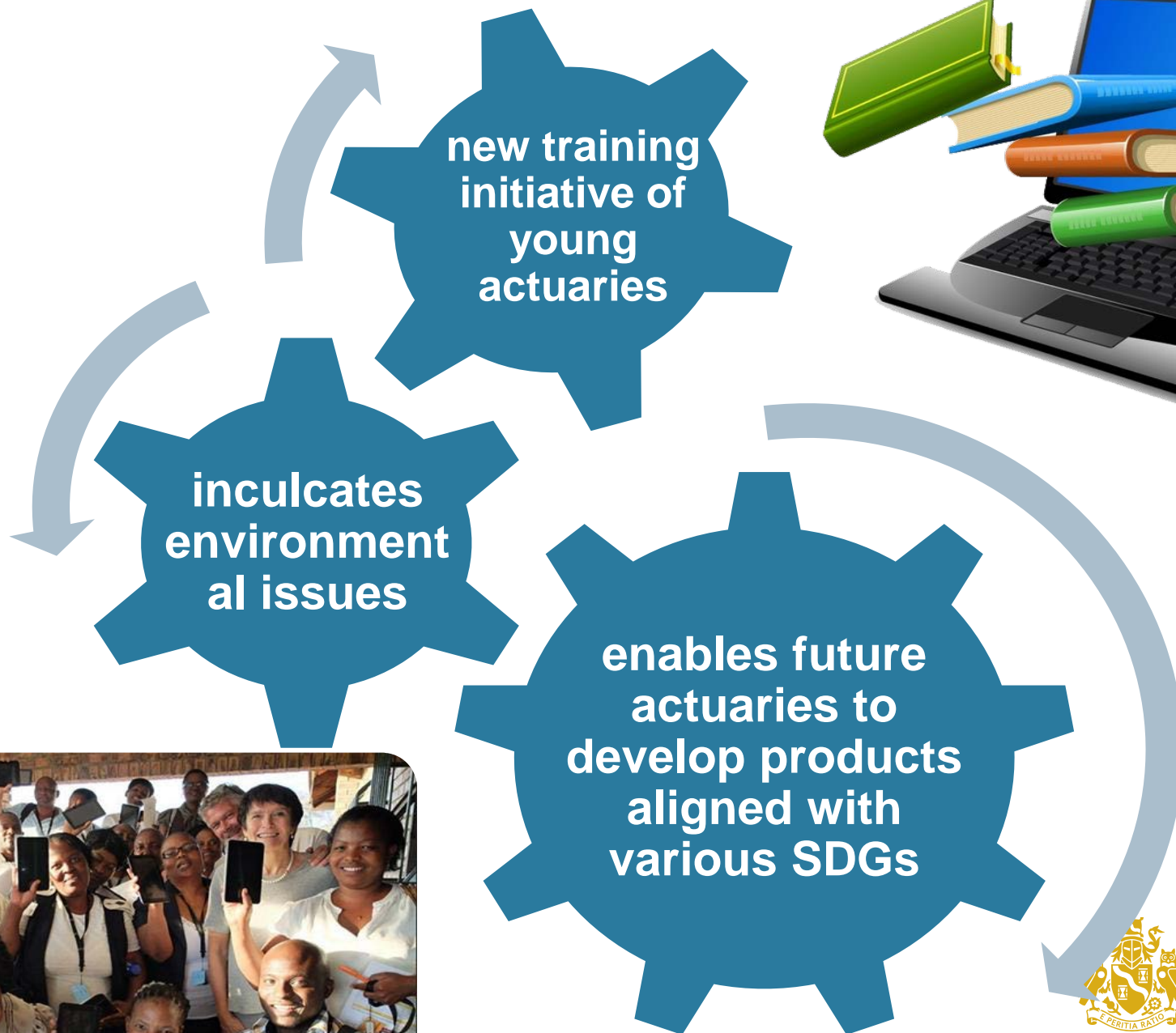
- In this regard we would therefore **anticipate the training of young actuaries must inculcate environmental issues up the actuarial profession's agenda.**
- This **new training initiative should also broaden its focus and ambition to also include social issues** (Sachs, J. & Schmidt-Traub, G., 2017).
- This will **enable future actuaries to develop products aligned with various SDGs.**
- Also, when **working with uncertain future events, actuaries shouldn't only analyse the financial consequences of risk due to mathematics, statistics and financial theory.** They must also look at environmental and social consequences of the said risk(s) in a holistic sustainability approach (Géraldine T & Philippe R, 2015).





## Environmental issues integration into training of young actuaries





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# Concluding remarks

- How the actuarial profession can help towards the SDGs being met?
  - Lobby the regulators
  - Design products with SDGs in mind
  - Recommendations to pension fund sponsors based on the schemes' data
  - Focus on the training of new actuaries



**Questions**

**Comments**



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