# Supporting next generation innovation policy in the Pacific Alliance:

## A scoping study to understand the professional development needs of innovation policymakers in Chile, Colombia, Mexico and Peru

## Summary Report

### Contents

## Objectives

**This scoping report was commissioned by Innovate UK in order to:**

- Diagnose the training needs of innovation policymakers in Pacific Alliance countries of Mexico, Chile, Colombia and Peru.
- Recommend a high impact and cost-effective approach to capacity building for innovation policymakers in the Pacific Alliance.
- Inform the development of a large collaborative programme on capacity building for innovation policy for the UK in the Latin American region, and potentially across the global Newton partnership.

**Our approach**

Our method included:

- Reviewing and synthesising the latest literature on innovation system performance.
- In-depth interviews with 8-10 key stakeholders in each target country.
- Mapping both formal innovation policy institutional structures and also informal patterns of influence on design and implementation of policies.
- Categorising and quantifying innovation policymakers to understand the size and characteristics of the market for innovation policy training.
- Reviewing evidence of what works in professional development for innovation policy.
- Engaging with latest global innovation policy professional development initiatives and with relevant stakeholders within the IADB and World Bank.
- Conducting an initial mapping of UK offers in professional development for innovation policy to ensure recommendations build on, and don't duplicate, existing offers.
- Validation workshops with high-level cross-system stakeholder groups in each country, to test proposals and refine recommendations.

**Acknowledgments**

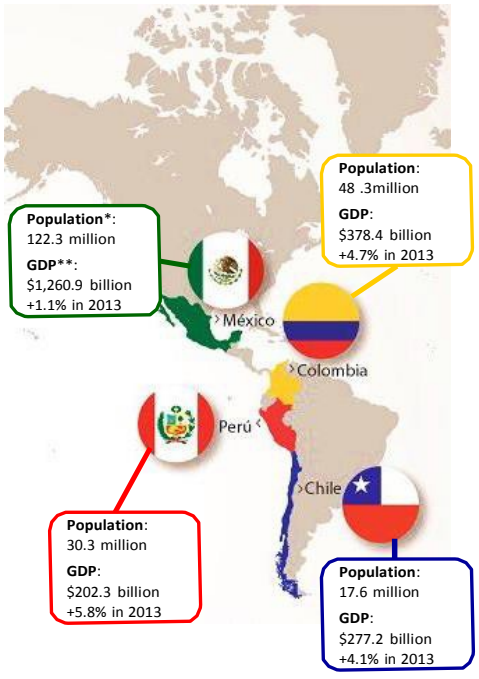
We'd like to thank all those experts across Pacific Alliance governments who kindly gave up their valuable time to participate in the interviews for the report, and to provide peer review and comment. Thanks also to the Innovate UK and Newton teams, in addition to the SIN and Newton advisors in Chile, Mexico, Colombia and Peru for the valuable support they provided throughout the process. Please note that opinions and analysis represented in this report are drawn from both published analysis and primary interviews and validated with expert workshops. They do not necessarily reflect the positions of Pacific Alliance governments or of Innovate UK. Errors and omissions remain our own.

## The innovation systems of the Pacific Alliance

The Pacific Alliance is a regional integration initiative by the governments of Chile, Mexico, Colombia and Peru to stimulate shared economic development and competitiveness. The Centre for Global Development described it as one of the 'few bright spots' in Latin American economic integration, and diplomats have been superlative about the potential of the agreement. A nascent partnership, it was only formalised in 2012. While the focus to date has been on trade liberalisation agreements, innovation has been mandated as one of the priorities for collaboration. With no permanent secretariat, policy developments take place in presidential summits, international working groups and conferences such as the 2013 Lab4+ entrepreneurship and innovation conference.

The Pacific Alliance covers a large geographical area (it takes over eight hours to fly direct from Mexico City to Santiago) and a diverse set of economies at varying stages of development of their innovation ecosystems. An intensive IADB study of the Pacific Alliance innovation systems is currently underway, but our scoping study draws out some of the characteristics and highlights.

**Figure 1.** Pacific Alliance overview




**Innovation indicators in the Pacific Alliance countries**

| Indicator | Chile | Colombia | Mexico | Peru | UK |
|---|---|---|---|---|---|
| Global Innovation Index Rank (2014) | 46/143 | 68/143 | 66/143 | 73/143 | 2/143 |
| Global Competitiveness Index (2014-2015) | 33/144 | 66/144 | 61/144 | 65/144 | 9/144 |
| R&D gross domestic expenditure as % of GDP (latest available) | 0.39 | 0.18 | 0.46 | 0.15 | 1.77 |
| High-Tech exports, in % of manufactures exports (2012) | 5 | 5 | 16 | 3 | 22 |
| Patents per million people (2010-2013) | 2.1 | 0.2 | 1 | 0.1 | 77.2 |
| % growth in total patent applications (2003-2013) | 42 | 72 | 31 | 37 | 5 |
| Time in hours required to start a business (2014) | 6 | 11 | 6 | 26 | 6 |
| % of the 18-64 population who believe they have the right skills/knowledge to start a business | 60 | 58 | 59 | 62 | 44 |

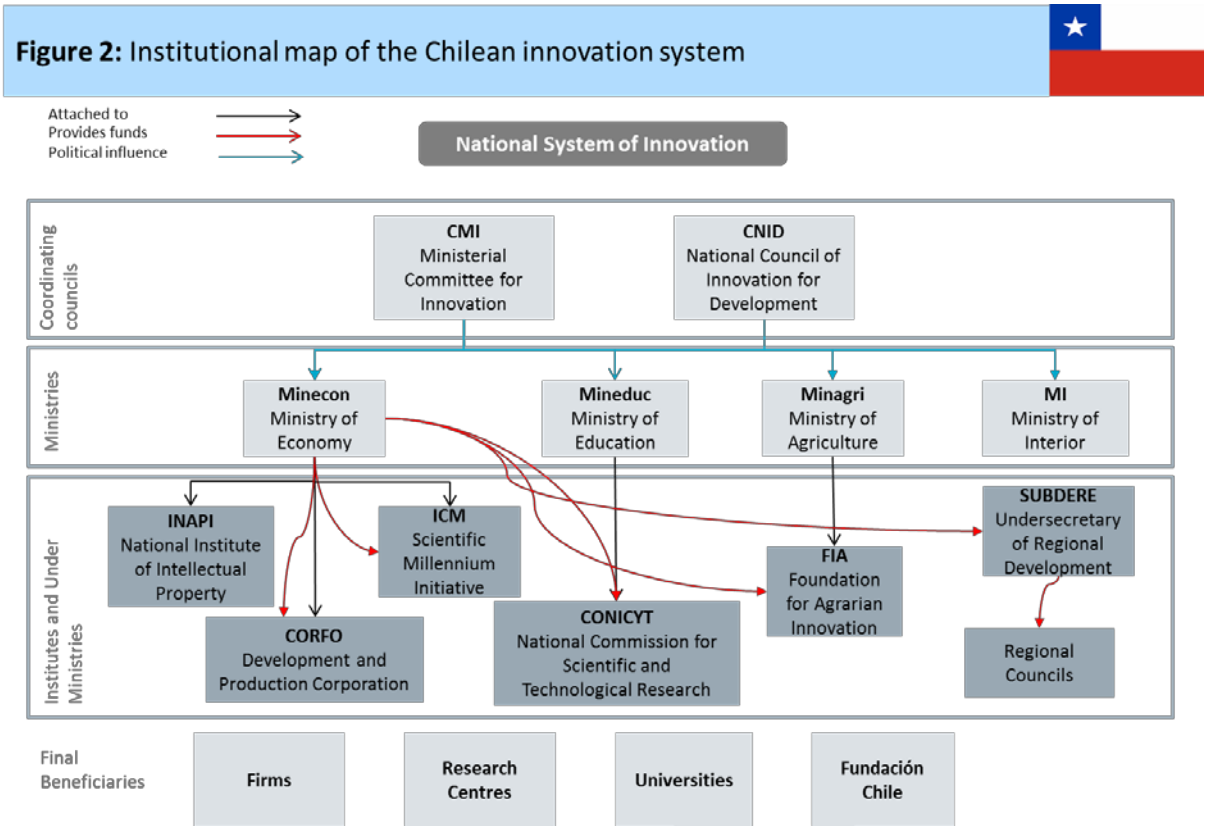
* and ** Population and GDP figures for 2013

Data compiled from: World Bank, OECD, UNESCO, Global Economic Forum, Global Innovation Index, World Intellectual Property Organisation, Global Entrepreneurship Monitor

**Chile**

For over a decade, innovation has been a central pillar of Chile's economic development policy. The innovation budget grew from US$ 300 million in 2005 to over US$ 1 billion in 2013. Alongside greater spending, institutions have been strengthened. There is a growing emphasis on high-level policy coordination at the centre of government, and an expanding role for innovation support agencies such as CORFO, the Chilean Production Development Corporation. Innovation support programmes have proliferated and matured. Startup Chile, launched in 2010, has become world-renowned for its innovative, global approach to attracting tech startups. The programme has already been emulated in several countries even though the long-term economic impact of the programme remains unproven.

**Figure 2:** Institutional map of the Chilean innovation system




Although ranked the most competitive country in Latin America, Chile's economic growth remains dependent on natural resources like copper. Chile spends proportionally far less (0.39 per cent of GDP[1]) on R&D than peers at similar stages of development. With a low contribution of R&D spending from the private sector, challenges of improving R&D intensity of firms lie ahead, alongside economic rebalancing and continued human capital development. Dependence on mining is being reframed as an opportunity to build local capabilities to develop knowledge and technology intensive solutions relevant for many other technology-based industries, locally and globally.

[1] Ministerio de Economía, 2015.

Regional and global integration of innovation activities will be crucial, as will ensuring that growth in spending on innovation support achieves the desired results for economy and society. With this in mind, innovation is increasingly recognised as a cross-government activity. A new Laboratorio de Gobierno is launching this year with a high-level mandate to support innovation in public service delivery and in the relationship between the public and private sectors on innovation.

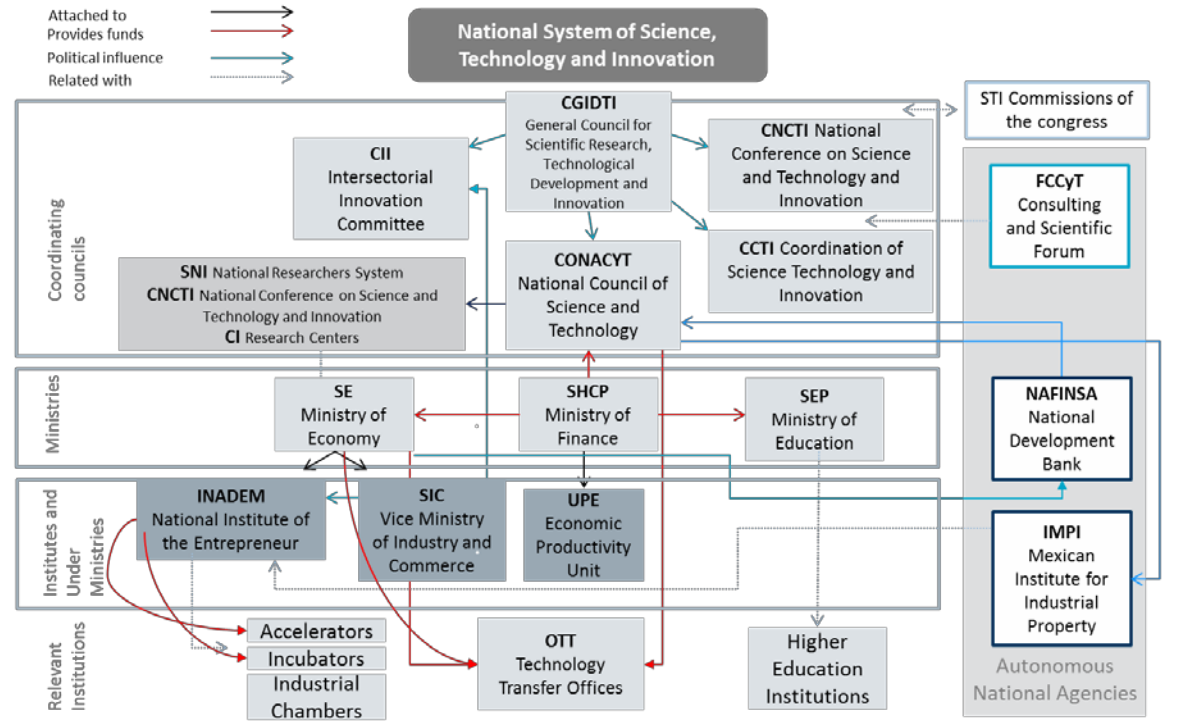
**Mexico**

The innovation ecosystem in Mexico has evolved rapidly since the Law of Science and Technology of 2002, which aimed to strengthen the development of science, research and innovation to boost the economy. Less than 0.5 per cent of GDP is invested in R&D[2], although the current administration has set a target of 1 per cent by the end of its term[3]. The national institutional framework that designs and operates innovation promotion comprises five institutions: the National Council of Science and Technology – CONACYT; the National Institute of the Entrepreneur – INADEM; the Vice Ministry of Industry and Commerce – SIC; the Mexican Institute of Industrial Property – IMPI; and the Ministry of Education – SEP. Further reforms in 2009 strengthened regulatory frameworks, and today Mexico has many of the building blocks of an effective system – a growing scientific output, a well-regarded new system of technology transfer offices, strong commitment by government to support entrepreneurship, and efforts to rationalise and clarify the large number of innovation and entrepreneurship support programmes. The system is increasingly coordinated, yet under-connected.

Already by far the largest market of the Pacific Alliance, Mexico benefits from close geographical, commercial and scientific relationships with its US neighbour. These have contributed to the growth of strong innovation clusters in the north and the capital region, manufacturing exports greater than the other Pacific Alliance countries combined, and good growth in FDI. These opportunities are set against a backdrop of a diverse country with considerable inequality and persistent challenges of corruption, violence and poverty.

[2] World Bank, 2015.
[3] Cornell University et al., 2014.

**Figure 3:** Institutional map of the Mexican innovation system




**Peru**

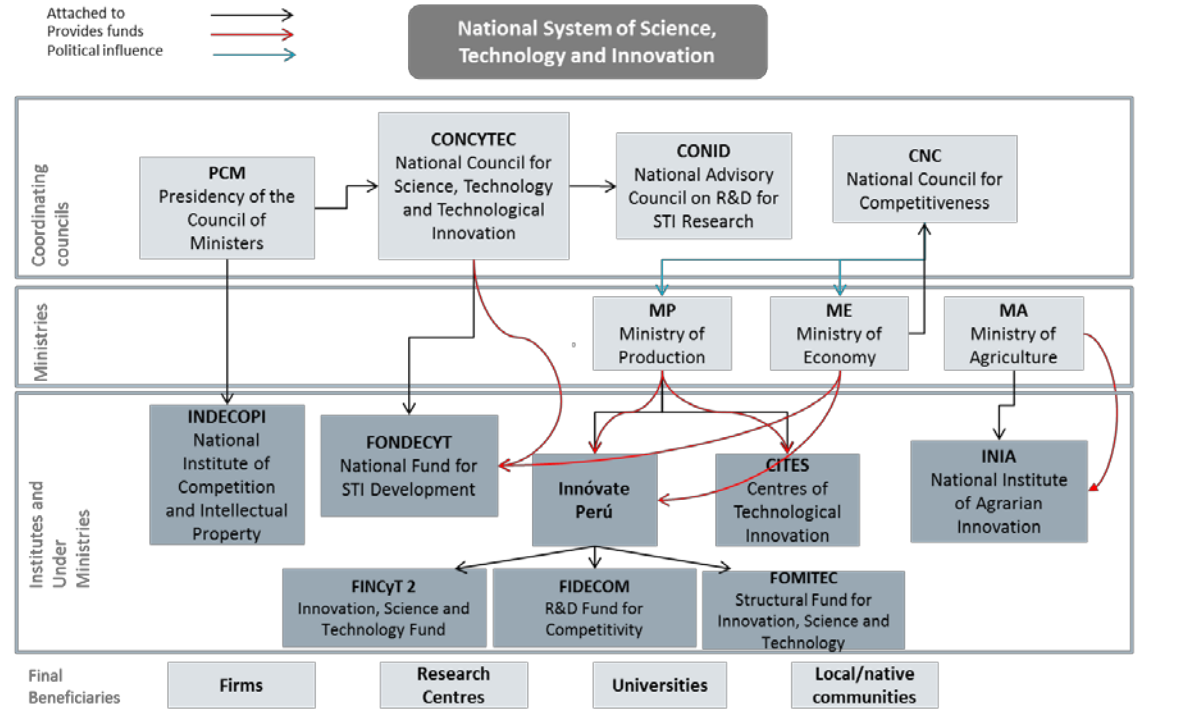
A relative latecomer to innovation policy compared to its Pacific Alliance counterparts, nevertheless according to the OECD, by 2011 Peru had some 'well-designed and well-managed programmes' for STI support. This marks a sharp improvement on the scenario five years earlier, and continues to improve. There has been a recent surge in funding, with the main science and research funding agency CONCYTEC receiving close to a ten-fold increase in budget over the last year, from US$5.1 million to US$42 million and an increasingly important agenda setting and coordinating role. However, overall public innovation investment significantly lags other Pacific Alliance countries even after these increases, which fail to keep step with rapid economic growth in recent years (the most recent available 2004 statistics show 0.15 per cent investment in R&D as a proportion of GDP[4]). National budgets are complemented by multilateral innovation funding mechanisms including US$40 million World Bank funding for the National Agricultural Innovation Programme (PNIA).

Peru's private sector invests very little in R&D and innovation and there are significant regulatory challenges to using public funds for private R&D and persistent gaps in human capital. Recognising the need to diversify away from resource-based industries, the Ministry of Production leads a number of programmes, including the innovation fund

[4] Fundación Telefonica, 2011.

'FINCYT'/Innovaté Peru, which from a very slow start in 2007 is now starting to tap latent demand for innovation funding. Critics point out a lack of coordination and connectedness across the innovation system, and an absence of mission-driven approaches to innovation support. For instance, while awareness of the importance of innovation is rising among politicians, this is disconnected from the poverty reduction debate. Policymakers need to grow the efficiency and output of support programmes to ensure the funding surge is sustained, and grow the reach of a concentrated system through greater regional coordination.

**Figure 4:** Institutional map of the Peruvian innovation system




**Colombia**

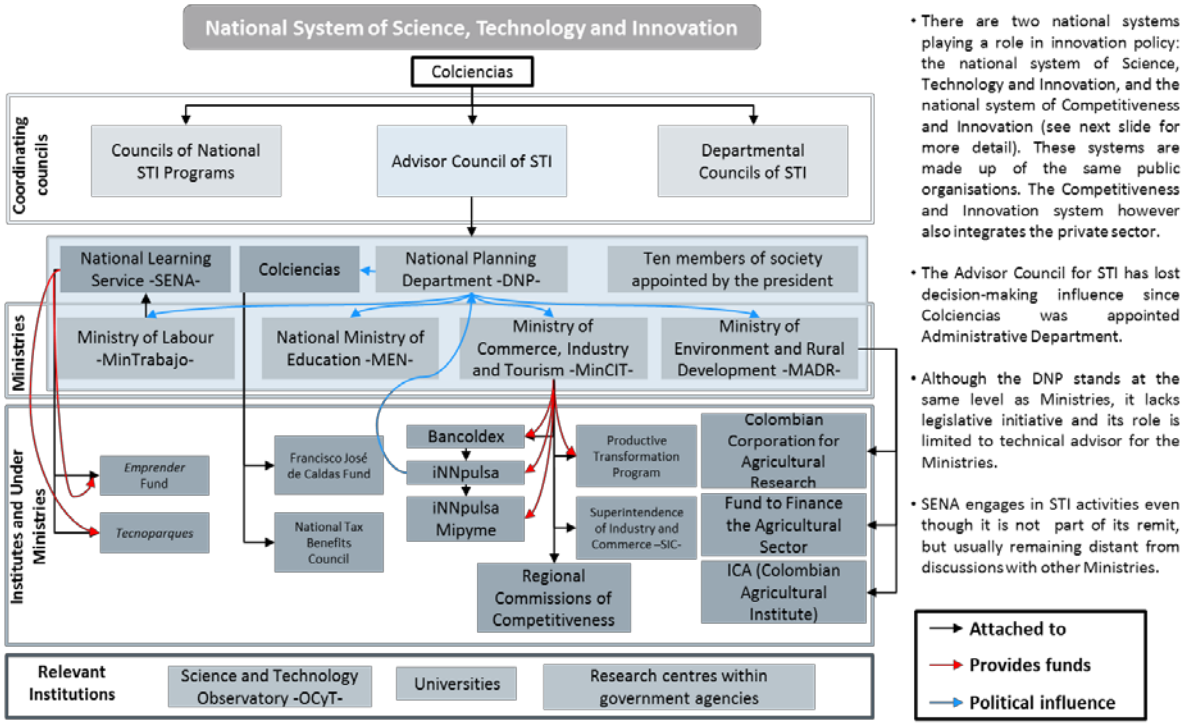
With a recent history of insecurity and conflict, and challenges of social inequality, innovation has officially been on the Colombian public policy agenda since 2009. Innovation policy is now recognised as an inter-sectoral issue with a high priority in the most recent 'National Development Plan'.

One agency, Colciencias, has primary responsibility of the design of the innovation policy across the system and combines roles as ministry, research council and innovation agency. In practice its attention is weighted towards research funding: with 47.9 per cent of its 2012 budget going to scholarship loans for post-graduate support programmes and used to fund

education programmes[5]. A frequent criticism of the public innovation system is that it operates with two overlapping structures: the science and innovation system, largely focused on research, science and scientist funding (Figure 5.1), and the competitiveness and innovation system, focused on supporting the private sector (Figure 5.2). Many agencies operate separate programmes in each system.

The 2010 National Plan created the iNNpulsa agency to support high-impact entrepreneurs and innovation; its success to date has been rewarded by re-absorption into parent development bank, Bancoldex, in 2015 with a significantly increased budget and remit. Bancoldex recently announced plans to create a new line of credit for innovative firms with the equivalent of £8 billion in capital.[6]

**Figure 5.1:** Institutional map of the Colombian Innovation System (STI)

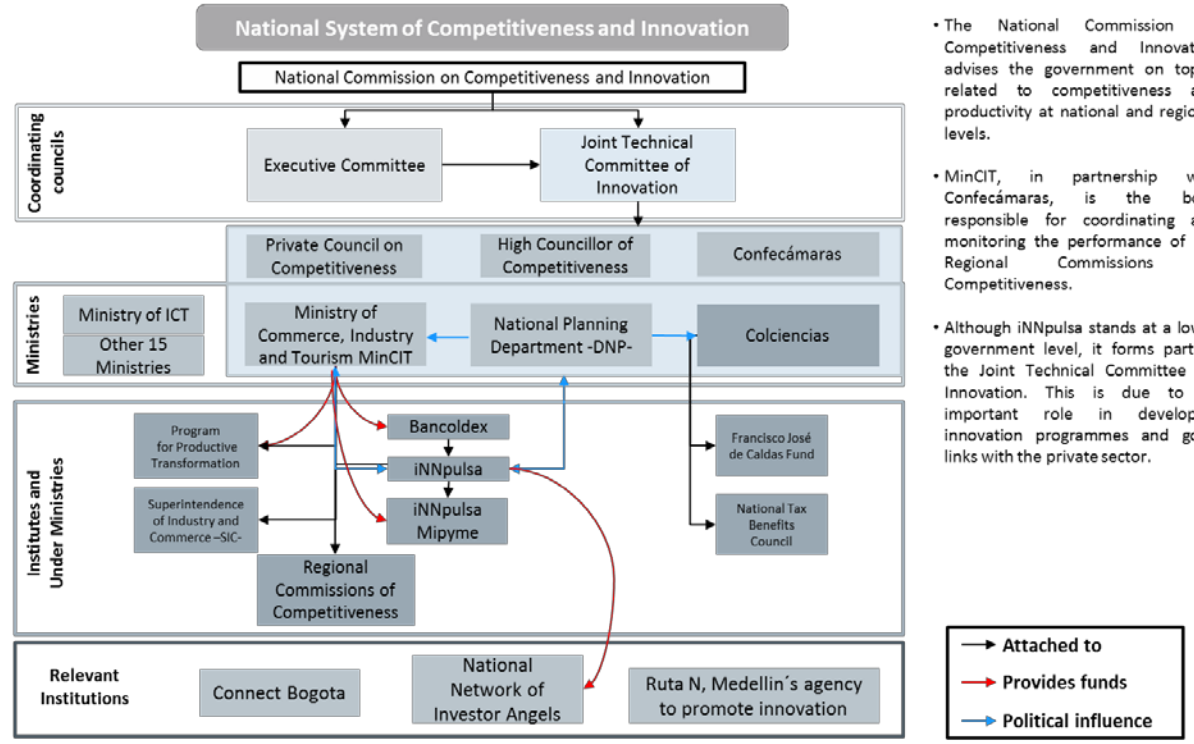



Colombia ranks third of the Pacific Alliance countries in terms of relative R&D spend at 0.22 per cent of GDP, with broader Science, Technology and Innovation (STI) spending higher at 0.5 per cent of GDP in 2013[7]. Private sector contribution to this expenditure however, remains low at under a third of the total. Budgets are growing, albeit in a somewhat distributed way. Laws require ministries to invest 1 per cent of their budgets in R&D (with

[5] Gómez and Mitchell, 2014.
[6] http://www.elnuevosiglo.com.co/articulos/3-2015-30-mil-millones-para-empresarios-innovadores.html
[7] OCyT, 2014.

limited impact where capabilities to exploit it are missing), while the requirement across regions to allocate 10 per cent of mining royalties to innovation has led to significant new funding opportunities[8]. While some regions lack the absorptive capacity to exploit these, others have capitalised. For example, Medellin is widely seen as a national innovation hub, with its highly effective 'Ruta N' agency. Other agencies outside the core innovation system also have considerable budgets. Educational development agency, SENA, for example has a budget of around $1.3 billion, 20% of which is designated for innovation and competitiveness.

**Figure 5.2:** Institutional map of the Colombian Innovation system (Competitiveness)




- The National Commission on Competitiveness and Innovation advises the government on topics related to competitiveness and productivity at national and regional levels.
- MinCIT, in partnership with Confecámaras, is the body responsible for coordinating and monitoring the performance of the Regional Commissions of Competitiveness.
- Although iNNpulsa stands at a lower government level, it forms part of the Joint Technical Committee for Innovation. This is due to its important role in developing innovation programmes and good links with the private sector.

[8] Law 1530 of 2012.

## Mapping demand for innovation policy training

In this exercise we used the following definition of innovation policymaker as a starting point to identify our target audience for training:

A) A person responsible for or involved in formulating public policies which seek to support innovation – whether through seeking to improve supply, demand, connection or direction of policy.

B) A person who leads or manages the deployment and implementation of major government programmes which are designed to foster innovation.

Since innovation is increasingly recognised as a cross-cutting issue, there is a vast pool of policymakers for whom innovation policy is relevant. These reach down into regional and municipal governments, and reach across into a range of ministries from defence and health to agriculture that might have innovation funds or functions. However, for the purposes of this scoping exercise, we focused on mapping innovation policymakers in the 'core' ministries and agencies of innovation policy. These tended to be business or economy, finance, science and higher education and their associated agencies, but selection varied according to country.

**Figure 6.** Quantifying the audience for innovation policy training

| Quantifying senior innovation policymakers (in core ministries and agencies only)* | | | | | |
|---|---|---|---|---|---|
| | L1 Junior politician /Director General | L2 Director | L3 Programme Director | L4 Senior Programme Manager | Total (CORE only) |
| Chile | 4 | 29 | 38 | 80 | 151 |
| Colombia | 6 | 26 | 38 | 20+** | 94+ |
| Mexico | 10 | 26 | 37 | 22+** | 95+ |
| Peru | 2 | 8 | 45 | 28+** | 83+ |

* These numbers should be regarded as estimates only. These exclude most policymakers in regions and municipal authorities and many innovation functions in non-core ministries.

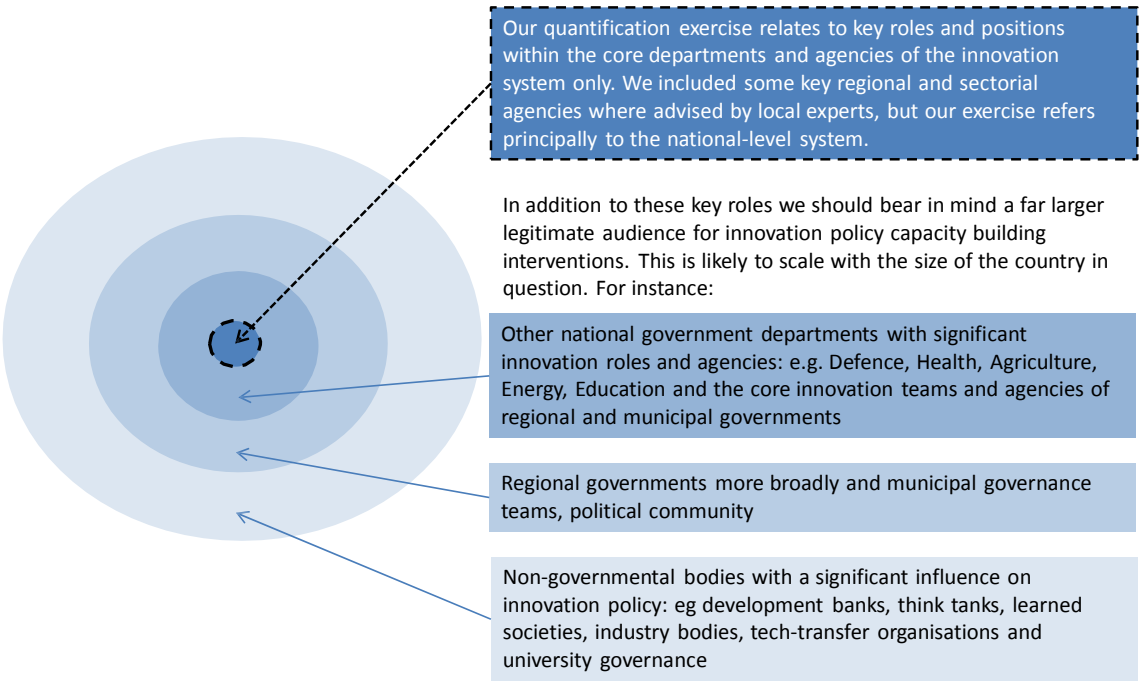
** L4 figures were less easily available in a comparable way across countries. These figures indicate a group of policymakers at approximately L4 who operate with an innovation remit within other government departments, rather than the direct reports of L3s in our targeted agencies. This group was identified as potentially important targets for capacity building in our workshops.

### Quantifying the target group of policymakers

We used a combination of publicly available human resources data and expert interviews to quantify the pool of target policymakers within the core ministries and agencies. While this gives us a useful sense of the size of the target audience, it remains an estimate.[9]

It's important to note that there is a legitimate audience for innovation policy training at the regional or state level, across government ministries and among policy influencers across the system like think tanks, universities and industry associations that is very much larger than the core identified here.

Figure 7: Mapping innovation policymakers: assessing the size of the wider audience




### Current training provision and space for a UK offer

Existing provision for training and professional development on innovation policy is sparse. There is a range of general policy training programmes across the region, but few offer any significant focus on innovation. The innovation policy education that does exist tends to be taught in full-time Masters courses with limited practical application. Executive development is often limited to study tours and one-off workshops.

[9] Further detail on the approach used is available in the full report. Note that these estimates are designed to indicate the scale of audience rather than capture exact numbers.

Other national governments do offer specific training and development opportunities, particularly Korea in the case of Peru and the US in the case of Mexico. However, there was a feeling that European countries are generally under-represented, limiting potentially valuable opportunities for collaboration. Our interviews and workshops indicated strong overall support from senior policymakers across the Pacific Alliance for a new capacity-building initiative from the UK. We were able to identify and test a set of priority themes, which give a useful guide on how to target future programmes.

**Capacity building and training themes suggested in stakeholder interviews**

| Themes | Emphasis |
|---|---|
| **'Innovation 101'** | The 'basics' of innovation policy: definitions, aspects, scope, and creating an awareness of the main levers, mechanisms and techniques a policymaker can deploy to support innovation. |
| **Innovation policy design and prioritisation** | Specific skills of public policy analysis and design relevant to innovation policy. |
| **Innovation programme management and implementation** | Bridging the gap between strategy and design and effective implementation. Operational expertise and craft knowledge. |
| **Evaluation of innovation policies** | Techniques and approaches for monitoring and assessing the impact of both specific innovation policies or programmes, and also broader innovation policy strategies at a regional or national level. Post hoc and also real-time data and how to use it to influence politics, business and future policy design. |
| **Data for innovation policy and measurement of innovation** | Skills to understand, collect and interpret suitable data to measure innovation and track and monitor effectiveness for different kinds of innovation policy. In addition, skills to commission and support others to create and use data for evidence-based policymaking. |
| **Foresight/road mapping capabilities** | The ability of the public sector innovation system to deploy robust techniques to understand potential future paths and scenarios for technology and innovation development. |
| **Learning from global innovation** | Knowledge of where to go to access appropriate global best practice in innovation policy, and the networks and connections to learn from those experiences to improve innovation policy design and implementation in their own jurisdiction. |
| **Entrepreneurship support** | The range of potential government interventions designed to boost entrepreneurship, including ensuring policymakers can understand the businesses their policies support, develop appropriate financing |

| | |
|---|---|
| | mechanisms for innovative entrepreneurship, and design effective structured support programmes like accelerators and incubators. |
| **University-business links** | All types of connections between higher education institutions and private businesses, including technology transfer, partnerships, spin-outs, commissioned R&D etc. |
| **Engaging with the private sector and incentivising innovation investment** | Understanding the motivations of firms, and deeper insights into innovation management. The design and implementation of innovation policies which encourage firms and governments to invest in innovation projects. |
| **Sectorial innovation policies** | The skills required to understand the specific needs of industrial sectors and to design initiatives which are tailored for, and directed towards, a particular sector. In addition, the overall process by which a government establishes and enacts industrial sector priorities for innovation. |
| **Cross-government innovation strategy and coordination and policy mix** | Support and insight into methods for innovation policy formulation which operates across government departmental silos. In addition, how to evaluate an appropriate 'mix' of innovation policy initiatives across government departments to achieve broader strategic aims. Understanding how to support regional innovation strategies and boost regional innovation competencies. |
| **Communicating innovation and influencing politicians** | Persuasion and communication skills to ensure key stakeholders – including politicians – can understand the value of investing in innovation and make informed decisions regarding the desirability and effectiveness of different innovation policy options and programmes. |

**Differentiation in demand - According to seniority, career background and level of specialism**

Beyond these core themes, stakeholders suggested that policymakers at different levels of seniority have different priorities. The most senior figures were perceived to value peer support, inspiration and strategic expert advice. At the level of middle management, it was frequently suggested that support for policy implementation, including evaluation, would be most impactful. The most advanced level of knowledge was only relevant for technical specialists. However, at the broad level across ministries and across the national systems, there was support for developing a better shared baseline of knowledge on innovation and how to support it.

Another factor influencing which themes were prioritised was the career background of policymakers. Institutions were drawing staff from two main backgrounds: either technical,

scientific or academic specialists moving into the policy world, or public policy professionals moving into innovation policy from other remits. It was suggested that policy generalists were much easier to upskill to cover innovation portfolios than technical specialists with no grounding in the basics of the policymaking process.

While a range of capability frameworks for general public policy exist, these are unavailable for innovation policy, despite being of great interest to policymakers in national governments and multilateral institutions around the world.

**Differentiation in demand - According to country**

In all countries we found pools of expertise on innovation policy, but also a frustration that this knowledge was highly concentrated. Considering the variation in development levels and maturity of innovation system within and between the countries, there was a surprising level of consensus on overarching priority themes for capacity building. This suggests there is a case for the development of a core set of resources and offers which will be relevant to all countries.

However, this consensus about the core is joined by a set of highly individual contexts and challenges in each country. Addressing these would require an additional highly tailored and collaborative complementary offer. Beyond the thematic focus of future programmes, there was a strong steer from stakeholders on preferences for *how* future capacity-building initiatives should be delivered for greatest impact.

## Conclusions

Our desk research and expert interviews uncovered gaps, challenges and opportunities in each system, clarified who the target audience for innovation policy capacity building is, and drew out a set of thematic and methodological learning preferences.

In order to make the best informed recommendations possible for the Innovate UK Newton programme building on this, we combined these findings with:

a) Robust evidence of *what works* in professional development and training for policymakers;
b) Knowledge of latest and best practices in capacity building for innovation policymakers globally in national and multilateral organisations; and
c) Unique and relevant opportunities offered by the UK system and greatest opportunities for sustainable partnerships.

These considerations translated into a set of design principles:

| Key lesson | Resulting design principle |
|---|---|
| Policymaker learning needs vary according to level of seniority.<br>There is a multiplier effect from focusing on leadership cadres, but capacity building schemes often miss out the middle and junior managers and fail to spread knowledge throughout the system. | More than one approach is needed:<br><br>a) A targeted and tailored professional development for influential leaders.<br>b) A set of open access resources for greatest reach across systems. |
| There is a core set of priority learning themes and a desired knowledge 'baseline' when it comes to innovation across all systems.<br>However, there are also individual challenges in institutions and countries that require more tailored problem-solving. | A core of content will be relevant across countries, but the programme shouldn't have a one size fits all approach. Additional content and problem solving support should be tailored to individual country contexts. |
| Some of the most important perceived challenges of innovation policy do not lend themselves well to external training – for example cross-system coordination and working as a coherent innovation system – and can best be addressed by helping to facilitate the knowledge and networks within a system. | At least one proposed programme should emphasise and enable cross-system collaborative learning and development through *method* as much as through content.<br><br>Stronger and more productive national and international peer relationships should be a central objective of the programme. |
| Policymakers benefit from experiences more than lectures, and need ongoing expert and peer support to apply knowledge. | If possible, a programme should involve immersion in UK system and opportunity to build peer networks.<br>At the same time, the pool of policymakers on all sides is small. The initiative needs to use policymaker time on all sides efficiently and effectively and not become a drain on resources that detracts from their core role. |
| Senior policymakers are very time-poor, and need training which helps them directly achieve their strategic priorities. | Programmes should be practical, applied to pressing challenges and fit alongside the day job. |
| 'One off' workshops are plentiful but have limited impact. | Programme should involve a set of ambitious, connected activities and access to whole UK |

| | |
|---|---|
| Connected and cumulative activities with longer-term relationships are much more likely to create positive change. | system assets and networks.<br><br>Programme should be an active rather than a passive learning experience that involves working on real projects which are part of achieving their individual and institutional strategic objectives. |

**Testing and validation**

We turned these design principles and considerations into two broad proposals which we tested, along with the themes highlighted in interviews, with high-level expert stakeholder groups in workshops in each country.

**Prioritising thematic focus of initiatives**

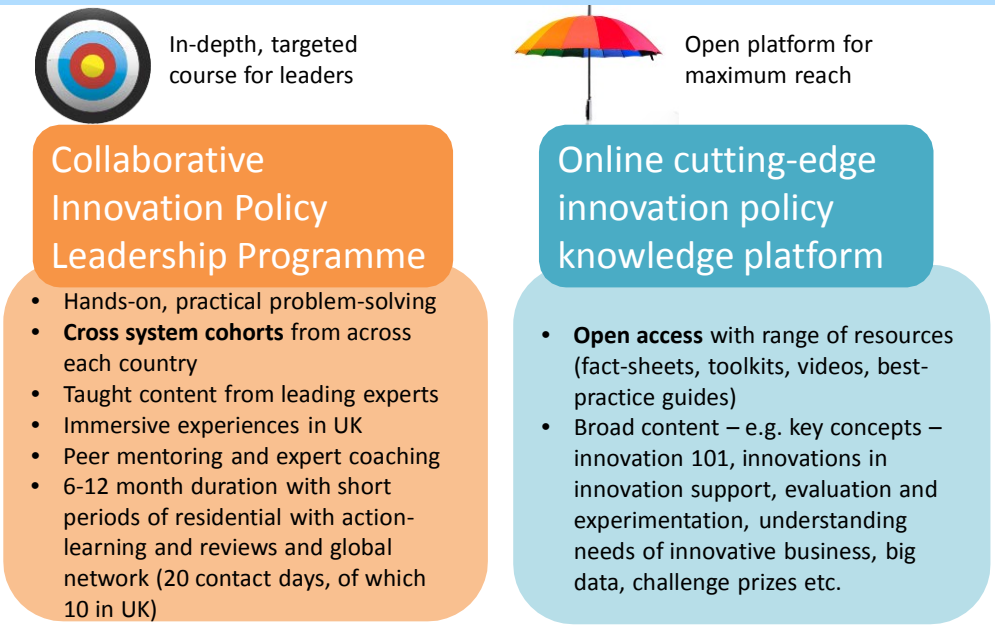
During the workshops we undertook a validation and prioritisation exercise in relation to the themes. Participants were required to discuss, review and add or remove themes, and finally to each select three priorities.

In terms of themes, we saw a spread of issues within each of the countries, indicating a wide range of personal and institutional priorities. It's important to note that all the themes outlined above were found to be highly relevant. However, among these there were four themes that were consistent shared priorities:

- **Cross-government coordination and whole system working** – while there are pockets of expertise in all countries, disconnections between institutions, or between design and implementation, was perceived to be reducing the impact of policies.
- **Engaging the private sector** – a lack of understanding among policymakers of the needs, motivations and limitations of business – and a lack of effective engagement strategies – was seen as a major hindrance to innovation policy. This wasn't limited to technology commercialisation, but covered all aspects of open innovation.
- **Evaluation and data** – evaluation methods, measurement of innovation and data strategies, but also how to make better use of this knowledge and influence programme design and prioritisation.
- **University-business links** – across a broad range of issues, from culture and trust to intellectual property negotiation and technology transfer.

Regarding the overall approach to capacity building, the design principles were strongly endorsed. The outline proposals we presented for discussion were based on these principles:

**Figure 8:** Proposals tested at validation workshops




Both proposals received an enthusiastic response as approaches that would be both desirable and feasible, and we received detailed feedback in both cases. There was extremely strong support for the collaborative leadership programme, and support for materials with a much greater reach to complement this. While the open platform was seen as great in principle, discussions reinforced the importance of getting the detailed design right.

## Recommendations

For greatest impact, any new capacity building initiative needs to be designed as far as possible according to the principles outlined above, whilst also taking into account the need for limitations of financing and other scarce resources within the UK innovation system.

Building on all the feedback from our validation workshops, we therefore recommend an approach in two parts:

|  | **Part One: The design, development and piloting of professional development programme for innovation policymaker cohorts** |
|---|---|
| **What?** | High intensity professional development programme for cross-system cohorts of innovation policy leaders (Levels 2 and 3) focused on addressing specific national challenges.<br>Co-designed by the UK in partnership with the Pacific Alliance nations. |
| **For whom?** | Each 'intake' would comprise five cohorts of five leaders from across each national innovation system. (Mexico, Colombia, Peru, Chile, UK)<br>• In each case this could involve for example participants from a) an innovation agency, b) the finance ministry, c) the research funding body, d) the intellectual property agency, d) the ministry of economy.<br>• Individual governments would select individual participants and the mix of agencies to be represented according to their national priorities.<br>• The programme would seek to build cross-system capabilities and address systemic failures as well as building individual organisational capabilities. |
| **How would it work?** | A modular programme comprising:<br>• Action learning through a challenge-focused practical approach.<br>• Taught content on latest global developments, approaches and evidence in innovation policy from leading experts.<br>• Immersive experiences in the UK innovation system.<br>• Ongoing peer mentoring and expert advice to cohorts on real-life challenges and projects they have selected. |
| **What would be the** | Six months, combining some intensive residential (probably two five-day visits by cohorts to the UK in month one and month three) with action learning periods and online review meetings. |

| | |
|---|---|
| **duration?** | The first UK visit would be broad in coverage (eg introduction to the UK model of innovation support, latest models, evidence and thinking in key priority areas) while the second would be highly targeted according to the chosen challenge area (eg with more focused group of site visits, peer support sessions and training or expert advice). The progamme would culminate with the delivery of a tangible product which could be a report, a policy pilot etc to embed the learning in the wider system. |
| **How would they learn?** | **From leading experts** – classroom content, lectures and workshops.<br>**From practitioners** – demonstration, study visits, shadowing.<br>**From peers** – collective problem solving approach and creation of sustainable support networks for future activities. |
| **What would they learn?** | **Learning what to do**: Diagnosing problems, global best practice and evidence, new models and opportunities and UK experience focusing on priority areas of: Cross-government coordination and whole system working; Engaging the private sector; Evaluation and data and University-business links.<br>Tailor-made programme based on newly-commissioned content in addition, where appropriate, to existing courseware and services in the UK.<br>**Learning how to do it:** Using a national challenge focus, the cohort will work together as a team to apply and test new approaches with support from UK peers, peer cohorts and expert coaches and facilitators from the UK.<br>[This programme will be supplemented by practice guides to help embed changes in home organisations – see recommendation Part Two] |
| **What would the outcomes be?** | • Performance and effectiveness of programmes.<br>• Creativity and leadership by participating policymakers in adopting and testing new approaches.<br>• Unblocking system failures, new connections and identification of complementarities across national systems, and across the Pacific Alliance innovation system.<br>• Continuous learning through alumni networks, peer support and global conferences. |

However, while this kind of tailored, facilitated approach is likely to be high impact, it is also likely to be fairly resource intensive and thus only cost-effective for a relatively small group of senior policymakers (Levels 2 and 3 according to our categorisation).

In addition, in order to maximise impact and reach of the Innovate UK programme, the approach also needs to:

a) Reach out to a much wider community of users in each country in a highly cost-effective way (more junior programme managers in Level 4 but also regional stakeholders, those policymakers and managers who want to support innovation but are outside the core innovation and business ministries and agencies and the wider innovation system).

b) Help embed the learning and increase the impact of the professional development course in partner organisations.

c) Distil and communicate the craft knowledge, expertise and experience within the UK system in a way that will reduce the burden on a small community of UK expert practitioners and policymakers to explain what they do individually to the large community of Newton stakeholders.

d) Draw on but not attempt to duplicate other resources like the OECD/World Bank Innovation Policy platform.

With this in mind, we recommend the creation of a complementary set of open access resources, accessible to a far wider community. In our regional workshops, we proposed the idea of an open access platform. This had broad appeal from workshop participants, and there was a very strong desire for approaches that helped embed the professional development programme and increase access to the support within the target countries. However, there were questions around the practicalities of hosting of such a platform across the Pacific Alliance context, and agreement that the practical design of the approach would be critical. Taking these challenges into account, we propose the following model:

|  | **Part Two: Creation of a set of open access practitioner guides to designing and managing public innovation support programmes.** |
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| **What?** | **Practice guides** to implementing innovation support programmes<br>These highly practical, bilingual guides (initially 3-5) would target key thematic challenge areas identified in our research.<br>• They would embed learning and new practice in innovation agencies across the Pacific Alliance including, but not limited to, that developed as part of the collaborative leadership programme. |

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| | • They would capture and codify models and methods within the UK innovation system, including practitioner tips and insights.<br>• They would incorporate and curate existing UK content, latest and best practice, and generate new content where gaps exist.<br><br>Stand-alone resources, these could additionally be developed in each system into train the trainer workshops by UK partners in collaboration with peers in the Pacific Alliance countries. |
| **For whom?** | They would be designed to target senior programme managers and implementers in innovation agencies and ministries, but would be relevant to a broad range of policymakers and managers.<br><br>Particular targets for these resources would include:<br>• Those joining an innovation agency, as part of an induction or orientation process and needing overviews, examples and a sense of the range of global best practice or those looking to implement innovation support in a regional context.<br>• Those looking to practically implement policies, programmes and initiatives generated by senior policymakers who have completed the leadership development programme. |
| **How would it work?** | The guides would be designed for and with policy and programme practitioners, and delivery would include effective user experience testing.<br><br>Initial topics could be for instance:<br>• Monitoring, evaluating and experimenting with innovation support programmes.<br>• Understanding the motivations and barriers to innovation in firms and incentivising and supporting innovation in firms through competitive grant programmes.<br>• Private sector innovation support programmes that address public and social challenges.<br>• Designing programmes that build productive partnerships between universities and firms for innovation.<br>• Communicating the importance of investing in innovation for economic growth to different audiences e.g., businesses, politicians or the general public.<br><br>The guides would be designed according to a common framework. For |

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| | instance:<br><br>• What we did, what we learned, and what we do now in the UK.<br>• Common shared challenges and how to overcome them (including practitioner insights from Innovate UK and others).<br>• In-depth models and insights from one or two UK programme cases.<br>• Latest thinking/practice globally and key innovations in approach.<br>• Links to further resources like those on OECD IPP or organisations within the UK.<br><br>They would be as short and as accessible as possible while maintaining enough rigour and detail to be both credible and practically useful.<br><br>Part of the development and piloting phase of the materials should involve embedding materials in small number of in-country training and learning programmes. |
| **How would the resources be accessed?** | The resources would be open access both on the Innovate UK website, and embedded within partner government websites and training initiatives. Other options to be explored in addition to train the trainer workshops could include publicising the resources through webinars or online courses. |
| **How would policymakers and managers be incentivised to use the resources?** | Several strategies could be considered:<br><br>• Linking materials to topics focused on by leadership programme cohorts – so that participants in that programme can draw on the materials to assist in embedding learning in their organisations and implementing policies.<br>• A modular training approach linked to the practice guides, where completion of several elements could lead to a certificate.<br>• Embedding the materials in compulsory programmes within innovation agencies in the Pacific Alliance – such as core training, induction processes, or linked to specific new project development.<br><br>Users can pick and choose the guides relevant to them – with different learning experiences depending on their needs, for example:<br><br>• A light-touch engagement with a range of areas in order to heighten awareness of important concepts or opportunities from global best practice in innovation policy.<br>• A longer, more intensive learning experience with the materials as part |

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| | of learning the 'trade' of an innovation policymaker entering from academia or a non-innovation policy role.<br>• Using practitioner implementation guides and toolkits to assist in the deployment of new innovation policies and programmes. |
| **What would the outcomes be?** | • Wider sensitisation about innovation and the most effective policies to support it for economic and social impact amongst the policymaking community and the communities they seek to influence.<br>• Embedding the leadership programme learning across a wider range of innovation agency staff in Pacific Alliance countries.<br>• Practical library or 'toolbox' for a range of policy training initiatives.<br>• Dual English and Spanish-language materials to assist with the development of language skills for easier access to other global best practice materials by Pacific Alliance policymakers.<br>• Greater awareness through the materials of the potential for learning and collaboration between the UK and Pacific Alliance countries on innovation policy. |

## Next steps - moving from idea to action

**Timing:** This scoping exercise has stimulated enthusiasm and interest among senior stakeholders in the Pacific Alliance innovation systems. Innovate UK should build on this momentum, and move as rapidly as possible onto a detailed design phase and a first pilot programme.

**Collaborative programme design:** We recommend a detailed design phase is undertaken in close collaboration with stakeholders and delivery organisations in partner countries. This will help ensure appropriate content and focus, but also ensure resources link directly into national initiatives (e.g. innovation and entrepreneurship observatories in Colombia and Mexico or CORFO's Academia, or Fundación Chile's human capital development programmes). This should last for up to six months, followed by a pilot programme.

**Regional perspective:** The regional, Pacific Alliance perspective of the programme is highly valuable and indeed unique. However, the UK should continue to engage with each national government and stakeholder group to understand and take into account their unique perspectives and needs. This should also be the case as-and-when Innovate UK choose to roll the programme out to other regions in addition. For greatest impact the approach

should be peer and practice-driven and supported (but not constrained) by diplomatic initiatives.

**Piloting, testing and embedding for sustainable impact:** The programme should be seen as a collaborative experiment. With this in mind, in addition to the pilot professional development programme, the practice guides should be primarily developed in the UK but improved and adapted into train the trainer resources in partnership with organisation(s) in the Pacific Alliance region. The resources should not replicate existing offers, for example the OECD/World Bank IPP, but should instead complement newly developed content with available free resources and wider multilateral initiatives.

**Delivery consortium***:* For greatest impact on UK and partner countries we suggest an integrated 'whole system' offer from the UK that incorporates a range of organisations and government initiatives, but is coordinated by a single neutral partner. The pump-priming from Innovate UK to develop content, design and test a new approach and secure contacts should mean the programme is sustainably delivered, with the support of UK government networks overseas, beyond the lifetime of Newton funding.

**Complementary initiatives**: Gaining profile and buy-in for the programmes will be crucial. We recommend that Innovate UK consider using separate Newton funds focused on capacity building to co-ordinate a Newton-wide conference of senior innovation agency and policymaker professionals in the UK in late 2015 or early 2016. This conference would particularly target, if possible, policymakers at the 'Level 1' seniority. Improving and cementing the reputation of the UK as a global leader in innovation policy would assist in gaining support for programmes across countries and targeting initiatives for greatest social and economic impact in partner countries. In addition, Newton partners should consider holding local events for innovation policymakers within the Pacific Alliance, potentially linked to the practice guides and targeting a more junior level of policymaker.

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