

# The Prince of Wales Global Sustainability Fellowship Programme

## Supporting Document: Intended research themes and topics first round

Fellows will work within the interdisciplinary environment of the the Prince of Wales Global Sustainability Fellowship Programme. Proposals are invited for specific programmes of research in the following broad topic areas.

### Theme: Industrial Transformation

#### Topic 1: Radical innovation and disruption (supported by Paul and Michelle Gilding)

The Fellow will investigate the potential for radical innovation in technology and business models to disruptively catalyse the transition to a sustainable economy.

In light of the depth of system-wide challenges such as climate change, pollution, inequality and resource constraints, it is increasingly apparent that the transition to a sustainable economy will only be achieved through radical innovation in technology and business models. While this may have the potential to deliver greater economic and social stability in the long term, it could be highly disruptive for business incumbents. Understanding how disruptive transitions have occurred in market-based economies in the past could allow for deeper insights into how the transition to a more sustainable economy can be accelerated, and the roles of incumbents and/or disruptive new entrants in future markets.

The scope of the Fellowship could include (but is not limited to):

- (i) the enablers for radical innovation
- (ii) risks associated with disruptive technologies and business models
- (iii) triggers/mechanisms for market transformation
- (iv) relationships between markets, politics, and social change (to improve understanding of how interconnected relationships between actors such as governments, entrepreneurs, and businesses shape economic systems and development at a global and local level).

Areas that may be explored could also include:

- lessons from past disruptions (e.g. digital photography) and current ones (e.g. renewable energy and distributed generation)
- implications of disruptive technologies and/or business models for incumbent businesses – can incumbents survive or will disruptors win out?

- forms of transformative technological and/or business model innovation
- implication of radical innovation for society (adaptability, resilience, and potential resistance to change)
- how can transformation occur rapidly at scale, including the relationship between the market and social change
- effective change management to navigate disruptions and successfully bring new approaches to the market
- the ability of business clusters to promote or hinder economic innovation.

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## **Topic 2: Transforming the pulp and paper industry** (supported by Sappi)

The Fellow will investigate how trends of innovation and sustainability will come together to reshape the business with a particular focus on the pulp and paper industry.

The pulp and paper industry is encountering multiple challenges. Alongside, pressures to improve the efficiency of energy and material intensive industrial processes, changes in global demand due to economic shifts and digitisation are forcing investment in new product development. The resulting transformation will alter the skill base required by the industry and the employability of workers as more technologically sophisticated processes are introduced, particularly in rural communities where the industry is located.

Opportunities and barriers to sustainable, innovation-led transformation of the pulp and paper industry could be better understood by investigating existing industry research and development initiatives. This may reveal what additional action, from both industry and government, is required.

The scope of the Fellowship could include (but is not limited to):

- (i) shifts to a more environmentally conscious operating models in developing and developed countries
- (ii) future applications of pulp and paper in emerging economies
- (iii) the potential of new paths in wood chemistry and extracting biochemicals for wood-fibre based plastic products or applications in the textile industry
- (iv) energy opportunities from renewable sources and its impact on forestry assets.

Industrial transformation will be further driven by advancements in artificial intelligence and the global need to bring carbon emissions to net zero, amongst others. This underlines the need to consider how the industry can transform to long-term sustainability, which includes economic vitality and employment opportunities for future generations. The Fellow could examine these

challenges and opportunities at a more granular level in specific geographies and product categories.

The Fellow could also explore one or more of the following business, social and structural perspectives on industrial transformation:

- perverse incentives or gaps in policy and regulation which impedes innovation-led transformation towards environmentally responsible operating models and more sustainable products, and similarly looking at successful policy
- shifting public expectations and attitudes towards more sustainable consumption of pulp and paper products through consistent industry messaging, for example
- identifying business models which are both innovative and socially and environmentally sustainable, including product development and operating practices
- the 'business case' for companies to increase investment in innovation-led transformation, including the long- and short term risks to the industry from not doing so
- the potential socio-economic impacts of an innovation-led industrial transformation on various stakeholders in the supply chains, for example, on the types of jobs and skills required
- the forms of governance, policy, regulations, incentives and finance are already in place, and what further action is needed to enable the innovation required within a tight timeframe.

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### **Topic 3: Pathways to a circular economy** (supported by Unilever)

The Fellow will investigate the potential of a circular economy to mitigate the business risks associated with 'linear' models of production and consumption, including social implications, with particular focus on the consumer goods industry.

The term 'circular economy' does not yet benefit from an extensive case history or evidence base; nor is there agreement on how the concept relates to sustainable development more broadly, including potential social impacts. In light of this, studying the potential design of a circular economic system will offer valuable insights into how to re-configure public infrastructure and policies; support innovative technologies; alternative means of sourcing materials and accessing markets; and how products and services are delivered within different markets.

Investigating pathways to a circular economy will support understanding how companies can aid to deliver the UN Sustainable Development Goals, while at the same time building long-term value and generating new opportunities for businesses.

The scope of the Fellowship could include (but is not limited to):

- (i) waste and resource use/management via circular business models

- (ii) synergies and trade-offs between circular economy and climate change
- (iii) societal impact
- (iv) potential design of a circular economy to most effectively support positive outcomes such as decent work, mitigation of climate change, and gender equality
- (v) actions that companies can take unilaterally to design out resource inefficiencies and design in fairer access to goods and services.

The Fellow could explore drivers and barriers to a circular economy at a more granular level in specific geographies or product categories, including:

- potential designs for value chains that promote sustainable supply, manufacturing and consumption patterns
- removal of perverse incentives or gaps in policy and regulation from governments which mitigate against circularity (and similarly looking at areas where policy is working)
- lack of infrastructure for enabling a circular economy
- shifting expectations and attitudes towards consumption among the public, and how these can be shaped by industry messaging
- benefits of circular business models, and risks to industry of not moving in this direction, both short and long term
- potential impacts of a circular economy on society and the economy, for example, social norms, consumer behaviour, jobs and skills
- potential of a circular economy to be catalytic in delivering a broader range of SDGs.

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## **Theme: Social inclusion**

### **Topic 4: Resilient communities** (supported by Asda)

Communities in the UK have been subject to many influences over the last decade, from policy changes such as universal credit to broader austerity measures, demographic trends, immigration and commercial pressures such as globalisation, technology and competition which are remaking the economy in the 21<sup>st</sup> century. Not all communities are responding well to these changes, with many experiencing vulnerability and a sense of 'being left behind'. The unequal distribution of employment, opportunity, health, education and access to services has fostered tensions in many parts of the UK and has become a national political concern.

Many leading retailers have a long track record of community engagement in the UK, making direct donations to charities, offering space in stores for local fundraising, and actively supporting staff volunteering. Is there potential for such enterprises to become 'anchor institutions', like schools, churches and hospitals, serving as hubs of ideas, services and innovations to the communities where they are located? The effectiveness of charitable interventions by retail companies in

community wellbeing is under explored. There may also be potential for retailers to support local economies through local sourcing and procurement, facilitation of micro enterprises.

The Fellow will explore the nature and effect of community interventions by retail organisations in the UK, with a particular focus on wellbeing and vulnerability. Issues addressed might include unemployment, hunger, health and diet and access to and availability of public services, children's educational attainment, alcoholism, obesity and non-communicable disease. The Fellow could explore these issues through case study research in specific communities, or at a broader national level, or both. It is expected that the research will engage with retail organisations (including the funder of this Fellowship, ASDA), and address strategic options for improved impact.

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#### **Topic 5: Luxury and inclusion** (supported by Chanel)

Luxury business models embody exclusivity – the rarity of the materials used, the quality of the craftsmanship, the restricted access. If goods and experiences were widely accessible, then they would cease to retain their status as 'luxury'. However, against a backdrop of rising socioeconomic inequality, environmental degradation and climate change impacting on the most vulnerable in society, exclusivity risks being interpreted as exclusion, and luxury brands the symbol of a broken system.

At the same time, luxury brands contribute to maintaining traditional craftsmanship, create opportunities through their procurement of valuable materials, and have more latitude to maintain high standards than lower margin firms. The luxury industry can also wield considerable cultural influence and, therefore, has the potential to lead by example. The Fellow will investigate how the business models of luxury brands are affected by these debates, and the potential for companies selling luxury goods to contribute to solving recognised social and environmental problems.

The scope of the Fellowship could include (but is not limited to) the following questions:

- (i) to what extent can the supply chains of luxury brands be managed to contribute to environmental sustainability, employment and social value creation
- (ii) can luxury brands play a role in sharing wealth, for example through building inclusive business models?
- (iii) what influence do luxury brands have on the ideas and wider attitudes of customers and the wider community of consumers, and does this differ between countries?
- (iv) what is the role of luxury products in influencing positive change in terms of sustainability or poverty?
- (v) can luxury companies contribute to inclusive development?

Further questions arise from a broader consideration of luxury production and consumption. How is luxury defined, and how has this varied over time? How different is it in different countries, and what is the significance of this for companies selling luxury products? What impacts are

sustainability crises (climate change, biodiversity loss) and economic change (e.g. automation, robotics) likely to have on the luxury industry, and to what extent can luxury products play a role in supporting a transition to a sustainable equitable future for humankind? What opportunities exist for promoting greater social inclusion within the luxury business model (either in production or consumption)?

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**Topic 6: Infrastructure and local communities** (supported by The Equal Opportunities Foundation)

China's Belt and Road Initiative (BRI) is an ambitious effort to improve regional cooperation and connectivity on a transcontinental scale by establishing infrastructure that can strengthen, trade and investment links between China and some 65 other countries. The BRI involves bold investments in infrastructure in multiple countries. Yet large-scale engineering projects are known to have significant social and environmental impacts that can be hard to predict and avoid, and expensive to fix. The challenge for governments participating in BRI is to enable economic development whilst protecting the environment and addressing social exclusion, unequal development, and rural poverty. The determination to achieve 'win-win-win' outcomes can serve as a catalyst for creative solutions, but the delivery of sustainable development at a local level remains problematic. The Fellow will investigate the potential for avoiding, minimising and responding to the social and environmental impacts of large infrastructure investments, such as those of the BRI.

The approaches to development underpinning the BRI do not necessarily reflect established international models (e.g. those developed by the World Bank or bilateral donors). As implementation under the BRI gains pace, there will be valuable opportunities to analyse the effectiveness of this new international development 'experiment'. When considering appropriate conceptual and analytical approaches to exploring sustainability in the BRI context, attention needs to be placed on potential tensions between socioeconomic diversity and varying notions of 'sustainability' across countries, and the aims of this cross-regional initiative.

The scope of the Fellowship could include (but is not limited to):

- what are the key policy/planning frameworks on sustainable development that are being developed in China in general and for the BRI in particular, and what are the relationships (including power-dynamics) between the various institutions and actors involved?
- what is the relationship between policy and implementation at the local level, to establish the extent to which planning processes and associated decision-support tools are achieving alignment with the UN Sustainable Development Goals?
- to what extent does the determination of sustainability impacts (e.g. distribution of costs and benefits) address cross-scale and cross-territory considerations? Does analysis go beyond project-specific issues to include the wider implications arising from, for example: shifts in production and consumption across borders and regions, creating new urban areas and/or relocating supply chains?

- to what extent are issues of climate change factored into planning and design of BRI projects?
- to what extent do capacity constraints in legal, regulatory, administrative, and civil societal systems limit the effectiveness of sustainability planning? How far can they (and are they) are being addressed through capacity building (e.g. pedagogical approaches to build leadership capacity for sustainability)?
- to what extent could sovereign or private financing or investment vehicles/instruments be used to contribute to the sustainability of BRI development projects?
- what evidence is there of innovation, collaboration across value chains and/or adaptive problem solving in BRI projects (e.g. to increase the resilience of projects and communities to climate change, natural disasters and pandemics)? How could such initiatives be furthered?

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## **Theme: Health**

### **Topic 7: Air quality and NCDs** (supported by AstraZeneca)

The Fellow will investigate the interconnectivity of environmental health and disease to identify and explore strategic interventions to help prevent the increasing burden of non-communicable disease (NCD).

Many factors contribute to this trend, from changes in diet to reduced levels of physical exercise in modern lifestyles, and pollution in the environment from vehicles and other sources. The Fellow will investigate and anticipate the impacts of one factor – air quality – on respiratory, oncological and cardiovascular disease prevalence, potentially through a series of substantive case studies in different situations and scales, for example local, regional, national and global contexts, rural and urban environments (e.g. smart cities), and low-income countries.

Anticipating the current and future impact of air quality, together with science-based interventions to limit its impact on the prevalence of NCDs will empower health systems – in their broadest sense – to respond in a more integrated manner. Tackling the sources of air pollution will be critical to success rather than assuming that mounting burdens will be dealt with by already overstretched health services.

The scope of the Fellow could include (but is not limited to):

- (i) how different forms of air pollution relate to NCD occurrence
- (ii) the role of remote sensing, artificial intelligence and ‘big data’ in informing disease prevention policies and strategies
- (iii) how scalable strategic interventions could positively impact disease prevention, health and wellbeing – including the nature of their business models.

Air quality is fundamental to our health. Poor air quality impacts millions now, and potentially many more in the future. The Fellow will help to shape the future of more preventative, sustainable health systems through the pragmatic solutions and interventions highlighted by their research.

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