



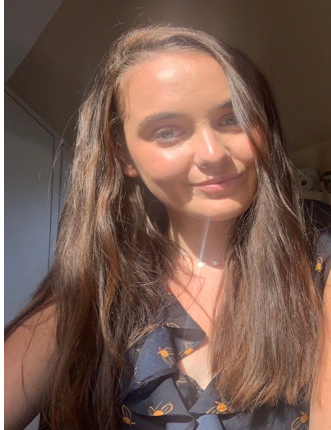
# Careers Centre 2030

A guide to the challenges and opportunities facing the class of 2030 and beyond

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Team Enterprise 2030  
STEP Programme 2020

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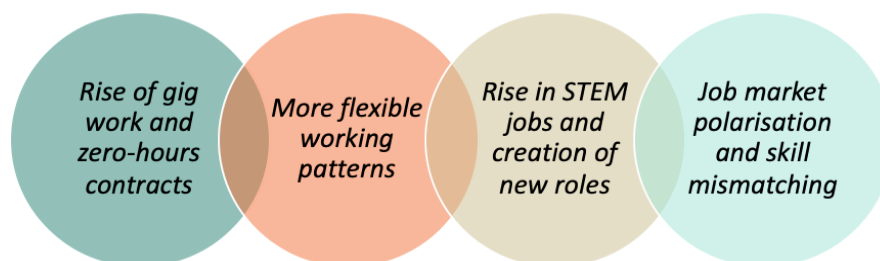
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## Summary

Significant changes in the global economy, workplace, and workforce by 2030 are projected to require graduates to adapt and learn new skills to remain competitive in an increasingly volatile job market. Despite a future characterised by uncertainty for university-leavers, adequate attention is yet to be given to understanding these trends and advising how universities should modernise their careers services to prioritise essential skills and qualities for graduates to learn in order to equip them in the most meaningful way to face the challenges of 2030. This research paper is divided into four chapters to highlight the major trends which will define the graduate experience of 2030 and beyond, understand the challenges and opportunities of the changing job market, and identify some of the ways universities should re-focus their attention towards dispensing the most appropriate lessons to the graduates of today and 2030.



Using the method of 'Horizon Scanning', Chapter One finds that the greater proliferation of technology in society and workplace coupled with an uncertain global economy will result in deeply-rooted changes in the workforce and workplace. These include, but are certainly not limited to: growing competition for jobs against automation and artificial intelligence, a major increase in remote working and flexible hours, greater difficulty for graduates to find graduate-level work, and a recentering of the global economy and therefore expertise to solve issues such as climate change away from the 'West' and towards so-called emerging economies such as Brazil and Turkey.

In this context, Chapter Two focuses on three of the major trends which will shape the 2030s, and to an extent, are already increasingly defining today's job market: zero-hour contracts, the gig economy, and remote working. In summary, while the findings presented in this paper highlight numerous challenges associated with these changes, it is also



identified that they may also bring fresh opportunities and spaces for innovation and progress.

Chapter Three highlights the disparity between the expected challenges of 2030 and the preparedness of graduates to meet those challenges. The paper refers to the term 'skill mismatching': the overeducation of a graduate to a position, thus relative disadvantage to their peers. Not only does skill mismatching lead to untapped potential, but also triggers secondary impacts such as stress and strained personal relationships.

Chapter Four concludes with some recommendations to the University of St Andrews Careers Centre to improve their services in order to best equip graduates to face the challenges of 2030. For example, this paper recommends that the Centre extends their support after graduation and putting on Wage Negotiation Workshops.



Changes in the global economy by 2030 will require graduates to **adapt** and **learn new skills** to remain competitive in an increasingly volatile job market.

We seek to understand these trends and advise how universities should *modernise their careers services* to equip graduates in the most meaningful way to face the challenges of 2030.

We focus on four areas, looking at the challenges and opportunities within each:

- the rise of gig work and zero-hours contracts
- more flexible working patterns
- rise in STEM jobs and the emergence of new roles
- job market polarisation and skill mismatching

## Introduction

As a team, we were asked to produce a report outlining the enterprise capabilities that will allow us to best respond to the challenges and opportunities of 2030. In order to focus our outcome, we chose to examine what the labour market of 2030 will look like and therefore what skills need to be developed by students to make the most of their careers.

Using the enterprising behaviours, attributes and skills identified under the 5 pillars of Enterprise Education Capabilities, we were able to identify numerous challenges and opportunities of the future labour market. Our report aims to prepare the University of St. Andrew's future graduates for the changing nature of the work of 2030. This report compiles the data and offers suggestions as to how the university can prepare their future graduates for the changing job market.

### Decision Making Process

Prior to commencing our research into the labour market, we discussed the possibility of exploring other key issues (see appendix A for survey results). These included:

- The Environment
- Health
- Technology

Although we considered these topics to be vitally important when preparing for the future, we decided to focus on the Labour Market to best engage the University of St. Andrew's student community with practical suggestions. We recognised that the majority of students worry about their future after university and it was therefore an appropriate topic to direct towards future graduates. This topic also allows us to include the progress of technology and its impact on future careers.

## Chapter 1

### Horizon Scanning

**'Horizon scanning' seeks to detect future developments and therefore understand how our society will function in the future. It involves examining threats and opportunities surrounding both technological and societal issues.**

According to the ONS the percentage of the UK population classed as graduates has increased from 24% in 2002 to 42% in Q3 of 2017.<sup>1</sup> This staggering figure places the UK as the 6th most educated OECD country.<sup>2</sup> In recent years this increase has been matched by the amount of high paying jobs, with no significant crisis of overeducation. Real wages for graduates, however, have decreased from their 2008 peak and could very well continue to do so.<sup>3</sup>


If such trends continue into 2030 an oversupply of university educated workers may reduce the wage premium provided by tertiary education, as in Hong Kong.<sup>4</sup> Differentiation in a competitive labour market, therefore, may well become more difficult and important. Wage stagnation amongst skilled labourers also stresses the need for more intervention, so as to better prepare graduates for wage contraction and negotiation.

#### The Workplace in 2030

By 2030, the workplace is likely to be more adaptable and flexible to a range of different styles of work. 57% of all current employees say that the availability of flexible working is important to them, and of the Generation Y workforce (born between 1980 and 2000), 92% consider flexibility a top priority.<sup>5</sup> These changing attitudes, coupled with changing technologies and external pressures such as climate change, will drive a shift towards remote working, flexible hours and a new balance between work and private life. Face-to-face meetings will become gradually less frequent as procedure is streamlined to maximise productivity. However, around-the-clock availability will continue to become more important.

Market volatility will drive increasingly flexible work arrangements, including more temporary or zero-hour employment contracts. Low-skilled employees in particular will face relative insecurity of employment- many will have to work on continuous portfolios of project-based assignments for a multitude of employers.

#### The Economy in 2030



The world is very uncertain, meaning any forecast of the future level of economic activity is subject to high levels of change and the future economy will be shaped by many factors. However, what is clear is that there will be rapid economic progress for the developing world over the next ten years, particularly in India and China which Standard Chartered Bank predicts to be the world's biggest economies by 2030.<sup>6</sup> The US is predicted to be a distant third while the UK will not even make the top ten, preceded instead by countries such as Indonesia, Turkey, Egypt and Brazil. Given China and India's future economic might, they may take a much bigger role in addressing global issues such as climate change, international security and global economic governance.

How quickly the UK economy will grow depends on the future size and productivity of the labour force. Little is known about how the current COVID-19 pandemic will influence and alter predictions. Moreover, the vast majority of economic projections suggest that, at least in the short term, Brexit will harm UK economic growth through its increase in barriers to trade. Study outcomes differ in concluding how the potential for growth is influenced by non-tariff barriers between the UK, the EU and non-EU countries, however, stronger links between countries are generally associated with faster economic growth. There is broad agreement among UK-based economists that stronger trade, investment and migratory links will boost the UK's future economic output.<sup>7</sup>

## The Workforce in 2030

The workforce is likely to change significantly by 2030. Some trends will remain the same, including a volatile world economy, competition for low skilled roles, and employer-led education and training. However, there are some features which are projected to change significantly due to various social and economic factors. These include: demographic change (more ethnic and age diversity), changing work environments (enabling a wider range of the population to work remotely, therefore expanding opportunities for otherwise excluded groups), and a growing number of jobs being filled by automated systems.<sup>8</sup>

With these significant changes, it is crucial for companies and individuals to adapt quickly to be synonymous with the pace of change. While many traditional jobs are likely to be filled by AI, there will also be significant opportunities for entrepreneurship and innovation to fill gaps in the market which have been created by an increasingly technologised economy and society. All individuals, but particularly graduates, will require new skills to help them stand out in an increasingly volatile, flexible, and demanding job market.<sup>9</sup>



## Chapter 2

### Working Style: Zero-Hour Contracts, Gig-Work and Remote Working

#### Background and Terminology

**Looking towards 2030, with the expected changes in work patterns and sector demands, combined with market volatility and economic uncertainty, we are set to see various shifts in both working styles and contract types.**

**Zero hour contracts** are a type of employment contract where the employer is not obligated to offer an employee a defined number of working hours and the employee is not obligated to accept any offered working hours. The employee receives pay for the hours they do work, which will vary significantly depending on demand. In February 2020, the number of people on zero-hour contracts stood at 974,000 and this number is set to rise in the next ten years.<sup>10</sup> Prevalence of zero-hour contracts is higher among young people than older people (*i.e.* those ages between 16-24) and are common in higher education sectors as well as retail, hospitality and health sectors.

**Gig work** is a type of labour market characterised by the prevalence of short term contracts or freelance jobs as opposed to permanent jobs and contracts.<sup>11</sup> Gig work is becoming more common for companies which want to cut costs and streamline their operations by outsourcing certain aspects of their operations to external companies, such as Deliveroo in the food and hospitality industry. Between 2016-2019, Britain's gig economy has doubled and now accounts for over 4.7 million workers.<sup>12</sup> In an increasingly volatile economy, in both the post-COVID-19 and also post-Brexit world, gig work is likely to become increasingly common and popular as full-time jobs are increasingly difficult to find. The increase in gig opportunities is also likely to become more prevalent with the rising opportunities in remote working.<sup>13</sup>

**Remote working** (also referred to as telecommuting, working from home, or 'geographically neutral employment') involves working outside of the centralised and traditional workplace, usually with the help of digital technologies.<sup>14</sup> From 2005 to 2017, there was a 159% increase in remote work and in the US at the start of 2020 there were 4.7 million remote workers, equivalent to 3.4% of the population.<sup>15</sup> The availability of remote working opportunities will only increase in the upcoming decade due to the prevalence of new technologies, climate change pressures, and efforts by employers to maximise productivity whilst cutting costs. Indeed, one study found that remote workers are, on average, 13% more productive.<sup>16</sup>

## Key Facts

- *Zero-hours contracts are set to rise in the next ten years and are bad news for graduates.*
- *Graduates could face a lack of job security plus dwindling career progression and personal development prospects as a result.*
- *Future opportunities for flexible gig work will promote innovation and have the potential to be lucrative for students and graduates.*
- *By 2030, remote working is set to be universal, with emerging trends in new sectors and employers looking for graduates with specific skill sets.*

## The Challenge of Zero-Hour Contracts


It's not hard to see why employers like zero-hour contracts. They allow for employers to flexibly meet changing demand and to transfer financial risk to the employee. They also have the potential to facilitate effective management of risk, reduce costs of training and can sometimes allow for employers to cut corners with employment obligations. The Trade Union Congress has recommended, in light of a recent survey of workers on zero-hours contracts, that the UK government should 'clamp down' on these contracts to 'curb the exploitation of workers'.<sup>18</sup>

Overall zero-hour contracts are not good news for employees. Here's why:

- Employees have little job security and high levels of uncertainty. Lack of job security and high levels of uncertainty commonly correlate with poor mental health and low levels of self-esteem.
- These contracts can have negative effects on the work environment and culture *i.e.* can fuel power imbalances in organisations. Employees may fear that if they decline offers of work this will negatively affect whether they will be offered additional hours in the future.
- Zero-hour contracts have the potential to contribute to the polarisation of the job market with low or medium skilled workers often competing for hours.
- Pay (gross hourly wage) is often lower in zero-hour contracts.

Although graduates are highly skilled they often do not go into the top positions in a company. With the rise of zero-hour contracts, both graduates looking to start out in entry-level positions and part-time summer/term-time jobs could be affected. In the long term, and after years of hard work, graduates want job security with scope for development and progression. A zero-hours contract would not be able to give them this.

## The Opportunity of Expanding into Gig Work



The flexibility of gig work is perhaps the most unique and exciting opportunity for the expanding economy. Although most gig working opportunities are based on zero-hour contracts, the expanding growth of the economy will suit individuals such as students who want to earn extra money separate from their full time studies or employment. So while gig work can lead to increased job insecurity for some, many opportunities are surprisingly steady despite often being dependent on other sectors, such as food and hospitality (which are usually very reliable and in-demand sectors).

Other benefits of the gig economy include:

- Encourages individual entrepreneurs and companies to innovate by creating services and applications which businesses originally did not know they needed.
- Increased overall profitability because the gig economy often makes it easier for customers to access the services and goods for a business.
- Over time there will be greater protection for workers as gig work becomes more common for a wider range of people.

## Learning to Utilise Remote Working

For graduates, the growth of remote working is exciting. It offers a flexible schedule, the ability to work from any location, reduced costs associated with commuting, food and other expenses that might traditionally be incurred and overall greater job satisfaction.<sup>18</sup> However, remote working is unlikely to be universal by 2030 and so for those graduates set on securing a remote position, the following should be considered:

- Certain professions have greater remote working opportunities e.g. technology-based roles such as software engineers and other professions requiring long periods of uninterrupted time.
- Writers, from online-only publications to company content teams, are also well-suited to take advantage of the remote working trend. Some less obvious sectors have growing opportunities e.g. telemedicine, from answering questions to prescribing treatment, is expanding.
- Employers looking for remote workers want specific skill sets: IT competence (send your CV as a PDF, link an online portfolio or blog, know the basics of hardware and software, have a backup internet connection via mobile tether, learn basic coding), good communication, organisation, independence and self-motivation. Building a CV that demonstrates these skills should be a priority.<sup>19</sup>
- The positive impact on employee work-life balance is obvious, however graduates should consider certain challenges associated with remote work: a recent study identified issues with collaborating, combating loneliness and unplugging after work (remote workers were found on average to work 9% longer).<sup>20</sup> Although 57% of remote workers spend 100% of their time working remotely, a mixture of in office and remote working is possible and should be considered.<sup>20</sup>



## Chapter 3

### Skill Set of 2030: New Jobs and Job Mismatching

#### Background and Terminology

This study has looked into the types of work that will likely exist in 2030 as a means of preparing graduates for what skills and subjects they should be learning to be successful in such jobs. Skill mismatching has been a persistent problem for UK graduates. Recent developments in the labour market, however, have meant that the penalties for being mismatched have multiplied.

It has been suggested that new jobs likely to exist in 2030 include organ creator, augmented-reality journey builder, biofilm installer and earthquake forecaster.

A **skill mismatch** occurs when a graduate is 'overeducated' relative to their assumed employment position. This mismatch means that a graduate is unable to fully exploit the wage premium tertiary education provides, and is thereby underpaid relative to his matched peers. According to Green and Henseke (2016) the difference in earnings between matched and mismatched graduates has increased in recent years.<sup>21</sup> It has also become more difficult for mismatched graduates to transition to higher paying (matched) jobs.<sup>21</sup>


#### Key Facts

- *85% of the jobs that today's students will be doing in 2030 haven't been invented yet.*<sup>22</sup>
- *Most new jobs will be centered around creation and innovation.*
- *Students can be guaranteed a future career with qualifications in science, technology, engineering and mathematics (STEM).*<sup>23</sup>
- *Around 30% of UK graduates are mismatched.*<sup>21</sup>
- *Overeducation has increased slightly in recent years, peaking at 16.3% in 2016 (% in employment considered overeducated).*<sup>24</sup>
- *33.9% of graduates without jobs transitioned to grad schemes in 1997/2001 versus 29.6% in 2006/2012.*<sup>21</sup>

#### The Opportunities of the New Jobs Market

Although some of the jobs suggested to exist include ideas we have never heard of (e.g. trash engineer!), some of the career routes can be adapted from what students are learning today.





One example is ‘**neuro-manager**’ which is a job focused on employee welfare. Routed in the study of neuroscience, neuro-managers would focus their knowledge on helping raise morale in the workplace by understanding and augmenting the chemistry of the brain.<sup>25</sup> Another potential 2030 career route for the Computer Scientists out there is ‘**ethical hacker**’. Even today, cyber attacks are becoming more and more prevalent and large companies are already investing in protection from such attacks, as it is estimated the average cost of a virtual attack is \$13 million.<sup>26</sup> However, in 2030 ethical hackers might be hired by the public administration sector to deal with the ill-natured type of hacker. They will be asked to use their technological powers for good and fight in the cyber war. Consider that: superheroes in 2030 might all be computer geeks.

So the good news: in order to prepare for the new jobs in 2030, the university may not have to establish new degree subjects. Students should be encouraged to think about their subjects in new and innovative ways to stay ahead of the market and use their skills in ways they may not have thought of.

## The Challenge of Job Mismatching

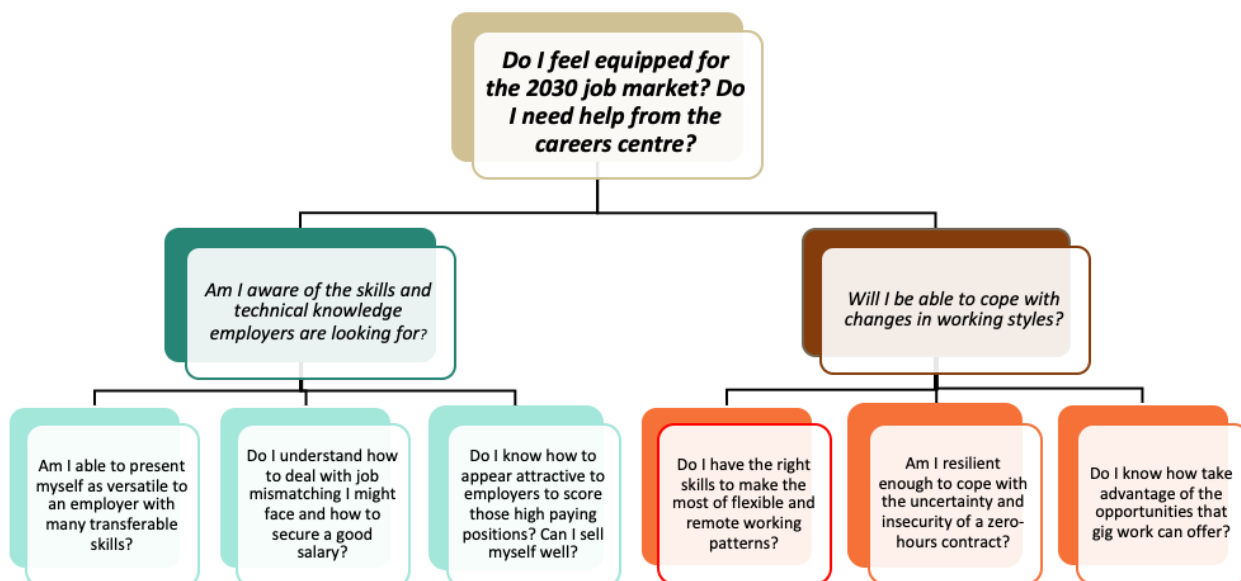
The proportion of mismatched UK graduates has been relatively stable over the past decade (30%), owing to the persistence of graduate job growth. The penalties for being mismatched, however, have become more severe due to the hollowing out of middle income jobs, which previously functioned as a cushion for mismatched graduates.<sup>27</sup>

The ability of unemployed graduates to transition to a matched role after graduation has also decreased substantially, particularly for men. This is at least partly due to weaker post-2008 job growth. Oftentimes graduates settle for underskilled positions (**rational mismatching**) in order to progress within a firm’s internal structure, or for a higher paying job further down the line. The percentage of those that transition from mismatched to matched positions has decreased slightly in recent years, from 13.2% to 12.8%, pointing to some difficulties in upwards mobility. All of these problems are further exacerbated (and set to worsen) by virtue of scant policy attention and the lack of government intervention.<sup>28</sup> Job mismatching has been shown to lead not only to lower earnings, but also to negative physical effects, amongst them stress, lower productivity and strained familial relations.<sup>29</sup> The developments described above highlight the importance of securing skill appropriate positions, as well as the importance of support well after graduation. The Careers Centre should stress the importance of such changes, and should direct attention at avoiding the pitfalls of overeducation.

## Chapter 4:

### Conclusion and Recommendations

Think about a student in 2030 about to graduate. They will probably ask themselves whether they feel equipped and prepared to start their job hunt or enter their future role. Implementing a structured problem solving/decision making strategy taught in the STEP programme (issue trees), we decided to put ourselves in the shoes of a 2030 graduate and envisage their potential thought process, in deciding whether to approach the careers centre for help. Following on from this exercise we were able to identify useful and actionable recommendations for the careers centre in 2030.



### **Recommendations for the Careers Centre**

*Based upon the findings of this report and the issue tree above, we have a number of key recommendations for the careers centre to help equip the graduates of 2030.*

## Wage Negotiation Workshops

The continued stagnation of real graduate wages, when coupled with the persistence/growth of job mismatching (both rational and involuntary) has highlighted the importance of supporting students at post-graduation stages. Marks and Harold (2009) have found that groups which negotiated for salaries managed to increase their salaries by an average of \$5,000.<sup>30</sup> There was also considerable difference in outcomes depending on the type of negotiating tactic used.

Some UK universities provide relevant advice and tips.<sup>31</sup> However, no UK universities currently offer structured workshops or detailed advice on negotiating wages. The **introduction of such a programme/workshop could be incredibly beneficial**, and could help St Andrews graduates differentiate themselves in an increasingly competitive job market.

## Careers Centre Support Extension

Currently, the University of St. Andrews Careers centre offers support, mentoring and advice for up to three years after graduation. Our results suggest that this is not long enough and **propose that the Careers Centre extends its support to students for life**. As our study has shown, the labour market is likely to change rapidly over 10 years and therefore a support span of 3 years after graduation is not enough. Offering access to services will ensure that, should students get stuck in a mismatched job, they have access to skills development workshops and advice.

The University of St. Andrews Careers Centre currently ranks eleventh in a league table produced by Times Higher Education.<sup>32</sup> In first place is Loughborough University who similarly only offer support for up to three years after graduation. The University of Dundee, in third place, does not have an expiration date on their careers services for graduates and even offers support for students from other universities for one year after graduation.<sup>32</sup> Therefore, we strongly believe that St. Andrews should follow a similar policy as our neighbours in Dundee and offer support to graduates indefinitely. Doing so would improve the reputation of the University of St. Andrews and act as a substantial selling point for prospective students.

## Continuation and Adaptation of STEP Programme

Collectively, we have come to the decision that **continuation of the STEP programme would be worthwhile to equip graduates with the skills they will need in the ever-evolving workplace**. Central to this will be yearly updating of the STEP programme and enterprise capabilities to match workplace trends in terms of skills demands and

desirable attributes. In 2030, key skills are set to change.<sup>33</sup> Skills are likely to be focused around:

- Cognitive flexibility
- Digital literacy
- Emotional and social intelligence
- Creativity and innovation

STEP provides an opportunity for students to gain first-hand experience working in a team on a real-life project and for STEP to grow, projects could also be collaborative with businesses and industry partners. STEP should continue to be both inclusive and flexible as it goes forward. Flexibility is key to ensure participation and engagement across the student population and to ensure that those with commitments *e.g.* childcare, part-time jobs *etc* will still be able to benefit from the programme. It complements a more traditional internship with a greater focus on remote collaboration and teamwork, and is a more viable option for students not in their penultimate year of study.

## Design of New Skill Based Programme

As well as the continuation of the STEP programme for the reasons explained above, **we propose the development and implementation of a new, skills based programme.**

Depending on the number of applicants, this programme would either divide successful applicants into teams or organise them to mimic a company workforce, with each individual taking on a different role within the company. These roles may include:

- Product design
- Marketing
- Secretary
- Finance
- Leadership

Whilst all students should be involved in all aspects, they should lead in their area. The team would then begin the development of a startup, agreeing on a product or service concept and developing a business plan with details of finances and marketing strategy. Business concepts could be presented to the Careers Centre with the possible awarding of a small sum to launch the best ventures.

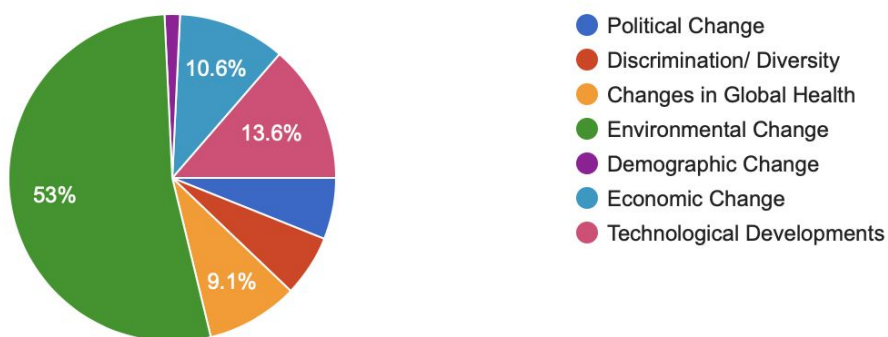
A programme such as this would be invaluable in developing skills such as teamwork, leadership, creativity and innovation whilst also providing first-hand, practical workplace knowledge that can be directly applied to the workplace. If carried out in the holidays it would provide a remote working opportunity, whilst running it as an extracurricular activity throughout a semester would allow more active and present collaboration. Both would serve to benefit St. Andrews graduates tremendously in terms of their capabilities and their CV.

## Appendices

### Appendix A: Survey Result

Changes in which of these areas do you think will be most impactful over the coming decade?

66 responses





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