Ada, the National College for Digital Skills

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@AdaCollege

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National College for Digital Skills

The Why & How

Ada:

What we stand for

Operating Model

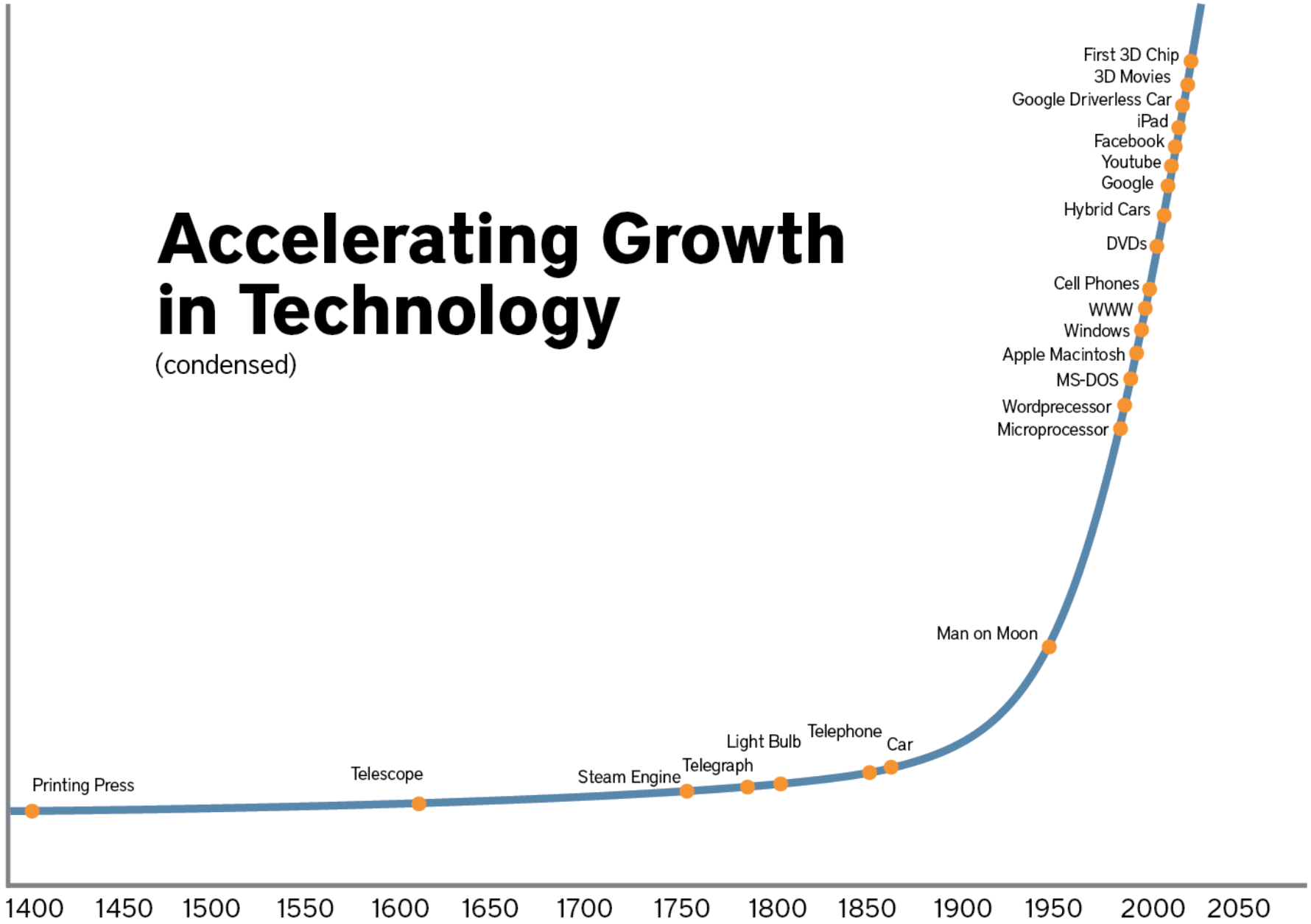
Our Approach

Ada 2.0 – what's next

National College for Digital Skills

Accelerating Growth in Technology

(condensed)

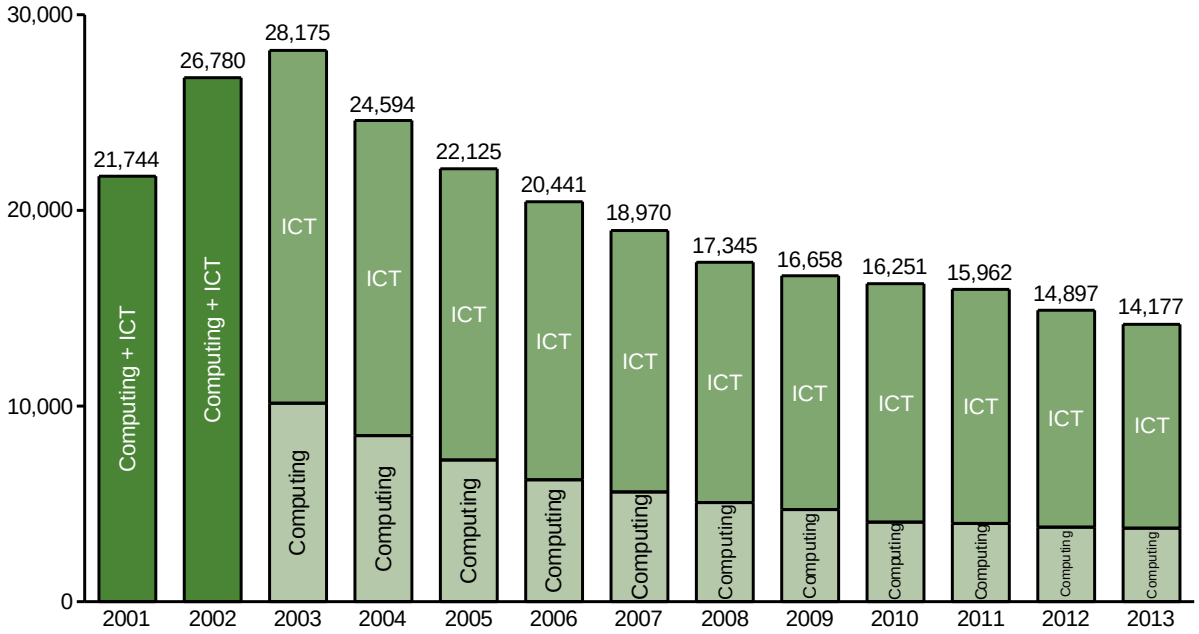


SAMSUNG

National College for Digital Skills

University of Roehampton London

Number of Students Taking A-Level Computing and ICT Modules, 2001-13



- **GCSE B** : *'The increase in students sitting GCSE CS slowed between 2016 and 2017 … and it looks likely that fewer students will be sitting a computing GCSE over the next few years due to the removal of ICT GCSE'*

- **A-Level** : *'The picture at A-level is better, with a sustained increase in student numbers over the last 4 years, albeit with still very small numbers (7215 students in 2017)'*

- **Volumes** : '*However, cohort sizes remain small, with a mean of 6.7 students per provider and a median of just 5.'*

- **Gender Parity :** *'Girls continue to be heavily underrepresented in computer science. At GCSE, 20% of entries are from female students (1 in 5) and only 10% (1 in 10) at A-level, even though girls do better than boys at GCSE.'*

- **Low-income students** : *'Compared to ICT, a lower proportion of pupil premium students study GCSE and*

THE ‘GAP’?

1.64M

digital tech jobs in the UK

2×

digital sector is creating jobs twice as fast as the non-digital sector

75%

UK businesses report a digital skills shortage

£63B

estimated annual loss in GDP due to digital skills gap

V.

32%

of computing teacher recruitment targets are unmet in England

1 in 2

schools don’t offer Computer Science at GCSE

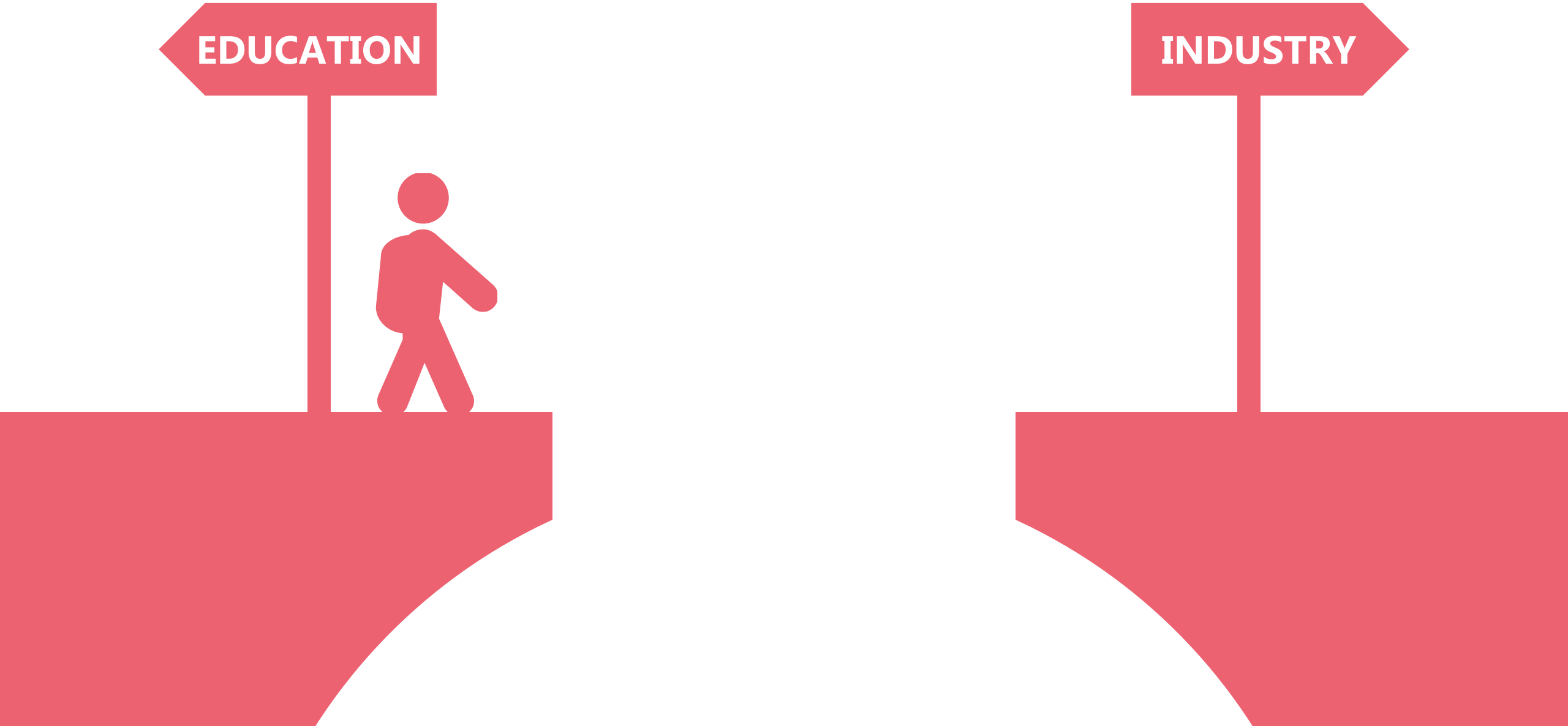
MOVING ON UP

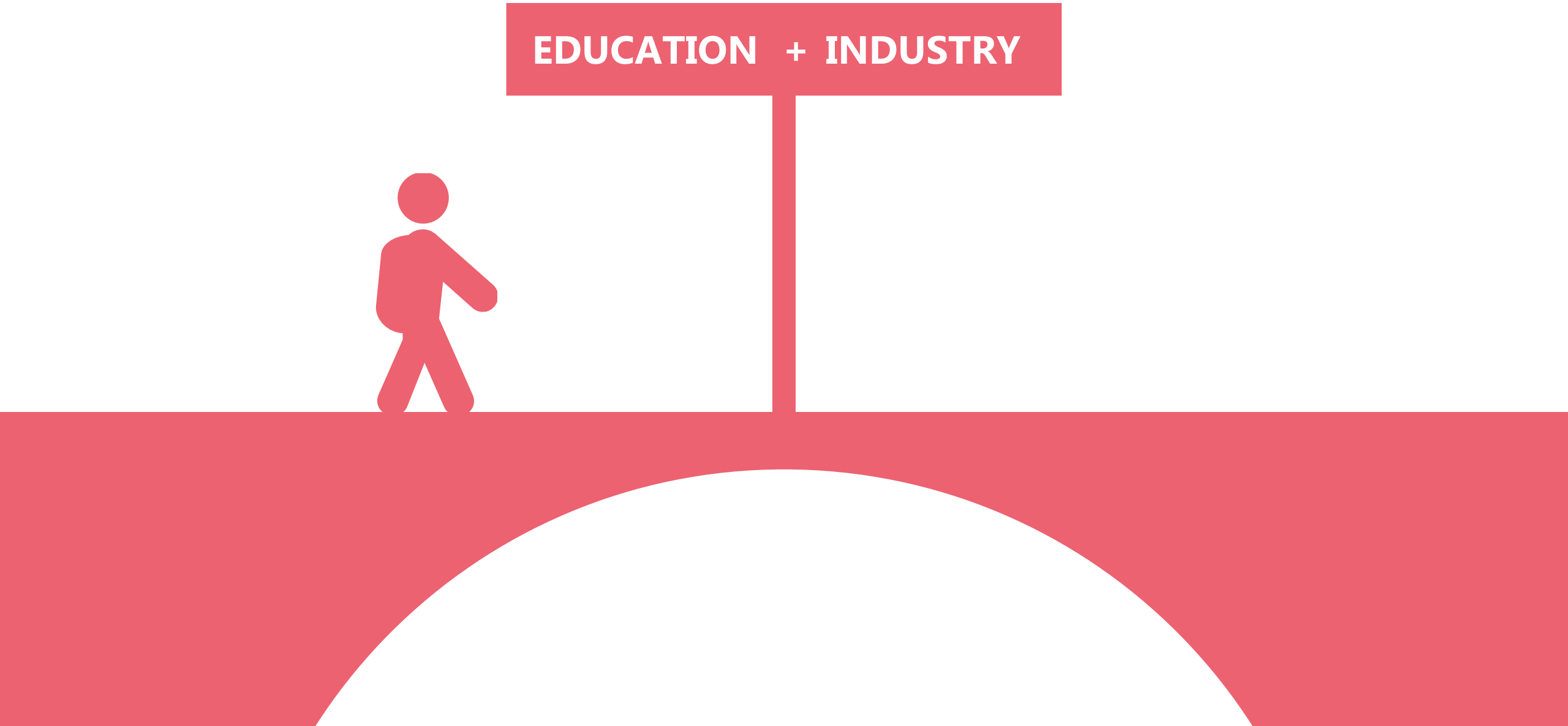
A BCS analysis of social mobility in IT

'A young person from a less advantaged background will find a career path more open to them in IT than some of the longer-established professions'.

Key findings:

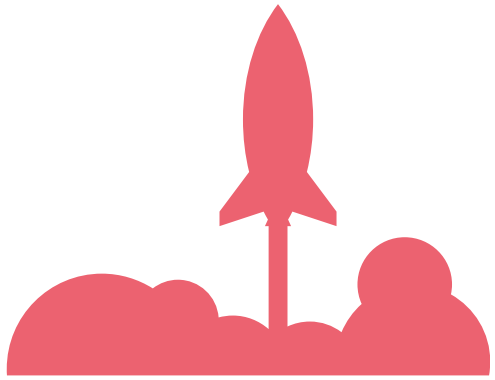
- IT as a profession offers more social mobility than medicine and law
- IT offers comparable social mobility to the business and accountancy professions
- IT offers more routes to entry and a far lower cost for obtaining qualifications and skills than medicine and law
- 75% of those in the IT profession have experienced upward social mobility compared to their parents social class
- 80% of IT project/programme managers have experienced a higher grading of social mobility than their parents
- 18% of IT professionals have experienced 'long-range social mobility'


EDUCATION
INDUSTRY


EDUCATION + INDUSTRY

OUR VISION

An education system that provides a sustainable pipeline of high quality diverse digital talent to the tech industry



OUR MISSION

To work with industry to design and deliver an education that empowers all our students, especially women and those from low-income backgrounds, to progress into highly skilled digital roles and lead flourishing lives

AREAS OF FOCUS

Become a Centre of Excellence

Become an Engine for Social Mobility

Become a Bridge between Education and Employment

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Post-16: 6th form

Post-18: Apprenticeships

ADA IN NUMBERS

130
sixth form students

150+
apprentices

30
teachers and staff

25%
female compared to 17% industry average

50%
from low-income backgrounds

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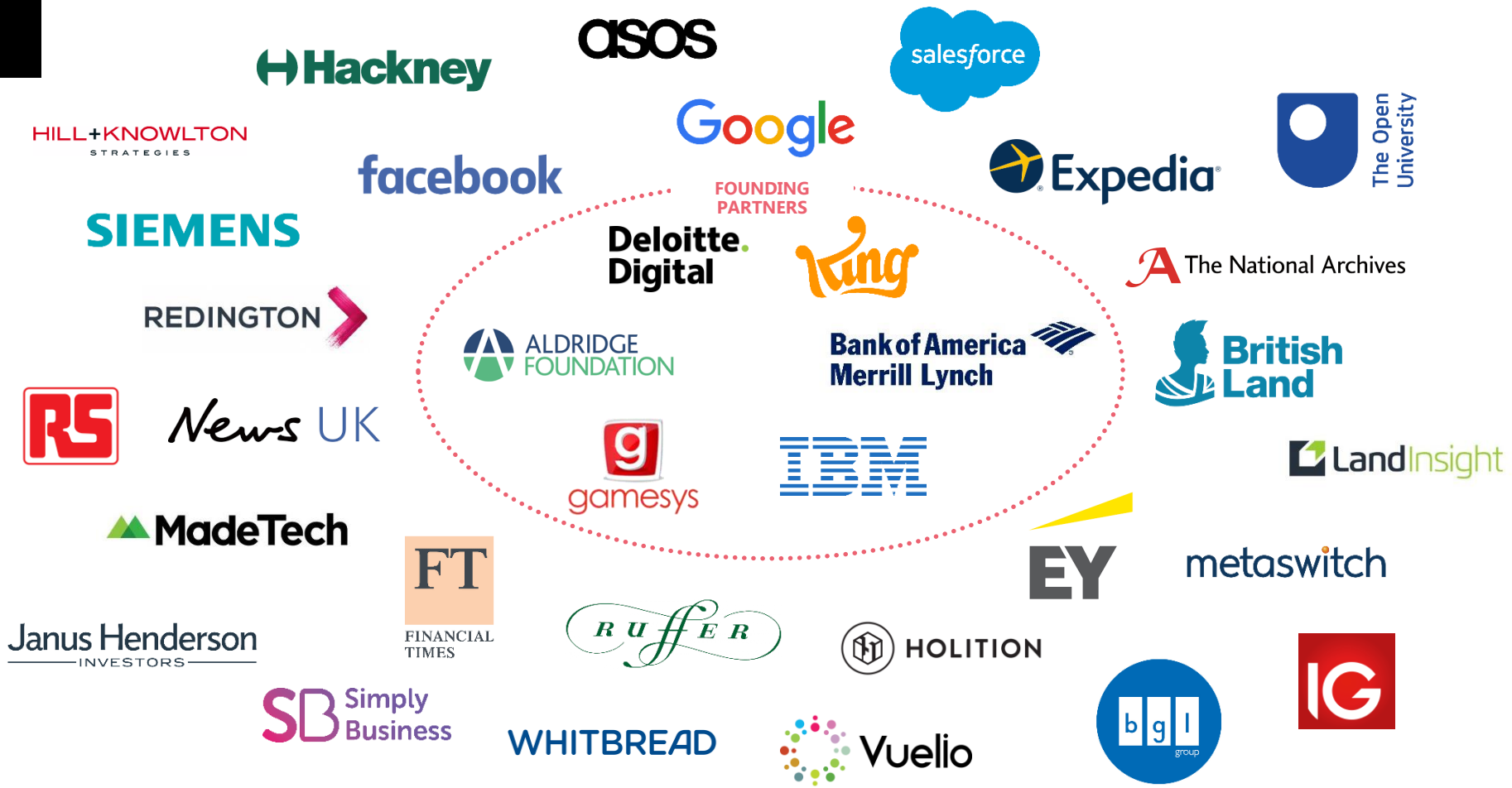
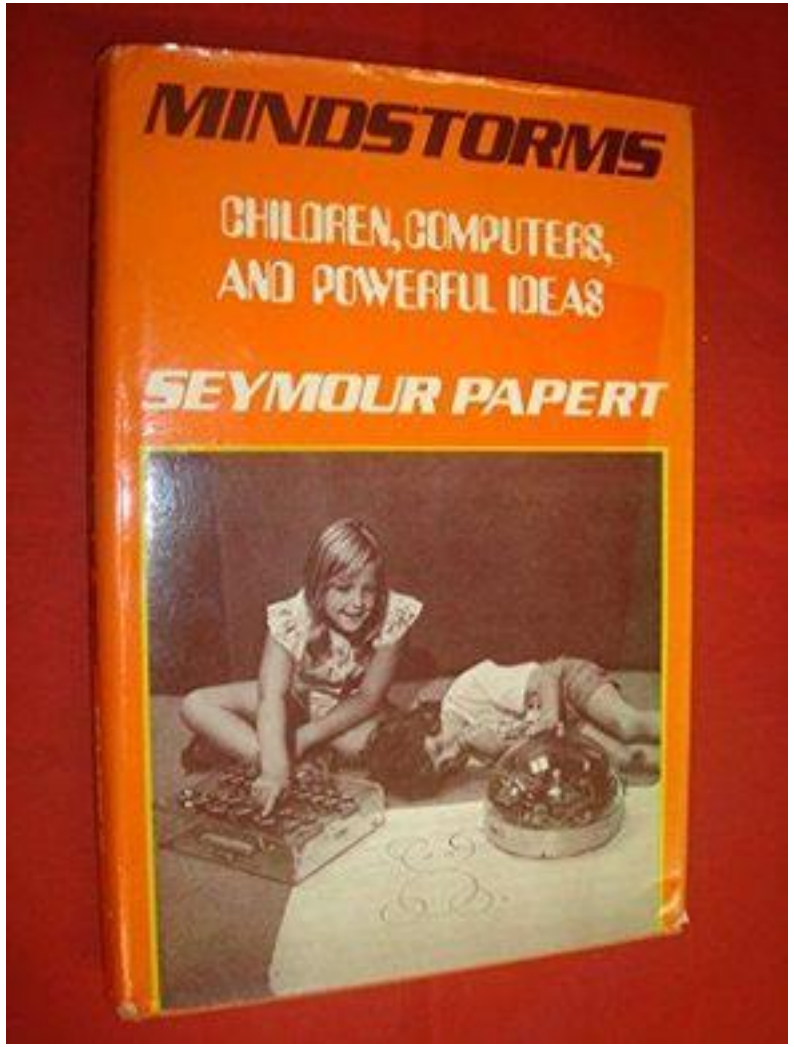
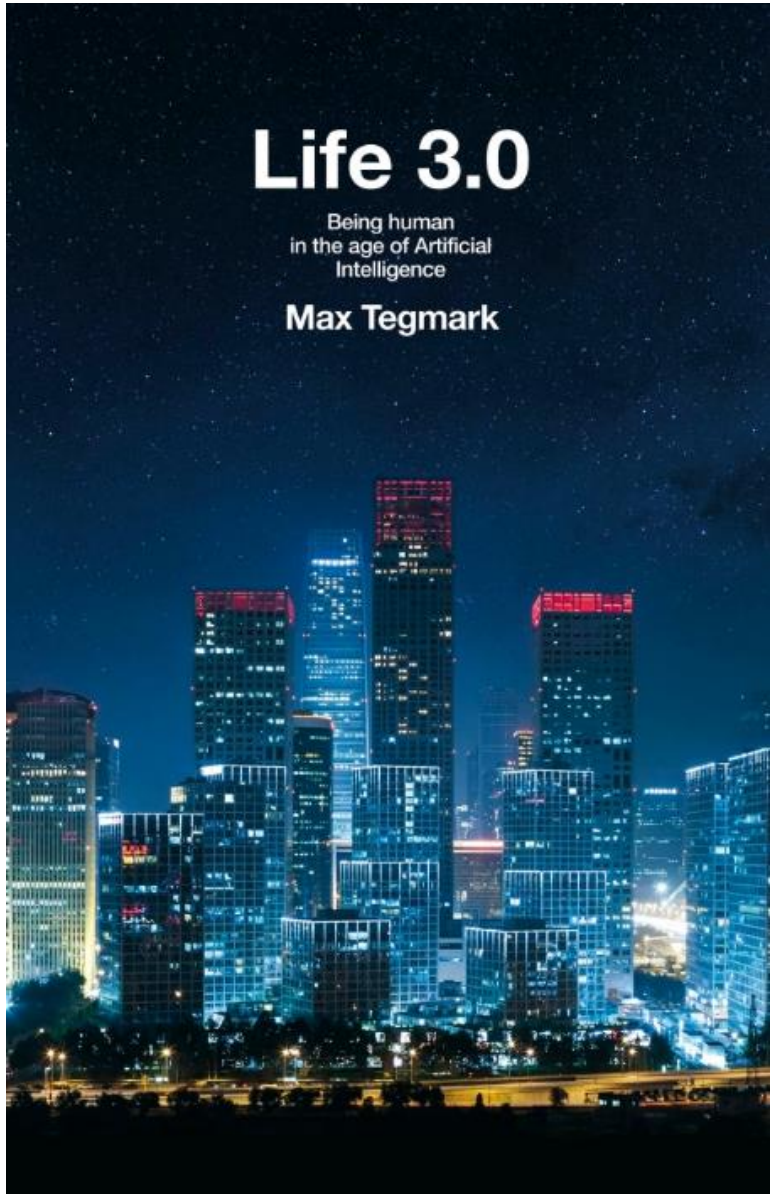
OUR PARTNERS



In the classroom

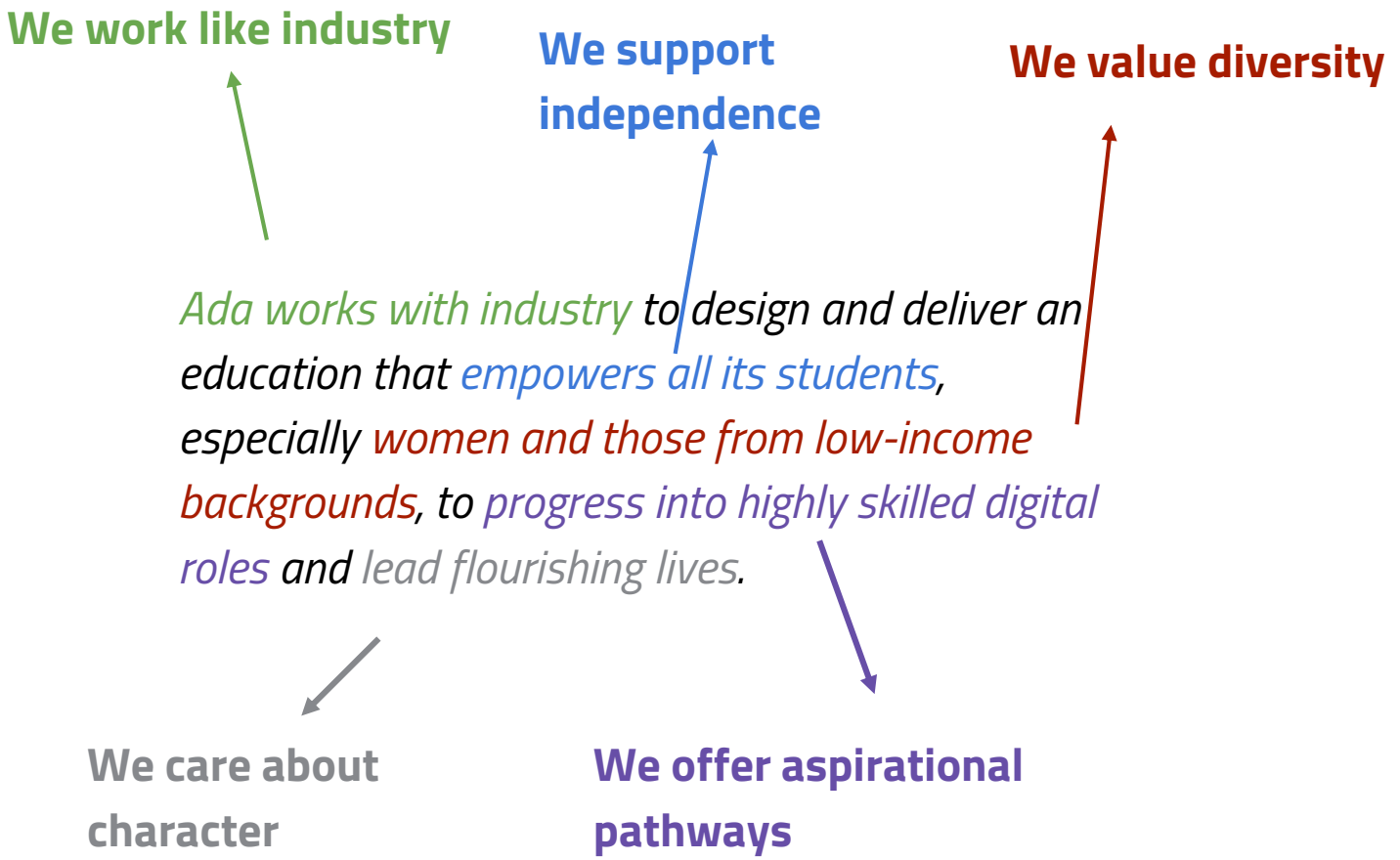
6th form & Apprenticeships


MINDSTORMS
CHILDREN, COMPUTERS, AND POWERFUL IDEAS
SEYMOUR PAPERT


Life 3.0
Being human in the age of Artificial Intelligence
Max Tegmark

The Fourth Industrial Revolution
Klaus Schwab
Founder and Executive Chairman, World Economic Forum

Ada Approach to teaching and learning



Our sixth form curriculum

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Vocational

+

Academic

Ada Sixth Form Curriculum Pathways

National College for Digital Skills

ADA COMPUTER SCIENCE BTEC DIPLOMA

- CREATIVE
- TECHNICAL
- ENTREPREN-EURIAL

A-LEVELS OR EXTENDED DIPLOMA

A-LEVELS
Maths
Further Maths
Physics
Graphics
Business
Psychology

½ A LEVEL
Mathematical Studies
EPQ

- TWO PROGRAMMING LANGUAGES
- EXTRA-CURRICULAR ACTIVITIES

UNIVERSITY

HIGHER-LEVEL APPRENTICESHIP

STARTUP

A-Level Computer Science

Digital & Online Marketing

Graphic & Web Design

Search Engine Optimisation

Content & Copywriting

Digital & Display Advertising

Social Media & Online PR

Media Buying & Production

Account Management

Project & Product Management

Strategy & Consulting

Intelligence & Analytics

Sales & Business Development

eCommerce & Online Retail

User Interface Design (UI)

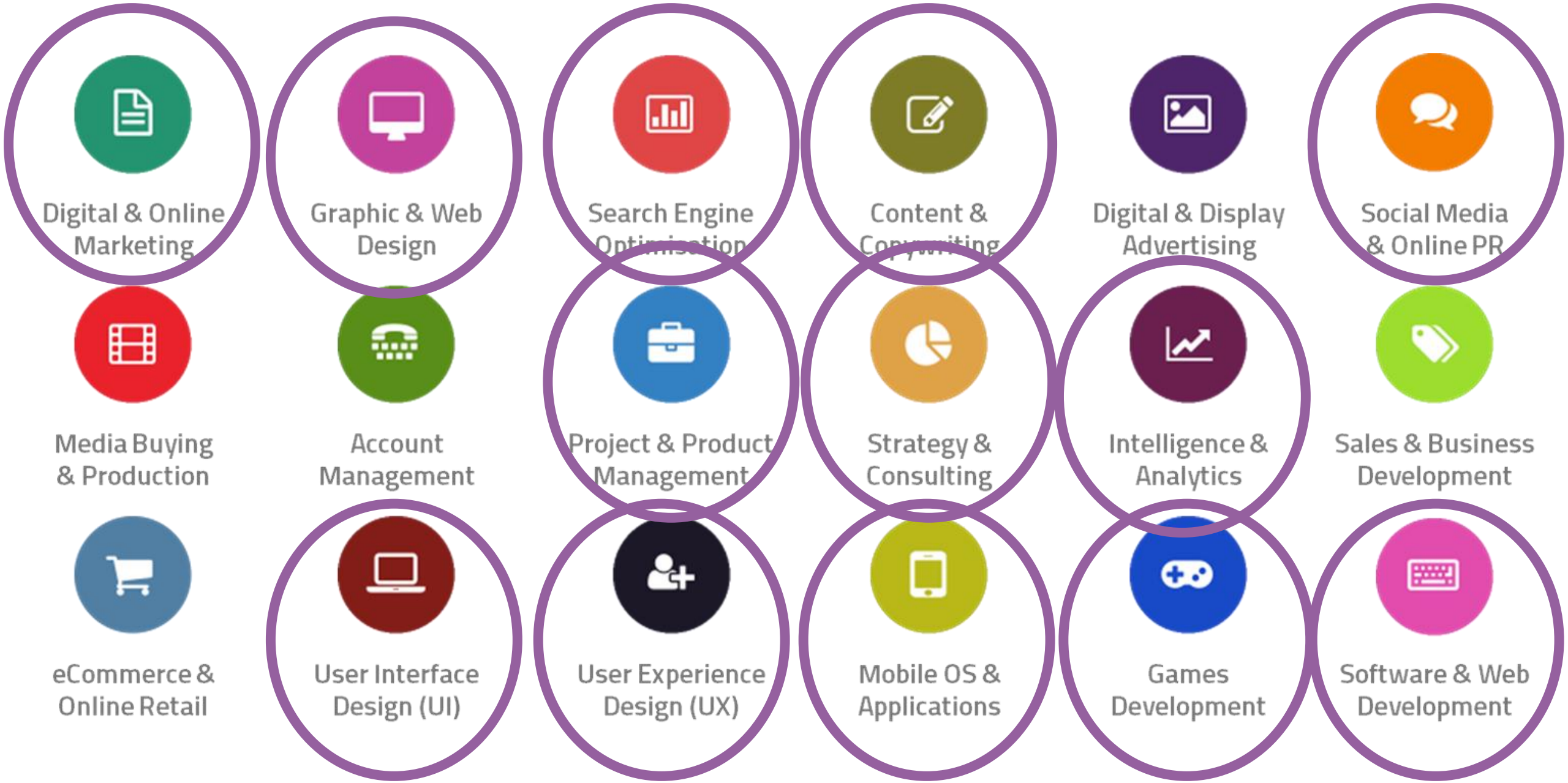
User Experience Design (UX)

Mobile OS & Applications

Games Development

Software & Web Development

BTEC Computer Science

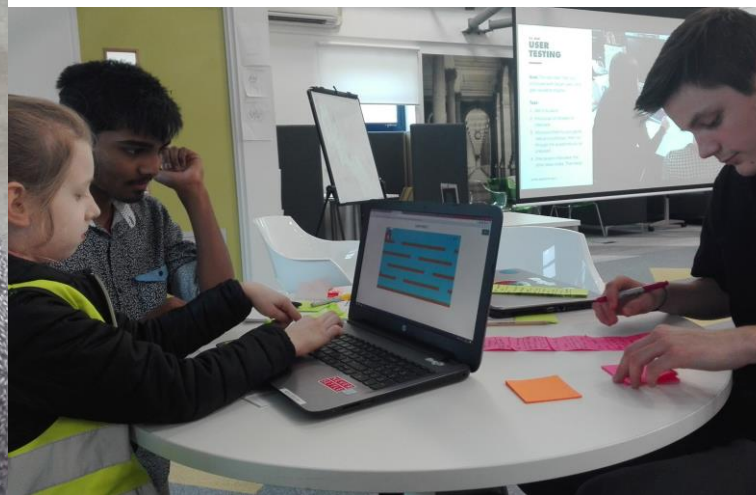


King

Bank of America
Merrill Lynch

Deloitte.

ustwo



Higher Level & Degree Apprenticeships

"In the post-war period, the number of good white collar-jobs grew faster than the size of the middle class workforce and this enabled working-class students to obtain middle-class jobs. This is no longer happening."

Barnaby Lennon, 'Other People's Children', 2018

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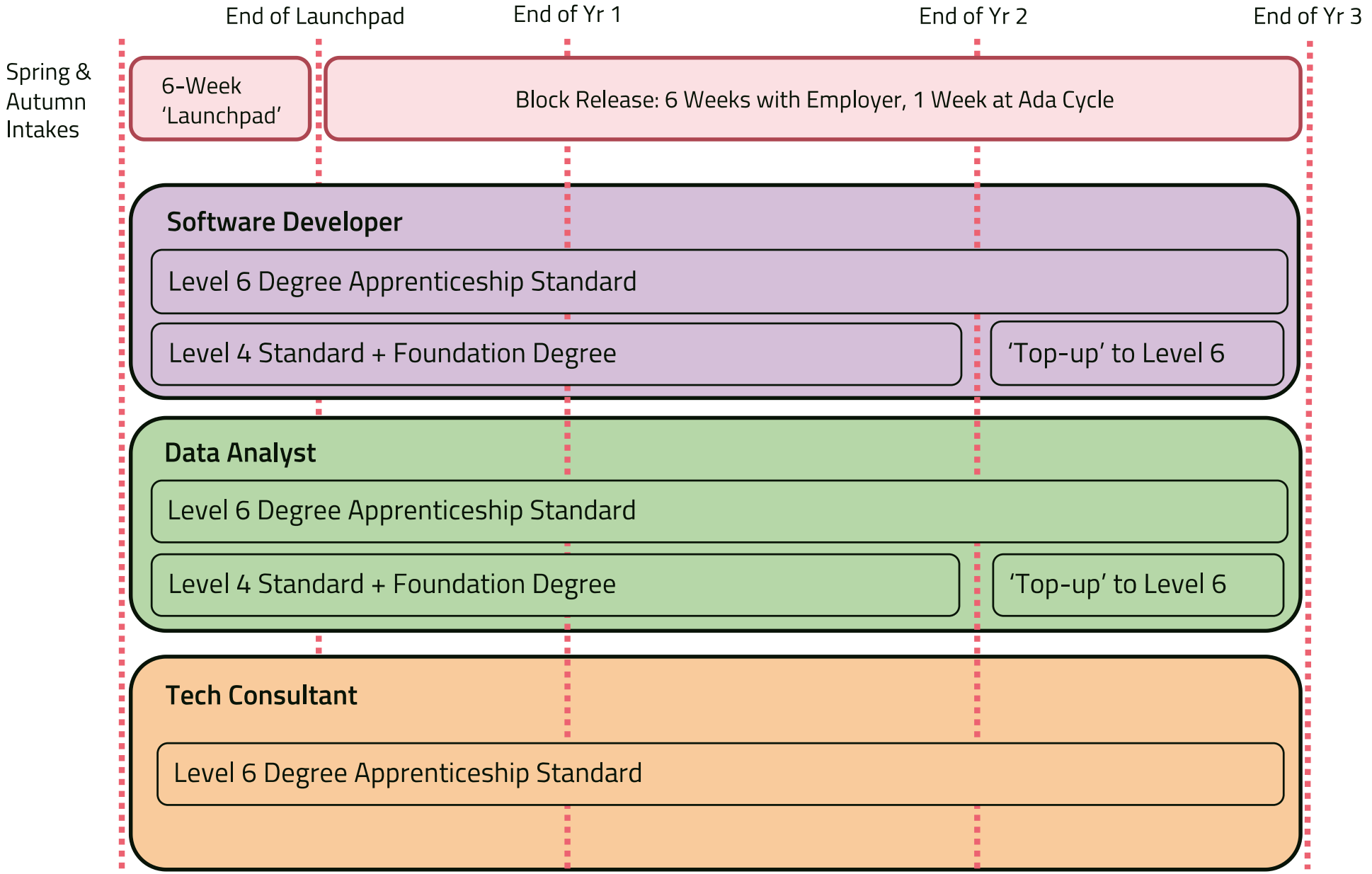

How do you prepare students interested in tech to succeed in the workforce from day 1?

Search or jump to... / Pull requests Issues Marketplace Explore

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Repositories 37 | People 10 | Teams 0 | Projects 0 | Settings

Search repositories... | Type: All | Language: All | Customize pinned repositories | New

maths-as-calculus
Jupyter Notebook 11 Updated 28 days ago

cs-python-march18examUnit1
A python notebook with questions from the March 2018 Unit 1 Exam
Jupyter Notebook 33 Updated on 25 Mar

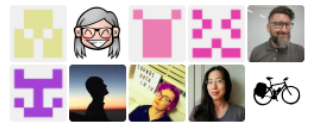
maths-as-distributions
Jupyter Notebook 12 Updated on 15 Mar

analysis_of_games
Workshop created by Jessica Van Der Kroef and Aylin Agiali of King, for the Ada-King Print and Play Challenge.

Top languages
Jupyter Notebook

Most used topics Manage
maths algebra python statistics

People 10 >



GitHub

Jupyter

Logout | Control Panel

Files | Running | Clusters | Nbextensions

Select items to perform actions on them. Upload | New

0 / cs-python-csv | Name | Last Modified

..	seconds ago
quizUsingCSVData.ipynb	5 months ago
Untitled.ipynb	4 months ago
usingCsvModuleForFiles-solutuion.ipynb	5 months ago
usingCsvModuleForFiles.ipynb	5 months ago
newData.csv	5 months ago
newDataFile.csv	5 months ago
questions.csv	5 months ago
README.md	5 months ago
students.csv	5 months ago

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BARCLAYS
CASSIAN DEGAS
PEARSON
ATIF KHAN
Maria Oxford Uni.
Luke + Chris
MADE TECH
Imperial College
XI YONG
BEN DORNAN
THE ROYAL INSTITUTION
HEATHER TAYLOR-PORTMANN
FARMDROP
#ALW
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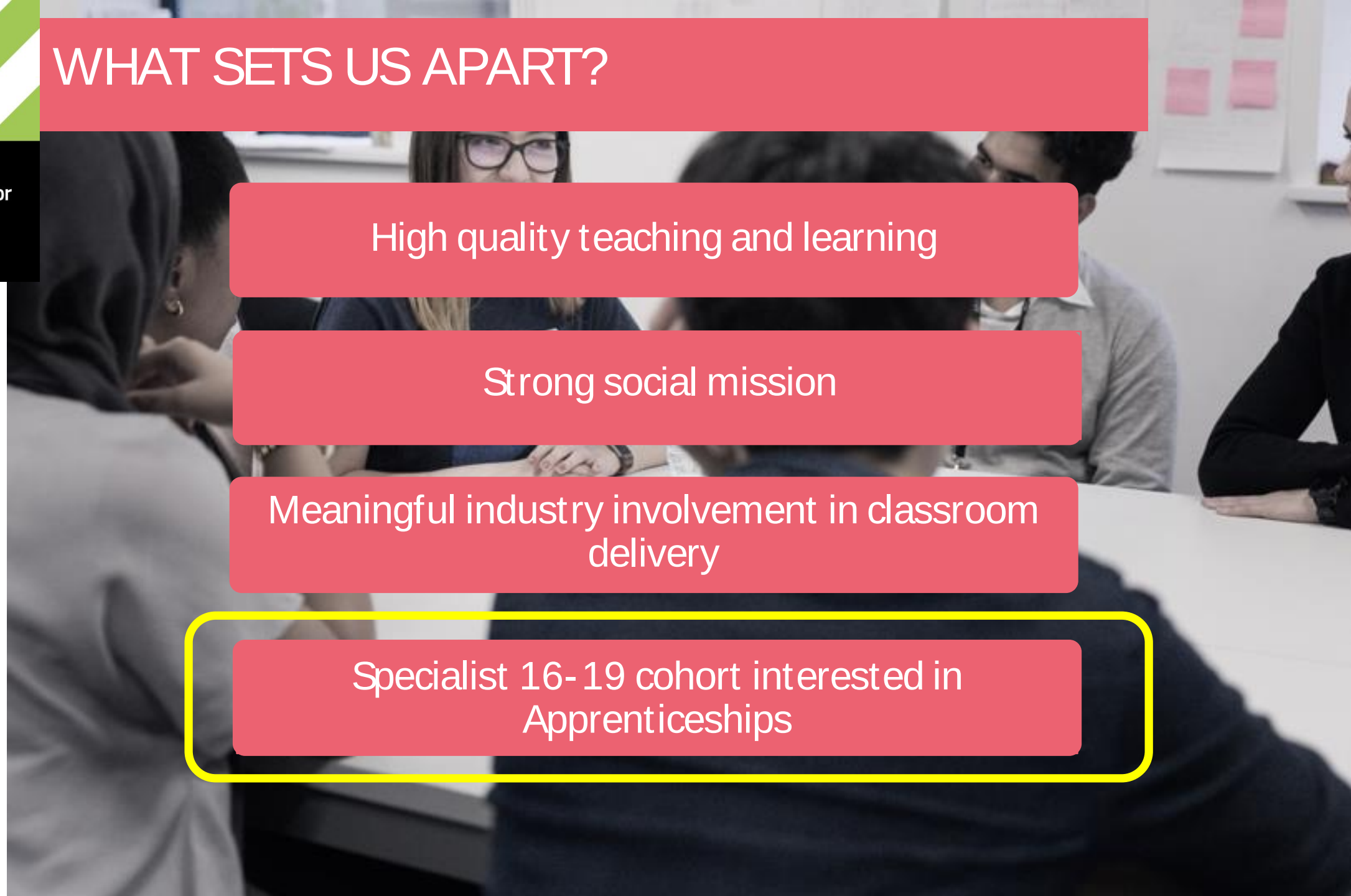
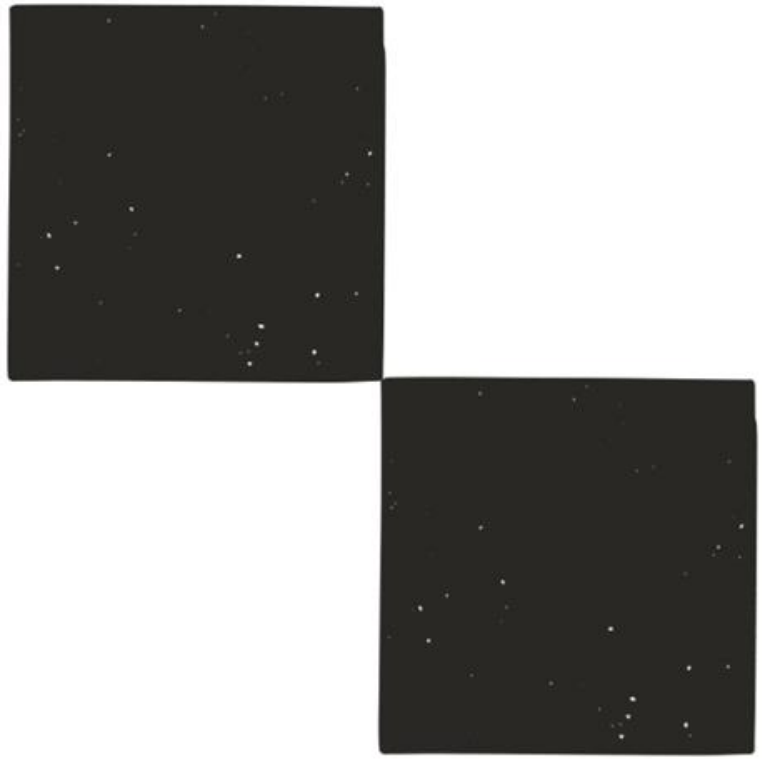
WHAT SETS US APART?



- High quality teaching and learning
- Strong social mission
- Meaningful industry involvement in classroom delivery
- Specialist 16-19 cohort interested in Apprenticeships

WHAT DOES THE FUTURE HOLD?

- Volume Growth
- Geographic Growth
- Teacher and Lecturer training
- Increased Partnerships & Outreach Work with Schools, Colleges and Universities



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ada = possibilities

@bryanMMathers

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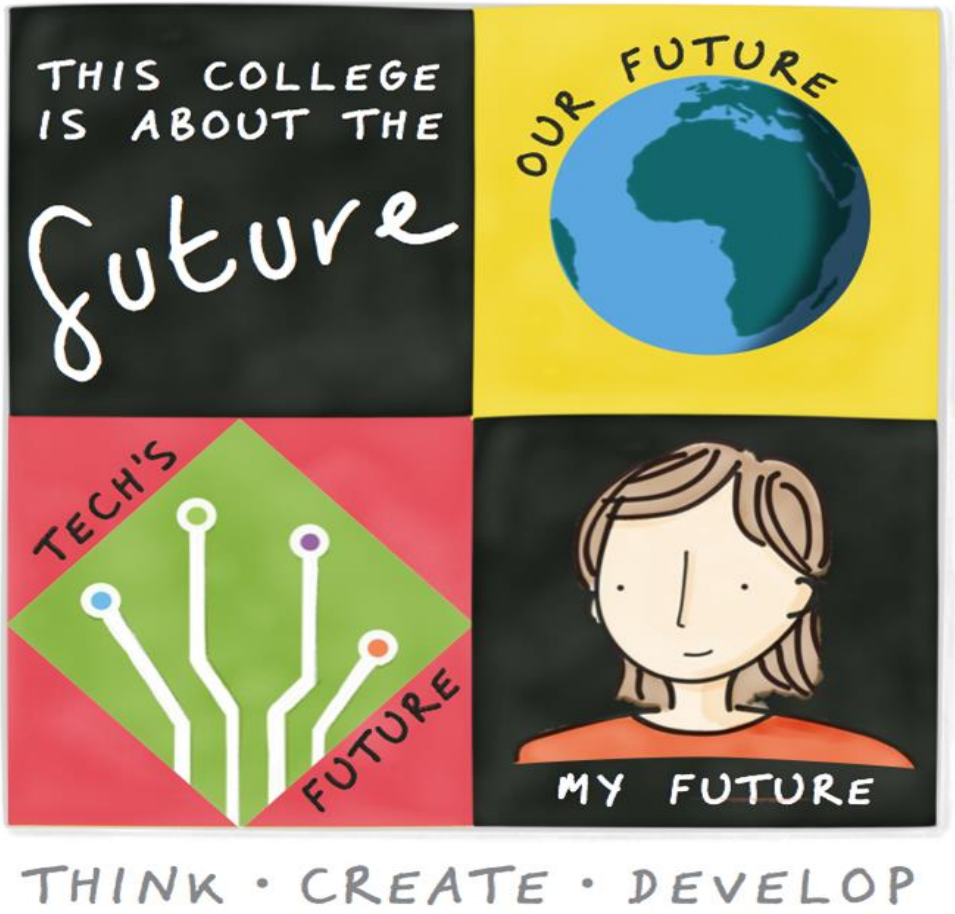

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