

Photonics Leadership Group Meeting Minutes

Tuesday 28 June 2021 13:00-16:00 SEC, Glasgow

Attendees:

Stuart Allan, Artemis Optical⁺; Ric Allott, STFC; Yann Amouroux, OSA; David Andrews, University of East Anglia / SPIE, Simon Andrews, Fraunhofer UK; Ali Anjomshoaa, Compound Semiconductor Centre⁺; Jason Buck, Torbay Development Agency; Karin Burger, SPIE Europe; Max Buttinger, Thales UK; Allan Colquhoun, Leonardo⁺; Iwan Davies, IQE⁺; Paola de Bono, TWI⁺; Chris Dorman, Coherent Scotland; Daniel Esser, Heriot-Watt University; Joe Gannicliffe, CS Applications Catapult; Glenn George, Bay Photonics; David Gillett, Laser 2000; Mark Goossens, CS Applications Catapult; Shahida Imani, Chromacity; Louise Jones, Photonics Connected; John Lincoln, Harlin; Anke Lohmann, Anchored In ; Wayne Loschi, EPIC (Torbay); Sergio Mantecon, Edmund Optics; Una Marvet, Alter Technologies; Owen McGann, GTS⁺; Alison McLeod, Technology Scotland; Robert Mendenhall, Novanta; John Parsons , Indigo Consulting⁺; David Payne, University of Southampton; Bonnie Peterson, SPIE; Richard Pitwon, Resolute Photonics; Andy Robertson, Bay Photonics; Kent Rochford, SPIE; Andy Sellars, CS Applications Catapult; Malcolm Varnham, Trumpf UK⁺; Matthew Wasley , KTN⁺; Philip White, DIT⁺;

⁺attending remotely in full or in part

Direct Apologies:

Ian Alderton, Alrad; Valerie Berryman-Bousquet, Sharp Labs Europe; Dom Brady, Fibercore; Thomas Butcher, STFC; Geoff Duggan, Lumerical; Mike Fake, Lumenisity; Caroline Gray, OptiC Technology Centre; Duncan Hand, Heriot-Watt University; Tom Harvey, Nat Healthcare Photonics Ctr; Jon Heffernan, University of Sheffield; Stratos Kehayas, G&H; Andrew Lord, BT; Carol Monaghan, MP; John Nolan, First Mile Networks; Jianming Tang, University of Bangor; Mike Wale, UCL; (Apologises to anyone missing from apologises)

**Post meeting and editorial input in italics*

1) Previous Minutes and welcomes

Those attending their first PLG meeting formally welcomed including David Andrews, Joe Gannicliffe, Robert Mendenhall, Una Marvet Jason Buck and Wayne Loschi.

Previous minutes from meeting 8 June were accepted.

2) 2021 update to size of UK photonics industry

John Lincoln presented summary of the PLG's latest sizing of the UK photonics industry release in July



Full analysis available in set of 3 presentations on [PLG You tube channel](#)

Recent addition has been the full classification of all organisations in the database by addressed market and tier of operation. Thanks to all those who helped in this process.

3) UK Photonics Directory

The PLG's new UK Photonics directory was introduced - <https://photonicsuk.org/directory>. Built using the PLG's data on the industry, the aim of the directory is to make the UK photonics community more visible, foster local supply chain connections and generate additional income for the PLG from a wider base through enhanced listing features.

The directory includes search, filter & map features by regions, categories & tiers.

Organisations are welcome to claim & edit their entry, hence avoiding overhead at the PLG to keep descriptions up to date. Enhanced premium / basic listing is available at initial £75 and £450 differentiated as below. Prices to rise once traffic data established. Premium and basic listing to be provided as a benefit to those providing an annual contribution to the PLG (See below).

Feature	Premium Listing	Basic Listing	Free Listing
Priority position at top of listing	In	–	–
Tagged as featured listing	In	–	–
Organisation Description in detailed listing	In	In	–
Website hyperlink	In	In	–
Direct Contact Form	In	–	–
Social media links (Twitter / LinkedIn)	In	–	–
Locations / Addresses in detailed listing	5	2	–
Number of Map Pins in Map views	5	2	2
Presence in regional listings	In	In	In
Addressed Markets	10	4	2
Supply chain tiers	5	2	2
Logo on summary view	In	In	–
Additional images in detailed listing	4	–	–
Video embedded in detailed listing	In	–	–
Date established	In	In	–
Price per year	£500	£95	Free
(limited time sale price)	£450	£75	
Hiring flag & link to 'positions open' page (NEW)	In		

Group feedback noted the benefit of the directory listing packages being correlated to marketing budgets and thus easier for a wider range of organisations to support than direct contributions to the PLG.

Other suggestions for improvement in content or layout welcome. Those yet to claim their listing are encouraged to do so.

A press release on the directory launch has been prepared and will go live on 29 September. Please promote.

An optional 'now hiring' tag has been added to directory with an option to provide a link direct to the listed organisations own recruitment / 'position open' page has now been added. This will enable a dedicated 'Show whose hiring' page in the future. Those who already claimed and curated their listing can edited it to take advantage of this feature.

4) UK Innovation Strategy & spending review

PLG welcomed inclusion of Photonics along with electronics and quantum in one of seven key transformative technology families identified in the Innovation strategy as critical to the UK future

- The [PLG's summary of the strategy](#) is available online
- Further information expected in Thursday Photonex Plenary - **Strengthening Our Superpowers: Technology, Missions, and the UK Innovation Strategy**, Simone Boekelaar Head of Horizon Scanning at Innovate UK and key author of the strategy

Differing responses of innovation agencies to the strategy have been noted. Innovate UK proactively seeking early community input of areas/ programs for potential intervention, EPSRC appear to be playing more of a waiting game.

In response to requests from Innovate UK, the PLG was able to obtain ~ 40 suggestions for areas for potential Innovate support. Julian Heaton converted these into 6 programme elements, each with a 3-page overview and 1-page summary.

- Noted Julian Heaton has now retired from Innovate UK and submissions were processed through the AI and Robotics unit via Andrew Tyrer.
- *Iain Mauchline has been confirmed as Julian's replacement starting 4 October.*

5) UK Photonics Vision – feedback, comments, approval

Summary of the proposed Photonics vision presented, with detailed copies of draft available in hardcopy and [available online](#) advance (access key 'photonics'):

By 2035 UK photonics will be a £50 billion industry, adding an additional 150,000 direct jobs with productivity in excess of £100,000 per employee with 60% of the UK economy directly dependent photonics to keep it competitive.

Motivation for Vision summarised as follows:

AUDIENCE IN ~ ORDER

Snr policy makers in Westminster & devolved administrations
Gov advisors, National Science and Technology Council, & Chief scientific advisors
Snr program managers at BEIS, DCMS, UKRI including STFC, EPSRC & Innovate
Non-technical press
Photonics community and Technical press

OBJECTIVE

Convey a compelling future state for UK Photonics with quantified societal impact
Outline the risks of not backing photonics
Indicate high level actions and themes for intervention– but not at specific program level.
Stay high level, focus on what will / could happen, avoid technical how
Be visionary 1st, self-organising 2nd, requesting support distant 3rd.

OUTPUT

Look forward 14 years,
Quantitative, accessible, policy focused
Asks
Dialogue to develop detailed plan
Dedicated person in BEIS and Innovate UK
Set on Sci & Tech Council

DESIRED OUTCOME

Ensure photonics expertise is represented in national sci & tech council
Ensure photonics is seen has having bold vision
Make sure photonics makes the cut when Sci and Tech council decide what to support
Drive market and socio- challenges to seek photonics innovation
To drive business polices that favour photonics from R&D tax credits to immigration
Drive all innovation agencies to make sure they funding enough photonics to secure future UK capability.

Draft vision warmly received by group. Number noted potential additional impact facts that could be included especially under Agritech, fundamental science impact

Of the statements in headline vision, productivity one seen as weakest, suggested to either leave out or replace with relative statement e.g. by 2035 Photonics will be the 3rd most productive manufacturing sector in the UK. We are currently 5th.

Focus of the 'asks' in the vision on working with gov to create a plan for photonics and have defined contacts in gov welcomed. Noted many groups are putting forward very large requests for support in advance of the up-coming spending review, the PLG's approach aims to be more pragmatic and collaborative with gov.

Sponsors and images were requested to support professional layout. Thanks to all those that have already contributed to the draft. *SPIE have kindly offered to support professional layout of the vision*

All edits and additional suggestion for inclusion in the vision are welcomed by 15 October

6) Photonics 21 & Horizon Europe

a) Feedback on participation in current calls.

At least six organisations from the PLG are involved in bids into the current open / recently closed calls. Those who have been involved previously in H2020 report little, to no, difference in interaction with consortia partners and some benefits from a more concise application form. However a number noted an on-going reluctance from those in UK new to EU collaboration to getting involved.

Craig Sharp confirmed as the new National Contact point- [linkedin.com/in/craig-sharp-9a10b921](https://www.linkedin.com/in/craig-sharp-9a10b921). An experienced pair of hands previously NCP for Advanced Manufacturing.

News of the final confirmation of UK participation in quantum and space calls is expected any day. After intense lobbying from our EU counterparts the situation is now much improved.

b) 2023-2024 work programme

The process for constructing the 2023-2024 work programme has begun, starting with a number of Photonics21 work group meeting over next 2 weeks. All are encouraged to participate, noting that those active in these meetings can have a major impact on the design of future work program. Community keen to increase and reinvigorate UK participation in working groups and Photonics21

- [Climate, Mobility & Energy – 4 October](#), [QPICs – 6. October](#)
- [Core Photonics – 13. October](#), [Manufacturing – 14. October](#), [Health – 19. October](#)

Photonics21 Board of stakeholder (BoS) election due in October. Hopefully many registered to vote by 25 Sept deadline. John Lincoln and Alison McLeod have put themselves up for election to the BoS and will be seeking your vote and working together to raise awareness of the benefits of having more UK folks on the BoS.

7) Photonex program

Bonnie Peterson gave an overview of the highlights of Photonex, one of the first post Covid-19 in person meetings in the UK. A strong industry program and multiple conferences taking place at SEC from Wed 29 September.

Photonex 2022 will be in November at the NEC, Birmingham

Plans For Photonics West 2022 remain on track as a full in person meeting in San Francisco with strong exhibition bookings. Noted there are currently some excellent travel deals.

8) Photonics Leadership Ltd AGM called to order @ 14:45

Quorum noted as present

c) Review of PLG activities 2020-2021

Highlights of PLG activities of the last year were presented including

- Photonics in UK Innovation strategy
- £30 million DCMS Open Ran hardware innovation competition
- >40 concepts for Innovate support in 10 days for Innovation strategy follow-up
- UK photonics industry data 2021 and Autumn 2020 covid impact survey
- Liaison with Centre for the Protection of National Infrastructure, BEIS, DCMS
- White paper & policy briefs on 'Connecting the UK- Made in the UK' & 'Building agile UK defence laser and extreme science capability'
- Inputs to National security and Investment mandatory sector regimes and legislation briefings
 - the [full list of activities is online](#).

Delivery of these activities has taken ~60 days in 2020-21 a 50% increase over the previous year, (excluding the set-up of the directory, Treasurer input and APPG secretariat time.) Broken down as follows

Activity	Days
APPG	2
Blog	3.5
Size & survey	13
PLG gen	26
PLG meetings	6.5
Comms	9
Directory	6.5

d) Appointment of PLG officers.

Officer	Proposed by	Seconded by	Vote
Chris Dorman – Chair	John Lincoln	David Payne	Unanimous
Shahida Imani – Vice Chair	Simon Andrews	Mark Goossens	Unanimous
Anke Lohmann - Treasurer	Alison Mcleod	Andy Sellars	Unanimous
Karin Burger – Secretary	John Lincoln	Ric Allott	Unanimous
John Lincoln – Chief Executive	Simon Andrews	Ric Allott	Unanimous

Note only votes of those present in person were counted

Motion that Ric Allott & Simon Andrews continue to serve as Photonics Leadership company directors was passed unanimously

Thanks were given to the contribution of John Parsons out-going Vice-Chair

e) Review & approval of 20/21 income and expenditure

Following financial summary presented for period 1 Sept 2020 to 31 August 2021



Discussion noted income and contribution numbers were lower than previous year with a number citing Covid related uncertainties in late 2020, meaning they were unable to contribute at that time.

Note that expenditure and liabilities now significant exceeds income, with previous reserves fully consumed. A strategy to improve financial position therefore being required (below)

Harlin (John Lincoln) will write-off and cancel outstanding invoice of £6,400 from 2019/20 activities. Invoice for 2020/21 activities will be submitted shortly

Submission to Companies House has been made to move Photonics Leadership Ltd financial year end from March to 31 August to align with the AGM. Photonics Leadership reporting will therefore run a long year from Mar 2020 to Aug 2021.

Motion to approve 2020/21 financed (Proposed, Simon Andrews, Seconded David Gillett, passed unanimously.

f) 2021/22 activity plan

Suggest PLG activities for upcoming year presented

- 4 PLG Meetings, 2x face-to-face (Sept/Photonex & April) 2x virtual (Jan, June)
 - Designed to allow for additional participation following popularity of virtual meetings
 - Methods for facilitating mixed meeting independent of venue will be evaluated, noting popularity of dialling into today's meeting whilst recognising the benefit of face-to-face.
- Photonics Vision 2035 - Publication, promotion, liaison
- Innovation strategy - Words to actions
- Telecoms diversification - maximising UK opportunity

- Horizon Scanning- building on 2020 report to include industry / policy priorities
- Photonics 21 Board of stakeholders participation
- Champion Photonics role in Net Zero
- APPG support
- Directory

To help balance activities vs income proposed PLG focus less on workshop/ and general meeting organisation, noting the high levels of time this can require.

- Suggestion PLG should liaise with RTOs especially on meetings leveraging their bandwidth to facilitate the organisation of such.
- A tilt to more liaison with the Asia / pacific rim was requested

Motion to approve activity plan as stated above was approved.

g) 2021/22 financial plan

A plan was presented to increase PLG income and balance finances based on expanding the income base through paid premium and basic listing on the photonics directory (above) and revised voluntary contributions.

Previous contribution model was directly correlated to organisation size, (Micro £250, SME RTO Uni £500, Large company £900). It has been highlighted over the last year that these levels are much lower than other trade organisations in different sectors and no mechanism for those willing and able to contribute more to do so.

It has therefore recommended the PLG break the direct link with organisation size and add additional higher levels of support for those willing and able to make such contribution, with tiered benefits as follows with Bronze to Gold are equivalent to the previous contribution levels, platinum and diamond additions.

PHOTONICS LEADERSHIP GROUP Bronze Sponsor	PHOTONICS LEADERSHIP GROUP Silver Sponsor	PHOTONICS LEADERSHIP GROUP Gold Sponsor	PHOTONICS LEADERSHIP GROUP Platinum Sponsor	PHOTONICS LEADERSHIP GROUP Diamond Sponsor
Bronze <ul style="list-style-type: none"> • Use of PLG bronze sponsor logo • Basic directory entry • Identified as supporter on PLG website • Equivalent to previous micro level • £250 	Silver <ul style="list-style-type: none"> • identified as supporter on PLG website • Basic directory entry • Use PLG sponsor logo • Min recommended for Uni, SME & RTO • £600 	Gold <ul style="list-style-type: none"> • Premium directory entry and priority listing • Identification on PLG presentations and publication • Min recommended for large company • £990 	Platinum <ul style="list-style-type: none"> • All above + • Premium Directory & featured listing • Logo on PLG Publications / presentation • £1990 	Diamond <ul style="list-style-type: none"> • Premium Directory & featured listings • Logo on PLG Publications / presentation • + much kudos • £4990

In discussion it was emphasised that the new levels have been created for those willing and able to make a larger contribution. There is no assumption that any organisation will automatically move to the higher tiers i.e. we are not asking large companies to suddenly make a 5-fold increase in their contribution, but obviously welcome those happy to contribute more.

The specific tiered benefits are designed to help organisations support their contribution and be transparent about benefits. For those making a lower-level contribution (Silver or Bronze) who would also like a premium directory listing such an upgrade will be available for £300 in the directory.

A number noted the addition of some form of recruitment / hiring indicators in the directory would add additional value and support more premium listings from recruitment as well as marketing budgets. *This has now been implemented (above) and when sufficient number orgs indicate they are hiring a dedicated 'show whose hiring' map can be added to the directory*

Financial contributions can be in cash or in-kind, e.g. through the support of print and layout of PLG publications. This clarifies previous examples e.g. Hidden Economy or Horizon Scanning reports which have been co-branded with those supporting design and print of publications.

Contributions remain voluntary and input and participation from any entity/ individual is welcome no matter an organisations ability or willingness to make a contribution.

Based on these tiers and the directory prices the PLG income plan for 2021/22 was presented as follows.

	£ per	Units 20/21	Income	
Premium	£ 450	25	£ 11,250	
Basic	£ 75	40	£ 3,000	
Upgrades	£ 300	5	£ 1,500	
Directory income				£ 15,750
Diamond	£ 4,990	0	£ -	
Platinum	£ 1,990	4	£ 7,960	
Gold	£ 990	10	£ 9,900	
Silver	£ 600	20	£ 12,000	
Bronze	£ 250	5	£ 1,250	
Contribution income				£ 31,110
total				£ 46,860

It was noted that whilst the number of platinum & diamond contributions anticipated is low they make a significant difference to the PLGs income. For the directory a modest number of premium listings make a major contribution, the basic listings are designed to be highly accessible rather than significant income generators. *Immediately following the meeting commitment has been gratefully received for 1 Diamond and 3 Platinum sponsors as well as a number of Gold level sponsors, previously supporting at lower levels.*

Discussion noted this is the first time a clear income plan/ forecast has been generated for the PLG and if achieved will be a major step forward in balancing activity and income and thus supporting the long-term sustainability of the organisation.

In discussion it was noted that directory figures are distinct from the contribution ones, i.e. the 25 premium listing forecast excludes any that are provided as part of voluntary contributions to the PLG at Gold level or above. Those who take a paid directory listing and subsequently make annual contribution will have the directory listing costs discounted from their annual contribution.

In the coming year the PLG will also explore multi-organisation discounts/ packages in recognition that some may find it easier to support e.g. their regional photonics network and the PLG in one contribution.

A motion to approve the financial plan as detailed was put forward and passed

Quotes and invoices for 2021/22 contribution are now available on request, or they can be initiated direct from the [PLG online store](#), where card or bank transfer payment can be selected.

h) The PLG AGM was adjourned at 15:30

9) Updates from communities and programs

a) Photonics Scotland

Latest 2021 photonics Scotland survey and report [Photonics in Scotland 2021](#) just published.

b) Photonics Connected

The Welsh Optoelectronics Forum has been reborn as [Photonics Connected](#) as part of Technology Connected. Their first Council meeting will take place shortly.

c) UK Quantum

A new industry group for Quantum has been stood up in the UK at the request of BEIS - <https://www.ukquantum.org/> Meeting fortnightly they are currently finalising their aims and objectives. The PLG has met with Trevor Cross to offer support and collaboration and await clear indication of who to liaise with beyond Mark Goossens who is providing the secretariat support from the CSA Catapult. The Group would appear to replace the previous Quantum Leadership group.

The IEEE is also standing up a [Quantum group](#) for the UK & Ireland led by Richard Pitwon launched at Photonex focused on promotion of Quantum Engineering as a discipline.

In parallel BEIS have initiated number of projects to evaluate the potential of quantum tech in communications and other applications

d) UKIVA

Most of the UK industrial vision community is at the Processing and Packaging Machinery exhibition at NEC which unfortunately clashes with Photonex this year-28-30 Sept

UKIVA are planning the return of an in person [Machine Vision conference](#) in 2022

e) APPG

A delegation of 5 MPs from the Photonics and Quantum will be hosted at Photonex on 29 September. A full program includes tours of Coherent Scotland's new carbon neutral factory, participation in the industrial panel session on accelerating the photonics innovation chain chaired by the PLG, tours of the exhibition. Please welcome the MPs.

A full program of [APPG events for the coming year](#) has been agreed. A format of 3 short (5min) presentations from industry followed by discussion with MPs has been found to be the most useful.

f) CS connected

CS connected are having a major drive on skills including list of welch training courses available at <https://csconnected.com/education/>

g) CSA Catapult

The Quantum Electro-Optic Detector Technology Innovate project has a survey open on SPADs you are invited to contribute to- [QuEOD Survey](#)

h) Heriot Watt

The new Robotarium building is progressing very well, and the National Robotarium now has a CEO, Stewart Miller. The Robotarium will include advanced laser manufacturing facilities for industry feasibility studies. <https://www.hw.ac.uk/news/articles/2021/national-robotarium-appoints-first-ceo-in.htm>

i) AILU

6 October (tomorrow) – a live and hybrid workshop/webinar titled “Digital Technology in Laser Manufacturing” – from Cranfield University (or Zoom) – full programme here:

https://www.ailu.org.uk/laser_technology/events/2021-10-06/digital_technology.html

10 November – a Zoom webinar in conjunction with Heriot Watt titled “Medical Device Manufacturing with Lasers” – information here:

https://www.ailu.org.uk/laser_technology/events/2021-11-10/meddevice_101121.html

10)Next meeting(s) and AOB 15:50-16:00

- Next meeting will be Teams on 13 or 17 January 2021
- Next Face-to-face meeting will be in April. Date TBC. Location:- southerly. Volunteers to host welcome ideally with facilities to enable dial in / remote participation.