

Nottingham Business School

Principles for Responsible Management Education:

Sharing Information on Progress Report 2019



**NOTTINGHAM
BUSINESS SCHOOL**

NOTTINGHAM TRENT UNIVERSITY 



Highlights in the reporting period from 2017-2019



Principle 1: Purpose

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NBS became PRME Champion and leads the PRME Champion Project 'Carbon Literacy Training for Business Schools'.

Principle 2: Values

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The UN SDGs are integrated into every course/programme at NBS. First years are introduced to these values from day 1.

Principle 3: Method

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Every student can choose further curricular and extra-curricular projects to focus more on the SDGs, in addition to the capstone modules where the SDGs are part of the core curriculum.

Principle 4: Research

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The Values-Driven Leadership course enables cross-sector participation in ethical action aimed at systemic change to enable responsible business and professional practice in Egypt, Kenya and South Africa.

Principle 5: Partnerships

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NBS has collaborated with the National Health Service (NHS) in England to integrate the SDGs into the health and care sector.

Principle 6: Dialogue

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NBS Academics have written one of the leading textbooks in how to integrate the SDGs into management education.

Global Summer School offers to students worldwide to learn about 'Transformational Leadership and the SDGs'.

Operations/Nottingham Trent University

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NBS is supported by the award-winning operations in Nottingham Trent University ranked as the fifth most sustainable university in the UI GreenMetric World University Ranking and third in the People and Planet University league.

Message from the Dean

Nottingham Business School (NBS) has always taken its responsibility for developing responsible practitioners, managers, leaders and specialists very seriously by incorporating the values of responsibility and sustainability in everything that we do.



Since our last PRME report in 2017, NBS became PRME Champion and is recognised as one of the leading business schools in mainstreaming the UN Sustainable Development Goals (SDGs) in curriculum, research and partnerships.

Indeed our mission and purpose is 'delivering education and research that combines academic excellence with positive impact on business and society' and I am particularly proud of the fact that this is woven into the fabric of our work-culture and integral part of our student and staff community.

Thus since our last PRME report in 2017, NBS became PRME Champion and was recognised as one of the leading business schools in mainstreaming the UN Sustainable Development Goals (SDGs) in curriculum, research and partnerships.

SDGs are now integrated into every course/programme at Nottingham Business School (NBS). First year students are introduced to these values from the first day via a capstone module. NBS has then broadened its approach where academics have gone one step further and have integrated SDGs into their modules as part of the curriculum development where possible.

As part of continuing professional development, students are encouraged to choose further curricular and extra-curricular activities to focus more on SDGs as part of their transformational leadership development journey.

We have invested significant resources for integrating SDGs. NBS has a team of academics aiming to help embed sustainable development in all the school's activities. Our cutting-edge research in this field guides our policies and actions. Our Sustainability research through the Responsible and Sustainable Business Lab (RSB) not only makes an important contribution to the School and University's research reputation, but also disseminates our ideas through top-tier journals helping the global community of scholars and practitioners and thus contributes to the development of the next generation scholars and educators. Since 2014, more than 107 world leading and internationally excellent articles have been published by our colleagues in responsible and sustainable business area, with many more peer reviewed papers, books, text books and practice orientated articles.

NBS collaborated with a wide variety of public, private and not for profit organisations to help students develop skills and experience related to sustainable development. NBS strives to have real world impact on societal and environmental challenges by continuing to work closely with these organisations.

To cover the entire range of our activities on responsible and sustainable education, would require a major book in itself. This report presents some highlights of the prominent areas of our work since the 2017 report, organised according to the 6 Principles of Purpose, Values, Method, Research, Partnerships and Dialogue. It also covers how NBS is supported by the award-winning operations in Nottingham Trent University (NTU) ranked as the fifth most sustainable university in the UI GreenMetric World University Ranking and third in the People and Planet University league.

I hope you will find it of value and interest.

Professor Baback Yazdani
Dean of Nottingham Business School
Nottingham Trent University.

Principle 1: Purpose

Introducing Nottingham Business School



NBS became PRME Champion and leads the PRME Champion Project 'Carbon Literacy Training for Business Schools'.

We will develop the capabilities of students to be future generators of sustainable value for business and society at large and to work for an inclusive and sustainable global economy.

Nottingham Business School was named as a PRME Champion 2018-19 during the World Economic Forum in Davos

Over 40 academic leaders and corporate executives, including deans from top business schools and Chief Executives from leading businesses, met to discuss gaps in business and management education. Nottingham Business School was honoured to be named one of three new UK Champions. The PRME Champions are intended to serve as case studies and model exemplars to other higher education institutions globally.

Melanie Currie, Deputy Dean at NBS, spoke about the achievement:

“We are delighted that NBS has been unveiled as a PRME Champion. As a PRME Champion we will continue to contribute to thought and action leadership on responsible management education in the context of the United Nations sustainable development agenda. At NBS we are committed to using the global goals in our teaching, research and partnerships and we look forward to sharing our learnings across the PRME community.”



As a PRME Champion, Nottingham Business School commits to:

- Working collaboratively to achieve higher levels of performance in transforming business and management education in five key areas: curricula, research, educational frameworks, sustainability-based partnerships, and thought leadership.
- Serve the broader PRME community through active engagement with existing PRME Chapters, PRME Working Groups, Global Compact LEAD, and other global opportunities, as well as to support broader and deeper implementation of sustainability principles in the institutional context of the PRME initiative.
- Contribute to broader UN goals and issues, particularly helping to realize the Sustainable Development Goals.

This announcement recognises the leading role that the UK and Ireland PRME Chapter plays in promoting the Principles of Responsible Management Education globally and the hard work of our member organisations.



NBS is leading one of the PRME Champion Projects: Carbon Literacy Training for Business Schools (CL4BS)

What if every new recruit into corporations from the world's business schools was qualified as Carbon Literate? What if they knew the relevance of climate change to their chosen profession and could speak from the heart of its risks and opportunities to their future employers – and know how to act on that?

Building on an existing and successful Carbon Literacy Training framework co-developed by the Community Interest Company Cooler Projects, and implemented in BAFTA, BBC and ITV to address these challenges in the television sector, the Carbon Literacy Project for Business Schools will be designed in a way that it can be scaled up and disseminated across Europe and beyond.

One of the new features will be that it is first targeted towards the staff development of academics who then roll it out across their own Business School. Another feature will be the discipline-specific modules for Carbon Literate Accounting, Corporate Strategy, Economics, Marketing, Operations and Organizational Behaviour/HR. Finally, an Executive Leadership module will be conceptualised to help the senior management in business schools to embed carbon literacy and climate change mitigation into the curricula.

The Carbon Literacy Project has been enthusiastically embraced by all the PRME Champions, as it responds to the gap of climate change education within Business Schools.

3 Step Approach for Carbon Literacy Training:

1

The first part, 'Climate Change, Business and You', has been developed—a three-hour package available to all as a general module introducing the science behind climate change and the relevance of business to climate change. We are running trials – please contact Rachel.Welton@ntu.ac.uk to take part!

2

'Application to function': Contributions of the discipline in question are highlighted and best practice shared on how to mitigate climate change. In 2019 three international webinars are planned; Accounting, Finance and Operations. If you are interested in taking part in these webinars, please contact petra.molthan-hill@ntu.ac.uk

3

'Carbon Literate Action': Every academic will be encouraged to design an Action Plan on how they will integrate climate change education into their teaching and will be familiarized with a student facing training package on how to encourage students to take action.

Generally, the Carbon Literacy Project has been enthusiastically embraced by all the PRME Champions, as it responds to the gap of climate change education within Business Schools. Many of the active PRME Champions are collaborating with the project, these takes many forms; assistance in the development of teaching materials, customisation and extension of discipline specific packages and training the trainer' packages to facilitate the international roll out. In addition, the Champions group are facilitating international data collection to build a comparative international study of climate change conceptualisation.





Pass it on

‘Pass it on’ aims to show how pop music can be used as a way to discuss Climate Change and Climate Action.

‘Pass it on’, a collaborative effort between The University of Winchester, Nottingham Business School and OIKOS International students aims to show how pop music can be used as a way to discuss Climate Change and Climate Action (SDG 13), and to show that young people have a voice on the subject. During a workshop at Nottingham Business School organised by Dr Petra Molthan-Hill as part of developing carbon literacy training for business schools, OIKOS international students and staff of NTU’s Green Academy were asked to write a paragraph each about a) what climate change means to them, b) what the environment means to them, and c) what the future looks like to them. From these responses, Glenn Fosbraey, Senior Lecturer in Creative Writing at The University of Winchester,

shaped them into lyrics, wrote the music, and then brought it to the University’s recording studios where it was produced by Niall Thomas, sung by Winchester graduate Hannah Jacobs, and played by members of staff.

The song can be used in HE as both a template of how to engage students from different countries, subject areas, and universities in a proactive discussion about Climate Change or as a conversation starter that may elicit new ideas or projects. It is especially suited to discuss actions related to SDG 7 and SDG 13 but as it tries to ‘shake up’ students into keeping our world as beautiful as it is, it can be used to prompt behavioural changes with regards to any of the SDGs.

Listen to ‘Pass it on’ at www.youtube.com/watch?v=VwgbFjb6Ado



NBS is recognised as one of the leading business schools in mainstreaming sustainability in the curriculum. In the next two years, we will build on our mission “to combine academic excellence with impact upon business and society” by developing the carbon literacy training into a package that can be used within our own school but also worldwide in business schools and corporations.

Principle 2: Values



We will incorporate into our academic activities, curricula and organisational practices the values of global social responsibility as portrayed in international initiatives such as the United Nations Global Compact.



1. Mainstreaming the UN Sustainable Development Goals

NBS has been committed to mainstreaming the UN Sustainable Development Goals (SDGs) in all its courses since 2016. The re-visioning of SDGs underpins our aspiration to continue to be recognised as a leading exemplar of responsible and sustainable educational institution.

Examples for mainstreaming the SDGs in the curricula at undergraduate level are first year Personal and Academic Development modules and final year Leadership and Employability modules. All undergraduate students must complete these modules as part of their degree. At postgraduate level, Transformational Leadership Development is a module where SDGs are mainstreamed in its delivery.

SDGs were included into the Curriculum Refresh project, which as explained in our PRME SiP report 2017 was designed to promote students' abilities to contribute in meaningful ways towards current and future global challenges through the delivery of courses. The values of global social responsibility have guided our assessment of courses and further development. The School is ensuring that students are exposed to, and can engage with, the ideas of sustainable development and responsible management from the earliest possible stage in their university studies. Our goal is to develop forward thinking and responsible graduates and business leaders.

The School achieves this through the formal curricula, broadening approach in modules and the provision of a wide range of Continuing Professional Development (CPD) opportunities such as volunteering and activities with community organisations to contribute to the implementation of SDGs.

One of the School's seven learning goals is that upon successful completion of their programme students should be able to: "critically evaluate ethical and sustainability-based issues within their field of study". By creating a vibrant, inclusive and innovative teaching, learning and assessment environment, NBS supports students to incrementally develop the necessary knowledge, skills and behaviours to be able to critically review business practices through the lens of ethics, responsibility and sustainable development. From the outset, the School provides real life cases and examples to enable students to 'learn by doing' and embeds reflection in assessment strategy such that students capture critical learning points and consider their future actions.

NBS has been committed to mainstreaming the UN Sustainable Development Goals (SDGs) in all its courses since 2016.



UNDERGRADUATE

Personal and Academic Development - #NBSDiscover

All new undergraduate students entering the School undertake a common induction project based on a contemporary business issue. The project provides an opportunity for students to 'discover Nottingham, discover NBS and discover business'. The theme of the project is carefully selected to exemplify the School's mission, to provide education and research which impacts business and society. Inspired by the BBC documentary Blue Planet II which successfully drew attention to the global problem of plastics waste, #NBSDiscover 2018 challenged students to examine the use and disposal of plastics in Nottingham city centre.

Working in small groups, all first-year students took to the city's streets to observe how organisations and the public use plastics in everyday life, and track what happens to plastics waste generated within the city centre. Groups were encouraged to consider the different types of plastics

used, facilities for disposing of plastic waste, signs of plastics substitutes, and evidence of initiatives to help combat the environmental challenges that extensive use of plastics generates. Students visited bars and restaurants, museums and galleries, parks and public spaces to observe the extent of the problem.

To contextualise the task and position the plastics problem as a multi-faceted business issue #NBSDiscover 2018 commenced with keynote lectures from Ed Wills Global Marketing Director of Riecke Packaging, Lizzie Carr, NTU Outstanding Alumni award winner 2018 and founder of the campaign, Plastics Patrol; and Lea Hawkes, General Manager at the waste recycling company, Veolia. Evidence gathered from the induction project is taken forward to form the basis of ongoing work throughout the students' first year of study in a core module 'Personal and Academic Development'. As the module progresses,

students attend a series of Challenge Lectures delivered by businesses and other stakeholders. The lecture series in 2018/19 showcased how manufacturers, retailers, consumers, policy makers, governments and global society must all cooperate to arrest the issues arising from plastics production, consumption and waste. The guest lectures run alongside tutor-led seminars which introduce students to the UN Sustainable Development Goals and related topics to include the triple bottom line accounting concept, social marketing and values driven recruitment and selection. To consolidate their learning, students are required to apply their knowledge and understanding of ethics, responsibility and sustainability issues to a real business scenario. The report students produce focuses on the business implications of planned changes to the NTU Catering plastics consumption and plastics waste management strategy.





“#NBSDiscover is a unique induction project and is specifically designed to immerse all new NBS undergraduates in a current issue which has implications for business and society. This year’s challenge considered a topic which is now a major concern for policy makers, governments and environmentalists, with businesses and consumers also starting to become more aware of the impact of their plastic waste. Embedding the project in a core module has enabled the School to provide students with a wider and deeper exposure to the issues and truly lay the foundations for ethical, responsible and sustainable business education.”

Amanda Thompson
Director of Taught Undergraduate Programmes at NBS



Leadership and Employability

Another example of the core final year undergraduate module across the School is Leadership and Employability. BA (Hons) Business students take part in an award-winning greenhouse gas management student consultancy project and details of this project are in Principle 3: Method.

POSTGRADUATE

Transformational Leadership Development

Transformational Leadership Development is a core module that all NBS postgraduate students must undertake. Personal and professional development and transformational leadership (SDGs) are two main streams of this innovative module. Details of this module are in Principle 3: Method.

2. Broadening the UN Sustainable Development Goals

All NBS courses have integrated at least one SDG as a minimum and many courses have more than one SDGs in different modules. Roadmaps and a tailored mapping exercise of the SDGs in NBS offered module level insights and identified best practice of integrating and broadening the SDGs in teaching. The SDGs mapping exercise evidenced that all SDGs are integrated in modules across the School. This is part of broadening our approach where NBS academics have gone one step further and have integrated SDGs in modules as part of curriculum development wherever relevant.

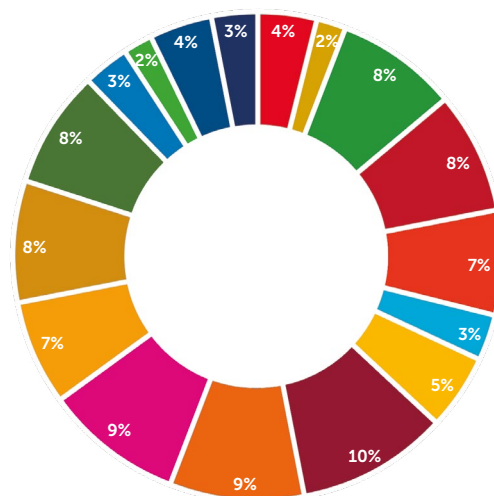


Figure 1: Percentage of each SDG taught within NBS

SDGs Mapping of Modules

In the academic year 2018/19, a follow-up audit of the Curriculum Refresh roadmaps was conducted in NBS. The 5 academic departments – Accounting and Finance, Economic, Marketing, Management and Human Resource Management – stated intentions to further highlight the SDGs in the curriculum modules were mapped. Each department allocated resources for a Sustainability/PRME representative, who was tasked to collect evidence and examples of how the SDGs were embedded in different modules with an SDG Capture Form (see figure 2). Colleagues shared their academic practice relating to the SDGs in their departmental meetings and exhibited a wide range of examples on how to integrate the goals in learning and teaching and helped identify best practice.

The data collected showed that together all NBS departments are teaching all the UN global goals. The SDG wheel on the previous page demonstrates that the most popular goals to include are SDG8 (Decent Work and Economic Growth) and SDG10 (Reduced Inequalities). As a result of SDGs mapping, some examples are provided on how all five NBS departments have broadened their approach and integrated SDGs into teaching activities.

Accounting and Finance

The Accounting and Finance department engages with all 17 SDGs by integrating in various modules. For example, Accounting and Finance for International Managers module (Undergraduate Year 1) includes a project-based assignment that requires the students to develop a start-life up business where they are required to contend with real life economic, social, ethical and environmental issues. Year 2 undergraduate students on the Corporate Financial Analysis module, as part of their coursework and final exam, are expected to conduct a complete analysis on a company. The analysis does not only focus on the financial issues, but they conduct analysis on the economic, social, governance and industrial aspects. Another good example of SDGs being integrated is in the Level 6 Corporate Governance and Risk Management module. Students review risk and governance issues every week, which brings the students face to face with SDGs of different types. The summative coursework includes a company case study where the focus is on the SDGs.

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Mapping the UN Sustainable Development Goals (SDGs)

Please complete form and email to muhammadusman.mazhar@ntu.ac.uk

Your name _____

List all the modules, which you teach and where you have integrated the SDGs:

Fill the section below for one module of your choice which you see as the most advanced with regards to the integration of the SDGs:

Context (tick or highlight all that are relevant)	
Level of study <input type="checkbox"/> Undergraduate year 1 (level 4) <input type="checkbox"/> Undergraduate year 2 (level 5) <input type="checkbox"/> Undergraduate year 3/4 (level 6) <input type="checkbox"/> Postgraduate (level 7)	Type <input type="checkbox"/> case study used in your teaching <input type="checkbox"/> module content or teaching methods <input type="checkbox"/> module assessment <input type="checkbox"/> a personal change in your awareness, understanding or attitudes <input type="checkbox"/> research or research-informed teaching (see back of page) <input type="checkbox"/> extramurally, via volunteering or charity work <input type="checkbox"/> other

Which of the Sustainable Development Goals does this relate to?

1 POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	SUSTAINABLE DEVELOPMENT GOALS

Give a brief description of how you have integrated the SDGs in your module (if not highlighted above please tell us which module):

We are looking for good case studies for the PRME report can we use yours: Yes/No

Figure 2: Form for SDGs mapping of modules and identifying good practice examples

Economics

Based on the SDGs mapping evidence, the Economics department has integrated UN SDGs in its modules to discuss relevant issues. On one MSc programme, for example the module “Economic Analysis of Global Issues” weaves both environmental sustainability issues (e.g. climate change, natural resource depletion) with macroeconomic challenges (income inequality, poverty, resource curse). On this module, students are expected to submit two empirical pieces of work that test core economic principles using real life data on pollution and economic growth. This summative assessment (50 % each) ensure that learners can relate economic tools (e.g. carbon taxes, fiscal spending) and their applications to core SDGs.

Human Resource Management

The Department of HRM has integrated SDGs and as a whole, considers the whole notions of ‘Good Work’, ‘Equality and Diversity’, and ‘Well-Being’ in the workplace and beyond. The most popular SDGs are SDG3 (Good Health and Well-Being), SDG4 (Quality Education), SDG5 (Gender Equality) and SDG10 (Reduced Inequalities). SDG8 (Decent Work and Economic Growth) is integrated by every module leader based on the feedback received, making this SDG unsurprisingly the

area the HRM Department is strongest in. For example, in a first-year undergraduate module ‘Foundations of Managing and Organising’, SDG 8 is fully integrated and is a core theme. The UK Government’s ‘Taylor Report’ is integrated throughout this module where the themes of flexible work both for and by employees forms the core narrative and main assessment point of this module. Contemporary Issues in HR is a final year undergraduate module that examines the dimensions of job quality, job security, working time, skills and task discretion, and growing work pressures.

Management

Management department has integrated all SDGs in various undergraduate and postgraduate courses, as the data suggests. For example, Enterprise & Business Development (EBD) (first year undergraduate module) and Responsible & Sustainable Leadership (MBA module). In EBD, students research a case study company and its competitive environment. They identify different types of company practices that demonstrate corporate commitment to acting ethically and sustainably. These practices are mapped against SDGs framework using the SDG Indicator Wizard, which may demonstrate company’s commitment to implementing sustainable development.

Marketing

The Marketing department has integrated all SDGs in their teaching. For example, a particularly interesting module to demonstrate the comprehensive coverage is the Strategic Marketing & Brand Management module. The content is not taught through a traditional PESTLE analysis but extend this (and the student cognition) to the lenses of social, economic and environmental (explicitly linked to the SDGs) and explored through the impact upon the corporate reputation; the assessment reflects this too.

3. Enriching the Curriculum: Continuing Professional Development Opportunities

In parallel with in-curricular activities and broadening of SDGs, the School encourages students to contribute to the SDGs as part of their Continuing Professional Development (CPD) activities. NBS offers a wide range of CPD opportunities both within and outside the curriculum in relation to SDGs, a wide choice to enrich the student's experience further. Some of the examples are:

Sea Change Upcycling Challenge

As an extension to the #NBSDiscover project, student were invited to take part in an exercise to review their own use of plastics, particularly single use plastics, and to make a personal pledge to reduce, recycle, repurpose or replace plastics. In February 2019, 237 first year students, accompanied by second and final year student mentors participated in a grand upcycling challenge. The aptly named, 'Sea Change' event, tasked NBS students to devise creative and entrepreneurial solutions to help businesses recycle, reuse and upcycle plastics, or change to more sustainable materials and so reduce the impact of plastics on our oceans and marine life.

To provide a flavour of the event our students helped Plastics Patrol, a campaigning organisation working to combat plastics pollution, to consider ways in which plastics collected on litter picks could be put to use in local communities, they helped NTU's School of Art and Design

to think of ways to upcycle VHS/SVHS, U-Matic tapes and other old format tapes and they helped NTU's Marketing team to think of attractive, yet sustainable Open Day merchandise. A highlight of the event was a challenge set by Oath Project students within NBS calling on fellow students to examine ways to reduce the amount of plastics used on fancy dress night's out in Nottingham...., think glitter, fairy wings and other accessories....!

Amanda Thompson, Director of Taught Undergraduate Programmes at NBS, said:

“We need to work collectively to bring about a ‘sea change’ in our attitudes towards plastics consumption. This event gives our students the opportunity to apply the skills and creativity they are acquiring as part of their degree courses to encourage businesses to reduce, reuse, and recycle plastics and so preserve the environment for future generations.”

Give Back Week

In another new initiative, 'Give Back Week' NBS has organised a series of volunteering opportunities in the local community. The activities are designed to support students to develop key skills such as team-working, communication, self-confidence and leadership whilst contributing to lives of the people of Nottingham. The week will see our students creating a community cricket area at a primary school, restoring a historic walled garden to its former glory, saving the city's community farm, supporting Sea Cadets and cultivating a community garden in the midst of a city estate.

Similarly, there are other modules where CPD are integrated. For example, final year undergraduate students must complete the Leadership & Employability (L&E) module, where they are required to do a minimum of 25 hours of CPD and reflect on these as part of their individual report. This is an opportunity for students to engage with CPD relevant to SDGs. For example, the Sustainability in Practice (SiP) certificate offered to students and staff is one of the examples of an innovative project, more info below. Postgraduate students completing the Transformational Leadership Development module have to carry out 20 hours of CPD as minimum and they can choose and conducts SDGs related activities. Final year undergraduate and master students can engage with the Thinkubator Challenge, which is a ground-breaking event, providing access to free expertise to help support the growth of both UK and international businesses and solve many tricky environmental and social problems.



Since 2016, NBS is contributing to achieving the UN Sustainable Development Goals in everything we do. These values will guide our assessment and further development of all activities.

Principle 3: Method



We will create educational frameworks, materials, processes and environments that enable effective learning experiences for responsible leadership

NBS has a team of academics aiming to help embed sustainable development in all of the school's activities such as curriculum, research and operations.

It is the purpose of the NTU's Green Academy team to support staff and students in NBS to work towards sustainable solutions.

The School has a Sustainability Coordinator and all of the five departments have their Sustainability/PRME Representatives to assist the Sustainability Coordinator and help colleagues in their respective departments on how they can integrate SDGs into their curriculum. NBS has an Academic Lead for PRME with a key role to integrate the PRME principles and SDGs in curriculum, research and partnership activities in the school through responsible management education.

The academics in the business school are further supported by NTU's Green Academy providing expertise in Education for Sustainable Development (ESD) and the United Nations Sustainable Development Goals (SDGs) across all faculties at NTU and it is the purpose of the team to support staff and students to work towards sustainable solutions. The team offers bespoke consultancy for individual academics, module and course teams to integrate sustainability into the curriculum along with leading or supporting several external accreditations.

The NTU Green Academy was first initiated as part of the Higher Education Academy (HEA) Green Academy Change Programme in 2013/14. The Green Academy supported the university-wide Curriculum Refresh process through the co-creation of the

sustainability-related actions and references. They provided academic colleagues with support throughout the process with a range of workshops, learning materials and offer of one-to-one consultancy sessions. Resources such as the Education for Sustainable Development: Future Thinking learning room were launched (Spring 2016) to provide ideas for staff to integrate sustainability. It contains over 1500 resources relating to the UN SDGs. Estate Case Studies (projects on campus) and Community Case Studies (projects in the local communities) were also collated to be used as teaching materials. The Green Academy also offered monthly workshops and tailored sessions for course and module leaders looking to integrate ESD themes into their teaching. The sessions explored the SDGs and their relevance to specific academic disciplines as well as the importance of interdisciplinary collaboration.

After assessing course content against the expected outcomes, course leaders across NTU submitted a Course Roadmap during 2016/17, showing how each expectation was already addressed in the course, and if not, how this could be included or further developed in the short-term and long-term. Each roadmap was then reviewed in line with existing quality framework and procedures. After being finalised, the documents were signed off by the Dean.



The flagship project of NTU's Green Academy is the Sustainability in Practice (SiP) Certificate.

Following the conclusion of Curriculum Refresh, NTU's Green Academy undertook a mapping exercise of 297 course roadmaps across NTU. The exercise indicated that 96 % of courses have embedded sustainability related themes along with 90 % stating they would explore two or more of the SDGs.

The flagship project of NTU's Green Academy is the Sustainability in Practice (SiP) Certificate. All students from Undergraduate to PhD can undertake as an extra-curricular activity. This free online course has been offered to all NTU students since its launch in 2013 delivered through the online learning platform NOW. This course, which is non-credit bearing, is added to the Higher Education Achievement Record of all undergraduate students as a proof of additional achievements alongside the degree. It seeks to foster personal, disciplinary and inter-disciplinary understanding of sustainability along with local and global solutions through the lenses of either food, energy or clothing sustainability.

An offline version has also been made available in the form of the SiP Challenge Day, which includes inclusive fun group activities based on the online course, a practical challenge exercise relating to sustainable solutions and a final project.

In 2017/2018, the Sustainability in Practice (SiP) Certificate was offered to all 30,000 students as an extra-curricular option. NBS has demonstrated leadership to support the SiP certificate. The School has integrated it in two of the key capstone modules, one targeted towards third year undergraduates and one towards postgraduates (both featured on the next pages) to give all students the opportunity to explore it.



EAUC Green Gown Award Winner 2017 – Employability (Larger institution)



Green Gown Awards 2017

Employability Winner

Nottingham Trent University - Future-proof your career

NOTTINGHAM TRENT UNIVERSITY



Future-proof your career

In 2017, NTU won the Employability (Larger institution) Green Gown Award for their work on combining sustainability with employability within the Business School.

The project, which started in 2012, encourages students at NBS to appreciate that an understanding of sustainability in its broadest sense, will aid their employability. Starting with level 6, we introduced the core 'Leadership & Employability' (L&E) module in 2012/13 across all degrees. L&E incorporates personalised Continuing Professional Development (CPD) activity, culminating in a synoptic assessment, featuring reflection on their whole degree (including work-based learning) and their capacity to be a Responsible Leader in the future.

Since 2012/13, all NBS final year undergraduates have had to assess themselves against a set of graduate attributes, which include Global Citizenship and Sustainability. They must identify personal gaps, set up personal development plans and carry out relevant CPD to fill those gaps. A wide range of CPD is available and includes NTU's Sustainability in Practice Certificate, volunteering, the Oath project, Enactus and AIESEC. Since 2014, there is an equivalent module for postgraduates at NBS.

Fiona Winfield, Employability Manager at NBS and one of the initiators of these modules highlights:



“It is widely understood by students and staff that obtaining a degree is no longer enough to guarantee future employment. Key insights from this project showed that implementing during the final year of study is too late. Complementary modules at level 4 and 5 have therefore subsequently been introduced. There is also a need to embed messages relating to employability and sustainability (in its broadest sense) throughout the degree; it is not good practice just to have one module, which covers such issues.”

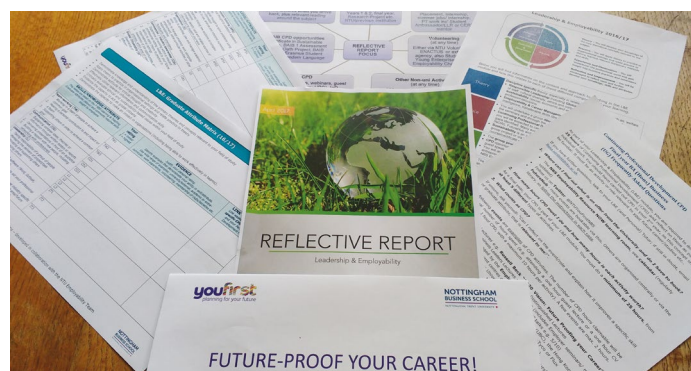
According to the 2018 Destination of Leavers from Higher Education (DLHE) survey, 'Graduate Prospects' of NBS graduates was at almost 90%, having been 71% just five years earlier. This means that nearly all NBS graduates enter a graduate level post (or study at postgraduate level) within 6 months of finishing their degree.

Anecdotally, students have found themselves in a strong position at interview, both from being self-aware (and therefore understanding their own strengths and weaknesses) and being able to discuss issues relating to sustainability and responsible leadership. This truly helps them to stand out from other interviewees.

More broadly, because of NTU's 2015 Strategic Plan, all courses across the university have been reviewed and refreshed. Many of NBS's initiatives relating to employability, sustainability and personalisation have been extended throughout the institution.

Top 3 key lessons learned in this project:

- 1 The need for patience – do not expect immediate results!
- 2 The need for persistence – colleagues and students may find these activities difficult and may resist
- 3 Try to find synergies - linking employability to sustainability allows for efficiencies



Further information

For more details of this initiative and access to our video showcasing one of the Leadership and Employability projects, and featuring student feedback, please visit the Sustainability Exchange: www.sustainabilityexchange.ac.uk/green_gown_awards_2017_nottingham_trent_univers

Transformational Leadership Development encourages our students to explore SDGs through a series of focused workshops.



Updating of Curriculum Case Study: PG Transformational Leadership Development

Transformational Leadership Development (TLD) is a core, 10 credit module that all postgraduate students, regardless of their pathway, study whilst at Nottingham Business School.

The Structure of TLD:

TLD is split into three interrelated component parts.

Part 1:

Encourages students to embark on a journey of self-discovery. Students are asked to undertake a series of diagnostic activities in order to create a personal development plan, supported and mentored by academic staff to engage in a series of CPD events and experiences to enhance their self-awareness, self-efficacy, skills and competencies, with the expressed intention of enhancing their career prospects.

Part 2:

Enables students to gain a greater knowledge of the type of careers available to them. Students are encouraged to attend events relating to assessment centre processes, CV development, online reputational management and graduate job fairs.

Part 3:

Teaches students the importance of ethical and responsible management. Students participate in a series of workshops that explore the 17 Global Goals for Sustainable Development and transformational leadership theory, with the expressed intention of shifting student paradigms surrounding global challenges and opportunities.

Dr Claudia Bordogna says

“At NBS, we feel it is critical that our students are aware of how their actions and behaviours impact the future growth and development of our World. Economic uncertainty, combined with an unpredictable political landscape, rapid technological, societal and environmental changes are dramatically affecting the global context. Alongside this, the advancement of digital technologies, automation and digitisation of our world and workplace are continuing, changing the job market, the nature of many jobs and even the concept of what it means to be working. As Gro Harlem Brundtland identified in *Our Common Future: From One Earth to One World* (1987), it is imperative that “common understanding and common spirit of responsibility” are developed to unify and strengthen our divided world.

At NBS, we feel strongly that it is our responsibility to educate our future leaders on ways to improve business practices to ensure common understanding, spirit and sustainable development occurs.”

Against this background of uncertainty, there is growing social pressure on Organisations to responsibly engage with in the big issues of our time, to consider “People, Planet and Profit” and take responsibility for the ways in which their activities impact their customers and workers, the wider society and the natural environment. Increasingly, these major social, economic and environmental issues are being framed in terms of sustainable development (WCED, 1987), and the United Nations Global Goals for Sustainable Development which were launched in September 2016. Organisations are now expected to balance new priorities and play a crucial role in the realization of the United Nations 2030 Agenda for Sustainable Development. Progressive Organisations recognize that the status quo can no longer be maintained, and that to survive, they need to embrace transformational change.

But how do such leaders create an environment, which motivates, inspires and enhances the actions and ethical values that are urgently needed in these challenging circumstances?

To answer this question, TLD encourages our students through a series of focused workshops to share and examine their personal values, engage in a series of thought-provoking ethical activities, share their thoughts on the ethics of their disciplines (e.g. finance, retail, supply chain), and explore what it means to be a transformational leader within their chosen sector. Successful engagement in this final part of the module means students gain an additional TLiP Certificate awarded by the NTU Green Academy.

The Transformational Leadership in Practice (TLiP) Certificate

This is an applied aspect of the module, whereby students are split into small groups to consider the role of business in contemporary society. Students are asked to pick a sector that is relevant to their career ambition, such as fashion or technology, investment banking or supply chain, and consider the 17 Global Goals in relation to this industry. Students are encouraged to research and critical analyse their chosen sectors, thereby identifying the best and worst practices occurring in those industries. Furthermore, students are then challenged to come up with alternative approaches to enable more sustainable and progressive methods to transpire. Students are assessed through the creation of poster presentations that showcase their findings. Top posters from each course are celebrated at the NTU Green Academy Sustainability in Practice event held annually in the Spring. Students are encouraged to share their TLiP certificate with future Employers and Business Leaders, thereby evidencing their knowledge and understanding of critical global issues and innovative ways to address them.

Students are asked to choose a sector that is relevant to their career ambition for TLiP.

Global Responsibility Week

Supplementing this activity is an annual 'Global Responsibility Week' in which Master's students are required to attend a variety of half-day sessions delivered by visiting academics from our international academic partner institutions. Sessions are designed to develop students' understanding of and ability to address some of the most fundamental challenges facing business and society from the perspectives of responsible management and leadership, ethics and sustainability.

The topics cover a broad range of disciplines within tracks including developing sustainable and responsible business models; embedding sustainable innovation; evolving models for responsible finance; managing and leading in a complex world; leading through ethical dilemmas; responsible consumption and ethical marketing; building sustainable supply chains; and redesigning economies for sustainable and ethical growth.

The Value of TLD

The TLD module provides students with a unique platform in which to develop their insights, perspectives, capacities and skills that are the defining characteristics of the next generation of business leaders.



We have mapped the journey of each individual student throughout his/her course with regards to the SDGs and will increase their opportunities to learn more about the SDGs especially SDG 13 Climate Action.

Principle 4: Research

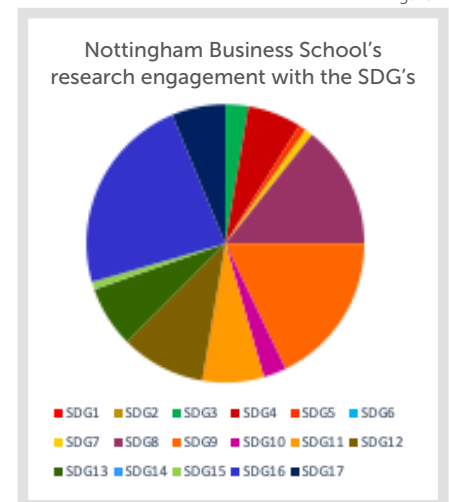


We will engage in conceptual and empirical research that advances our understanding about the role, dynamics, and impact of corporations in the creation of sustainable social, environmental and economic value.

Nottingham Business School is proud to report that in the current REF period, 107 of 3* and 4* papers were produced in the area of responsible and sustainable business, with further outputs of 2* and 1* quality. As such, sustainability research not only makes an important contribution to the School and University's research reputation, but it also proves that research on sustainability is very publishable in top-tier journals.

At the same time, 2 of the school's Impact case studies that are under development focus on Sustainability-related themes. Sustainability research within Nottingham Business is therefore an excellent example of how excellence and impact can go hand in hand. The published research on sustainability addresses all of the Sustainable Development Goals in some way or another, as it the diagram above depicts quite clearly. Sustainable Consumption, SDG 12, is the focus of a large number of research papers, as is SDG8, inclusive and sustainable growth and decent work for all. SDG4 on the provision of inclusive and equitable quality education for all, is also a central theme.

Figure 1



Picture taken at NTU's Team Awards dinner, during which the RSB Lab was commended.

The Responsible and Sustainable Business Lab - Research Centre within Nottingham Business School

The purpose of the RSB Lab is to pull together transdisciplinary teams of experts across NBS as well as across the University to address complex research questions in the ERS area and to develop interdisciplinary grant proposals and research papers. As such, research is broad in scope, and most of its members belong to another, more discipline-focused research group as well, making the RSB Lab fully interdisciplinary. The RSB Lab develops and disseminates research on **Managing** Responsible and Sustainable Business, **Innovating** towards Responsible and Sustainable Business, and **Training** on Responsible and Sustainable Business. Staff aligned to the centre fall within one or more of these three branches. We briefly outline staff activity in these areas:

Team Leader Professor Mollie Painter

writes on a broad spectrum of topics across the fields of business ethics, CSR, sustainability and responsible leadership. In addition to her leadership of the RSB Lab, she also leads a programme on developing values-driven leadership on the African continent in partnership with the Academy of Business in Society (an NGO based in Brussels),



with executive education courses running in Egypt, Kenya and South Africa. Professor Painter's current research focuses on values-driven leadership, ethics within complex organizational environments and innovative pedagogies to enable values-driven action. In dealing with these topics, she draws on the conversation between European philosophy and organizational studies.

Natalie Toms is the Research Assistant for the RSB Lab where she supports income generation, publication and business impact in the areas of responsible and sustainable

business within the business school and across disciplines. She is responsible for supporting project administration and the daily management of research projects, with particular responsibility for digital media communication and the dissemination of research activities via online mediums. She coordinates events and general engagement with internal research networks within the business school, and external stakeholders. Natalie supports senior researchers in the development of questionnaires, conducting of surveys, literature reviews and database searches.

RSB Lab research teams

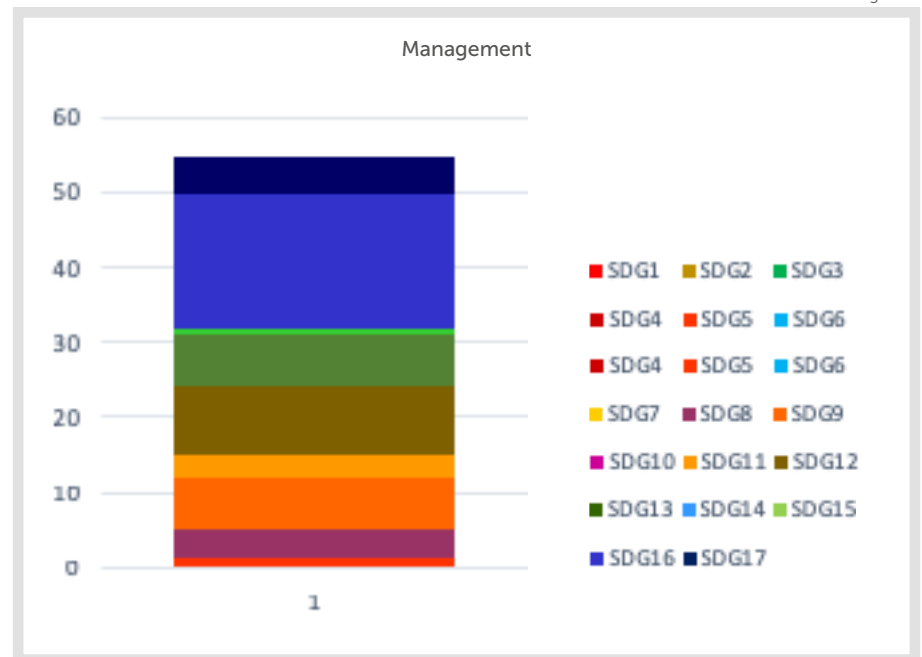
Manage

Sub-theme 1: Sustainability Management and Accounting

Associate Professor Wendy Chapple's research portfolio includes international comparative analysis of corporate responsibility, with various studies focusing on patterns and institutional drivers of corporate responsibility in Asia, OECD countries and developing countries. Systems of Governance in the developing country context is also another key element to her research portfolio. This assesses multilevel governance structures and how configurations of actors, tools and norms influence the achievement of the Sustainable Development Goals (SDGs). Of particular interests are the concepts of inclusive and relational governance. Dr Chapple was also part of a consortium which has recently completed a € 3.09 million European Union FP7 research project "Global Value" which assessed the CSR impact of multi-national companies and how "systems of governance" influence business behaviour. She currently supervises undergraduate international business research projects, teaches transformational leadership on the MSC programme and teaches on the Values Led Organisation module on the OMBA. She also supervises students on the DBA programme at NBS.

Professor Marius van Dijke is one of our adjunct professors, and Professor of Behavioural Ethics at the Rotterdam School of Management at Erasmus University in Rotterdam. Marius's research is concerned with behavioural ethics and leadership of high integrity. Examples of issues he examines in his research include when power stimulates moral and immoral behaviour, why people so deeply value social justice, the role of intuitive and controlled processes in moral judgment and behaviour.

Dr Lynn Oxborrow is a Principal Lecturer in Small Business and Supply Chain Management. Her research interests focus on clothing industry supply chains and sustainable products and processes in SMEs. She is working with Dr. Cagri Talay and Stella Claxton to explore the role of relationship asymmetry in sustainable fashion supply chains, supported by NTU's seedcorn fund.



Two key management themes we focus on are 1) sustainability management and accounting, which includes social and environmental strategy, accountability and enterprise risk management and responsible investment; and 2) energy and environment, which we pursue in cooperation with Professor Rob Ackrill's Applied Economics and Policy Analysis (AEPA) research group to ensure that interdisciplinary perspectives are fully integrated.

As such, this part of the RSB lab's research focuses mostly on SD16, focusing on building strong institutions that support responsible and sustainable business, but with many other SDGs also addressed as part of this group of scholars' output.

Professor Usha Ramanathan is a Professor of Sustainability and Supply Chains in Nottingham Business School. Her teaching experience spans over 20 years in India, Oman and the UK. Usha's research interest lies in the area of supply chain and operations management, retail customer behaviour, Big Data and the Internet of Things. She is actively engaged in research activities within the Business School across various disciplines such as marketing, strategy, retail service operations and supply chain.

Associate Professor Stephanie Giamporcaro is a Reader in Responsible and Sustainable Finance. She works to embed further sustainability within the DNA of

the Business School at the postgraduate level through research and teaching, notably around the theme of finance and investment. She is actively involved within the PhD program.

Dr Peter Eckersley joined NBS as a Senior Research Fellow in Public Policy and Management in 2018. He has published widely on local governance, public policy, sustainability, austerity and public accountability. At NBS he works on research projects related to central-local government relations, public policy, public services and policy analysis. He is also the Reviews Editor for Local Government Studies and a Visiting Fellow at Newcastle University Business School.

Sub-theme 2: Energy and the Environment

Professor Rob Ackrill's research is in applied economics and public policy analysis. His links to the RSB Lab are through his work on renewable energy and low carbon. Rob leads the Energy and Environment strand of our Responsible and Sustainable Management branch.

Alan Collins qualified as an economics teacher in secondary education and after a spell working in that role he went on to undertake postgraduate training in transport engineering and planning. He was then employed by engineering consultants engaged in the economic and environmental assessment of road infrastructure schemes. He then moved on to Strathclyde University to take up a Research Fellowship in the Economics of the Greenhouse Effect (now termed Climate Change). Following his time there he took up a Lectureship in Economics in what is now the University of Portsmouth and progressed to Professor and Head of Department.

Dr Michael Zhang is an editor for the Journal for Sustainable Mobility. His research interests have been focused on three inter-related areas: International management, Entrepreneurship (with a focus on processes of opportunity discovery and creation) and Economic development (with a focus on transition economies).

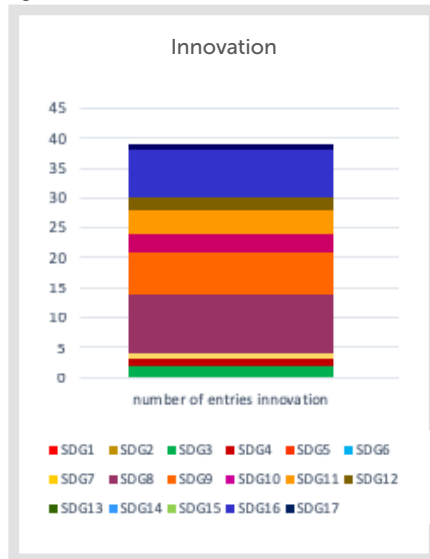
Professor Sander De Leeuw is an industrial engineer by background, Sander's specialist subject is Supply Chain Management, with a specific focus on humanitarian aid supply chains, web-shop logistics and behavioural operations management.

Dr Morakinyo Adetutu is Senior Lecturer in Economics. His research utilises micro-econometrics in analyses of efficiency and productivity, with applications to energy and environmental sustainability.

Anna Ozolina joined Nottingham Business School in 2016 to facilitate grant capture and development of three newly established research centres, among them the RSB Lab. Previously she worked at The Academy of Business in Society (ABIS) with strong expertise in managing and coordinating large EU projects (FP7). In her role as Research Centres Coordinator, she alerts colleagues to the European Commission Calls, coordinates and manages international cross-sectoral, multi-disciplinary research projects and guides colleagues through the writing process. As part of the Responsible and Sustainable Business (RSB) Lab, Anna seeks engagement beyond academia for impactful, forward-facing agenda. Anna is also a PhD candidate in the field of Sustainable Mobility, working with stakeholders in evaluating the effectiveness of Ultra Low Emission Vehicle policies and technologies. In 2018 Anna became a Research Fellow in Sustainable Mobility.

The purpose of the RSB Lab is to pull together transdisciplinary teams of experts across NBS as well as across the University to address complex research questions in the ERS area and to develop interdisciplinary grant proposals and research papers.

Figure 3



The research in this area of the RSB Lab contributes to multiple SDGs, as the graph to the left indicates. Within the last two years, the largest number of publications were focused on addressing SDG 10 (reduced inequalities), and also contributed to SDG 16 (peace, justice and strong institutions), indicating that systemic change within institutions remains an important focus area for researchers working in this area.

Grant Project on Upcycling:

HILLER, A. (PI), PAINTER, M., COOPER, T. and OEHLMANN, J. 2018. Impacts on waste reduction and job creation through upcycling clothing practices. NTU Sustainable Futures Continuation, Growth and Development Fund

The purpose of this project was to build on previous work done within in NTU on upcycling in relation to its potential to to make fashion circular, impact waste reduction and employ digital innovation; cultivating behavior change; and challenging existing paradigms around human agency.

Innovate

This research focuses on critically evaluating current mindsets, habits and lifestyles with a view to providing some fresh perspectives and viable alternatives. Our team studies the processes and dynamics that may undermine ethics and sustainability in order to understand why certain unethical practices and unsustainable habits persist. We then challenge business practitioners to question ingrained ways of thinking and being. Inspired by philosophical thinking and interested in practice, we challenge everyday assumptions to show how they trap us in certain everyday modes of being that may be questioned and transformed..

Professor Painter leads this focus area within the Lab (CV on page 21)

Mumin Abubakre has a Ph.D. in Management Information Systems from the School of Business and Economics, Loughborough University, and he is a senior lecturer in the Nottingham Business School, Nottingham Trent University. Mumin's interdisciplinary research relates to the implications of digital innovation on individuals, businesses, and societies; and the Social Implications of Information Technology implementation & use.

Emrah Karakilic holds a PhD in sociology from Goldsmiths, University of London, and he currently works as a research fellow in RSB Lab at Nottingham Trent University. His interdisciplinary research revolves around critical management studies; technology, work and employment; Italian operaismo and post-operaismo; financialisation; and cognitive capitalism.

Professor Tim Cooper is responsible for leading research in the fields of sustainable design and sustainable consumption. He leads the University's Sustainable Futures strategic research theme, is Head of the Sustainable Consumption research group and a member of the Product Design academic team.

Professor Daniel Hjorth is a 0.2 professor at NBS, and fulltime at Copenhagen Business School where he is Professor of Entrepreneurship and Organisation at the Department of Management, Politics and Philosophy. He is Academic Director for the across CBS Entrepreneurship Business in Society Platform, and Editor-in-Chief for ORGANIZATION STUDIES (an FT50 listed and ABS 4* Journal). Hjorth's research is focused on the organizational conditions for entrepreneurship, creativity and innovation, art and business, philosophy and management, and on social entrepreneurship.

Professor Robin Holt is a 0.2 professor at NBS, and fulltime at Copenhagen Business School at the Department of Management, Politics and Philosophy. His research focuses on the creation of organizational forms. Current projects include a recently published book on Judgment and Strategy, as well as a forthcoming study of Strategy and Technology. He has studied and written papers on the fashion business and craft work; entrepreneurship; business education; process philosophy; ethics and aesthetics. Professor Holt was editor of the journal Organization Studies 2013-2017 and is currently serving as an Editorial Board Member of the Academy of Management Review.

Alex Hiller is Director of Postgraduate Taught Programmes at NBS and his research centres around ethics and sustainability in consumption, especially pragmatist philosophical perspectives on valuation and trade-offs in ethical consumption. Alex Chairs the Academic Business Ethics Network, the UK Chapter of the European Business Ethics Network and the academic arm of the Institute of Business Ethics. Alex is currently working on an NTU-funded project into the impacts on waste reduction and job creation through upcycling clothing practices with Prof Mollie Painter and Johanna Oehlmann.

Johanna Oehlmann has been investigating individual 'upcycling' practices as processes of human-material making and its inherent sustainability valuations since Spring 2018. The research is based on interviews and observations with upcycling makers in the UK. An EGOs conference paper (2018) is currently developed into a journal article.

This research departed from joint research with Kyungeun Sung and Tim Cooper in 2018 on 'Scaling up British fashion upcycling businesses: Multi-stakeholder perspectives'

(Conference paper, Global Fashion Conference, December 2018).

David Smith is professor emeritus of Innovation Management. An Economist by background, David's specialist subject is Innovation. His bestselling textbook 'Exploring Innovation' contains a chapter on Green Innovation.

Train

Dr Petra Molthan-Hill leads the Green Academy at Nottingham Trent University since 2013, with the aim to include Education for Sustainable Development related curricular and extra-curricular initiatives into the whole university, for example the internal online course offered to all 30.000 student at NTU: 'Sustainability in Practice Certificate'. She won the Sustainability Professional Award in the Green Gown Awards 2016 and 'The Guardian University Award 2015 for Business Partnership' (Greenhouse Gas Management Project) together with NetPositive Ltd. Molthan-Hill is also Associate Professor of Sustainable Management and Education for Sustainable Development at Nottingham Business School and was as NBS Sustainability Co-ordinator responsible for embedding sustainability and business ethics into the curriculum of the business school. She is the Co-Chair of the United Nations Principles for Responsible Management Education (PRME) working group on climate change and environment. Molthan-Hill is the editor of 'The Business Student's Guide to Sustainable Management' offering seminars and other teaching material in how to integrate the Sustainable Development Goals in accounting, marketing, HR and other subjects in management/business studies; the second edition is now part of the PRME book series. She is also the Academic Lead for PRME in Nottingham Business School. In 2017, as part of a team Molthan-Hill reconceptualised the Sustainable Development Assessment Tool for the NHS England integrating the SDGs into the tool. Recently, Molthan-Hill undertook research with 'Coronation Street' - a popular soap in the UK - about their impactful carbon literacy training and is now developing a Carbon Literacy Training for Business Schools based on these insights.

Kostas Galanakis is Doctor of Philosophy (PhD) in Engineering, a Manufacturing Systems Engineer by background, and is Module Leader and Principal Lecturer on the following modules: New Venture Creation & Management; International Value Chains; and Applied Consultancy Projects. The research activities that Kostas has undertaken recently focus on managing Entrepreneurial and Innovation Process. Especially, the support of young entrepreneurial minds and the alignment of their ideas with the market needs are on his priorities. Kostas directs research related to international value chains, innovation systems; business model innovation and SMEs collaborative structures. Therefore, he prepares practitioners to continuously

improve, change and reinvent businesses aiming to achieve an optimum performance.

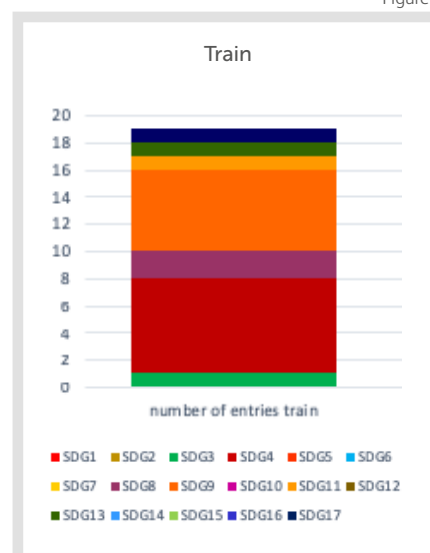
Dr Kostas Galanakis has secured a €3.9m Marie Skłodowska-Curie Innovative Training Network (ITN) grant as Coordinator and will lead seven other partners to deliver 'Human-Centric Energy Districts: Smart Value Generation by Building Efficiency and Energy Justice for Sustainable Living – Smart-BEEJS'. NTU will receive over £800k.

Dr Rachel Welton is Course Leader BA (Hons) International Business and is also leading on many PRME Champion activities including co-leading the Carbon Literacy training for Business Schools. Her research focus is on Climate Change Perceptions of business school students. She initiated the Oath Project, which featured in the last NBS PRME report 2017 and which is still ongoing. She joined Nottingham Business School in 2003 and has designed, lead and taught international, marketing and tourism modules offered within NBS.

Dr Muhammad Mazhar is a Senior Lecturer in Sustainability and is Sustainability Coordinator of the Nottingham Business School. He holds PhD in Sustainability and Carbon Management. His research interest is in sustainability, energy & carbon management, low carbon smart cities and education for sustainable development. Previously, he has been part of two EU funded Horizon 2020 research projects; Regeneration Model for accelerating the smart URBAN transformation (REMOURBAN) and Students Achieving Valuable Energy Savings (SAVES 2). Currently, he is working on knowledge sharing and learning to replicate low carbon smart cities and international carbon management in universities.

Aidilla Dharmasasmita is the NTU Green Academy's Academic Associate, leading the Sustainability in Practice (SiP) Certificate whilst simultaneously being a PhD candidate on ESD & SDGs in Business Schools context. Aidilla has been teaching undergraduates and postgraduates in various modules where sustainability has been embedded. She has also supervised students in greenhouse gas management consultancy projects. Aidilla received her full-scholarship MSc in Corporate Social Responsibility at the University of Nottingham, after completing a BA (Hons) in Business with a major in Operations and Data Analysis at Nottingham Trent University.

Figure 4



Our aim is to disseminate the best practices developed by the Business School's award-winning teaching staff to an external audience of trainers and teachers. We do so by publishing textbooks, advising on module design, and sharing case studies and reflective exercises. We support faculty and corporate trainers in highlighting relevant research. Trainers, in turn, use this research to underpin their teaching practice in the areas of sustainability and business ethics. Our pedagogies are founded upon research on how to understand moral behaviour, influence decision-making, and give voice to values in everyday business practice. Researchers in this stream of the Lab also publish high quality journal articles on pedagogy related to sustainability, and thereby largely contribute to research on SDG4 and SDGs 9.

The RSB Lab develops and disseminates research on Managing Responsible and Sustainable Business, Innovating towards Responsible and Sustainable Business, and Training on Responsible and Sustainable Business.

Current research projects

Creativity: A number of researchers are critically exploring creativity as a concept (Karakilic, Painter), and the role of creative industries in creating sustainable societies (Collins, Hjorth, Holt, Painter, Oxborrow)

Digital innovation: Various members of the team (Abubakre, Karakilic, Painter, Palermo) are working on the role and impact of social media and other digital technologies in shaping identities, values and behaviours.

Financialization and algorithmic trading: The impact of algorithmic trading and the emergence of the gig economy on individuals' working lives and on society in general is being critically evaluated through a variety of papers and grant projects that are in the making (Karakilic, Painter, Giamporcaro). Karakilic is also working on a book chapter on hedge funds.

Integration of ethics and sustainability in organisations: Our involvement with the previous PRME Champion's project on 'Shared Vocabularies' are being extended through a Springer book project with teaching cases (in partnership with Nottingham University, IEDC-Bled and Glasgow Caledonian University), and also through papers that discuss the interaction between CSR, ethics and sustainability in organisational structures (Painter, Karakilic, Russon).

Impact of values-driven education (Painter, Chmura, Perestz, Abubakre) and critical pedagogy (Karakilic): Various papers to explore the impact of values-driven education in Africa and its impact on society are under development. This includes papers rethinking traditional conceptions of rationality, game theoretical contributions towards understanding changes in behaviour, and the employment of digital technologies in disseminating values-driven education.

Upcycling: Hiller, Cooper, Painter, Oehlmann and Ramanathan are working on upcycling as a response to waste management and as contribution to social value, place-making, and participative citizen action towards sustainability.



Current/ forthcoming grant projects:

- Transparency, Job Security and Autonomy in the Gig Economy: The Case of Uber (E.Karakilic, M.Painter, I. Clark)
- How digital social innovation could reduce information poverty and power disparity in marginalised communities – A case of Soweto, South Africa (M.Abubakre, M.Painter, C. Stevenson, A. Ozolina)
- Exploring Digital Crossroads: Values, Technology and Entrepreneurship in South Africa (M. Abubakre, M.Mkanshi)
- Upcycling (A. Hiller, T. Cooper, M. Painter, J. Oehlmann, U. Ramanathan)
- Climate change conceptualisation (P. Molthan-Hill, R. Welton, M. Mazhar, A. Meredith, M. Hewitt)



The RSB Lab has pulled together transdisciplinary teams of experts across NBS as well as across the University to address complex research questions in the ERS area and to develop interdisciplinary grant proposals and research papers. We will promote responsible and sustainable business practice through maintaining and developing our core focus areas Innovation, Management and Training in the RSB Lab.

Principle 5: Partnership



We will interact with managers of business corporations to extend our knowledge of their challenges in meeting social and environmental responsibilities and to explore jointly effective approaches to meeting these challenges.

Sustainable Development Assessment Tool (SDAT) Project:

Integrating the SDGs into the National Health Service

As one of the biggest organisations in the world, the National Health Service (NHS) in England can contribute considerably to the United Nations' Sustainable Development Goals (UN's SDGs). In order to optimise this, a recent study undertaken by Dr Petra Molthan-Hill and Dr Michael Hewitt¹ evaluated and reconceptualised a sustainable development assessment tool for health and care settings in England.

A quantitative survey and user/expert discussion panels were conducted to evaluate and reconceptualise the previous sustainable development assessment tool used by the NHS in England, the so-called

'Good Corporate Citizenship Assessment Tool', including potential improvements such as the integration of the UN's SDGs.

A reconceptualised self-assessment tool integrating the UN's SDGs was developed and implemented online as the 'Sustainable Development Assessment Tool' (SDAT).² Further improvements included a process-oriented redesign and the creation of new modules and cross-sections aligning them with the leads responsible for the implementation of key initiatives in NHS organisations, which would contribute to achieving the targets of the SDGs.

User/expert involvement informed an innovative approach to a reconceptualization of a sustainable assessment tool for health

and care settings. The tool will support organisations to build their mandatory Sustainable Development Management Plans, as part of the National Public Health Outcomes Framework. In addition, the alignment of the tool to the UN's SDGs provides an opportunity for health and care organisations to demonstrate accountability and progress against the UN's set of transformational goals.

1. HEWITT, M., MOLTHAN-HILL, P., LOMAX, R. and BADDLEY, J., 2018. Supporting the UN's Sustainable Development Goals: reconceptualising a 'sustainable development assessment tool' for the health and care system in England. *Perspectives in Public Health*. ISSN 1757-9139. <https://doi.org/10.1177/1757913918786523>

2. Available at: www.sduhealth.org.uk/sdat/



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Devon Partnership NHS Trust

This is an example of innovative project delivery, in partnership with industry, designed to challenge students and benefit the business organisations with whom they work.

The Greenhouse Gas Management Student Consultancy Project

The Greenhouse Gas Management Student Consultancy Project is a part of final year Leadership and Employability module (BA (Hons) Business). This is an example of innovative project delivery, in partnership with industry, designed to challenge students and benefit the business organisations with whom they work. The project aims to develop students' understanding of the broader sustainability and greenhouse gas management issues. Students work as a team and are trained in greenhouse gas management and, as part of their core curriculum, gain direct experience serving as consultants with local businesses and public bodies. Students offer advice to businesses on the reduction of environmental and carbon emissions impact and assist in achievement of the Investors in the Environment (iIE) accreditation. In the past, the greenhouse gas management project has won the Guardian University 2015 award for business partnerships together with the Nottingham Energy Partnership. More recently in 2018, NBS received the Green Apple Award as an Associate partner with the Northamptonshire County Council for environmental best practice in education and training category. Four final year BA (Hons) Business student teams worked with four Northamptonshire schools to provide consultancy for greenhouse gas management and save cost. The project provided students with practical experience of sustainability and resource efficiency whilst developing key employability skills.



Business in the Community (BITC)

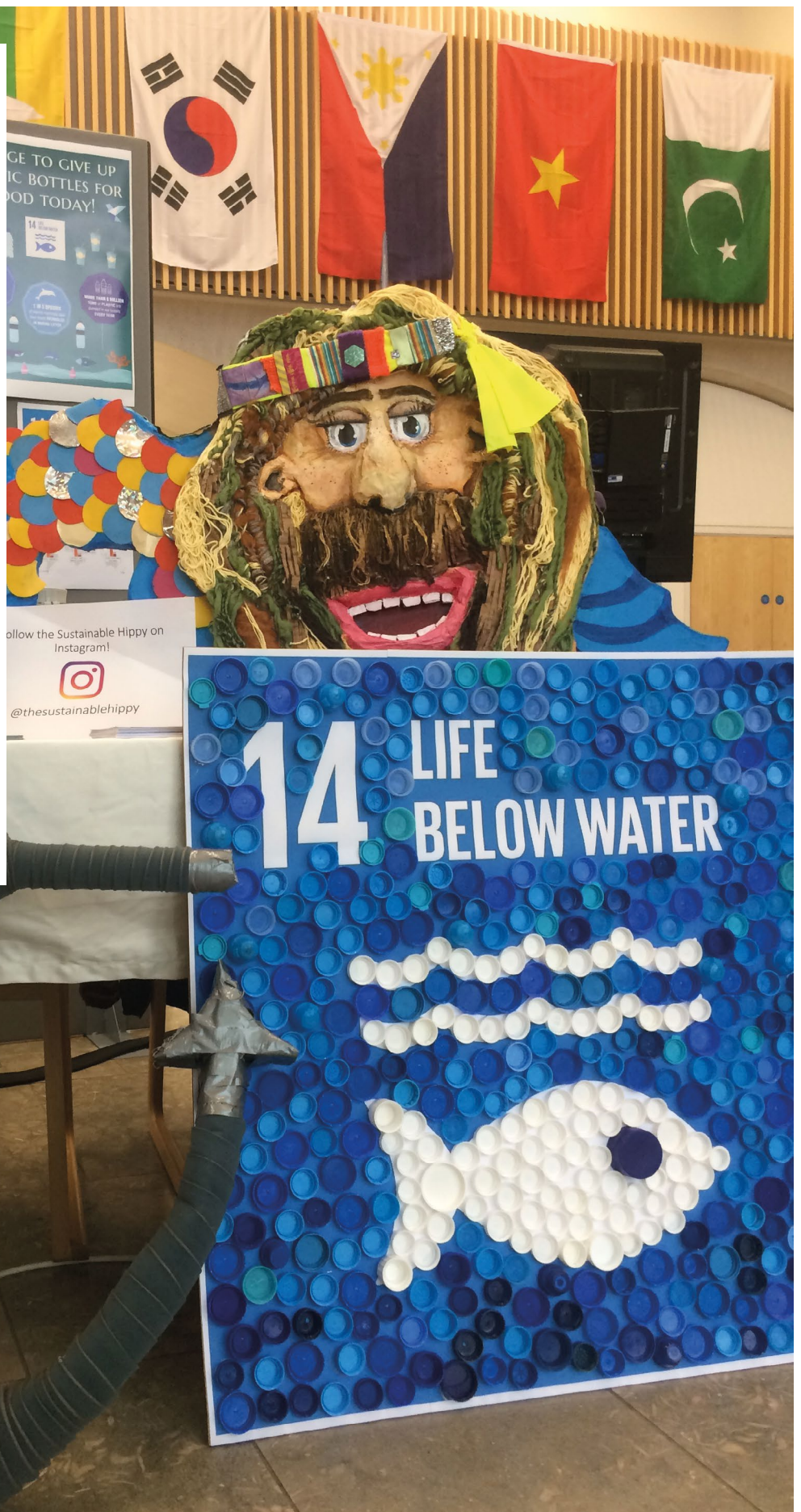
Business in the Community (BITC) is a British business-community outreach charity promoting responsible business, Corporate Social Responsibility (CSR), corporate responsibility, and is one of the Prince's Charities of Charles. NTU and NBS is a member of the BITC and works closely with the BITC on various projects such as Community Conversation and ClickSilver. BITC held annual university wide Community Conversation in partnership with NBS in April 2018, as part of the MBA Business Practice delivery. Through this initiative, BITC engaged with over 100 business leaders, city stakeholders, students and academics to discuss key issues arising in communities.

Key speakers from stakeholder organisations participated in an event which was well attended and fed into the preparatory consultation into BITC's Place Strategy for Nottingham. ClickSilver is another university wide initiative where BITC, in partnership with the student volunteering team, have delivered volunteering sessions. BITC have an ongoing dialogue in the Business School, liaising closely with their MBA consultation programmes with community organisations in partnership with Nottingham City Council's Neighbourhood and Communities team. Dean of NBS also engaged through the BITC Enterprise Leadership Team. NBS continuously explores opportunities to work with BITC for student projects, so that students have experimental learning experience around sustainable development and CSR. For example, a Community Insight Event was organised in March 2019 with input from three social enterprises working to end food poverty in Nottingham.



The SDG Visual Display Project

Not only does NTU support sustainability in the Curriculum, the university is also committed to raising awareness of the Sustainable Development Goals outside of the classroom. The SDG visual displays project was launched in 2017, aiming to facilitate a tangible understanding of sustainability whilst encouraging students and staff to reflect on their own agency regarding the SDG targets. To date five visual displays have been created, 3 reflecting on the urgency of disposable plastic in the oceans, one on food impacts and the fifth on social issues in the fast fashion industry. The displays were co-created with students in workshops that were informed through an extensive literature on behavioural change. Workshop students suggest that the project is facilitating understanding of the SDGs: '... opened my eyes to the SDGs and is encouraging me to make changes in my behaviours around waste' and 'an opportunity to creatively engage with sustainability'. Students have expressed appreciation of opportunities the project provides to collaborate on a common, authentic goal with students from other academic disciplines.



Responsible Futures and Partnership with NTSU >

Responsible Futures is an accreditation from the UK National Union of Students, aiming to encourage universities and Student's Unions to embed sustainability and social responsibility at the heart of the formal and informal curricula. NTU is working in partnership with Nottingham Trent Student Union to work towards the accreditation and ensure that all students will get the opportunity to develop sustainability skills on their courses, and in extra-curricular activities.

The partnership was re-accredited in January 2019, after a student-led audit consisting of evidence review, interviews and focus groups. The auditors were impressed by the partnership's commitment to embedding the SDGs and to enable all students to contribute to positive change, with one of the student commenting:

nus

**Responsible
Futures**

Accredited institution



Special Interest Group in Social and Sustainable Entrepreneurship

Dr Angelo Bisignano is the co-chair for the Special Interest Group in Social and Sustainable Entrepreneurship within the International Small Business and Entrepreneurship world conference (ISBE). The group regularly coordinates funding calls for projects on social responsibility and on sustainability that link academic researchers with governments, civil society organisations, and wider communities. The group also promotes social responsibility and sustainability issues within the ISBE 4,000 people-strong network with dedicated events bridging academics, policy makers, and practitioners. Angelo is currently working with NGOs and local councils across Europe to develop projects for promoting enterprising skills amongst asylum seekers and refugees so to facilitate their integration in local communities. In 2017, two of his students won 1st prize as Best Undergraduate Research Project in the UK with a research project on the topic. Angelo embedded the HULT Prize and relative student competition in the curriculum, with students developing potential solutions to poverty and social exclusion. Several projects developed in employment opportunities for graduate students.

“ NTU is currently doing an incredible job to further improve the awareness and engagement, of both students and staff, of sustainability and the Sustainable Development Goals. The work we have seen shows that the university continues to be a leading institution in terms of sustainability.”

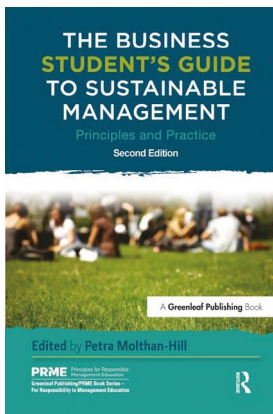


Most of the projects described under this principle are ongoing and we will strive to have impact on societal and environmental challenges by continuing to work closely with the public and private sector.

Principle 6: Dialogue



We will facilitate and support dialog and debate among educators, students, business, government, consumers, media, civil society organisations and other interested groups and stakeholders on critical issues related to global social responsibility and sustainability.



The Business Student's Guide to Sustainable Management

15 colleagues at Nottingham Business School shared their expertise in how to integrate the SDGs by contributing to the internationally acclaimed textbook **The Business Student's Guide to Sustainable Management** along with international colleagues. The second edition of the book is part of the PRME book series.

This book offers over 40 ready-made seminars/short workshops which enable teachers and students to integrate the Sustainable Development Goals (SDGs) into every discipline in business, including economics, operations, marketing, HR, and financial reporting. Each chapter follows the same easy-to-use format.

The Business Student's Guide to Sustainable Management: Principles and Practice offers over 40 ready-made seminars to implement the SDGs in to every discipline.

“The focal text of our review is The Business Student's Guide to Sustainable Management: Principles and Practice, edited by Petra Molthan-Hill... We chose Molthan-Hill's book due to its wide range of sustainability topics and its application to business disciplines... The Business Student's Guide is aimed at undergraduate business and management students. One of the book's most important contributions is the discussion on how to embed sustainability in business schools. The book also offers information on a significant number of resources that could be used as a starting point either to blend into existing required traditional business courses or to develop within specialized electives.”

M. Starik, P. Kanashiro and E. Collins (2017), *Academy of Management Learning and Education*, Vol. 16, No. 3.

“Building on the impact of the first edition of The Business Student's Guide to Sustainable Management, this revised handbook is an invaluable resource for students and educators alike. It includes a wide array of learning resources – overview essays, case examples, curricular supplements (film and print), reference lists, instructional guides available to faculty – to empower the business practitioner who recognizes the necessity for, and the opportunities of, sustainable management.”

Mary C. Gentile, Creator/Director of Giving Voice To Values, University of Virginia Darden School of Business

“The activities arranged in the Summer School were very innovative and it was a fun learning experience.”

Global Summer School: The Transformational Leader and the Global Goals

While most of our projects described above are offered internally, the 'Transformational Leader and the Global Goals' course is on offer for anyone in the world and from any other university who wants to experience the unique approach NBS and NTU have to address the United Nations Global Goals for Sustainable Development (SDGs) in the curriculum. This course takes place during NTU's annual 'Global Summer School' and is open for anyone to attend. The course focuses on enabling students to develop skills around transformational leadership, problem solving and collaboration. Utilizing the expertise of our Academics and NTU's Green Academy, the course explores leadership and contemporary challenges through the lens of the SDGs.

During two intense weeks, students take part in interactive workshops, seminars and practical activities, aiming to increase understanding around sustainability issue and to spark ideas how to overcome the problems we are facing with creative and collaborative solutions.

Comments from previous students:

“The faculty was very friendly and interactive.”

“The activities arranged were very innovative and a fun learning experience.”

“I enjoyed the gardening lesson at Clifton Campus”

“NTU Summer School is perfect in all aspects”

Further information

To find out more about the Global Summer School, please visit:
www.ntu.ac.uk/international/study-and-courses/find-a-course/global-summer-school/accordion-more-information/the-transformational-leader-and-the-global-goals



UN PRME Climate Change and Environment Working Group

Dr Petra Molthan-Hill is Co-Chair of the PRME working group on climate change and environment. Dr Muhammad Mazhar is leading on the 'Policies and Strategies' stream of the working group. The UN PRME Climate Change and Environment Working Group was convened to focus primarily on SDG 13 'Climate Action' however there are several other SDGs that naturally fall under the broader remit of the group such as SDG 12 'Ensure sustainable consumption and production patterns'. The issue of Climate Change in particular is of key importance to all organisations and will impact on all sectors of business, including education, in terms of new threats as well as new opportunities. Business Schools will experience the same operational impacts as other organisations, but also have an obligation to produce business managers and leaders who can assist the business in which they will work in meeting the challenges that climate change will bring and contribute to climate change mitigation.



The Working Group has three main objectives:

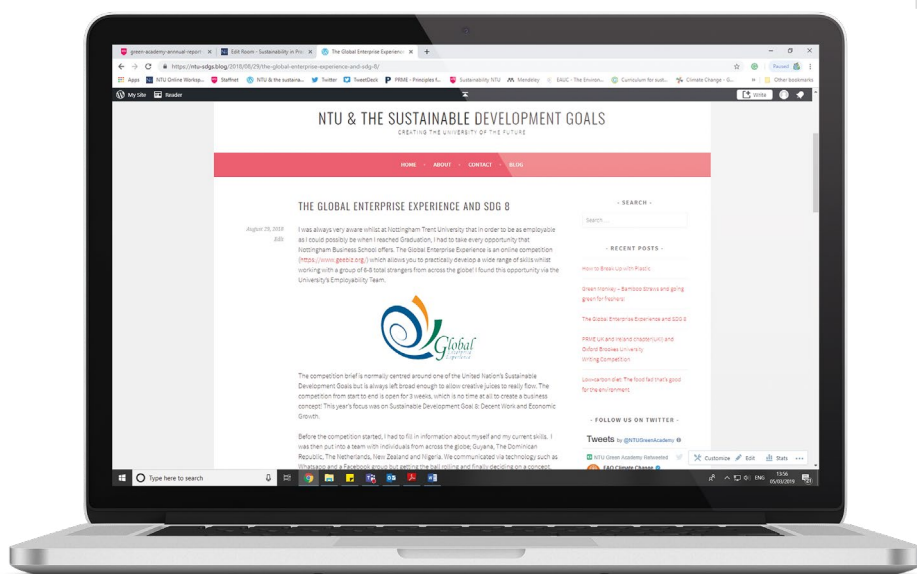
1. Policy/Strategies: This section provides business schools and universities with policy templates on how climate change and other environmental issues can be integrated into operational policies/strategies but also into learning and teaching policies/strategies.
2. Teaching: Sharing of good ideas, best practice and innovative training methods on how to integrate climate change and other sustainability issues into management education and training within universities and beyond. A special focus is on how to encourage student to work towards sustainable solutions.
3. Cooperation: Explores the dialogue between business schools and private/public sector organisations especially through Global Compact in order to work together on solutions to climate change and other environmental challenges. The vision is that companies put up 'wicked' problems and the best brains across the world will contribute to solving them.

Student engagement and activism

Each year students are encouraged to take part in the Global Enterprise Experience (GeeBiz) to develop global leadership skills and work with other students from around the globe to find sustainable solutions to complex problems. Last year one of our NBS students, Eloise Thomas, entered the competition and described it as:

'one of the best opportunities I have found whilst being a student at NBS. The chance to work with global teammates doesn't arise often and I have improved current skills such as communicating with teammates in non face-to-face situations, problem-solving and creating concepts in a short space of time'

This experience has been shared via the NTU and the Sustainable Development Goals Blog, (<https://ntu-sdgs.blog/>). Launched in 2017 the SDG blog enables staff and students to explore how NTU is working towards the SDGs and the opportunity to share their own experiences.





Every country in the world has emergency services including Fire and Rescue Services to protect individuals and communities from the risk of fire or from fire related incidents.

Improving the policy development service delivery and public assurance arrangements for Fire and Rescue Services.

One of the primary roles of the nation state is to protect its citizens. Every country in the world has emergency services including Fire and Rescue Services to protect individuals and communities from the risk of fire or from fire related incidents. If they are not efficient, they endanger the public more; are sub-optimal in terms of the cost and benefit of emergency service provision; and compromise the long term provision of economic, efficient and effective emergency services, and

In 2011, Nottinghamshire Fire & Rescue Service commissioned an NBS team led by

Professor Murphy to review the assessment of fire risk across Nottingham and Nottinghamshire in order to re-configure its emergency cover against the changing pattern of risk affecting its communities.

Their early research demonstrated the benefits of implementing a new people-centred approach to risk assessment, supported by evidence-led performance management data. This people centred approach to risk assessment has subsequently been rolled out across the UK and in Europe, North America and Australasia.

Following publication of this earlier work, the National Audit Office (NAO) commissioned an appraisal of the financial sustainability of fire and rescue services in the on-going era of austerity. This research identified weaknesses in local and national performance data; in the policy and delivery framework for Fire and Rescue services and

in the assurance that the government and the services provide to the public. These were all identified and acknowledged by Teresa May in her last major speech as Home Secretary before becoming Prime Minister in 2016.

This 2015 report was the basis of a Public Accounts Committee inquiry and subsequently led to significant changes in legislation, new institutions, policy development, and greater accountability in the strategic and operational delivery of the service. The team are currently critically appraising the implementation of all these new changes.

Professor Pete Murphy joined Nottingham Business School from the Senior Civil Service, where had worked extensively on performance management and emergency planning. In addition to his work on the fire service he also researches central and local government, the NHS, and the police.



In our dialogue with stakeholders, we seek to exchange best practice and learn from each other. In the next two years, we will share more widely our projects with an internal audience via PRME and our blog 'NTU & The Sustainable Development Goals' (<https://ntu-sdgs.blog/blog/>).

NBS/Nottingham Trent University's sustainable operations

We understand that our own organisational practices should serve as an example of the values and attitudes we convey to our students.

Nottingham Trent University is committed to enabling a culture of Sustainable Development across NTU, enhancing the student experience and creating a global legacy. NTU understands that our own organisational practices should serve as an example of the values and attitudes we convey to our students.



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Nottingham Business School (NBS) demonstrates its commitment to sustainable development practices through good governance, community relations and the management of its environmental footprint. The School is supported by Nottingham Trent University's (NTU) award winning whole-institution approach to greening campus operations and enriching society. The University plays a very active role in the city of Nottingham and the wider region and has gained recognition nationally for its leadership and advocacy in sustainability.

The University's Environmental Policy sets out the institutional responsibility to promote environmental and sustainability awareness and education, in accordance with our strategic ambitions.

To ensure transparency and enable the sharing of best practice, the University has successfully implemented environmental management systems and we're proud to be one of the first universities to achieve both Eco-Campus Platinum and the internationally recognised ISO 14001 certification since 2012.

In working towards meeting the aims of each theme the University is continuing to implement sustainable solutions at local and community levels supporting the global effort to meet the SDGs by 2030.



Professor Edward Peck
Vice-Chancellor

“I was delighted when NBS was announced in Davos as one of the 38 PRME Champions worldwide and chosen as a role model on how to mainstream the UN Sustainable Development Goals (SDGs) into the curriculum. This has been a priority in NTU since 2016 and we were one of the first universities to sign the SDG Accord. A special focus for us is SDG 4 - Quality Education for all - and we have just won the Guardian University of the Year 2019 Award for our inclusive curriculum and focus on social mobility.”



The following projects and achievements reflect our vision and capability in leading change for sustainable development.

EcoCampus

EcoCampus, the environmental management system award scheme for higher and further education, has been used by over 65 UK Universities and Colleges to guide their environmental management journey and ensure compliance obligations are met through an Environmental Management System (EMS). This is recognised by four phased awards - Bronze, Silver, Gold and Platinum (the latter includes certification to the international standard ISO 14001).

In 2018, Dr Peter Redfern from NTU's School of Science, in collaboration with Zhejiang University International Campus, established EcoCampus China. The aim of EcoCampus China is to offer expert help and support to improve the environmental performance of universities and government departments in China using a management system approach.

EcoCampus China has been developed to help universities in China improve their environmental performance by joining an international community of like-minded, environmental professionals.

Support comes in the form of workshops led by experienced and highly qualified environmental management system experts, leading-edge software tools to enable rapid progress through the programme, and comprehensive e-learning courses to train staff as part of continuing professional development. It gives the busy professionals in Chinese universities the support they need to make a real difference. Following, a recent audit in January 2019, Zhejiang were awarded a Silver Phase Award in recognition of progress made.

Following the establishment of a franchise in Nigeria and the expansion of the scheme in the Asian- Pacific Region, EcoCampus is seeking further opportunities for collaboration with other international universities.

In 2018, Dr Peter Redfern from NTU's School of Science, in collaboration with Zhejiang University International Campus, established EcoCampus China.



Award winning sustainable development at NTU

Below are some of the most recent awards that NTU has been awarded.



People & Planet Awards

NTU was awarded third place in the 2017 People & Planet University League, which ranks all 145 UK universities on their commitment to and management of sustainability. We have been in the top ten since 2009 and topped the league three times. These accolades cement our position as one of the most sustainable universities in the world.



Green Apple Awards

In 2016 NTU received two Green Apple awards for our Greening the City project, which has brought improvements to green spaces on the City Campus, and the carbon-negative Pavilion on the Clifton Campus.



UI GreenMetric

NTU has been ranked as the fifth most sustainable university in the world. The UI GreenMetric World University Ranking is an initiative of Universitas Indonesia. Universities from around the world are invited to take part, with over 700 institutions ranked in the 2018 survey. Universities are scored against their infrastructure and performance relating to energy and climate change, waste, water, transport, and education.



Green Gown Awards

NTU has also won a number of highly prestigious Green Gown Awards, presented by the Environmental Association of Universities and Colleges (EAUC). In 2018, NTU were a Finalist in the Sustainability Institution of the Year Award.

In 2017, Prof. Simmons won the Leadership award (Large Institution) for her career-long commitment to environmental and social sustainability and her determination to turn theory into action to enhance the opportunities and broaden the worldview of NTU students.



Learning in Future Environments (LiFE)

NTU is the first university to achieve a Gold LiFE accreditation. Awards are presented to educational institutions that meet high sustainability standards set by the LiFE Index, which is run by the Environmental Association of Universities and Colleges (EAUC).

The LiFE Index inspects our approach to sustainability across all aspects of university life, including teaching, research, campus development, waste management, and transport.

Award in CSR Education

During the 8th International Conference on Sustainability and Responsibility in Cologne in November 2018, Dr Petra Molthan-Hill received the Award in CSR Education. In the Laudation she was seen as an inspiration to others for her creative approaches. The award was presented by Professor Robert G. Eccles, Professor of Management Practice at Oxford University, who was honoured on the same day with the prestigious Lifetime Achievement CSR Award 2018 for his scientific achievements in the field of Corporate Social Responsibility.

Guardian University Awards

The carbon-neutral Pavilion building at Nottingham Trent University's Clifton campus was awarded the Guardian University Award for 'Buildings that Inspire' in 2017. The award recognises the 'outstanding initiative' that creates and champions a more sustainable living and working environment in the university and beyond, with a demonstrable and lasting legacy. The campus building, which opened in 2015, has already achieved a list of accolades including the Royal Institute of British Architects (RIBA), East Midlands Awards (Client of the Year Award), Royal Institution of Chartered Surveyors (RICS) East Midlands (Regeneration Award), the East Midlands Celebrating Construction Awards (Integration and Collaborative Working Award), and the Considerate Constructors Scheme National Award.



Sustainable development projects

This section describes just a handful of ways that NTU leads by example to contribute to the UN's 2030 Agenda for Sustainable Development.



U-cycle

Cycling to university offers students a cheap, green and healthy alternative to other modes of transport - making it the best option for student transport. The Sustainable Development Team manages the Ucycle bike hire scheme and the Push Forward workshop facility. Students and staff can hire a bike for just £39 per year and have it maintained too.



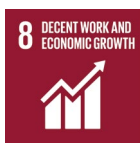
Foodshare

The Sustainable Development Team runs an allotment at Clifton Campus, with the produce donated to local charities. Since the project began, NTU student and staff volunteers have grown over 30 different types of produce, including beans, lettuces and tomatoes. The site has a polytunnel, which is watered from water collected in water butts, and includes an outdoor classroom. The project won the Community Award in the National UPP Awards in 2015.



Environmental Management Systems

The ISO 14001 certification makes us confident that we have the Environmental Management System needed to reach our ambitious energy, waste, transport, procurement and biodiversity targets. The University has held the internationally recognised ISO 14001 certification since 2012, before which we were involved in a university-based pilot scheme called EcoCampus. This was designed to assist institutions in moving towards environmental sustainability through good operational and management practices.



Enterprise Week

Working collaboratively with the Students Union throughout Enterprise Week, we nurture, promote, support and reward enterprise amongst students, providing a series of activities for students in helping them with their business ideas. These culminate in a dragon's den style competition, where there is prize money of £4,000 for different categories including the Green Dragon's Prize of £1,000 awarded in a ceremony at the end of the week.



Sustainable Construction

As part of the Carbon Reduction Strategy for the NTU Estate, the Estates Team works to achieve at least BREEAM Excellent for all new builds and BREEAM Very Good for major building refurbishments. An example of this is the award-winning carbon-neutral Pavilion building on NTU's Clifton Campus.



Fairtrade

As part of a global community, we want to ensure that all those involved in the production of the products consumed on our sites are paid fairly for their services. This gives them extra funds to improve their lives, such as sending their children to school, investing in community facilities, or securing safe water supplies, in developing countries. Every year we run a whole range of events and activities with a particular focus on Fairtrade Fortnight at the end of February, which includes Global Week too.



Plastic Planet

In April 2018, NTU's Sustainable Development Team launched the Plastic Planet campaign with engagement stalls at the City, Clifton and Brackenhurst campuses. The aim of the campaign is to work with other departments, as well as with students and staff, to encourage positive behaviour changes that reduce the amount of unnecessary single use plastic used around NTU.



Green Rewards

At the beginning of 2019, the Sustainable Development Team launched a new staff electronic engagement platform to promote more sustainable and wellbeing lifestyle choices to all 4,000 colleagues across the 4 campuses. Staff record and earn points for their positive green activities and top performers receive prizes on a monthly basis. Green Rewards is designed to be simple to use and to encourage changes in behaviour towards more sustainable activities, such as cutting down on single-use plastic, energy use and promoting volunteering, recycling, Fairtrade products and physical exercise. Each commitment made to these activities counts towards each person's chance of winning prizes on a monthly basis plus bi-annual donations to charity.



University Shutdowns

In order to minimise energy waste during University holidays, the Sustainable Development Team run a campaign to advise staff and students of what can and cannot be turned off, suggesting students defrost freezers in their halls, and raising awareness of the University's remote access services.



Peregrine Falcons

NTU is very lucky to have a pair of peregrine falcons nesting on the Newton building on our City Campus. A webcam was set up to monitor the breeding progress of these protected birds and to allow our staff, students and the public to watch the hatching and development of their chicks. This has been hugely popular and has raised the interest in biodiversity locally and globally.



Carbon Woodland

In order to reduce the University's carbon footprint and to increase habitat connectivity, the Sustainable Development Team has been working with partners to plant trees at our Brackenhurst Campus. A team of volunteers planted 3,000 native trees in 2018 alone. The trees will provide shelter for wildlife on campus, offer research opportunities for students, reduce flood risk and slow the rain flow into nearby watercourses.



Greening the city

Students told us that they wanted more green space and gardens on campus. Based on this feedback, the Sustainable Development Team has been working on the Greening the City project to ensure more pocket parks are created to improve the amount of green space and to increase the level of biodiversity that students encounter during day-to-day life on campus. An example of this work is the Boots Roof Garden, which offers new space for students and staff to relax, socialise and study in on top of the busy City Campus library. Green roofs are a fantastic way to improve building efficiency, reduce flood risk and provide a tranquil environment for people and wildlife.



We have started to report university wide how we engage with the SDGs and are one of the first signatories to the SDG Accord. Our aim is to report on SDGs in alignment with our new strategic plan.

Appendix

Principle 4: Research

Publications during the last report period

Indicative publications (Manage)

DABIĆ, M., VLAČIĆ, E., RAMANATHAN, U. and EGRI, C.P., 2019. Evolving absorptive capacity: the mediating role of systematic knowledge management. *IEEE Transactions on Engineering Management*. ISSN 0018-9391

ECKERSLEY, P., 2018. Sustainable development in cities: collaborating to improve urban climate resilience and develop the business case for adaptation *Public Money & Management* 38 (5), pp. 335-344. ISSN 0954-0962

GIAMPORCARO, S., 2018. Responsible investment at Old Mutual: a case of institutional entrepreneurship. *Emerald Emerging Markets Case Studies*. ISSN 2045-0621

GIAMPORCARO, S., 2018. African Bank Investment Ltd (ABIL): a South African corporate governance failure. *Emerald Emerging Markets Case Studies*. ISSN 2045-0621

GIAMPORCARO, S., 2018. Lonmin Plc: mining and responsible investment dangerous liaisons? *Emerald Emerging Markets Case Studies*, 8 (2). ISSN 2045-0621

OXBORROW, L., 2018. Managing sustainability in the fashion business: challenges in product development for clothing longevity in the UK. *Journal of Business Research*

GOWOREK, H., OXBORROW, L., CLAXTON, S., COOPER, T.H., HILL, H. and MCLAREN, A., 2018. Managing sustainability in the fashion business: challenges in product development for clothing longevity in the UK. *Journal of Business Research*. ISSN 0148-2963

OXBORROW, L., 2018. How small suppliers deal with the buyer power in asymmetric relationships within the sustainable fashion supply chain *Journal of Business Research*. ISSN 1873-7978

PAINTER, M., HIBBERT, S., POURYOUSEFI, S. and RUSSON, J.A., 2018. Sharing vocabularies: towards horizontal alignment of values-driven business functions. *Journal of Business Ethics*. ISSN 0167-4544

RAMANATHAN, U., WIN, S. and WIEN, A., 2018. A SERVQUAL approach to identifying the influences of service quality on leasing market segment in the German financial sector. *Benchmarking*. ISSN 1463-5771

GARZA-REYES, J.A., TORRES ROMERO, J., GOVINDAN, K., CHERRAFI, A. and RAMANATHAN, U., 2018. A PDCA-based approach to Environmental Value Stream Mapping (E-VSM). *Journal of Cleaner Production*, 180, pp. 335-348. ISSN 0959-6526

DISNEY, J., ROSSITER, W. and SMITH, D.J., 2018. Nottingham Express Transit: the role of green innovation in the drive for sustainable mobility through improved public transport. *The International Journal of Entrepreneurship and Innovation*, 19 (1), pp. 56-68. ISSN 1465-7503

SMITH, D.J., 2018. Making 'greener' connections: an introduction to the Special Issue. *The International Journal of Entrepreneurship and Innovation*

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SMITH D.J., 2018 Nottingham Express Transit: the role of green innovation in the drive for sustainable mobility through improved public transport. *The International Journal of Entrepreneurship and Innovation*

RAMANATHAN, R., RAMANATHAN, U. and BENTLEY, Y., 2017. The debate on flexibility of environmental regulations, innovation capabilities and financial performance – a novel use of DEA. *Omega*. ISSN 0305-0483

ALLETTO, A., BRUCCOLERI, M., MAZZOLA, E. and RAMANATHAN, U., 2017. Collaboration experience in the supply chain of knowledge and patent development.

Production Planning & Control, 28 (6-8), pp. 574-586. ISSN 0953-7287

RAMANATHAN, U., SUBRAMANIAN, N., WANTAO, Y. and VIJAYGOPAL, R., 2017. Impact of customer loyalty and service operations on customer behaviour and firm performance: empirical evidence from UK retail sector. *Production Planning & Control*, 28 (6-8), pp. 478-488. ISSN 0953-7287

RAMANATHAN, U., SUBRAMANIAN, N. and PARROTT, G., 2017. Role of social media in retail network operations and marketing to enhance customer satisfaction. *International Journal of Operations & Production Management*, 37 (1), pp. 105-123. ISSN 0144-3577

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COLLINS, A., 2017. Voluntary disclosure, greenhouse gas emissions and business performance: assessing the first decade of reporting. *The British Accounting Review*. ISSN 0890-8389

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HILLER, A. and WOODALL, T., 2018. Everything Flows: A Pragmatist Perspective of Trade-Offs and Value in Ethical Consumption. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-018-3956-5>

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PAINTER-MORLAND, M., KIRK, S., DESLANDES, G. and TANSLEY, C., 2018. Talent Management: The Good, the Bad, and the Possible. *European Management Review*, DOI: 10.1111/emre.12171

VAN DIJKE, M., LEUNISSEN, J.M., WILDSCHUT, T. and SEDIKIDES, C., 2018. Nostalgia promotes intrinsic motivation and effort in the presence of low interactional justice. *Organizational Behavior and Human Decision Processes*. ISSN 0749-5978 (Forthcoming)

DE CREMER, D., VAN DIJKE, M., SCHMINKE, M., DE SCHUTTER, L. and STOUTEN, J., 2018. The trickle-down effects of perceived trustworthiness on subordinate performance. *Journal of Applied Psychology*. ISSN 0021-9010

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HJORTH, D., STRATI, A., DRAKOPOULOU DODD, S. and WEIK, E., 2018. Organisational creativity, play and entrepreneurship. *Organization Studies*, 39 (2-3), pp. 155-168. ISSN 0170-8406

HILLER, A. (PI), PAINTER, M., COOPER, T. and OEHLMANN, J., 2018. Impacts on waste reduction and job creation through upcycling clothing practices. *NTU Sustainable Futures Continuation, Growth and Development Fund*

PAINTER-MORLAND, M.J., DEMUINJCK, G. and ORNATI, S., 2017. "Sustainable development and well-being – a philosophical challenge". *Journal of Business Ethics*, DOI: 10.1007/s10551-017-3658-4

PAINTER-MORLAND, M.J., 2017. "The problem with the idea that 'only what can be measured can be managed': Bataille intuitions". *Rue Descartes*, DOI 10.3917/rdes.091.0150

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GOBENA, L.B. and VAN DIJKE, M., 2017. Fear and caring: procedural justice, trust, and collective identification as antecedents of voluntary tax compliance. *Journal of Economic Psychology*, 62, pp. 1-16. ISSN 0167-4870

CLARKE, J. and HOLT, R., 2017. Imagery of ad-venture: understanding entrepreneurial identity through metaphor and drawing. *Journal of Business Venturing*, 32 (5), pp. 476-497. ISSN 0883-9026

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VAN DIJKE, M., VAN HOUWELINGEN, G., DE CREMER, D. and DE SCHUTTER, L., 2017. So gross and yet so far away: psychological distance moderates the effect of disgust on moral judgment. *Social Psychological and Personality Science*. ISSN 1948-5506

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MOLTHAN-HILL, P., 2018. Supporting the UN's Sustainable Development Goals: reconceptualising a 'sustainable development assessment tool' for the health and care system in England <https://doi.org/10.1177/1757913918786523>

ERLANDSSON, L., MOLTHAN-HILL, P., SMITH, A. and ARNTSEN, A., 2018. 'Combating Global Warming Through the Estate and Curriculum – A Whole-Institution Commitment at Nottingham Trent University' in Azeiteiro, UM et al. (Eds) *Higher Education Institutions in a Global Warming World - The transition of Higher Education Institutions to a Low Carbon Economy*, Aalborg, Denmark, River Publishers

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