

Photonics Leadership Group

Meeting Minutes

Tuesday 10 October 2018 13:00-16:00,

Ricoh Arena Coventry



www.photonicsuk.org

Attendees:

Ian Alderton, Alrad / UKIVA; Simon Andrews, Fraunhofer UK; Jon Blackburn, TWI/AILU; Dom Brady, CS Applications Catapult; Karin Burger, SPIE; Dan Daly, Lein Diagnostics; Iwan Davies, IQE; Chris Dorman, Coherent Scotland; Andrew Ellis, Aston Institute of Photonic Technologies; Mark Greenwood, SPI Lasers; Duncan Hand, Heriot-Watt University; Julian Heaton, Innovate UK; Robert Lamb, Leonardo; John Lincoln, Harlin /Future Photonics Hub; Anke Lohmann, Anchored In ; Kevin Mackrodt, Artemis Optical; Sarah Newman, EPSRC; David Richardson, Uniof Southampton; Dave Rimmer, WOF; Nigel Rix, KTN; Michael Robertson, CIP/Huawei; Andrew Scott, QinetiQ; Jason Smith, University of Oxford/Oxford High Q; Stephen Taylor, Technology Scotland; Mark Thompson, IPG; Mike Wale, Independent; Duncan Walker, Pure LiFi; Matthew Wasley, KTN; Alastair Wilson, CST Global;

Apologies:

Ric Allott, STFC/Central Laser Facility ; John Blomfield, Qioptiq; Terry Boniface, BEIS; Laura Cadman, EPSRC; Andy Charlton, Laser Quantum; Geoff Duggan, lumerial; Tom Harvey, CPI, Nat Healthcare Photonics Ctr; Jon Heffernan, Uni Sheffield; Antony Hurden, Grounded Innovation; Jonathan Jessop, Thorlabs; Gary Mackay, EW Simulation Technology Ltd; Graeme Malcom, M Squared Laser; Sergio Mantecon, Edmund Optics; Nick Martin, BAE systems; Rachel Maze, BEIS; Wyn Meredith, CSC; Carol Monaghan, MP; Georgios Papadakis, InnovateUK; John Parsons , Thales UK; David Payne, University of Southampton; Richard Pitwon, Resolute Photonics; Roy Sambles, IOP / Uni of Exeter; Martin Sharp, AILU/ Liverpool John Moores); Andy Strong, ID quantique; Chris Tate, Pure LiFi; Michael Willcocks, BEIS; Thomas Butcher, STFC/Central Laser Facility ; Allan Colquhoun, Leonardo; Mark Gubbins, Seagate ; Andrew Kearsley, Oxford lasers; Christopher Leburn, Chromacity; Stephen Lee, Caledonian Photonics; David MacLellan, AILU; James McKenzie, PhotonStar LED; Gordon McKenzie, ; David Parker , OPS Innovations, Lumenisity; Andrew Robertson, Gooch and Housego; Alwyn Seeds, UCL; Stuart Sendall , Pacer /Photonsens; Chris Sorsby, Vitritech / GTS; Stefano Taccheo, University of Swansea; Sergei Turitsyn, University of Aston; Philip White, UKTI; Ian White, University of Cambridge;

**Post meeting and editorial input in italics*

1) Previous Minutes, apologies and welcomes

Previous minutes from meeting 15 June were accepted

2) Invoicing for PLG contributions, recap

Process for invoicing now in place and invoices are ready to be sent (many thanks to KarinB). For efficiency, draft Invoices will be sent to all regular PLG contributors on basis agreed at previous meeting, namely:

- Micro company £250, Small, medium, charitable and university £500, Large £900

If amendments are required to enable processing send updates to KarinB. Note EU definitions of Large >250 employees or >fifty million euro turnover, micro is up to ten employees, will apply. (*we will estimate category, please let KarinB know if this is incorrect*)

Whilst there is an expectation that payment is appropriate, it is understood that some organisations will be unable to contribute and participation in PLG activities remains voluntary.

A summary of PLG activities in past year is requested to help support justification for contributions. Due to high level of PLG activity and government engagement this will strong document and not complex to produce.

Action KarinB> send draft invoice

Action JohnL> Provide a 1 pager identifying key PLG activities in past 12 months

Action All> highlight any amendments required to draft invoices as required and arrange payment

3) How to support Quantum Industrial Leadership Group

The need and proposal for an industry led Quantum leadership group was highlighted in recent ISCF wave 3 deep-dive in Quantum. Trevor Cross has been tasked with putting together, AnkeL would be happy to support. It has been suggested that such a group could leverage the experience of the PLG and close collaboration be efficient for PLG members.

Concerns raised that PLG is built around an existing photonics industry and that Quantum, whilst offering potential is not yet an established industry generating income today and much of activity is focused in Universities- it is a future industry not a current one. Noted that the same could previously have been said of many areas photonics. Highlighted that quantum and photonics industries are at different phases- photonics established looking to expand and diversify, quantum just starting needs end-use cases and hype filters. The established photonics industry has also highlighted their near-term interest is in bringing spin-off technologies developed under the quantum program to market rather than longer term commercialisation of full 'superposition' solutions.

Several noted that despite different levels of market maturity and partial technology overlap (there is much of photonics that is not considered Quantum and areas of Quantum outside Photonics), PLG has valuable experience embedded in members about what works in growing enabling tech industry that could assist quantum to grow and mature rapidly that would provide valuable input to new industry. As and when quantum products come to market they are likely to utilise photonics technology and spin-off innovation opportunities are significant.

Noted quantum is also attracting significant investment capital into start-ups, government focus and a high fraction of recent requests for Innovate support in measurement. This presents opportunities for raising the profile of photonics and leveraging support in parallel, whilst needing to be aware of the risk of distraction to the PLG.

6 of 30 present indicated they would be interested in attending a Quantum Leadership Group meeting.

Further discussion with quantum community recommended

Action JohnL, AnkeL> Contact Trevor Cross to continue discussions.

Action Non-attendees> please indicate interest in attending a future quantum industry leadership group meeting.

4) ISCF and Innovate update

John L present debrief on the ISCF wave 3 bids including comparison to successful bids – see [PLG ISCF wave 3 EOI debrief 2](#)

Whilst not surprising that none of the photonics bids were taken forward discussion noted it was surprising that none were invited and picked up within the ISCF wave 3 areas that were taken forward. This maybe due to the precise focus of some of the ISCF bids or the complexity in amalgamating many of the bids. Agreed there remain significant opportunities in photonics providing solutions to the ISCF areas that are being supported.

The need to link key area of photonics to their impact in vertical markets echos work currently underway in Innovate (JulianH). Whilst currently limited in scope this could be extended to provide the clear one-to-many description of how different area of photonics impact multiple key verticals and thus relevant to the various ISCF challenges. Such could be used to support discussion with the SICF challenge directors to ensure that scope for photonics innovation is built into those programs.

The scale of effort to progress a successful ISCF bid is now clear (full time role for >6 months), requiring significant resource input committed by industry or innovation organisation into the processes. To fit with budget planning cycles, to progress any ISCF wave 4 bid around photonics, would require RTO's or larger PLG companies build commitment to such resource into their 2019 or future spending plans.

Action JohnL?> open up lines of discussion with key ISCF challenge directors on role of photonics and its ability to provide key solutions in their areas

Action JulianH> provide current mapping of Photonics to vertical market developed by Innovate

Action Larger orgs and RTOs> Review internal interest in committing resource to a future ISCF wave 4+ bid. Any interested to confirm back.

5) National Security infrastructure investment legislation

Presentation of the key points in the proposed National Security investment legislation presented (JohnL). Members are advised to review the proposals at <https://www.gov.uk/government/consultations/national-security-and-investment-proposed-reforms>, paying particular attention to Annex A in the Draft statement of Intent. Advanced materials, network equipment technologies, quantum and many other areas relevant to photonics are covered. However, as there is also a catch-all in proposed legislation to cover any transfer that may pose a national security risk the precise definition of area covered is not significant.

From discussions with BEIS clear that one of the most important aspect of proposed legislation covers the transfer of control of assets including intellectual property and potentially manufacturing know how. This makes the legislation as relevant to innovation organisations (RTO's & Universities) as does the transfer of organisation ownership control is relevant to companies.

Whilst consultation formally closes on 16 October, BEIS would welcome further input from industry and innovation sector to nsiireview@beis.gov.uk or 0207 215 5000. The legislation has no definitive timescale pending parliamentary time (currently scarce). Estimated timescales for implementation likely 2019/2020.

Note that although notification of trigger events (e.g. transfer of control) under this legislation would be voluntary, Gov would reserve the right to intervene even if it is not notified. Intervention is likely to be rare and the terms and process are precisely detailed. However, the 'voluntary' aspect should not be taken as an indication those connected with the transfer of control of assets including in new and emerging technology do not have a significant responsibility to notify.

6) Photonics Leadership Ltd AGM

Company number: 4223669, Date/ time: 14:45, 10 October 2018, Ricoh Arena, Coventry

Present	Board Council Members and registered Company directors present: Anke Lohmann (AL), John Lincoln (JL), Simon Andrews (SA) Director and company officers apologies, Ric Allott, David Payne Voting members present: Ian Alderton, Alrad / UKIVA; Simon Andrews, Fraunhofer UK; Jon Blackburn, TWI/AILU; Karin Burger, SPIE; Dan Daly, Lein Diagnostics; Iwan Davies, IQE; Chris Dorman, Coherent Scotland; Andrew Ellis, Aston Institute of Photonic Technologies; Mark Greenwood, SPI Lasers; Duncan Hand, Heriot-Watt University; Julian Heaton, Innovate UK; John Lincoln, Harlin /Future Photonics Hub; Anke Lohmann, Anchored In ; Kevin Mackrodt, Artemis Optical; Dave Rimmer, WOF; Nigel Rix, KTN; Michael Robertson, CIP/Huawei; Andrew Scott, QinetiQ; Stephen Taylor, Technology Scotland; Mark Thompson, IPG; Mike Wale, Independent; Matthew Wasley , KTN; Alastair Wilson, CST Global; Voting member apologies: John Blomfield, Qioptiq; Tom Harvey, CPI, Nat Healthcare Photonics Ctr; Nick Martin, BAE systems; Wyn Meredith, CSC; Georgios Papadakis, InnovateUK; John Parsons , Thales UK; Thomas Butcher, STFC/Central Laser Facility ; Allan Colquhoun, Leonardo; Andrew Kearsley, Oxford lasers; Chris Sorsby, Vitritech / GTS;
Meeting opened	Meeting called to order 14:45 10 October 2018
Appointment of chair at AGM	John L to chair
Proxies	None notified
Verification of Quorum.	More than two voting member present noted as making a Quorum, despite notice of proxies being absent.
Approval of minutes	Proposed minutes of previous meeting from 4 May 2017 be approved. Passed Unanimously.
Voting criteria	For clarity the criteria for members to vote was circulated in advance of the meeting and approved within the 4 May 2017 AGM, namely:-

	<ul style="list-style-type: none"> Qualification to vote on the appointment of officers at an AGM is determined by attendance at two or more of the last six PLG meetings or attendance at two or more PLG meetings in the last two years. Voting is restricted to one person per organisation. Qualifying voting status can be passed between colleagues. i.e. if person Y replaces person X, from organisation Z, voting qualification is determined by presence of either X or Y at the previous 6 meetings. Proxies are permitted.
Expansion of Quorum	Proposed to modify articles of association to amend minimum Quorum to 5 voting members. Passed Unanimously.
Current company officers review	<p>A summary of the officers of the company and responsibilities was circulated prior to the meeting and relationship to Photonic Leadership Group. Current company officers are</p> <ul style="list-style-type: none"> Officers Chief Executive (John Lincoln) Registered Company Secretary. (Ian Sheekey) Directors Anke Lohman, Ric Allott, Simon Andrews, David Payne* <p>In addition the Photonics Leadership Chair (Chris Dorman) is appointed by PLG member vote but does not hold position as a Director of Photonics Leadership Ltd Photonics Leadership Chair</p>
Appointment of Vice-Chair	<p>Proposed to add 'Vice-Chair' as a role in the Photonics Leadership Group to provide succession planning. As with the 'Chair' they would not be obliged to be an officer of Photonics Leadership Ltd, but should be from industry Passed by Majority</p> <p>Proposed that voting of on the Chair and Vice-Chair be deferred to the next PLG meeting Passed by Majority</p> <p>Nominations for position of Chair and Vice-Chair will be open at least 4 weeks prior to the next Photonics Leadership Meeting, with the appointment voted on at that meeting. Early expression of interest are welcome</p>
Appointment of additional officers/directors/ council of management.	<p>Proposed to add a 'Treasurer' as an officer of Photonics Leadership Ltd. Passed by Majority</p> <p>Proposed to add 'Secretary' as an officer of Photonics Leadership Ltd. Rejected</p> <p>Nominations for position of Treasurer will be open at least 4 week prior to the next Photonics Leadership Meeting, with the appointment voted on at that meeting. Early expression of interest are welcome</p>
Appointment of officers	<p>As per articles of association one third of officers shall retire from office at the AGM. Those retiring shall be the longest serving.</p> <p>With five officers currently appointed 2 are deemed required to retire. The longest serving being Lincoln and Payne, who duly retire.</p> <p>Notification from Prof Sir David Payne to step-down as director/ company officer has been received without wish to be reappointed. In-line with the articles of association David's resignation accepted as of this date.</p> <p>Proposed John Lincoln be reappointed as Chief Executive of the Photonics Leadership Ltd. Passed Unanimously</p>
Approval of Finance summary	<p>Proposed financial statement Photonics Leadership Ltd for year ended 31 May 2017, prepared by total Tax Group by approved Passed by Majority</p> <p>Proposed Management accounts for the year ended 31 May 2018 and period 1 June 2018 to 31 August 2018 be approved Passed by Majority.</p> <p>The management accounts will be submitted to total tax group to draw up full year account.</p>

	Expenditure for year to 31 May 2018 - £651.38 covering bank and accountancy fees Current cash balance £5955.42 Outstanding liabilities for 2017/18 £65.58 for webhosting Additional liabilities for 2018/19 £707.14 webhosting and accountancy fees
Business plan for coming year	Additional income is forecast starting immediately following AGM from contributions from participating organisation Additional expenditure is forecast for services of John Lincoln in running PLG.
Close	Meeting closed at 15:30, 10 October 20187

7) Interface and inputs from other groups

Photonics21.

The next strategic roadmap from Photonics21 outlining recommendations for Horizon Europe the framework programme to follow Horizon2020 are nearing completion. Drafts from the working groups are in circulation, please comment. The complete roadmap will be presented to the Commission at the P21 AGM 27/28 March 2019.

Going into Horizon Europe there is uncertainty about the future of the Photonics PPP. It may be retained as is (Photonics21 is highlighted as a model PPP), merged with microelectronics or revert to a technical or co-funded programme.

Election to the P21 Board of Stakeholders open on 22 October, closing 5 November. There are 42 candidates for 39 places. Only a small fraction of Photonics21 members register to vote, encouraging all PLG members to vote would significantly enhance election.

UK representatives up for election include following. [Profiles of all candidates are available online.](#)

- Mike Wale (seeking re-election after leaving Oclaro), Eindhoven University (it is Mike's intention to seek re-election to the chair of Working Group 6)
- Matthew Wasley, KTN
- Kent Rochford, SPIE President
- Derek Peden, Design LED Products Ltd

Action all>if registered vote in P21 BOS election

Action all>if not registered to vote in current P21 election please do so in future elections Deadline ~23 September every year.

The PLG have made a number of representations to BEIS on how P21 works and the role of the UK both in participating in H2020 and in the organisation of the PPP via in P21 and the board of stakeholders.

John McCann previously with the Photonics Unit at the Commission has returned as Ronan Burgess's replacement, a well-known and respected figure.

There will be two [briefing events \(London 29/Oct and Glasgow 30 Oct\)](#) on upcoming photonics competitions in H2020- ICT-03-2018-2019: Photonics Manufacturing Pilot Lines for Photonic Components and Devices and ICT-05-2019: Application driven Photonics components.

A notification process to EU Commission on an IPCEI (Important Projects of Common European Interest) around photonics and microelectronics has been initiated that will allow member states to fund projects at higher TRL level. Chapter 5 related to Compound Semiconductors is being led by IQE-contact IwanD for more info.

AILU.

The [6th Industrial Laser Applications Symposium](#), will be held 20-21 March 2019 in Crewe.

Following failed proposal to ISCF AILU are looking at how industrial laser-based material processing can deliver solutions to ISCF challenges. With significant investment in UK around laser processing there is plenty of opportunity to stimulate manufacturing.

UKIVA

The [UK Machine Vision conference](#) will run again in 2019 becoming an annual event due to success in last 2 years.

The international [Vision meeting and exhibition](#) will take place in Stuttgart in 6-8 November

SOA

Technology Scotland have prepared a white paper on ‘mobility as a service’ helping secure ministerial backing. A white paper on Photonics in Scotland is in preparation.

SOA 25th anniversary will be held in 2019 in conjunction with the EPIC AGM 11-12 April 2019

WOF

A local North Wale growth fund bid around photonics is in preparation.

The ever-successful Photonics Academy ran again this Summer, now in its 10th year, bringing new young people to photonics. Ideas on how to role this out across the UK are very welcome.

Innovate

Elec-tech roadmap is nearing completion. Drafts are in circulation for comment. Input has been received from JohnL on behalf of the PLG, further inputs welcome.

Current £20m [Open competition](#) closes 14 November. 6-18 month projects up to £500k can be single company, 19-36 month projects up to £2m must be collaborative.

Two currently open Aerospace programs – [fast track collaborative R&D](#) and [collaborative R&D](#) closing 5 December to EOI

[Digital Health catalyst round 3](#) is open closing 31 October for £50-£75k proposals

The UK currently hold the chair of EU Eureka program, watch space for funding opportunities.

8) Next Meeting

February 2019. Offers of hosting from TWI and Keltie.

Majority vote in favour of holding next meeting at Keltie office @ 1 London Bridge, subject to Keltie’s agreement

Requests received from contributors unable to attend due to overlap with the parallel Silicon Photonics meeting to schedule PLG meeting to avoid this clash in 2019-

9) AOB (roundtable), not covered above

- Prof Ian White formerly at Cambridge University and contributor to the PLG will be joining Bath Uni as the New Vice Chancellor.
- Funding is available for industry looking to access STFC facilities – see NigelR for more info
- The [1st IEEE British and Irish Conference on Optics and Photonics](#) (BiCOP) meeting will take place 12-14 December at the Royal Society. Papers by 1 November
- Laurence Devereux @ Xmark media (host for current meeting) is seeking input from PLG members on the future of Photonex and additional themes and events to be included. Quantum and photonics for automotive have been suggested

Many thanks to XMark Media for hosting alongside Photonex 2018