Overview

INSIGHTS AND LESSONS FOR DESIGNING AND IMPLEMENTING INNOVATION SUPPORT PROGRAMS

AUS4INNOVATION

INTRODUCTION

What makes innovation support programs different is their explicit focus on capacity strengthening – specifically, strengthening the capacity of sectors, regions, or nations to deploy science, technology and other sources of knowledge and innovation to achieve economic and social development goals through innovation. But how effective are they at achieving this? The Aus4Innovation program commissioned a review of different international innovation support programs to identify a number of key principles and lessons for designing and implementing innovation support programs.

WHAT DO WE MEAN BY INNOVATION SUPPORT?

Innovation support focuses on creating value through the creation and adaption of research and development (R&D) and technological capabilities and the capability of individuals and organisations.

Other critical elements include i) policies and regulations that provide incentives for innovation; ii) visions and strategies to help coordinate investments and incentives to promote innovation and direct it at different impact targets; iii) the networks and patterns of interaction that connect ideas and technologies with users and that support continuous learning and dynamic skill development; and, iv) critically, it involves habits, practices, norms, organisational policies and routines of innovation actors.

WHAT DO INNOVATION SUPPORT PROGRAM MODALITIES LOOK LIKE?

Typically, innovation support programs are premised on an understanding of the systemic nature of innovation capacity and are guided by the innovation system concept as the key policy and capacity-strengthening framework.

There is significant heterogeneity in the bilateral and multilateral agencies that have approached the task. There has been an evolution and sequencing of program types over many years which can be categorised into six broad types of program designs and impact intent, i.e., Modalities:

1. **Entrepreneurial-oriented:** Supporting entrepreneurship as a foundation of broader social and economic growth.

2. **Innovation process-oriented**: Supporting the capacity of the innovation systems as a foundation for broader social and economic growth.

3. **Policy-oriented**: Supporting the development of effective innovation policy settings as a foundation for broader social and economic growth, but increasingly targeting better alignment with inclusive and sustainable growth and development strategies.

4. **Multi-level/portfolio-oriented**: Supporting the systemic development of innovation capacity as a foundation for broader social and economic growth but can be targeted at specific development impacts such as women's health, resilience etc, through the targeting of bounded themes.

5. **Deploying new platform technology-oriented:** Supporting the development of technological capability, often targeted in the service of defined social, economic and environmental impact objectives.

6. **Mission-oriented:** Supporting the development of capacity for mission-directed innovation, targeted in the service of defined social, economic and environmental objectives.

STRENGTHS AND TRADE-OFFS OF DIFFERENT INNOVATION SUPPORT PROGRAM MODALITIES?

Different modalities have evolved from different contextual dynamics with strengths and trade-offs associated with each of the different modalities.

The following table highlights these strengths and trade-offs.

	STRENGTH	TRADE-OFF
Entrepreneurial-oriented	Tightly bounded with tangible and 'measurable' outcome ambitions, this type of program is well suited to short-term funding.	Business-led growth is unlikely to drive innovation that supports inclusion and sustainability ambitions without explicit policy and regulatory support. Entrepreneurial ecosystem framing weakens the ability to catalyse more systemic forms of innovation capacity.
Innovation process-oriented	The explicit systemic framing of these approaches recognises that, while innovation action is always going to be centred on businesses and communities, innovation also needs to be supported by a wider enabling environment (policies and institutions), a set of innovation-oriented capabilities and the development of long-term relationships between partners.	A tendency to focus on a specific set of innovation relationships, such as university-industry partnerships, rarely reflects the 'national style of innovation' in emerging economies where the more usual approach involves reworking the existing stock. Alternatively, programs spread themselves too thinly and fail to gain traction and support to sustain efforts when project support is withdrawn. Generic capacity outcomes across multiple sectors are difficult to track in the short term, and often two or three program cycles are needed to see impacts.
Policy-oriented	Particularly powerful at key policy inflection points: for example, the reorientation from science and technology policy to science, technology and innovation (STI) policy; or the need to reorientate innovation to deal with new platform technologies, such as biotechnology or industry 4.0.	Can suffer from normative, blueprint approaches to introducing new innovation policy frameworks developed in the Global North, rather than a more contextualised approach to innovation policy development. Outcomes and impacts are highly uncertain and unpredictable, often due to underdeveloped policy implementation capacity. Policy-oriented programs fail when insufficient attention is given to local policy analysis and formulation capability and where inappropriate international expertise is brought in.
Multi-level /portfolio-oriented	Applies a whole innovation system approach, with a practice-to-policy scope of capacity building, and an explicit learning orientation.	Risk of spreading resources too thinly resulting in program fragmentation with many small-scale activities failing to trigger wider systemic changes. It also poses challenges for M&E because of the intangibility of outcomes and the unpredictability and long-term nature of impact pathways. Requires long term donor commitment
Platform technology-oriented	Developing technological capability across firms, R&D organisations and relevant policy domains is a key element of economic development strategies.	This is a large-scale and often decades-long capacity development task. Policy support has been a valuable entry point, but most useful when followed up with more innovative action-oriented programs. Like other approaches, a clear thematic focus with strong policy visibility is a useful way of concentrating support resources and delivering tangible results within program cycles
Mission-oriented	Embodies much of current thinking on focusing innovation on societal scale development aspirations that are complex in nature and require social and technical innovation. The more successful programs have been those that are designed as policy facing dialogue platforms that commissions scoping studies and set up experiments to test solutions and learn from them.	Thematic hubs sometimes overly focus on technology acceleration and commercialisation through an entrepreneurial ecosystem lens. This tends to overlook the role of social innovation in addressing societal grand challenges and pays less attention to policy engagement and the need for institutional and policy reform needed to enact and scale socio-technical change

NINE PRINCIPLES FOR INNOVATION SUPPORT PROGRAMS

The following nine inter-related principles for innovation system strengthening and transformation focus on using an active learning approach to manage the scale, complexity and uncertainty associated with the ambitions of innovation support programs:

1. **Planning to Learn:** Innovation projects must be designed and developed in a context of complexity, uncertainty and multiple system failures. Embrace an active learning approach.

2. **An Evolving Theory of Change:** A theory of change (ToC) makes explicit the assumptions that shape the initial approach and the decisions regarding scope, participants, objectives etc. When developed collaboratively, it can help establish shared views of the situation, the challenges and the approach to change. Review the ToC regularly as part of the active learning approach.

3. **Adaptive Management:** An active learning approach needs an adaptive management response. Detailed pre-project planning is not appropriate. This has challenging implications for staffing, budgeting and accountability, as project managers must respond effectively to contingencies and emerging opportunities.

4. **Policy Experiments:** In the context of innovation and innovation policy, change involves experiment. Managed experiments, robust evaluation and openness to learning builds knowledge, capability and confidence.

5. **Organisational and Institutional Innovation:** The lack of organisational and institutional innovation is often what blocks or reduces the returns to and incentive for technological change. Untethering perceptions of innovation from a fixation with technology can be a step toward empowering organisational and institutional innovation. Technologies, organisations and institutions (in the sense of rules, conventions, policies, cultural norms) must co-evolve.

6. **Endogenous Drivers:** Innovation system formation, growth and change is an endogenous process. The primary objective of an intervention to support innovation systems strengthening is to develop the agency of the participants, particularly those with the least agency, and to grow the level of endogenous change momentum and capability.

7. **Entrepreneurship:** Entrepreneurship in all its forms – leading the formation of new for-profit or social enterprises and the formation or transformation of organisations and policies – is a form of (business, social, organisational, institutional) experiment and a critical driver of change.

8. **Sustained Engagement:** The key processes of capability building, alignment of interests, trust building, discovery of opportunity, etc. are likely to require sustained support over perhaps long time periods.

9. **Transformational change and the directionality of innovation:** Societal-level challenges, such as climate change, environmental sustainability and inclusive growth, demand transformational change processes affecting all dimensions of societies and economies in order to reorientate innovation to these new goals. Periods of transformational change involve substantial economic and social disruption, with skewed distributions of costs and benefits. The directionality of innovation system evolution is seen as an explicit policy issue, rather than the 'natural' outcome of market forces.[1] Innovation system strengthening strategies that combine mission-oriented innovation policies might provide an approach to directionality.

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[1] For example: Schot, J., Daniels, C., Torrens, J. and Bloomfield, G., 2017. Developing a shared understanding of transformative innovation policy. TIPC Research Brief, 1.

KEY LESSONS AND INSIGHTS AND DESIGNING INNOVATION SUPPORT PROGRAMS

It is important to correctly frame the task of innovation support as a systemic challenge and be clear on the implementation and impact logic that flows from this: It is important that key program staff and stakeholders are adequately socialised with the underlying ToC implied by a systemic understanding of innovation capacity and the logic that links individual program activities with broader program goals and objectives of systemic capacity development.

Choices have consequences and these need to be made transparent: Different program modality choices have impact and resource consequences and trade-offs in terms of long- and short-term results, and in terms of sustainability of the capacity built. It is important to be transparent about these consequences and trade-offs in negotiations with host country partners and donors.

Program design needs to be firmly rooted and informed by national contexts: The need for collaborative program design with national partners and strong alignment to policy and development priorities requires a deep understanding of existing modes/national styles of innovation and the specific challenges (but also opportunities) that emanate from it. This implies avoiding normative assumptions and instead targeting innovation capacity support aligned to both to national development priorities as well as building on existing modes of innovation in a particular country setting. This needs to be reflected in the composition and role of governance and program advisory committees to help anchor program directions cognisant of a range of contextual issues that shape the national innovation style and agenda.

Programmes with an innovation agenda that is framed by impact aspirations rather than technology offerings gain more policy traction: While new platform technologies present specific technological capability building challenges, for the most part, innovation support needs to be framed by impact challenges that may be agnostic to the forms of knowledge, technology and innovation that are mobilised to address these challenges. However, impact challenges need to be carefully chosen with a realistic scale of ambition, but at a scale of sufficient significance to act as a policy exemplar.

It is important to recognise that innovation is most usually driven by the ability of firms and others to rework the existing stock of knowledge rather than R&D as a source of useful knowledge: Research and technology commercialisation plays a relatively minor role in innovation in partner countries. More emphasis is needed on supporting existing modes of knowledge acquisition and adaptation. This could be a steppingstone to building industry capability to demand and use knowledge from formal R&D organisations.

Building explicit links between innovation interventions at the firm or community level and the broader policy learning process strengthens the overall national capacity for innovation: A policy experimentation modality supported by evaluation and learning and explicit policy dialogue processes helps build knowledge, capability and confidence, and strengthens the overall national capacity for innovation by adapting the policy enabling environment to emerge innovation opportunities and modalities.

A focus on building capability in innovation policy evaluation and formulation strengthens policy learning: The ability to evaluate the effectiveness of different policy instruments is critical to a policy learning process that continuously adapts the capacity of the innovation system to current and future impact challenges.

Selecting the right thematic focus helps focus resources and gain policy attention: Giving a thematic bounding to an innovation support program not only concentrates scarce resources but also helps interventions develop a proof of concept in a specific domain. Providing tangible impact results is a way of gaining policy attention that may be required for broader diffusion and scaling of the initiative. Appropriate themes are those framed by development impact challenges and these need to be identified in consultation with national prioritisation processes.

Bringing in high-quality expertise and new ideas helps introduce new ideas about innovation: Successful programs are often those where the calibre and reputation of the international partners have been such that it has introduced radical new ways of thinking about innovation. Designing programs so that there is a

creative tension between existing innovative thinking in a country and new ideas brought in from outside aligns with an overall ethos of experimentation and learning in these projects.

Flexibility, process-driven, adaptive management approaches balanced with an impact focus help programmes achieve goals: The process of innovation capacity building is not a linear one that can be planned and engineered in advance. ToCs and program logics need to be adapted to the experimental nature of the task. At the same time, individual sub-projects on their own are unlikely to make substantial inroads in the innovation capacity-building challenge or the impact issues that these are focused on. Taking an active portfolio management approach is thus important in terms of tracking program outcomes and impacts and adapting investment strategies along the way. This implies much greater attention to the MEL process and the function it plays within program implementation.

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