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**Dr Nick Jones**

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To whom it may concern,

### Towards an Advanced Hackspace: Converting Ideas into Prototypes.

In this letter and the linked FAQ (password 235711), I will outline a proposal for an Advanced Hackspace: a place for converting ideas into prototypes. This space could be viewed as addressing the prototyping step that feeds into a commercial incubator (which attempts to convert prototypes into products). The colleges's strategic aims emphasise the need to advance Imperial's profile for innovation, generate more translational input to our incubator, draw more resources to the college and improve the undergraduate proposition in the face of conventional and electronic competition. Imperial is a collection of highly creative individuals from undergraduate level to professors; but are our assets exploited for their full creative (and commercial) potential? Do established routes allow us to develop all types of commercially relevant ideas? Or do some go unnurtured?

**A Hackerspace** or hackspace (fablab, hacklab, maker space or creative space) is a collaborative space devoted to interaction, creation and design driven by computers, science and technology. Hackspaces are a $21^{st}$ Century evolution of a well equipped garage with other amateur mechanics present: their output could be prototypes of anything from phone apps to novel machine parts.

**Proposal:** I suggest that Imperial be the first university in the UK to host, fully, a hackspace and the first in the world to create an Advanced Hackspace. Hackspaces tend to be amateur-led and poorly integrated into other institutions (if at all). An Advanced Hackspace would exploit the skills within, and prestige of, the university to create a distinctive *citizen-driven but faculty-empowered space for idea prototyping* (where a citizen is broadly any member of the college from student to faculty).[1]

**An Advanced Hackspace:** would 1) attract resources, 2) integrate with college institutions and 3) network with other institutions. By offering competitive non-stipendiary hackspace fellowships at a senior and part-time level the college has an opportunity to attract skilled individuals who are either retired or have free time: levering the existing London enthusiasm for Hackspaces and its extensive reservoir of skilled individuals. Normally participants pay to be members of hackspaces; instead, fellows would be encouraged to pursue their own projects while providing skilled mentoring and assistance to other users. A summer fellowship programme could also be offered to students: again trading access to resources with serving

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[1]This is distinct from MediaLab propositions which are faculty/research-group driven and are correspondingly closed to other members of the university.

the space. As well as external human resources, such a space could be used to attract support from conventional funding sources, from commercial sponsors/partners, or direct from BIS. Integration with the wider college would help pass promising ideas into the incubator, connect with student societies, with alumni and connect up (when appropriate) the assorted fabrication spaces that the college already has. Finally an Advanced Hackspace would be networked: running talk series from firms and other spaces; running community mini maker faires; organizing joint events with London Hackspaces; hosting competitions and awarding prizes.

**Advantages:** Being the first university to establish a successful institution of this kind would attract PR which is consonant with the College's image as an innovation hub. In our current period of trying to create growth it seems likely that this space could attract money to the College. As web-based resources begin to compete with some aspects of the conventional university proposition, this space would show the clear advantage of attending Imperial (and could be coupled to a novel masters programme). While conventional hackspaces are not geared to commerce, the proposed Advanced Hackspace would be set up to create promising product prototypes. Increasing the number of successful ideas which pass through the incubator is obviously desirable but hopefully a space of this kind would increase the rate of all spin-outs. Grateful alumni of MIT (e.g. founders of Z-corp 3D printers, cam.ly and ECD) include those that used that began their spin-outs in MIT's student hackspace equivalent (MITERS).

**Costs:** The principal costs are threefold: 1) the space 2) the consumables 3) faculty oversight. The equipment costs for such a space are likely to be small compared to these three. If the non-stipendiary fellowship scheme proposed were successful then direct support staffing costs could be low (it is conventional to have a few thousand pounds associated with non-stipendiary appointments). The London Hackspace is currently ∼2600 sq ft (not exclusively lab space however) and is seeking to double the size of its premises. The Imperial Robotics society currently gets support from sponsors that provide some consumables for free. Space and faculty costs could be offset by sponsorship, grant provision and by offering course elements associated with the space.

In the linked document I supply a set of FAQs (passcode 235711) (also available by mailing me) and I make some suggestions as to first steps towards such an advanced hackspace.

This letter had the objective of circulating an idea which would help Imperial advance its existing strengths in commercial innovation.

Best Wishes,

Nick Jones