

Mission Aotearoa

An aerial night photograph of New Zealand, showing the North and South Islands. The land is dark, but city lights are visible, particularly in the North Island. The entire image has a strong cyan/blue color cast, giving it a futuristic or digital feel.

Rowan Conway

UCL Institute for Innovation and Public Purpose

29 March 2021

This PowerPoint was presented on 30 March 2021 (29 March in UK) at the Mission Aotearoa: Mapping our Future webinar. The accompanying video can be found on the McGuinness Institute YouTube channel.

Changing how innovation is imagined, practiced and evaluated to tackle societal challenges

- We bring revived notions of public value and public purpose to the center of political economy and to concrete policy practice, working with the concept that growth must have a direction as well as a rate.
- We look at how government actors around the world can act as “value creators” whilst recognizing that value today is largely dictated by market ideals of efficiency and cost reduction
- We equip leaders to co-design innovation-led, sustainable and inclusive growth.

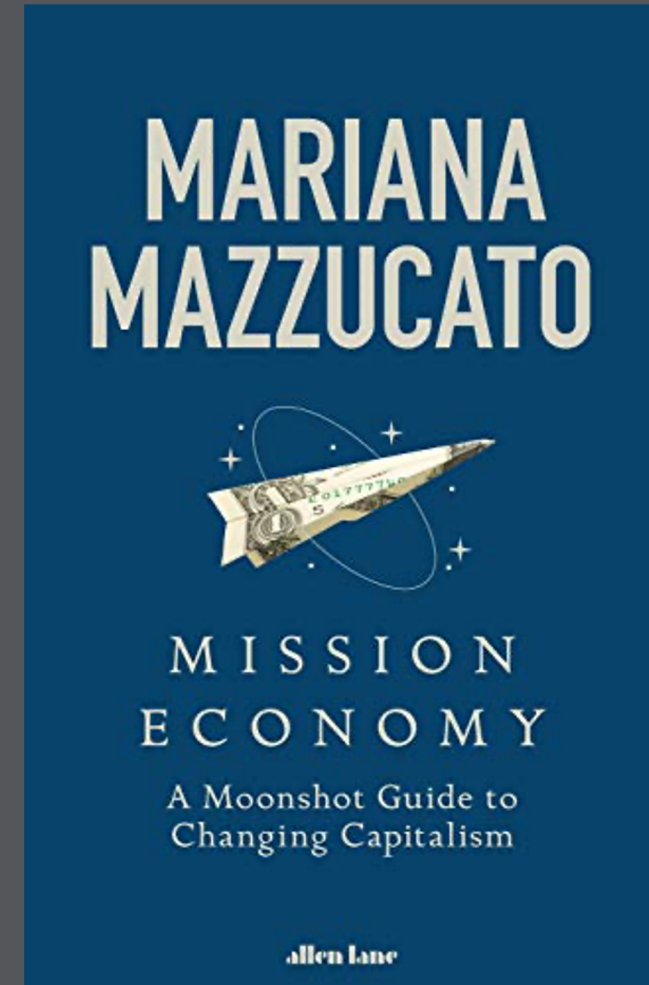
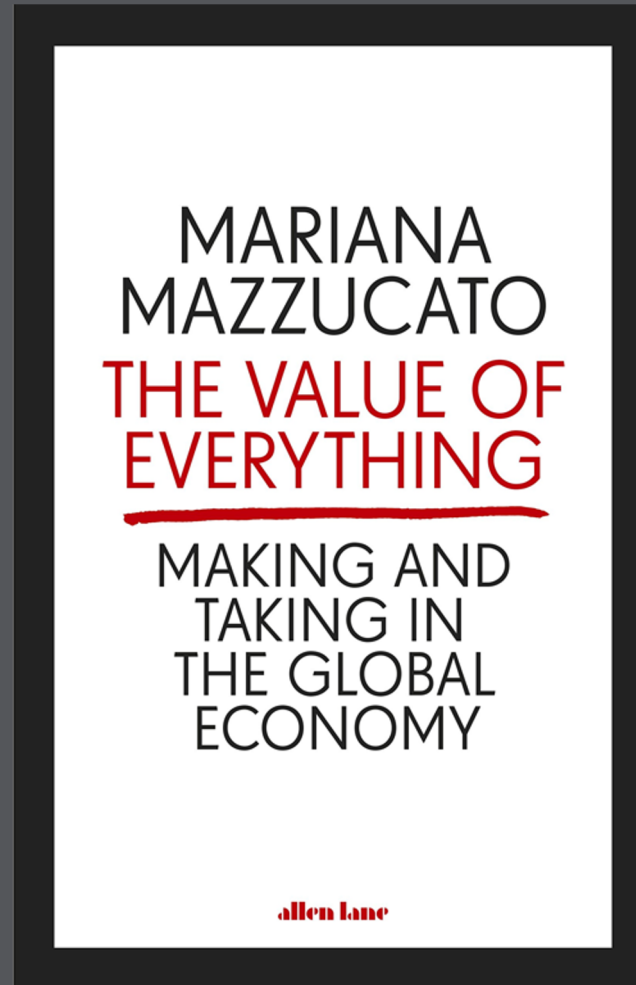
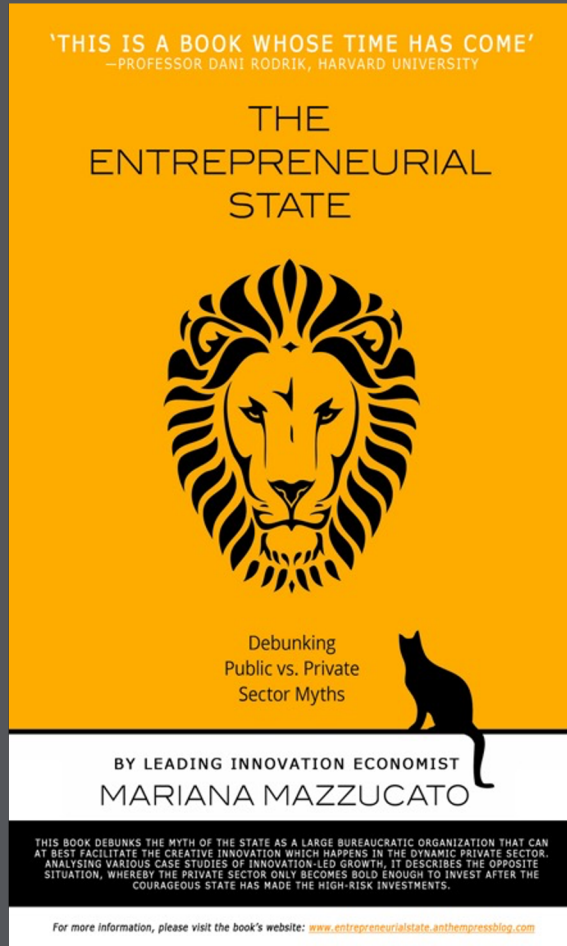


Prof Mariana Mazzucato
Director of the UCL Institute
for Innovation and Public
Purpose (UCL IIPP)



Rowan Conway
Head of the Mission Oriented
Innovation Network
UCL IIPP

Reimagining the innovation economy



A decade on...

“Long-term vision is something we tend to avoid in New Zealand, with the possible exception of Māori, who have greater reason to focus on the development of their assets for future generations of mokopuna. But I will argue here that vision is essential to any strategy aimed at enhancing prosperity...”

Sir Paul Callaghan, 2011

Mission Aotearoa: what if?

1. What is a mission-oriented approach to innovation and how is it different from (i) grand challenges and (ii) strategy and policy?
1. Why do we need mission oriented innovation?
1. How are countries using this approach?
1. What's working and what's not?
1. What next for Aotearoa New Zealand?

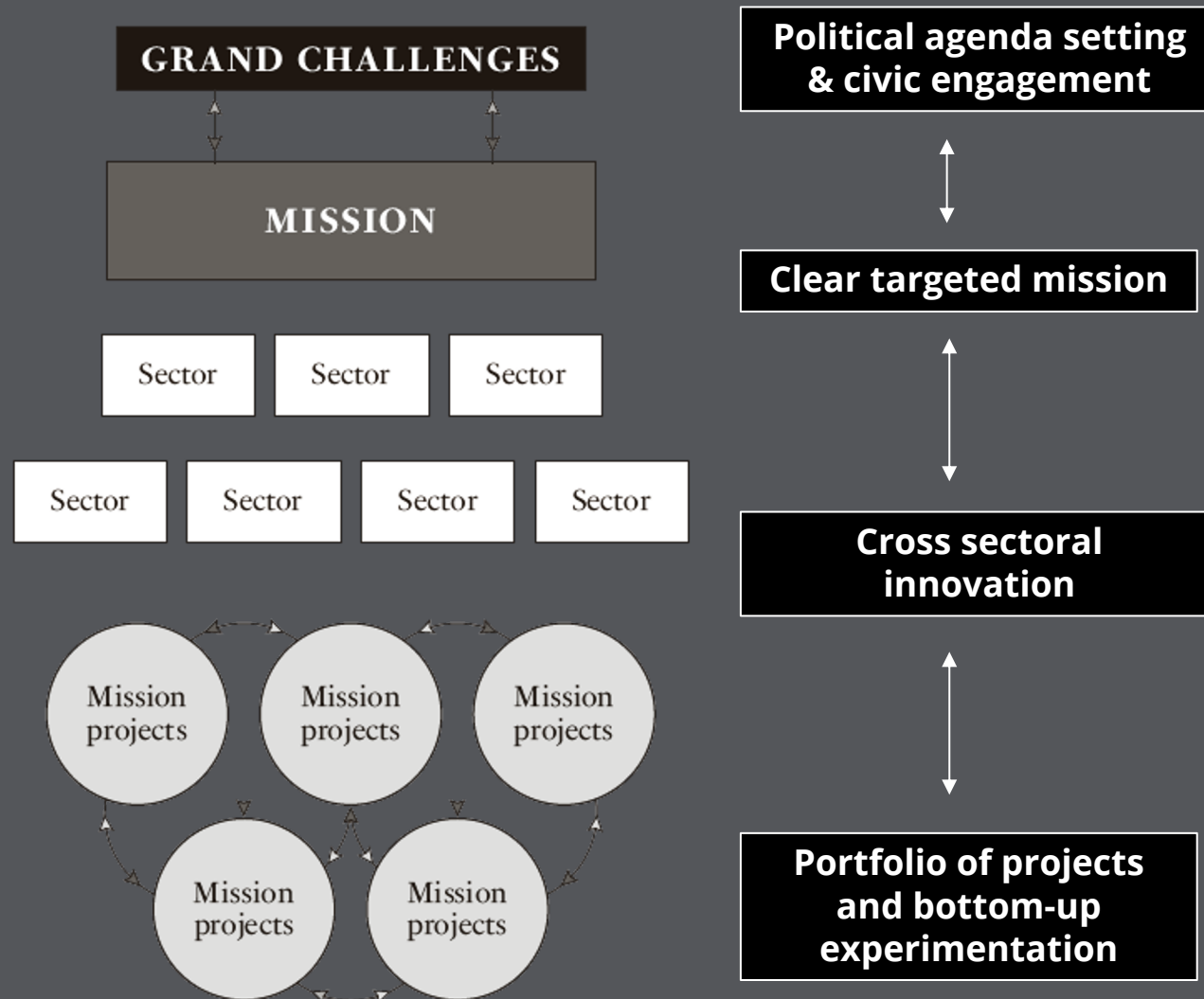
1. What?

What is a mission-oriented approach to innovation and how is it different from (i) grand challenges and (ii) economic strategy and policy?

Moonshots

Missions have been used to inspire and direct action throughout history. A generation of missions in the 1960s were technological — such as NASA’s Apollo mission to put a man on the Moon. Today’s social challenges are perhaps more prosaic, and yet considerably more “wicked” than the space race. Wicked problems require more attention to the ways in which social issues interact with political and technological issues. The complexity of challenges like climate change makes them far less clear cut than a mission to space.

From challenges to missions



Five criteria for missions

- Be bold, inspirational, with wide societal relevance
- Have a clear direction: targeted, measurable, and time-bound
- Be ambitious but realistic with research and innovation actions
- Be cross-disciplinary, cross-sectoral, and cross-actor innovation
- Drive multiple, bottom-up solutions.



Missions require new governance and new capabilities

- Mission selection, design and framing: taking engagement seriously
- Flexibility and adaptability through portfolio approach
- Directing public finances (from central banks to procurement) to crowd-in private investment
- Rethinking public sector organisations: from efficiency to dynamic public value creation



“Applying mission oriented thinking in our times requires not just adaptation but also institutional innovations that create new markets and reshape the existing ones. And, importantly, it also requires citizen participation...This raises two issues that are key for a mission and the vision behind it. The first is: whose vision should determine it (i.e. who decides)?

**Innovation
is political.**

The second is that it might be easier to rouse approval for purely technological missions as opposed to those that are more social, like fighting climate change, which no doubt face more resistance.”

(Mazzucato, 2021)

In other words: innovation is political.

2. Why?

Why do we need mission oriented innovation?

The climate challenge is one of the greatest global challenges of our times. With the Paris Agreement and the UN Sustainable Development Goals (SDGs) from 2015, we reached a global consensus on the need for a change of course to avoid a major rise in global temperatures and the irreparable damage such an increase would cause.

Yet efforts to translate these goals into action have been insufficient.



Missions create momentum

Missions by definition set out an explicit direction towards a goal that will need political and local buy in if they are to succeed. And yet, missions also provide a highly visible and explicit invitation to innovate, without which a challenge such as climate change might otherwise seem too large and existential to tackle.

While there may be many calls to action by civil society and social movements led by popular figures such as Greta Thunberg, **without a policy framework that provides a clear license for exploration, innovative solutions to global challenges will not arise spontaneously.**

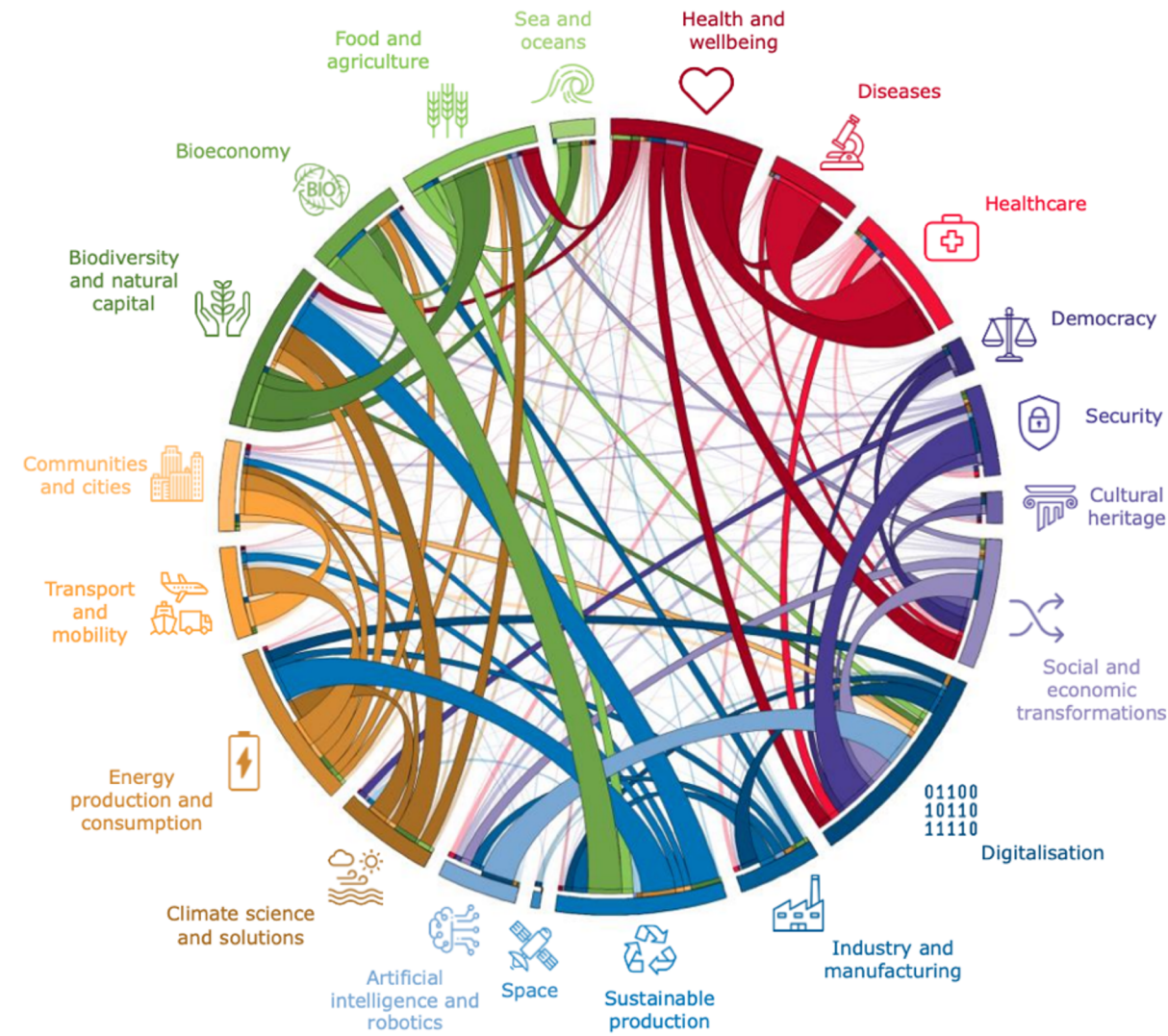


3. How?

How are countries using
this approach?

Innovation policy driven Missions: EU Mission Areas

- Adaptation to **climate change** including societal transformation;
- **Cancer**;
- **Healthy oceans, seas, coastal and inland waters**;
- **Climate-neutral and smart cities**;
- **Soil health and food.**





Portfolio led STI missions in Australia

- CSIRO's Missions model requires significant co-investment from external stakeholders to operationalise and scale so significant efforts go to 'crowding in' resources
- Balancing effective engagement across multiple government departments at Commonwealth, State and Local level with the ability to scale and deliver impact quickly
- Balancing imperative for short term co-investment with need for long-term transformational impact and global cooperation.

<i>Goal</i>	Build rural resilience that reduces drought impacts by 30% by 2030		
<i>Mission Statement</i>	Protect \$1 billion of farm production in low rainfall years and safeguard 1.2 million+ on-farm and rural Australian jobs.		
<i>Impacts</i>	Protect national farm income	Rural and regional community resilience	Improved environmental outcomes
<i>Elements</i>	On Farm Innovation	Regional Resilience & Development	Policy Enablers & Global Outreach
<i>Pathway</i>	1 yr: demonstration water banking schemes underway 3 yr: Improved systems and risk sharing reduces variation in profits 5 yr: community resilience strategies result in significant \$\$ savings		

Bold plans for a climate transition in Denmark

A Green and Sustainable World - Denmark's Global Climate Action Strategy

Denmark will work to:



Increase global
climate ambition



Reduce global
greenhouse gas
emissions



Strengthen focus on
climate adaption and
sustainable
development



Shift financial flows
and investments
from black to green



Collaborate with
the private sector
on green solutions

Green Industrial transformation in Denmark

In December 2020, Denmark committed to phasing out oil and gas production by 2050. The Danish government set out four specific green research and innovation missions that will contribute to the green transition with 700,000,000 DKK for Research and Innovation Partnerships that meet the missions.

To decarbonise with a “big science” approach such as Denmark with Carbon Capture and Storage (CCS) relies on an advanced R&D infrastructure, large scale public and private finance and a mature innovation ecosystem - which is possible in a Nordic economy, but is very different in other parts of the world.





Community leadership: Portfolio experimentation at UNDP

Portfolio Experimentation – for example in Pakistan, drives rapid learning about emerging challenges through the design and running of a portfolio of experiments that is coherent with the needs of the local community, government and UNDP country office. Experimenters purposefully look for multiple intervention points to help address complex challenges.

In practice, this means multiple experiments running at the same time with the goal of learning from them at the systems level. Experimentation can be highly valuable as it can break down big issues into smaller questions, which can then be more manageably investigated, in a way that is structured and transparent. In the UNDP labs, experimenters do not look at ideas as solutions, but rather as testable hypotheses. The experimentation process helps us find out what works and what doesn't.



4. What's working?

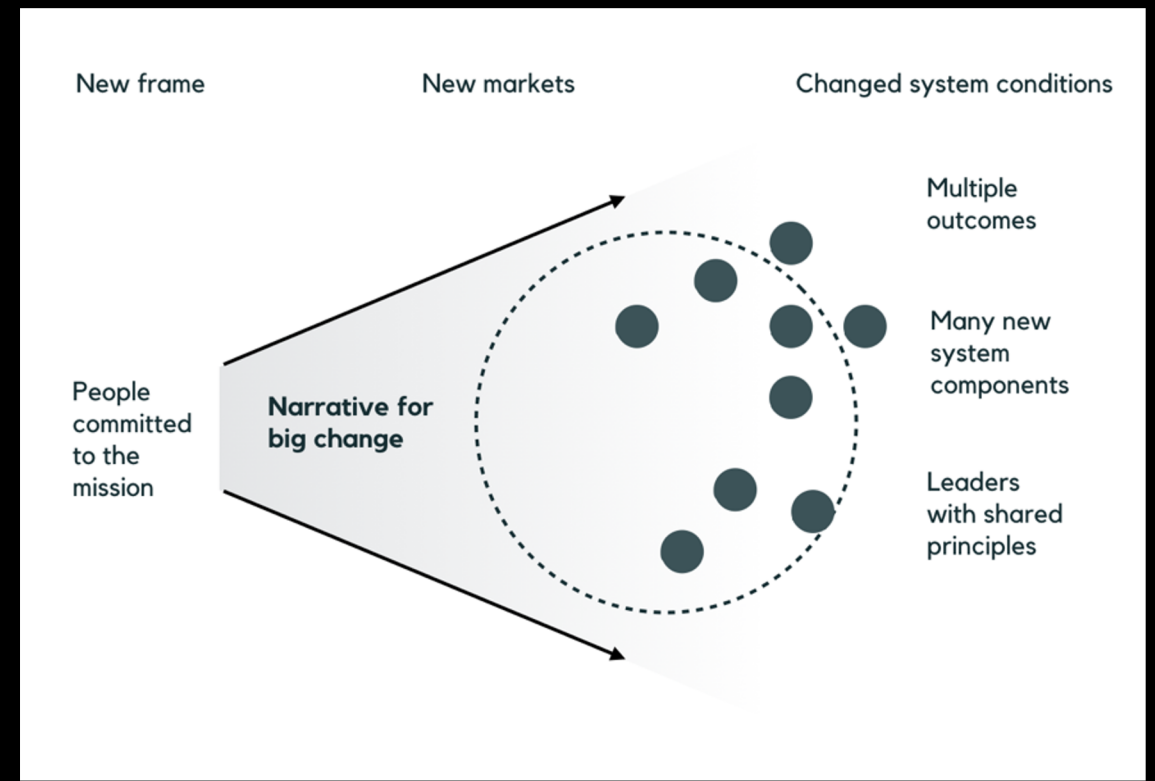
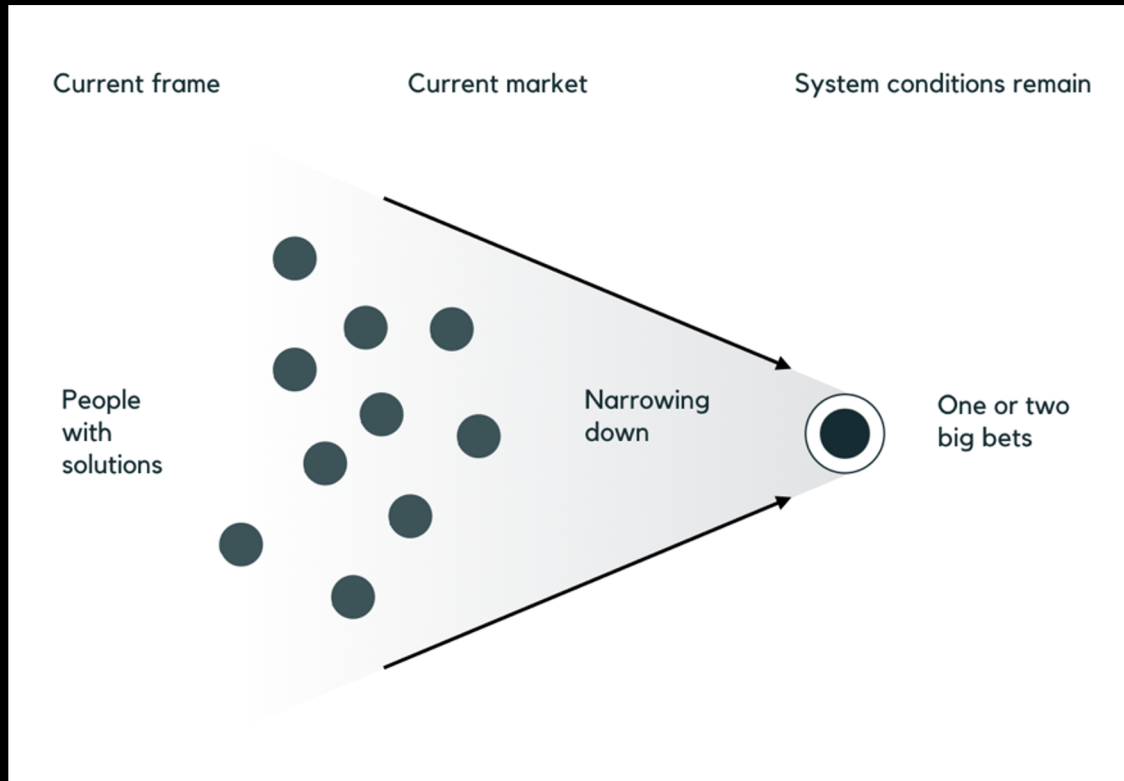
What's working and what's not?

Implementing missions: an (emerging) typology

Approach	Characteristics	Examples	Benefits	Challenges
Industrial or Innovation Strategy	Top-down coordination approach to better align existing policy mixes for incremental upgrading	UK's industrial strategy Germany's High-Tech Strategy 2025	Signal of gov't commitment / allocates funding / coordinates depts around missions not sectors	Subject to political cycles and political capture
Portfolio led by purpose-driven STI institutions	Proactive portfolio management to solve well-defined technological problems with market creation through procurement	DARPA / NASA / NYSERDA / CSIRO (Australia) / ARIA (UK)	Invests across the innovation chain Target	Low public engagement
Research-led missions	Sectoral coordination and implementation approach via triple, quadruple, quintuple HELIX models coordinated with academia / government and private sector	Netherland's quadruple helix in health innovation Living Labs (e.g.: Trondheim and Limerick)	Acute focus on the problem / Secure and ringfenced funding / non partisan	Inertia / distinctiveness / momentum
Place-based missions	Local, municipal, city and region based approaches to driving change within a place	Helsinki / Paris / Manchester / Barcelona / Valencia / Medellin / Clyde (Scotland) / Camden	Civic engagement / local context / highly visible output via urban design and spatial planning	Political cycles / High complexity / variable powers
Design-led missions	Multi-actor design-led approaches to reframe siloed policy goals and designing for the future. Snowballing strategy can set a whole train of positive action in motion	New European Bauhaus Sweden's Vinnova London's recovery missions	Participatory via co-design / low barrier to entry / opportunity to build deep civic engagement	Emergent – so lacking in robust metrics
Portfolio policy experimentation	With a focus on learning and adaptation, this approach breaks missions down to the smallest level of experimentation, to pursue an emergent, sense-making strategy	Climate KIC UNDP Development Labs	Focus on learning and adaptation / Decentralised / emergent strategy / highly collaborative and context-driven	Unclear leadership/ niche / challenge to maintain interdisciplinary / dept and cross-sectoral collaboration

A systemic opportunity unfolds over time

Therefore needs a new model for innovation



Source: Jennie Winhall, 2019

Beware “Mission Mimicry”

Missions are difficult:

They require new tools, capabilities and a long term view

To focus on the problem of climate change first and foremost will require commitment to new capabilities which will not emerge automatically

It is therefore worth reflecting on the appropriate approach to take

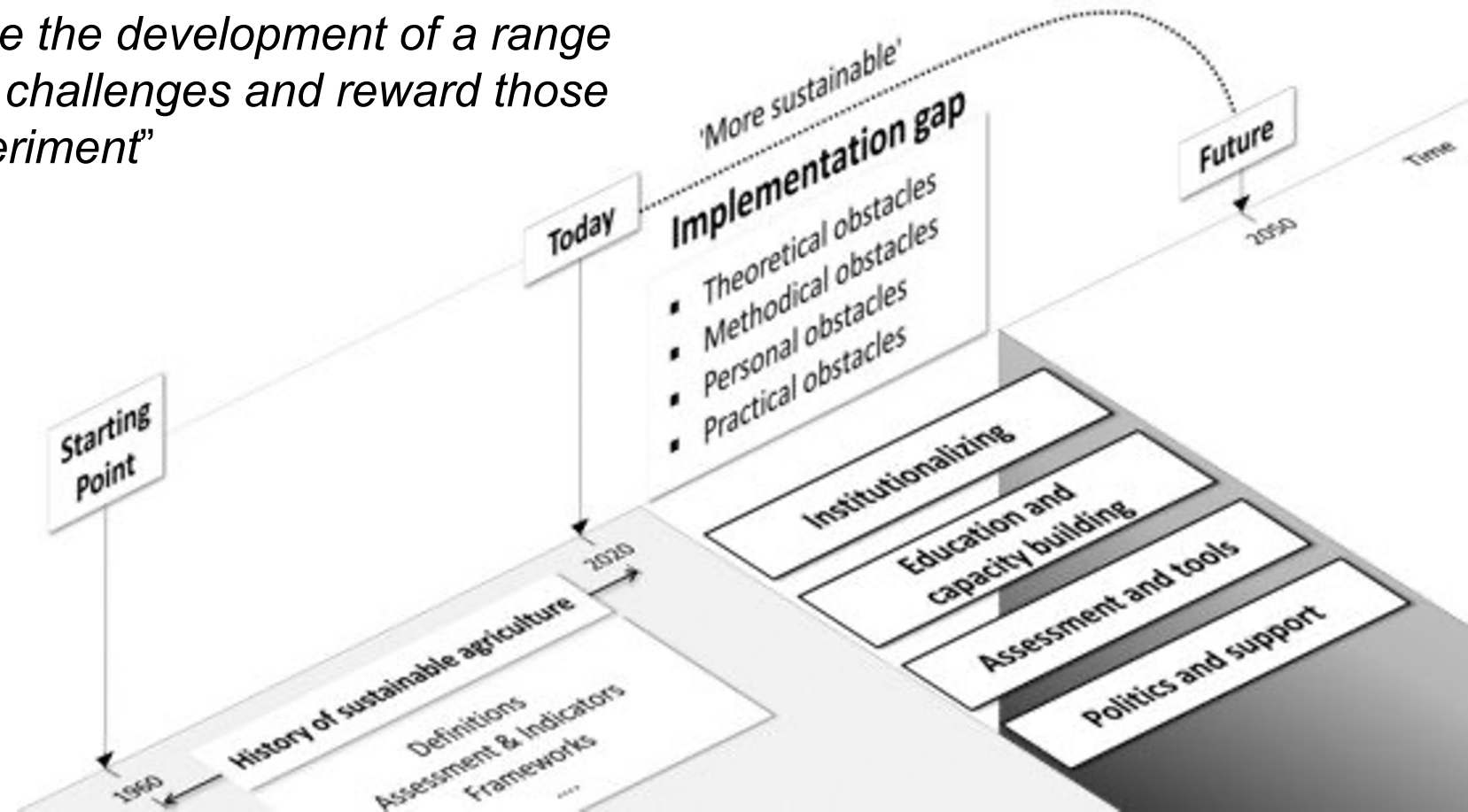
“Isomorphic mimicry is a key “technique of successful failure” that perpetuates capability... [it] is the tendency of governments to mimic other governments’ successes, replicating processes, systems, and even products of the “best practice” examples. This mimicry often conflates form and function: leading to a situation where “looks like” substitutes for “does”; i.e., governments look capable after the mimicry but are not actually more capable.”

The authors state that this tendency to mimic is amplified when the public sector seeks “agenda conformity” as this makes it very hard for states to build the new capabilities needed, for their contexts, given their realities.

Missions are concrete targets within a broader challenge that provide a framework for innovation.

“By setting the direction for a solution, missions do not specify how to achieve success. The right answers are not known in advance. Rather, missions stimulate the development of a range of different solutions to meet grand challenges and reward those actors willing to take risks and experiment”

IIPP Policy Brief, December 2019



5. What next?

What next for Aotearoa New Zealand?

There is a bold political mandate in Aotearoa New Zealand

The New Zealand Government has committed to:

- Decarbonise the public sector by 2025
- Setting the goal of 100% renewable electricity generation by 2030
- Expanding the Just Transitions unit with an extra \$5 million a year
- Phasing out single use and hard to recycle plastics and by creating a \$50m Plastics Innovation Fund to develop alternatives
- Reducing waste by investing in waste infrastructure and projects, and by establishing mandatory product stewardship schemes



You know what needs to be done...

The New Zealand's Climate Change Commission



Dr Rod Carr, Chair of the NZ
Climate Change Commission



"As a country we need transformational and lasting change to meet our targets and ensure a thriving Aotearoa for future generations."

The Climate Change Commission provides independent, evidence-based advice to Government to help Aotearoa New Zealand transition to a low-emissions and climate-resilient economy. They also monitor and review Government's progress towards emissions reduction and adaptation goals.

The new report that will be ratified in May outlines exactly what it will take to meet the climate goals.



You have capital, capacity, innovation capability and confidence for a climate transition



Climate Change Minister James Shaw

But mind-sets and frameworks will need to shift. This will require confronting the paradigms underneath structures of economic and financial systems and building a collaborative model (in partnership with Iwi/Maori, private sector and communities) for mission-oriented innovation to achieve just, inclusive and sustainable goals.

The Treaty of Waitangi is a foundational agreement and needs to be front of mind when seeking to solve the interrelated challenges of climate change, resource depletion and inequality.

Climate Change Minister James Shaw has said... "I look forward to working with my colleagues across Government to build a low carbon future for Aotearoa."

Questions I am leaving you with...

- 1. How might New Zealanders best design, build and realise missions?**
- 1. What might be the best governance framework for leading, tracking, and assessing the results of missions?**
- 1. What does a just, inclusive and sustainable transition for Aotearoa New Zealand look like? (A “just transition” does not mean a simple or easy transition)**

A decade from now...

This mission will require bold innovation.

The SDGs might be the mandate for countries to direct such innovation and missions could provide the pathway to deliver on that mandate.

The rest is up to you.