



Introduction to

Centre for Business Innovation

Inside

- ✓ Who we help
- ✓ How we work
- ✓ Our Portfolio of Consortia
- ✓ Cambridge Innovation Summit
- ✓ Where you can find out more



Helping you deliver **Innovation**



In a world with ever accelerating emerging technologies and new business models

Larger Corporates with limited time and resources face the challenge of finding, testing and implementing innovations in their chosen areas of technology or business process

They need to leverage experience and best practice of relevant peers in a trusting safe space away from the attention of consultants and competitors

CfBI helps them do this by managing international, sector specific consortia where members with complementary interests share the costs and risks involved

Its all about **Doing
More with Less**

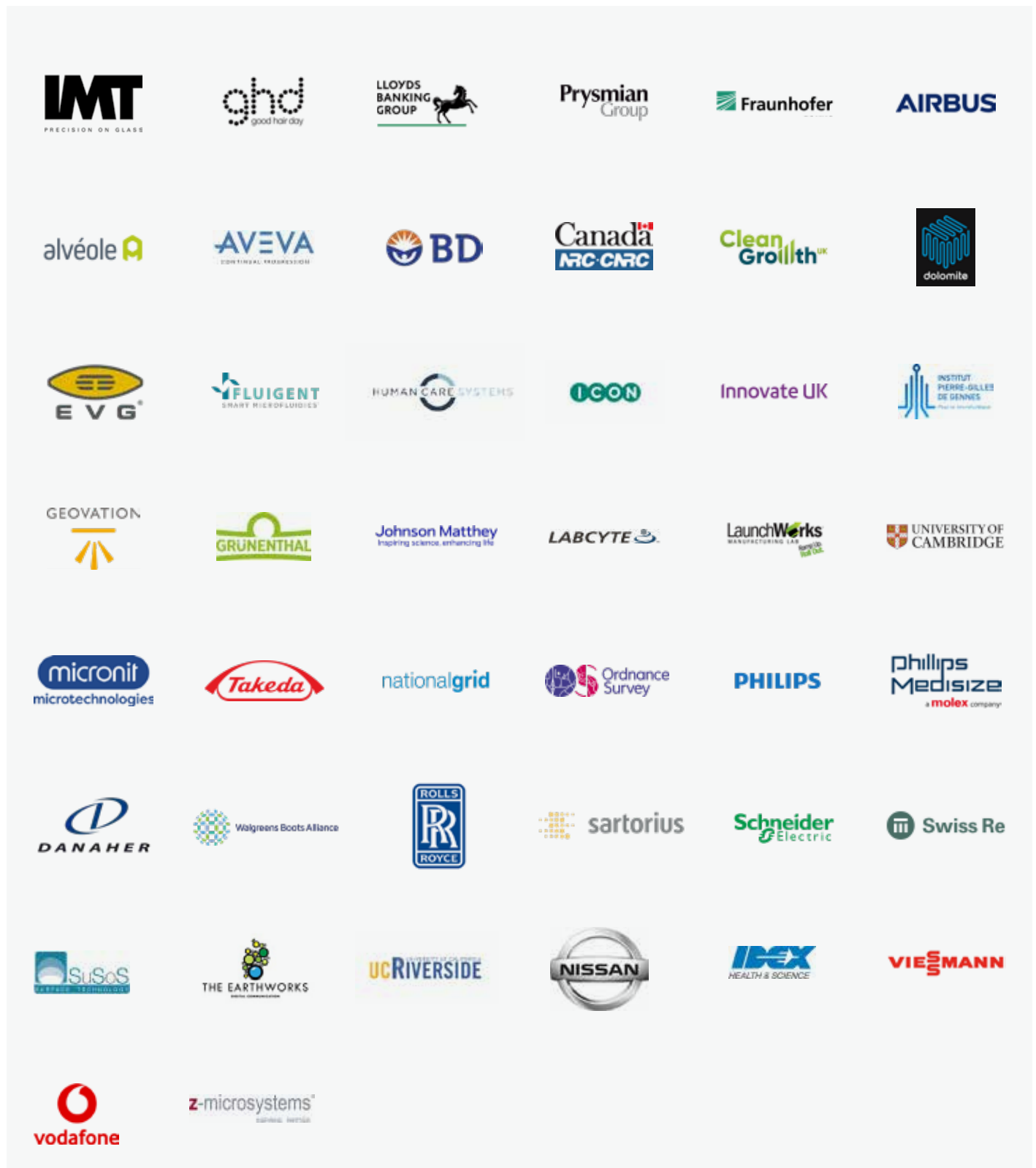
Benefits of joining CfBI consortia include:

- Wide range of consortium themes – some will match your 'hot topics' ;
- Influencing the work of the consortium – to align with your needs;
- Influencing who joins the consortium and what is put in the public domain – to protect your interests;
- Learning about and progressing new opportunities – to go deeper into the ones that interest you;
- Benchmarking and engaging with peers and potential partners – while working with people who might help you ;
- Understanding regulators, standards setting bodies and other stakeholders – to be on top of regulatory environment and public perception of new business models;
- Sharing the costs and risks of follow-on pilot/development projects – to get demonstrators in place quickly;
- Pitching for research calls – to leverage public sector funding;
- All on a shared subscription basis in a spirit of 'Open Innovation'.

Why CfBI?

- ✓ Our formula, which has been refined over 10 years, is unique – more confidential and user driven than going to conferences and cheaper than buying consultancy
- ✓ Some of the best companies in the world join our consortia & work with us for several years
- ✓ We are a Cambridge Think-Tank drawing on the latest thinking from business and academe
- ✓ We do not sell consultancy or IT
- ✓ Working with us does not involve the 'baggage' of national/government support schemes.
- ✓ We only act in our members' interests

2019 Members of our Consortia Include



Consortium subscription costs **between £6k and £12k per year.**
Discounts for joining multiple consortia

What do CfBI consortia 'feel' like?



Expert Witness presentations provide up to the minute insight and opportunity for private Q&A

Facilitated discussions under Chatham House Rule allow members opportunity to raise sensitive issues without this being attributed in the public domain.

Site Visits to international Centres of Excellence provide opportunity for hands on experience

✓ Consortium Agendas are set by consensus of members

✓ Consortia meet circa 5 times per year at member sites or centres of excellence world wide

CfBI consortia visit centres of excellence around the world

- Cambridge
- Zurich
- Berlin
- Salzburg

- Eindhoven
- Milan
- San Diego
- Lausanne

- Boston
- Brussels
- London
- San Francisco

- Barcelona
- Geneva
- Hamburg
- Glasgow

- Toulouse
- Singapore
- Dalian....

Portfolio of CfBI Consortia

Today



Coming soon





Corporate Venturing Leadership Forum

Objective

Corporates are having to look at their wider ecosystems to find new innovation, disrupt the disruptors and tackle ingrained cultural challenges. Tasked with providing new competitive advantages, corporate innovators discover best practise in outreach and ecosystem development activities such as incubation and acceleration programmes, cultural transformation and managing expectations of both start-up and corporate motherhip.

Successes

- ✓ The creation of a multi-corporate energy-tech accelerator
- ✓ Members have done deals valued at > **\$1.5M**
- ✓ Members early access to new retail innovation lab not yet open to wider corporate base

Visits

CERN (CH), **University of Cambridge**, **Lloyds Bank** (UK), **Geovation** (UK), **CAIXA Bank** (ES), **Philips** (NL), **NXP** (NL), **Nissan** (FR)

Key People

Adam Swash: Consortium Facilitator – After 20 years working in Strategy & Research at Experian Plc, Adam has first-hand experiences of delivering innovation in a corporate environment.

Prof. Erkkö Autio: Expert Witness. Erkkö is Chair in Technology Venturing and Entrepreneurship at Imperial College London Business School. Erkkö has conducted pioneering research in the areas of comparative entrepreneurship, international entrepreneurship, innovation ecosystems, and most recently in systems of entrepreneurship and entrepreneurial ecosystems. Professor Autio was recently recognised as one of the 50 most influential management scholars globally in terms of research impact





Open Innovation meets Big Data

Objective

Companies are scrambling to extract more value from data – both in their own organization and beyond. To explore the latest thinking on application of Open Innovation in commercial organizations. Today we are stretching the envelope of Open Innovation beyond the original vision of Henry Chesbrough by applying the process to sharing / repurposing / trading data – with the vision of overcoming implementation problems and leveraging the explosion in data availability to create net new value.

Successes

- ✓ Open Banking and beyond, thought Leadership on applying the Open Innovation meets Big Data concept to: Smart Homes, Mobility, Connected Cars, Future or Retail, Connected Health
- ✓ Project with Zeppelin and Radboud University to benchmark consortium members' readiness for Open Innovation
- ✓ Project with Chalmers University to evaluate opportunities to pool/trade IP
- ✓ Future Mobility, Smart Homes, Digital Health, Open Banking and beyond.



Flagging of ethical concerns and ways to deal with them



Evaluation of value of data models

Visits:

Phillips (NL), **Lego** (DK), **Nissan** (F & UK), **Airbus** (F & UK), **University of Oxford**, **University of Cambridge**, **European Commission** (B), **WIPO** (CH), **Friesland Campina** (NL), **Swiss Re** (CH and UK), **Solvay** (B), **DSM** (NL), **Munich Automotive Manufacturers** (D)

Key People:

Peter Hewkin: Consortium Facilitator. Peter Founded CfBI and is responsible for its consortium model.

Tim Minshall: Expert Witness. Professor of Innovation, Head of Institute for Manufacturing, University of Cambridge

Henry Chesbrough: Expert Witness. World thought leader Open Innovation University of Berkeley

Ellen Enkel Expert Witness: Professor of Digital Innovation, Zeppelin University Switzerland



My Experience in the participation of the OI consortium has been excellent. In particular I found the interactions with peers from other companies very good, and the programs rich enough to foster interesting discussions. The event at WIPO in Geneva was a great success and I learned a lot “

Michael Benard :

Head of University Relations Google

“The DSM Innovation Center participated two years ago in the Open Innovation consortium, and the outcome and insight from the collaboration with other companies and institutions that were dealing with the same topic really proved to be a jumpstart in many ways. DSM is still getting benefits from that collaboration. It was a non-commercial, non-salespitch initiative, very different from the usual stuff we get from suppliers. It was the ‘real deal’.”

Massimo Mercuri

innovation Projects – Royal DSM

“The OI Consortium has provided a unique forum of experts with whom one can discuss key issues around innovation management, learn from the experience of peers across a variety of industries, establish extremely valuable networks for cross-company benchmark. The efficient way in which meetings are structured has allowed a very effective use of the face-to-face time, as well as great flexibility in steering the discussions according to the topics of interest that may emerge “

Claudio Marinell

Director Open Innovation and Academic Relations—Nokia

“ The Social Media for Business Consortium provides a great opportunity to network, expand knowledge and challenge ways of working, amongst like minded Brands and Industry experts. The collaborative environment developed by the consortium fuels an environment for learning that can add significant value to your Business, in a way that numerous conferences, or agency/vendor engagements fail to deliver.”

Carl Barkey
Head of Social Media American Express, UK



Social Media for Business

Objective

To understand the risks and opportunities of using social data for business applications and to create a safe space for testing new applications with academic rigour.

Successes

- ✓ Finding new applications matching (young) candidates to jobs
- ✓ Demonstrating with academic rigour the ability to drive up clickthroughs by (with permission) matching viewer profile to ad wording/images
- ✓ Proposing an innovative model where companies can test this paradigm with 'sandpit' experiments in a safe space with trusted partners and academic ethical oversight

Visits

Beiersdorf (D), **Scottish Enterprise** (UK), **Roche** (CH), **Swiss Re** (UK and CH), **Tchibo** (D), **Boots** (UK), **Airbus** (D), **Sky TV** (UK)

Key People

Peter Hewkin: Consortium Facilitator. Peter Founded CfBI and is responsible for its consortium model.

David Stillwell: Expert Witness. Head of Psychometrics Centre at the Judge Business School, University of Cambridge

Vess Popov: Expert Witness. Project Leader Psychometrics Centre at the Judge Business School, University of Cambridge



Distributed Ledger Technologies

Objective

Behind the hype, the majority of corporates have small teams who are looking at the implications of blockchain technology. The potential disruptions and opportunities afforded in: supply chain provenance, smart contracts and decentralised markets. A few are even starting small experiments. Tasked with answering these critical questions and facing up to the nay-sayers our corporate technologists have a safe space to ask those questions, benchmark member pilot application projects, think about fit into the wider technology stack and hear case studies from those right on the technological edge. We will also prepare you to avoid potential "unintended consequences" of blockchains.

Successes



Recent speakers helped put together some initial resources in a LinkedIn article Blockchain 101 highlighting 'what is blockchain', what is the state of the market in each industry and if you want to take it a few steps further a few free training courses.

Visits

Silicon Valley Bank (UK)

Key People

Adam Swash: Consortium Facilitator – After 20 years working in Strategy & Research at Experian Plc, Adam has first-hand experiences of delivering technology innovation and NPD for both internal and client facing products.

Geoff Goodall: expert witness Senior Research Associate, UCL Centre for Blockchain Technology. Following a successful career in international finance, Geoff now focusses on the academic and regulatory aspects of Blockchain Technologies. He has a particular interest in the implications of identity, anonymity and decentralisation. He has a PhD in computer science from Harvard University and an undergraduate degree in mathematics from MIT

“ Bitcoin is a technological tour de force.” –Bill Gates, co-founder of Microsoft, investor, and philanthropist. Whereas most technologies tend to automate workers on the periphery doing menial tasks, blockchains automate away the center. Instead of putting the taxi driver out of a job, blockchain puts Uber out of a job and lets the taxi drivers work with the customer directly.

Vitalik Buterin
Co-creator Ethereum

Bitcoin is a remarkable cryptographic achievement, and the ability to create something that is not duplicable in the digital world has enormous value

Eric Schmidt
CEO of Google

Quantum Computers Will Eventually Break Bitcoin's Blockchain, But That's Just One Side of the Story

Superposition.com





Advanced Materials for Additive Manufacturing

Objective,

The Advanced Materials for Additive Manufacturing (AMAM-1) consortium has been launched in order to provide the consortium members a unique insight into use of advanced materials in additive manufacturing, development of additive manufacturing technologies for various applications, and to facilitate the commercial uptake and bring together potential users with a shared interest to address commercialisation challenges.

Visits

On the 21st November 2018, the first meeting of the Advanced Materials for Additive Manufacturing Consortium (AMAM-1) was hosted at LEITAT facilities in Barcelona in the space of the IAM 3D HUB.

The 2nd meeting of the Advanced Materials for Additive Manufacturing Consortium – AMAM-1.2 was hosted by Laboratory for Advanced Materials Processing at EMPA in

their offices in Thun, Switzerland. It was joint with the last meeting of series 6 of the Nano-Carbon Enhanced Materials Consortium (NCEM-6.5). At this meeting delegates were given a tour of the EMPA labs.

Key People

The consortium leader Dr Bojan Boskovic, from Cambridge Nanomaterials Technology Ltd (www.cnt-ltd.co.uk), is an expert in advanced materials commercialisation including nanomaterials such as carbon nanotubes and graphene. He has more than 20 years of hands-on experience with advanced nanomaterials and composites from industry and academia in the UK and Europe.

He has extensive experience in management of exploitation and dissemination of results of a number of European Commission funded FP7 and H2020 projects, including two project which are directly related to additive manufacturing and 3D printing: M3DLoC and

Repair3D. The M3DLoC project is developing new 3D printing materials for Lab-on-Chip (LoC) medical devices, and Repair3D is reusing polymer-based recycled composite materials for 3D printed applications.

Speakers:

The AMAM consortium meetings speakers are experts coming from leading academic, industrial and government organisations working in the field of advanced materials, they come from: **Avanzare**, Spain; **AIMEN**, Spain; **MEMS, CSEM S.A.**, Switzerland; **EMPA** (Swiss Federal Laboratories for Materials Science and Technology), Switzerland; **IAM 3D Hub, LEITAT**, Spain; **ABB**, Switzerland; **EOS GmbH** (Electro Optical Systems GmbH), Germany; and **SISMA S.p.A.** Italy, among others.



“ Looking forward to join and participate - your meetings are always fabulous

Ali Tinazli
HP VP Lifesciences USA

This huge event for microfluidics researchers was extremely interesting to establish a network and find synergy in microfluidics experiences.

Eloise Perriset
Merck Millipore France

Well worth travelling to from the West Coast. Congratulations. ”

Philip Spuhler
Head of Genomic Microfluidics BD Bioscience

Microfluidics

Objective

To Grow the Market for Microfluidics enabled products and services

Successes

- ✓ This consortium has become the de-factor global trade association for its industry
- ✓ We have proposed standards for device formats, ontologies and interoperability of kit
- ✓ We have engaged with key influencers including: FDA, NICE, European Commission, Chinese Academy of Sciences, Medicare and the NHS
- ✓ We have been amongst the first to identify new opportunities such as: Organ on a Chip, DNA read-write, Microfluidics for therapeutic applications (ie beyond diagnostics)
- ✓ We have created the 'Microfluidics Hot Seat' (global Shark Tank format)

- ✓ We have created our own ecosystem community with 'cadet communities' in San Francisco, Boston, Paris and Cambridge We have lauched the ParticleGEN co-developent consortium to specify, develop and sell a first in world system capable of particle encapsulation at 'ton a month'

- ✓ Several deals with value > \$1m
- ✓ Mini trade shows in Europe and USA

- ✓ Understanding of IP landscape and ways to deal with Patent trolls

- ✓ Organise Global Yellow Parges for our Industry

- ✓ Manage world leading LI group for our Industry

- ✓ Have been in existance for more than 10 years

- ✓ Best practise white papers

Visits:

MIT (USA), Univeristy of Cambridge (UK), **Stanford** (US), **ETH** (CH), **Berkely** (USA), **A*** (Singapore), **Academy of Sciences** (China), **Philips** (NL), **Biomerieux** (F), **Research Council of Canada** (CAN), **BD** (USA), **Sony** (A), **roche** (CH) **Illumina** (USA), **Danaher** (DK), **ST Microelectronics** (U), **Agilent** (D), **Frunhofer** (EI), **Panasonic** (J)

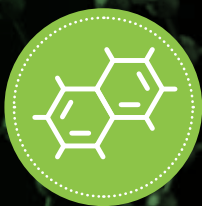
People

Peter Hewkin: Consortium Facilitator

Theodor Veres: Expert Witness: Professor National Research Council of Canada

Jens Ducree: Expert Witness: Fraunhofer Project Centre for Embedded Bioanalytical Systems at Dublin City University

Tuomas Knowles: Expert Witness Professor of Chemistry, University of Cambridge.



Nano-Carbon Enhanced Materials

Objectives

The Nano-Carbon Enhanced Materials (NCEM) Consortium was put together in order to provide the consortium members a unique insight into nano-carbon materials such as graphene and carbon nanotubes, facilitate the commercial uptake and bring together potential users with a shared interest to address commercialisation challenges.

Successes

Following successful NCEM-1.3 meeting in Brussels, the consortium submitted EC FP7 UltraWire project proposal in December 2012 that included 4 consortium members and 2 of organisations that provided speakers at the consortium meetings. The UltraWire project was granted €3.3M by the EC and it started on 1st October 2013 and finished in September 2016 (www.ultrawire.eu).

The NCEM-5.2 in Madrid (Spain) and the NCEM-6.2 in Freising (Germany) meetings were link to the Open Days of the EU funded NanoLeap Project (www.nanoLeap.eu), in order to give NCEM members the opportunity to be the first to know about opportunities for exploitation of the project results.

Visits

The NCEM meetings are often hosted at one of its members' sites at a leading research institution with the tour of laboratories: **MIT**, Boston (NCEM-2.5), **University of Cambridge**, Cambridge (NCEM-4.1), **Fraunhofer IPA**, Stuttgart (NCEM-1.4), **CRANN Trinity College Dublin**, Dublin (NCEM-1.5 & NCEM-2.4), **AIRBUS Defence & Space**, Stevenage (NCEM-3.2), **Schneider Electric**, Grenoble (NCEM-3.1), **Graphenea**, **San Sebastian** (NCEM-2.2), **Cambridge Nanosystems**, Cambridge (NCEM-3.5),

Rice University, Houston (NCEM-4.2) and **IIT**, Genoa (NCEM-4.3), **The Joint Institute for Innovation Policy and Nanocyl Brussels** (NCEM-5.3), **Tecnalia**, San Sebastian (NCEM-5.5), **Prysmian Group**, Milan (NCEM-6.1), **Fraunhofer IVV**, Freising (NCEM-6.2), **LEITAT**, Spain (NCEM-6.4) and **EMPA**, Thun (NCEM-6.5).

Key People

The consortium leader Dr Bojan Boskovic, from Cambridge Nanomaterials Technology Ltd (www.cnt-ltd.co.uk), is an expert in nano-carbon commercialisation. He has more than 20 years of hands-on experience with carbon nanomaterials and composites from industry and academia in the UK and Europe.



Dr Kyle Kissell,

Technology Director from NanoRidge in Houston, Texas commented after the 2nd NCEM meeting:

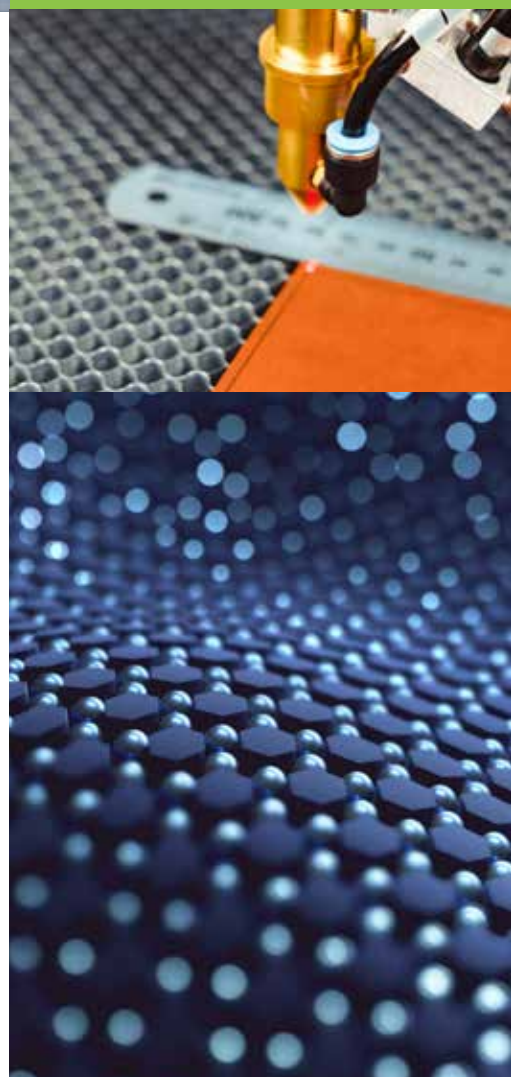
“ I believe that consortia like this are a critical step towards bridging the gap between extraordinary science and product commercialization. We feel privileged to be invited to speak to a group that is interested in **DOING** something as opposed to just **TALKING** about something. The connections we created during the two days of interactions will be crucial for the success of our products and our company.”

His carbon nanomaterials related work has been patented and published in leading scientific journals including Nature Materials. He is also working as an advisor for the European Commission (EC) on engineering and upscaling clustering and he has experience in management of exploitation and dissemination related activities in European collaborative R&D FP7 and Horizon 2020 projects and in UK Government Innovate UK funded projects.

Speakers:

The NCEM consortium meetings attracted some of the leading academic, industrial and government speakers working in the field of nano-carbon materials, some are from: **University of Cambridge**, UK; **Department of Energy**, USA; **NASA Ames Research Center**, USA; **Nanotechnology, Bayer Material Science**, Germany;

Fraunhofer IPA, Germany; **Graphenea**, Spain; **Nokia Research Centre**, Cambridge, UK; **Alcatel Lucent Bell Labs**, Ireland; **Nanocyl**, Belgium; **Graphene Laboratories**, USA; **ACCIONA R&D**, Spain; **AIRBUS Defense & Space**, UK; **Avanzare**, Spain; **University of Manchester**, UK; **Queen Mary University of London**, UK; **Haydale Graphene Industries PLC**, UK, among others.



“ Drugs Don't Work in Patients who Don't Take Them ”

C. Everett Koop

13th Surgeon General of the United States,



Medical Adherence and Digital Health

Objective:

To address a Big Problem – Poor medical adherence is one of the major challenges facing health care delivery globally. The World Health Organisation estimated adherence to chronic medication as being circa 50%. Recent studies demonstrated adherence below 25%.

Low adherence causes problems for: payers paying for hospital readmission, pharmaceutical companies through reduced use of drugs, and doctors/patients through poorer clinical outcomes. The global cost of the problem has been estimated at \$1tn annually.

Digitisation of patient care enables new approaches (and uncovers new obstacles) relating to improving adherence and patient engagement. We see improved adherence and digital health closely linked.

Successes

✓ Economic sustainability of adherence initiatives: Publication of a consensus position paper looking at the causes of failure in the adherence 'market' (specifically as concerns low cost high volume therapies). Work is now focussed on building on the recommendations, by working with the OECD in the design of national level adherence indicators.



Improved measurement and reporting of adherence in clinical trials: an initial 'opinion piece' written by consortium members has been published by Nature Reviews Drug Discovery. We are preparing a peer reviewed paper on practical considerations and recommendations for the measurement and reporting of adherence in trials – acting as a companion to the EMERGE guidelines for reporting adherence in trials.



Digital Health: The consortium is facilitating the move of therapies from medicines to combinations of medicine / device / (digital) service



Adherence, digital health, and the insurance industry: The consortium is working with the Swiss Re Institute on the role that the insurance industry will play to improve adherence, patient engagement, and associated digital health services and platforms.

Visits:

Swiss Re (CH), **AbbVie** (Fr), **Astra Zeneca** (UK), **Teva** (NL), **EFPIA** (Be), **Vodafone** (UK), **Walgreens Boots Alliance** (UK), **ESPACOMP** (Hu), **ICON plc** (UK)

Key People

Dr Jeremy Holland: CfBI Facilitator





Inclusive Design

Objective

To demonstrate how innovation in inclusive (universal) design of 'senior friendly' user interfaces can deliver competitive advantage

Successes.



The Inclusive Design consortium commissioned the Engineering Design Centre at the University of Cambridge to design and implement an improved software 'inclusive design audit' tool matching members needs which, by drawing on knowledge about chronic conditions and their impact on ability to complete everyday tasks, could quantify the implications of design choices on available market. Members of the consortium negotiated exclusive access to this tool and used it to improve their position in the 'grey market'. This has opened members' eyes to new ways that design thinking can help them gain competitive advantage.

Visits:

Nestle (CH and UK), **BT** (UK), **Transport for London** (UK), **GSK** (UK), **Heathrow Airport** (UK), **John Lewis Partnership** (UK)

Key People

Rob Morland: Inclusive Design Consortium lead

Professor John Clarkson: Expert Witness. Head of the Engineering Design Centre

“ Following our participation with the Inclusive Design Consortium GSK R&D PHARMA have recruited two Inclusive Design professionals to develop strategy and execute against a more patient centric approach

- The strategy for an Inclusive Design led approach for patient engagement and capturing of patient insights is currently getting visibility at senior levels within the R&D and Corporate organisations.

- Some significant future products for GSK Pharma have had their usability features enhanced as a result of Inclusive Design thinking, brought to bear by the aforementioned ID professionals.”

Conor O'Neil
GSK

“BT used the Exclusion Calculator after ID-3:

To inform the product design of the “in-link” WiFi booths that are appearing in many towns and cities.

As a discussion tool to raise the profile of accessibility issues across BT (and EE). To quantify this, the tool was shared with 300 digital professionals in BT.

Gillian Gibson-Piggott



Prospective New Consortia

CfBI is always testing concepts for future consortia which either morph from existing consortia or seed whole new consortia

At present we are looking at:

- Cybersecurity (new initiative –focused on industrial / infrastructure risk)
- Internet of (locatable) things – important subset of IoT
- Rapid Decarbonization – with Clean Growth UK

As well as a new class of “**Co-Development Consortia**” sharing costs and risks to deliver industrial scale projects.



Cambridge Innovation Summit 1st July 2020

This is CfBI's headline event where members from across all our consortia meet to discuss their changing needs and seed new consortia to address them.

Talks/Workshops

- ✓ Innovation trends
- ✓ Innovation tools
- ✓ Call to action

Corporate members of all CfBI consortia from around the world come together to celebrate, explore and shape the wider innovation landscape

Details at

cambridgeinnovationsummit.com

Paid up CfBI consortium members can attend for free

Technology Demos

- Innovation Tools
- Voice Recognition
- AI
- Diagnosis Support

And lots more

Earlybird Registrations

- ASFGROUP (CN)
- Amadeus Capital Partners (UK)
- Amazon (USA)
- ARM (UK / CN)
- AVEVA (UK)
- Beko (UK/Turkey)
- BioFab (UK / CN)
- Boots / Walgreens (UK/US)
- BT (UK)
- Danaher (USA)
- DSTL (UK)
- GE Healthcare (UK)
- ghd (UK)
- Halma (UK)
- Jaguar Landrover (UK)
- Johnson Matthey (UK)
- Magna (UK/Can)
- Nissan (UK / F / J)
- Schneider (F)
- Schrodgers (UK)
- Silicon Valley Bank (UK/US)
- Swiss Re (UK/CH)
- Taylor Vinters (UK)
- University of Cambridge (UK)
- Yili (CN)



Interested?

Contact: **Dr Peter Hewkin** (CEO)



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We would be happy to set up a call with our consortium facilitators to explore win-wins which can arise from joining CfBI consortia

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