pro² Network+ Advisory Board Agenda and Minutes

19 April 2024, 2-3:30pm | Microsoft Teams

Attendees:
Tim Minshall, Dr John C Taylor Professor of Innovation and Head of the Institute for Manufacturing at the University of Cambridge, **Chair**.
Giulia Pratico, Western Gateway Team Manager, Innovate UK Business Growth.
Jim Davison, Region Director, Make UK.
Lars Erik Holmquist, Professor of Design and Innovation, Nottingham Trent University.
Maria Galvez Trigo, Assistant Professor in the School of Computer Science and Informatics, Cardiff University.
Maura Lydon, pro² Network+ Senior Administrator, **Secretary**.
Mike Fraser, Professor of Human-Computer Interaction and Head of Department of Computer Science, University of Bristol. pro² Network+ Steering Group Principal Investigator and Chair.
Sarah Fawcett, VP Operations, OKdo.
Sarah Hughes, pro² Network+ Manager.
Stephen Chadwick, EVP & President EMEA, Hexagon Manufacturing Intelligence.
Steve Hodges, Professor in Computing and Digital Systems. pro² Network+ Steering Group Co-Lead.

Apologies:
Isabel Qamar, Materials Scientist, Formlabs.
Laura McDonnell, Senior Portfolio Manager, EPSRC.

Agenda

Item	Title	Allocated Time	Lead
1	Welcome, team update and review of previous meeting's actions: • SHu will schedule next meeting for April time	2-2:10	Tim/Steve
2	Update on what has been done since the last meeting and what is next	2:10-2:30	Mike
3	Funding opportunities update and changes to funding call process	2:30-2:45	Mike
4	Sustainability strategy for pro², including circular economy bid	2:45-2:55	Mike
5	Advice on strategic and governance challenges, specifically: • Influencing policy	2:55-3:05	Steve
6	Opportunities for pro² – what else could we be doing? • Seeking advice from the board	3:05-3:15	Steve
7	Ongoing support with social media engagement	3:15-3:25	Sarah

| 8 | AOB | 3:25-3:30 | Tim |

Minutes

Item	Title	Deadline	Responsible
1	Welcome, team update and review of previous meeting's actions: • SHu will schedule next meeting for April time – **completed**. • LM to contact SF about diversifying the network, especially for recruitment and funding call purposes – **completed**, SF provided guidance and resources around this and stated she was willing to provide further input if needed. • LM to contact SF with information about 'networks of networks' – **completed**, discussed opportunities for promoting pro^2 among in-person or online groups, like 'Women in Electronics' on LinkedIn. • AB members to provide Shu with photos and details for their profiles on the pro2 website – **incomplete**, still missing a photo for IQ. **Actions**: • ML to follow up with IQ about providing a profile photo.	29/4/24	ML
2	Update on what has been done since the last meeting and what is next MF presented on the following pro^2 activities since the last AB meeting in October: - **New Themes:** Establishment of three themes around which pro^2's activities will be organised, which are Theme One: Prototyping with Emerging Materials, Theme Two: Isotyping: Refining and Scaling, and Theme Three: Infrastructure: Device Production. Consideration was given to creating a fourth theme around sustainability, but the SG felt that it was better for it to cut across all themes rather than to isolate it. The network's website and social media channels have been updated with information explaining these themes and other key aspects of the		

	pro² mission, such as the Theory of Change. - **Theme One Workshop:** An online workshop was held on 5th February 2024 around identifying themes that will feed into a Theme One funding call. A synthesis of the ideas collected at the workshop is expected to be released in Sep. 2024 after which the funding call offering up to £300,000 will be organised. - **Theme Two Summer School:** The Theme Two leads have planned a summer school which will take place at Lancaster University from 10th-12th July 2024. The event will be heavily subsidised by the network with instruction, venues, catering and accommodation provided for about 30 participants with a low registration fee of £50. The summer school is open to anyone with an interest in prototyping and producing digital devices, including PhD students, academics and researchers, and industry professionals. Talks, tutorials, lab work and collaboration will be provided with a focus on moving from prototyping to isotyping. Several prizes worth £1,000 will be offered to participants to help with isotyping, as well as some smaller awards of about £200. SHo noted that the summer school concept was based on previous AB feedback about methods for diversifying the network through offering a wide variety of activities targeting people in different career stages. The event will open for registration in late April with a deadline to apply in late May. SHo requested AB support in promoting the event. - **Secondment Scheme:** MF announced a new pro² secondment scheme for international and industrial visits which is currently being planned and is expected to launch soon. It will be an open call that covers travel and accommodation costs to support three categories of secondment: visits to UK-based industry (e.g. a UK academic visiting a UK industry partner), UK-		

	based individuals visiting overseas institutions, and overseas-based individuals visiting UK institutions. Eligibility will depend upon visits that align with the pro^2 agenda and funding can only be distributed to institutions that are eligible to receive UKRI funds. Individuals' time will not be an eligible cost. MF noted that the scheme could be another way to expand the network and reach more diverse audiences.		
	o **Comments**: LEH asked whether people from industry could be supported to visit a higher education institution. MF said it may be possible and reiterated that funding can only go to UKRI eligible institutions.		
	- **PDRA role:** There was concern in the SG around the lack of a comprehensive overview of existing device building tools and techniques. The network looked into various options for obtaining an overview, including hiring a consultant, but could not find anyone suitable to carry out the task. Instead a postdoctoral Research Associate (PDRA) will be hired to conduct an 18 month piece of work mapping tools and techniques for device building, and to identify new standards to ensure interoperability across a range of low-volume components/manufacturing infrastructure. The intention is for this to become a report and a web service which people can use to explore tools/platforms/etc. they can use in their work. The network is currently in a second round of recruitment for the role as no one suitable was found in the initial round. MF noted the difficulty of finding candidates that meet the skillset required and added that the role has been costed at a senior level in order to improve the quality of candidates.		
	Actions:		
	• AB to help promote upcoming pro^2 activities including the summer school.	ASAP	AB

| 3 | Funding opportunities update and changes to funding call process

- **Network funding calls:** The first pro² funding call on Replicability in 2023 related most closely to Theme Two and a Theme Three funding call has recently closed. Over the next year or two, additional calls will be organised around the themes including a Theme One call.
- **Theme Three 2024 Funding Call on 'Infrastructure':** The recently closed Theme Three funding call on 'Infrastructure for Device Production' was open to submissions from 27 Feb. – 5 Apr. It was seeking projects in infrastructure for testing, audit, product iteration, and replication with a focus in areas like XR/AR, IoT, and AI. It is offering up to £300,000 in funding at 100% fEC (meaning that pro² will provide 80% of this amount in total). Institutional and individual conflicts of interest are declared for the assessment process. In response to SG and AB concerns that SG institutions were over-represented in the pool of applications that made it to interview stage and successfully funded in the 2023 Replicability call, the Theme Three call has implemented a new stage whereby reviews are conducted by independent experts who were primarily selected by 'cold calling'. These independent reviewers select applications which progress to the interview stage. Six applications were received in response to the call, which will be shortlisted for interviews once feedback from reviewers has been received (expected by 19th April). Following this, further consideration will be given to whether the risk of bias was better mitigated against in this call or whether additional improvements are needed for future calls.
    o **Comments:** TM asked what would be done if the changes to the funding call review process were not successful in mitigating against COI. MF said | | |

	that in that case a discussion about how to enforce the diversity of applicants would be needed (e.g. an 'affirmative action' approach). He noted there has been much discussion in the SG about expanding the network beyond the SG's own expertise/areas of interest and that planning a diversity of activities (like the summer school) was in response to this. TM commented that there is likely a clustering of expertise around SG institutions and therefore some bias/COI is understandable but it remains important to reflect on whether review processes are reducing bias risks or not. SF asked whether the problem was due to the review process or the channels by which funding opportunities are promoted (e.g. is the network targeting a diverse enough audience). She suggested targeting a broader volume of applications which can be narrowed down. MF agreed that how funding calls are promoted and how the network is expanded are important challenges. He acknowledged that SG expertise mainly falls into areas around prototyping and that the Theme Three call was the least central to SG expertise, making it difficult to identify informal channels of communication and other methods of reaching a diverse audience.		
4	Sustainability strategy for pro², including circular economy bid MF reported that he had spoken with EPSRC representatives about the role of sustainability in the pro² network and learned that a circular economy/sustainability focussed network will be established soon. Following discussion of this with EPSRC, the SG felt it would be best for pro²		

	to collaborate with the new network. pro² has contacted two of the bids which are going forward in response to the call for a new network and tried to identify any others that were definitely going forward, but none were found. Letters of support from pro² were provided to the two bids identified, in which it was agreed that a joint pro²/circular economy network funding call would be part of the programme proposed to EPSRC. The call would focus on the intersection of sustainability and the pro² mission – how sustainability can be supported by low-volume production, for example targeting markets that already exist but cannot be met by high-volume manufacturers. If neither bid is successful, pro² will reach out to whoever does succeed. Interviews for the call will occur soon so the SG is currently awaiting the final decision. Some pro² time will go into the new network to ensure that pro² is collaborating on a wide range of activities with them beyond the joint funding call. **Comments**: TM said it was important to consider the cost and complexity of collaboration with the new network. The AB were supportive of the plan to collaborate with the new network.		
5	Advice on strategic and governance challenges, specifically: • Influencing policy SHo reported that the pro² management team has created promotional materials to spread the word about the network, including ecofriendly postcards that can be handed out at events. One of the network's primary goals is to influence policy, and the SG believes there are serious potential benefits to more hardware being produced domestically rather than being outsourced to other nations. He said that while the SG have ideas about what policy changes to recommend and how to achieve them, they would like to request input from the AB on this issue. TM said that it would be important to consider whether the network is interested in lobbying or informing policy makers, and noted that the government team that focusses on trade and		

advanced manufacturing has recently undergone changes. He met with some of them recently at a trade conference and found them very keen to learn and engage. TM offered to connect the SG with them for general discussion at this stage, rather than lobbying. JD cautioned that there are risks around the political views of suppliers, with regard to being overly reliant on Chinese suppliers; he recommended advocating for the domestic production of technologies that are most suitable for manufacture in the UK. TM agreed that supply chain resilience is a big problem and that pro2 should try to identify how it can provide useful information and solutions in response.

SHo said that at this stage the SG would like to learn more about the wider policy landscape and how to achieve impact. TM advised that it is important to have both convincing evidence and a clear narrative in order to influence policy change. SF questioned whether the supply problem was due to the process of preparing for low-volume production or whether it was a problem of knowing who to go to and why within the political landscape. She said she knows of many UK companies that offer low-volume production and design, so if it is a problem of identifying suitable suppliers then academic/industry partnerships and networks like pro^2 can be a useful resource in overcoming this challenge. SHo agreed that an 'approved' supplier list was a great idea and that developing a database around digital device production might be part of the solution. He said that awareness was needed of the surprises that are often encountered around low-volume manufacturing processes, as many SMEs/producers lack knowledge about processes and resources, and that the UK/Europe regulatory environment is outdated with regard to early evaluation of products. This could present the UK with an opportunity if it can improve in this area in contrast to Europe. TM recommended identifying specific policy problems that need improvement. SC suggested that pro2 engage with the catapults that are aligned with the network's policy goals, to relieve some of the burden in relation to impacting policy change.

	Actions: • ML to organise a meeting for SHo, TM, JD, and SF around building a policy engagement plan for the network within the next two months.	3/5/24	ML
6	Opportunities for pro^2 – what else could we be doing? • Seeking advice from the board No comments were made on this topic due to a lack of time.		
7	Ongoing support with social media engagement SHu thanked the AB for their support engaging with pro^2 social media posts and encouraged them to continue doing so in order to help the network expand and spread the word about opportunities like funding calls and events. TM asked if social media engagement was a KPI for the network, and if so, whether enough engagement was being achieved. SHu said that the management team is tracking engagement in order to replicate content that performs well and that engagement metrics will be reported to the network's funder. She noted that pro^2 does not have a formal list of KPIs, but social media engagement is one of the network's informal goals. She shared that the management team have recently begun a 'Featured Member Interviews' series of social media posts to showcase the work of network members, as well as highlighting common challenges and solutions. ML and Matt Sutton have been responsible for producing these videos and engagement has been good so far. JD asked that the AB be tagged in these posts going forward to promote engagement. TM asked whether any of the ToC impact goals were reliant on promoting awareness of the network via social media, and wondered whether efforts in this area should be improved to meet those goals. SHu said that the management team has been assessing performance on various channels and that engagement on LinkedIn has been good. There has been less engagement on X and the network has recently started an Instagram channel; other platforms like Mastodon have also been considered. The team has also considered where to promote opportunities like		

	funding calls and job vacancies beyond social media. Job adverts for the PDRA vacancy have been published on boards like Black British Professionals in STEM (BBSTEM), Patchwork Hub, Women in Tech Hub and other avenues in order to reach diverse audiences. Performance on these platforms will be reviewed. MF said that the team will also produce content related to the sub-award projects which are currently running to draw attention to their work; a condition of their funding was access to the project to produce outputs that are less traditionally academic, e.g. videos, rather than just publications. SF recommended tracking where applicants heard about the network through application processes, e.g. for funding calls. **Actions**: • AB to continue engaging with pro2 social media posts and spreading the word about the network. • ML to tag AB members in social media posts.	 Ongoing Ongoing	 AB ML
8	AOB TM asked about the date of the next AB meeting. It was agreed that the board would continue meeting every six months. **Actions**: • ML to schedule the next meeting of the AB in six months' time.	 3/5/24	 ML