SPATIAL FINANCE INITIATIVE 🌍 ↔ 💰
Spatial Finance Initiative

Earth observation and remote sensing combined with machine learning has the potential to transform the availability of information in our financial system and change how risks, opportunities, and impacts are measured and managed by financial institutions. ‘Spatial finance’, where geospatial data is integrated into financial theory and practice, creates a significant opportunity for the financial services industry.

Finance applications enabled by geospatial data and analysis are extensive, but such approaches are particularly helpful for analysing risks and impacts related to climate change and the environment. For these reasons, we believe that geospatial analysis will become a core competency for financial analysis and this will have very significant implications for information markets, financial products, and risk management. This will help financial markets to measure and manage climate-related risks, as well as a vast range of other factors that affect risk and return in different asset classes.

The Spatial Finance Initiative has been established to bring together research capabilities in space, data science, and financial services to make them greater than the sum of their parts. The Initiative is designed to be a funnel, undertaking and coordinating world-leading academic research and channelling these into real-world finance-related applications. The research will be translated into practical and pre-operational products and services by working closely with the finance community and geospatial and financial services providers.

The Initiative has been established by the Alan Turing Institute, Green Finance Initiative, Satellite Applications Catapult, and the University of Oxford. It is a multi-disciplinary multi-stakeholder project focused on globally significant research and applications.

The Initiative will have a number of outputs over multiple years: research projects, (pre-) operational demonstrators, events, training and capacity building, and the incubation of applications.

Research questions include:

- How can earth observation and machine learning secure geospatial data, particularly asset-level data, relevant to financial decision-making?
- What does geospatial data mean for the future of financial analysis and what hypotheses can we test with such data?
- How can spatial finance support the implementation of the Task Force on Climate-related Financial Disclosures (TCFD)?
- What are the implications for the skills and resources available for financial analysts?
- How could geospatial data and ‘spatial reporting’ complement and support traditional financial reporting, as well as integrated reporting?
- What uses could geospatial data have for non-financial objectives and impact investing?
- How can geospatial data support engagement with investee companies?
- Does geospatial data and analysis have implications for traditional theories of finance and economic geography?
Agenda

Friday 1st February 2019

09:00 – 09:30 Arrival at the Auditorium, The Willis Building, 51 Lime Street, London, EC3M 7DQ

09:30 – 09:40 Welcome and Opening Remarks
Rowan Douglas CBE, Head of Capital, Science & Policy Practice, Willis Towers Watson
Sir Roger Gifford, Chair, City of London Green Finance Initiative and the UK Green Finance Taskforce

09:40 – 09:55 Spatial Finance Initiative
Ben Caldecott, Director, Oxford Sustainable Finance Programme, University of Oxford
Sam Adlen, Chief Strategy Officer, Satellite Applications Catapult
Anastasia Shteyn, Programme Manager, Finance and Economic Data Science, Alan Turing Institute

09:55 – 10:15 ’Queryable Earth’
Will Marshall, Co-Founder and CEO, Planet

10:15 – 11:30 Session I: What could geospatial capabilities mean for the theory and practice of finance?
Chair: Roger Urwin, Global Head of Investment Content, Willis Towers Watson
Panellists:
Gordon L. Clark, Professorial Fellow, St Edmund Hall, University of Oxford
Martin Ewald, Managing Director and Head of Investment Strategy for Infrastructure Equity, Allianz GI
Will Goodhart, Chief Executive, CFA Society of the United Kingdom

11:30 – 12:45 Session II: How can geospatial capabilities support the alignment of finance with sustainability?
Chair: Jessica Fries, Executive Chairman, The Prince of Wales’s Accounting for Sustainability Project
Panellists:
Carel Cronenberg, Lead, MRV, European Bank for Reconstruction and Development
Jonathon Gascoigne, Director of Risk Analytics, Capital, Science & Policy Practice, Willis Towers Watson
Rebecca Self, CFO, Sustainable Finance, HSBC
Ben Yeoh, Senior Portfolio Manager, Global Equities, RBC Global Asset Management

12:45 – 13:00 Closing Remarks
Rt Hon Claire Perry MP, Minister of State, UK Department for Business, Energy and Industrial Strategy

13:00 – 14:00 Networking Lunch
Partners

The Alan Turing Institute

The Alan Turing Institute, headquartered in the British Library, London, was created as the national institute for data science in 2015. In 2017, as a result of a government recommendation, we added artificial intelligence to our remit.

Our mission is to make great leaps in data science and artificial intelligence research in order to change the world for the better.

Research excellence is the foundation of the Institute: the sharpest minds from the data science community investigating the hardest questions. We work with integrity and dedication.

Our researchers collaborate across disciplines to generate impact, both through theoretical development and application to real-world problems. We are fuelled by the desire to innovate and add value.

City of London Green Finance Initiative

The City of London Corporation – the body responsible for running London’s Square Mile – regards green finance as prudent, profitable and one of the best tools available in the race to cut carbon. That’s why, in January 2016, we launched our Green Finance Initiative in partnership with government.

The initiative brings together international expertise from across the financial and professional services sector. It aims to:

- Provide public and market leadership on green finance
- Advocate for specific regulatory and policy proposals that might enhance the green finance sector worldwide
- Promote London and the UK as a leading global centre for the provision of green financial and professional services

Satellite Applications Catapult

The Satellite Applications Catapult is an independent innovation and technology company, created by Innovate UK to drive economic growth through the exploitation of space. We work with businesses of all sizes to realise their potential from space infrastructure and its applications.

Based in Harwell, Oxfordshire, the Catapult was established in May 2013 as one of a network of centres to accelerate the take-up of emerging technologies and drive economic impact for the UK. We are a not-for-profit research organisation which is registered as a private company limited by guarantee and controlled by its Board.

The world is in the early stages of a new digital revolution, with space technology increasingly at its heart. Satellites are critical infrastructure, as fundamental to the global economy as the energy grid or internet, and space is a UK success story. In 2016, the industry was worth £13.7bn, and working with the wider UK space community and the UK Space Agency we will help grow this to £40bn by 2030.
Oxford Sustainable Finance Programme

The Oxford Sustainable Finance Programme at the University of Oxford Smith School of Enterprise and the Environment is a multidisciplinary research centre working to be the world's best place for research and teaching on sustainable finance and investment. We were established in 2012 to align the theory and practice of finance and investment with global environmental sustainability.

We research environment-related risks, impacts, and opportunities across different sectors, geographies, and asset classes; how such factors are emerging and how they positively or negatively affect asset values; how they might be interrelated or correlated; their materiality (in terms of scale, impact, timing, and likelihood); who will be affected; and what affected groups can do to pre-emptively manage risk. Since our inception we have conducted pioneering research on stranded assets and continue to undertake significant research on the topic.

The production of high-quality research on the materiality of environment-related factors is a necessary, though insufficient, condition for these factors to be successfully integrated into decision-making. Consequently, we develop the data, analytics, frameworks, and models required to enable the integration of this information.

We are pioneers and advocates of 'spatial finance', a term we have coined that refers to efforts to bring geo-spatial capabilities into financial analysis. As such we are developing new asset-level datasets through data science and combining these with new approaches to spatial analysis, scenarios, and stress tests.

We also research barriers to the adoption of practices related to sustainable finance and investment. This includes the role of governance, norms, behaviour, and cognition, as well as policy and financial regulation in shaping investment decisions and capital allocation.

The Oxford Sustainable Finance Programme is based in a world leading university with a global reach and reputation. We work with leading practitioners from across the investment chain (including actuaries, asset owners, asset managers, accountants, banks, data providers, investment consultants, lawyers, ratings agencies, stock exchanges), with firms and their management, and with experts from a wide range of related subject areas (including finance, economics, management, geography, data science, anthropology, climate science, law, area studies, psychology) within the University of Oxford and beyond.