



# Three-day virtual BE-Rural summer school for teachers interested in developing bioeconomy curricula

## Slides used in Day 3 – 8 June 2021



Developing the industrial biotechnologists of the future: the innovative work of IBioIC with Scottish schools.

Three-day virtual BE-Rural summer school for teachers interested in developing bio-economy curricula

Rachel Moir  
IBioIC Skills Programme Manager  
8<sup>th</sup> June 2021

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### Agenda



14:00 – 14:20 – Introduction to Day 3. Introduction to IBioIC (Rachel Moir, Skills Programme Manager, IBioIC)

14:20 – 14:50 – Scottish Bioeconomy Strategy and its context in a school setting (Debbie McCreath, Public Affairs Manager, IBioIC)

14:50 – 15:25 – Engagement strategies with STEM programmes, Scottish Schools Education Research Centre)

15:25 – 15:30 – Pre-break Q&A and discussion

15:30 – 15:45 – Break

15:45 – 16:20 – Leaders in Science Programme (Dr Jo Sadler, Leaders in Science Founder & Chancellor's Fellow, University of Edinburgh)

16:20 – 16:40 – Inclusive STEM, Social Mobility Foundation and other initiatives (Rachel Moir, Skills Programme Manager, IBioIC)


16:40 – 17:10 – Concluding slides about the 3-days summer school, final zoom polls, and participants to fill feedback survey about summer school overall (Elsa João)

17:10 – 17:25 – Final Q&A considering content of the 3-days of the summer school

17:25 – 17:30 – Close (Rachel Moir, IBioIC and Dr Elsa João, University of Strathclyde)

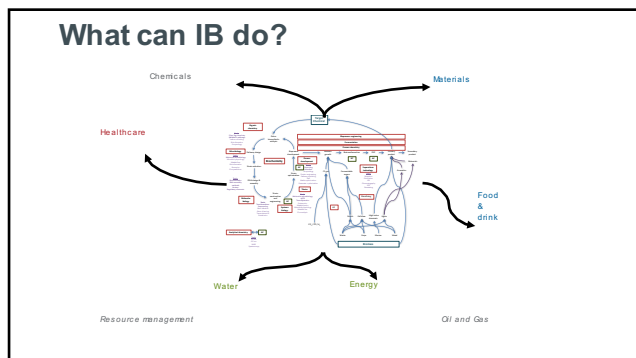
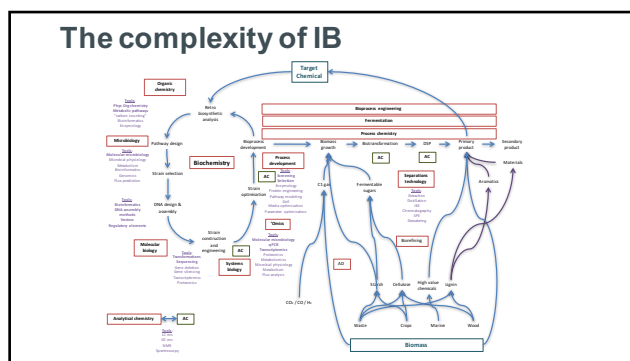
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## What is IB?




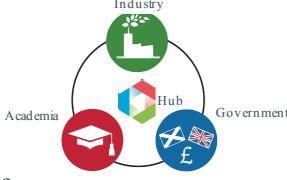
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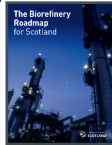
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### IBioIC Remit





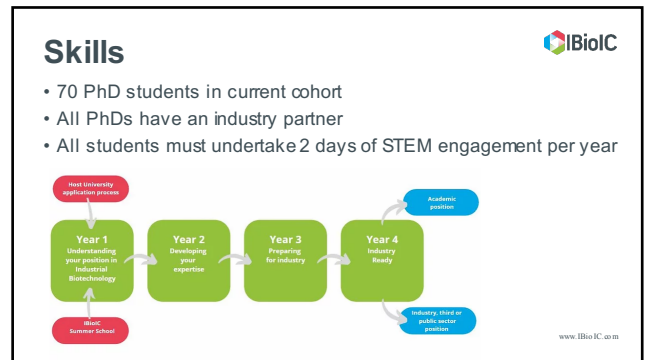
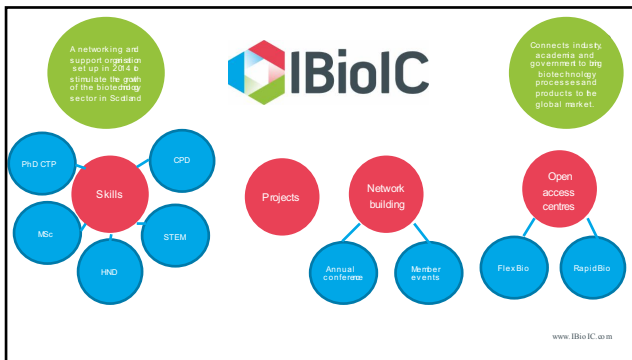



### Why?

- Grow the Bioeconomy in Scotland
- Reduce dependency on carbon intensive feedstocks
- Increase sustainable manufacturing

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# Skills



- HND programme
  - Approx. 15 HND students per year
  - Across three colleges
  - Option to go onto technical career or articulate to university
  - Supported through the Retain and Inspire programme.
- MSc Programme
  - 30 students per year (funded)
  - All students undertake an industry placement
  - Cross- institution delivery
- Other projects:
  - STEM resource development
  - Internships

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# Projects

- 100 + collaborative industrial projects funded
- >£25 million in leveraged funding




delicious. nutritious. sustainable.




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# Network building

- Over 120 industry members and 25 Academic partners
- Networking through annual conference, member events, consortia building and sector based activities.



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### Open access centres

Equipment Centres

Fermentation facility

DSP facility

Expert Bioprocess staff

Part of the BioPilotsUK group

BioPilotsUK

www.IBioIC.com

RapidBio

www.IBioIC.com

### FlexBio

www.IBioIC.com

### Thanks for listening!

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### IBioIC

### Inclusive STEM

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IBioIC Skills Programme Manager  
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### Are we all equal?



We know the jobs of the future are in STEM, yet it is estimated only 25% of women make up Scotland's STEM industries.

Ethnic minority men are 28% less likely to work in STEM than white men

With a population of 469,365 in 2018, the Highlands and Islands is characterised by population sparsity, an ageing population and net out-migration of young people. The working age (16-64) population is expected to fall and make-up a lower share of the total population by 2040 (54% compared to 61% in 2018).

Better-off pupils are significantly more likely to go to university than their more disadvantaged counterparts, with the inequality between the two groups now standing at 18.8%

Disabled STEM students 57% less likely to take up postgraduate STEM study than non-disabled students

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### Why do we need to address inequalities?



National Plan for Industrial Biotechnology sets out ambitious targets of a £900m turnover and over 200 companies active in industrial biotechnology by 2025.



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### Social Mobility Foundation



- Aims to make a practical improvement in social mobility for young people
- It does this through provide opportunities, and networks of support for 16-17 year olds who are unable to get them from their schools or families.
- Scottish branch based in Glasgow
- Aspiring Professionals Programme offers tailored support across 11 career sectors: Accountancy, Architecture, Banking & Finance, Biology & Chemistry, Business, Digital, Engineering & Physics, Law, Media & Communications, Medicine, and Politics.

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### Speakers for Schools



- Aim is to end educational inequality by giving all young people access to the same prestigious networks available to the top fee-paying schools in the UK
- Inspiration programme
- Experience programme

**47%**

of state school students said lack of confidence would stop them from being successful<sup>2</sup>

**7%**

of the UK population go to an independent school, yet their alumni continue to dominate 'leading professions'<sup>3</sup>

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### Newton Rooms



- Designed to inspire more young people to become interested in Science, Technology, Engineering and Mathematics (STEM), and encourage them to study these subjects in school and beyond.
- Being created in the Highland region by the Science Skills Academy, a partnership project led by Highlands and Islands Enterprise (HIE) with £3m from the Inverness and Highland City-Region Deal.



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### Equate Scotland



- National expert in gender equality throughout the STEM sectors.
- Funded by the Scottish Government to deliver our work without charge to students and women
- Aim to make a tangible and sustainable change, enabling women studying and working in these key sectors to develop, by supporting their recruitment, retention and progression

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### Kibble



- Kibble supports at risk children and young people (aged 5-26) across the UK. Many of the young people we care for have experienced significant trauma in their lives and Kibble offers dedicated care and support to help them move forward. This includes residential and community support, as well as dedicated schools and wellbeing services.
- New initiative with National Manufacturing Institute Scotland (NMIS)
  - supporting care experienced young people into employment through opportunities in STEM
  - Highlighting opportunities within the manufacturing sector and the accessible routes to employment.

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### Engagement with college sector



- Known pathway for access to further education by low income groups
- IBioIC work with colleges by providing student mentorship and development of STEM materials for engagement school leavers.



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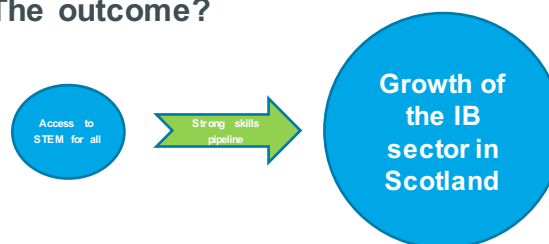
### HND in IB video



Please click on Speaker  
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### The outcome?



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Thank you for  
listening!

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